2751 NORTHEAST DOUGLAS STREET
LEE'S SUMMIT, MISSOURI 64064

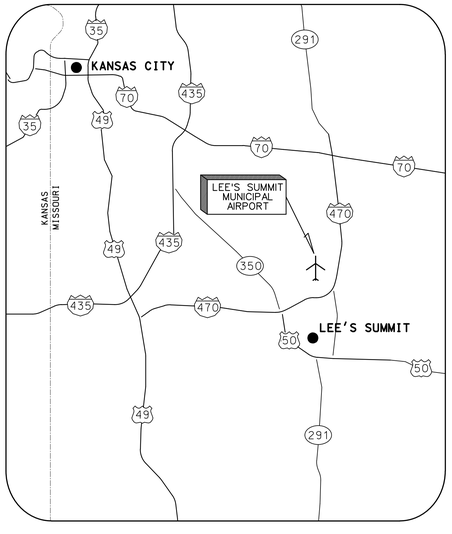
CONSTRUCTION PLANS
FOR
LEE'S SUMMIT MUNICIPAL AIRPORT

CITY PROJECT NO. 47732472

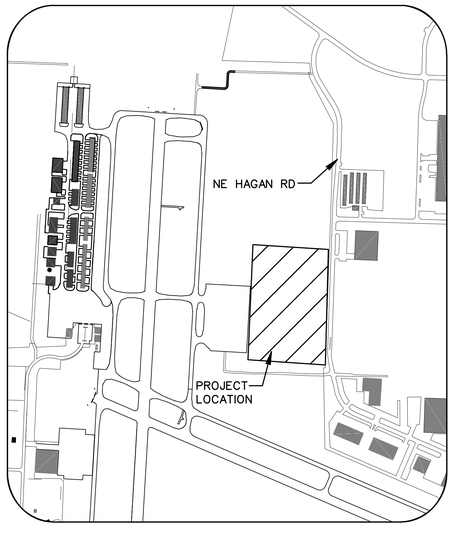
LXT HANGAR 2 AND EASTSIDE DEVELOPMENT

ISSUED-FOR-BID PLAN SET

JANUARY 04, 2024



LOCATION MAP



SITE PLAN

CALL MISSOURI ONE-CALL SYSTEMS
BEFORE EXCAVATING
1-800-DIG-RITE

DESIGN AIRCRAFT - GEOMETRY
CANADAIR CL-600
AIRCRAFT APPROACH CATEGORY C
AIRPLANE DESIGN GROUP II

DESIGN AIRCRAFT - STRUCTURE
GRUMMAN GULFSTREAM IV
GROSS WEIGHT - 71,800 LBS
EQUIVALENT ANNUAL DEPARTURES - 651

MAXIMUM EQUIPMENT HEIGHT: 100'

UNICOM/CTAF FREQUENCY - 122.80

CMT

22001238

PROFESSIONAL ENGINEERING - 000631

CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
■SPRINGFIELD, IL ■AURORA, IL ■ST. LOUIS, MO
■EDWARDSVILLE, IL ■CHICAGO, IL ■ PEORIA, IL ■ ROCKFORD, IL
■INDIANAPOLIS, IN ■COLUMBUS, OH ■SPRINGFIELD, MO
■KANSAS CITY, MO ■LA BELLE, FL ■MOLINE, IA
SUBMITTED BY TYLER HORN, PE

DATE JANUARY 04, 2024

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

SHEET LIST TABLE

GENERAL DRAWINGS (SHEETS 1-7)		C135	LIGHTING SITE PLAN	S300	TYPICAL STEEL FRAMING DETAILS
G000	COVER SHEET	C136	SITE LIGHTING DETAILS	S301	STEEL FRAMING DETAILS
G001	INDEX TO SHEETS AND SUMMARY OF QUANTITIES	C137	AIRFIELD PAVEMENT JOINTING PLAN	S400	TYPICAL CMU FRAMING DETAILS
G002	CONRACTOR ACCESS AND STAGING	C138	AIRFIELD PAVEMENT JOINTING DETAILS	**ELECTRICAL DRAWINGS (SHEETS 94-109)**	
G003	CONSTRUCTION ACTIVITY PLAN	C139	AIRFIELD PAVEMENT STAKING PLAN	E001	GENERAL ELECTRICAL INFORMATION
G004	CRITICAL POINTS	**ARCHITECTURAL DRAWINGS (SHEETS 51-81)**		E002	SITE LIGHTING PHOTOMETRICS PLAN
G005	CAP NOTES	AG001	ARCHITECTURAL LEGEND AND ABBREVIATIONS	E003	ELECTRICAL SITE PLAN
G006	TRAFFIC CONTROL PLANS	AG002	CODE PLANS	E101	LIGHTING FLOOR PLANS
CIVIL DRAWINGS (SHEETS 8-50)		AG003	CODE INFORMATION AND WALL TYPES	E102	LIGHTING HANGAR FLOOR PLAN
C101	EXISTING CONDITIONS AND DEMOLITION SHEET	AG004	GENERAL ACCESSIBILITY	E201	POWER FLOOR PLANS
C102	SITE PLAN	AG005	INTERIOR ACCESIBILITY	E202	POWER HANGAR PLAN
C103	PAVING PLAN	AG006	CODE INFORMATION	E301	SYSTEMS FLOOR PLANS
C103A	JOINTING PLAN SHEET 1	A100	ARCHITECTURAL SITE DETAILS	E302	SYSTEMS HANGAR PLAN
C103B	JOINTING PLAN SHEET 2	A101	OVERALL FLOOR PLAN LEVEL	E401	ENLARGED PLANS
C104	NORTH DRIVE PLAN & PROFILE	A102	FLOOR PLANS	E501	DIAGRAMS
C105	MIDDLE DRIVE PLAN & PROFILE	A111	OVERALL ROOF PLAN	E601	ELECTRICAL DETAILS
C106	SOUTH DRIVE PLAN & PROFILE	A121	OVERALL REFLECTED CEILING PLAN	E602	ELECTRICAL DETAILS
C107	GRADING PLAN	A122	REFLECTED CEILING PLAN	E701	ELECTRICAL SCHEDULES
C107A	GRADING DETAILS	A201	BUILDING ELEVATIONS	E702	ELECTRICAL SCHEDULES
C108	BASIN DETAIL	A301	BUILDING SECTIONS - SHEET 1	E703	ELECTRICAL SCHEDULES
C109	STORM PROFILE - SHEET 1	A302	BUILDING SECTIONS - SHEET 2	**FIRE PROTECTION DRAWINGS (SHEETS 110-112)**	
C110	STORM PROFILE - SHEET 2	A310	WALL SECTIONS - SHEET 1	FP001	GENERAL FIRE PROTECTION INFORMATION
C111	STORM PROFILE - SHEET 3	A311	WALL SECTIONS - SHEET 2	FP101	FIRE PROTECTION FLOOR PLANS
C112	STORM PROFILE - SHEET 4	A312	WALL SECTIONS - SHEET 3	FP102	FIRE PROTECTION HANGAR FLOOR PLAN
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C114A	SANITARY PLAN & PROFILE - SHEET 2	A403	STAIR AND ELEVATOR DETAILS	M101	MECHANICAL FLOOR PLANS
C115	SANITARY PLAN & PROFILE - SHEET 3	A501	DETAILS	M102	MECHANICAL HANGAR FLOOR PLAN
C116	WATER LINE PLAN & PROFILE - SHEET 1	A601	DOOR/WINDOW SCHEDULE & DETAILS	M401	ENLARGED PLANS
C117	WATER LINE PLAN & PROFILE - SHEET 2	A602	DOOR/WINDOW DETAILS	M501	DIAGRAMS, RISER, PAD
C118	WATER LINE PLAN & PROFILE - SHEET 3	A603	ALUM. STOREFRONT DOOR/WINDOW SCHEDULE	M601	MECHANICAL DETAILS
C119	MARKING & SIGNAGE	A604	DOOR/WINDOW SCHEDULE & DETAILS	M701	MECHANICAL SCHEDULES
C120	MARKING & SIGNAGE DETAIL - SHEET 1	A610	FINISH SCHEDULE	**PLUMBING DRAWINGS (SHEETS 120-128)**	
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C122	MARKING & SIGNAGE DETAIL - SHEET 3	A621	CASEWORK ELEVATIONS - SHEET 1	P101	DOMESTIC WATER & NATURAL GAS PIPING FLOOR PLANS
C123	EROSION CONTROL PLAN - PHASE 1	A622	CASEWORK ELEVATIONS - SHEET 2	P102	DOMESTIC WATER & NATURAL GAS PIPING HANGAR FLOOR PLAN
C124	EROSION CONTROL PLAN - PHASE 2	A623	ADA AND CODE SIGNAGE	P201	SANITARY PIPING FLOOR PLANS
C125	EROSION CONTROL DETAILS	**STRUCTURAL DRAWINGS (SHEETS 82-93)**		P202	SANITARY PIPING HANGAR FLOOR PLAN
C126	TYPICAL SECTIONS PLAN VIEW	S000	STRUCTURAL GENERAL NOTES	P401	ENLARGED PLANS
C127	TYPICAL SECTIONS - SHEET 1	S001	STRUCTURAL GENERAL NOTES	P501	DIAGRAMS, RISERS
C128	TYPICAL SECTIONS - SHEET 2	S002	SPECIAL INSPECTIONS	P601	PLUMBING DETAILS
C129	SITE DETAILS - SHEET 1	S100	FOUNDATION PLAN - OVERALL	P701	PLUMBING SCHEDULES
C130	SITE DETAILS - SHEET 2	S101	FOUNDATION PARTIAL PLANS	**LANDSCAPING DRAWINGS (SHEETS 129-131)**	
C131	FENCING PLAN	S102	MEZZANINE FRAMING PLAN	L100	OVERALL LANDSCAPE PLAN
C132	FENCING DETAILS SHEET	S200	TYPICAL FOUNDATION DETAILS	L101	LANDSCAPE LAYOUT PLAN
C133	SLIDING GATE DETAILS SHEET 1	S201	FOUNDATION DETAILS	L102	LANDSCAPE DETAILS
C134	SLIDING GATE DETAILS SHEET 2	S202	FOUNDATION DETAILS		

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: INDEX TO SHEETS AND SOQ
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH

SHEET TITLE

INDEX TO SHEETS

G001

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Date: Wednesday, January 3, 2024 17:02:29

CONSTRUCTION ACCESS AND STAGING NOTES

UNDER NO CIRCUMSTANCES WILL ANY CONTRACTOR VEHICLE, EQUIPMENT OR PERSONNEL BE ALLOWED ONTO ANY ACTIVE AIRFIELD PAVEMENTS WITHOUT THE APPROVAL AND DIRECT SUPERVISION OF AIRPORT STAFF.

UNLESS NOTED OTHERWISE, ALL CONTRACTOR STAGING AREAS AND HAUL ROUTES SHALL BE RESTORED TO THEIR EXISTING CONDITION UPON COMPLETION OF THE PROJECT. ALL WORK REQUIRED FOR RESTORATION OF STAGING AREAS AND HAUL ROUTES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

THE CONTRACTOR SHALL CONTINUOUSLY MONITOR AND CLEAN NE HAGAN ROAD DURING ALL HAULING OPERATIONS. THE CONTRACTOR SHALL HAVE AT A MINIMUM A STREET SWEEPER, VACUUM TRUCK AND ASSOCIATED OPERATORS AVAILABLE ON SITE FOR THIS PURPOSE AT ALL TIMES THAT CONSTRUCTION TRAFFIC IS OPERATING ACROSS NE HAGAN ROAD. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

THE CITY OF LEE'S SUMMIT LOCAL ORDINANCES RESTRICT NOISE DISTURBANCES BETWEEN THE HOURS OF 10:00 P.M. AND 7:00 A.M. EVERY NIGHT. THE CONTRACTOR MAY REQUEST A WAIVER OF THIS ORDINANCE TO BE GRANTED AT THE DISCRETION OF THE LEE'S SUMMIT CHIEF OF POLICE. THE AVAILABILITY OF THE HAUL ROUTE DURING THE NIGHTLY HOURS PROTECTED BY THE CITY NOISE ORDINANCE IS NOT GUARANTEED.

CONSTRUCTION TRAFFIC SHOULD BE ROUTED TO AVOID CAUSING DAMAGE TO EXISTING OR PROPOSED AIRFIELD LIGHTING OR SIGNAGE FIXTURES. ANY AIRFIELD LIGHTS OR SIGNS DAMAGED BY CONSTRUCTION OPERATIONS OR TRAFFIC SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL WALK THE SITE WITH OWNER AND ENGINEER TO DOCUMENT EXISTING SITE CONDITIONS THROUGH PHOTO AND VIDEO RECORDINGS. PHOTO/VIDEO EVIDENCE OF PRE-SITE CONDITIONS SHALL BE SHARED BETWEEN ALL PARTIES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ALL DAMAGES TO EXISTING CONDITIONS THAT WERE NOT DOCUMENTED IN THE PRE-CONSTRUCTION WALKTHROUGH.

AIRPORT TERMINAL

RUNWAY 18-36

TAXIWAY C

TAXIWAY C OFA

TAXIWAY C TOFA

BA-1.1

BA-1.2

65.5'

RUNWAY 13-31

65.5 LF

TAXIWAY B TOFA

TAXIWAY B

EAST APRON

CS-2.1

CS-2.2

CS-2.3

CS-2.4

CONTRACTOR STAGING AND STORAGE AREA

A-1.1 A-1.2 A-1.3 A-1.4 A-1.5 A-1.6

EA-1.1 EA-1.2

B-1.1 B-1.2 B-1.3 B-1.4 B-1.5 B-1.6

LP-1.1 LP-1.2 LP-1.3 LP-1.4 LP-1.5 LP-1.6 LP-1.7 LP-1.8 LP-1.9 LP-1.10 LP-1.11 LP-1.12 LP-1.13 LP-1.14 LP-1.15 LP-1.16 LP-1.17 LP-1.18

PROJECT WORK AREA

CONTRACTOR STAGING AND STORAGE AREA

CS-1.1 CS-1.2 CS-1.3 CS-1.4

CONTRACTOR ACCESS THROUGH EXISTING GATE

HAGAN ROAD

HR-1.1 HR-1.2 HR-1.3

CONTRACTOR HAUL ROUTE

NEW DEVELOPMENT BY OTHERS

LEGEND

- PROJECT 1 AND 2 WORK AREA
- CONTRACTOR STAGING AND STORAGE AREA
- LOW PROFILE BARRICADES
- HAUL ROUTE
- CP-1.1 CRITICAL POINT
- TOFA

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	CAP NOTES
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
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SHEET TITLE

CONTRACTOR ACCESS AND STAGING

G002

SHEET 003 OF 131

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Date: Wednesday, January 3, 2024 17:02:41

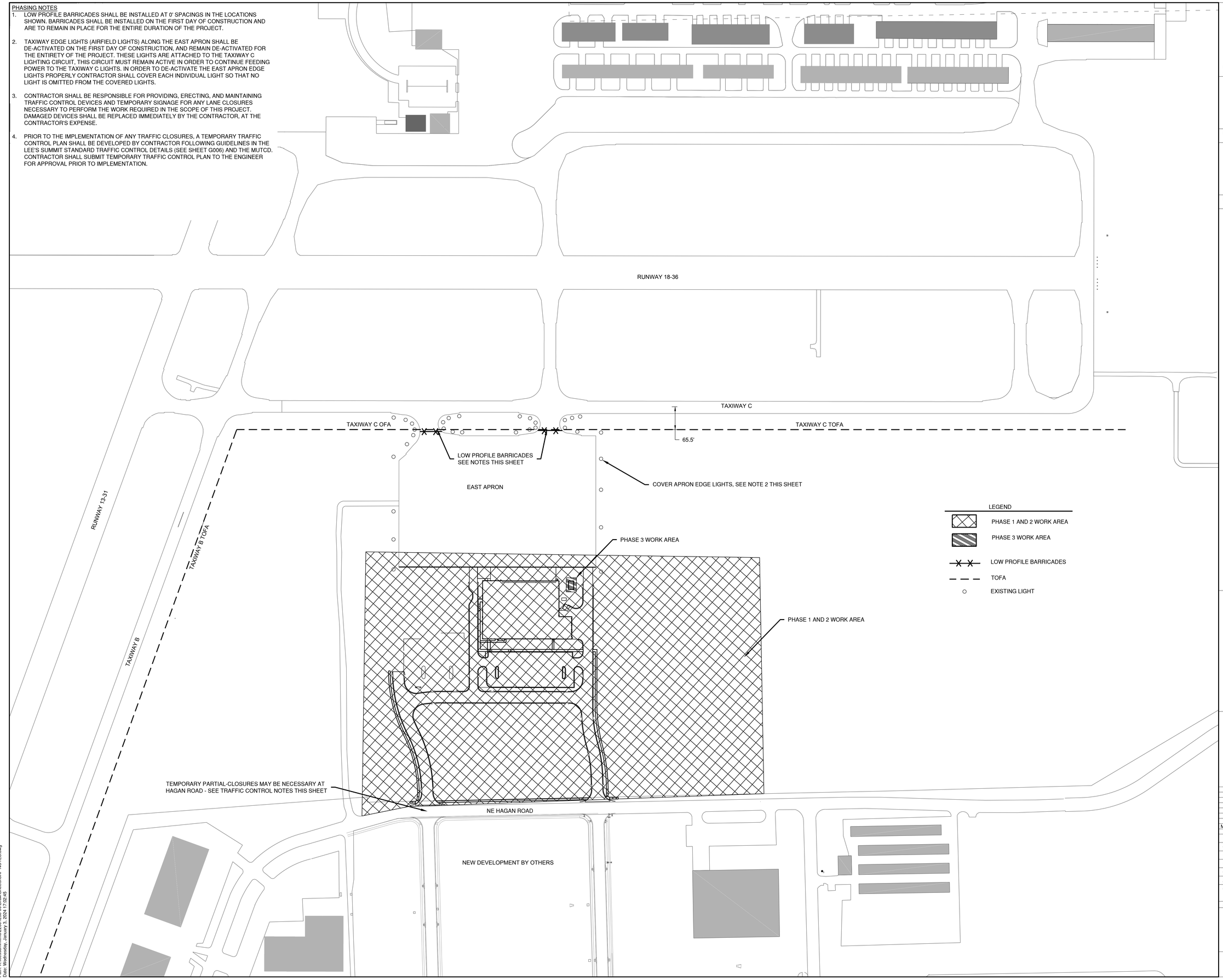
PHASING NOTES

1. LOW PROFILE BARRICADES SHALL BE INSTALLED AT 0' SPACINGS IN THE LOCATIONS SHOWN. BARRICADES SHALL BE INSTALLED ON THE FIRST DAY OF CONSTRUCTION AND ARE TO REMAIN IN PLACE FOR THE ENTIRE DURATION OF THE PROJECT.

