# LAKEWOOD STORAGE

## NE PORT DRIVE LEE'S SUMMIT, MO 64064

### 2018 International Building Code Analysis

12.16.2021

Occupancy Classification (311.2) Group S-1 Moderate Hazardous Storage
Group B Business

| | | |
|---|---|---|
| 1st Floor | Storage (S-1) | 33,300 S.F. |
| 1st Floor | Office (B) | 1,113 S.F. |
| 2nd Floor | Storage (S-1) | 34,766 S.F. |
| 3rd Floor | Storage (S-1) | 34,394 S.F. |
| **Total Building** | | **103,573 S.F.** |

*Occupant load (Table 1004.5):

| | | |
|---|---|---|
| 1st Floor | Storage: (1/300 gross merc/stor) | 111 |
| 1st Floor | Office: (1/150 gross business) | 7 |
| 2nd Floor | Storage: (1/300 gross merc/stor) | 116 |
| 3rd Floor | Storage: (1/300 gross merc/stor) | 115 |
| **Total Building** | | **349** |

***Note: Bldg. 1 is 75% unoccupied space with the remainder being: Corridors, Electrical Room, Riser Room, Stairs/Elevator, etc.**

**Toilet Count (Table 2902.1): 1 per 100 — Men: 1 Water Closet, 1 Lavatory; Women: 1 Water Closet, 1 Lavatory; General: Hi/Lo D.F., Service Sink

****Request for consideration to decrease the Occupant Load Count to an actual number of occupants for whom each occupied space, floor, or building is designed. The change in Occupancy Load Variance Request is driven solely by the Toilet Room Calculations.**

| | | |
|---|---|---|
| Construction Type (Table 601): | | **Type II-B** |
| Height Allowed (Table 504.4: 3 stories allowed): | | **3 story provided** |
| Floor Area Allowed (Table 506.2): | S-1 | **52,500 S.F. Allowable** |
| Sprinkler System (903.2.9): | | **Required / Provided** |
| Standpipe System (905): | | **Required / Provided** |
| Fire Separation (Table 508.4): | | **None Required / None Provided** |
| Fire Alarms (907.1): | | **None Required / None Provided** |
| Rated Corridors (Table 1020.1): | | **None required/ None provided** |
| Exiting (1022.1): | Exits req. per floor: 2 | **Exits provided 2/floor min.** |
| (Table 1017.2): | Exit Distance | **250' allowable** |
| (1024.2): | Exit width req. 44" | **60"width provided** |
| Fire Resistance Rating Exterior Walls (Table 602): | | **None Required / None Provided** |

**DALLENBACH•COLE**
ARCHITECTURE

STATE OF MISSOURI
JEFFREY S. DALLENBACH
NUMBER A-2020036988
ARCHITECT

12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION
NO. A-2020036988

**CIVIL ENGINEER / LANDSCAPE ARCHITECTS**
SCHLAGEL ASSOCIATES
PH: 913.492.5158
14920 W. 107TH STREET
LENEXA, KS 66215

**ARCHITECT**
DALLENBACH - COLE ARCHITECTURE
PH: 210.493.2234
315 NINTH STREET, STE. 1
SAN ANTONIO, TX 78215

LOCATION MAP
NORTH

**STRUCTURAL ENGINEER**
FORCE ENGINERRING & TESTING
PH: 281.540.6603
19530 RAMBLEWOOD DRIVE
HUMBLE, TX 77338

**MEP ENGINEER**
RSW CONSULTANTS
PH: 210.408.1860
FAX: 210.408.0273
12035 COLWICK, STE. 101
SAN ANTONIO, TX 78216

**GENERAL NOTES:**

1. THE GENERAL CONTRACTOR SHALL HAVE PARTIAL USE OF THE PREMISES FOR CONSTRUCTION OPERATIONS. CONFINE APPARATUS, OPERATIONS OF WORKMEN, AND STORAGE OF MATERIAL TO THE AREAS DEFINED BY THE OWNER.
2. ALL WORK SHALL BE PERFORMED TO COMPLY WITH THE 2018 INTERNATIONAL BUILDING CODE, 2018 INTERNATIONAL MECHANICAL CODE, 2017 NATIONAL ELECTRICAL CODE, 2018 INTERNATIONAL PLUMBING CODE, 2018 INTERNATIONAL FIRE CODE, ALL CITY ADOPTED AMENDMENTS, AND ANY OTHER APPLICABLE CODES AND BUILDING STANDARDS AS ADOPTED BY THE CITY OF LEE'S SUMMIT, MO.
3. THE CONTRACTOR AND OWNER SHALL BE RESPONSIBLE FOR FINAL MATERIAL AND PRODUCT SELECTIONS. THE CONSTRUCTION DOCUMENTS INDICATE GENERAL DESIGN INTENT BUT MAY NOT DEFINE ALL STANDARDS AND PRODUCTS REQUIRED FOR THE FULL PERFORMANCE AND CONSTRUCTION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR REVIEW AND APPROVAL OF SUBMITTALS AND SHOP DRAWINGS FROM THE SUBCONTRACTORS AND FOR COMPLIANCE WITH APPLICABLE INDUSTRY STANDARDS, CITY CODES, AND ORDINANCES. FOLLOWING CONTRACTOR APPROVAL OF SUBMITTALS AND SHOP DRAWINGS, SUBMITTAL TO OWNER FOR FINAL REVIEW IS REQUIRED.
4. COORDINATION OF SUBMITTALS FOR FABRICATION, PURCHASING, TESTING, DELIVERY, WITH OTHER SUBMITTALS AND RELATED CONSTRUCTION OPERATIONS IS THE RESPONSIBILITY OF THE CONTRACTOR. SUBMITTALS TO INCLUDE QUALITY CONTROL PROCEDURES, DESIGN DATA, CERTIFICATIONS, MANUFACTURER'S INSTRUCTIONS, AND WARRANTY INFORMATION (1 YEAR MINIMUM).
5. THE CONTRACTOR IS RESPONSIBLE FOR OVERSIGHT OF ALL PHASES OF THE PROJECT IN RELATION TO APPLICABLE INDUSTRY STANDARDS FOR THE MATERIALS AND PRODUCTS INCORPORATED INTO THE PROJECT.
6. THE GENERAL CONTRACTOR WITH OWNER TO COORDINATE ALL TESTING AND/OR INSPECTIONS WITH OWNER HIRED COMPANIES UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO COORDINATE OVERHEAD DUCTWORK, CONDUIT, ETC. SUBCONTRACTOR TO PROVIDE SHOP DRAWINGS FOR COORDINATION PURPOSES.
8. ALL DRAWINGS AND SPECIFICATIONS ARE PART OF THE CONSTRUCTION DOCUMENTS. CONSTRUCTION DOCUMENTS, INCLUDING ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. ARE TO BE USED TOGETHER. ANY DISCREPANCIES BETWEEN THE DOCUMENTS OR EXISTING CONDITIONS ARE TO BE REPORTED TO THE ARCHITECT FOR INTERPRETATION AND/ OR CLARIFICATION PRIOR TO PROCEEDING WITH ANY WORK RELATED TO THE DISCREPANCY.
9. NECESSARY FRAMING AND/OR BLOCKING IS REQUIRED FOR ALL WALL MOUNTED ITEMS. ALL WOOD PRODUCTS TO BE FIRE RETARDANT.
10. FIRE-RETARDANT-TREATED WOOD SHALL BE PERMITTED IN NON-BEARING PARTITIONS WHERE THE REQ. FIRE-RESISTANCE RATING IS 2 HOURS OR LESS, NON BEARING EXTERIOR WALLS WHERE NO FIRE RATING IS REQ., AND ROOF CONSTRUCTION INCLUDING GIRDERS, TRUSSES, FRAMING AND DECKING PER IBC 603.1. FIRE-RETARDANT-TREATED WOOD TO COMPLY WITH IBC 2303.2 STANDARDS.
11. CONTRACTOR IS RESPONSIBLE FOR SAFETY, SECURITY AND PROTECTION OF EXISTING IMPROVEMENTS THROUGHOUT THE DURATION OF CONSTRUCTION.
12. ALL WORK TO BE PERFORMED IN COMPLIANCE WITH AIA DOCUMENT A201-2017 GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION WHICH BECOMES PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
13. A GEOTECHNICAL REPORT WAS PREPARED FOR THIS PROJECT WHICH IS INCLUSIVE OF DESIGN RECOMMENDATIONS. ENGINEERING DESIGN WAS COMPLETED BASED ON THE GEOTECHNICAL DESIGN RECOMMENDATIONS AND A COPY OF THE GEOTECHNICAL REPORT CAN BE OBTAINED FROM THE OWNER FOR REFERENCE.

### LIST OF DRAWINGS


COVER SHEET

CIVIL DRAWINGS
C0.0 COVER SHEET
C1.0 SITE PLAN
C2.0 GRADING PLAN
C2.1 INTERSECTION DETAILS
C3.0 EROSION CONTROL PLAN
C3.1 EROSION CONTROL DETAILS
C4.0 STORM SEWER PLAN & PROFILE
C5.0 DETENTION BASIN PLAN & PROFILE
C6.0 UTILITY PLAN
C7.0 SITE DETAILS
C7.1 SITE DETAILS
C7.2 SITE DETAILS
C7.3 SITE DETAILS
L1.0 LANDSCAPING PLAN
L2.0 LANDSCAPE DETAILS
L2.1 LANDSCAPE DETAILS

ARCHITECTURE DRAWINGS
A1.1 SITE PLAN
A1.2 ROOF PLAN
A1.3 ROOF DETAILS
A2.1 1ST FLOOR PLAN
A2.2 2ND FLOOR PLAN
A2.3 3RD FLOOR PLAN
A2.4 OFFICE PLAN & RCP
A2.5 ENLARGED PLANS
A2.6 ADA & INT. ELEVATIONS
A2.7 ENLARGED PLANS
A2.8 EGRESS PLANS
A3.1 EXTERIOR ELEVATIONS
A3.2 EXTERIOR ELEVATIONS
A4.1 WALL SECTIONS
A4.2 WALL SECTIONS
A4.3 WALL SECTIONS
A4.4 WALL SECTIONS
A4.5 WALL SECTIONS
A4.6 WALL SECTIONS
A4.7 WALL SECTIONS
A4.8 WALL SECTIONS
A4.9 STAIR A SECTIONS
A4.10 STAIR B SECTIONS
A4.11 ELEV. A & B SECTIONS

ARCHITECTURE DRAWINGS (CONT.)
A5.1 WDW/DOOR SCHEDULES
A5.2 WINDOW TYPES
A5.3 WINDOW DETAILS
A6.1 BUILDING DETAILS
A6.2 BUILDING DETAILS
A6.3 BUILDING DETAILS
A6.4 BUILDING DETAILS
A6.5 BUILDING DETAILS
A7.1 SPECIFICATIONS

STRUCTURAL DRAWINGS
S0.0 REFER COVER SHEET

MEP DRAWINGS
MEP 1 SITE PLAN
M1.1 1ST FLOOR MECHANICAL
M1.2 2ND FLOOR MECHANICAL
M1.3 3RD FLOOR MECHANICAL
M1.4 OFFICE MECHANICAL
M1.5 ROOF MECHANICAL
M2.1 MECHANICAL SCHEDULES
M3.1 MECHANICAL SPECIFICATIONS
E1.1 1ST FLOOR LIGHTING
E1.2 2ND FLOOR LIGHTING
E1.3 3RD FLOOR LIGHTING
E1.4 OFFICE LIGHTING
E2.1 1ST FLOOR POWER
E2.2 2ND FLOOR POWER
E2.3 3RD FLOOR POWER
E2.4 OFFICE POWER
E2.5 ROOF POWER
E3.1 ELECTRICAL RISER
E3.2 ELECTRICAL SCHEDULES
E4.1 ELECTRICAL SPECIFICATIONS
P1.1 1ST FLOOR PLUMBING
P1.2 2ND FLOOR PLUMBING
P1.3 3RD FLOOR PLUMBING
P1.4 OFFICE PLUMBING
P2.1 PLUMBING SCHEDULES
P2.2 PLUMBING RISERS
P2.3 PLUMBING RISERS


LAKEWOOD STORAGE
PROJECT NO. 2035

# FINAL DEVELOPMENT PLANS
FOR
# LAKEWOOD BUSINESS PARK - LOT 35

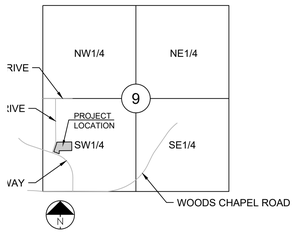
## IN THE CITY OF LEE'S SUMMIT
## JACKSON COUNTY, MISSOURI

PRCOM20214832

**LEGEND:**

| | | |
|---|---|---|
| A/E | - | ACCESS EASEMENT |
| BC | - | BACK OF CURB |
| B/B | - | BACK TO BACK |
| BM | - | BENCHMARK |
| BL or B.L. | - | BUILDING LINE |
| CO | - | CLEANOUT |
| TJB | - | TELEPHONE JUNCTION BOX |
| C&G | - | CURB AND GUTTER |
| D/E | - | DRAINAGE EASEMENT |
| E/E | - | ELECTRICAL EASEMENT |
| EL | - | ELEVATION |
| FL | - | FLOW LINE |
| G/E | - | GAS LINE EASEMENT |
| HDPE | - | HIGH-DENSITY POLYETHYLENE |
| L/E | - | LANDSCAPE EASEMENT |
| MSFE | - | MINIMUM SERVICEABLE FLOOR ELEVATION |
| PVC | - | POLYVINYL CHLORIDE |
| P/L | - | PROPERTY LINE |
| PUB/E | - | PUBLIC EASEMENT |
| RCP | - | REINFORCED CONCRETE PIPE |
| ROW or R/W | - | RIGHT-OF-WAY |
| S/E | - | SANITARY SEWER EASEMENT |
| SL | - | SERVICE LINE |
| S/W | - | SIDEWALK |
| TE | - | TOP ELEVATION |
| U/E | - | UTILITY EASEMENT |
| WSE | - | WATER SURFACE ELEVATION |
| W/E | - | WATERLINE EASEMENT |

ASPHALT PAVEMENT - EXISTING
ASPHALT PAVEMENT - PROPOSED
CONCRETE PAVEMENT - EXISTING
ASPHALT PAVEMENT - EXISTING
CONCRETE SIDEWALK - EXISTING
CONCRETE SIDEWALK - PROPOSED
CURB & GUTTER
CURB & GUTTER - EXISTING
TREELINE
EXISTING LOT AND R/W LINES
EXISTING PLAT LINES
P/L PROPERTY LINES
ROW RIGHT-OF-WAY
SANITARY SEWER MAIN
SANITARY SEWER MAIN - EXIST.
STO STORM SEWER
STORM SEWER - EXISTING
$CATV_X$ CABLE TV - EXISTING
$FOC_X$ FIBER OPTIC CABLE - EXISTING
$T_X$ TELEPHONE LINE - EXIST.
$E_X$ ELECTRIC LINE - EXISTING
$OHP_X$ OVERHEAD POWER LINE - EXIST.
$UGE_X$ UNDERGROUND ELECTRIC - EX.
$G_X$ GAS LINE - EXISTING
$W_X$ WATERLINE - EXISTING
LIGHT - EXISTING
EXISTING MANHOLE
CO CLEANOUT
EXISTING SANITARY MANHOLE
PROPOSED SANITARY MANHOLE
AI EXISTING AREA INLET
CI EXISTING CURB INLET
GI EXISTING GRATE INLET
JB EXISTING JUNCTION BOX
D EXISTING STORM MANHOLE




SECTION 9-48-31

**LOCATION MAP**
SCALE 1" = 2000'

## UTILITY CONTACTS:

MISSOURI DEPARTMENT OF TRANSPORTATION (MODOT)
Steve Holloway
600 NE Colbern Road
Lee's Summit, MO 64086
(816) 607-2186

MISSOURI GAS ENERGY (MGE)
Brent Jones
3025 SE Clover Drive
Lee's Summit, MO 64082
(816) 399-9633
brent.jones@spireenergy.com

EVERGY (formerly KCP&L)
Gary Jones
Gary.Jones@evergy.com

CITY OF LEES SUMMIT PUBLIC WORKS
Michael Park
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1800

AT&T
Mark Manion or Marty Loper
500 E. 8th Street, Room 370
Kansas City, MO 64106
(816) 275-2341 or (816) 275-1550

COMCAST CABLE
Barbara Brown
3400 W. Duncan Road
Blue Springs, MO 64015
(816) 795-2255

PUBLIC WATER SUPPLY DISTRICT
Mark Schaufler
220 SE Green Street
Lee's Summit, MO 64063
(816) 969-1900

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP-CALL BEFORE YOU DIG!

MISSOURI ONE CALL SYSTEM

## GENERAL NOTES:

1. ALL CONSTRUCTION TO FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813.
2. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE ENGINEERING DEPARTMENT OF THE CITY OF LEE'S SUMMIT, MISSOURI.
3. LINEAL FOOT MEASUREMENTS SHOWN ON THE PLANS ARE HORIZONTAL MEASUREMENTS, NOT SLOPE MEASUREMENTS. ALL PAYMENTS SHALL BE MADE ON HORIZONTAL MEASUREMENTS.
4. NO GEOLOGICAL INVESTIGATION HAS BEEN PERFORMED ON THE SITE.
5. THE UTILITY LOCATIONS SHOWN ON THESE PLANS ARE TAKEN FROM UTILITY COMPANY RECORDS AND APPARENT FIELD LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION.
6. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT OF WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. THE CONTRACTOR MAY ALSO UTILIZE THE FOLLOWING TOLL FREE PHONE NUMBER PROVIDED BY "MISSOURI ONE CALL SYSTEM, INC.": 1-800-DIG-RITE. THIS PHONE NUMBER IS APPLICABLE ANYWHERE WITHIN THE STATE OF MISSOURI. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
7. PRIOR TO ORDERING PRECAST STRUCTURES, SHOP DRAWING SHALL BE SUBMITTED TO THE DESIGN ENGINEER FOR APPROVAL.
8. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE.
9. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
10. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR, OR AS DIRECTED BY THE OWNER.
11. ALL EXCAVATIONS SHALL BE UNCLASSIFIED. NO SEPARATE PAYMENT WILL BE MADE FOR ROCK EXCAVATION.
12. THE CONTRACTOR SHALL CONTROL THE EROSION AND SILTATION DURING ALL PHASED OF CONSTRUCTION, AND SHALL KEEP THE STREETS CLEAN OF MUD AND DEBRIS.
13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
14. SUBGRADE SOIL FOR ALL CONCRETE STRUCTURES, REGARDLESS OF THE TYPE OR LOCATION, SHALL BE FIRM, DENSE AND THOROUGHLY COMPACTED AND CONSOLIDATED; SHALL BE FREE FROM MUCK AND MUD; AND SHALL BE SUFFICIENTLY STABLE TO REMAIN FIRM AND INTACT UNDER THE FEET OF THE WORKMEN OR MACHINERY ENGAGED IN SUBGRADE SURFACING, LAYING REINFORCING STEEL, AND DEPOSITING CONCRETE THEREON. IN ALL CASES WHERE SUBSOIL IS MUCKY OR WORKS INTO MUD OR MUCK DURING SUCH OPERATIONS, A SEAL COURSE OF EITHER CONCRETE OR ROCK SHALL BE PLACED BELOW SUBGRADE TO PROVIDE A FIRM BASE FOR WORKING AND FOR PLACING THE FLOOR SLAB.
15. THE CONTRACTOR SHALL CONTACT PUBLIC WORKS INSPECTIONS AT: 816-969-1800 TO OBTAIN A PUBLIC WORKS CONSTRUCTION PERMIT. A MINIMUM 48 HOUR NOTICE SHALL BE GIVEN PRIOR TO PERMIT ISSUANCE.
16. THE CONTRACTOR SHALL CONTACT THE CITY'S EROSION CONTROL SPECIALIST AT: 816-969-1800 PRIOR TO ANY LAND DISTURBANCE.
17. THE CONTRACTOR SHALL CONTACT THE RIGHT OF WAY INSPECTOR AT 816-969-1800 PRIOR TO ANY LAND DISTURBANCE ACTIVITIES WITHIN THE RIGHT OF WAY. THESE ACTIVITIES MAY REQUIRE A PERMIT.
18. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL TRAFFIC HANDLING MEASURES NECESSARY TO ENSURE THAT THE GENERAL PUBLIC IS PROTECTED AT ALL TIMES. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD-LATEST EDITION).
19. ALL SANITARY SEWER LATERALS SHALL HAVE A TRENCH CHECK, CONSISTING OF FLOWABLE BACKFILL, INSTALLED DURING CONSTRUCTION. TRENCH CHECK SHALL EXTEND TO BOTTOM OF TRENCH, TO WIDTH OF TRENCH, TO 12 INCHES ABOVE PIPE, FOR A MINIMUM LENGTH OF 12 INCHES. TRENCH CHECK SHALL BE LOCATED AT LEAST 5 FEET FROM SANITARY MAIN.

GRADING/EARTHWORK NOTES:

1. REFER TO GEOTECHNICAL REPORT FOR ALL COMPACTION REQUIREMENTS AND ASPHALT AND CONCRETE RECOMMENDED THICKNESS AND SUBGRADE TREATMENTS.
2. RECOMMEND A GEOTECHNICAL ENGINEER REVIEW ALL EARTHWORK ACTIVITY TO MAKE SURE RECOMMENDATIONS IN GEOTECHNICAL REPORT ARE FOLLOWED.
3. PRIOR TO PLACEMENT OF PAVEMENT, GEOTECHNICAL ENGINEER MUST APPROVE SUBGRADE IN WRITTEN FORM TO THE OWNER AND PROJECT ENGINEER.
4. ALL UTILITY INSTALLATIONS UNDER PAVED AREAS MUST BE COMPACTED AS PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER AND THE GEOTECHNICAL REPORT.
5. ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF LENEXA TECHNICAL SPECIFICATIONS.
6. EXISTING TOPOGRAPHY SHOWN AS ESTABLISHED FROM AERIAL PHOTOGRAMMETRY AND FIELD, SPOT CHECKED BY SCHLAGEL AND ASSOICATES, P.A.,. CONTRACTOR TO FIELD VERIFY ELEVATIONS. NO ADDITIONAL MONEY WILL BE PAID FOR HAUL-IN OR HAUL-OFF MATERIAL.

## EARTHWORK:

1. IT IS RECOMMENDED THAT A GEOTECHNICAL ENGINEER OBSERVE AND DOCUMENT ALL EARTHWORK ACTIVITIES.
2. CONTOURS HAVE BEEN SHOWN AT 1-FOOT OR 2-FOOT INTERVALS, AS INDICATED. GRADING SHALL CONSIST OF COMPLETING THE EARTHWORK REQUIRED TO BRING THE PHYSICAL GROUND ELEVATIONS OF THE EXISTING SITE TO THE FINISHED GRADE (OR SUB-GRADE) ELEVATIONS PROVIDED ON THE PLANS AS SPOT GRADES, CONTOURS OR OTHERS MEANS AS INDICATED ON THE PLANS.
3. THE EXISTING SITE TOPOGRAPHY DEPICTED ON THE PLANS BY CONTOURING HAS BEEN ESTABLISHED BY AERIAL PHOTOGRAPHY AND FIELD VERIFIED BY G.P.S. OBSERVATION NEAR JULY 18TH, 2016. THE CONTOUR ELEVATIONS PROVIDED MAY NOT BE EXACT GROUND ELEVATIONS, BUT RATHER INTERPRETATIONS OF SUCH. ACCURACY SHALL BE CONSIDERED TO BE SUCH THAT NOT MORE THAN 10 PERCENT OF SPOT ELEVATION CHECKS SHALL BE IN ERROR BY MORE THAN ONE-HALF THE CONTOUR INTERVAL PROVIDED, AS DEFINED BY THE NATIONAL MAP ACCURACY STANDARDS. ANY QUANTITIES PROVIDED FOR EARTHWORK VOLUMES ARE ESTABLISHED USING THIS TOPOGRAPHY CONTOUR ACCURACY, AND THEREFORE THE INHERENT ACCURACY OF ANY EARTHWORK QUANTITY IS ASSUMED FROM THE TOPOGRAPHY ACCURACY.
4. PROPOSED CONTOURS ARE TO APPROXIMATE FINISHED GRADE.
5. UNLESS OTHERWISE NOTED, PAYMENT FOR EARTHWORK SHALL INCLUDE BACKFILLING OF THE CURB AND GUTTER, SIDEWALK AND FURTHER MANIPULATION OF UTILITY TRENCH SPOILS. THE SITE SHALL BE LEFT IN A MOWABLE CONDITION AND POSITIVE DRAINAGE MAINTAINED THROUGHOUT.
6. UNLESS OTHERWISE NOTED, ALL EARTHWORK IS CONSIDERED UNCLASSIFIED. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR ROCK OR SHALE EXCAVATION, UNLESS SPECIFICALLY STATED OTHERWISE.
7. PRIOR TO EARTHWORK ACTIVITIES, PRE-DISTURBANCE EROSION AND SEDIMENT CONTROL DEVICES SHALL BE IN PLACE PER THE STORM WATER POLLUTION PREVENTION PLAN AND/OR THE EROSION AND SEDIMENT CONTROL PLAN PREPARED FOR THIS SITE.
8. ALL TOPSOIL SHALL BE STRIPPED FROM ALL AREAS TO BE GRADED AND STOCKPILED ADJACENT TO THE SITE AT AN AREA SPECIFIED BY THE PROJECT OWNER OR HIS APPOINTED REPRESENTATIVE. VEGETATION, TRASH, TREES, BRUSH, TREE ROOTS AND LIMBS, ROCK FRAGMENTS GREATER THEN 6-INCHES AND OTHER DELETERIOUS MATERIALS SHALL BE REMOVED AND PROPERLY DISPOSED OF OFFSITE OR AS DIRECTED BY THE OWNER OR HIS APPOINTED REPRESENTATIVE.
9. UNLESS OTHERWISE SPECIFIED IN THE GEOTECHNICAL REPORT, ALL FILLS SHALL BE PLACED IN MAXIMUM 6-INCH LIFTS AND COMPACTED TO 95-PERCENT OF MAXIMUM DENSITY AS DEFINED USING A STANDARD PROCTOR TEST (AASHTO T99/ASTM 698).
10. SUBGRADE FOR PAVEMENTS SHALL BE PROOF-ROLLED PRIOR TO PAVING OPERATIONS UTILIZING A FULLY LOADED TANDEM AXLE DUMP TRUCK. ALL AREAS EXHIBITING EXCESSIVE PUMPING AND HEAVING SHALL BE REMOVED, FILLED AND COMPACTED WITH SUITABLE MATERIALS AND RETESTED UNTIL ACCEPTABLE RESULTS ARE ACHIEVED AND FINAL APPROVAL HAS BEEN OBTAINED FROM THE GEOTECHNICAL ENGINEER.
11. SUBGRADE FOR BUILDING PAD SHALL INCLUDE A MINIMUM OF 18-INCHES OF LOW VOLUME CHANGE (LVC) MATERIAL, OR AS IDENTIFIED IN THE SITE SPECIFIC GEOTECHNICAL REPORT.
12. FILL MATERIALS SHALL BE PER GEOTECHNICAL REPORT AND SHALL NOT INCLUDE ORGANIC MATTER, DEBRIS OR TOPSOIL. ALL FILLS PLACED ON SLOPES GREATER THAN 6:1 SHALL BE BENCHED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REDISTRIBUTING THE TOPSOIL OVER PROPOSED TURF AND LANDSCAPED AREAS TO A MINIMUM DEPTH OF 6-INCHES BELOW FINAL GRADE.
14. ALL AREAS SHALL BE GRADED FOR POSITIVE DRAINAGE. UNLESS NOTED OTHERWISE THE FOLLOWING GRADES SHALL APPLY:
    A. TURF AREAS – 2.5% MINIMUM, 4H:1V MAXIMUM
    B. PAVED AREAS – 1.2% MINIMUM, 5% MAXIMUM
15. A.D.A. PARKING STALLS SHALL NOT BE SLOPED GREATER THEN 2% IN ANY DIRECTION AND CONSTRUCTED PER A.D.A. REQUIREMENTS.
16. ALL DISTURBED AREAS SHALL BE FERTILIZED, SEEDED AND MULCHED IMMEDIATELY AFTER EARTHWORK ACTIVITIES HAVE CEASED. SEEDING SHALL BE PER THE EROSION AND SEDIMENT CONTROL PLAN AND/OR LANDSCAPE PLAN. IF NOT SPECIFIED SEEDING SHALL BE PER APWA SECTION 2400, LATEST EDITION. UNLESS OTHERWISE NOTED, SEEDING SHALL BE SUBSIDIARY TO THE CONTRACT PRICE FOR EARTHWORK AND GRADING ACTIVITIES.
17. ALL DISTURBED AREAS IN THE RIGHT-OF-WAY SHALL BE SODDED.
18. UNDERDRAINS ARE RECOMMENDED FOR ALL PAVED AREAS ADJACENT TO IRRIGATED TURF AND LANDSCAPED BEDS.
19. CONTRACTOR SHALL ADHERE TO THE REPORTING REQUIREMENTS OUTLINED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE PROPERLY MAINTAINED AND KEPT CLEAN OF SILT AND DEBRIS AND IN GOOD WORKING ORDER. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS REQUIRED.

## UTILITIES:

1. EXISTING UTILITIES HAVE BEEN SHOWN TO THE GREATEST EXTENT POSSIBLE BASED UPON INFORMATION PROVIDED TO THE ENGINEER. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE RESPECTIVE UTILITY COMPANIES AND FIELD LOCATING UTILITIES PRIOR TO CONSTRUCTION AND IDENTIFYING ANY POTENTIAL CONFLICTS. ALL CONFLICTS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY REQUIRED UTILITY RELOCATIONS. UTILITIES DAMAGED THROUGH THE NEGLIGENCE OF THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL VERIFY FLOW-LINES AND STRUCTURE TOPS PRIOR TO CONSTRUCTION, AND SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES. PROVIDE SHOP DRAWINGS FOR ALL PRECAST AND MANUFACTURED UTILITY STRUCTURES FOR REVIEW BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE STRUCTURES.
4. UTILITY SEPARATION: WATERLINES SHALL HAVE A MINIMUM OF 10 FEET HORIZONTAL AND 2 FEET VERTICAL SEPARATION FROM ALL SANITARY AND STORM SEWER LINES. IF MINIMUM SEPARATIONS CAN NOT BE OBTAINED, CONCRETE ENCASEMENT OF THE SANITARY OR STORM SEWER LINE SHALL BE REQUIRED 10 FEET IN EACH DIRECTION OF THE CONFLICT.
5. PAYMENT FOR TRENCHING, BACKFILLING, PIPE EMBEDMENT, FLOWABLE FILL, BACKFILL MATERIALS, CLEAN UP, SEEDING, SODDING AND ANY OTHER ITEMS NECESSARY FOR THE CONSTRUCTION OF THE UTILITY LINE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE UTILITY INSTALLATION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING RESPECTIVE UTILITY COMPANIES 48-HOURS IN ADVANCE FOR THE INSPECTION OF ANY PROPOSED UTILITY MAIN EXTENSION OR SERVICE LINE OR SERVICE CONNECTION TO ANY EXISTING MAIN.
7. TRENCH SPOILS SHALL BE NEATLY PLACED ONSITE ADJACENT TO THE TRENCH, AND COMPACTED TO PREVENT SATURATION AND EXCESS SEDIMENT RUNOFF. UNSUITABLE MATERIALS, EXCESS ROCK AND SHALE, ASPHALT, CONCRETE, TREES, BRUSH ETC. SHALL BE PROPERLY DISPOSED OF OFFSITE. MATERIALS MAY BE WASTED ONSITE AT THE DIRECTION OF THE OWNER OR HIS APPOINTED REPRESENTATIVE.

NOTE:
1. TRENCH CHECKS TO BE INSTALL ON ALL SANITARY SEWER SERVICE LINES IN ACCORDANCE WITH CITY OF LEE'S SUMMIT STANDARDS.
2. THERE ARE NO OIL OR GAS WELLS LOCATED WITHIN THIS PROJECT SITE.

**RELEASE FOR CONSTRUCTION**
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

| Sheet List Table | |
|---|---|
| Sheet Number | Sheet Title |
| C0.0 | COVER SHEET |
| C1.0 | SITE PLAN |
| C2.0 | GRADING PLAN |
| C2.1 | INTERSECTION DTAILS |
| C3.0 | EROSION CONTROL PLAN |
| C3.1 | EROSION CONTOL DETAILS |
| C4.0 | STORM SEWER PLAN & PROFILE |
| C5.0 | DETENTION BASIN PLAN & PROFILE |
| C6.0 | UTILITY PLAN |
| C7.0 | SITE DETAILS |
| C7.1 | SITE DETAILS |
| C7.2 | SITE DETAILS |
| C7.3 | SITE DETAILS |
| L1.0 | LANDSCAPE PLAN |
| L2.0 | LANDSCAPE DETAILS |
| L2.1 | LANDSCAPE DETAILS |

**APPROVED BY:**

CITY ENGINEER — DATE
APPROVED FOR ONE YEAR FROM THIS DATE

**OWNER/DEVELOPER:**

LAKEWOOD SELF-STORAGE, LLC
JUSTIN BEAL OR MICHAEL VANBURSKIRK
1220 WASHINGTON, SUITE 300
KANSAS CITY, MO 64105
P: (816) 268-4241
E: JBEAL@NGZIMMER.COM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Missouri State Certificates of Authority
#E2002003800-F #LA2001005237 #LS2002008859-F


PREPARED BY:

STATE OF MISSOURI — JEFFREY T. SIMMONS — NUMBER PE-2021400125 — PROFESSIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---|---|
| 1 08/13/2021 | City Comments |
| 2 08/30/2021 | City Comments |
| 3 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

COVER SHEET

SHEET
C0.0

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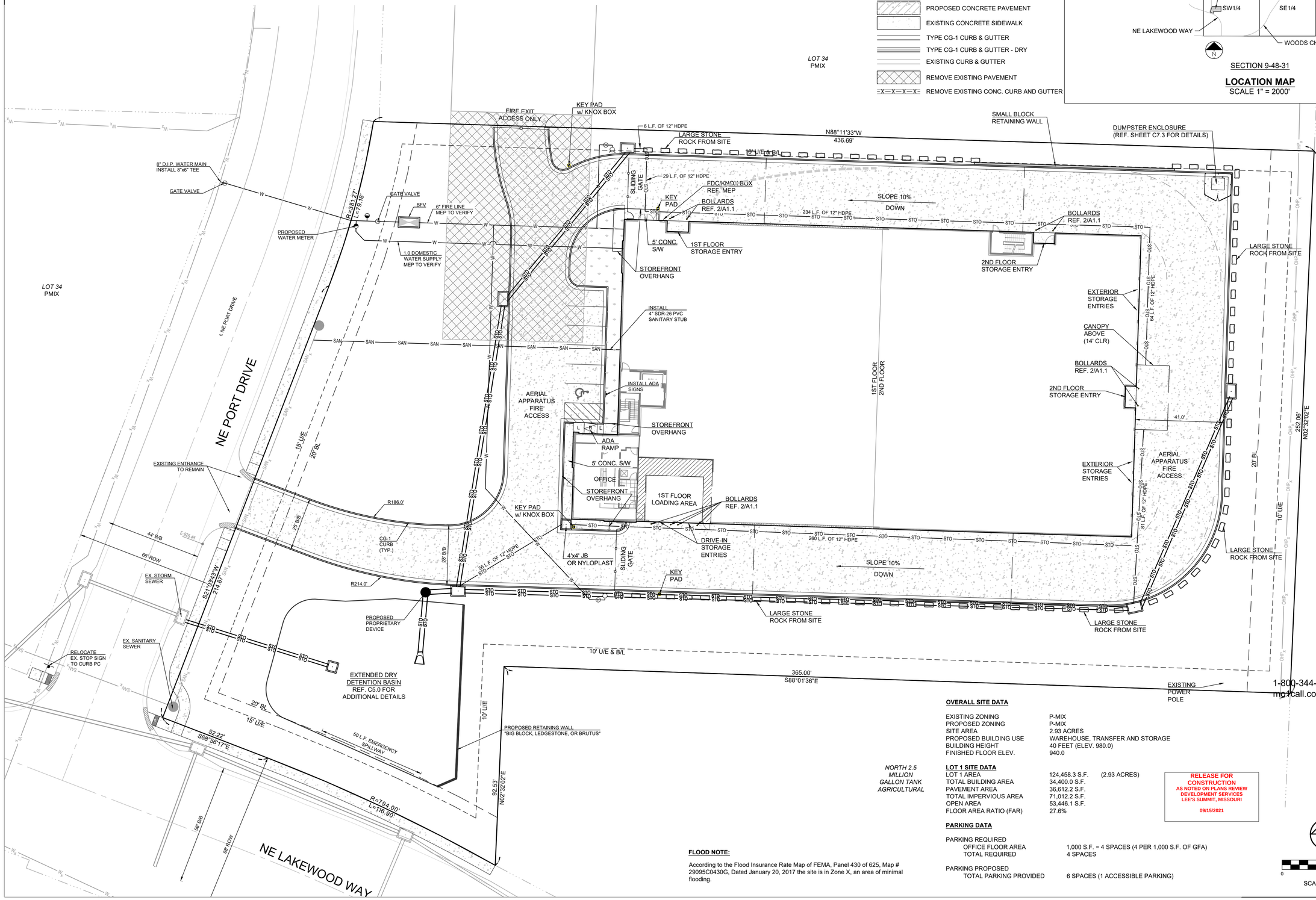
*PROPERTY DESCRIPTION:*

*LOT 35 OF LAKEWOOD BUSINESS PARK, LOTS 33A, AND 34-36.*

**PAVEMENT LEGEND:**

- PROPOSED ASPHALT PAVEMENT
- EXISTING ASPHALT PAVEMENT
- PROPOSED 4" CONCRETE SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- EXISTING CONCRETE SIDEWALK
- TYPE CG-1 CURB & GUTTER
- TYPE CG-1 CURB & GUTTER - DRY
- EXISTING CURB & GUTTER
- REMOVE EXISTING PAVEMENT
- REMOVE EXISTING CONC. CURB AND GUTTER




**OVERALL SITE DATA**

| | |
|---|---|
| EXISTING ZONING | P-MIX |
| PROPOSED ZONING | P-MIX |
| SITE AREA | 2.93 ACRES |
| PROPOSED BUILDING USE | WAREHOUSE, TRANSFER AND STORAGE |
| BUILDING HEIGHT | 40 FEET (ELEV. 980.0) |
| FINISHED FLOOR ELEV. | 940.0 |

**LOT 1 SITE DATA**

| | | |
|---|---|---|
| LOT 1 AREA | 124,458.3 S.F. | (2.93 ACRES) |
| TOTAL BUILDING AREA | 34,400.0 S.F. | |
| PAVEMENT AREA | 36,612.2 S.F. | |
| TOTAL IMPERVIOUS AREA | 71,012.2 S.F. | |
| OPEN AREA | 53,446.1 S.F. | |
| FLOOR AREA RATIO (FAR) | 27.6% | |

**PARKING DATA**

| | |
|---|---|
| PARKING REQUIRED | |
| OFFICE FLOOR AREA | 1,000 S.F. = 4 SPACES (4 PER 1,000 S.F. OF GFA) |
| TOTAL REQUIRED | 4 SPACES |
| PARKING PROPOSED | |
| TOTAL PARKING PROVIDED | 6 SPACES (1 ACCESSIBLE PARKING) |

**FLOOD NOTE:**

According to the Flood Insurance Rate Map of FEMA, Panel 430 of 625, Map # 29095C0430G, Dated January 20, 2017 the site is in Zone X, an area of minimal flooding.

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LEE'S SUMMIT, MISSOURI
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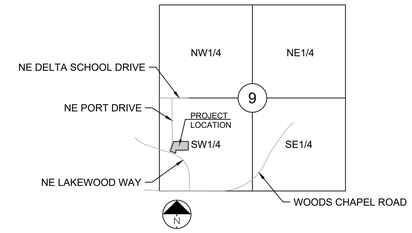
SCALE: 1" = 20'




SECTION 9-48-31

**LOCATION MAP**
SCALE 1" = 2000'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PREPARED BY:

NOTICE: ALL UTILITIES ARE TO BE LOCATED BY CONTRACTOR PRIOR TO CONSTRUCTION

STATE OF MISSOURI
JEFFREY T. SIDMORE
NUMBER PE-2021000125
PROFESSIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

OWNER: KELLEY PAUL L. TRUSTEE
ADDRESS: 1204 NE WOODS CHAPEL RD.

# LAKEWOOD BUSINESS PARK - LOT 35
## FINAL DEVELOPMENT PLANS
## 4101 NE PORT DRIVE
## LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---|---|
| 08/13/2021 | City Comments |
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DRAWN BY: RPM
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PROJ. NUMBER: 20-261

SITE PLAN

SHEET
C1.0

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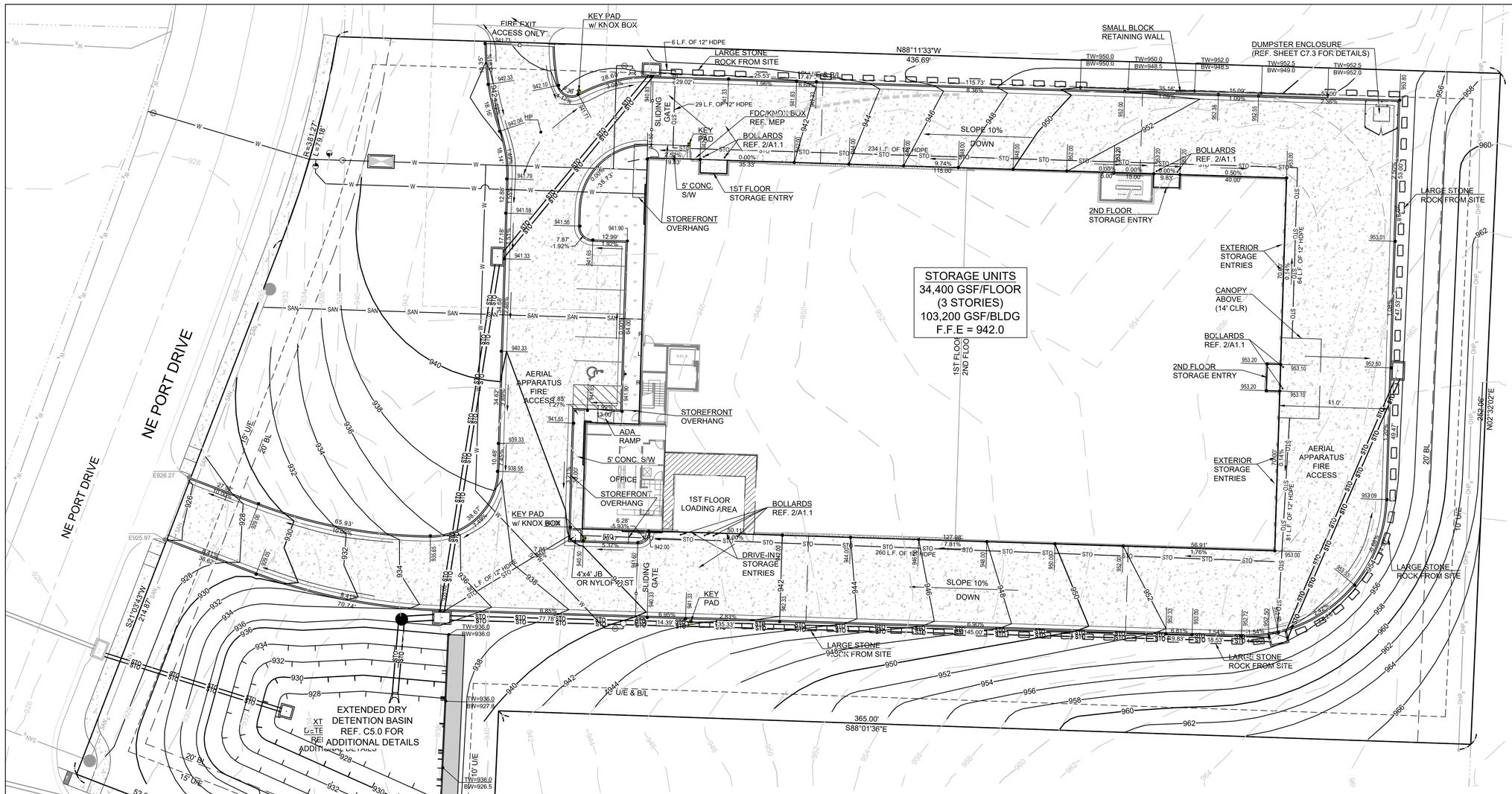


SCALE: 1" = 20'

## GRADING LEGEND:

| | |
|---|---|
| EXX.XX | EXTG. SPOT ELEVATION |
| XX.XX | PROPOSED TOP OF CURB ELEV. |
| XX.XX | TOE OF CURB OR SPOT ELEVATION |
| XX.XX / XX.XX | PROPOSED TOP OF CURB ELEVATION W/ TOE OF CURB ELEVATION |
| F.F.E. | FINISHED FLOOR ELEVATION |
| 1023 | EXISTING CONTOUR |
| 1023 | PROPOSED CONTOUR |

* - ALL SIDEWALKS TO BE INSTALLED WITH A 2.0% MAXIMUM CROSS SLOPE.

LEGEND

| | |
|---|---|
| BFG | BOTTOM OF WALL FINISH GRADE ELEVATION |
| BW | BOTTOM OF WALL |
| TW | TOP OF WALL ELEVATION |
| P | PAVEMENT ELEVATION |
| TC | TOP OF CURB ELEVATION |

## PAVEMENT LEGEND:

- PROPOSED ASPHALT PAVEMENT
- EXISTING ASPHALT PAVEMENT
- PROPOSED 4" CONCRETE SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- EXISTING CONCRETE SIDEWALK
- TYPE CG-1 CURB & GUTTER
- TYPE CG-1 CURB & GUTTER - DRY
- EXISTING CURB & GUTTER
- REMOVE EXISTING PAVEMENT
- REMOVE EXISTING CONC. CURB AND GUTTER

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mo1call.com

**RELEASE FOR CONSTRUCTION**
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DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

**NOTES:**

1. BOUNDARY INFORMATION, SITE AREA INFORMATION, ADJACENT PROPERTY LINES AND UTILITY INFORMATION IS FROM ALTA SURVEY PREPARED BY SUMMIT SURVEY COMPANY PROVIDED BY AND USED WITH APPROVAL OF THE OWNER.
2. TOPOGRAPHY FROM ALTA SURVEY PREPARED BY SUMMIT SURVEY PROVIDED BY AND USED WITH APPROVAL OF THE OWNER.
3. AN EASEMENT OR LICENSE GRANTED TO THE CITY OF LEE'S SUMMIT, MISSOURI TO LOCATE, CONSTRUCT AND MAINTAIN, OR TO AUTHORIZE THE LOCATION, CONSTRUCTION AND MAINTENANCE OF SIDEWALKS, POLES, WIRES, ANCHORS, CONDUITS AND OR STRUCTURES FOR, PEDESTRIAN ACCESS, GAS, SANITARY SEWER, STORM SEWER, SURFACE DRAINAGE CHANNEL, ELECTRICITY, TELEPHONE, CABLE TELEVISION, OR ANY OTHER NECESSARY PUBLIC UTILITY OR SERVICES, ANY OR ALL OF THEM, UPON, OVER, OR UNDER THOSE AREAS OUTLINED OR DESIGNATED UPON THIS PLAT AS "UTILITY EASEMENT" OR "U/E" OR WITHIN ANY STREET OR THOROUGHFARE DEDICATED TO PUBLIC USE.
4. THE USE OF ALL TRACTS, LOTS, UNITS AND PROPERTIES IN THIS SUBDIVISION SHALL HEREAFTER BE SUBJECT TO THE COVENANTS AND RESTRICTIONS, WHICH INSTRUMENTS ARE TO BE RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF JACKSON COUNTY, MISSOURI, AS PROVIDED ABOVE, AND WHICH WILL BECOME A PART OF THE DEDICATION OF THE PLAT.
5. BUILDING LINES (BL) OR SETBACK LINES ESTABLISHED AS SHOWN ON THE PLAT AND NO BUILDING OR PORTION THEREOF SHALL BE CONSTRUCTED BETWEEN THIS LINE AND STREET RIGHT-OF-WAY.
6. ALL CONSTRUCTION MUST COMPLY WITH THE MOST RECENT ADOPTED CITY CODE, ORDINANCES, AND DESIGN STANDARDS.
7. ALL PARKING LOTS SHALL HAVE CG-1 CURB AS REQUIRED BY CODE.
8. ALL DRIVE AISLES, DRIVEWAYS, AND STREETS ARE DIMENSIONED FROM BACK OF CURB TO BACK OF CURB ON THIS PLAN.
9. ALL ACCESSIBLE PARKING SHALL COMPLY WITH THE ADA REQUIREMENTS.
10. BASED ON THE GEOLOGIC DATA ON MISSOURI DEPARTMENT OF NATURAL RESOURCES WEB SITE THERE ARE NO KNOWN WELLS ON THE SITE.
11. ALL ISSUES PERTAINING TO LIFE SAFETY AND PROPERTY PROTECTION FROM THE HAZARDS OF FIRE, EXPLOSION OR DANGEROUS CONDITIONS IN NEW AND EXISTING BUILDINGS, STRUCTURES AND PREMISES, AND TO THE SAFETY TO FIRE FIGHTERS AND EMERGENCY RESPONDERS DURING EMERGENCY OPERATIONS, SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL FIRE CODE AND LOCAL AMENDMENTS.
12. IFC 903.3.7- FIRE DEPARTMENT CONNECTIONS. THE LOCATION OF FIRE DEPARTMENT CONNECTIONS SHALL BE APPROVED BY THE FIRE CODE OFFICIAL. CONNECTIONS SHALL BE A 4 INCH STORZ TYPE FITTING AND LOCATED WITHIN 100 FEET OF A FIRE HYDRANT, OR AS APPROVED BY THE CODE OFFICIAL.
13. IFC 507.5.1- WHERE A PORTION OF THE FACILITY OR BUILDING HEREAFTER CONSTRUCTED OR MOVED INTO OR WITHIN THE JURISDICTION IS MORE THAN 300 FEET FROM A HYDRANT ON A FIRE APPARATUS ACCESS ROAD, AS MEASURED BY AN APPROVED ROUTE AROUND THE EXTERIOR OF THE FACILITY OR BUILDING, ON-SITE FIRE HYDRANTS AND MAINS SHALL BE PROVIDED WHERE REQUIRED BY THE FIRE CODE OFFICIAL.
14. IFC 503.2.3 -FIRE APPARATUS ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE SURFACED SO AS TO PROVIDE ALL-WEATHER DRIVING CAPABILITIES.
15. IFC 506.1 -WHERE ACCESS TO OR WITHIN A STRUCTURE OR AN AREA IS RESTRICTED BECAUSE OF SECURED OPENINGS OR WHERE IMMEDIATE ACCESS IS NECESSARY FOR LIFE-SAVING OR FIRE-FIGHTING PURPOSES, THE FIRE CODE OFFICIAL IS AUTHORIZED TO REQUIRE A KEY BOX TO BE INSTALLED IN AN APPROVED LOCATION. THE KEY BOX SHALL BE OF AN APPROVED TYPE LISTED IN ACCORDANCE WITH UL
16. 1037, AND SHALL CONTAIN KEYS TO GAIN NECESSARY ACCESS AS REQUIRED BY THE FIRE CODE OFFICIAL.506.1.1 LOCKS.AN APPROVED LOCK SHALL BE INSTALLED ON GATES OR SIMILAR BARRIERS WHEN REQUIRED BY THE FIRE CODE OFFICIAL. A KNOX PADLOCK WILL BE PROVIDED ON THE GATE AND A KNOX BOX ON THE BUILDING.
17. PLEASE NOTE THAT PARKING LOT DESIGN MUST MEET THE UDO ARTICLE 12 REQUIREMENTS AND THE PRIVATE DRIVE MUST MEET PUBLIC STREET DESIGN STANDARDS PER THE DESIGN AND CONSTRUCTION MANUAL SECTION 5200.
18. SANITARY SEWER MAIN AND EASEMENTS FOR LOT 35 WILL BE PROVIDED IN THE FUTURE WHEN THE LOT IS DEVELOPED.


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#E2000200800-F #LA2001005237 #LS2000200858-F


PREPARED BY:

JEFFREY T. SIKEMORE PLUMMER PE-2021001125 NATIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI

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| 08/13/2021 | City Comments |
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DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

GRADING PLAN

SHEET C2.0

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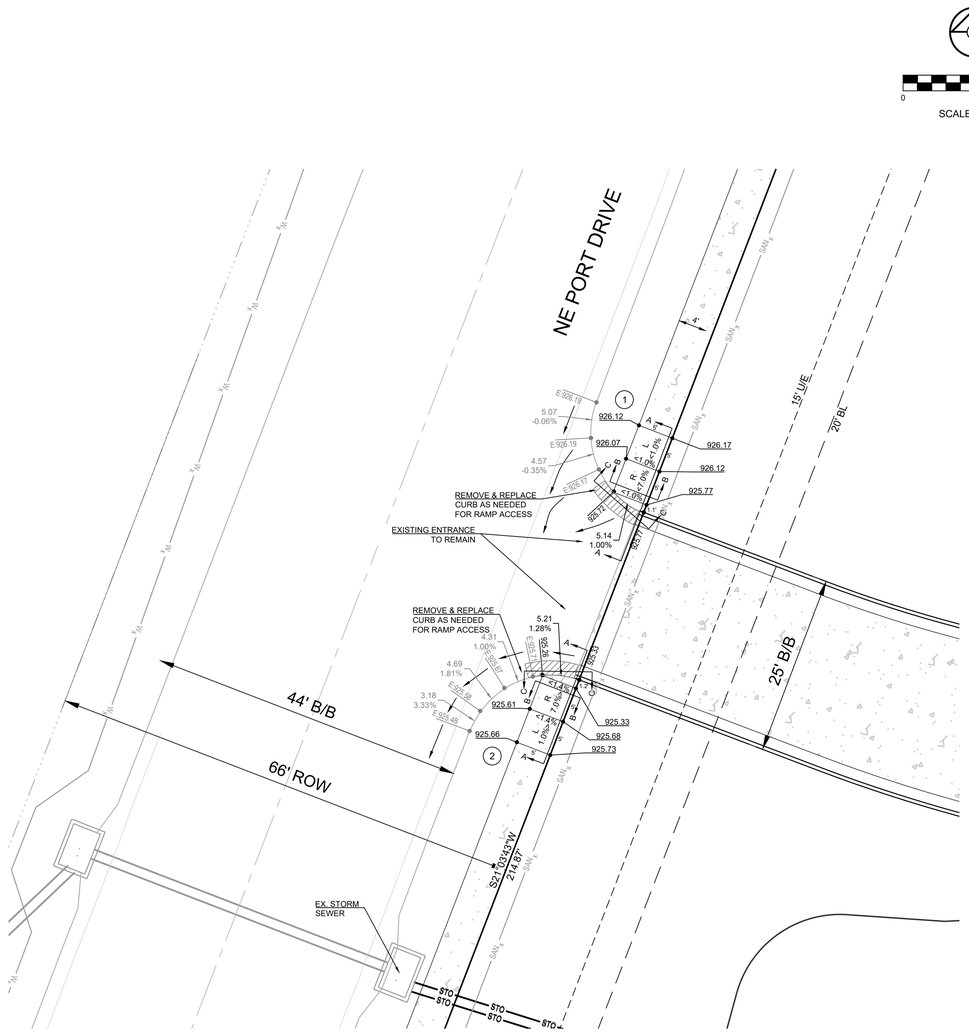


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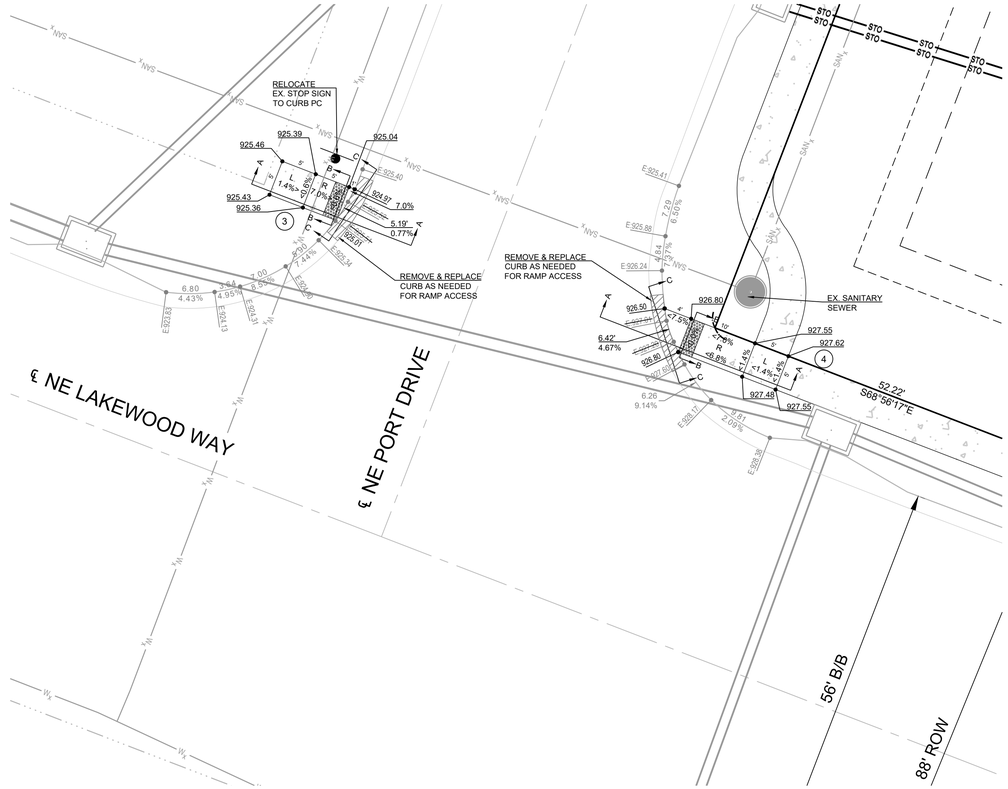


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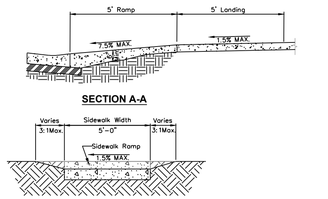


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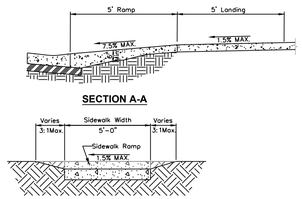


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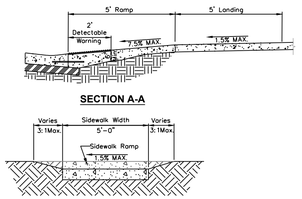


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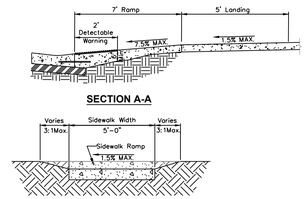


**RAMP 4**
N.T.S.

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PREPARED BY:

STATE OF MISSOURI
JEFFREY T. SIGMORE
PLUMBER
PE-2021000125
PROFESSIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

# LAKEWOOD BUSINESS PARK - LOT 35
## FINAL DEVELOPMENT PLANS
## 4101 NE PORT DRIVE
## LEE'S SUMMIT, MISSOURI

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INTERSECTION DTAILS

SHEET
C2.1

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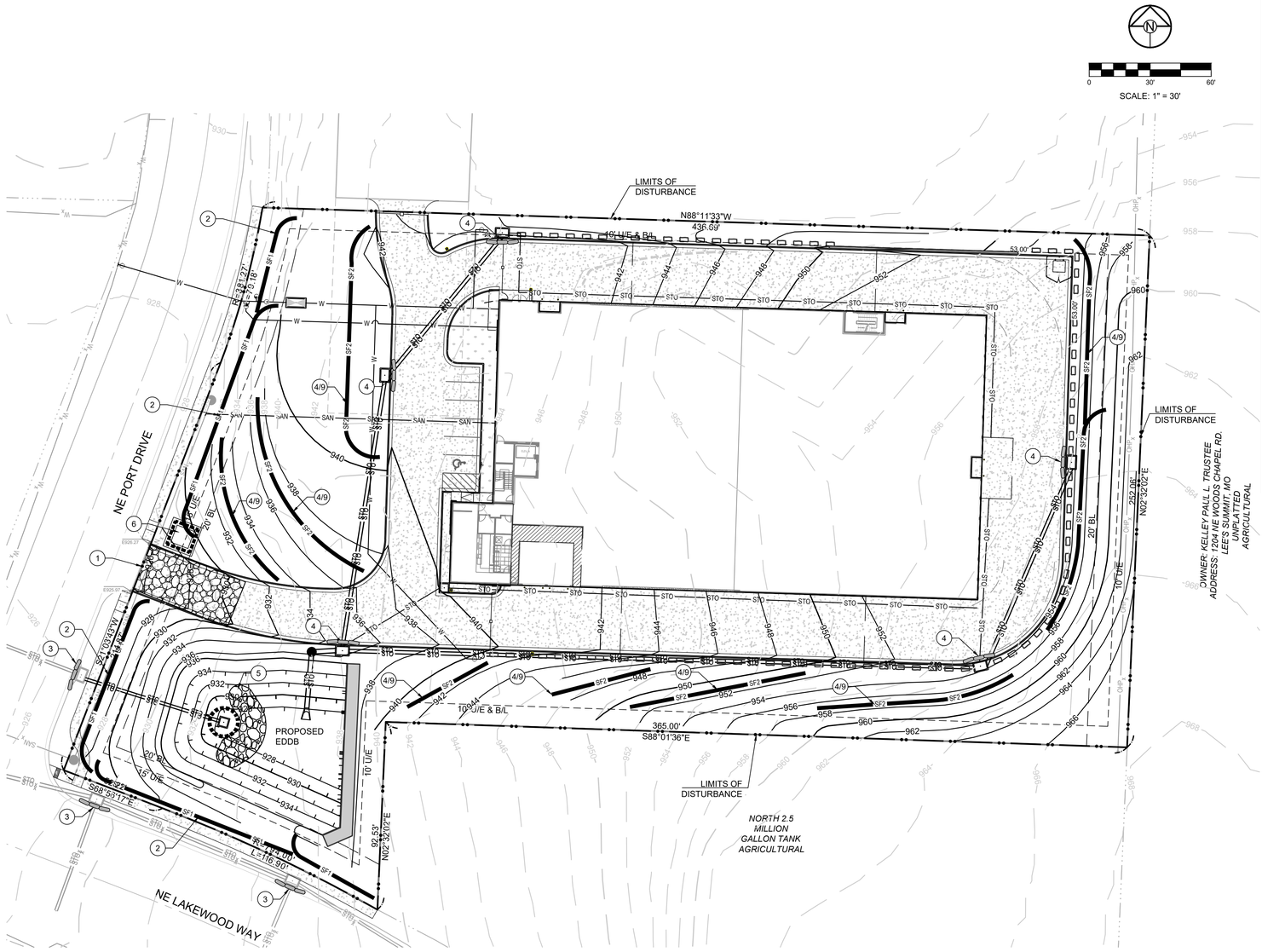


## EROSION AND SEDIMENT CONTROL STAGING CHART

| PROJECT STAGE | BMP PLAN REF. NO | BMP DESCRIPTION | REMOVE AFTER STAGE | NOTES: |
|---|---|---|---|---|
| A - PRIOR TO LAND DISTURBANCE | 1 | CONSTRUCTION ENTRANCE & STAGING AREA | D | MAINTAIN, REPAIR, OR REPLACE AS NECESSARY |
| | 2 | SILT FENCE (PRIOR TO LAND DISTURBANCE) | E | PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED |
| | 3 | EXISTING INLET PROTECTION (GRAVEL CURB INLET SEDIMENT TRAP) | E | PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED |
| B - MASS GRADING | 4 | SILT FENCE (DURING CONSTRUCTION) | E | PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED |
| | 5 | TEMP. SEDIMENT TRAP (REF. DETAIL ON SHEET C3.1) | E | TO BE INSTALLED PRIOR TO DISTURBING ENTIRE SITE. |
| C - UTILITY CONSTRUCTION | 6 | CONCRETE WASHOUT AREA | E | MAINTAIN, REPAIR, OR REPLACE AS NECESSARY |
| | 7 | INLET PROTECTION (SILT FENCE) | D/E | PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES PRIOR TO TOPS BEING PLACED SILT FENCE REMOVED & REPLACE WITH #7 BELOW WITH PLACEMENT OF TOPS AND/OR STABLIZATION OF DRAINAGE AREAS. |
| D - AFTER PAVING OPERATIONS | 8 | INLET PROTECTION (GRAVEL FILTER BAGS) | E | BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED |
| | 9 | SILT FENCE (AFTER CURB CONSTRUCTION) | E | PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED |
| | 10 | SEEDING AND MULCHING | E | ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY |
| E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT | 11 | | | ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE. |

**DISTURBED AREA = 2.93 A.C.**

**SITE SPECIFIC NOTES:**

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
3. NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0414G DATED JANUARY 20, 2017.
4. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
5. ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.
6. STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPS. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
7. ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
8. SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
9. AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

## LEGEND

- TEMPORARY STORAGE AREA FOR EXCESS MATERIAL
- TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA
- CONCRETE WASHOUT AREA
- SILT FOAM DIKE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS
- ROCK DITCH CHECK
- GRAVEL CURB INLET SEDIMENT TRAP
- 1 — BMP PLAN REF. NO.
- SF1 — SILT FENCE (PRIOR TO LAND DISTURBANCE)
- SF2 — SILT FENCE (DURING CONSTRUCTION)
- x — CONSTRUCTION FENCE
- LIMITS OF DISTURBANCE
- 965 — EXISTING CONTOURS
- 965 — PROPOSED CONTOURS
- STRAW BALE DITCH CHECK
- GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY
- TEMP. SEDIMENT TRAP BERM

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

**PROJECT BENCHMARK:**

MONUMENT FOUND
CHISELED "SQUARE" ON STORM CURB INLET #30 AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413

ELEV. 1004.09

MISSOURI ONE CALL SYSTEM
1-800-344-7483 or 811
mo1call.com

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Missouri State Certificates of Authority
#E2000030800-F #LA2000105237 #LS2000208859-F

PREPARED BY:

STATE OF MISSOURI
JEFFREY T. SIMMONS
NUMBER PE-2021000125
PROFESSIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

# LAKEWOOD BUSINESS PARK - LOT 35
## FINAL DEVELOPMENT PLANS
## 4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI

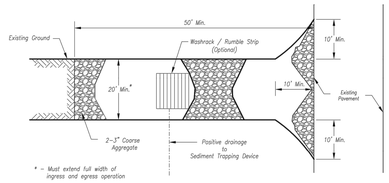
| REVISION DATE | DESCRIPTION |
|---|---|
| 08/13/2021 | City Comments |
| 08/30/2021 | City Comments |
| 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 09/25/2021
PROJ. NUMBER: 20-261

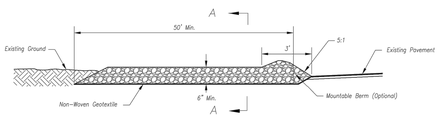
EROSION CONTROL PLAN

SHEET C3.0

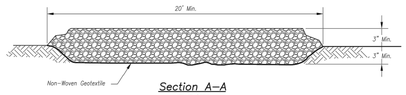
I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-5-FDP-ECP.dwg, 9/7/2021 3:58:32 PM, 1:1




Plan View
Not to Scale




Side Elevation
Not to Scale




Section A–A
Not to Scale

*Notes for Construction Entrance:*

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

*Maintenance for Construction Entrance:*

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

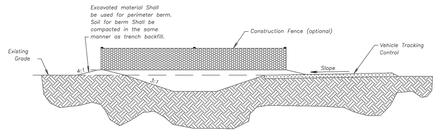
CONSTRUCTION ENTRANCE

*Notes for Concrete Washout:*

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one–piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

*Maintenance for Concrete Washout:*

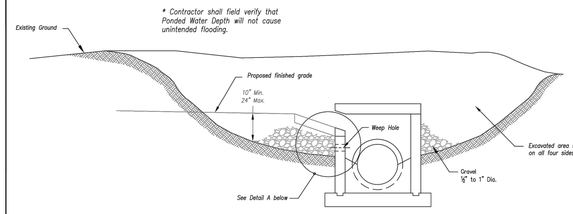
1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water–tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



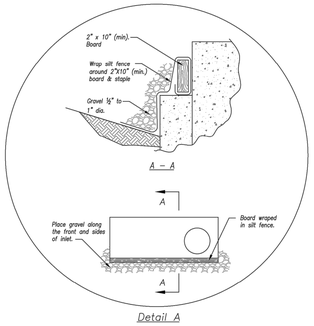

CONCRETE WASHOUT

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA American Public Works Association | KANSAS CITY METRO CHAPTER |
| CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT | STANDARD DRAWING NUMBER ESC-01 ADOPTED: 10/24/2016 |




On Grade Curb Inlet Protection




Detail A

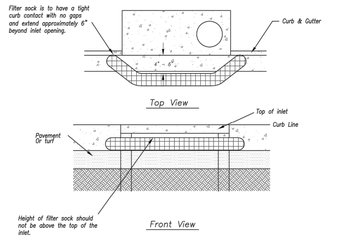
*Notes:*

1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" x 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

*Maintenance:*

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

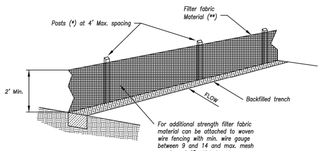


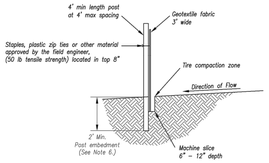

Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA American Public Works Association | KANSAS CITY METRO CHAPTER |
| CURB INLET PROTECTION | STANDARD DRAWING NUMBER ESC-06 ADOPTED: 10/24/2016 |

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.




(*) POSTS
– MIN. LENGTH 4'
– HARDWOOD 1 ¾" x 1 ¾"
– NO.2 SOUTHERN PINE 2 ¾" x 2 ¾"
– STEEL 1.33 LB/FT

(**) – Geotextile Fabric shall meet the requirements of AASHTO M288

*Notes:*

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2" into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

*Maintenance:*

1. Remove and dispose of sediment deposits when the deposit approaches ½ the height of silt fence.
2. Repair as necessary to maintain function and structure.

SILT FENCE DETAILS
Not to Scale

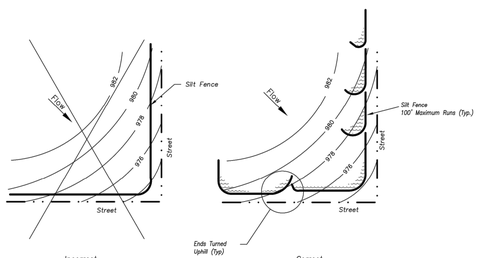
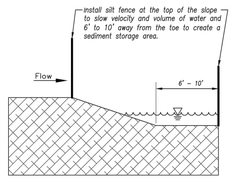
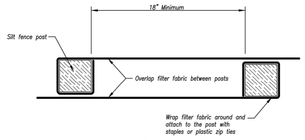



Figure A



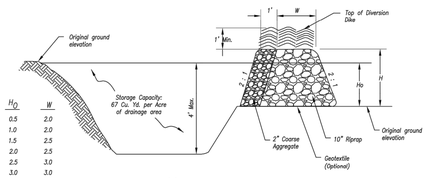




JOINING FENCE SECTIONS
Not to Scale

SILT FENCE DETAILS
Not to Scale

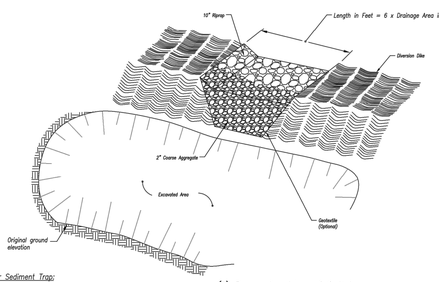
| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA American Public Works Association | KANSAS CITY METRO CHAPTER |
| SILT FENCE | STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016 |

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.




| H | Ho | W |
|---|---|---|
| 1.5 | 0.5 | 2.0 |
| 2.0 | 1.0 | 2.0 |
| 2.5 | 1.5 | 2.5 |
| 3.0 | 2.0 | 2.5 |
| 3.5 | 2.5 | 3.0 |
| 4.0 | 3.0 | 3.0 |
| 4.5 | 3.5 | 4.0 |
| 5.0 | 4.0 | 4.5 |

(*) Cross Section of Outlet
Not to Scale




(*) Perspective View of Outlet
Not to Scale

(*) – The perspective view and cross section are schematic in nature. Construction plans must provide specific site construction arrangements.

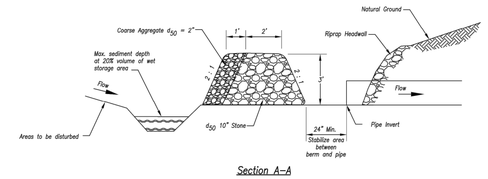
*Notes for Sediment Trap:*

1. The area under the embankment shall be cleared, grubbed, and stripped of any vegetation and root mat.
2. Fill material for the embankment shall be free of roots or other woody vegetation, organic material, large stones, and other objectionable material. The embankment should be compacted in 6–inch layers by traversing with construction equipment.
3. The earthen embankment shall be stabilized immediately after installation.
4. Construction operations shall be carried out to minimize erosion and water pollution.
5. The structure shall be removed and the area stabilized when the upslope drainage area has been stabilized.
6. All cut and fill slopes shall be 2H : 1V or flatter, except for excavated, wet storage areas which may be at a maximum 1H : 1V grade.

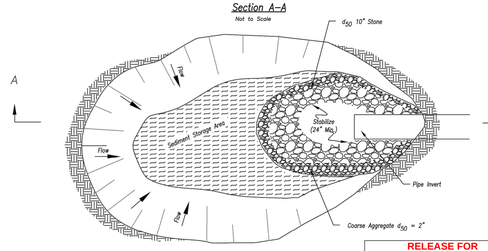
*Maintenance for Sediment Trap:*

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

SEDIMENT TRAP




Section A–A
Not to Scale




Plan View
Not to Scale

*Notes for Sediment Trap at Culvert Opening:*

1. The inlet protection device shall be constructed in a manner that will facilitate clean–out and disposal of trapped sediment and minimize interference with construction activities.
2. The inlet protection devices shall be constructed in such manner that any resultant ponding stormwater will not cause excessive inconvenience or damage to adjacent areas or structures.
3. Geometry of the design will be a horseshoe shape around the culvert inlet.
4. The toe of the riprap shall be no closer than 24" from the culvert opening to provide an acceptable emergency outlet for flows from larger storm events.
5. Storage requirements equivalent to that of temporary sediment trap.
6. 67 C.Y./Acre wet storage below base of stone.
7. 67 C.Y./Acre dry storage from base of stone to top of stone berm.

*Maintenance for Sediment Trap at Culvert Opening:*

1. Check sediment traps after periods of significant runoff.
2. Remove sediment and restore the trap to its original dimensions when sediment accumulates to 20% of the storage capacity.
3. Immediately repair any erosion damage to the embankment and outlet.
4. Keep outlet and pool area free of all trash and other debris.

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AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

SEDIMENT TRAP AT CULVERT OPENING

| AMERICAN PUBLIC WORKS ASSOCIATION | |
|---|---|
| Kansas City Metro Chapter APWA American Public Works Association | KANSAS CITY METRO CHAPTER |
| SEDIMENT TRAPS | STANDARD DRAWING NUMBER ESC-08 ADOPTED: 10/24/2016 |

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.


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PREPARED BY:

JEFFREY T. SIDMORE NUMBER PE-2021010125 PROFESSIONAL ENGINEER STATE OF MISSOURI
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE LEE'S
SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
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| 08/13/2021 | City Comments |
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DRAWN BY: RPM
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PROJ. NUMBER: 20-261

EROSION CONTOL DETAILS

SHEET C3.1

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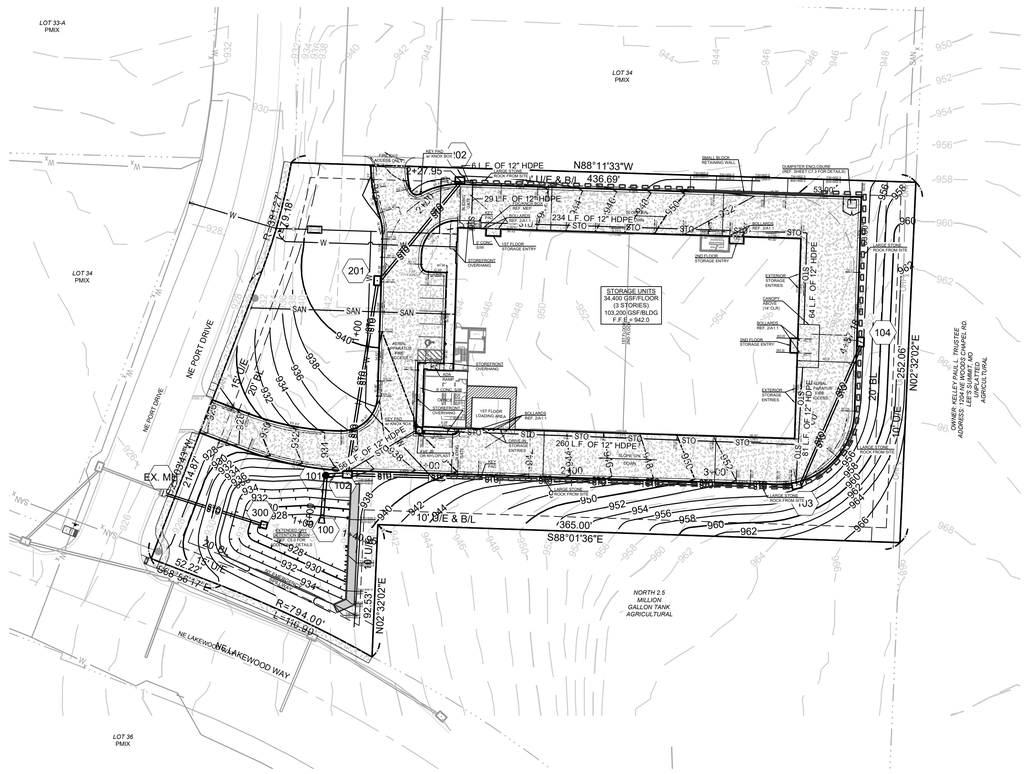


## Schlagel & Associates, P.A.

| | | | |
|---|---|---|---|
| Project Name: | LAKEWOOD BUSINESS PARK | Curb Type: | A |
| Project #: | 18-222 | City: | LEE'S SUMMIT |
| Time: | 6/22/2021 11:14 | | |
| Design Storm: | 10 | | |
| "K" Value: | 1.00 | | |

| Runoff Calculations | | | | | | | | | | | | | | Pipe Properties | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inlet # | Area (acres) | "C" Value | Cumul. Area (acres) | Cumul. CxA | Tc | Intensity | Runoff To Inlet | Cumul. Runoff | Pipe Cap. | Pipe Vel. | Up Piped Inlet 1 | Up Piped Inlet 2 | Up Area (acres) | Up CxA | Up Inlet | Down Inlet | Pipe Type | "n" Value | Pipe Size | Pipe Length | Slope % | Drop In Inlet | FL Up | FL Down | Inlet Top | HGL Elev. |
| LINE 100 | | | | | | | | | | | | | | | | | | | | | | | | | DS TAILWATER @ STR #100 | FREE |
| 101 | 0.00 | 0.70 | 2.83 | 1.98 | 5.6 | 7.18 | 0.00 | 14.24 | 25.70 | 8.18 | | | 0.00 | 0.00 | 101 | 100 | PEP | 0.012 | 24 | 28.19 | 1.10 | 3.01 | 926.31 | 926.00 | 935.12 | 927.97 |
| 102 | 1.95 | 0.70 | 2.83 | 1.98 | 5.6 | 7.18 | 9.82 | 14.24 | 64.84 | 20.64 | 201 | | 0.32 | 0.22 | 102 | 101 | PEP | 0.012 | 24 | 15.10 | 7.00 | 0.50 | 930.38 | 929.32 | 935.50 | 932.04 |
| 103 | 0.28 | 0.70 | 0.56 | 0.39 | 5.2 | 7.30 | 1.44 | 2.87 | 24.13 | 13.65 | | | 0.00 | 0.00 | 103 | 102 | PEP | 0.012 | 18 | 314.03 | 4.50 | 0.50 | 945.00 | 930.88 | 953.21 | 945.76 |
| 104 | 0.28 | 0.70 | 0.28 | 0.20 | 5.0 | 7.35 | 1.44 | 1.44 | 17.18 | 9.72 | | | 0.00 | 0.00 | 104 | 103 | PEP | 0.012 | 18 | 109.83 | 2.28 | 0.50 | 948.00 | 945.50 | 953.33 | 948.53 |
| LINE 200 | | | | | | | | | | | | | | | | | | | | Drop in Inlet 102 | | 0.50 | | | | |
| 201 | 0.09 | 0.70 | 0.32 | 0.22 | 5.2 | 7.29 | 0.45 | 1.62 | 12.12 | 9.88 | | | 0.00 | 0.00 | 201 | 102 | PEP | 0.012 | 15 | 137.13 | 3.00 | 0.50 | 934.99 | 930.88 | 941.28 | 935.59 |
| 202 | 0.23 | 0.70 | 0.23 | 0.16 | 5.0 | 7.35 | 1.19 | 1.19 | 8.99 | 7.33 | | | 0.00 | 0.00 | 202 | 201 | PEP | 0.012 | 15 | 90.81 | 1.65 | 0.50 | 936.99 | 935.49 | 942.42 | 937.49 |

| | |
|---|---|
| Design Storm: | 100 |
| "K" Value: | 1.25 |

| Runoff Calculations | | | | | | | | | | | | | | Pipe Properties | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Inlet # | Area (acres) | "C" Value | Cumul. Area (acres) | Cumul. CxA | Tc | Intensity | Runoff To Inlet | Cumul. Runoff | Pipe Cap. | Pipe Vel. | Up Piped Inlet 1 | Up Piped Inlet 2 | Up Area (acres) | Up CxA | Up Inlet | Down Inlet | Pipe Type | "n" Value | Pipe Size | Pipe Length | Slope % | Drop In Inlet | FL Up | FL Down | Inlet Top | HGL Elev. |
| LINE 100 | | | | | | | | | | | | | | | | | | | | | | | | | DS TAILWATER @ STR #100 | FREE |
| 101 | 0.00 | 0.70 | 2.83 | 1.98 | 5.6 | 10.09 | 0.00 | 25.01 | 25.70 | 8.18 | | | 0.00 | 0.00 | 101 | 100 | PEP | 0.012 | 24 | 28.19 | 1.10 | 3.01 | 926.31 | 926.00 | 935.12 | 928.64 |
| 102 | 1.95 | 0.70 | 2.83 | 1.98 | 5.6 | 10.09 | 17.24 | 25.02 | 64.84 | 20.64 | 201 | | 0.32 | 0.22 | 102 | 101 | PEP | 0.012 | 24 | 15.10 | 7.00 | 0.50 | 930.38 | 929.32 | 935.50 | 932.70 |
| 103 | 0.28 | 0.70 | 0.56 | 0.39 | 5.2 | 10.24 | 2.53 | 5.04 | 24.13 | 13.65 | | | 0.00 | 0.00 | 103 | 102 | PEP | 0.012 | 18 | 314.03 | 4.50 | 0.50 | 945.00 | 930.88 | 953.21 | 946.04 |
| 104 | 0.28 | 0.70 | 0.28 | 0.20 | 5.0 | 10.32 | 2.53 | 2.53 | 17.18 | 9.72 | | | 0.00 | 0.00 | 104 | 103 | PEP | 0.012 | 18 | 109.83 | 2.28 | 0.50 | 948.00 | 945.50 | 953.33 | 948.72 |
| LINE 200 | | | | | | | | | | | | | | | | | | | | Drop in Inlet 102 | | 0.50 | | | | |
| 201 | 0.09 | 0.70 | 0.32 | 0.22 | 5.2 | 10.24 | 0.79 | 2.85 | 12.12 | 9.88 | | | 0.00 | 0.00 | 201 | 102 | PEP | 0.012 | 15 | 137.13 | 3.00 | 0.50 | 934.99 | 930.88 | 941.28 | 935.81 |
| 202 | 0.23 | 0.70 | 0.23 | 0.16 | 5.0 | 10.32 | 2.08 | 2.08 | 8.99 | 7.33 | | | 0.00 | 0.00 | 202 | 201 | PEP | 0.012 | 15 | 90.81 | 1.65 | 0.50 | 936.99 | 935.49 | 942.42 | 937.68 |


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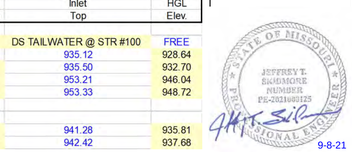
PREPARED BY:




9-8-21

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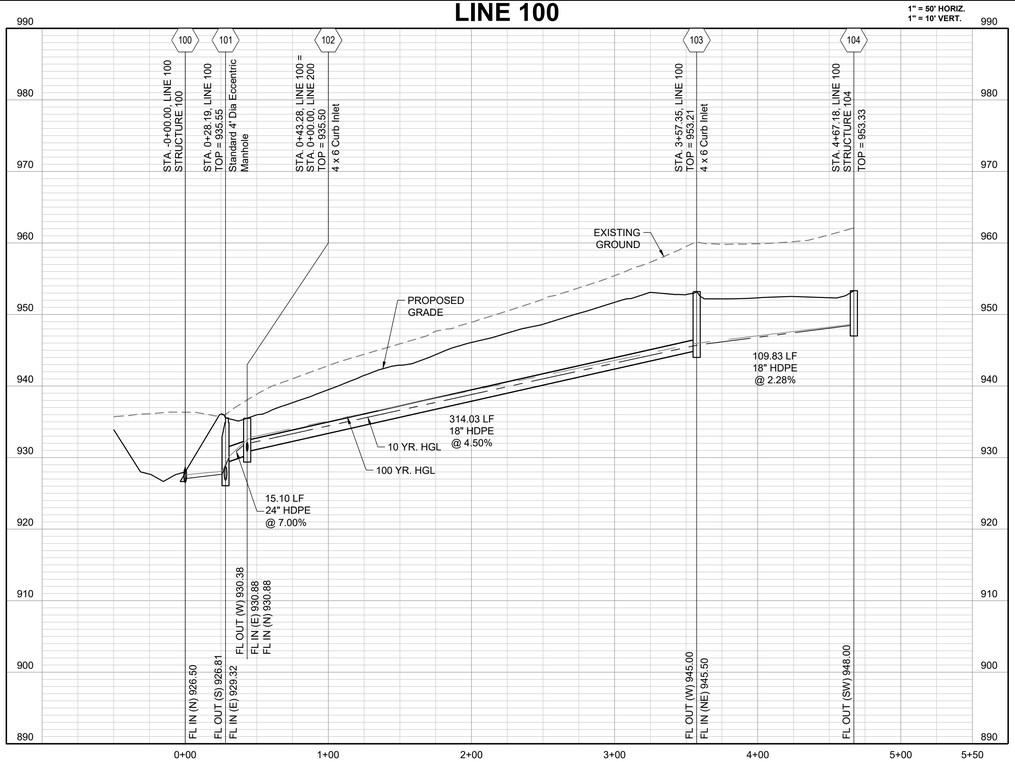
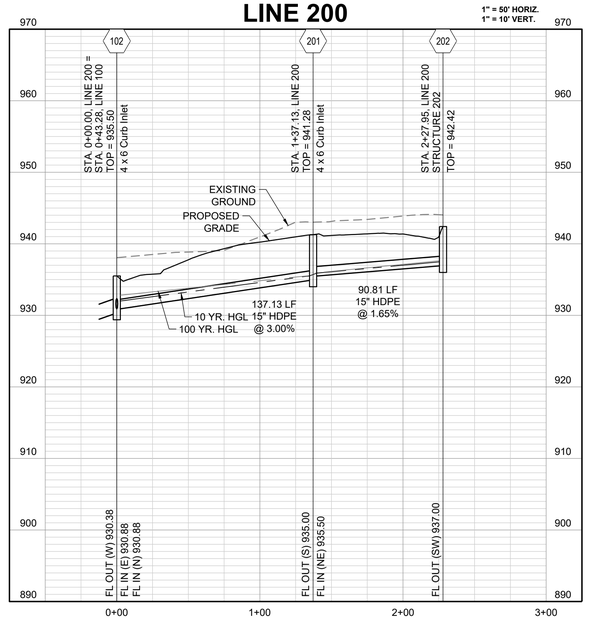
# LINE 100

1" = 50' HORIZ.
1" = 10' VERT.




# LINE 200

1" = 50' HORIZ.
1" = 10' VERT.




| Storm Sewer Construction Notes | |
|---|---|
| Structure | Notes |
| 100 | STA -0+00.00, LINE 100<br>INSTALL 24 INCH RCP F.E.S.<br>264°58'18"<br>N 1026415.6767 E 2830785.4381 |
| 101 | STA 0+28.19, LINE 100<br>INSTALL STANDARD 4' DIA ECCENTRIC MANHOLE<br>84°58'17"<br>N 1026443.7542 E 2830787.9087 |
| 102 | STA 0+43.28, LINE 100<br>INSTALL 4 X 6 CURB INLET<br>88°11'33"<br>N 1026444.3471 E 2830802.9959 |
| 103 | STA 3+57.35, LINE 100<br>INSTALL 4 X 6 CURB INLET<br>102°35'10"<br>N 1026436.7618 E 2831116.9328 |
| 104 | STA 4+67.18, LINE 100<br>INSTALL 4 X 6 CURB INLET<br>178°11'33"<br>N 1026537.0354 E 2831161.7330 |
| 201 | STA 1+37.13, LINE 200<br>INSTALL 4 X 6 CURB INLET<br>358°11'08"<br>N 1026579.8758 E 2830823.9201 |

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION | DATE | DESCRIPTION |
|---|---|---|
| 1 | 08/13/2021 | City Comments |
| 2 | 08/30/2021 | City Comments |
| 3 | 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

STORM SEWER PLAN & PROFILE

SHEET
C4.0

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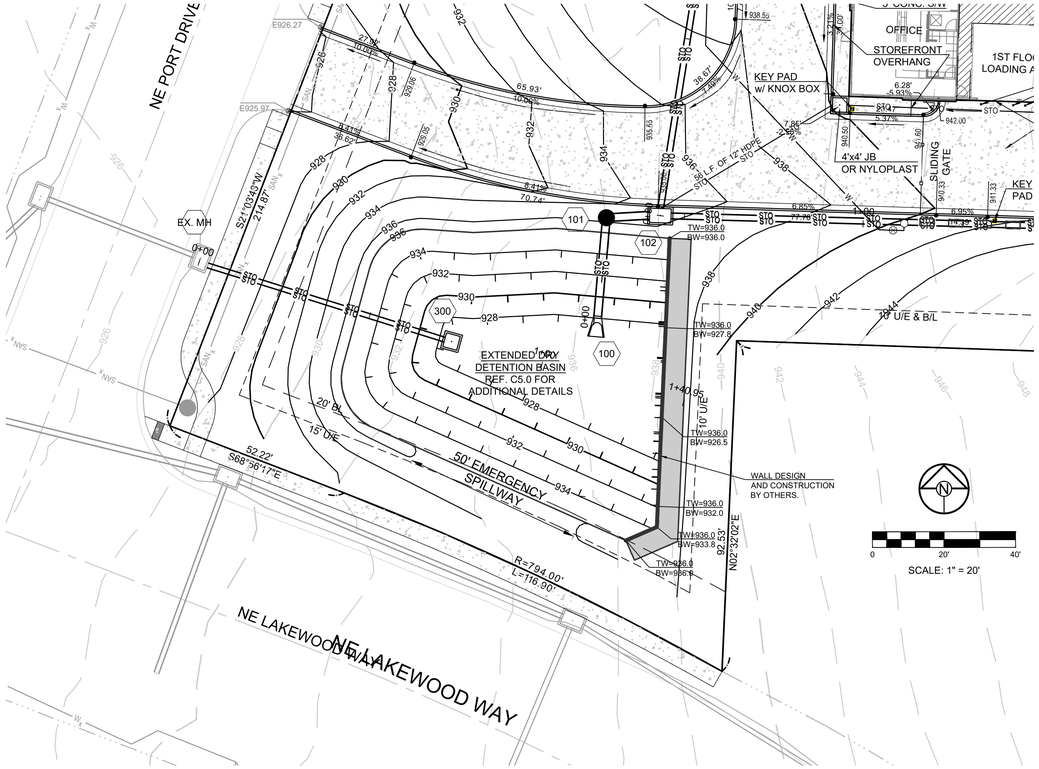
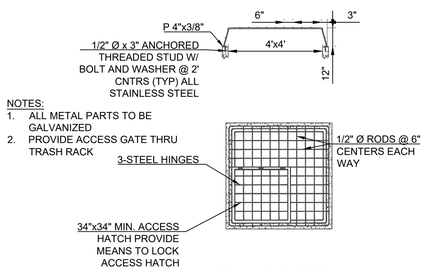
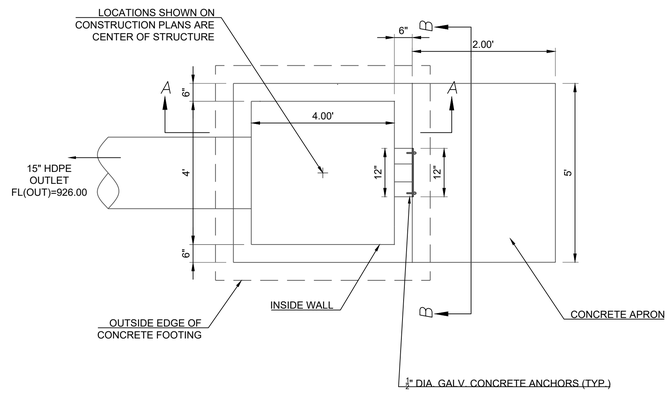
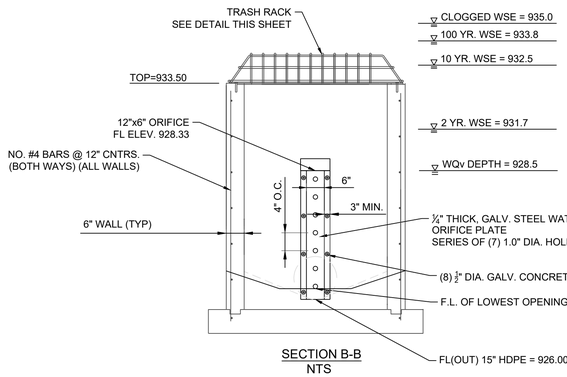



## OUTLET STRUCTURE 300

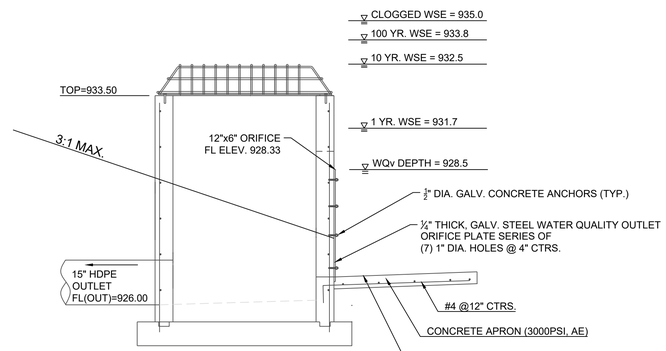



TRASH RACK DETAIL



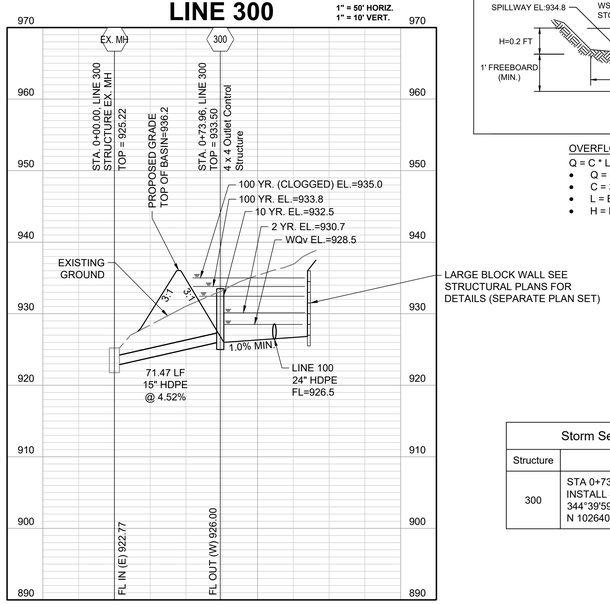




SECTION B-B
NTS

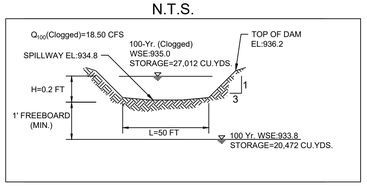



SECTION A-A
NTS

## SECTION VIEW OF DAM OUTLET STRUCTURE




## PROFILE VIEW
## EMERGENCY SPILLWAY
N.T.S.




OVERFLOW CALCULATIONS:

$Q = C * L * H^{(\frac{3}{2})}$

- $Q = Q_{100}$
- C = 3.33
- L = BASE WIDTH
- H = HEIGHT

| Storm Sewer Construction Notes | |
|---|---|
| Structure | Notes |
| 300 | STA 0+73.96, LINE 300<br>INSTALL 4 X 4 OUTLET CONTROL STRUCTURE<br>344°39'59"<br>N 1026409.1464 E 2830744.6401 |

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PREPARED BY:

JEFFREY T. SHOEMORE NUMBER PE-2021005125 NATIONAL ENGINEER STATE OF MISSOURI
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

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LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
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| 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

DETENTION BASIN PLAN & PROFILE

SHEET
C5.0

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-3-FDP-STRM.dwg, 9/7/2021 3:59:31 PM, 1:1

NOTE:
ALL EASEMENTS
ARE AS RECORDED IN:
BOOK I-79
PAGE 42

STORAGE UNITS
34,400 GSF/FLOOR
(3 STORIES)
103,200 GSF/BLDG
F.F.E = 942.0

UTILITY INFORMATION & CONTACTS:

Missouri Gas Energy
Attn: Lucas Walls
3025 Southeast Clover Drive
Lee's Summit, Missouri 64082
Phone: (816) 969-2218
Email: lucas.walls@sug.com

Kansas City Power & Light
Attn: Phillip Ingram
1300 Hamblen Road
Lee's Summit, Missouri 64081
Phone: (816) 347-4339
Email: phillip.ingram@kcpl.com

Sewer and Water - City of Lee's Summit
220 SE Green Street
Lee's Summit, Missouri 64063
Phone: (816) 969-1900
Email: publicworks@cityofls.net

AT&T
Attn: Herb Upshaw
9444 Nall Avenue
Overland Park, Kansas 66207
Phone: (913) 383-4929
Email: hu4112@att.com

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDON. THE SURVEYOR FURTHER DOES NOT WARRANTY THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

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RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

SCALE: 1" = 20'


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PREPARED BY:

JEFFREY T. SIDMORE NUMBER PE-2021005125 STATE OF MISSOURI PROFESSIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---|---|
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| 2 08/30/2021 | City Comments |
| 3 09/07/2021 | City Comments |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

UTILITY PLAN

SHEET
C6.0

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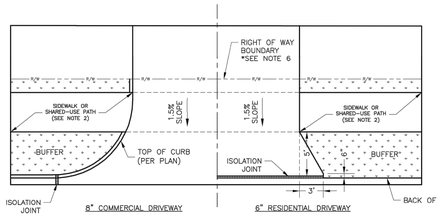
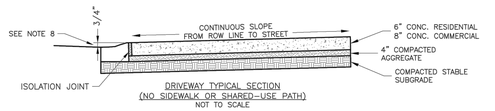
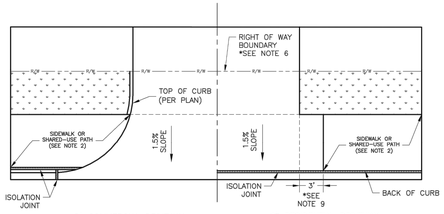


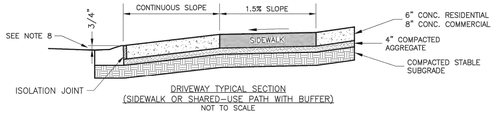

DRIVEWAY WITH BUFFER
NOT TO SCALE



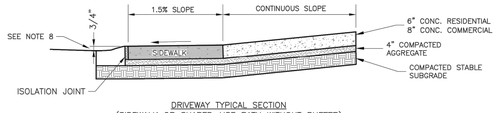

DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE




DRIVEWAY WITHOUT BUFFER
NOT TO SCALE




DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE




DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS AND DRIVEWAY APPROACHES, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
9. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
10. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

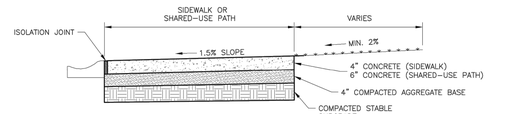
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

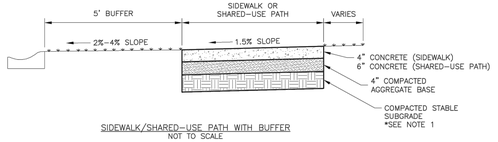
Project:
Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-1




SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE




SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

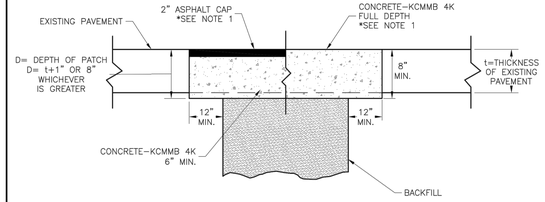
GENERAL NOTES:
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SIDEWALK/SHARED-USE PATH DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-2




TRENCHING/PATCHING DETAIL
NOT TO SCALE

NOTE:
1. ASPHALT CAP OR FULL DEPTH CONCRETE SHALL BE DETERMINED BY CITY INSPECTOR.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRENCHING/PATCHING ROADWAYS DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-5

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PREPARED BY:

JEFFREY T. SIDMORE NUMBER PE-2021000125 NATIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

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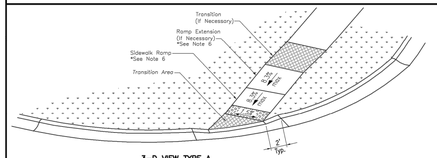
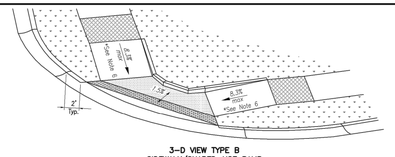
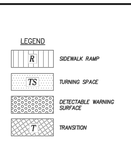
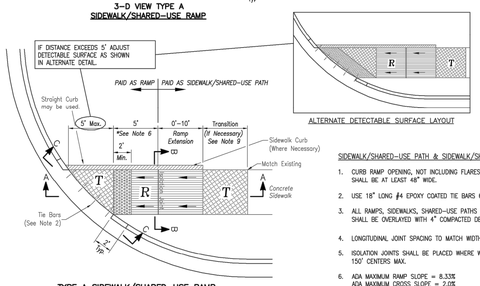



3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP




3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

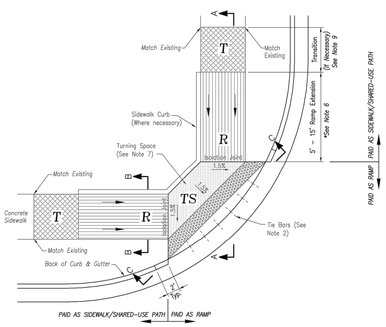



TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

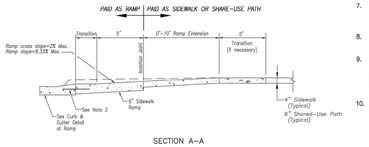



ALTERNATE DETECTABLE SURFACE LAYOUT

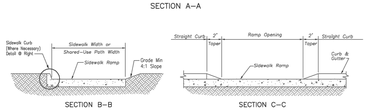



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
ADA MAXIMUM CROSS SLOPE = 2.0%
*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).




SECTION A-A

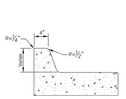



SECTION B-B

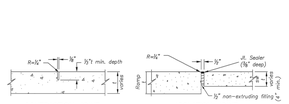



SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale

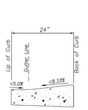



SIDEWALK CURB DETAIL
Not to Scale




CONTRACTION JOINT ISOLATION JOINT

JOINT DETAILS
Not to Scale




CURB & GUTTER DETAIL AT RAMP
Not to Scale

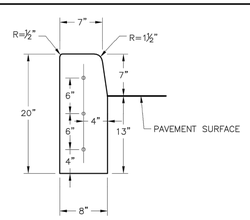
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

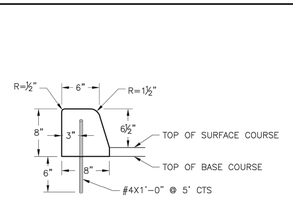
Project:
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

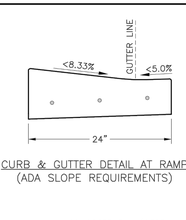
GEN-3A



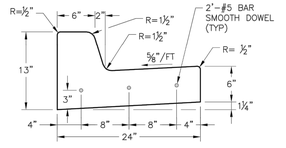

STRAIGHT CURB
(TYPE C-1)



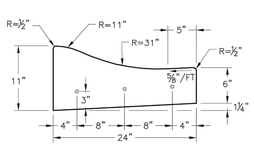

DOWELLED CURB
(TYPE DC)



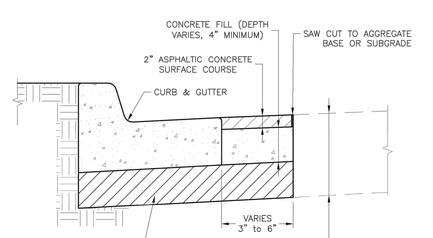

CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



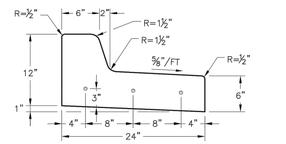

STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)



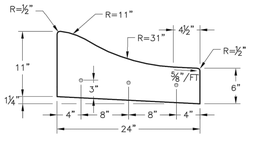

ROLL BACK CURB & GUTTER
(TYPE CG-2)




CURB REPLACEMENT DETAIL




STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)




ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)

GENERAL NOTES
1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Project:
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4

| REVISION DATE | DESCRIPTION |
|---|---|
| 08/13/2021 | City Comments |
| 08/30/2021 | City Comments |
| 09/07/2021 | City Comments |

| | |
|---|---|
| DRAWN BY: | RPM |
| CHECKED BY: | JTS |
| DATE PREPARED: | 06/25/2021 |
| PROJ. NUMBER: | 20-261 |

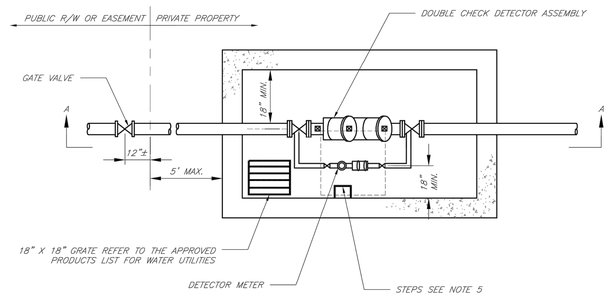
SITE DETAILS

GENERAL NOTE:
ALL NEW CURB AND GUTTER SHALL BE INSTALLED ON AN AGGREGATE BASE, A STABILIZED SUBGRADE OR GEOGRID EXTENDING A MINIMUM OF 1 FOOT (1.0') BEHIND THE BACK OF CURB.

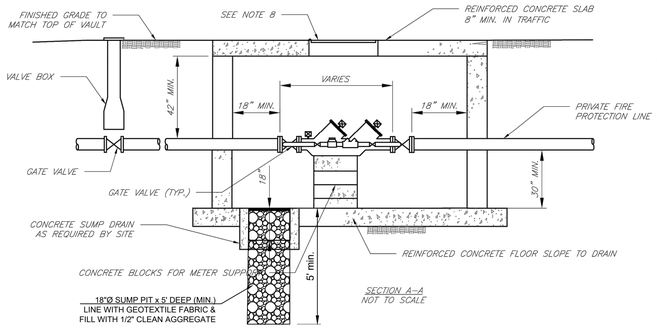
RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

SHEET
C7.0

I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-6-FDP-DTL.dwg, 9/7/2021 4:00:18 PM, 1:1




PLAN VIEW
NOT TO SCALE




SECTION A–A
NOT TO SCALE

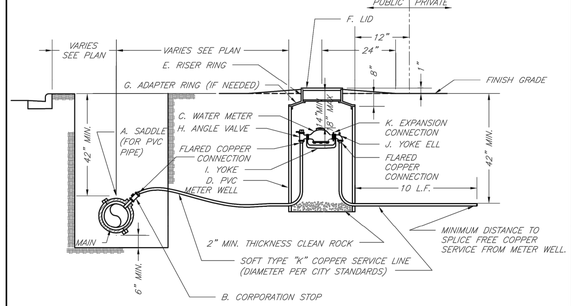
GENERAL NOTES:

1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE. METER VAULT ROOF TO BE REINFORCED CONCRETE WITH OPENING CENTERED OVER DETECTOR METER. REINFORCED WALLS AND SLABS ARE TO BE DESIGNED BY THE OWNER'S ENGINEER OR PRECAST ENGINEER.
2. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA AND WHERE SURFACE WATER WILL NOT DRAIN INTO IT. PROVIDE CONCRETE SUMP TO DRAIN TO AN ABOVE GROUND DISCHARGE POINT.
3. ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
4. ALL FITTINGS FOR THE DETECTOR METER TO BE BRASS.
5. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
6. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT WATER UTILITIES AT 816-969-1900.
7. ALL VALVES SHALL HAVE RISING STEMS.
8. MANHOLE COVER SHALL BE A BILCO K-1 MODEL UNLESS IN A VEHICLE TRAFFIC AREA. SEE THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR TRAFFIC CONDITIONS. THE COVER SHALL HAVE A 1-3/4" ø HOLE DRILLED FOR A TOUCH/READ DEVICE.
9. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
10. CONTACT PUBLIC WORKS ENGINEERING FOR VAULTS THAT INCLUDE A FIRE DEPARTMENT CONNECTION OR A 3" OR LARGER METER.

CITY OF LEE'S SUMMIT, MO
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063

Project: STANDARD DRAWINGS
Detail Name: VAULT FOR DOUBLE CHECK DETECTOR CHECK

Drawn By: AS
Checked By: JDL
Date: 1/14
Rev: 1/14
or
WAT-12



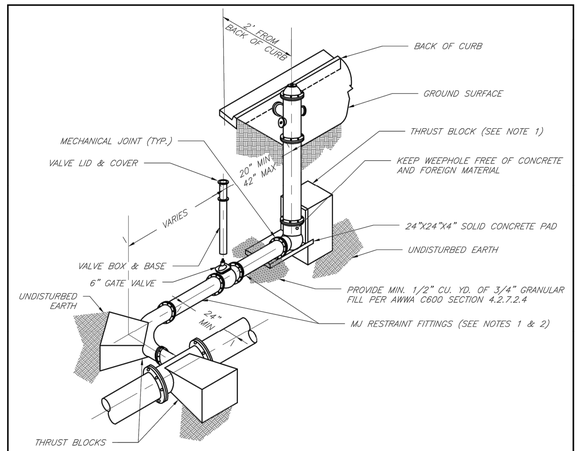

TYPICAL METER INSTALLATION – 2" AND SMALLER
NOT TO SCALE

NOTES:

1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816-969-1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LS | LEE'S SUMMIT MISSOURI | PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063 | SERVICE CONNECTION/METER WELL

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-11
Rev: 1/14
Rev:

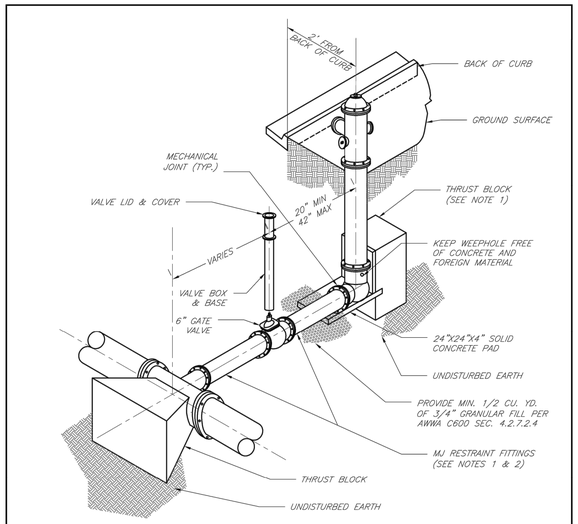



NOTES:

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LS | LEE'S SUMMIT MISSOURI | PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063 | HYDRANT WITH 90 DEGREE BEND

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-8
Rev: 1/14
Rev:




NOTES:

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6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LS | LEE'S SUMMIT MISSOURI | PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063 | HYDRANT INSTALLATION – STRAIGHT SET

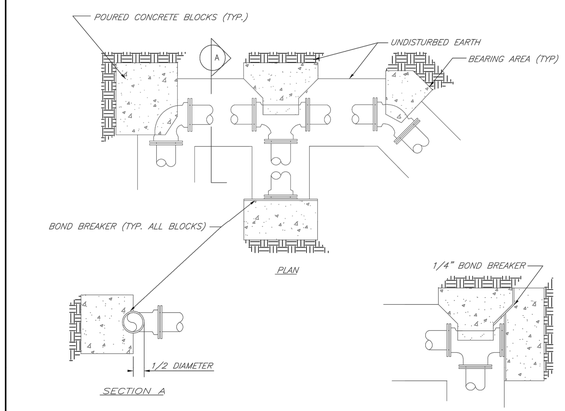
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-7
Rev: 1/14
Rev:

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

| NOM. DIA. (INCHES) | 180 TEE, PLUG | 90 BEND | 45 BEND | 22.5 BEND | 11.25 BEND |
|---|---|---|---|---|---|
| 6 | 4.7 | 6.7 | 4.0 | 4.0 | 4.0 |
| 8 | 8.4 | 11.8 | 6.4 | 4.0 | 4.0 |
| 10 | 13.1 | 18.5 | 10.0 | 5.1 | 4.0 |
| 12 | 18.8 | 26.7 | 14.4 | 7.4 | 4.0 |
| 14 | 25.7 | 36.3 | 19.6 | 10.0 | 5.0 |
| 16 | 33.5 | 47.4 | 25.6 | 13.1 | 6.6 |
| 18 | 42.4 | REST. JT. | 32.5 | 16.5 | 8.3 |
| 20 | REST. JT. | REST. JT. | 40.1 | 20.4 | 10.3 |
| 24 | REST. JT. | REST. JT. | REST. JT. | 29.4 | 14.8 |

NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.




LS | LEE'S SUMMIT MISSOURI | PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063 | HORIZONTAL THRUST BLOCKS

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-1
Rev: 1/14
Rev:

RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
14920 Pilot Knob Road • Lee's Summit, MO 64086
(816) 524-8100 • FAX (816) 524-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2000200800-F #LA2001005237 #LS2000200859-F

PREPARED BY:

STATE OF MISSOURI
JEFFREY T. SIDMORE
NUMBER PE-2021000125
PROFESSIONAL ENGINEER
9-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

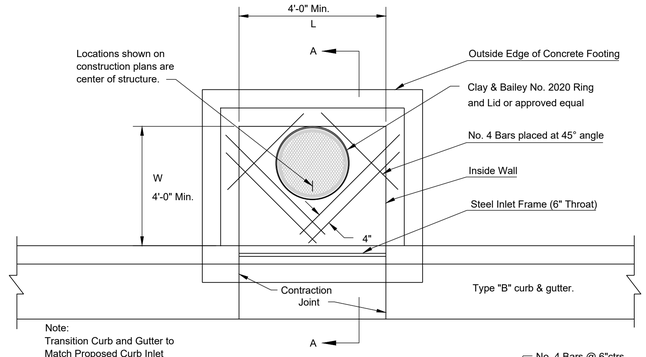
| REVISION | DATE | DESCRIPTION |
|---|---|---|
| 1 | 08/13/2021 | City Comments |
| 2 | 08/30/2021 | City Comments |
| 3 | 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

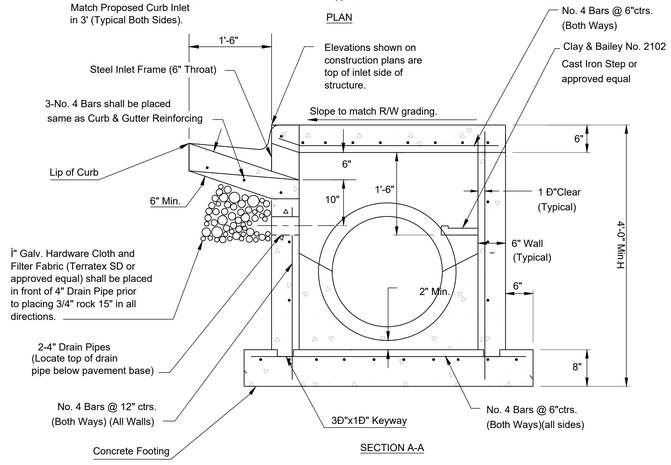
SITE DETAILS

SHEET
C7.1

I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-6-FDP-DTL.dwg, 9/7/2021 4:00:28 PM, 1:1




Note:
Transition Curb and Gutter to Match Proposed Curb Inlet in 3' (Typical Both Sides).




NON-SETBACK CURB INLET
(6" Throat)

NOTES:

General

1. All storm sewer structures shall be pre-cast or poured in place. If pre-cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the city Engineer.
2. Pre-cast shop drawings are to be approved by the city Engineer Prior to casting.
3. Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the city Engineer prior to construction.
4. The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less then or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.

Concrete

5. Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, unless noted otherwise.
6. Concrete construction shall meet the applicable requirements of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, latest edition, unless noted otherwise.
7. Inlet floors shall be shaped with non-reinforced concrete inverts to provide smooth flow.
8. Bevel all exposed edges with 3/4" triangular molding.

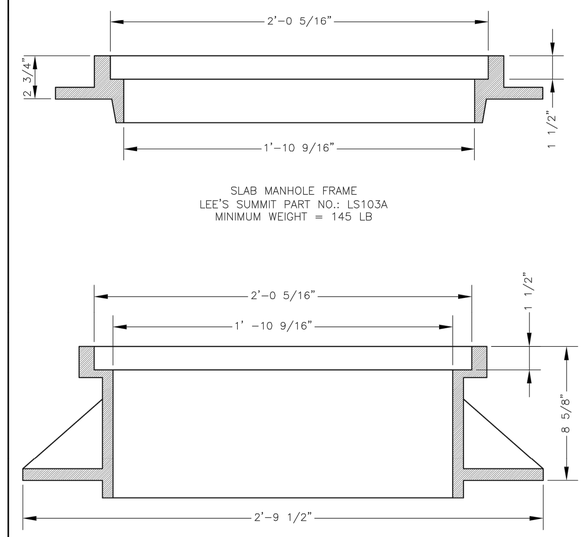
Reinforcing Steel

9. Reinforcing steel shall be new billet, minimum Grade 40 as per ASTM A615, and shall be bent cold.
10. All dimensions relative to reinforcing steel are to centerline of bars. 2" clearance shall be provided throughout unless noted otherwise. Tolerance of +/- 1/8" shall be permitted.
11. All lap splices not shown shall be a minimum of 40 bar diameters in length.
12. All reinforcing steel shall be supported on fabricated steel bar supports @ 3'-0" maximum spacing.
13. All dowels shall be accurately placed and securely tied in place prior to placement of bottom slab concrete. Sticking of dowels into fresh or partially hardened concrete will not be acceptable.

Construction

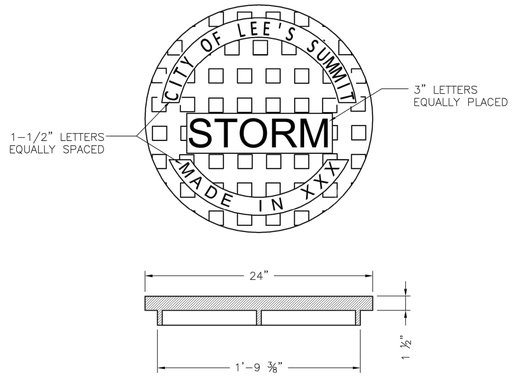
14. The bottom slab shall be at least 24 hours old before placing sidewall concrete. All sidewall forms shall remain in place a minimum of 24 hours after sidewalls are poured before removal, and after removal shall be immediately treated with membrane curing compound.
15. Pipe connections to pre-cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.
16. Material selection and compaction requirements for backfill around structures shall be as specified in the project manual.

# NON-SETBACK CURB INLET




*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.

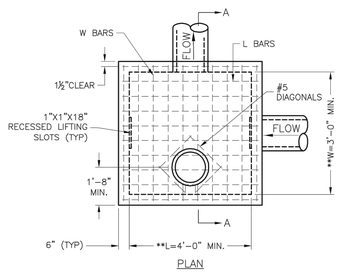
| LEE'S SUMMIT MISSOURI<br>PUBLIC WORKS ENGINEERING DIVISION \| 220 SE GREEN STREET \| LEE'S SUMMIT, MO 64063 | Date: 04/17<br>Drawn By: MJF<br>Checked By: DL |
|---|---|
| STORM MANHOLE FRAME DETAIL | STM-7 |

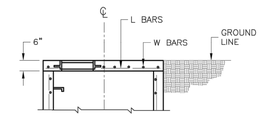



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCT LIST.

| LEE'S SUMMIT MISSOURI<br>PUBLIC WORKS ENGINEERING DIVISION \| 220 SE GREEN STREET \| LEE'S SUMMIT, MO 64063 | Date: 04/17<br>Drawn By: MJF<br>Checked By: DL |
|---|---|
| STORM MANHOLE COVER DETAIL | STM-6 |

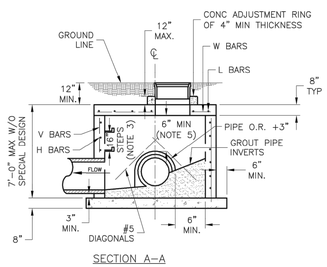


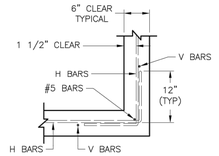




** INCREASE IN MULTIPLES OF 6" (7'-0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

| BARS | BAR SIZE | SPACING (IN.) |
|---|---|---|
| H | 4 | 12 |
| V | 4 | 12 |
| L | 5 | 6 |
| W | 5 | 6 |




RELEASE FOR CONSTRUCTION
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI
09/15/2021

GENERAL NOTES:
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE ¾" CHAMFER STRIP OR ½" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

| LEE'S SUMMIT MISSOURI<br>PUBLIC WORKS ENGINEERING DIVISION \| 220 SE GREEN STREET \| LEE'S SUMMIT, MO 64063 | Project: STANDARD DETAILS<br>CITY OF LEE'S SUMMIT, MO<br>LEE'S SUMMIT, JACKSON COUNTY, MO<br>Sheet Name: JUNCTION BOX DETAIL | Drawn By: MJF<br>Checked By: DL<br>Date: 04/17<br>Proj. #: |
|---|---|---|
| | | STM-3 |

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Missouri State Certificates of Authority
#E2000030800-F #LA2001005237 #LS2000208859-F

PREPARED BY:

JEFFREY T. SIKEMORE NUMBER PE-2021000125 STATE OF MISSOURI PROFESSIONAL ENGINEER
8-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---|---|
| 1 08/13/2021 | City Comments |
| 2 08/30/2021 | City Comments |
| 3 09/07/2021 | City Comments |
| 4 | |
| 5 | |
| 6 | |
| 7 | |
| 8 | |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

SITE DETAILS

SHEET
C7.2

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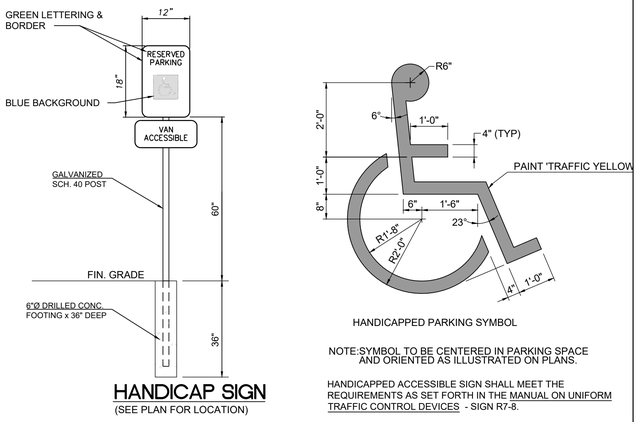



## HANDICAP SIGN

(SEE PLAN FOR LOCATION)

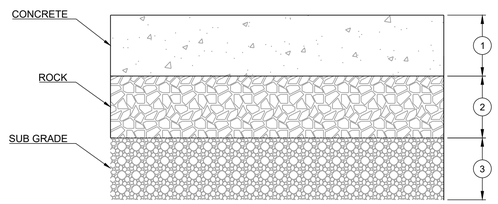



HANDICAPPED PARKING SYMBOL

NOTE:SYMBOL TO BE CENTERED IN PARKING SPACE AND ORIENTED AS ILLUSTRATED ON PLANS.