2. TAXIWAY EDGE LIGHTS (AIRFIELD LIGHTS) ALONG THE EAST APRON SHALL BE DE-ACTIVATED ON THE FIRST DAY OF CONSTRUCTION, AND REMAIN DE-ACTIVATED FOR THE ENTIRETY OF THE PROJECT. THESE LIGHTS ARE ATTACHED TO THE TAXIWAY C LIGHTING CIRCUIT, THIS CIRCUIT MUST REMAIN ACTIVE IN ORDER TO CONTINUE FEEDING POWER TO THE TAXIWAY C LIGHTS. IN ORDER TO DE-ACTIVATE THE EAST APRON EDGE LIGHTS PROPERLY CONTRACTOR SHALL COVER EACH INDIVIDUAL LIGHT SO THAT NO LIGHT IS OMITTED FROM THE COVERED LIGHTS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, ERECTING, AND MAINTAINING TRAFFIC CONTROL DEVICES AND TEMPORARY SIGNAGE FOR ANY LANE CLOSURES NECESSARY TO PERFORM THE WORK REQUIRED IN THE SCOPE OF THIS PROJECT. DAMAGED DEVICES SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.

4. PRIOR TO THE IMPLEMENTATION OF ANY TRAFFIC CLOSURES, A TEMPORARY TRAFFIC CONTROL PLAN SHALL BE DEVELOPED BY CONTRACTOR FOLLOWING GUIDELINES IN THE LEE'S SUMMIT STANDARD TRAFFIC CONTROL DETAILS (SEE SHEET G006) AND THE MUTCD. CONTRACTOR SHALL SUBMIT TEMPORARY TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTATION.



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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

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CONSTRUCTION ACTIVITY PLAN

G003

SHEET 004 OF 131

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Date: Wednesday, January 3, 2024 17:02:45

CRITICAL ELEVATION POINTS
EASTSIDE DEVELOPMENT
LEE'S SUMMIT MUNICIPAL AIRPORT

NEW PCC APRON CRITICAL POINTS					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
A-1.1	NEW PCC APRON	993.15	1093.15	3895197.6990'	1975836.2174'
A-1.2	NEW PCC APRON	992.07	1092.07	3895225.0609'	1975602.4250'
A-1.3	NEW PCC APRON	992.65	1092.65	3895231.8597'	1975840.1059'
A-1.4	NEW PCC APRON	992.5	1092.50	3895235.4162'	1975809.8043'
A-1.5	NEW PCC APRON	992.5	1092.50	3895241.2694'	1975810.4913'
A-1.6	NEW PCC APRON	991.7	1091.70	3895264.9717'	1975607.0755'
NEW HANGAR 2 BUILDING					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
B-1.1	HANGAR 2	992.6	1092.60	3895239.6411'	1975825.4447'
B-1.2	HANGAR 2	991.7	1091.70	3895266.2132'	1975597.1525'
B-1.3	HANGAR 2	1000.5	1100.50	3895412.0130'	1975845.9181'
B-1.4	HANGAR 2	989.1	1089.10	3895438.8480'	1975617.5309'
B-1.5	HANGAR 2	986.9	1086.90	3895376.4210'	1975573.9185'
B-1.6	HANGAR 2	985.3	1085.30	3895443.0613'	1975581.6141'
EXISTING APRON CORNERS					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
EA-1.2	EXISTING APRON CORNER	992.6	1092.60	3895239.0915'	1975485.3858'
EA-1.1	EXISTING APRON CORNER	991.22	1091.22	3895170.5224'	1976068.6364'
PHASE 1 LOW PROFILE BARRICADES					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
BA-1.1	LOW-PROFILE BARRICADES	995	1095.00	3894780.9189'	1975297.1567'
BA-1.2	LOW-PROFILE BARRICADES	995	1095.00	3894818.6910'	1975574.6147'
CONTRACTOR STAGING AREA 1					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
CS-1.1	CONTRACTOR STAGING AREA 1	993.00	1093.00	3895667.0684'	1976473.9207'
CS-1.2	CONTRACTOR STAGING AREA 1	989.00	1089.00	3895683.6663'	1976301.0807'
CS-1.3	CONTRACTOR STAGING AREA 1	990.20	1090.20	3895808.2523'	1976487.3898'
CS-1.4	CONTRACTOR STAGING AREA 1	986.20	1086.20	3895824.9587'	1976312.2733'
CONTRACTOR STAGING AREA 2					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
CS-2.1	CONTRACTOR STAGING AREA 2	991.16	1091.16	3895026.7387'	1975651.2420'
CS-2.2	CONTRACTOR STAGING AREA 2	990.56	1090.56	3895043.5627'	1975476.0480'
CS-2.3	CONTRACTOR STAGING AREA 2	992.16	1092.16	3895167.9226'	1975664.7112'
CS-2.4	CONTRACTOR STAGING AREA 2	991.53	1091.53	3895184.6290'	1975489.5946'
CONSTRUCTION HAUL ROUTE					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
HR-1.1	HAUL ROUTE	984.50	1084.50	3895916.0873'	1976293.0927'
HR-1.2	HAUL ROUTE	979.60	1079.60	3895920.5640'	1975958.5945'
HR-1.3	HAUL ROUTE	976.80	1076.80	3895973.6711'	1975371.9616'
LIGHT POLES					
POINT	DESCRIPTION	GROUND ELEVATION	MAX* ELEVATION	NORTHING	EASTING
LP-1.1	LIGHT POLE	992.70	1092.70	3895289.8052'	1975843.3242'
LP-1.2	LIGHT POLE	989.80	1089.80	3895449.1546'	1975860.7262'
LP-1.3	LIGHT POLE	1000.40	1100.40	3895318.6532'	1975535.9543'
LP-1.4	DOUBLE LIGHT POLE	996.80	1096.80	3895515.7584'	1975814.8711'
LP-1.5	DOUBLE LIGHT POLE	986.50	1086.50	3895538.9955'	1975616.7976'
LP-1.6	LIGHT POLE	979.40	1079.40	3895536.3247'	1975562.8928'
LP-1.7	LIGHT POLE	987.00	1087.00	3895576.5091'	1975758.8022'
LP-1.8	LIGHT POLE	987.50	1087.50	3895576.0414'	1975712.0700'
LP-1.9	LIGHT POLE	990.50	1090.50	3895572.4994'	1976125.9413'
LP-1.10	LIGHT POLE	988.30	1088.30	3895591.9298'	1975962.2827'
LP-1.11	LIGHT POLE	986.60	1086.60	3895747.8781'	1976042.7741'
LP-1.12	LIGHT POLE	977.60	1077.60	3895722.6696'	1975580.5369'
LP-1.13	LIGHT POLE	982.50	1082.50	3895872.8469'	1976036.2884'
LP-1.14	LIGHT POLE	981.00	1081.00	3895895.0099'	1975921.2974'
LP-1.15	LIGHT POLE	976.80	1076.80	3895907.6764'	1975786.7647'
LP-1.16	LIGHT POLE	975.20	1075.20	3895920.5243'	1975648.3518'
LP-1.17	LIGHT POLE	976.60	1076.60	3895897.0204'	1975577.2174'
LP-1.18	LIGHT POLE	998.80	1098.80	3895457.7191'	1975697.9933'
CONSTRUCTION ACTIVITY MAXIMUM HEIGHT: 100' FROM GROUND					

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
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SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: CRITICAL POINTS
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
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SHEET TITLE

CRITICAL POINTS

G004

SHEET 005 OF 131

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Date: Wednesday, January 3, 2024 11:05:53

GENERAL

1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL FOLLOW THE REQUIREMENTS OF THE AIRPORT'S APPROVED CONSTRUCTION SAFETY AND PHASING PLAN (CSPP), FAA AC 150/5370-2G, AND ALL AIRPORT SAFETY AND SECURITY REQUIREMENTS.
2. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CITY FOR APPROVAL A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) IN ACCORDANCE WITH FAA AC 150/5370-2G. NO CONSTRUCTION ACTIVITY SHALL BEGIN UNTIL THE CITY HAS APPROVED THE SPCD.
3. THE CSPP COVERS OPERATIONAL SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INDIVIDUAL SAFETY OF HIS/HER PERSONNEL AND MEETING OSHA REQUIREMENTS.
4. A MINIMUM OF 10 DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING THE CONTRACTOR SHALL PROVIDE A LIST OF SUBCONTRACTORS AND MATERIAL SUPPLIERS.
5. THE CONTRACTOR SHALL EXERCISE BEST MANAGEMENT PRACTICES IN ACCORDANCE WITH STORM WATER POLLUTION PREVENTION AND PROJECT SPECIFICATION C-102 EROSION AND SEDIMENT CONTROL THROUGHOUT THE LIFE OF THE PROJECT TO CONTROL WATER POLLUTION.
6. ALL CONTRACTOR COSTS ASSOCIATED WITH THE REQUIREMENTS LISTED ON THIS SHEET SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A SPECIFIC PAY ITEM IS PROVIDED.
7. THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THIS DOES NOT GUARANTEE THAT ALL FEATURES ARE SHOWN ON THE PLANS. THERE WILL BE NO ADDITIONAL PAYMENT TO THE CONTRACTOR DUE TO VARIATIONS IN SIZE, QUANTITY OR LOCATION OF EXISTING FEATURES.
8. CRAWLER TYPE EQUIPMENT SHALL NOT BE ALLOWED ON ANY PAVED SURFACE ON THE AIRPORT. ONLY RUBBER-TIRED VEHICLES, WHICH WILL NOT CAUSE DAMAGE TO THE PAVEMENTS, SHALL BE ALLOWED WITHOUT PROVIDING SOME TYPE OF PROTECTION.
9. THE CONTRACTOR SHALL HAVE PROPER IDENTIFICATION ON ALL EQUIPMENT AND VEHICLES ON THE AIRPORT.
10. NO EDGE DROP GREATER THAN 3 INCHES WILL BE ALLOWED AT ANY ACTIVE RUNWAY PAVEMENT EDGE OR SAFETY AREA. IF NECESSARY, THE CONTRACTOR SHALL PLACE TEMPORARY MATERIAL TO ELIMINATE VERTICAL DROPS GREATER THAN 3 INCHES OR SLOPES GREATER THAN 5% IN THESE AREAS. THIS WORK SHALL BE SUBSIDIARY TO OTHER ITEMS IN THE PROJECT.
11. THE CONTRACTOR SHALL CONSTRUCT HAUL ROADS FOR ALL PHASES OF CONSTRUCTION. THE HAUL ROADS SHALL BE CONSTRUCTED OF MATERIALS THAT ALLOW ACCESS TO THE SITE DURING POOR CONDITIONS. THE HAUL ROADS SHALL BE REMOVED AFTER CONSTRUCTION OF EACH PHASE IS COMPLETE. THE AREAS WHERE HAUL ROADS WERE CONSTRUCTED SHALL BE RESTORED BACK TO THEIR ORIGINAL CONDITION. CONSTRUCTION OF THE HAUL ROADS, REMOVAL OF THE HAUL ROADS AND RESTORING THE AREAS BACK TO THEIR ORIGINAL CONDITION SHALL BE INCIDENTAL TO THE PROJECT.

1. COORDINATION

1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE AIRPORT AND THE ENGINEER. THE COST OF PREPARING FOR AND ATTENDING THE PRECONSTRUCTION CONFERENCE SHALL BE INCIDENTAL TO THE CONTRACT.
2. ON OR BEFORE THE PRECONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE FOR THE PROJECT. THE SCHEDULE SHALL INCLUDE A START AND COMPLETION DATE FOR EACH ITEM OF WORK. THE SCHEDULE SHALL BE UPDATED ON A WEEKLY BASIS. ALL COSTS ASSOCIATED WITH THE SCHEDULE SHALL BE INCIDENTAL TO THE CONTRACT.
3. DURING CONSTRUCTION THE CONTRACTOR SHALL ATTEND A WEEKLY COORDINATION MEETING WITH THE RESIDENT ENGINEER/OBSERVER. ALL COSTS ASSOCIATED WITH ATTENDING THE WEEKLY MEETING SHALL BE INCIDENTAL TO THE CONTRACT.
4. CHANGES MADE TO THE SCOPE OR DURATION OF THE PROJECT MAY NECESSITATE REVISIONS TO THE CSPP AND SHALL REQUIRE REVIEW AND APPROVAL BY THE ENGINEER AND AIRPORT OPERATOR.

2. PHASING

1. THIS PROJECT INCLUDES THREE PHASES:
   PHASE 1: FACILITY DEVELOPMENT
   PHASE 2: SITE WORK
   PHASE 3: ELECTRICAL VAULT WORK.
2. THE CONTRACTOR SHALL HAVE A DEFINED LIMIT OF CALENDAR DAYS TO COMPLETE ALL WORK IN THIS PROJECT AS DETAILED IN THE PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL PAY LIQUIDATED DAMAGES AS DEFINED IN THE PROJECT SPECIFICATIONS FOR EACH DAY THAT THE WORK EXTENDS BEYOND THE ALLOWABLE CALENDAR DAYS.
3. PHASING IS AS DESCRIBED BELOW AND AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEET

PHASE 1 NOTES

1. PHASE 1 SHALL CONSIST OF THE CONSTRUCTION OF THE BUILDING AND ALL OTHER WORK ITEMS NOT SPECIFICALLY INCLUDED IN PHASE 2. PHASE 1 ITEMS SHALL REQUIRE PART TIME INSPECTION FROM THE CONSTRUCTION MANAGEMENT TEAM.
2. ALL PHASE 1 WORK SHALL BE COMPLETED WITHIN THE OVERALL CALENDAR DAY ALLOTMENT FOR THIS PROJECT.
3. NO WORK SHALL COMMENCE FOR THIS PHASE UNTIL THE EAST APRON IS CLOSED TO AIRCRAFT TRAFFIC PER THE SPECIFIC LAYOUT AND INSTRUCTIONS PROVIDED IN THE CONSTRUCTION ACTIVITY PLAN SHEET.
4. PHASE 1 MAY BE PERFORMED CONCURRENTLY WITH PHASE 2 AND PHASE 3.

PHASE 2 NOTES

1. PHASE 2 SHALL CONSIST OF ALL ITEMS OF WORK THAT REQUIRE FULL TIME INSPECTION FROM THE CONSTRUCTION MANAGEMENT TEAM. THIS WORK INCLUDES:
   A. EARTHWORK AND GRADING OPERATIONS
   B. BUILDING FOOTINGS AND FOUNDATION CONSTRUCTION
   C. INSTALLATION OF ALL UNDERGROUND UTILITIES, INCLUDING STORM SEWERS AND INLETS
   D. ALL SUBGRADE TREATMENT, BASE ROCK INSTALLATION, CONCRETE AND ASPHALT PAVING
2. PHASE 2 MAY BE PERFORMED CONCURRENTLY WITH PHASE 1 AND PHASE 3
3. THE CONTRACTOR SHALL HAVE A DEFINED LIMIT OF CALENDAR DAYS TO COMPLETE ALL WORK IN THIS PHASE AS DETAILED IN THE PROJECT SPECIFICATIONS. THE PHASE 2 CALENDAR DAYS SHALL BE COUNTED CONCURRENTLY WITH THE OVERALL CALENDAR DAYS, ALL PHASE 2 WORK SHALL BE COMPLETED WITHIN THE OVERALL CALENDAR DAY ALOTMENT FOR THIS PROJECT.
4. THE CONTRACTOR SHALL HAVE THE FLEXIBILITY TO DETERMINE THE PERIOD WITHIN THE OVERALL CALENDAR DAYS THAT THE PHASE 2 WORK ITEMS SHALL BE ACCOMPLISHED. THE CONTRACTOR MAY REQUEST THE SUSPENSION OF THE PHASE 2 CALENDAR DAYS BETWEEN DIFFERENT WORK ITEMS, HOWEVER, ONCE CALENDAR DAYS ARE INITIATED FOR A SPECIFIC WORK ITEM IN A SPECIFIC AREA - THEY MAY NOT BE SUSPENDED UNTIL THAT SPECIFIC WORK ITEM IS COMPLETED.
5. THE CONTRACTOR SHALL PAY LIQUDATED DAMAGES AS DEFINED IN THE PROJECT SPECIFIATIONS FOR EACH DAY THAT THE PHASE 2 WORK EXCEEDS THE PHASE 2 CALENDAR DAY LIMIT.
6. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION MANAGEMENT TEAM A MINIMUM OF 72 HOURS NOTICE PRIOR TO STARTING WORK ON ANY SPECIFIC PHASE 2 ITEM.

2. PHASING (CONT.)

PHASE 3 NOTES

1. PHASE 3 SCOPE OF WORK SHALL CONSIST OF ANY WORK THAT WILL REQUIRE A TEMPORARY SHUTDOWN TO AIRFIELD POWER, TO COMPLETE THE ELECTRICAL SERVICE TIE-IN TO THE AIRFIELD ELECTRICAL VAULT. THE VAULT SERVES AS THE ONLY POWER SOURCE TO THE AIRFIELD LIGHTING SYSTEM.
2. PHASE 3 WORK MAY ONLY BE ACCOMPLISHED DURING DAYLIGHT HOURS (8AM-5PM) ON DAYS SCHEDULED IN ADVANCE WITH THE AIRPORT. THIS WORK SHALL BE COMPLETED IN THE CALENDAR DAYS ALOTTED FOR THIS PHASE AS DEFINED IN THE PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL PAY LIQUIDATED DAMAGES AS DEFINED IN THE PROJECT SPECIFICATIONS FOR EACH DAY THAT THE AIRFIELD LIGHTING REMAINS INACTIVE FOLLOWING THE CALENDAR DAY ALOTMENT.
3. CONTRACTOR SHALL REQUEST TEMPORARY VAULT SHUTDOWNS WITH AT LEAST 48-HOURS NOTICE TO THE AIRPORT. AIRPORT HAS THE RIGHT TO APPROVE OR REJECT ANY DAYS. AIRFIELD LIGHTING IS A CRITICAL SAFETY COMPONENT ON DAYS WITH INCLEMENT WEATHER - THE AIRPORT HAS THE RIGHT TO CANCEL THE TEMPROARY VAULT SHUTDOWN AT ANY TIME IF NECESSARY DUE TO WEATHER.

3. CONSTRUCTION ACTIVITY

1. THE EAST APRON SHALL BE CLOSED FOR THE DURATION OF THE PROJECT
2. NO CONSTRUCTION TRAFFIC SHALL CROSS INTO ANY OPEN AIRFIELD PAVEMENT OR AIRFIELD OBJECT FREE AREAS FOR ANY REASON WHATSOEVER. SHALL ACCESS BE NECESSARY FOR ANY REASON, CONTRACTOR SHALL COORDINATE WITH THE AIRPORT WHO SHALL PROVIDE ESCORT.
3. UNAUTHORIZED ENTRY BY ANY PERSONNEL, VEHICLE OR EQUIPMENT WOULD BE A MAJOR INFRACTION OF AIRPORT SAFETY. THE PERSONNEL RESPONSIBLE FOR THE INCURSION SHALL BE SUSPENDED FROM ACCESS ONTO AIRPORT PROPERTY AND WILL NOT BE ALLOWED RE-ENTRY WITHOUT THE CONSENT OF THE AIRPORT. IF MULITPLE INCURSIONS OCCUR, THE AIRPORT RESERVES THE RIGHT TO SUSPEND ALL ACCESS ONTO AIRPORT PROPERTY UNTIL ALL KEY CONTRACTOR STAFF ARE RETRAINED IN AIRPORT SAFETY. PROJECT CALENDAR DAYS WILL CONTINUE TO BE COUNTED DURING THE WORK SUSPENSION.

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

1. THE CONTRACTOR SHALL REMAIN CLEAR OF THE PAPI SYSTEMS, WIND CONE, BEACON, AWOS AND OTHER NAVAIDS FACILITIES AT ALL TIMES, UNLESS SPECIFICALLY NOTED OTHERWISE.
2. THE CONTRACTOR SHALL LOCATE FAA UTILITIES WITH FAA TECHNICAL OPERATIONS PRIOR TO START OF ALL CONSTRUCTION.

5. CONTRACTOR ACCESS

1. CONTRACTOR ACCESS SHALL BE AS NOTED BELOW AND AS SHOWN ON THE SITE PLAN AND CONSTRUCTION ACTIVITY PLAN SHEETS.
2. THE CONTRACTOR SHALL DESIGNATE AT LEAST ONE PERSON TO MONITOR THE AIRPORT UNICOM FREQUENCY OF 122.80. THE PERSON DESIGNATED SHALL HAVE THE ABILITY TO EASILY COMMUNICATE WITH OTHER CONTRACTOR PERSONNEL WORKING ON THE JOBSITE. THE CONTRACTOR SHALL PROVIDE THEIR OWN WORKING RADIO(S).
3. THE STORAGE AND STAGING AREAS SHALL BE AS SHOWN ON THE SITE PLAN.
4. THE CONTRACTOR SHALL KEEP A RECORD OF THE NAMES OF ALL EMPLOYEES ENTERING THE JOB SITE ON A DAILY BASIS AND BE RESPONSIBLE FOR MAINTAINING THE SECURITY OF THE ACCESS GATES BY KEEPING THE GATES LOCKED AND GUARDED AT ALL TIMES. A RECORD OF EACH SUBCONTRACTOR ENTERING THE JOB SITE SHALL ALSO BE KEPT BY THE CONTRACTOR.
5. WHEN THE CONTRACTOR IS NOT WORKING, EQUIPMENT SHALL BE STORED AT THE STAGING AREA OR WITHIN THE WORK AREA LIMITS
6. THE CONTRACTOR SHALL STORE EQUIPMENT AND MATERIALS ONLY AT THE LOCATIONS SHOWN. PARKED EQUIPMENT AND MATERIAL STOCKPILES SHALL NOT PENETRATE SURFACES DEFINED BY F.A.R. TITLE 14 PART 77 - OBJECTS AFFECTING NAVIGABLE AIRSPACE.
7. ALL CONSTRUCTION TRAFFIC OPERATING WITHIN AN ACTIVE RUNWAY OR TAXIWAY SAFETY AREA OR ON AN ACTIVE APRON SHALL BE UNDER CONTROL BY A FLAGMAN OR ESCORT WHO IS MONITORING THE AIRPORT UNICOM FREQUENCY. THE CONTRACTOR SHALL PROVIDE HIS/HER OWN FLAGMEN.
8. THE CONTRACTOR SHALL THOROUGHLY AND CONTINUOUSLY CLEAN ALL CONSTRUCTION AREAS AND HAUL ROUTES WHICH WILL BE OPENED TO AIR TRAFFIC TO THE SATISFACTION OF THE ENGINEER. A POWER BROOM AND OPERATOR SHALL BE ON SITE AT ALL TIMES WHEN ACTIVE PAVEMENTS ARE UTILIZED FOR CONSTRUCTION TRAFFIC.
9. ALL PAVEMENTS, DRIVES OR ANY OTHER AREAS UTILIZED BY THE CONTRACTOR FOR HAUL ROADS OR STORAGE AREAS SHALL BE MAINTAINED AND REPAIRED TO THE SAME CONDITION OR BETTER THAN THEY WERE PRIOR TO BEGINNING CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR THIS WORK.
10. ALL VEHICLE AND EQUIPMENT OPERATORS USED BY THE CONTRACTOR SHALL BE PROPERLY TRAINED BY THE CONTRACTOR. VEHICLE OPERATORS HAVING ACCESS TO THE MOVEMENT AREA SHALL BE FAMILIAR WITH AIRPORT PROCEDURES FOR THE OPERATION OF GROUND VEHICLES AND THE CONSEQUENCES OF NONCOMPLIANCE OR BE ESCORTED BY SOMEONE WHO IS.
11. THE CONTRACTOR SHALL NOTIFY THE LOCAL FIRE DEPARTMENT IF CONSTRUCTION ACTIVITY WILL REQUIRE THE BLOCKAGE OF EMERGENCY ACCESS TO THE AIRPORT.

6. TEMPORARY FENCING AND PROJECT ACCESS NOTES

1. SEE FENCING PLAN FOR LAYOUT OF PROPOSED FENCE AND FOR LAYOUT OF FENCE REMOVALS
2. ALL PROPOSED FENCING SHALL BE INSTALLED PRIOR TO REMOVAL OF EXISTING. ANY GAPS IN FENCING SHALL ONLY BE ALLOWED TEMPORARILY AND UNDER DIRECT SUPERVISION OF CONTRACTOR PERSONNEL.

7. WILDLIFE MANAGEMENT

1. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR AIRPORT MANAGER IF ANY WILDLIFE IS SEEN ENTERING THE AIRPORT.
2. THE CONTRACTOR SHALL DISPOSE OF ALL TRASH INCLUDING FOOD SCRAPS IN APPROVED CONTRACTOR PROVIDED CONTAINERS.

8. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

1. THE CONTRACTOR SHALL PICK UP ANY FOREIGN OBJECT DEBRIS (FOD) SEEN ON THE AIRFIELD PAVEMENTS.
2. THE CONTRACTOR SHALL SECURE ALL LOOSE ITEMS FROM VEHICLES PRIOR TO DRIVING ON AIRFIELD PAVEMENTS.

9. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT

1. THE CONTRACTOR SHALL DEVELOP A HAZMAT MANAGEMENT PLAN AND KEEP COPIES ON THE JOBSITE OF MATERIAL SAFETY DATA SHEETS (SDS) FOR ALL MATERIALS HANDLED ON THE JOBSITE.

10. NOTIFICATION OF CONSTRUCTION ACTIVITIES

1. THE CONTRACTOR SHALL PROVIDE A 24 HOUR EMERGENCY CONTACT PERSON AND PHONE NUMBER.
2. THE CONTRACTOR SHALL GIVE A MINIMUM OF 72 HOURS NOTICE TO THE AIRPORT PRIOR TO CLOSING ANY PAVEMENTS SO THAT PROPER NOTAMS MAY BE ISSUED BY THE AIRPORT AND TO ALLOW FOR COORDINATION WITH THE AIRPORT TENANTS BY THE AIRPORT.
3. FOR ANY EQUIPMENT USED BY THE CONTRACTOR WITH A HEIGHT GREATER THAN 100', THE CONTRACTOR SHALL SUBMIT FAA FORM 7460-1 TO THE FAA FOR AN AIRSPACE STUDY. NO EQUIPMENT WITH A HEIGHT GREATER THAN 100' SHALL BE USED UNTIL A DETERMINATION FROM FAA IS RECEIVED.
4. IN THE EVENT OF AN EMERGENCY, THE CONTRACTOR SHALL CALL 911.
5. CONTACTS FOR THIS PROJECT ARE AS LISTED BELOW.

CITY (OWNER)	
MIKE ANDERSON - DEPUTY DIRECTOR OF LSPW	(816) 969-1800
AIRPORT	
JOEL ARRINGTON - AIRPORT MANAGER	(816) 969-1181
AIRPORT FRONT DESK	(816) 969-1186
ENGINEER	
TYLER HORN, P.E. - PROJECT MANAGER	(816) 853-2894
WATER UTILITIES	(816) 989-1900
FIRE DEPARTMENT	(816) 969-1300
POLICE DEPARTMENT	(816) 969-1700
FAA TECHNICAL OPERATIONS	
BRIAN CHITTUM	(816) 329-2828
EMERGENCY	911

11. INSPECTION REQUIREMENTS

1. THE CONTRACTOR SHALL INSPECT THE JOBSITE DAILY TO ENSURE COMPLIANCE WITH THE CSPP. THE CHECKLIST FOUND IN APPENDIX 3 OF FAA AC 150/5370-2G MAY BE USED TO AID IN THE INSPECTIONS.
2. THE CONTRACTOR SHALL ATTEND A FINAL INSPECTION OF EACH PHASE WORK AREA PRIOR TO OPENING THE AREA TO AIRPORT OPERATIONS.

12. UNDERGROUND UTILITIES

1. THE CONTRACTOR SHALL MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROUND UTILITIES AT CRITICAL POINTS. THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY IN RESPECT TO THE ACCURACY, COMPLETENESS OR SUFFICIENCY OF THE INFORMATION.
2. BEFORE INITIATING ANY DIGGING, DRILLING OR EXCAVATING ON THE AIRPORT PROPERTY, THE CONTRACTOR SHALL CALL 1-800-DIG-RITE AND FAA TECHNICAL OPERATIONS TO ARRANGE FOR UTILITY LOCATES.

13. PENALTIES

1. NONCOMPLIANCE BY THE CONTRACTOR WITH AIRPORT RULES AND REGULATIONS OR FAILURE TO COMPLY WITH THE AIRPORT'S APPROVED CSPP AND THE CONTRACTOR'S APPROVED SPCD MAY RESULT IN FINES AS ALLOWED BY LAW OR APPLICABLE REGULATION.

14. RUNWAY AND TAXIWAY VISUAL AIDS

1. AIRPORT PAVEMENT SHALL BE CLOSED DURING THIS PROJECT. THE CONTRACTOR SHALL USE MARKING, LIGHTING AND SIGNS THAT FOLLOW THE REQUIREMENTS OF FAA AC 150/5370-2G.
2. BARRICADES SHALL BE USED AND MAINTAINED AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEETS.

15. TRAFFIC CONTROL AND SIGNAGE NOTES

1. PRIOR TO BEGINNING PROJECT CONSTRUCTION, A CONSTRUCTION TRAFFIC CONTROL PLAN SHALL BE DEVELOPED BY THE CONTRACTOR FOLLOWING GUIDELINES AS DESCRIBED IN THE CITY OF LEE'S SUMMIT TRAFFIC CONTROL PLAN ON SHEET G006 TRAFFIC CONTROL DETAILS. CONTRACTOR SHALL SUBMIT THE TRAFFIC CONTROL PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, ERECTING, AND MAINTAINING TRAFFIC CONTROL DEVICES AND TEMPORARY SIGNAGE FOR SURROUNDING ROADWAYS AS IDENTIFIED ON THE SUBMITTED TRAFFIC CONTROL PLAN. DAMAGED DEVICES SHALL BE REPLACED IMMEDIATELY BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR SHALL INSTALL 'AUTHORIZED PERSONNEL ONLY' SIGN AT ACCESS ROAD ENTRANCE FOR PROJECT DURATION.

16. EROSION CONTROL NOTES

1. PRIOR TO COMMENCING ANY SITE GRADING OR DEMOLITION, CONTRACTOR MUST INSTALL EROSION CONTROL MEASURES PER THE REQUIRED MINIMUM PERMANENT STORMWATER MANAGEMENT PRACTICES TO SATISFY STORMWATER PLANS, LOCAL PERMITTING REQUIREMENTS, AND THE EROSION CONTROL DEVICES AS DESIGNATED PER THESE PROJECT PLANS.
2. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AS EARLY AS PRACTICAL. ALL CONTROLS SHALL BE MONITORED REGULARLY, MAINTAINED, AND MODIFIED TO MAINTAIN EFFECTIVENESS.