HANDICAPPED ACCESSIBLE SIGN SHALL MEET THE REQUIREMENTS AS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - SIGN R7-8.

# TYPICAL HANDICAPPED PARKING DETAILS



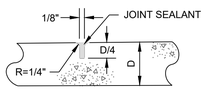

DRIVE AND PARKING AREAS

1. 8" - 4000 PSI PCC PAVEMENT
2. 4" - 3/4" CLEAN ROCK
3. 9" STABILIZED SUBGRADE

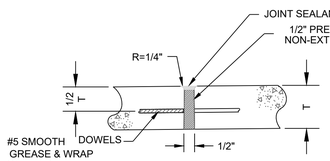
TRASH AREA

1. 8" - 4000 PSI PCC PAVEMENT
2. 4" - 3/4" CLEAN ROCK
3. 9" STABILIZED SUBGRADE

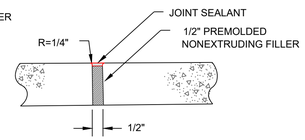
# TYPICAL CONCRETE PAVEMENT SECTION




TYPE 1




TYPE 2




TYPE 3

NOTES:

1. TYPE 1 JOINTS MAY BE CONSTRUCTED WITH A GROOVING TOOL OR WITH A CONCRETE SAW AFTER THE CONCRETE IS SET.
2. TYPE 1 JOINTS SHALL BE SPACE TO EQUAL THE WIDTH OF THE SIDEWALK.

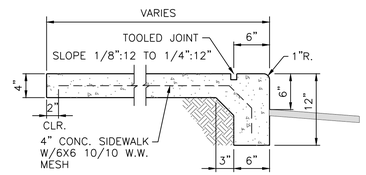
NOTES:

1. TYPE 2 JOINTS SHALL BE PLACED @ ALL P.C.'s, P.T.'s AND TRANSITIONS, AND WHERE NEW WALK TIES INTO EXISTING WALK.
2. SMOOTH BARS SHALL BE 24" LONG.

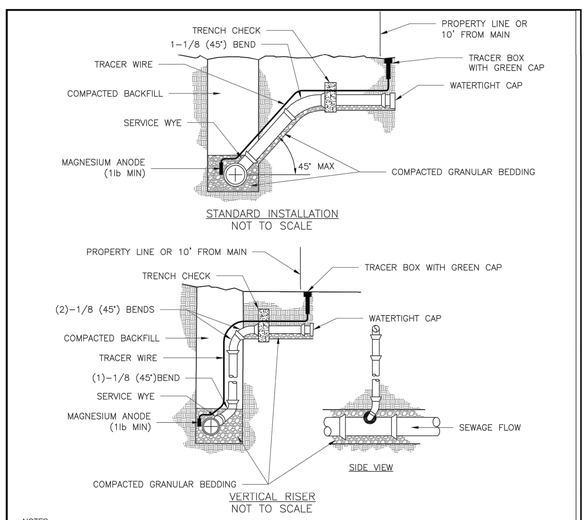
NOTE:

1. TYPE 3 JOINTS SHALL BE PLACED WHERE NEW CONCRETE ABUTS EXISTING CONCRETE AND IN AREAS WHERE DOWEL BARS ARE NOT REQUIRED BY THE ENGINEER.

# TYPICAL CONCRETE PAVEMENT - JOINT DETAILS




# INTEGRAL CURB/SIDEWALK DETAIL




STANDARD INSTALLATION
NOT TO SCALE

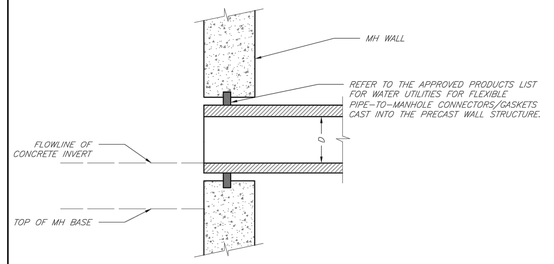



VERTICAL RISER
NOT TO SCALE

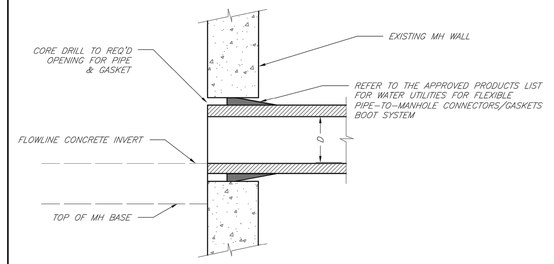
NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
4. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
6. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
7. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
9. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

| LEE'S SUMMIT MISSOURI | Date: 04/17 |
|---|---|
| PUBLIC WORKS ENGINEERING DIVISION \| 220 SE GREEN STREET \| LEE'S SUMMIT, MO 64063 | Drawn By: MJF |
| BUILDING SEWER STUB AND RISER | Checked By: DL |
| | SAN-1 |

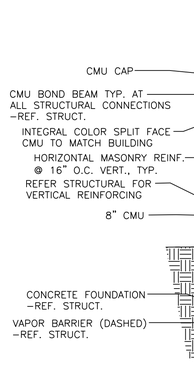


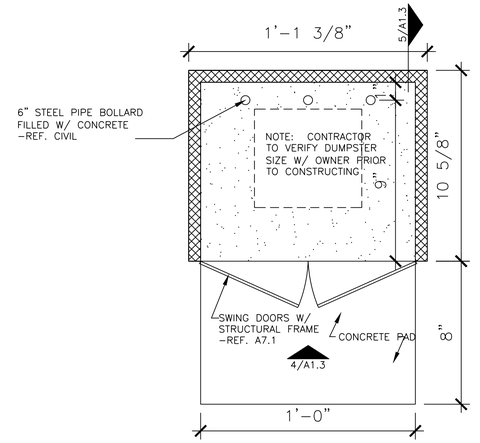

NEW MANHOLE

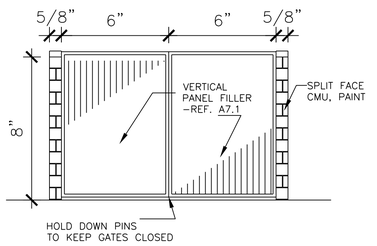



EXISTING MANHOLE

| LEE'S SUMMIT MISSOURI | Date: 02/13 |
|---|---|
| PUBLIC WORKS ENGINEERING DIVISION \| 220 SE GREEN STREET \| LEE'S SUMMIT, MO 64063 | Drawn By: JN |
| MANHOLE WALL CONNECTIONS | Checked By: DL |
| | FILE: SAN-5 |
| | Rev: 1/14 |
| | Rev: |




**RELEASE FOR CONSTRUCTION**
AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI
09/15/2021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Missouri State Certificates of Authority
#E2002000800-F #LA2001005037 #LS2002008859-F


PREPARED BY:

STATE OF MISSOURI JEFFREY T. SIKEMORE NUMBER PE-2021000125 PROFESSIONAL ENGINEER

9-8-21

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE
LEE'S SUMMIT, MISSOURI

| REVISION DATE | DESCRIPTION |
|---|---|
| 08/13/2021 | City Comments |
| 08/30/2021 | City Comments |
| 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

SITE DETAILS

SHEET
C7.3

I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-sl-FDP-DTL.dwg, 9/7/2021 4:00:35 PM, 1:1

| | | | | | | |
|---|---|---|---|---|---|---|
| | AFA | 15 EA. | Acer x freemanii 'Armstrong' | Armstrong Maple | 3" Cal. | B&B |
| | QRR | 6 EA. | Quercus robur x bicolor(aka x warei) 'Long' | Regal Prince Oak | 3" Cal. | B&B |
| | TAR | 5 EA. | Tilia americana 'Redmond' | Redmond Linden | 3" Cal. | B&B |
| | ZSM | 13 EA. | Zelkova serrata 'Musashino' | Musashino Columnar Zelkova | 3" Cal. | B&B |
| EVERGREEN TREES | | | | | | |
| | JCSP | 8 EA. | Juniperus chinensis 'Spartan' | Spartan Juniper | 8' Ht. | B&B |
| | JVC | 8 EA. | Juniperus virginiana 'Canaertii' | Canaert Juniper | 8' ht. | B&B |
| | PS | 8 EA. | Pinus strobus | White Pine | 8' ht. | B&B |
| ORNAMENTAL TREES | | | | | | |
| | AGA | 5 EA. | Amelanchier x grandiflora 'Autumn Brilliance' | Autumn Brilliance Serviceberry | 3" Cal. & 8' Ht. | B&B |
| | SRI | 5 EA. | Syringa reticulata 'Ivory Silk' | Ivory Silk Lilac | 3" Cal. & 8' ht. | B&B |
| SHRUBS | | | | | | |
| | BSW | 28 EA. | Buxus sinica var. insularis 'Wintergreen' fka a microphylla var. | Wintergreen Boxwood | 5 gal. | Cont. |
| | CSA | 14 EA. | Cornus sericea 'Farrow' | Arctic Fire Red Twig Dogwood | 5 gal. | Cont. |
| | JVG | 31 EA. | Juniperus virginana 'Grey Owl' | Grey Owl Juniper | 5 gal. | Cont. |
| | VCK | 8 EA. | Viburnum carlesii 'Korean Spice' | Koreanspice Viburnum | 5 gal. | Cont. |
| GRASSES | | | | | | |
| | CAK | 11 EA. | Calamagrstis x acutifolia 'Karl Foerster' | Karl Foerster Grass | 2 gal. | Cont. |

NOTE: MODIFICATION REQUESTED FOR PLANT SIZES

NOTES:

1. UTILITY INFORMATION SHOWN IS DESIGNED LOCATION OR LOCATIONS BASED ON UTILITY LOCATES. AS BUILT LOCATIONS MAY VARY. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES PRIOR TO COMMENCING LANDSCAPE INSTALLATION. NOTIFY THE LANDSCAPE ARCHITECT OF ANY CONFLICTS OR OBSTRUCTIONS.
2. QUANTITIES INDICATED ON THE PLAN ARE FOR CONVENIENCE ONLY. CONTRACTOR SHALL VERIFY ALL PLANT QUANTITIES PRIOR TO PLANTING. NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES. THE PLAN QUANTITIES AND NUMBER OF SYMBOLS SHALL SUPERSEDED QUANTITIES IN THE SCHEDULE.
3. ALL PLANT MATERIAL SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS AND ANSI A60.1 THE AMERICAN STANDARD FOR NURSERY STOCK.
4. ALL TREES SHALL MEET THE SIZE REQUIREMENTS OF THE LEE'S SUMMIT ORDINANCE. ALL TREES SHALL BE CALLIPERED AND UNDERSIZED TREES SHALL BE REJECTED.
5. ALL SHRUBS TO BE UTILIZED FOR SCREENING SHALL BE 24" HEIGHT AT TIME OF PLANTING.
6. ALL PLANTING BEDS CONTAINING SHRUBS, GROUND COVER, PERENNIALS, ANNUALS SHALL BE IN A PLANTING BED WITH 3" MIN. DEPTH OF MULCH AND A "V-CUT" EDGE.
7. ALL TREES SHALL HAVE A MIN. 3 FT. DIA. AREA THAT HAS 3" MIN. DEPTH OF WOOD MULCH.
8. ALL TURF AREAS SHALL BE SODDED UNLESS INDICATED ON THE PLANS.
9. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN SHALL REQUIRE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT AND THE CITY OF LEE'S SUMMIT, PRIOR TO INSTALLATION.
10. THE LANDSCAPE ARCHITECT AND OWNER SHALL APPROVE GRADES AND CONDITION OF SITE PRIOR TO SODDING OPERATIONS.
11. INSTALLATION AND MAINTENANCE OF LANDSCAPING SHALL COMPLY WITH THE CITY OF LEE'S SUMMIT STANDARDS.
12. ALL PLANT MATERIAL SHALL BE INSTALLED TO ALLOW A MINIMUM CLEARANCE BETWEEN PLANT AND ADJACENT PAVEMENT OF 1 FT. FOR PERENNIALS AND GROUNDCOVER AND 1.5 FT. FOR SHRUBS. A 2 FT. CLEARANCE(4 FEET FROM BACK OF CURB TO THE CENTER OF SHRUB)FOR CAR OVERHANG IS REQUIRED AT ALL PARKING ISLANDS AND PERIMETERS.
13. AFTER COMPLETE INSTALLATION OF ALL PLANT MATERIAL AND SOD THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT THAT THE WORK IS COMPLETE AND READY FOR REVIEW. THE LANDSCAPE ARCHITECT SHALL REVIEW THE LANDSCAPE INSTALLATION TO DETERMINE COMPLIANCE WITH THE APPROVED PLANS. WHEN THE LANDSCAPE INSTALLATION MEETS THE REQUIREMENTS OF THE APPROVED PLAN, THE LANDSCAPE ARCHITECT SHALL PROVIDE A SIGNED AND SEALED LETTER TO THE CITY STATING THAT ALL LANDSCAPE PLANTINGS HAVE BEEN INSTALLED PER THE APPROVED PLAN.
14. ALL EXTERIOR GROUND OR BUILDING MOUNTED EQUIPMENT (MECHANICAL, ELECTRICAL AND/OR TELEPHONE CABINETS), TRANSFORMERS, AIR CONDITIONING UNITS, ETC. SHALL BE SCREENED FROM PUBLIC VIEW BY INSTALLING FIVE SEA GREEN JUNIPERS EVENLY SPACED AROUND THE PERIMETER. FINAL LOCATION OF ANY EQUIPMENT SHALL BE DETERMINED AND VERIFIED WITH THE FINAL DESIGN AND PERMITTING OF THE PROJECT.
15. ALL ROOFTOP EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW WITH AN ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING AND INTEGRAL TO THE OVERALL APPEARANCE OF THE BUILDING.

**LANDSCAPE DATA LOT 1 ONLY**

**STREET FRONTAGE LANDSCAPE**

| | |
|---|---|
| LAKEWOOD WAY TREES REQUIRED(1 PER 30')(169.12'/30') | 6 TREES |
| LAKEWOOD WAY TREES PROVIDED | 6 NEW TREES |
| PORT DRIVE TREES REQUIRED(1 PER 30')(294.05'/30') | 10 TREES |
| PORT DRIVE TREES PROVIDED | 11 NEW TREES |
| LAKEWOOD WAY SHRUBS REQUIRED(1 PER 20')(169.12'/20') | 9 SHRUBS |
| LAKEWOOD WAY SHRUBS PROVIDED | 9 SHRUBS |
| PORT DRIVE SHRUBS REQUIRED(1 PER 20')(294.05'/20') | 15 SHRUBS |
| PORT DRIVE SHRUBS PROVIDED | 15 SHRUBS (IN PARKING LOT SCREEN) |

**SITE LANDSCAPE REQUIRED**

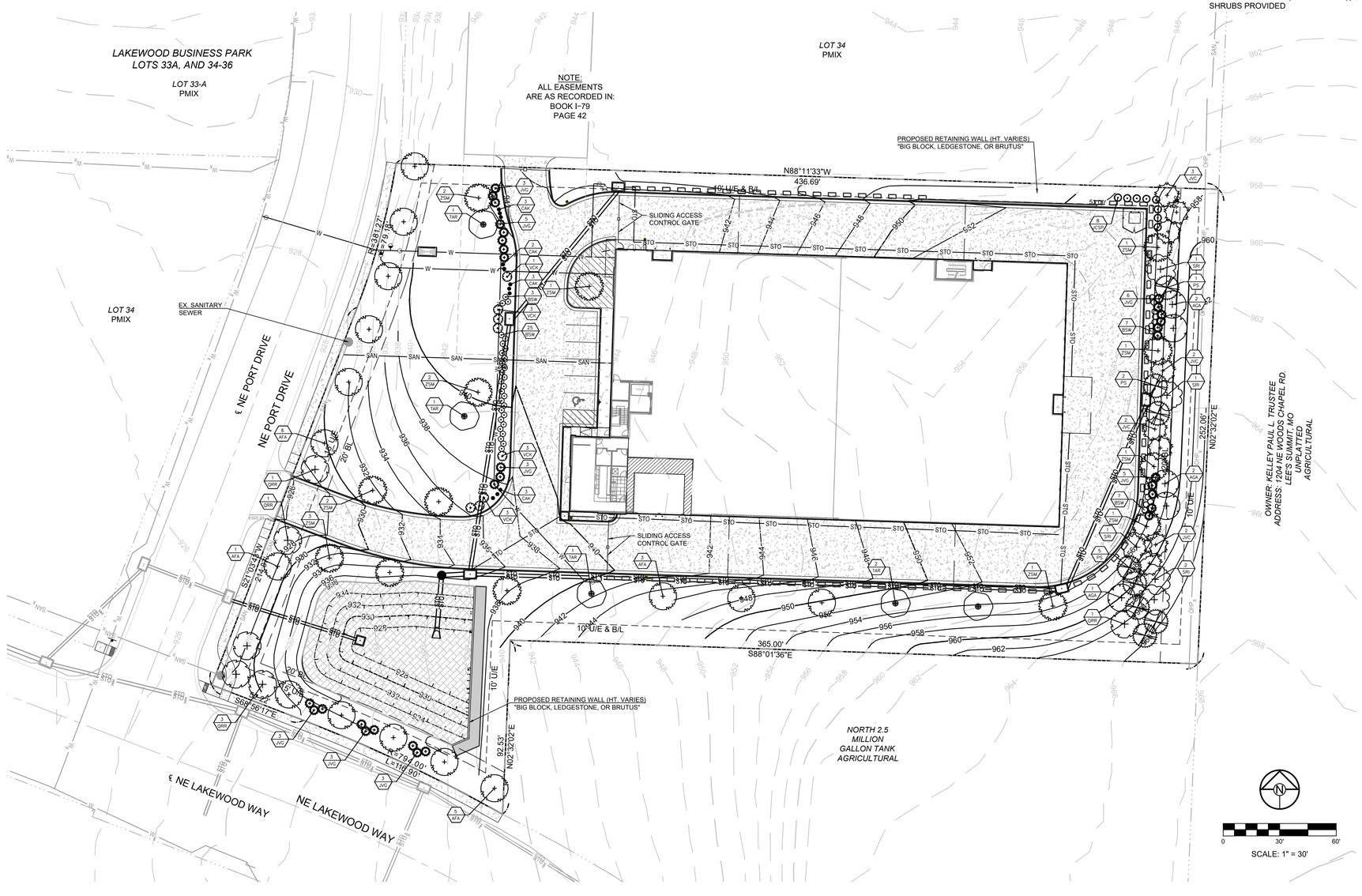
| | |
|---|---|
| TREES REQUIRED (1 PER 5,000 S.F OF OPEN SPACE)(93,083/5000) | 19 TREES |
| TREES PROVIDED | 19 TREES (3 IN BUFFER SCREEN) |
| SHRUBS REQUIRED (2 PER 5,000 S.F. OF LOT AREA)(93,083/5000X2) | 37 SHRUBS |
| SHRUBS PROVIDED | 37 SHRUBS (25 IN BUFFER, 12 IN FRONT) |

**PARKING LOT LANDSCAPE**

| | |
|---|---|
| LANDSCAPE AREA REQUIRED(5% OF PARKING AREA)(2741.0 x 0.05) | 138 S.F. |
| LANDSCAPE AREA PROVIDED | 738.0 S.F. |
| TREES REQUIRED (1 PER ISLAND) | 1 TREE |
| TREES PROVIDED | 1 TREE |
| SCREENING (2.5 FT. HT ALONG ENTIRE FRONTAGE ADJ. TO STREET) | 58 SHRUBS (12 FROM OPEN SPACE, 15 FROM LAKEWOOD WAY) |

**MEDIUM IMPACT LANDSCAPE BUFFER- EAST BOUNDARY**

| | |
|---|---|
| TREES REQUIRED (1 PER 1,000 S.F.)(5,041/1,000) | 5 TREES |
| TREES PROVIDED | 5 TREES (3 FROM OPEN SPACE) |
| ORNAMENTAL TREES REQUIRED (1 PER 500 S.F.)(5,041/500) | 10 TREES |
| ORNAMENTAL TREES PROVIDED | 10 TREES |
| EVERGREEN TREES REQUIRED (1 PER 300 S.F.)(5,041/300) | 17 TREES |
| EVERGREEN TREES PROVIDED | 17 TREES |
| SHRUBS REQUIRED (1 PER 200 S.F.)(5,041/200) | 25 SHRUBS |
| SHRUBS PROVIDED | 25 SHRUBS (25 FROM OPEN SPACE) |




PARKING LOT LANDSCAPING BED

BIORETENTION PONDING AREA

0 30' 60'

SCALE: 1" = 30'

**RELEASE FOR CONSTRUCTION**
AS NOTED ON PLANS REVIEW
DEVELOPMENT SERVICES
LEE'S SUMMIT, MISSOURI

09/15/2021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PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE LEE'S SUMMIT,
MISSOURI

| REVISION DATE | DESCRIPTION |
|---|---|
| 08/13/2021 | City Comments |
| 08/30/2021 | City Comments |
| 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

LANDSCAPE PLAN

SHEET
L1.0

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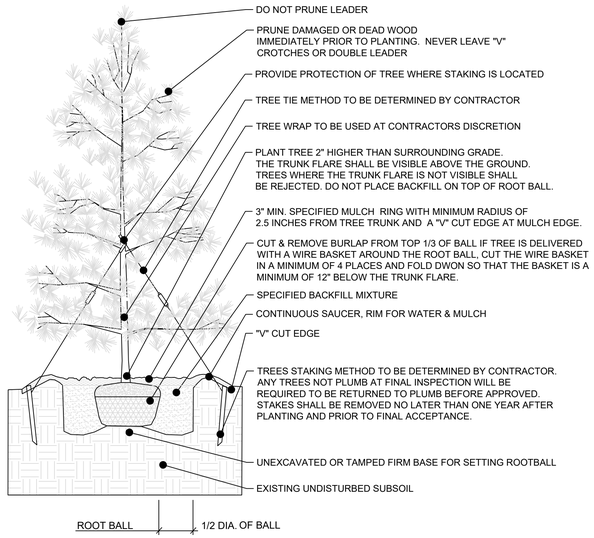
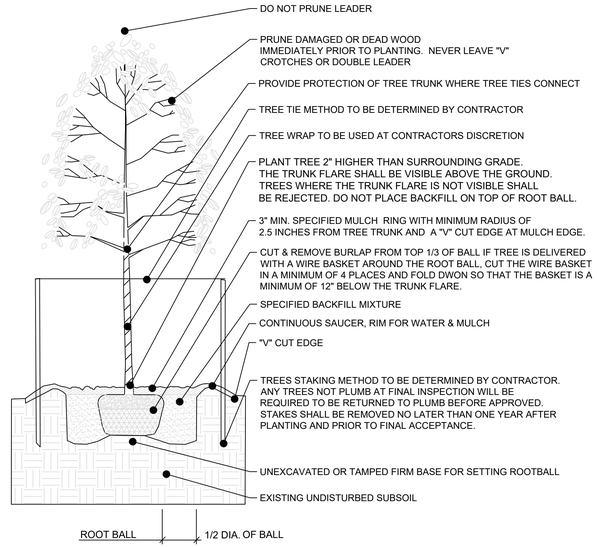


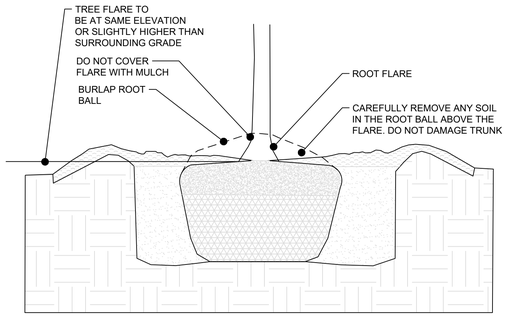

## TYP. EVERGREEN PLANTING & GUYING

NO SCALE



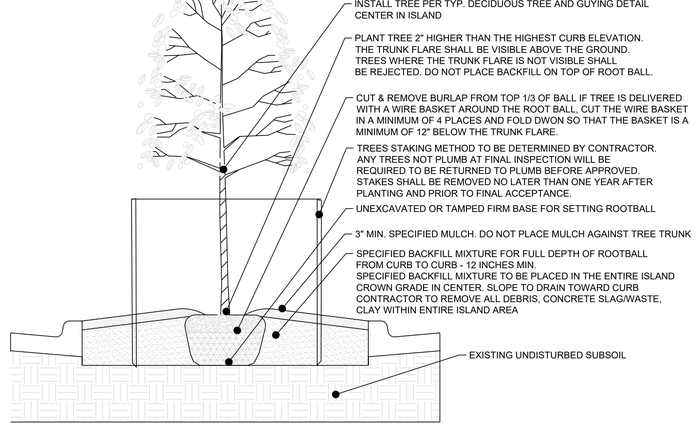

## 2 TYP. DECIDUOUS PLANTING & GUYING

NO SCALE




## TYP. TREE PLANTING DEPTH

NO SCALE




## TYP. PARKING LOT ISLAND PLANTING

NO SCALE

1. All trees shall comply with State and Federal regulations. Trees should be obtained from local sources but must meet the quaility guidelines herein. Trees transported from out of the region shall meet all State and Federal regulations and be certified to be disease and insect free.
2. Provide healthy stock, grown in a nursery and reasonably free of die-back, disease, insects, eggs, bores, and larvae. At the time of planting all plants shall have a root system, stem, and branch form that will not restrict normal growth, stability and health for the expected life of the plant.
3. All trees shall be nursery-grown.
4. Plants shall be healthy with the color, shape, size and distribution of trunk, stems, branches, buds and leaves normal to the plant type specified. Tree quality above the soil line shall comply with the following:
5. Crown: The form and density of the crown shall be typical for a young specimen of the species or cultivar pruned to a central and dominant leader.
6. Crown specifications do not apply to plants that have been specifically trained in the nursery as topiary, espalier, multi-stem, clump, or unique selections such as contorted or weeping cultivars.
7. Leaves: The size, color, and appearance of leaves shall be typical for the time of year and stage of growth of the species or cultivar. Trees shall not show signs of prolonged moisture stress or over watering as indicated by wilted, shriveled, or dead leaves.
8. Branches: Shoot growth (length and diameter) throughout the crown should be appropriate for the age and size of the species or cultivar. Trees shall not have dead, diseased, broken, distorted, or otherwise injured branches.
   a.) Main branches shall be distributed along the central leader not clustered together. Potential main branches shall be evenly spaced and have appropriate space between them. They shall form a balanced crown appropriate for the cultivar/species.
   b.) Branch diameter shall be no larger than two-thirds (one-half is preferred) the diameter of the central leader measured 1 inch above the branch union.
   c.) The attachment of the largest branches (scaffold branches) shall be free of included bark.
   d.) Branches shall be distributed radially around and vertically along the trunk, forming a generally symmetrical crown typical for the species.
   e.) The attachment of scaffold branches shall be free of included bark.
9. Branch structure: The better quality, large-maturing shade trees (lower extreme left) have all branches less than about two-thirds the trunk diameter. Poor quality shade trees (lower left center) have larger upright branches. Trees such as crape myrtle and other small-maturing trees can have several trunks. Trees with extensive defects in branches such as cracks and included bark (lower right) represent lesser quality than trees free of these potential problems. Included bark can be seen between the two arrows below. Branches with bark inclusions are weakly attached to the tree and can split easy.
10. Evergreen branch structure: The branch pattern should dense, symmetrical and the branch stems should be evenly spaced completely around the trunk. The branches shall extend to within 12 inches of the ground and be along the full length of the trunk. Trees which are not symmetrical or that have an "open area" will be rejected. For structural integrity on evergreen trees, all side branches should be less than half the diameter of the adjacent trunk (less than one-third is preferred).
11. Trunk: The tree trunk shall be relatively straight, vertical, and free of wounds that penetrate to the wood (properly made pruning cuts, closed or not, are acceptable and are not considered wounds), sunburned areas, conks (fungal fruiting bodies), wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties, or lesions (mechanical injury).
12. Evergreen tree trunk: Evergreen trees shall have a single trunck that isstraight, vertical, and free of wounds that penetrate to the wood (properly made pruning cuts, closed or not, are acceptable and are not considered wounds), sunburned areas, conks (fungal fruiting bodies), wood cracks, sap leakage, signs of boring insects, galls, cankers, girdling ties, or lesions (mechanical injury). Codominant trunks (trunks of similar size) will not be accepted.
13. Temporary branches, unless otherwise specified, can be present along the lower trunk below the lowest main (scaffold) branch, particularly for trees less than 1 inch in caliper. These branches should be no greater than 3/8-inch diameter. Clear trunk should be no more than 40% of the total height of the tree.
14. Central Leader: **Trees shall have a single(one), relatively straight central leader** and tapered trunk, free of co-dominant stems and vigorous, upright branches that compete with the central leader. Preferably, the central leader should not have been headed. However, in cases where the original leader has been removed, an upright branch at least ½ (one-half) the diameter of the original leader just below the pruning point shall be present. All trees are assumed to have one central leader trees unless a different form is specified in the plant list or drawings. If the central leader is broken or damaged during delivery or installation the tree shall be rejected and removed from the site. If the central leader dies wihin the warranty period the tree shall be replaced at the end of the warranty period.
15. All graft unions, where applicable, shall be completely closed without visible sign of graft rejection. All grafts shall be visible above the soil line.
16. Trunk caliper and taper shall be sufficient so that the lower five feet of the trunk remains vertical without a stake. Auxiliary stake may be used to maintain a straight leader in the upper half of the tree.
17. Plant roots shall be normal to the plant type specified. Root observations shall take place without impacting tree health. Root quality at or below the soil line shall comply with the project Root Acceptance details and the following:
18. The roots shall be reasonably free of scrapes, broken or split wood.
19. The root system shall be reasonably free of injury from biotic (e.g., insects and pathogens) and abiotic (e.g., herbicide toxicity and salt injury) agents. Wounds resulting from root pruning used to produce a high quality root system are not considered injuries.
20. A minimum of three structural roots reasonably distributed around the trunk (not clustered on one side) shall be found in each plant. Root distribution shall be uniform throughout the root ball, and growth shall be appropriate for the species.
21. Plants with structural roots on only one side of the trunk (J roots) shall be rejected.
22. The root collar shall be within the upper 1 inch of the substrate/soil. Two structural roots shall reach the side of the root ball near the top surface of the root ball. The grower may request a modification to this requirement for species with roots that rapidly descend, provided that the grower removes all stem girdling roots above the structural roots across the top of the root ball. Any excess soil shall be removed from the root ball so that the root flare is visible as indicated in the "Planting Depth Detail". The root collar shall be visible above the mulch layer.
23. The root system shall be free of stem girdling roots over the root collar or kinked roots from nursery production practices.
24. Plant Grower Certification: The final plant grower shall be responsible to have determined that the plants have been root pruned at each step in the plant production process to remove stem girdling roots and kinked roots, or that the previous production system used practices that produce a root system throughout the root ball that meets these specifications. Regardless of the work of previous growers, the plant's root system shall be modified at the final production stage, if needed, to produce the required plant root quality. The final grower shall certify in writing that all plants are reasonably free of stem girdling and kinked roots as defined in this specification, and that the tree has been grown and harvested to produce a plant that meets these specifications.
25. At time of observations and delivery, the root ball shall be moist throughout. Roots shall not show signs of excess soil moisture conditions as indicated by stunted, discolored, distorted, or dead roots.

**RELEASE FOR CONSTRUCTION**
**AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI**

**09/15/2021**


SCHLAGEL
ENGINEERS PLANNERS SURVEYORS LANDSCAPE ARCHITECTS
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PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.


LAKEWOOD BUSINESS PARK - LOT 35
FINAL DEVELOPMENT PLANS
4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI

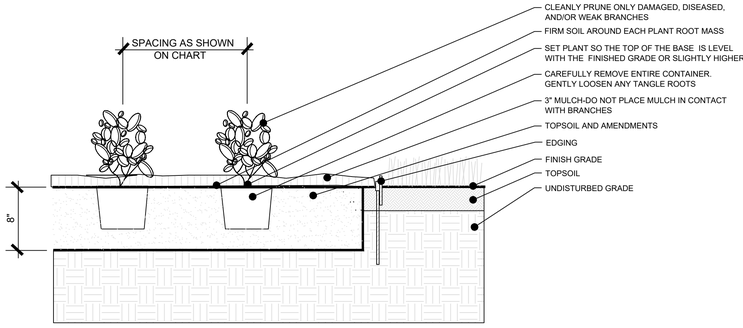
| REVISION DATE | DESCRIPTION |
|---|---|
| 09/13/2021 | City Comments |
| 09/30/2021 | City Comments |
| 09/07/2021 | City Comments |

| | |
|---|---|
| DRAWN BY: | RPM |
| CHECKED BY: | JTS |
| DATE PREPARED: | 06/25/2021 |
| PROJ. NUMBER: | 20-261 |

LANDSCAPE DETAILS

SHEET
L2.0

I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-7-FDP-LP.dwg, 9/7/2021 4:01:10 PM, 1:1



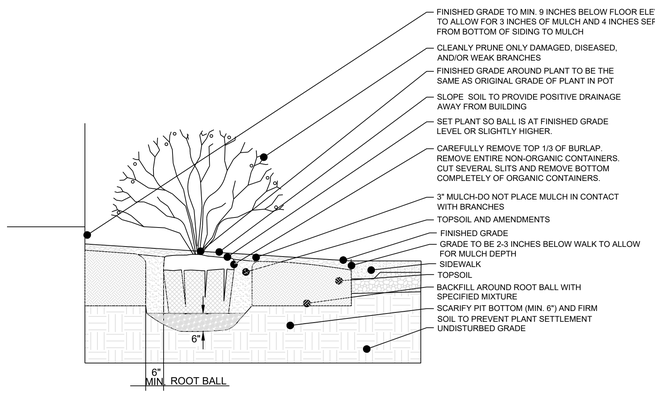

TYP. ANNUAL/PERENNIAL PLANTING

NO SCALE



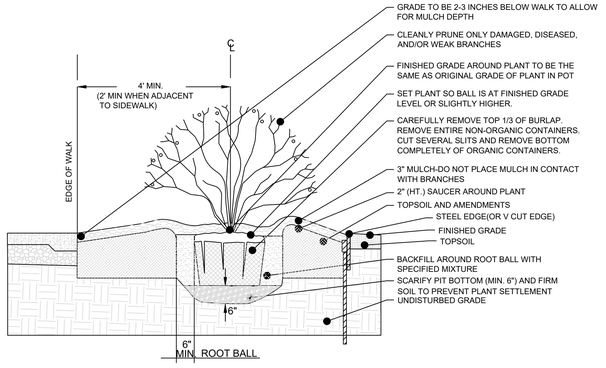

TYP. SHRUB PLANTING ADJACENT TO CURB

NO SCALE



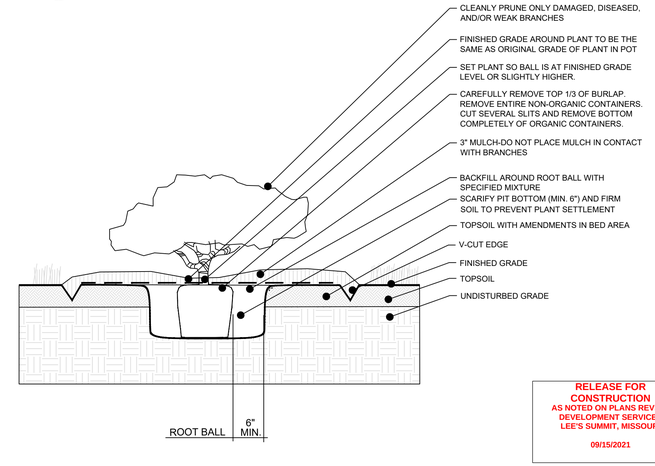

TYP. SHRUB PLANTING ADJACENT TO BUILDING

NO SCALE




TYP. SHRUB PLANTING ADJACENT TO WALK

NO SCALE




TYP. SHRUB BED IN LAWN DETAIL

NO SCALE

**RELEASE FOR CONSTRUCTION**
**AS NOTED ON PLANS REVIEW DEVELOPMENT SERVICES LEE'S SUMMIT, MISSOURI**

**09/15/2021**

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PREPARED BY:

SCHLAGEL & ASSOCIATES, P.A.

# LAKEWOOD BUSINESS PARK - LOT 35
## FINAL DEVELOPMENT PLANS
## 4101 NE PORT DRIVE LEE'S SUMMIT, MISSOURI

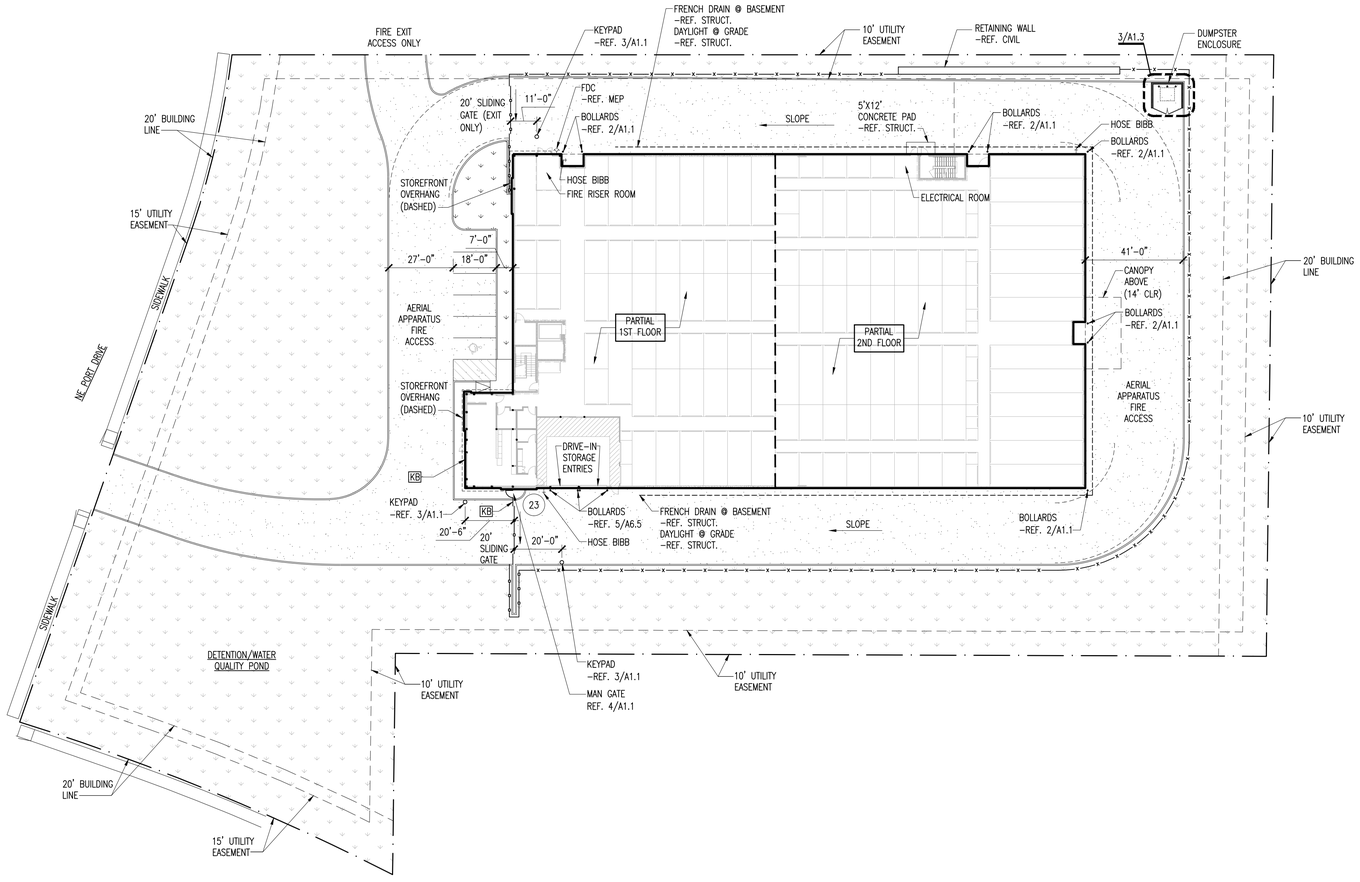
| REVISION DATE | DESCRIPTION |
|---|---|
| 08/13/2021 | City Comments |
| 08/30/2021 | City Comments |
| 09/07/2021 | City Comments |

DRAWN BY: RPM
CHECKED BY: JTS
DATE PREPARED: 06/25/2021
PROJ. NUMBER: 20-261

LANDSCAPE DETAILS

SHEET
L2.1

I:\PROJECTS\2020\20-261\3.0 Design\3.0 DWG Plans\3.0 FDP\20-261-7-FDP-LP.dwg, 9/7/2021 4:01:15 PM, 1:1




TRUE NORTH / PLAN NORTH

1 SITE PLAN
SCALE: 1" = 30'-0"

## SITE PLAN LEGEND

| | |
|---|---|
| | BUFFERS/ EASEMENTS |
| | PROPERTY LINES |
| | 6'-0" HIGH, ORNAMENTAL IRON FENCE |
| | LARGE STONE BORDER –REF. CIVIL DRAWINGS |
| | CONCRETE PAVING –REF. CIVIL DWGS. |
| | LANDSCAPE AREA –REF. LANDSCAPE DRAWINGS |
| | 6" STEEL PIPE BOLLARD –REF. 2/A1.1 |
| | 4" STRIPES PAINTED ON PAVING AT 2'-0" O.C. |
| KB | KNOX BOX |

## SITE PLAN NOTES

1. REFER CIVIL DRAWINGS FOR RECORDED PLAT/SURVEY FOR PROPERTY BOUNDARIES, EASEMENTS, SETBACKS, ETC. REPORT ANY DISCREPANCIES TO ARCHITECT PRIOR TO CONSTRUCTION.

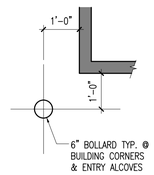
2. REFER CIVIL DRAWINGS FOR ALL DRIVE, PARKING, AND CURB LOCATIONS, DETAILS, AND DIMENSIONAL INFORMATION.

3. NOT USED.

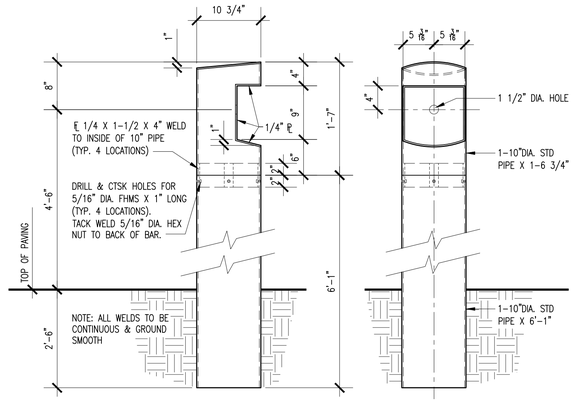
4. PROVIDE CONCRETE FILLED STEEL TUBE BOLLARD AT BUILDING CORNERS AND BUILDING ENTRIES AT DRIVE AREAS (REF. DETAIL 2/A1.1 FOR LOCATIONS, CIVIL FOR DETAIL).

5. REFER LANDSCAPE DRAWINGS FOR EXTENTS OF REQUIRED LANDSCAPING.

6. SECURITY CONTRACTOR TO PROVIDE MANUAL FAIL SAFE OPERATION, KEY BOX, AND 20'-0" GATE OPENING FOR ELECTRICAL GATE PER FIRE MARSHALL REQUIREMENTS.

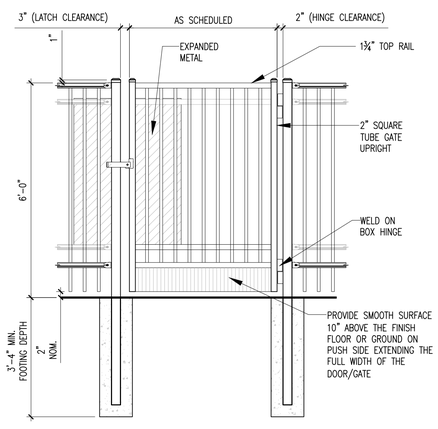



2 BOLLARD DETAIL
SCALE: 1/2" = 1'-0"




3 KEYPAD BOLLARD DETAIL
SCALE: 1" = 1'-0"

NOTE: PROVIDE KEY LOCK ON OUTSIDE OF GATE & FREE EXIT ON INSIDE OF MAN GATE AT MAIN ENTRY. 1'-6" RADIUS OF EXPANDED METAL W/ SAME FINISH AS GATE TO BE PROVIDED AT LATCH. PROVIDE 5"-7" WELDED. HINGES.




4 IRON MAN GATE ELEVATIONS
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

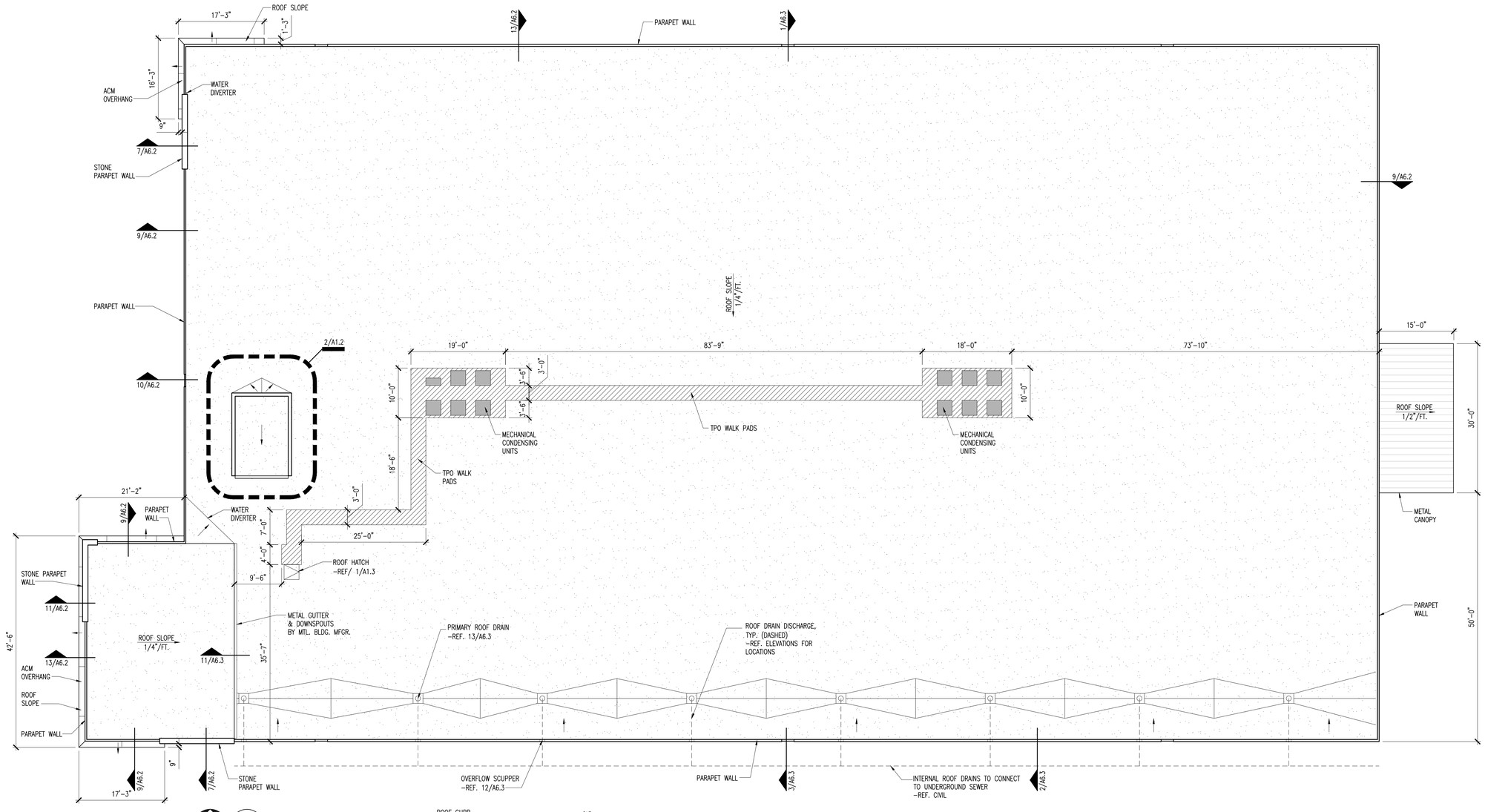
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

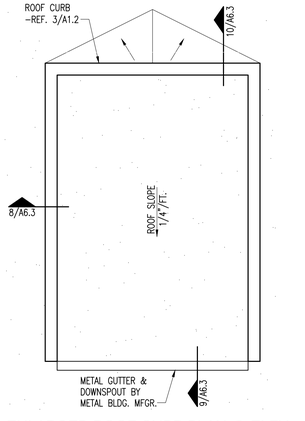
SITE PLAN

SHEET NO.
A1.1



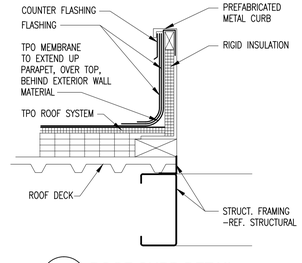

1 ROOF PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH




2 ENLARGED ROOF CURB PLAN @ ELEV.
SCALE: 1/4"=1'-0"

NORTH




3 ROOF CURB DETAIL
SCALE: NTS

## ROOF PLAN LEGEND

| | |
|---|---|
| | TPO ROOF |
| | TPO WALK PAD |
| | MBCI BATTENLOK ROOF 24 GA. |

## ROOF PLAN NOTES

1. ROOF INSULATION – REFER TO SHEETS A6.1 – A6.5 FOR GENERAL NOTES FOR ROOF INSULATION VALUES.
2. PRIMARY & SECONDARY INTERNAL ROOF DRAINS TO CONNECT TO UNDERGROUND SEWER & TO BE SIZED/SPACED BY TPO ROOF CONTRACTOR. –REF. CIVIL
3. TPO ROOF CONTRACTOR TO CONFIRM/EXPAND ON TAPER PATTERN.
4. MECHANICAL CONDENSING UNITS TO BE BUILT UP SO THAT RACK DOES NOT IMPEDE WATER FLOW.

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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056988
ARCHITECT

12.16.2021
JEFFREY W. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

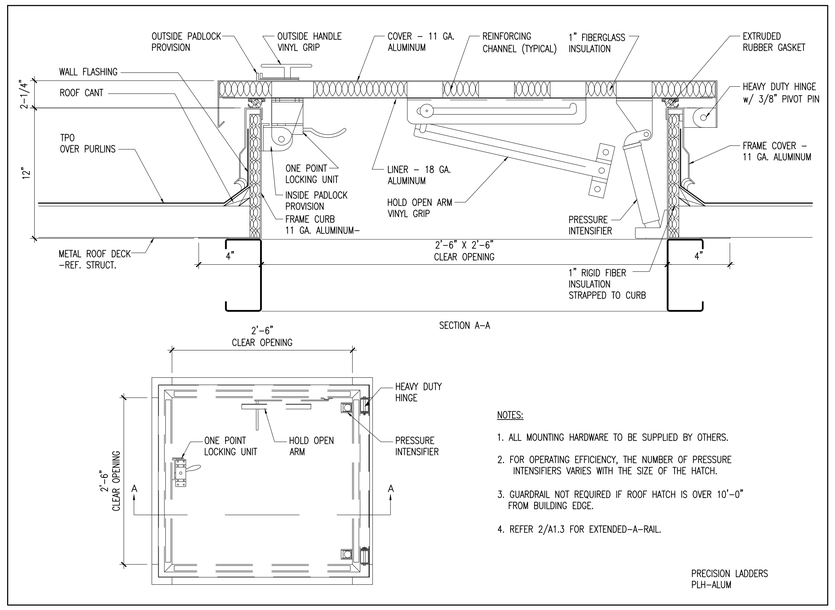
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

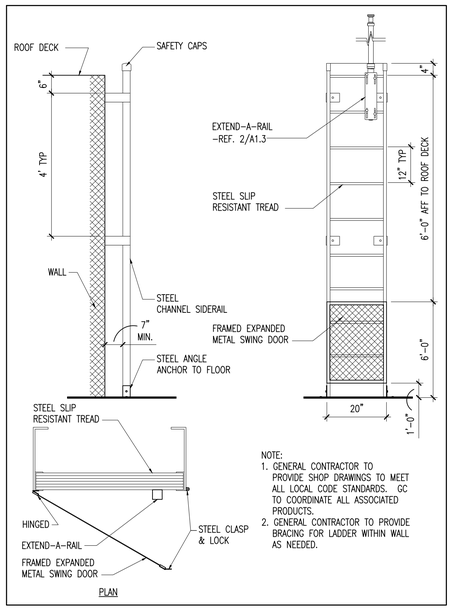
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

ROOF PLAN

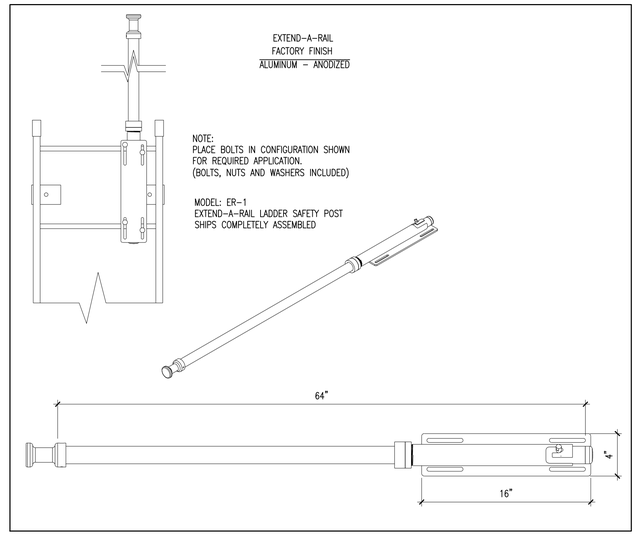
SHEET NO.
A1.2



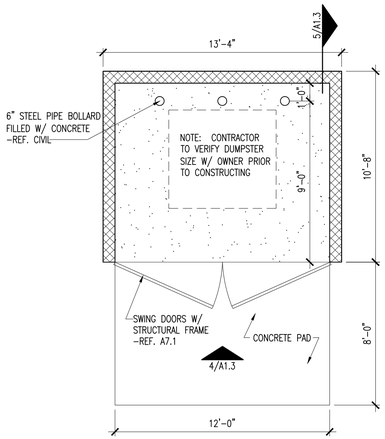

1 ROOF HATCH DETAIL
SCALE: 1/2"=1'-0"



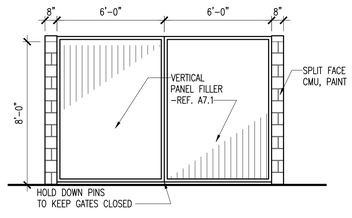

1A ROOF LADDER DETAIL
SCALE: 1/2"=1'-0"



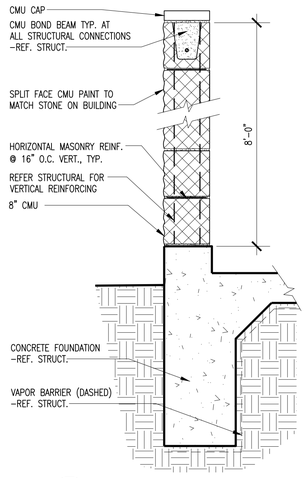

2 SAFTEY HANDRAIL DETAIL
SCALE: 1/2"=1'-0"




3 DUMPSTER ENCLOSURE
SCALE: 1/4"=1'-0"




4 DUMPSTER GATE ELEVATION
SCALE: 1/4"=1'-0"

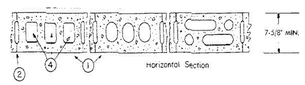



5 DUMPSTER WALL
SCALE: 1"=1'-0"

## UL FIRE RATED ASSEMBLIES

### CMU WALL UL FIRE DETAIL (STAIR, ELEV., & MACH. RM.)

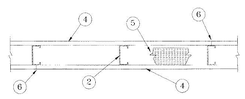
UL# U905 — 1-HOUR FIRE RATING REQUIRED




1. CONCRETE BLOCKS
2. MORTAR
3. PORTLAND CEMENT STUCCO OR GYPSUM PLASTER (OPTIONAL)
4. LOOSE MASONRY FILL
5. FOAMED PLASTIC (OPTIONAL)

### METAL STUD UL FIRE DETAIL (FIRE RISER RM)

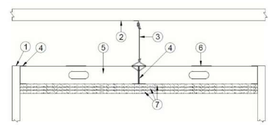
UL# U419 — 1-HOUR FIRE RATING REQUIRED



1. FLOOR AND CEILING RUNNERS
2. STEEL STUDS
3. LATERAL SUPPORT MEMBERS
4. GYPSUM BOARD
5. BATTS AND BLANKETS
6. JOINT TAPE AND COMPOUND
7. CAULKING AND SEALANTS

### HORIZONTAL ASSEMBLY UL FIRE DETAIL (ELEV. MACH. RM & FIRE RISER RM)

UL# I504 — 1-HOUR FIRE RATING REQUIRED



1. SUPPORTING STRUCTURE 1
2. SUPPORTING STRUCTURE 2
3. HANGER WIRE
4. C-CHANNELS
5. STEEL STUDS
6. STEEL STRAP
7. 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
NUMBER A-2020056988
ARCHITECT

12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

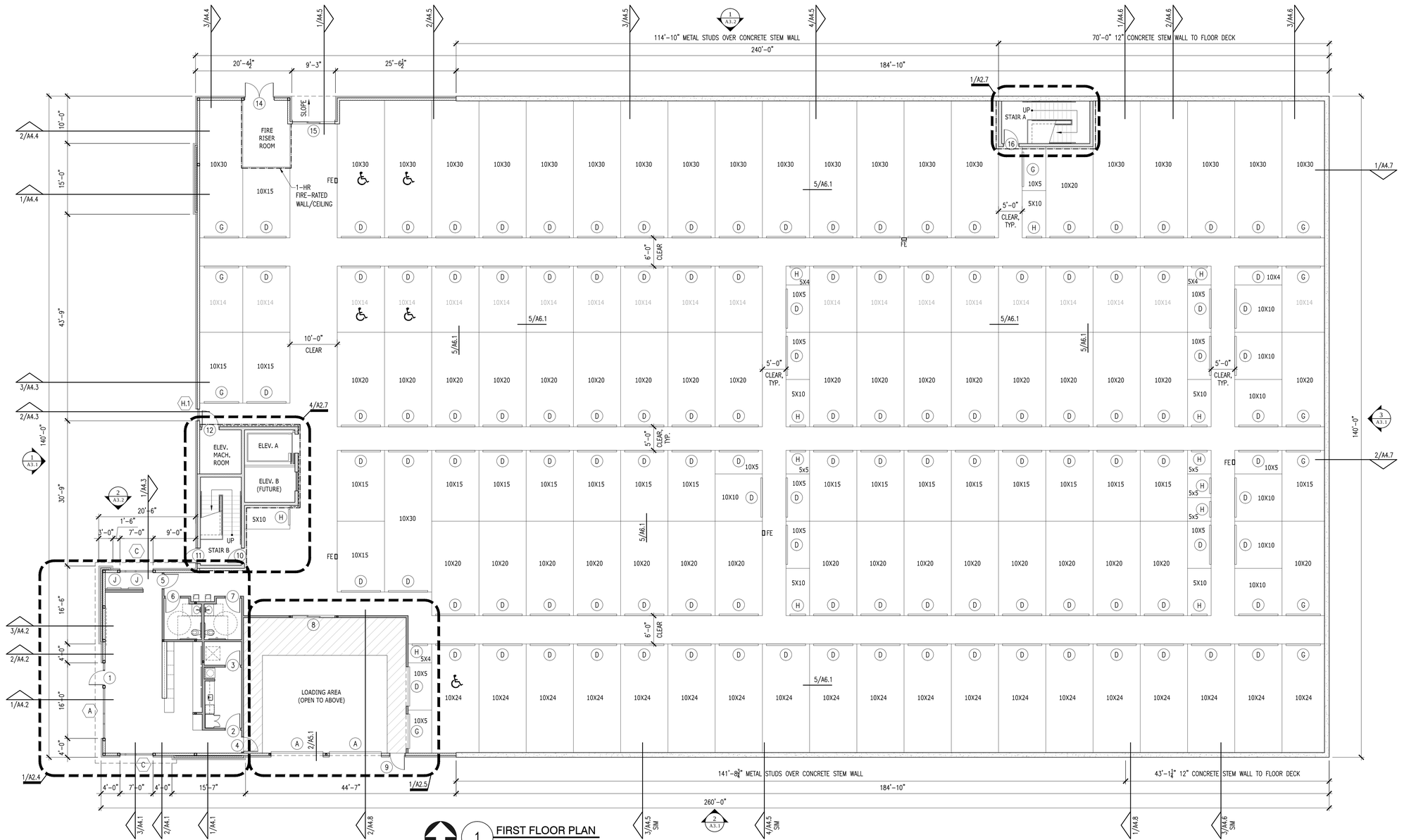
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

ROOF DETAILS

SHEET NO.
A1.3




## 1 FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

### FLOOR PLAN LEGEND

| | |
|---|---|
| | METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. -REFER DETAIL 5/A6.1 |
| | EXTERIOR SHEATHING OVER METAL STUDS -REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES. |
| | GYP. BD. ON METAL STUD FRAMING -REFER PARTITION TYPES, SHEET A6.1 |
| | 1-HOUR FIRE-RATED WALL @ STAIRS, ELEVATOR, AND FIRE RISER ROOM |
| | 12" CONCRETE STEM WALL |
| | INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1 |

### GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANELS TO BE 60 MIL TPO ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/TPO ROOFING SUBCONTRACTOR TO SIZE/SPACE INTERNAL ROOF DRAINS AS REQUIRED TO MEET LOCAL REQUIREMENTS. SECONDARY ROOF DRAINS TO BE PROVIDED. GENERAL CONTRACTOR TO COORDINATE CONNECTION TO UNDERGROUND STORM DRAIN.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. 3RD FLOOR EXTERIOR WALL DIMENSIONS ARE TO FINISH MATERIAL. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. NOT USED.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2-A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT -REF. SHEET A2.6
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC B31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.
13. FIRE RISER ROOM TO HAVE 1-HR FIRE-RATED WALLS AND CEILING. REFER UL FIRE-RATED ASSEMBLES, SHEET A1.3
14. GENERAL CONTRACTOR TO COORDINATE STANDPIPE/FIRE SPRINKLER DESIGN WITH ROOM SIZE AND CONFIGURATION.

| | |
|---|---|
| | SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS |
| TABLE 225.3 | |
| TOTAL SPACES IN FACILITY | MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE |
| 1 TO 200 | 5%, BUT NOT LESS THAN 1 |
| 201 AND OVER | 10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200 |
| SECTION 225.3.1 DISPERSION. | |
| INDIVIDUAL SELF-SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF-SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI-BUILDING FACILITY. | |
| ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA: | |
| 403.3 ACCESSIBLE ROUTE | THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. |
| 404.2.5 THRESHOLDS | 1/2" HIGH MAXIMUM |
| 404.2.7 DOOR HARDWARE | OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND |
| 404.2.9 DOOR OPENING FORCE | 5 POUNDS MAXIMUM |
| ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.). | |
| PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) -JANUS TO INSTALL | |
| ADA CALCULATIONS:<br>590 UNITS<br>-200 UNITS<br>390 UNITS X .02 = 7.8 SPACES + 10 SPACES = 18 SPACES REQUIRED | |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STATE OF MISSOURI
JEFFREY S. DALLENBACH
DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

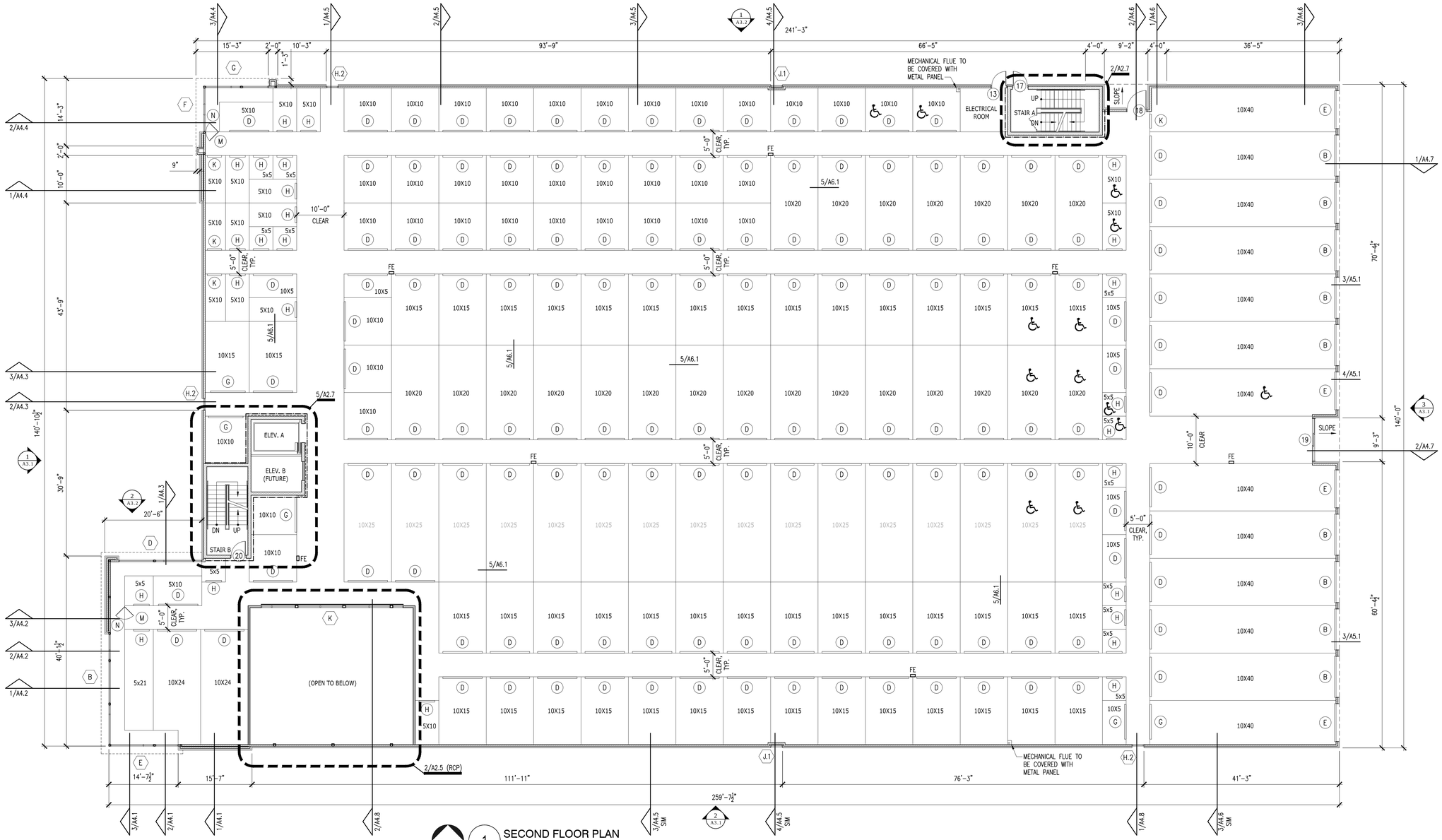
DRAWN : VP

REVISIONS:

1ST FLOOR PLAN

SHEET NO.

A2.1




1 SECOND FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

| FLOOR PLAN LEGEND | |
|---|---|
| | METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1 |
| | EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES. |
| | GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1 |
| | 1–HOUR FIRE–RATED WALL @ STAIRS, ELEVATOR, AND FIRE RISER ROOM |
| | 12" CONCRETE STEM WALL |
| | INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1 |

## GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
2. GENERAL CONTRACTOR TO COORDINATE ALL FOUNDATION PENETRATIONS WITH STRUCTURAL ENGINEER.
3. ROOF PANELS TO BE 60 MIL TPO ROOF TO MEET LOCAL WIND LOAD REQUIREMENTS ENGINEERED BY METAL BUILDING MANUFACTURER.
4. GENERAL CONTRACTOR/TPO ROOFING SUBCONTRACTOR TO SIZE/SPACE INTERNAL ROOF DRAINS AS REQUIRED TO MEET LOCAL REQUIREMENTS. SECONDARY ROOF DRAINS TO BE PROVIDED. GENERAL CONTRACTOR TO COORDINATE CONNECTION TO UNDERGROUND STORM DRAIN.
5. GENERAL CONTRACTOR IS TO SUBMIT ALL SAMPLES OF PRODUCTS, ETC. TO OWNER FOR APPROVAL/ SELECTION OF ALL COLORS, FINISHES, ETC. PRIOR TO PURCHASE AND INSTALLATION
6. ALL EXTERIOR WALL DIMENSIONS ARE TO FOUNDATION (INCL. LUG) UNLESS NOTED OTHERWISE. 3RD FLOOR EXTERIOR WALL DIMENSIONS ARE TO FINISH MATERIAL. ALL INTERIOR DIMENSIONS ARE TO OUTER FACE OF MATERIAL USED UNLESS NOTED OTHERWISE.
7. NOT USED.
8. PROVIDE & INSTALL FIRE EXTINGUISHERS (FE) WALL CABINETS. RECESS CABINETS @ 48" A.F.F. RECESSED, FLUSH WITH WALL AT ALL INTERIOR APPLICATIONS. MOUNT TO PIERS, 48" A.F.F. IN HEAVY DUTY OUTDOORS FIRE EXTINGUISHER CABINET AT ALL EXTERIOR APPLICATIONS. LOCATE ONE CLASS 2–A FIRE EXTINGUISHER SO THAT MAX. TRAVEL DISTANCE IS 75 L.F. W/ A MINIMUM OF 1 FOR EVERY 11,250 S.F. PER TABLE 906.3(1) OF THE 2015 INTERNATIONAL FIRE CODE OR AS DIRECTED BY LOCAL AUTHORITIES HAVING JURISDICTION. (KEYED ON FLOOR PLANS) FURR OUT WALL AT FE LOCATIONS W/ 6" METAL STUDS AND METAL WALL PANEL EACH SIDE.
9. FLOOR FINISH CONCRETE TO BE POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.6
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC B31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.
13. FIRE RISER ROOM TO HAVE 1–HR FIRE–RATED WALLS AND CEILING. REFER UL FIRE–RATED ASSEMBLES, SHEET A1.3
14. GENERAL CONTRACTOR TO COORDINATE STANDPIPE/FIRE SPRINKLER DESIGN WITH ROOM SIZE AND CONFIGURATION.

| SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS | |
|---|---|
| TABLE 225.3 | |
| TOTAL SPACES IN FACILITY | MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE |
| 1 TO 200 | 5%, BUT NOT LESS THAN 1 |
| 201 AND OVER | 10, PLUS 2% OF THE TOTAL NUMBER OF UNITS OVER 200 |
| SECTION 225.3.1 DISPERSION. | |
| INDIVIDUAL SELF–SERVICE STORAGE SPACES SHALL BE DISPERSED THROUGHOUT THE VARIOUS CLASSES OF SPACES PROVIDED. WHERE MORE CLASSES OF SPACES ARE PROVIDED THAN THE NUMBER REQUIRED TO BE ACCESSIBLE, THE NUMBER OF SPACES SHALL NOT BE REQUIRED TO EXCEED THAT REQUIRED BY TABLE 225.3. SELF–SERVICE STORAGE SPACES COMPLYING WITH TABLE 225.3 SHALL NOT BE REQUIRED TO BE DISPERSED AMONG BUILDINGS IN A MULTI–BUILDING FACILITY. | |
| ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA: | |
| 403.3 ACCESSIBLE ROUTE | THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. |
| 404.2.5 THRESHOLDS | 1/2" HIGH MAXIMUM |
| 404.2.7 DOOR HARDWARE | OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND |
| 404.2.9 DOOR OPENING FORCE | 5 POUNDS MAXIMUM |
| ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.). | |
| PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL | |
| ADA CALCULATIONS:<br>590 UNITS<br>–200 UNITS<br>390 UNITS X .02 = 7.8 SPACES + 10 SPACES = 18 SPACES REQUIRED | |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JEFFREY'S DALLENBACH NUMBER A-2020036988
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A–2020036988

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

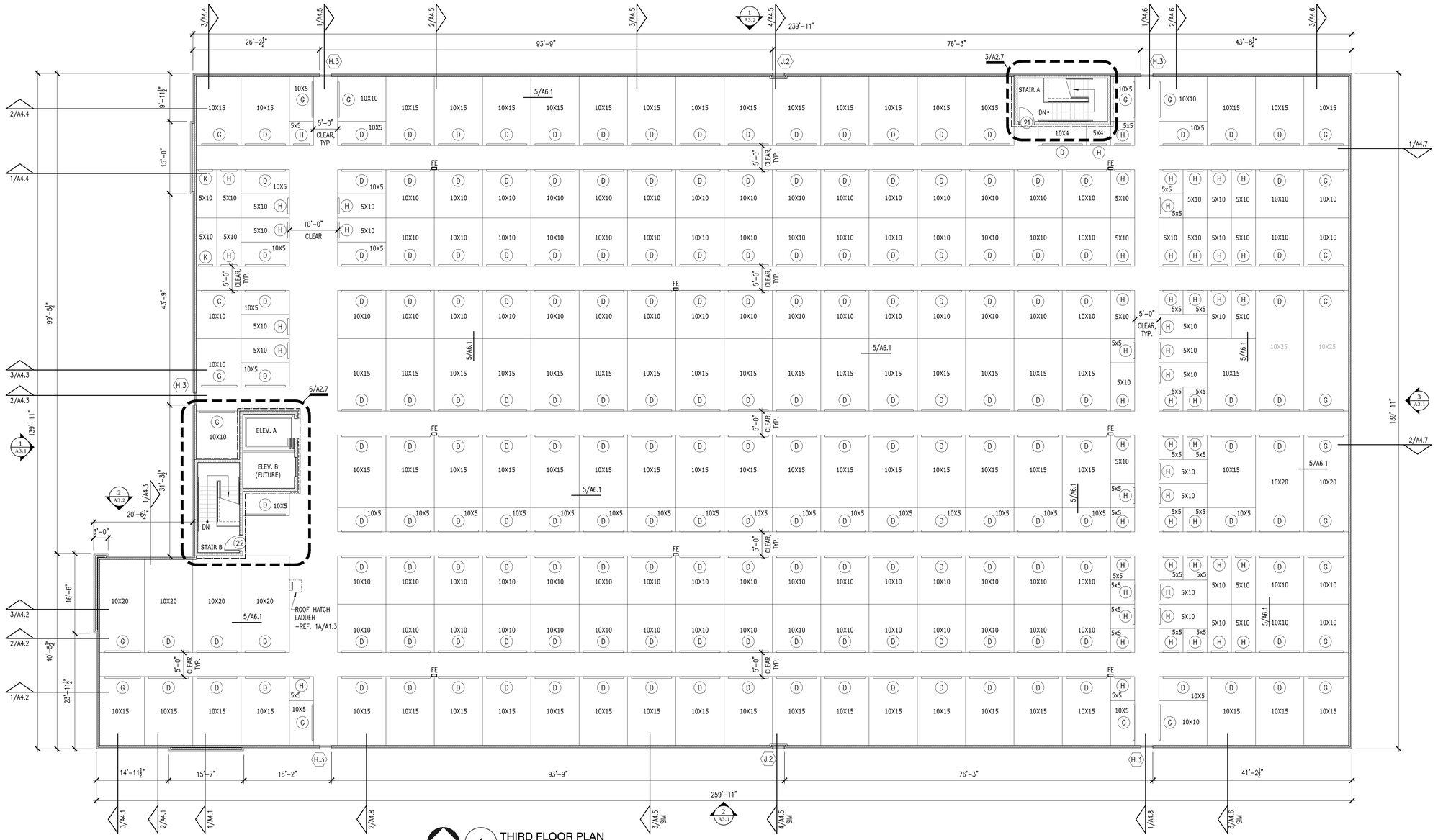
DRAWN : VP

REVISIONS:

## 2ND FLOOR PLAN

SHEET NO.

A2.2




1 THIRD FLOOR PLAN
SCALE: 3/32" = 1'-0"

PLAN NORTH

## FLOOR PLAN LEGEND

- METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER DETAIL 5/A6.1
- EXTERIOR SHEATHING OVER METAL STUDS –REF. ELEVATIONS SHEET FOR EXTENTS OF EXTERIOR FINISHES.
- GYP. BD. ON METAL STUD FRAMING –REFER PARTITION TYPES, SHEET A6.1
- 1–HOUR FIRE–RATED WALL @ STAIRS, ELEVATOR, AND FIRE RISER ROOM
- 12" CONCRETE STEM WALL
- INSULATED METAL PARTITION SYSTEM REFER TO DETAIL SHEET 4/A6.1

## GENERAL NOTES (TYPICAL ALL SHEETS)

1. INTERIOR AND EXTERIOR STORAGE UNIT SIGNAGE TO BE APPROVED BY OWNER. SIGNAGE TO BE PROVIDED AND INSTALLED BY GENERAL CONTRACTOR.
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9. FLOOR FINISH CONCRETE TO BE POLISHED CONCRETE IN CORRIDORS ONLY. (EXCLUDING STORAGE UNITS)
10. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.6
11. FURR OUT WALL IN ELECTRICAL ROOMS TO RECESS ELECTRICAL PANEL.
12. ALL INTERIOR CMU TO BE PAINTED SW PRO CLASSIC B31 SERIES PAINT EXCLUDING INSIDE OF INDIVIDUAL STORAGE UNITS. ALL CMU INSIDE INDIVIDUAL STORAGE UNITS NOT TO BE PAINTED OR SEALED.
13. FIRE RISER ROOM TO HAVE 1–HR FIRE–RATED WALLS AND CEILING. REFER UL FIRE–RATED ASSEMBLES, SHEET A1.3
14. GENERAL CONTRACTOR TO COORDINATE STANDPIPE/FIRE SPRINKLER DESIGN WITH ROOM SIZE AND CONFIGURATION.

| ♿ | SELF STORAGE UNITS MARKED WITH A HANDICAP SYMBOL TO BE ACCESSIBLE AND FOLLOW ACCESSIBILITY STANDARDS |
|---|---|
| TABLE 225.3 | |
| TOTAL SPACES IN FACILITY | MINIMUM NUMBER OF SPACES REQUIRED TO BE ACCESSIBLE |
| 1 TO 200 | 5%, BUT NOT LESS THAN 1 |
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| ACCESSIBLE UNITS MUST MEET THE FOLLOWING CRITERIA: | |
| 403.3 ACCESSIBLE ROUTE | THE RUNNING SLOPE OF WALKING SURFACES NOT STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48. |
| 404.2.5 THRESHOLDS | 1/2" HIGH MAXIMUM |
| 404.2.7 DOOR HARDWARE | OPERABLE PARTS OF HARDWARE SHALL BE 34" MIN. AND 48" MAX. ABOVE FINISHED FLOOR OR GROUND |
| 404.2.9 DOOR OPENING FORCE | 5 POUNDS MAXIMUM |
| ACCESSIBLE UNITS MUST ALSO PROVIDE ACCESSIBLE ROUTES TO ACCESSIBLE MEANS OF EGRESS, PARKING SPACES, AND COMMON USE ELEMENTS & FACILITIES (TOILET ROOMS, DRINKING FOUNTAINS, ETC.). | |
| PROVIDE JANUS ADA KIT (THREE STRAPS AND ACCESSIBLE SIGN) –JANUS TO INSTALL | |
| ADA CALCULATIONS:<br>590 UNITS<br>–200 UNITS<br>390 UNITS X .02 = 7.8 SPACES + 10 SPACES = 18 SPACES REQUIRED | |


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12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

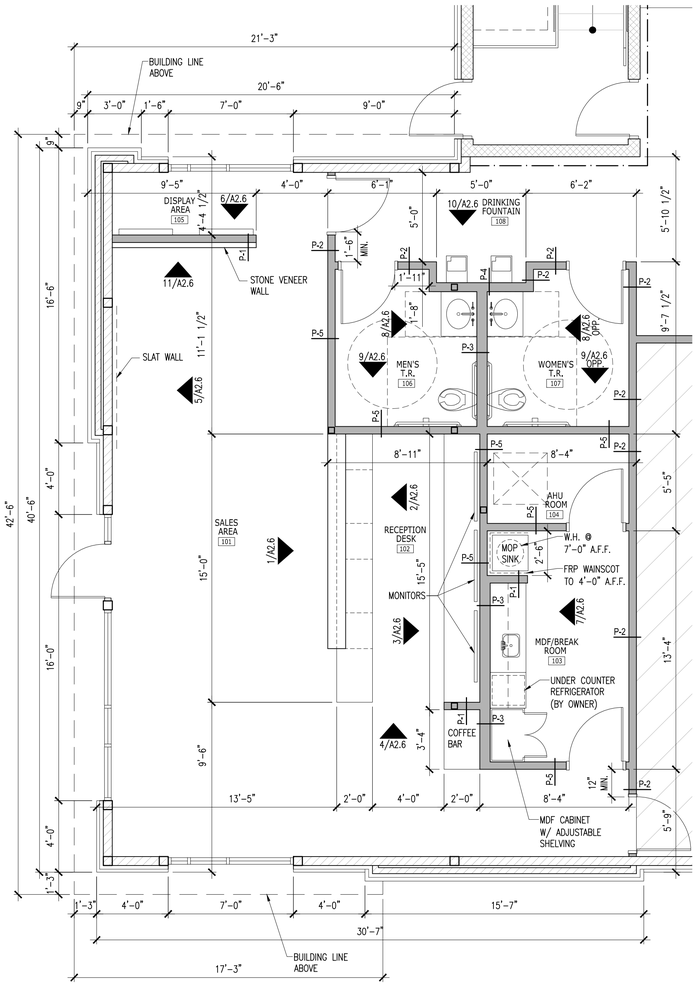
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

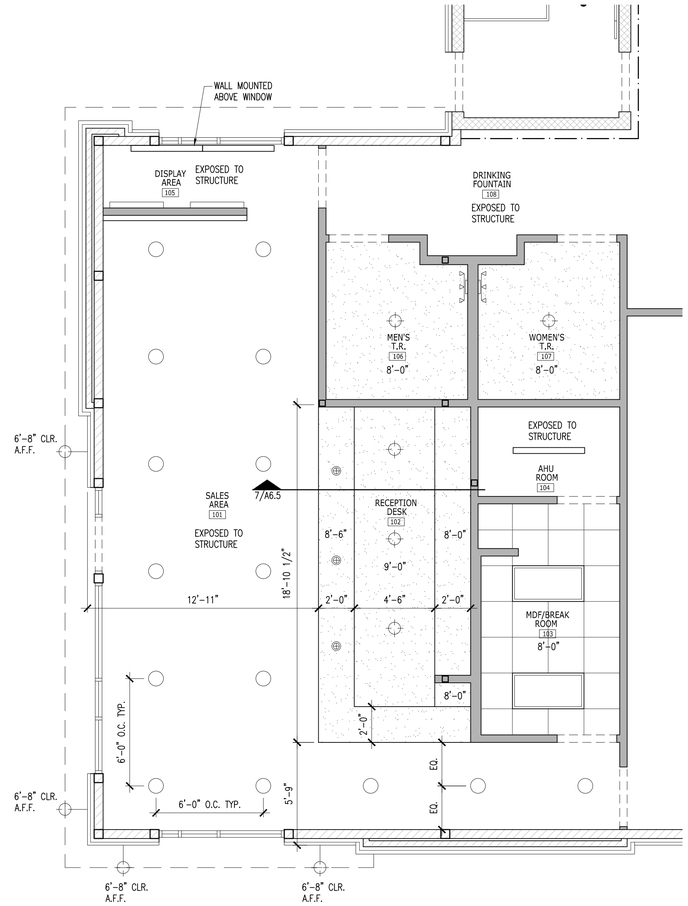
3RD FLOOR PLAN

SHEET NO.
A2.3




1 OFFICE FLOOR PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH




2 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

| ENLARGED FLOOR PLAN LEGEND | |
|---|---|
| | METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. –REFER CORRUGATED HALLWAY SYSTEM A6.1 |
| | METAL STUD WALL FRAMING |
| | INTERIOR METAL STUD WALL FRAMING –REFER PARTITION TYPES SHEET A6.1 |
| | 4" STRIPES PAINTED ON PAVING @ 2'-0" O.C. COLOR: SAFETY YELLOW |

**GENERAL NOTES**

1. REFERENCE SHEET A6.1 FOR PARTITION TYPES (P–#)
2. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT –REF. SHEET A2.6

| REFLECTED CEILING PLAN LEGEND | | | |
|---|---|---|---|
| | SUSPENDED PAINTED GYP. BD. CEILING | | EXTERIOR WALL SCONCE –WALL MOUNTED |
| | 2' X 2' OPEN GRID CEILING | | VANITY LIGHT |
| | 4' LED LIGHT | | PENDANT LIGHT |
| | 2' X 4' LED LIGHT –RECESSED | | LARGE PENDANT LIGHT |
| | RECESSED LIGHT | | MEP DIFFUSER |

NOTES:
1. REFER MEP FOR FIXTURE SPECIFICATIONS.
2. COORDINATE LIGHT FIXTURES AND MECHANICAL SUPPLY/RETURN PRIOR TO INSTALLATION.
3. PAINT UNDERSIDE OF FLOOR DECK, EXPOSED STRUCTURE AND DUCTS IN OFFICE WHERE VISIBLE. (CALL OUT PT COLOR ON A7.1)

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STATE OF MISSOURI
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MISSOURI REGISTRATION NO. A-2020056988

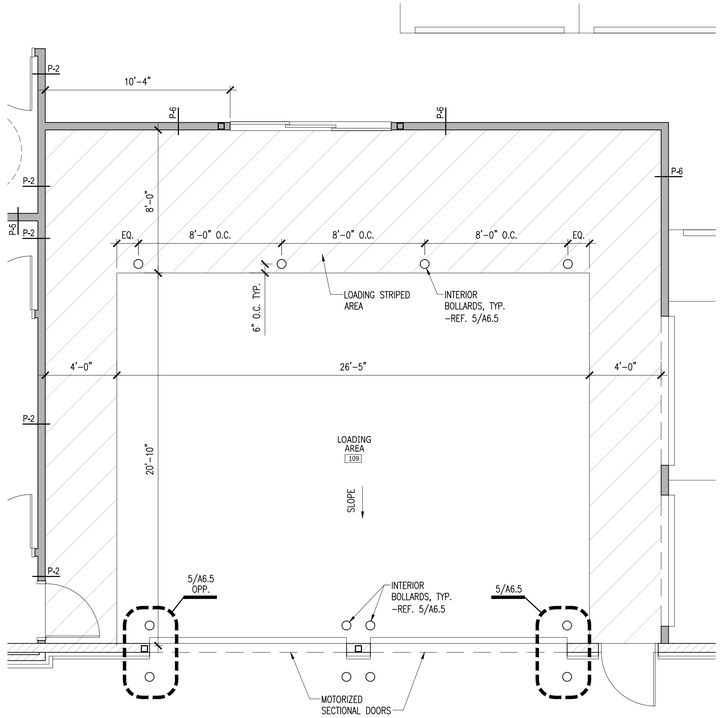
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

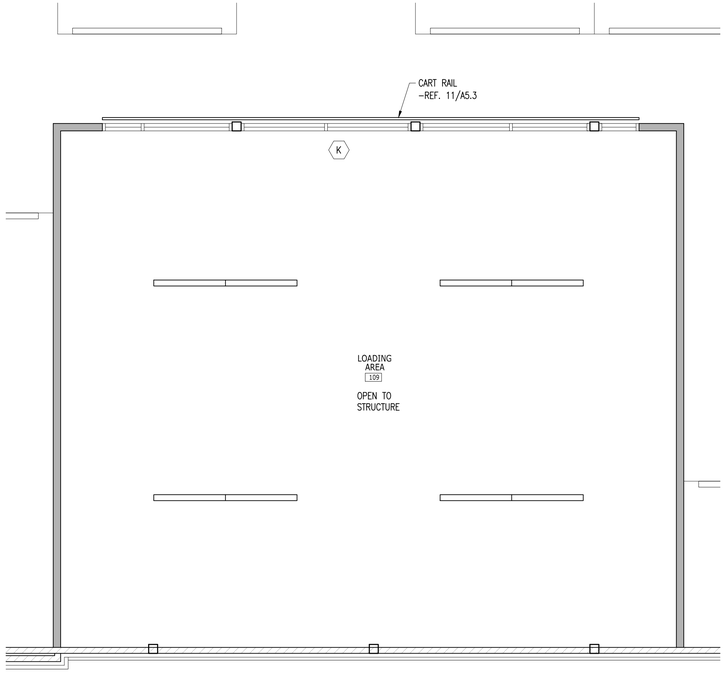
OFFICE PLAN & RCP

SHEET NO.
A2.4




1 LOADING AREA FLOOR PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH




2 REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"

PLAN NORTH

| ENLARGED FLOOR PLAN LEGEND | |
|---|---|
| | METAL PARTITION SYSTEM (CORRIDOR SIDE OF PARTITION EXCEPT WHERE NOTED OTHERWISE) HALLWAYS TO BE JANUS CORRUGATED METAL PARTITIONS TYP. -REFER CORRUGATED HALLWAY SYSTEM A6.1 |
| | METAL STUD WALL FRAMING |
| | INTERIOR METAL STUD WALL FRAMING -REFER PARTITION TYPES SHEET A6.1 |
| | 4" STRIPES PAINTED ON PAVING @ 2'-0" O.C. COLOR: SAFETY YELLOW |

| GENERAL NOTES |
|---|
| 1. REFERENCE SHEET A6.1 FOR PARTITION TYPES (P-#) |
| 2. BUILDING MUST COMPLY W/ LOCAL AMERICAN W/ DISABILITIES ACT -REF. SHEET A2.6 |

| REFLECTED CEILING PLAN LEGEND | | | |
|---|---|---|---|
| | SUSPENDED PAINTED GYP. BD. CEILING | | EXTERIOR WALL SCONCE -WALL MOUNTED |
| | 2' X 2' OPEN GRID CEILING | | VANITY LIGHT |
| | 4' LED LIGHT | | PENDANT LIGHT |
| | 2' X 4' LED LIGHT -RECESSED | | LARGE PENDANT LIGHT |
| | RECESSED LIGHT | | MEP DIFFUSER |

NOTES:
1. REFER MEP FOR FIXTURE SPECIFICATIONS.
2. COORDINATE LIGHT FIXTURES AND MECHANICAL SUPPLY/RETURN PRIOR TO INSTALLATION.
3. PAINT UNDERSIDE OF FLOOR DECK, EXPOSED STRUCTURE AND DUCTS IN OFFICE WHERE VISIBLE. (CALL OUT PT COLOR ON A7.1)

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ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

# LAKEWOOD STORAGE

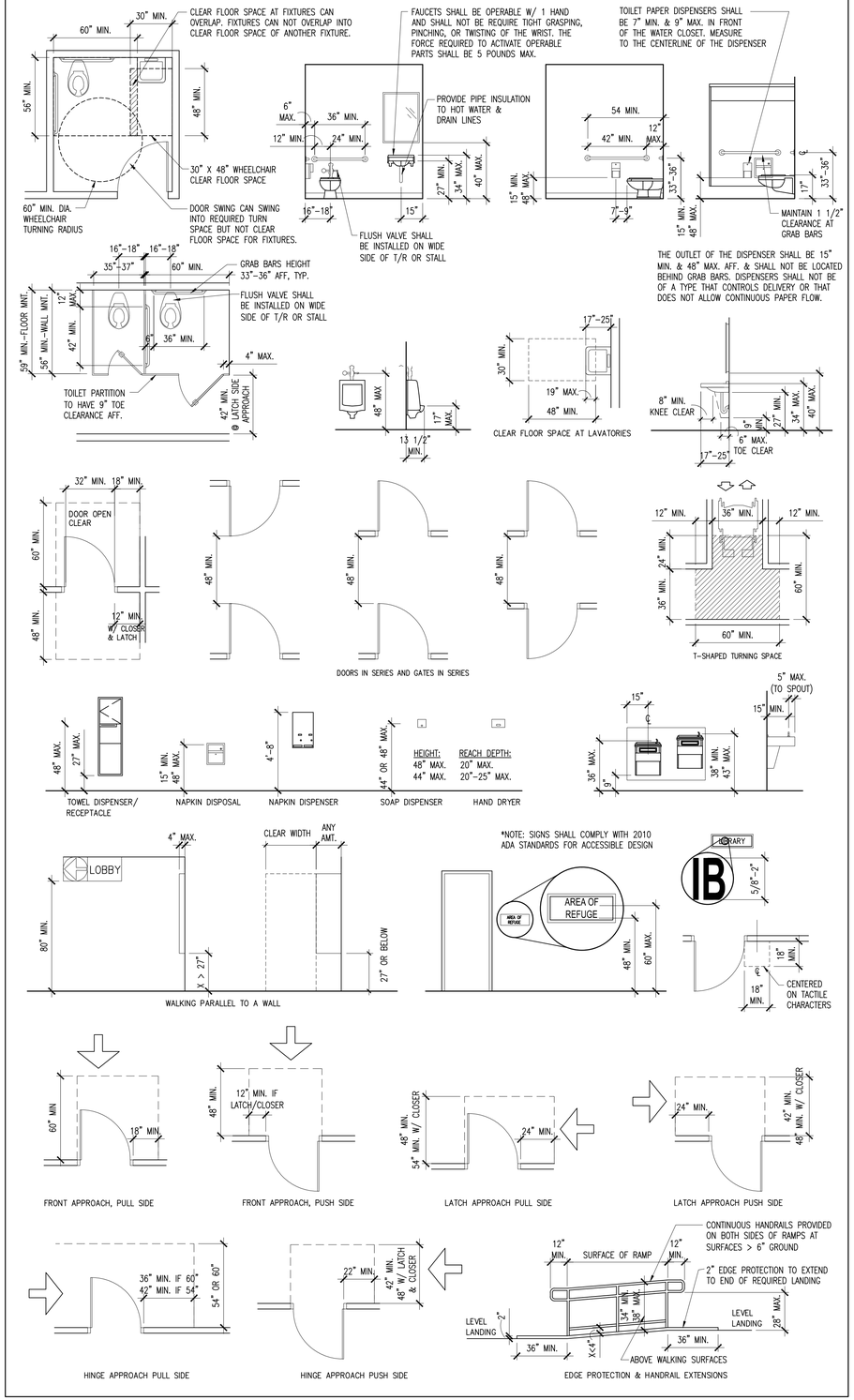
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

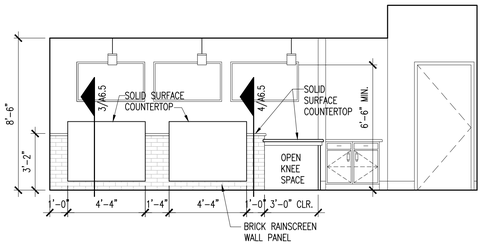
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

ENLARGED PLAN & RCP

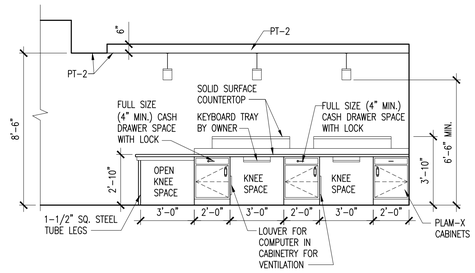
SHEET NO.
A2.5

## 2010 - ADA STANDARDS FOR ACCESSIBLE DESIGN

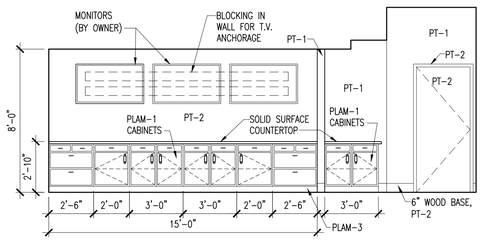


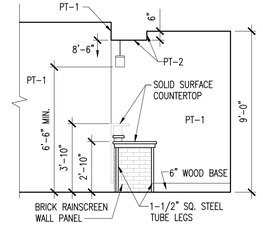

1 RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"



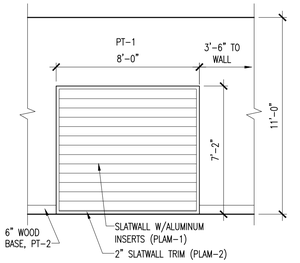

2 RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"



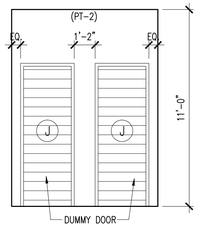

3 MONITOR WALL ELEVATION
SCALE: 1/4" = 1'-0"



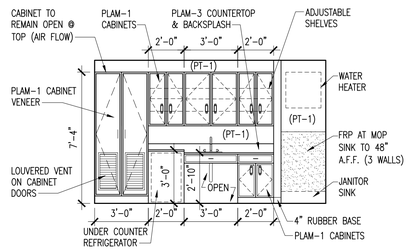

4 RECEPTION DESK ELEVATION
SCALE: 1/4" = 1'-0"




5 SLAT WALL ELEVATION
SCALE: 1/4" = 1'-0"

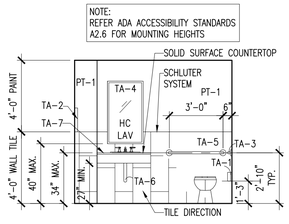



6 DISPLAY WALL ELEVATION
SCALE: 1/4" = 1'-0"



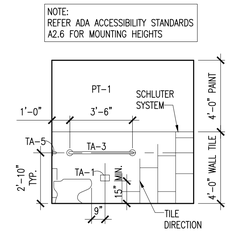

7 MDF/BREAK ROOM ELEVATION
SCALE: 1/4" = 1'-0"

NOTE:
REFER ADA ACCESSIBILITY STANDARDS A2.6 FOR MOUNTING HEIGHTS

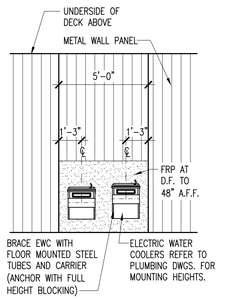



8 TOILET ROOM ELEVATION
SCALE: 1/4" = 1'-0"

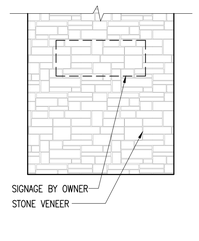
NOTE:
REFER ADA ACCESSIBILITY STANDARDS A2.6 FOR MOUNTING HEIGHTS




9 TOILET ROOM ELEVATION
SCALE: 1/4" = 1'-0"




10 DRINKING FOUNTAIN ELEVATION
SCALE: 1/4" = 1'-0"




11 BRICK WALL ELEVATION
SCALE: 1/4" = 1'-0"

| TOILET ACCESSORIES | | |
|---|---|---|
| MARK | ITEM | HEIGHT |
| TA-1 | TOILET TISSUE DISPENSER | 19" CL |
| TA-2 | HAND DRYERS | 48" MAX. |
| TA-3 | 42" HORIZONTAL GRAB BAR | 34" CL |
| TA-4 | MIRROR | 40" |
| TA-5 | 36" HORIZONTAL GRAB BAR | 34" CL |
| TA-6 | LAVATORY PIPING INSULATION | N/A |
| TA-7 | FEMININE NAPKIN DISPOSAL | 48" MAX. |
| TA-8 | SOAP DISPENSER | 44" MAX. |

NOTES
1. FOR CONTROLS OR REACH, HEIGHT IS MAX.
2. FOR MIRRORS, HEIGHT IS TO BOTTOM OF REFLECTIVE EDGE.
3. FOR GRAB BARS, HEIGHT IS TO CENTER OF HORIZONTAL BAR.
4. ALL DESIGN MUST COMPLY W/ LOCAL AMERICAN'S W/DISABILITIES ACT – REF. SHEET A2.6
5. BLOCKING FOR ACCESSORIES BY GENERAL CONTRACTOR
6. SOAP DISPENSER TO BE INSTALLED OVER COUNTERTOP

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STATE OF MISSOURI
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DALLENBACH NUMBER A-2020056968
ARCHITECT
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NE PORT DRIVE
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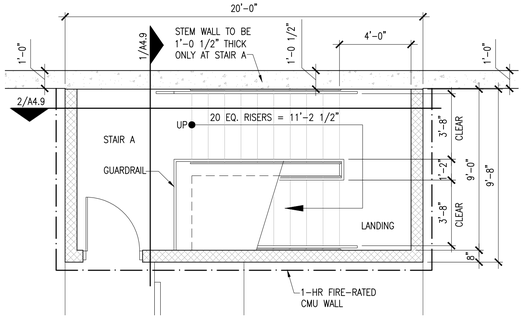
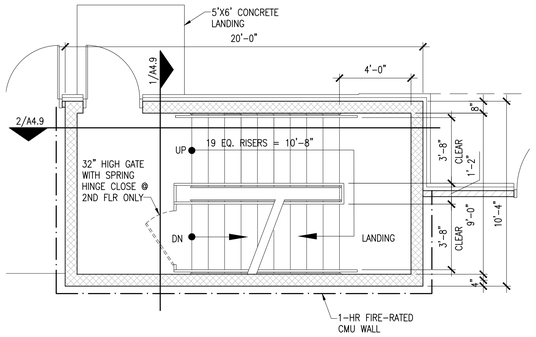
ADA & INT. ELEV

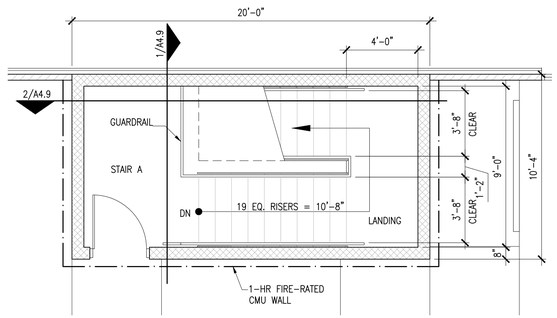
SHEET NO.
A2.6



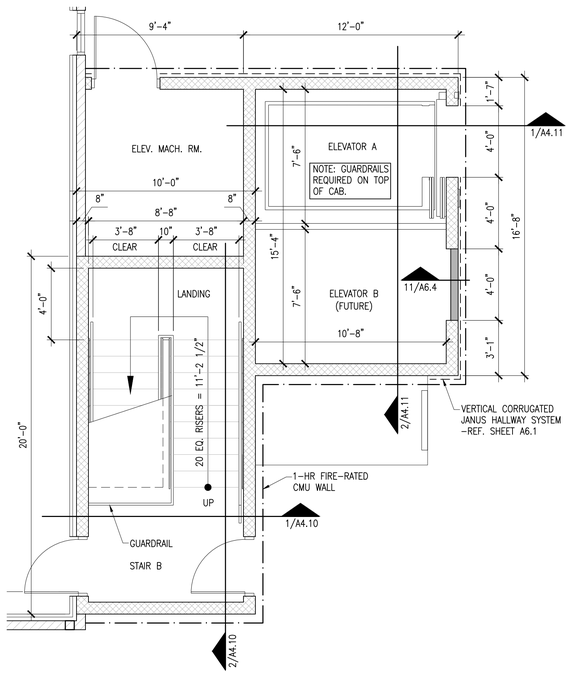

1 1ST FLOOR STAIR A
SCALE: 1/4" = 1'-0"



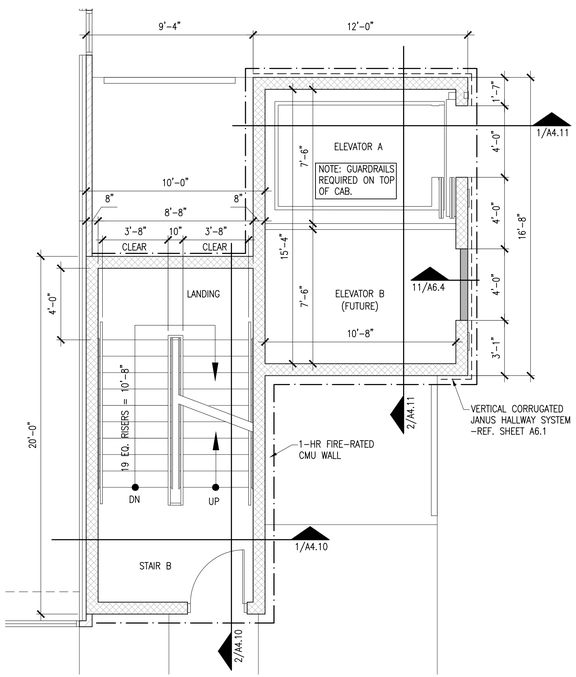

2 2ND FLOOR STAIR A
SCALE: 1/4" = 1'-0"



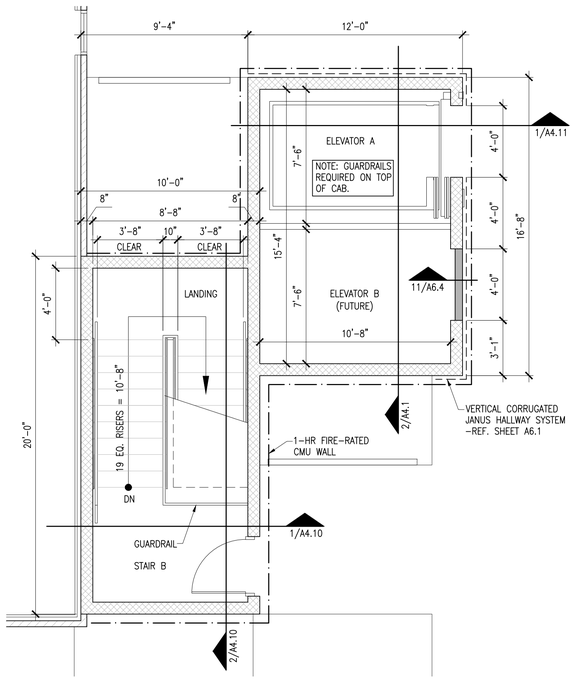

3 3RD FLOOR STAIR A
SCALE: 1/4" = 1'-0"




4 1ST FLOOR STAIR B / ELEV. A & B
SCALE: 1/4" = 1'-0"




5 2ND FLOOR STAIR B / ELEV. A & B
SCALE: 1/4" = 1'-0"




6 3RD FLOOR STAIR B / ELEV. A & B
SCALE: 1/4" = 1'-0"

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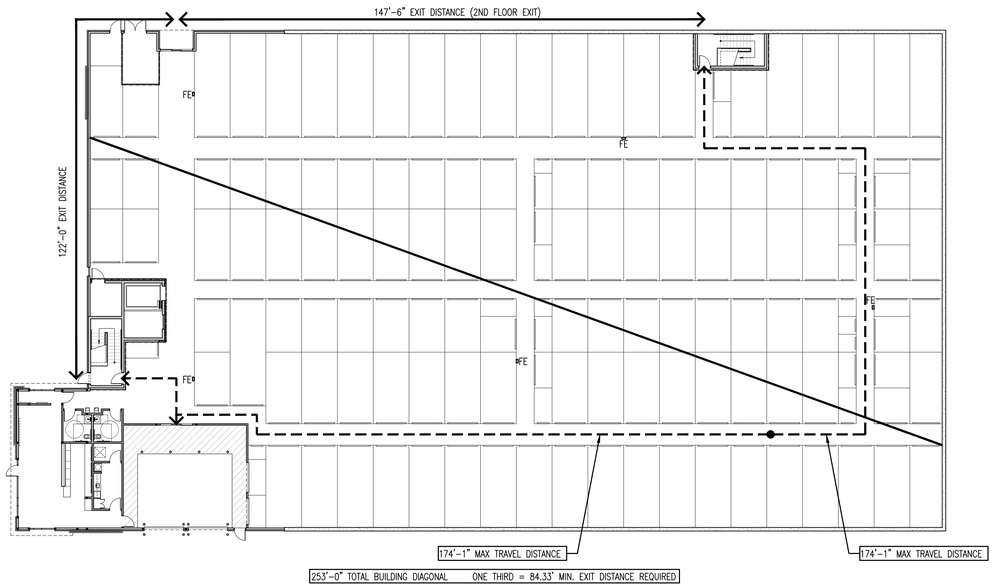
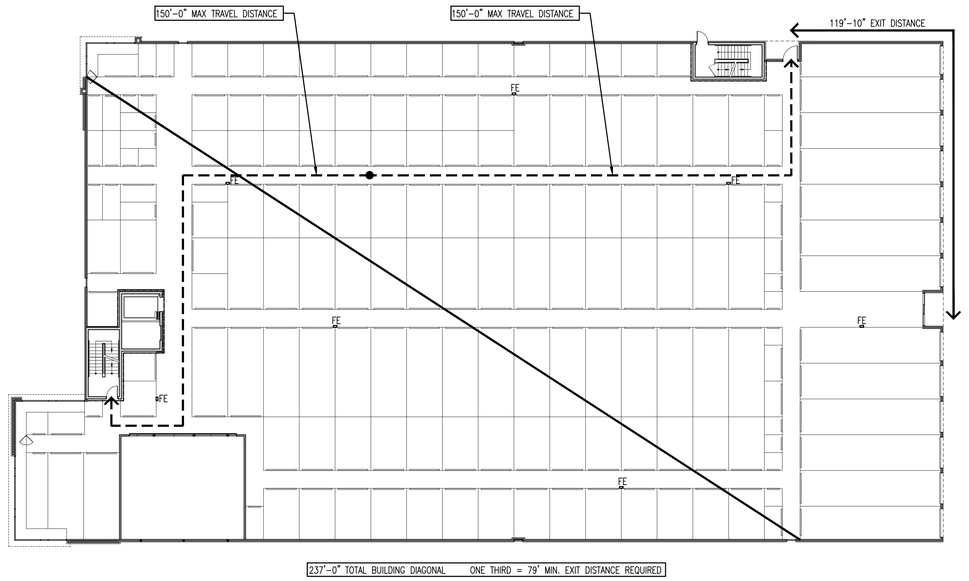
ENLARGED PLANS

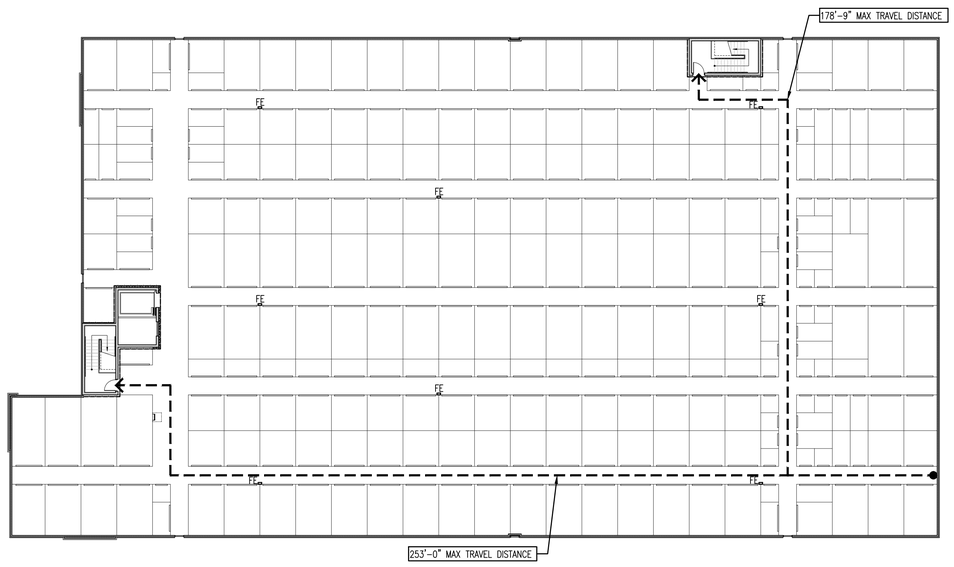
SHEET NO.
A2.7




1 1ST FLOOR EGRESS PLAN
SCALE: 1" = 20'-0"




2 2ND FLOOR EGRESS PLAN
SCALE: 1" = 20'-0"




3 3RD FLOOR EGRESS PLAN
SCALE: 1" = 20'-0"

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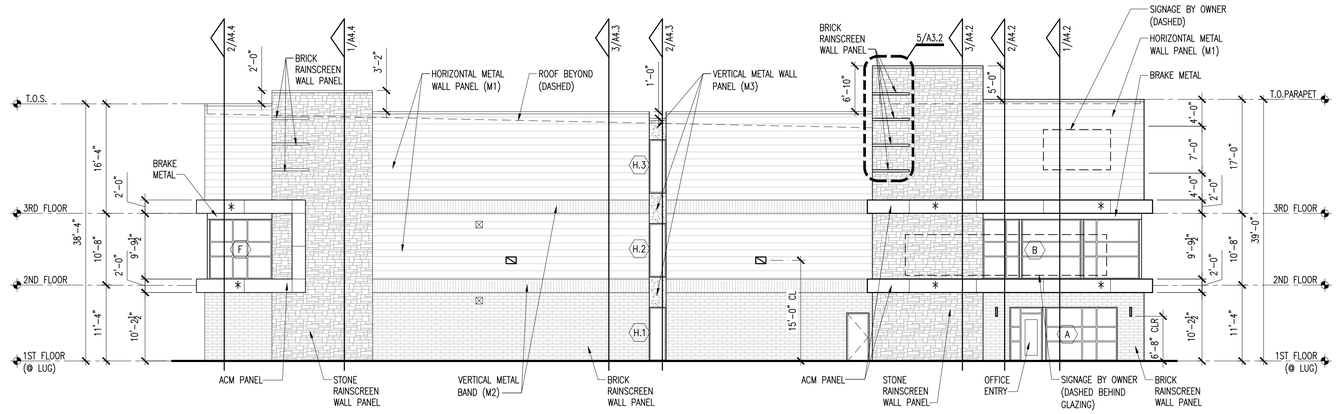
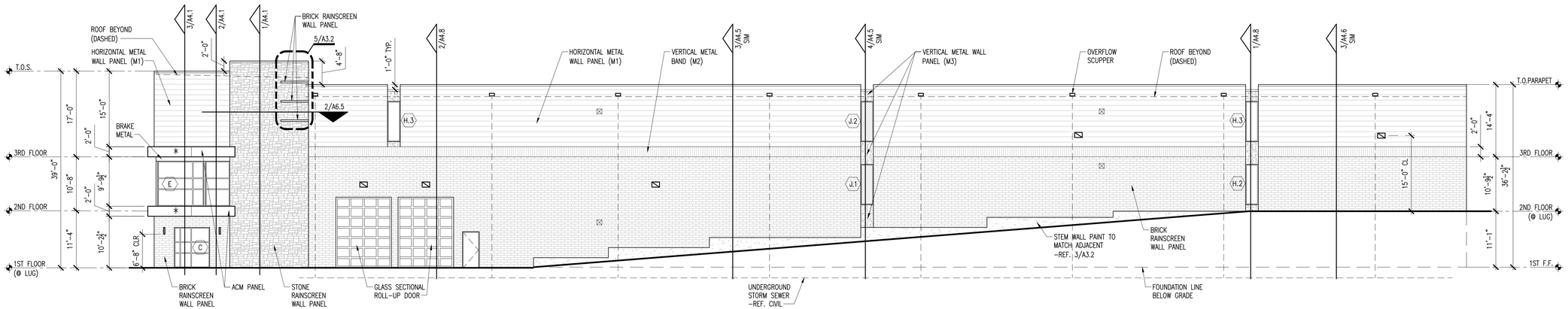
EGRESS PLANS

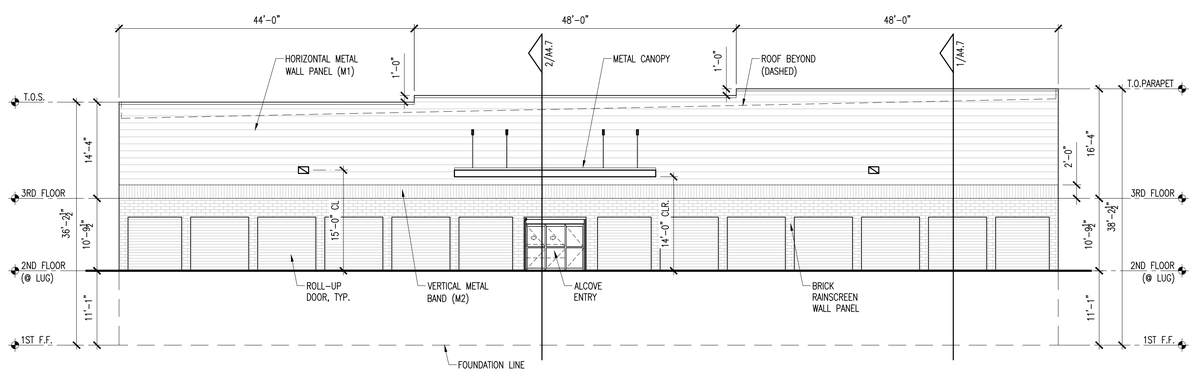
SHEET NO.
A2.8




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




2 SOUTH ELEVATION
SCALE: 3/32" = 1'-0"




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

| ELEVATION LEGEND | |
|---|---|
| | HORIZONTAL METAL WALL PANEL (M1) |
| | VERTICAL METAL BAND (M2) |
| | VERTICAL METAL WALL PANEL (M3) |
| * | ACM – ALUMINUM COMPOSITE MATERIAL PANEL |
| | BRICK RAINSCREEN WALL PANEL |
| | STONE RAINSCREEN WALL PANEL |
| | EXTERIOR LIGHT FIXTURE –REF. MEP |
| | OVERFLOW SCUPPER –REF. 12/A6.3 |
| ⊠ | OUTSIDE AIR LOCATIONS –REF. MEP |

ELEVATION NOTES

1. METAL COPING, TRIM, AND FLASHING TO MATCH COLOR OF ADJACENT MATERIAL.
2. ROOF MATERIAL TO BE TPO ROOF SYSTEM SLOPED AT 1/4" FT WITH INTERNAL ROOF DRAINS TO CONNECT TO UNDERGROUND SEWER
3. OVERFLOW SCUPPERS TO BE 2" ABOVE LOWEST POINT OF ROOF.
4. REFER SHEET A7.1 FOR EXTERIOR PAINT COLORS.
5. PAINT MAN DOOR TO MATCH ADJACENT MATERIAL UNLESS NOTED OTHERWISE.
6. GENERAL CONTRACTOR/SIGNAGE COMPANY TO PROVIDE ANCHORAGE, BLOCKING, & WATERPROOFING FOR SIGNAGE.
7. MAX PARAPET HEIGHT TO BE 2'–6" WITHOUT STRUCTURAL SUPPORT.

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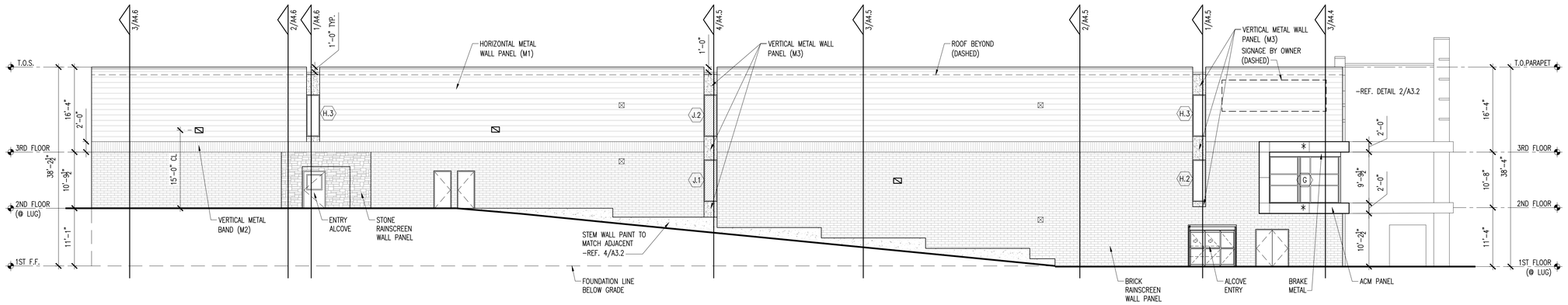
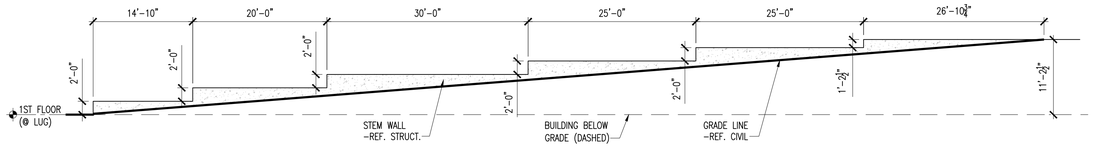
EXTERIOR ELEVATIONS

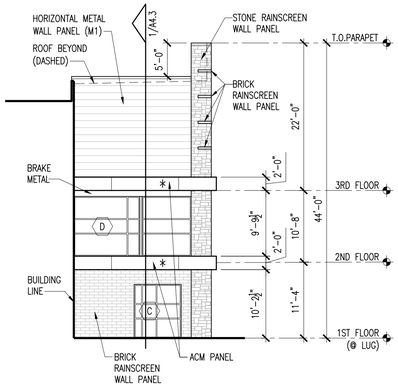
SHEET NO.
A3.1



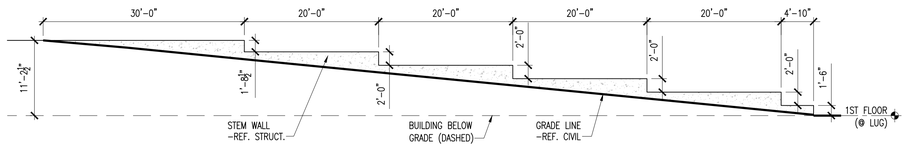

1 NORTH ELEVATION
SCALE: 3/32" = 1'-0"



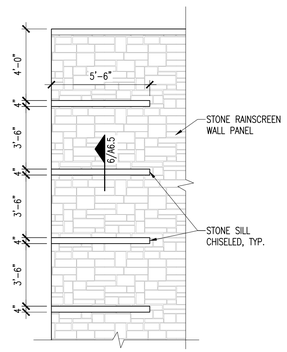

3 SOUTH STEM WALL
SCALE: 3/32" = 1'-0"




2 NORTH ELEVATION
SCALE: 3/32" = 1'-0"




4 NORTH STEM WALL
SCALE: 3/32" = 1'-0"




5 STONE BAND ELEVATION
SCALE: 1/4" = 1'-0"

| ELEVATION LEGEND | |
|---|---|
| | HORIZONTAL METAL WALL PANEL (M1) |
| | VERTICAL METAL BAND (M2) |
| | VERTICAL METAL WALL PANEL (M3) |
| * | ACM – ALUMINUM COMPOSITE MATERIAL PANEL |
| | BRICK RAINSCREEN WALL PANEL |
| | STONE RAINSCREEN WALL PANEL |
| | EXTERIOR LIGHT FIXTURE –REF. MEP |
| | OVERFLOW SCUPPER –REF. 12/A6.3 |
| ⊠ | OUTSIDE AIR LOCATIONS –REF. MEP |

ELEVATION NOTES

1. METAL COPING, TRIM, AND FLASHING TO MATCH COLOR OF ADJACENT MATERIAL.
2. ROOF MATERIAL TO BE TPO ROOF SYSTEM SLOPED AT 1/4" FT WITH INTERNAL ROOF DRAINS TO CONNECT TO UNDERGROUND SEWER
3. OVERFLOW SCUPPERS TO BE 2" ABOVE LOWEST POINT OF ROOF.
4. REFER SHEET A7.1 FOR EXTERIOR PAINT COLORS.
5. PAINT MAN DOOR TO MATCH ADJACENT MATERIAL UNLESS NOTED OTHERWISE.
6. GENERAL CONTRACTOR/SIGNAGE COMPANY TO PROVIDE ANCHORAGE, BLOCKING, & WATERPROOFING FOR SIGNAGE.
7. MAX PARAPET HEIGHT TO BE 2'-6" WITHOUT STRUCTURAL SUPPORT.