17. HAZARD MARKING AND LIGHTING

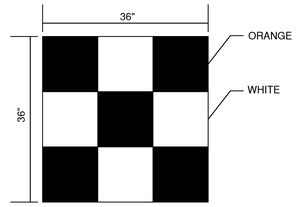
1. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED LIGHTING OF OPEN TRENCHES, EXCAVATIONS, TEMPORARY STOCKPILES, AND HIS/HER CONSTRUCTION EQUIPMENT.
2. ALL CONSTRUCTION EQUIPMENT SHALL BE FLAGGED AND/OR LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2G AND 150/5210-5D AT ALL TIMES WHILE OPERATING ON AIRPORT PROPERTY.
3. BARRICADES SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEET OR AS DIRECTED BY THE AIRPORT.
4. THE CONTRACTOR SHALL INSPECT THE BARRICADES ONCE DURING EACH WORK DAY TO ENSURE PROPER PLACEMENT AND PROPER OPERATION OF THE RED LIGHTS.

18. PROTECTION

1. THE CONTRACTOR SHALL NOT OPERATE ON ANY ACTIVE AIRFIELD PAVEMENTS.
2. IF THE CONTRACTOR DAMAGES OR DIRTIES ANY ACTIVE PAVEMENTS THEY SHALL BE FIXED/CLEANED IMMEDIATELY.
3. THE CONTRACTOR SHALL STAY CLEAR OF ALL TAXIWAY OBJECT FREE AREAS AND RUNWAY OBJECT FREE AREAS. THESE LIMITS CAN BE FOUND ON THE CONSTRUCTION ACTIVITY PLAN.
4. THE RUNWAY APPROACH/DEPARTURE SURFACE IS A PROTECTED AIRSPACE SURFACE BEGINNING 200 FEET BEYOND ALL RUNWAY ENDS AND EXTENDS OUTWARED FROM THE RUNWAY AT A SLOPE OF 34:1 FOR 1,000 FEET. ALL CONSTRUCTION EQUIPMENT AND PERSONNEL SHALL NOT BE PERMITTED TO PENETRATE THIS SURFACE.

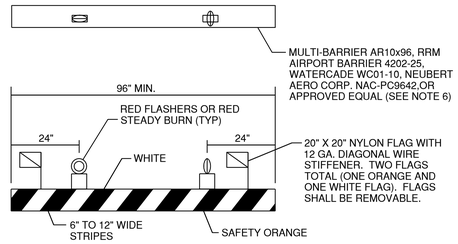
19. OTHER LIMITATIONS ON CONSTRUCTION

1. IF, DURING CONSTRUCTION, AN EMERGENCY IS DECLARED BY THE AIRPORT, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE PAVEMENT OF ALL VEHICLES, PERSONNEL AND EQUIPMENT.
2. BROKEN CONCRETE, BROKEN ASPHALT, UNUSED PAINT, UNUSED SEALANT AND OTHER MISCELLANEOUS DEBRIS SHALL BE DISPOSED OF OFF AIRPORT PROPERTY IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS, UNLESS OTHERWISE SPECIFIED.
3. PER AC 150/5370-2G, SECTION 2.22.2, EQUIPMENT MUST BE REMOVED FROM THE ROFA WHEN NOT IN USE.



CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG

N.T.S



PLAN

BARRICADE NOTES:

1. FLASHER OR STEADY BURN LIGHTS SHALL BE BATTERY OR SOLAR POWER OPERATED AND SHALL BE SECURED FIRMLY TO THE BARRICADES, AS APPROVED BY THE RESIDENT ENGINEER. LENS SHALL BE RED AND BE ABLE TO ROTATE 90^.
2. FACING OF BARRICADE SHALL BE COVERED WITH REFLECTIVE TAPE OR PAINT.
3. BARRICADES TO BE PLACED AT SPACINGS AS INDICATED ON THE CAP SHEETS. BARRICADES WILL EITHER BE PLACED WITH MAXIMUM 4' GAPS FROM EACH OTHER, OR 0' GAPS (OR INTERLOCKING BARRICADES) PER FAA AC 150/5370-2F, IN THE LOCATIONS AS SHOWN ON THE CONSTRUCTION ACTIVITY PLAN SHEETS.
4. BARRICADES SHALL BE OF LOW MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT OR ANY OF IT COMPONENTS, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE. IF AFFIXED TO THE SURFACE, THE BARRICADE MUST BE FRANGIBLE AT GRADE LEVEL OR LOW AS POSSIBLE, BUT NOT TO EXCEED 3 INCHES ABOVE THE GROUND.
5. BARRICADES SHALL BE OF A COMMERCIAL DESIGN AND SHALL MEET CURRENT FAA REQUIREMENTS.
6. THE COST OF FURNISHING AND MAINTAINING BARRICADES THROUGHOUT THE LIFE OF THE PROJECT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
7. ALL BARRICADES ON RUNWAY, TAXIWAY OR APRONS SHALL BE LOW PROFILE BARRICADES.

LOW PROFILE LIGHTED BARRICADE

N.T.S.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: CAP NOTES
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
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SHEET TITLE

CAP NOTES

G005

SHEET 006 OF 131

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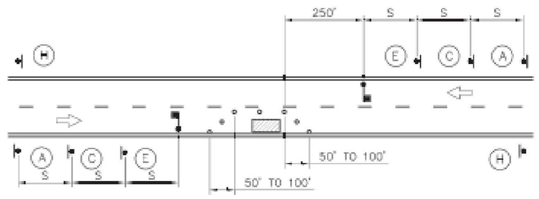
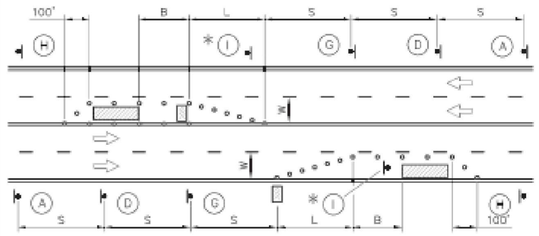
Date: Wednesday, January 3, 2024 1:73:03

SYMBOL LEGEND

WORK AREA — CHANNELIZER
SIGN — ARROW PANEL
BARRICADE — FLAGGER
DIRECTION OF TRAVEL

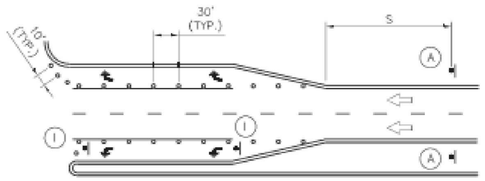


LANE CLOSURE – TWO LANE STREET

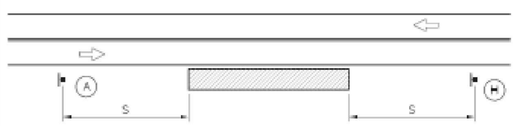


LANE CLOSURE – FOUR LANE STREET

*INSTALL SIGNS EVERY 200 FEET THROUGHOUT THE CLOSED LANE OR AS NEEDED



TURN LANE CLOSURE



TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET

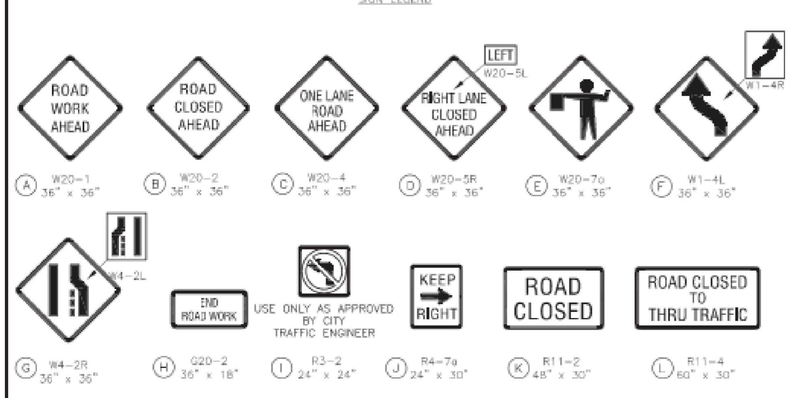
GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"	
SPEED LIMIT (MPH)	LENGTH (FEET)
25	35
30	55
35	85
40	120
45	170

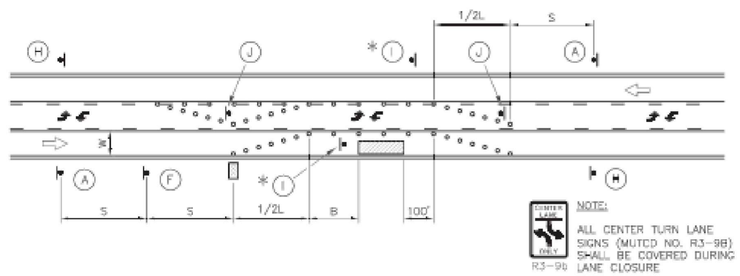
MAXIMUM CHANNELIZER SPACING		
SPEED LIMIT (MPH)	WITHIN TAPER (FEET)	OUTSIDE TAPER (FEET)
25	25	50
30	30	60
35	35	70
40	40	80
45	45	90

TAPER DIMENSIONS (FEET)				
SPEED LIMIT (MPH)	MINIMUM TAPER LENGTH "L", PER LANE WIDTH "W"			MINIMUM NUMBER OF CHANNELIZERS
	10	11	12	
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13

SIGN SPACING "S"	
SPEED LIMIT (MPH)	SPACING (FEET)
25	100
30–35	250
** 40	350

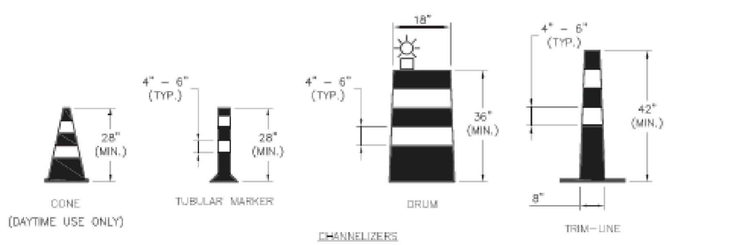
SIGN LEGEND





LANE CLOSURE – THREE LANE STREET

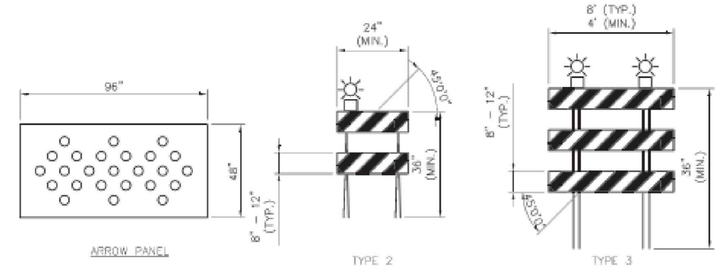
*INSTALL SIGNS EVERY 200 FEET THROUGHOUT THE CLOSED LANE OR AS NEEDED



CHANNELIZERS

NOTE:

WHITE BANDS ON BARRICADES AND CHANNELIZERS SHALL BE MADE FROM HIGH INTENSITY SHEETING MATERIAL.

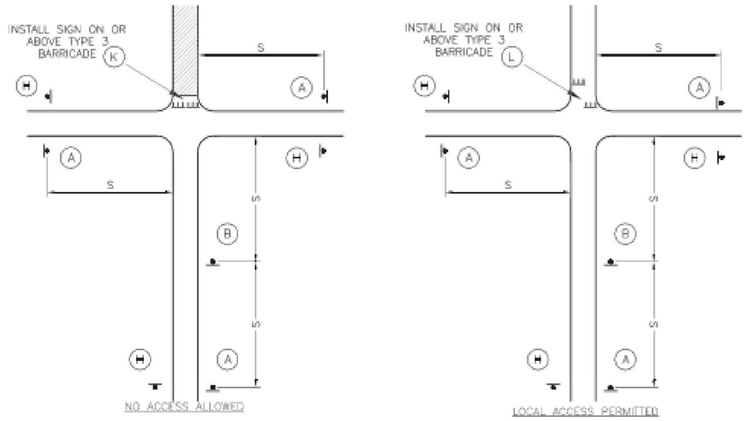


(OPTIONAL ON TWO LANE AND THREE LANE STREETS WITH SPEEDS LESS THAN 35 MPH)

BARRICADES

GENERAL NOTES:

1. ALL SIGNS, BARRICADES, CHANNELIZERS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. ALL TRAFFIC CONTROL DEVICES SHALL BE STANDARD IN SIZE, SHAPE, COLOR, AND MESSAGE, IN GOOD CONDITION, AND RETRO-REFLECTORIZED. ALL SIGNS SHALL BE SECURELY MOUNTED WITH HEIGHT AND LATERAL LOCATION AS DESCRIBED IN THE MUTCD.
3. WARNING LIGHTS SHALL BE USED ON BARRICADES IN PLACE AT NIGHT AND ON WARNING SIGNS WHICH ALERT DRIVERS ABOUT A CHANGE IN ALIGNMENT, TRAFFIC CONTROL, LANE CLOSURE, OR ROAD CLOSURE.
4. FLAGGERS SHALL BE USED WHERE INDICATED ON THE PLANS, WHERE CONSTRUCTION VEHICLES INTERACT WITH NORMAL TRAFFIC, OR WHERE CONSTRUCTION ACTIVITIES IMPOSE A RESTRICTION ON TRAFFIC, AS DIRECTED BY THE CITY TRAFFIC ENGINEER. WHERE FLAGGERS ARE USED, ADVANCE SIGNING SHALL BE ERECTED AS SHOWN IN THE DETAILS OR AS SPECIFIED IN THE MUTCD. FLAGGERS SHALL MEET THE REQUIREMENTS IN THE MUTCD IN REGARD TO CHARACTER, TRAINING, ATTIRE, AND BEHAVIOR.
5. TRIM-LINES ARE THE CITY'S PREFERRED CHANNELIZING DEVICE. CONES MAY NOT BE USED AT NIGHTTIME.
6. TRAFFIC CONTROL DEVICES NOT IN USE OR NOT APPLICABLE SHALL BE EITHER COVERED OR REMOVED FROM THE WORK AREA.
7. THE CONTRACTOR SHALL USE BARRICADES, STREET PLATES, OR FENCING AS NEEDED TO EFFECTIVELY SHIELD PEDESTRIAN AND VEHICULAR TRAFFIC FROM EXPOSED OBJECTS, EXCAVATIONS, AND CONSTRUCTION ACTIVITIES.
8. ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND SIDE STREETS UNLESS NOTED OTHERWISE ON THE PLANS.
9. NO STREET SHALL BE CLOSED WITHOUT THE APPROVAL OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT LEAST 7 DAYS IN ADVANCE OF ANY STREET CLOSURE. IF A DETOUR ROUTE AROUND THE CLOSURE IS TO BE PROVIDED, ALL DETOUR SIGNING SHALL BE AS SHOWN ON A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
10. CONSTRUCTION VEHICLES PARKED ALONG STREETS SHALL BE LOCATED WITHIN THE WORK AREA (TRAFFIC CONTROL) OR WHERE OTHERWISE NORMALLY PERMITTED. CONSTRUCTION MATERIALS, INCLUDING TRAFFIC CONTROL AND VEHICLES SHALL NOT RESTRICT SIGHT DISTANCE FOR VEHICLES EXITING AT STREETS OR DRIVES.
11. CONSTRUCTION MATERIALS SHALL BE KEPT OFF OF SIDEWALKS, CONSOLIDATED IN ONE LOCATION WITHIN CITY RIGHT-OF-WAY, AND REMOVED DAILY UNLESS OTHERWISE APPROVED BY THE INSPECTOR. DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS ON STREETS AND SIDEWALKS SHALL BE REMOVED IMMEDIATELY.
12. THE CONTRACTOR SHALL NOT PERFORM ANY WORK THAT WILL RESTRICT VEHICULAR TRAFFIC IN ANY WAY BETWEEN THE HOURS OF 7:00 A.M. AND 9:00 A.M. OR 4:00 P.M. AND 6:00 P.M. MONDAY THROUGH FRIDAY UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS.
13. ALL TRAVEL LANES SHOULD BE AT LEAST 11 FEET WIDE UNLESS OTHERWISE AUTHORIZED BY THE CITY TRAFFIC ENGINEER. A "NARROW LANES" SIGN SHALL BE INSTALLED IN ADVANCE OF A LANE WIDTH REDUCTION TO LESS THAN 11 FEET.
14. ALL EDGE DROP-OFFS OF MORE THAN 2 INCHES AND LESS THAN 4 INCHES SHOULD BE PROTECTED BY A WEDGE OR BARRIER AND ALL EDGE DROP-OFFS GREATER THAN 4 INCHES SHALL HAVE EDGE PROTECTION (SEE TRAFFIC CONTROL SPECIFICATIONS FOR EDGE TREATMENT REQUIREMENTS).
15. THE "WORKERS" SYMBOLIC SIGN (MUTCD NO. W21-1A) MAY BE USED INSTEAD OF THE "ROAD WORK AHEAD" SIGN FOR WORK WITH A DURATION OF 12 HOURS OR LESS. THE "END ROAD WORK" SIGN IS NOT REQUIRED TO BE INSTALLED AFTER THE "WORKERS" SIGN.
16. NO TRAFFIC SIGNAL SHALL BE ALTERED OR MODIFIED IN ANY WAY WITHOUT A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES ON AN AROUND-THE-CLOCK BASIS, WHETHER OR NOT WORK IS ACTIVELY BEING PURSUED AND ANY DEFICIENCIES NOTED SHALL BE CORRECTED IMMEDIATELY.
18. THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR SELECTING THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ASSURE THE SAFETY OF DRIVERS, PEDESTRIANS, AND WORKERS AT ALL TIMES.
19. SHOULD THE CONTRACTOR FAIL TO ENFORCE THE TRAFFIC CONTROL PLAN OR FAIL TO CLEAN, REPLACE OR OTHERWISE MAINTAIN THE TRAFFIC CONTROL DEVICES WHEN DIRECTED TO DO SO BY THE CITY TRAFFIC ENGINEER OR REPRESENTATIVE, THE CITY MAY TAKE ONE OR MORE OF THE FOLLOWING ACTIONS:
    A. EMPLOY ANOTHER AGENCY TO CORRECT DEFICIENCIES IN TRAFFIC CONTROL DEVICES AND DEDUCT THE COST FROM THE CONTRACTOR'S PAY ESTIMATE.
    B. STOP THE WORK UNTIL DEFICIENCIES ARE CORRECTED.
    C. SUSPEND ALL PAY ESTIMATES UNTIL DEFICIENCIES ARE CORRECTED, OR
    D. PLACE THE CONTRACTOR IN DEFAULT.