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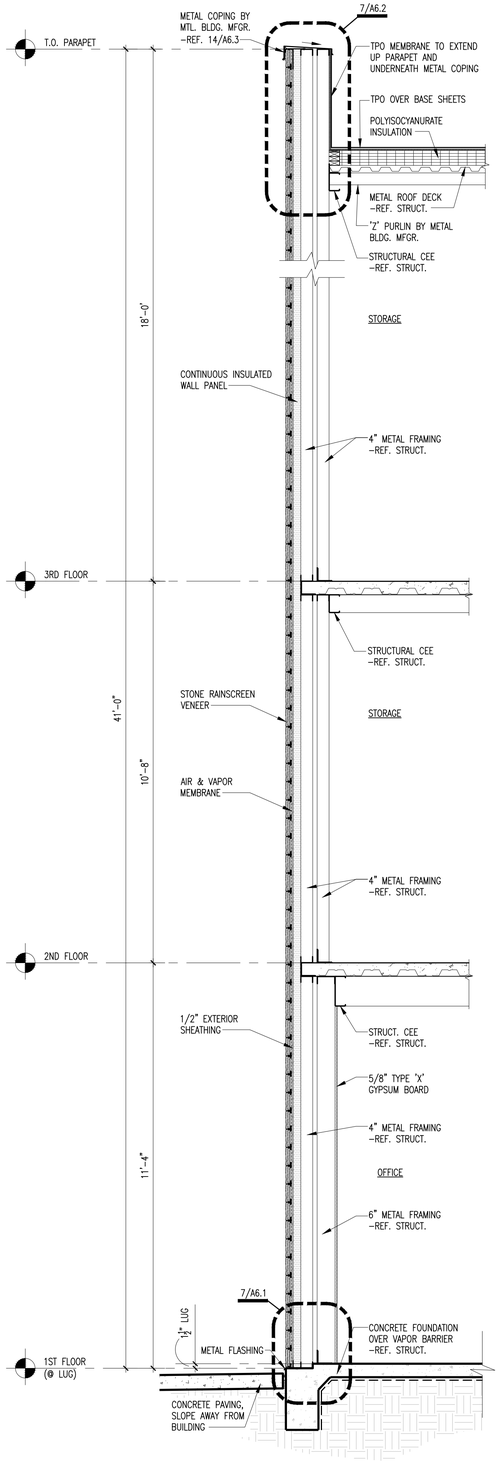
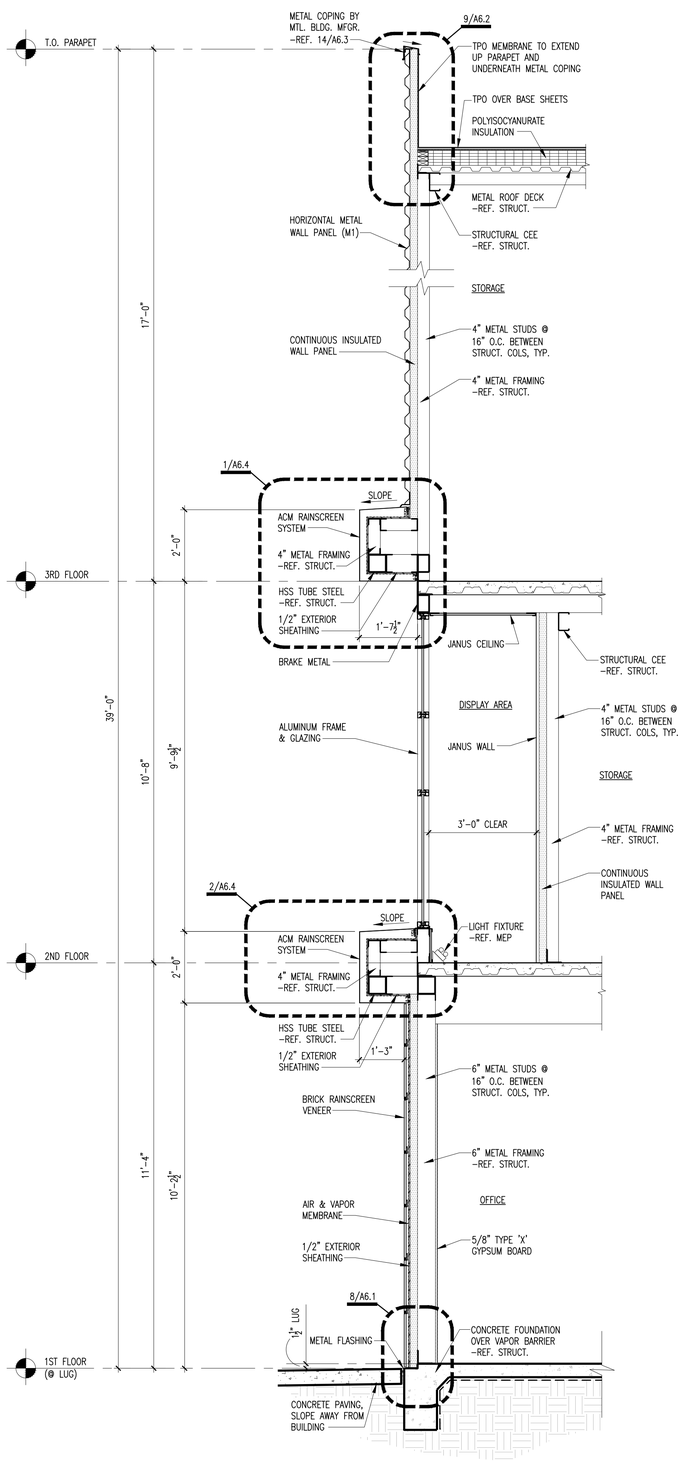
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

EXTERIOR ELEVATIONS

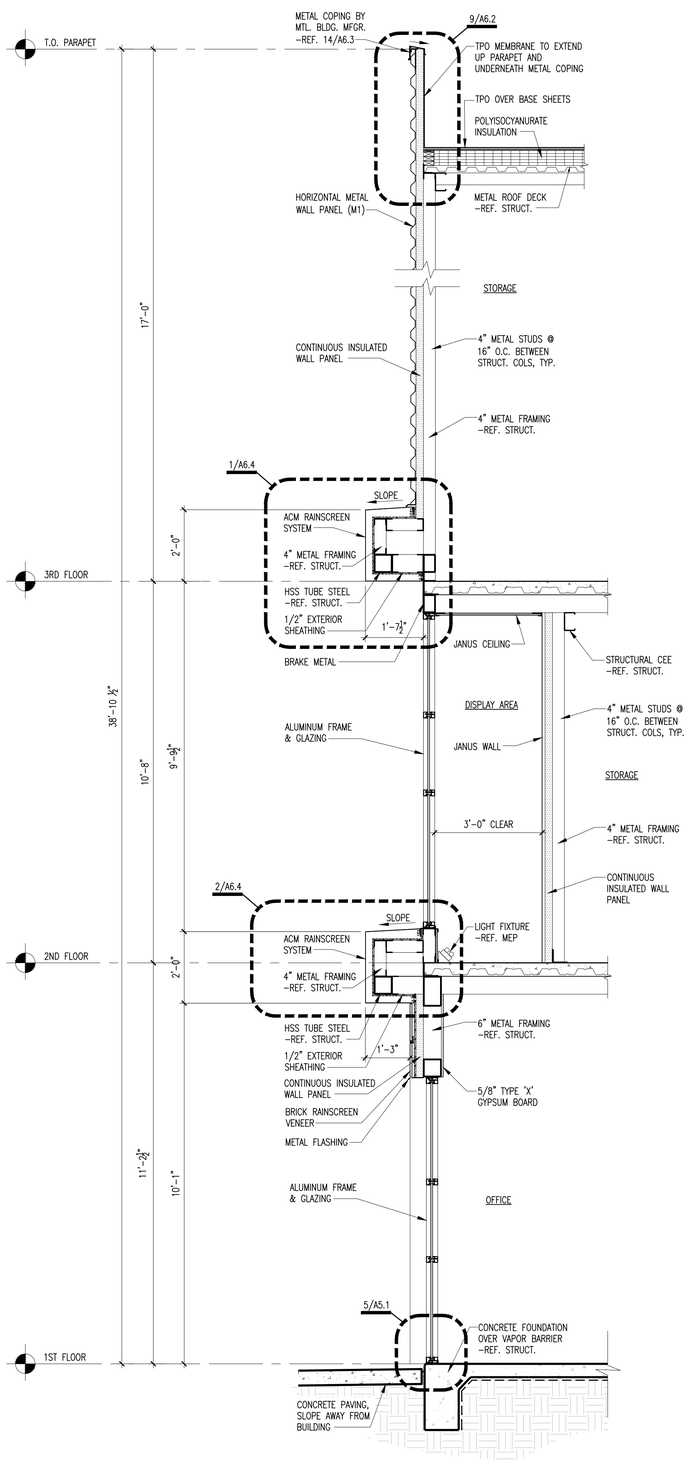
SHEET NO.
A3.2




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




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




3 WALL SECTION
SCALE: 1/2" = 1'-0"

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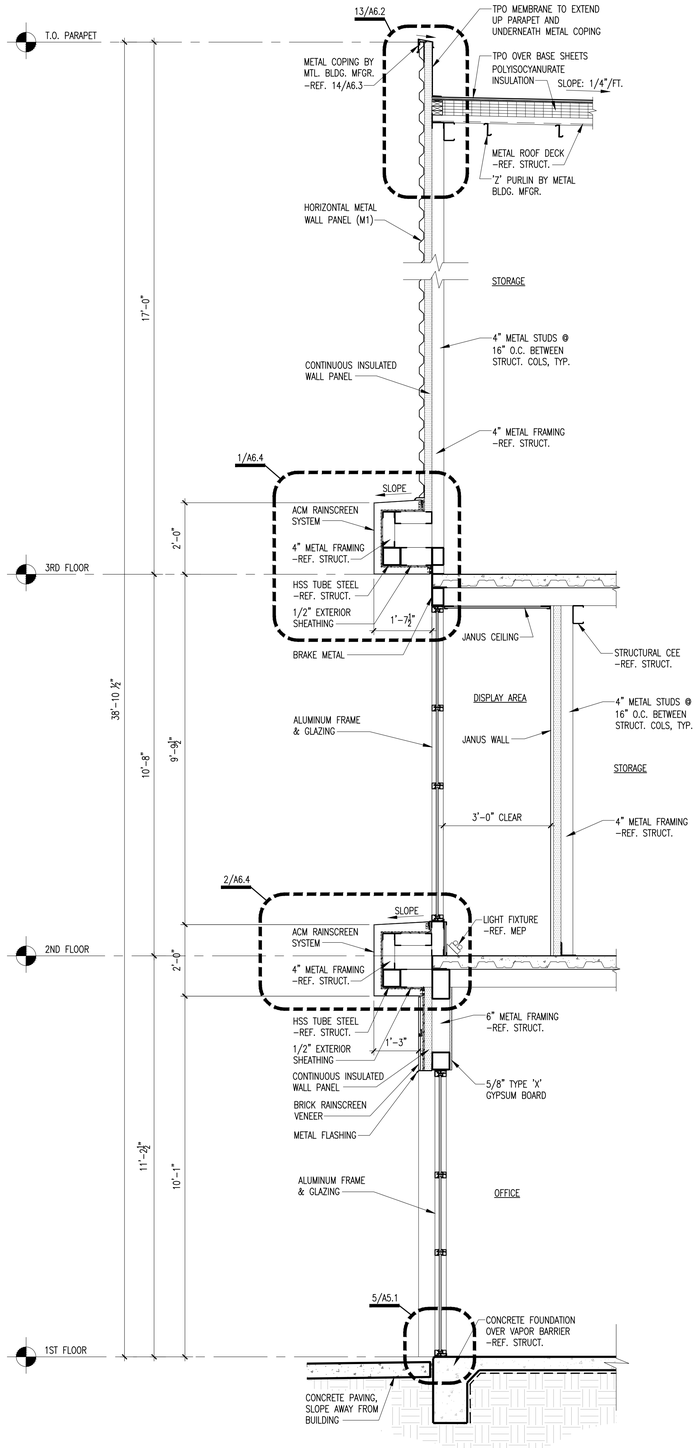
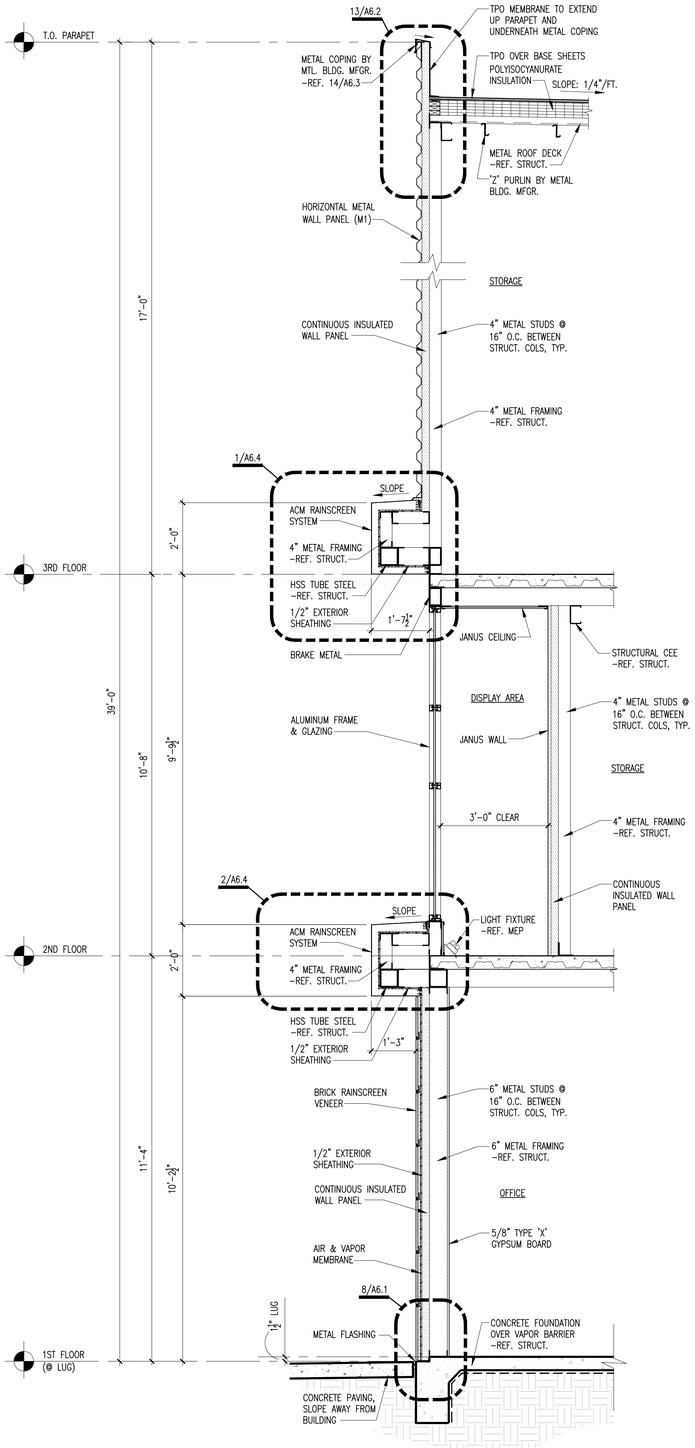
WALL SECTIONS

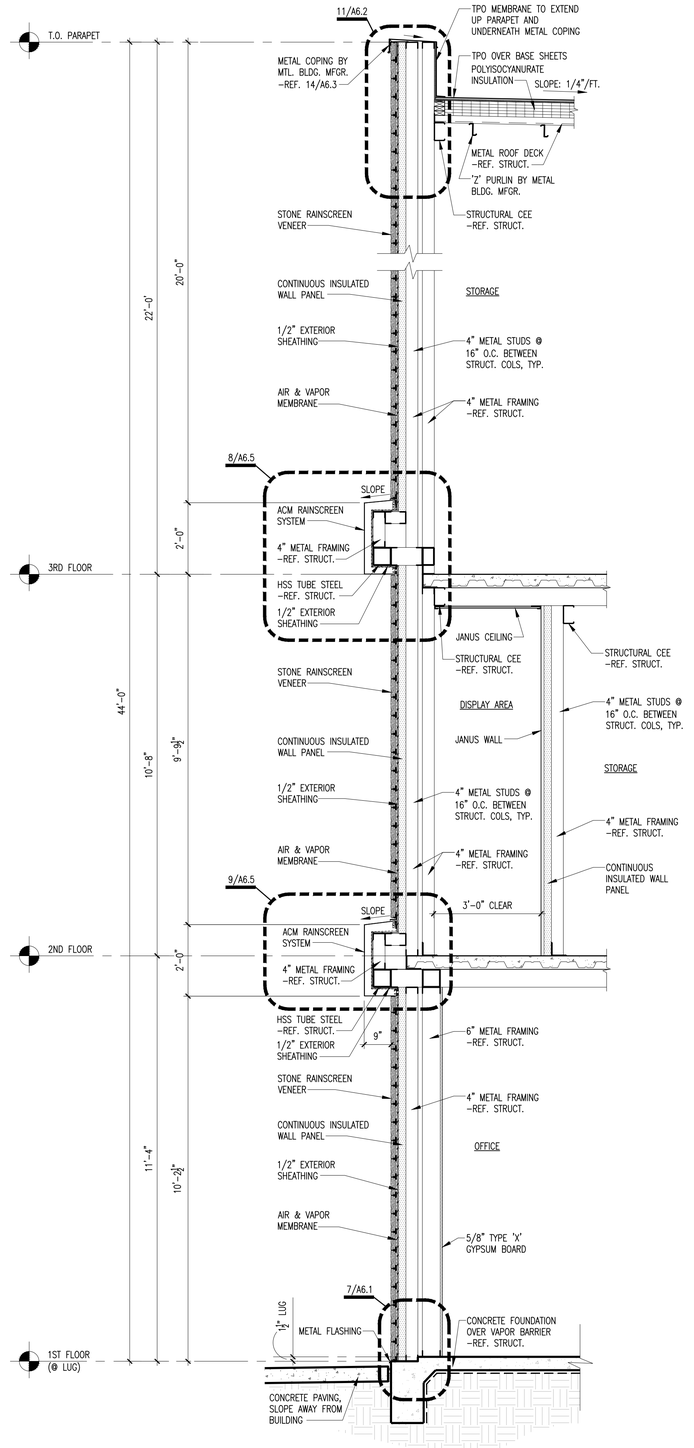
SHEET NO.
A4.1




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




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




3 WALL SECTION
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
JEFFREY S. DALLENBACH
DALLENBACH NUMBER A-2020036988
ARCHITECT

12.16.2021
JEFFREY S. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020036988

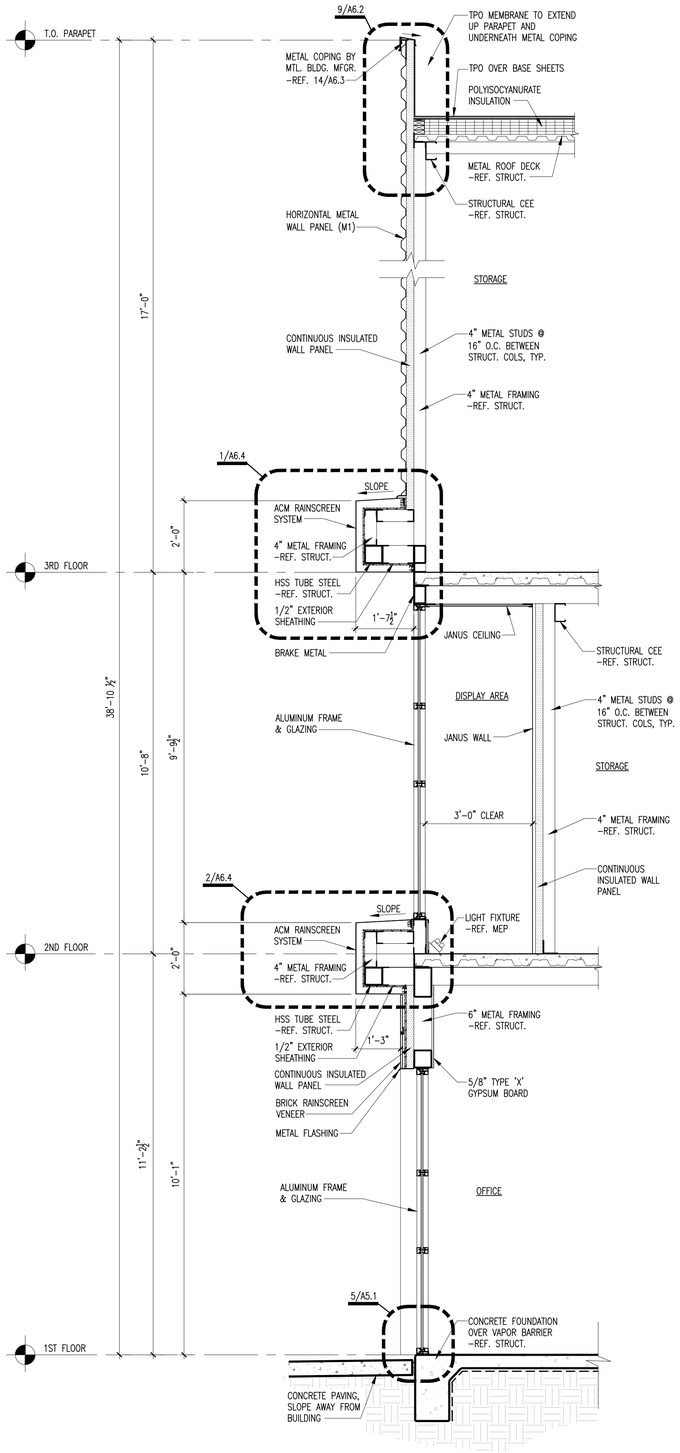
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

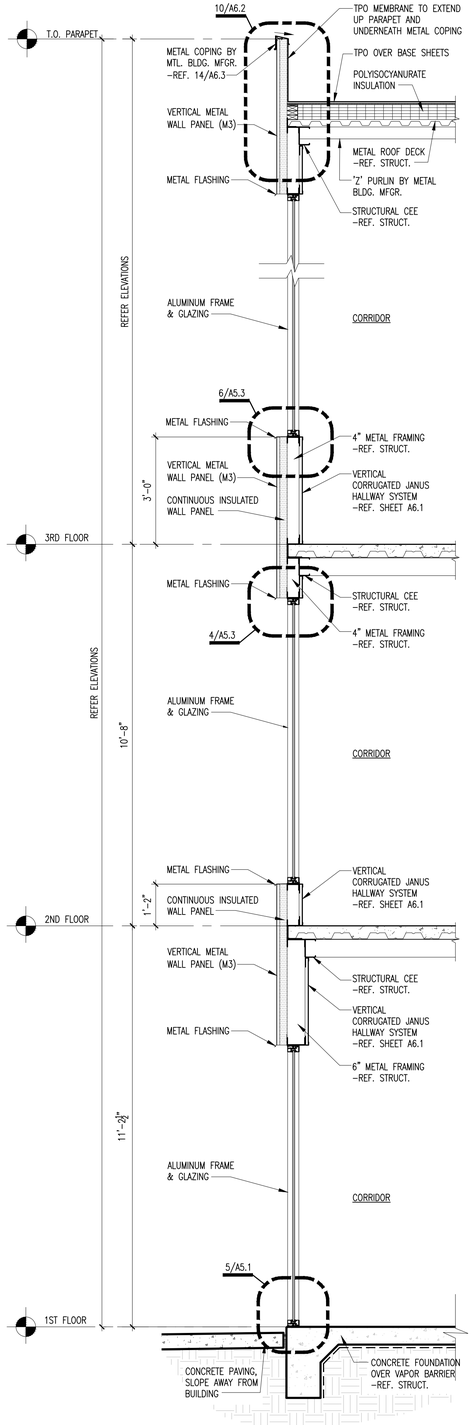
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

WALL SECTIONS

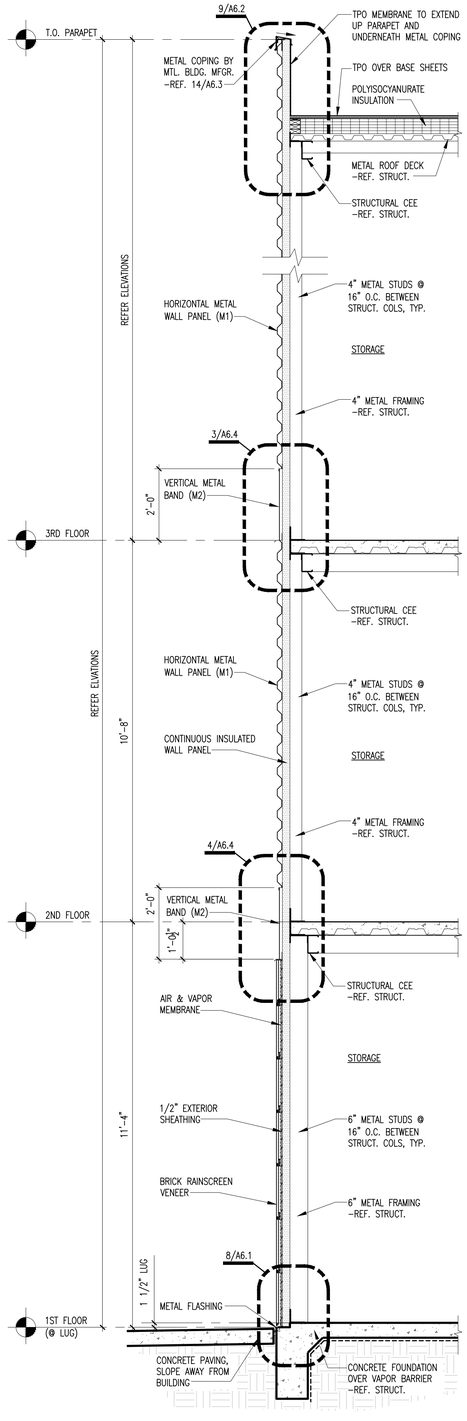
SHEET NO.
A4.2




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




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




3 WALL SECTION
SCALE: 1/2" = 1'-0"

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12.16.2021
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# LAKEWOOD STORAGE

NE PORT DRIVE
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PROJECT NO. 2035
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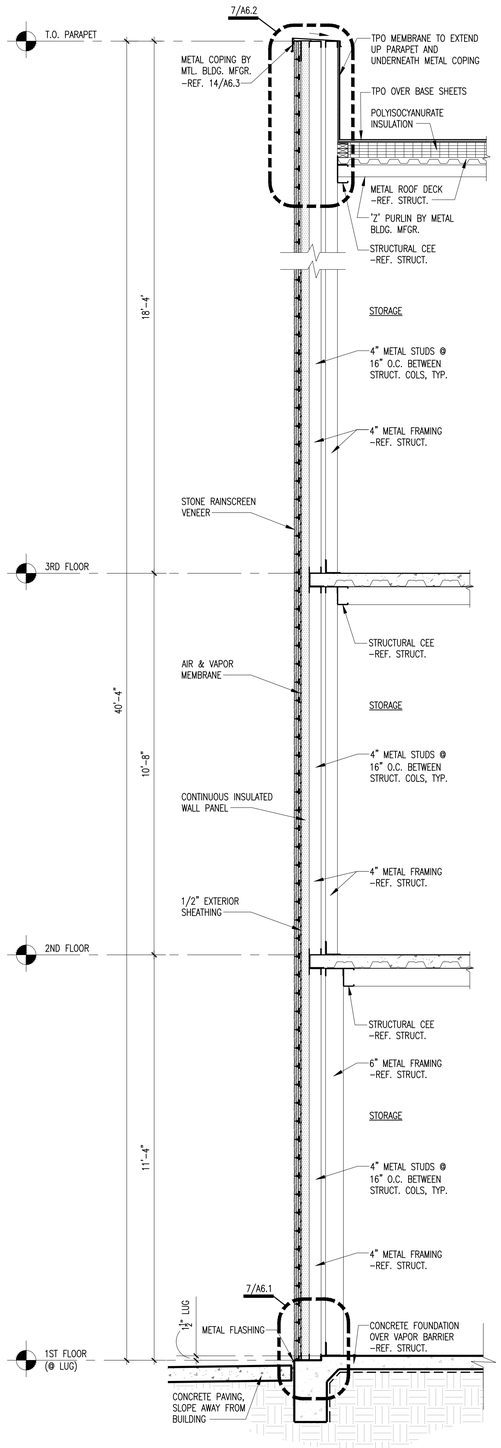
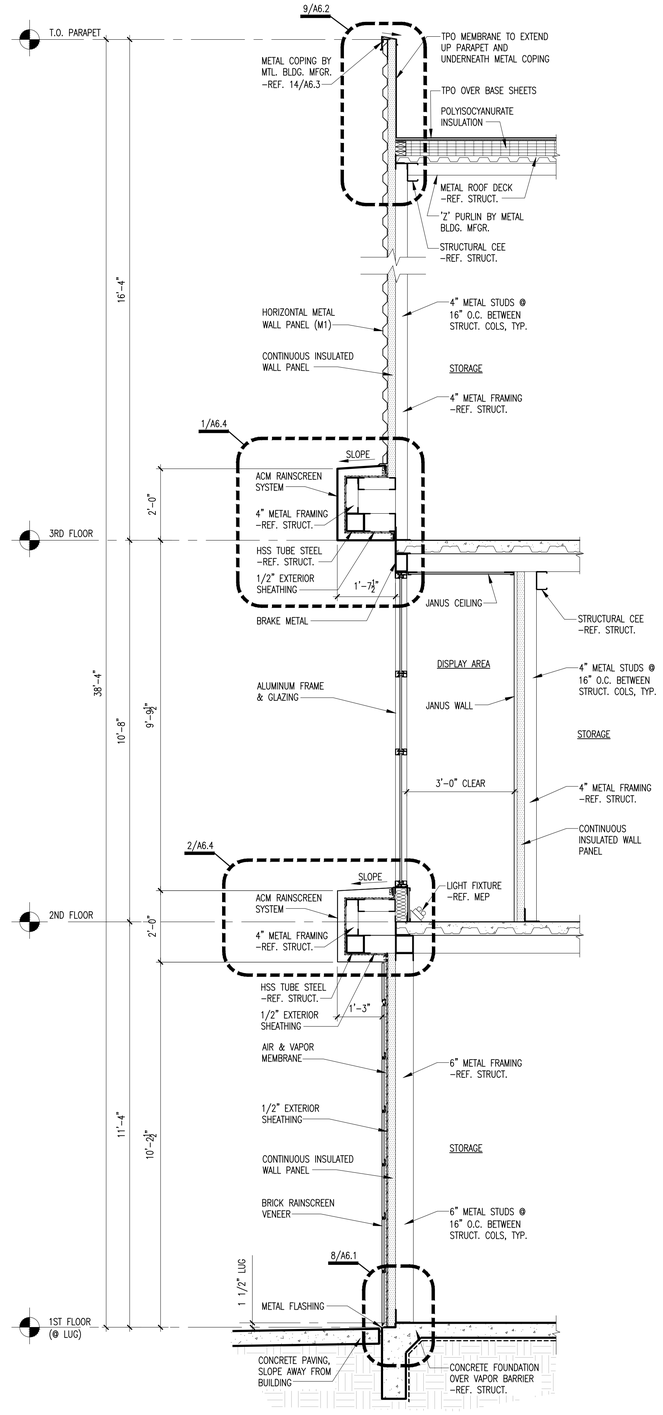
DRAWN : VP
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.3




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




2 WALL SECTION
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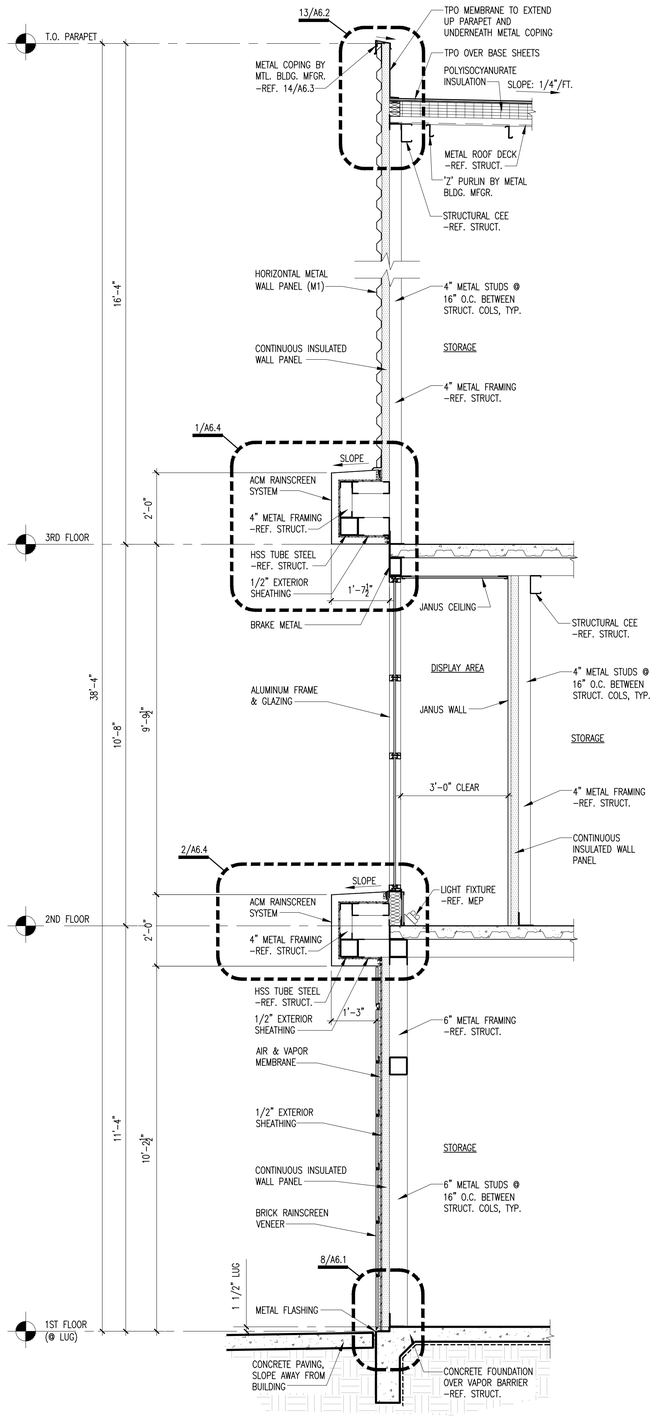


3 WALL SECTION
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
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12.16.2021
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# LAKEWOOD STORAGE

NE PORT DRIVE
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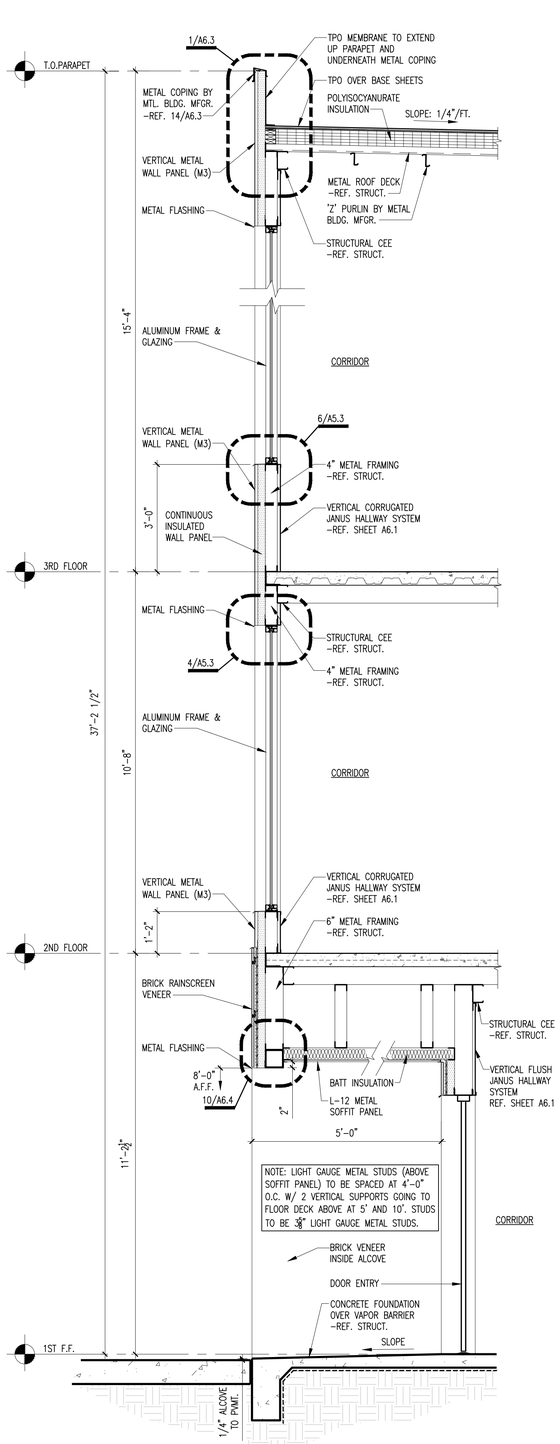
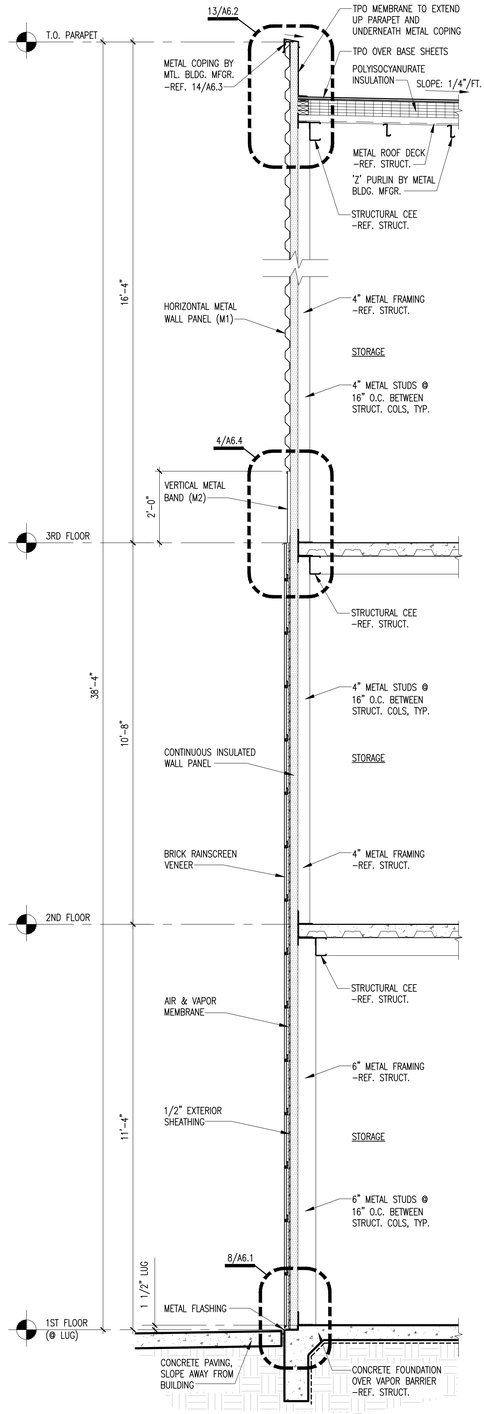
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.4




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




2 WALL SECTION
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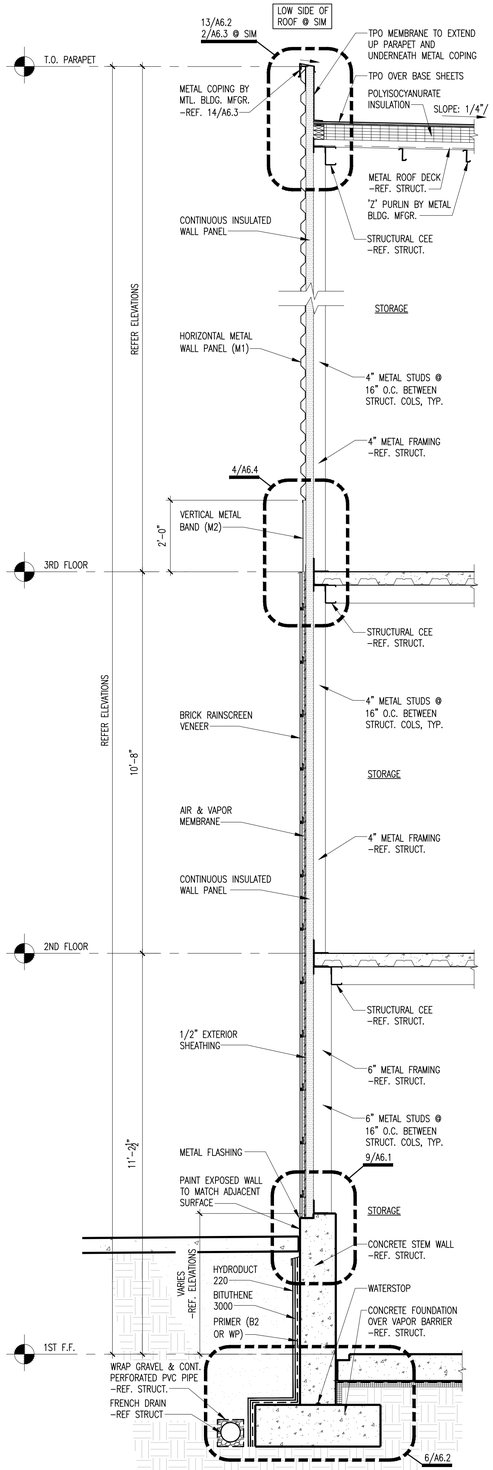
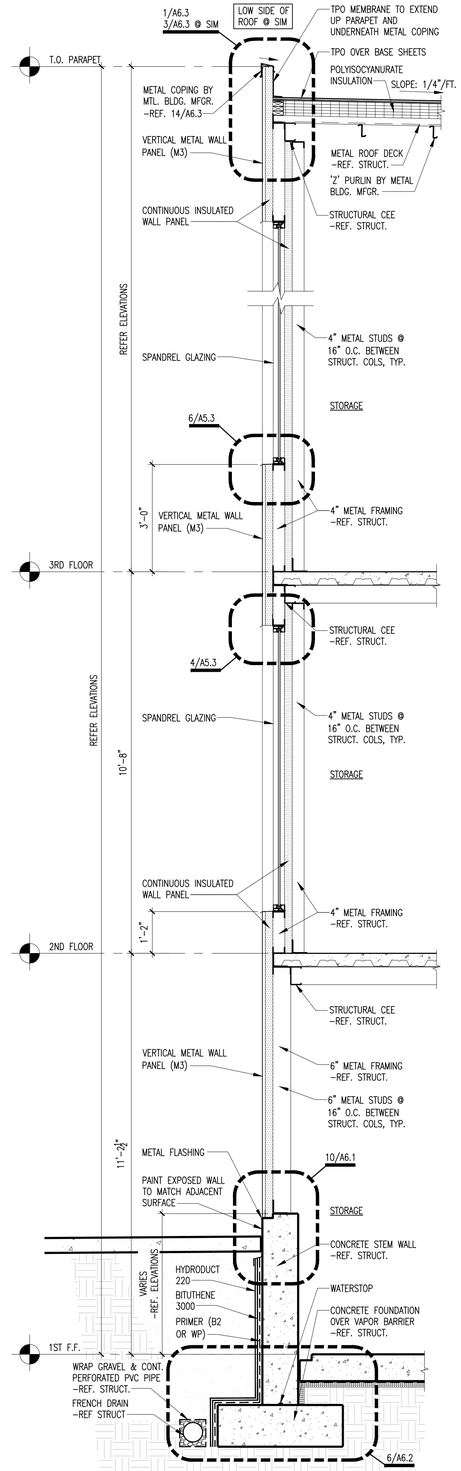



3 WALL SECTION
SCALE: 1/2" = 1'-0"




4 WALL SECTION
SCALE: 1/2" = 1'-0"

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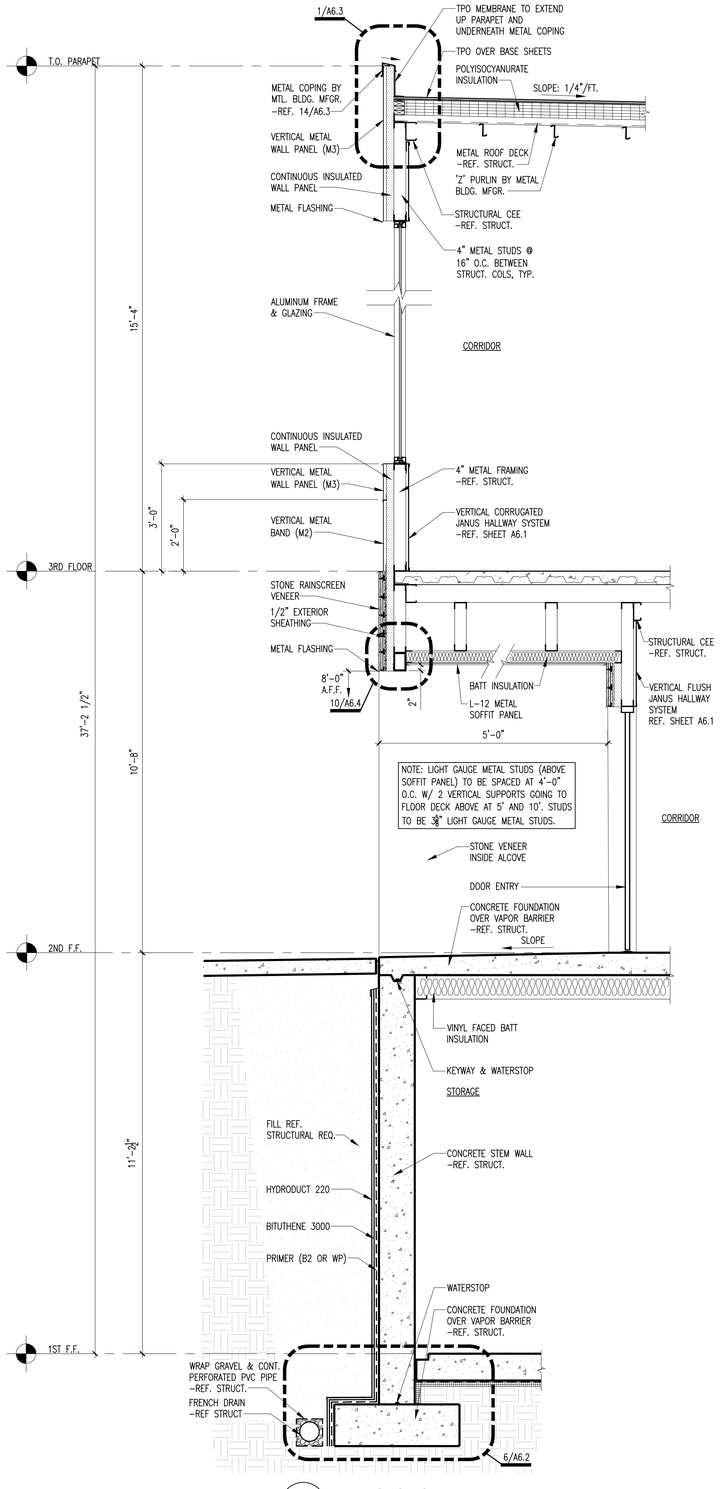
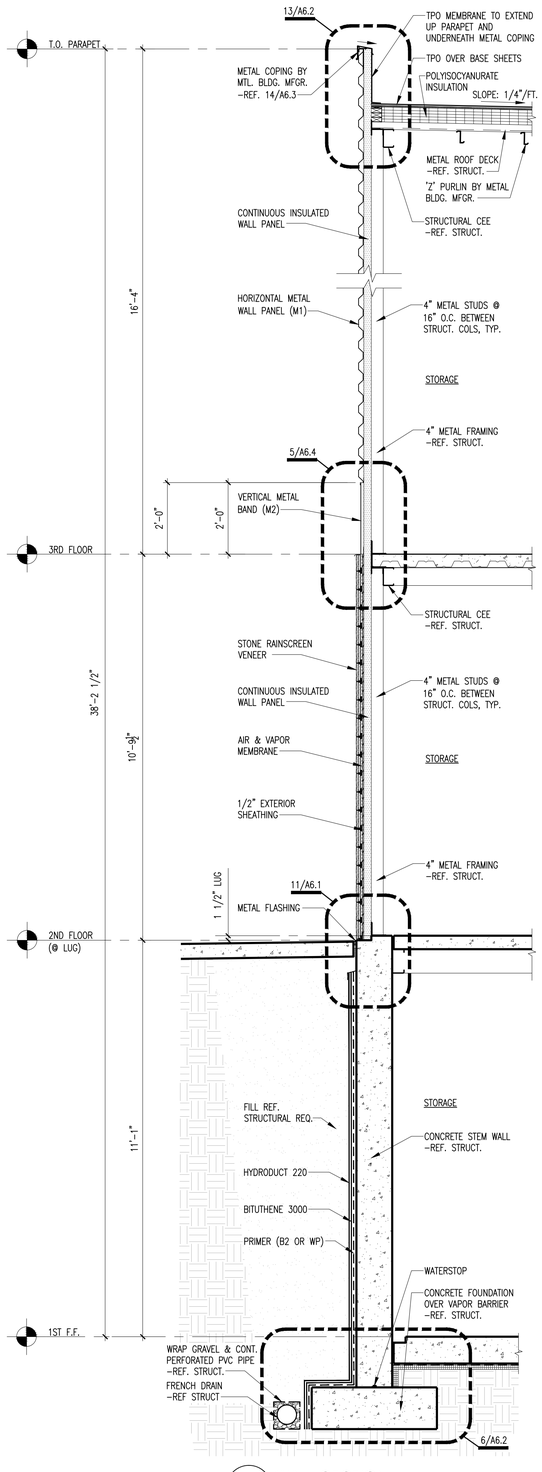
WALL SECTIONS

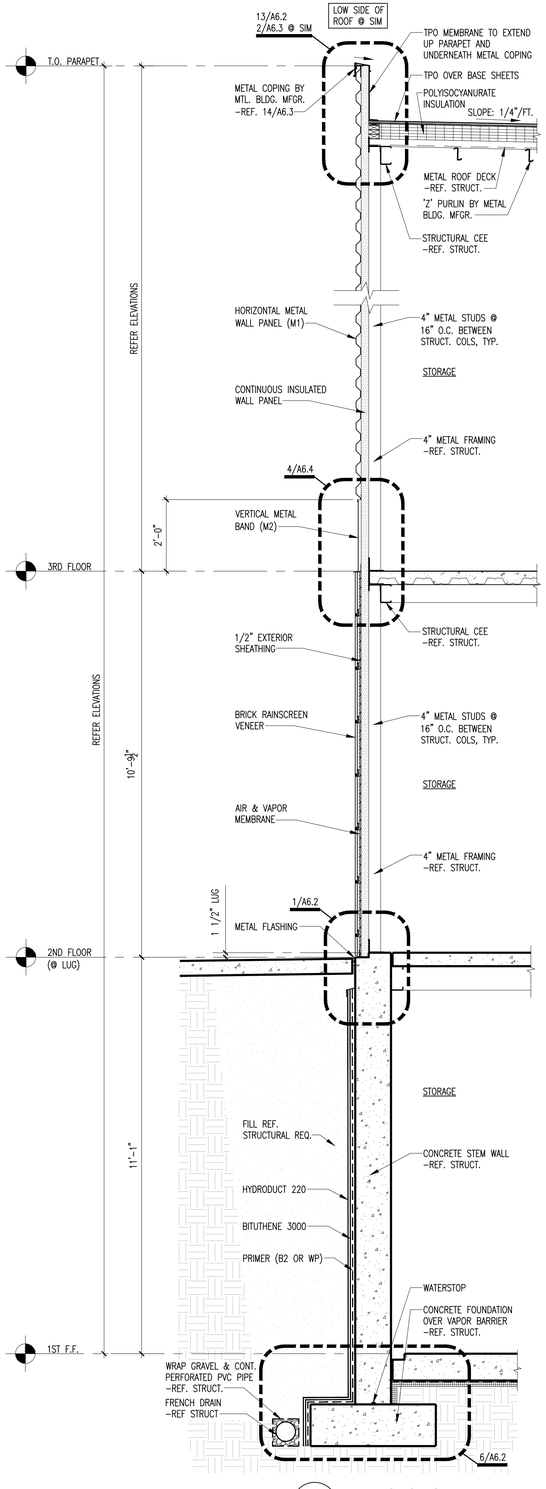
SHEET NO.
A4.5




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




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




3 WALL SECTION
SCALE: 1/2" = 1'-0"

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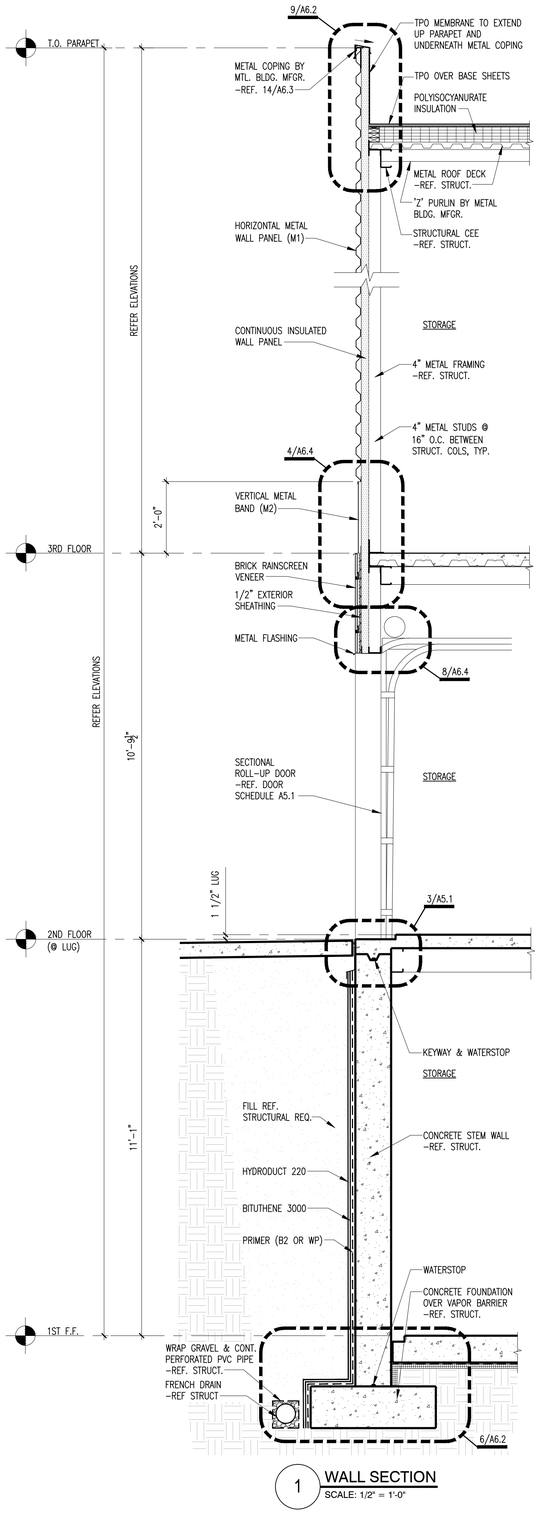
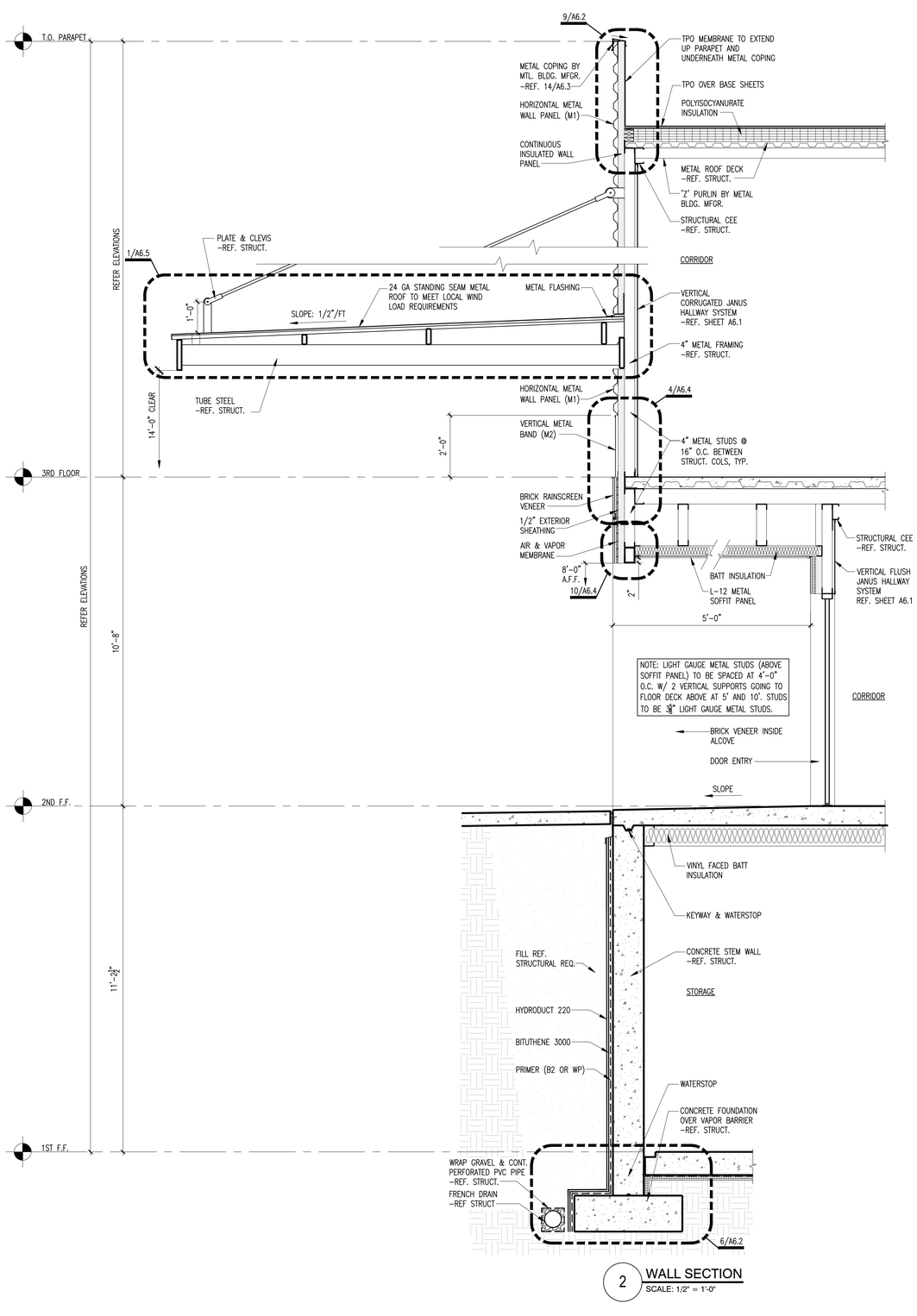
WALL SECTIONS

SHEET NO.
A4.6




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




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

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STATE OF MISSOURI
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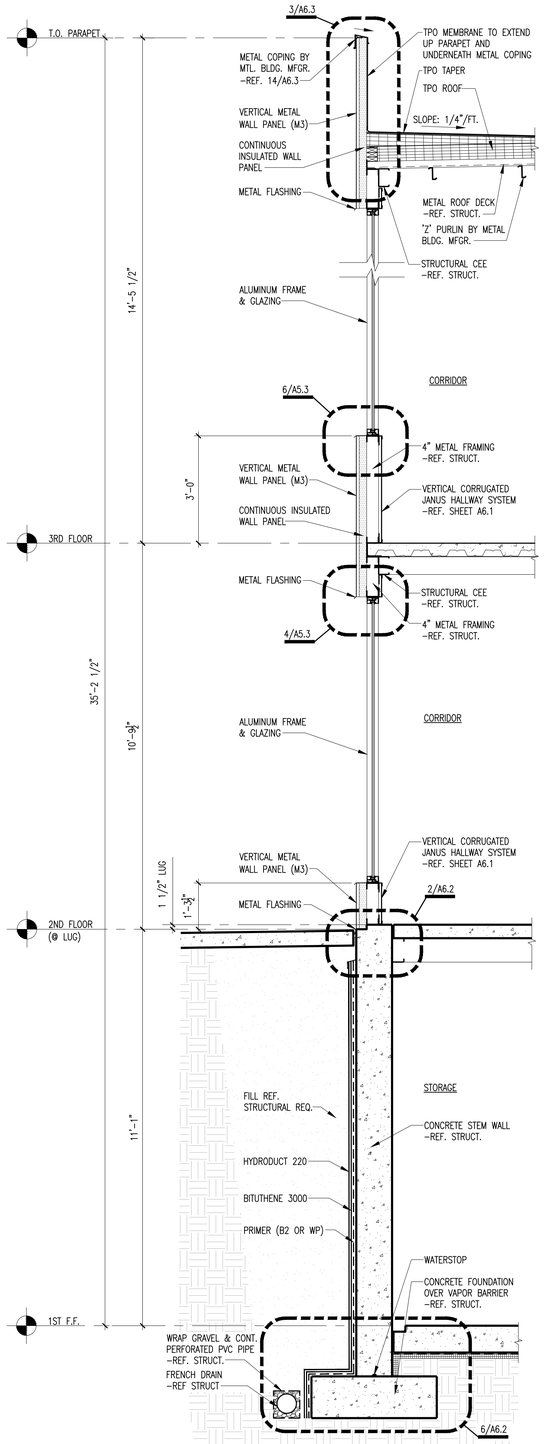
REVISIONS:

## WALL SECTIONS

SHEET NO.
A4.7




1 WALL SECTION
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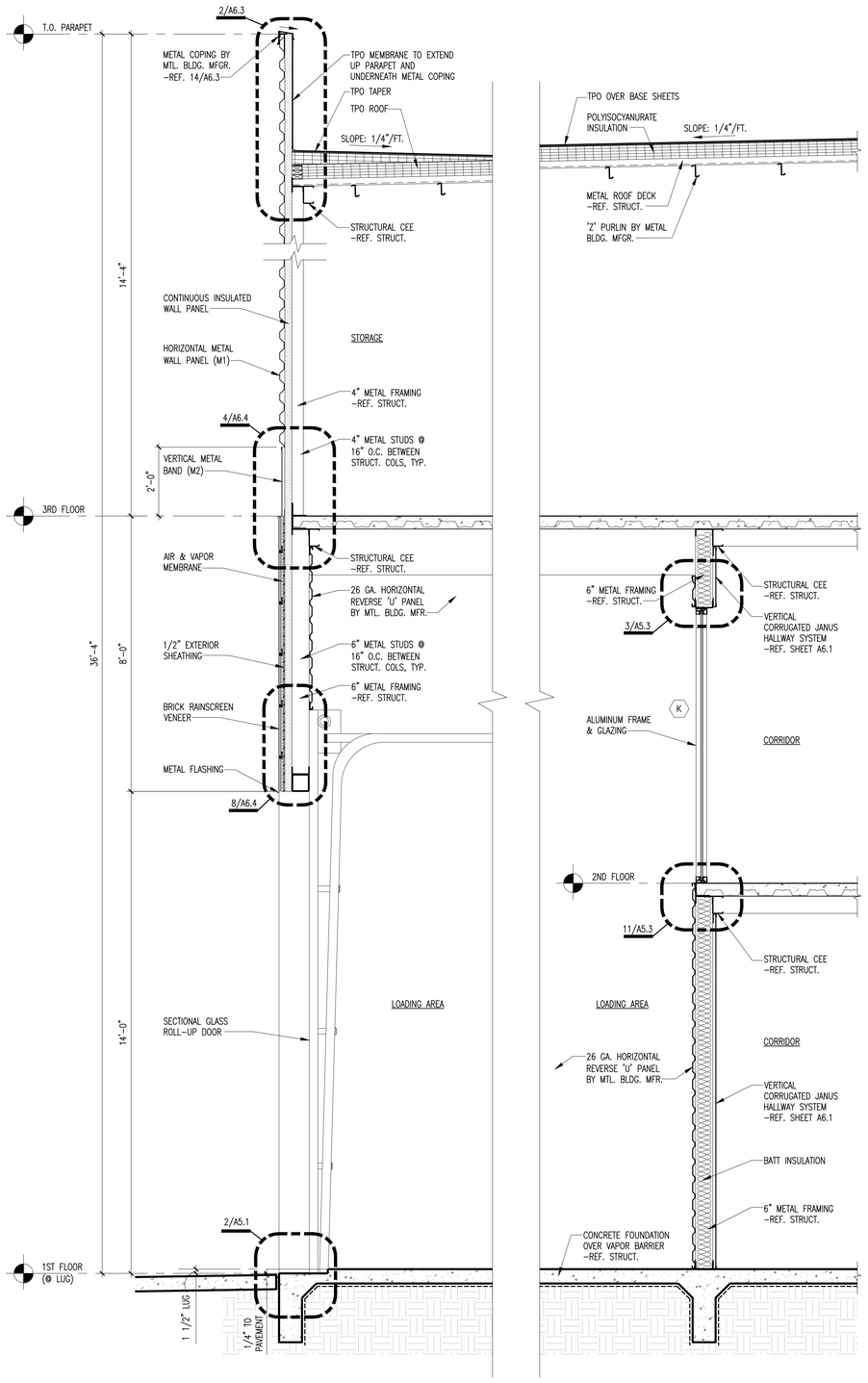


2 WALL SECTION
SCALE: 1/2" = 1'-0"

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# LAKEWOOD STORAGE

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PROJECT NO. 2035
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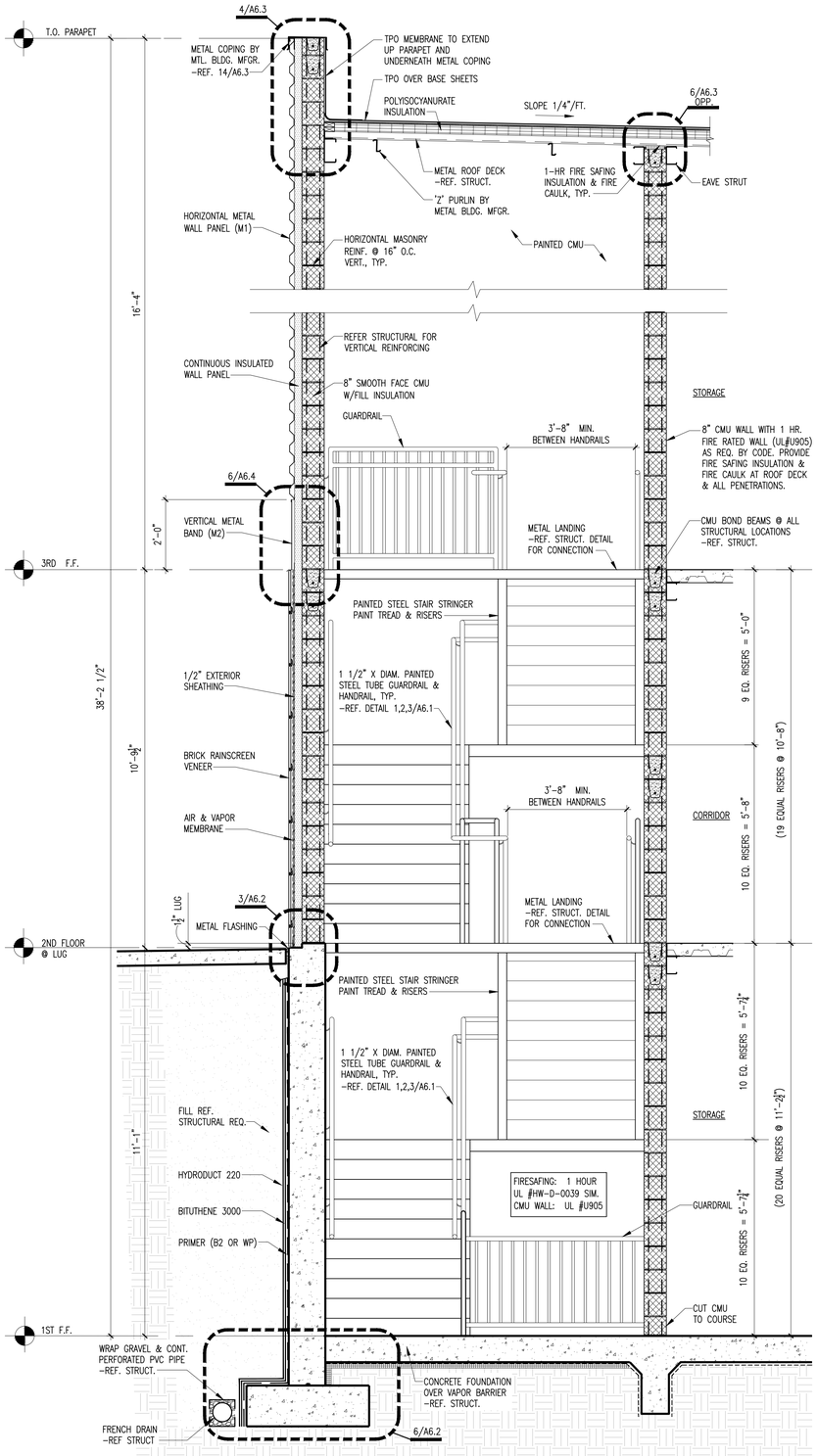
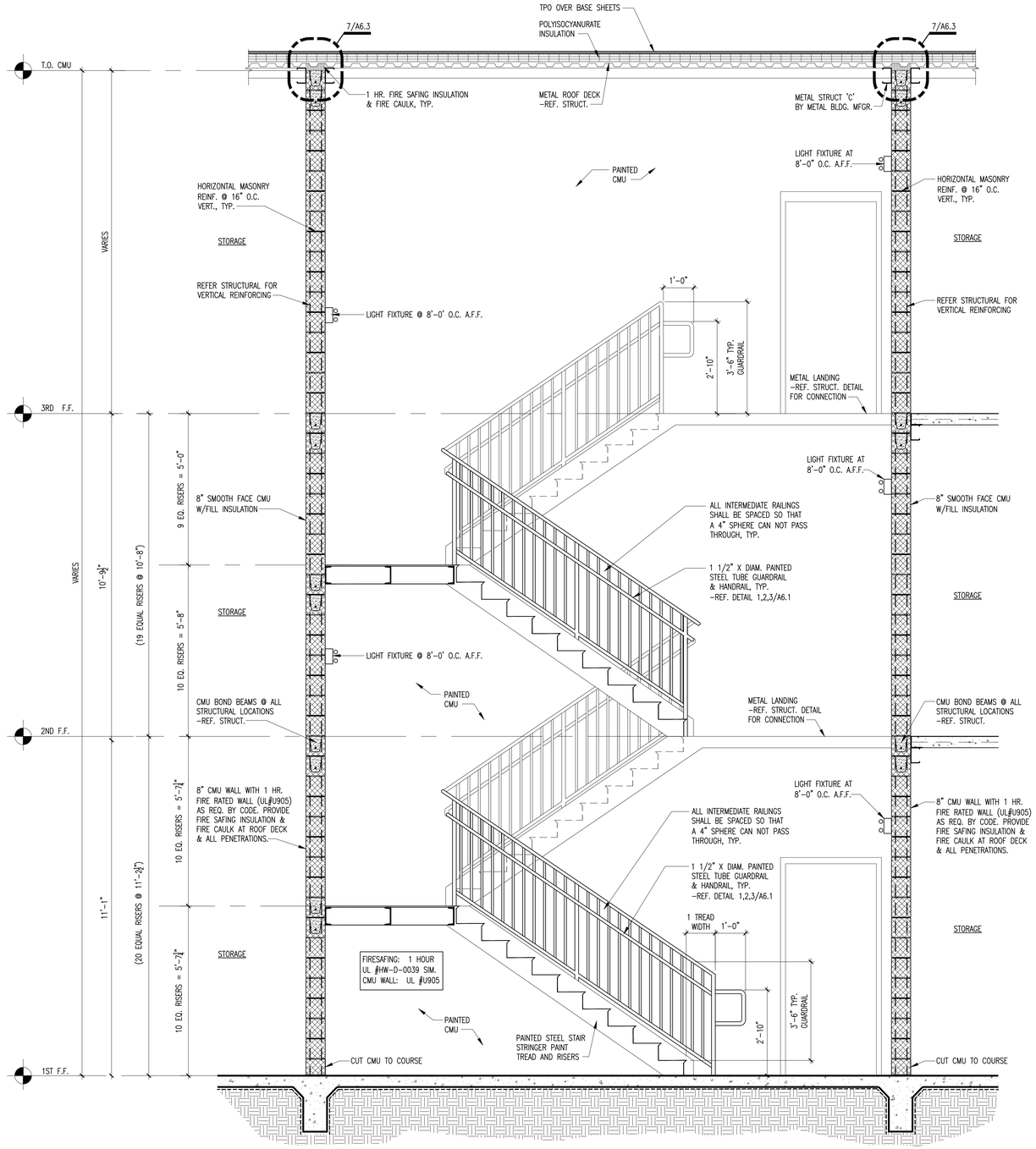
REVISIONS:

WALL SECTIONS

SHEET NO.
A4.8




1 STAIR A SECTION
SCALE: 1/2" = 1'-0"




2 STAIR A SECTION
SCALE: 1/2" = 1'-0"

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STATE OF MISSOURI
JEFFREY S. DALLENBACH NUMBER A-2020036988
ARCHITECT

12.16.2021
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# LAKEWOOD STORAGE

NE PORT DRIVE
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PROJECT NO. 2035
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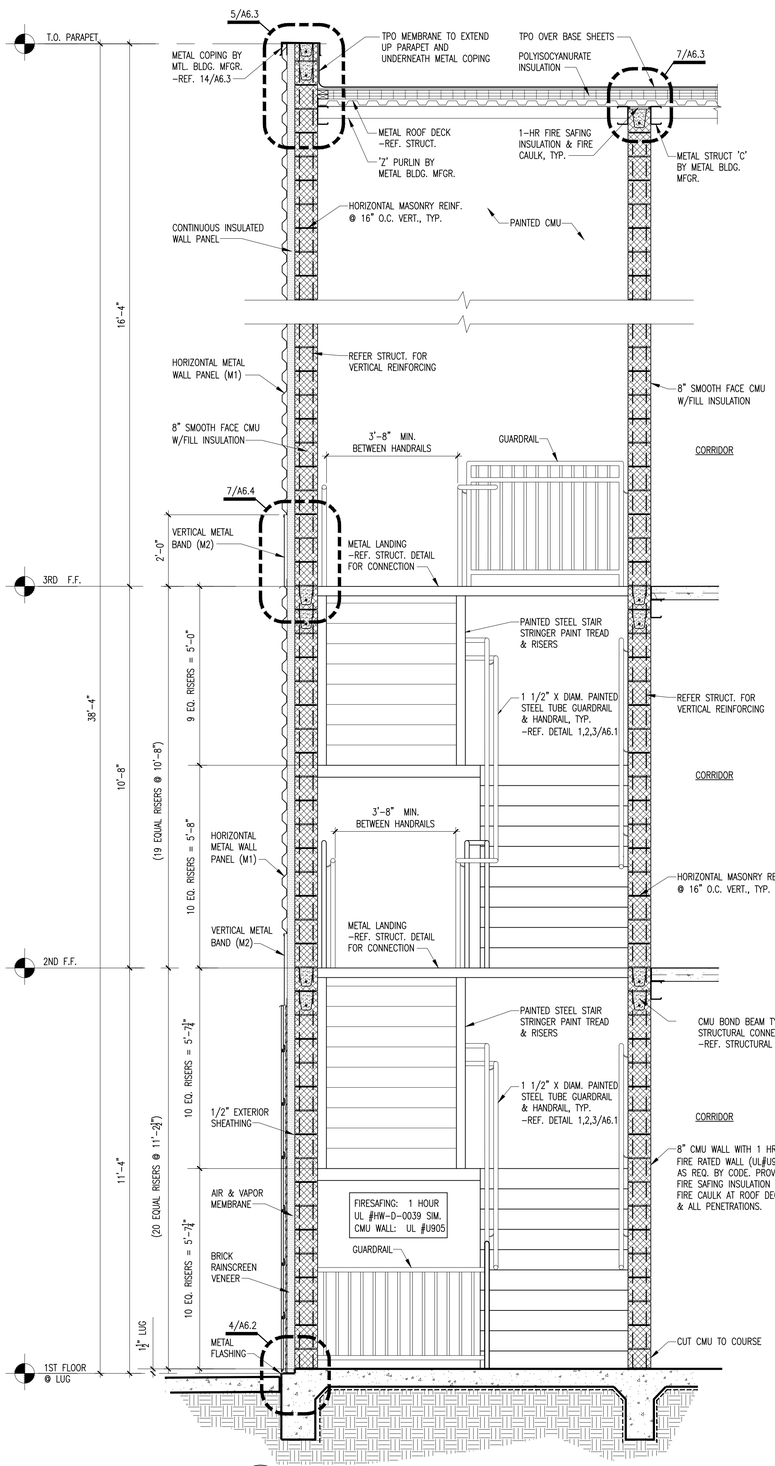
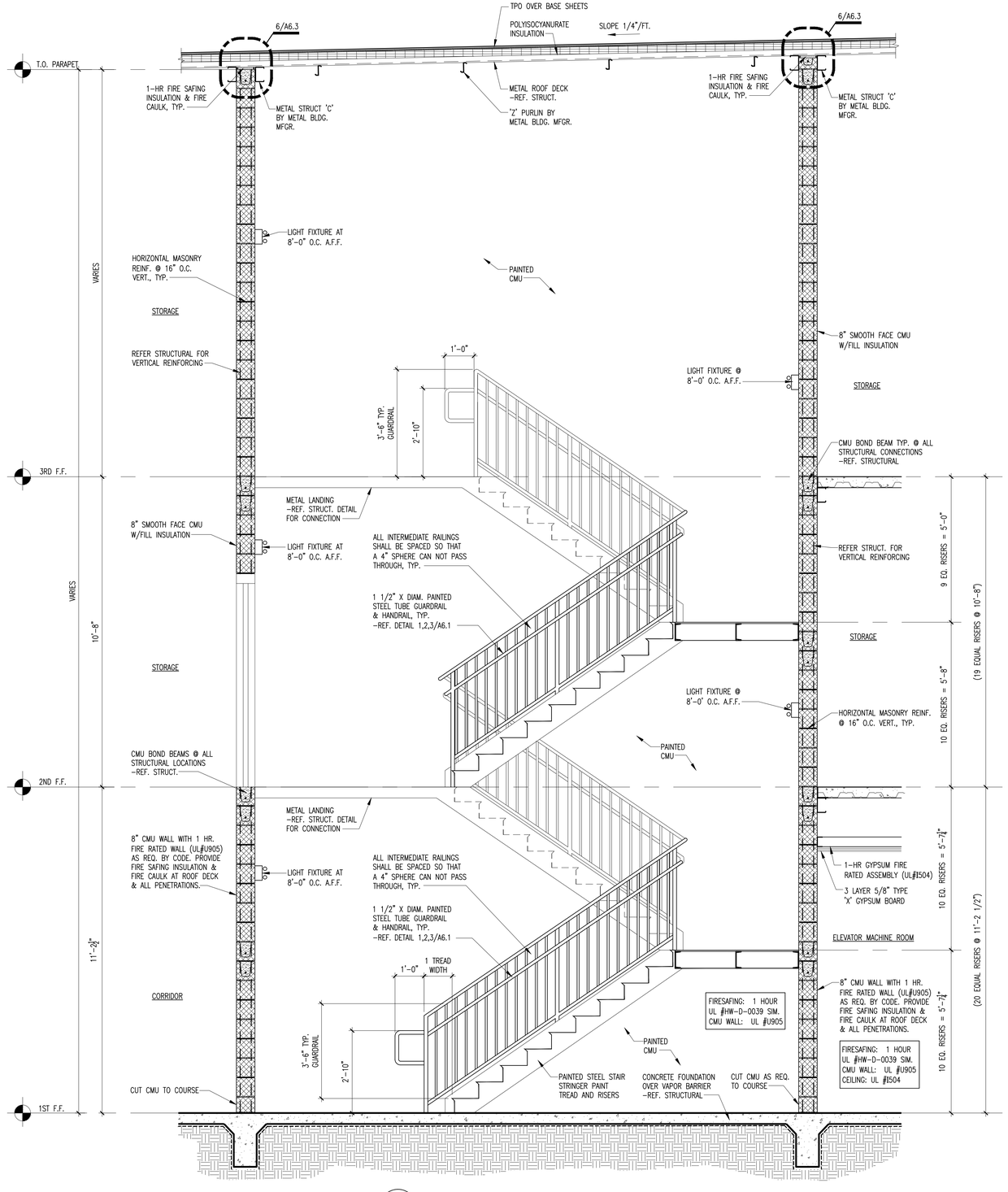
DRAWN : VP
REVISIONS:

STAIR A SECTIONS

SHEET NO.
A4.9




1 STAIR B SECTION
SCALE: 1/2" = 1'-0"




2 STAIR B SECTION
SCALE: 1/2" = 1'-0"

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# LAKEWOOD STORAGE

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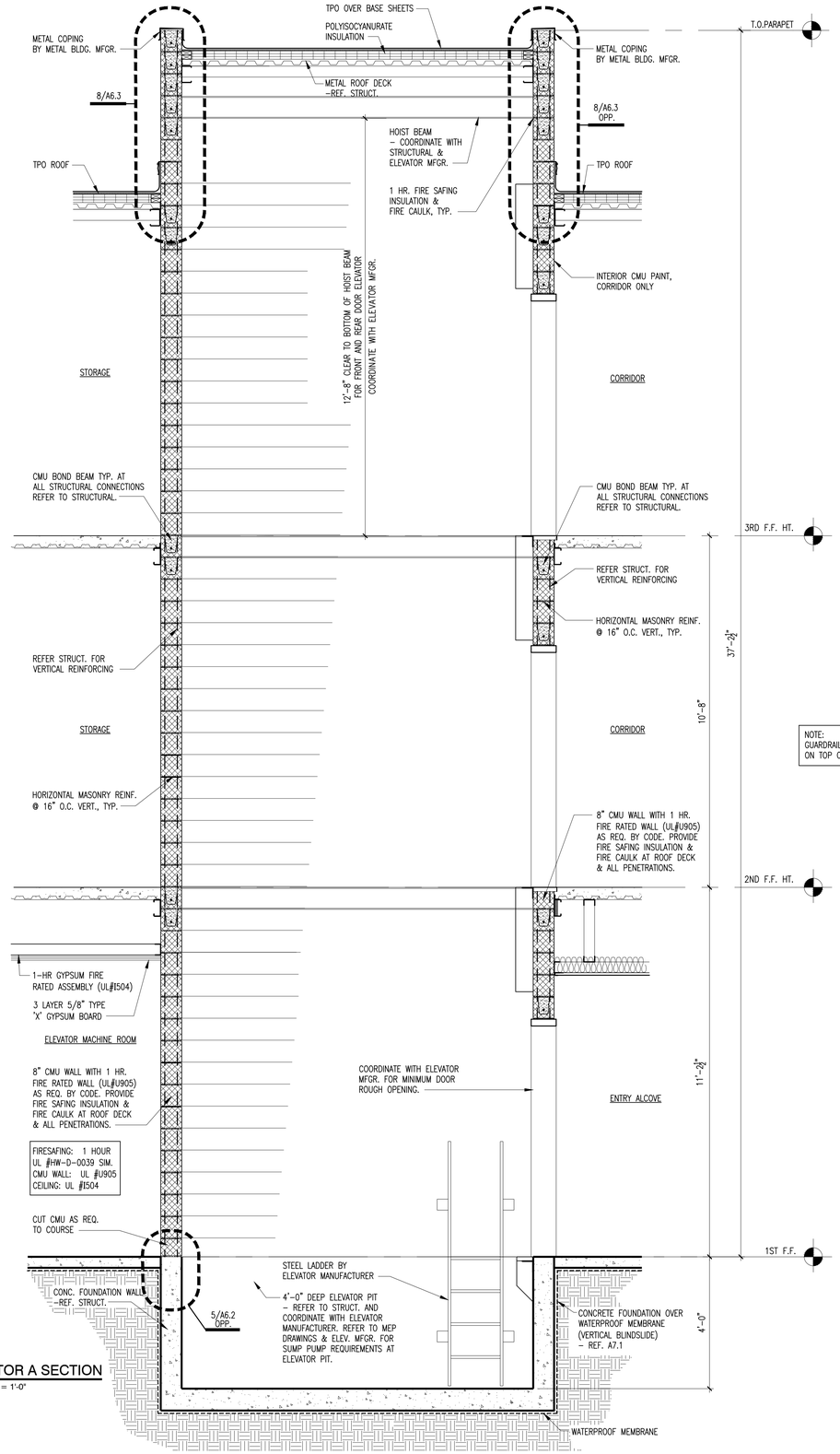
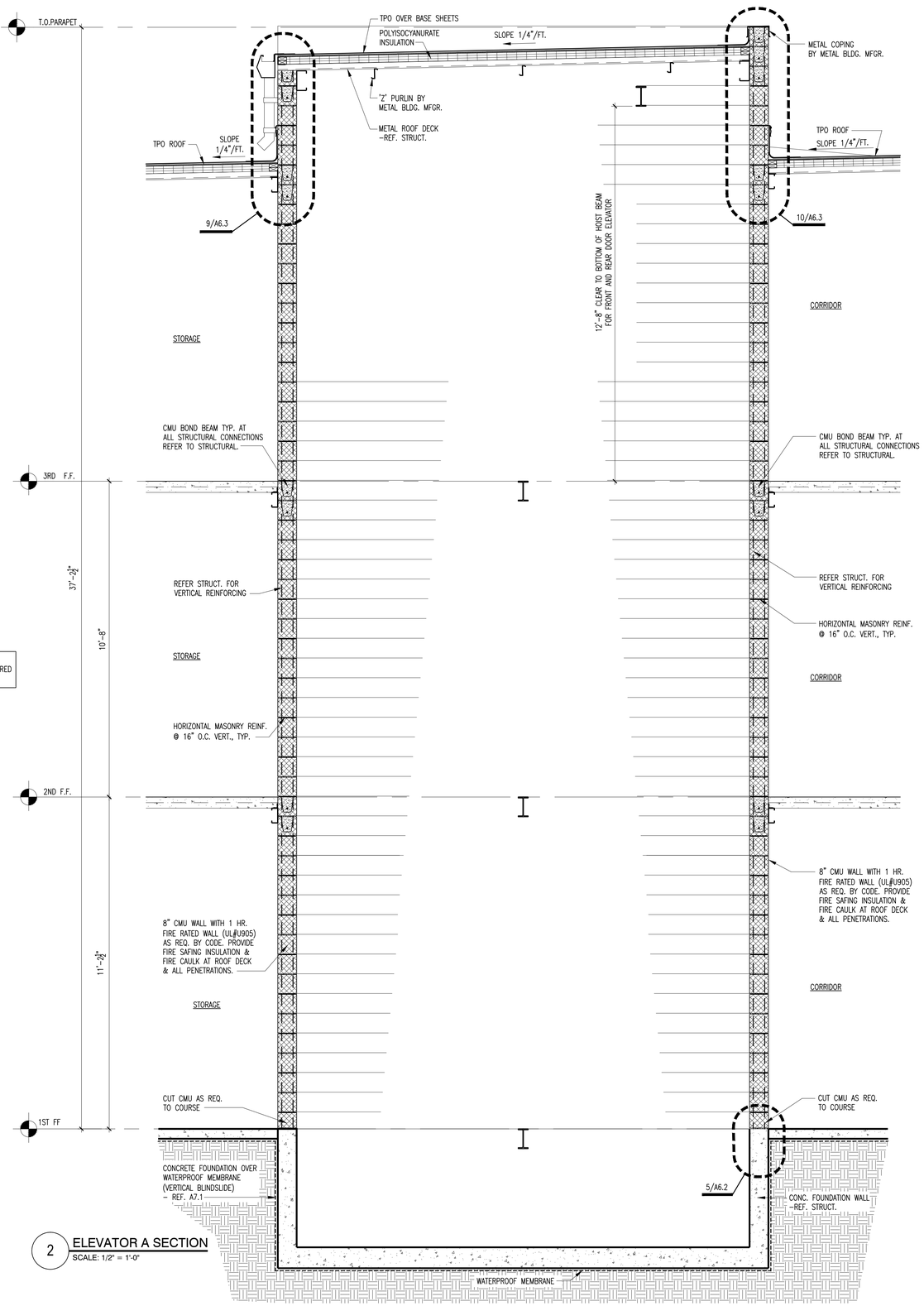
## STAIR B SECTIONS

SHEET NO.
A4.10




1 ELEVATOR A SECTION
SCALE: 1/2" = 1'-0"




2 ELEVATOR A SECTION
SCALE: 1/2" = 1'-0"

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NE PORT DRIVE
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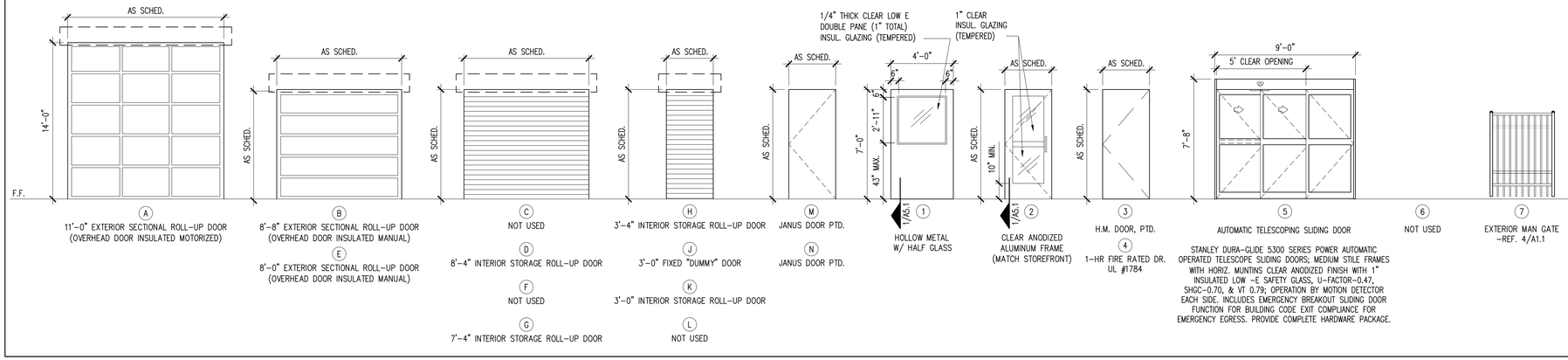
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

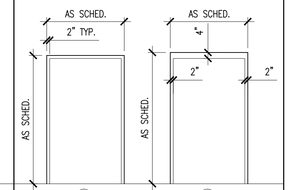
ELEV. A & B SECTIONS

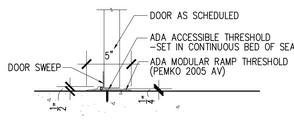
SHEET NO.
A4.11

## DOOR TYPES

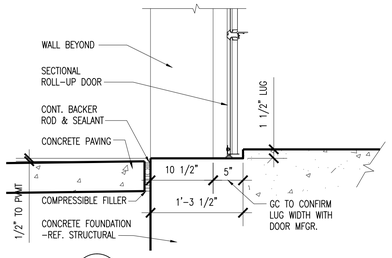



## FRAME TYPES

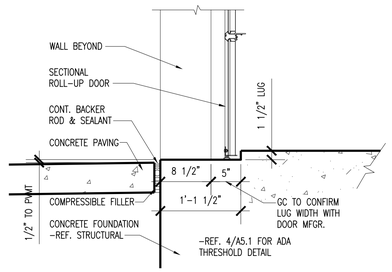


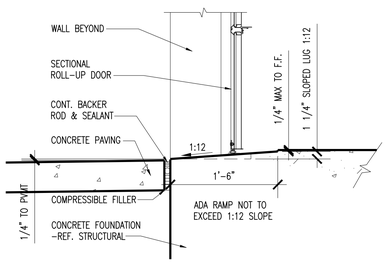

1 THRESHOLD DETAIL
SCALE: 1 1/2" = 1'-0"



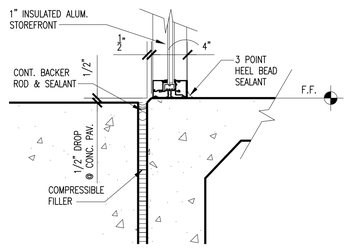

2 THRESHOLD DETAIL @ PULL IN BAYS
SCALE: 1" = 1'-0"




3 THRESHOLD DETAIL @ EXIT UNITS
SCALE: 1" = 1'-0"




4 THRESHOLD DETAIL (ADA)
SCALE: 1" = 1'-0"




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

## FINISH SCHEDULE

| | | | FLOOR | | WALLS | | | | CEILING | | KEYED NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIRST FLOOR | | | MATERIAL | BASE | NORTH | SOUTH | EAST | WEST | HEIGHT | TYPE | |
| OFFICE | 101 | SALES AREA | PC | WD | PT-1 | PT-1 | - | PT-1 | - | ES | - |
| | 102 | RECEPTION DESK | PC | WD | PT-1 | PT-1 | PT-1/PT-2 | - | VARIES | GYP. | - |
| | 103 | MDF / BREAK ROOM | PC | RUBBER | PT-1 | PT-1 | PT-1 | PT-1 | 8'-0" | LAY-IN | 2 |
| | 104 | AHU ROOM | PC | - | PT-1 | PT-1 | PT-1 | PT-1 | - | ES | - |
| | 105 | DISPLAY AREA | PC | WD | PT-1 | PT-1 | PT-1 | - | - | ES | 3 |
| | 106 | MENS T.R. | PFT | - | PT-1/PWT | PT-1/PWT | PT-1/PWT | PT-1/PWT | 8'-0" | GYP. | 1,2 |
| | 107 | WOMENS T.R. | PFT | - | PT-1/PWT | PT-1/PWT | PT-1/PWT | PT-1/PWT | 8'-0" | GYP. | 1,2 |
| | 108 | DRINKING FOUNTAIN | PC | - | JANUS | JANUS | JANUS | JANUS | - | ES | - |
| | 109 | LOADING AREA | SLT | - | JANUS | JANUS | JANUS | JANUS | - | ES | - |

KEYED NOTES:
1. PORCELAIN TILE WAINSCOT TO 4'-0" A.F.F.
2. ACOUSTICAL BATT INSULATION ABOVE CEILING.
3. DUMMY DOORS PER FLOOR PLANS.

GENERAL NOTES:
A. GENERAL CONTRACTOR TO SUBMIT ALL FINISH SELECTIONS TO OWNER AND ARCHITECT FOR APPROVAL PRIOR TO ORDERING
B. REF. SHEET A7.1 FOR SPECIFICATIONS.
C. GENERAL CONTRACTOR TO PROVIDE ALLOWANCE FOR CERAMIC TILE IN ROOMS 101-105 AS AN ALTERNATE

LEGEND:

| | |
|---|---|
| ES | EXPOSED STRUCTURE |
| GRID | 2X2 CEILING GRID ONLY |
| GYP | 5/8" TYPE 'X' GYPSUM BOARD |
| JANUS | JANUS WALL SYSTEM |
| LAY-IN | 2x2 LAY-IN ACOUSTICAL CEILING |
| PC | POLISHED CONCRETE |
| PFT | PORCELAIN FLOOR TILE |
| PT-1 | INTERIOR OFFICE PAINT |
| PT-2 | INTERIOR OFFICE PAINT - ACCENT |
| PWT | PORCELAIN WALL TILE |
| RUBBER | RUBBER WALL BASE |
| WD | PAINTED WOOD BASE |
| SLT | SEALANT WITH TRAFFIC COATING |

## DOOR NOTES

1: DOOR HARDWARE TO BE APPROVED BY OWNER BASED ON SUBCONTRACTOR SUBMITTAL.

2: CONTRACTOR TO COORDINATE DOOR HARDWARE AND FRAMES WITH SECURITY EQUIPMENT AND MAGNETIC HOLD OPEN DEVICES.

3: PROVIDE MIN. INTERIOR & EXTERIOR ACCESSIBLE HARDWARE, THRESHOLDS, SIGNAGE, ETC. TO COMPLY W/ ADA ACCESSIBILITY STANDARDS. REFERENCE FLOOR PLANS FOR LOCATIONS.

4: NOT USED

5: NOT USED

6: STORAGE ROLL-UP DOORS-PROVIDE ALUM. HANDLES W/ SLIDE BAR LATCH TO FRAME, CONTINUOUS ALUM. BOTTOM PULL BAR, WEATHER SEALS (EXTERIOR) AND REMOVABLE CYLINDER LOCK W/ EMERGENCY OVERRIDE LATCH OPERATOR TO OPERATOR.

7: GLAZING IN ALL EXTERIOR DOORS TO BE INSULATED LOW-E GLAZING W/ 1/4" DOUBLE PANES W/ 1/2" AIR SPACE (1" TOTAL) (TEMPERED).

8: THRESHOLDS 1½" LUGS NOT REQUIRED AT ALCOVE ENTRIES.

9: READILY VISIBLE DURABLE SIGN POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" -REF. SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.

10: FIRE RATED DOORS TO BE SELF CLOSING OR AUTOMATIC CLOSING.

11: READILY VISIBLE DURABLE SIGN POSTED ON EGRESS SIDE ADJACENT TO DOOR STATING: "EXIT" IN TACTILE LETTERS & BRAILLE -REF SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.

12: READILY VISIBLE DURABLE SIGN POSTED ON ENTRY SIDE OF DOOR STATING "ROOM NAME" IN TACTILE LETTERS AND BRAILLE - REF. SHEET A2.6 FOR INSTALLATION INSTRUCTIONS.

13: ROLL UP DOORS TO MEET LOCAL WIND LOAD REQUIREMENTS.

14: CONSTRUCTION CORES TO REMAIN - REKEYING/MASTER KEYING BY OWNER

15: 3'-0" CLEAR MAN GATE - ORNAMENTAL IRON APPLIED METAL SECURITY MESH AT GATE AND ADJACENT FENCE PANEL EXTEND FULL LENGTH OF EITHER SIDE OF LOCKSET. LEVER HARDWARE PER ADA REQUIREMENTS.

16: SLIDING DOOR OPENING TO BE ON SAME SIDE AS MAN DOOR ADJACENT.

17: DOORS TO COMPLY WITH ENERGY CODES SHOWN ON SHEET A7.1.

18: DOORS TO COMPLY WITH LOCAL WIND LOAD CAPACITY.

## STORAGE DOOR SCHEDULE

| MARK | WIDTH | HEIGHT | DOOR TYPE | FRAME TYPE | REMARKS |
|---|---|---|---|---|---|
| A | 11'-0" | 14'-0" | EXT. SECT. | - | 17,28 |
| B | 8'-8" | 8'-0" | EXT. SECT. | - | 17,28 |
| C | | | NOT USED | | |
| D | 8'-4" | 7'-0" | INT. ROLL-UP | - | 17 |
| E | 8'-0" | 8'-0" | EXT. SECT. | - | 17,28 |
| F | | | NOT USED | | |
| G | 7'-4" | 7'-0" | INT. ROLL-UP | - | 17 |
| H | 3'-4" | 7'-0" | INT. ROLL-UP | - | 17 |
| J | 3'-0" | 7'-0" | DUMMY DOOR | - | 9,17 |
| K | 3'-0" | 7'-0" | INT. ROLL-UP | - | 17 |
| L | | | NOT USED | | |
| M | 3'-0" | 7'-0" | JANUS SWING | - | 17 |
| N | 3'-0" | 7'-0" | JANUS SWING | - | 17,29 |

## DOOR SCHEDULE

| LOCATION | MARK | WIDTH | HEIGHT | DOOR TYPE | FRAME TYPE | REMARKS |
|---|---|---|---|---|---|---|
| OFFICE ENTRY | 1 | 3'-0" | 7'-0" | 2 | STFT | 1,2,3,5,8,9,11,15,16,17,18,23 |
| MDF ROOM | 2 | 3'-0" | 7'-0" | 3 | 1 | 11,15,20 |
| AHU ROOM | 3 | 3'-0" | 7'-0" | 3 | 1 | 7,10,11,20 |
| OFFICE / LOADING | 4 | 3'-0" | 7'-0" | 1 | 1 | 11,15,20 |
| OFFICE / STORAGE | 5 | 3'-0" | 7'-0" | 3 | 1 | 11,15,20 |
| TOILET ROOM | 6 | 3'-0" | 7'-0" | 3 | 1 | 11,14,20,24 |
| TOILET ROOM | 7 | 3'-0" | 7'-0" | 3 | 1 | 11,14,20,24 |
| SLIDING DOOR | 8 | 9'-0" | 7'-8" | 5L | - | 3,13,19,21,22,30 |
| LOADING EXIT | 9 | 3'-0" | 7'-0" | 1 | 1 | 1,2,3,8,10,11,12,16,19,24 |
| STAIR B - 1ST FLR | 10 | 3'-0" | 7'-0" | 4 | 1 | 1,2,6,10,11,19,24 |
| STAIR B - EXIT | 11 | 3'-0" | 7'-0" | 3 | 1 | 1,2,3,8,10,11,12,16,19,24 |
| ELEV. MACHINE RM | 12 | 3'-6" | 7'-0" | 3 | 1 | 2,6,10,11,20 |
| ELECTRICAL ROOM | 13 | 3'-0" | 7'-0" | 3 | 1 | 2,3,8,10,11,12,16,20 |
| FIRE RISER ROOM | 14 | 6'-0" PR | 7'-0" | 3 | 1 | 2,3,8,10,11,12,16,20 |
| SLIDING DOOR | 15 | 9'-0" | 7'-8" | 5R | - | 3,13,19,21,22,27 |
| STAIR A - 1ST FLR | 16 | 3'-0" | 7'-0" | 4 | 2 | 1,2,6,10,11,19,24 |
| STAIR A - EXIT | 17 | 3'-0" | 7'-0" | 3 | 2 | 1,2,3,8,10,11,12,16,19,24 |
| ALCOVE ENTRY | 18 | 4'-0" | 7'-0" | 1 | 1 | 1,2,3,4,10,11,12,13,16,19,24 |
| SLIDING DOOR | 19 | 9'-0" | 7'-8" | 5R | - | 3,13,19,21,22,27 |
| STAIR B - 2ND FLR | 20 | 3'-0" | 7'-0" | 4 | 2 | 1,2,6,10,11,19,24 |
| STAIR A - 3RD FLR | 21 | 3'-0" | 7'-0" | 4 | 2 | 1,2,6,10,11,19,24 |
| STAIR B - 3RD FLR | 22 | 3'-0" | 7'-0" | 4 | 2 | 1,2,6,10,11,19,24 |
| MAN GATE | 23 | 3'-0" | 6'-0" | 7 | - | 1,2,24,25 |

REMARKS::
1: PANIC HARDWARE
2: DOOR CLOSER
3: WEATHER STRIPPING / THRESHOLD -REF. DETAIL 1/A5.1
4: MAGNETIC HOLD OPEN DOORS W/ 15 MINUTE TIMER
5: DEADBOLT
6: FIRE RATED-45 MIN. (REF. NOTE 10)
7: VENTED AT AHU LOCATIONS
8: DRIP FLASHING
9: FIXED "DUMMY DOORS
10: STORAGE LOCKSET
11: DOOR STOP
12: INSULATED
13: KEY PAD
14: TR LOCKSET
15: OFFICE LOCKSET
16: DOOR SWEEP
17: COLOR: REF. SHEET A7.1
18: DOOR SIGNAGE @ ENTRY (REF. NOTE 9)
19: DOOR SIGNAGE @ EXITS (REF. NOTE 11)
20: DOOR SIGNAGE @ IDENTIFYING ROOMS (REF. NOTE 12)
21: STANLEY ACCESS CONTROL (PANIC BAR & ELECTRIC LOCK)
22: STANLEY TIMER
23: MAIL-SLOT
24: KICKPLATE ON PUSH SIDE
25: MAN GATE KEYSET
26: NOT USED
27: RIGHT HAND OPENING
28: INSULATED SECTIONAL ROLL-UP DOOR
29: CLASP ON LATCH PUSH SIDE
30: LEFT HAND OPENING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STATE OF MISSOURI
JEFFREY K. DALLENBACH
DALLENBACH NUMBER A-2020056988
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

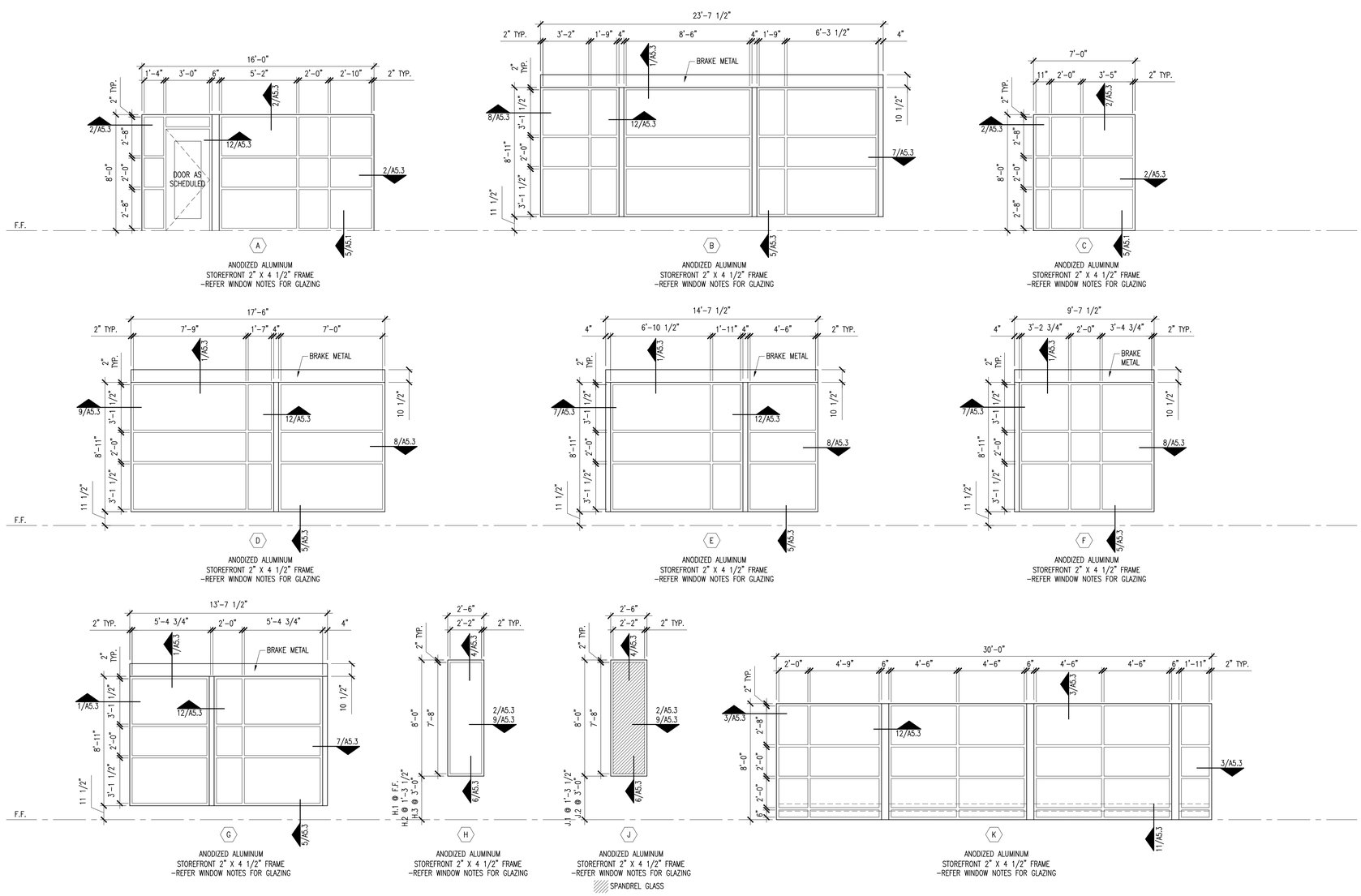
WDW/DOOR SCHEDULES

SHEET NO.
A5.1

## WINDOW NOTES

1. VERIFY ALL ROUGH OPENING DIMENSIONS IN RELATION TO STRUCTURAL DRAWINGS. FRAME SIZES TO BE ADJUSTED AS NECESSARY FOR PROPER SHIM, FLASHING, AND THERMAL EXPANSION.
2. SAFETY (TEMPERED) GLAZING IS REQUIRED IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST EXPOSED EDGE OF THE GLAZING IS WITHIN A 24-INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION AND WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE WALKING SURFACE (IBC 2406.3.6).
3. STOREFRONT INSULATED LOW-E GLAZING TO BE 1/4" DOUBLE PANES WITH 1/2" AIR SPACE(1" TOTAL)(TEMPERED).
4. EXTERIOR INSULATED LOW-E GLAZING TO BE 1/4" DOUBLE PANES WITH 1/2" AIR SPACE (1" TOTAL) (TEMPERED).
5. FLASH AND WEATHERSTRIP ALL EXTERIOR WINDOWS TO PROVIDE WATER RESISTANT ASSEMBLY.
6. WINDOW DIMENSION @ FIRST FINISHED FLOOR IS FROM LUG TO SILL.
7. WINDOW AND DOOR DIMENSIONS ARE ROUGH OPENINGS. DOORS, FRAMES, WINDOWS, ETC. ARE TO BE SIZED TO ALLOW SHIMS AND TOLERANCES TO MEET INDUSTRY STANDARDS AND THERMAL EXPOSION (DEFINE IN SHOP DRAWINGS).
8. STOREFRONTS TO BE ANODIZED ALUMINUM.

## WINDOW TYPES





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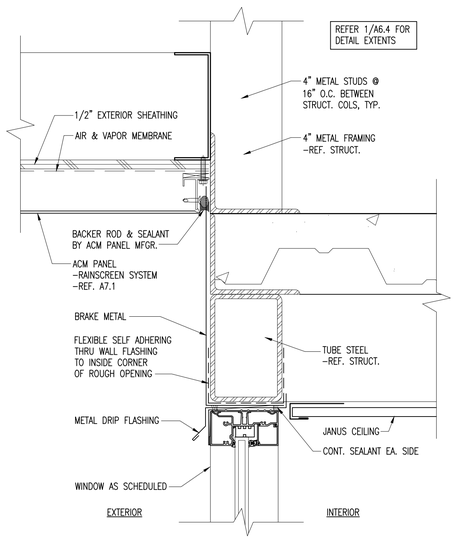
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

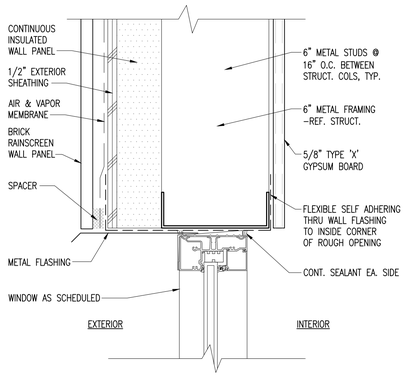
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

WINDOW TYPES

SHEET NO.
A5.2




1 HEAD DETAIL (JAMB SIM.)
SCALE: 3" = 1'-0"




2 HEAD DETAIL (JAMB SIM.)
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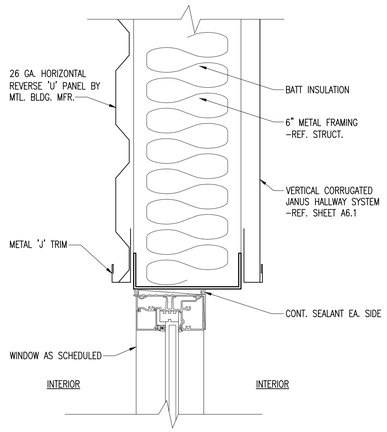


3 HEAD DETAIL (JAMB SIM.)
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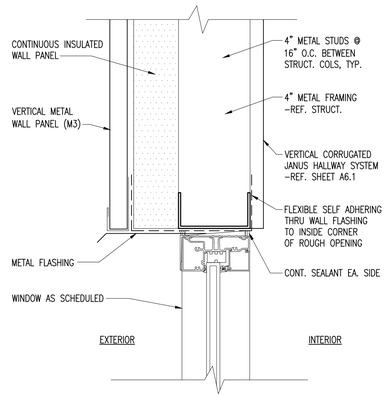


4 HEAD DETAIL
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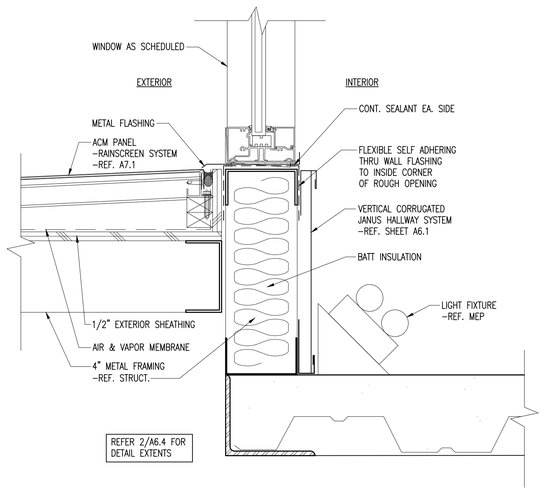
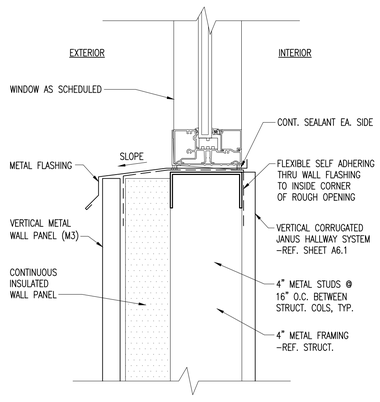



5 SILL DETAIL
SCALE: 3" = 1'-0"




6 SILL DETAIL
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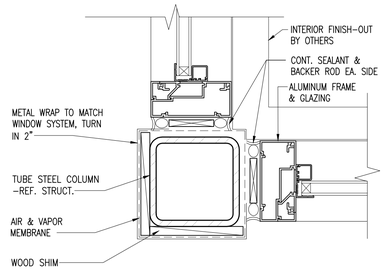


7 CORNER DETAIL
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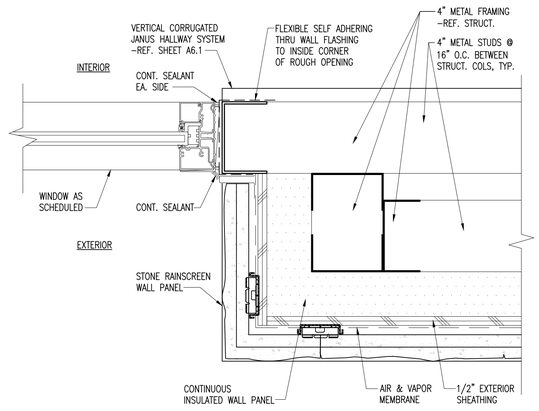


8 JAMB DETAIL
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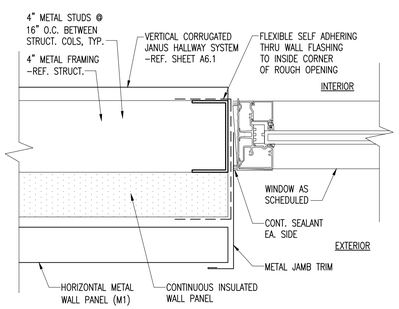
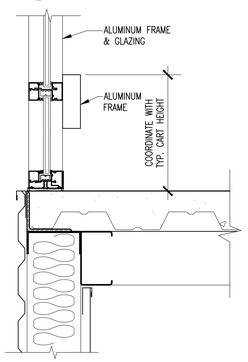
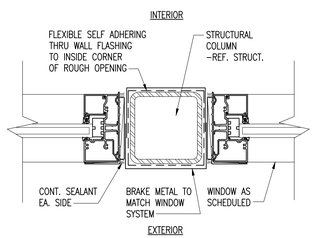



9 JAMB DETAIL
SCALE: 3" = 1'-0"

10 NOT USED
SCALE: 1 1/2" = 1'-0"




11 CART RAIL SECTION
SCALE: 1 1/2" = 1'-0"




12 COLUMN DETAIL
SCALE: 1 1/2" = 1'-0"

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# LAKEWOOD STORAGE

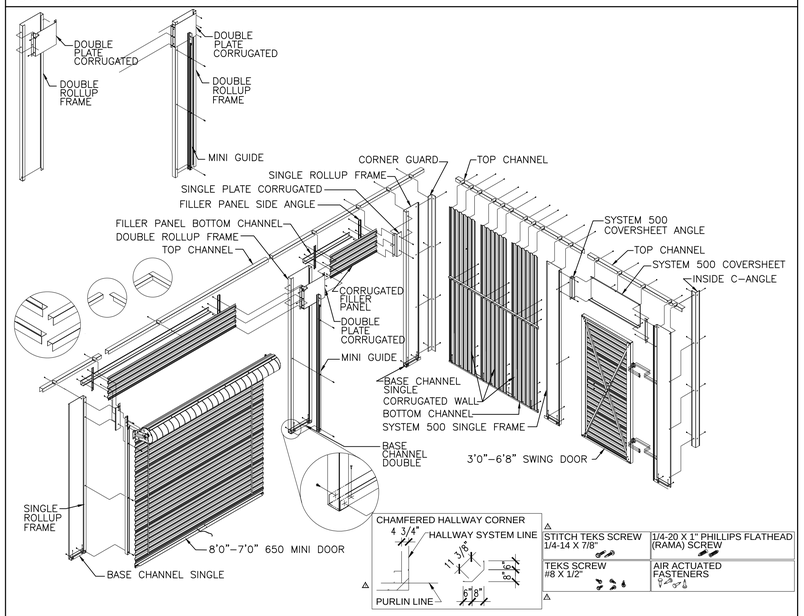
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

## WINDOW DETAILS

SHEET NO.
A5.3

## CORRUGATED HALLWAY SYSTEM

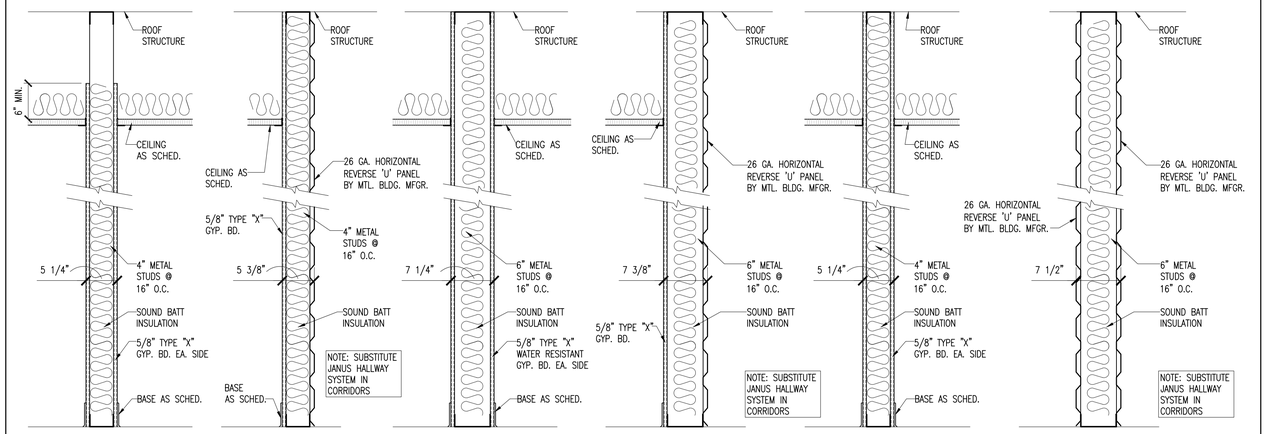



## JANUS/STORAGE SCHEDULE

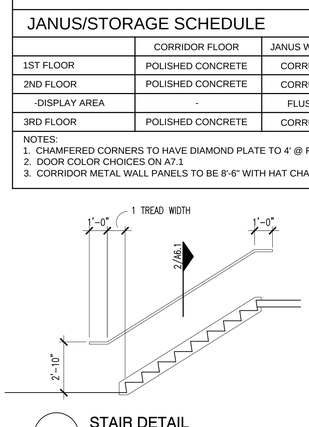
| | CORRIDOR FLOOR | JANUS WALLS | COLOR | CORNERS | CMU WALLS | CEILING | CEILING HEIGHT |
|---|---|---|---|---|---|---|---|
| 1ST FLOOR | POLISHED CONCRETE | CORRUG. | WHITE | CHAMFERED | PAINTED | NONE | - |
| 2ND FLOOR | POLISHED CONCRETE | CORRUG. | WHITE | CHAMFERED | PAINTED | NONE | - |
| -DISPLAY AREA | - | FLUSH | WHITE | CHAMFERED | - | FLUSH | 10'-9" |
| 3RD FLOOR | POLISHED CONCRETE | CORRUG. | WHITE | CHAMFERED | PAINTED | NONE | - |

NOTES:
1. CHAMFERED CORNERS TO HAVE DIAMOND PLATE TO 4' @ F.F. & 12" BASE IN HIGH TRAFFIC AREA - COLOR: WHITE
2. DOOR COLOR CHOICES ON A7.1
3. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.