TYPICAL STREET CLOSURE

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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: CAP NOTES
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
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SHEET TITLE

TRAFFIC CONTROL DETAILS

G006

SHEET 007 OF 131

Path: K:\leessummmo\22001238.00\Draw\Sheets\CAP NOTES.dwg
Date: Wednesday, January 3, 2024 11:00:04

12-WAY CONCRETE ENCASED DUCT TO BE PROTECTED AT ALL TIMES DURING CONSTRUCTION.

EXISTING OVERHEAD ELECTRICAL SERVICE TO ELECTRICAL VAULT TO BE REMOVED (COORDINATE WITH EVERGY ELECTRIC)

EXISTING LIGHT POLE TO REMAIN IN PLACE

EXISTING AIRFIELD ELECTRICAL VAULT (DO NOT DISTURB)

EXISTING LIGHT POLE AND WIRING TO BE REMOVED

PROPOSED BUILDING LIMITS

EXISTING LIGHT POLE AND WIRING TO BE REMOVED

EAST APRON. SEE TYPICAL SECTIONS FOR FURTHER DETAILS

EXISTING LIGHT POLE TO REMAIN IN PLACE (SEE UTILITY PLAN SHEET C135 FOR NEW ELECTRICAL ROUTE TO FEED POLE)

EXISTING LIGHT POLES TO BE REMOVED

EXISTING OVERHEAD ELECTRICAL SERVICE TO BE REMOVED

EXISTING POWER POLE (TYP.) TO BE REMOVED

EXISTING ACCESS GATE

REMOVE 106' OF EXISTING CURB & GUTTER

PROPOSED 8" SANITARY SEWER (BY OTHERS) -FIELD VERIFY AS-BUILT CONDITION PRIOR TO CONSTRUCTION

EXISTING 8' AIRPORT CHAIN LINK PERIMETER FENCE. SEE FENCING PLAN SHEET FOR FENCE REMOVALS

EXISTING UNDERGROUND TELEPHONE LINE

EXISTING OVERHEAD ELECTRIC

EXISTING 30" WATER MAIN (DO NOT DISTURB)

EXISTING 16" WATER MAIN

EXISTING ASPHALT ROADWAY. SEE TYPICAL SECTIONS FOR FURTHER DETAILS

EXISTING POWER POLE

REMOVE 105' OF EXISTING CURB & GUTTER

NEW DEVELOPMENT BY OTHERS

NE HAGAN ROAD

NEW DEVELOPMENT BY OTHERS

SWMH #1507

PLAN LEGEND

X X	EXISTING FENCE
OHE OHE	EXISTING OVERHEAD ELECTRIC
UTV	EXISTING UNDERGROUND TELEPHONE LINE
945	EXISTING CONTOURS
W W W	EXISTING WATER MAIN
UFO	EXISTING UNDERGROUND FIBER OPTIC
G G	EXISTING GAS MAIN
	EXISTING SANITARY SEWER
	EXISTING EAST APRON
	EXISTING GRAVEL LOT
EM	EXISTING ELECTRICAL METER
EB	EXISTING ELECTRICAL BOX
H	EXISTING UTILITY HANDHOLE
PP	EXISTING POWER POLE
PA	EXISTING POWER POLE ANCHOR
FH	EXISTING FIRE HYDRANT AND WATER VALVE
LP	EXISTING LIGHT POLE

N

0 30 60 FEET

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KANSAS CITY, MO 64108

olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	EXISTING CONDITIONS
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
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SHEET TITLE

EXISTING CONDITIONS AND DEMOLITION SHEET

C101

SHEET 008 OF 131

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Date: Wednesday, January 3, 2024 1:19:42

SITE DATA TABLE		
PARKING SPACES SUMMARY	REQUIRED	STANDARD: 55 ADA: 3
	PROVIDED	STANDARD: 63 ADA: 4
	TOTAL: 67 SPACES	
TOTAL PROJECT AREA SIZE	676,500 SF	
	15.53 ACRES	
IMPERVIOUS AREA	155,697 SF	
BUILDING AREA SUMMARY	TOTAL FOOTPRINT	42,298 SF
	1ST FLOOR	42,298 SF
	2ND FLOOR	6,729 SF

INTERSECTION SIGHT DISTANCE NOTES:

1. PER AASHTO, INTERSECTION SIGH DISTANCE (ISD) = 1.47(V)Tg
   - 1.1. V=35MPG (DESIGN FOR 40MPH)
   - 1.2. Tg=11.5 FOR COMBINATION TRUCK LEFT TURN
   - 1.3. Tg=10.5 FOR COMBINATION TRUCK RIGHT TURN
   - 1.4. ISD (LEFT TURN)=680'
   - 1.5. ISD (RIGHT TURN)=620'

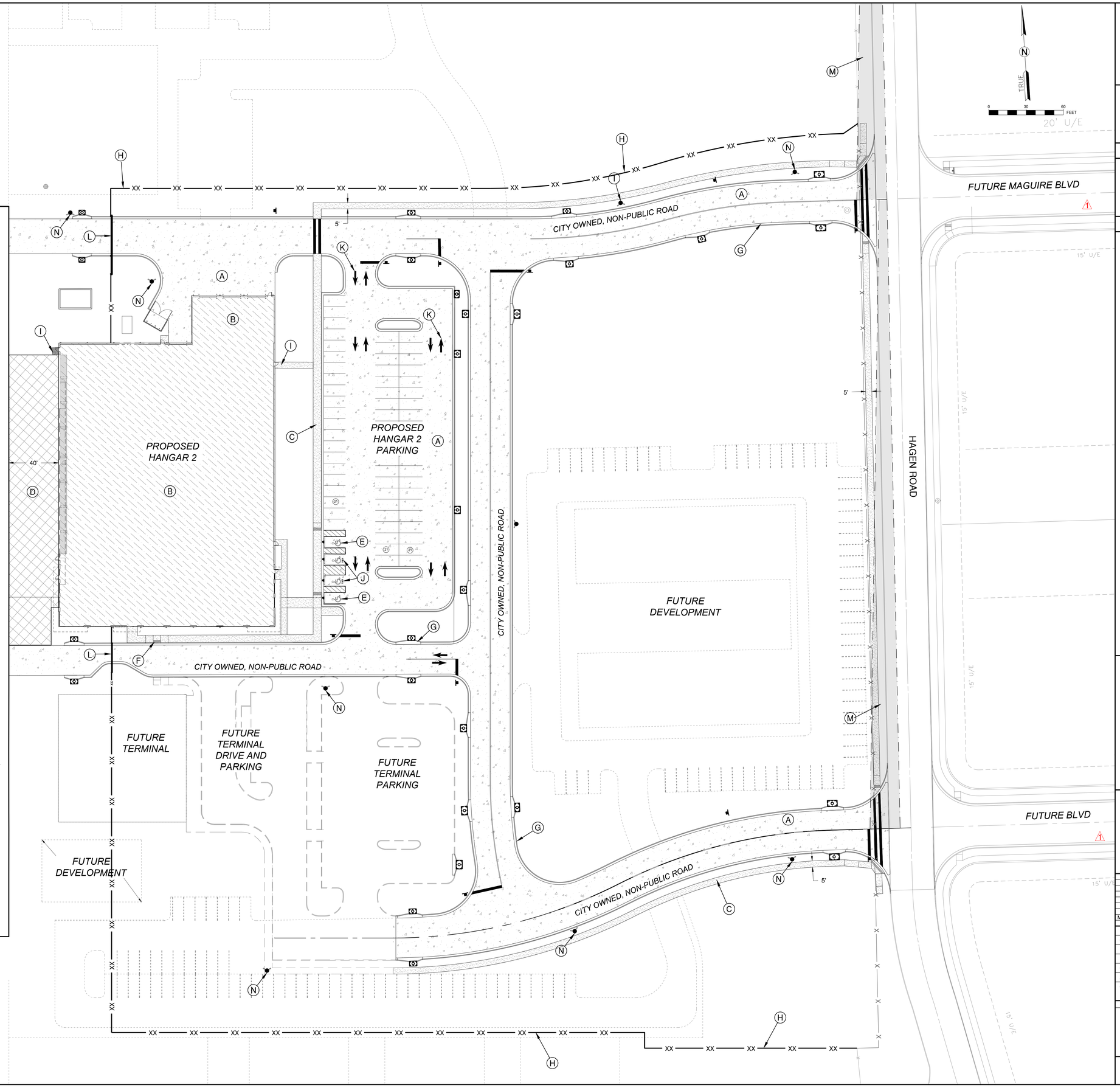
SITE PLAN GENERAL NOTES:

1. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
2. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY / STATE / FEDERAL / COUNTY REGULATIONS, CODES AND O.S.H.A. REGULATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THIS DRAWING WITH OTHER DRAWINGS THAT CONTAIN DIMENSIONS TO ENSURE THAT THE PLAN DIMENSIONS ARE CONSISTENT WITH THE COORDINATES PRESENTED ON THE PLAN. FOLLOWING STAKE-OUT OF ANY FACILITY BY COORDINATES, THE CONTRACTOR SHALL CHECK THAT PLAN DIMENSIONS ARE ACHIEVED PRIOR TO CONSTRUCTION.
4. CONTRACTOR SHALL PROVIDE FULL-DEPTH SAWCUT AT ALL REMOVAL LIMITS AS REQUIRED TO PROVIDE A CLEAN, NEAT EDGE TO EXISTING PAVEMENT, CURB & GUTTER, SIDEWALKS, ETC. THAT WILL REMAIN.
5. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS DOORS AND ENCLOSURES.
6. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH WORK BY OTHERS INCLUDING UTILITY COMPANIES.

PARKING SUMMARY	
STANDARD SPACES	63 SPACES
ADA SPACES	4 SPACES
TOTAL SPACES	67 SPACES

PLAN KEYNOTES

- (A) PROPOSED VEHICLE CONCRETE PAVEMENT -SEE PAVING PLAN
- (B) PROPOSED BUILDING
- (C) PCC SIDEWALK -SEE PAVING PLAN
- (D) PROPOSED AIRFIELD CONCRETE PAVEMENT
- (E) ADA STALL AND BOLLARD MOUNTED SIGNAGE - SEE MARKING AND SIGNAGE DETAIL
- (F) ADA SIDEWALK RAMP AND FLUSH CURB WITH 2'x6' ADA TRUNCATED DOME WARNING STRIP (TYP) - SEE SITE DETAILS
- (G) CONCRETE CURB AND GUTTER - SEE TYPICAL SECTIONS
- (H) 8' TALL CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE - SEE FENCING DETAILS
- (I) PROPOSED DOOR STOOP - SEE ARCHITECTURAL PLANS FOR DETAILS
- (J) ADA VAN STALL AND BOLLARD MOUNTED SIGNAGE - SEE MARKING AND SIGNAGE DETAIL
- (K) PAINTED TRAFFIC FLOW ARROW
- (L) AUTOMATIC SLIDING GATE - SEE FENCING PLAN
- (M) INTERSECTION SIGHT TRIANGLES
- (N) PROPOSED FIRE HYDRANT



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olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	SITE PLAN
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DRAWN BY:	WLC
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SITE PLAN

C102

SHEET 009 OF 131

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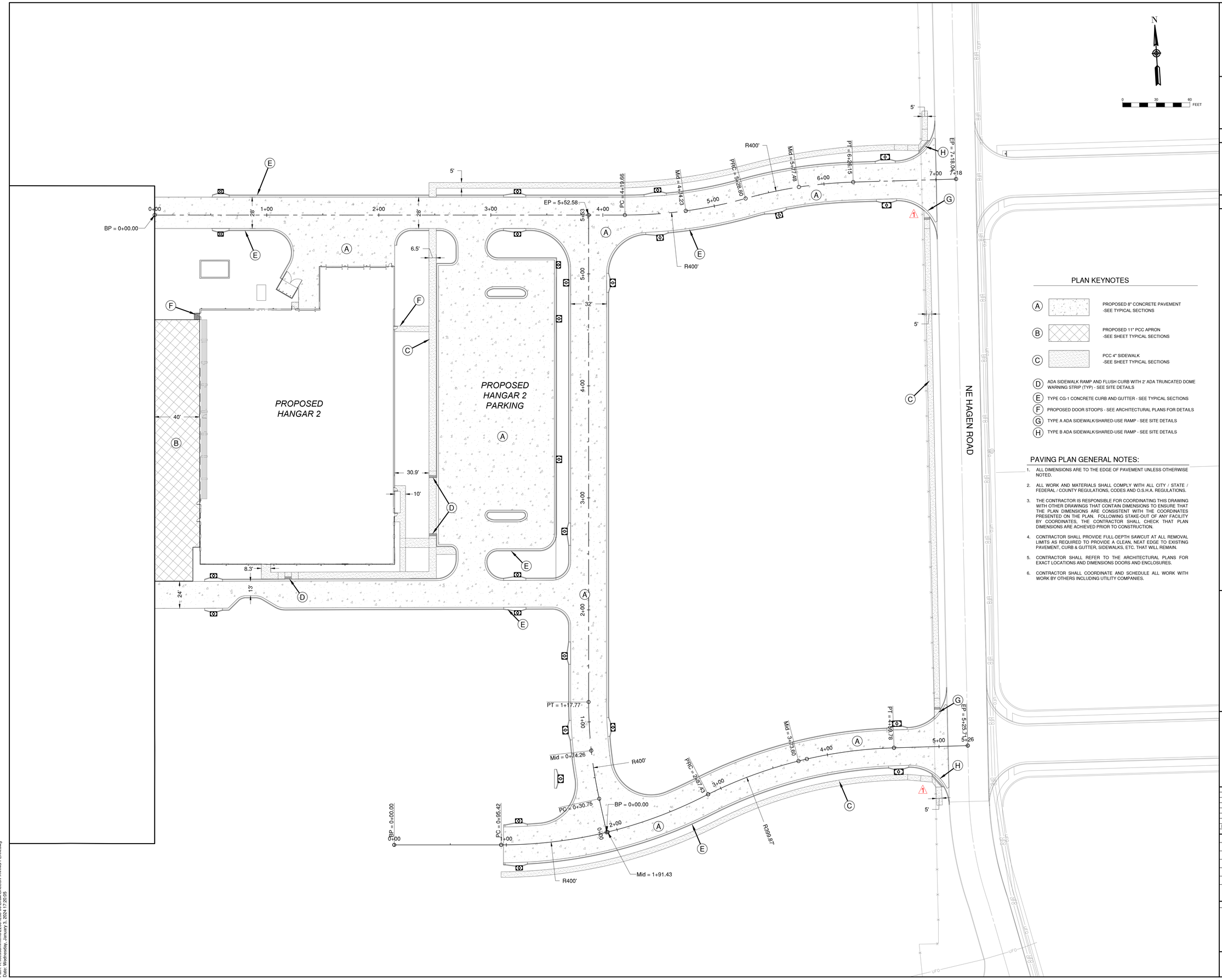

PLAN KEYNOTES

- (A) PROPOSED 8" CONCRETE PAVEMENT -SEE TYPICAL SECTIONS
- (B) PROPOSED 11" PCC APRON -SEE SHEET TYPICAL SECTIONS
- (C) PCC 4" SIDEWALK -SEE SHEET TYPICAL SECTIONS
- (D) ADA SIDEWALK RAMP AND FLUSH CURB WITH 2' ADA TRUNCATED DOME WARNING STRIP (TYP) - SEE SITE DETAILS
- (E) TYPE CG-1 CONCRETE CURB AND GUTTER - SEE TYPICAL SECTIONS
- (F) PROPOSED DOOR STOOPS - SEE ARCHITECTURAL PLANS FOR DETAILS
- (G) TYPE A ADA SIDEWALK/SHARED-USE RAMP - SEE SITE DETAILS
- (H) TYPE B ADA SIDEWALK/SHARED-USE RAMP - SEE SITE DETAILS

PAVING PLAN GENERAL NOTES:

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6. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WORK WITH WORK BY OTHERS INCLUDING UTILITY COMPANIES.

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1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	PAVING PLAN
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SHEET TITLE

PAVING PLAN

C103

SHEET 010 OF 131

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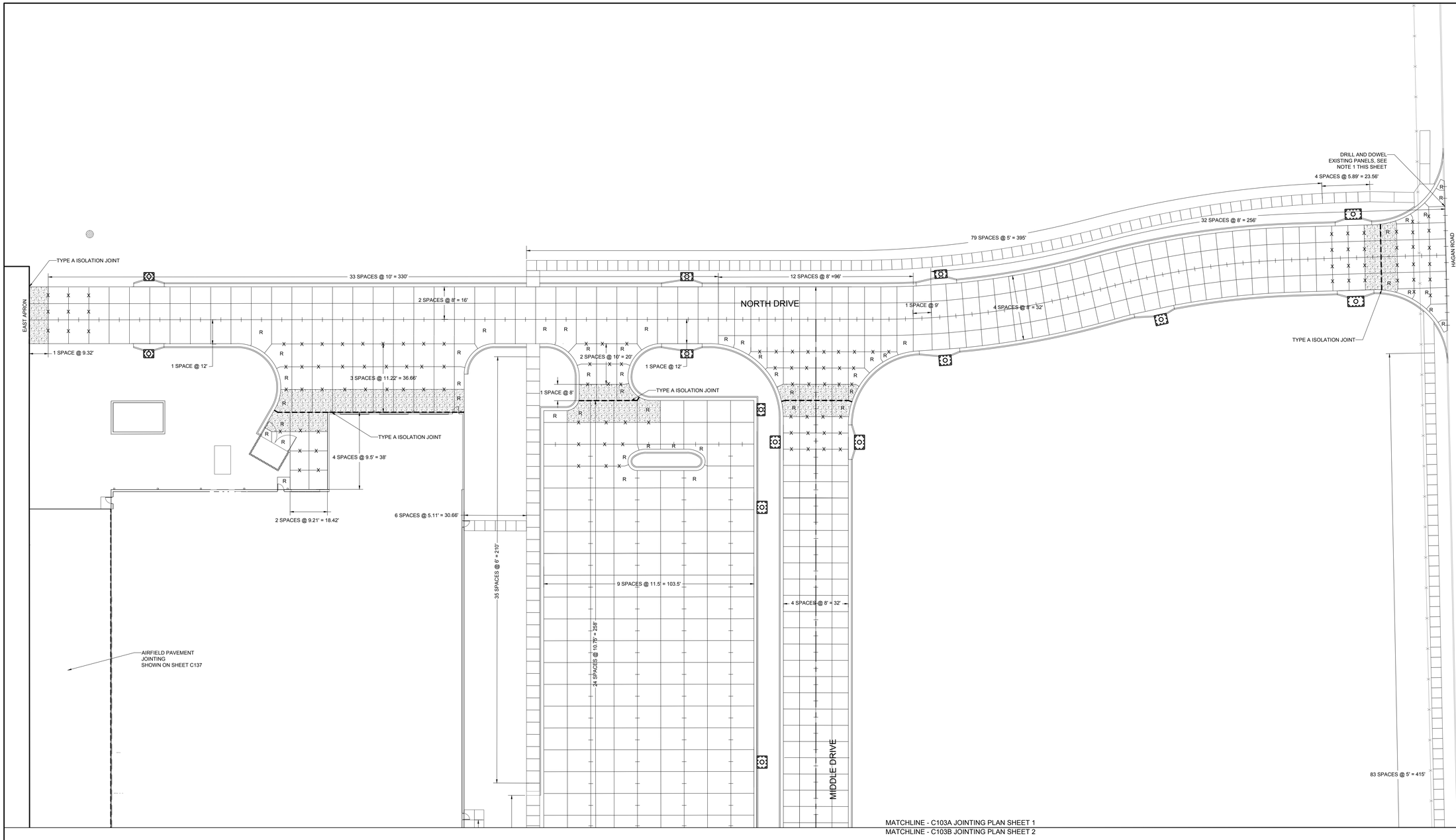

JOINTING NOTES

1. DRILL AND BOND DOWEL BARS INTO EXISTING PAVEMENT PRIOR TO PLACEMENT OF NEW PCC. MATCH EXISTING JOINTING.
2. ALL CONSTRUCTION JOINTS OR COLD JOINTS SHALL REQUIRE DRILL AND DOWELLED JOINTS
3. JOINTS ARE PRESENTED BASED ON AN EXPECTED PAVING PLAN FOR THIS PROJECT. CONTRACTOR MAY ELECT TO PAVE THE SITE DIFFERENTLY, HOWEVER, CONTRACTOR MUST PREPARE AND SUBMIT PAVING PLAN WITH AN ALTERNATIVE JOINTING PLAN TO ENGINEER FOR REVIEW. PAVING PLAN AND ALTERNATIVE JOINTING PLAN SHALL BE SUBMITTED AT LEAST 10 CALENDAR DAYS IN ADVANCE OF ANY SCHEDULED PAVES. NO ADDITIONAL COSTS TO THE CONTRACT SHALL BE INCURRED BY THE OWNER FOR THE PREPARATION OF AN ALTERNATIVE JOINTING PLAN. NO ADDITIONAL COSTS TO THE CONTRACT SHALL BE INCURRED BY THE OWNER IF AN ALTERNATIVE JOINTING PLAN IS ACCEPTED.
4. SEE SHEET C138 FOR JOINTING DETAILS

LEGEND

- ISOLATION JOINT - TYPE A
- DOWELED CONSTRUCTION JOINT - TYPE E
- DOWELED CONTRACTION JOINT - TYPE C
- EXISTING JOINT
- PANEL WITH THICKENED EDGE
- R — ODD-SHAPED PANEL WITH MESH REINFORCEMENT

N

TRUE

0 20 40 FEET

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
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JOINTING PLAN
SHEET 1

C103A

SHEET 014 OF 131

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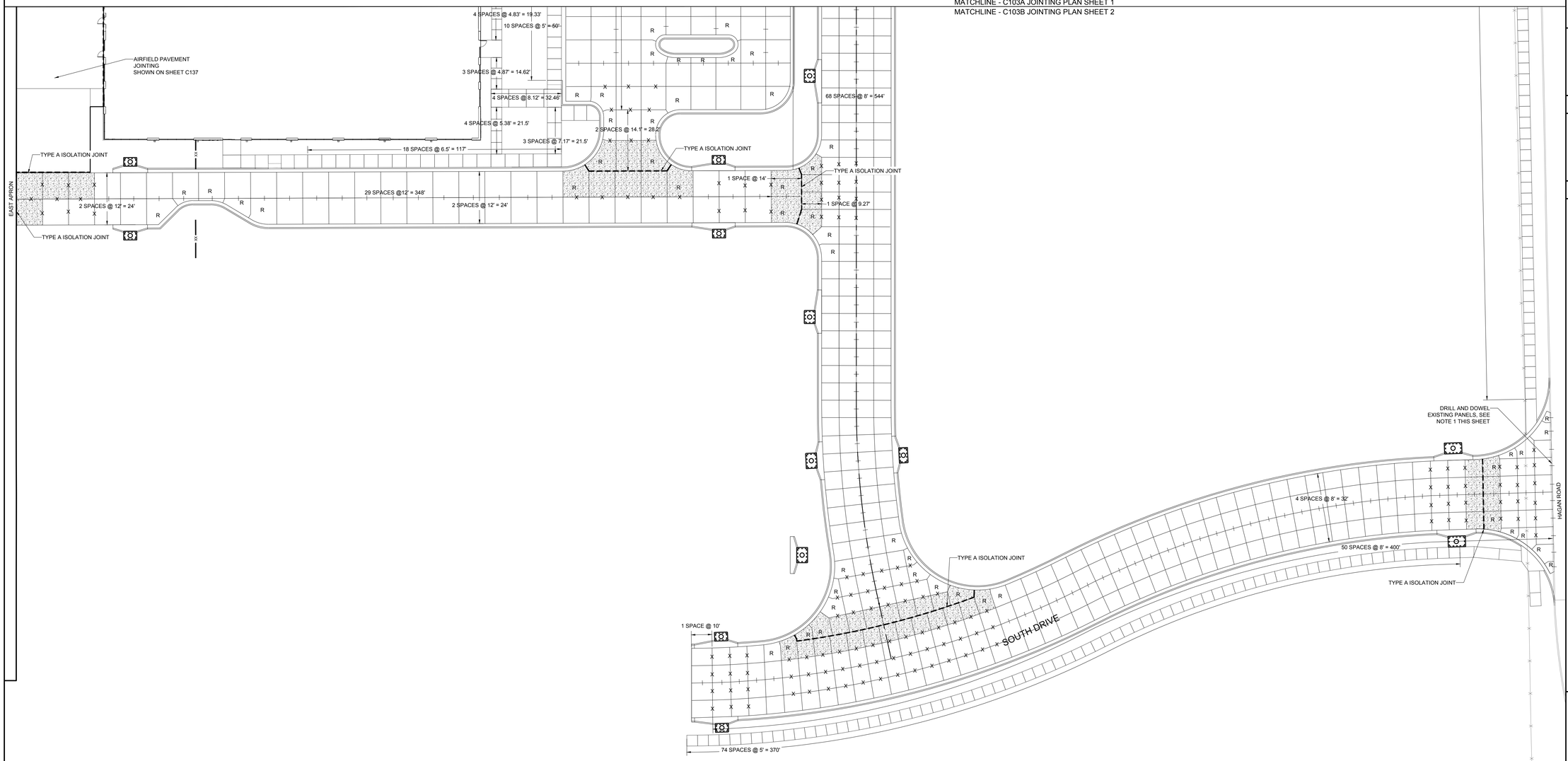

JOINTING NOTES

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N

TRUE

0 20 40 FEET

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LEE'S SUMMIT, MISSOURI

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

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CAD DWG FILE: JOINTING PLAN 2.0
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JOINTING PLAN
SHEET 2

C103B

SHEET 015 OF 131

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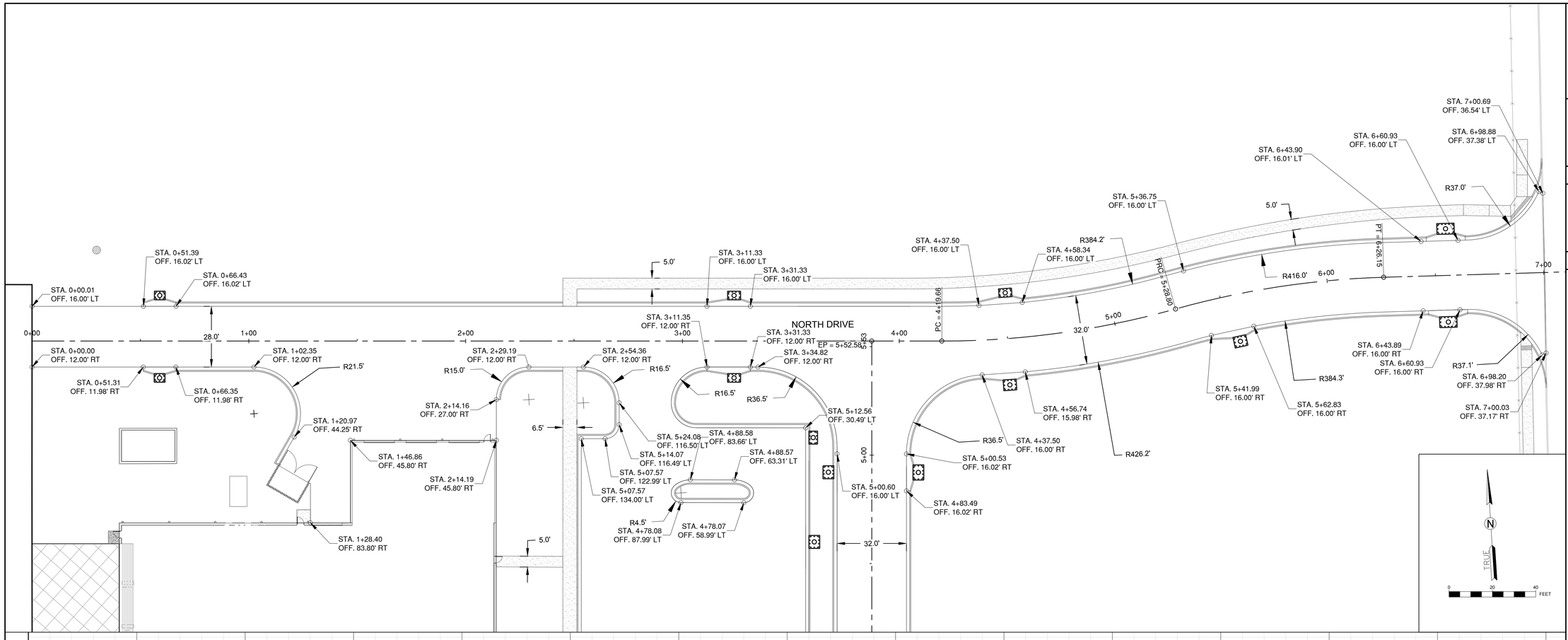

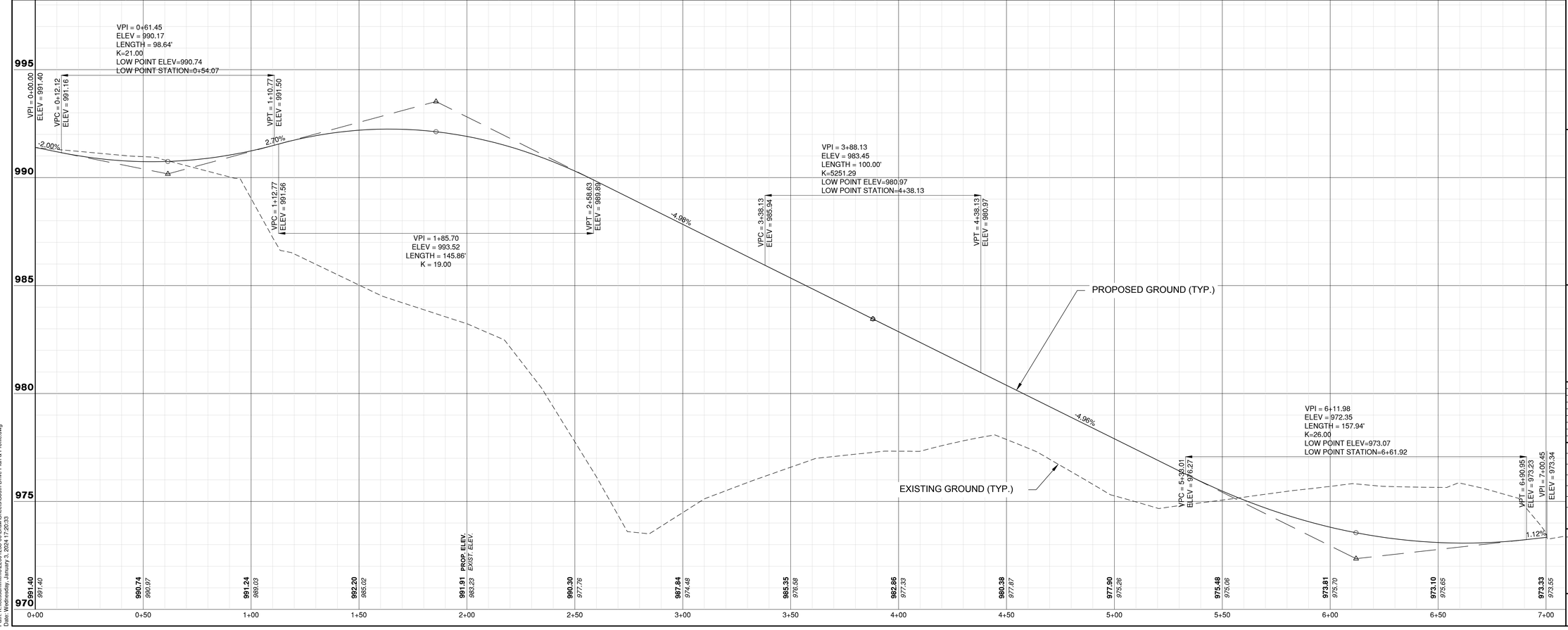

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WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: SOUTH DRIVE PLAN & PROFILE
DESIGNED BY: WLC
DRAWN BY: WLC
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SHEET TITLE