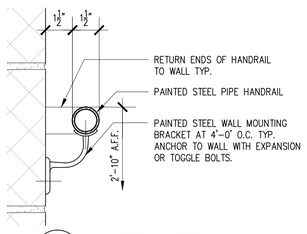
## PARTITION TYPES




* 5/8" TYPE 'X' WATER RESISTANT GYPSUM BOARD TO BE USED IN ALL WET AREAS




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




2 HANDRAIL DETAIL
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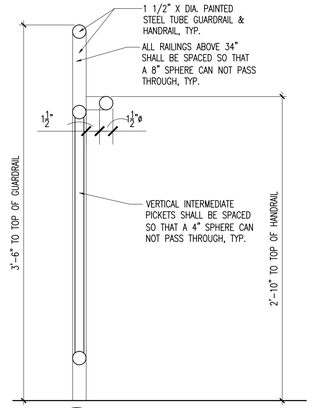
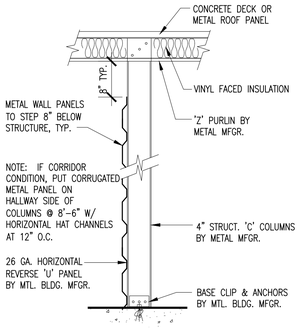



3 HANDRAIL DETAIL
SCALE: 1 1/2" = 1'-0"

4 NOT USED
SCALE: 1" = 1'-0"




5 PARTITION/COL. CONNECTION
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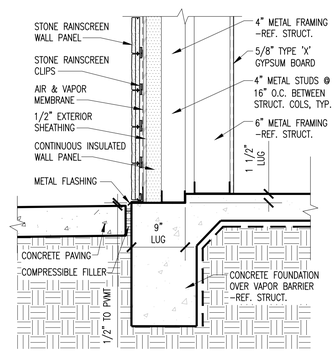
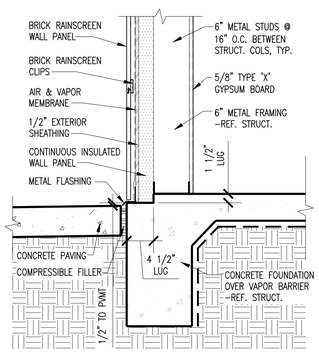
6 NOT USED
SCALE: 1" = 1'-0"




7 FOUNDATION DETAIL
SCALE: 1" = 1'-0"




8 FOUNDATION DETAIL
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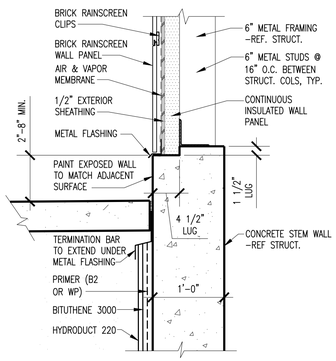
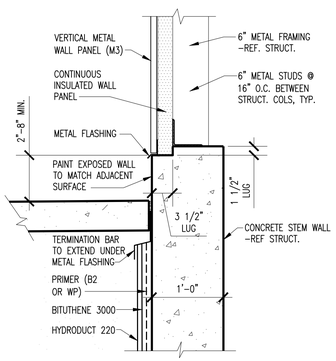
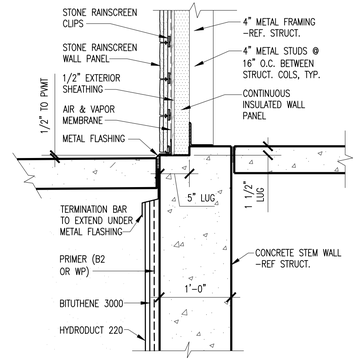



9 FOUNDATION DETAIL
SCALE: 1" = 1'-0"




10 FOUNDATION DETAIL
SCALE: 1" = 1'-0"




11 FOUNDATION DETAIL
SCALE: 1" = 1'-0"

## GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.

ROOF INSULATION: R-25.5 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

WALL INSULATION:

- 8" CMU - FILL CELLS TO R-11 - STORAGE
- 6" METAL STUDS - R-19 BATT INSULATION IN WALLS - 1ST FLOOR
- 4" METAL STUDS - R-11 BATT INSULATION IN WALLS - 2ND/3RD FLOOR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STATE OF MISSOURI
JEFFREY K. DALLENBACH
NUMBER A-2020036988
ARCHITECT

12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020036988

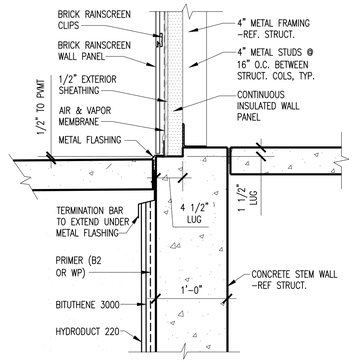
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

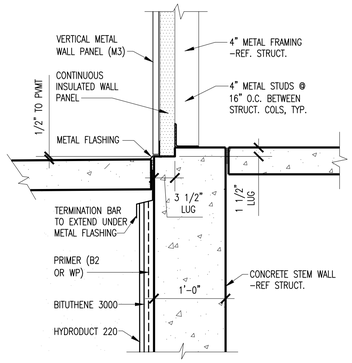
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BUILDING DETAILS

SHEET NO.
A6.1




1 FOUNDATION DETAIL
SCALE: 1" = 1'-0"




2 FOUNDATION DETAIL
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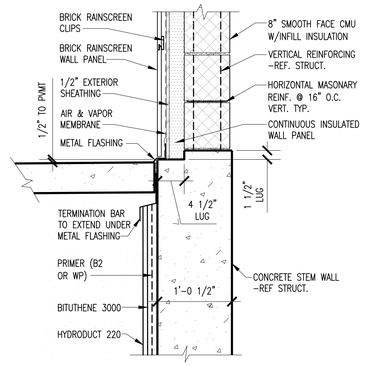


3 FOUNDATION DETAIL
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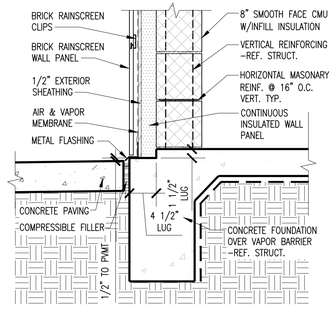


4 FOUNDATION DETAIL
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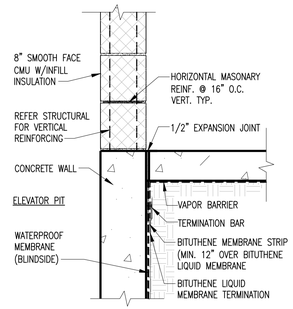
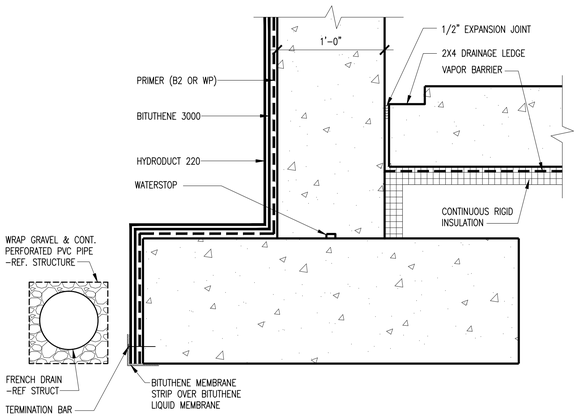
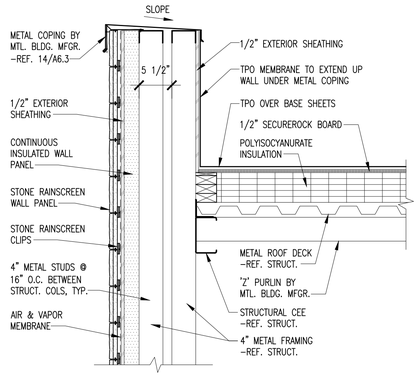



5 FOUNDATION DETAIL
SCALE: 1" = 1'-0"

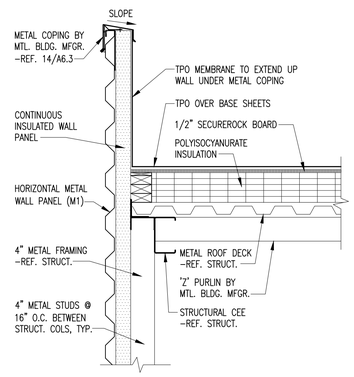



6 FOUNDATION DETAIL
SCALE: 1 1/2" = 1'-0"

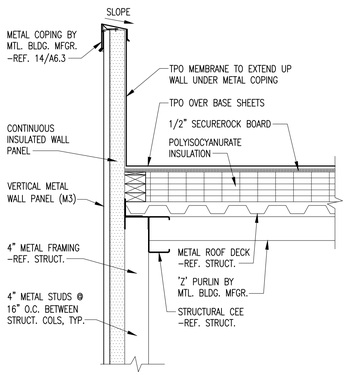



7 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"

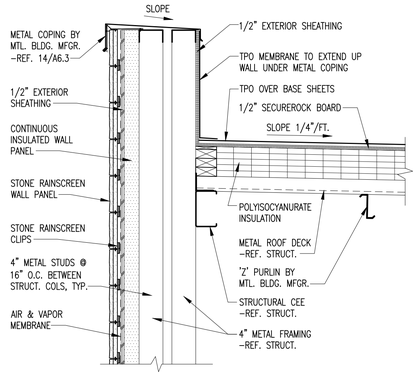
8 NOT USED
SCALE: 1" = 1'-0"




9 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"

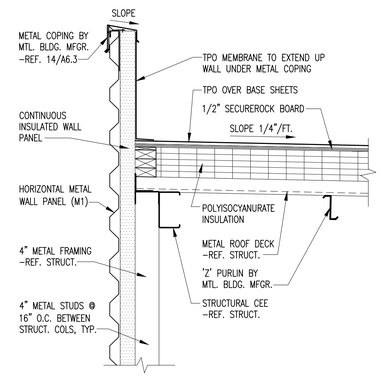



10 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"




11 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"

12 NOT USED
SCALE: 1" = 1'-0"




13 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"

## GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
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ROOF INSULATION: R–25.5 @ TPO ROOF

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WALL INSULATION:

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- 4" METAL STUDS – R–11 BATT INSULATION IN WALLS – 2ND/3RD FLOOR

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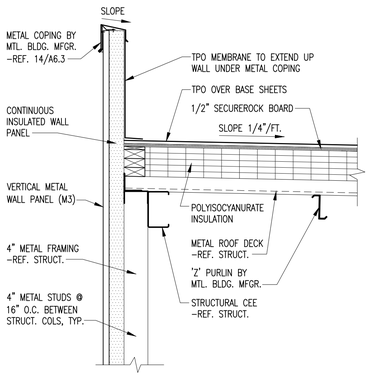
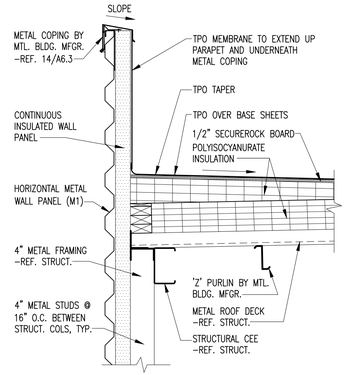
PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BUILDING DETAILS

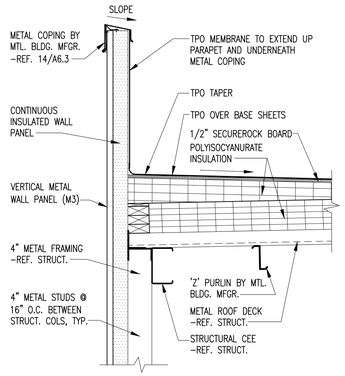
SHEET NO.
A6.2



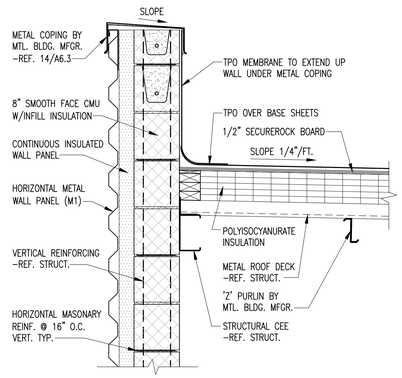

1 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"



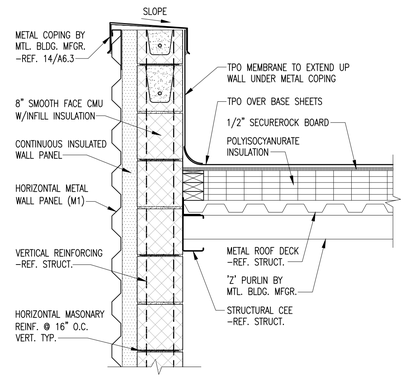

2 PARAPET SLOPE DETAIL
SCALE: 1" = 1'-0"



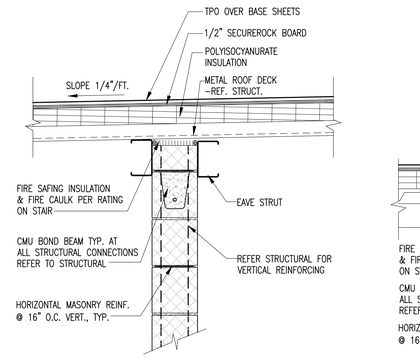

3 PARAPET SLOPE DETAIL
SCALE: 1" = 1'-0"



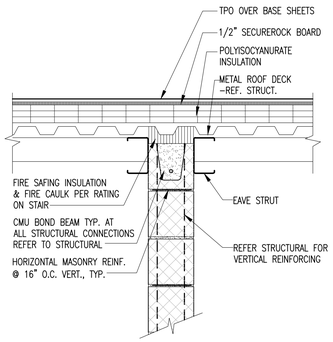

4 PARAPET HIGH EAVE DETAIL
SCALE: 1" = 1'-0"



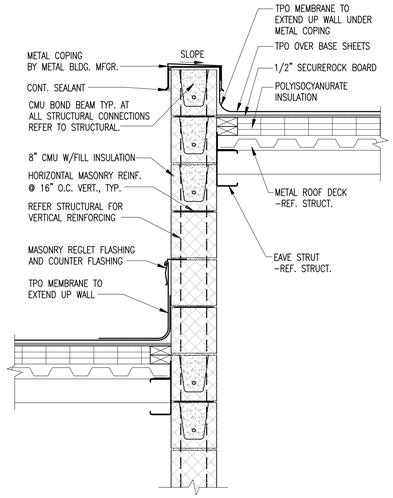

5 PARAPET RAKE DETAIL
SCALE: 1" = 1'-0"



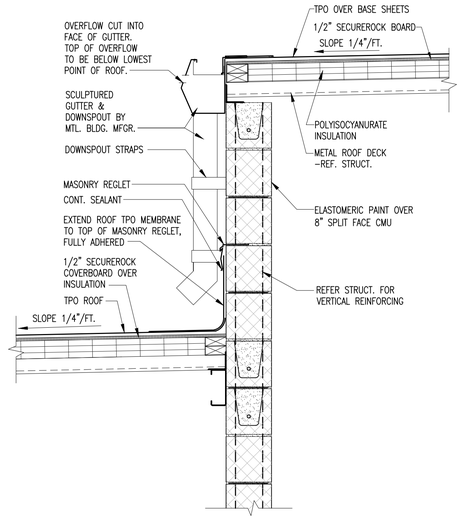

6 STAIR DETAIL
SCALE: 1" = 1'-0"



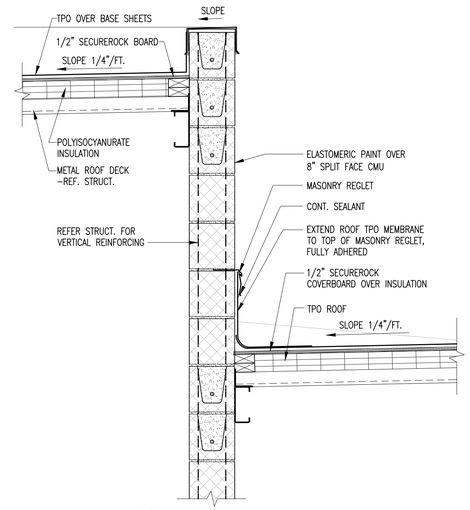

7 STAIR DETAIL
SCALE: 1" = 1'-0"



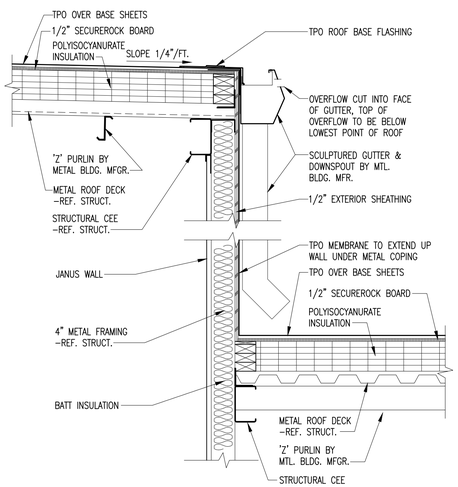

8 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"



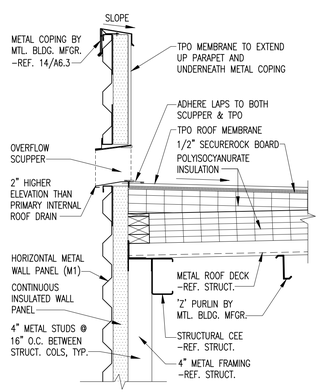

9 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"



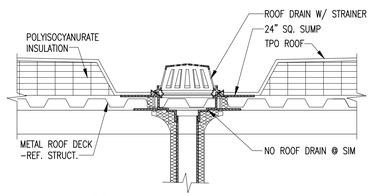

10 ELEVATOR PARAPET DETAIL
SCALE: 1" = 1'-0"



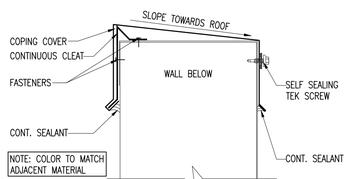

11 ROOF DETAIL
SCALE: 1" = 1'-0"




12 OVERFLOW SCUPPER DETAIL
SCALE: 1" = 1'-0"




13 ROOF DRAIN DETAIL
SCALE: 1" = 1'-0"




14 METAL COPING DETAIL
SCALE: 3" = 1'-0"

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DATE : 12.16.2021
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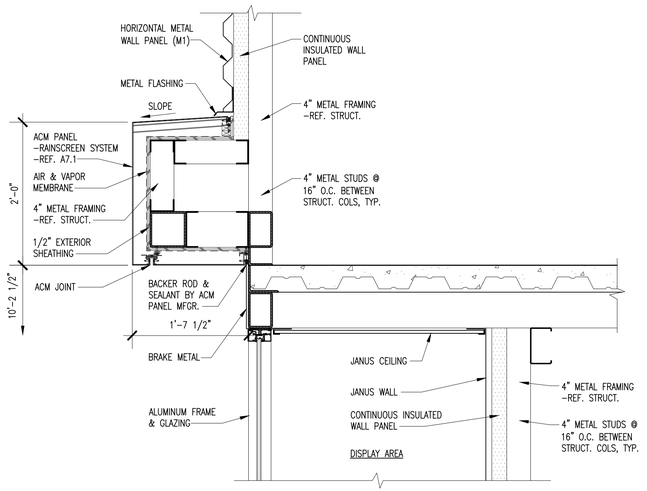
REVISIONS:

BUILDING DETAILS

SHEET NO.
A6.3

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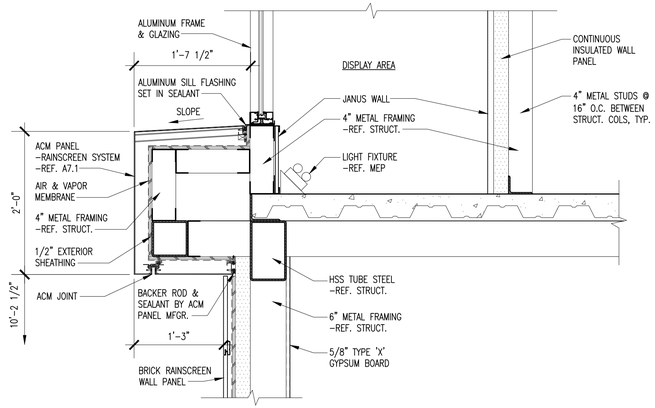


2 ACM DETAIL
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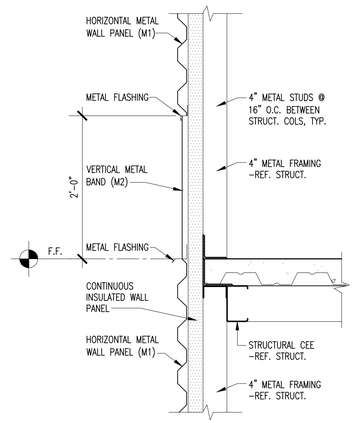
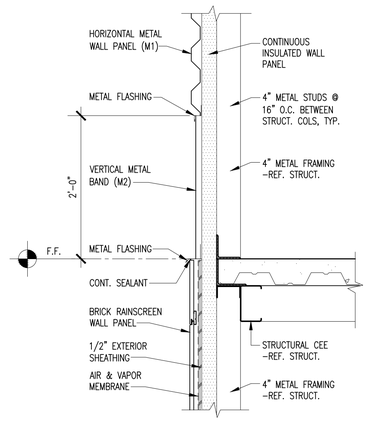



3 BANDING DETAIL
SCALE: 1" = 1'-0"




4 BANDING DETAIL
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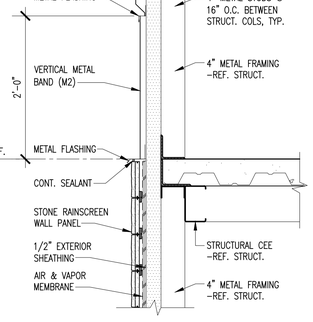
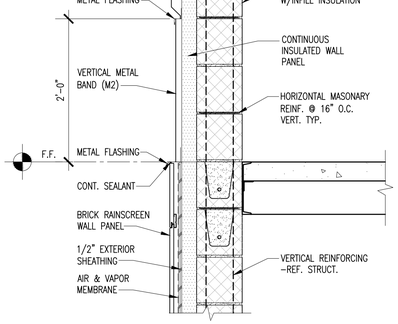
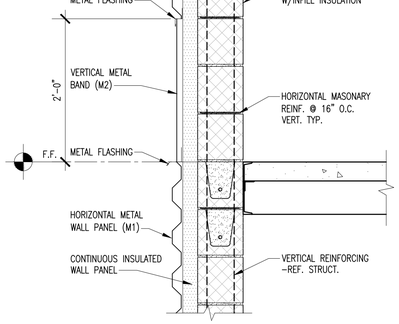


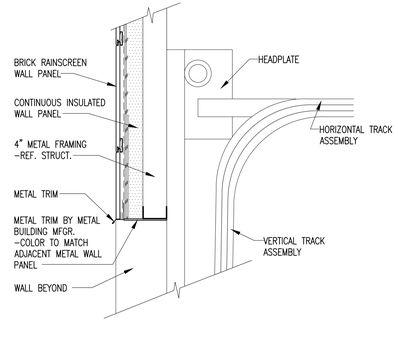

5 BANDING DETAIL
SCALE: 1" = 1'-0"




6 BANDING DETAIL
SCALE: 1" = 1'-0"

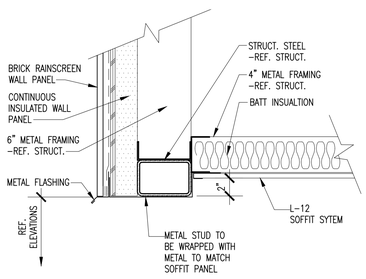



7 BANDING DETAIL
SCALE: 1" = 1'-0"

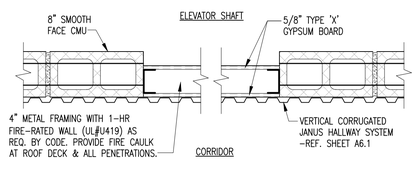



8 ROLL-UP DOOR DETAIL
SCALE: 1" = 1'-0"

9 NOT USED
SCALE: 1" = 1'-0"




10 ALCOVE HEADER DETAIL
SCALE: 1 1/2" = 1'-0"




11 INFILL DETAIL
SCALE: 1" = 1'-0"

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DATE : 12.16.2021
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REVISIONS:

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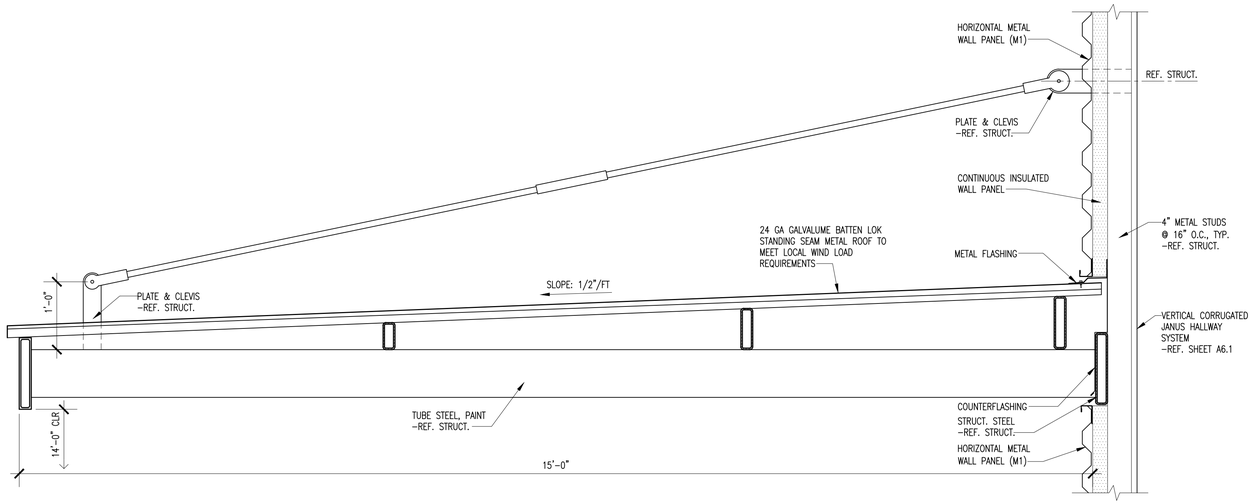
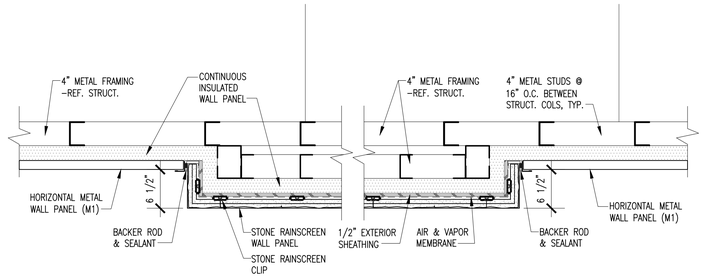
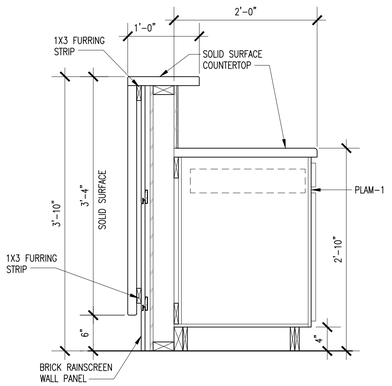
SHEET NO.
A6.4



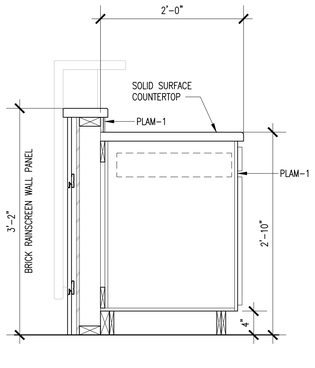

1 CANOPY DETAIL
SCALE: 1" = 1'-0"



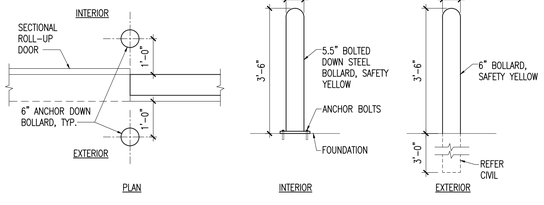

2 TRANSITION DETAIL (PLAN)
SCALE: 1" = 1'-0"



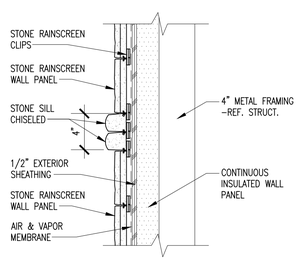

3 MILLWORK DETAIL
SCALE: 1" = 1'-0"



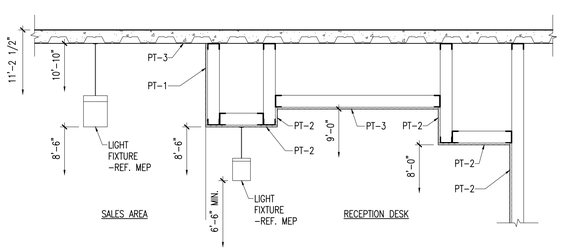

4 MILLWORK DETAIL
SCALE: 1" = 1'-0"



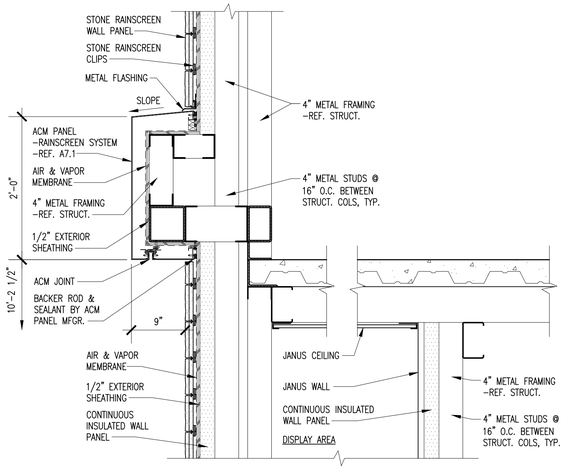

5 BOLLARD DETAIL, TYP. @ LOADING AREA
SCALE: 1/2" = 1'-0"



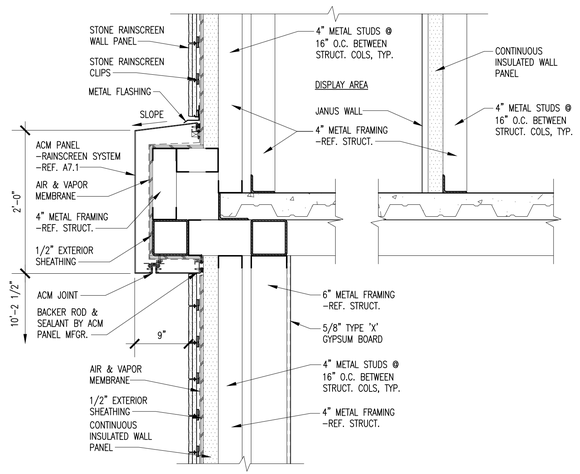

6 SILL CHISELED BAND DETAIL
SCALE: 1 1/2" = 1'-0"




7 INTERIOR OFFICE SECTION
SCALE: 1/2" = 1'-0"




8 ACM DETAIL
SCALE: 1" = 1'-0"




9 ACM DETAIL
SCALE: 1" = 1'-0"

## GENERAL NOTES

1. ALL ENGINEERING, SIZING, CONNECTIONS, FASTENERS, AND DETAILING NOT PROVIDED ON STRUCTURAL DRAWINGS TO MEET LOCAL BUILDING CODES AND ARE TO BE PROVIDED BY METAL BUILDING MANUFACTURER.
2. CLOSURES, TAPE SEALER AND ALL OTHER WATERPROOFING MATERIALS TO BE PROVIDED BY METAL BUILDING MANUFACTURER TO ENSURE WATER TIGHT CONSTRUCTION.
3. STORAGE CORRIDOR FLOORS TO BE POLISHED CONCRETE. (NOT STORAGE UNITS)
4. CORRIDOR METAL WALL PANELS TO BE 8'-6" WITH HAT CHANNELS SPACED @ 12" O.C. ABOVE.
5. METAL PANELS INSIDE STORAGE UNITS TO EXTEND TO 8" BELOW THE UNDERSIDE OF THE DECK ABOVE, STEP WALL HEIGHT WHERE NECESSARY.
6. ALL EXTERIOR SHEATHING 1/2" DENSGLASS GOLD WITH AIR AND MOISTURE MEMBRANE, UNLESS NOTED OTHERWISE ON A7.1.

ROOF INSULATION: R-25.5 @ TPO ROOF

- CONTINUOUS RIGID INSULATION ENTIRELY ABOVE ROOF DECK TO BE AT R-25 + 1/2" COVERBOARD

WALL INSULATION:

- 8" CMU – FILL CELLS TO R-11 – STORAGE
- 6" METAL STUDS – R-19 BATT INSULATION IN WALLS – 1ST FLOOR
- 4" METAL STUDS – R-11 BATT INSULATION IN WALLS – 2ND/3RD FLOOR

DALLENBACH·COLE ARCHITECTURE
315 NINTH STREET - SUITE 1
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P 210.439.2234

STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056988
ARCHITECT

12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056988

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BUILDING DETAILS

SHEET NO.
A6.5

## EXTERIOR FINISHES

| | |
|---|---|
| ORNAMENTAL IRON FENCE | 6'-0" HIGH ORNAMENTAL IRON FENCE<br>FENCE TO MATCH AMERISTAR - MONTAGE PLUS<br>COLOR: BLACK |
| SLIDING GATE | GATE TO MATCH AMERISTAR - MONTAGE PLUS<br>SUBMIT SHOP DRAWINGS<br>3-RAIL CLASSIC, 6'-0" TALL X 20' OPENING ROLL GATE<br>COLOR: BLACK |
| MAN GATE | GATE TO MATCH AMERISTAR - MONTAGE PLUS<br>SUBMIT SHOP DRAWINGS<br>3-RAIL CLASSIC STEEL PANEL GATE. -REF. A5.1 DOOR SCHEDULE FOR HARDWARE<br>COLOR: BLACK |
| EXTERIOR BOLLARDS | 3' HIGH A.F.F., 6" DIAMETER<br>STEEL POLE WITH CONCRETE FILL & ROUND TOP<br>COLOR: SAFETY YELLOW |
| INTERIOR BOLLARDS | ULINE - OR APPROVED EQUAL<br>5.5" SURFACE MOUNTED STEEL BOLLARD<br>COLOR: SAFETY YELLOW |
| CMU - SMOOTH FACE | SMOOTH FACE CMU W/ DRYBLOCK ADMIXTURE<br>SIZE: 8X8X16<br>INSULATION: FILL CELLS TO R-11<br>MORTAR: W/ DRYBLOCK ADMIXTURE |
| HORIZONTAL METAL WALL PANEL (M1) | METL SPAN<br>PROFILE: 7.2 SINGLE-SKIN WALL PANEL<br>COLOR: SANDSTONE<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| VERTICAL METAL BAND (M2) | METL SPAN<br>PROFILE: VERTICAL PBD SINGLE-SKIN WALL PANEL<br>COLOR: POLAR WHITE<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| VERTICAL METAL WALL PANEL (M3) | METL SPAN<br>PROFILE: CF ARCHITECTURAL VERTICAL<br>COLOR: SLATE GRAY<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| ACM (ALUMINUM COMPOSITE PANEL) | ALPOLIC/PE 4MM<br>COLOR: MST WHITE<br>JOINT SYSTEM: RAINSCREEN<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| BRICK RAINSCREEN WALL PANEL | NICHIHA<br>VINTAGE BRICK SERIES<br>COLOR: ALEXANDRIA BUFF<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| STONE RAINSCREEN WALL PANEL | NICHIHA<br>KURASTONE SERIES<br>COLOR: STACKED STONE 'MOUNTAIN'<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| CONTINUOUS INSULATED WALL PANEL | METL SPAN<br>PROFILE: CF ARCHITECTURAL VERTICAL<br>COLOR: POLAR WHITE<br>THICKNESS: 2 1/2"<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| BRAKE METAL | COLOR: PT-2 |
| EXTERIOR SHEATHING | GEORGIA PACIFIC OR APPROVED EQUAL<br>DENSGLASS GOLD<br>THICKNESS: 1/2" |
| AIR & VAPOR MEMBRANE | GCP APPLIED TECHNOLOGIES<br>PERM-A-BARRIER WALL MEMBRANE |
| ALUMINUM WINDOW & STOREFRONT FRAME | COLOR: ANODIZED ALUMINUM<br>GENERAL CONTRACTOR TO PURCHASE BOTH ALUMINUM WINDOW AND STOREFRONT FROM SAME MANUFACTURER TO MATCH COLOR |
| GLAZING - CLEAR @ WINDOWS | SOLARBAN 90<br>COLOR: CLEAR + CLEAR<br>VISIBILITY: 51%, U-VALUE: .29, SHGC: .23<br>1/4" GLAZING, 1/2" AIR SPACE, 1/4" GLAZING (1" TOTAL), TEMPERED |
| GLAZING - SPANDREL | OPACI-COAT 300<br>COLOR: #3-967 'BLACK-GRAY'<br>SOLARBAN 60<br>VISIBILITY: 51%, U-VALUE: .29, SHGC: .23<br>1/4" GLAZING, 1/2" AIR SPACE, 1/4" GLAZING (1" TOTAL), TEMPERED |
| EXTERIOR DOOR & FRAME PAINT | SHERWIN WILLIAMS<br>ALCOVE DOOR / DOOR FRAME COLOR: PT-2<br>SERVICE DOOR / DOOR FRAME COLOR: PT-1<br>NOTE: PAINT BOTH SIDES OF EXT. DOOR SAME COLOR |
| EXPOSED CANOPY STRUCTURE | SHERWIN WILLIAMS<br>COLOR: PT-1 |
| METAL TRIM, FLASHING, CANOPY TRIM, & COPING | MBCI 24 GA.<br>COLOR: COLOR TO MATCH ADJACENT MATERIAL 'PAINT GRADE' |
| METAL SOFFIT PANEL (AT ENTRY ALCOVES) | MBCI 24 GA. L-12 SOFFIT PANEL<br>COLOR: SIG 200 'SOLAR WHITE' |
| PREFINISHED SCUPPERS | MBCI 24 GA.<br>COLOR: COLOR TO MATCH ADJACENT MATERIAL 'PAINT GRADE' |
| GLASS SECTIONAL ROLL-UP DOOR | C.H.I. OVERHEAD DOOR<br>MODEL: 3297 (INSULATED)<br>SIZE: 11' WIDE X 14' HIGH<br>COLOR: COLOR TO MATCH METL SPAN 'SLATE GRAY'<br>INSTALL PER SPECIFICATIONS |
| EXTERIOR SECTIONAL ROLL-UP COMMERCIAL DOOR | C.H.I. OVERHEAD DOOR<br>MODEL: 3222 (INSULATED)<br>COLOR: COLOR TO MATCH JANUS CEDAR RED<br>INSTALL PER SPECIFICATIONS |
| TPO ROOF | JOHNS MANVILLE - MECHANICALLY ATTACHED TPO ROOFING SYSTEM (UL CLASS A)<br>-ROOF DECK (REF. STRUCT.)<br>-COLOR: WHITE<br>-JM ENRGY 3 POLYISOCYANURATE ROOF INSULATION, R-25<br>-JM SECUROCK GYPSUM-FIBER ROOF BOARD, MECHANICALLY ATTACHED, ½" THICK, R-0.5<br>-JM TPO .060 MIL (MINIMUM) THICK WHITE REINFORCED TPO MEMBRANE<br>-REFLECTIVITY: 0.77<br>-EMISSIVITY: 0.87<br>-20 YEAR MANUFACTURER ROOF WARRANTY AND 2 YEAR INSTALLER WARRANTY<br>-INSTALL PER MANUFACTURER SPECIFICATIONS |
| METAL ROOF PANEL @ CANOPY | MBCI BATTENLOK 24 GA.<br>COLOR: GALVALUME |

## EXTERIOR FINISHES (CONTINUED)

| | |
|---|---|
| ROOF HATCH | PRECISION ROOF HATCH<br>MODEL: PH-A<br>SIZED PER CONSTRUCTION DOCUMENTS<br>INSTALL PER SPECIFICATIONS |
| ROOF CURB | LM CURBS |
| EXTEND-A-RAIL | PRECISION ALUMINUM LADDER |
| ROOF HATCH LADDER | PRECISION FIXED VERTICAL ALUMINUM LADDER<br>MODEL: FL-133<br>SIZED PER CONSTRUCTION DOCUMENTS<br>INSTALL PER SPECIFICATIONS |
| DUMPSTER METAL DOOR PANEL | METL SPAN<br>MODEL: CS-260 SINGLE-SKIN<br>COLOR: COLOR TO MATCH JANUS CEDAR RED<br>PROFILE: VERTICAL |
| DUMPSTER CMU WALL | SPLIT FACE CMU<br>SIZE: 8X8X16<br>COLOR: PT-1 |
| WALL INSULATION (CMU)<br>WALL INSULATION (6" STUD)<br>WALL INSULATION (4" STUD) | FILL CELLS TO R-11<br>R-19 BATT INSULATION (ONLY BEHIND BRICK & STONE VENEER)<br>R-13 BATT INSULATION (ONLY BEHIND BRICK & STONE VENEER) |
| ABOVE CEILING @ OFFICE | ACOUSTICAL BATT INSULATION |
| ROOF INSULATION | R-25.5 RIGID INSULATION ENTIRELY ABOVE ROOF DECK |
| NOTE: GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL | |

## EXTERIOR PAINT
SHERWIN WILLIAMS

| PAINT | COLOR |
|---|---|
| PT-1 | SW 6062 'RUGGED BROWN' / 'VINTAGE LEATHER' |
| PT-2 | SW 7019 'GAUNTLET GRAY" |

## INTERIOR FINISHES - STORAGE OFFICE / ACCESSORY SPACES

| | |
|---|---|
| POLISHED CONCRETE | CONSOLIDECK CONCRETE POLISHING SYSTEM<br>W/ 1800 GRIT FINISH MINIMUM<br>W/ BLENDED DENSIFYER, PROSOCO SEALER, AND SPRAY GUARD |
| PORCELAIN WALL TILE - PWT (TOILET ROOMS) | DALTILE<br>LINDEN POINT - LP19 BIANCO<br>SIZE: 12 X 24 PATTERN: RUNNING BOARD |
| WALL GROUT (TOILET ROOMS) | CUSTOM BUILDING PRODUCTS<br>COLOR: #380 HAYSTACK SIZE: MFGR. RECOMMEND |
| BRICK RAINSCREEN WALL PANEL (RECEPTION DESK) | NICHIHA<br>VINTAGE BRICK SERIES<br>COLOR: ALEXANDRIA BUFF<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| STONE RAINSCREEN WALL PANEL (SALES AREA WALL) | NICHIHA<br>KURASTONE SERIES<br>COLOR: STACKED STONE 'MOUNTAIN'<br>NOTE: INSTALL PER MANUFACTURER'S INSTALLATION GUIDELINES |
| SOLID SURFACE RECEPTION DESK COUNTERTOP | WILSON ART<br>COLOR: 9100GS (3) 'COCONUT OIL'<br>EDGE: PENCIL ROUND |
| PLASTIC LAMINATE - (PLAM-1) CABINETS, SLAT WALL | WILSON ART<br>COLOR: 7983-38 'BOARDWALK OAK' |
| PLASTIC LAMINATE - (PLAM-2) SLAT WALL TRIM | WILSON ART<br>COLOR: D96-60 'SHADOW' |
| PLASTIC LAMINATE - (PLAM-3) BREAK ROOM COUNTERTOP | WILSON ART<br>COLOR: D427-60 'LINEN'<br>EDGE: PENCIL ROUND |
| WOOD WALL BASE (OFFICE ONLY) | STYLE: 6" FLAT STRAIGHT EDGE<br>COLOR: PT- 2 |
| RUBBER WALL BASE | 4" ROPPE WALL BASE<br>COLOR: 129 'DOLPHIN' |
| SLAT WALL | WILSON ART<br>COLOR: PLAM-1 W/ ALUMINUM INSERTS |
| CEILING GRID SYSTEM | ARMSTRONG METALWORKS MESH - WOVEN WIRE<br>MESH PANEL: NICKEL CHROME, PERFORATION: 1 CELL WOVEN<br>EDGE TRIM: AXIOM KNIFE EDGE, PROFILE: 5/8" , WHITE<br>GRID:PRELUDE 15/16 EXPOSED TEE GRID, WHITE |
| ACOUSTIC CEILING TILE | ARMSTRONG 2X2 FINE FISSURED ANGLED TEGULAR SQUARE LAY-IN<br>COLOR: WHITE (WH), MEDIUM TEXTURE<br>GRID: PRELUDE 15/16 EXPOSED TEE GRID, WHITE |
| UNDERSIDE OF CEILING, STRUCTURE, AND DUCT @ OFFICE | COLOR: PT- 3 |

## INTERIOR FINISHES - STORAGE

| | |
|---|---|
| ROLL-UP DOORS COMMERCIAL - INTERIOR | JANUS INTERNATIONAL<br>MODEL: 650<br>COLOR: HIGH GLOSS WHITE<br>INSTALL PER MFGR. INSTALLATION INSTRUCTIONS |
| POLISHED CONCRETE (IN CORRIDOR, NOT UNITS) | CONSOLIDECK CONCRETE POLISHING SYSTEM<br>W/ 1800 GRIT FINISH MINIMUM<br>W/ BLENDED DENSIFYER, PROSOCO SEALER, AND SPRAY GUARD |
| DUMMY DOORS & TRIM (BEHIND GLAZING IN OFFICE) | JANUS INTERNATIONAL - CONTINUOUS SHEET ROLLING DOOR<br>MODEL 650<br>COLOR: LIGHT STONE<br>SIZE: REF. DOOR SCHEDULE SHEET A5.1<br>INSTALL PER SPECIFICATIONS<br>TRIM: LIGHT STONE |
| STAIR STRUCTURE | SHERWIN WILLIAMS<br>COLOR: PT-4 |
| INTERIOR CMU AT STORAGE (EXCLUDING STORAGE UNITS) | SHERWIN WILLIAMS<br>COLOR: PT-3 |
| HOLLOW METAL DOORS & FRAMES @ STAIR | SHERWIN WILLIAMS<br>COLOR: PT-4 |
| NOTE: GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL | |

## INTERIOR PAINT
SHERWIN WILLIAMS

| PAINT | COLOR | LOCATION |
|---|---|---|
| PT-1 | SW 7551 'GREEK VILLA' | WALL FIELD COLOR, TOILET ROOMS |
| PT-2 | SW 7025 'BACKDROP' | ACCENT WALL, OFFICE DOORS, DOOR TRIM, & WOOD BASE |
| PT-3 | SW 6170 'TECHNO GRAY' | UNDERSIDE OF DECK (CEILING) |
| PT-4 | SW 7019 'GAUNTLET GRAY" | STAIR STRUCTURE / UPPER STAIR DOORS |

## TOILET ROOM ACCESSORIES

| | |
|---|---|
| TOILET TISSUE DISPENSER | BOBRICK - SURFACE-MOUNTED MULTI ROLL TOILET TISSUE DISPENSER<br>MODEL: B-4288 CONTURA SERIES<br>FINISH: SATIN-FINISH STAINLESS STEEL |
| HAND DRYER | XLERATOR<br>HAND DRYER<br>MODEL: XL-BW INCLUDE: ADA COMPLIANT RECESS KIT<br>FINISH: STAINLESS STEEL |
| 42" HORIZONTAL GRAB BARS<br>36" HORIZONTAL GRAB BARS | BOBRICK- 1/4" DIAMETER W/ SNAP FLANG COVER<br>MODEL: B-5806<br>FINISH: STAINLESS STEEL |
| MIRROR | BOBRICK - CHANNEL-FRAME MIRROR<br>MODEL: B-165 2436<br>SIZE: 24X36<br>FIINISH: STAINLESS STEEL W/ BRIGHT-POLISH FINISH |
| SOAP DISPENSER | GOJO<br>MODEL: ADX-7 |

## WATERPROOFING

| | |
|---|---|
| WATERPROOFING SYSTEM (BASEMENT WALLS) | GCP APPLIED TECHNOLOGIES<br>-HYDRODUCT 220<br>-BITUTHENE 3000<br>-PRIMER (B2 OR WP) |
| VAPOR BARRIER (UNDER SLAB) | GCP APPLIED TECHNOLOGIES<br>-FLORPRUFE 120 COORDINATE WITH STRUCTURE<br>-10 MIL - REF. STRUCT. |
| WATERSTOP (KEYWAY TRANSITIONS) | GCP APPLIED TECHNOLOGIES<br>-ADCOR WATERSTOP |
| WATERPROOFING MEMBRANE (UNDER ELEVATOR PIT) | GCP APPLIED TECHNOLOGIES<br>-BLINDSIDE<br>-PREPRUFE 160R (VERTICAL)<br>-PREPRUFE 300 (HORIZONTAL) |
| NOTE: GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL | |

## SPECIFICATION NOTES

1. GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR SUBMIT EQUIVALENT PRODUCT TO ARCHITECT/ OWNER FOR APPROVAL.
2. GENERAL CONTRACTOR TO PROVIDE 8'X8' MOCK-UP OF ALL EXTERIOR FINISHES FOR OWNER & ARCHITECT'S APPROVAL. GC TO COORDINATE WITH ARCHITECT FOR SPECIFIC SECTIONS. MOCK-UP TO BE COMPLETED PRIOR TO 30% OF PROJECT COMPLETION. NO EXTERIOR FINISHES TO BE ORDERED OR INSTALLED PRIOR TO MOCK-UP APPROVAL.
3. GENERAL CONTRACTOR TO SUBMIT PAINT SAMPLE FOR OWNER APPROVAL PRIOR TO PAINTING INTERIOR WALLS.
4. ENGINEERED DESIGN LOADS - STAIRS/HANDRAILS/GUARDS: PER SECTIONS 1009/1012/1013 AND TABLE 1607.1/SECTION 1607 2012 IBC, ENGINEERED DESIGN LOADS FOR THE ABOVE MENTIONED ITEMS SHALL BE PROVIDED IN THE PLAN SET SUBMITTAL. FOR STAIRS THE UNIFORM LOAD REQUIRED IS 100 PSF AND THE CONCENTRATED LOAD REQUIRED FOR THE STAIRS TREADS IS 300LBS. FOR HANDRAIL ASSEMBLIES AND GUARDS THE APPLIED LOAD AND CONCENTRATED LOADS ARE 50 PLF (ANY DIRECTION AT THE TOP) AND 200 POUNDS (ANY DIRECTION AT THE TOP), RESPECTIVELY. FOR INTERMEDIATE RAILS THE HORIZONTALLY APPLIED NORMAL LOAD IS 50 POUNDS ON ANY AREA EQUAL TO ONE SQUARE FOOT, INCLUDING OPENINGS AND SPACE BETWEEN RAILS.
5. GRAB BARS - DESIGN LOADS/ENGINEERED LAYOUT AND DETAILS: PER SECTION 1607.8.2 2012 IBC, GRAB BARS SHALL BE DESIGNED TO RESIST A SINGLE CONCENTRATED LOAD OF 250LBS. APPLIED IN ANY DIRECTION. PROVIDE DESIGN CRITERIA FOR GRAB BARS AND STRUCTURAL CONNECTIONS ON THE PLANS FOR THE NEW RESTROOMS. ENGINEERED DESIGN LOADS/LAYOUT AND DETAILS MUST BE SEALED/SIGNED/DATED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF TEXAS.

## ALTERNATES

1. GENERAL CONTRACTOR TO PROVIDE ALLOWANCE FOR CERAMIC TILE IN ROOMS 101-105 AS AN ALTERNATE.
2. UNIT LIGHTING ALLOWANCE.

## ELEVATOR SPECIFICATIONS

| | ELEVATOR A (FUTURE B) |
|---|---|
| ELEVATOR MODEL | ENDURA 45A, QTY. 1 |
| RATED CAPACITY | 4,500 LBS. |
| RATED SPEED | 130 FT./MIN. UP / 150 FT./MIN DOWN |
| OPERATION SYSTEM | TAC32 |
| TRAVEL | 21'- 10 1/2" |
| LANDINGS | 3 TOTAL |
| OPENINGS | FRONT: 3 |
| CLEAR CAR INSIDE | 5' - 8" WIDE X 7' - 9 1/2" DEEP |
| CAB HEIGHT | 8'-0" NOM., W/ CEILING HT. OF 7'-4" |
| HOISTWAY ENTRANCE SIZE | 4'-0" WIDE X 7'-0" HIGH |
| DOOR TYPE | TWO SPEED FRONT OPENING |
| POWER CHARACTERISTICS | 480 VOLTS, 3 PHASE, 60 HZ. |
| SEISMIC REQUIREMENTS | ZONE 2 |
| FIXTURE & BUTTON STYLE | VANDAL RESISTANT SIGNAL FIXTURES |
| CAB WALL COLOR | GRAYSTONE 464 |
| CAB CEILING FRAME COLOR | F-119 CHALKBOARD |
| CAB DOOR COLOR | #4 STAINLESS STEEL |

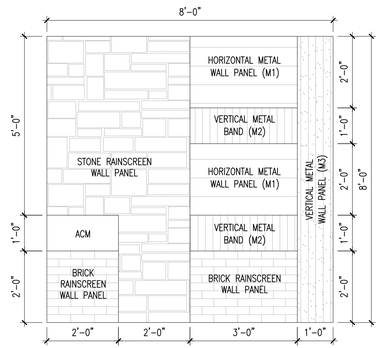
GENERAL NOTES:

1. GENERAL CONTRACTOR TO PROVIDE PRODUCT SPECIFIED OR APPROVED EQUAL.
2. MANUFACTURER: THYSSENKRUPP ELEVATOR, BASIS OF DESIGN IS THE ENDURA 45 A HOLELESS HYDRAULIC ELEVATOR PRODUCT.
3. WARRANTY/MAINTENANCE: 12 MONTH PERIOD
4. HOISTWAY ENTRANCES: DOORS AND FRAMES ON ALL LANDINGS SHALL BE APPLIED POWDER COAT PAINT. HOISTWAY SILL ASSEMBLIES SHALL BE SELF-SUPPORTING EXTRUDED ALUMINUM.
5. CAR ENCLOSURE: CAB TYPE TKS, REINFORCED COLD-ROLLED STEEL WITH A POWDER COATED FINISH. CEILING SHALL BE SUSPENDED TYPE, FLUORESCENT LIGHTING WITH TRANSLUCENT DIFFUSER MOUNTED IN A POWDER COAT PAINTED METAL FRAME. CAB FRONTS AND RETURN SHALL BE PROVIDED IN A #4 BRUSHED STAINLESS STEEL. CAR DOOR FINISH SHALL BE A #4 BRUSHED STAINLESS STEEL FINISH WITH STAINLESS STEEL KICK PLATES. CAB SILLS SHALL BE EXTRUDED ALUMINUM. HANDRAIL SHALL BE 2" FLAT METAL BAR ON SIDE AND REAR WALLS AND HAVE A #4 STAINLESS STEEL FINISH. BUMPER RAILS SHALL BE 4" FLAT METAL BAR ON SIDE AND REAR WALLS AND HAVE A #4 STAINLESS STEEL FINISH.
6. CAR OPERATING STATION: THE MAIN CAR CONTROL IN EACH CAR SHALL CONTAIN THE DEVICES REQUIRED FOR SPECIFIC OPERATION MOUNTED IN AN INTEGRAL SWING RETURN PANEL REQUIRING NO APPLIED FACEPLATE. SWING RETURN SHALL HAVE A BRUSHED STAINLESS STEEL FINISH. PUSHBUTTONS THAT ILLUMINATE USING LONG LASTING LED'S SHALL BE INCLUDED FOR EACH FLOOR SERVED. AN EMERGENCY COMMUNICATIONS SYSTEM, INTEGRAL PHONE SYSTEM SHALL BE PROVIDED. A COLUMN MOUNTED CAR RIDING LANTERN SHALL BE INSTALLED.
7. CONTROL SYSTEM: AUTOMATIC LIGHT AND FAN SHUT DOWN CONTROL SYSTEM SHALL BE INCLUDED. AN "EMERGENCY BATTERY LOWERING OPERATION" (10DOC) SHALL BE INCLUDED IN THE ELEVATOR OPERATION. THE EMERGENCY BATTERY LOWERING OPERATION SHALL LOWER THE ELEVATOR IN TIME OF POWER LOSS AND OPEN THE CAB DOOR ALLOWING FOR PASSENGERS TO EXIT.
8. HALL STATIONS: PROVIDE BUTTONS WITH BLUE-ILLUMINATING LED HALOS TO INDICATE THAT A CALL HAS BEEN REGISTERED AT THAT FLOOR FOR THE INDICATED DIRECTION. PROVIDE 1 SET OF PUSHBUTTON RISERS WITH FACEPLATES HAVING A #4 BRUSHED STAINLESS STEEL FINISH. PHASE 1 FIREFIGHTER'S SERVICE KEY SWITCH, WITH INSTRUCTIONS, SHALL BE INCORPORATED INTO THE HALL STATION AT THE DESIGNATED LEVEL. SPECIAL EQUIPMENT; CARD READER PROVISIONS SHALL BE INCLUDED IN ALL CONTROLLERS AND SPACE MADE AVAILABLE IN THE ELEVATOR CAB FOR A SURFACE MOUNTED DEVICE.
9. ELEVATOR FLOOR: RAISED RUBBER TILE.
10. GUARDRAILS REQUIRED ON TOP OF ELEVATOR CAB.

## MOCK WALL

NOTES:
1. INCLUDE SAMPLES OF METAL SCUPPER, FLASHING & TRIM

2. COPING TO MATCH ADJACENT MATERIAL U.N.O. ON ELEVATIONS





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STATE OF MISSOURI
JEFFREY'S DALLENBACH NUMBER A-2020056968
ARCHITECT
12.16.2021
JEFFREY K. DALLENBACH, AIA
MISSOURI REGISTRATION NO. A-2020056968

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : VP
REVISIONS:

BLDG. SPECS.

SHEET NO.
A7.1

NE PORT DRIVE

# LAKEWOOD STORAGE

## LEE'S SUMMIT, MISSOURI 64064

DRAWING INDEX:

| SHEET NUMBER: | DESCRIPTION: |
|---|---|
| COVER | DRAWINGS INDEX |
| S0.1 | GENERAL NOTES |
| S0.2 | LIGHT GAGE FRAMING NOTES |
| S0.3 | MASONRY NOTES |
| S0.4 | TESTING & INSPECTION REQUIREMENTS |
| S0.5 | ROLL-UP DOOR INSTALLATION |
| F1.1 | CONCRETE NOTES |
| F2.1 - F2.2 | FOUNDATION PLANS |
| F2.3 - F2.4 | LUG AND ANCHOR BOLT PLAN |
| F2.5 | LUG AND ANCHOR BOLT DETAILS |
| FD1.1 - FD1.4 | FOUNDATION DETAILS |
| S1.1 - S1.2 | 1ST FLOOR FRAMING PLAN |
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| S6.1-S6.8 | EXTERIOR FRAMING ELEVATIONS |
| S7.1-S7.12 | COLUMN LINE FRAMING ELEVATIONS |
| S8.1 | ENLARGED FRAMING PLANS |
| D1.1-D1.10 | DETAILS |

Force Engineering & Testing Inc.
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Ultimate Wind Pressures

**Wind Loads - Components & Cladding : h ≤ 60'**

| | | | | |
|---|---|---|---|---|
| Kh (case 1) = | 1.01 | h = | 33.5 ft | 0.2h = 6.7 ft |
| Base pressure (qh) = | **26.0 psf** | 0.6h = | 20.1 ft | |
| Minimum parapet ht = | 1.5 ft | GCpi = | +/-0.18 | |
| Roof Angle (θ) = | 1.2 deg | qi = qh = | 26.0 psf | |
| Type of roof = | Monoslope | | | |

**Roof**

| Area | Surface Pressure (psf) 10 sf | 20 sf | 50 sf | 100 sf | 200 sf | 350 sf | 500 sf | 1000 sf |
|---|---|---|---|---|---|---|---|---|
| Negative Zone 1 | -48.9 | -45.6 | -41.4 | -38.2 | -34.9 | -32.3 | -30.7 | -30.7 |
| Negative Zone 1' | -28.1 | -28.1 | -28.1 | -28.1 | -24.2 | -21.0 | -19.0 | -16.0 |
| Negative Zone 2 | -64.5 | -60.3 | -54.8 | -50.7 | -46.5 | -43.2 | -41.1 | -41.1 |
| Negative Zone 3 | -87.8 | -79.6 | -68.6 | -60.3 | -52.0 | -45.3 | -41.1 | -41.1 |
| Positive All Zones | 16 | 16 | 16 | 16 | 16.0 | 16.0 | 16.0 | 16.0 |
| Overhang Zone 1&1' | -44.2 | -43.4 | -42.4 | -41.6 | -34.9 | -29.4 | -26.0 | -26.0 |
| Overhang Zone 2 | -59.8 | -54.3 | -46.9 | -41.4 | -35.9 | -31.4 | -28.6 | -28.6 |
| Overhang Zone 3 | -83.2 | -73.5 | -60.7 | -51 | -41.4 | -33.6 | -28.6 | -28.6 |

Overhang pressures in the table above assume an internal pressure coefficient (Gcpi) of 0.0
Overhang soffit pressure equals adj wall pressure (which includes internal pressure of 4.7 psf)

**Parapet**

qp = 26.7 psf

| Solid Parapet Pressure | | Surface Pressure (psf) 10 sf | 20 sf | 50 sf | 100 sf | 200 sf | 500 sf |
|---|---|---|---|---|---|---|---|
| CASE A: | Zone 2 : | 85.6 | 80.0 | 72.7 | 67.2 | 61.6 | 54.3 |
| | Zone 3 : | 109.6 | 99.8 | 86.9 | 77.0 | 67.2 | 54.3 |
| CASE B : | Interior zone : | -50.5 | -48.0 | -44.6 | -42.0 | -39.5 | -36.1 |
| | Corner zone : | -57.8 | -53.9 | -48.8 | -45.0 | -41.2 | -36.1 |

**Walls**

| Area | GCp +/- GCpi 10 sf | 100 sf | 200 sf | 500 sf | Surface Pressure at h 10 sf | 100 sf | 200 sf | 500 sf |
|---|---|---|---|---|---|---|---|---|
| Negative Zone 4 | -1.17 | -1.01 | -0.96 | -0.90 | -30.4 | -26.3 | -25.0 | -23.4 |
| Negative Zone 5 | -1.44 | -1.12 | -1.03 | -0.90 | -37.4 | -29.2 | -26.7 | -23.4 |
| Positive Zone 4 & 5 | 1.08 | 0.92 | 0.87 | 0.81 | 28.1 | 23.9 | 22.7 | 21.1 |

Note: GCp reduced by 10% due to roof angle <= 10 deg.

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JOHNATHAN GREEN
NUMBER PE-2021045657
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LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

COVER SHEET
SHEET NO.
COVER

GENERAL NOTES:

1. APPLICABLE STRUCTURAL CODE: INTERNATIONAL BUILDING CODE 2018

2. DESIGN LOADS:
   - ROOF DEAD LOAD: 10 PSF
   - ROOF COLLATERAL LOAD: 0 PSF
   - ROOF LIVE LOAD: 20 PSF
   - FLOOR DEAD LOAD: 45 PSF

   FLOOR LIVE LOAD:
   - LIGHT STORAGE: 125 PSF
   - CORRIDORS: 100 PSF/200# CONCENTRATED

   RAIN LOADS:
   - R= 5 PSF

   SNOW LOADS:
   - GROUND SNOW LOAD: 20.0 PSF
   - SNOW. EXP. FACTOR, Ce= 1.0
   - ISNOW IMP. FACTOR, Is= 1.0
   - THERMAL FACTOR, Ct= 1.0
   - ROOF SNOW LOAD: 20.0 PSF

   WIND LOADS:
   - ULTIMATE WIND SPEED: 109 MPH
   - NOMINAL WIND SPEED: 84.4 MPH
   - WIND IMP. FACTOR, Iw= 1.0
   - WIND CONDITION: ENCLOSED
   - INT. PRESSURE COEFFICIENT: +/- 0.18
   - WIND EXPOSURE: "C"

   SEISMIC DESIGN:
   - SEISMIC DESIGN CATEGORY: A
   - SEISMIC IMP. FACTOR, Ie= 1.0
   - SITE CLASS: B
   - Ss: 10.0%g S1: 6.8%g
   - EQUIVALENT LATERAL FORCE ANALYSIS

   BASIC SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAME WALLS W/SHEAR PANELS
   SEISMIC DESIGN BASE SHEAR (U.N.O.), V= 0.010*W Cs= 0.010 R= 6.5 Ie= 1.0
   TOTAL BASE SHEAR 64 KIPS

   A. ALL ROOF COMPONENTS SHALL BE DESIGNED FOR THE APPROPRIATE DESIGN PRESSURE FOR THE TRIBUTARY AREA AS INDICATED ON THE DESIGN CHART
   B. ALL DOORS SHALL MEET THE WIND LOAD RESISTANCE FROM IBC 2009. REFER TO THE LOAD CHARTS FRO COMPONENT AND CLADDING FOR DESIGN PRESSURES
   C. HANDRAILS AND GUARDS SHALL BE DESIGNED IN ACCORDANCE WITH TABLE 1607.1 ON THE INTERNATIONAL CODE AS FOLLOWS:
      1. HANDRAILS ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A LATERAL LOAD OF 50 POUNDS PER LINEAR FOOT APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE
      2. HANDRAILS ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO SUPPORT A CONCENTRATED LOAD OF 200 POUNDS PER LINEAR FOOT APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE
   D. STAIR THREADS SHALL BE DESIGNED TO SUPPORT A MINIMUM OF A 300 POUND CONCENTRATED LOAD
      DEFLECTION CRITERIA:
      - STRUCTURAL STANDING SEAM ROOF SYSTEM: L/240
      - PURLIN FRAMING SYSTEM: L/240 TOTAL LOAD
      - COMPOSITE DECK SYSTEM: L/360 TOTAL LOAD
      - STUD WALL SYSTEM: H/240 (EIFS)
      - STUD WALL SYSTEM: H/120 (METAL FINISHES)

3. USE OF DRAWINGS:
   A. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT JOB SITE BEFORE COMMENCING WITH WORK, AND SHALL REPORT ANY DISCREPANCIES TO FORCE ENGINEERING & TESTING.
   B. OMISSIONS AND CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE DRAWINGS, NOTES, AND DETAILS SHALL BE BROUGHT TO THE ATTENTION OF FORCE ENGINEERING & TESTING AND RESOLVED PRIOR TO STARTING WORK.
   C. DO NOT USE SCALED DIMENSIONS FROM THE DRAWINGS. WHERE NO DIMENSIONS ARE PROVIDED, CONSULT WITH FORCE ENGINEERING & TESTING FOR CLARIFICATION PRIOR TO PRECEDING WITH THE WORK.
   D. DETAILS SHOWN SHALL BE INCORPORATED INTO THE PROJECT AT ALL APPROPRIATE LOCATIONS WHETHER CALLED OUT OR NOT.
   E. NO ADDITIONS OR ALTERATIONS SHALL BE MADE TO DRAWINGS BEARING THE ENGINEERS SEAL WITHOUT THE PERMISSION OF THE ENGINEER.

4. ALTERATION OF STRUCTURAL MEMBERS NO STRUCTURAL MEMBER, EITHER HOT ROLLED STEEL OR COLD FORMED STEEL, SHALL BE ALTERED IN ANY WAY BY ANY TRADE WITHOUT THE SPECIFIC WRITTEN PERMISSION OF FORCE ENGINEERING & TESTING, INC.

5. DESIGN AND/OR FABRICATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARD PRACTICES AND INTERPRETATIONS OF THE FOLLOWING CODES:
   14TH. EDITION AISC STEEL CONSTRUCTION MANUAL ASD, 2007 AISI COLD-FORMED STEEL DESIGN MANUAL, 2000 AWS 1.1 STRUCTURAL WELDING CODE-STEEL AND ANY OTHER CODE LISTED WITHIN THE DESIGN INFORMATION.

6. MATERIALS

| | ASTM DESIGNATION | MINIMUM YIELD |
|---|---|---|
| HOT ROLLED MILL SHAPES | A992 | Fy= 50 ksi |
| HOLLOW PLATE/FLAT BAR | A572 OR A529 | Fy= 50 ksi |
| HOLLOW STRUCTURAL SECTIONS | A500 OR B500 | Fy= 46 ksi |
| COLD-FORMED LIGHT GAUGE SHAPES | A653 GR 55 | Fy= 55 ksi |
| CABLE BRACING | A475 | EXTRA HIGH STRENGTH |
| ROD BRACING | A36 | Fy= 36 ksi |
| ROOF AND WALL SHEETING | A792 | Fy= 50, 80 ksi |
| MACHINE BOLTS | A307 | |
| HIGH STRENGTH BOLTS | A325 | |
| ANCHOR BOLTS (BY OTHERS) | A36 | Fy= 36 ksi |
| CSI CFD2 FLOOR DECK | A653 (G90) | Fy= 50 ksi |
| EXTERIOR STRUCTURAL STUDS | A653 SQ (G90) | Fy= 33 ksi |
| CSI TYPE B DECK | A653 (G90) | Fy= 40 ksi |

7. SPECIAL NOTES:
   PIPE LOAD WITH WATER

| SIZE | WEIGHT MAX. | SPACING OF HANGERS |
|---|---|---|
| 4" DIA. | 17 PLF | 10'-0" |
| 6" DIA. | 32 PLF | 10'-0" |
| 8" DIA. | 50 PLF | 10'-0" |
| 10" DIA. | 75 PLF | 10'-0" |
| 12" DIA. | 100 PLF | 5'-0" |

   ARCHITECTURAL BARRIER ACT LOADS:

| ITEM | REQUIRED CAPACITY |
|---|---|
| GRAB BAR | 250 POUNDS ANY DIRECTION |
| TUB OR SHOWER SEAT | 250 POUNDS ANY DIRECTION |
| FASTENER & MOUNTING DEVIES | 250 POUNDS ANY DIRECTION |

   STAIR TREADS, RAILING AND GUARD RAILS:

| ITEM | REQUIRED CAPACITY |
|---|---|
| TREADS | 300 POUNDS AT CENTER |
| TOP RAILS | 50 PLF HORIZONTALLY |
| OTHERS RAILS, FILLERS & CONNECTIONS | 25 PSF HORIZONTALLY |
| HAND RAILS | 200 POUNDS ANY DIRECTION |

8. FINISH:
   A. ALL COLD-FORMED STRUCTURAL FRAMING MEMBERS SHALL BE SHOT BLASTED, GIVEN ONE COAT (0.5 MILS) OF PREMIUM POLYESTER-BASED RED PRIMER, THEN OVEN BAKED PRIOR TO ANY FABRICATION. THE PRIMER CONTAINS A "WAX" TYPE LUBRICANT TO FACILITATE ROLL FORMING AND DETER MARRING DURING THESE OPERATIONS. HAIR LINE CRAZING WHICH MAY OCCUR DURING FORMING OPERATIONS IS CONSIDERED NORMAL.
   B. ALL OTHER STRUCTURAL FRAMING MEMBERS SHALL BE CLEANED IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE AND GIVEN ONE SHOP COAT (1.0 MILS) OF STANDARD RED-OXIDE PRIMER DESIGNED FOR SHORT TERM FIELD PROTECTION DURING THE ERECTION PROCESS. ALL STANDARD RED-OXIDE PRIMER SHALL MEET THE PERFORMANCE SPECIFICATIONS OF FEDERAL SPECIFICATION TT-P-636D AND TT-P-664.
   C. ALL STRUCTURAL STUDS SHALL HAVE A MIN G60 ZINC COATING (.60oz/Ft$^2$) TOTAL ON BOTH SIDES.
   D. ALL NON-STRUCTURAL STUDS SHALL HAVE A MIN G40 ZINC COATING (.40oz/Ft$^2$) TOTAL ON BOTH SIDES.
   E. WHEN EXPOSED, ALL COLD-FORMED STRUCTURAL ZEES, CEES, AND STUDS SHALL HAVE A MINIMUM OF G90 ZINC COATING (.90oz/Ft$^2$) TOTAL ON BOTH SIDES.

9. ALL ANCHOR BOLT CONNECTIONS ARE A MINIMUM OF F1554-36 UNLESS NOTED. ALL STRUCTURAL FASTENERS ARE A MINIMUM OF #12 DIAMETER SCREWS UNLESS NOTED.

10. COMPOSITE DECK SLABS
    A. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATES, NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE 1 PORTLAND CEMENT AND SHALL HAVE THE FOLLOWING DESIGNATED COMPRESSIVE STRENGTH (FC) AFTER 28 DAYS COMPOSITE DECK SLABS: 4000psi
    B. CHORLIDE ADMIXTURES OR ADMIXTURES CONTAINING CHORLIDE SALTS SHALL NOT BE ADDED UNDER ANY CIRCUMSTANCES TO THE CONCRETE. SUCH ADDITIVES HAVE PROVEN DELETERIOUS TO STEEL AND STEEL FINISHES.
    C. REINFORCEMENT: 6X6-W1.4 x W1.4 WWR OR EQUIVALENT STEEL FIBER REINFORCING.

11. A325 BOLT TIGHTENING REQUIREMENTS
    ALL HIGH STRENGTH BOLTS ARE A325 UNLESS SPECIFICALLY NOTED OTHERWISE. ALL STRUCTURAL A325 BOLTS WITH HEAVY HEX NUTS FOR THE RIGID FRAME ARE TO BE INSTALLED USING THE TURN-OF-THE-NUT METHOD SPECIFIED IN THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" IN THE AISC MANUAL. UNLESS NOTED OTHERWISE, ALL BOLTED CONNECTIONS ARE DESIGNED AS BEARING TYPE CONNECTIONS WITH BOLT THREADS NOT EXCLUDED FROM THE SHEAR PLANE.

12 ERECTION NOTES
    A. ALL BRACING SHOWN ON THE DRAWINGS FOR THIS STEEL FRAMING SYSTEM IS REQUIRED AND SHALL BE INSTALLED BY THE ERECTOR AS A PERMANENT PART OF THE STRUCTURE ("CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IN THE AISC MANUAL; SECTION 7.9)
    B. TEMPORARY SUPPORTS, SUCH AS GUYS, BRACES, FALSEWORK, CRIBBING OR OTHER ELEMENTS REQUIRED FOR THE ERECTION OPERATION SHALL BE DETERMINED AND FURNISHED BY THE ERECTOR ("CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IN THE AISC MANUAL; SECTION 7.9). ERRORS WHICH REQUIRE MAJOR CHANGES IN THE MEMBER CONFIGURATION ARE TO BE REPORTED IMMEDIATELY TO
    C. ENGINEER OF RECORD BY THE CONTRACTOR TO ENABLE WHOEVER IS RESPONSIBLE EITHER TO CORRECT THE ERROR OR TO MOST EFFICIENT AND ECONOMIC METHOD OF CORRECTION TO BE USED BY OTHERS ("CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" IN THE AISC MANUAL; SECTION 7.12).

    D. ERECTION TOLERANCES ARE SET FORTH IN AISC CODE OF STANDARD PRACTICE 7.11 EXCEPT THAT INDIVIDUAL MEMBERS ARE CONSIDERED PLUMB, LEVEL AND ALIGNED IF THE DEVIATION DOES NOT EXCEED 1:300. VARIATIONS IN FINISHED OVERALL DIMENSIONS OF STRUCTURAL STEEL FRAMING ARE DEEMED WITHIN THE LIMITS OF GOOD PRACTICE WHEN THEY DO NOT EXCEED THE CUMULATIVE EFFECT OF ROLLING, FABRICATING, AND ERECTION TOLERANCES.
    E. AS A GENERAL RULE FIELD WELDING IS NOT USED TO ASSEMBLE THE STEEL FRAMING SYSTEM. IN CASES WHERE THE DRAWINGS INDICATE FIELD WELDING AND IN CASES WHERE APPROVED CORRECTIONS ARE TO BE MADE BY FIELD WELDING THE FOLLOWING REQUIREMENTS SHALL BE MET:
       1. WELDERS MUST BE QUALIFIED BY AN INDEPENDENT TESTING AGENCY, WITH SUITABLE DOCUMENTATION TO AWS D1.1 STRUCTURAL WELDING CODE – STEEL OR AWS D1.3 STRUCTURAL WELDING CODE SHEET STEEL AS APPLICABLE, FOR THE PROCESSES, POSITIONS, AND MATERIAL INVOLVED.
       2. ALL WELDS MUST BE MADE IN CONFORMANCE TO A DOCUMENTED AND APPROVED WELDING PROCEDURE SPECIFICATION (WPS). ALL JOINTS WHICH ARE NOT PREQUALIFIED MUST BE SUPPORTED BY A CERTIFIED PROCEDURE QUALIFICATION RECORD (PQR) BY AN INDEPENDENT TESTING AGENCY.
    F. STEEL DECK INSTALLATION SHALL BE IAW APPROVED ERECTION DRAWINGS.
       1. ENDS OF DECK UNITS SHALL BE LAPPED NO LESS THAN 2 INCHES OVER SUPPORTS.
       2. ATTACHMENT OF DECK TO SUPPORTS SHALL BE A MIN. (2) #12-14 x 3/4" HWH INTO THE BEARING WALL TOP TRACK PER LOW FLUTE. OVER FULL BEARING HEADERS, USE A MIN. OF (1) #12-14 x 3/4" HWH PER LOW FLUTE. (36/7 PATTERNS) OVER STEEL BEAMS USE A MIN. (1) 1/4-20x1-1/2" DP5 PER FLUTE OR HILTI X-HSN 24 (37/7 PATTERN)
       3. SIDELAP FASTENERS SHALL BE AT MAXIMUM OF 12" O.C. BETWEEN BEARING WALL FRAMES. USE #12-14 x 3/4" HWH FOR SIDELAP FASTENERS.

    G. CONCRETE PLACEMENT
       1. DECK SHALL BE FREE OF SOIL, DEBRIS, STANDING WATER, LOOSE MILL SCALE AND ALL OTHER FOREIGN MATTER
       2. CONCRETE SHALL BE PLACED FROM A LOW LEVEL IN A UNIFORM MANNER OVER THE SUPPORTING STRUCTURE AND SPREAD TOWARDS THE CENTER OF THE DECK SPAN.
       3. CONCRETE SHALL BE PLACED IN THE OPPOSITE DIRECTION TO WHICH THE SHEETS WERE LAID TO AVOID CONCRETE LEAKAGE.
       4. CONCRETE FINISHING SHALL BE DONE WITH "WALK-BEHIND" POWER TROWELS: 1200 LB FINISH RIDER OR BUGGIES ARE NOT ALLOWED.
       5. SLUMP SHALL BE 3 TO 5 INCHES
       6. BATCH TO PLACEMENT TIME SHALL BE LESS THAN 90 MINUTES.
       7. CONCRETE PUMP TEMPERATURE CHANGE OF 50 TO 90 DEGREES FAHRENHEIT.
       8. AIR CONTENT OF 0 TO 3%

13. MECHANICALLY ATTACHED ULTRA PLY TPO MEMBRANE ROOF SYSTEM
    A MAIN FIELD OF ROOF FM I-90 RATED ASSEMBLY SEE ROOFNAV 260654-0-0.
    B. PERIMETER AND CORNER OF ROOF USE FM I-120 RATED ASSEMBLY SEE ROOFNAV 254071-0-0

14. COMPONENT BRACING PLANS ARE NOT INCLUDED WITH THESE PERMIT DOCUMENTS. ANY ARCHITECTURAL COMPONENTS OR ANY PLUMBING, MECHANICAL OR ELECTRICAL FIXTURE MUST BE DESIGN FOR SEISMIC LOADING PER THE STRUCTURAL DESIGN CRITERIA LISTED IN THESE PLANS BY THE SPECIALTY SYSTEMS DESIGN ENGINEER OR ARCHITECT.

15 ** SHOP DRAWINGS **
    1. THE TERM "SHOP DRAWINGS" INCLUDES FABRICATION, MANUFACTURING, ERECTION AND SETTING DRAWINGS, BROCHURES, CERTIFICATES, AND PRODUCT DATA DESCRIBING MATERIALS AND EQUIPMENT. SHOP DRAWINGS SHALL INCLUDE ALL PERTINENT INFORMATION REQUIRED FOR THE ENGINEER TO FULLY EVALUATE THE MATERIALS BEING REPRESENTED BY THE SUBMITTAL INLCLUDING THE PHYSICAL PROPERTIES, DIMENSIONS, LOCATIONS AND METHOD OF INSTALLATION
    2. SHOP DRAWINGS WILL BEAR THE REVIEW STAMP OF THE CONTRACTOR INDICATING THAT HE HAS REVIEWED THE DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS; COORDINATE ITEMS INCLUDED IIN THE SUBMITTAL WITH RELATED ITEMS; AND VERIFIED AND COORDINATED DIMENSIONS.
    3. REPRODUCTIONS OF THE ENGINEERING DRAWINGS WILL NOT BE ACCEPTABLE AS SHOP DRAWINGS.
    4. ANY SHOP DRAWING NOT CONFORMING TO THESE REQUIREMENTS WILL BE CAUSE FOR REJECTION AND WILL BE RETURNED WITHOUT ANY FURTHER ACTION.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

DRAWN :

REVISIONS:

GENERAL NOTES

SHEET NO.

S0.1

# GENERAL NOTES: LIGHT-GAUGE STEEL FRAMING

MATERIALS & STANDARDS:

1. STEEL FRAMING MEMBERS MUST CONFORM TO THE REQUIREMENTS OF AISI SPECIFICATIONS. FOR THE DESIGN OF COLD-FORMED STRUCTURAL MEMBERS (AISI-86).
2. MATERIAL MUST CONFORM TO ONE OF THE FOLLOWING: ASTM A653, A792, OR A 875.
3. MINIMUM YIELD STRENGTH (FY) = 55,000 PSI
4. ALL STRUCTURAL MEMBERS SHALL BEAR IDENTIFICATION WITH THE FOLLOWING INFORMATION: MANUFACTURER'S NAME, MINIMUM THICKNESS IN MILS OF UNCOATED STEEL, COATING WEIGHT, MINIMUM YIELD STRENGTH (KIPS PER SQUARE INCH).
5. STRUCTURAL FRAMING MEMBERS SHALL BE HOT-DIP GALVANIZED (G60) OR HAVE EQUIVALENT CORROSION-RESISTANT COATING. NON-STRUCTURAL MEMBERS SHALL BE HOT-DIP GALVANIZED (G40) OR HAVE EQUIVALENT CORROSION-RESISTANT COATING.
6. MATERIAL THICKNESS SHALL CONFORM TO THE FOLLOWING SCHEDULE:

| GAUGE | MILS | MIN. THICKNESS (INCHES) |
|---|---|---|
| 25 | 18 | 0.018 |
| 22 | 27 | 0.027 |
| 20 | 33 | 0.033 |
| 18 | 43 | 0.043 |
| 16 | 54 | 0.054 |
| 14 | 68 | 0.068 |
| 12 | 97 | 0.097 |

FABRICATION:

1. C-SECTION STRUCTURAL MEMBERS SHALL COMPLY WITH THE FOLLOWING DIMENSIONAL REQUIREMENTS:

| NOMINAL MEMBER SIZE | INDUSTRY DESIGNATOR | WEB DEPTH (INCHES) | MIN. FLANGE WIDTH (INCHES) | MIN. LIP SIZE (INCHES) |
|---|---|---|---|---|
| 2 X 4 | 350S162-T | 3.5 | 1.625 | 0.5 |
| 2 X 6 | 550S162-T | 6 | 1.625 | 0.5 |
| 2 X 8 | 800S162-T | 8 | 1.625 | 0.5 |
| 2 X 10 | 1000S162-T | 10 | 1.625 | 0.5 |
| 2 X 12 | 1200S162-T | 12 | 1.625 | 0.5 |

2. "T" IS THE UNCOATED MATERIAL THICKNESS IN MILS. "S" INDICATES STUDS AND JOIST SECTIONS WITH LIPS. MAXIMUM FLANGE SIZE PERMITTED IS 2 1/2"
3. TRACKS: COMPLY WITH THE ABOVE DIMENSIONAL REQUIREMENTS EXCEPT WITH A MINIMUM FLANGE OF 1 1/4" , AND NO LIP.
4. WEB PUNCHOUTS: PUNCHOUTS SHALL NOT EXCEED 1 1/2" WIDTH X 4" LENGTH, LOCATED AT WEB CENTERLINE.

CUTTING, NOTCHING & HOLE STIFFENING:

1. FLANGES SHALL NOT BE CUT OR NOTCHED WITHOUT ENGINEER'S APPROVAL.
2. WEB HOLES SHALL BE NO CLOSER THAN 12" TO BEAM OR JOIST BEARING AND SHALL BE LIMITED TO THE FOLLOWING:
   A. DEPTH: ONE-HALF (½) THE WEB DEPTH
   B. LENGTH: 4" OR WEB DEPTH, WHICHEVER IS GREATER
3. WEB HOLES CLOSER THAN 12" TO THE JOISTS BEARING OR 18" TO BEAM/HEADER BEARING SHALL BE REINFORCED WITH #8 SCREWS AT 1" SPACING ALONG EDGES.

FASTENERS:

1. SCREWS:

A. ALL SCREWS SHALL BE SELF-DRILLING / TAPPING SCREWS, WITH HEAD STYLES, THREADS AND POINT TYPES ACCORDING TO MANUFACTURER.
B. USE #8 MINIMUM UNLESS OTHERWISE SPECIFIED
C. MAINTAIN A MINIMUM CENTER-TO-CENTER OR EDGE DISTANCE OF THREE (3) DIAMETERS.
D. INSTALL SO THAT:
   (I) A MINIMUM OF THREE (3) THREADS PENETRATE THROUGH THE STEEL.
   (II) SCREWS PENETRATE COMPONENTS WITHOUT CAUSING PERMANENT SEPARATION.
   (III) HOLES OR THREADS ARE NOT STRIPPED.

2. BOLTS:

A. ALL BOLTS SHALL MEET OR EXCEED ASTM-A307, INSTALLED WITH STANDARD NUTS AND WASHERS.
B. MAINTAIN A MINIMUM DISTANCE OF 1 1/2 TIMES BOLT DIAMETER TO EDGE OF CONNECTED STEEL MEMBER.
C. BOLT HOLE DIAMETER SHALL NOT EXCEED BOLT DIAMETER BY MORE THAN 1/16".

STUD WALLS:

1. ALL BE SHALL BE SPACED AT 24" O.C. IF INLINE WITH STRUCTURAL MEMBERS ABOVE.
2. STUDS SHALL NOT BE SPLICED WITHOUT ENGINEER'S APPROVAL.

CONSTRUCTION GUIDELINES:

1. WHERE POSSIBLE, ALL STRUCTURAL MEMBERS SHALL BE ALIGNED VERTICALLY (IN-LINE FRAMING) TO TRANSFER LOADS IN A DIRECT PATH TO THE FOUNDATION SYSTEM.
2. BEARING SURFACES FOR JOISTS, RAFTERS AND TRUSSES SHALL BE UNIFORM AND LEVEL.
3. ALL LOAD BEARING STUDS, INCLUDING KING AND JACK STUDS, SHALL BE SEATED IN THE TRACKS WITH A MAXIMUM GAP OF 1/8" BETWEEN THE END OF THE STUD & THE WEB OF THE TRACK.
4. TRACK MEMBERS SHALL NOT BE USED FOR ANY LOAD CARRYING APPLICATIONS WITHOUT ENGINEER'S APPROVAL.
5. CUTTING METHODS WHICH CAUSE SIGNIFICANT HEATING OF THE STEEL OR DAMAGE TO THE COATINGS SHALL ONLY BE USED WHEN THE GALVANIZED COATING IS REPAIRED.
6. A SILL SEALER, OR EQUIVALENT, SHALL BE PROVIDED BETWEEN THE UNDERSIDE OF THE WALL WHEN FASTENED DIRECTLY TO CONCRETE.
7. PLUMBING LINES: COPPER AND PLASTIC PIPES SHALL BE SEPARATED FROM STEEL FRAMING BY NON-CONDUCTIVE GROMMETS OR OTHER EQUIVALENT MEANS.
8. ELECTRICAL WIRING: A GROMMET BUSHING, CONDUIT OR EQUIVALENT WIRE PROTECTION SHALL BE INSTALLED IN THE SERVICE HOLE OR PUNCH-OUT BEFORE ELECTRICAL WIRING IS PULLED THROUGH.
9. BRACING:
   A. TEMPORARY BRACING AND/OR SHORING MUST BE PROVIDED UNTIL PERMANENT BRACING HAS BEEN INSTALLED.
   B. STEEL FRAMING ERECTOR IS CAUTIONED THAT MOST STEEL FRAMING MEMBERS ARE INADEQUATE TO SUPPORT LOADS IF NOT PROPERLY BRACED. CONSEQUENTLY, STRAPPING AND BRIDGING MUST BE IN PLACE AND SHEATHING MUST BE CAREFULLY APPLIED. MOVEMENT OF LABORERS ON UNSHEATHED, UNBRACED AND UNBRIDGED MEMBERS SHOULD NOT BE PERMITTED.

# GENERAL NOTES: STRUCTURAL AND MISC... STEEL

(THESE NOTES SHALL CONTROL UNLESS NOTED OTHERWISE ON PLANS AND DETAILS.)

1. CONFORM TO THE FOLLOWING MATERIAL SPECIFICATIONS:
   - STRUCTURAL & MISC... SHAPES: ASTM A-50
   - PIPE COLUMNS: ASTM A-53-B, ASTM A-68-II
   - HSS TUBE COLUMNS: ASTM A-500-B
2. ALL DETAILING SHALL BE IN CONFORMANCE WITH STANDARDS OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC).
3. UNLESS OTHERWISE NOTED, PROVIDE FRAMED BEAM CONNECTIONS IN ACCORDANCE WITH PART 4, AISC MANUAL - 3/4" ASTM A-325 BOLTS.
4. FIELD CONNECTIONS SHALL BE EQUIVALENT TO STANDARD BOLTED CONNECTIONS USING 3/4" ASTM A-325 BOLTS UNLESS OTHERWISE SHOWN . IF CONNECTION BOLTS ARE IN SINGLE SHEAR, BOLTS SHALL BE PLACED IN TWO VERTICAL ROWS. CONNECTIONS SHALL BE BOLTED OR WELDED - SEE DETAILS.
5. WELDING SHALL CONFORM TO THE "CODE FOR WELDING IN BUILDING CONSTRUCTION" BY THE AMERICAN WELDING SOCIETY, LATEST EDITION. WELDS NOT CALLED OUT ON DRAWINGS SHALL BE 1/4" CONTINUOUS FILLET WELDS. WELDING ELECTRODES SHALL CONFORM TO AWS A5.1 OR A5.5 E70XX.

# FASTENER SCHEDULE:

(MINIMUM UNLESS NOTED OTHERWISE IN DETAILS OR PLANS.)

| CONNECTED COMPONENTS | FASTENER TYPE & SIZE | SPACING AND/OR NUMBER | REMARKS |
|---|---|---|---|
| STUD WALLS: | | | |
| STUD TO TOP AND BOTTOM TRACKS | #8 SCREWS | 2 | EA. END OF STUD/EACH FLANGE |
| PLYWOOD (OR OSB) SHEATHING TO STUDS | #8 SCREWS | 6" EDGE<br>12" FIELD | |
| FLOOR JOISTS/DECK: | | | |
| JOIST TO WALL TRACK | #8 SCREWS | 2 EACH JOIST | BUNGLE-OR FLAT-HEAD;<br>MIN.. HEAD DIA. = 0.315" |
| WEB STIFFENER TO JOIST | #8 SCREWS | 4 | |
| FLOOR DECK TO JOIST | #8 SCREWS | 6" EDGE<br>12" FIELD | |

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
On Johnathan Green, c=US, o=Force Engineering & Testing, email=jgreen@forceengineeringtesting.com
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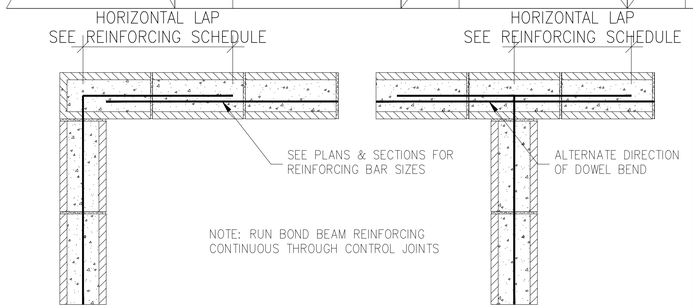
LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

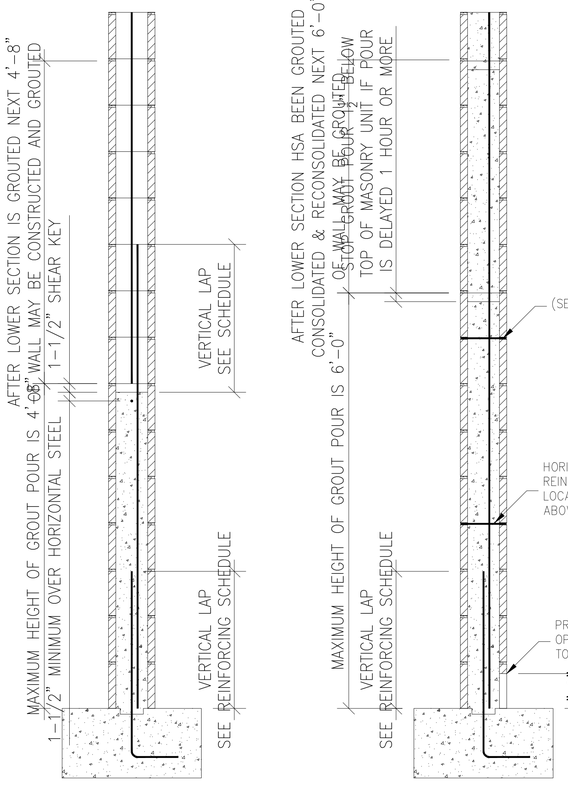
LIGHT GAGE NOTES

SHEET NO.
S0.2

| DESCRIPTION: LINTEL 1 (L1) | DESCRIPTION: LINTEL 2 (L2) | DESCRIPTION: LINTEL 3 (L3) | DESCRIPTION: LINTEL 4 (L4) | DESCRIPTION: LINTEL 5 (L5) | DESCRIPTION: LINTEL 6 (L6) | DESCRIPTION: LINTEL 7 (7) | DESCRIPTION: LINTEL 8 (L8) | DESCRIPTION: LINTEL 9 (9) | DESCRIPT.: LINTEL 10 (L10) |
|---|---|---|---|---|---|---|---|---|---|
| 8" X 8" CMU BOND BEAM LINTEL REINFORCED WITH (1) #5 BARS BARS CONTINUOUS AT BOTTOM. GROUT SOLID W/ 2000 PSI CONCRETE. | 8" or 10" X 16" CMU BOND BEAM LINTEL REINFORCED WITH (1) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 8" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT | W 16 X 26 STEEL BEAM LINTEL WITH 7" WIDE X 5/16" THK. PLATE WELDED TO BOTTOM FLANGE. WITH WALL TIES AT 16" O.C. | 8" or 10" X 24" CMU BOND BEAM LINTEL REINFORCED WITH (1) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT | 8" or 10" X 32" CMU BOND BEAM LINTEL REINFORCED WITH (2) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 8" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT | 8"or 10" X 32" CMU BOND BEAM LINTEL REINFORCED WITH (1) #4 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 STIRRUPS BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT | 8" or 10" X 40" CMU BOND BEAM LINTEL REINFORCED WITH (1) #4 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 STIRRUPS BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT | 8" or 10" X 40" CMU BOND BEAM LINTEL REINFORCED WITH (2) #4 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 STIRRUPS AT 24" O.C. MAX. & #3 STIRRUPS AT 8" O.C. MAX. OVER PIER GOUT SOLID W/ 2000 PSI COURSE GROUT | 8" or 10" X 48" CMU BOND BEAM LINTEL REINFORCED WITH (2) #5 BARS CONTINUOUS AT TOP AND BOTTOM. PROVIDE #3 VERTICAL BARS AT 16" O.C. GROUT SOLID W/ 2000 PSI COURSE GROUT | W 12 X 14 STEEL BEAM LINTEL WITH 7" WIDE X 5/16" THK. PLATE WELDE TO BOTTOM FLANGE. WITH WALL TIES AT 16" O.C. |
| REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE VERTICAL REINFORCING THE SAME SIZE AND SPACING AS ADJACENT WALL. | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 7" x 7" x 1/2" THK BEARING PLATE WITH NELSON STUD EACH END. ATTACH CMU TO BEAM W/ BLOCK TIES AT 16" O.C. | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 8" MINIMUM BEARING REQ'D EACH END, PROVIDE | REMARKS: 7" x 7" x 1/2" THK BEARING PLATE WITH NELSON STUD EACH END. ATTACH CMU TO BEAM W BLOCK TIES AT 16" O.C. |



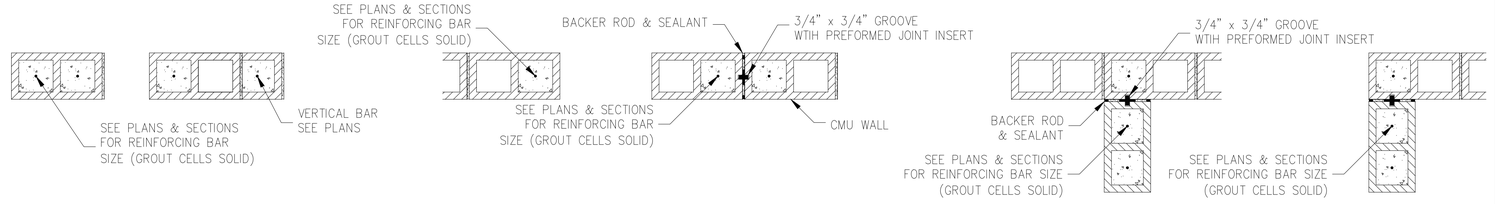

TYPICAL BOND BEAM REINFORCING DETAILS




LOW LIFT GROUTING — HIGHT LIFT GROUTING

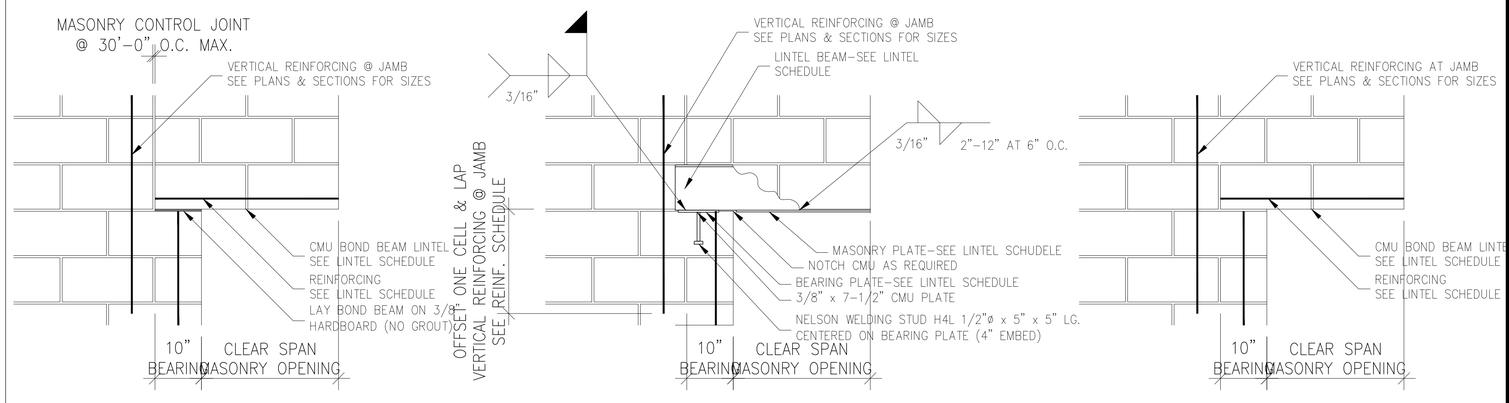
GROUT POURS IN EXCESS OF 12" MUST BE CONSOLIDATED BY MEANS OF A MECHANICAL VIBRATOR. THE GROUT MUST ALSO BE RECONSOLIDATED AFTER THE EXCESS WATER HAS BEEN ABSORBED.

TYPICAL MASONRY WALL GROUTING DETAIL




REINF. AT SINGLE PILASTERS — OPENING — CONTROL JOINT — INTERSECTION — CORNER

TYPICAL MASONRY VERTICAL REINFORCING DETAILS




TYPICAL JAMB ELEVATION W/CONTROL JOINT — TYPICAL STEEL LINTEL BEAM ELEVATION — TYPICAL JAMB ELEVATION

TYPICAL BOND BEAM LINTEL DETAILS

LOW LIFT GROUTING

1. ALL MASONRY AND GROUTING PROCEDURES SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE BUILDING CODE FOR MASONRY STRUCTURES, A.C.I. 530
2. ALL BLOCK MASONRY WALLS SHALL BE LAID WITH TYPE 'S' HIGH STRENGTH MORTAL (1800 PSI) BOUGHT PREMIXED BY THE BAG OR MIXED TO THE FOLLOWING PROPORTIONS:
* 1 BAG MASONRY CEMENT
*1/2 BAG PORTLAND CEMENT
*4 1/2 CUBIC FEET OF SAND BY VOLUME
3. ALL HOLLOW CMU BLOCK MASONRY SHALL BE GRADE 'N' LOAD BEARING UNITS IN ACCORDANCE WITH ASTM C-90 SPECIFICATIONS (MIN. ULTIMATE NET CONCRETE STRENGTH = 2500 PSI.***
4. ALL GROUT FOR VERTICAL REINFORCING AND BOND BEAMS SHALL BE 2,000 PSI COARSE GROUT, 8" – 10" SLUMP
5. ALL REINFORCING HOLLOW UNIT MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. WALL AND CROSS WEBS FORMING SUCH CELLS TO BE FILLED SHALL BE FULL-BEDDED IN MORTAL TO PREVENT LEAKAGE OF GROUT. ALL HEAD (OR END) JOINTS SHALL BE SOLIDLY FILLED WITH MORTAR FOR A DISTANCE IN FROM THE FACE OF THE WALL OR UNIT NOT LESS THAN THE THICKNESS OF THE LONGITUDINAL FACE SHELLS. BOND SHALL BE PROVIDED BY LAPPING UNITS IN SUCCESSIVE VERTICAL COURSES OR BY EQUIVALENT MECHANICAL ANCHORAGE.
6. VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENTS SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED CONTINUOUS VERTICAL CELL MEASURING NOT LESS THAN 2 INCHES BY 3 INCHES. NO MORTAR PROJECTIONS INTO THE CELL MAY EXCEED 1/4".
7. ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. GROUT SHALL BE PLACED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. ALL GROUT SHALL BE CONSOLIDATED APPROXIMATELY 5 TO 10 MINUTES AFTER POURING, BY VIBRATING, AND BEFORE PLASTICITY IS LOST. WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF GROUT NOT LESS THAN 1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED. HORIZONTAL STEEL SHALL BE FULLY EMBEDDED BY GROUT IN AN UNINTERRUPTED POUR.
8. PROVIDE HORIZONTAL JOINT REINFORCING AT 24" ON CENTER. ALL HORIZONTAL JOINT REINFORCING SHALL BE DURAWALL-TRUSS TYPE MIN. WIRE GATE NO. 8 OR APPROVED EQUAL.
9. THE CONTRACTOR SHALL SUBMIT HIS COLD WEATHER MASONRY PROCEDURES FOR APPROVAL IF THE AMBIENT TEMPERATURES ARE BELOW 40 DEGREES FAHRENHEIT.
10. ALL VERTICAL REINFORCING STEEL SHALL LAP 48 BAR DIAMETERS UNLESS OTHERWISE NOTED ON PLANS, SECTIONS OR DETAILS.

HIGH LIFT GROUTING

11. THE CONTRACTOR MAY ELECT TO USE HIGH LIFT GROUTING AS AN ALTERNATE. IF THE HIGH LIFT GROUTING IS USED, THE FOLLOWING ADDITIONAL CONDITIONS APPLY:
A.) THE CONTRACTOR SHALL SUBMIT HIS HIGH LIFT GROUTING PROCEDURE OF APPROVAL PRIOR TO CONSTRUCTION.
B.) CLEANOUTS OPENING, AT LEAST 6 SQUARE INCHES, SHALL BE PROVIDED AT THE BOTTOM OF ALL CELLS TO BE FILLED AT EACH POUR OF GROUT. THE CLEANOUTS SHALL BE SEALED AFTER INSPECTION AND BEFORE GROUTING.
C.) VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 200 DIAMETERS OF THE REINFORCEMENT. THE REINFORCEMENT SHALL BE HELD IN PROPER LOCATION WITH PREFABRICATED BAR POSITIONERS. ONE SHALL BE PLACED IMMEDIATELY ABOVE THE LAP OF THE FOUNDATION DOWELS.
D.) GROUT IN MAXIMUM LIFTS OF 6 FEET, CONSOLIDATE AT INITIAL PLACEMENT AND RECONSOLIDATE AFTER INITIAL WATER LOSS. A MECHANICAL VIBRATOR SHALL BE USED FOR ALL CONSOLIDATION. DELAY TWENTY-FIVE TO FORTY-FIVE MINUTES BETWEEN SUCCESSIVE LIFTS TO ALLOW EXCESS GROUT WATER TO BE ABSORBED. RECONSOLIDATE BEFORE EACH SUCCESSIVE LIFT WHILE GROUT IS STILL IN A PLASTIC STATE.

12. ALL GROUT SHALL BE NONMETALLIC SHRINKAGE-RESISTANT GROUT PROVIDED BY A MANUFACTURER APPROVED IN WRITING BY THE STRUCTURAL ENGINEER AND INSTALLED AND MIXED PER THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS. ALL GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (fc) AT 28 DAYS EQUAL TO 5000 PSI.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, ou=Force
Engineering & Testing Inc.
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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

MASONRY NOTES

SHEET NO.
S0.3

## TESTING & INSPECTION REQUIREMENTS

| REQUIRED INSPECTION VERIFICATION OR TEST | APPLICABILITY FOR PROJECT | VERIFICATION MONITORING FREQUENCY | IBC SECTION & REFERENCE CRITERIA | INSPECTOR QUALIFICATIONS | CONTACT FOR TESTING/INSPECTION |
|---|---|---|---|---|---|
| SOILS (SLAB ON GRADE) | | | IBC 1704.7.1 | | |
| A. SUB-GRADE<br>1. VISUAL OBSERVATION AT THE CONTRACTORS EXPENSE, INSTRUMENT READINGS SHALL BE TAKEN BY LICENSED SURVEYOR TO VERIFY FINAL SUBGRADE ELEV. AND SLOPE | APPLICABLE | PERIODIC | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR | TESTING LAB |
| 2. PROOF ROLLING OBSERVATIONS PROOF ROLLING SHALL BE MONITORED BY A GEOTECHENGR. THE GEOTECH ENGR SHALL APPROVE THE TYPE OF PROOFROLLING EQUIP. AND PROCEDURES | APPLICABLE | CONTINUOUS | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 | TESTING LAB |
| 3. MOISTURE CONDITIONING & RECOMPACTION: PROVIDE<br>(1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS | APPLICABLE | PERIODIC | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTE | QUALIFICATIONS BASED ON ASTM D3740 | TESTING LAB |
| B. CHEMICAL INJECTION QUALITY CONTROLLED TESTING & EVALUATION PRIOR TO INJECTION SHALL BE PERFORMED BY THE GEOTECH ENGR. TO DETERMINE THE EFFECTIVENESS OF THE EFFECTIVENESS OF THE CHEMICAL INJECTION PROCESS. THE GEOTECH FORM SHALL MONITOR THE INJECTION PROCESS TO VERIFY AREA COVERAGE, DEPTH, AND SWELL TEST RESULTS. | | CONTINUOUS | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTE | QUALIFICATIONS BASED ON ASTM D3740 | TESTING LAB |
| C. DURING FILL PLACEMENT VISUAL OBSERVATION: DURING PLACEMENT & COMPACTION OF FILL, SPECIAL INSPECTOR SHALL DETERMINE THAT THE FILL MATERIAL BEING USED & THE MAX. LIFT THICKNESS COMPLY W/ PROJECT REQUIREMENTS. PIT RUN MATERIALS SHALL BE VISUALLY MONITORED BY THE TEST LAB W/ ADDT'L SAMPLES TESTING EACH DAY, OR MORE OFTEN IF MATERIALS APPEAR TO VARY. | APPLICABLE | PERIODIC | BC 1704.7.2 GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR | TESTING LAB |
| D. EVALUATION OF IN-PLACE DENSITY OF FILL PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS | APPLICABLE | CONTINUOUS | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 | TESTING LAB |
| E. TRENCH BACKFILLING TRENCH BACKFILLING WITH CLAY CAP AND PLACING OF CLAY PLUG SHALL BE MONITORED BY GEOTECH ENGR. W/ A WRITTEN REPORT SENT TO STRUCTURAL ENGR. | APPLICABLE | PERIODIC | | | TESTING LAB |
| C. DURING FILL PLACEMENT VISUAL OBSERVATION: DURING PLACEMENT & COMPACTION OF FILL, SPECIAL INSPECTOR SHALL DETERMINE THAT THE FILL MATERIAL BEING USED & THE MAX. LIFT THICKNESS COMPLY W/ PROJECT REQUIREMENTS. PIT RUN MATERIALS SHALL BE VISUALLY MONITORED BY THE TEST LAB W/ ADDT'L SAMPLES TESTING EACH DAY, OR MORE OFTEN IF MATERIALS APPEAR TO VARY. | APPLICABLE | PERIODIC | BC 1704.7.2 GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR | TESTING LAB |
| D. EVALUATION OF IN-PLACE DENSITY OF FILL PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS | APPLICABLE | CONTINUOUS | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 | TESTING LAB |
| E. TRENCH BACKFILLING TRENCH BACKFILLING WITH CLAY CAP AND PLACING OF CLAY PLUG SHALL BE MONITORED BY GEOTECH ENGR. W/ A WRITTEN REPORT SENT TO STRUCTURAL ENGR. | APPLICABLE | PERIODIC | | | TESTING LAB |
| 2A. PILE FOUNDATIONS | | | IBC 1704.8 | LICENSED GEOTECH ENGINEER | |
| 2B. SHALLOW FOUNDATIONS<br>A. THE GEOTECH ENGR. OR A QUALIFIED E.I.T. UNDER THE DIRECT SUPERVISION OF THE GEOTECH ENGR. SHALL BE PRESENT DURING THE EXCAVATION OF THE FORST PIER SHAFT.<br>1. VERIFY THE BEARING STRATUM IS ENCOUNTERED AT THE ANTICIPATED DEPTHS.<br>2. ADDRESS UNFORESEEN SUBSURFACE CONDITIONS , IF ANY.<br>3. VERIFY CONFORMANCE W/FOUNDATION RECOMMENDATIONS PROVIDED IN THE PROJECT GEOTECH REPORT & THE STRUCTURAL DWGS. | APPLICABLE | PERIODIC | IBC 1704.9 GEOTECHNICAL REPORT, GENERAL NOTES | GRADUATE ENGINEER<br>** QUALIFICATIONS BASED ON ASTM E329 & ASTM C1077 | TESTING LAB |
| B. ALL FTGS SHALL BE OBSERVED & MONITORED BY A REPRESENTATIVE OF THE GEOTECH ENGR. W/ A COMPLETE SITE OF STR. DWGS THAT ARE TO REMAIN W/ THE GEOTECH ENGR. OR HIS REPRESENTATIVE.<br>1. CHECK REINF. SIZES, QTY, AND CLEARANCES.<br>2. CHECK FTG DEPTH & SIZE.<br>3. CHECK CONCRETE AS SPECIFIED IN CONCRETE SECTION NOTES. | APPLICABLE | CONTINUOUS | GEOTECHNICAL REPORT, FND. DWGS, DETAILS, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM E329 & ASTM C1077 | TESTING LAB |
| C. DURING FILL PLACEMENT VISUAL OBSERVATION: DURING PLACEMENT & COMPACTION OF FILL, SPECIAL INSPECTOR SHALL DETERMINE THAT THE FILL MATERIAL BEING USED & THE MAX. LIFT THICKNESS COMPLY W/ PROJECT REQUIREMENTS. PIT RUN MATERIALS SHALL BE VISUALLY MONITORED BY THE TEST LAB W/ ADDT'L SAMPLES TESTING EACH DAY, OR MORE OFTEN IF MATERIALS APPEAR TO VARY. | APPLICABLE | PERIODIC | BC 1704.7.2 GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 LICENSED SURVEYOR | TESTING LAB |
| D. EVALUATION OF IN-PLACE DENSITY OF FILL PROVIDE (1) DENSITY TEST FOR EACH 2000 S.F. REFER TO NOTES ON BLDG PAD FOR TESTING SPECIFICATIONS | APPLICABLE | CONTINUOUS | GEOTECHNICAL REPORT, BLDG PAD, GENERAL NOTES | QUALIFICATIONS BASED ON ASTM D3740 | TESTING LAB |
| 3. CONCRETE CONSTRUCTION | | | | | |
| A. REINFORCING STEEL PROVIDE PERIODIC INSPECTION OF REINFORCING SIZES, SPACING, REBAR GRADE, & PLACEMENT @ THE FOLLOWING FREQUENCY:<br>COLUMNS: 10% BEAMS: 30% JOISTS: 10% OTHER MEMBERS: RANDOMLY @ 20% | APPLICABLE | PERIODIC | IBC 1704.4, ACI 318: CH 35, 7.1-7.7, CONCRETE & REINF. GENERAL NOTES | QUALIFICATIONS BASED ON ASTM E329 | FORCE ENGINEERING & TESTING, INC. |
| B. REINFORCING STEEL WELDING<br>NO FIELD WELDING PERMITTED | APPLICABLE | | AWS D1.4 ACI 318: 3.5.2 | CERTIFIED WELDER | FORCE ENGINEERING & TESTING, INC. |
| C. BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO & DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED. | NOT APPLICABLE | CONTINUOUS | IBC 1704.4 | CWI OR ASSOCIATE CWI | |
| D. VERIFY USE OF CONCRETE MIX DESIGN.<br>(EACH CONCRETE POUR) | APPLICABLE | PERIODIC | ACI 318-CH 4, 5.2-5.4 | QUALIFICATIONS BASED ON ASTM C1077 | FORCE ENGINEERING & TESTING, INC. |
| E. SAMPLING OF MESH CONCRETE.<br>1. ALL CONCRETE TESTING IS TO BE MADE AFTER WATER, IF ANY, IS ADDED AT SITE.<br>2. PROVIDE A SET OF (4) CYLINDERS TO BE TAKEN FOR EVERY 75 CUBIC YDS. OF CONCRETE.<br>3. MONITOR SLUMP & AIR CONTENT OF CONCRETE & NOTIFY DELIVERY DRIVER IF SLUMP DEVIATES MORE THAN +/- 1 INCH FROM RECOMMENDED VALUE. CONTACT SUPPLIER FOR FURTHER DIRECTIONS. | APPLICABLE | PERIODIC | ACI 318-CH 4, 5.2-5.4 | QUALIFICATIONS BASED ON ASTM C1077 | FORCE ENGINEERING & TESTING, INC. |
| F. PLACEMENT OF CONCRETE & SHOTCRETE. | NOT APPLICABLE | CONTINUOUS | ACI 318 - CH 5.9, 5.10 | QUALIFICATIONS BASED ON ASTM C1077 | |
| G. MAINTENANCE OF SPECIFIED CURING TEMP. & TECHNIQUES (EACH CONCRETE POUR) | APPLICABLE | PERIODIC | ACI 318 - CH 5.11, 5.13 | QUALIFICATIONS BASED ON ASTM C1077 | TESTING LAB |
| H. PRESTRESSED CONCRETE<br>1. APPLICATION OF PRE-STRESSING FORCE.<br>2. GROUTING OF BOUNDED PRESTRESSING TENDONS IN SEISMIC-FORCE RESISTING SYSTEMS | NOT APPLICABLE | CONTINUOUS | | QUALIFICATIONS BASED ON ASTM C1077 | |
| I. ERECTION OF TILT-UP CONCRETE MEMBERS. | NOT APPLICABLE | PERIODIC | | TECHNICIAN TRAINED IN FIELD OF WORK & HAS AT LEAST TWO YEARS OF EXPERIENCE | |
| J. POST TENSIONED CONCRETE. | | | | | |
| 1. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS. | NOT APPLICABLE | EACH POUR | | QUALIFICATIONS BASED ON ASTM E329 | NOT APPLICABLE |
| 2. THE POST-TENSIONING ENGINEER OR A MEMBER OF HIS STAFF SHALL INSPECT THE TENDON PLACEMENT & CHAIRING TO ENSURE COMPLIANCE W/THE INTENT OF THE DESIGN. | NOT APPLICABLE | PERIODIC | | QUALIFICATIONS BASED ON ASTM E329 | NOT APPLICABLE |
| 3. CONTINUOUS INSPECTION IS REQUIRED DURING ALL STRESSING ACTIVITIES. | NOT APPLICABLE | CONTINUOUS | | QUALIFICATIONS BASED ON ASTM E329 | NOT APPLICABLE |
| 4. RECORDS OF ALL JACKING FORCES & ELONGATINS SHALL BE MADE IN ACCORDANCE W/PTI FIELD MANUAL & RECORDS SHALL BE PROMPTLY SUBMITTED TO THE ARCHITECT & ENGINEER. | NOT APPLICABLE | CONTINUOUS | | QUALIFICATIONS BASED ON ASTM E329 | NOT APPLICABLE |
| K. REMOVAL OF SHORES.<br>VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL. | NOT APPLICABLE | CONTINUOUS DURING EACH CONCRETE POUR | ACI 318 - CH 5.6, 5.8 | QUALIFICATIONS BASED ON ASTM C1077 | NOT APPLICABLE |
| 4. STEEL CONSTRUCTION | | | IBC 1704.7.1 | | |
| A. MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS & WASHERS.<br>1. ID MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONST. DOCS.<br>2. MFGRS CERTIFICATE OF COMPLIANCE REQ'D. | APPLICABLE | PERIODIC | STRUCTURAL STEEL NOTES; APPLICABLE ASTM MATERIAL SPECS; AISC 33, SECTION A3.4; AISC LRFD SECTION A33 | CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI | TESTING LAB |
| B. HIGH-STRENGTH BOLTING.<br>1. BEARING TYPE CONNECTIONS. | APPLICABLE | PERIODIC | IBC 1704.3.3; STRUCTURAL STEEL NOTES | CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI | TESTING LAB |
| 2. SLIP-CRITICAL CONNECTIONS. | NOT APPLICABLE | PERIODIC | AISC LRFD SECTION M2.5 | CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI | TESTING LAB |
| C. MATERIAL VERIFICATION OF STRUCTURAL STEEL.<br>1. I.D. MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONST DOCS. | APPLICABLE | PERIODIC | IBC 1708.4; STRUCTURAL STEEL NOTES | CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI | TESTING LAB |
| 2. MFGRS CERTIFICATE OF COMPLIANCE REQUIRED | APPLICABLE | PERIODIC | AISC,ASD,SECTION A3.6 AISC LRFD SECTION A3.5 | CWI/ASSOCIATE/TECHNICAL GRADUATE AWS OR SRSI | TESTING LAB |

| REQUIRED INSPECTION VERIFICATION OR TEST | APPLICABILITY FOR PROJECT | VERIFICATION MONITORING FREQUENCY | IBC SECTION & REFERENCE CRITERIA | INSPECTOR QUALIFICATIONS | CONTACT FOR TESTING/INSPECTION |
|---|---|---|---|---|---|
| CONTINUED..... | | | | | |
| E. WELDING OF STRUCTURAL STEEL.<br>1. COMPLETE & PARTIAL PENETRATION GROOVE WELDS. | NOT APPLICABLE | CONTINUOUS | IBC 1704.3.1; STRUCTURAL NOTED | CWI/ASST/LICENSED ENGINEER | TESTING LAB |
| 2. MULTI PASS FILLET WELDS | NOT APPLICABLE | CONTINUOUS | AWS D1.1 | CWI/ASST/LICENSED ENGINEER | TESTING LAB |
| 3. SINGLE-PASS FILLET WELDS > 5/16" | APPLICABLE | CONTINUOUS | AWS D1.1 | CWI/ASST/LICENSED ENGINEER | TESTING LAB |
| 4. SINGLE-PASS FILLET WELDS </=5/16" | NOT APPLICABLE | PERIODIC | AWS D1.1 | CWI/ASST/LICENSED ENGINEER | TESTING LAB |
| 5. FLOOR & DECK WELDS. | NOT APPLICABLE | PERIODIC | AWS D1.3 | CWI/ASST/LICENSED ENGINEER | TESTING LAB |
| F. WELDING OF REINFORCMING STEEL.<br>1. VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN A706. | NOT APPLICABLE | PERIODIC | | CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE | |
| 2. REINFORCING STEEL-RESISTING FLEXURAL & AXIAL FORCES IN INTERMEDIATE & SPECIAL MOMENT FRAMES, & BOUNDARY ELEMENTS OF SPECIAL REINFORCING CONCRETE SHEAR WALLS & SHEAR REINFORCEMENT. | NOT APPLICABLE | CONTINUOUS | | CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE | |
| 3. SHEAR REINFORCEMENT | NOT APPLICABLE | CONTINUOUS | | CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE | |
| 4. OTHER REINFORCING STEEL | NOT APPLICABLE | PERIODIC | | CWI/ASST/TECHNICIAN W/AT LEAST (1) YEAR OF FIELD EXPERIENCE | |
| G. STEEL FRAME JOINTS DETAILS COMPLIANCE W/APPROVED CONST. DOCS.<br>1. DETAILS SUCH AS BRACING & STIFFENING. | NOT APPLICABLE | PERIODIC | IBC 1704.3.2; STRUCTURAL STEEL DWGS | | TESTING LAB |
| 2. MEMBER LOCATIONS | NOT APPLICABLE | PERIODIC | IBC 1704.3.2; STRUCTURAL STEEL DWGS | | TESTING LAB |
| 3. APPLICATION OF JOINT DETAILS @ EACH LOCATION | NOT APPLICABLE | PERIODIC | IBC 1704.3.2; STRUCTURAL STEEL DWGS | | TESTING LAB |
| 5. INSPECTION OF FABRICATORS FOR STRUCTURAL STEEL | | | | | |
| SPECIAL INSPECTIONS SHALL NOT BE REQUIRED WHERE THE WORK IS DONE ON THE PREMISES OF A FABRICATOR WHO IS REGISTERED & APPROVED TO PERFORM SUCH WORK W/O SPECIAL INSPECTION I.E., "AISC CERTIFIED". AT COMPLETION OF THE FABRICATION, THE "APPROVED" FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BLDG CODE OFFICIAL AND THE ENGINEER IN RESPONSIBLE CHARGE STATING THAT THE WORK WAS PERFORMED IAW THE APPROVED CONST. DOCUMENTS | NOT APPLICABLE | PERIODIC | IBC 1704.3.2; & 1704.2.2; AISC CERTIFICATION PROGRAM | LICENSED PROFESSIONAL ENGINEER CERTIFIED BY AISC CERTIFICAITON PROGRAM | TESTING LAB |
| 6. MASONRY CONSTRUCTION | | | | | |
| LEVEL 1 INSPECTION | APPLICABLE | | IBC 1704.5.2 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| A. AS MASONRY CONST BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE<br>1. PROPORTIONS OF SITE-PREPARED MORTAR. | APPLICABLE | PERIODIC | ACI 530.1 ART 2.6A | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 2. CONST OF MORTAR JOINTS. | APPLICABLE | PERIODIC | ACI 530.1 ART 3.3B | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 3. LOCATION OF REINFORCEMENT & CONNECTORS. | APPLICABLE | PERIODIC | ACI 530.1 ART 3.4, 3.6A | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 4. PRESTRESSING TECHNIQUE | NOT APPLICABLE | PERIODIC | ACI 530.1 ART 3.6A | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 5. GRADE & SIZE OF PRESTRESSING TENDONS & ANCHORAGES. | NOT APPLICABLE | PERIODIC | ACI 530.1 ART 2.4B, 2.4H | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 2. THE INSPECTION PROGRAM SHALL VERIFY:<br>1. SIZE & LOCATION OF STRUCTURAL ELEMENTS. | NOT APPLICABLE | PERIODIC | ACI 530.1 ART 3.3G | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 2. TYPE, SIZE, & LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONST. | APPLICABLE | PERIODIC | ACI 530 SEC 1.2.2(e), 2.14,3.1.6 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 3. SPECIFIED SIZE, GRADE & TYPE OF REINFORCEMENT | APPLICABLE | PERIODIC | ACI 530.1 ART 2.4, 3.4 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 4. WELDING IF REINFORCING BARS | NOT APPLICABLE | CONTINUOUS | ACI 530 SEC 2.1.10.7.2,3.3.3.4(b) | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 5. PROTECTION OF MASONRY DURING COLD WEATHER (BELOW 40 DEG.) OR HOT WEATHER (ABOVE 90 DEG.) | APPLICABLE | PERIODIC | ACI 530.1 ART 1.8C, 1.8D | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 6. APPLICATION OF PRESTRESSING FORCE | NOT APPLICABLE | PERIODIC | ACI 530.1 ART 3.6B | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:<br>1. GROUT SPACE IS CLEAN | APPLICABLE | PERIODIC | ACI 530.1 ART 3.2 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 2. PLACEMENT OF REINFORCEMENT AND CONNECTORS & PRESTRESSING TENDONS AND ANCHORAGES | APPLICABLE | PERIODIC | ACI 530.1 ART 3.4 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 3. PROPORTIONS OF SITE-PREPARED GROUT & PRESTRESSING GROUT FOR BONDED TENDONS | APPLICABLE | PERIODIC | ACI 530.1 ART 2.6B | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 4. CONSTRUCTION OF MORTAR JOINTS | APPLICABLE | PERIODIC | ACI 530.1 ART 3.3B | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| D. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE W/CODE & CONST DOCS. | APPLICABLE | PERIODIC | ACI 530.1 ART 3.5 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| 1. GROUTING OF PRESTRESSING BONDED TENDONS. | NOT APPLICABLE | CONTINUOUS | ACI 530.1 ART 3.4 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| E. PREPARATION OF ANY REQUIRED GROUT SPECIMENT, MORTAR SPECIMENS, AND/OR PRISMS SHALL BE OBSERVED. | APPLICABLE | PERIODIC | ACI 530.1 ART 1.4 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |
| F. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONST DOCS & THE APPROVED SUBMITTALS SHALL BE VERIFIED | APPLICABLE | PERIODIC | ACI 530.1 ART 1.5 | QUALIFICATION BASED ON ASTM C1093 | TESTING LAB |

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
Date: 2021.12.15 02:57:55 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

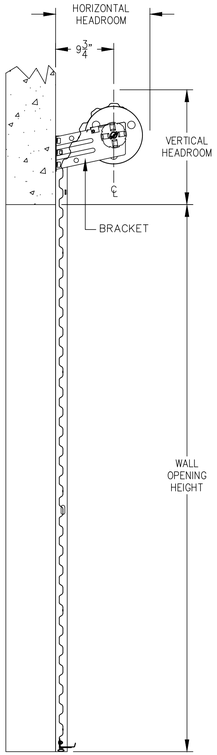
TESTING & INSPECTION

SHEET NO.
S0.4

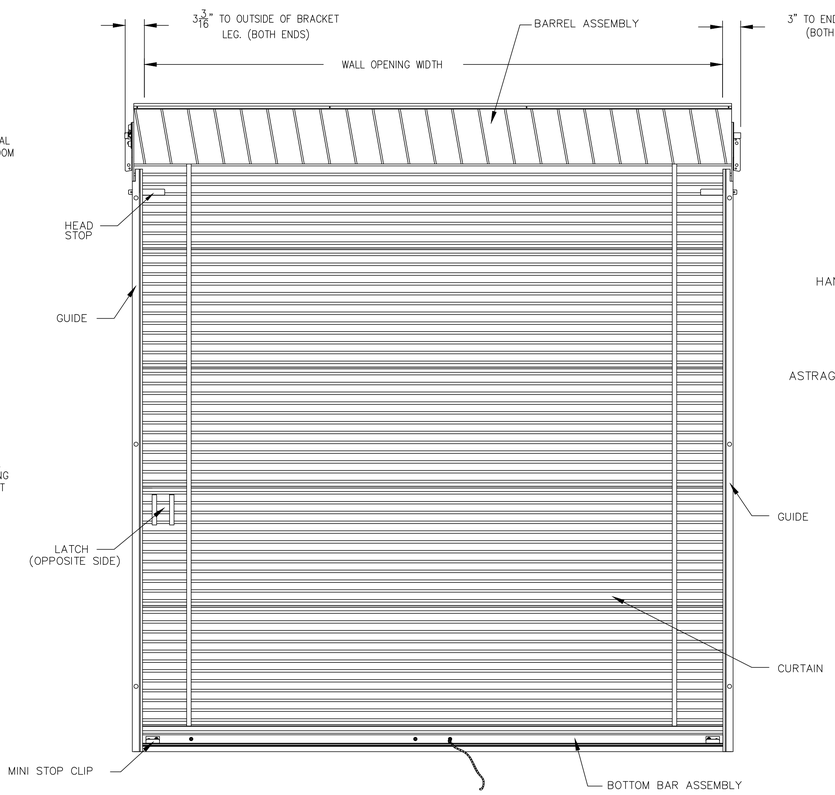
## HEADROOM REQUIRED

| OPENING HEIGHT | VERTICAL HEADROOM | HORIZONTAL HEADROOM |
|---|---|---|
| THRU 7'-4" | 15-1/2" | 17" |
| OVER 7'-4" THRU 8'-8" | 16" | 17-1/2" |
| OVER 8'-8" THRU 10'-0" | 17" | 18-1/4" |

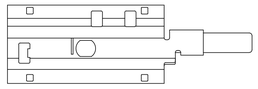
1. CLEARANCES SHOWN ARE MAXIMUMS, LESSER CLEARANCES MAY BE POSSIBLE.
2. ALL OPENING PREPARATION AND FIELD PAINTING SHALL BE PROVIDED BY OTHERS.
3. CURTAIN FINISH SHALL BE SILICON POLYESTER PRE-PAINT OVER GALVANIZED GRADE 80 STEEL.
4. GUIDES, BRACKETS, BOTTOM BAR ANGLE, HEAD STOPS AND HANDLES ARE ZINC COATED.
5. UNLESS OTHERWISE NOTED, LOCKING SHALL BE BY SINGLE MINI SLIDE LATCH BOLTED TO CURTAIN AND SUITABLE FOR DOUBLE PADLOCKS AND SINGLE CYLINDER LOCK BY OTHERS.
6. LATCH COVER IS YELLOW ZINC (STAINLESS STEEL OPTIONAL) AND SLIDE IS MAGNETIC STAINLESS.
7. SERIES 650I IS AN INSULATED SERIES 650.