NORTH DRIVE PLAN & PROFILE

C104

SHEET 013 OF 131

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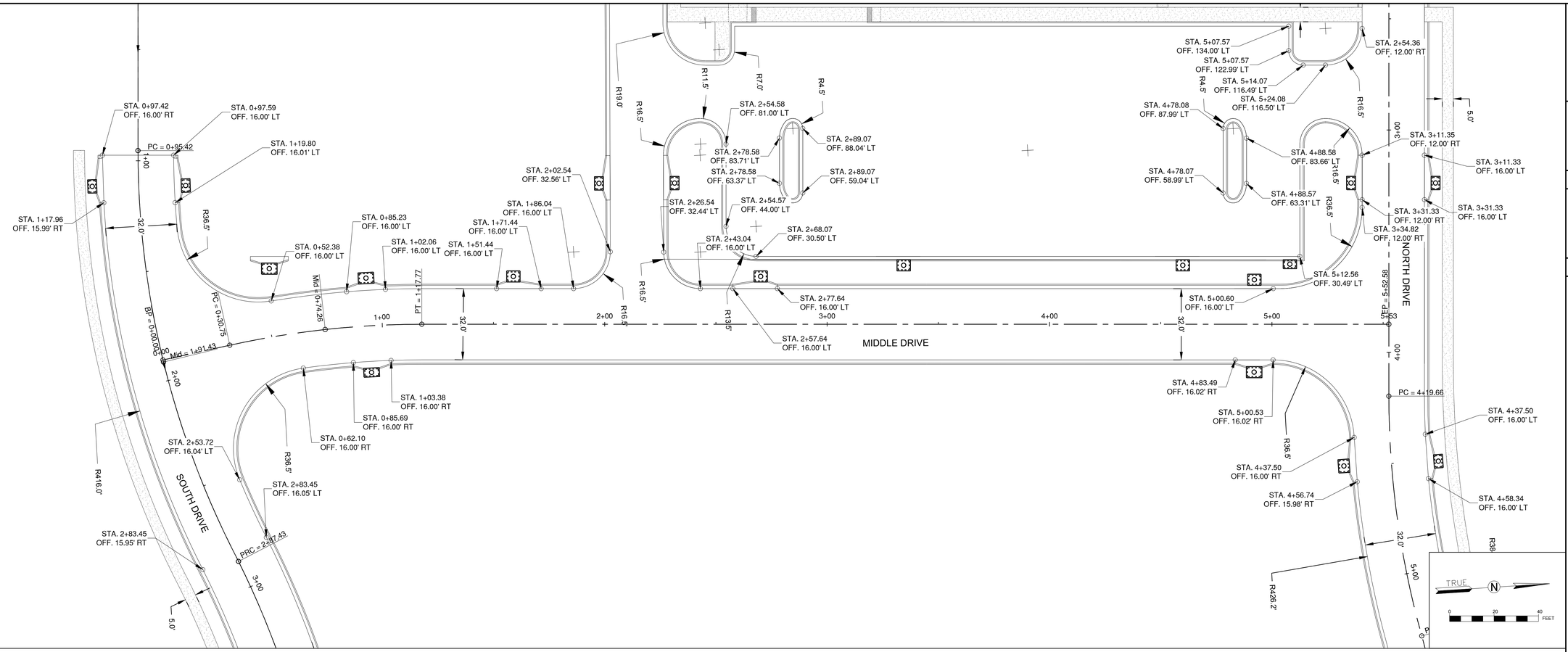
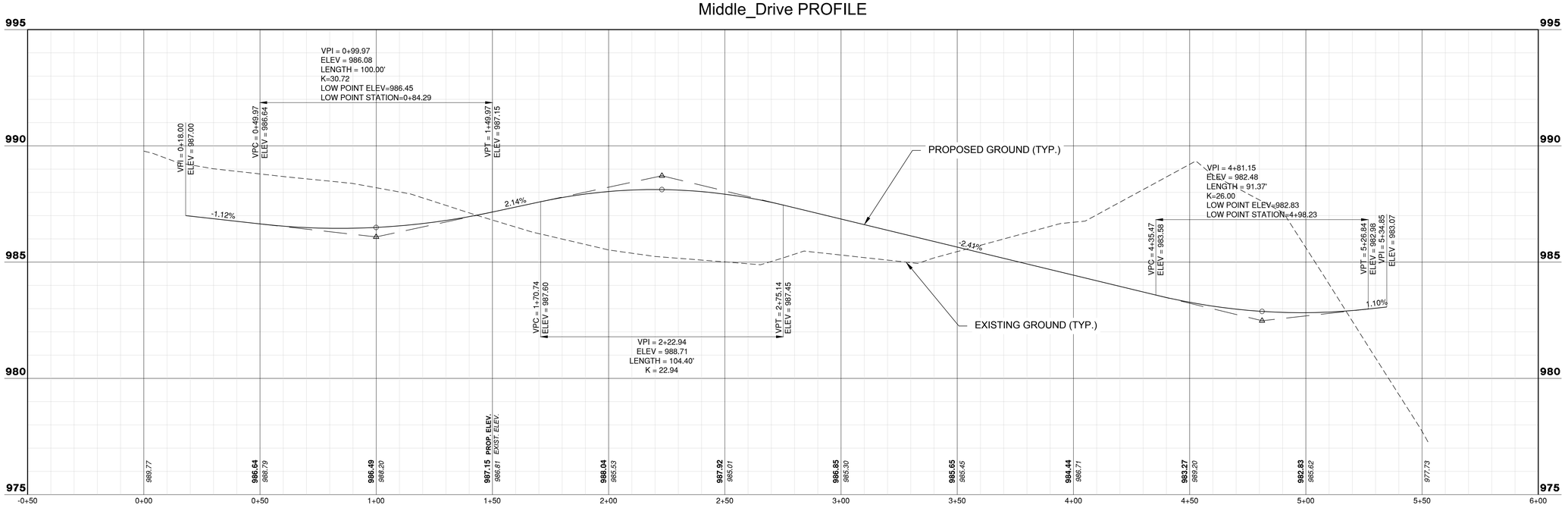


Middle_Drive PROFILE



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LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
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STATE OF MISSOURI
TYLER G. HORN
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

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MIDDLE DRIVE PLAN & PROFILE

C105

SHEET 014 OF 131

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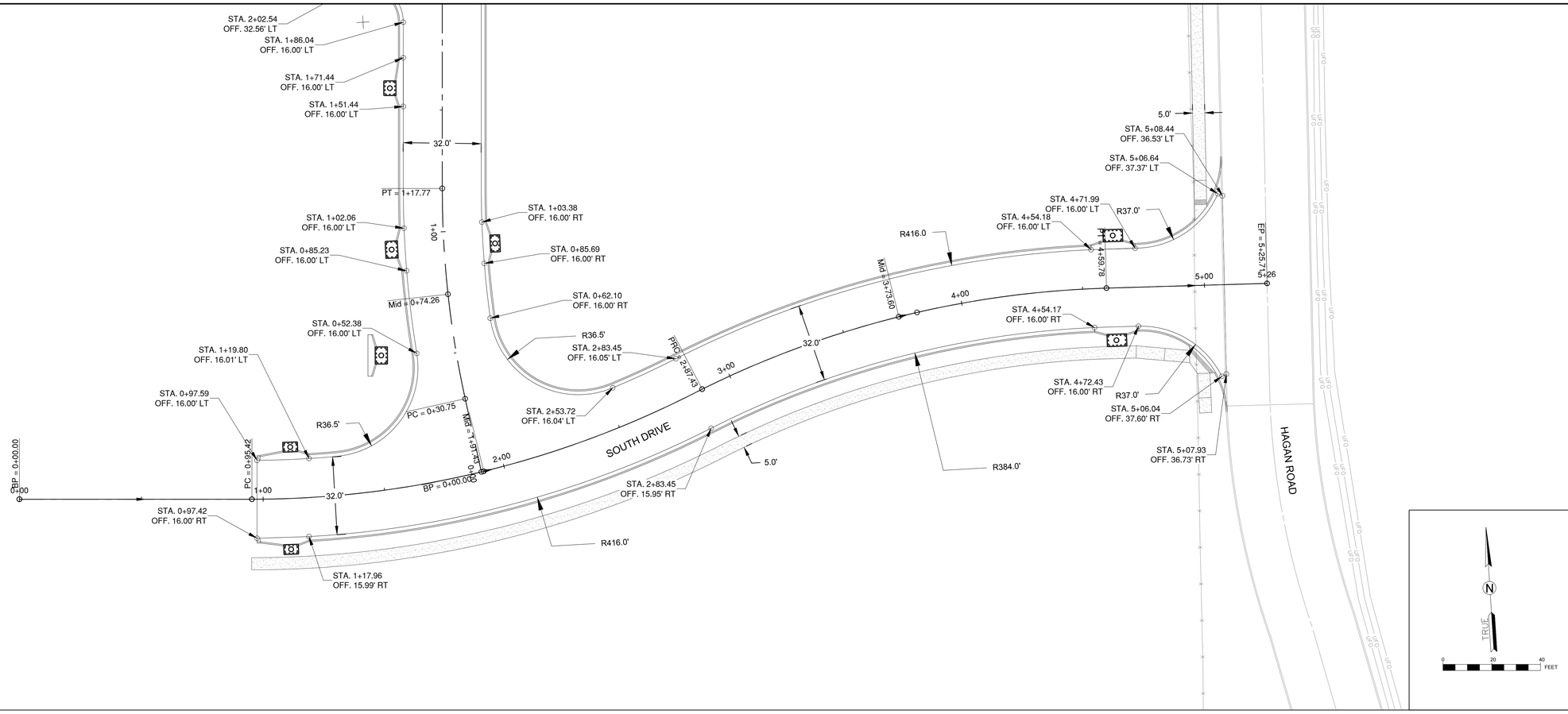

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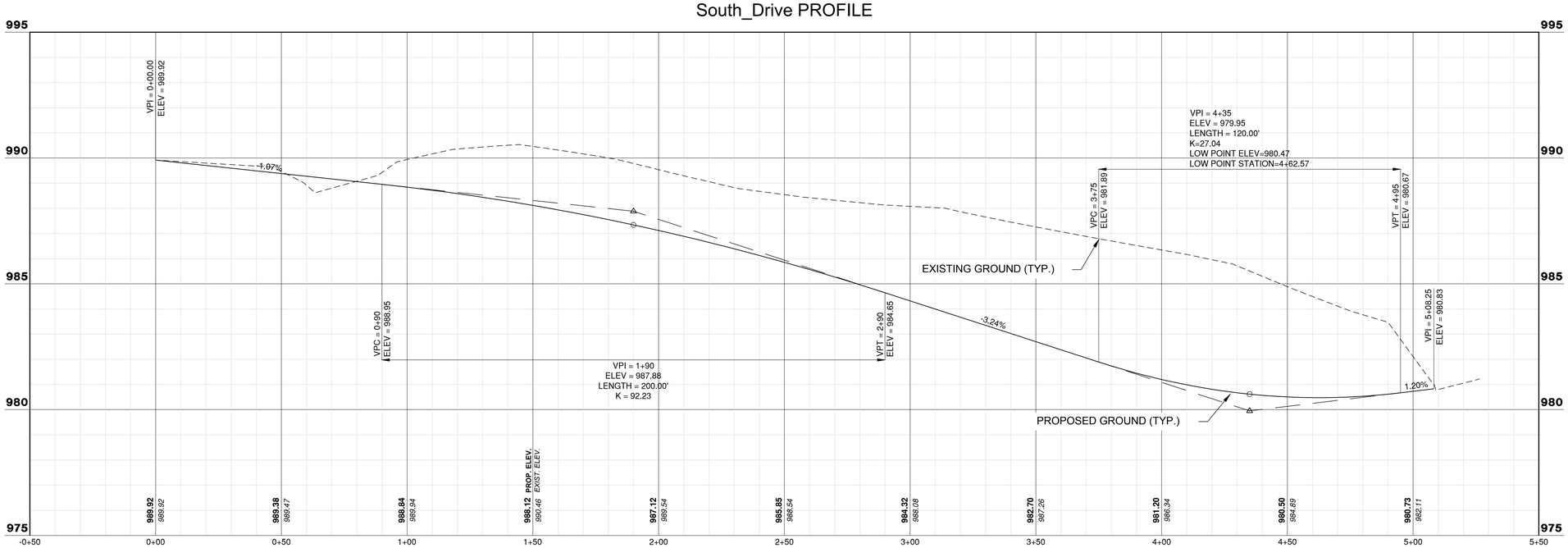

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

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SOUTH DRIVE PLAN & PROFILE

C106

SHEET 015 OF 131

Path: K:\lessummtmo\2500\238.00\Draw\Sheets\South Drive Plan & Profile.dwg
Date: Wednesday, January 3, 2024 1:20:39

ALL SUITABLE EXCESS FILL SHALL BE PLACED IN CONTROLLED LIFTS, COMPACTED AND TESTED IN THIS FILL SITE PER THE PROJECT SPECIFICATIONS. TOPSOIL SHALL BE STRIPPED AND RE-COVERED ATOP THE EXCESS FILL GRADED INTO THIS SITE. EXCESS FILL SHALL BE GRADED TO DRAIN WITH SLOPES NOT-TO-EXCEED 6:1.
SEE EROSION CONTROL PLAN FOR OVERVIEW OF FILL SITE.

EXCESS FILL SITE
EXCESS SOIL MUST BE SPREAD AND COMPACTED

SEE SHEET C108 FOR STORMWATER BASIN DETAILS

GRADING DETAILS - AREA #2
SEE SHEET C107A

GRADING DETAILS - AREA #1
SEE SHEET C107A

GRADING DETAILS - AREA #3
SEE SHEET C107A

PROPOSED BLDG. FFE 993.0

FUTURE TERMINAL FFE 993.5

HAGAN RD

NOTE: INLETS 7, 8, 9 AND 19 ARE NON RECESSED

STORM STRUCTURE LOCATION SCHEDULE

STRUCTURE	STRUCTURE TYPE	ALIGNMENT	STATION	OFFSET
1	CURB INLET	SOUTH DRIVE	1+10.72	20.88 RT
1A	TURF INLET	SOUTH DRIVE	-0+32.11	22.37 RT
2	CURB INLET	SOUTH DRIVE	1+12.01	21.12 LT
3	CURB INLET	SOUTH DRIVE	1+57.19	54.92 LT
4	CURB INLET	MIDDLE DRIVE	0+93.94	21.50 LT
4A	CURB INLET	MIDDLE DRIVE	0+93.94	21.02 RT
5	CURB INLET	MIDDLE DRIVE	1+58.91	21.50 LT
6	CURB INLET	MIDDLE DRIVE	2+70.14	21.50 LT
6A	CURB INLET	MIDDLE DRIVE	2+31.43	63.46 LT
6B	CURB INLET	MIDDLE DRIVE	1+97.43	63.34 LT
6C	CURB INLET	MIDDLE DRIVE	1+96.50	334.79 LT
6D	CURB INLET	MIDDLE DRIVE	2+30.50	334.78 LT
7	CURB INLET	MIDDLE DRIVE	3+34.45	26.50 LT
8	CURB INLET	MIDDLE DRIVE	4+59.95	26.49 LT
9	CURB INLET	MIDDLE DRIVE	4+92.10	20.00 LT
10	CURB INLET	MIDDLE DRIVE	4+91.99	21.51 RT
11	CURB INLET	NORTH DRIVE	4+49.50	21.38 RT
11A	CURB INLET	NORTH DRIVE	4+50.56	21.12 LT
12	CURB INLET	NORTH DRIVE	5+55.05	21.62 RT
13	CURB INLET	NORTH DRIVE	6+55.35	21.50 RT
14	CURB INLET	NORTH DRIVE	6+55.32	21.51 LT
15	FES	NORTH DRIVE	5+93.12	536.34 LT
15A	JUNCTION BOX	NORTH DRIVE	6+54.82	376.25 LT
16	CURB INLET	NORTH DRIVE	0+58.93	21.02 LT
17	CURB INLET	NORTH DRIVE	0+58.82	16.98 RT
18	CURB INLET	NORTH DRIVE	3+23.83	17.00 RT
18A	CURB INLET	NORTH DRIVE	3+23.83	21.00 LT
19	CURB INLET	MIDDLE DRIVE	5+08.06	27.00 LT
20	CURB INLET	SOUTH DRIVE	4+63.23	21.50 RT
21	CURB INLET	SOUTH DRIVE	4+62.99	21.50 LT
22	TURF INLET	MIDDLE DRIVE	5+26.82	263.91 RT
22A	TURF INLET	MIDDLE DRIVE	4+63.70	218.83 LT

UTILITY DISCLAIMER

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PLAN LEGEND

993	EXISTING CONTOUR
993	PROPOSED CONTOUR
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
	PROPOSED STORM STRUCTURE
	FLOW ARROW (GRADE TO DRAIN)
FG	FINISH GRADE ELEVATION
TW	TOP OF WALL ELEVATION
SW	TOP OF SIDEWALK ELEVATION
TP	TOP OF PAVEMENT ELEVATION
FG	FINISHED GRADE ELEVATION
FL	FLOW LINE ELEVATION
BW	BOTTOM OF WALL
SW XXX.XX	PROPOSED / NEW ELEVATION
1	STORM STRUCTURE NUMBER

GENERAL NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS OR CONTACT THE RESPECTIVE UTILITY OWNER TO REQUEST SUCH RELOCATION.
2. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
3. CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE OR AT A NEARBY LOCATION AS DIRECTED BY THE OWNER FOR USE AS FINAL GRADING AT THE END OF THE PROJECT. ALL EXCESS TOPSOIL AND STRUCTURAL FILL SHALL BE COMPLETELY REMOVED FROM THE OWNER'S PROPERTY AND PROPERLY DISPOSED OF.
4. ALL DISTURBED TURF AREAS SHALL RECEIVE A MINIMUM OF 6" OF TOPSOIL AND SHALL BE SEEDED / FERTILIZED IN ACCORDANCE WITH THE PLANS & SPECIFICATIONS.
5. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION IS WATERTIGHT.
6. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
7. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
8. ALL FILL MATERIAL IS TO BE IN PLACE AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
9. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.