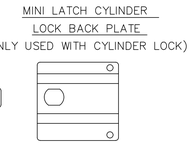


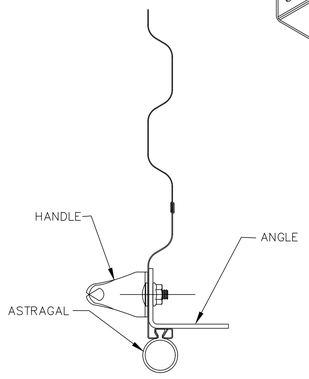

END VIEW



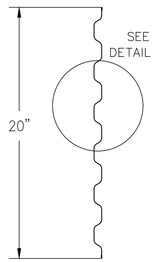

INSIDE ELEVATION



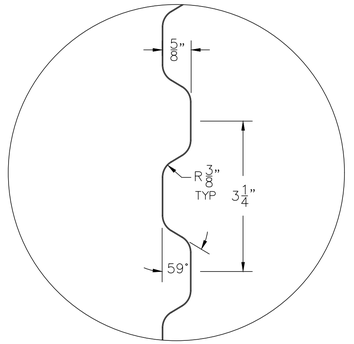





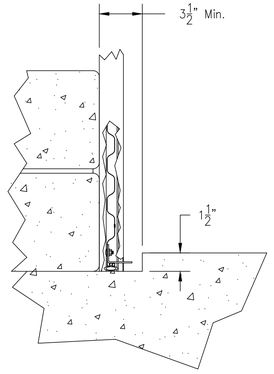

BOTTOM BAR ASSEMBLY




CURTAIN PANEL

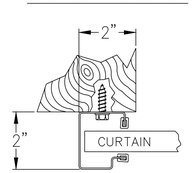



DETAIL A

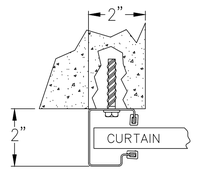



RAIN LIP DETAIL

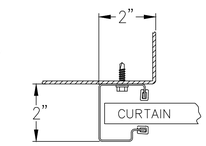
26 GA CURTAIN DETAIL



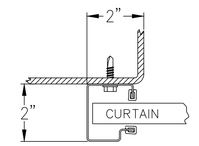

WOOD JAMBS
USING 1/4-10 X 1" LAG




CONCRETE/MASONRY JAMBS
USING 1/4" X 1-3/4" POWERS WEDGE-BOLT




ROLLUP FRAME JAMBS
USING 1/4-14 X 7/8" STITCH TEKS




STEEL JAMBS
USING 1/4-14 X 1" TEKS

18 GA GUIDE MOUNTING DETAIL

# MINI DOOR SERIES: 650

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

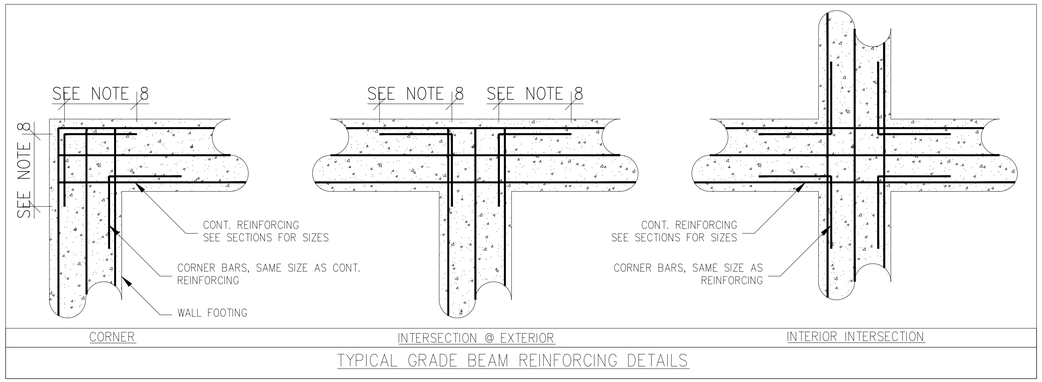
Johnathan Green
DN: cn=Johnathan Green, o=US, ou=Force Engineering & Testing Inc., email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 10:57:23 -06'00'

LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

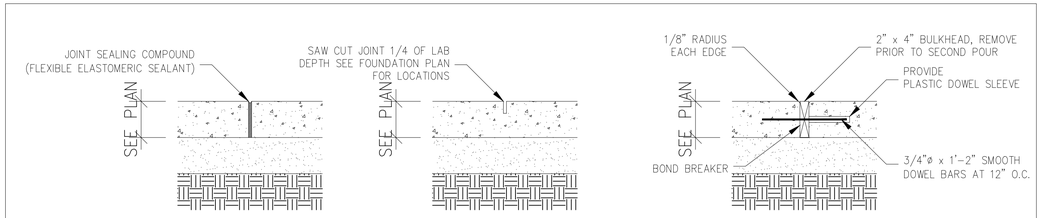
ROLL-UP DOORS

SHEET NO.
S0.5




CORNER | INTERSECTION @ EXTERIOR | INTERIOR INTERSECTION

TYPICAL GRADE BEAM REINFORCING DETAILS




TYPICAL ISOLATION JOINT DETAIL | TYPICAL CRACK CONTROL JOINT DETAIL (C.C.J.) | TYPICAL SLAB CONSTRUCTION JOINT DETAIL–U.N.O. (C.J.)

A. FOUNDATION AND SLAB ON GRADE

1. THE SUBSURFACE AND SHALLOW FOUNDATION DESIGN ARE BASED UPON ON A REPORT PREPARED BY KTI PROJECT NO. 219188G DATED JANUARY 8, 2020 & ADDENDUM #1 DATED JULY 19, 2021. THE CONTRACTOR SHALL PERFORM EXCAVATIONS, FOOTING CONSTRUCTION, AND PREPARATION OF THE SUBGRADE UNDER THE SLAB ON GRADE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT AND THE PROJECT SPECIFICATIONS.
2. THE FOUNDATIONS HAVE BEEN DESIGNED FOR THE FOLLOWING ALLOWABLE SOIL BEARING PRESSURES BASED ON THE ABOVE GEOTECHNICAL REPORTS AT THE TIME THE REPORT WAS PREPARED
   - STRUCTURAL FOUNDATION/SLAB ——— 5000 PSF
   - SHALLOW SPREAD FOOTING NET ALLOWABLE LOAD ——— 5000 PSF
   - ISOLATED FOOTINGS ——— 5000 PSF
3. FOUNDATION CONDITIONS NOTED DURING CONSTRUCTION, WHICH DIFFER FROM THOSE DESCRIBED IN THE GEOTECHNICAL REPORT SHALL BE REPORTED TO THE ARCHITECT, GEOTECHNICAL ENGINEER AND FORCE ENGINEERING & TESTING BEFORE FURTHER CONSTRUCTION IS ATTEMPTED.
4. GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT AND FORCE ENGINEERING & TESTING, 24 HOURS PRIOR TO PLACEMENT OF CONCRETE IN THE FOOTINGS.
5. FOUNDATIONS SHALL BEAR ON EITHER LIMESTONE BEDROCK OR COMPACTED MDOT TYPE 5 AGGREGATE FILL PLACED AT 95% STANDARD PROCTOR DENSITY. IN NO CASE SHALL FOUNDATION BEAR ON BOTH SITE SOILS AND BEDROCK MATERIALS.
6. THE FLOOR SUBGRADE SHALL BE PROPERLY COMPACTED AND PROOFROLLED AND SHALL BE FREE OF STANDING WATER, MUD AND FROZEN SOIL.
7. A VAPOR BARRIER WITH A PERFORMANCE EQUIVALENT TO A 10 MIL VISQUEEN SHALL BE PLACED BENEATH THE SLAB ON GRADE.
8. SLABS ON GRADE SHALL HAVE CONSTRUCTION JOINTS OR CRACK CONTROL JOINTS AT EACH COLUMN LINE IN EACH DIRECTION. ADDITIONAL CRACK CONTROL JOINTS SHALL BE PROVIDED, SUCH THAT NO AREA BOUNDED BY CONSTRUCTION AND/OR CRACK CONTROL JOINTS CONTAINS MORE THAN 400 SQ.FT. OF SLAB AREA, THE SPACING OF THE JOINTS DOES NOT EXCEED 36 TIMES THE SLAB THICKNESS, AND THE RESULTING ASPECT RATIO OF THE DIMENSIONS OF SLAB AREA DOES NOT EXCEED 1.5 TO 1. CRACK CONTROL JOINTS SHALL BE MADE USING A "SOFT-CUT" CONCRETE SAW AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THE CRACK CONTROL JOINTS SHALL BE CUT A MAXIMUM WIDTH OF 1/8 INCH AND A MINIMUM DEPTH OF 1/4 OF THE SLAB THICKNESS. REFER TO THE DRAWINGS FOR INFORMATION ON CONTROL JOINTS, CONSTRUCTION JOINTS, REINFORCEMENT DETAILS AND JOIT SEALANT DETAILS.
9. NOT USED
10. ALL SOIL SURROUNDING AND BENEATH ALL FOOTINGS, SLABS. ETC. SHALL BE PROTECTED AGAINST FROST OR FREEZING DURING CONSTRUCTION.
11. OWNER/CONTRACTOR ASSUMES FULL RESPONSABILITY FOR FOUNDATION DESIGN WHEN A GEOTECHNICAL REPORT IS NOT PROVIDED TO THE ARCHITECT AND/OR ENGINEER.
12. OWNER/CONTRACTOR ASSUMES FULL RESPONSABILITY FOR ONSITE SOIL CONDITIONS. REPORT IS NOT PROVIDED TO THE ARCHITECT AND/OR ENGINEER.
13. THE CONSTRACTOR SHOULD EMPLY PROFESSIONAL GEOTECHNICAL ENGINEER TO INSPECT THE FOUNDATION AND BEARING LEVEL AND VERIFY THAT THE MATERIAL ON WHICH THE FOUNDATIONS WILL BEAR HAS AT LEAST THE ABOVE NOTED CAPACITY AND GIVE GIVE RECOMMENDATIONS FOR SUBGRADE PREPARATION. STRICTLY FOLLOW GEOTECHNICAL ENGINEERS RECOMMENDATIONS FOR SUBBASE AND FOOTING BEARING MATERIAL AND PREPARATION AS SPECIFIED.
14. IMMEDIATELY NOTIFY THE ENGINEER AND/OR ARCHITECCT IF UNSUITABLE SOIL OR SOIL CONDITIONS AT VARIANCE WITH THE GEOTECHNICAL REPORT IS DISCOVERED AT THE FOOTING ELEVATIONS SPECIFIED.
15. NO BACKFILL SHALL BE PLACED AGAINST WALLS UNTIL WALLS AND SLABS (OR HORIZONTAL BEAMS AND STRUTS) SUPPORTED THEREON HAVE ATTAINED DESIGN STRENTH OR PRIOR TO THE COMPLETE INSTALLATION OF THE LATERAL LOAD RESISTING SYSTEM.
16. BACKFILL BEHIND ALL RETAINING AND/OR BASEMENT WALL WITH FREE DRAINING GRANULAR FILL AND PROVIDE SUBSURFACE DRAINAGE AS REQUIRED. ALL BACKFILL MATERIAL SHALL CONFORM STRICTLY WITH THE RECOMMEDATIONS GIVEN IN THE GEOTECHNICAL REPORT MENTIONED ABOVE OR PER A PROFESSIONAL GEOTECHNICAL ENGINEER'S FIELD INSTRUCTIONS.
17. PROVIDE VERTICAL CONTROL JOINTS IN RETAINING WALLS AS INDICATED. PROVIDE ADDITIONAL JOINTS AS REQUIRED SO THE SPACING BETWEEN JOINTS DOES NOT EXCEED A SPACING OF 3.0 x WALL HEIGHT (25 FEET MAXIMUM). PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINTS, UNLESS OTHERWISE NOTED.
18. THE EXISTENCE OF UNDERGROUND STRUCTURES AND/OR UTILITIES IS NOT KNOWN. IT IS THE CONTRACTOR'S RESPONSABILITY TO COORDINATE WITH THE OWNER OR NECESSARY AUTHORITIES THE LOCATIONS OF ALL EXISTING UNDERGROUND STRUCTURES AND/OR ULTILITIES.
19. WHERE FOOTINGS ARE IN CLOSE PROXIMITY OF SEWWERS, DRAINS, CONDUITS, PIPES, ETC. THE BOTTOM OF FOOTING SHALL BE SET AT OR BELOW THE INVERT ELEVATION OF THE ADJACENT ELEMENT.

JOINT NOTES:

1. JOINT LOCATIONS SHOWN ARE RECOMMENDATION ONLY. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT SLAB SHRINKAGE JOINTING JOINTING TO PREVENT UNACCEPTABLE CRACKING. ALL JOINTS SHOULD NOT FALL BELOW OR WITHIN 18" OF A POST LINE OR BEARING WALL. THE SUBSURFACE INFORMATION AND FOUNDATION DESIGN ARE BASED UPON A REPORT BY: INTERTEK/PSI PROJECT NO. 3381473 DATED NOV. 30, 2016.
2. SAW CUT JOINTS AS SOON AS THE SLAB WILL SUPPORT THE WEIGHT OF THE SAW AND OPERATOR WITHOUT DISTURBING THE FINAL FINISH. THE DEPTH OF SAW CUT JOINTS SHALL BE 1/4 OF THE SLAB THICKNESS, UNLESS OTHERWISE NOTED.
3. LENGTH-TO-WIDTH RATIO OF JOINT SPACING SHALL NOT EXCEED 1.5:1
4. CONTROL JOINT SHALL BE SUBSTITUTED FOR ANY CONST JOINT OMITTED BY CONTRACTOR. PROVIDE DOWELED CONST JOINT AT THE END OF CONC PLACEMENT FOR EACH POUR.
5. PROVIDE 2-#4 X 4-'0" LONG @ 4" OC AT MID-DEPTH OF SLAB AT CORNERS OF BLOCK-OUTS AND ARE RE-ENTRANT CORNER WHERE CJ'S DO NOT OCCUR.
6. JUST PRIOR TO PROJECT COMPLETION, CLEAN OUT JOINTS IN ALL TRAFFIC AREAS WITH DRY COMPRESSED AIR.

CONCRETE NOTES

B. CONCRETE

1. CONCRETE IN THE FOLLOWING AREAS SHALL HAVE NATURAL SAND FINE AGGREGATE AND NORMAL WEIGHT COARSE AGGREGATES CONFORMING TO ASTM C33, TYPE I PORTLAND CEMENT CONFORMING TO ASTM C150, AND SHALL HAVE THE FOLLOWING COMPRESSIVE STRENGTH (FC') AT 28 DAYS:
   - FOOTINGS ——— 3000 PSI
   - GRADE BEAMS ——— 3000 PSI
   - SLAB ON GRADE ——— 4000 PSI
   - MONO-LITHIC ——— 4000 PSI
2. DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".
3. MIXING, TRANSPORTING, AND PLACING OF CONCRETE SHALL CONFORM TO ACI 301.
4. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 7.7 FOR CONDITIONS NOT NOTED)
   - CONCRETE EXPOSED TO WEATHER
     - #5 BARS AND SMALLER ——— 2 INCHES
     - ALL OTHER BARS ——— 2 INCHES
   - CONCRETE CAST AGAINST EARTH ——— 3 INCHES
   - GRADE BEAMS:
     - TOP ——— 2 INCHES
     - BOARD FORMED SIDES ——— 2 INCHES
     - EARTH FORMED SIDES ——— 3 INCHES
     - BOTTOM ——— 3 INCHES
   - SLAB ON GRADE
     - SINGLE LAYER OR TOP LAYER ——— 2 INCHES
     - BOTTOM LAYER CAST AGAINST SOIL ——— 3 INCHES
     - BOTTOM LAYER NOT CAST AGAINST SOIL ——— 2 INCHES
   - BEAMS ——— 2 INCHES
   - WALL BELOW GRADE (BACKFILLED SIDE) ——— 2 INCHES
   - WALL BELOW GRADE (NO BACKFILL) ——— 1 INCH

   PROVIDE STANDARD BAR CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED.
5. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
6. WELDING OF REINFORCEMENT BARS, WHEN ACCEPTED BY THE STRUCTURAL ENGINEER, SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D1.4. ELECTRODES FOR SHOP AND FIELD WELDING OF REINFORCEMENT BARS SHALL CONFORM TO ASTM A233, CLASS E90XX.
7. REINFORCEMENT DESIGNATED AS "CONTINUOUS" MAY BE SPLICED USING TYPE "B" SPLICES. REINFORCEMENT BAR SPLICE LENGTHS IN BEAMS WHICH ARE LOCATED AT THE CENTERLINE OF SUPPORTS FOR BOTTOM BARS AND AT MIDSPAN FOR TOP BARS MAY BE 48 BAR DIAMETERS, UNLESS NOTED OTHERWISE. PROVIDE STANDARD ACI HOOKS FOR TOP AND BOTTOM BARS AT DISCONTINUOUS ENDS OF ALL GRADE BEAMS. ENDS OF ALL GRADE BEAMS.
8. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.
9. HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. VERTICAL JOINTS MAY OCCUR AT CENTER OF SPANS AT LOCATIONS REVIEWED BY FORCE ENGINEERING & TESTING, INC..
10. CONDUIT, PIPES, AND SLEEVES EMBEDDED IN CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, CHAPTER 6.3.
11. ALL CONCRETE SHALL BE NORMAL WEIGHT CONCRETE (144 PCF+) CONFORMING TO ASTM C94 WITH ALL CEMENT CONFORMING TO ASTM C150, TYPE I OR II. MAXIMUM AGGREAGATE SIZE SHALL BE 1-1/2" FOR FOOTING AND 3/4" FOR WALLS AND SLABS, CONFORMING TO ASTM C33.
12. ALL CONCRETE SHALL BE A MINIMUM COMPRESSIVE STRENGTH (fc) AT 28 DAYS, SLUMP AND MAXIMUM WATER/CEMENT RATION REQUIREMENTS.
    - A. ALL CONCRETE, U.N.O: ——— 3000 PSI ——— 2' - 4" SLUMP W/C RATIO = .58
    - B. CONCRETE FILL: ——— 2500 PSI ——— 2' - 4" SLUMP W/C RATIO = .58
    - C. SLABS: ——— 4000 PSI ——— 2' - 4" SLUMP W/C RATIO = .53
13. OBTAIN EACH TYPE OF CEMENT OF THE SAME BRAND FROM THE SAME MANUFACTURER'S PLANT, EACH AGGREGATE FROM ONE SOURCE, AND EACH ADMIXTURE FROM THE SAME MANUFACTURER.
14. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE ENTRAINED AIR IN ACCORDANCE WITH SECTION 1904 OF THE IBC.
15. FOR AIR ENTRAINED CONCRETE - MAXIMUM W/C RATIO = .44 AGGREGATE FROM ONE SOURCE, AND EACH ADMIXTURE FROM THE SAME MANUFACTURER.
16. ALL ADMIXTURES SHALL CONFORM TO ASTM C260, C494, C618, C989 AND C1017 (LISTING IS NOT ALL INCLUSIVE).

TYP. LAP SPLICE AND DEVELOPMENT LENGHT SCHEDULE FOR STRUCTURAL MASONRY

| BAR SIZE | ANY BAR W/CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND CLEAR COVER TO THE BLOCK SURFACE OF AT LEAST (5) BAR DIAMETERS | ANY BAR W/AT LEAST 4" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 4" CLEAR COVER TO THE BLOCK SURFACE | ANY BAR W/AT LEAST 3" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 3" CLEAR COVER TO THE BLOCK SURFACE | ANY BAR W/AT LEAST 2" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 2" CLEAR COVER TO THE BLOCK SURFACE | ANY BAR W/AT LEAST 1 3/4" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS AND 1 3/4" CLEAR COVER TO THE BLOCK SURFACE | ANY BAR W/ONLY 1" CLEAR SPACING TO ALL ADJACENT PARALLEL BARS |
|---|---|---|---|---|---|---|
| | Ld AND SPLICE | | | | | |
| fm = 1500psi, fy = 6000psi | | | | | | |
| #4 | 21 | 21 | 21 | 26 | 29 | 36 |
| #5 | 26 | 26 | 27 | 40 | 45 | 45 |
| #6 | 40 | 40 | 50 | 54 | 54 | 54 |
| #7 | 46 | 51 | 63 | 63 | 63 | 63 |
| #8 | 61 | 72 | 72 | 72 | 72 | 72 |

NOTES:

1. REINFORCING MAY BE CONSIDERED TO BE SPLICED WHEN IN CONTACT OR WHEN THE BARS ARE SPACED NO FURTHER APART THAN 1/5 THE REQUIRED LAP LENGTH INDICATED AND NEVER FURTHER APART THAN 8"
2. THE CLEAR SPACING NOTED ABOVE SHALL BE MAINTAINED BETWEEN ADJACENT PAIRS OF SPLICED BARS AND THE CLEAR COVER NOTED ABOVE SHALL BE MAINTAINED AT BAR SPLICES.
3. CLEAR SPACING AND CLEAR COVER NOTED ABOVE ARE MINIMUMS. LARGER SPACING AND COVERS ARE ACCEPTABLE. SELECT THE SPLICE LENGTH BASED ON THE WORST CASE OF SPACING OR COVER.
4. ALL TABULATED VALUES ARE IN INCHES.

TYP. LAP SPLICE AND DEVELOPMENT LENGHT SCHEDULE

| BAR SIZE | MISC. BARS | | TOP BARS (see note #3) | | HOOKED BARS | BAR SIZE | MISC. BARS | | TOP BARS (see note #3) | | HOOKED BARS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ld | SPLICE | Ld | SPLICE | Ldh | | Ld | SPLICE | Ld | SPLICE | Ldh |
| fc = 3000psi | | | | | | fc = 4000psi | | | | | |
| #3 | 17 | 23 | 22 | 29 | 9 | #3 | 15 | 20 | 19 | 25 | 8 |
| #4 | 22 | 29 | 29 | 38 | 11 | #4 | 19 | 25 | 25 | 33 | 10 |
| #5 | 28 | 37 | 36 | 47 | 14 | #5 | 24 | 32 | 31 | 41 | 12 |
| #6 | 33 | 43 | 43 | 56 | 17 | #6 | 29 | 38 | 37 | 49 | 15 |
| #7 | 48 | 63 | 63 | 82 | 20 | #7 | 42 | 55 | 54 | 71 | 17 |
| #8 | 55 | 72 | 72 | 94 | 22 | #8 | 48 | 63 | 62 | 81 | 19 |
| #9 | 62 | 81 | 81 | 106 | 25 | #9 | 54 | 71 | 70 | 91 | 22 |
| #10 | 70 | 91 | 91 | 119 | 28 | #10 | 61 | 80 | 79 | 103 | 25 |
| #11 | 78 | 102 | 101 | 132 | 31 | #11 | 67 | 88 | 87 | 114 | 27 |

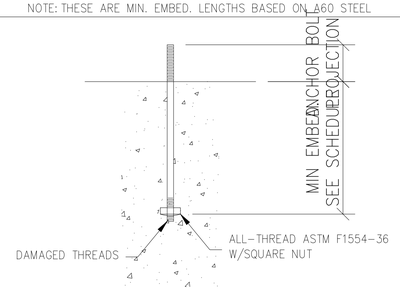
NOTES:

1. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
2. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
3. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW (EXCLUDING WALL HORIZONTAL REINFORCING) OR AS NOTED ON DOCUMENTS AS "TOP BAR"
4. ALL TABULATED VALUES ARE IN INCHES.

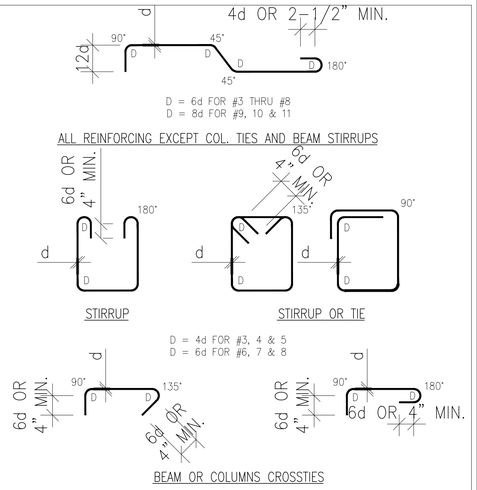
| BOLT DIA. | MINIMUM EMBEDMENT |
|---|---|
| 5/8" DIA. | 10" |
| 3/4" DIA. | 13" |
| 1" DIA. | 21" |
| 1-1/4" DIA. | 28" |
| 1-1/2" DIA. | 32" |

ANCHOR BOLT SCHEDULE

NOTE: THESE ARE MIN. EMBED. LENGTHS BASED ON A60 STEEL




ANCHOR BOLT DETAIL




STANDARD HOOKS AND BENDS-BEAM STIRRUPS AND COLUMN TIES

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
on Johnathan Green, o=US, o=Force Engineering & Testing Inc.
email=jgreen@forceengineering.com
I am approving this document
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# LAKEWOOD STORAGE

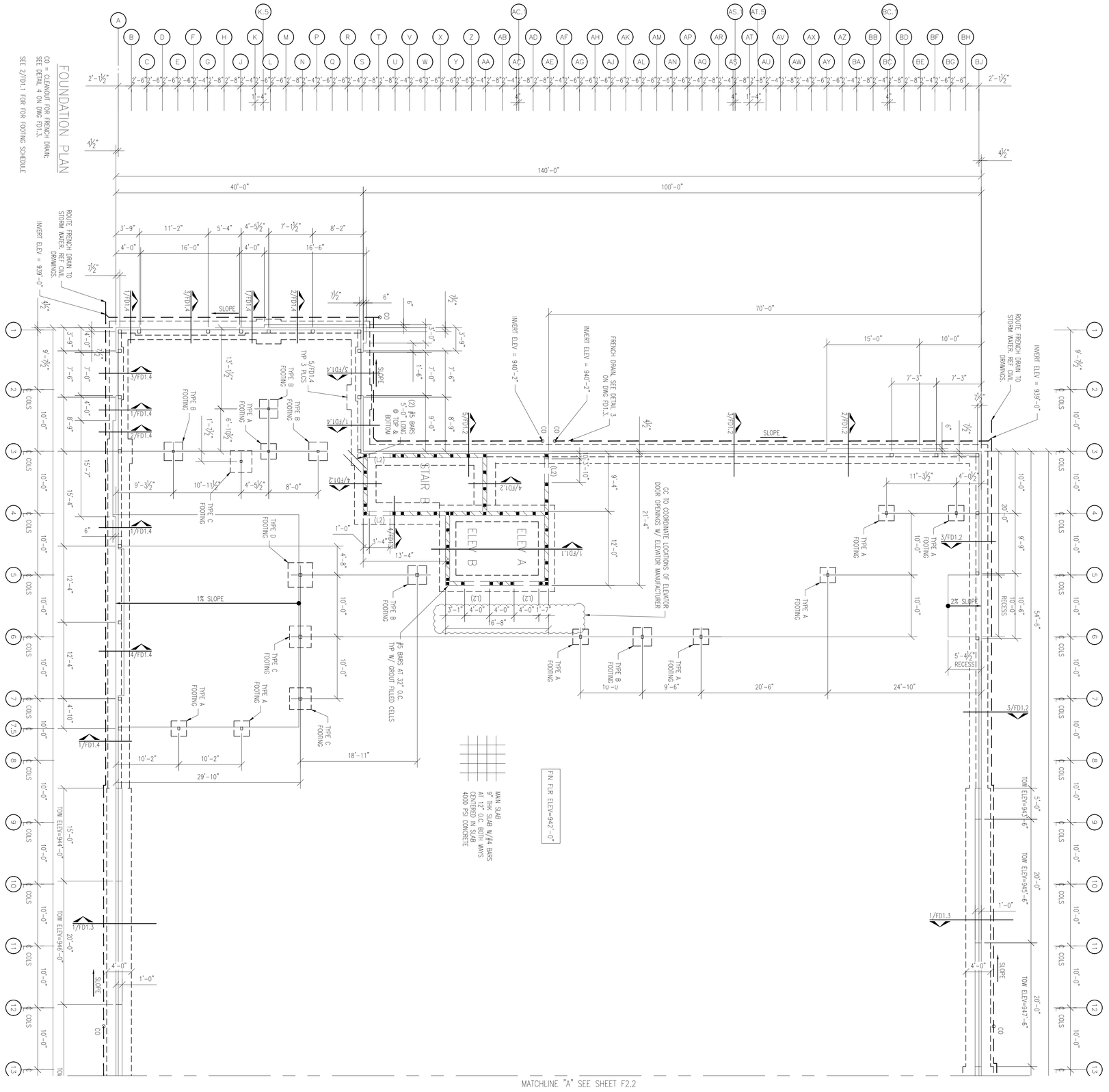
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

CONCRETE NOTES

SHEET NO.

F1.1




# LAKEWOOD STORAGE

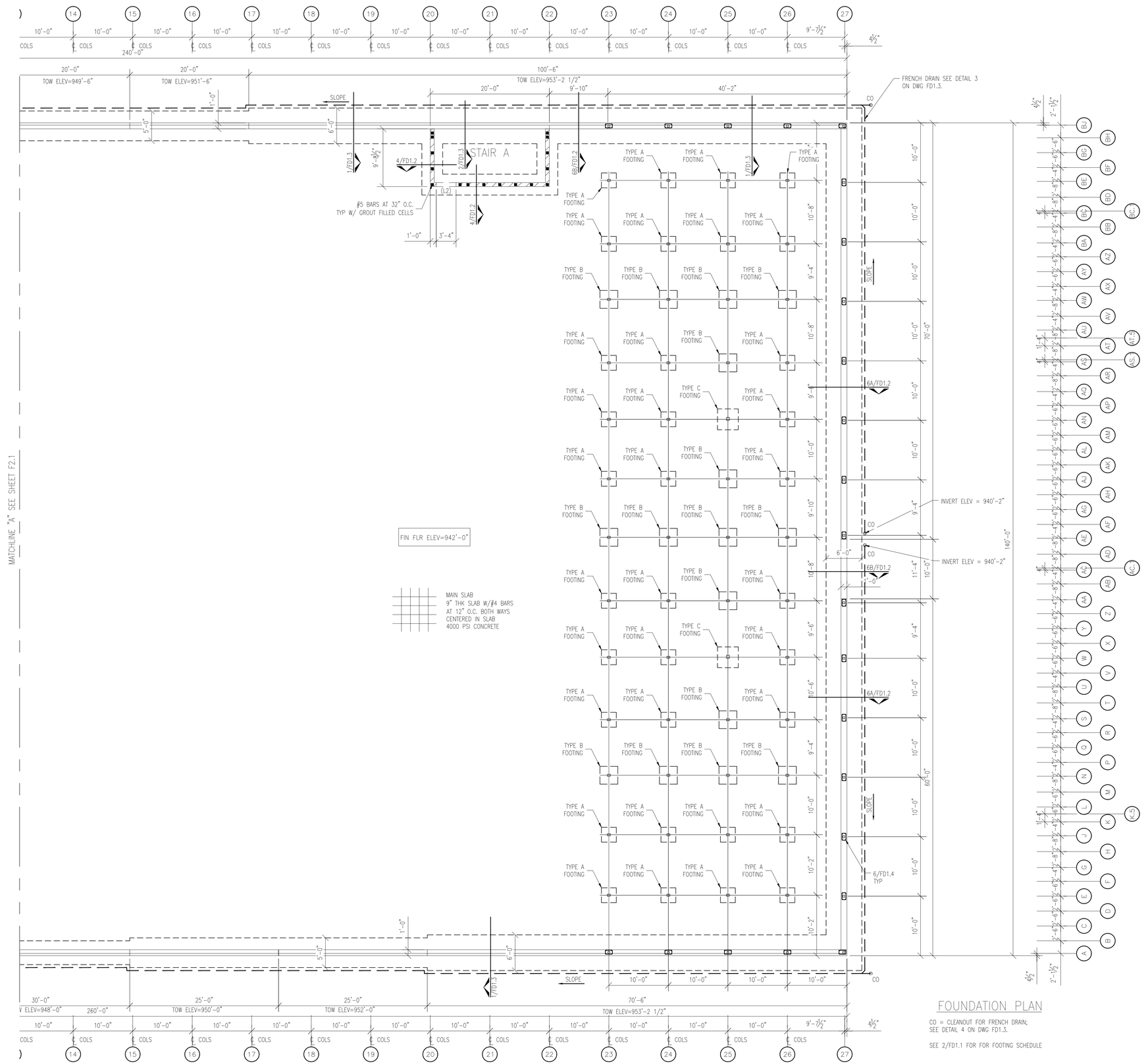
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

FOUNDATION PLAN
SHEET NO. F2.1

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

JONATHAN O. FORCE
NUMBER PE-2012045687
STATE OF MISSOURI
PROFESSIONAL ENGINEER

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966




FOUNDATION PLAN

CO = CLEANOUT FOR FRENCH DRAIN;
SEE DETAIL 4 ON DWG FD1.3.

SEE 2/FD1.1 FOR FOR FOOTING SCHEDULE

Force Engineering & Testing, Inc.
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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
Dn: Johnathan Green, cn=US, o=Force Engineering and Testing, e=mail=jgreen@forceengineeringtesting.com
I am approving this document
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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

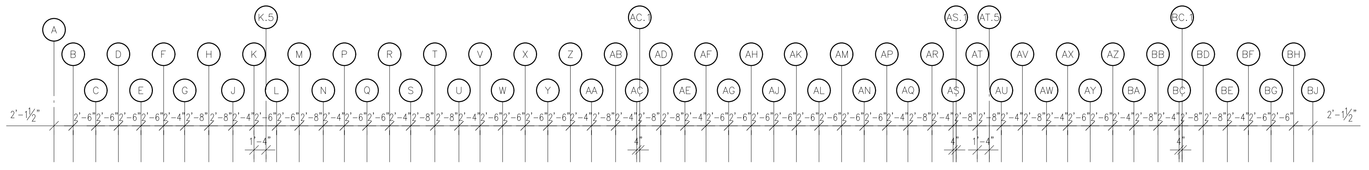
DRAWN :

REVISIONS:

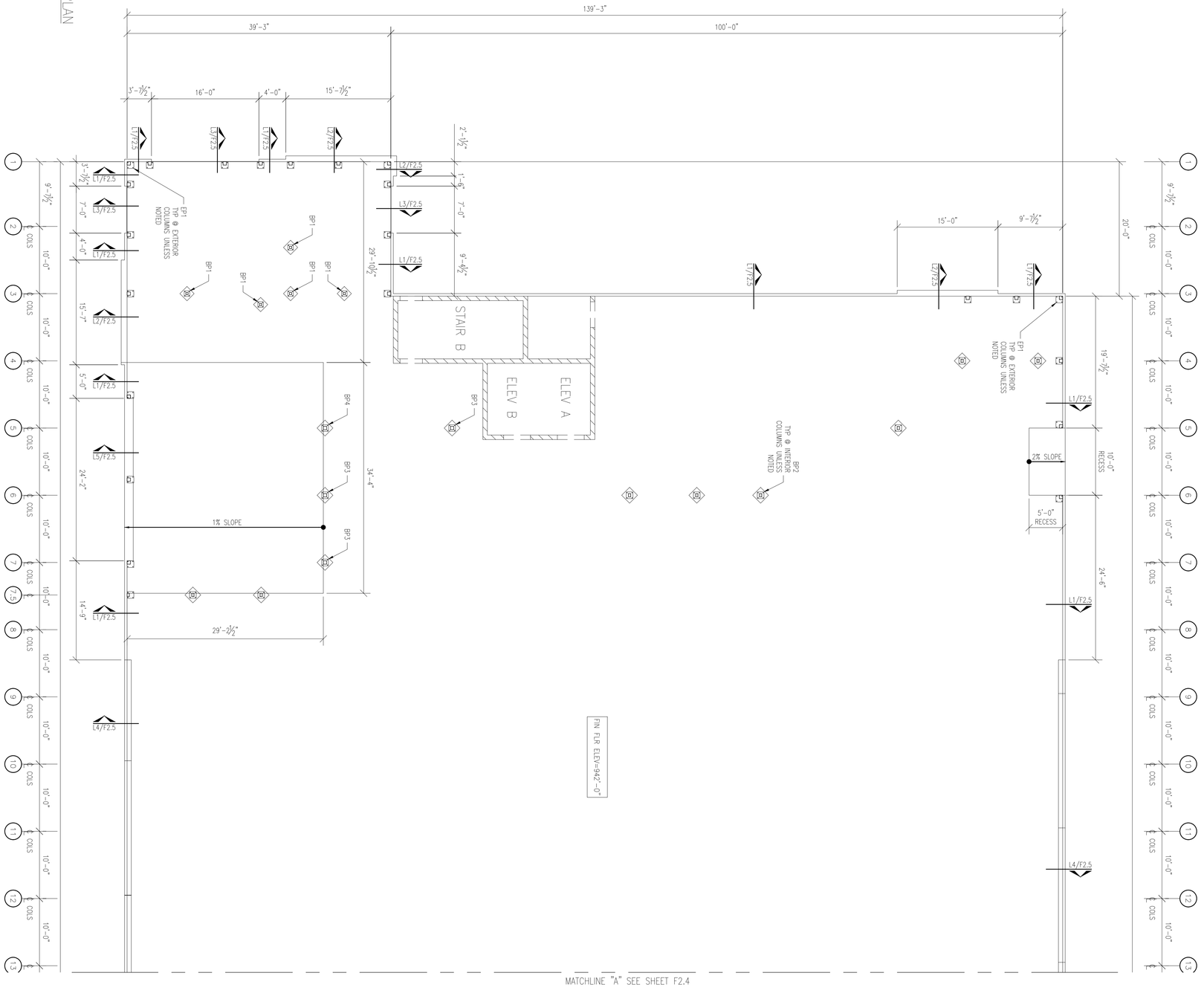
FOUNDATION PLAN

SHEET NO.

F2.2




ANCHOR BOLT & LUG PLAN




# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

A.B. & LUG PLAN

SHEET NO. F2.3

DRAWN :

REVISIONS:

DATE : 12.15.2021

PROJECT NO. 2035

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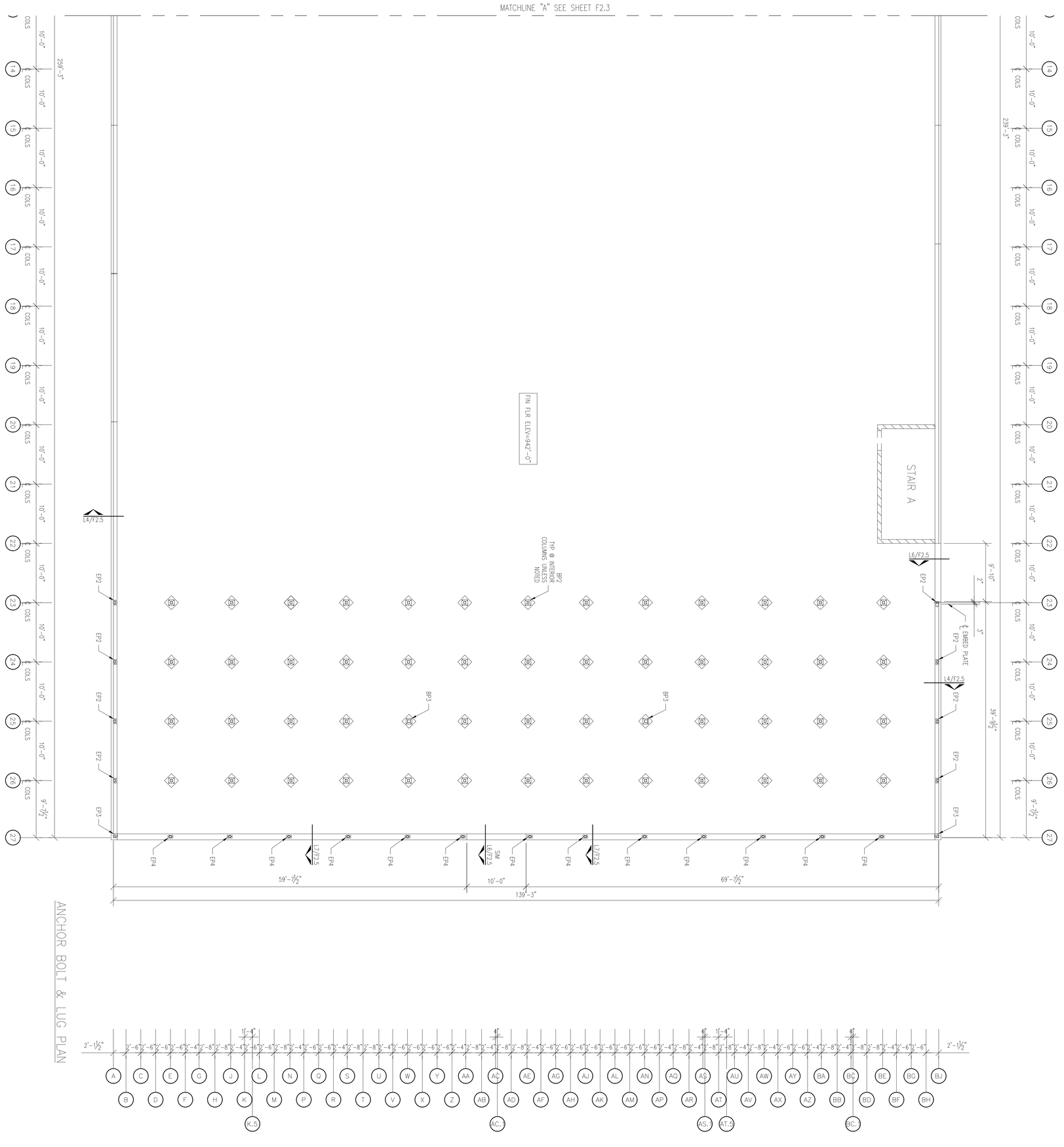


ANCHOR BOLT & LUG PLAN




# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

A.B. & LUG PLAN
SHEET NO. F2.4

STATE OF MISSOURI
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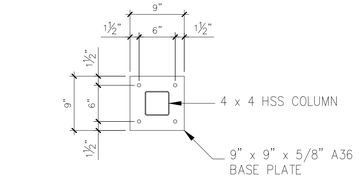
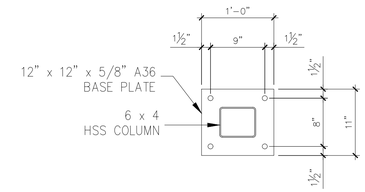
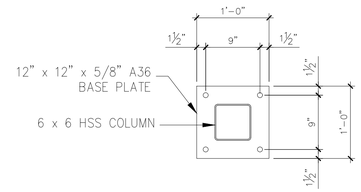
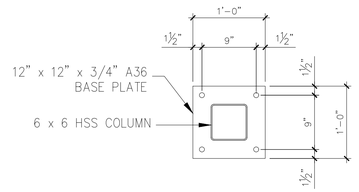
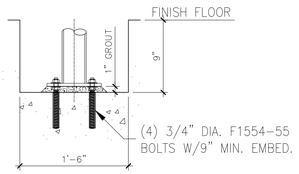


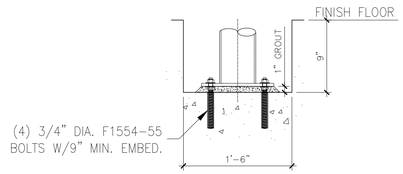




BASE PLATE 1 – BP1

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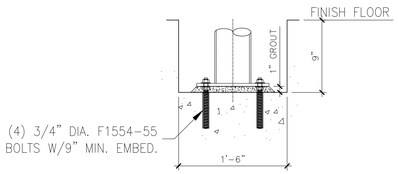
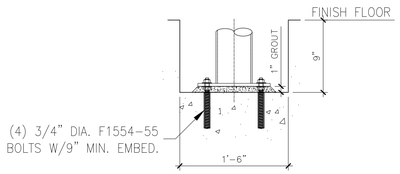



BASE PLATE 3 – BP3

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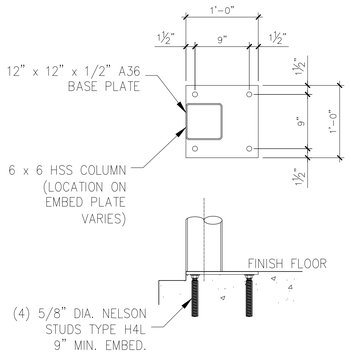
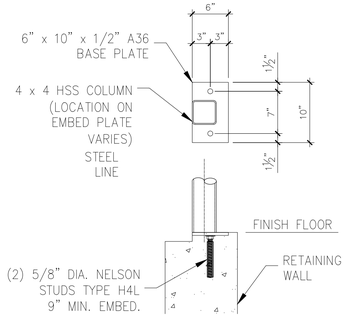
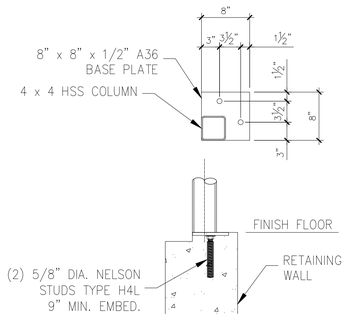
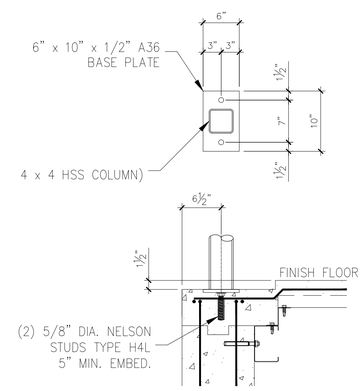


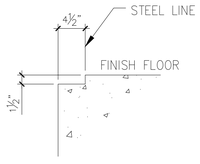




EMBED PLATE 1 – EP1

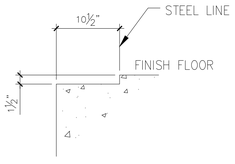
EMBED PLATE 2 – EP2

EMBED PLATE 3 – EP3

EMBED PLATE 4 – EP4




LUG DETAIL 1 – L1

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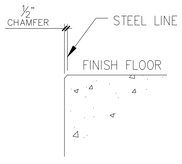


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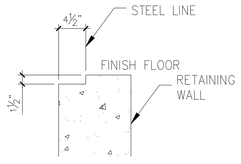


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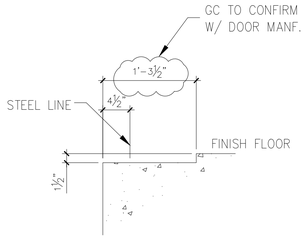
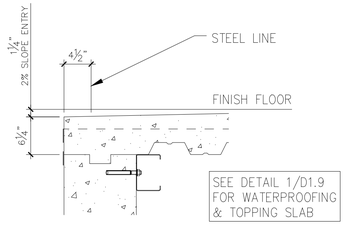
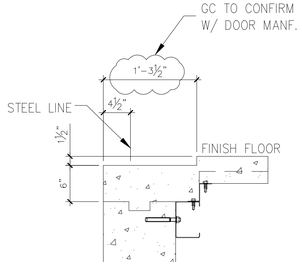



LUG DETAIL 5 – L5




LUG DETAIL 6 – L6




LUG DETAIL 7 – L7

Force Engineering & Testing, Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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e=mail=jgreen@forceengineeringtesting.com
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2021.12.15 12:54:32 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

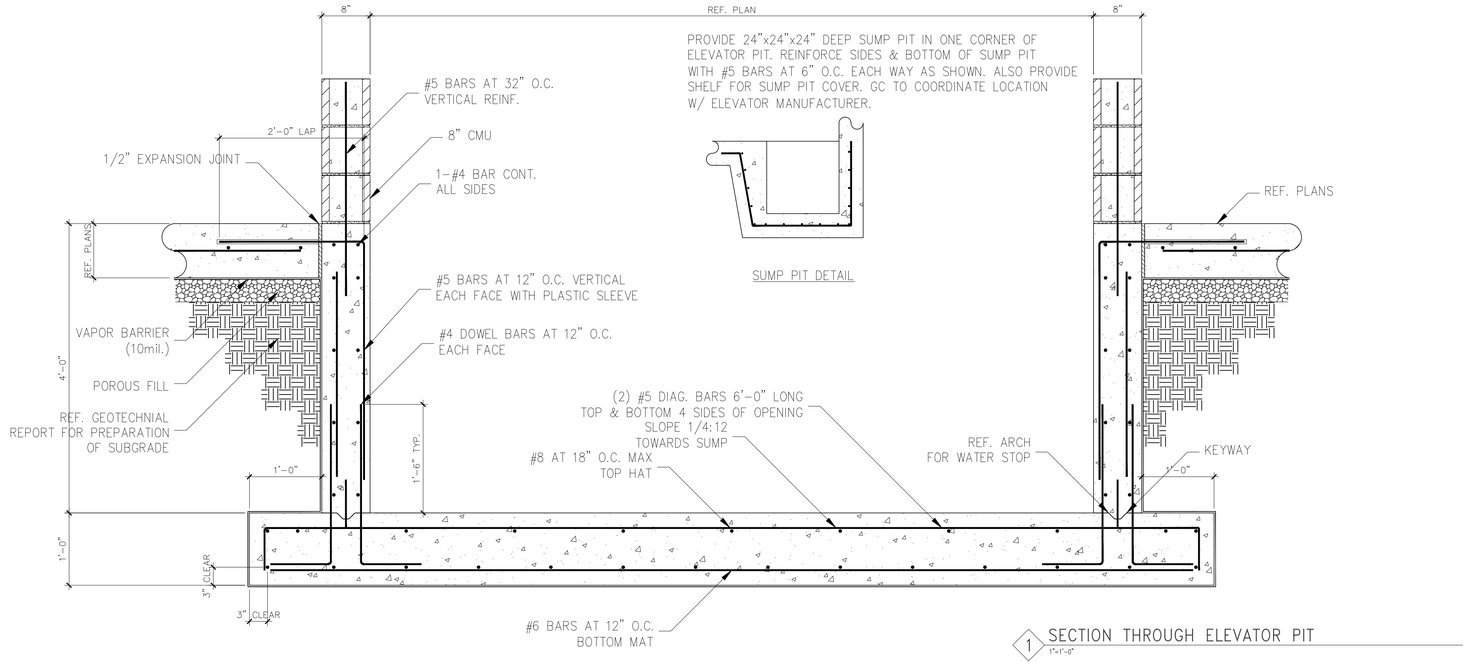
DRAWN :

REVISIONS:

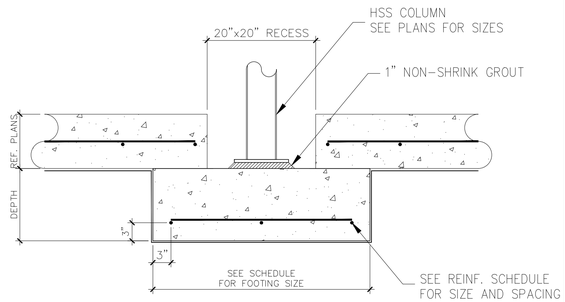
A.B & LUG DETAILS

SHEET NO.

F2.5

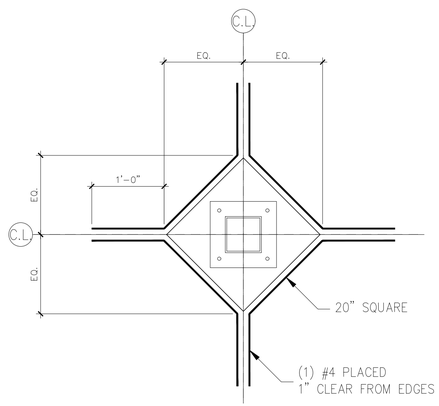



1 SECTION THROUGH ELEVATOR PIT
1"=1'-0"




| FOOTING SCHEDULE (FTG.) | | | | |
|---|---|---|---|---|
| FOOTING | SIZE | DEPTH | REINF. | MAT TYPE |
| A | 2-6" x 2-6" | 12" | 3-#5 EA WAY | SINGLE |
| B | 3-0" x 3-0" | 12" | 4-#5 EA WAY | SINGLE |
| C | 3-6" x 3-6" | 12" | 4-#5 EA WAY | SINGLE |
| D | 4-0" x 4-0" | 12" | 5-#5 EA WAY | SINGLE |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

2 FOOTING SCHEDULE
1"=1'-0"




3 FOOTING RECESS REINFORCING
1"=1'-0"

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STATE OF MISSOURI
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2023.12.15 10:54:09 -06'00'

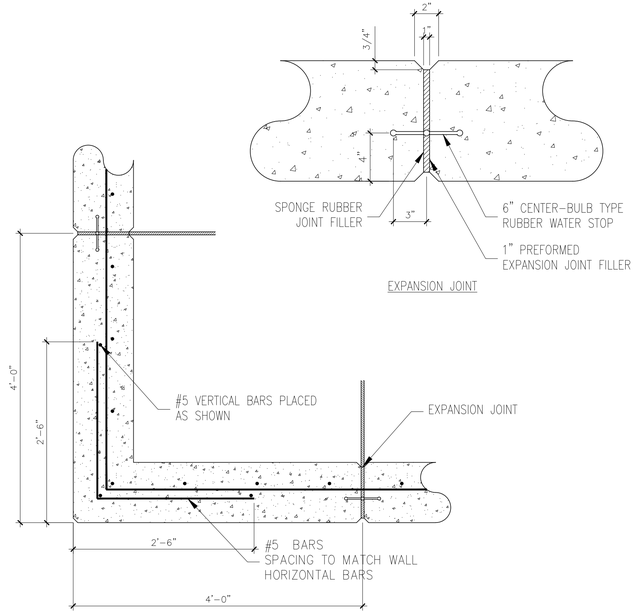
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

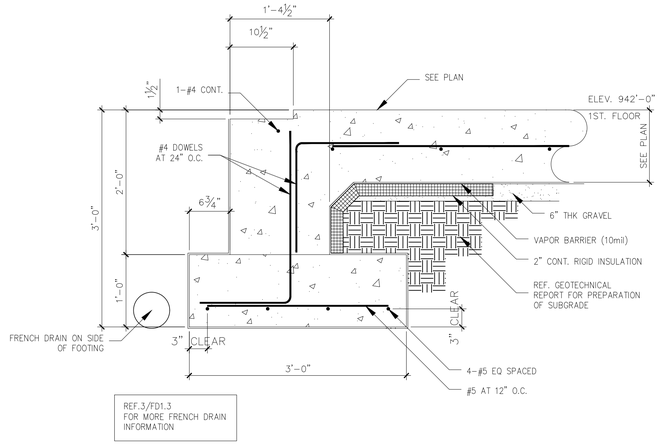
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

CONCRETE DETAILS

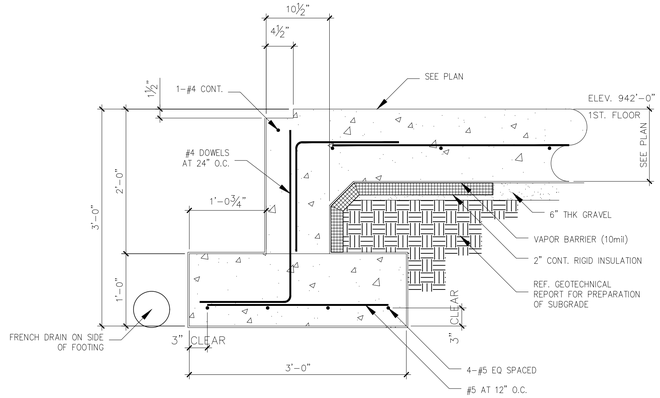
SHEET NO.
FD1.1



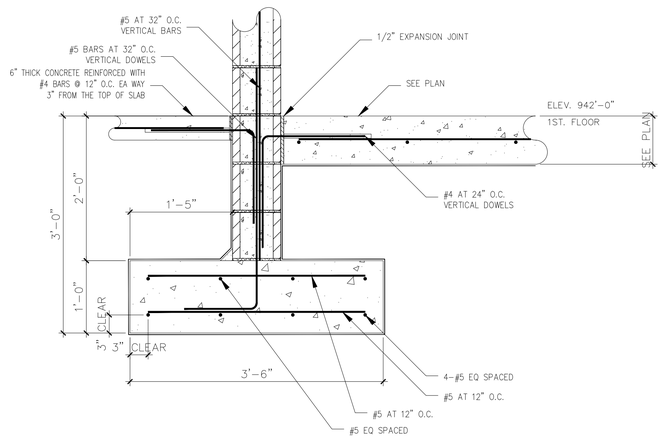

1 OUTSIDE CORNER CONCRETE WALL JOINT
1"=1'-0"



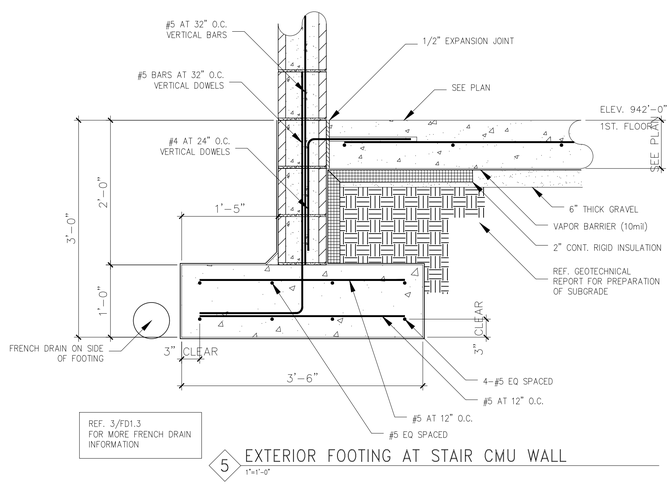

2 EXTERIOR FOOTING
1"=1'-0"



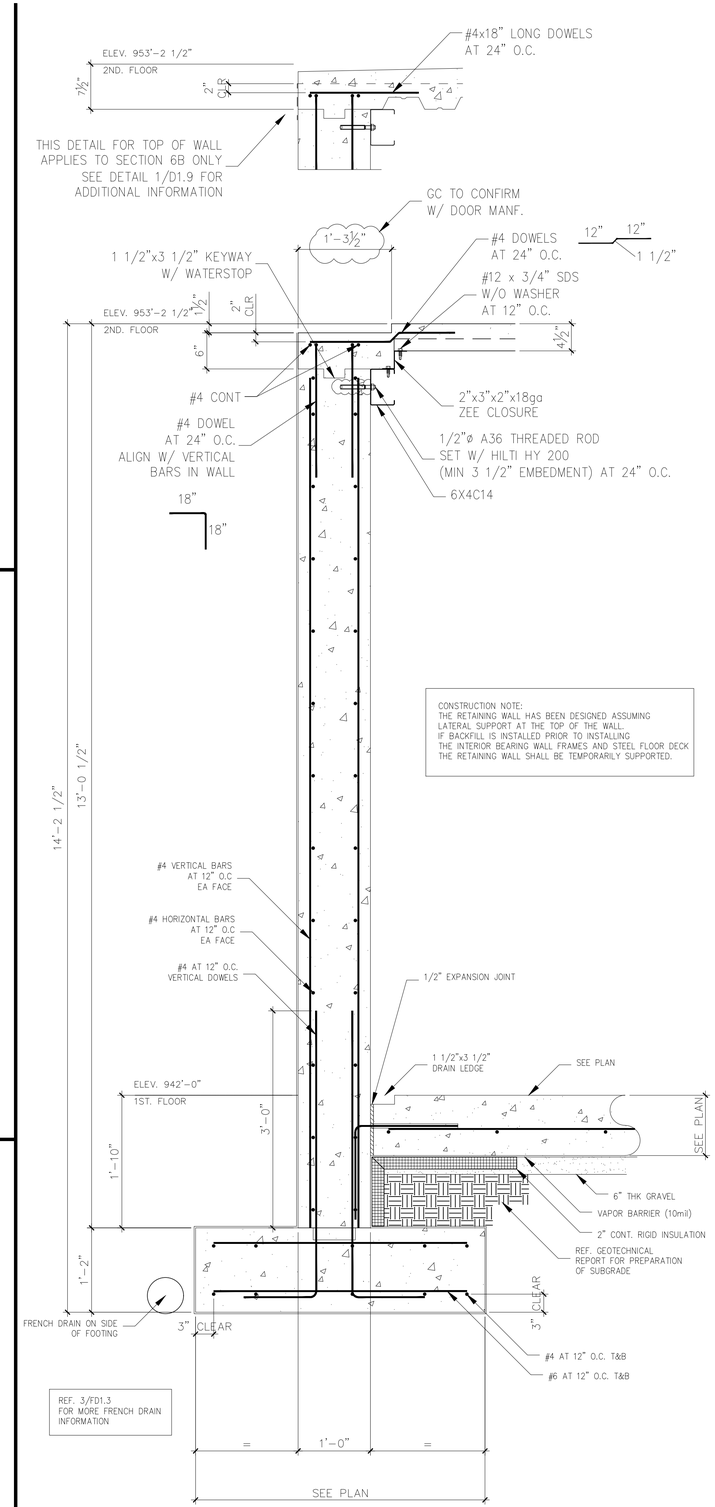

3 EXTERIOR FOOTING
1"=1'-0"




4 INTERIOR FOOTING AT STAIR CMU WALL
1"=1'-0"




5 EXTERIOR FOOTING AT STAIR CMU WALL
1"=1'-0"




6A EXTERIOR FOOTING AT RETAINING WALL (AS SHOWN)
1"=1'-0"

6B EXTERIOR FOOTING AT RETAINING WALL (AS NOTED)
1"=1'-0"

Force Engineering & Testing Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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2022.12.15 07:53:46 -06'00'

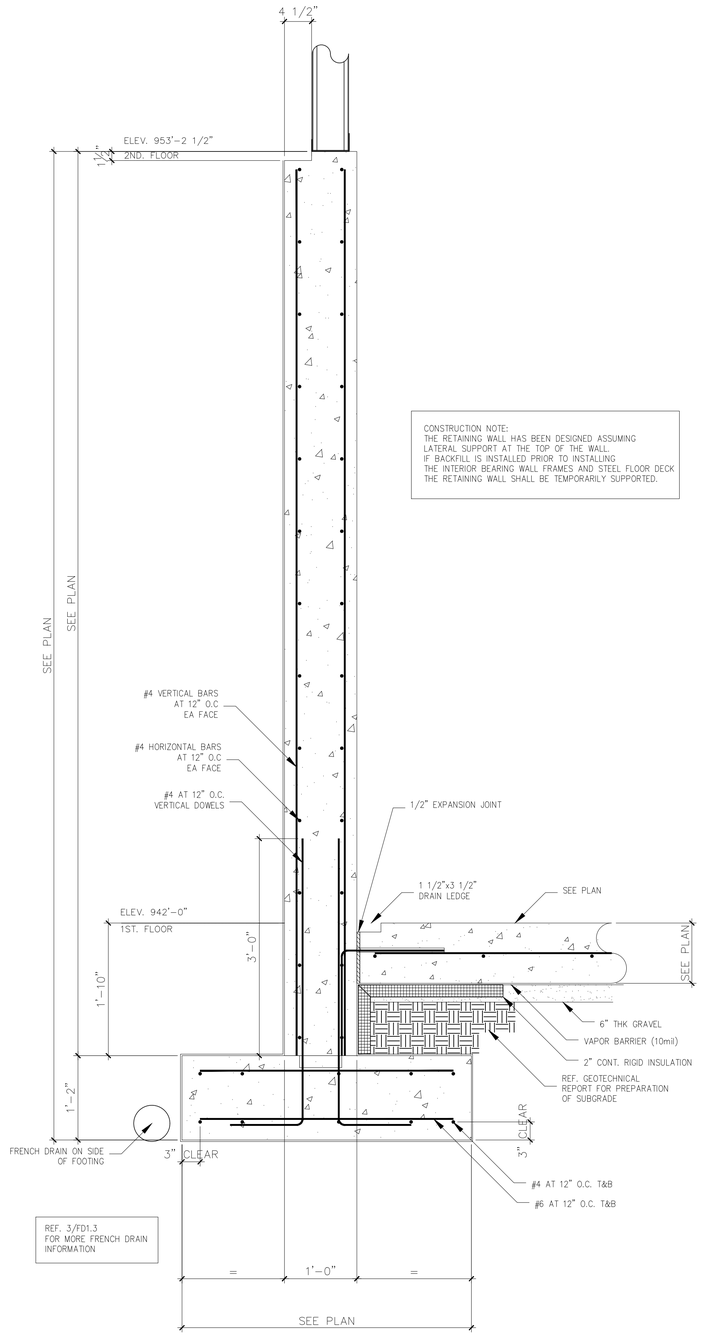
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

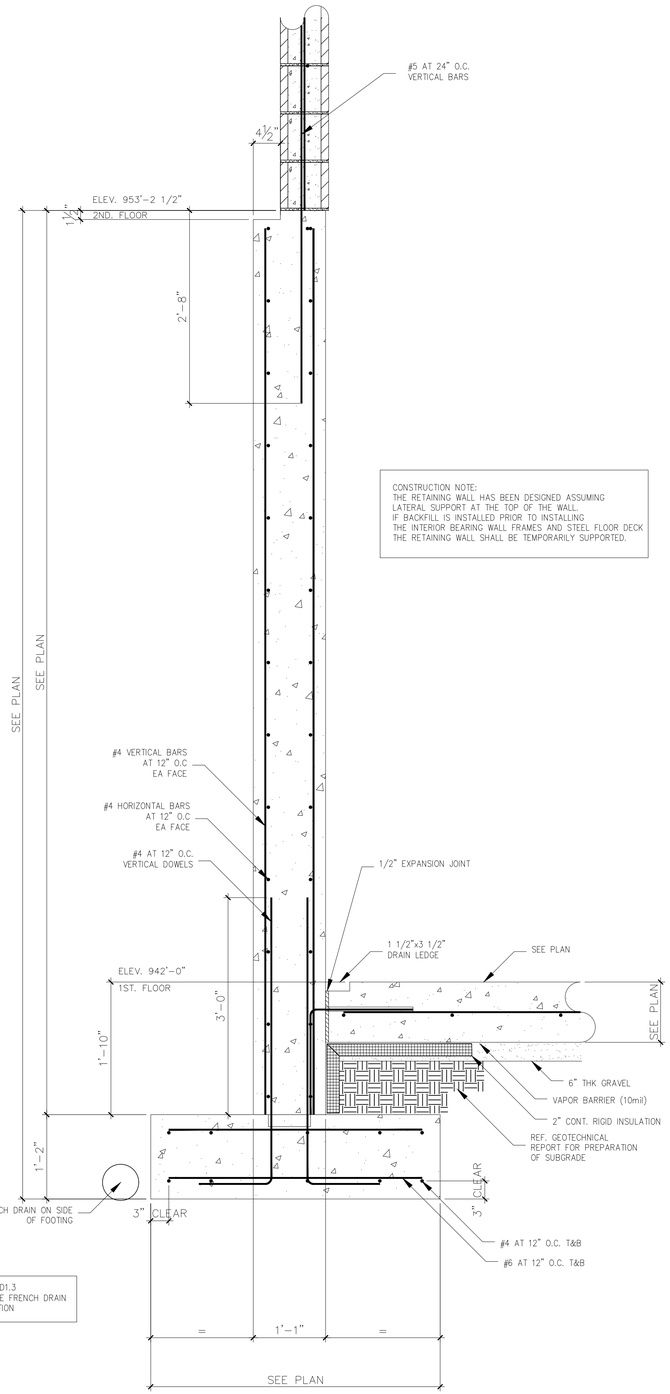
CONCRETE DETAILS

SHEET NO.
FD1.2



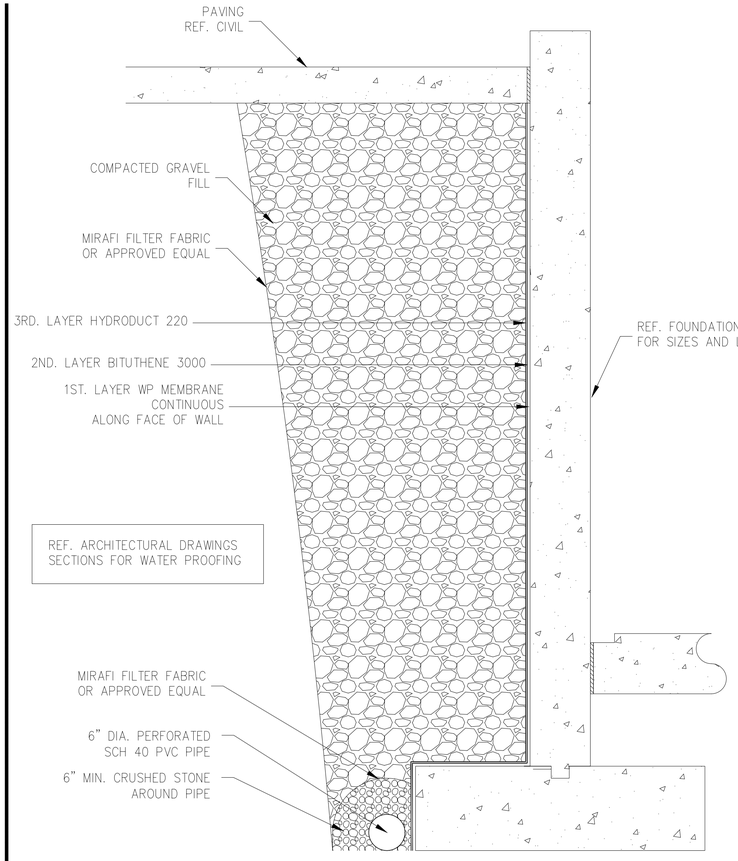

CONSTRUCTION NOTE:
THE RETAINING WALL HAS BEEN DESIGNED ASSUMING
LATERAL SUPPORT AT THE TOP OF THE WALL.
IF BACKFILL IS INSTALLED PRIOR TO INSTALLING
THE INTERIOR BEARING WALL FRAMES AND STEEL FLOOR DECK
THE RETAINING WALL SHALL BE TEMPORARILY SUPPORTED.

1 EXTERIOR FOOTING AT RETAINING WALL
1"=1'-0"

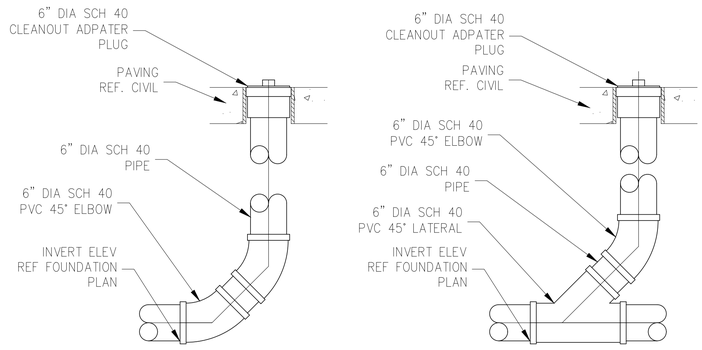



CONSTRUCTION NOTE:
THE RETAINING WALL HAS BEEN DESIGNED ASSUMING
LATERAL SUPPORT AT THE TOP OF THE WALL.
IF BACKFILL IS INSTALLED PRIOR TO INSTALLING
THE INTERIOR BEARING WALL FRAMES AND STEEL FLOOR DECK
THE RETAINING WALL SHALL BE TEMPORARILY SUPPORTED.

2 EXTERIOR FOOTING AT RETAINING WALL
1"=1'-0"




3 FRENCH DRAIN SECTION
1"=1'-0"




4 FRENCH DRAIN CLEANOUTS
1"=1'-0"

NOTES:
1) CLEANOUTS REQUIRED AT CHANGES OF DIRECTION AND START OF FRENCH DRAINS
2) MAX SPACING OF CLEANOUTS IS 150'-0".

Force Engineering & Testing Inc.
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STATE OF MISSOURI
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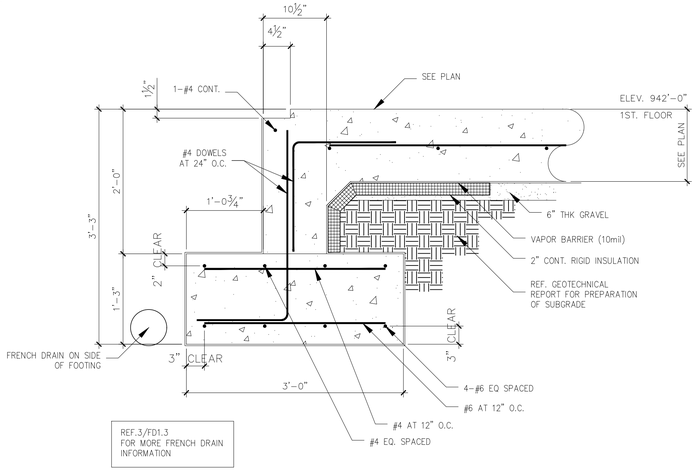
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

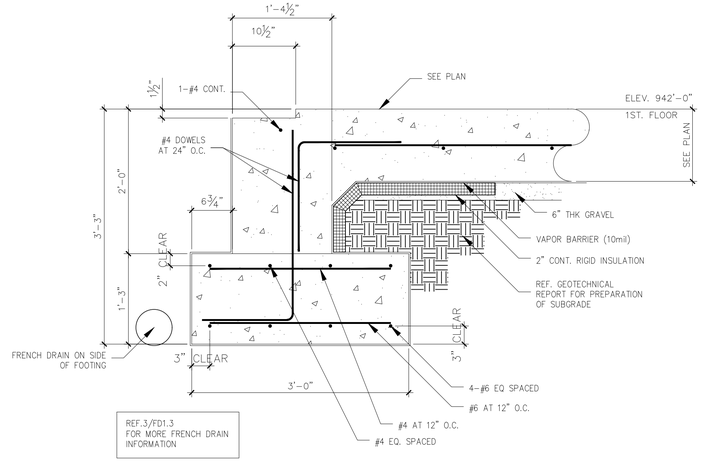
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

CONCRETE DETAILS

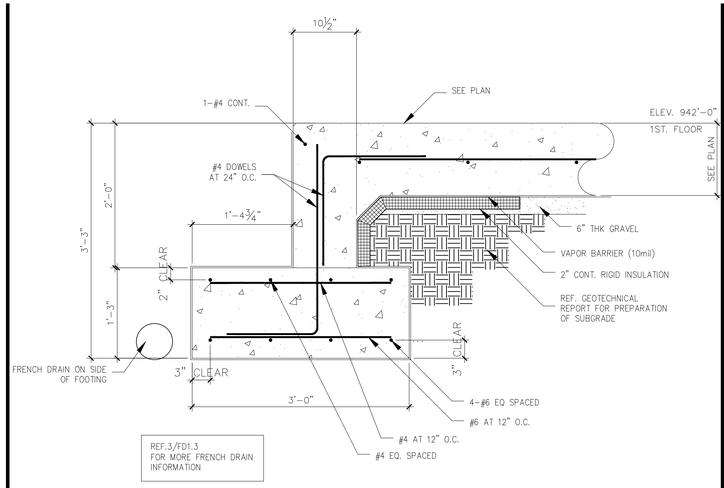
SHEET NO.
FD1.3




1 EXTERIOR FOOTING
1"=1'-0"




2 EXTERIOR FOOTING
1"=1'-0"



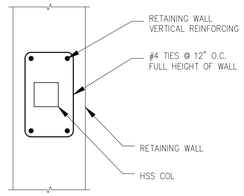

3 EXTERIOR FOOTING
1"=1'-0"




4 EXTERIOR FOOTING
1"=1'-0"




5 SPREAD FOOTING
1"=1'-0"




6 ADDITIONAL WALL REINFORCING AT HSS COLUMN
1"=1'-0"

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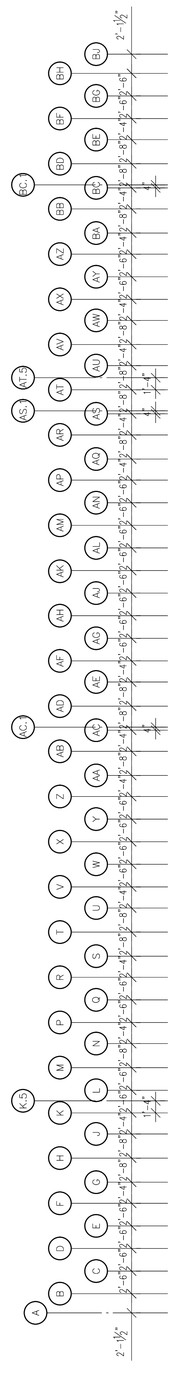
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

CONCRETE DETAILS

SHEET NO.
FD1.4




MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

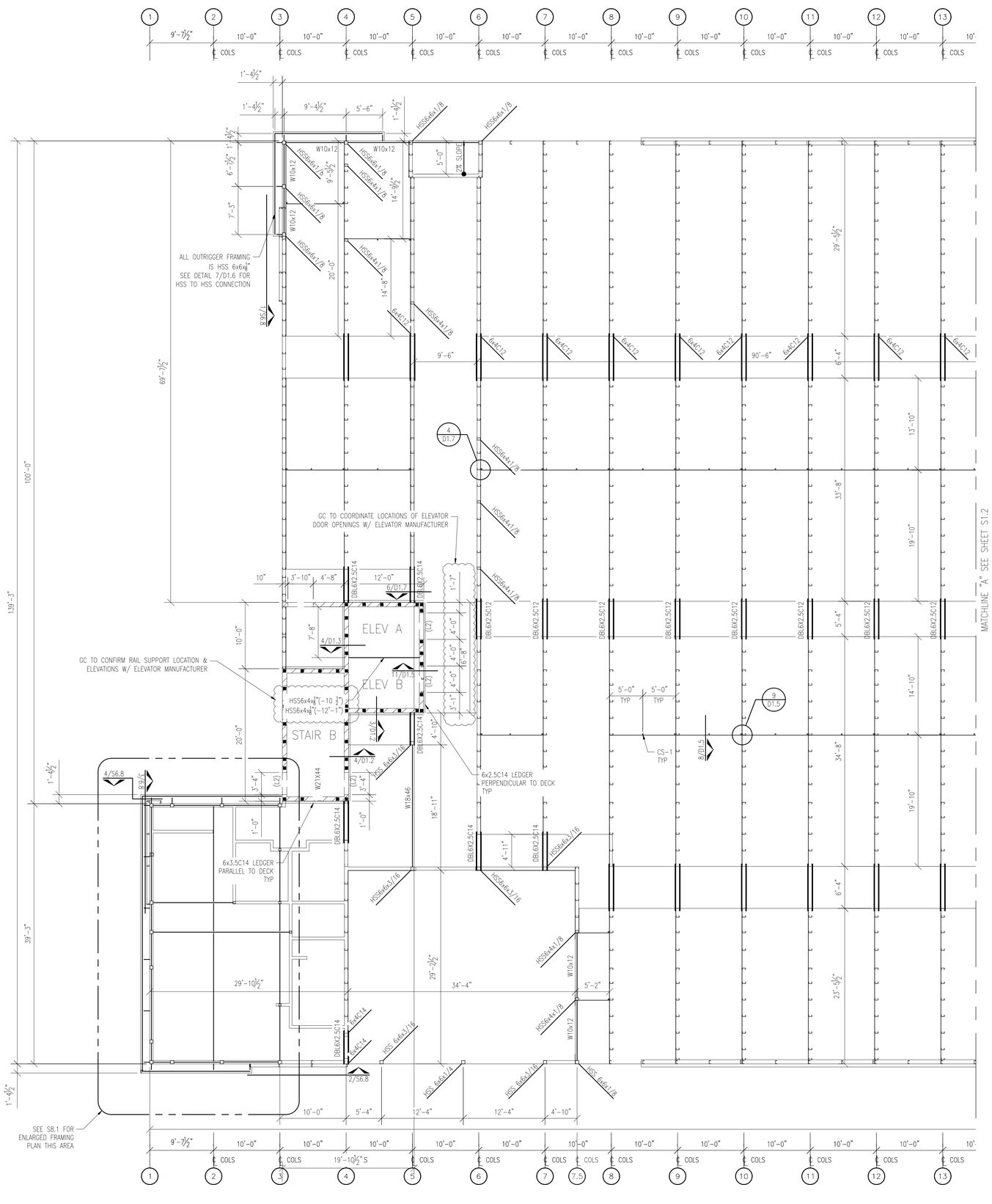
-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

# 1ST FLOOR FRAMING PLAN

TOS ELEV = 952'-10" UNLESS NOTED

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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2021.12.15 10:52:17 -06'00'

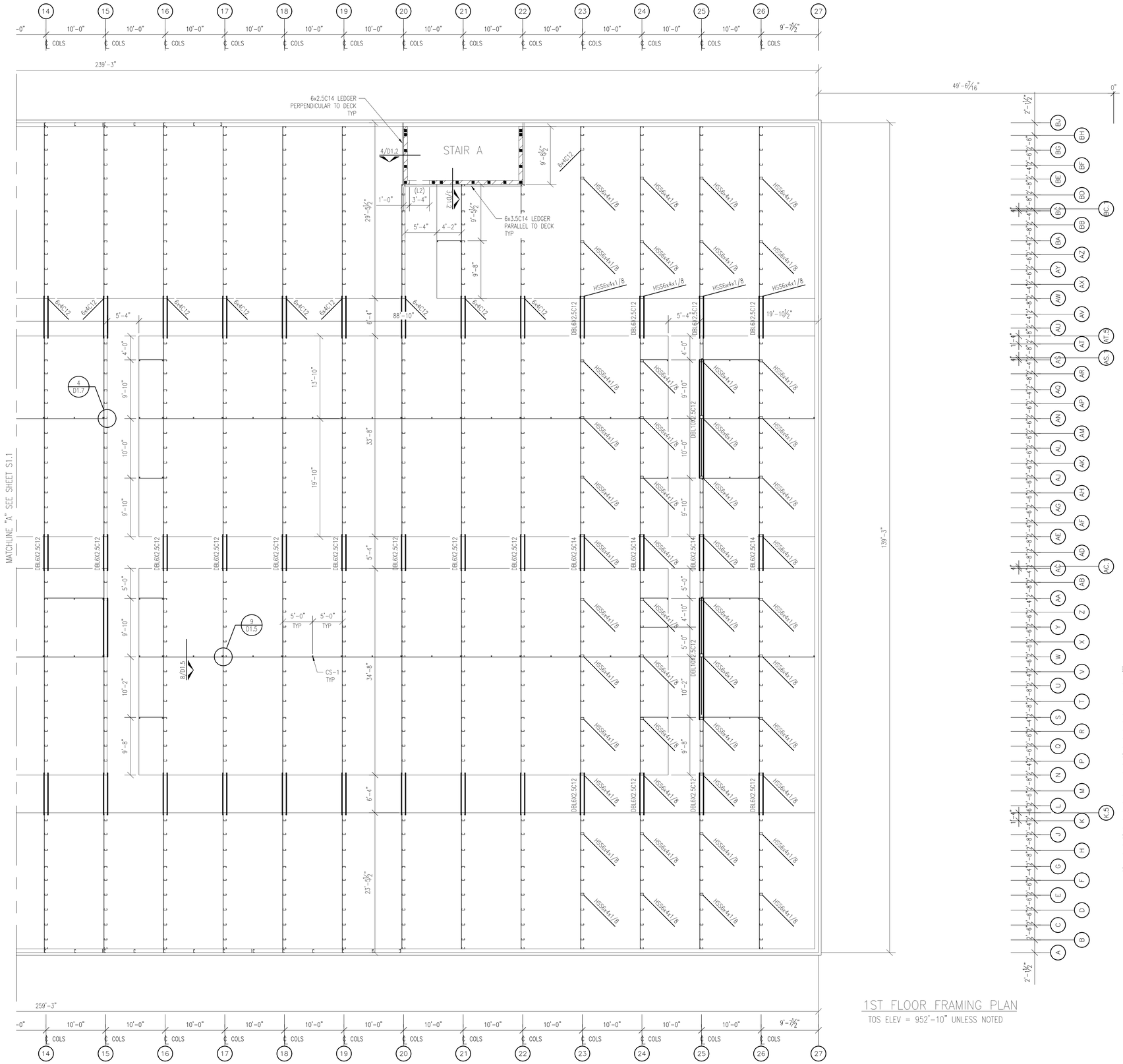
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

1ST FLOOR FRAMING

SHEET NO.
S1.1




## 1ST FLOOR FRAMING PLAN

TOS ELEV = 952'-10" UNLESS NOTED

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

Force Engineering & Testing Inc.
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STATE OF MISSOURI
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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

1ST FLOOR FRAMING

SHEET NO.
S1.2

MATERIAL TO BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16.
-3RD. FLOOR PARTITION PANEL-20ga. INVERTED "U" PANEL

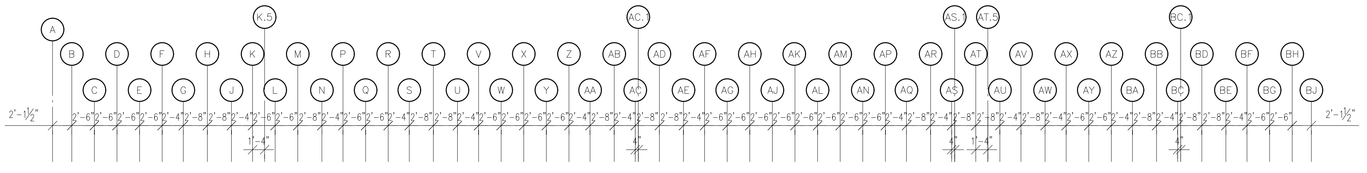
-2ND. FLOOR COLUMN 4x2.5C16.
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR T/3 PONY BRACING-16ga. -SS-2 (1/2" SHORT) FLOOR TO BOTTOM OF BEAM
-2ND. FLOOR PARTITION PANEL-20ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL. 6x2.5C14 (U.N.O.)

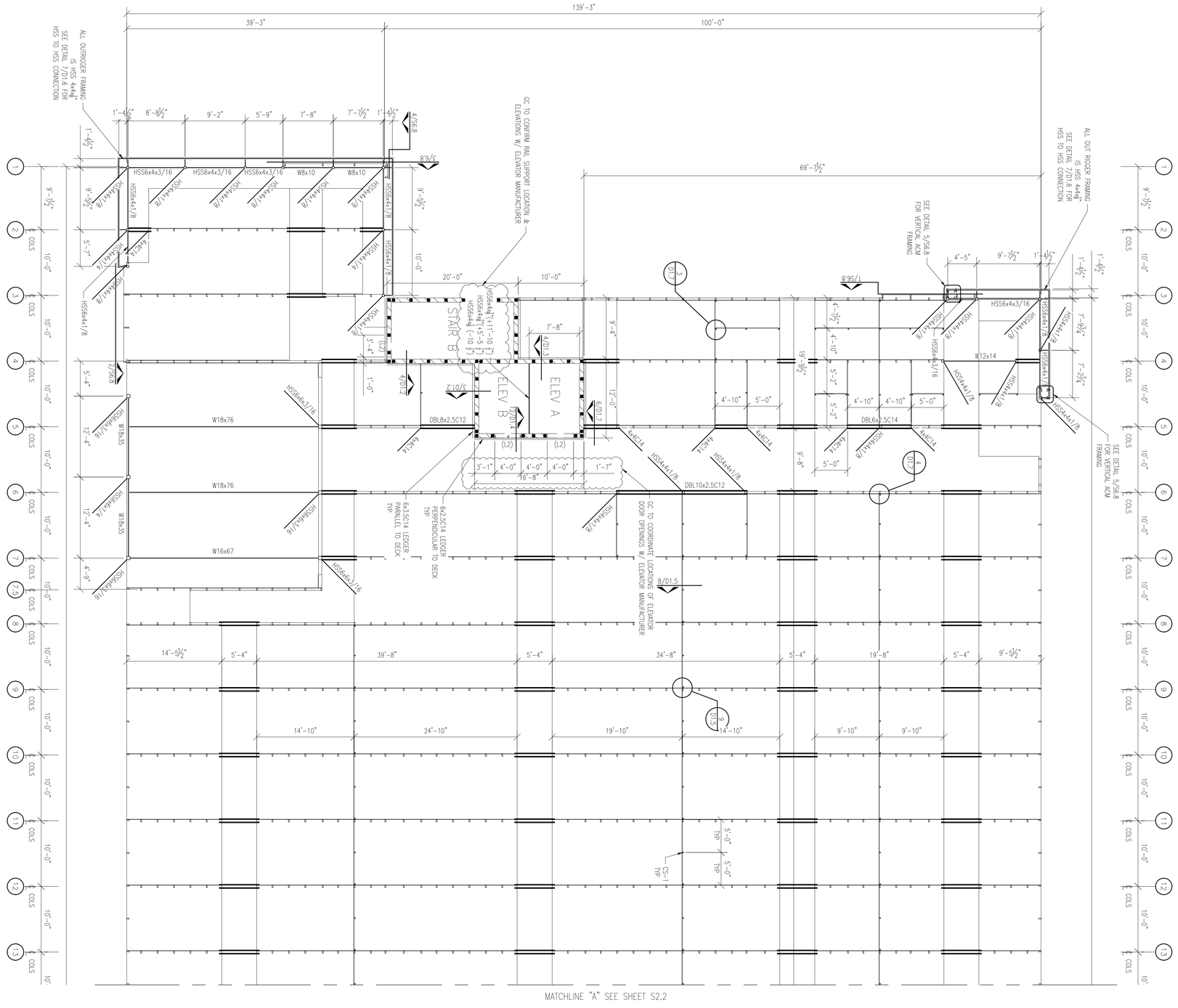
-1ST. FLOOR COLUMN 6x2.5C16.
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga - (TT6)
-1ST. FLOOR T/3 PONY BRACING-16ga. -SS-2 (1/2" SHORT) FLOOR TO BOTTOM OF BEAM
-1ST. FLOOR PARTITION PANEL-20ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL. 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

# 2ND FLOOR FRAMING PLAN

TOS ELEV = 963'-6" UNLESS NOTED



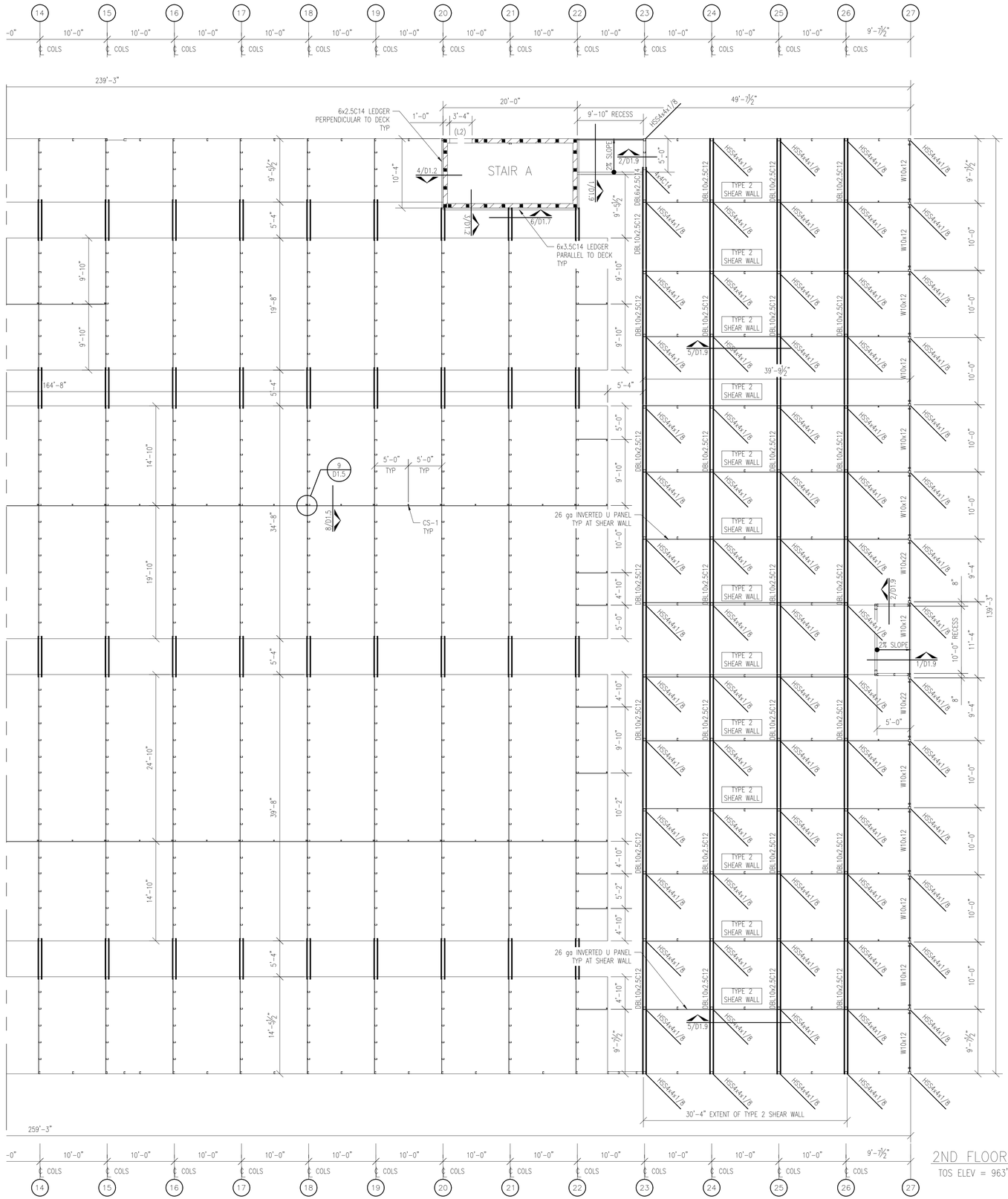

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064


Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

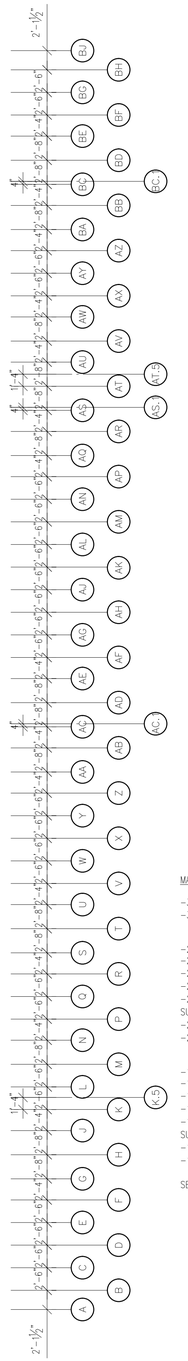

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

2ND FLOOR FRAMING
SHEET NO. S2.1




2ND FLOOR FRAMING PLAN

TOS ELEV = 963'-6" UNLESS NOTED




MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
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PROFESSIONAL ENGINEER

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2021.12.15 12:51:51 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

DRAWN :

REVISIONS:

## 2ND FLOOR FRAMING

SHEET NO.

S2.2

MATERIAL TO BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16.

-3RD. FLOOR PARTITION PANEL=29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16.

-2ND. FLOOR HALLWAY COLUMN 4x4C14.

-2ND. FLOOR BASE TRACK =2x4-1/8x2x16ga.

-2ND. FLOOR TOP TRACK =2x4-1/8x3.1x12ga. - (TT5)

SHEAR WALL BLOCKING: 1/3 POINT BRACING- 16ga. =SC-2 (1/2" SHEATHING BOTH SIDES)

-2ND. FLOOR PARTITION PANEL=29ga. INVERTED "U" PANEL

-2ND. FLOOR HALLWAY HEADER (BR. 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16.

-1ST. FLOOR HALLWAY COLUMN 6x4C14.

-1ST. FLOOR BASE TRACK =2x6-1/8x2x16ga.

-1ST. FLOOR TOP TRACK =2x6-1/8x3.1x12ga. - (T16)

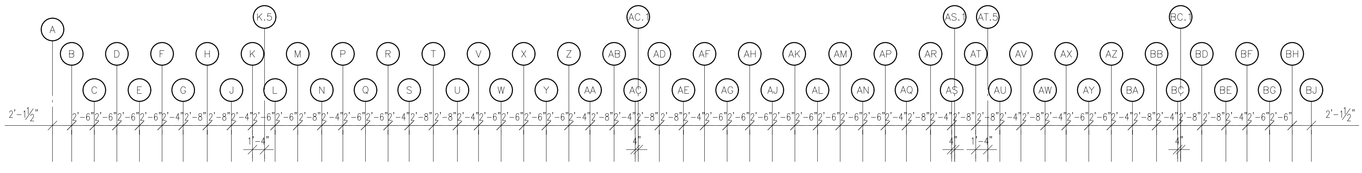
-1ST. FLOOR 1/3 POINT BRACING- 16ga. =SC-2 (1/2" SHEATHING BOTH SIDES)

SUBSTRUCTURE WALL BLOCKING: 16ga. =SC-2 (1/2"

-1ST. FLOOR PARTITION PANEL=29ga. INVERTED "U" PANEL

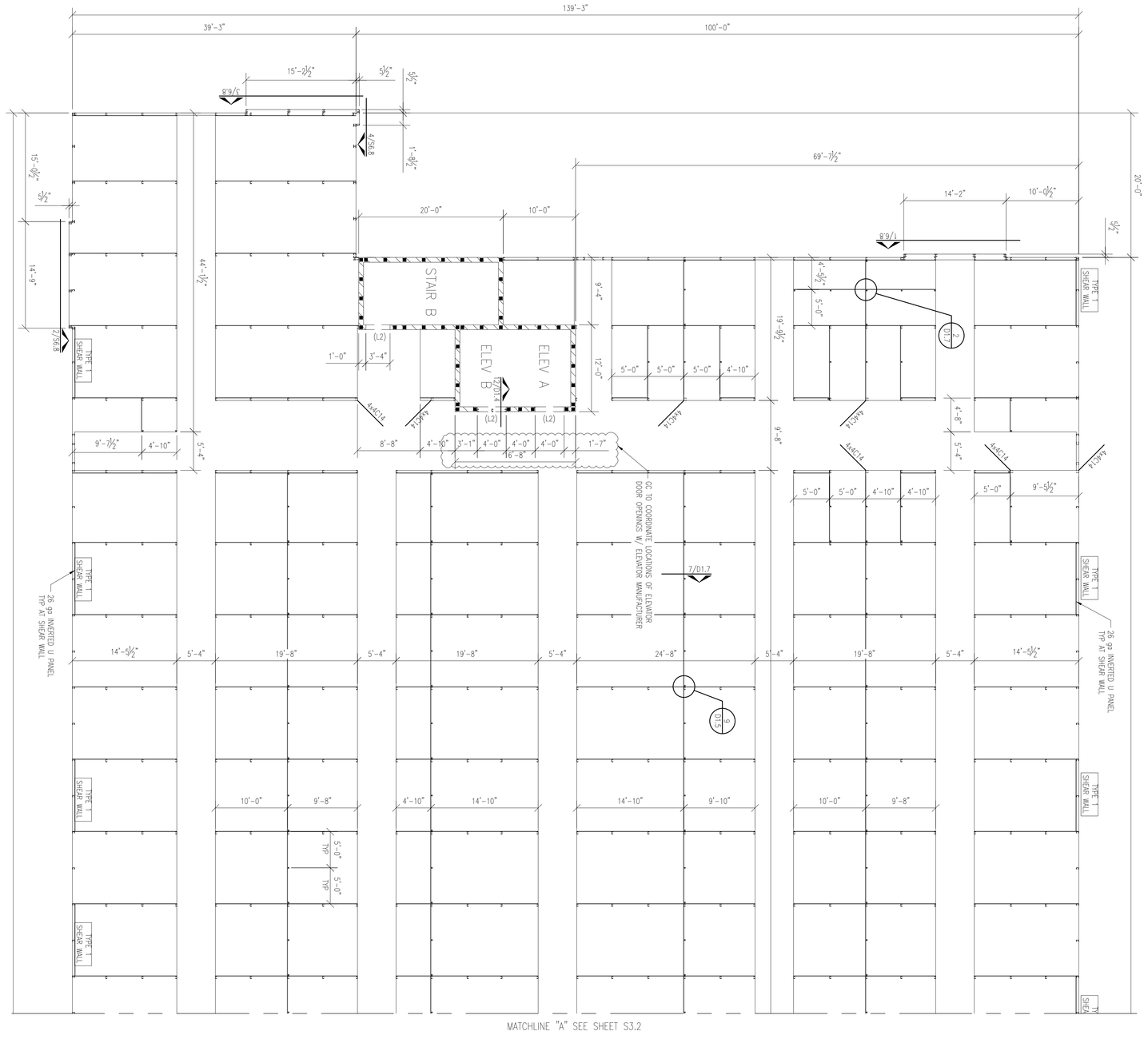
-1ST. FLOOR HALLWAY HEADER (BR. 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.




## 3RD FLOOR FRAMING PLAN

1) SEE DETAIL 4/D1.9 FOR TYPE 1 SHEAR WALL.





# LAKEWOOD STORAGE

NE PORT DRIVE

LEE'S SUMMIT, MISSOURI 64064

Force Engineering & Testing Inc.

19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338

(281) 540-6603 Fax: (281) 540-9966


PROJECT NO. 2035

DATE : 12.15.2021

DRAWN :

REVISIONS:

3RD FLOOR FRAMING

SHEET NO. S3.1

## 3RD FLOOR FRAMING PLAN

1) SEE DETAIL 4/D1.9 FOR TYPE 1 SHEAR WALL.

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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2023.12.15 13:50:18 -06'00'

# LAKEWOOD STORAGE

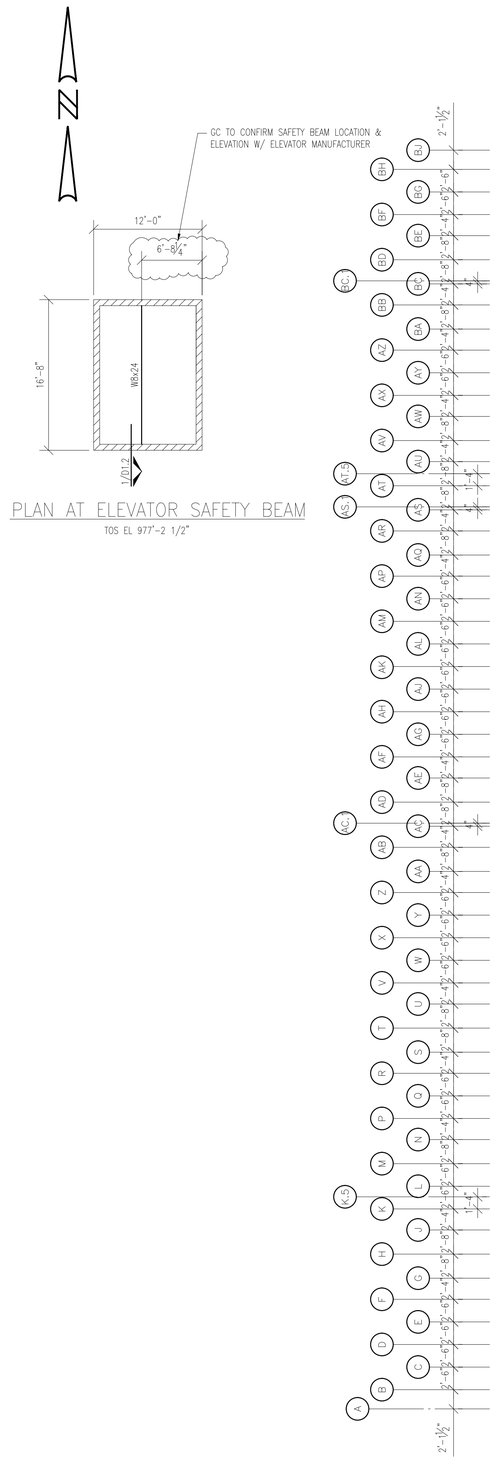
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

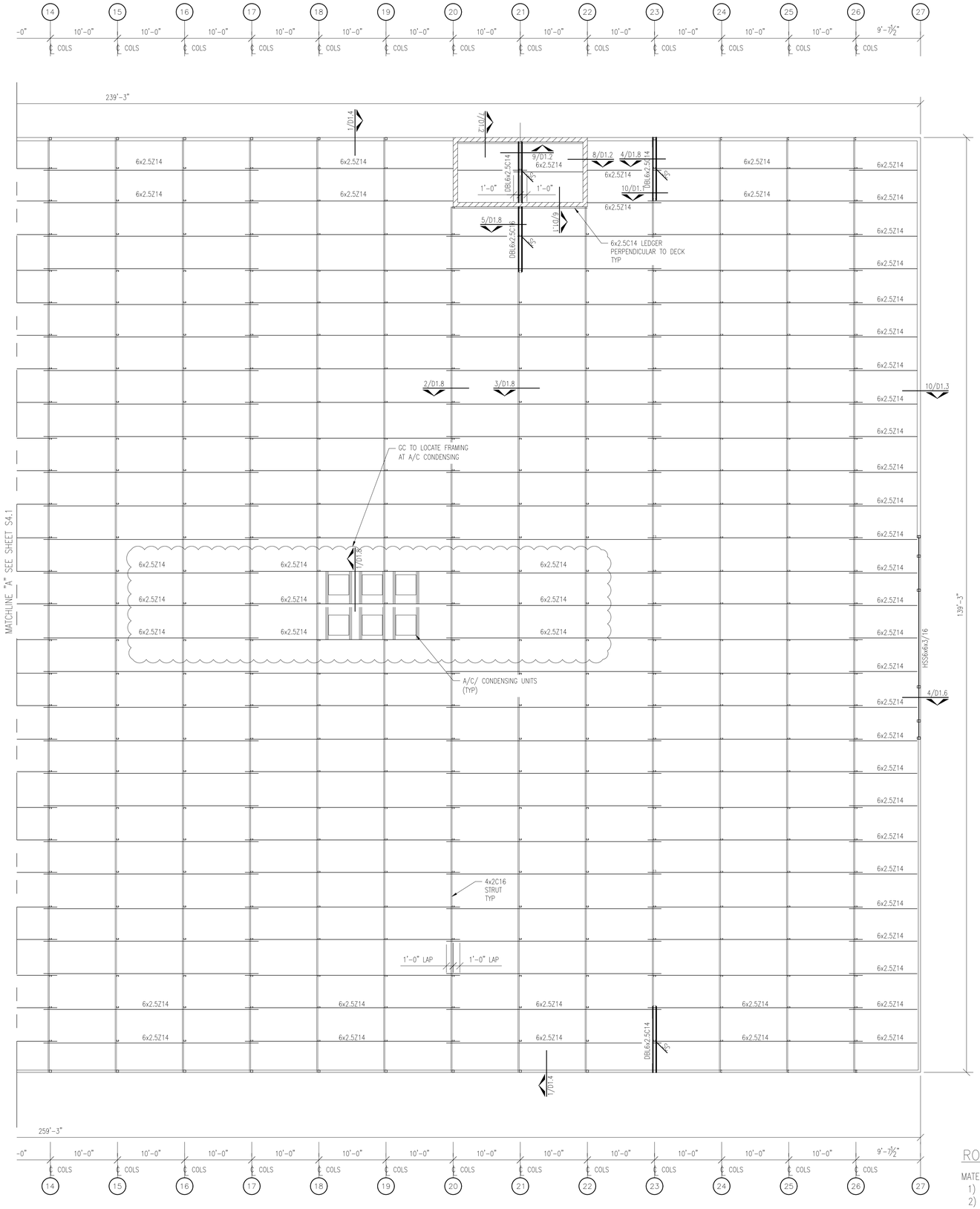
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

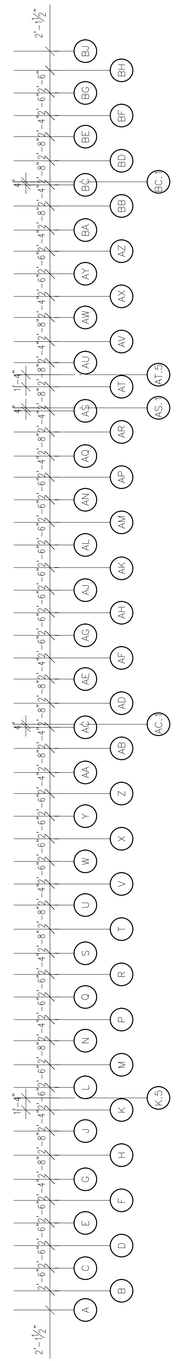
## 3RD FLOOR FRAMING

SHEET NO.

S3.2


N
GC TO CONFIRM SAFETY BEAM LOCATION & ELEVATION W/ ELEVATOR MANUFACTURER
12'-0"
6'-8¼"
16'-8"
W8x24
1/D1.2
2'-1½"
BH BG BF BE BD BC BB BA AZ AY AX AW AV AU AT AS AR AQ AP AN AM AL AK AJ AH AG AF AE AD AC AB AA Z Y X W V U T S R P N M L K J H G F E D C B A
1" 1" 1" 1"
2'-6" 4'-6" 4'-8" 4'-8" 4'-8




ROOF FRAMING PLAN

MATERIAL NOTES:
1) PULRINS ARE 6x2.5Z16 UNLESS NOTED
2) SC= 4x2C16 STUB COLUMN

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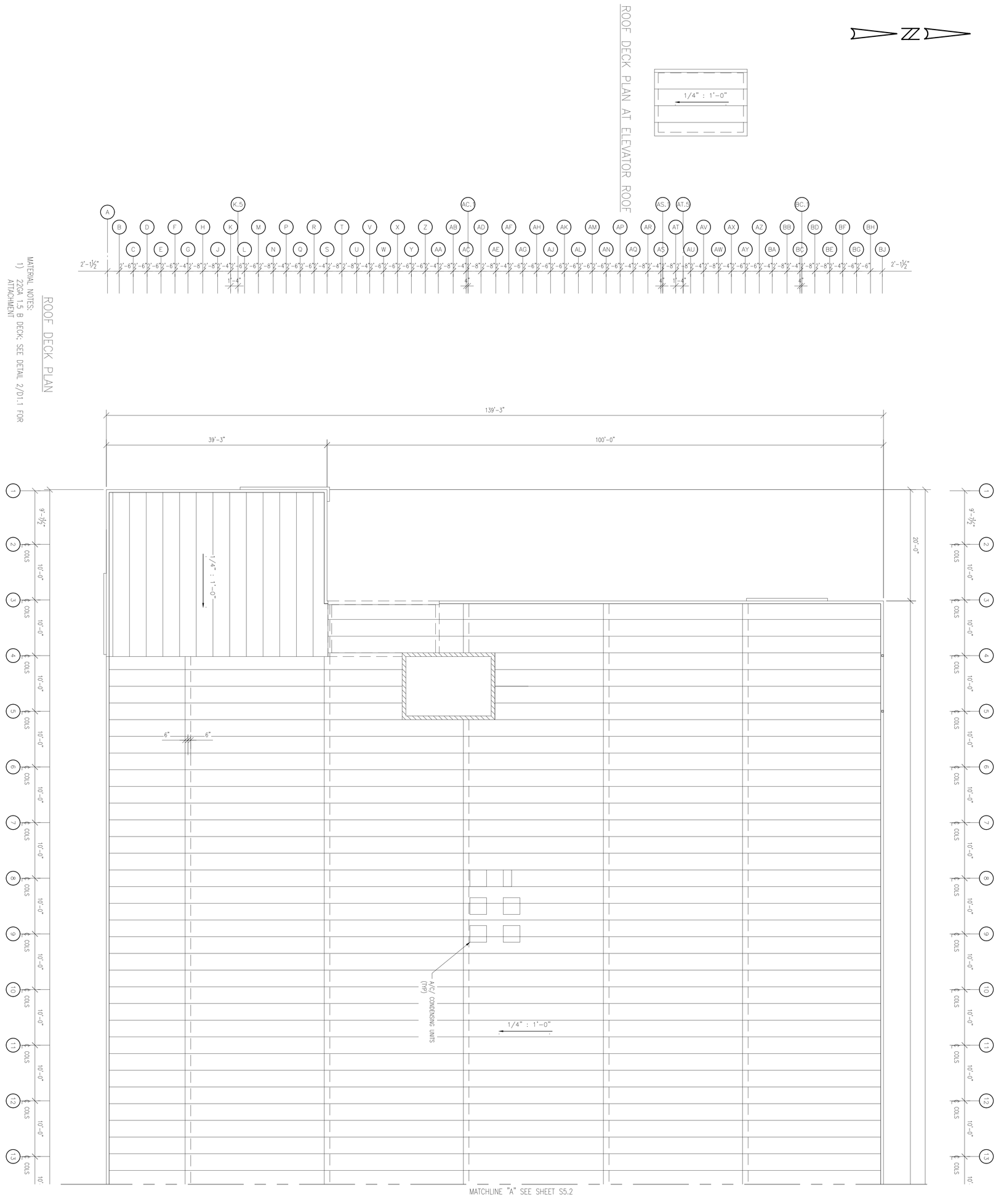
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

ROOF FRAMING

SHEET NO.
S4.2




ROOF DECK

SHEET NO.
S5.1

DRAWN :

REVISIONS:

DATE : 12.15.2021

PROJECT NO. 2035

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

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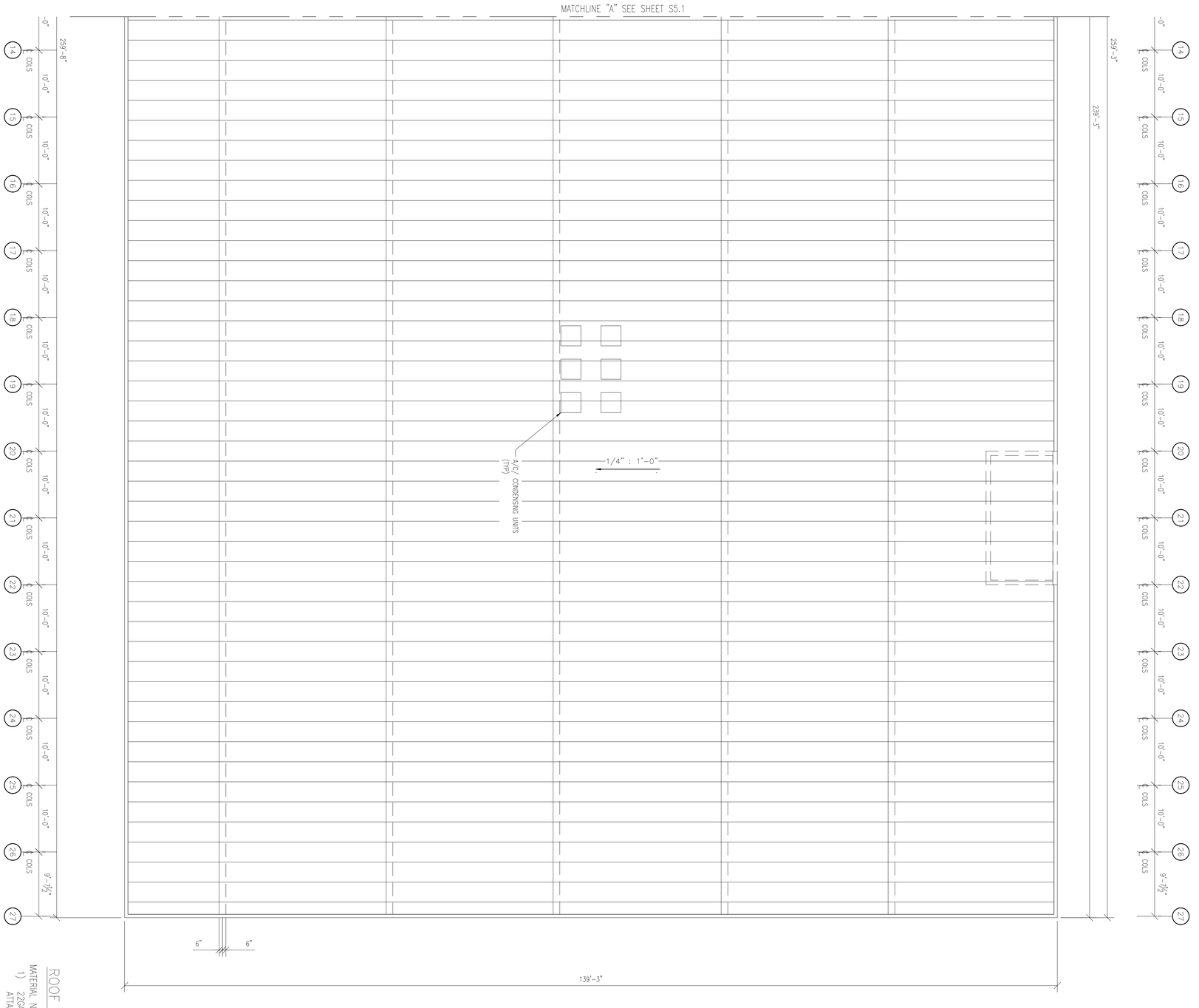
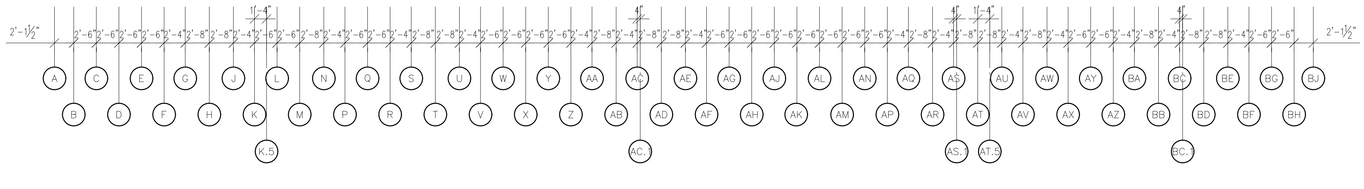



## ROOF DECK PLAN

MATERIAL NOTES:
1) 22GA 1.5 B DECK; SEE DETAIL 2/D1.1 FOR ATTACHMENT




# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

SHEET NO. S5.2

ROOF DECK

REVISIONS:

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DATE : 12.15.2021

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PROFESSIONAL ENGINEER

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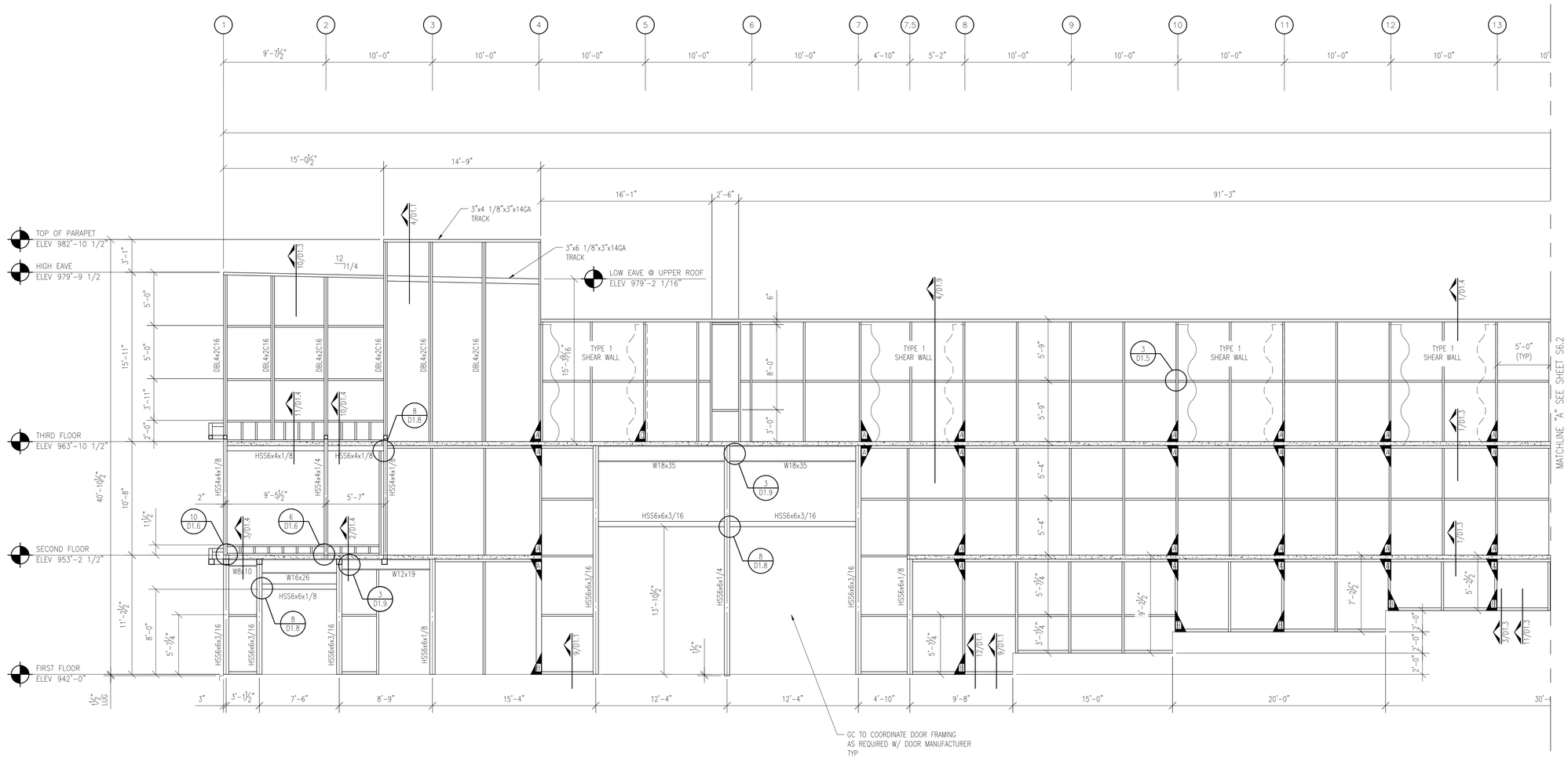


FRAMING ELEVATION @ COLUMN LINE A
(LOOKING NORTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-9" O.C. MAX
-3RD. FLOOR WINDOW JAMB 4x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 4x2.0C16
-3RD. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

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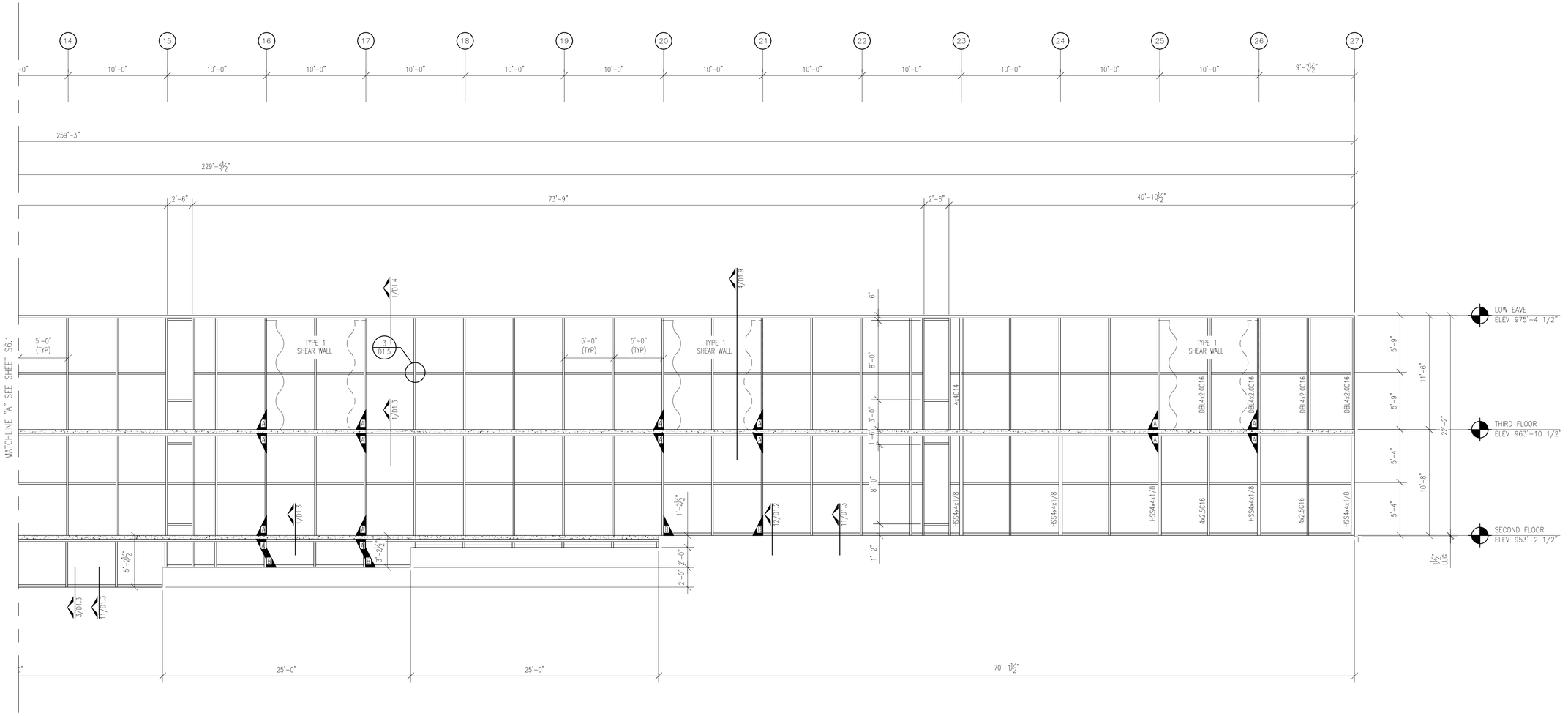
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.1




FRAMING ELEVATION @ COLUMN LINE A
(LOOKING NORTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-9" O.C. MAX
-3RD. FLOOR WINDOW JAMB 4x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 4x2.0C16
-3RD. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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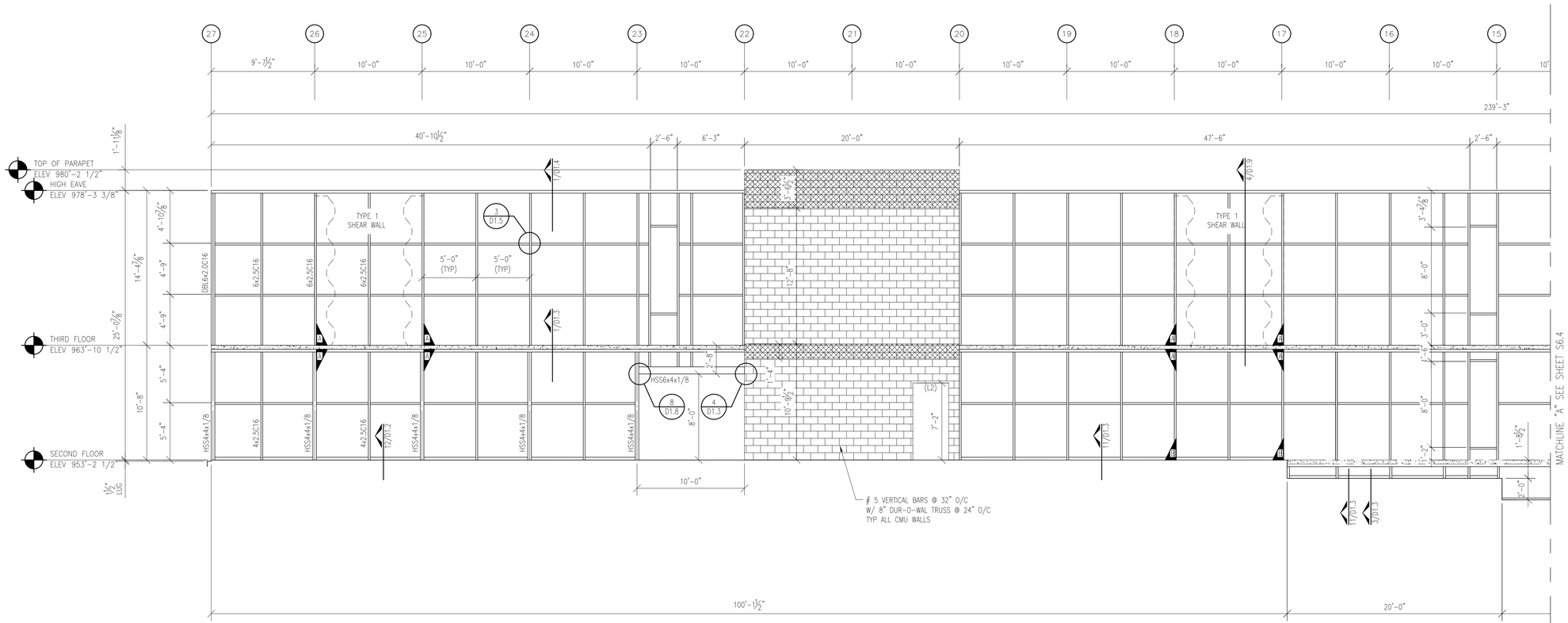
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.2




## FRAMING ELEVATION @ COLUMN LINE BJ

(LOOKING SOUTH)

DENOTES THE LOCATION OF BOND BEAM (BOND BEAMS ARE CONTINUOUS AROUND STAIR UNLESS NOTED)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 4'-11" O.C. MAX
-3RD. FLOOR WINDOW JAMB 6x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 6x2.0C16
-3RD. FLOOR TOP TRACK 3x6 1/8x3x1x14ga TT2

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x4x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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PROFESSIONAL ENGINEER

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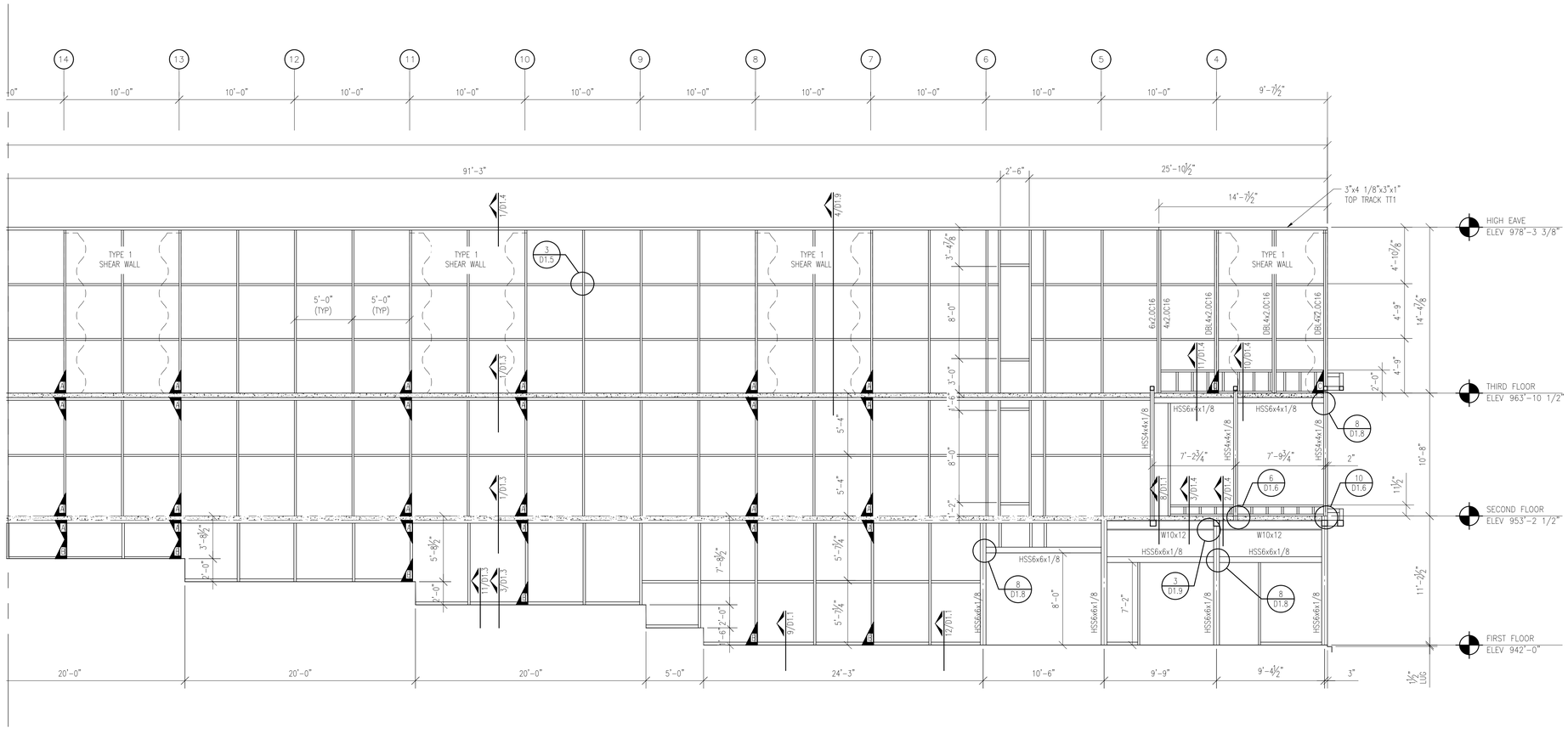
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.3




FRAMING ELEVATION @ COLUMN LINE BJ
(LOOKING SOUTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 4'-11" O.C. MAX
-3RD. FLOOR WINDOW JAMB 6x2.0C16
-3RD. FLOOR WINDOW HEADER/SILL 6x2.0C16
-3RD. FLOOR TOP TRACK 3x6 1/8x3x1x14ga TT2

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER/SILL 4x2.0C16
-2ND. FLOOR TOP TRACK 3x4 1/8x4x14ga TT1

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF SHEAR WALL SHEATHING. ALL SHEAR WALL SHEATHING IS USED FOR LATERAL BRACING OF THE STRUCTURE. SHEAR WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

Force Engineering & Testing Inc.
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STATE OF MISSOURI
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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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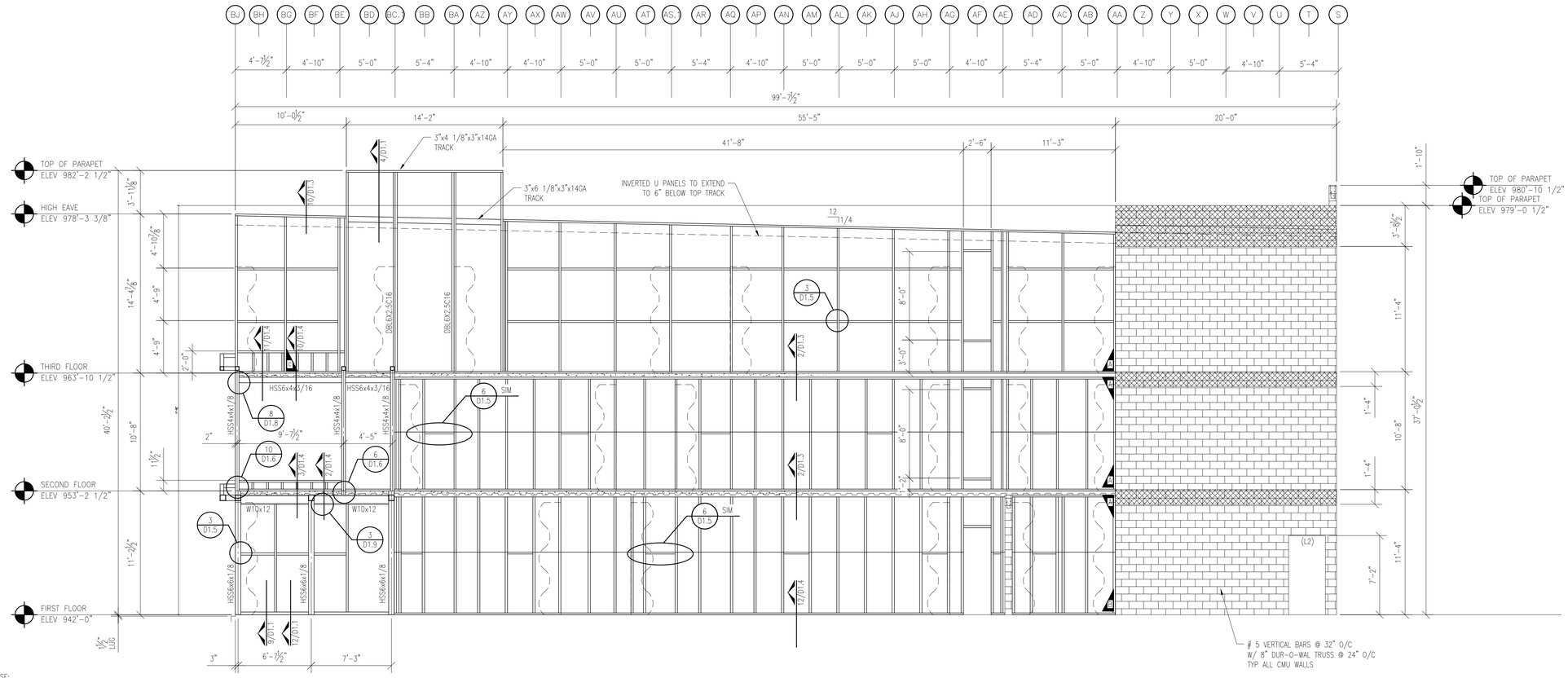
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.4




MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.5C16 @ 5'-0" O.C.
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-3RD. FLOOR GIRT 6x2.0C16
-3RD. FLOOR TOP CHANNEL 3x6 1/8x6 1/8x14ga TT4
-3RD. FLOOR BOTTOM TRACK 2x6 1/8x2x16ga

-2ND. FLOOR COLUMN 4x2.0C16 @ 2'-6" O.C.
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR BRIDGING 4x2.0C16 @ MIDPOINT
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1
-2ND. FLOOR MID POINT BRACING 2x16ga FLAT STRAP CONTINUOUS DO NOT BREAK
-2ND. FLOOR WINDOW JAMB 4x2.0C16
-2ND. FLOOR WINDOW HEADER 4x2.0C16
-2ND. FLOOR BOTTOM TRACK 2x4 1/8x2x16ga

-1ST. FLOOR COLUMN 6x2.0C16 @ 2'-6" O.C.
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR BRIDGING 6x2.0C16 @ MIDPOINT
-1ST. FLOOR TOP TRACK 3x6 1/8x3x14ga TT2
-1ST. FLOOR MID POINT BRACING 2x16ga FLAT STRAP CONTINUOUS DO NOT BREAK
-1ST. FLOOR WINDOW JAMB 6x2.0C16
-1ST. FLOOR WINDOW HEADER 6x2.0C16
-1ST. FLOOR BOTTOM TRACK 2x6 1/8x2x16ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. **BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.**

DENOTES THE LOCATION OF WALL/BASE ANCHOR.
TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 12/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

## FRAMING ELEVATION @ COLUMN LINE 3
(LOOKING EAST)

DENOTES THE LOCATION OF BOND BEAM (BOND BEAMS ARE CONTINUOUS AROUND STAIR UNLESS NOTED)

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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I am approving this document
2021.12.15 12:46:36 -06'00'

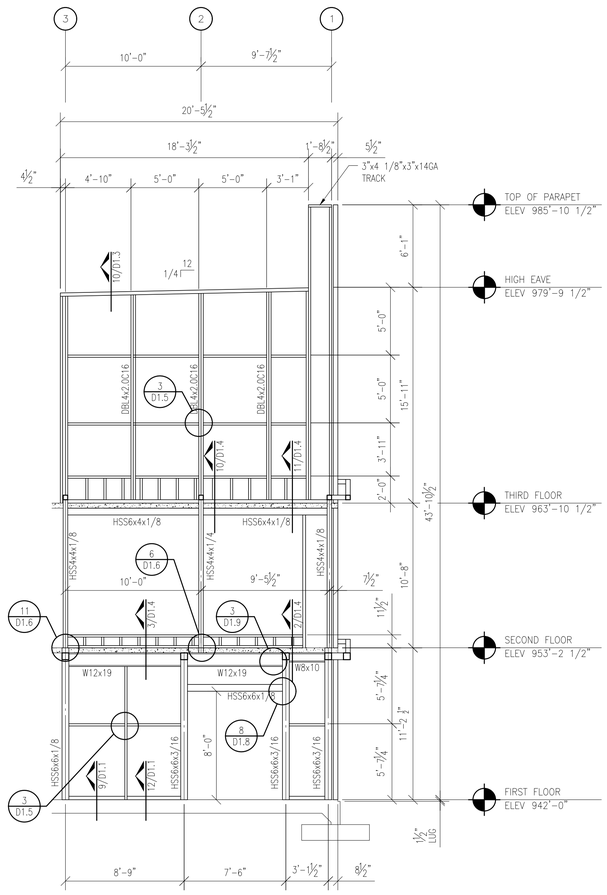
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.5




## FRAMING ELEVATION @ COLUMN LINE S

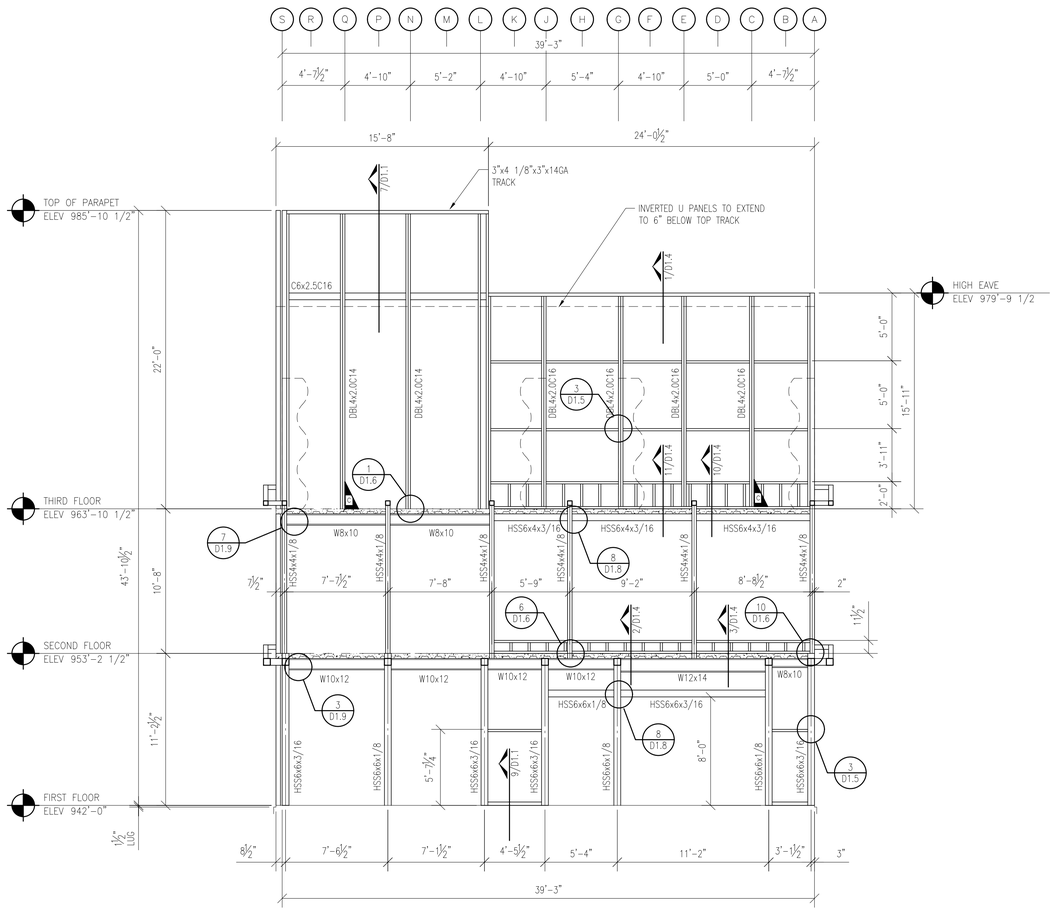
(LOOKING SOUTH)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR TOP TRACK 3x4 1/8x6 1/8x14ga TT3

-1ST. FLOOR COLUMN 6x2.0C16 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR BASE ANGLE 3x3x14ga.

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.




## FRAMING ELEVATION @ COLUMN LINE 1

(LOOKING EAST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16 @ 5'-0" O.C. MAX
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-3RD. FLOOR GIRT 4x2.0C16 @ 5'-0" O.C. MAX
-3RD. FLOOR TOP TRACK 3x4 1/8x4x14ga TT1

-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR BASE ANGLE 3x3x14ga.

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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PROFESSIONAL ENGINEER

Johnathan Green
Digitally signed by Johnathan Green
DN: cn=Johnathan Green, o=UIL on=force Engineering and Testing, email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 07:46:18 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

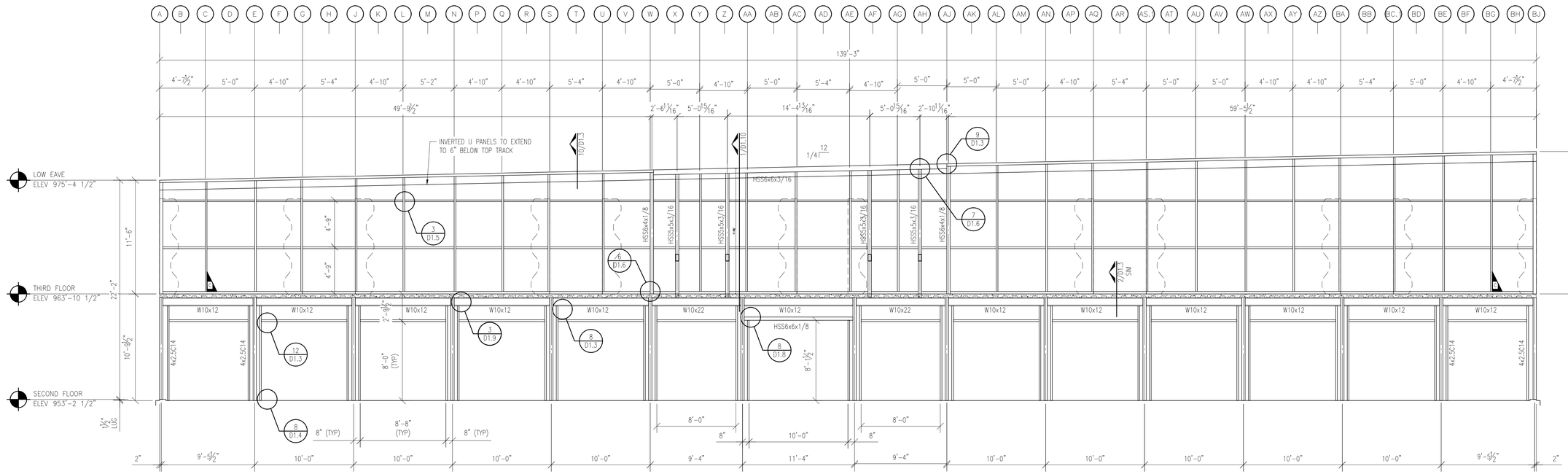
DRAWN :

REVISIONS:

FRAMING ELEVATIONS

SHEET NO.

S6.6




FRAMING ELEVATION @ COLUMN LINE 27
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 6x2.5C16 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 6x2.0C16
-3RD. FLOOR TOP TRACK 3x6 1/8x6 1/8x14ga TT4
-3RD. FLOOR BOTTOM TRACK 2x6 1/8x2x16ga

-2ND. FLOOR COLUMN HSS 4x4x1/8"
-2ND. FLOOR DOOR JAMB 4x2.5C16
-2ND. FLOOR DOOR HEADER 4x2.0C16

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. **BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.**

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

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PROFESSIONAL ENGINEER

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Date: 2021.12.15 07:46:01 -06'00'

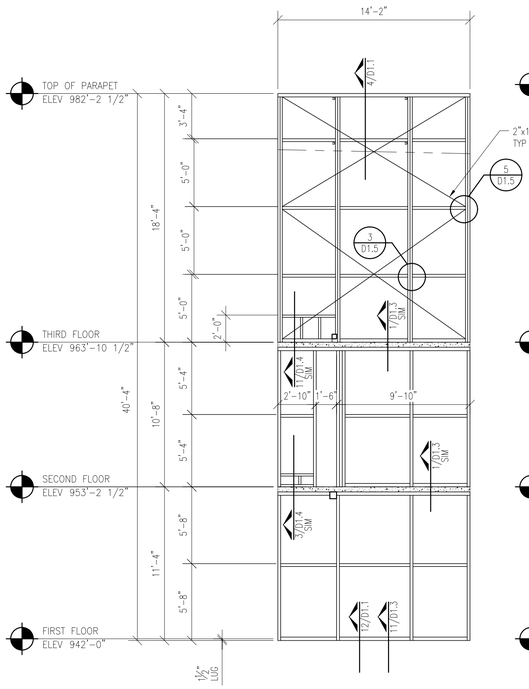
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

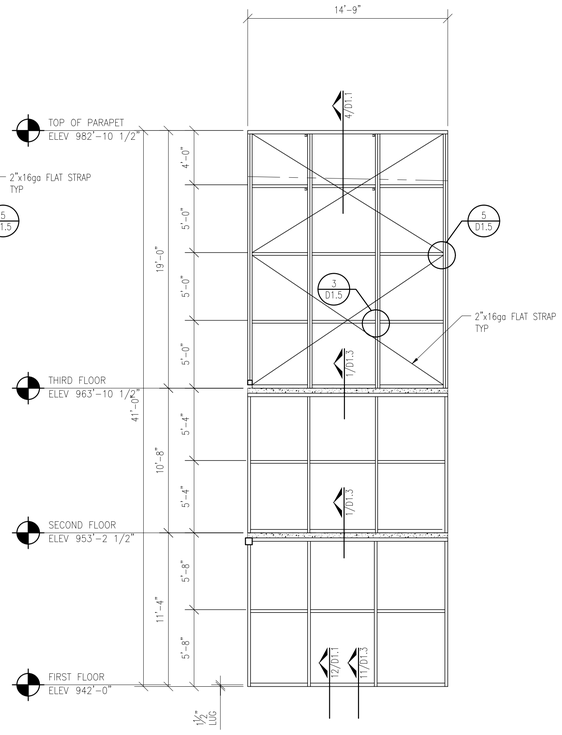
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

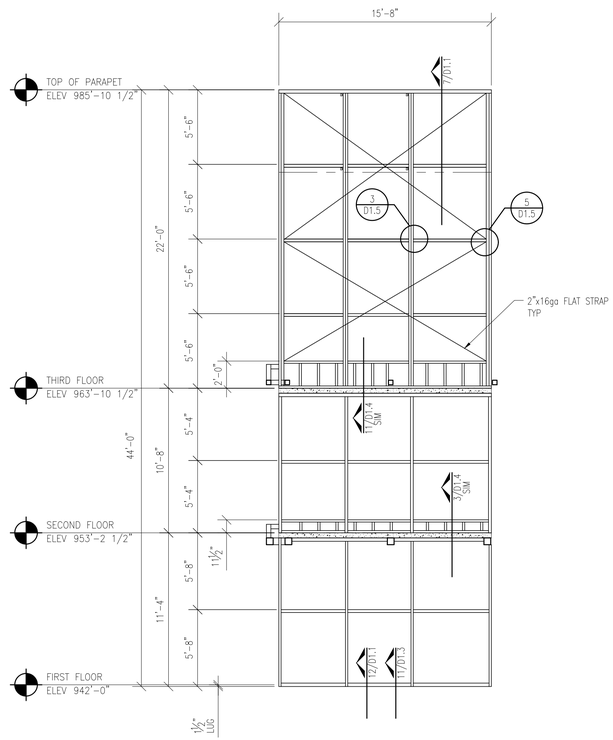
SHEET NO.
S6.7



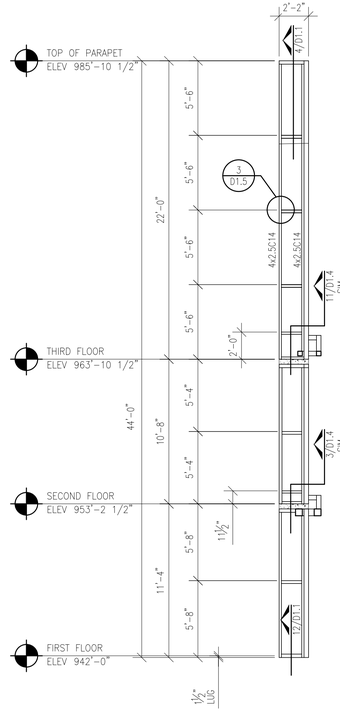

1 FRAMING ELEVATION



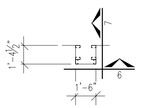

2 FRAMING ELEVATION



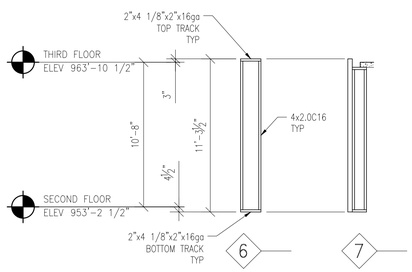

3 FRAMING ELEVATION




4 FRAMING ELEVATION




5 PLAN AT VERTICAL ACM FRAMING




MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN DBL 4x2.5C14 @ 5'-0" O.C. MAX
-3RD. FLOOR GIRT 4x2.0C16
-3RD. FLOOR TOP TRACK 3x4 1/8x3x14ga

-2ND. FLOOR COLUMN 4x2.0C16 @ 5'-0" O.C. MAX
-2ND. FLOOR GIRT 4x2.0C16 @ 5'-4" O.C. MAX
-2ND. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1

-1ST. FLOOR COLUMN 4x2.5C14 @ 5'-0" O.C. MAX
-1ST. FLOOR GIRT 4x2.0C16 @ 5'-8" O.C. MAX
-1ST. FLOOR TOP TRACK 3x4 1/8x3x14ga TT1
-1ST. FLOOR BASE ANGLE 3x3x14ga

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

Force Engineering & Testing Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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Date: 2022.12.15 12:48:41 -06'00'

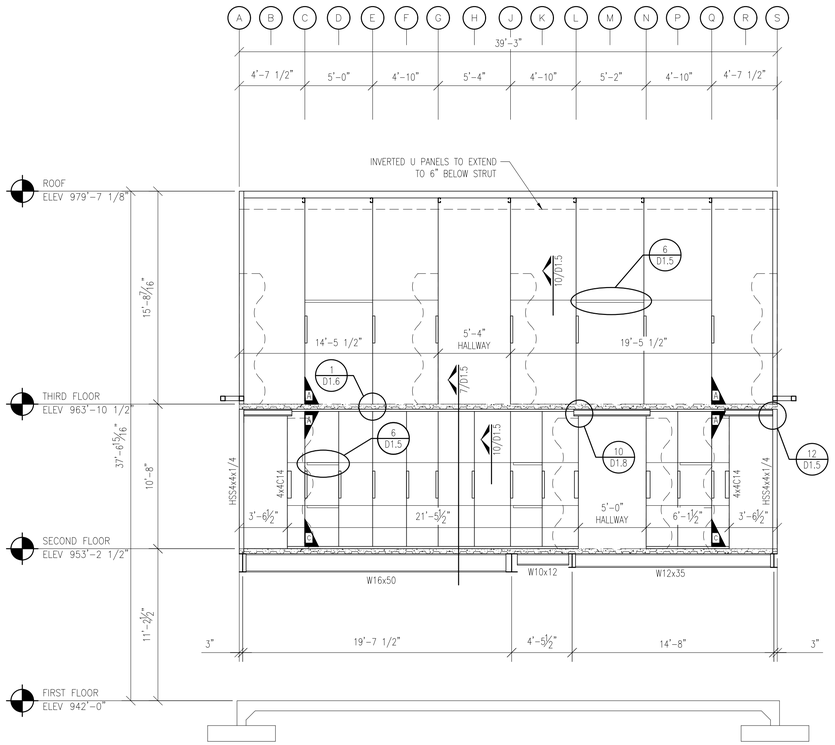
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

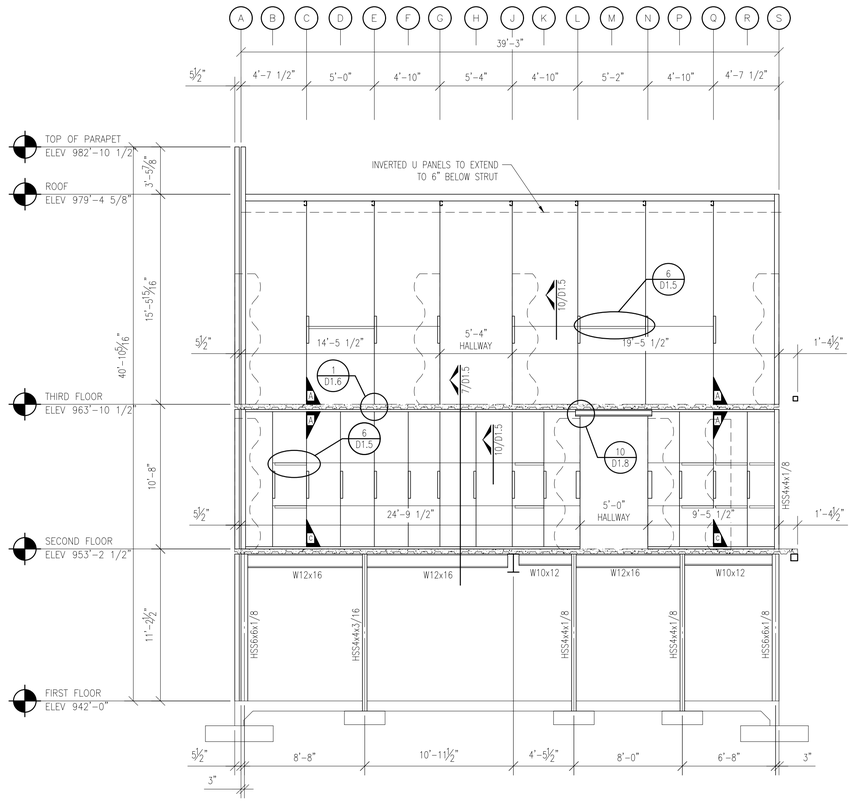
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S6.8




FRAMING ELEVATION @ COLUMN LINE 2
(LOOKING WEST)




FRAMING ELEVATION @ COLUMN LINE 3
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. **BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.**

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 07:40:01 -06'00'

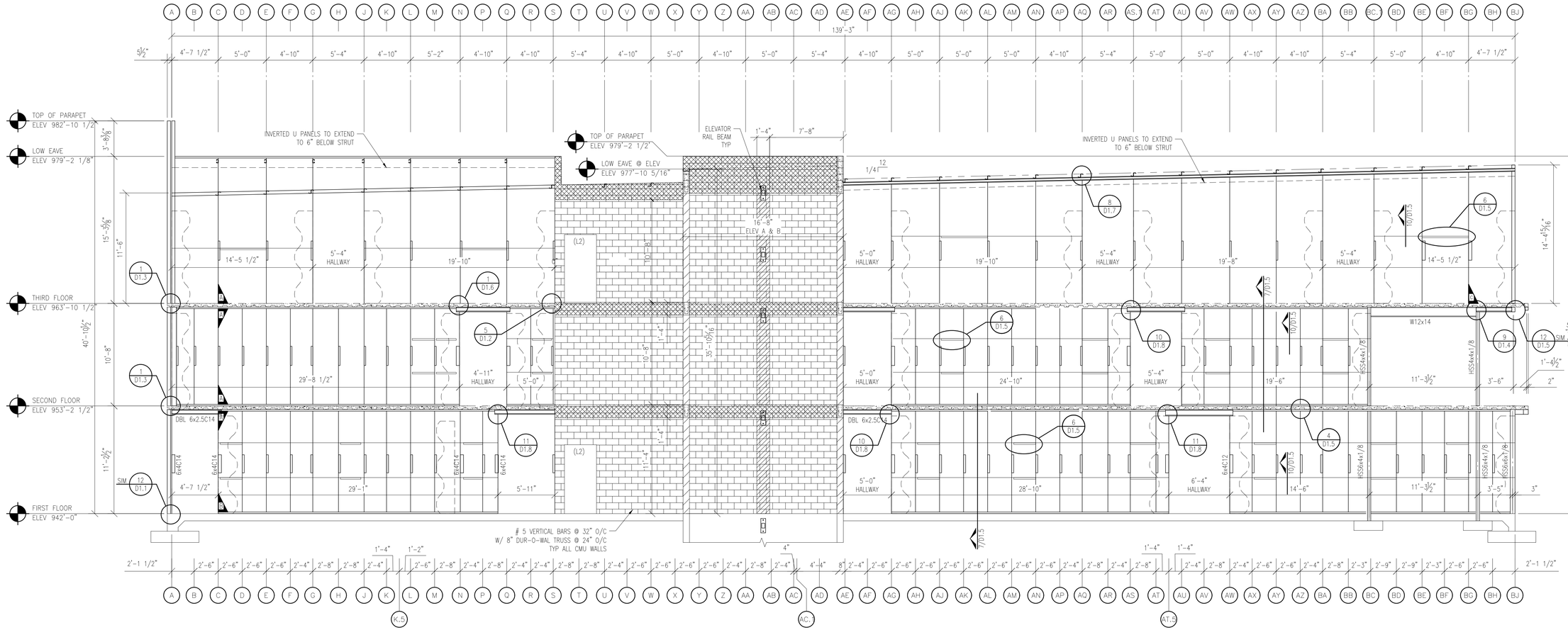
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.1




DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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2023.12.15 02:44:39 -06'00'

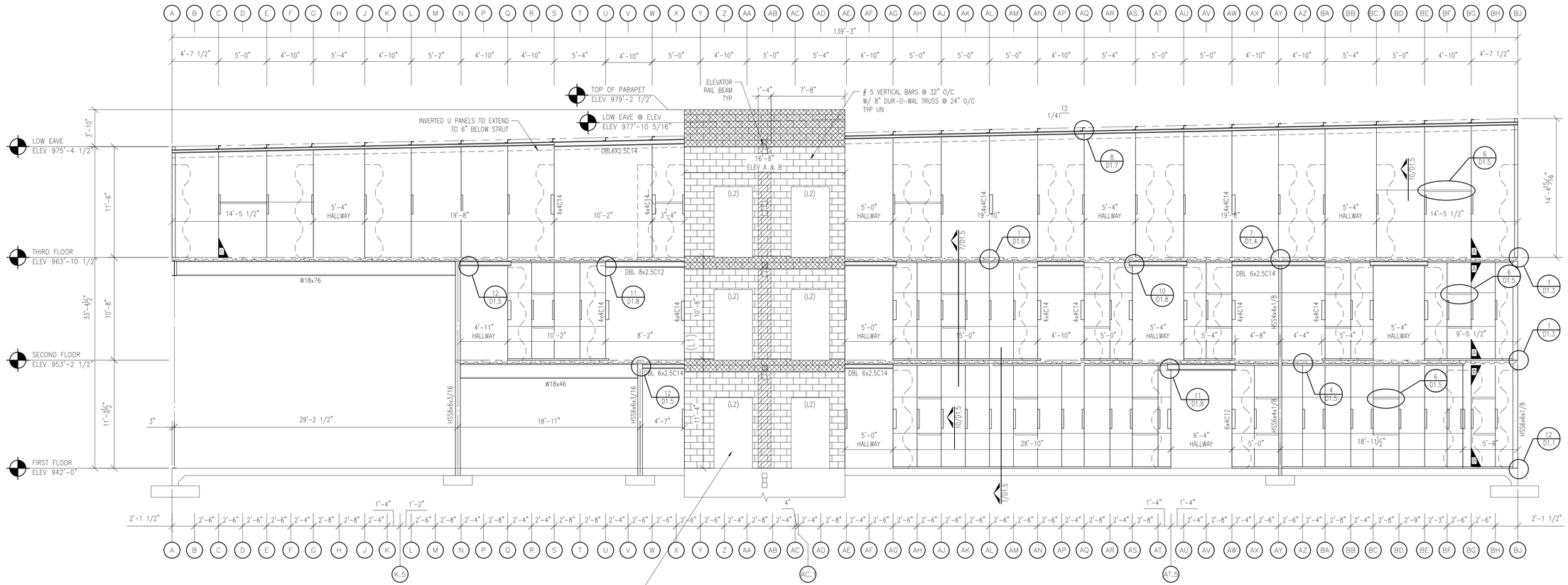
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.2




FRAMING ELEVATION @ COLUMN LINE 5

(LOOKING WEST)

DENOTES THE LOCATION OF BOND BEAM
(BOND BEAMS ARE CONTINUOUS AROUND STAIR)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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PROFESSIONAL ENGINEER

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dn=Johnathan Green, c=US, o=Force Engineering & Testing, email=jgreen@forceengineeringandtesting.com
I am approving this document
2023.12.15 02:44:20 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

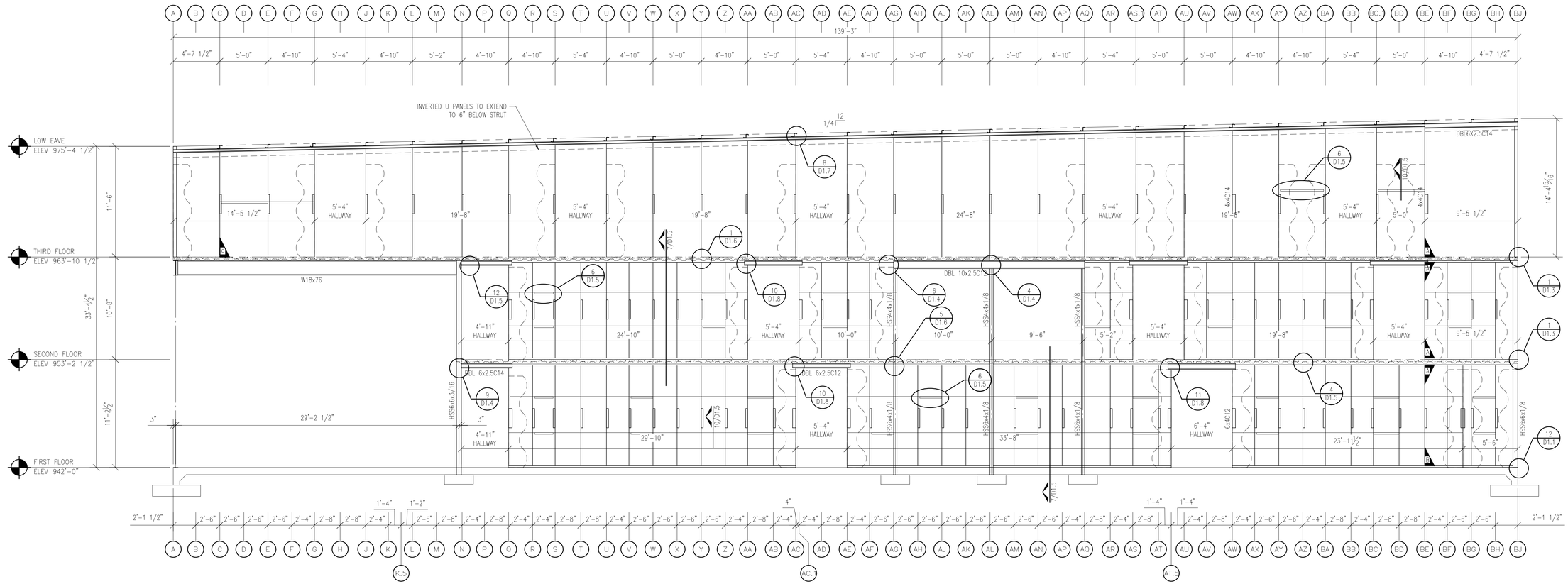
DRAWN :

REVISIONS:

FRAMING ELEVATIONS

SHEET NO.

S7.3




FRAMING ELEVATION @ COLUMN LINE 6

(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, o=Force Engineering & Testing, emailAddress=emailsignature@forceengineeringtesting.com
I am approving this document
2021.12.15 10:44:00 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

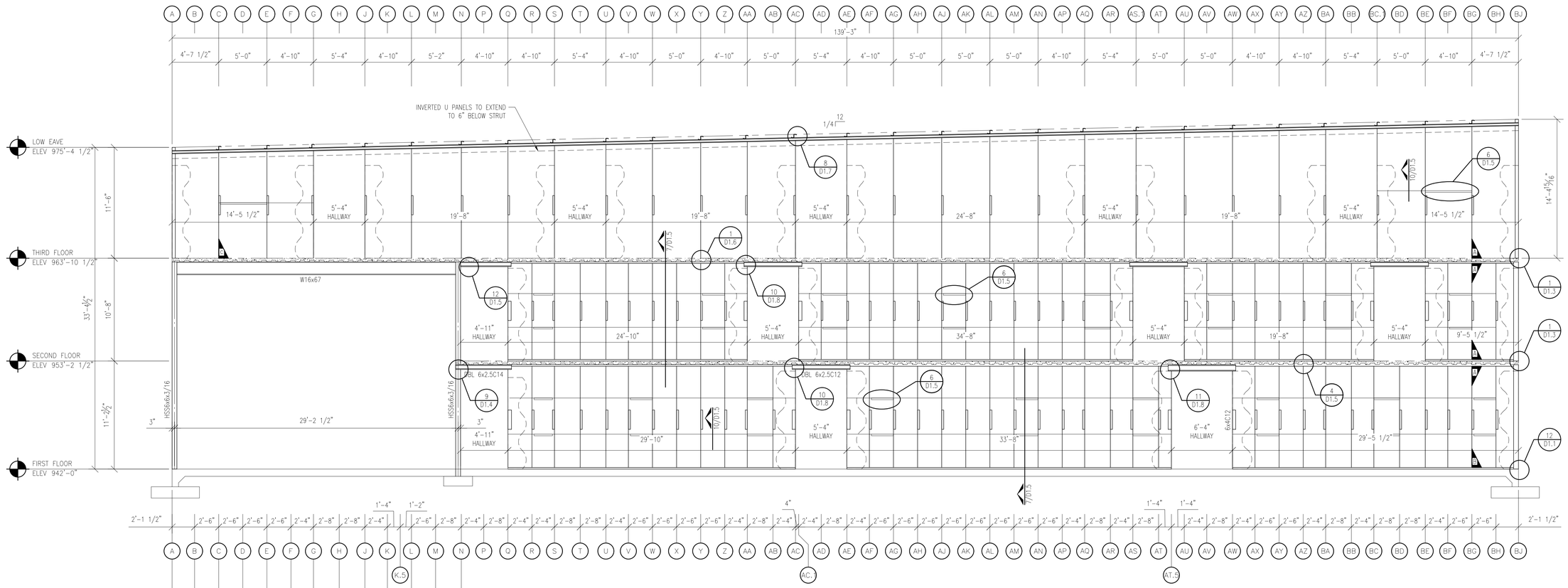
DRAWN :

REVISIONS:

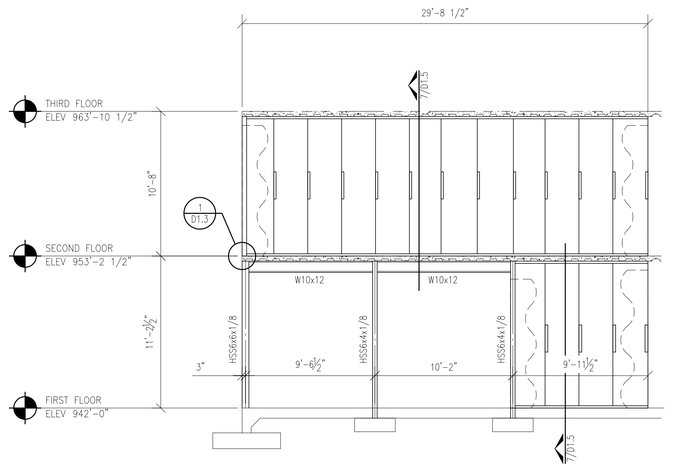
FRAMING ELEVATIONS

SHEET NO.

S7.4




FRAMING ELEVATION @ COLUMN LINE 7
(LOOKING WEST)




FRAMING ELEVATION @ COLUMN LINE 7.5
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, c=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
Johnathan Green
2021.12.15 02:43:41 -06'00'

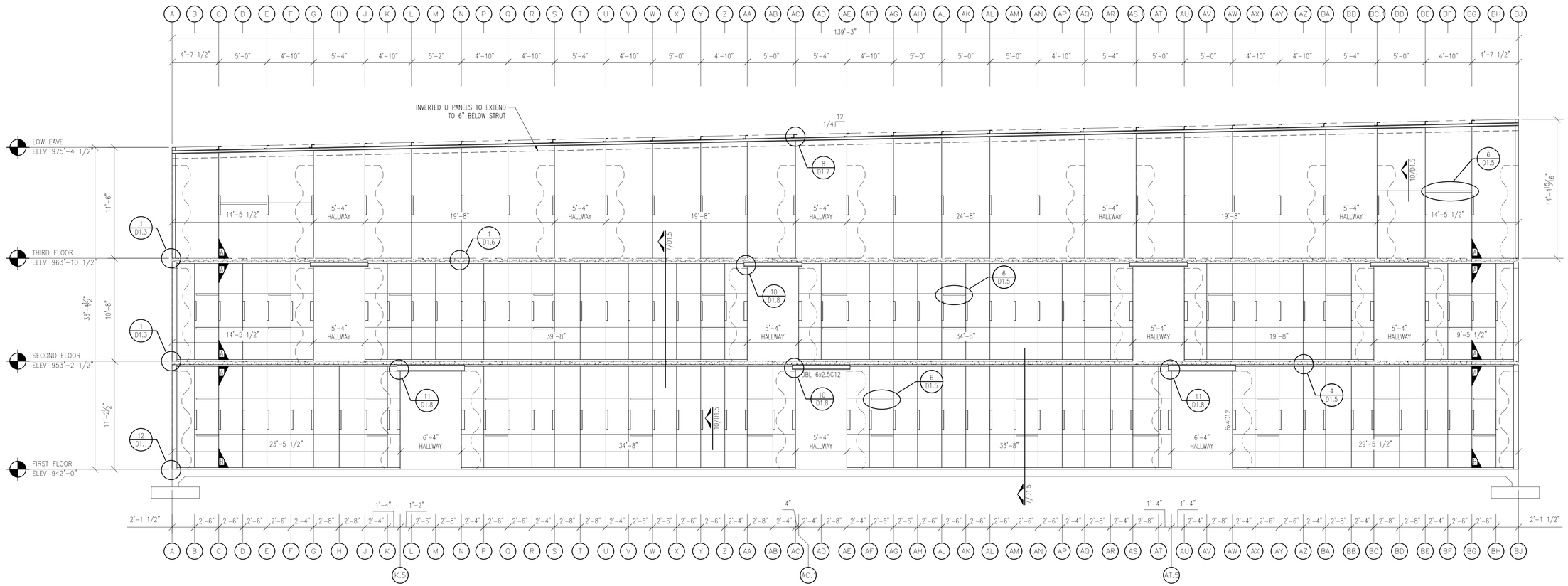
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.5




FRAMING ELEVATION @ COLUMN LINE 8
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. **BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.**

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, o=Force Engineering and Testing, e-mail:jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 02:43:17 -06'00'

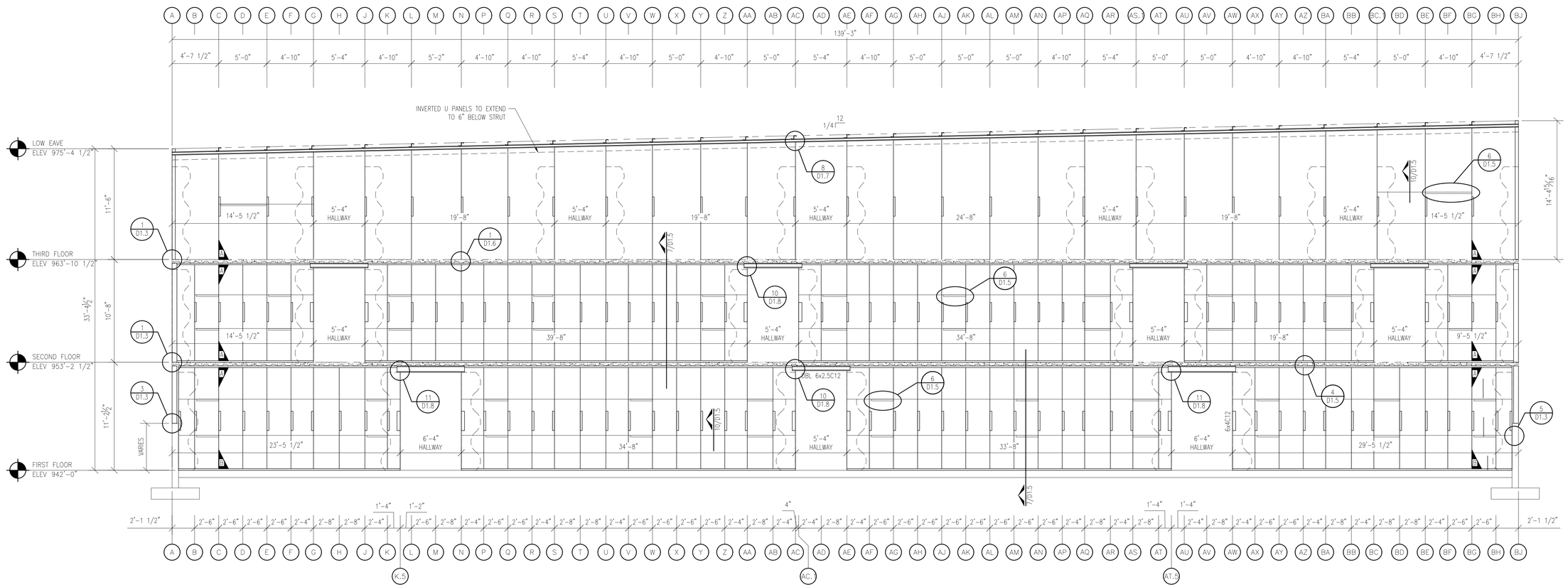
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.6




FRAMING ELEVATION @ COLUMN LINES 9–19
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

–3RD. FLOOR COLUMN 4x2.5C16
–3RD. FLOOR PARTITION PANEL–29ga. INVERTED "U" PANEL

–2ND. FLOOR COLUMN 4x2.0C16
–2ND. FLOOR HALLWAY COLUMN 4x4C14
–2ND. FLOOR BASE TRACK –2x4–1/8x2x16ga.
–2ND. FLOOR TOP TRACK –2x4–1/8x3x1x12ga. – (TT5)
–2ND. FLOOR 1/3 POINT BRACING–16ga. –SG–2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
–2ND. FLOOR PARTITION PANEL–29ga. INVERTED "U" PANEL
–2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

–1ST. FLOOR COLUMN 6x2.5C16
–1ST. FLOOR HALLWAY COLUMN 6x4C14
–1ST. FLOOR BASE TRACK –2x6–1/8x2x16ga.
–1ST. FLOOR TOP TRACK –2x6–1/8x3x1x12ga.– (TT6)
–1ST. FLOOR 1/3 POINT BRACING–16ga. –SG–2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
–1ST. FLOOR PARTITION PANEL–29ga. INVERTED "U" PANEL
–1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. **BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.**

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W–BEAM SHEAR PLATE CONNECTIONS.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
(281) 540–6603 Fax: (281) 540–9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, o=Force Engineering & Testing Inc.
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2021.12.15 02:42:58 -06'00'

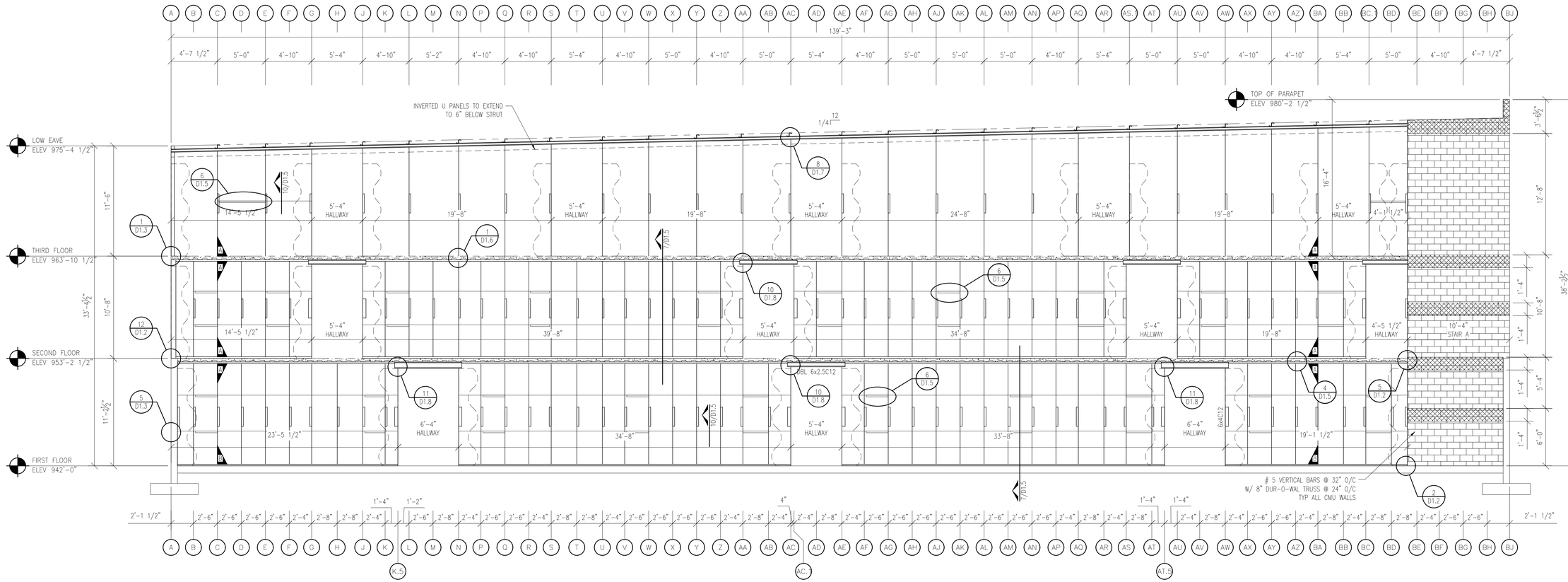
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.7




FRAMING ELEVATION @ COLUMN LINE 20 & 22

(LOOKING WEST)

DENOTES THE LOCATION OF BOND BEAM
(BOND BEAMS ARE CONTINUOUS AROUND STAIR)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

B — DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
DN: cn=Johnathan Green, o=US, ou=Force Engineering & Testing Inc, email=jgreen@forceengineeringandtesting.com
I am approving this document
2021.12.15 02:42:40 -05'00'

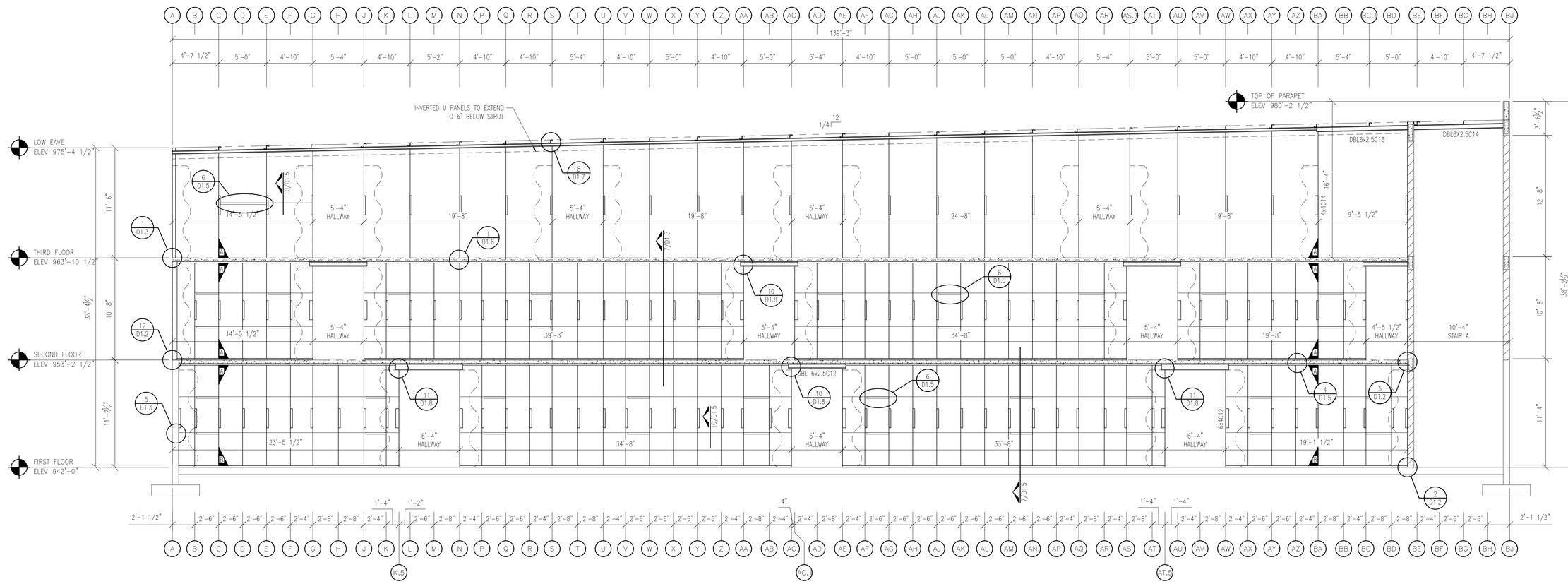
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATIONS

SHEET NO.
S7.8




FRAMING ELEVATION @ COLUMN LINES 21
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING : SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:
1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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PROFESSIONAL ENGINEER

Johnathan Green
DN: cn=Johnathan Green, o=US, ou=Force Engineering and Testing, e=sarahgreen@forceengineeringandtesting.com
I am approving this document
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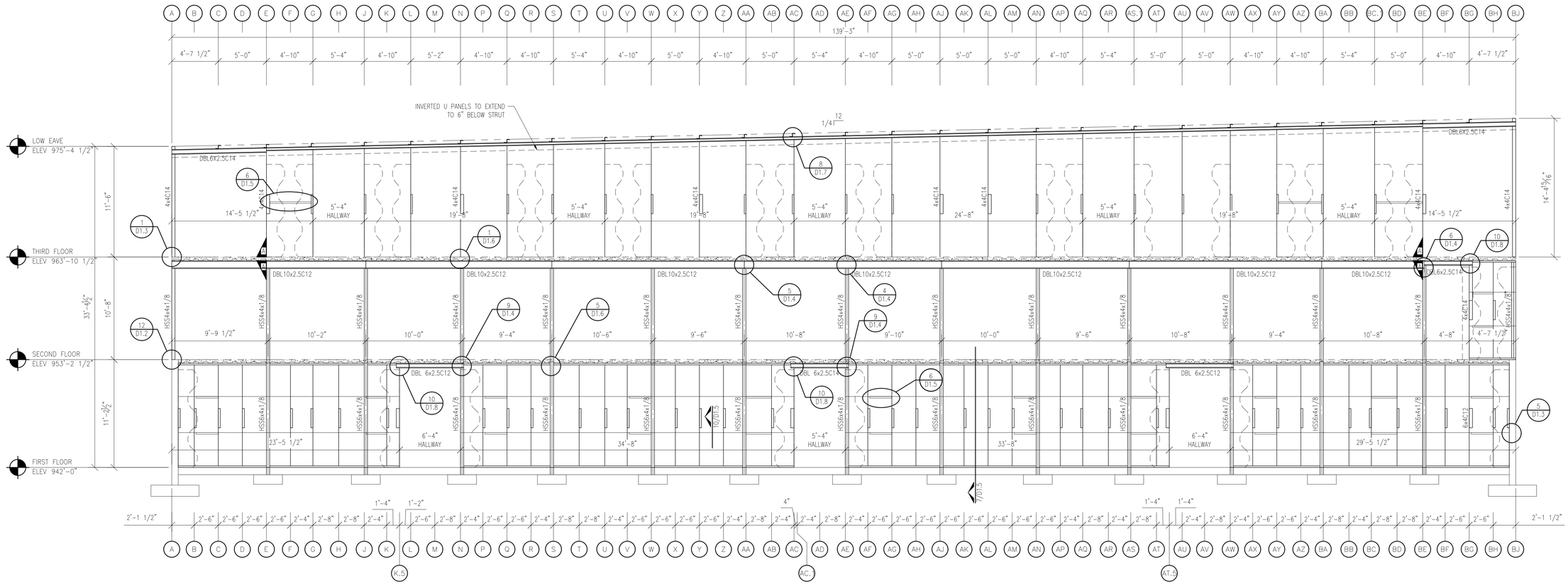
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATION

SHEET NO.
S7.9




FRAMING ELEVATION @ COLUMN LINES 23

(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
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-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

Force Engineering & Testing Inc.
19530 RAMBLEWOOD DRIVE HUMBLE, TX 77338
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
DN: cn=Johnathan Green, o=US, ou=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 10:42:10 -06'00'

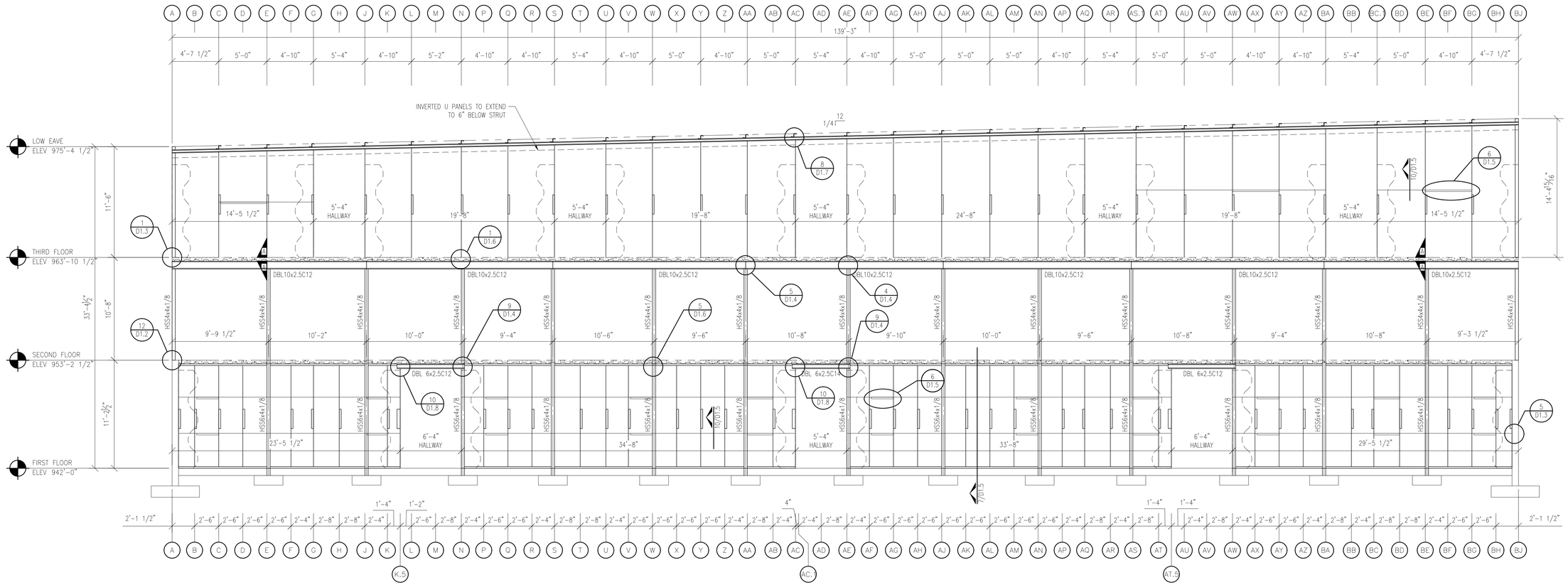
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATION

SHEET NO.
S7.10




FRAMING ELEVATION @ COLUMN LINES 24 & 26

(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

B — DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
3) SEE DETAIL 1/D1.1 FOR PARTITION PANEL ATTACHMENT DETAIL.
4) SEE DETAIL 7/D1.3 FOR 1ST AND 2ND FLOOR BOTTOM TRACK SPLICE.
5) SEE DETAIL 6/D1.3 FOR 1ST AND 2ND FLOOR TOP TRACK SPLICE.
6) TOP TRACK SHALL BE CONTINUOUS ACROSS ALL HEADERS. IF THE TRACK IS NOT CONTINUOUS ACROSS HEADER, THE HEADER MUST BE STITCHED TO METAL DECK PER DETAIL 8/D1.6.
7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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I am approving this document
2021.12.15 02:41:35 -06'00'

# LAKEWOOD STORAGE

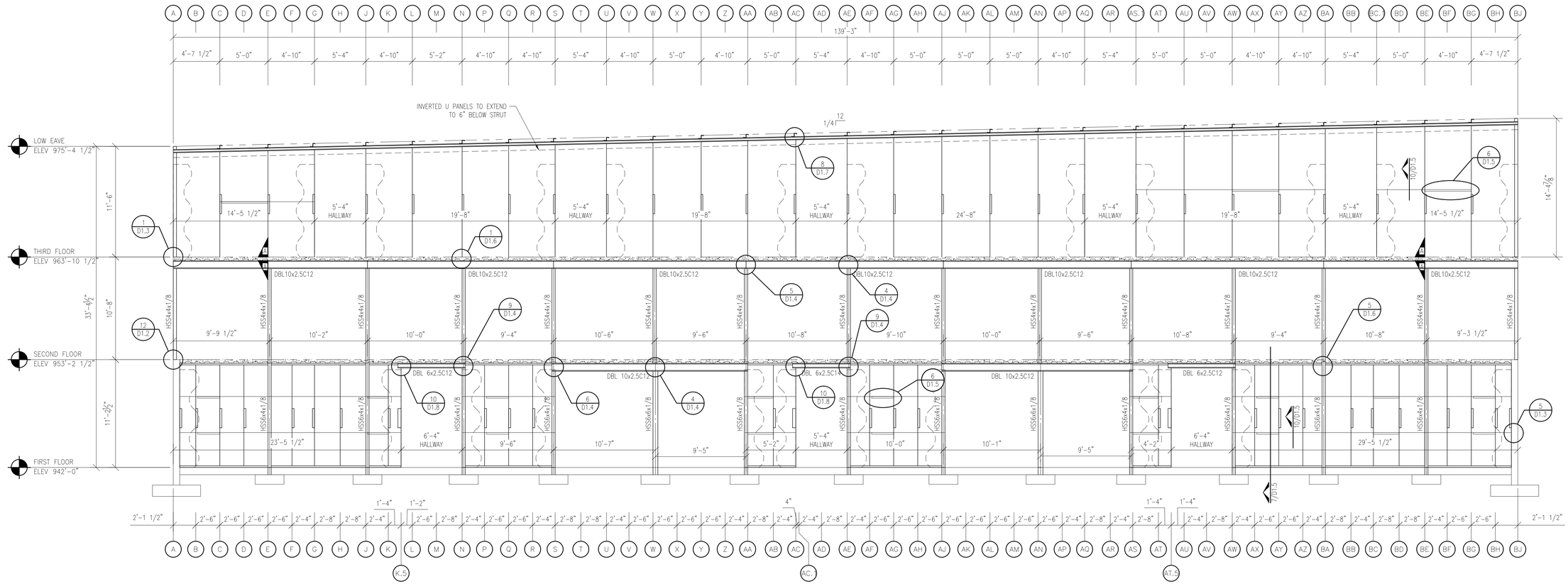
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATION

SHEET NO.

S7.11




FRAMING ELEVATION @ COLUMN LINE 25
(LOOKING WEST)

MATERIAL TO BE AS FOLLOWS UNLESS NOTED OTHERWISE:

-3RD. FLOOR COLUMN 4x2.5C16
-3RD. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL

-2ND. FLOOR COLUMN 4x2.0C16
-2ND. FLOOR HALLWAY COLUMN 4x4C14
-2ND. FLOOR BASE TRACK -2x4-1/8x2x16ga.
-2ND. FLOOR TOP TRACK -2x4-1/8x3x1x12ga. - (TT5)
-2ND. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT) CONTINUOUS DO NOT BREAK
-2ND. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-2ND. FLOOR HALLWAY HEADER DBL 6x2.5C14 (U.N.O.)

-1ST. FLOOR COLUMN 6x2.5C16
-1ST. FLOOR HALLWAY COLUMN 6x4C14
-1ST. FLOOR BASE TRACK -2x6-1/8x2x16ga.
-1ST. FLOOR TOP TRACK -2x6-1/8x3x1x12ga.- (TT6)
-1ST. FLOOR 1/3 POINT BRACING-16ga. -SG-2 (1/2" SUBGIRT)CONTINUOUS DO NOT BREAK
-1ST. FLOOR PARTITION PANEL-29ga. INVERTED "U" PANEL
-1ST. FLOOR HALLWAY HEADER DBL 8x2.5C12 (U.N.O.)

SEE DETAIL 9/D1.6 FOR TOP TRACK SCHEDULE.

DENOTES THE LOCATION OF BEARING WALL SHEATHING. ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR LATERAL BRACING OF THE STRUCTURE. BEARING WALL SHEATHING SHALL NOT REMOVED OR MODIFIED WITHOUT THE CONSENT OF THE ENGINEER OF RECORD.

DENOTES THE LOCATION OF WALL/BASE ANCHOR.

TYPE A: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 6/D1.8
TYPE B: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 7/D1.8
TYPE C: SIMPSON S/DTT2Z TENSION TIE
SEE DETAIL 9/D1.8

ERECTION NOTES:

1) SEE DETAIL 2/D1.5 COMPOSITE DECK DETAIL
2) SEE DETAILS 1/D1.5 & 3/D1.6 FOR TYPICAL DECK ATTACHMENT DETAILS.
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7) SEE DETAIL 3/D1.9 FOR TYPICAL W-BEAM SHEAR PLATE CONNECTIONS.

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STATE OF MISSOURI
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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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I am approving this document
2021.12.15 12:41:17 -06'00'

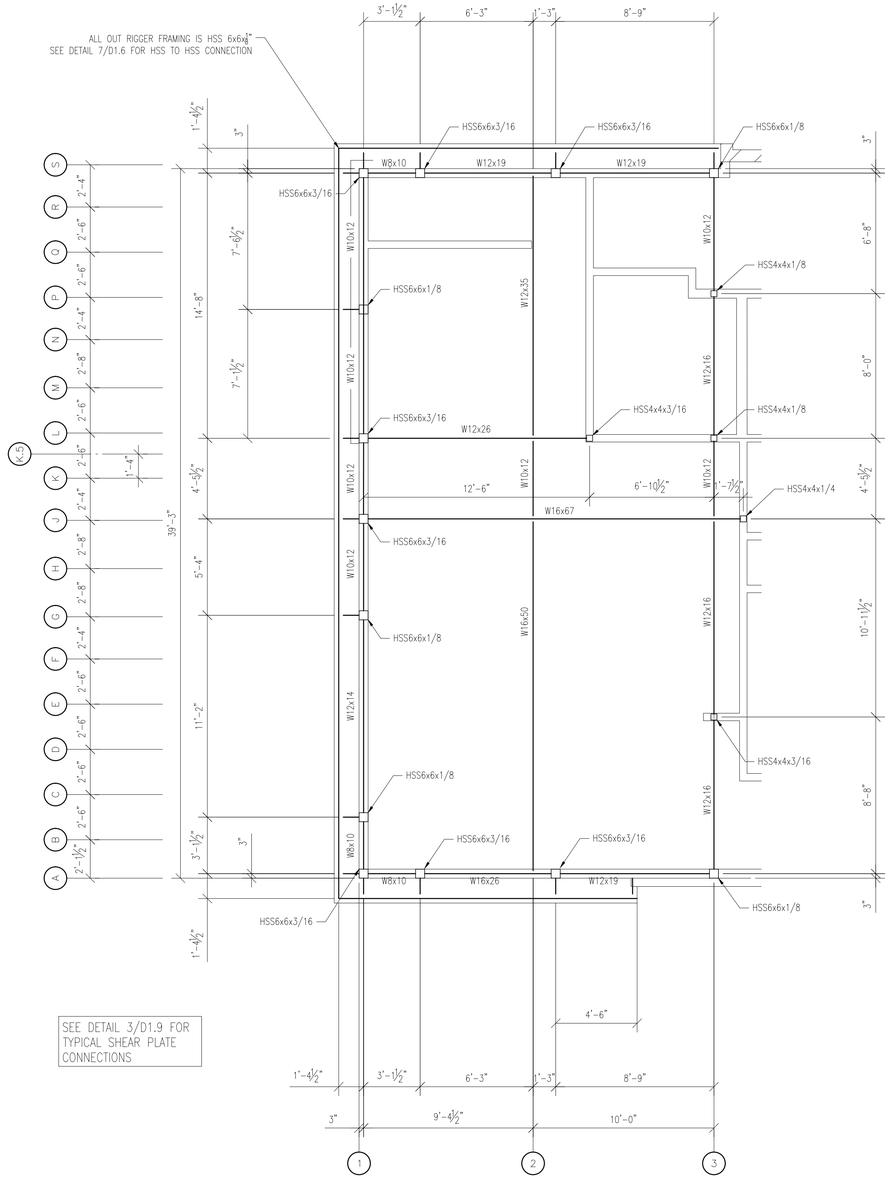
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING ELEVATION

SHEET NO.
S7.12




SEE DETAIL 3/D1.9 FOR TYPICAL SHEAR PLATE CONNECTIONS

## 2ND FLOOR FRAMING PLAN @ OFFICE

(TOS ELEV 952'-10" UNO)


Force Engineering & Testing Inc.
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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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I am approving this document
2021.12.15 02:40:42 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

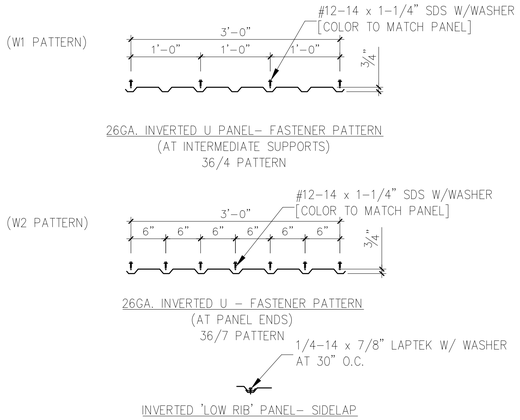
DRAWN :

REVISIONS:

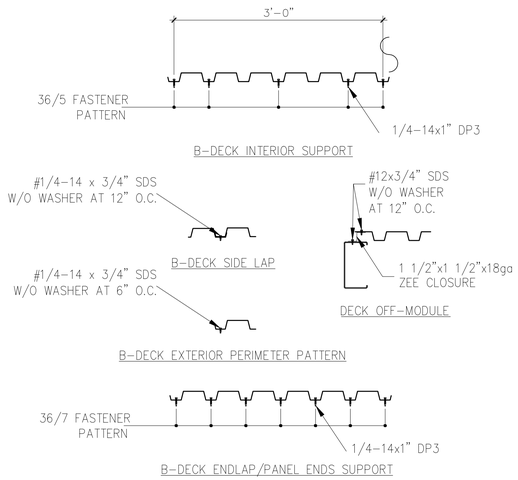
FRAMING PLANS

SHEET NO.

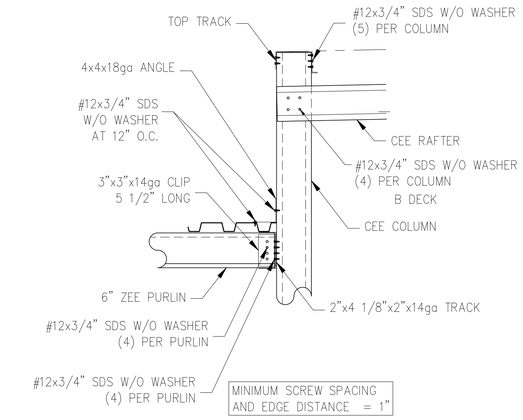
S8.1



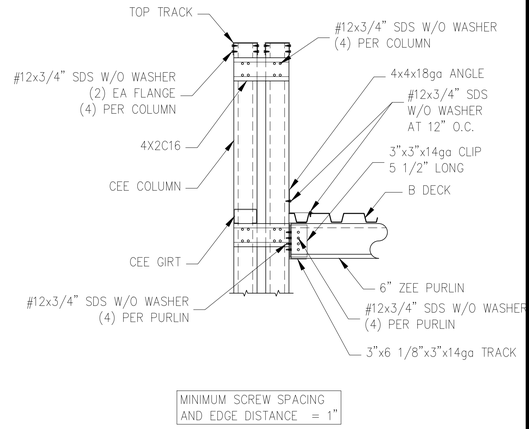

1 PARTITION PANEL ATTACHMENT
1"=1'-0"



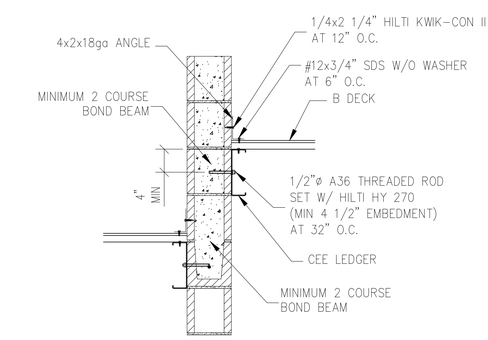

2 1.5 B-DECK ATTACHMENT
1"=1'-0"



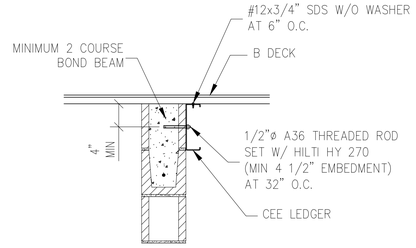

3 LOW EAVE AT UPPER ROOF
1"=1'-0"



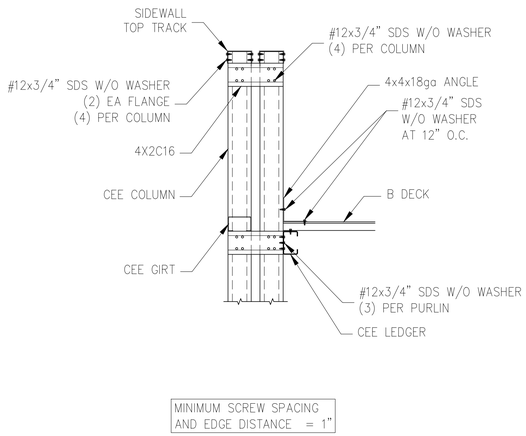

4 RAKE PARAPET
1"=1'-0"



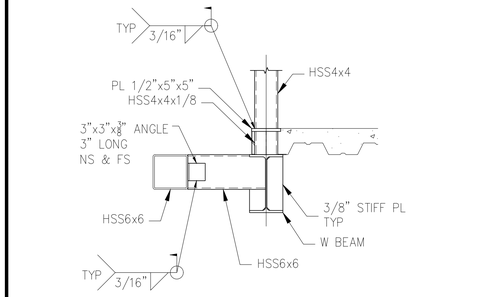

5 HIGH EAVE PARAPET AT ELEVATOR
1"=1'-0"



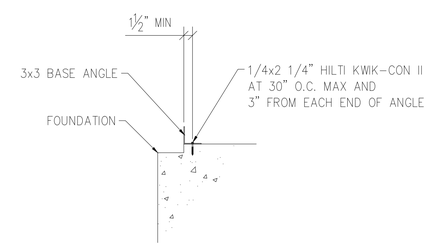

6 CEE LEDGER TO CMU WALL AT STAIR
1"=1'-0"



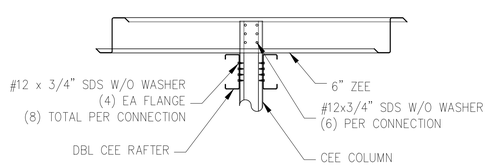

7 HIGH EAVE PARAPET
1"=1'-0"



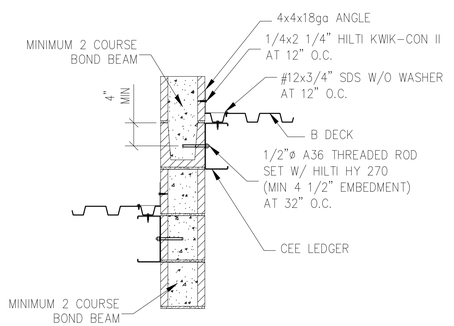

8 HSS COLUMN TO W BEAM
HSS COLUMN TO W BEAM



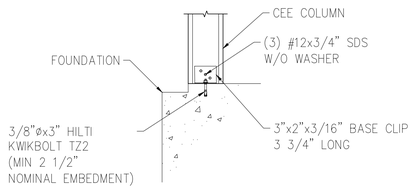

9 1ST FLOOR BASE ANGLE
1"=1'-0"




10 DBL CEE RAFTER TO COLUMN
1"=1'-0"




11 RAKE PARAPET AT ELEVATOR
1"=1'-0"




12 1ST FLOOR EXTERIOR COLUMN
1"=1'-0"

Force Engineering & Testing, Inc.
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PROFESSIONAL ENGINEER

Johnathan Green
Dn: cn=Johnathan Green, o=US, ou=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
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2021.12.15 15:40:21 -06'00'

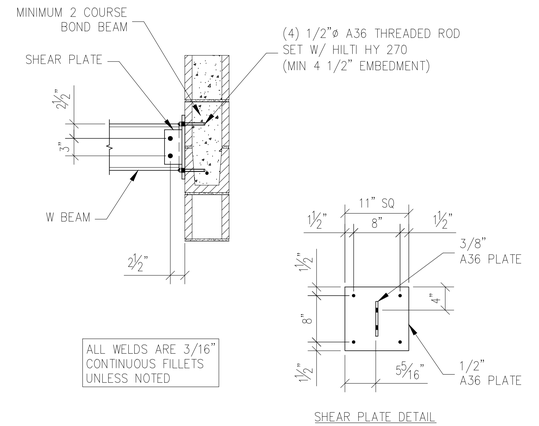
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

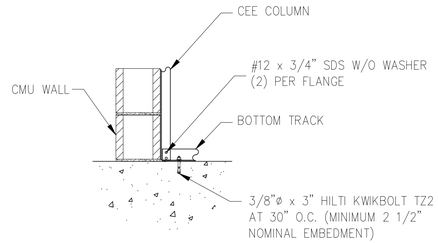
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

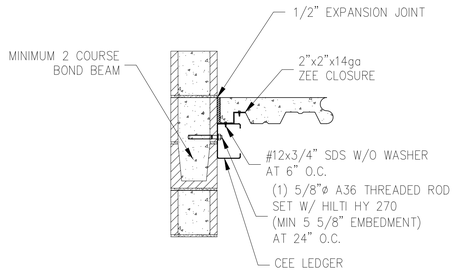
SHEET NO.
D1.1



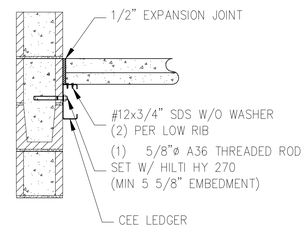

1 ELEVATOR SAFETY BEAM TO CMU
1"=1'-0"




2 1ST FLOOR BEARING WALL AT CMU
1"=1'-0"




3 CMU LEDGER PARALLEL TO DECK
1"=1'-0"




4 CMU LEDGER PERPENDICULAR TO DECK
1"=1'-0"




5 2ND & 3RD FLOOR BEARING WALL AT CMU
1"=1'-0"




6 LOW EAVE AT ELEVATOR
1"=1'-0"




7 CEE LEDGER TO CMU WALL AT HIGH EAVE PARAPET
1"=1'-0"




8 PURLIN CONNECTION TO CMU WALL AT STAIR
1"=1'-0"




9 RAFTER CONNECTION AT CMU WALL
1"=1'-0"




10 PURLIN CONNECTION TO CMU WALL AT ELEVATOR
1"=1'-0"




11 CEE LEDGER TO CMU WALL AT RAKE PARAPET
1"=1'-0"




12 2ND FLOOR EXTERIOR COLUMN AT RETAINING WALL
1"=1'-0"

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Johnathan Green
Dn: Johnathan Green, cn=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 10:40:10 -06'00'

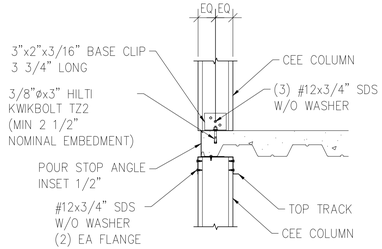
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

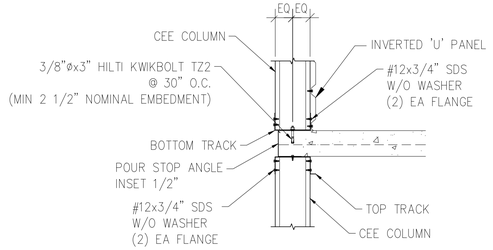
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

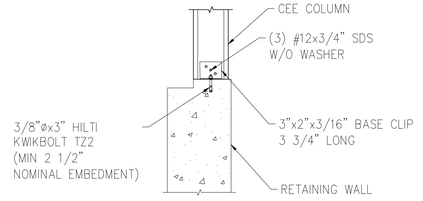
SHEET NO.
D1.2



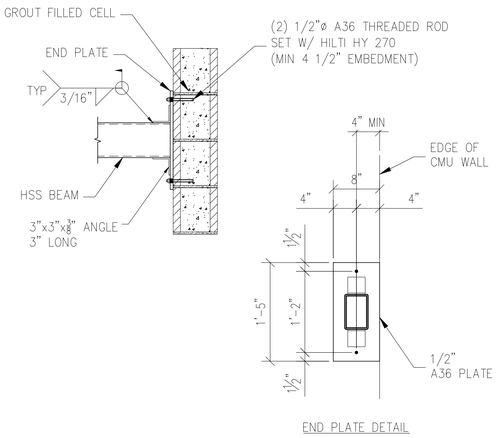

1 2ND & 3RD FLOOR AT EXTERIOR WALL (PARALELL TO DECK)
1"=1'-0"




2 2ND & 3RD FLOOR AT EXTERIOR WALL (PERP TO DECK)
1"=1'-0"

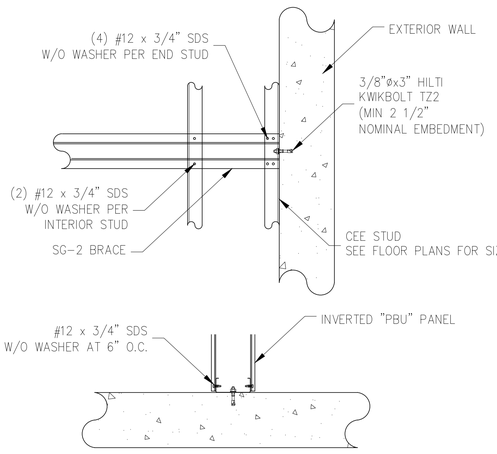



3 1ST FLOOR EXTERIOR COLUMN AT RETAINING WALL
1"=1'-0"

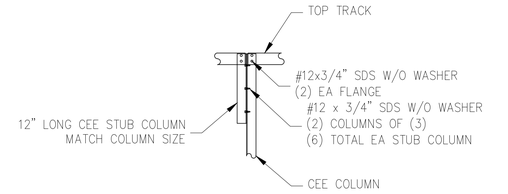



END PLATE DETAIL

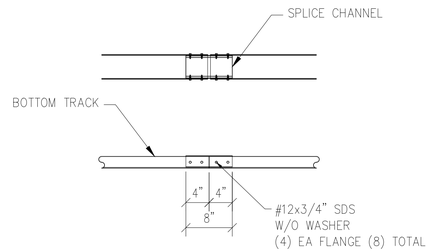
4 HSS BEAM TO CMU
1"=1'-0"



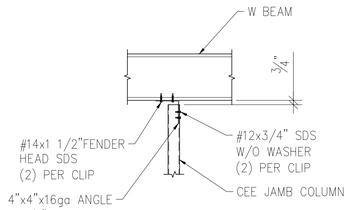

5 CEE COLUMN TO CONCRETE WALL
1"=1'-0"



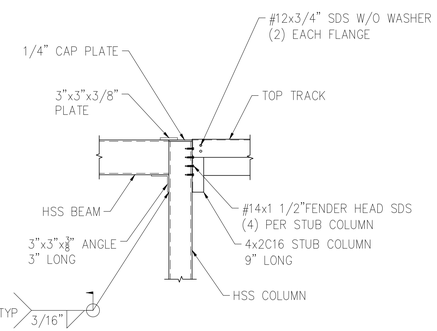

6 TOP TRACK SPLICE
1"=1'-0"



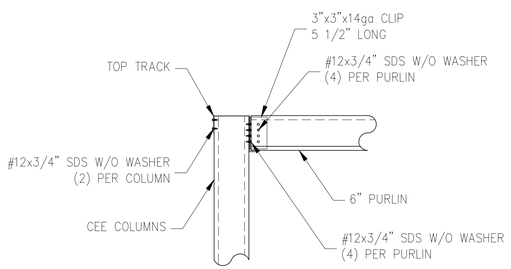

7 BOTTOM TRACK SPLICE
1"=1'-0"



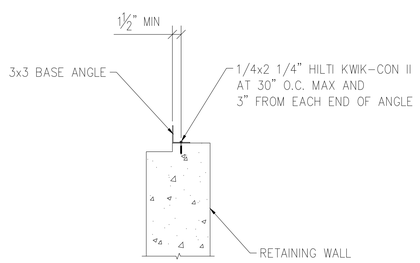

8 JAMB TO W BEAM
1"=1'-0"



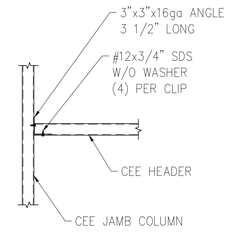

9 HSS BEAM TO HSS COLUMN
1"=1'-0"




10 RAKE
1"=1'-0"




11 BASE ANGLE AT RETAINING WALL
1"=1'-0"




12 HEADER TO JAMB
1"=1'-0"

Force Engineering & Testing Inc.
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(281) 540-6603 Fax: (281) 540-9966

STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, c=US, o=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
Johnathan Green
2021.12.15 07:29:42 -06'00'

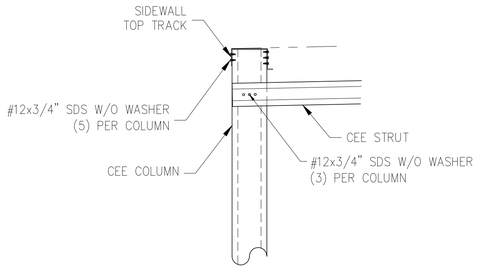
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

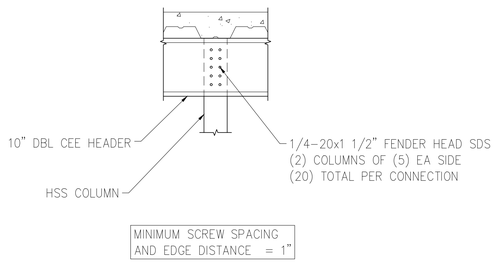
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

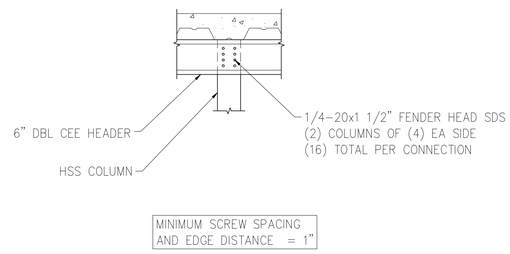
SHEET NO.
D1.3



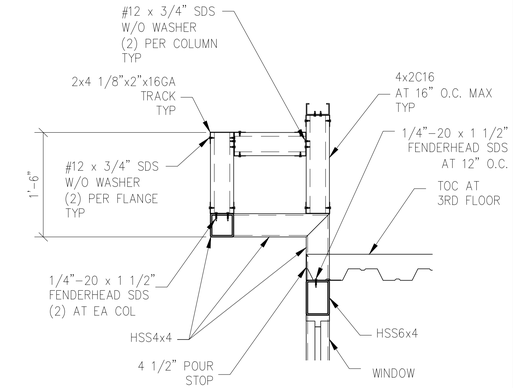

1 EAVE FRAMING
1"=1'-0"



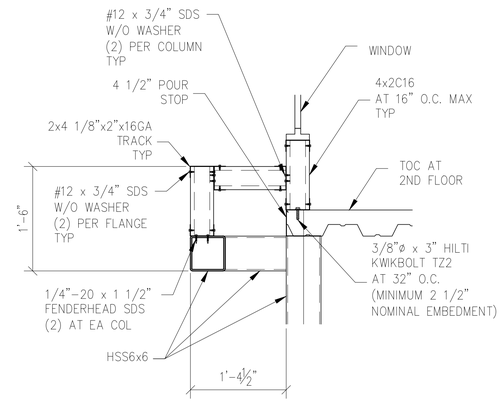

4 10" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"



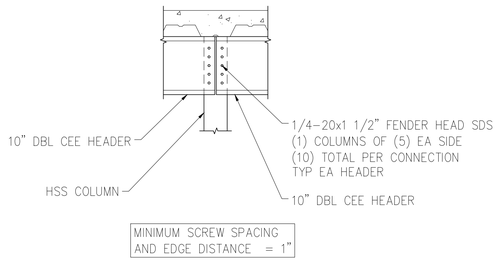

7 6" DOUBLE CEE HEADER TO HSS COLUMN
1"=1'-0"



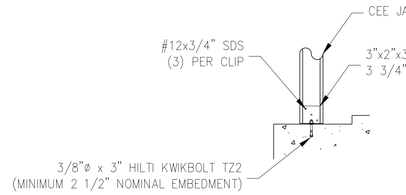

10 SECTION THRU DISPLAY AREA AT 3RD FLOOR
1"=1'-0"



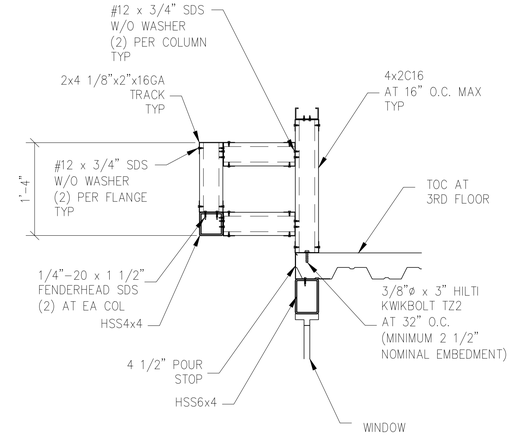

2 SECTION THRU DISPLAY AREA AT 2ND FLOOR
1"=1'-0"



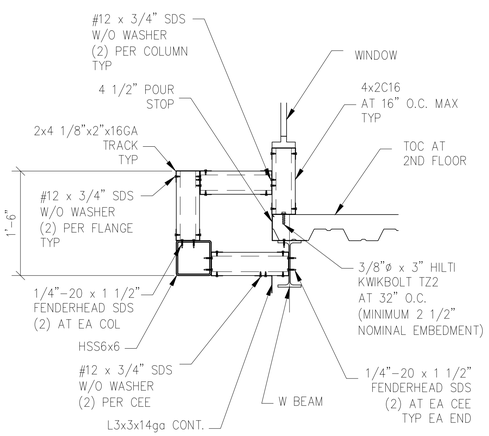

5 10" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"



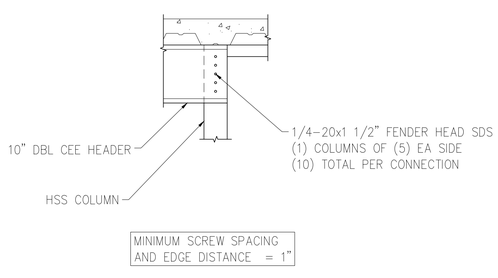

8 JAMB CONNECTION TO FOUNDATION
1"=1'-0"



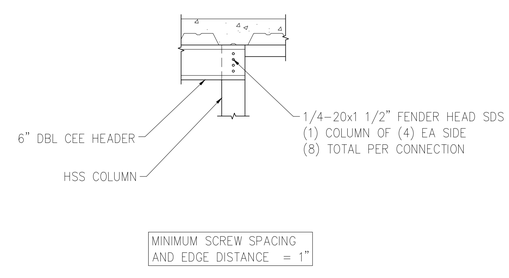

11 SECTION THRU DISPLAY AREA AT 3RD FLOOR
1"=1'-0"



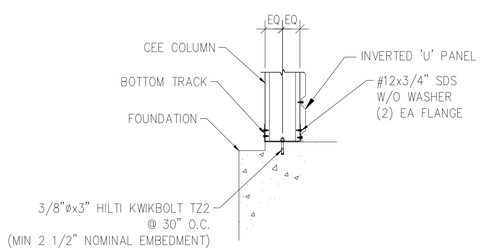

3 SECTION THRU DISPLAY AREA AT 2ND FLOOR
1"=1'-0"




6 10" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"




9 6" DBL CEE HEADER TO HSS COLUMN
1"=1'-0"




12 1ST FLOOR AT EXTERIOR ENDWALL
1"=1'-0"

Force Engineering & Testing Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
dn: cn=Johnathan Green, o=ES, ou=Force Engineering and Testing, email=jgreen@forcengineeringtesting.com
I am approving this document
2021.12.15 02:28:23 -06'00'

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

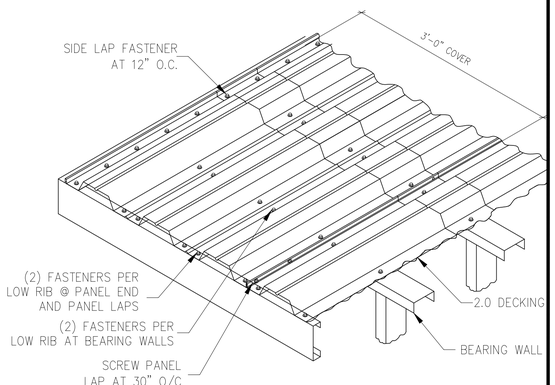
DRAWN :

REVISIONS:

FRAMING DETAILS

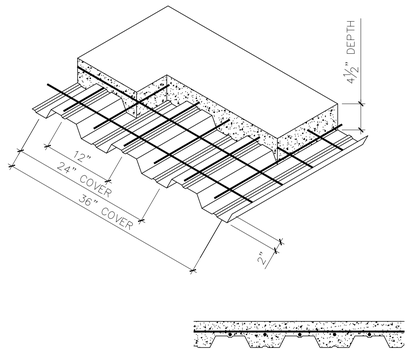
SHEET NO.

D1.4



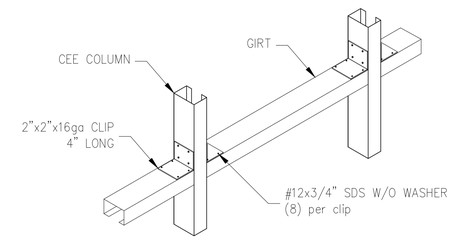

FASTENERS:
1) #12 x 3/4" SDS W/ WASHER @ GAGE STEEL
2) HILTI X-U UKS FASTENER AT 8" O.C. ALONG CONCRETE LEDGER

1 TYPICAL COMPOSITE DECK ATTACHMENT
1" = 1'-0"




DESIGN THICKNES 0.0474 FY=33 KSI 18ga G-60 COMPOSITE FLOOR DECKING
FOR 4-1/2" COMPOSITE SLAB (4000 psi CONCRETE)
REINFORCEMENT: 6X6-W1.4 x W1.4 WWR
OR EQUIVALENT STEEL FIBER REINFORCING.

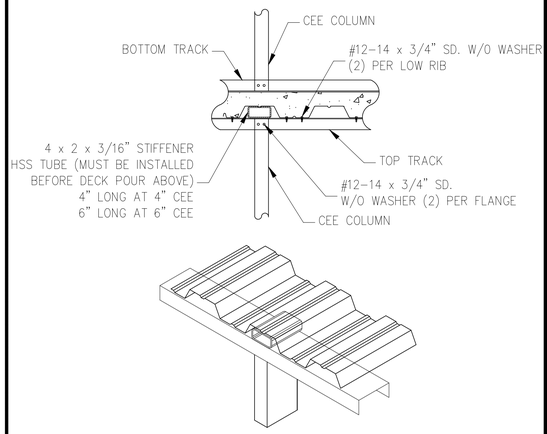
2 TYPICAL COMPOSITE SLAB DETAIL
1" = 1'-0"



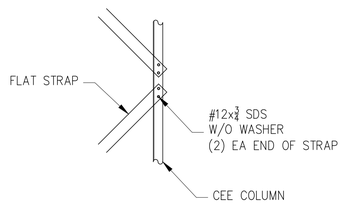

NOTE:
USE #14x1 1/2" FENDER HD
SDS INTO HSS MEMBERS

3 EXTERIOR WALL GIRT
1" = 1'-0"

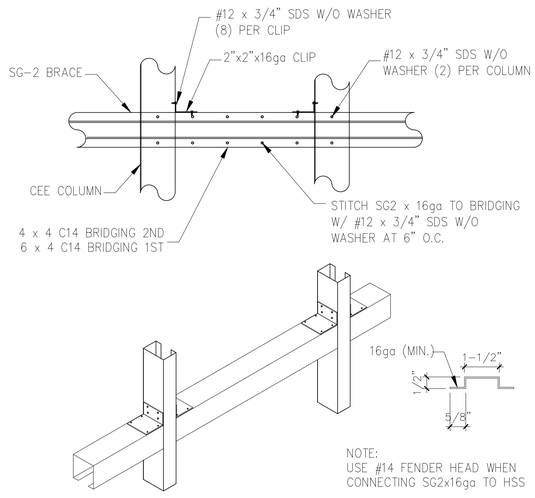
NOT REQUIRED ON TOP FLOORS.




4 DECK STIFFENER
1" = 1'-0"

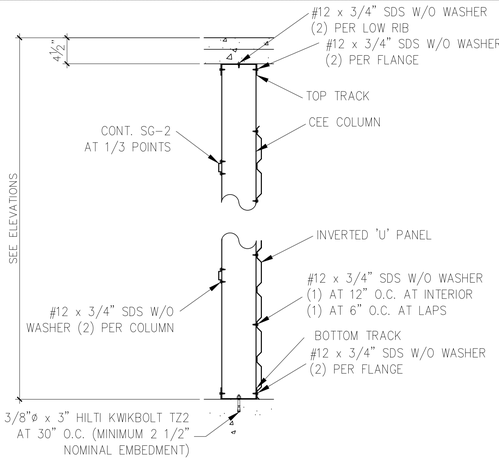



5 FLAT STRAP TO COLUMN
1" = 1'-0"



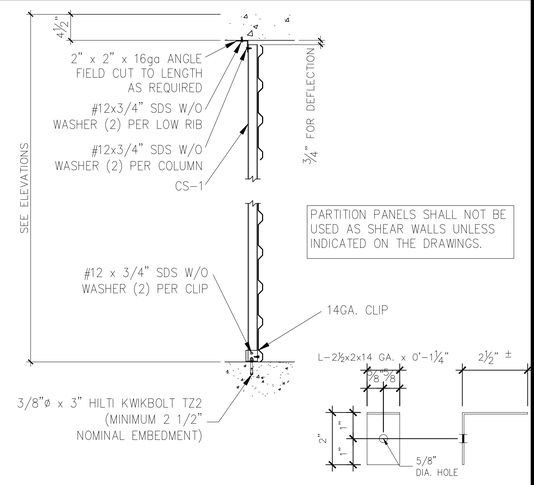

NOTE:
USE #14 FENDER HEAD WHEN
CONNECTING SG2x16ga TO HSS

6 INTERIOR BRIDGING TO COLUMN
1" = 1'-0"

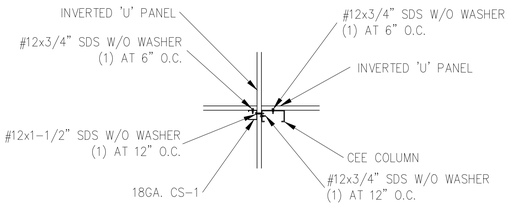



"ALL BEARING WALL SHEATHING IS USED AS SHEAR WALLS FOR
LATERAL BRACING OF THE STRUCTURE"

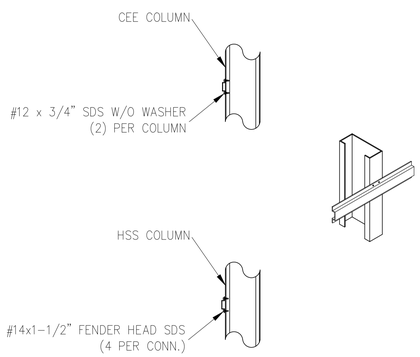
7 BEARING COLUMN 1ST & 2ND FLOOR
1" = 1'-0"



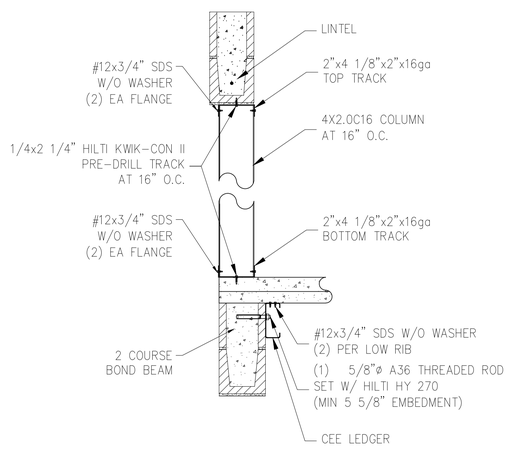

8 PARTITION COLUMN AT 1ST AND 2ND FLOOR
1" = 1'-0"



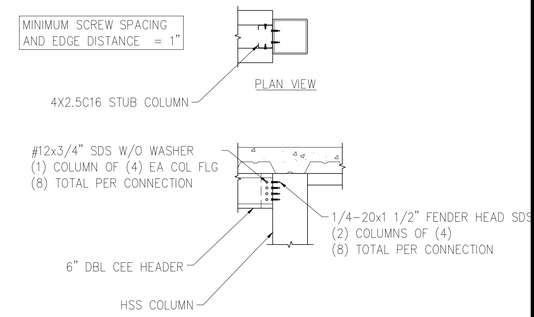

9 PARTITION INTERSECTION
1" = 1'-0"




10 SG2 BRACE TO COLUMN
1" = 1'-0"




11 INFILL WALL AT ELEVATOR DOOR
1" = 1'-0"




12 6" DBL CEE HEADER TO HSS COLUMN
1" = 1'-0"

Force Engineering & Testing, Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
cn=Johnathan Green, o=US, ou=Force Engineering and Testing, email=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 02:39:03 -06'00'

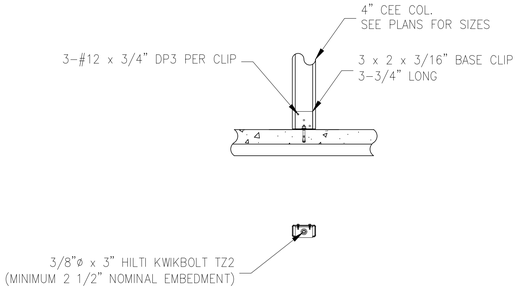
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

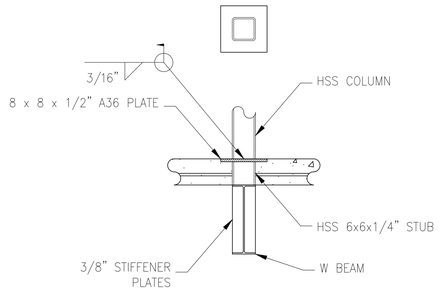
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

SHEET NO.
D1.5

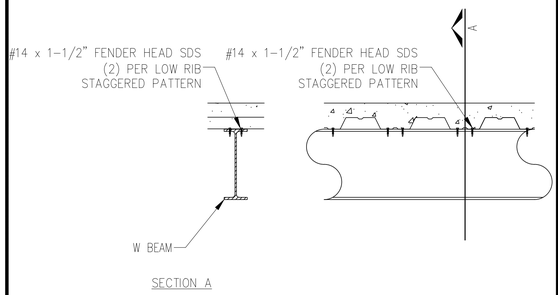



1 3RD FLOOR BEARING COLUMN
1"=1'-0"



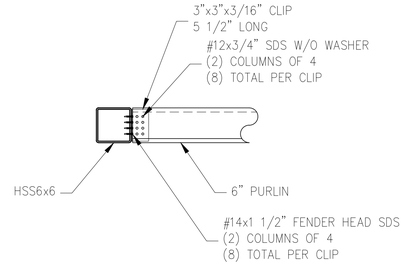

ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

2 HSS COLUMN TO W BEAM
1"=1'-0"

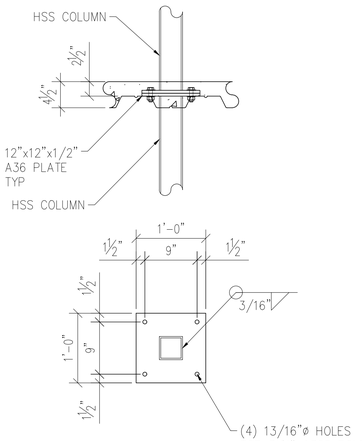



SECTION A

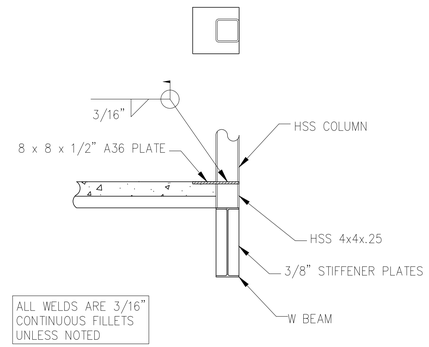
3 TYP. DECK TO BEAM CONN.
1"=1'-0"




4 PURLIN TO HSS BEAM
1"=1'-0"

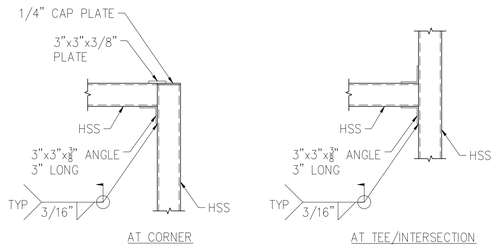



5 HSS COLUMN SPLICE
1"=1'-0"



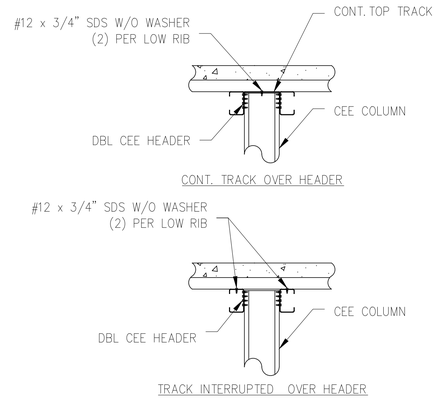

ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

6 EXTERIOR COL. TO BEAM CONN.
1"=1'-0"




ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

7 TYPICAL HSS TO HSS CONNECTION
1"=1'-0"



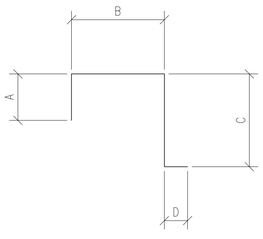

CONT. TRACK OVER HEADER




TRACK INTERRUPTED OVER HEADER

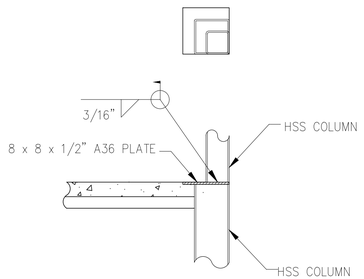
ERECTORS NOTE:
TOP TRACK TO BE CONTINUOUS ACROSS HEADER AT ALL LOCATIONS. IF TRACK NOT CONTINUED, HEADER MUST STITCHED TO METAL DECK PER DETAIL.

5 TOP TRACK CONNECTION AT HEADER
1"=1'-0"



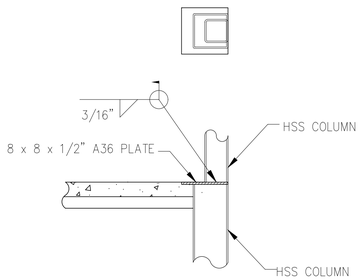

| MARK | GAUGE | A | B | C | D |
|---|---|---|---|---|---|
| TT1 | 14 | 3" | 4 1/8" | 3" | 1" |
| TT2 | 14 | 3" | 6 1/8" | 3" | 1" |
| TT3 | 14 | 3" | 4 1/8" | 6 1/8" | 1" |
| TT4 | 14 | 3" | 6 1/8" | 6 1/8" | 1" |
| TT5 | 12 | 2" | 4 1/8" | 3" | 1" |
| TT6 | 12 | 2" | 6 1/8" | 3" | 1" |

9 TOP TRACK SCHEDULE
1"=1'-0"




ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

10 HSS COLUMN TO COLUMN
1"=1'-0"




ALL WELDS ARE 3/16" CONTINUOUS FILLETS UNLESS NOTED

11 HSS COLUMN TO COLUMN
1"=1'-0"

Force Engineering & Testing, Inc.
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STATE OF MISSOURI
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PROFESSIONAL ENGINEER

Johnathan Green
Johnathan Green, c=US, o=Force Engineering and Testing, e=mail=jgreen@forceengineeringtesting.com
I am approving this document
2021.12.15 02:38:44 -06'00'

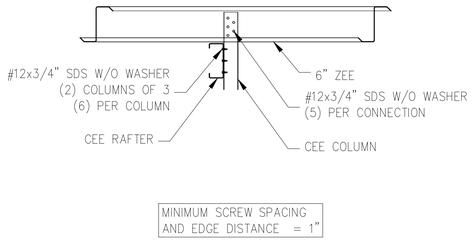
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

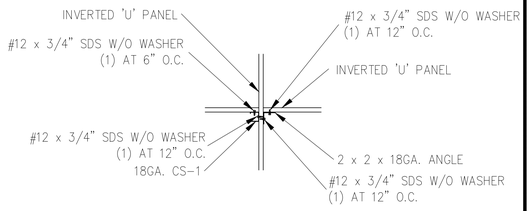
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

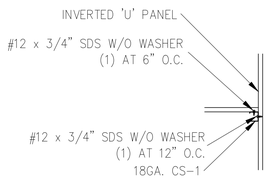
SHEET NO.
D1.6



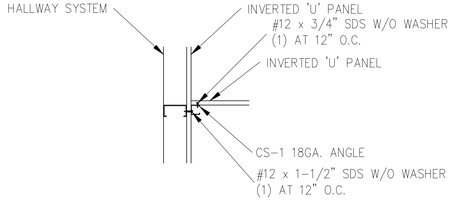

1 PULRIN CONNECTION TO COLUMN – UPPER ROOF
1"=1'-0"



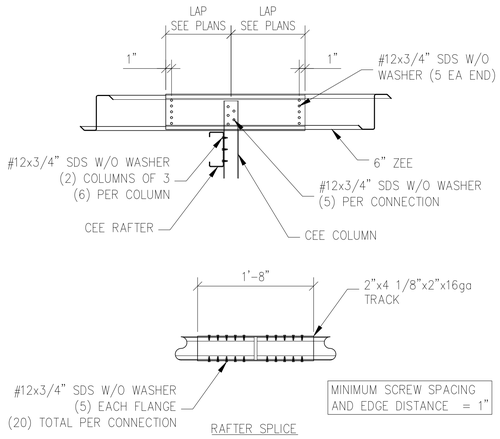

2 PARTITION INTERSECTION
1"=1'-0"



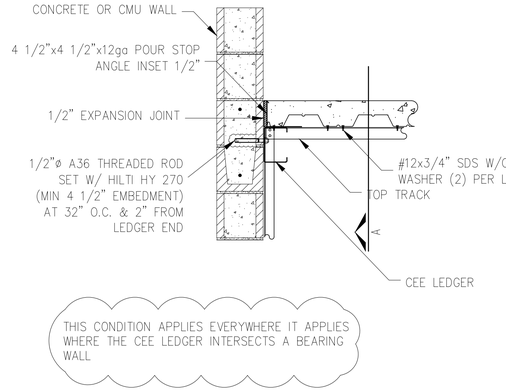

3 PARTITION INTERSECTION
1"=1'-0"



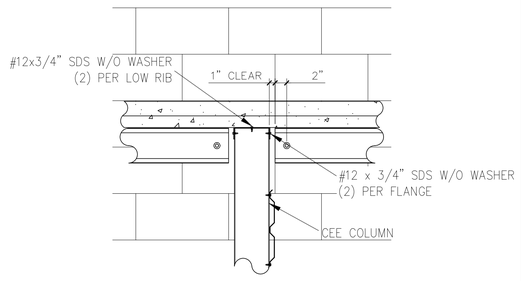

4 PARTITION INTERSECTION
1"=1'-0"

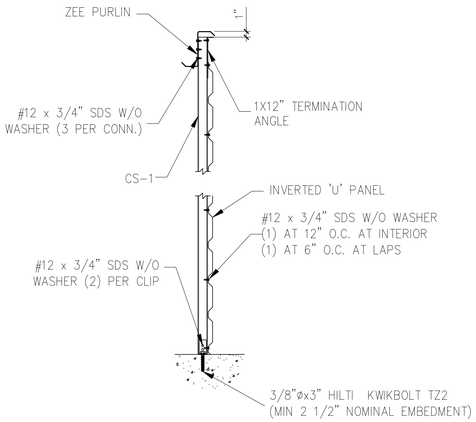



5 PURLIN LAP AT COLUMN – UPPER ROOF
1"=1'-0"



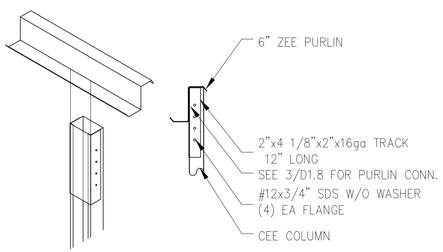

6 DBL HEADER INTO CMU AT CEE LEDGER
1"=1'-0"



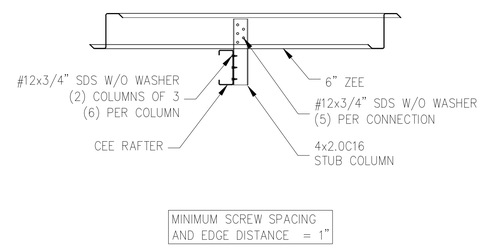




"PARTITION PANELS ARE NOT USED AS SHEAR WALLS U.N.O."

7 CS1 TO PURLIN CONNECTION
1"=1'-0"




8 PURLIN CONNECTION TO COLUMN
1"=1'-0"




9 PULRIN CONNECTION TO STUB COLUMN – UPPER ROOF
1"=1'-0"

Force Engineering & Testing, Inc.
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NUMBER PE-2021045657
PROFESSIONAL ENGINEER

Johnathan Green
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I am approving this document
2021.12.15 07:38:26 -06'00'

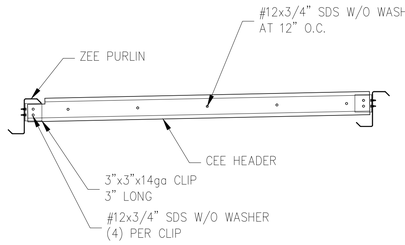
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

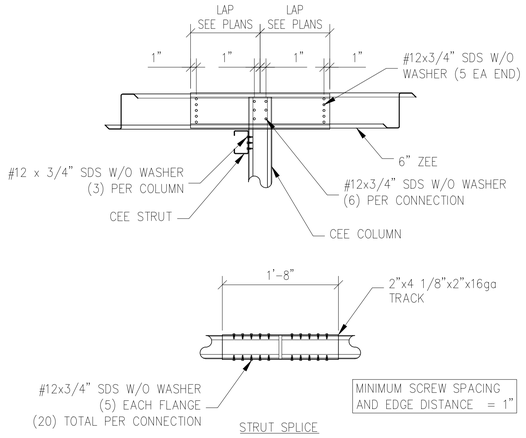
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

SHEET NO.
D1.7

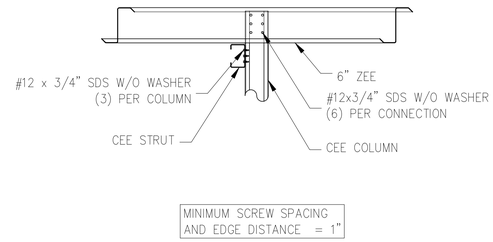



1 FRAMING AT A/C CONDENSING UNIT
1"=1'-0"

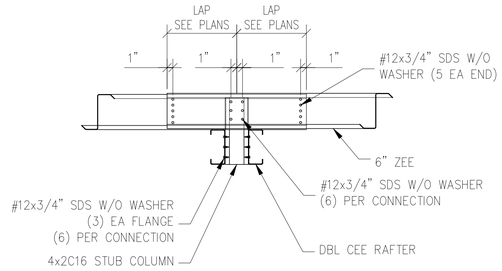



STRUT SPLICE

2 PURLIN LAP AT COLUMN
1"=1'-0"




3 PULRIN CONNECTION TO COLUMN
1"=1'-0"




4 PURLIN LAP AT STUB COLUMN
1"=1'-0"




5 PURLIN CONN TO STUB COLUMN
1"=1'-0"




"ALL SHEATHING IS USED FOR SHEAR PER PFC-5570 TABLE 3"

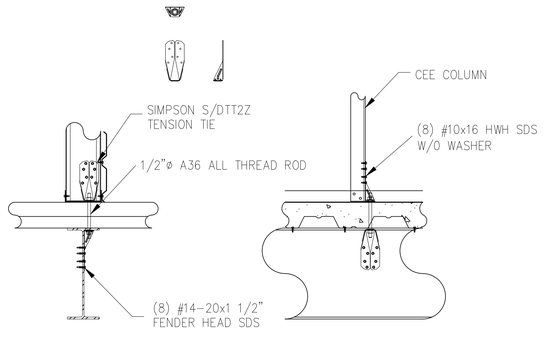
6 2ND & 3RD FLOOR SHEAR WALL ANCHOR
1"=1'-0"



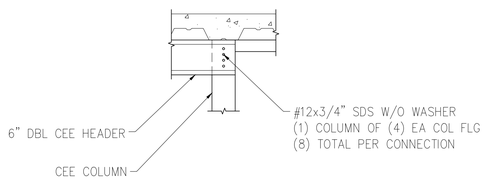

7 1ST FLOOR SHEAR WALL ANCHOR
1"=1'-0"



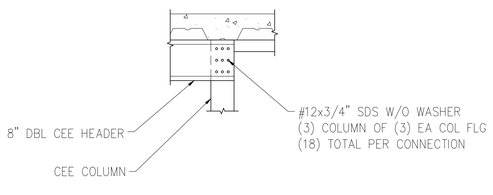

8 HSS BEAM TO COLUMN
1"=1'-0"



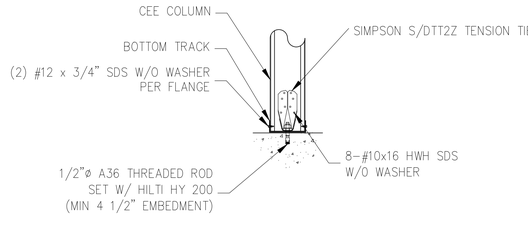

9 SHEAR WALL ANCHOR TO W BEAM
1"=1'-0"




10 6" DBL CEE HEADER AT CEE COLUMN
1"=1'-0"




11 8" DBL CEE HEADER AT CEE COLUMN
1"=1'-0"




12 1ST FLOOR SHEAR WALL ANCHOR
1"=1'-0"

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PROFESSIONAL ENGINEER

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2021.12.15 02:38:06 -06'00'

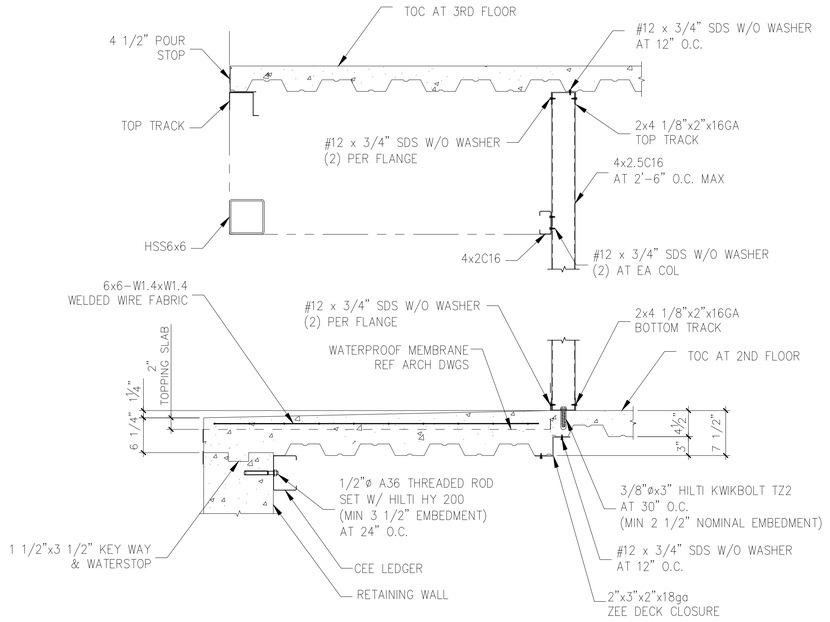
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

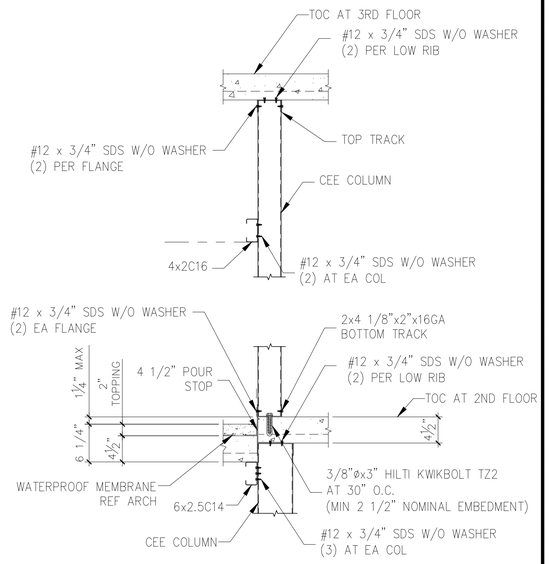
PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

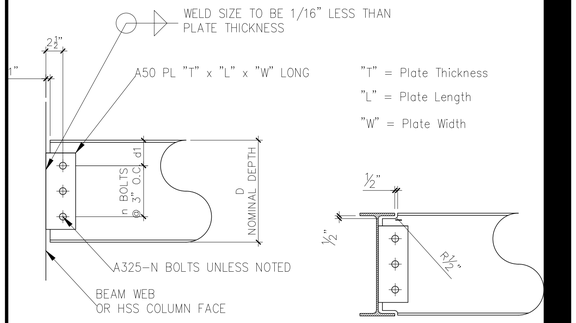
SHEET NO.
D1.8




1 SECTION THRU 2ND FLOOR ALCOVE
1"=1'-0"

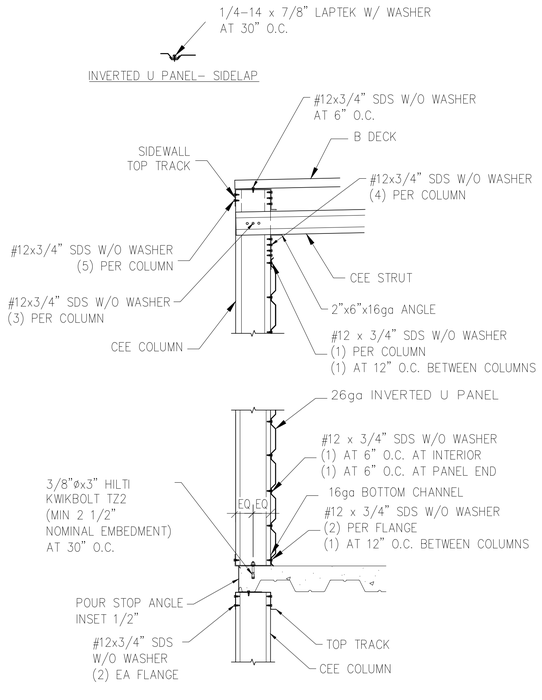



2 SECTION THRU 2ND FLOOR ALCOVE
1"=1'-0"

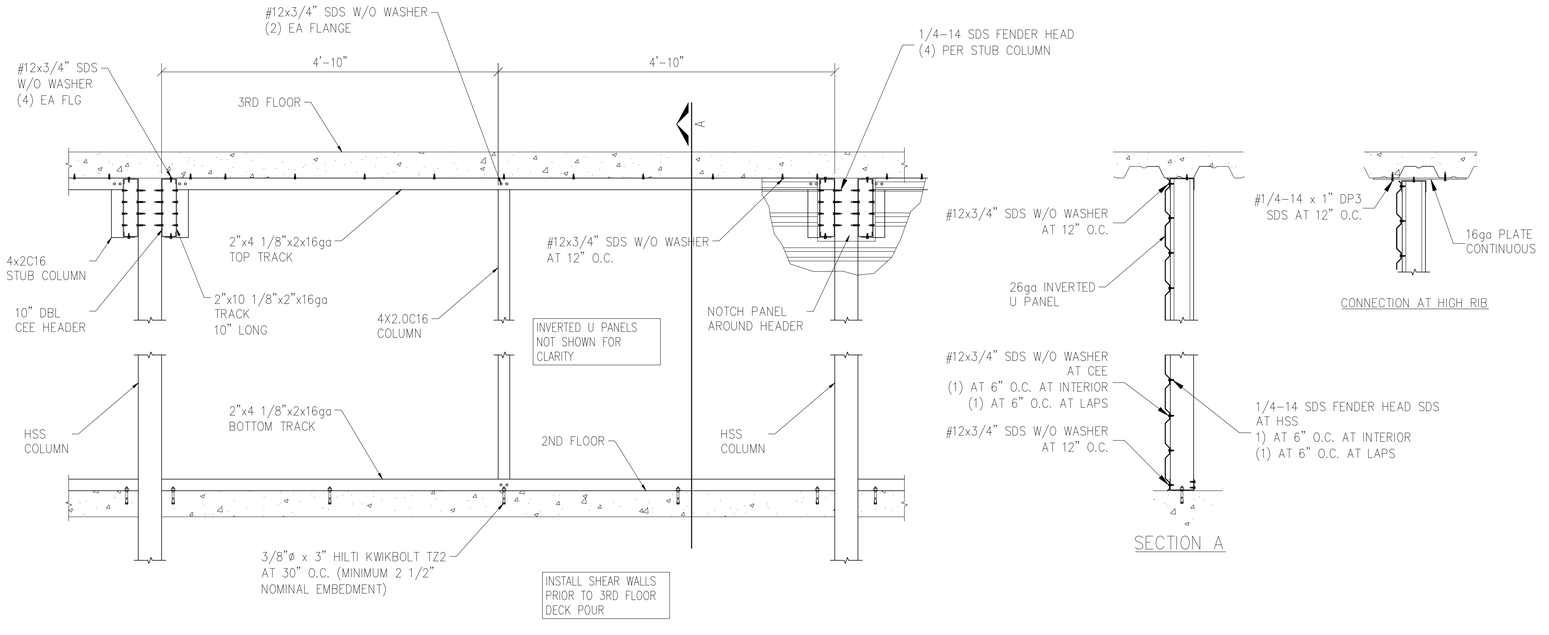



3 SHEAR PLATE CONNECTION
1"=1'-0"

| SHEAR PLATE SCHEDULE | | | | | | | |
|---|---|---|---|---|---|---|---|
| D | d1 | n | NUMBER OF ROWS | BOLT DIA. | T | L | W |
| 8" | 2 1/2" | 2 | 1 OF 2 | 3/4" | 1/4" | 6" | 4" |
| 10" | 2 1/2" | 2 | 1 OF 2 | 3/4" | 5/16" | 6" | 4" |
| 12" | 3" | 3 | 1 OF 3 | 3/4" | 5/16" | 9" | 4" |
| 14" | 2 1/2" | 4 | 1 OF 4 | 3/4" | 5/16" | 12" | 4" |
| 16" | 3" | 4 | 1 OF 4 | 3/4" | 5/16" | 12" | 4" |
| 18" | 3" | 5 | 1 OF 5 | 3/4" | 5/16" | 15" | 4" |
| 21" | 3" | 6 | 1 OF 6 | 3/4" | 5/16" | 18" | 4" |
| 24" | 3" | 7 | 1 OF 7 | 3/4" | 3/8" | 21" | 4" |




4 SECTION AT TYPE 1 SHEAR WALL
1"=1'-0"




5 SECTION AT TYPE 2 SHEAR WALL
1"=1'-0"




SECTION A

Force Engineering & Testing Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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2021.12.15 02:27:47 -06'00'

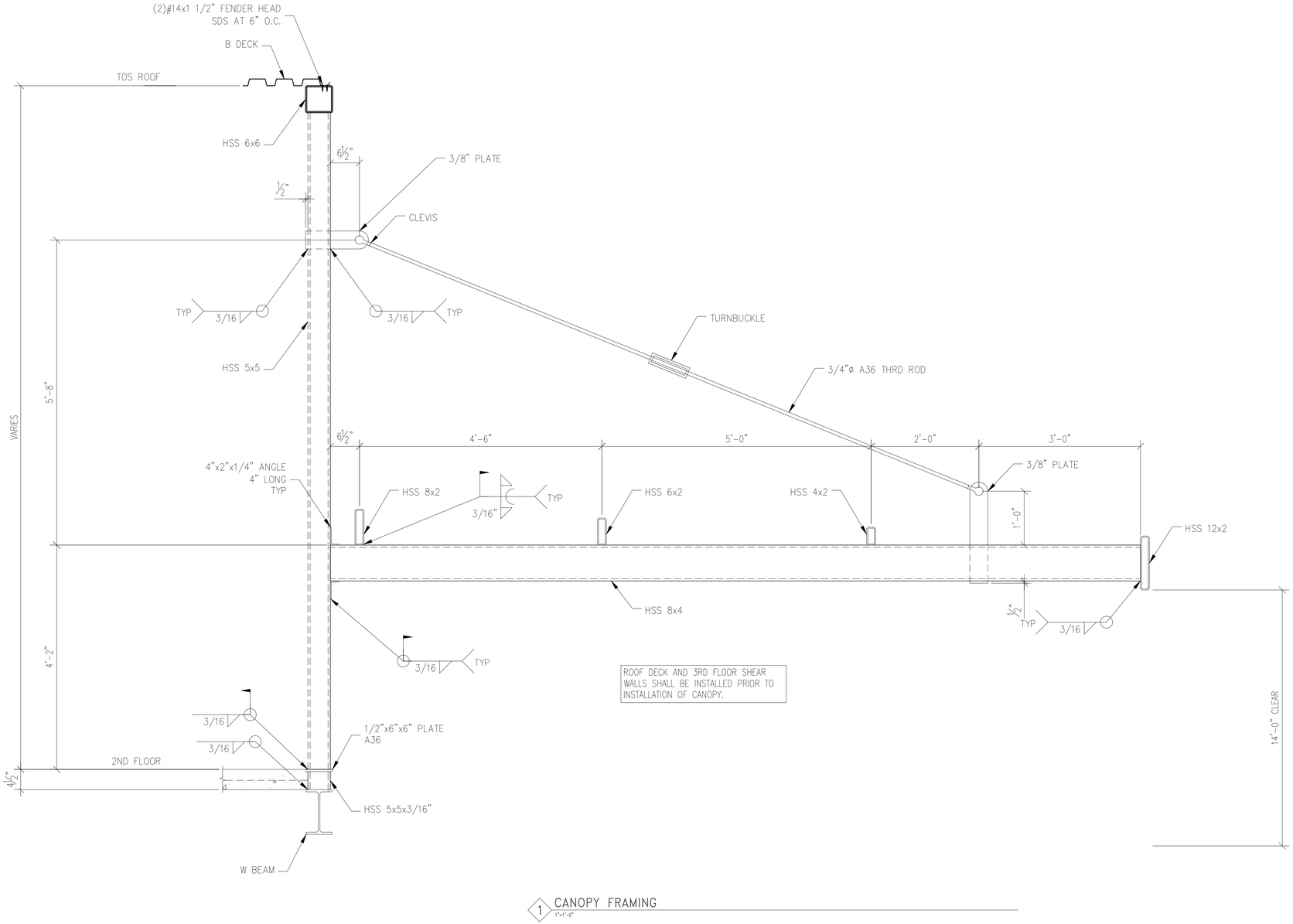
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.15.2021
DRAWN :
REVISIONS:

FRAMING DETAILS

SHEET NO.
D1.9




1 CANOPY FRAMING
1"=1'-0"

Force Engineering & Testing Inc.
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STATE OF MISSOURI
JOHNATHAN GREEN
NUMBER PE-2021045657
PROFESSIONAL ENGINEER

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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.15.2021

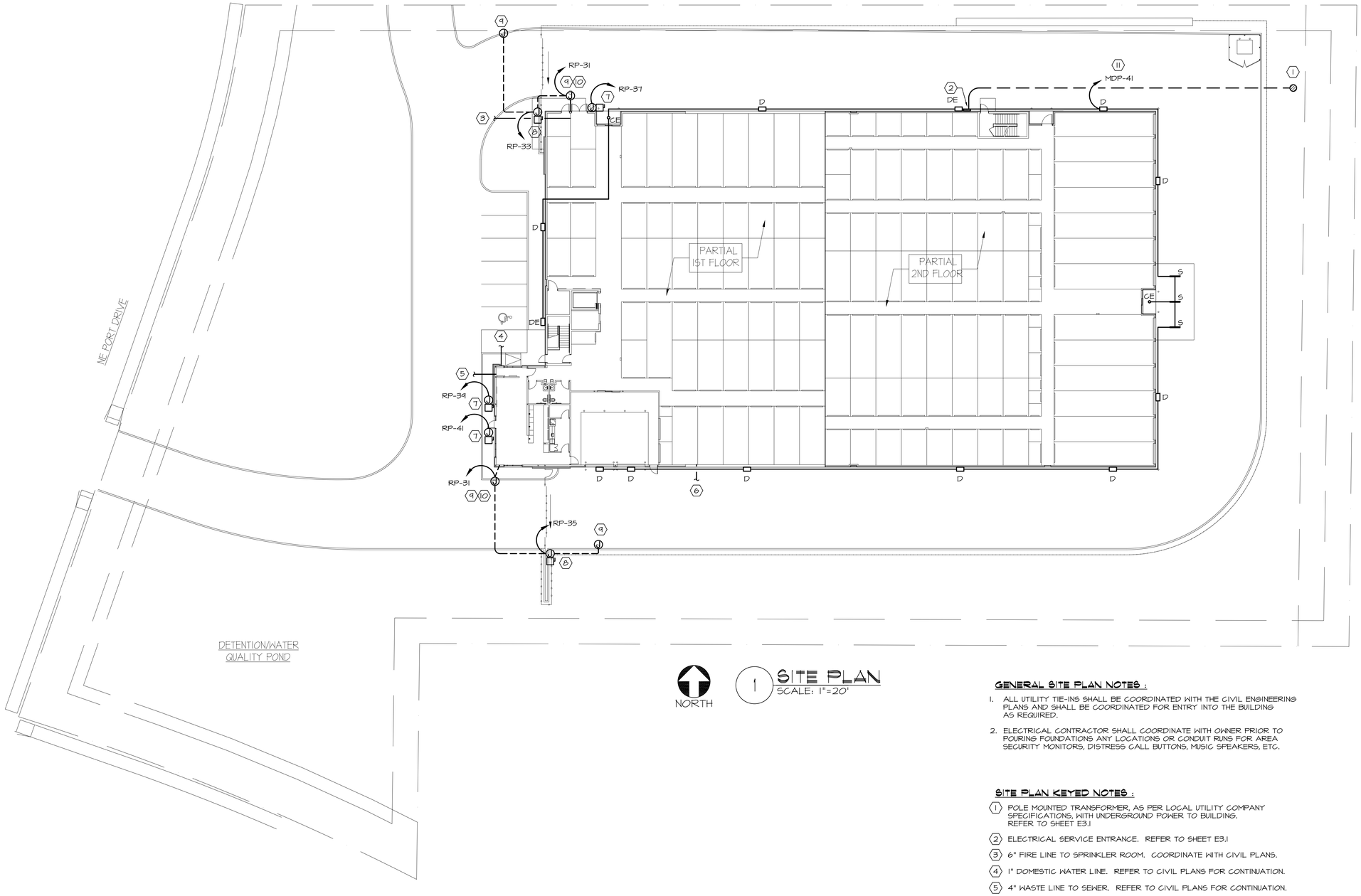
DRAWN :

REVISIONS:

FRAMING DETAILS

SHEET NO.

D1.10




1 SITE PLAN
SCALE: 1"=20'

## GENERAL SITE PLAN NOTES :

1. ALL UTILITY TIE-INS SHALL BE COORDINATED WITH THE CIVIL ENGINEERING PLANS AND SHALL BE COORDINATED FOR ENTRY INTO THE BUILDING AS REQUIRED.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH OWNER PRIOR TO POURING FOUNDATIONS ANY LOCATIONS OR CONDUIT RUNS FOR AREA SECURITY MONITORS, DISTRESS CALL BUTTONS, MUSIC SPEAKERS, ETC.

## SITE PLAN KEYED NOTES :

(1) POLE MOUNTED TRANSFORMER, AS PER LOCAL UTILITY COMPANY SPECIFICATIONS, WITH UNDERGROUND POWER TO BUILDING. REFER TO SHEET E3.1

(2) ELECTRICAL SERVICE ENTRANCE. REFER TO SHEET E3.1

(3) 6" FIRE LINE TO SPRINKLER ROOM. COORDINATE WITH CIVIL PLANS.

(4) 1" DOMESTIC WATER LINE. REFER TO CIVIL PLANS FOR CONTINUATION.

(5) 4" WASTE LINE TO SEWER. REFER TO CIVIL PLANS FOR CONTINUATION.

(6) 4" CONDENSATE WASTE LINE TO STORM. REFER TO CIVIL PLANS FOR CONTINUATION.

(7) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR BUILDING SIGN. FINAL CONNECTION BY ELECTRICAL CONTRACTOR. COORDINATE MOUNTING LOCATIONS WITH SIGN INSTALLER. RUN CIRCUIT THRU PHOTOCELL.

(8) J-BOX & 30A/2P/120V/NF/N-3R DISCONNECT SWITCH FOR MOTORIZED GATE. COORDINATE LOCATION W/ INSTALLER.

(9) PROVIDE ONE (1) 1" CONDUIT FOR UNDERGROUND DATA & 120V POWER FOR ENTRY KEYPADS. COORDINATE LOCATION ON-SITE.

(10) RUN ONE (1) EMPTY 2" CONDUIT W/ PULL STRING UNDERGROUND BETWEEN GATE OPERATOR AND BUILDING, AND ONE (1) 1" EMPTY CONDUIT W/ PULLSTRING BETWEEN GATE CONTROLLER AND ASSOCIATED KEYPAD(S).

(11) RUN CIRCUIT SWITCHLEG THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.

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Westlake, TX 76262
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DP
CE

STATE OF MISSOURI
DJ PENN
NUMBER E-38507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

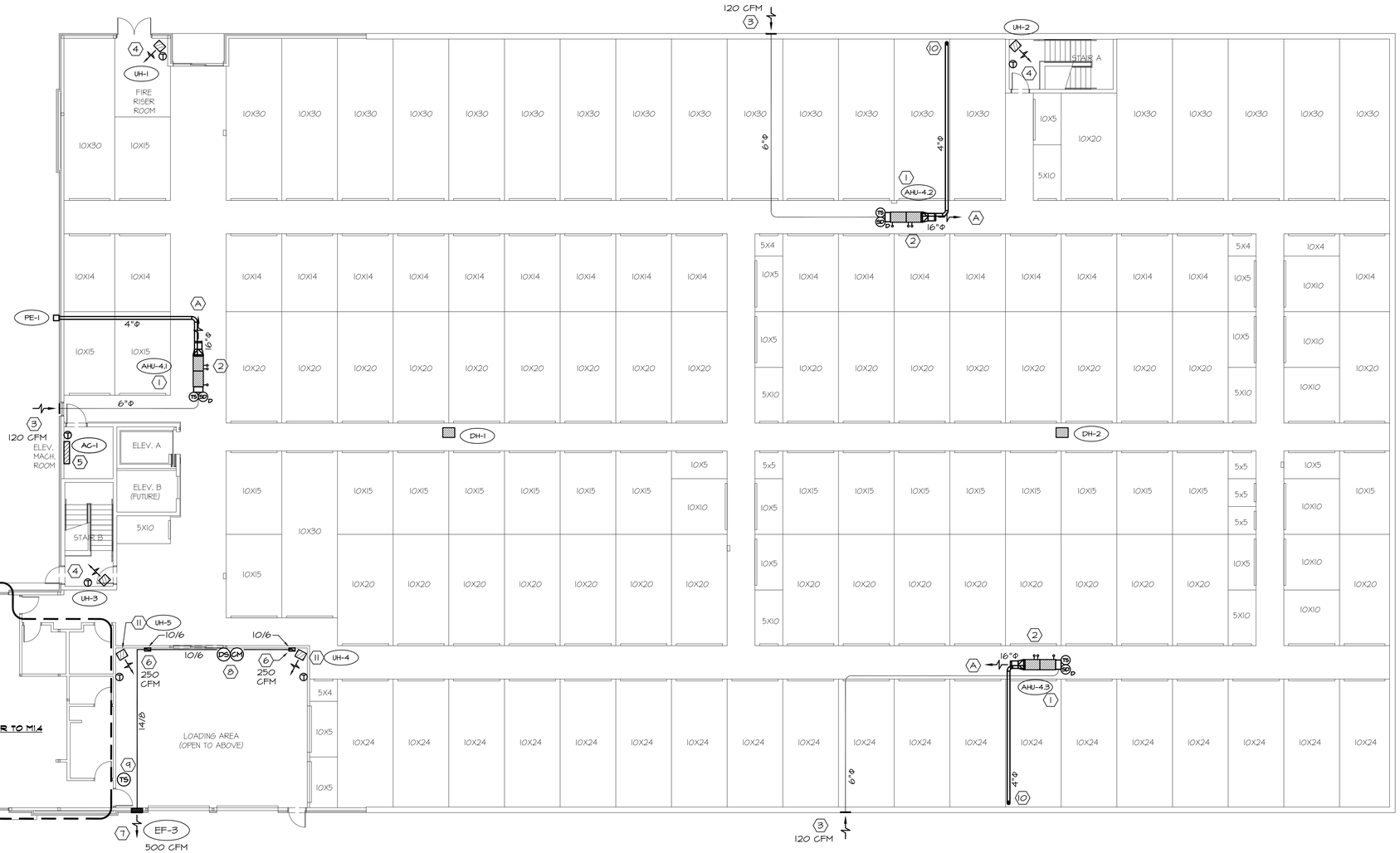
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

SITE PLAN

SHEET NO.
MEP1




## 1 1ST FLOOR - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

**COORDINATION NOTE :**

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

**GENERAL MECHANICAL NOTES :**

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED NEAR UNIT. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

**EXHAUST SYMBOLS :**

- (CM) CARBON MONOXIDE SENSOR
- (DS) $NO_2$ DIESEL (NITROGEN DIOXIDE) SENSOR
- (TS) TEST STATION

**MECHANICAL KEYED NOTES :**

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF HUMIDISTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.
4. MOUNT UNIT HEATER HIGH IN CORNER, COORDINATE LOCATION ON-SITE. THERMOSTAT SET TO MAINTAIN 45 DEGREES F. MINIMUM.
5. MOUNT DUCT FREE A/C UNIT HIGH ON WALL. MOUNT THERMOSTAT @48" A.F.F. COORDINATE UNIT LOCATION WITH EQUIPMENT IN ROOM. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE.
6. RUN NON-INSULATED SHEET METAL DUCT FOR FUME EXHAUST. RUN AS HIGH AS POSSIBLE. RUN EXPOSED ON WALL DOWN TO 2'-0" A.F.F. REFER TO DETAIL, SHEET M2.1
7. RUN 14/10 NON-INSULATED SHEET METAL DUCT AS HIGH AS POSSIBLE TO EXHAUST FAN. PROVIDE TRANSITION DUCT AS REQUIRED. MAINTAIN 10'-0" CLEARANCE FROM ANY AIR INTAKE/MAKEUP. REFER TO DETAIL, SHEET M2.1
8. MOUNT CARBON MONOXIDE & NITROGEN DIOXIDE SENSORS AT 2'-0" A.F.F. CONNECT TO BOTH EXHAUST FANS (EF-1 & EF-2). IF ANY SENSORS IS ACTIVATED THEN BOTH FANS SHALL TURN ON.
9. PROVIDE A TEST STATION FOR THE SENSORS & EXHAUST FANS. THE SENSOR SUPPLIER SHALL COORDINATE THIS DESIGN. PROVIDE DESIGN FOR APPROVAL BY OWNER & ENGINEER PRIOR TO ANY WORK.
10. 4"Φ FLUE UP TO 2ND FLOOR.
11. MOUNT UNIT HEATER HIGH IN CORNER, COORDINATE LOCATION ON-SITE. THERMOSTAT SET TO MAINTAIN **45 DEGREES F. MINIMUM.**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DP EC

STATE OF MISSOURI
DJ PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

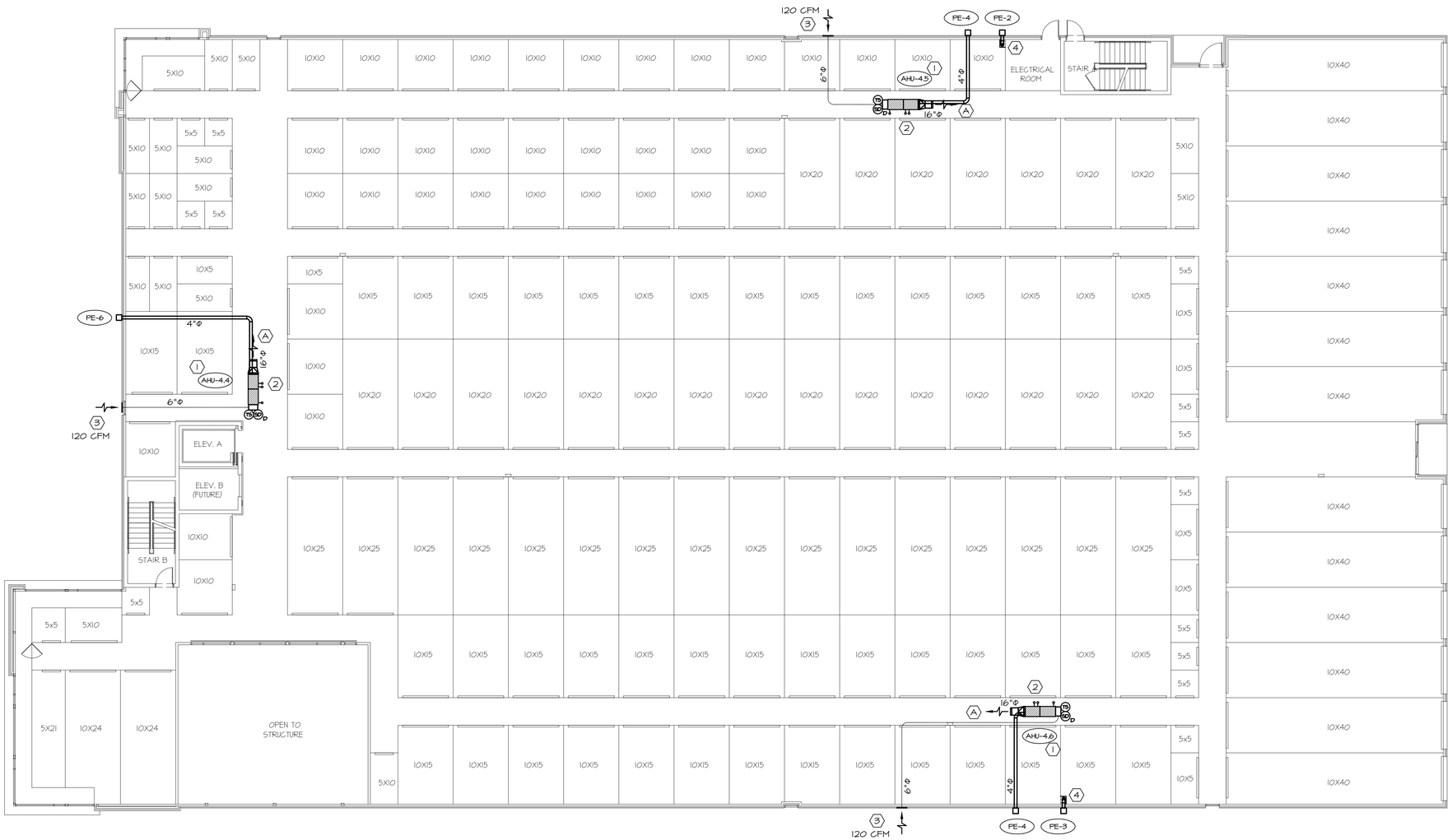

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

1ST FLOOR MECHANICAL

SHEET NO.
M1.1




## COORDINATION NOTE :

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

## 1 2ND FLOOR - MECHANICAL PLAN

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

## GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED NEAR UNIT. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

## MECHANICAL KEYED NOTES :

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF HUMIDISTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.
4. 4"Φ FLUE UP FROM 1ST FLOOR.

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STATE OF MISSOURI
DJ PENN
NUMBER E-38507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

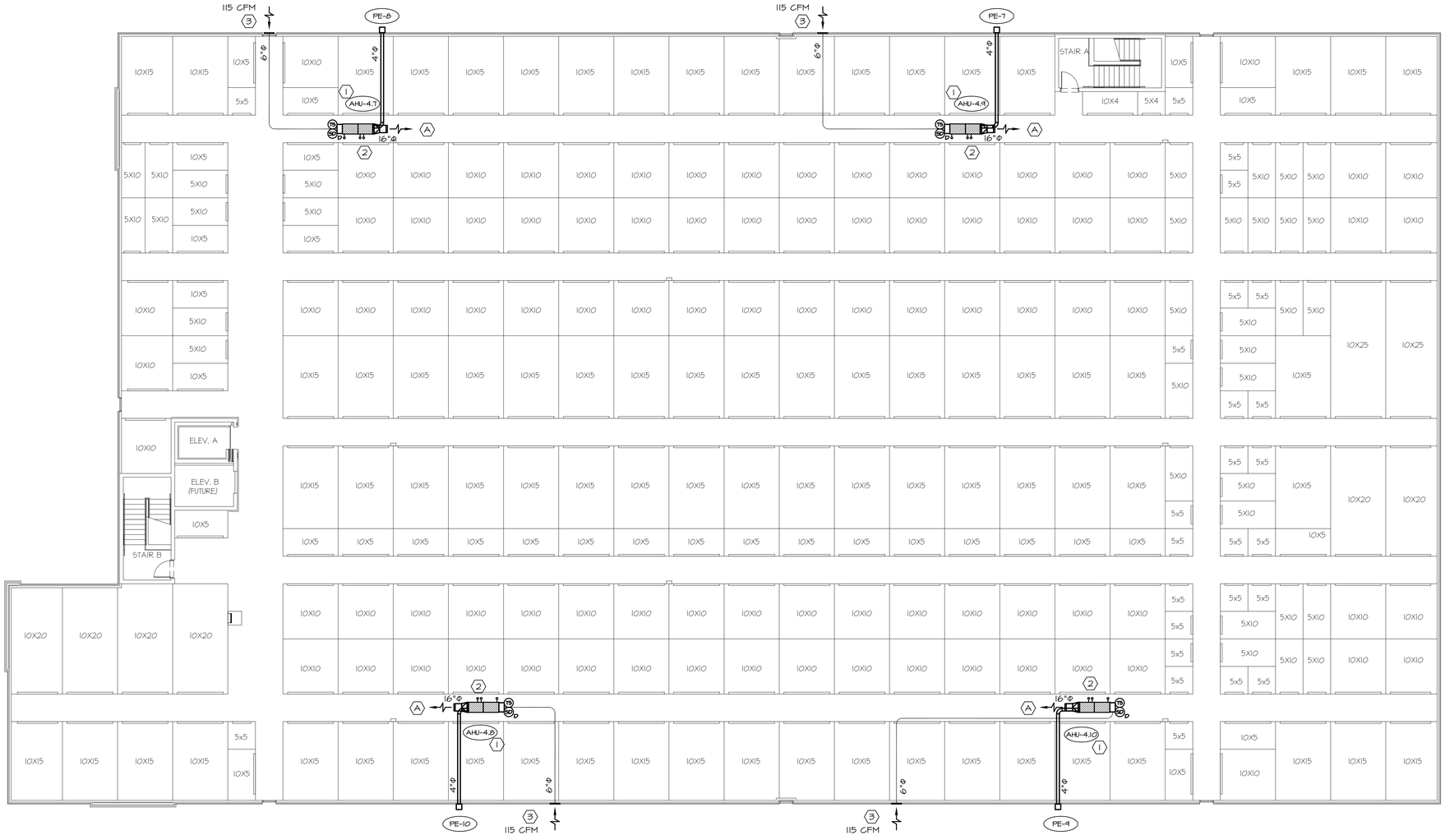
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

2ND FLOOR MECHANICAL

SHEET NO.
M1.2




## 1 3RD FLOOR - MECHANICAL PLAN

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

**COORDINATION NOTE :**

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

**GENERAL MECHANICAL NOTES :**

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-8 @ BRICK/STONE WALLS AND #A/C U-5 @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM EACH AIR HANDLING UNIT TO HUB DRAIN LOCATED NEAR UNIT. COORDINATE LOCATION ON-SITE.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.

**MECHANICAL KEYED NOTES :**

1. HANG AIR HANDLING UNIT HIGH IN CORRIDOR. PROVIDE A SHORT SECTION OF SUPPLY DUCT WITH GRILLE AS SPECIFIED ON OPENING. COORDINATE LOCATION OF HUMIDISTAT W/ PROJECT MANAGER ON-SITE. INSTALL SMOKE DETECTOR @ RETURN AIR.
2. RUN REFRIGERANT LINES TO CONDENSING UNIT OUTSIDE. COORDINATE LOCATION & ROUTING ON-SITE.
3. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

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# LAKEWOOD STORAGE

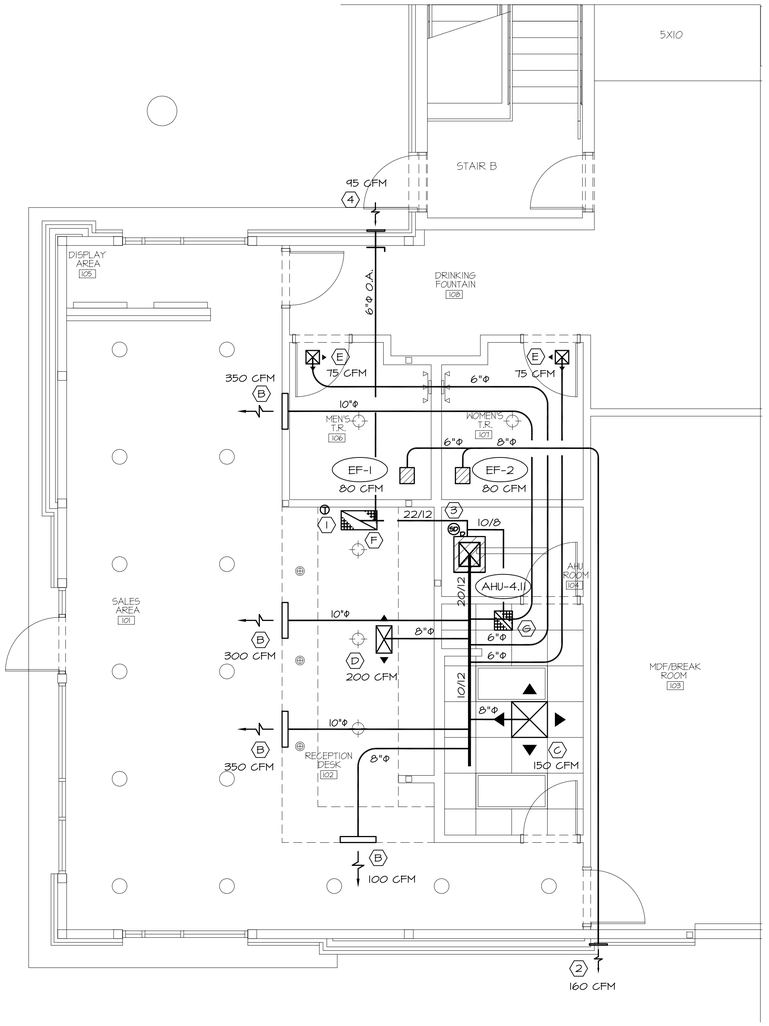
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

3RD FLOOR MECHANICAL

SHEET NO.

M1.3




## GENERAL MECHANICAL NOTES :

1. RUN REFRIGERANT LINES SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION BASED ON THE FINAL ROUTING OF THE THE LINES FROM THE AHU TO CU LOCATED OUTSIDE. RUN DOWN IN WALL TO 24" A.F.G. & PENETRATE OUTSIDE WALL. PROVIDE WALLCAP & WEATHERPROOFING AT ENTRY POINT (QUICKFLASH #A/C U-B @ BRICK/STONE WALLS AND #A/C U-S @ METALS WALLS).
2. RUN THE CONDENSATE DRAIN LINE FROM AIR HANDLING UNIT TO FLOOR SINK LOCATED NEAR BY.
3. ALL DUCTWORK IN UN-CONDITIONED SPACES SHALL BE INSULATED AS PER INTERNATIONAL MECHANICAL CODE.
4. EXPOSED DUCTWORK SHALL BE PAINTED TO MATCH CEILING STRUCTURE. COORDINATE WITH ARCHITECTURAL PLANS.

## MECHANICAL KEYED NOTES :

1. COORDINATE LOCATION OF THERMOSTAT W/ PROJECT MANAGER ON-SITE. MOUNT @48" A.F.F.
2. 12/12 EXHAUST LOUVER. LOUVER SHALL BE WEATHERPROOOF, PAINTED TO MATCH ADJACENT SURFACE & PROVIDE WITH INSECT SCREEN.
3. PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT.
4. 12/12 OUTSIDE AIR INTAKE LOUVER SHALL BE WEATHERPROOF & PAINTED TO MATCH ADJACENT SURFACE. COORDINATE WITH ARCHITECT. LOUVER SHALL BE PROVIDED W/ AN INSECT SCREEN & PLENUM. CONNECT OUTSIDE AIR DUCT TO RETURN AIR DUCT. PROVIDE A MANUAL BALANCING DAMPER AND GRAVITY BACKDRAFT DAMPER IN THE DUCT. BALANCE THE OUTSIDE AIR CFM AS SCHEDULED.

1 OFFICE - MECHANICAL PLAN
SCALE: 1/4"=1'-0"

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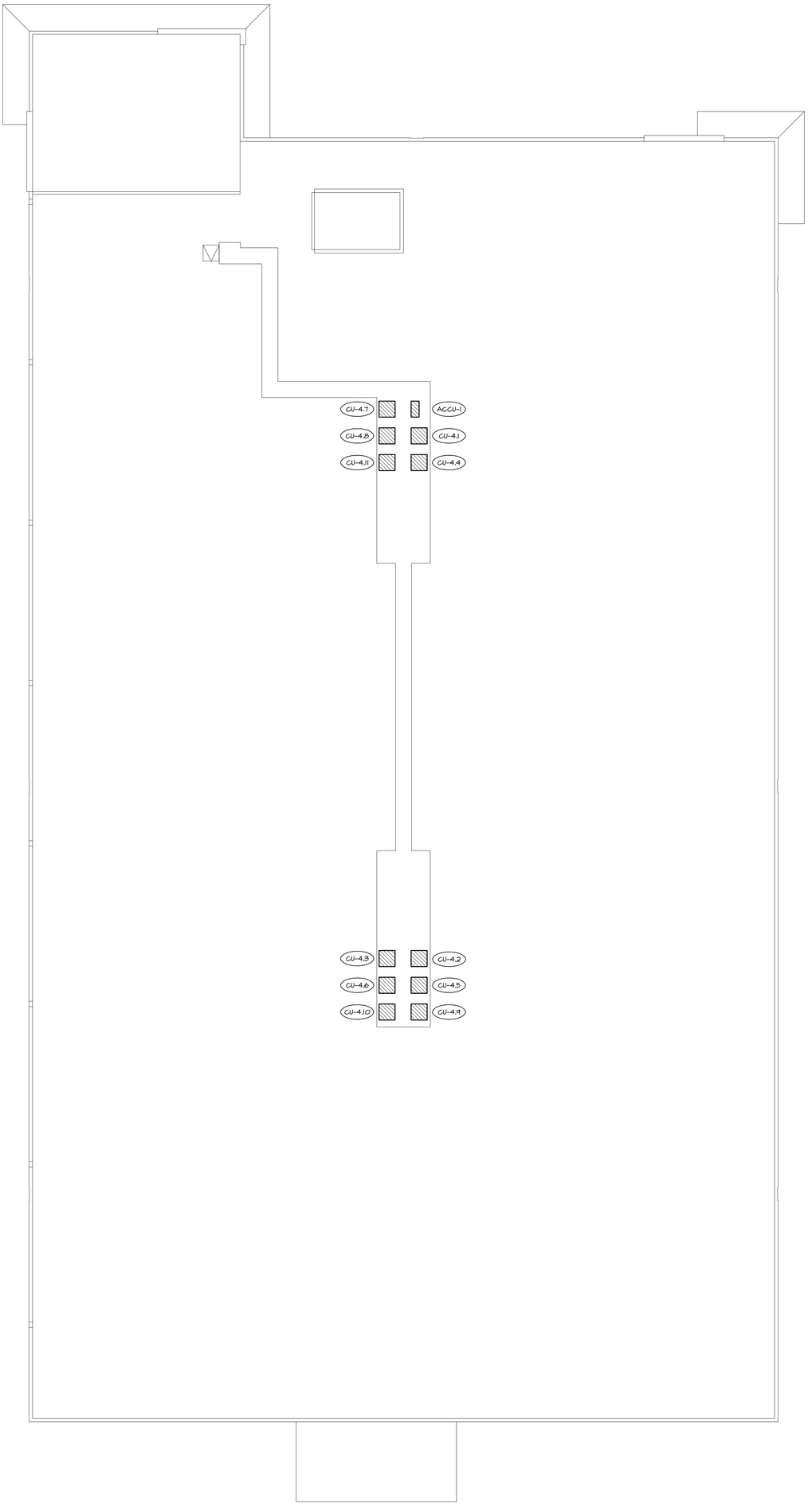
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

OFFICE MECHANICAL

SHEET NO.
M1.4




1 ROOF - MECHANICAL PLAN
SCALE: 3/32"=1'-0"

# LAKEWOOD STORAGE

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PROJECT NO. 2035
DATE: 12.16.2021
DRAWN: DJP
REVISIONS:

ROOF MECHANICAL
SHEET NO. M1.5

## CONDENSING UNIT SCHEDULE

| MARK | CU-4.1 thru 4.11 |
|---|---|
| TYPE | AIR COOLED |
| MIN. CAPACITY (MBTUH) | 48 |
| VOLTS/PHASE | 480/3 |
| MIN. CIRCUIT AMPACITY | 9 |
| MAX. OVERCURRENT PROTECTION | 15 |
| AIR COOLED CONDENSER | |
| AMBIENT TEMP. (F°) | 95 |
| MANUFACTURER | RHEEM |
| MODEL | RAI448ADINB |
| SEER | 14.0 |
| OPERATING WEIGHT | 221 |
| NOTES | 1 |

NOTE :
1. ALL REFRIGERANT LINES SHALL BE SIZED AS PER MANUFACTURER'S RECOMMENDATIONS.

## FAN SCHEDULE

| MARK | EF - 1 & 2 | EF-3 |
|---|---|---|
| SERVICE | EXHAUST | EXHAUST |
| CONTROL | SWITCH | REFER TO GARAGE EXHAUST |
| TYPE | CEILING MOUNTED | WALL |
| AIR FLOW (CFM) | 80 | 400-940 |
| TOTAL S. P. (IN. W.G.) | 0.50 | 1.1 |
| SOUND CRITERIA (SONES) | 3.4 | XXXX |
| DRIVE TYPE | DIRECT | DIRECT |
| FAN SPEED (RPM) | 1000 | 1725 |
| MOTOR SIZE | 100 WATTS | 1/2 HP |
| VOLTS - PHASE | 120/1 | 120/1 |
| MANUFACTURER | COOK | GREENHECK |
| MODEL | GC-144 | SEI-14-436-VG |
| APPROX WEIGHT (LBS) | 15 | 35 |
| NOTES: | 1,2,3 | REFER TO GARAGE EXHAUST |

NOTES:
1. PROVIDE UNIT W/ GRAVITY BACKDRAFT DAMPER.
2. UNIT TO BE PROVIDED WITH FACTORY "PREWIRED" APPROVED MOTOR DISCONNECT DEVICES & MOTOR OVERLOAD PROTECTION.
3. UNIT CONTROLLED WITH LIGHTS IN ROOM.

## AIR HANDLING UNIT SCHEDULE

| MARK | AHU-4.1 thru 4.10 | AHU-4.11 |
|---|---|---|
| TYPE | HORIZONTAL | VERTICAL |
| SUPPLY AIR FLOW (CFM) | 1600 | 1600 |
| EXT. STATIC PRESS. (IN.WG) | 0.48 | 0.48 |
| DRIVE TYPE | DIRECT | DIRECT |
| FAN SPEED (RPM) | HIGH | HIGH |
| MOTOR SIZE (HP) | 3/4 | 3/4 |
| COOLING COIL | | |
| TYPE | DX | DX |
| MIN. SENSIBLE CAPACITY (MBH) | 34 | 34 |
| MIN. TOTAL CAPACITY (MBH) | 46 | 46 |
| ENT. DRY BULB TEMP. (F) | 80 | 80 |
| ENT. WET BULB TEMP. (F) | 67 | 67 |
| MINIMUM ROWS | - | - |
| MAXIMUM FINS PER INCH | - | - |
| HEATING | | |
| GAS INPUT (MBH) | 75 | 75 |
| GAS OUTPUT (MBH) | 60 | 60 |
| VOLTS - PHASE | 115/1 | 115/1 |
| MINIMUM CIRCUIT AMPS | 13 | 13 |
| MAX. OVERCURRENT PROTECTION | 15 | 15 |
| MANUFACTURER | RHEEM | RHEEM |
| COOLING COIL MODEL | RCFP-HM4824CC | RCFP-HM4824CC |
| HORIZONTAL ADAPTER | RXHH-A04 | RXHH-A04 |
| FURNACE MODEL NO. | R802T-A0754117MXA | R802T-A0754117MXA |
| OPERATING WEIGHT | 215 | 215 |
| NOTES | 1,2,3,4 | 1,2,3,4 |

NOTE:
1. **FURNISH FULLY AUTOMATIC HUMIDISTAT WITH AUTO-CHANGEOVER.**
2. PROVIDE SINGLE POINT ELECTRICAL CONNECTION.
3. PROVIDE SMOKE DETECTOR IN RETURN AIR DUCT AND CONNECT TO LOCAL FIRE ALARM ANNUNCIATOR.
4. LONG LINE SETS MAY BE REQUIRED.

## MECHANICAL/SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE MECHANICAL AND SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED. ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL MECHANICAL SYSTEMS AND WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.
2. PERFORM A SYSTEM AND BALANCING IN ALL MECHANICAL SYSTEMS.
3. TEST ALL AIR DEVICES, SUPPLY AND RETURN DUCT AIR FLOWS, FAN MOTORS AMPS.
4. ENSURE THERMOSTATS, TEMPERATURE SENSORS, ECONOMIZERS, SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
5. ENSURE AIR OUTLETS AND ZONE TERMINAL DEVICES ARE EQUIPPED WITH MEANS OF AIR BALANCING IN ACCORDANCE WITH CHAPTER 6 OF THE IMC CODE AND COMPLY WITH 2015 IECC SECTION C408 SYSTEM COMMISSIONING.
6. EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

## ELEVATOR ROOM AC

AC-1 / ACCU-1 — MITSUBISHI ELECTRIC DUCT FREE SPLIT SYSTEM; 30,000 BTUH, SEER = 16.0
INDOOR UNIT #MSY-D30NA-Ø; 1 AMP
OUTDOOR UNIT #MUY-D30NA-1;
(21A MCA) 25A/208V/1Ø

## UNIT HEATER

UH-1 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE SPRINKLER ROOM CONNECTED TO A THERMOSTAT IN THE ROOM. UNIT HEATER SHALL BE A DAYTON #3UG13 (GRAINGER #3UG13) W/ 3.2 KW ELECTRIC HEAT @14.9 AMPS/208V/1Ø.

UH-2 / UH-3 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE STAIRWELL CONNECTED TO A LOCKABLE THERMOSTAT. UNIT HEATER SHALL BE A DAYTON #3UG13 (GRAINGER #3UG13) W/ 3.2 KW ELECTRIC HEAT @14.9 AMPS/208V/1Ø.

UH-4 / UH-5 — CONTRACTOR SHALL INSTALL AN ELECTRIC TYPE UNIT HEATER IN THE LOADING AREA CONNECTED TO A LOCKABLE THERMOSTAT. UNIT HEATER SHALL BE A DAYTON #3UG13 (GRAINGER #3UG13) W/ 5.0 KW ELECTRIC HEAT @20.9 AMPS/208V/1Ø.

## AIR DEVICE SCHEDULE

(A) 20" DIAMETER EYE-BALL NOZZLE SUPPLY DIFFUSER
PROVIDE #01 ALUMINUM COLOR.
TITUS MODEL #TND-AA-01.

(B) 2' SIDE WALL "FLOWBAR" SLOT DIFFUSER
TITUS MODEL #FL15-2-JT W/ 10" INLET
JET THROW WITH TITUS PLENUM.

(C) 24" X 24" 4-WAY LAY-IN SUPPLY AIR DIFFUSER
W/ ROUND NECK AND OPPOSED BLADE DAMPER.
TITUS MODEL #TM5, FRAME TYPE 3.

(D) 6" X 12" 2-WAY SUPPLY AIR DIFFUSER
W/ ROUND NECK AND OPPOSED BLADE DAMPER.
TITUS MODEL #TDC, FRAME TYPE 1, PATTERN #A2.

(E) 9" X 9" 2-WAY SUPPLY AIR DIFFUSER
W/ ROUND NECK AND OPPOSED BLADE DAMPER.
TITUS MODEL #TDC, FRAME TYPE 1, PATTERN #G2.

(F) 12" X 24" LAY-IN RETURN AIR GRILLE
1" x 1" x 1" CUBE CORE CONSTRUCTION
TITUS MODEL #50F, FRAME TYPE 3.

(G) 10" X 10" RETURN AIR GRILLE
1" x 1" x 1" CUBE CORE CONSTRUCTION
TITUS MODEL #50F, FRAME TYPE 1.

## GARAGE EXHAUST

THE GARAGE EXHAUST FAN SHALL BE MOUNTED HIGH ON THE WALL & MAINTAIN 10'-0" FROM ANY AIR INTAKE. THE EXHAUST FAN SHALL BE WALL MOUNTED & PROVIDED W/ A HEATHERHOOD W/ BIRDSCREEN, A GRAVITY DAMPER & AN INTERIOR GUARD.

CONTROLS SHALL COMPLY WITH 2018 IBC & 2018 IMC. CARBON MONOXIDE & NITROGEN DIOXIDE SENSORS SHALL BE UL-2075 LISTED.
THE FAN SHALL HAVE 2 SPEEDS. WHEN THE LIGHTS ARE "ON", THE FAN SHALL RUN ON LOW SPEED. WHEN THE CARBON MONOXIDE OR NITROGEN DIOXIDE DETECTORS ARE ACTIVATED, THE EXHAUST FAN SHALL RUN AT HIGH SPEED (0.75 CFM/SF EXHAUST).

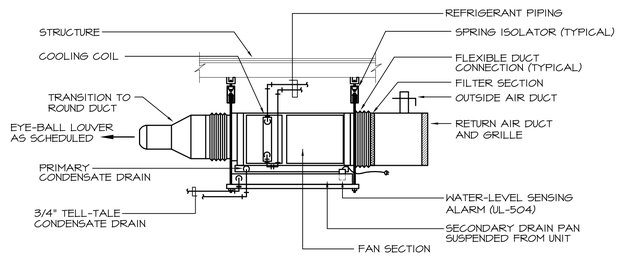
**THE CONTRACTOR SHALL PROVIDE CUT SHEETS FOR ALL FANS TO THE ARCHITECT & OWNER FOR APPROVAL PRIOR TO ORDERING OR ANY WORK. THE FANS MUST BE APPROVED BY ARCHITECT/ OWNER PRIOR TO ANY WORK.**

## FURNACE POWER EXHAUST

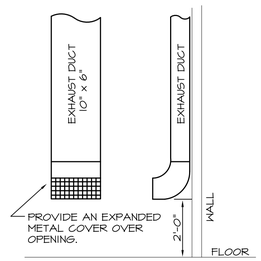
PE-1 THRU PE-10 — FIELD CONTROLS #PVG-100
4" VENT: UP TO 100,000 BTU INPUT @ 550°F
115V/1Ø, 2.1 AMPS

## DEHUMIDIFIER SCHEDULE

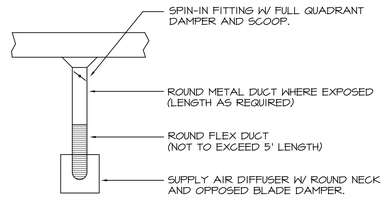
DH-1 — CONTRACTOR SHALL INSTALL A DEHUMIDIFIER HIGH ABOVE STORAGE UNIT.
FRAL #FDK-1005; 1100 CFM, 1500 W @ 208V/1Ø.




1 AIR HANDLING UNIT DETAIL
NO SCALE




2 EXHAUST DUCT DETAIL
NO SCALE




3 SUPPLY AIR DIFFUSER DETAIL
NO SCALE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STATE OF MISSOURI — REGISTERED PROFESSIONAL ENGINEER — D.J. PENN — NUMBER E-28507
12/16/2021

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
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REVISIONS:

MECHANICAL SCHEDULES

SHEET NO.
M2.1

GENERAL
A. THE GENERAL CONDITIONS OF THE GENERAL SPECIFICATIONS, ALONG WITH ALL APPLICABLE INSTRUCTIONS TO BIDDERS SHALL FORM A PART OF THIS SECTION OF THE SPECIFICATIONS.

B. REFERENCE IS MADE TO REQUISITES FOR BIDDERS AND CONTRACTORS UNDER OTHER SECTIONS OF THESE SPECIFICATIONS, WHICH SHALL BE CONSIDERED BINDING, UNLESS OTHERWISE NOTED UNDER THIS SECTION.

SCOPE
EACH CONTRACTOR SHALL THOROUGHLY ACQUAINT HIMSELF WITH THE CONSTRUCTION DETAILS BEFORE SUBMITTING HIS BIS AS NO ALLOWANCES WILL BE MADE BECAUSE OF THE CONTRACTOR'S UNFAMILIARITY WITH THESE DETAILS. ALL PERFORMANCE OF CONSTRUCTION SHALL BE AS REQUIRED BY THE PAGE OF THE GENERAL CONSTRUCTION.

INSPECTION OF SITE
ALL PROPOSALS SHALL PRECLUDE THAT CONTRACTOR IS FAMILIAR WITH JOBSITE CONDITIONS AND UTILITY LOCATIONS AND THE LACK OF SPECIFIC INFORMATION ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY.

PERMITS
ALL PERMITS AND LICENSES NECESSARY FOR THE PROPER EXECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE SUBCONTRACTOR INVOLVED.

CODE REQUIREMENTS
ALL WORK UNDER THIS CONTRACT SHALL COMPLY WITH THE PROVISIONS OF THE SPECIFICATIONS, DRAWINGS OR AS DIRECTED BY THE OWNER, AND SHALL SATISFY ALL APPLICABLE CODES, ORDINANCES, OR REGULATIONS OF THE GOVERNING BODIES, WHETHER SO SHOWN OR NOT, AND ALL MODIFICATIONS REQUIRED BY SUCH AUTHORITIES SHALL BE MADE BY THE CONTRACTOR WITHOUT ANY ADDITIONAL COST TO THE OWNER.

MATERIALS AND WORKMANSHIP
A. ALL MANUFACTURED ARTICLES, MATERIALS, AND EQUIPMENT SHALL BE APPLIED AS RECOMMENDED BY THE MANUFACTURERS, AND UNLESS OTHERWISE SPECIFIED SHALL BE NEW, AND FREE FROM ANY DEFECTS. ALL LIKE MATERIALS USED SHALL BE OF THE SAME MANUFACTURE AND QUALITY UNLESS OTHERWISE SPECIFIED.

B. ALL WORK UNDER THIS CONTRACT SHALL BE PERFORMED BY COMPETENT WORKMEN AND EXECUTED IN A NEAT AND WORKMANLIKE MANNER. WORK SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION, AND ON COMPLETION, THE INSTALLATION SHALL BE THOROUGHLY CLEANED AND ALL DEBRIS PRESENT AS A RESULT OF THIS CONTRACT SHALL BE REMOVED FROM THE PREMISES.

CODES AND REGULATIONS
EACH SUBCONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDINANCES, RULES AND REGULATIONS BEARING ON THE CONDUCT OF THE WORK AS DRAWN OR SPECIFIED. IF A SUBCONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT A VARIANCE, HE SHALL PROMPTLY NOTIFY THE GENERAL CONTRACTOR AND THE OWNER IN WRITING. IF ANY SUBCONTRACTOR PERFORMS ANY WORK KNOWING IT TO BE CONTRARY TO LAWS, ORDINANCES, RULES AND REGULATIONS AND WITHOUT GIVING SUCH NOTICE, THE SUBCONTRACTOR SHALL BEAR ALL COSTS ARISING THEREFROM.

PROTECTION OF WORK AND PROPERTY
A. EACH SUBCONTRACTOR SHALL CONTINUOUSLY MAINTAIN ADEQUATE PROTECTION OF ALL HIS WORK FROM DAMAGE AND SHALL PROTECT THE TENANT'S PROPERTY FROM INJURY OR LOSS ARISING FROM HIS WORK. HE SHALL MAKE GOOD ANY SUCH DAMAGE, INJURY, OR LOSS, EXCEPT SUCH AS MAY BE DIRECTLY DUE TO CAUSES BEYOND HIS CONTROL AND NOT TO HIS FAULT OR NEGLIGENCE. HE SHALL ADEQUATELY PROTECT ADJACENT PROPERTY AS WELL.

B. EACH SUBCONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE SAFETY OF THEIR EMPLOYEES ON THE WORK AND SHALL COMPLY WITH ALL PROVISIONS OF FEDERAL, STATE AND LOCAL BUILDING CODES AND SAFETY LAWS TO PREVENT ACCIDENTS OR INJURY TO PERSONA ON OR ADJACENT TO THE PREMISES WHERE THE WORK IS BEING PERFORMED. EACH SUBCONTRACTOR SHALL MAINTAIN ALL INSURANCE REQUIRED TO PROTECT HIMSELF, TENANT AND TENANT FOR THE DURATION OF THE WORK AGAINST PROPERTY DAMAGE AND PUBLIC LIABILITY.

CHANGES IN THE WORK
THE TENANT, WITHOUT INVALIDATING THE CONTRACT, MAY ORDER EXTRA WORK OR MAKE CHANGES BY ALTERING, ADDING TO OR DEDUCTING FROM THE WORK, THE CONTRACT SUM BEING ADJUSTED ACCORDINGLY.

COOPERATION
ALL WORK UNDER THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN CONJUNCTION WITH OTHER CONTRACTORS AND TRADES OF THIS PROJECT IN A MANNER WHICH WILL ALLOW EACH CONTRACTOR AND TRADE ADEQUATE TIME AT THE PROPER STAGE OF CONSTRUCTION TO FULFILL HIS CONTRACTS. REFERENCE SHALL BE MADE TO THE TENANT FOR INSTRUCTIONS SHOULD ANY QUESTIONS ARISE BETWEEN TRADES AS TO THE PLACING OF LINES, DUCTS, CONDUITS, FIXTURES, OR EQUIPMENT, OR SHOULD IT APPEAR DESIRABLE TO REMOVE ANY GENERAL CONSTRUCTION WHICH WOULD AFFECT THE APPEARANCE OF STRENGTH OF THE STRUCTURE.

SUBSTITUTION OF MATERIALS
MANUFACTURER'S NAMES ARE LISTED HEREIN TO ESTABLISH A STANDARD. THE PRODUCTS OF OTHER MANUFACTURERS WILL BE ACCEPTABLE, IF IN THE OPINION OF THE TENANT, THE SUBSTITUTE MATERIAL IS OF A QUALITY AS GOOD OR BETTER THAN THE MATERIAL SPECIFIED, AND WILL SERVE WITH EQUAL EFFICIENCY AND DEPENDABILITY, THE PURPOSE FOR WHICH THE ITEMS SPECIFIED WERE INTENDED.

SHOP DRAWINGS
SHOP DRAWINGS AND CATALOGUE DATA ON ALL MAJOR ITEMS OF EQUIPMENT AND SYSTEMS, AND SUCH OTHER ILLUSTRATIVE MATERIAL AS MAY BE CONSIDERED NECESSARY BY THE TENANT, SHALL BE SUBMITTED BY THIS CONTRACTOR IN ADEQUATE TIME TO PREVENT DELAY AND CHANGES DURING CONSTRUCTION.

DRAWINGS AND SPECIFICATIONS
A. THE DRAWINGS SHOW DIAGRAMMATICALLY THE LOCATIONS OF THE VARIOUS LINES, DUCTS, CONDUITS, FIXTURES, AND EQUIPMENT AND THE METHOD OF CONNECTING AND CONTROLLING THEM. IT IS NOT INTENDED TO SHOW EVERY CONNECTION IN DETAIL AND ALL FITTINGS REQUIRED FOR A COMPLETE SYSTEM.

B. SHOULD ANY CHANGES BE DEEMED NECESSARY BY THE CONTRACTOR IN ITEMS SHOWN ON CONTRACT DRAWINGS, THE SHOP DRAWINGS, DESCRIPTIONS, AND THE REASON FOR THE PROPOSED CHANGES SHALL BE SUBMITTED TO THE OWNER FOR APPROVAL.

RESPONSIBILITY
A. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE SATISFACTORY AND COMPLETE EXECUTION OF ALL WORK INCLUDED IN HIS CONTRACT. HE SHALL PRODUCE COMPLETE FINISHED OPERATING SYSTEMS AND PROVIDE ALL INCIDENTAL ITEMS REQUIRED AS PART OF HIS WORK, REGARDLESS OF WHETHER SUCH ITEM IS PARTICULARLY SPECIFIED OR INDICATED.

B. CONTRACTOR SHALL SUPPLY TO ARCHITECT AND OWNER A CERTIFIED BALANCE REPORT AT COMPLETION OF PROJECT.

HEATING, VENTILATING AND AIR CONDITIONING
GENERAL
A. THE WORK COVERED BY THIS SECTION OF THESE SPECIFICATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE RESPECTIVE DRAWINGS, INFORMATION, OR INSTRUCTIONS TO BIDDERS, AND THE GENERAL CONDITIONS, ADDENDA, OR DIRECTIVES WHICH MAY BE ISSUED BY THE OWNER, HEREWITH, OR OTHERWISE, SHALL BE COMPLIED WITH IN EVERY RESPECT.

B. THE LISTING HEREIN OF AN ARTICLE OR MATERIAL, OPERATION OR METHOD, REQUIRES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL EACH ITEM LISTED, UNLESS SPECIFICALLY NOTED TO THE CONTRARY. THE CONTRACTOR SHALL PERFORM EACH OPERATION PRESCRIBED OR LISTED ACCORDING TO THE CONDITIONS STATED.

EXAMINATION OF SITE
ALL CONTRACTORS SUBMITTING PROPOSALS FOR THIS WORK SHALL FIRST EXAMINE THE SITE AND ALL CONDITIONS THEREON AND/OR THEREIN. ALL PROPOSALS SHALL TAKE INTO CONSIDERATION ALL SUCH CONDITIONS AS MAY AFFECT THE WORK UNDER THIS CONTRACT.

SCOPE
FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR A COMPLETE FULLY OPERATIVE HEATING, VENTILATING, AND AIR CONDITIONING SYSTEM EXCEPT AS SPECIFICALLY EXCLUDED BY THE DRAWINGS, AND/OR TENANT'S DIRECTIONS.

EQUIPMENT
A. AIR CONDITIONING UNITS - UNITS SHALL BE FACTORY ASSEMBLED AND PRE-TESTED INCLUDING FANS, MOTORS, COILS, FILTERS, VARIABLES PITCH DRIVES, ETC. ALL UNITS SHALL BE EQUIPPED WITH AN ECONOMIZER PACKAGE AND RELIEF DAMPER. UNITS SHALL HAVE NET CAPACITY RATINGS DETERMINED AT THE SPECIFIED DESIGN CONDITIONS. THESE NET CAPACITY RATINGS SHALL BE DETERMINED BY DEDUCTING FOR MOTOR HEAT. THE AIR CONDITIONING UNITS SUPPLIED SHALL HAVE A TOTAL SYSTEM ENERGY RATIO (EER) AS PER CITY CODE. THIS EER SHALL BE DETERMINED BY DIVIDING THE NET CAPACITY AS DEFINED ABOVE BY THE TOTAL INPUT WATTAGE. THE TOTAL INPUT WATTAGE IS TO INCLUDE THE WATTAGE OF ALL FAN MOTORS AND ASSOCIATED EQUIPMENT. CONTRACTOR HILL FURNISH VIBRATION ISOLATION AS REQUIRED AND RECOMMENDED BY EQUIPMENT MANUFACTURER.

B. AIR COOLED CONDENSING UNITS - UNITS SHALL BE FACTORY ASSEMBLED AND PRE-TESTED, AND WILL INCLUDE HEAVY GALVANIZED STEEL HOUSING FINISHED WITH BAKED ENAMEL. AIR COOLED CONDENSERS WITH COPPER TUBES AND ALUMINUM FINS, CONTROL PANEL, COMPRESSOR HIGH AND LOW PRESSURE CUTOUTS, MUFFLERS, CRANKCASE HEATERS, LIQUID RECEIVE, ETC. COMPRESSORS SHALL BE OF THE HERMETICALLY SEALED OR SEMI-HERMETICALLY SEALED TYPE. (LOW AMBIENT CONTROL STD.)

C. CENTRAL STATION AIR HANDLING EQUIPMENT - (IF SCHEDULED ON DRAWINGS) SHALL BE LOW TO MEDIUM PRESSURE SINGLE ZONE DRAW-THRU UNITS EQUAL TO TRANE OR CARRIER. THEY SHALL BE COMPLETE WITH COOLING AND/OR HEATING COILS AND ACCESSORIES AS SPECIFIED ON THE PLANS.

RELIEF AIR FANS
1. GRAVITY RELIEF - EQUAL TO BREIDERT TYPE "RLO" WITH INTEGRAL BACKDRAFT DAMPER AND INSECT SCREEN.

2. POWER RELIEF - EQUAL TO BREIDERT TYPE "LO-SET" SET WITH MOTORIZED DAMPER AND INTEGRAL BACKDRAFT DAMPER AND INSECT SCREEN.

D. ELECTRIC STRIP HEATER - EACH STRIP HEATER SHALL BE CONSTRUCTED TO SLIP INTO THE DUCT THROUGH A RECTANGULAR OPENING IN THE SIDE. EACH STRIP HEATER SHALL BE FURNISHED COMPLETE WITH BUILT-IN MAGNETIC CONTACTORS, AIR FLOW SWITCH, AND FACTORY PREWIRED TO TERMINAL STRIPS FOR LINE AND CONTROL CONNECTIONS IN THE FIELD. A THERMAL CUTOUT SHALL BE FURNISHED WITH EACH STRIP HEATER TO PROTECT THE HEATER AGAINST AIR FAILURE. THE COMPLETE HEATING UNIT SHALL BE LISTED BY UNDERWRITER'S LABORATORIES, INC. COILS SHALL BE ARRANGED FOR MINIMUM TWO-STAGE CONTROL IOKW AND ABOVE.

E. FILTERS - FILTERS SHALL BE OF THE THROW AWAY TYPE WHEREVER POSSIBLE. IF FILTERS ARE OF NECESSITY THE PERMANENT TYPE, THEN THEY MUST BE OF THE CLEANABLE, HIGH VELOCITY TYPE AND SHALL BE AMERICAN AIR FILTERS, AIR MAYS, EVANS, OR APPROVED EQUAL. FILTERS SHALL BE OF THE OPTIMUM THICKNESS AND DESIGN FACE VELOCITY SHALL NOT EXCEED 550 FPM. INSTALLATION OF THE AIR CONDITIONING UNIT SHALL BE SUCH SO AS TO NOT IMPEDE ACCESS TO THE FILTERS. IF THE FILTERS ARE IN FRAME HOLDERS, THEN SUCH HOLDERS SHALL BE PROVIDED WITH A LEFT HANDLE.

G. ALL SINGLE STAGE UNITS WILL BE EQUIPPED WITH MULTI-STAT HUMIDISTAT. A DUAL STAGE UNIT WILL BE EQUIPPED WITH A DAY/NIGHT HUMIDISTAT ARRANGEMENT.
DESIGN AND STANDARD CONDITIONS FOR HUMIDISTAT OPERATION WILL BE AS FOLLOWS:

COOLING: 75 F MINIMUM OCCUPIED COOLING TEMPERATURE
85 F COOLING NIGHT SETBACK.

HEATING: 72 F MAXIMUM OCCUPIED HEATING TEMPERATURE
55 F HEATING NIGHT SETBACK.

DUCTWORK
A. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:

| DUCT SIZE | GAUGE |
|---|---|
| 12" AND LESS | NO. 26 U.S. GAUGE |
| 13" TO 30" | NO. 24 U.S. GAUGE |
| 31" TO 54" | NO. 22 U.S. GAUGE |
| 55" TO 84" | NO. 20 U.S. GAUGE |
| 85" AND OVER | NO. 18 U.S. GAUGE |

B. SQUARE AND RECTANGULAR DUCTWORK SHALL BE CONSTRUCTED AS FOLLOWS:

| SIZE | METHOD |
|---|---|
| 17" AND LESS | "S" AND DRIVE CLEATS |
| 18" TO 30" | "L" STANDING SEAMS ON 3'-0" CENTERS |
| 31" TO 54" | 1-1/4" STANDING SEAMS ON 3'-0" CENTERS |

ROUND DUCTWORK SHALL BE CONSTRUCTED OF NEW GALVANIZED PRIME GRADE SHEET STEEL OF THE FOLLOWING GAUGES:

| DUCT SIZE (DIAMETER) | DUCTS | FITTINGS |
|---|---|---|
| 8" AND LESS | 24 | 22 |
| 9" TO 18" | 22 | 20 |
| 19" TO 30" | 20 | 18 |

ALL 90 DEGREE ELBOWS FOR ROUND DUCTWORK SHALL BE FIVE (5) PIECE. ALL LONGITUDINAL SEAMS SHALL BE FORMED BY PITTSBURGH LOCKS. JOINTS SHALL BE SWAGGED WITH ONE-HALF INCH (1/2") OVERLAP.

C. ALL SUPPLY AIR DUCTS (HEATING AND COOLING) AND RETURN AIR DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED STEEL WITH MINIMUM 1-1/2" THICK ACOUSTICAL AND THERMAL INSULATION WITH AN R-VALUE OF 6.0 ALL EXHAUST AND RELIEF AIR DUCTS SHALL BE GALVANIZED STEEL.

D. CONTRACTOR HILL INSTALL INSECT SCREENS ON ALL DUCT OPENINGS WHICH LEAD TO OR ARE OUTDOORS. INSECT SCREENS SHALL BE 10 GAUGE, ONE-HALF INCH (1/2") MESH IN REMOVABLE GALVANIZED STEEL FRAMES.

E. ALL DUCTWORK SHALL BE DESIGNED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN THE AMERICAN SOCIETY OF HEATING REFRIGERATION AND AIR CONDITIONING ENGINEERS GUIDE (2013 ASHRAE 90.1) AND FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST METHODS RECOMMENDED IN THE SHEETMETAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA) LOW VELOCITY DUCT MANUAL, LATEST EDITION.

HANGERS AND SUPPORTS
A. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND LESS SHALL BE SUPPORTED BY MEANS OF BAND IRON HANGERS OF NO. 18 U.S. GAUGE ATTACHED TO THE DUCT BY MEANS OF RIVETS, SCREWS, OR CLAMPS, AND FASTENED TO STRUCTURE ABOVE BY TOGGLE BOLTS OR OTHER MEANS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS. VERTICAL DUCTS SHALL BE SUPPORTED WITH 1/4" x 1-1/4" x 1-1/4" ANGLES WHERE THEY PASS THROUGH THE FLOOR LINES.

B. ALL HORIZONTAL DUCTS HAVING A DIMENSION OF 40 INCHES AND MORE SHALL BE SUPPORTED BY MEANS OF ANGLE IRON TRAPEZE HANGERS. EACH SECTION OF DUCTWORK SHALL HAVE AT LEAST ONE PAIR OF SUPPORTS.

FLASHING
A. CONTRACTOR WILL PROVIDE WATER TIGHT 24 GA. SHEET METAL FLASHINGS AT ALL EXTERIOR WALLS AND ROOF PENETRATIONS.

B. ALL CUTTING OF ROOF OPENINGS, SUPPORTS FOR ROOF OPENINGS, PITCH PANS, ROOF CURBS, FLASHINGS, COUNTER FLASHINGS, REPAIR TO ROOF, ETC. ASSOCIATED WITH HVAC SUBCONTRACTOR SHALL BE THE RESPONSIBILITY AND PART OF THE CONTRACT HVAC SUBCONTRACTOR. HE SHALL EMPLOY THE OWNER'S ROOFERS FOR THIS WORK SO AS TO MAINTAIN THE ROOF BOND.

DAMPERS
A. SPLITTER DAMPERS SHALL BE FABRICATED OF SHEET STEEL NOT LESS THAN NO. 16 U.S. GAUGE WITH THE LEADING EDGE HEMMED. EACH DAMPER SHALL BE LARGE ENOUGH TO COVER THE SMALLER OF THE TWO OPENINGS IT CONTROLS. DAMPERS SHALL BE CONTROLLED AS FOLLOWS:

EXPOSED OR ACCESSIBLE DUCTWORK - LOCKING QUADRANTS EQUAL TO YOUNG REGULATOR NO. 1 WITH DAMPER ROD END BEARINGS ON OPPOSITE END.

CONCEALED DUCTWORK - LOCKING QUADRANT EQUAL TO YOUNG REGULATOR NO. 315 (CHROMIUM PLATED WITH DAMPER ROD END BEARINGS ON BOTH ENDS).

B. VOLUME DAMPERS SHALL BE OF THE OPPOSED INTERLOCKING TYPE AS MANUFACTURED BY AMERICAN FOUNDRY AND FURNACES CO. (AFFCO) OR EQUAL. BLADES SHALL BE OF NO. 16 GAUGE SHEET METAL AND SHALL NOT EXCEED 48" IN LENGTH OR 12" IN WIDTH. BLADES SHALL BE ON ONE-HALF INCH (1/2") DIAMETER RUSTPROOF AXLE. BEARINGS SHALL BE OF THE SELF-LUBRICATING FERRULE TYPE.

C. JOB FABRICATED TURNING VANES SHALL BE ACCEPTABLE IN SQUARE ELBOWS. PROVIDE AND INSTALL BARBER-COLMAN AIRTURNS OR EQUAL. TURNING VANES SHALL BE OF THE SAME GAUGE METAL AS THE DUCT IN WHICH THEY ARE INSTALLED. RADIUS ELBOWS SHALL HAVE A CENTER-LINE RADIUS OF ONE AND ONE-HALF (1-1/2) TIMES THE DUCT WIDTH.

FIBROUS GLASS DUCT SYSTEMS OPTION
AT HIS OPTION, THE CONTRACTOR MAY FURNISH OWENS-CORNING BOOFR OR BOOFRK OR EQUAL FOR ALL SUPPLY AND RETURN DUCTHORK WHERE THE AIR VELOCITY IS UNDER 2400 FPM, STATIC PRESSURE IS 2" OR LESS AND THE AIR TEMPERATURE IS 250 F OR LESS. SYSTEM SHALL BE FABRICATED, REINFORCED AND INSTALLED ACCORDING TO THE "SMACNA" PUBLICATION - FIBROUS GLASS DUCT CONSTRUCTION STANDARDS, FOURTH EDITION, 1975.

ALL JOINTS ARE TO BE SEALED WITH 2-1/2" "SMACNA" APPROVED PRESSURE SENSITIVE ALUMINUM TAPE MEETING AFTS 100-73 STANDARDS AND THE REQUIREMENTS OF U.L. 181. APPLICATION SHALL BE IN ACCORDANCE WITH AFTS 101-73. (REFER TO MANUFACTURER'S INSTRUCTION SHEET FOR SPECIFIC DETAILS FOR U.L. 181 REQUIREMENTS.) RECOMMEND FASSON 0805. DO NOT APPLY AT TEMPERATURE BELOW 32 F.

DUCTWORK - EXCEPTIONS
DUCTWORK FOR EXHAUSTING AIR OR OUTSIDE SUPPLY AIR SHALL BE ALL METAL AND CONSTRUCTED ACCORDING TO RECOMMENDED PRACTICES AS FOUND IN THE LATEST ISSUE OF ASHRAE.

SUPPORT OF DUCT SYSTEM
DUCTWORK SHALL BE SUPPORTED AT ALL TURNS AND TRANSITIONS AND NOT MORE THAN 8' O.C. FOR STRAIGHT DUCTS UP TO 35" TO 54" MAXIMUM DIMENSION, 6' O.C. AND DUCTS OVER 60: MAXIMUM DIMENSION, 4' O.C.

HANGER DESIGN SHALL BE AS DESCRIBED IN THE LATEST EDITION OF THE "SMACNA" MANUAL. REINFORCEMENT MEMBERS MAY BE USED TO SUPPORT THE DUCT SYSTEM PROVIDED DETAILS OUTLINED IN THE AFOREMENTIONED DOCUMENTS ARE ADHERED TO.

REINFORCEMENT
ALL DUCTS REQUIRING REINFORCEMENT SHALL BE REINFORCED ACCORDING TO THE LATEST EDITION OF "SMACNA" MANUAL.

MATERIALS FOR REINFORCEMENT MEMBERS SHALL BE GALVANIZED STEEL. ALL SCREWS AND WASHERS SHALL BE PLATED OR GALVANIZED.

ACCESSORY ITEMS
ALL MANUAL DAMPERS, FIRE DAMPERS, TURNING VANES, REGISTER CONNECTIONS, ACCESS DOORS OR OTHER ASSOCIATED ACCESSORIES SHALL BE INSTALLED ACCORDING TO THE LATEST PUBLICATION OF "SMACNA" MANUAL.

PIPING
A. PIPING AND FITTINGS SHALL BE OF THE WEIGHTS AND TYPES SHOWN ON THE DRAWINGS. SIZES SHOWN ON THE DRAWINGS ARE NOMINAL PIPE SIZES.

B. ALL PIPING SHALL BE INSTALLED PARALLEL TO, OR AT RIGHT ANGLES WITH THE BUILDING WALLS AND PARTITIONS AND SHALL BE INSTALLED WITH THE PROPER PITCH.

C. ALL PIPING SHALL BE UPENDED AND POUNDED TO REMOVE ANY FOREIGN MATTER PRESENT AND SHALL BE SWABBED IF NECESSARY.

PLUMBING
MATERIALS
A. SANITARY SEWER - CAST IRON OR SCH. 40 PVC MAY BE USED UNLESS OWNER OR CITY REQUIREMENTS DIFFER. VENTS SHALL BE SCH. 40 PVC UNLESS OWNER OR CITY REQUIREMENTS REQUIRE CAST IRON. 40

B. DOMESTIC WATER AND HOT WATER PIPING SHALL BE COPPER TYPE "L" INSULATED WITH ARMAFLEX OR EQUIVALENT INSULATING TO A THICKNESS OF 1".

C. GAS PIPING SHALL BE BLACK STEEL SCHEDULED 40 WITH SCREWED FITTINGS.

D. CHILLED WATER SUPPLY AND RETURN PIPING SHALL BE GALVANIZED STEEL PIPE (STANDARD WALL) OR TYPE "M" HARD COPPER TUBING. ALL PIPING SHALL BE INSULATED WITH 1" THICK OWENS CORNING FIBERGLASS 25 ASJ/SSL OR EQUAL.

HANGERS AND SUPPORTS
HORIZONTAL PIPING SHALL BE SUPPORTED AT INTERVALS NOT TO EXCEED 10'-0" WITH SWIVEL SPLIT PIPE HANGERS EQUAL TO CRANE NO. 149F OR GRINNELL NO. 104. VERTICAL PIPING SHALL BE SUPPORTED BY MEANS OF WROUGHT IRON CLAMPS SUSPENDED FROM THE UNDERSIDE OF STRUCTURE WITH HANGER RODS.

CLEANOUTS
CLEANOUTS SHALL BE AS MANUFACTURED BY JOSAM, ZURN MFG. CO. OR EQUAL AND SHALL BE INSTALLED AT ALL BENDS, ANGLES, AND ENDS OF ALL WASTE AND SEWER LINES, AS CALLED FOR ON THE DRAWINGS, AND AS REQUIRED BY LOCAL CODES. ALL CLEANOUTS SHALL BE BROUGHT TO GRADE, AND IN ALL CASES, SHALL BE PROVIDED WITH SUFFICIENT SPACE FOR RODDING.

VALVES
ALL VALVES SHALL BE BRASS AND MANUFACTURED BY CRANE, NIBCO, STOCKHAM, LUNKENHEIMER, NORDSTROM, GRINNELL OR EQUAL.

SPRINKLER SYSTEM

A. SHOP DRAWINGS - THE SPRINKLER CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE OWNER'S INSURANCE CARRIER & TO THE APPROPRIATE RATING BUREAU FOR THEIR APPROVAL. A COPY OF THE APPROVAL LETTER FROM THE RATING BUREAU SHALL BE FORWARDED TO THE OWNER.

B. SPRINKLER HEADS - SHOW WINDOWS - HIGH TEMPERATURE, CHROME PLATED, COMPLETELY RECESSED TYPE. SALES AREA - CHROME PLATED, SEMI-RECESSED TYPE. STORAGE, TOILET AND WORK AREAS WITH CEILINGS - BRASS, PENDANT TYPE. STORAGE AND WORK AREAS WITHOUT CEILINGS - BRASS UPRIGHT TYPE. (REFER TO DWG. M.1)

ROUGH-INS
FOR SECOND LEVEL LOCATIONS, THE GENERAL CONTRACTOR SHALL RUN ALL LINES REQUIRED FOR PLUMBING ROUGH-INS TIGHT AGAINST THE UNDERSIDE OF THE SECOND FLOOR LEVEL. THE SECOND FLOOR STRUCTURAL SLAB SHALL BE CORED AS REQUIRED TO INSTALL THESE ITEMS AT THE LOCATIONS SHOWN ON THE PLANS.

TESTING AND ADJUSTING
CONTRACTOR WILL DEMONSTRATE OPERATION OF SYSTEM TO FULL SATISFACTION OF OWNER, WILL BALANCE AIR FLOW IN ACCORDANCE WITH AIR QUANTITIES ON DRAWINGS AND WILL RECORD VOLUME READINGS IN ACCORDANCE WITH ASHRAE AND PROVIDE SAME TO OWNER. GAS PIPING SHALL WITHSTAND AIR PRESSURE TESTING PER UNIFORM PLUMBING CODE.

GUARANTEE
ALL MATERIALS, EQUIPMENT, AND WORKMANSHIP SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE OF ACCEPTANCE. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTANCE BY OWNER SHALL BE A CONDITION OF THIS CONTRACT. ALL WORK FOUND TO BE DEFECTIVE SHALL BE REPAIRED OR REPLACED BY THIS SUBCONTRACTOR WITHOUT ADDITIONAL CHARGE TO THE OWNER.

MECHANICAL
TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES:
A. TELEPHONE - THE GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY OWNER & ARCHITECT OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.

B. TEMPORARY WATER - WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.

C. TEMPORARY ELECTRICITY - TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.

D. TEMPORARY HEAT - WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE OWNER OR LOCAL AUTHORITY.

NOTE FOR GENERAL CONTRACTOR
IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO MAKE USE OF APPLICABLE NOTES AND SPECIFICATIONS LISTED ON THIS SHEET AS THEY MAY PERTAIN TO THE SPECIFIC JOB.

WATER HAMMER ARRESTORS

A. INSTALL STAINLESS STEEL BELLOWS TYPE WATER HAMMER ARRESTORS ON WATER LINES CONNECTED TO FLUSH VALVES AND TO GROUPS OF FIXTURES. PROVIDE ACCESS DOORS AT ALL WATER HAMMER ARRESTOR LOCATIONS, SIMILAR TO WADE. SELECTION OF WATER HAMMER ARRESTORS SHALL BE PER PLUMBING AND DRAINAGE INSTITUTE RATING FOR FIXTURE UNIT CAPACITY SERVED. REFER TO PLUMBING RISERS OR PLANS FOR LOCATION AND SIZE.

WATER PIPING

A. PROVIDE WATER CUT-OFF GATE VALVE AND A WALL HYDRANT DRAIN ON WATER SUPPLY LINE WHERE IT ENTERS BUILDING. PROVIDE CUT-OFF GATE VALVES TO ZONE BUILDING AS REQUIRED AND AS INDICATED ON DRAWINGS.

B. PROVIDE WATER HAMMER ARRESTORS WHERE INDICATED ON DRAWINGS.

C. NOTIFY ENGINEER ONE WEEK PRIOR TO STERILIZATION OF DOMESTIC WATER PIPING SYSTEM SO THAT PROCEDURE MAY BE WITNESSED.

D. BEFORE STERILIZING, THOROUGHLY FLUSH ALL DOMESTIC WATER LINES.

E. DISINFECT LINES WITH FLUID CHLORINE OR HYPOCHLORITE. INTRODUCE SUFFICIENT CHLORINE TO PROVIDE AN INITIAL CONCENTRATION OF 50 P.P.M. DISINFECT FOR 24 HOUR PERIOD, OPENING AND CLOSING VALVES IN SYSTEM AT VARIOUS POINTS DURING DISINFECTION. FOLLOWING CHLORINATION, THOROUGHLY FLUSH COMPLETE SYSTEM UNTIL REPLACEMENT WATER IS COMPARABLE IN QUALITY TO WATER FROM THE WATER SUPPLY SYSTEM. SUBMIT CERTIFICATION THAT SPECIFICATION AND ALL ORDINANCES AND REGULATIONS HAVE BEEN COMPLIED WITH.

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STATE OF MISSOURI
DJ PENN
NUMBER E-28807
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

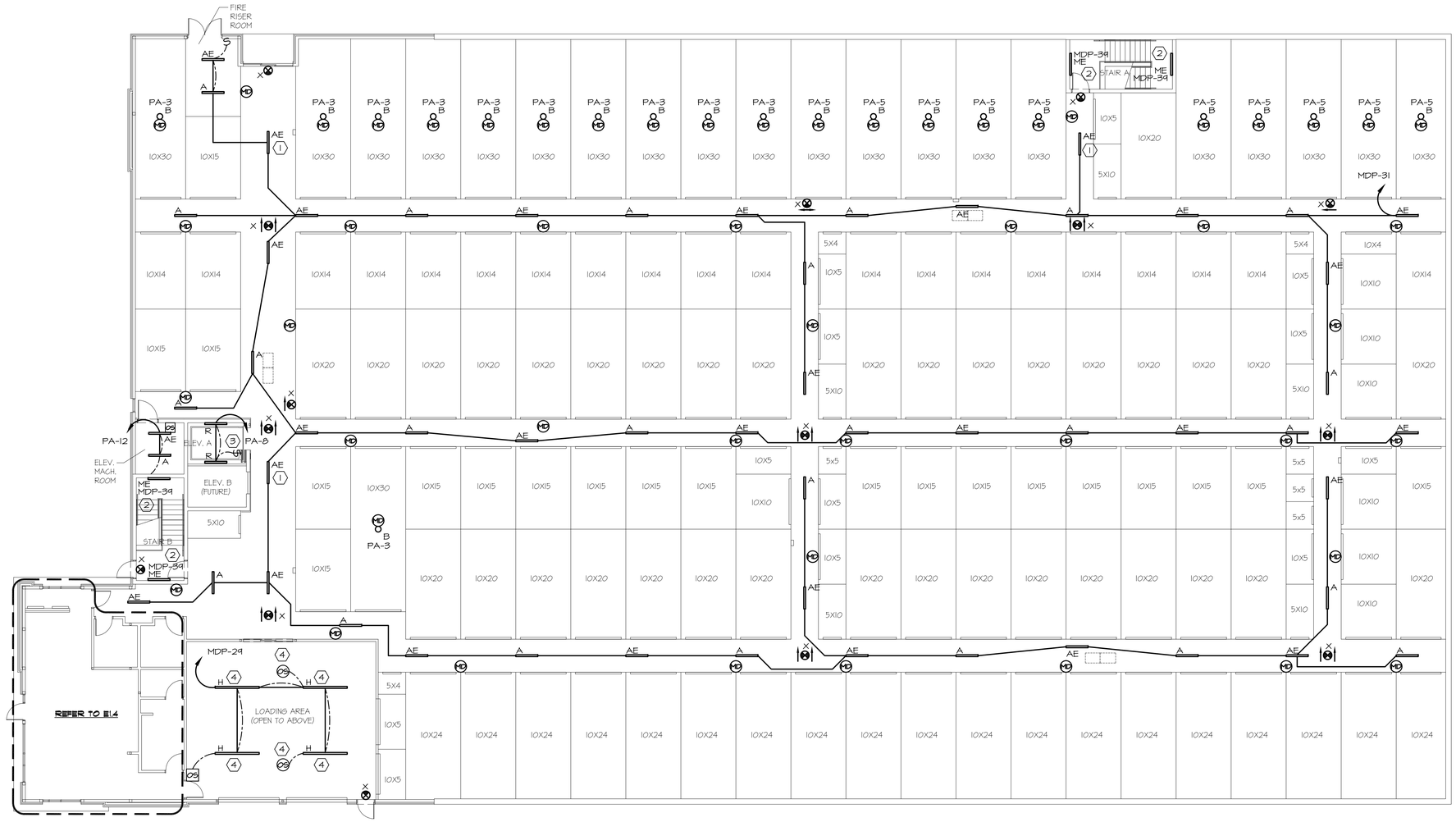
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

MECHANICAL SPECIFICATIONS

SHEET NO.
M3.1




1 1ST FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

**COORDINATION NOTE :**

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

NOTE : ME
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

**GENERAL LIGHTING NOTES :**

1. REFER TO SHEET "MEP1" FOR EXTERIOR LIGHTING.
2. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH OCCUPANCY SENSORS.
3. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

**KEYED LIGHTING NOTES :**

1. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.
2. LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.
3. LIGHT MOUNTED IN ELEVATOR PIT. LOCATE SWITCH @ ACCESS TO PIT. COORDINATE ON-SITE. ELEVATOR HOISTWAY LIGHTING SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE GFCI RECEPTACLE.
4. MOUNT ON STRUCTURE ABOVE. FIELD COORDINATE LOCATION.

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STATE OF MISSOURI
D.J. PENN
NUMBER E-38507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

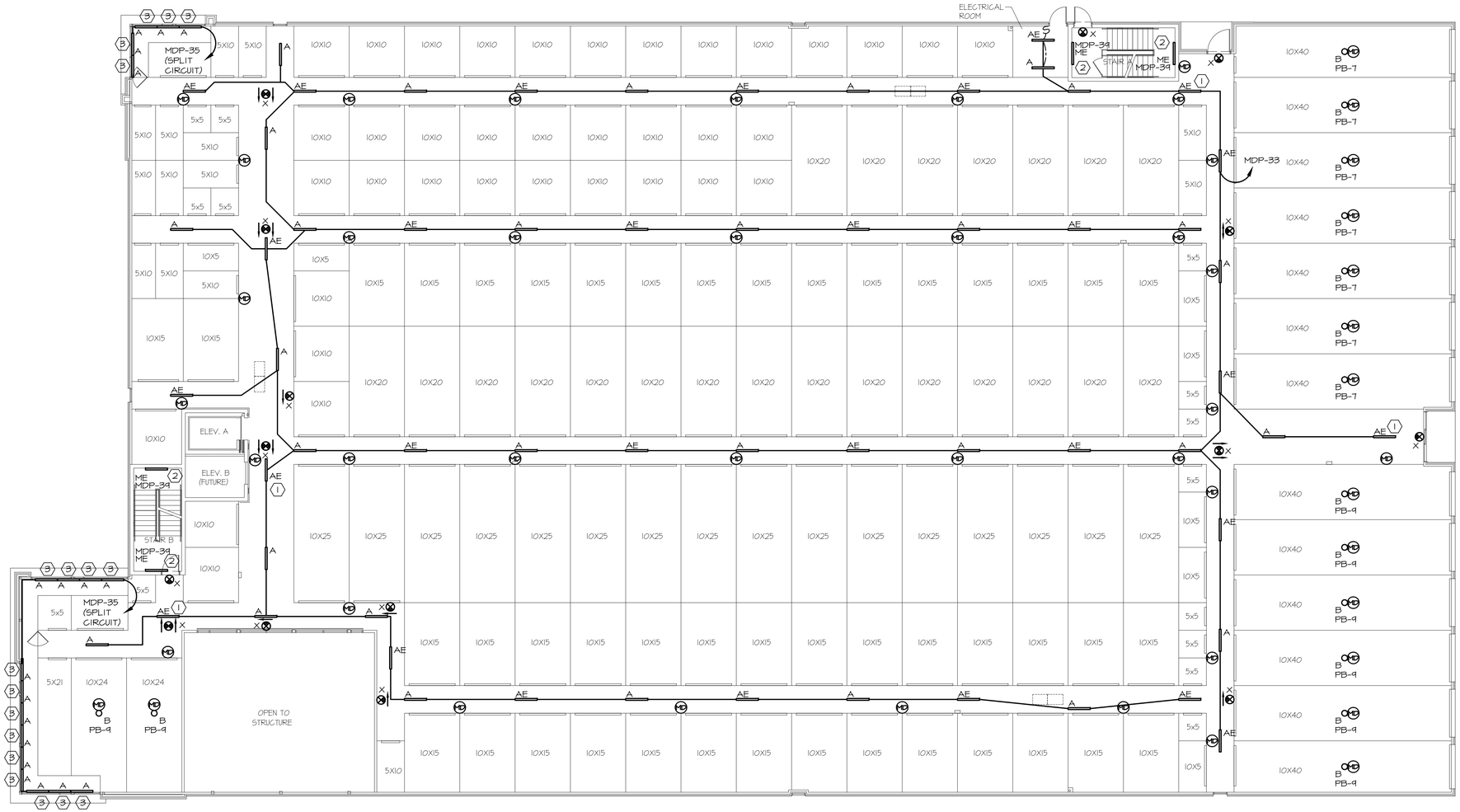
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

1ST FLOOR LIGHTING

SHEET NO.
E1.1




**COORDINATION NOTE :**

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

NOTE : (MD)
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

## 1 2ND FLOOR - LIGHTING PLAN
SCALE: 3/32"=1'-0"

**GENERAL LIGHTING NOTES :**

1. REFER TO SHEET "MEP1" FOR EXTERIOR LIGHTING.
2. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
3. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

**KEYED LIGHTING NOTES :**

(1) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.

(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.

(3) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURES ABOVE WINDOW.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DJ PENN
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12/16/2021

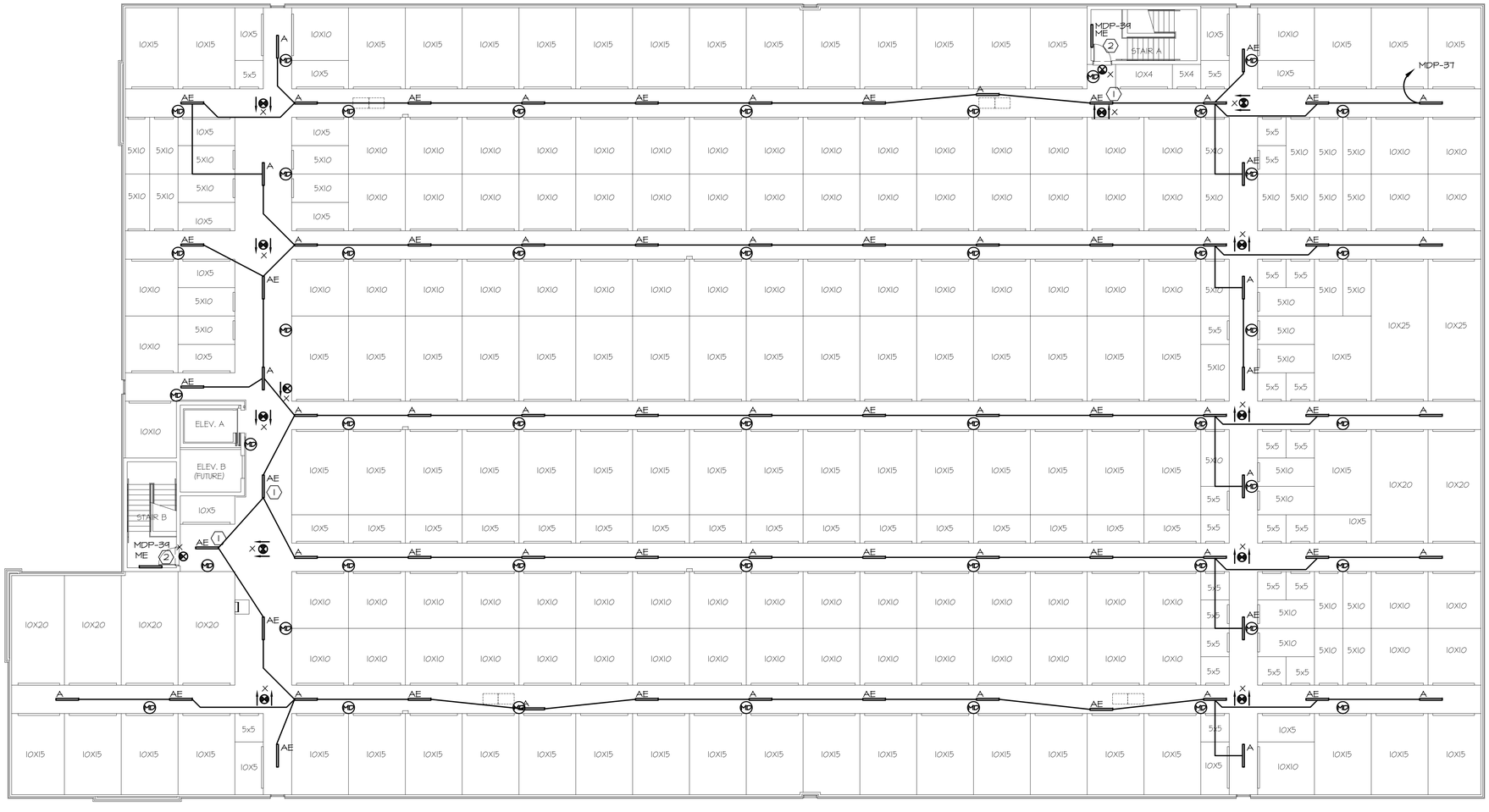
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

2ND FLOOR LIGHTING

SHEET NO.
E1.2




**COORDINATION NOTE :**

THE GENERAL CONTRACTOR SUPERINTENDENT SHALL PAY CLOSE ATTENTION TO THE COORDINATION BETWEEN THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR.

ALL SUB-CONTRACTORS ARE TO COORDINATE THEIR WORK WITH THE OTHER DISCIPLINES TO PROVIDE SPACE FOR THE LAYOUT OF EQUIPMENT, LIGHTS, DUCTWORK, SPRINKLERS, ETC.

THE SPRINKLER CONTRACTOR & MECHANICAL CONTRACTOR SHALL COORDINATE CLOSELY.

NOTE : (MS)
ALL HALLWAY LIGHTING SHALL BE ON MOTION DETECTORS. COORDINATE ALL MOTION DETECTOR LOCATIONS & LIGHTS TO BE ACTIVATED WITH OWNER PRIOR TO FINAL INSTALLATION.

## 1 3RD FLOOR - LIGHTING PLAN

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

**GENERAL LIGHTING NOTES :**

1. REFER TO SHEET "MEP1" FOR EXTERIOR LIGHTING.
2. ALL STORAGE UNIT LIGHTING "B" CONTROLLED WITH BUILT-IN OCCUPANCY SENSORS.
3. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

**KEYED LIGHTING NOTES :**

(1) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES.

(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT BOTTOM OF FIXTURE @ 8'-0" AFF.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STATE OF MISSOURI
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REGISTERED PROFESSIONAL ENGINEER
12/16/2021

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

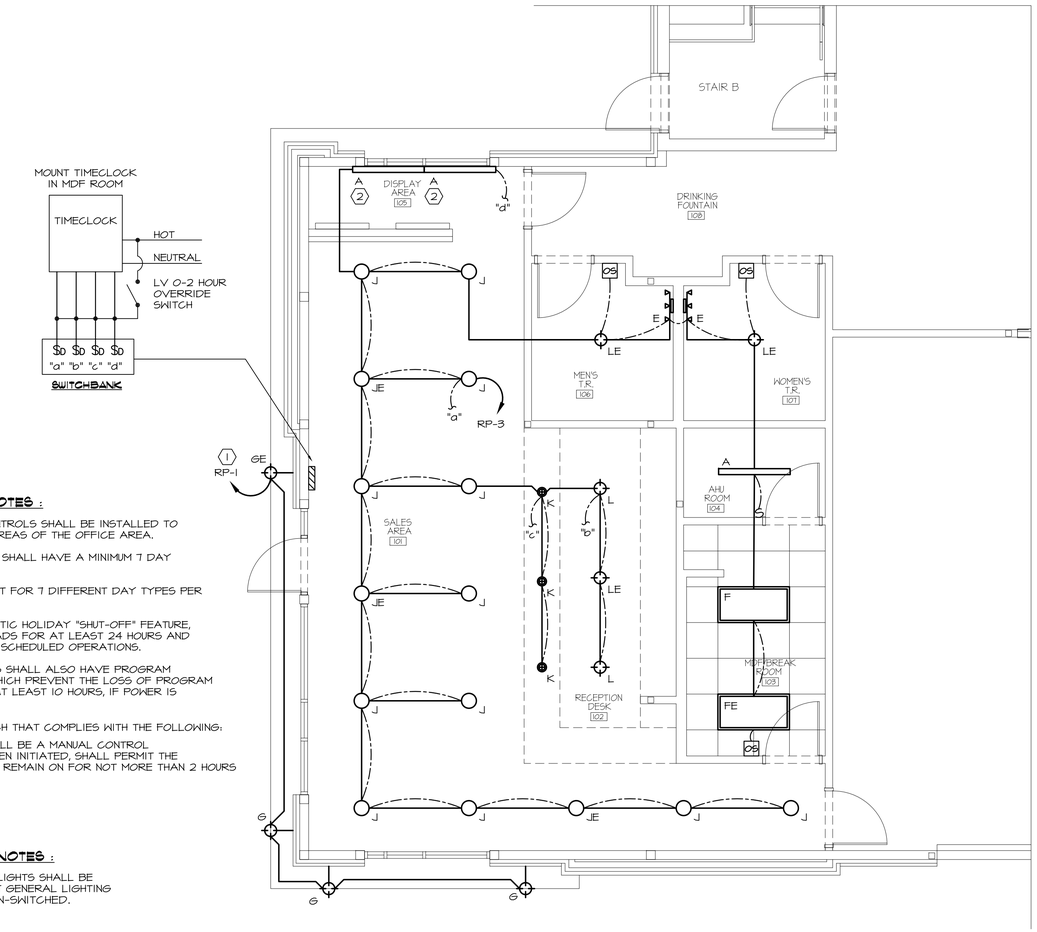
DRAWN : DJP

REVISIONS:

3RD FLOOR LIGHTING

SHEET NO.

E1.3




## LIGHTING CONTROL NOTES :

AUTOMATIC TIME SWITCH CONTROLS SHALL BE INSTALLED TO CONTROL LIGHTING IN ALL AREAS OF THE OFFICE AREA.

1. AUTOMATIC TIME SWITCHES SHALL HAVE A MINIMUM 7 DAY CLOCK, AND
2. BE CAPABLE OF BEING SET FOR 7 DIFFERENT DAY TYPES PER WEEK, AND
3. INCORPORATE AN AUTOMATIC HOLIDAY "SHUT-OFF" FEATURE, WHICH TURNS OFF ALL LOADS FOR AT LEAST 24 HOURS AND THEN RESUMES NORMALLY SCHEDULED OPERATIONS.
4. AUTOMATIC TIME SWITCHES SHALL ALSO HAVE PROGRAM BACK-UP CAPABILITIES, WHICH PREVENT THE LOSS OF PROGRAM AND TIME SETTINGS FOR AT LEAST 10 HOURS, IF POWER IS INTERRUPTED.

INCLUDE AN OVERRIDE SWITCH THAT COMPLIES WITH THE FOLLOWING:

1. THE OVERRIDE SWITCH SHALL BE A MANUAL CONTROL
2. THE OVERRIDE SWITCH, WHEN INITIATED, SHALL PERMIT THE CONTROLLED LIGHTING TO REMAIN ON FOR NOT MORE THAN 2 HOURS

## GENERAL LIGHTING NOTES :

1. ALL EXIT & EMERGENCY LIGHTS SHALL BE CONNECTED TO NEAREST GENERAL LIGHTING CIRCUIT AND REMAIN UN-SWITCHED.

## KEYED LIGHTING NOTES :

(1) RUN CIRCUIT SWITCHLEG THRU PHOTOCELL MOUNTED ON ROOF, WITH TIMECLOCK OVERRIDE. COORDINATE EXTERIOR LIGHTING WITH ARCHITECTURAL PLANS/ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS.

(2) LIGHT FIXTURE TO REMAIN "ON" AT ALL TIMES. MOUNT FIXTURES ABOVE WINDOWS, BELOW CEILING. COORDINATE WITH ARCHITECTURAL PLANS.

## 1 OFFICE LIGHTING PLAN
SCALE: 1/4"=1'-0"

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# LAKEWOOD STORAGE
NE PORT DRIVE
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PROJECT NO. 2035
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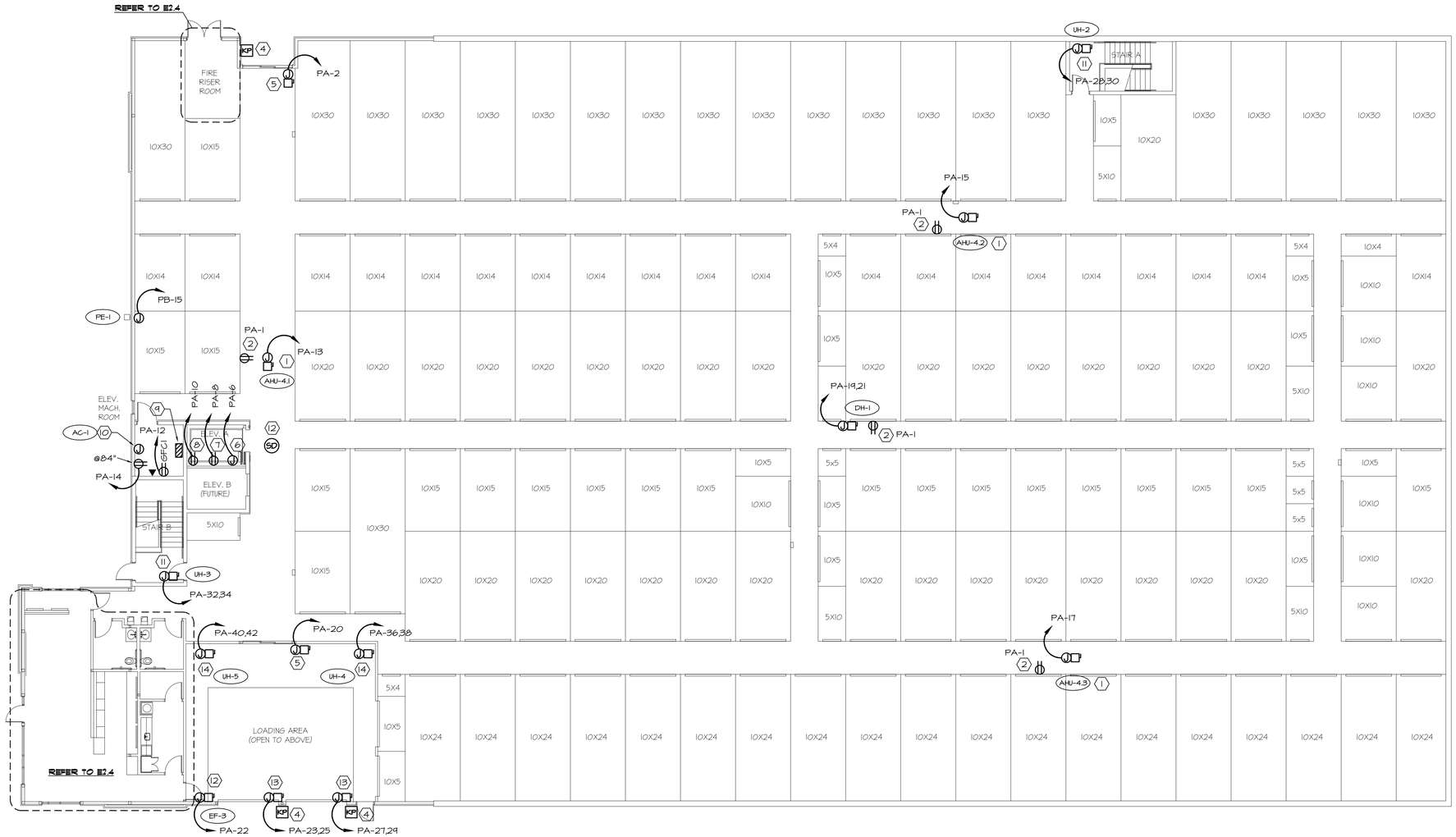
OFFICE LIGHTING

SHEET NO.
E1.4




1 1ST FLOOR - POWER PLAN
SCALE: 3/32"=1'-0"

**ELEVATOR GENERAL NOTES :**

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 1'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

**POWER KEYED NOTES :**

1. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET IN CORRIDOR ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
4. SECURITY KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY INSTALLER. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
5. J-BOX & 30A/2P/120V/NON-FUSED/N-1 DISCONNECT SWITCH FOR DOOR MOTOR. COORDINATE WITH INSTALLER.
6. PROVIDE A DEDICATED BRANCH CIRCUIT FOR THE ELEVATOR CAR LIGHTING. FIELD COORDINATE LOCATION W/ ELEVATOR EQUIPMENT SUPPLIER.
7. GFCI OUTLET IN HOISTWAY. LIGHTING IN HOISTWAY SHALL NOT BE CONNECTED TO LOAD SIDE OF THE GFCI RECEPTACLE.
8. DEDICATED DUPLEX RECEPTACLE FOR SUMP PUMP. REFER TO DETAIL 1/MEP2.
9. 100A/3P/480V/N-1 FUSED 100A ENCLOSED DISCONNECT PROVIDED WITH SHUNT TRIP AS PER ELEVATOR CODE. **CONTRACTOR SHALL VERIFY W/ ELEVATOR INSTALLER PRIOR TO ORDERING ANY GEAR.**
10. J-BOX FOR CONNECTION TO AC UNIT, POWERED THRU CONDENSING UNIT.
11. J-BOX & 30A/2P/208V/FUSED 25A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.
12. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR EXHAUST FAN.
13. J-BOX & 30A/2P/208V/FUSED 20A/N-1 DISCONNECT SWITCH FOR ROLL-UP DOOR MOTOR. COORDINATE CONTROLS WITH INSTALLER.
14. J-BOX & 30A/2P/208V/FUSED 30A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.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NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

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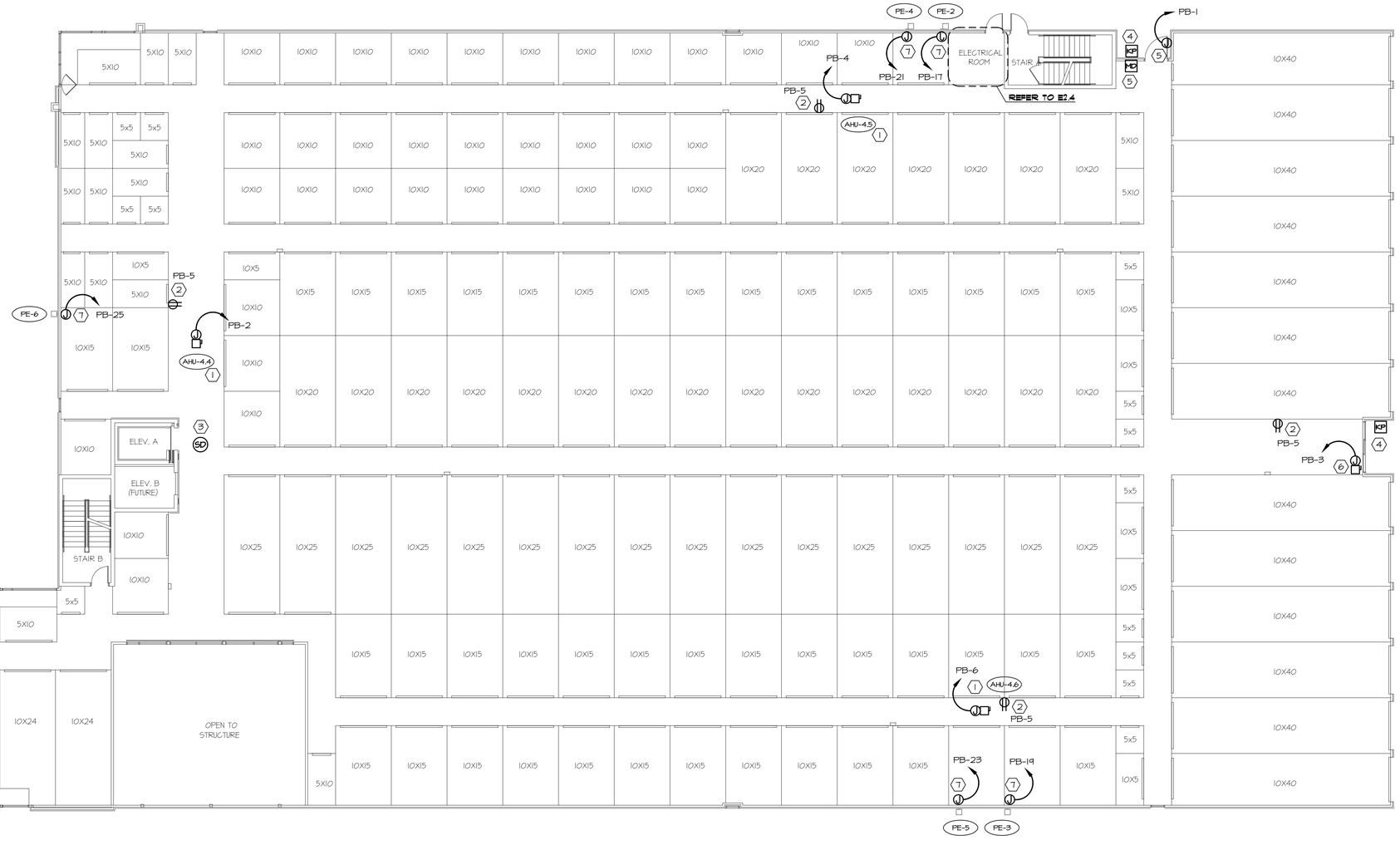
1ST FLOOR POWER

SHEET NO.
E2.1




## 1 2ND FLOOR - POWER PLAN

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

**ELEVATOR GENERAL NOTES :**

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 1'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

**POWER KEYED NOTES :**

1. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET IN CORRIDOR ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
4. SECURITY KEYPAD @ 48" AFF. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT WITH SECURITY INSTALLER. PROVIDE 3/4" CONDUIT W/ PULLSTRING TO ACCESSIBLE CEILING, CORRIDOR CEILING IS NOT ACCESSIBLE, COORDINATE ON-SITE.
5. E.C PROVIDED/INSTALLED J-BOX FOR MAGNETIC DOOR HOLD OPEN ACTIVATED WITH MOTION SENSOR AT ENTRY. E.C. TO COORDINATE LOCATION AND MOUNTING HEIGHT W/ OWNER. MOTION SENSOR SHALL REMAIN SEPARATE OF LIGHTING MOTION SENSORS. E.C. TO PROVIDE ALTRONIX #ALI25UL POWER SUPPLY/CONVERTER CABINET IN MAIN ELECTRICAL ROOM.
6. J-BOX & 30A/2P/120V/NON-FUSED/N-1 DISCONNECT SWITCH FOR DOOR MOTOR. COORDINATE WITH INSTALLER.
7. J-BOX FOR POWER VENT POWER. COORDINATE WITH INSTALLER.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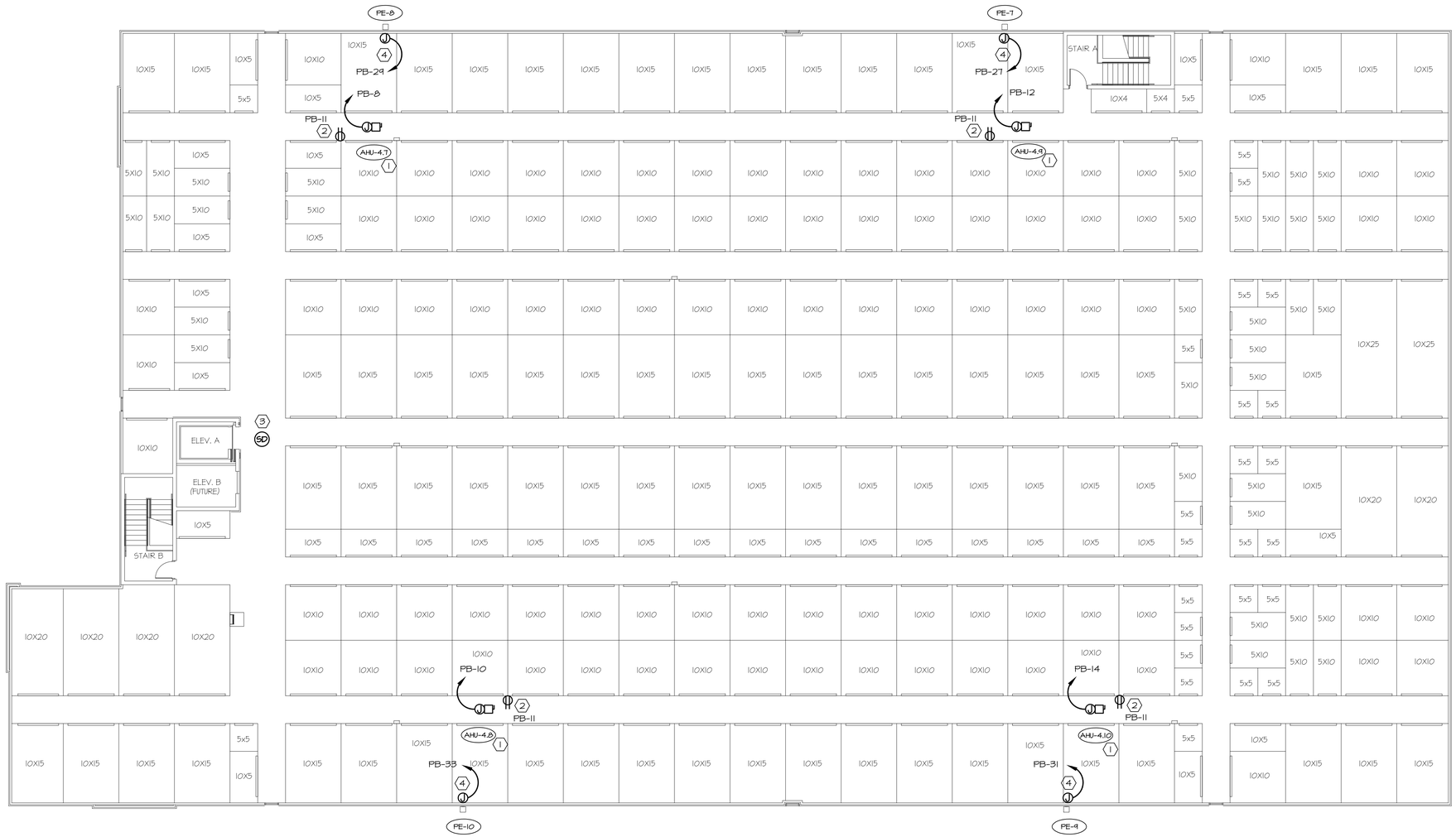
2ND FLOOR POWER

SHEET NO.
E2.2




## 1 3RD FLOOR - POWER PLAN

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

**ELEVATOR GENERAL NOTES :**

THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL FINAL REQUIREMENTS W/ THE STATE ELEVATOR INSPECTOR BUT NOTE THE FOLLOWING:

THE POWER FEEDER SHALL BE 7'-0" CLEAR FROM THE FLOOR.
THERE SHALL BE A DEDICATED GFCI RECEPTACLE IN THE PIT.
A DEDICATED GFCI IN THE ELEVATOR CONTROL ROOM.
A DEDICATED PHONE LINE TO THE CONTROLLER.
A DEDICATED PHONE LINE TO ADT ALARM PANEL.
A SMOKE DETECTOR IN THE ELEVATOR CONTROL ROOM & THE LOBBY ON EACH FLOOR THAT WHEN ACTIVATED WILL SEND A RECALL SIGNAL TO THE ELEVATORS.
THE LIGHT IN THE ELEVATOR PIT SHALL BE PROVIDED W/ A 2-POLE DISCONNECT SWITCH LOCATED IN THE ELEVATOR EQUIPMENT ROOM CAPABLE OF BEING LOCKED.
THE SHUNT TRIP SHALL BE LOCATED IN THE ELEVATOR EQUIPMENT ROOM.

**POWER KEYED NOTES :**

1. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
2. MOUNT OUTLET IN CORRIDOR ABOVE DOOR HEIGHT. COORDINATE LOCATION.
3. REFER TO "ELEVATOR GENERAL NOTES" ON THIS SHEET.
4. J-BOX FOR POWER VENT POWER. COORDINATE WITH INSTALLER.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# LAKEWOOD STORAGE

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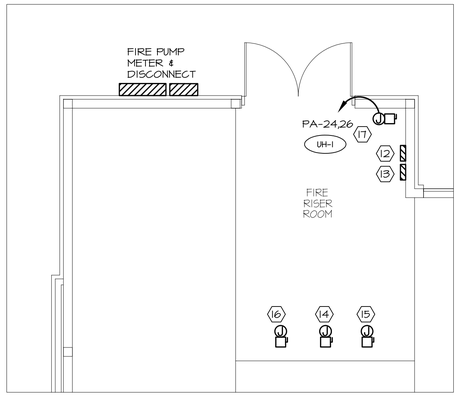
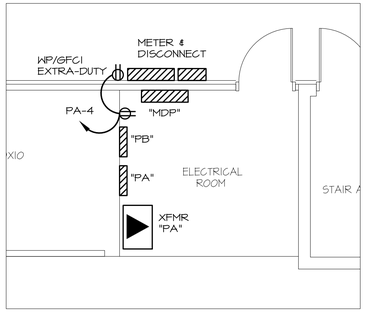
3RD FLOOR POWER

SHEET NO.

E2.3



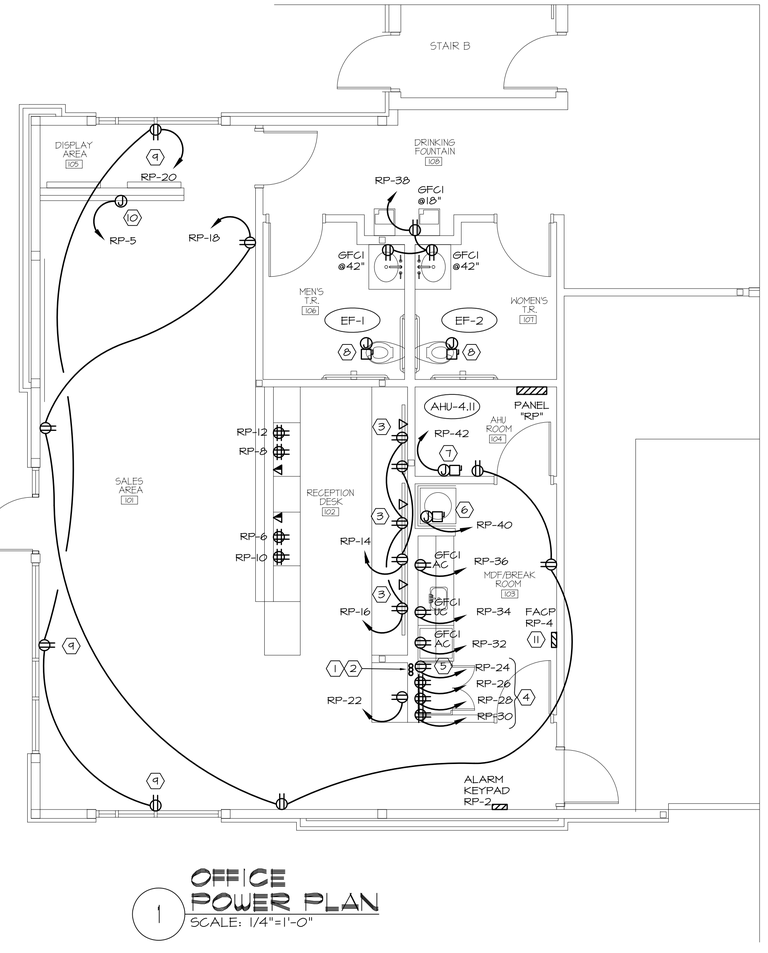

3 FIRE RISER ROOM
SCALE: 1/4"=1'-0"




2 ELECTRICAL ROOM
SCALE: 1/4"=1'-0"

**POWER KEYED NOTES :**

1. PROVIDE (2) 2" CONDUITS TO CABINETRY REAR WALL OF MDF/BREAK ROOM FOR SECURITY/TV/DATA. COORDINATE W/ SECURITY CONTRACTOR & GENERAL CONTRACTOR.
2. PROVIDE NECESSARY CONDUIT FROM CABINETRY TO OPERATOR GATES. COORDINATE WITH SECURITY CONTRACTOR & GENERAL CONTRACTOR.
3. DUPLEX OUTLETS AND CATV OUTLETS FOR MONITORS. MOUNT BEHIND MONITOR, 73" AFF. GC TO COORDINATE HEIGHTS/ LOCATIONS/QUANTITIES WITH OWNER AND MANAGEMENT COMPANIES.
4. OUTLETS TO BE MOUNTED IN MDF CABINET. COORDINATE WITH INSTALLER.
5. DEDICATED DUPLEX RECEPTACLE FOR TELEPHONE BOARD.
6. J-BOX & 30A/2P/120V/NF/N-1 DISCONNECT SWITCH FOR WATER HEATER.
7. J-BOX & 30A/2P/120V/FUSED 20A/N-1 DISCONNECT SWITCH FOR AIR HANDLING UNIT.
8. J-BOX & 30A/2P/120V/NF/N-1 DISCONNECT SWITCH FOR EXHAUST FAN. FAN TO BE POWERED AND CONTROLLED WITH LIGHTS IN ROOM.
9. DUPLEX RECEPTACLE FLUSH MOUNTED ABOVE WINDOW.
10. J-BOX FOR INTERIOR SIGN. COORDINATE LOCATION AND MOUNTING HEIGHT WITH INSTALLER.
11. THE LOCATION OF THE HVAC DUCT DETECTORS MUST BE CLEARLY INDICATED AT THE FIRE ALARM PANEL.
12. FIRE PUMP CONTROLLER. REFER TO SPRINKLER SHOP DRAWINGS.
13. JOCKEY PUMP CONTROLLER. REFER TO SPRINKLER SHOP DRAWINGS.
14. J-BOX & 200A/3P/480V/FUSED 200A/N-4 DISCONNECT SWITCH FOR FIRE PUMP. COORDINATE WITH SPRINKLER SHOP DRAWINGS.
15. J-BOX & 30A/3P/480V/FUSED 20A/N-4 DISCONNECT SWITCH FOR JOCKEY PUMP. COORDINATE WITH SPRINKLER SHOP DRAWINGS.
16. J-BOX & 30A/3P/208V/NF/N-4 DISCONNECT SWITCH FOR BOOSTER PUMP.
17. J-BOX & 30A/2P/208V/FUSED 25A/N-1 DISCONNECT SWITCH FOR UNIT HEATER.




1 OFFICE POWER PLAN
SCALE: 1/4"=1'-0"

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# LAKEWOOD STORAGE

NE PORT DRIVE
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PROJECT NO. 2035
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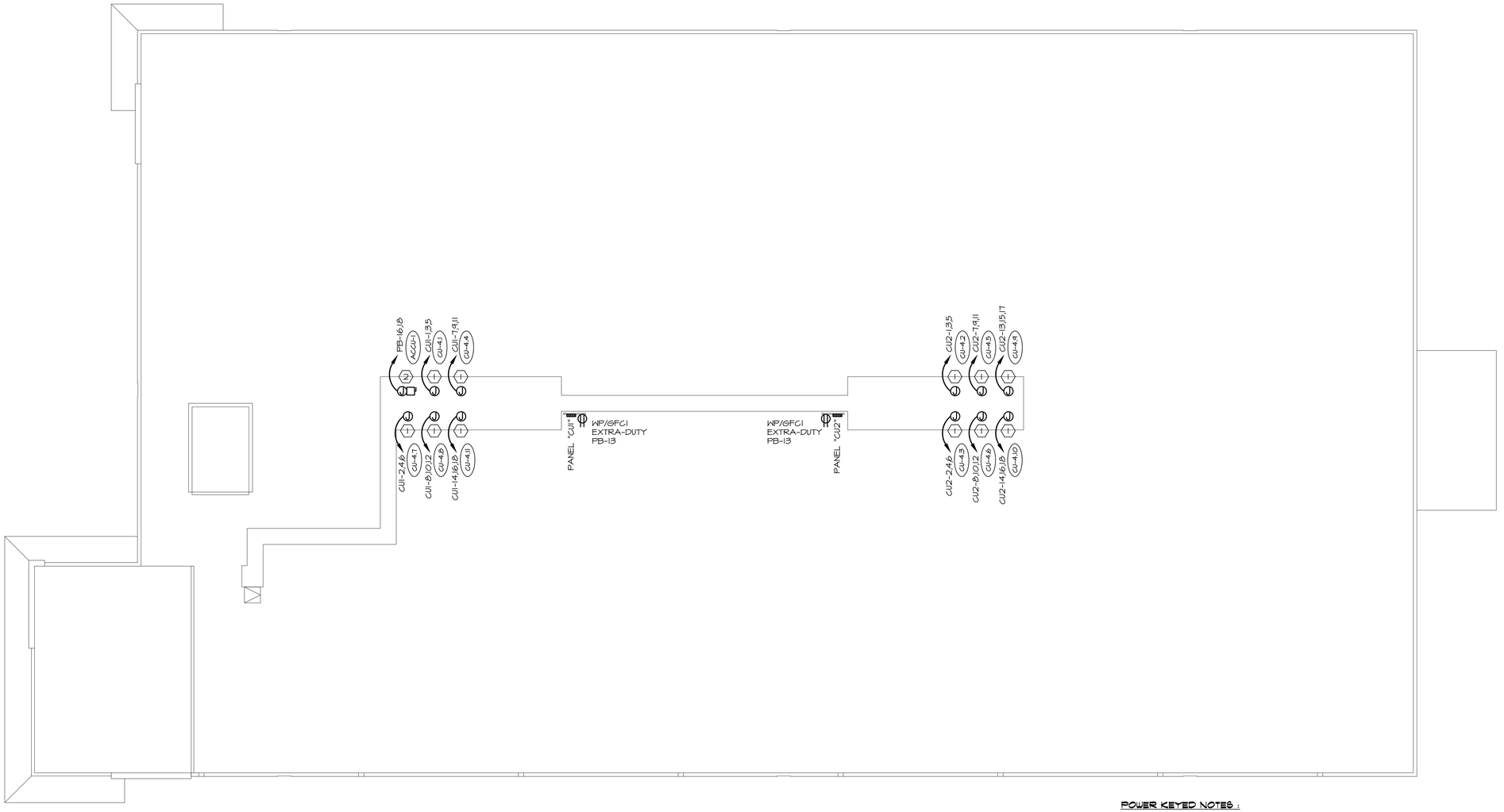
REVISIONS:

OFFICE POWER

SHEET NO.
E2.4




1 ROOF - POWER PLAN
SCALE: 3/32"=1'-0"

POWER KEYED NOTES :

1. J-BOX FOR CONNECTION TO CONDENSING UNIT. DISCONNECT MEANS IN PANELBOARD WITHIN 50 FEET.
2. J-BOX & 30A/2P/208V/FUSED 25A/N-3R DISCONNECT SWITCH FOR CONDENSING UNIT.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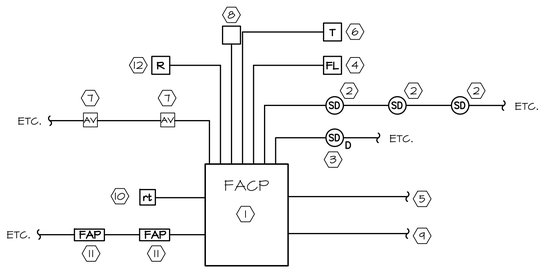
ROOF POWER

SHEET NO.
E2.5




## 2 TYPICAL FIRE ALARM CONTROL DIAGRAM
NO SCALE

### FIRE ALARM KEYED NOTES:

1. FIRE ALARM CONTROL PANEL WITH 24-HOUR BATTERY BACKUP
2. AREA SMOKE DETECTORS
3. DUCT SMOKE DETECTORS
4. SPRINKLER FLOW DETECTOR
5. WIRE TO RELAY TO SHUT DOWN HVAC UNITS
6. SPRINKLER FLOW DETECTOR TAMPER SWITCH
7. AUDIO/VISUAL ALARM DEVICES
8. ADDRESSABLE INTERFACE DEVICE (MONITOR ZAM) INSTALLED IN JUNCTION BOX
9. 120V POWER SUPPLY
10. REMOTE TEST & ALARM STATION
11. MANUAL FIRE ALARM PULL
12. RELAY FOR CONNETION OF DOOR HOLDER POWER SUPPLY.

## FIRE ALARM NOTES

THE COMPLETE FIRE ALARM SYSTEM SHALL BE DESIGNED BY THE FIRE ALARM SUB-CONTRACTOR AND SUBMITTED TO THE OWNER, ARCHITECT & ENGINEER FOR REVIEW. THE BID SHALL BE HANDLED BY AN ALLOWANCE.

ALL THE ITEMS SHOWN HERE & ON THE ELECTRICAL POWER SHEETS ARE FOR REFERENCE ONLY. THE FIRE ALARM CONTRACTOR SHALL PREPARE A SET OF DOCUMENTS FOR REVIEW BY THE CITY, OWNER'S INSURANCE CARRIER, ETC. AND SHALL COMPLY WITH NFPA-72, ADA 702.

REFER TO THE MECHANICAL SHEETS FOR DUCT DETECTOR LOCATIONS.

DUCT DETECTORS MUST ACTIVATE AS A GENERAL ALARM AND NOT A SUPERVISORY/TROUBLE SIGNAL

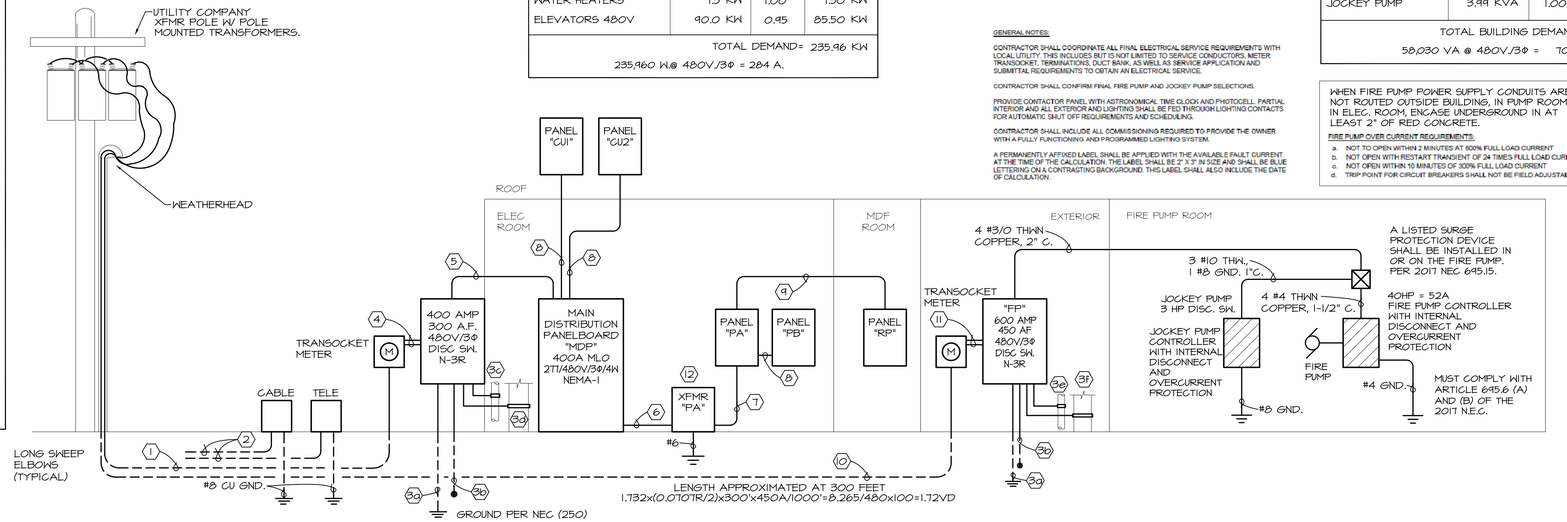
## LIGHTING FUNCTIONAL TESTING/COMMISSIONING

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE LIGHTING CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBATAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL LIGHTING FIXTURES HAVE LAMPS INSTALLED AND ARE FUNCTIONAL.
2. TEST ALL EXIT SIGNS, EMERGENCY LIGHTING FIXTURES, AND EMERGENCY BALLASTS FURNISHED INTEGRAL TO FIXTURES.
3. ENSURE ALL OCCUPANCY SENSORS HAVE BEEN INSTALLED AND ARE OPERATIONAL.
4. ENSURE ALL WALLBOX AND SCENE CONTROLLERS ARE INSTALLED AND OPERATIONAL.
5. ENSURE ALL PHOTOCELLS ARE INSTALLED AND OPERATIONAL.
6. TEST EACH INDIVIDUAL DEVICE FOR OCCUPANCY SENSOR TYPES.
7. VERIFY THE FOLLOWING:
   - 7.1. SENSORS HAVE BEEN LOCATED AND AIMED PER THE MANUFACTURER'S RECOMMENDATIONS
   - 7.2. STATUS INDICATORS ON DEVICES ARE OPERATIONAL AND CORRECT.
   - 7.3. DEVICES CONTROL LIGHTING FIXTURES AS INDICATED ON DRAWINGS.
   - 7.4. TIME DELAYS HAVE BEEN SET AS INDICATED ON THE DRAWINGS.
   - 7.5. MOVEMENT IN ADJACENT AREAS AND/OR CYCLING OF HVAC SYSTEMS DOES NOT FALSE TRIGGER SENSORS

## ELECTRICAL RISER KEYED NOTES :

1. UNDERGROUND SERVICE LATERAL FROM POLE MOUNTED TRANSFORMERS. INSTALLED PER UTILITY COMPANY STANDARDS. (2-SETS) 3 #3/0 AL THW (H), 1 #3/0 CU THW (N)., 3" C. LONG SWEEP RADIUS ELBOWS ONLY.
2. 2" CONDUITS FOR TELEPHONE & CABLE SERVICE. COORDINATE SERVICE FROM STREET TO BUILDING WITH LOCAL PROVIDER.
3a. #6 CU. GND. TO 3/4"x 8'-0" DRIVEN GROUND ROD. INSTALL PER NEC 250.
3b. #4 GND. TO FOUNDATION REBAR. INSTALL PER NEC 250.
3c. #2 GND. TO COLD WATER PIPE. INSTALL PER NEC 250.
3d. #2 CU. GND. TO BUILDING STEEL. INSTALL PER NEC 250.
3e. #1/0 GND. TO COLD WATER PIPE. INSTALL PER NEC 250.
3f. #1/0 CU. GND. TO BUILDING STEEL. INSTALL PER NEC 250.
4. 3 #350 KCMIL CU THW (H), 1 #350 KCMIL CU THW (N)., 3" C.
5. 4 #350 KCMIL CU THW., 1 #1/0 GND., 3" C.
6. 3 #1 THW, 1 #6 GND., 1-1/2" C.
7. 4 #3/0 THW, 1 #6 GND., 2" C.
8. 4 #2 THW, 1 #8 GND., 1-1/2" C.
9. 4 #2/0 THW, 1 #8 GND., 2" C.
10. (2-SETS) 3-300 KCMIL AL THW(H), 1-300 KCMIL AL THW(N), EACH IN 3" C. (RED DYE CONCRETE ENCASED) UNDER DRIVEWAY
11. (2-SETS) 3 #4/0 CU THW(H), 1 #4/0 CU THW(N), EACH IN 3" C.
12. 75 KVA DRY TYPE TRANSFORMER
    480 V. "DELTA" PRIMARY
    120/ 208 V. "WYE" SECONDARY
    MOUNT ON FLOOR.
    #6 CU. GND. TO BUILDING STEEL
    SQUARE D #EXNT5T3H




## 1 ELECTRICAL RISER DIAGRAM
NO SCALE

## ELECTRICAL SYMBOLS LEGEND

- 120V DUPLEX RECEPTACLE - 16" A.F.F. AC = ABOVE COUNTER
- 120V QUAD RECEPTACLE - 16" A.F.F.
- TELEPHONE RECEPTACLE - 16" A.F.F.
- PHONE/DATA RECEPTACLE - 16" A.F.F.
- CABLE T.V. ANTENNA OUTLET
- FLOOR MOUNTED DUPLEX RECEPTACLE
- MD MOTION DETECTOR
- KP KEYPAD
- FP FIRE ALARM MANUAL PULL STATION
- AV AUDIO/VISUAL DEVICE @ 84"A.F.F.
- V VISUAL DEVICE @ 84"A.F.F.
- S WALL SWITCH - 48" A.F.F.
- $S_3$ THREE-WAY WALL SWITCH - 48" A.F.F.
- $S_T$ WALL SWITCH W/ 15 MIN. TIMER - 48" A.F.F.
- OS CEILING MOUNTED OCCUPANCY SENSOR
- OS WALL MOUNTED OCCUPANCY SENSOR
- DISCONNECT SWITCH
- JUNCTION BOX
- P-1 HOMERUN W/ CIRCUIT CALLOUT
- ELECTRICAL PANELBOARD
- CD CO2 DETECTOR - CEILING MOUNTED
- SD SMOKE DETECTOR - CEILING MOUNTED
- $SD_D$ DUCT SMOKE DETECTOR.
- T THERMOSTAT - 48" A.F.F.

## LOAD ANALYSIS "MDP"

| LOAD | CONNECTED | FACTOR | DEMAND |
|---|---|---|---|
| SIGNAGE | 3.6 KW | 1.25 | 4.50 KW |
| LIGHTING 120V | 1.3 KW | 1.25 | 1.63 KW |
| LIGHTING-SENSOR 120V | 5.1 KW | 1.00 | 5.10 KW |
| LIGHTING 277V | 10.53 KW | 1.25 | 13.16 KW |
| CONV. OUTLETS | 10.0 KW | 1.00 | 10.00 KW |
| CONV. OUTLETS | 4.05 KW | 0.50 | 2.03 KW |
| AIR COND. 480V | 82.34 KW | 1.00 | 82.34 KW |
| HEATING 480V | -0- KW | 1.00 | -0- KW |
| AIR COND. 208V | 20.81 KW | 1.00 | 20.81 KW |
| HEAT 208V | 19.6 KW | 1.00 | -0- KW |
| MOTOR | 1.55 KW | 1.25 | 1.94 KW |
| MOTORS | 7.45 KW | 1.00 | 7.45 KW |
| WATER HEATERS | 1.5 KW | 1.00 | 1.50 KW |
| ELEVATORS 480V | 90.0 KW | 0.95 | 85.50 KW |
| TOTAL DEMAND= 235.96 KW | | | |

235,960 W.@ 480V./3Φ = 284 A.

## LIGHTING FIXTURE SCHEDULE

| TYPE | LAMPS | MOUNTING | VOLTAGE | DESCRIPTION/ CATALOG NO. |
|---|---|---|---|---|
| A | 44W LED | SURFACE | 120/277 | 4' LED STRIP<br>LSI #SDL4-LED-60L-FL-UNV-DIMI-40-80CRI |
| AE | 44W LED | SURFACE | 120/277 | 4' LED STRIP W/ 90 MIN. EMERGENCY BATTERY BACKUP<br>LSI #SDL4-LED-60L-FL-UNV-DIMI-40-80CRI-EMI0 |
| B | 150W E26 | SURFACE | 120 | LIGHT FIXTURE W/ MOTION DETECTOR.<br>LEVITON #49875 |
| CE | 24W LED | RECESSED | MVOLT | LED EXTERIOR RECESSED DOWNLIGHT<br>W/ 90 MINUTE EMERGENCY BATTERY BACKUP<br>LITHONIA #LDN6-35/20-L06AR-LD-MVOLT-EZIO-EL |
| D | 46W LED | WALL | MVOLT | LED EXTERIOR WALL-PACK<br>LITHONIA #DSXW1-LED-20C-700-40K-T2M-MVOLT-DNAXD |
| DE | 46W LED | WALL | MVOLT | EXTERIOR WALL-PACK W/90 MINUTE BATTERY BACKUP<br>LITHONIA #DSXW1-LED-20C-700-40K-T2M-MVOLT-ELCW-DNAXD |
| E | 21W LED | WALL | 120/277 | 24" LED VANITY FIXTURE. MOUNT @ 7'-2" AFF<br>WAC #WS-77624-30-AL |
| F | 46W LED | LAY-IN | 120/277 | 2'X4' LED TROFFER<br>LITHONIA #2FSL4-60L-EZI-LP840 |
| FE | 46W LED | LAY-IN | 120/277 | 2'X4' LED TROFFER W/ 90 MIN. EMERGENCY BATTERY BACKUP<br>LITHONIA #2FSL4-60L-EZI-LP840-EL7L |
| G | 12W LED | WALL | 120 | EXTERIOR SCONCE<br>VISA LIGHTING #OW5524-L35K-MVOLT-BRNZ |
| GE | 12W LED | WALL | 120 | EXTERIOR SCONCE W/ 90 MINUTE BATTERY BACKUP<br>VISA LIGHTING #OW5524-L35K-MVOLT-BRNZ<br>IOTA #ILB-SL-CP08-HE, BATTERY BACKUP |
| H | 60W LED | SURFACE | 120/277 | 8' LED STRIP<br>LSI #SDL8-LED-80L-FL-UNV-DIMI-40-80CRI |
| J | 35W LED | PENDANT | MVOLT | LED PENDANT<br>LITHONIA #LDN6CYL-40-30-L06-AR-LD-MVOLT-GZIO-PM-DWH |
| JE | 35W LED | PENDANT | MVOLT | LED PENDANT W/ 90 MINUTE BATTERY BACKUP<br>LITHONIA #LDN6CYL-40-30-L06-AR-LD-MVOLT-GZIO-PM-DWH<br>IOTA #ILB-SL-CP08-HE, BATTERY BACKUP |
| K | 17W LED | PENDANT | 120 | LED PENDANT<br>PRUDENTIAL LTG. #SDOT-LED35-HO-NU-TMA-SC-UNV-EBCPIG-TMA-DMOI |
| L | 27W LED | RECESSED | MVOLT | LED RECESSED DOWNLIGHT<br>LITHONIA #LDN6-40/25-L06AR-LD-MVOLT-EZIO |
| LE | 27W LED | RECESSED | MVOLT | LED RECESSED DOWNLIGHT W/ 90 MINUTE BATTERY BACKUP<br>LITHONIA #LDN6-40/25-L06AR-LD-MVOLT-EZIO-EL |
| ME | 39W LED | SURFACE | 120/277 | 4' LED WALL MOUNTED FIXTURE W/ 90 MIN. EMERGENCY BATTERY BACKUP<br>LSI #SDL4-LED-50L-FL-UNV-DIMI-40-80CRI-EMI0 |
| R | 56W LED | SURFACE | MVOLT | 4.5' LED FIXTURE<br>LITHONIA #VAP-6000LM-FST-MD-MVOLT-GZIO-40K-80CRI |
| S | 56W LED | SURFACE | MVOLT | 4.5' LED FIXTURE<br>LITHONIA #VAP-6000LM-FST-MD-MVOLT-GZIO-40K-80CRI |
| X | LED | UNIVERSAL | 120/277 | EXIT LIGHT W/ 90 MINUTE BACKUP BATTERY<br>LITHONIA #EXR-LED-EL-M6<br>CONTRACTOR SHALL COORDINATE # OF SIDES, MOUNTING & DIRECTIONAL ARROWS W/ PLAN & LOCAL INSPECTOR, COORDINATE PRIOR TO INSTALLATION. |

NOTES:

1. ALL LIGHT FIXTURES SHALL BE SUBMITTED & APPROVED BY THE OWNER PRIOR TO THE ORDER OR INSTALLATION OF ANY FIXTURE.

## FIRE PUMP LOAD ANALYSIS "FP"

| LOAD | CONNECTED | FACTOR | DEMAND |
|---|---|---|---|
| FIRE PUMP | 43.23 KVA | 1.25 | 54.04 KVA |
| JOCKEY PUMP | 3.99 KVA | 1.00 | 3.99 KVA |
| TOTAL BUILDING DEMAND= 58.03 KVA | | | |

58,030 VA @ 480V./3Φ = 70 A.

GENERAL NOTES:

CONTRACTOR SHALL COORDINATE ALL FINAL ELECTRICAL SERVICE REQUIREMENTS WITH LOCAL UTILITY. THIS INCLUDES BUT IS NOT LIMITED TO SERVICE CONDUCTORS, METER TRANSOCKET, TERMINATIONS, DUCT BANK, AS WELL AS SERVICE APPLICATION AND SUBMITTAL REQUIREMENTS TO OBTAIN AN ELECTRICAL SERVICE.

CONTRACTOR SHALL CONFIRM FINAL FIRE PUMP AND JOCKEY PUMP SELECTIONS.

PROVIDE CONTACTOR PANEL WITH ASTRONOMICAL TIME CLOCK AND PHOTOCELL. PARTIAL INTERIOR AND ALL EXTERIOR AND LIGHTING SHALL BE FED THROUGH LIGHTING CONTACTS FOR AUTOMATIC SHUT OFF REQUIREMENTS AND SCHEDULING.

CONTRACTOR SHALL INCLUDE ALL COMMISSIONING REQUIRED TO PROVIDE THE OWNER WITH A FULLY FUNCTIONING AND PROGRAMMED LIGHTING SYSTEM.

A PERMANENTLY AFFIXED LABEL SHALL BE APPLIED WITH THE AVAILABLE FAULT CURRENT AT THE TIME OF THE CALCULATION. THE LABEL SHALL BE 2" X 3" IN SIZE AND SHALL BE BLUE LETTERING ON A CONTRASTING BACKGROUND. THIS LABEL SHALL ALSO INCLUDE THE DATE OF CALCULATION.

WHEN FIRE PUMP POWER SUPPLY CONDUITS ARE NOT ROUTED OUTSIDE BUILDING, IN PUMP ROOM OR IN ELEC. ROOM, ENCASE UNDERGROUND IN AT LEAST 2" OF RED CONCRETE.

FIRE PUMP OVER CURRENT REQUIREMENTS:

a. NOT TO OPEN WITHIN 2 MINUTES AT 600% FULL LOAD CURRENT
b. NOT OPEN WITH RESTART TRANSIENT OF 24 TIMES FULL LOAD CURRENT
c. NOT OPEN WITHIN 10 MINUTES OF 300% FULL LOAD CURRENT
d. TRIP POINT FOR CIRCUIT BREAKERS SHALL NOT BE FIELD ADJUSTABLE.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STATE OF MISSOURI
D.J. PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ELECTRICAL RISER

SHEET NO.
E3.1

## PANELBOARD "MDP"

277/480 VOLT / 3 PHASE / 4 WIRE — 400A MAIN LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 65,000 A.I.C. RATING

| WIRE | CKT | DESCRIPTION | C.B. | ØA LOAD | ØB LOAD | ØC LOAD | C.B. | DESCRIPTION | CKT | WIRE |
|---|---|---|---|---|---|---|---|---|---|---|
| #2 | 1 | PANEL "CU1" | 100 | 12475 / 22550 | | | 125 | TRANSFORMER "P1" | 2 | #1 |
| #2 | 3 | " | | | 12475 / 26071 | | | " | 4 | #1 |
| #2 | 5 | " | 3 | | | 12475 / 26334 | 3 | " | 6 | #1 |
| #2 | 7 | PANEL "CU2" | 100 | 14970 / - | | | - | - | 8 | - |
| #2 | 9 | " | | | 14970 / - | | - | - | 10 | - |
| #2 | 11 | " | 3 | | | 14970 / - | - | - | 12 | - |
| - | 13 | - | - | - / - | | | - | - | 14 | - |
| - | 15 | - | - | | - / - | | - | - | 16 | - |
| - | 17 | - | - | | | - / - | - | - | 18 | - |
| - | 19 | - | - | - / - | | | - | - | 20 | - |
| - | 21 | - | - | | - / - | | - | - | 22 | - |
| - | 23 | - | - | | | - / - | - | - | 24 | - |
| - | 25 | - | - | - / - | | | - | - | 26 | - |
| - | 27 | - | - | | - / - | | - | - | 28 | - |
| #12 | 29 | LOADING AREA LIGHTS | 20 | | | 240 / - | - | - | 30 | - |
| #12 | 31 | 1ST FLOOR - CORRIDOR LIGHTS | 20 | 2508 / 15000 | | | 100 | FUTURE ELEVATOR | 32 | - |
| #12 | 33 | 2ND FLOOR - CORRIDOR LIGHTS | 20 | | 2546 / 15000 | | | " | 34 | - |
| #12 | 35 | 2ND FLOOR - DISPLAY LIGHTS | 20 | | | 748 / 15000 | 3 | " | 36 | - |
| #12 | 37 | 3RD FLOOR - CORRIDOR LIGHTS | 20 | 3300 / 15000 | | | 100 | ELEVATOR | 38 | #2 |
| #12 | 39 | STAIRWELL LIGHTS | 20 | | 340 / 15000 | | | " | 40 | #2 |
| (3) #12 | 41 | EXTERIOR LIGHTS | 20 | | | 744 / 15000 | 3 | " | 42 | #2 |
| | | VA LOAD PER PHASE | | 85803 | 86502 | 85516 | | CONNECTED LOAD = 257.82 KW<br>DEMAND LOAD = 235.96 KW | | 284 AMPS |

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

## PANELBOARD "CU1"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-3R — 14,000 A.I.C. RATING

| WIRE | CKT | DESCRIPTION | C.B. | ØA LOAD | ØB LOAD | ØC LOAD | C.B. | DESCRIPTION | CKT | WIRE |
|---|---|---|---|---|---|---|---|---|---|---|
| #12 | 1 | CU-4.1 | 15 | 2445 / 2445 | | | 15 | CU-4.7 | 2 | #12 |
| #12 | 3 | " | | | 2445 / 2445 | | | " | 4 | #12 |
| #12 | 5 | " | 3 | | | 2445 / 2445 | 3 | " | 6 | #12 |
| #12 | 7 | CU-4.4 | 15 | 2445 / 2445 | | | 15 | CU-4.8 | 8 | #12 |
| #12 | 9 | " | | | 2445 / 2445 | | | " | 10 | #12 |
| #12 | 11 | " | 3 | | | 2445 / 2445 | 3 | " | 12 | #12 |
| - | 13 | - | - | - / 2445 | | | 15 | CU-4.11 | 14 | #12 |
| - | 15 | - | - | | - / 2445 | | | " | 16 | #12 |
| - | 17 | - | - | | | - / 2445 | 3 | " | 18 | #12 |
| - | 19 | - | - | - / - | | | - | - | 20 | - |
| - | 21 | - | - | | - / - | | - | - | 22 | - |
| - | 23 | - | - | | | - / - | - | - | 24 | - |
| - | 25 | - | - | - / - | | | - | - | 26 | - |
| - | 27 | - | - | | - / - | | - | - | 28 | - |
| - | 29 | - | - | | | - / - | - | - | 30 | - |
| | | VA LOAD PER PHASE | | 12475 | 12475 | 12475 | | CONNECTED LOAD = 37.43 KW<br>DEMAND LOAD = 37.43 KW | | 45 AMPS |

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

## PANELBOARD "CU2"

277/480 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUG ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-3R — 14,000 A.I.C. RATING

| WIRE | CKT | DESCRIPTION | C.B. | ØA LOAD | ØB LOAD | ØC LOAD | C.B. | DESCRIPTION | CKT | WIRE |
|---|---|---|---|---|---|---|---|---|---|---|
| #12 | 1 | CU-4.2 | 15 | 2445 / 2445 | | | 15 | CU-4.3 | 2 | #12 |
| #12 | 3 | " | | | 2445 / 2445 | | | " | 4 | #12 |
| #12 | 5 | " | 3 | | | 2445 / 2445 | 3 | " | 6 | #12 |
| #12 | 7 | CU-4.5 | 15 | 2445 / 2445 | | | 15 | CU-4.6 | 8 | #12 |
| #12 | 9 | " | | | 2445 / 2445 | | | " | 10 | #12 |
| #12 | 11 | " | 3 | | | 2445 / 2445 | 3 | " | 12 | #12 |
| #12 | 13 | CU-4.9 | 15 | 2445 / 2445 | | | 15 | CU-4.10 | 14 | #12 |
| #12 | 15 | " | | | 2445 / 2445 | | | " | 16 | #12 |
| #12 | 17 | " | 3 | | | 2445 / 2445 | 3 | " | 18 | #12 |
| - | 19 | - | - | - / - | | | - | - | 20 | - |
| - | 21 | - | - | | - / - | | - | - | 22 | - |
| - | 23 | - | - | | | - / - | - | - | 24 | - |
| - | 25 | - | - | - / - | | | - | - | 26 | - |
| - | 27 | - | - | | - / - | | - | - | 28 | - |
| - | 29 | - | - | | | - / - | - | - | 30 | - |
| | | VA LOAD PER PHASE | | 14970 | 14970 | 14970 | | CONNECTED LOAD = 44.91 KW<br>DEMAND LOAD = 44.91 KW | | 54 AMPS |

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

### PANEL KEYED NOTES:

(1) LOCK-ON BREAKER
(2) DEDICATED CIRCUIT W/ SEPARATE GROUND
(3) RUN CIRCUIT THRU PHOTOCELL

## PANELBOARD "PA"

120/208 VOLT / 3 PHASE / 4 WIRE — 200A MAIN BREAKER — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 10,000 A.I.C. RATING

| WIRE | CKT | DESCRIPTION | C.B. | ØA LOAD | ØB LOAD | ØC LOAD | C.B. | DESCRIPTION | CKT | WIRE |
|---|---|---|---|---|---|---|---|---|---|---|
| #12 | 1 | OUTLETS-1ST FLOOR | 20 | 900 / 400 | | | 20 | DOOR MOTOR-1ST FLOOR | 2 | #6 |
| #12 | 3 | LIGHTING-STORAGE 1ST FLOOR | 20 | | 1500 / 360 | | 20 | OUTLETS-ELECTRICAL ROOM | 4 | #12 |
| #12 | 5 | LIGHTING-STORAGE 1ST FLOOR | 20 | | | 1500 / 200 | 20 | ELEVATOR CAR LIGHTS/FAN | 6 | #10 |
| - | 7 | - | - | - / 242 | | | 20 | ELEVATOR PIT OUTLET/LIGHTS | 8 | #10 |
| - | 9 | - | - | | - / 600 | | 20 | ELEVATOR SUMP PUMP | 10 | #4 |
| - | 11 | - | - | | | - / 240 | 20 | ELEVATOR RM.-OUTLET/LT | 12 | #10 |
| #4 | 13 | AHU-4.1 | 20 | 1445 / 180 | | | 20 | CONDENSATE PUMP | 14 | #10 |
| #8 | 15 | AHU-4.2 | 20 | | 1445 / - | | - | - | 16 | - |
| #6 | 17 | AHU-4.3 | 2 | | | 1445 / - | - | - | 18 | - |
| #10 | 19 | DEHUMIDIFIER DH-1 | 20 | 775 / 600 | | | 20 | LOADING AREA DOOR MOTOR | 20 | #4 |
| #10 | 21 | " | 2 | | 775 / 500 | | 20 | EF-3 | 22 | #4 |
| #6 | 23 | ROLL-UP DOOR MOTOR | 20 | | | 500 / 1600 | 25 | UNIT HEATER-1 | 24 | #8 |
| #6 | 25 | " | 2 | 500 / 1600 | | | 2 | " | 26 | #8 |
| #6 | 27 | ROLL-UP DOOR MOTOR | 20 | | 500 / 1600 | | 25 | UNIT HEATER-2 | 28 | #10 |
| #6 | 29 | " | 2 | | | 500 / 1600 | 2 | " | 30 | #10 |
| #2 | 31 | PANEL "PB" | 100 | 6430 / 1600 | | | 25 | UNIT HEATER-3 | 32 | #6 |
| #2 | 33 | " | | | 7204 / 1600 | | 2 | " | 34 | #6 |
| #2 | 35 | " | 3 | | | 7044 / 2500 | 30 | UNIT HEATER-4 | 36 | #4 |
| #2/0 | 37 | PANEL "RP" | 100 | 5278 / 2500 | | | 2 | " | 38 | #4 |
| #2/0 | 39 | " | | | 7431 / 2500 | | 30 | UNIT HEATER-5 | 40 | #4 |
| #2/0 | 41 | " | 3 | | | 6655 / 2500 | 2 | " | 42 | #4 |
| | | VA LOAD PER PHASE | | 22550 | 26071 | 26334 | | CONNECTED LOAD = 74.96 KW<br>DEMAND LOAD = 54.96 KW | | 153 AMPS |

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

## PANELBOARD "PB"

120/208 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 10,000 A.I.C. RATING

| WIRE | CKT | DESCRIPTION | C.B. | ØA LOAD | ØB LOAD | ØC LOAD | C.B. | DESCRIPTION | CKT | WIRE |
|---|---|---|---|---|---|---|---|---|---|---|
| #12 | 1 | DOOR HOLD-2ND FLOOR | 20 | 100 / 1445 | | | 20 | AHU-4.4 | 2 | #4 |
| #10 | 3 | DOOR MOTOR-2ND FLOOR | 20 | | 400 / 1445 | | 20 | AHU-4.5 | 4 | #10 |
| #10 | 5 | OUTLETS-2ND FLOOR | 20 | | | 720 / 1445 | 20 | AHU-4.6 | 6 | #6 |
| #10 | 7 | LIGHTING-STORAGE 2ND FLOOR | 20 | 1050 / 1445 | | | 20 | AHU-4.7 | 8 | #6 |
| #10 | 9 | LIGHTING-STORAGE 3RD FLOOR | 20 | | 1050 / 1445 | | 20 | AHU-4.8 | 10 | #4 |
| #10 | 11 | OUTLETS-3RD FLOOR | 20 | | | 720 / 1445 | 20 | AHU-4.9 | 12 | #10 |
| #10 | 13 | OUTLETS-ROOF | 20 | 360 / 1445 | | | 20 | AHU-4.10 | 14 | #6 |
| #6 | 15 | PE-1 | 15 | | 145 / 2184 | | 25 | ACCU-1 | 16 | #6 |
| #10 | 17 | PE-2 | 15 | | | 145 / 2184 | 2 | " | 18 | #6 |
| #6 | 19 | PE-3 | 15 | 145 / - | | | - | - | 20 | - |
| #10 | 21 | PE-4 | 15 | | 145 / - | | - | - | 22 | - |
| #6 | 23 | PE-5 | 15 | | | 145 / - | - | - | 24 | - |
| #6 | 25 | PE-6 | 15 | 145 / - | | | - | - | 26 | - |
| #8 | 27 | PE-7 | 15 | | 145 / - | | - | - | 28 | - |
| #6 | 29 | PE-8 | 15 | | | 145 / - | - | - | 30 | - |
| #6 | 31 | PE-9 | 15 | 145 / - | | | - | - | 32 | - |
| #6 | 33 | PE-10 | 15 | | 145 / - | | - | - | 34 | - |
| - | 35 | - | - | | | - / - | - | - | 36 | - |
| - | 37 | - | - | - / - | | | - | - | 38 | - |
| - | 39 | - | - | | - / - | | - | - | 40 | - |
| - | 41 | - | - | | | - / - | - | - | 42 | - |
| | | VA LOAD PER PHASE | | 6430 | 7204 | 7044 | | CONNECTED LOAD = 20.68 KW<br>DEMAND LOAD = 20.72 KW | | 58 AMPS |

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.

## PANELBOARD "RP"

120/208 VOLT / 3 PHASE / 4 WIRE — 100A MAIN LUGS ONLY — MOUNTING: SURFACE
1 SECTION: SINGLE LUGS — NEMA-1 — 10,000 A.I.C. RATING

| WIRE | CKT | DESCRIPTION | C.B. | ØA LOAD | ØB LOAD | ØC LOAD | C.B. | DESCRIPTION | CKT | WIRE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (3) #12 | 1 | EXTERIOR LIGHTS | 20 | 48 / 100 | | | 20 | ALARM | 2 | #12 | (1)(2) |
| #12 | 3 | RETAIL LIGHTS/FANS | 20 | | 1177 / 100 | | 20 | FACP | 4 | #12 | (1)(2) |
| #12 | 5 | INTERIOR SIGN | 20 | | | 200 / 360 | 20 | OUTLETS-POS | 6 | #12 | (1)(2) |
| - | 7 | - | - | - / 360 | | | 20 | OUTLETS-POS | 8 | #12 | (1)(2) |
| - | 9 | - | - | | - / 360 | | 20 | OUTLETS-COUNTER | 10 | #12 | |
| - | 11 | - | - | | | - / 360 | 20 | OUTLETS-COUNTER | 12 | #12 | |
| - | 13 | - | - | - / 360 | | | 20 | OUTLETS-BACK COUNTER | 14 | #12 | |
| - | 15 | - | - | | - / 540 | | 20 | OUTLETS-MONITORS | 16 | #12 | |
| - | 17 | - | - | | | - / 900 | 20 | OUTLETS-SALES | 18 | #12 | |
| - | 19 | - | - | - / 540 | | | 20 | OUTLETS-WINDOW | 20 | #12 | |
| - | 21 | - | - | | - / 800 | | 20 | OUTLET-COFFEE BAR | 22 | #12 | |
| - | 23 | - | - | | | - / 180 | 20 | TELEPHONE BOARD | 24 | #12 | (1)(2) |
| - | 25 | - | - | - / 360 | | | 20 | MDF-OUTLET | 26 | #12 | (1)(2) |
| - | 27 | - | - | | - / 360 | | 20 | MDF-OUTLET | 28 | #12 | (1)(2) |
| - | 29 | - | - | | | - / 360 | 20 | MDF-OUTLET | 30 | #12 | (1)(2) |
| #12 | 31 | GATE KEYPADS | 20 | 200 / 1200 | | | 20 | OUTLET-MICROWAVE | 32 | #12 | |
| #10 | 33 | GATE MOTOR | 20 | | 600 / 800 | | 20 | OUTLET-REFRIGERATOR | 34 | #12 | |
| #12 | 35 | GATE MOTOR | 20 | | | 600 / 1200 | 20 | OUTLET-COFFEE | 36 | #12 | |
| (3) #10 | 37 | BUILDING SIGN | 20 | 1200 / 910 | | | 20 | OUTLETS-TOILET RMS/DF | 38 | #12 | |
| (3) #12 | 34 | BUILDING SIGN | 20 | | 1200 / 1500 | | 20 | WATER HEATER | 40 | #12 | |
| (3) #12 | 41 | BUILDING SIGN | 20 | | | 1200 / 1445 | 20 | AHU-4.11 | 42 | #12 | |
| | | VA LOAD PER PHASE | | 5278 | 7431 | 6655 | | CONNECTED LOAD = 19.31 KW<br>DEMAND LOAD = 20.52 KW | | 57 AMPS | |

NOTES:
1. PROVIDE A TYPED INDEX CARD IDENTIFYING ALL CIRCUITS.


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STATE OF MISSOURI
DJ PENN
NUMBER E-38807
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ELECTRICAL SCHEDULES

SHEET NO.
E3.2

## GENERAL ELECTRICAL NOTES: (AS APPLICABLE)

G1. COMPLETE SYSTEMS: PROVIDE LABOR, MATERIALS, EQUIPMENT, AND TRANSPORTATION TO RECEIVE, INSTALL, ADJUST, AND PUT INTO OPERATION COMPLETE ELECTRICAL SYSTEMS IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. PROVIDE PRODUCTS NOT MENTIONED BUT OBVIOUSLY NECESSARY AND INCIDENTAL TO THE COMPLETION OF THIS WORK.

G2. SCOPE: WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: MECHANICAL WORK AS REQUIRED FOR COORDINATION, POWER DISTRIBUTION, FIRE ALARM SYSTEM, AND INSTALLATION OF MATERIALS.

G3. UTILITIES: COORDINATE WITH ALL UTILITY SERVICES. NOTIFY UTILITIES OF COMMENCEMENT OF WORK. MAKE ALL ARRANGEMENTS FOR TEMPORARY SERVICES. PROVIDE ALL WORK AND MATERIALS NECESSARY TO COMPLY WITH ALL UTILITY REGULATIONS AND REQUIREMENTS.

G4. PERMITS: OBTAIN ALL NECESSARY PERMITS TO BEGIN AND CONTINUE WITH WORK. PAY ALL ASSOCIATED FEES FOR PERMITS AND OTHER MUNICIPAL AND GOVERNING REQUIREMENTS.

G5. EXPERIENCE: ALL WORK DONE SHALL BE PERFORMED BY QUALIFIED ELECTRICIANS, UNDER THE SUPERVISION AND DIRECTION OF A SUPERINTENDENT HAVING SUCCESSFUL EXPERIENCE INSTALLING AND SUPERVISING EQUIPMENT AND SYSTEMS OF SIMILAR TYPE AND SIZE AS INDICATED BY CONTRACT DOCUMENTS.

G6. REGULATIONS: ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT RULES, REGULATIONS, AND INDUSTRY STANDARDS OF THE N.E.C., UL, IPCEA, NEMA, NFPA, OSHA, NATIONAL ELECTRICAL SAFETY CODE, AND ANY LOCAL CODES, LAWS, ADA OR ORDINANCES.

IN THE EVENT THAT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

G7. COSTS AND CONDITIONS: EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS IN THEIR ENTIRETY. SURVEY THE PROJECT AND BECOME FAMILIAR WITH EXISTING CONDITIONS AND SCOPE OF WORK. ALL COSTS SUBMITTED SHALL BE BASED ON A THOROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED. ANY ADDITIONAL COSTS DUE TO FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

G8. SPECIFICATIONS: BECOME FAMILIAR WITH ALL SPECIFICATIONS, DESIGN CRITERIA, AND EQUIPMENT REQUIREMENTS PRIOR TO ANY EQUIPMENT PURCHASE OR INSTALLATION. REFERENCE SPECIFICATIONS FOR DEVICES, MATERIALS AND WORKMANSHIP REQUIREMENTS. ADDITIONAL REQUIREMENTS ARE GIVEN IN THESE NOTES AND THE DRAWINGS. THERE SHALL BE NO DEVIATION FROM SPECIFICATIONS WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

G9. COORDINATION: COORDINATE WORK WITH ALL OTHER TRADES. GIVE SPECIAL CONSIDERATION TO COORDINATING INSTALLATION OF LIGHTING, SPRINKLER PIPING, AND DUCTWORK. COORDINATE WALL OUTLET LOCATIONS WITH MILLWORK. COORDINATE WALL SWITCHES WITH DOOR SWINGS. VERIFY EXACT LOCATION, COLOR AND FINISH OF OUTLETS AND DEVICES WITH INTERIOR DESIGNER, ARCHITECT, OR DESIGNATED TENANT REPRESENTATIVE PRIOR TO INSTALLATION.

G10. PRODUCTS: ALL PRODUCTS SHALL BE NEW, SPECIFICATION GRADE. PRODUCTS OF A SIMILAR NATURE SHALL BE OF THE SAME TYPE AND MANUFACTURER. PROVIDE THE STANDARD PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SPECIFIED PRODUCTS, UNLESS OTHERWISE REQUIRED BY DRAWINGS. ALL PRODUCTS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH NATIONALLY RECOGNIZED AND ACCEPTED STANDARDS AND PROCEDURES.

G11. COMPATIBILITY: ALL NEW ELECTRICAL DISTRIBUTION EQUIPMENT SHALL MATCH AND BE COMPATIBLE WITH EXISTING EQUIPMENT, BY MANUFACTURER TYPE, APPLICATION, AND SHORT CIRCUIT RATING.

G12. IDENTIFICATION: ALL ELECTRICAL DISTRIBUTION EQUIPMENT, TRANSFORMERS, PANELBOARDS AND OTHER ENCLOSED EQUIPMENT SHALL BE IDENTIFIED AS INDICATED IN THE CONTRACT DOCUMENTS. SAID IDENTIFICATION SHALL CONSIST OF PERMANENTLY ATTACHED ENGRAVED LAMINATED PLASTIC NAMEPLATES. EACH BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICE SHALL BE IDENTIFIED BY CIRCUIT NUMBER AND SCHEDULED INSIDE PANEL DOOR. EACH BRANCH CIRCUIT SPLICE OR TERMINATION SHALL BE IDENTIFIED BY PANEL AND CIRCUIT DESIGNATION SHOWN ON THE JUNCTION OR OUTLET BOX, OR UPON INDIVIDUAL WIRES IN CASES WHERE MORE THAN ONE OF EACH PHASE CONDUCTOR OCCUR.

G13. WIRING: ALL CONDUCTORS CARRYING GREATER THAN 50 VOLTS SHALL BE MINIMUM #12 AWG, SOLID, CU, SOFT DRAWN OF 98% CONDUCTIVITY, UNLESS NOTED OTHERWISE.

INSULATION: PROVIDE TYPE THW, THWN, THHN, OR XHHW TYPE INSULATIONS. COORDINATE INSULATION TYPES WITH CONDITIONS, NEC REQUIREMENTS, AND CONDUIT FILL REQUIREMENTS. ALL WIRING SIZES ARE BASED ON 60° C OR 75° C INSULATION, ACCORDING TO CURRENT RATING, REGARDLESS OF ACTUAL INSULATION USED. TYPE "AC" OR "MC" CABLE IS ACCEPTABLE ONLY WITH TYPE THHN INSULATION.

HOME RUNS: PROVIDE MINIMUM # 10 AWG WIRING ON ALL HOMERUNS GREATER THAN 100 FEET.

NEUTRALS: SIZE ALL NEUTRALS FULL UNLESS SPECIFICALLY REDUCED ON PLANS. PROVIDE OVERSIZED NEUTRALS FOR FEEDERS AND SEPARATE NEUTRALS FOR BRANCH CIRCUITS SERVING DIGITAL COMPUTER EQUIPMENT.

COLORS:

| PHASE: | 208V WYE | 240V DELTA | 480V |
|---|---|---|---|
| A | BLACK | BLACK | BROWN |
| B | RED | ORANGE (HIGH LEG) | ORANGE |
| C | BLUE | BLUE | YELLOW |
| NEUTRAL | WHITE | WHITE | WHITE W/ COLORED STRIP |
| GROUND | GREEN | GREEN | GREEN |

G14. GROUNDING: ALL CIRCUITS SHALL BE RUN WITH A #12 AWG INSULATED GREEN COPPER GROUND WIRE, UNLESS OTHERWISE NOTED. USE OF CONDUIT AS A GROUND IS UNACCEPTABLE.

AT SERVICE: PROVIDE BONDING JUMPER BETWEEN GROUND BUS AND NEUTRAL BUS. PROVIDE GROUNDING ELECTRODE CONDUCTORS AND GROUNDING ELECTRODES PER NEC.

G15. CONDUIT: ALL WIRING SHALL BE IN CONDUIT, MINIMUM 1/2" (E.M.T. IS ACCEPTABLE WITH COMPRESSION FITTINGS ONLY ). FLEXIBLE METAL CONDUIT IS ACCEPTABLE ONLY WITH SEPARATE INSULATED GROUND WIRE, AND ONLY FOR SWITCH DROPS OR LIGHTING FIXTURE WHIPS. ENT, ALUMINUM CONDUIT, NM ("ROMEX"), NMC, AND SNM ARE NOT ACCEPTABLE.

RIGID CONDUIT: CONDUIT OVER 2" IN DIAMETER, OR EXPOSED TO WEATHER; OR EXPOSED TO POTENTIAL DAMAGE; OR USED FOR SERVICE ENTRANCE SHALL BE GALVANIZED RIGID STEEL TYPE.

PVC CONDUIT: PVC CONDUIT, MINIMUM SCHEDULE 40, IS ACCEPTABLE ONLY FOR USE BELOW GRADE, AND ONLY WHEN INSTALLED WITH WIDE RADIUS RIGID STEEL TURNS.

ROUTING: CONDUIT ROUTING SHOWN IS SYMBOLIC AND DIAGRAMMATIC INSTALL CONDUIT TO FIT ACTUAL FIELD CONDITIONS.

BELOW GRADE: COVER METALLIC CONDUIT BELOW GRADE WITH ASPHALTUM OR BITUMASTIC TAPE. SEAL JOINTS AGAINST WATER.

G16. CONDUIT FITTINGS: ALL FITTING SHALL BE COMPRESSION OR THREADED TYPE. USE OF SET SCREW FITTINGS IS NOT ACCEPTABLE.

G17. CIRCUIT BREAKERS: ALL BRANCH CIRCUIT OVERCURRENT PROTECTION DEVICES SHALL BE 20 AMPERE INVERSE TIME TYPE CIRCUIT BREAKERS UNLESS NOTED OTHERWISE. 120/240 VOLT CIRCUIT BREAKERS SHALL BE RATED AT 10,000 AIC MINIMUM. MULTI- POLE BREAKERS SHALL BE INTEGRAL UNITS. USE OF HANDLE TIES IS NOT ACCEPTABLE.

G18. FUSES: ALL FUSES 600 AMPERES OR LESS SHALL BE UL LISTED, CLASS RK1 OR J, LOW-PEAK, DUAL ELEMENT, TIME DELAY, 600 VOLT. ACCEPTABLE MANUFACTURERS: BUSSMAN, GOULD SHAWMUT.

G19. PENETRATIONS: ALL PENETRATIONS THROUGH FIRE-RATED SLABS AND PARTITIONS SHALL BE FIRE PROOFED TO THE SAME OR GREATER RATING THAN THAT OF THE SLAB OR PARTITION. WHERE CONFLICTS OCCUR, NOTIFY ARCHITECT OR INTERIOR DESIGNER.

G20. ALTERNATES & SUBSTITUTIONS: SUBMIT FOR APPROVAL ALTERNATES OF ALL ITEMS SPECIFIED ON THESE DRAWINGS. THE CONTRACTOR SHALL BEAR THE BURDEN OF SHOWING PROOF THAT ALTERNATES REQUESTED FOR SUBSTITUTION PERFORM IN AN EQUAL OR SUPERIOR MANNER TO THE SPECIFIED ITEM. INFORMATION SUBMITTED FOR ENGINEER'S CONSIDERATION SHOULD INCLUDE PERFORMANCE CHARACTERISTICS, ILLUSTRATION OF FIELD APPLICATION, AND COMPARISON OF THE SPECIFIED ITEM TO THE INTENDED ALTERNATE.

"ALTERNATE" REFERS TO A LUMINAIRE, FIXTURE, DEVICE, EQUIPMENT ITEM, OR MANUFACTURER OTHER THAN THAT SPECIFIED ON THE DRAWINGS OR IN THE SPECIFICATIONS.

G21. SHOP DRAWINGS & SUBMITTALS: SUBMIT MANUFACTURERS' STANDARD PRODUCT INFORMATION, PERFORMANCE SPECIFICATIONS, PHYSICAL DIMENSIONS, AND OTHER INFORMATION NECESSARY FOR ENGINEER TO INSURE COMPLIANCE WITH SPECIFICATIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO ORDERING AND INSTALLING ANY EQUIPMENT.

G22. PROJECT RECORD DOCUMENTS: UPON COMPLETION OF WORK, PREPARE LIGHTING AND POWER PROJECT RECORD DOCUMENTS ("AS-BUILTS") ON A SUITABLY REPRODUCIBLE MEDIUM ( MYLAR OR VELLUM ). PRESENT COMPLETED DRAWINGS TO TENANT, AND TWO SETS OF PRINTS TO INTERIOR DESIGNER OR ARCHITECT. "AS-BUILT" DRAWINGS SHALL INCLUDE ALL BRANCH CIRCUIT WORK, ANY PANELBOARD INFORMATION AVAILABLE, FINAL SWITCHING, ETC.

G23. WARRANTY: WARRANT ALL MATERIALS, EQUIPMENT AND INSTALLATION FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE BY TENANT.

TEMPORARY SERVICES
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SPECIFIC ITEMS OF TEMPORARY SERVICES.

A. TELEPHONE - THE GENERAL CONTRACTOR SHALL INSTALL A JOB SITE TELEPHONE AND NOTIFY ARCHITECT & OWNER OF THE TELEPHONE NUMBER AND THE NAME OF THE SUPERINTENDENT.

B. TEMPORARY WATER - WATER REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE PROVIDED AND PAID FOR BY THE CONTRACTOR. WATER USED FOR HUMAN CONSUMPTION SHALL CONFORM TO REQUIREMENTS OF STATE AND LOCAL AUTHORITIES FOR POTABLE WATER.

C. TEMPORARY ELECTRICITY - TEMPORARY ELECTRIC SERVICE REQUIRED IN THE PERFORMANCE OF THE CONTRACT SHALL BE FURNISHED AND PAID FOR BY THE CONTRACTOR WHO SHALL FURNISH, INSTALL, AND MAINTAIN ALL TEMPORARY OVERHEAD CONSTRUCTION, METERS, DROPS, AND OTHER WIRING AND FITTINGS FOR BOTH LIGHT AND POWER AT LOCATIONS REQUIRED IN THE WORK AND SHALL BEAR THE COST OF MAKING THE SERVICE CONNECTIONS. BEFORE FINAL ACCEPTANCE, TEMPORARY ELECTRICAL SERVICE FACILITIES INSTALLED BY THE CONTRACTOR SHALL BE REMOVED AND THE SERVICE CONNECTIONS SEVERED IN ACCEPTABLE MANNER.

D. TEMPORARY HEAT - WHEN REQUIRED FOR PROPER INSTALLATION OR PROTECTION OF ANY PORTION OF THE WORK, THE CONTRACTOR SHALL FURNISH AND INSTALL TEMPORARY HEATING UNITS AS APPROVED BY THE OWNER OR LOCAL AUTHORITY.

## PANELBOARDS: (AS APPLICABLE)

THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ELECTRICAL DRAWINGS FOR SPECIFIC PANELBOARD REQUIREMENTS. THE PANEL BOARD SCHEDULE SPECIFY VOLTAGE CHARACTERISTICS, MAINS, LUG SIZE, LOCATION AND NUMBER, BRANCH CIRCUIT SIZE NUMBER AND LOCATION. ALSO MOUNTING METHOD AND TRIM.

APPROVED MANUFACTURERS ARE SQUARE "D", WESTINGHOUSE, GENERAL ELECTRIC, OR EQUAL.

THE ABOVE EQUIPMENT SHALL BE FACTORY ASSEMBLED UNIT ONLY NOT ASSEMBLY OF MISCELLANEOUS PARTS.

PANELBOARD ENCLOSURE SHALL BE CODE GAUGE GALVANIZED SHEET STEEL, WITH CORNERS LAPPED AND RIVETED OR FORMED THE ENCLOSURE SHALL BE PAINTED AS SPECIFIED HEREIN.

PANELBOARD TRIM SHALL BE FOR SURFACE OR RECESSED MOUNTING MOUNTING AS INDICATED BY THE PANEL SCHEMATICS. TRIM SHALL BE FULL FINISH SHEET STEEL FASTENED TO CABINET (ENCLOSED) BY APPROVED ADJUSTABLE CLAMPS.

PANELBOARD HINGES SHALL BE SEMI-CONCEALED FIVE KNUCKLE STEEL WITH NONFERROUS PINS, 180 DEGREE OPENING, AND LOCATE NOT MORE THAN 4" FROM TOP AND BOTTOM NOR GREATER THAN 26" ON CENTER.

PANELBOARD HARDWARE SHALL BE CHROME PLATED FLUSH TYPE COMBINATION LOCK AND CATCH WITH TWO KEYS. DOORS OVER 43" HIGH SHALL HAVE CHROME PLATED VAULT HANDLE. BUILT-IN LOCK AND 3 POINT CATCH FASTENING DOOR AT TOP, CENTER AND BOTTOM

PANELBOARD DIRECTORY HOLDER SHALL BE A METAL FRAME WITH NON-BREAKER TRANSPARENT COVER AND TYPE WRITTEN LIST OF CIRCUITS SHOWING POINTS SUPPLIED.

PANELBOARD NAME PLATES SHALL BE LAMINATED MICARTA, AND FURNISHED ON EACH PANEL TO INDICATE THE PANEL, AND PANEL VOLTAGE VOLTAGE.

PANELBOARD MOUNTING HEIGHT SHALL BE 6'-6" MAXIMUM FROM FINISHED FLOOR TO CENTER LINE OF TOP SWITCH OR CIRCUIT BREAKER UNLESS INDICATED OTHERWISE.

CIRCUIT BREAKERS QUICK-MAKE, QUICK-BREAK, THERMAL MAGNETIC WITH NON-WELDING TYPE CONTACTS. BREAKERS SHALL BE BOLTED TO THE PANEL BUS, UNLESS NOTED OTHERWISE. BREAKERS SHALL BE TRIP SET TO 20 AMPS.

TWO AND THREE POLE CIRCUIT BREAKERS TO BE COMMON TRIP.

LIGHTING CIRCUIT BREAKER TO BE "SWD" RATED.

## GROUNDING AND BONDING: (AS APPLICABLE)

FURNISH AND INSTALL A COMPLETE WIRED GROUNDING SYSTEM MINIMUM #12 AWG, GREEN. CONDUIT GROUNDS ARE NOT ACCEPTABLE

WHERE REQUIRED, EMT CONNECTORS OR FLEXIBLE CONDUIT FITTINGS SHALL BE BONDED USING A CONDUIT LOCKNUT. T & B SERIES #106, OR EQUAL, UL LISTED.

GROUND TERMINAL RODS SHALL BE NOT LESS THAN 1/2" DIAMETER AND 8 FEET LONG SHALL BE MADE OF COPPER CLAD STEEL.

CONDUIT SYSTEM SHALL BE ELECTRICALLY CONTINUOUS. ALL ENCLOSURES AND NON-CURRENT CARRYING METALS TO BE GROUNDED ALL LOCK NUTS MUST CUT THROUGH ENAMELED OR PAINTED SURFACES ON ENCLOSURES. WHERE ENCLOSURES AND NON CURRENT CARRYING METALS ARE ISOLATED FROM THE CONDUIT SYSTEM USE BONDING JUMPERS WITH APPROVED CLAMPS.

ALL NEW RECEPTACLES SHALL BE BONDED TO A GROUND CONDUCTOR USING A #12 AWG. MINIMUM BONDING JUMPER BETWEEN RECEPTACLE TERMINAL AND GROUND CONDUCTOR. METAL-TO-METAL CONTACT ACCEPTABLE FOR OTHER SURFACES BOXES OR FLUSH TYPE BOXES, BOXES OR FLUSH TYPE BOXES.

MOTOR AND EQUIPMENT TERMINAL BOXES SHALL BE GROUNDED BY THE USE OF A MANUFACTURER-SUPPLIED GROUND LUG OR BY DRILLING AND TAPPING A HOLE FOR A GROUND SCREW. REMOVE PAINT PRIOR

LIGHTING FIXTURES SHALL BE GROUNDED BY THE USE OF A PIGTAIL FASTENED ON BARE METAL THAT IS FREE OF PAINT.

## GENERAL LIGHTING NOTES: (AS APPLICABLE)

L1. FIXTURE TYPES: REFERENCE LIGHTING FIXTURE SCHEDULE AND REFLECTED CEILING PLAN FOR COMPLETE DESCRIPTION OF EACH FIXTURE TYPE. LIGHT FIXTURES ARE IDENTIFIED BY LETTERS AND SYMBOLS.

L2. SWITCH LOCATIONS: TYPICAL SWITCHING SHALL BE AS SHOWN.

L3. EXIT SIGNS: FURNISH EXIT SIGNS WITH INTEGRAL 90 MINUTE NICKEL-CADMIUM BATTERY BASED EMERGENCY POWER SOURCE.

L4. EMERGENCY LIGHTING: SUPPLY EMERGENCY FIXTURES WITH INTEGRAL 90 MINUTE BATTERY

L5. FIXTURE LOCATIONS: REFERENCE REFLECTED CEILING PLAN FOR EXACT LOCATIONS OF LIGHT FIXTURES. COORDINATE INSTALLATION IN FIELD WITH TENANT AND ENGINEER. COORDINATE AIMING OF ADJUSTABLE FIXTURES IN FIELD WITH TENANT

L6. INSTALLATION: WIRE FROM JUNCTION BOXES TO FIXTURES OR SWITCHES AS INDICATED. ADDITIONAL JUNCTION BOXES MAY BE REQUIRED BEYOND THOSE SHOWN.

L7. SUPPORT ALL FIXTURES ACROSS CEILING TEES OR FROM STRUCTURE ABOVE. IN NO CASE SHALL CEILING TILES OR PLASTER CEILING SUPPORT ANY FIXTURE.

## GENERAL POWER NOTES: (AS APPLICABLE)

P1. GENERAL: VERIFY EXACT LOCATION OF OUTLETS AND DEVICES WITH TENANT PRIOR TO INSTALLATION. PROVIDE OUTLET BOXES, DEVICES, COVER PLATES, AND FLANGES AS REQUIRED.

P2. COORDINATION: MOUNT ALL OUTLETS AT 18" A.F.F. UNLESS NOTED OTHERWISE. REFERENCE ARCHITECT'S DRAWINGS, PLANS & ELEVATIONS FOR ALL HEIGHTS, DIMENSIONS, AND CONFIGURATIONS OF DEVICES NOT INDICATED ON THESE DRAWINGS. REFERENCE SAME DRAWINGS FOR EQUIPMENT NOT IDENTIFIED.

P3. CONVENIENCE OUTLETS: ALL CONVENIENCE OUTLETS SHOWN SHALL BE NEMA TYPE 5-20R, SPECIFICATION GRADE (HUBBELL #5352) DUPLEX RECEPTACLES WITH COVER PLATES TO MATCH EXISTING. VERIFY COLOR WITH ARCHITECT.

ACCEPTABLE MANUFACTURERS:

HUBBELL
LEVITON
PASS & SEYMOUR

FLOOR SERVICE BOXES: PROVIDE STEEL CITY CONCEALED SERVICE FLOOR BOXES CONFIGURED AS INDICATED ON PLAN. PROVIDE POWER, COMMUNICATIONS, DATA & SECURITY WHERE SHOWN. PROVIDE #GAB CAST PRESET FOR WORK IN CONCRETE.

P4. IG & GFCI RECEPTACLES: ALL ISOLATED GROUND DEVICES (IG) AND GROUND FAULT INTERRUPT (GFCI) DEVICES SHALL BE RATED 20 AMPERES AND SHALL HAVE AN DEDICATED INSULATED GREEN GROUND WIRE. THE GROUND WIRE SHALL BE RUN CONTINUOUS AND UNSPLICED BETWEEN DEVICE AND PANEL GROUND BUS.

ISOLATED GROUND RECEPTACLES SHALL BE UL LISTED 20 AMPERE (HUBBELL #IG-5352).

GROUND FAULT RECEPTACLES SHALL BE UL LISTED, RATED 20 AMPERES (HUBBELL #GF-5362).

P5. TIME CLOCKS: PROVIDE INTERMATIC 24-HOUR, 7-DAY TIME CLOCK TO CONTROL SIGNS, LIGHTING, AND OTHER CYCLIC LOADS IDENTIFIED BY TENANT'S REPRESENTATIVE. PROVIDE CONTACTORS AS REQUIRED. VERIFY EXACT LOCATION AND WIRING REQUIREMENTS. TIMECLOCK TO REMAIN "ON" BETWEEN THE HOURS OF DUSK TO 12:00 AM MINIMUM.

P6. INSTALLATION: DROP FROM JUNCTION BOXES TO DEVICES AS INDICATED ADDITIONAL JUNCTION BOXES MAY BE REQUIRED BEYOND THOSE SHOWN

P7. EQUIPMENT EXPOSED TO WEATHER SHALL BE WEATHERPROOF.

## POWER RISER GENERAL NOTES:

P1. ELECTRICAL CONTRACTOR SHALL COLOR CODE FEEDER CONDUCTORS AT THE METER CENTER TO DESIGNATE PHASE NEUTRAL & GROUND.

P2. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT K.A.I.C. RATINGS OF THE LANDLORD'S DISTRIBUTION EQUIPMENT. PROVIDE SERIES RATED EQUIPMENT.

P3. ELECTRICAL CONTRACTOR SHALL BALANCE ALL PANELS AND ELECTRICAL EQUIPMENT TO 10% (+/-) BETWEEN PHASES: A/B, B/C, A/C REGARDLESS OF CIRCUITING INDICATED.

P4. PROPER CLEARANCE MUST BE MAINTAINED ABOUT ELECTRICAL EQUIPMENT PER N.E.C. FIELD VERIFY EXACT MOUNTING SPACE AVAILABLE IN THE ELECTRICAL ROOM PRIOR TO INSTALLATION OF ELECTRICAL EQUIPMENT.

P5. CONTRACTOR SHALL MAKE ALL FINAL ELECTRICAL CONNECTIONS.

P6. PANELBOARD(S) TO BE EQUIPPED WITH BOLT-ON BREAKERS.

## SPECIAL SYSTEMS NOTES: (AS APPLICABLE)

S1. TELEPHONE SYSTEM: PROVIDE BACKBOARDS, CONDUITS, AND PULL STRINGS. COORDINATE WORK WITH TELEPHONE COMPANY AND TELEPHONE CONTRACTOR. COORDINATE CONDUIT ROUTING WITH FIELD CONDITIONS. PROVIDE CONDUIT FOR TRUNKS. PROVIDE CONDUIT FOR RUNS EXPOSED TO WEATHER OR DAMAGE. VERIFY NUMBER OF INCOMING LINES WITH OWNER.

S2. TELEPHONE/DATA RECEPTACLES: FURNISH AND INSTALL PULL STRINGS FROM OUTLETS TO 6" ABOVE CEILING. VERIFY EXACT REQUIREMENTS WITH TELEPHONE EQUIPMENT SUPPLIER AND INSTALLER. FURNISH AND INSTALL MATERIALS NOT PROVIDED BY TELEPHONE CONTRACTOR.

S3. FIRE ALARM: VERIFY FIRE ALARM REQUIREMENTS IN FIELD WITH LOCAL AUTHORITY HAVING JURISDICTION. FURNISH AND INSTALL NEW INITIATION AND ANNUNCIATION DEVICES. PROVIDE WIRE AND CONDUIT FOR TYING NEW FIRE ALARM INITIATING AND SIGNALING DEVICES TO NEAREST AVAILABLE FIRE ALARM INITIATING ZONE.
MEET ALL ADA REQUIREMENTS.

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STATE OF MISSOURI
DJ PENN
NUMBER E-28807
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

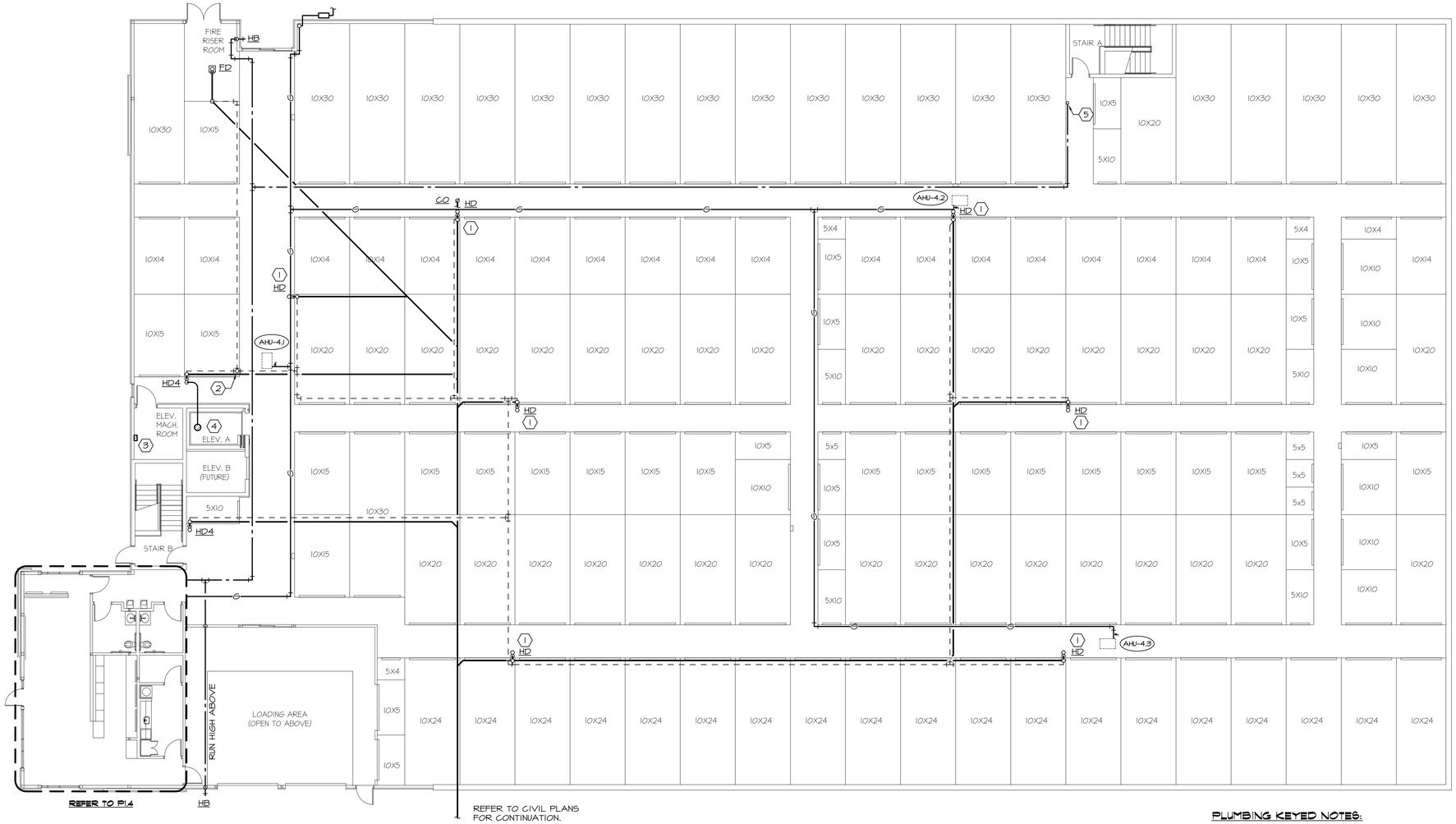
# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

ELECTRICAL SPECIFICATIONS

SHEET NO.
E4.1




## 1 1ST FLOOR - PLUMBING PLAN

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

**PLUMBING KEYED NOTES:**

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
3. RUN 3/4" CONDENSATE LINE FROM CONDENSATE PUMP TO HUB DRAIN. EQUAL TO DAYTON #3HGE6; 82 GPH @ 5' HEAD, 51 GPH @ 15' HEAD
4. SUMP PUMP FOR ELEVATOR SHAFT. RUN 2" DRAIN LINE TO 4" HUB DRAIN. REFER TO DETAIL 2/P2.1.
5. 3/4" C.W. LINE UP TO 2ND FLOOR.
6. XX" GAS LINE UP TO 2ND FLOOR.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12/16/2021

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NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
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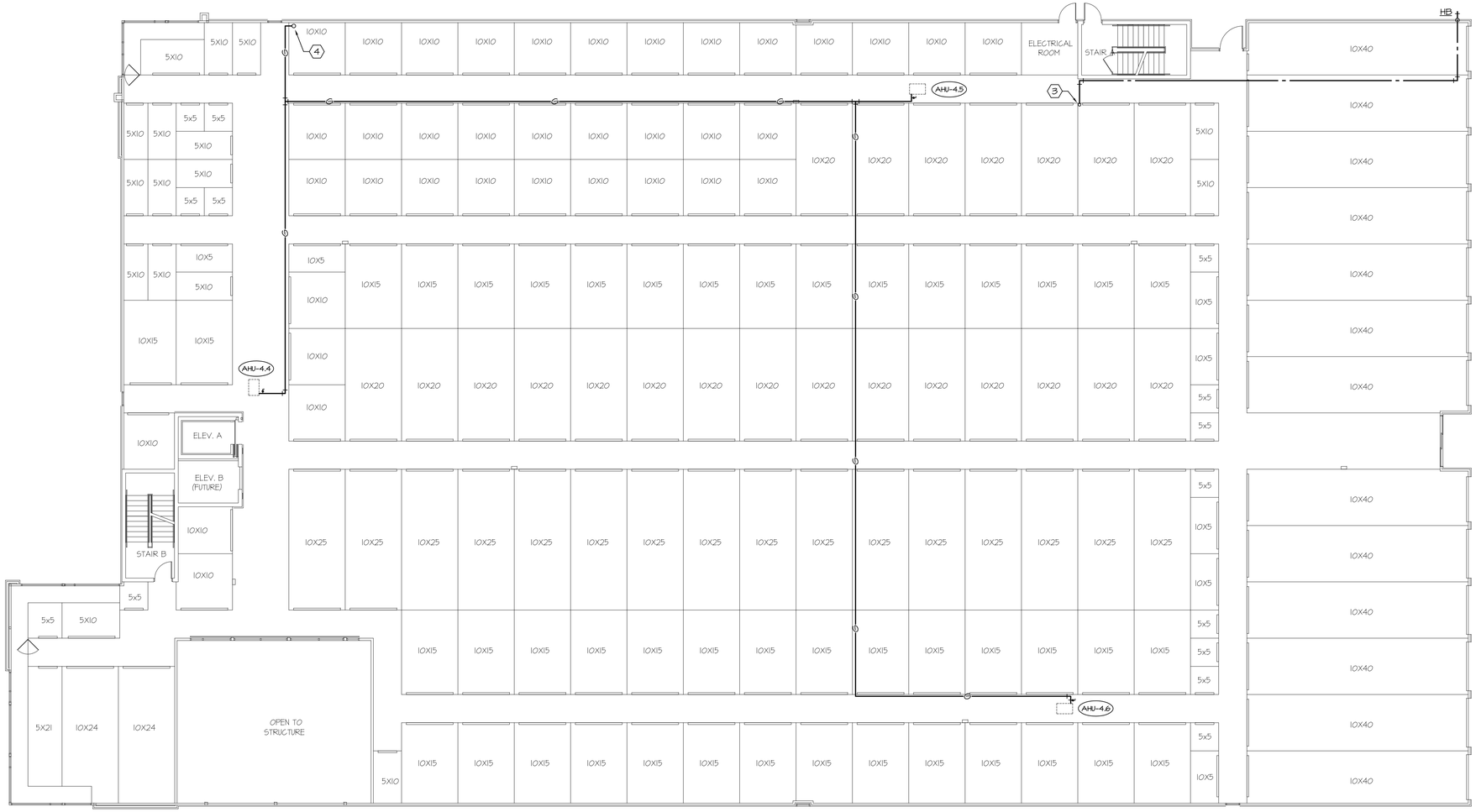
1ST FLOOR PLUMBING

SHEET NO.

P1.1




1 2ND FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

**PLUMBING KEYED NOTES:**

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
3. 3/4" C.W. LINE UP FROM 1ST FLOOR.
4. XX" GAS LINE UP FROM 1ST FLOOR. XX" GAS LINE UP TO 3RD FLOOR.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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
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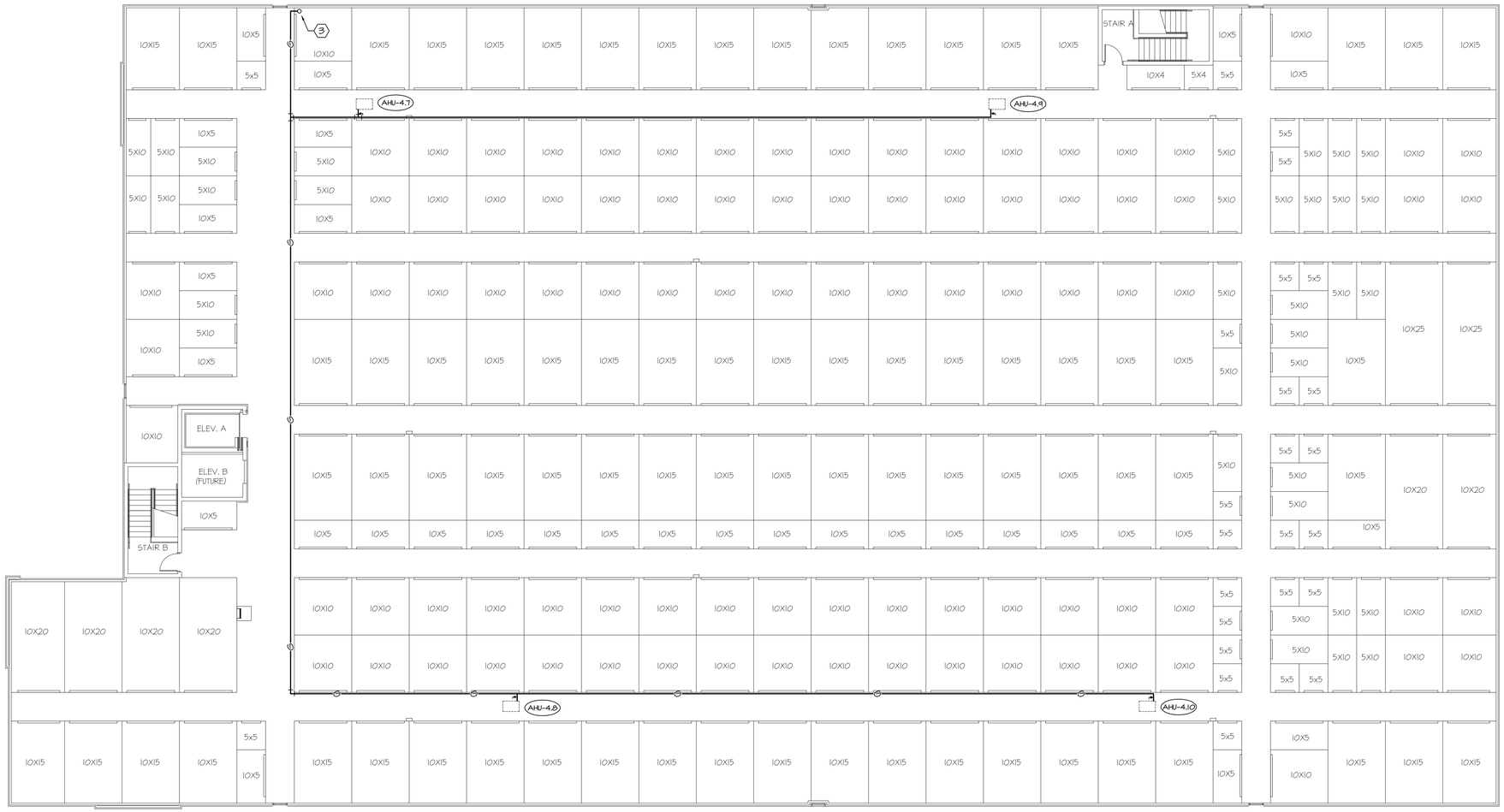
REVISIONS:

## 2ND FLOOR PLUMBING

SHEET NO.
P1.2




1 3RD FLOOR - PLUMBING PLAN
SCALE: 3/32"=1'-0"

PLUMBING KEYED NOTES:

1. HUB DRAIN FOR CONDENSATE DRAIN LINES, MOUNTED HIGH IN CORRIDOR. MAINTAIN AIR GAP.
2. RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.
3. XX" GAS LINE UP FROM 2ND FLOOR.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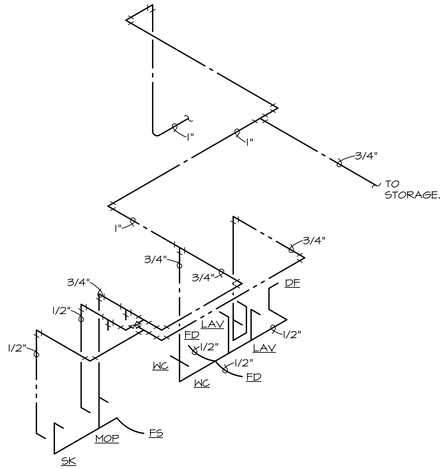
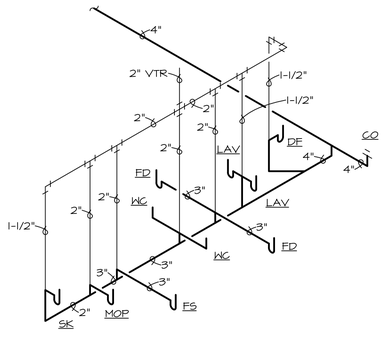
3RD FLOOR PLUMBING

SHEET NO.
P1.3




## 3 COLD WATER RISER
NO SCALE




## 2 WASTE & VENT RISER
NO SCALE

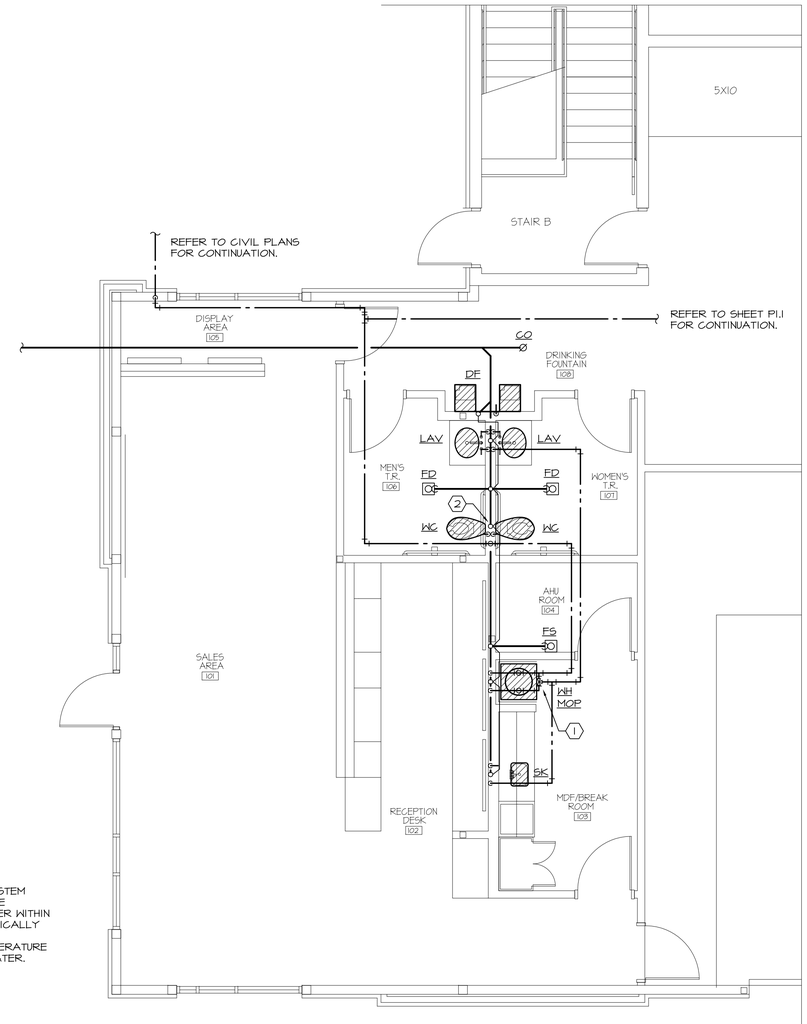
### GENERAL PLUMBING NOTES :

1. CONTROLS FOR CIRCULATING HOT WATER SYSTEM PUMPS SHALL START THE PUMP BASED ON THE IDENTIFICATION OF A DEMAND FOR HOT WATER WITHIN OCCUPANCY. THE CONTROLS SHALL AUTOMATICALLY TURN OFF THE PUMP WHEN THE WATER IN THE CIRCULATION LOOP IS AT THE DESIRED TEMPERATURE AND WHEN THERE IS NO DEMAND FOR HOT WATER.

### PLUMBING KEYED NOTES:

(1) PROVIDE & INSTALL 3/4" ANTI-SCALDING THERMOSTATIC MIXING VALVE ON HOT WATER LINE FEEDING PUBLIC RESTROOM LAVATORIES. SET TO 110° MAX. MUST CONFORM TO ASSE 1070.

(2) RUN 2" VENT THRU ROOF. COORDINATE ROUTING WITH UPPER FLOOR.




## 1 OFFICE PLUMBING PLAN
SCALE: 1/4"=1'-0"

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STATE OF MISSOURI
DJ PENN
NUMBER E-28507
REGISTERED PROFESSIONAL ENGINEER
12/16/2021

# LAKEWOOD STORAGE
NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
DATE : 12.16.2021
DRAWN : DJP
REVISIONS:

OFFICE PLUMBING

SHEET NO.
P1.4

**FIRE RESISTANCE DIRECTORY (BXRH)**

THROUGH-PENETRATION FIRESTOP SYSTEMS (XHEZ)—*Continued*

**System No. C-AJ-1014**

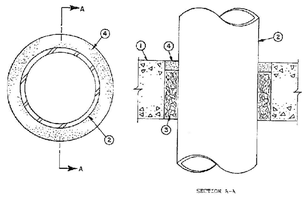
(Formerly System No. 133)

F Rating—2 Hr

T Rating—0 Hr

L Rating At Ambient—Less Than 1 CFM/sq ft (See Item 4)

L Rating At 400 F—Less Than 1 CFM/sq ft (See Item 4)

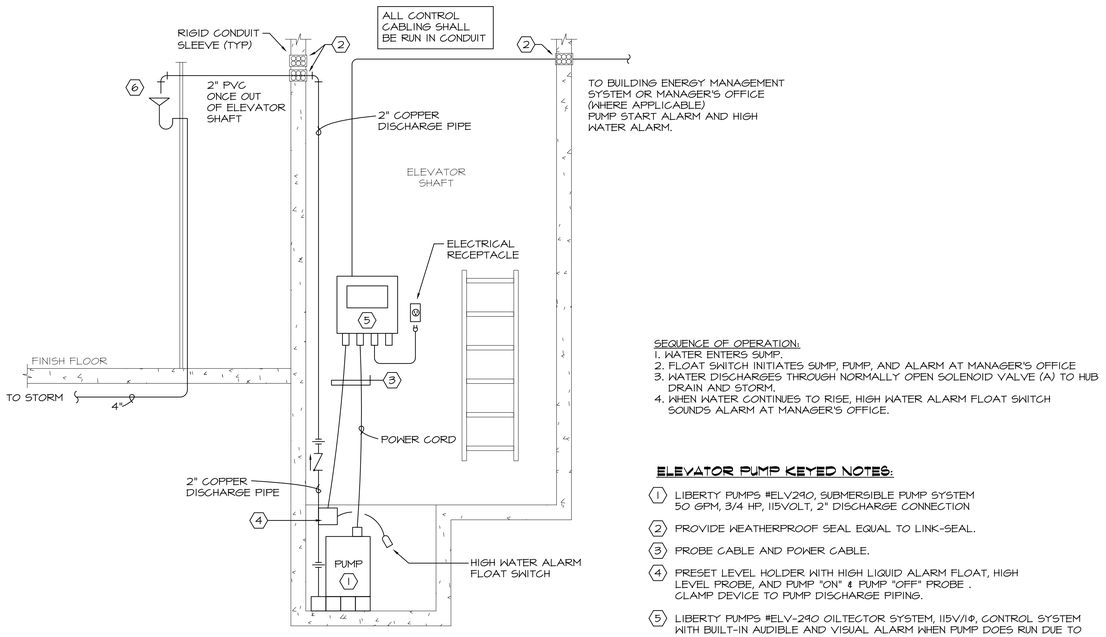



1. **Floor or Wall Assembly**—Min 3-1/4 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of circular opening is 6 in. See **Concrete Block** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
2. **Through Penetrants**—One metallic pipe or conduit to be centered within the firestop system. A nom annular space of 3/4 in. is required within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes or conduits may be used:
   A. **Steel Pipe**—Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. **Conduit**—Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
3. **Packing Material**—Min 4 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as require to accommodate the required thickness of fill material. Min thickness of packing material in floors and walls to be 2-3/4 in. and 2-1/4 in., respectively.
4. **Fill, Void or Cavity Material*—Sealant**—Min 1/2 in. thickness of fill material applied within annulus, flush with top surface of floor or with both surfaces of wall. As an alternate, the permanent forming material (Item 3) may be omitted if the fill material thickness is increased to a min 1-1/2 in.

   **Minnesota Mining & Mfg. Co.**—Types FB-2000, FB-2000+, FB-2003 (floors only). (Note: L Ratings apply only when FB-2000+ is used.)

*Bearing the UL Classification Marking

## 3 UL FIRE PENETRATION DETAIL
NOT TO SCALE




## 2 ELEVATOR SUMP PUMP SYSTEM DETAIL
NOT TO SCALE

SEQUENCE OF OPERATION:
1. WATER ENTERS SUMP.
2. FLOAT SWITCH INITIATES SUMP, PUMP, AND ALARM AT MANAGER'S OFFICE
3. WATER DISCHARGES THROUGH NORMALLY OPEN SOLENOID VALVE (A) TO HUB DRAIN AND STORM.
4. WHEN WATER CONTINUES TO RISE, HIGH WATER ALARM FLOAT SWITCH SOUNDS ALARM AT MANAGER'S OFFICE.

**ELEVATOR PUMP KEYED NOTES:**

1. LIBERTY PUMPS #ELV290, SUBMERSIBLE PUMP SYSTEM 50 GPM, 3/4 HP, 115VOLT, 2" DISCHARGE CONNECTION
2. PROVIDE WEATHERPROOF SEAL EQUAL TO LINK-SEAL.
3. PROBE CABLE AND POWER CABLE.
4. PRESET LEVEL HOLDER WITH HIGH LIQUID ALARM FLOAT, HIGH LEVEL PROBE, AND PUMP "ON" & PUMP "OFF" PROBE . CLAMP DEVICE TO PUMP DISCHARGE PIPING.
5. LIBERTY PUMPS #ELV-290 OILTECTOR SYSTEM, 115V/1Φ, CONTROL SYSTEM WITH BUILT-IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES RUN DUE TO HIGH LIQUID ALARM. PROVIDE SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACTOR FOR A REMOTE ALARM LOCATION.
6. HUB DRAIN N CORRIDOR. MAINTAIN AIR GAP.

**SERVICE WATER SYSTEMS FUNCTIONAL TESTING/COMMISSIONING PLAN**

THE CONTRACTOR SHALL COMPLETE THE TASKS BELOW TO COMMISSION THE SERVICE WATER SYSTEMS AND CONTROL SYSTEM AND SUBMIT WRITTEN DOCUMENTATION DETAILING THE TASKS BELOW. FOR EACH TASK, LIST THE DATE PERFORMED, PERSON COMPLETING THE TASK, THE INITIAL SETTING/CONDITION, LIST OF SPECIFIC EQUIPMENT, APPLIANCES OR SYSTEMS TO BE TESTED AND DESCRIPTION OF OF THE TESTS TO BE PERFORMED. ACTIONS PERFORMED, AND FINAL SETTING CONDITION. SUBMIT DOCUMENTATION AT OR BEFORE SUBSTANTIAL COMPLETION TO FACILITATE OBTAINING THE CERTIFICATE OF OCCUPANCY.

1. ENSURE ALL WATER SYSTEMS INSTALLED AND ARE FUNCTIONAL.
2. ENSURE SERVICE WATER HEATING CONTROL SYSTEMS ARE CALIBRATED AND FUNCTIONAL AND OPERATE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
3. EQUIPMENT SHALL DEMONSTRATE THE INSTALLATION AND OPERATION OF COMPONENTS.

## PIPING MATERIAL SCHEDULE

| TYPE | MATERIALS |
|---|---|
| WATER LINES | COPPER TYPE "L" OR CROSS-LINKED POLYETHYLENE (PEX) W/ 1" THICK ARMAFLEX OR EQUIVALENT INSULATION |
| WASTE LINE | ABS SCHEDULE 40 OR CAST IRON |
| VENT LINE | ABS SCHEDULE 40 OR COPPER PIPING |
| CONDENSATE | PVC SCHEDULE 40 |

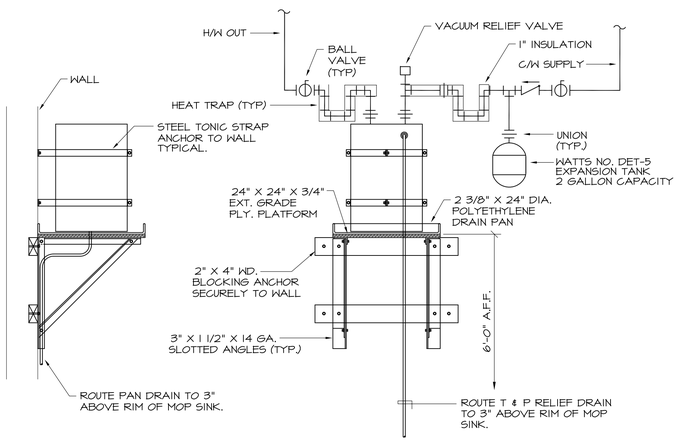
## PIPING LEGEND

| SYMBOL | TYPE |
|---|---|
| ——— - ——— | COLD WATER |
| ——— - - ——— | HOT WATER |
| ——— | WASTE LINE |
| – – – – – – – – – | VENT LINE |

## PLUMBING FIXTURE CONNECTION SCHEDULE

| MARK | FIXTURE | CW | HW | W | V | REMARKS |
|---|---|---|---|---|---|---|
| WC | WATER CLOSET (HANDICAP) | 1/2" | - | 4" | 2" | a. KOHLER #K-25077; ELONGAED WATER CLOSET; WHITE CHINA; 1.28 GAL. PER FLUSH.<br>b. McGUIRE #2166LK 1/2" ANGLE SUPPLIES.<br>c. CHURCH #295C WHITE, OPEN FRONT SEAT. |
| LAV | LAVATORY (HANDICAP) | 1/2" | 1/2" | 2" | 1-1/2" | a. KOHLER #K-2030; WALL MOUNTED; WHITE CHINA; 20"x 18"; 8" CENTERS<br>b. CHICAGO FAUCET #404-VE2805-317ABCP, 0.5 GPM; 4" WRIST BLADES<br>c. CHROME PLATED GRID STRAINER.<br>d. 17 GA., 1 1/2" P-TRAP.<br>e. 1/2"x 3/8" STOPS & SUPPLIES; CHROME PLATED.<br>f. WADE SERIES 520 CARRIER.<br>g. TRUEBRO #102 P-TRAP AND SUPPLY PIPING INSULATION KIT. |
| FD | FLOOR DRAIN | 1/2" | - | 3" | 2" | a. WADE # 1100STD 6" DIA. CAST IRON FLOOR DRAIN PROVIDE 1/2" TRAP PRIMER |
| FS | FLOOR SINK | 1/2" | - | 3" | 2" | a. WADE # 9113-EF6; 8x8x6 CAST IRON FLOOR SINK W/ 6"Ø FUNNEL, ALUMINUM DOME STRAINER AND NICKEL BRONZE HINGED TOP. PROVIDE 1/2" TRAP PRIMER. |
| DF | WATER COOLER | 1/2" | - | 2" | 1-1/2" | a. ELKAY #EZSTL8C; WALL MOUNT, BARRIER-FREE ACCESS, ADA COMPLIANT |
| MOP | MOP SINK | 1/2" | 1/2" | 3" | 1-1/2" | a. WILLIAMS #SBC-1800 "HILOW" 24"x24"x12" W/ STAINLESS STEEL CAP<br>b. WILLIAMS #T-10-VB; SINK FITTING W/ VACUUM BREAKER, 3/4" HOSE TREADED OUTLET; PAIL HOOK W/ WALL SUPPORT<br>c. PROVIDE STAINLESS STEEL BACK PANEL. |
| SK | BREAK SINK | 1/2" | 1/2" | 2" | 1-1/2" | a. ELKAY #LRAD1720S5; SINGLE BOWL; 18 GAUGE; DROP-IN 14"x14" BOWL<br>b. DELTA FAUCET #28716LF, LEVER HANDLES, 1.8 GPM; 5" SWING SPOUT.<br>c. 3" PERFORATED GRID STRAINER; ELKAY #LK-8..<br>d. 1/2"x3/8" STOPS AND SUPPLIES; CHROME PLATED. ELKAY #2165 LK. |
| HD | HUB DRAIN | - | - | 3" | 1-1/2" | a. PROVIDE 3" HUB DRAIN HIGH IN CORRIDOR. |
| HD4 | HUB DRAIN | - | - | 4" | 2" | a. PROVIDE 4" HUB DRAIN HIGH IN CORRIDOR. |
| TD | TRENCH DRAIN | - | - | 4" | 2" | --- |
| HB | HOSE BIBB | 3/4" | - | - | - | a. ZURN #1300; ENCASED, ANTI-SIPHON W/ NON-FREEZE TYPE INTEGRAL BACKFLOW PREVENTER |
| CO | CLEANOUT | - | - | 4" | - | a. WADE # 6000, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH TEE-NYE FITTING. |
| DCO | HEAVY-DUTY DOUBLE CLEANOUT SAMPLE PORT | - | - | 4" | - | a. WADE # 6000Z, CAST IRON W/ THREADED ADJUSTABLE HOUSING PROVIDE WITH SINGLE RISER |
| TMV | THERMOSTATIC MIXING VALVE | 3/4" | 3/4" | - | - | a. SYMMONS "MAXLINE" #T-230-CK; LEAD FREE, TAMPER RESISTANT |

NOTES
1. ALL FIXTURES SHALL HAVE AN INDIVIDUAL SHUTOFF VALVE.
2. ALL FIXTURES SHALL BE PROVIDED W/ A SHOKTROL.
3. INSTALL A METER AND/ OR BACKFLOW PREVENTOR AS PER LOCAL CODE.




## 1 WATER HEATER-1
NO SCALE

## WATER HEATER SCHEDULE

| MARK | RECOVERY | | STORAGE | LINING | MAXIMUM INPUT | REMARKS |
|---|---|---|---|---|---|---|
| | GPH | RISE°F | GALLONS | | BTUH | |
| WH-1 | 10 | 60 | 20 | GLASS | 1.5 KW @ 120V/1Φ | STATE #PCE-20-10M5A |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12/16/2021

# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035

DATE : 12.16.2021

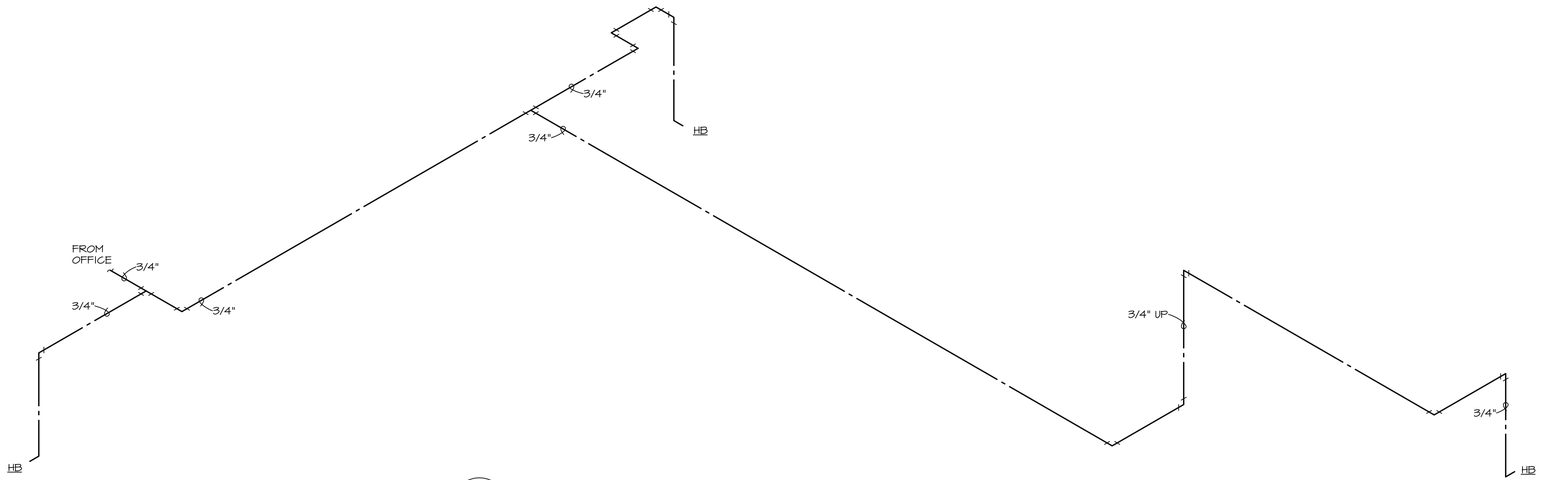
DRAWN : DJP

REVISIONS:

PLUMBING SCHEDULES

SHEET NO.

P2.1




1 COLD WATER RISER
NO SCALE

## WATER METER FIXTURE CALCULATIONS

| FIXTURE | F.U. FIXTURE | # OF FIXTURES | TOTAL F.U. |
|---|---|---|---|
| WATER CLOSET | 5.0 | 2 | 10.0 |
| LAVATORY | 2.0 | 2 | 4.0 |
| DRINKING FOUNTAIN | 0.25 | 1 | 0.25 |
| BREAK SINK | 1.4 | 1 | 1.4 |
| MOP SINK | 3.0 | 1 | 3.0 |

TOTAL WATER FIXTURE UNITS = 18.65 F.U.

BASED ON PREDOMINANTLY FLUSH TANKS
THE WATER DEMAND ESTIMATE = 13.0 GPM

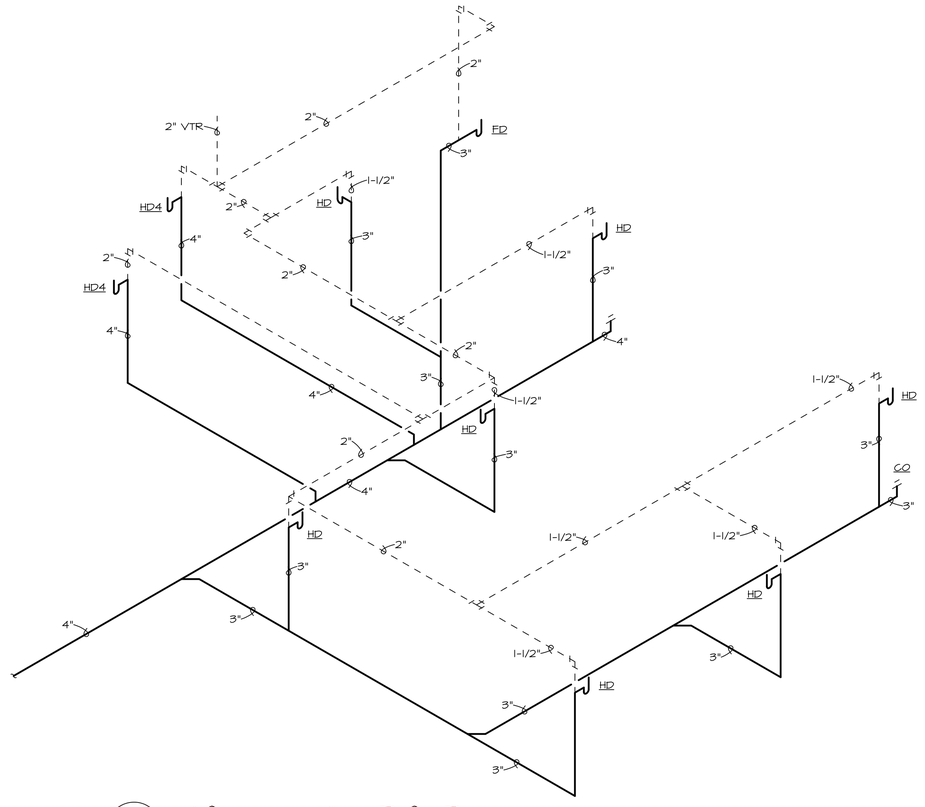
WATER SIZE REQUIRED = 1"

## DRAINAGE FIXTURE CALCULATIONS

| FIXTURE | F.U. FIXTURE | # OF FIXTURES | TOTAL F.U. |
|---|---|---|---|
| WATER CLOSET | 4.0 | 2 | 8.0 |
| LAVATORY | 1.0 | 2 | 2.0 |
| DRINKING FOUNTAIN | 0.5 | 1 | 0.5 |
| BREAK SINK | 2.0 | 1 | 2.0 |
| MOP SINK | 3.0 | 1 | 3.0 |
| FLOOR DRAIN | 2.0 | 3 | 6.0 |
| FLOOR SINK | 2.0 | 1 | 2.0 |
| HUB DRAIN | 2.0 | 9 | 18.0 |

TOTAL WASTE FIXTURE UNITS = 41.5 F.U.

RECOMMENDED PIPE SIZE REQUIRED @ 0.125/FT SLOPE = 4"




2 WASTE & VENT RISER
NO SCALE

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# LAKEWOOD STORAGE

NE PORT DRIVE
LEE'S SUMMIT, MISSOURI 64064

PROJECT NO. 2035
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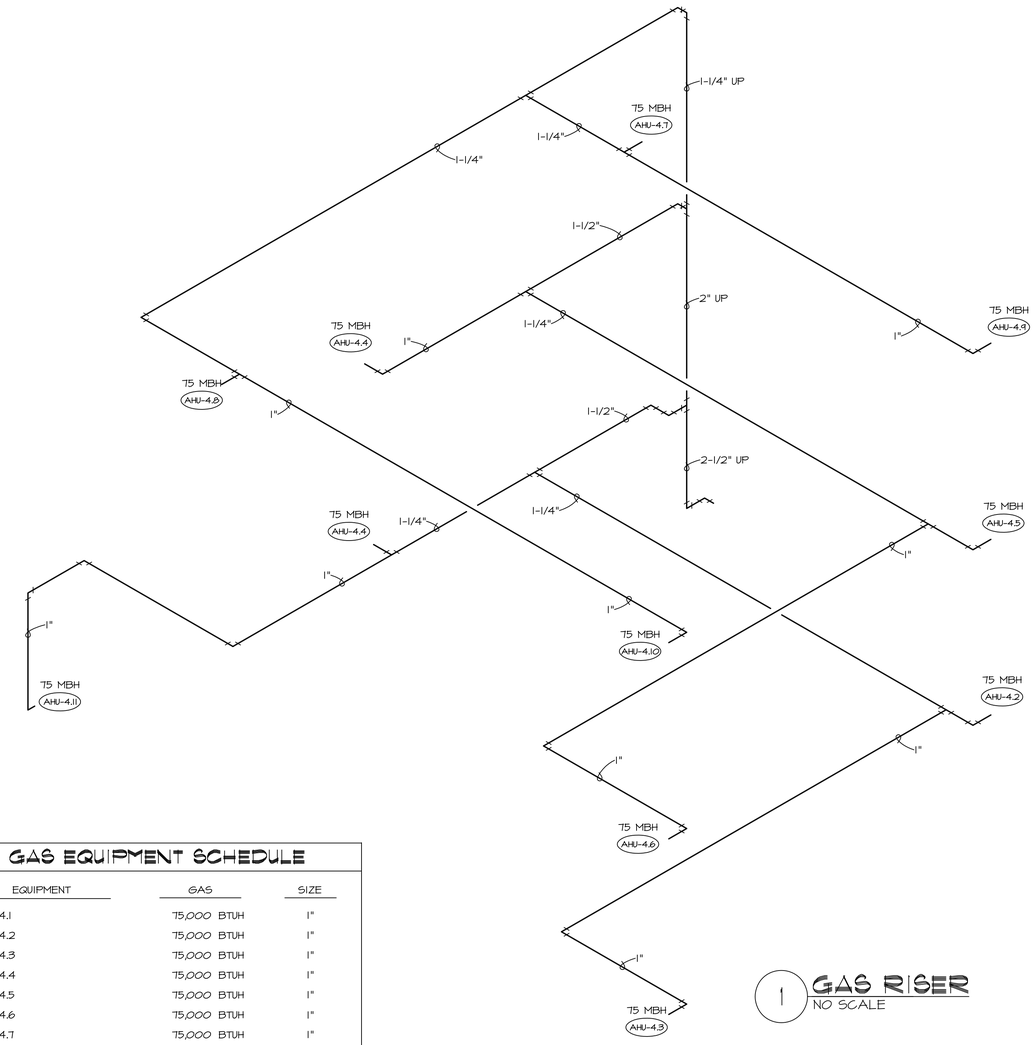
PLUMBING RISERS

SHEET NO.
P2.2




1 GAS RISER
NO SCALE

## GAS EQUIPMENT SCHEDULE

| EQUIPMENT | GAS | SIZE |
|---|---|---|
| AHU-4.1 | 75,000 BTUH | 1" |
| AHU-4.2 | 75,000 BTUH | 1" |
| AHU-4.3 | 75,000 BTUH | 1" |
| AHU-4.4 | 75,000 BTUH | 1" |
| AHU-4.5 | 75,000 BTUH | 1" |
| AHU-4.6 | 75,000 BTUH | 1" |
| AHU-4.7 | 75,000 BTUH | 1" |
| AHU-4.8 | 75,000 BTUH | 1" |
| AHU-4.9 | 75,000 BTUH | 1" |
| AHU-4.10 | 75,000 BTUH | 1" |
| AHU-4.11 | 75,000 BTUH | 1" |

TOTAL SPACE DEMAND = 825,000 BTUH 2-1/2" @ 350 '

ALL GAS EQUIPMENT SHALL BE PROVIDED WITH AN INDIVIDUAL SHUT-OFF VALVE AND A FLEXIBLE QUICK DISCONNECT.

GAS PRESSURE SHALL BE 0.5". CONTRACTOR SHALL VERIFY METERING AND PRESSURE REGULATOR REQUIREMENTS WITH LOCAL GAS COMPANY.

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PLUMBING RISERS

SHEET NO.
P2.3