KEYNOTE

- (A) PROPOSED 8" PVC STORM LINE AT 1% SLOPE FROM ROOF DRAIN TO STORM LINE
- (B) CONNECT 8" PVC TO STORM LINE WITH TEE
- (C) PROPOSED DOWNSPOUT CONNECTION - SEE STRUCTURAL PLANS FOR DOWNSPOUT CONNECTION ROUTED UNDER FOOTING.
- (D) 15" PVC STORM LINE AT 1% SLOPE
- (E) 18" INLINE DRAIN WITH STANDARD GRATE

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: GRADING PLAN
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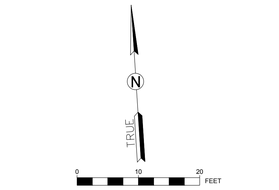
SHEET TITLE

GRADING PLAN

C107
SHEET 016 OF 131



PLAN LEGEND

993	EXISTING CONTOUR
993	PROPOSED CONTOUR
	PROPOSED SANITARY SEWER
	PROPOSED STORM SEWER
DI	PROPOSED STORM STRUCTURE
	FLOW ARROW (GRADE TO DRAIN)
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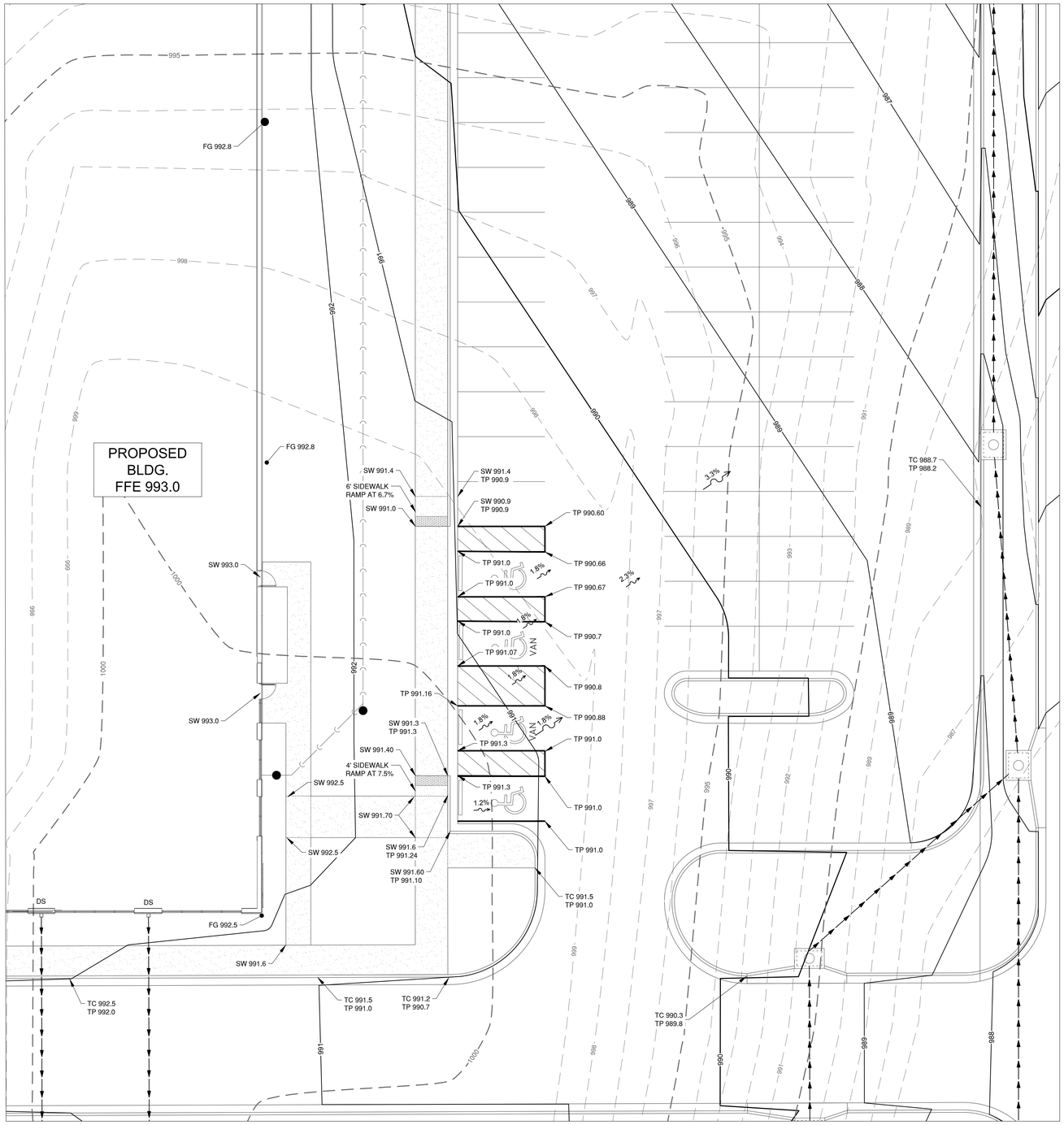
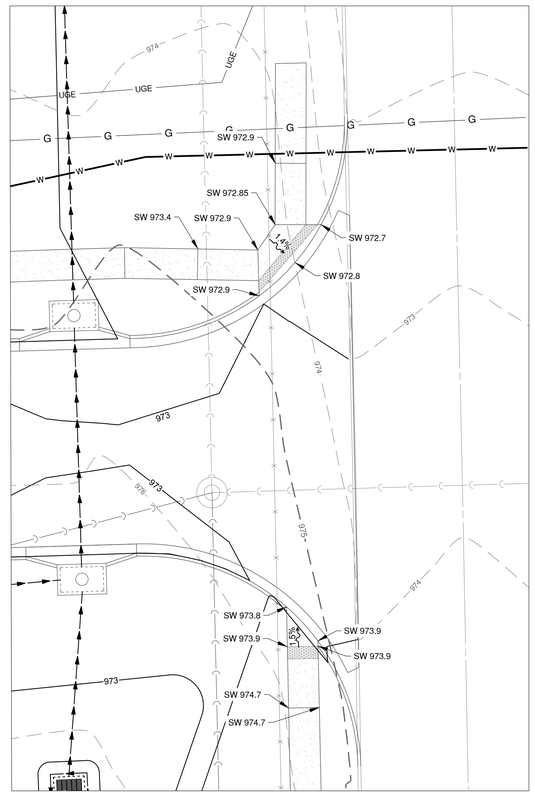


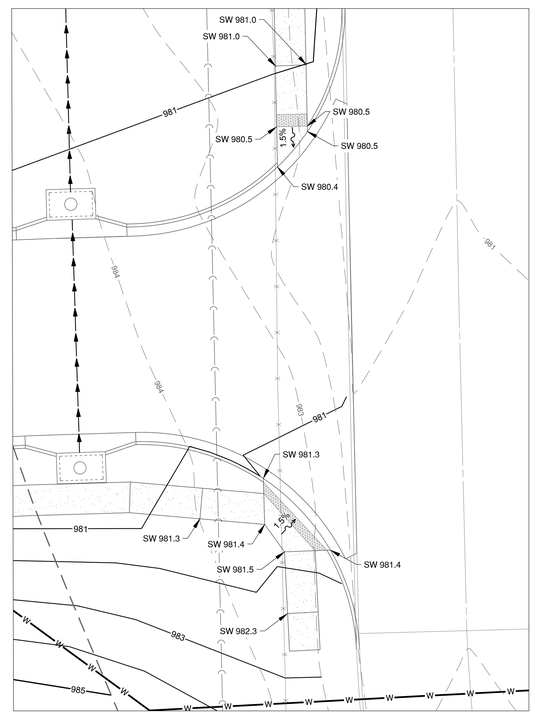
GRADING DETAILS - AREA #1

SCALE 1" : 10'



GRADING DETAILS - AREA #2

SCALE 1" : 10'



GRADING DETAILS - AREA #3

SCALE 1" : 10'

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olsson
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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TYLER G. HORN
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

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CAD DWG FILE:	GRADING PLAN DETAIL
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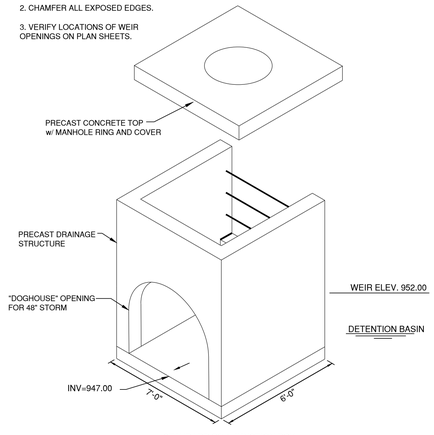
GRADING DETAILS

C107A

NOTES:
1. ANCHOR LID TO BOX. DRILL, DOWEL & GROUT OR APPROVED EQUAL.

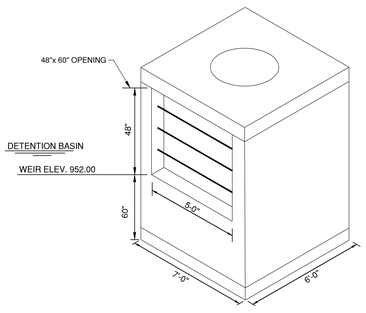
2. CHAMFER ALL EXPOSED EDGES.

3. VERIFY LOCATIONS OF WEIR OPENINGS ON PLAN SHEETS.



STANDARD SS-1 JUNCTION BOX
WITH MODIFICATIONS AS SHOWN

DISCHARGE END VIEW
NOT TO SCALE



DETENTION BASIN FRONT VIEW
NOT TO SCALE

BASIN OUTLET STRUCTURE DETAIL B2
N.T.S.

NOTES:
1. ANCHOR LID TO BOX. DRILL, DOWEL & GROUT OR APPROVED EQUAL.

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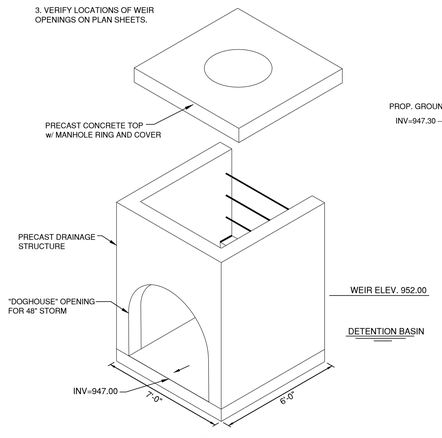
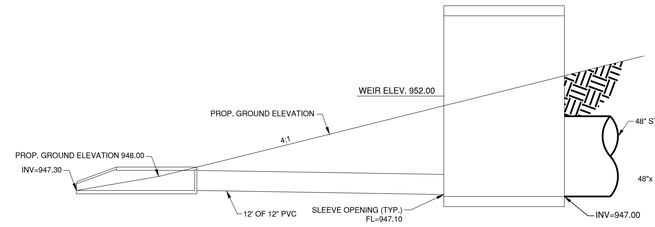
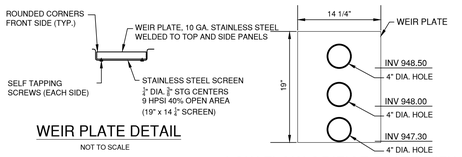


STANDARD SS-1 JUNCTION BOX
WITH MODIFICATIONS AS SHOWN

DISCHARGE END VIEW
NOT TO SCALE

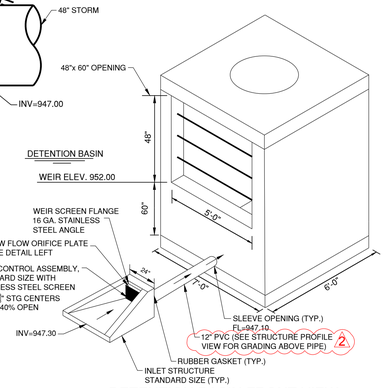


STRUCTURE PROFILE VIEW
NOT TO SCALE



WEIR PLATE DETAIL
NOT TO SCALE

LOW FLOW ORIFICE PLATE VIEW
NOT TO SCALE



DETENTION BASIN FRONT VIEW
NOT TO SCALE

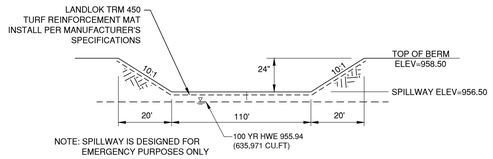
BASIN OUTLET STRUCTURE DETAIL B1
N.T.S.

DETENTION BASIN STAGE-STORAGE DISCHARGE

STAGE (FT)	ELEVATION (FT)	TOTAL STORAGE (CU.FT.)	DISCHARGE (CFS)
0.0	947.3	0	0.00
1.7	948.0	944	0.31
2.7	949.0	16,166	1.14
3.7	950.0	63,243	1.71
4.7	951.0	138,779	2.12
5.7	952.0	227,466	2.46
6.7	953.0	322,827	32.56
7.7	954.0	423,804	87.29
8.7	955.0	530,496	158.13
9.7	956.0	643,543	241.96

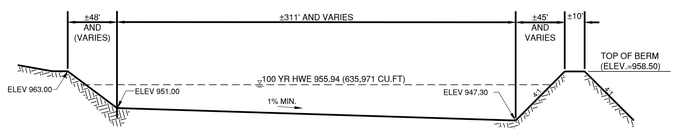
DETENTION BASIN VOLUME

STAGE (FT)	ELEVATION (FT)	CONTOUR AREA (SQ.FT.)	TOTAL STORAGE (CU.FT.)
0.0	947.3	0	0
1.7	948.0	4,260	944
2.7	949.0	29,960	16,166
3.7	950.0	66,600	63,243
4.7	951.0	84,840	138,779
5.7	952.0	92,590	227,466
6.7	953.0	98,160	322,827
7.7	954.0	103,820	423,804
8.7	955.0	109,590	530,496
9.7	956.0	117,612	643,543



NOTE: SPILLWAY IS DESIGNED FOR EMERGENCY PURPOSES ONLY

EMERGENCY SPILLWAY SECTION
N.T.S.



BASIN SECTION A-A
N.T.S.

GRADING PLAN GENERAL NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS OR CONTACT THE RESPECTIVE UTILITY OWNER TO REQUEST SUCH RELOCATION.

2. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.

3. CONTRACTOR SHALL STRIP TOPSOIL AND STOCKPILE ON-SITE OR AT A NEARBY LOCATION AS DIRECTED BY THE OWNER FOR USE AS FINAL GRADING AT THE END OF THE PROJECT. ALL EXCESS TOPSOIL AND STRUCTURAL FILL SHALL BE COMPLETELY REMOVED FROM THE OWNER'S PROPERTY AND PROPERLY DISPOSED OF.

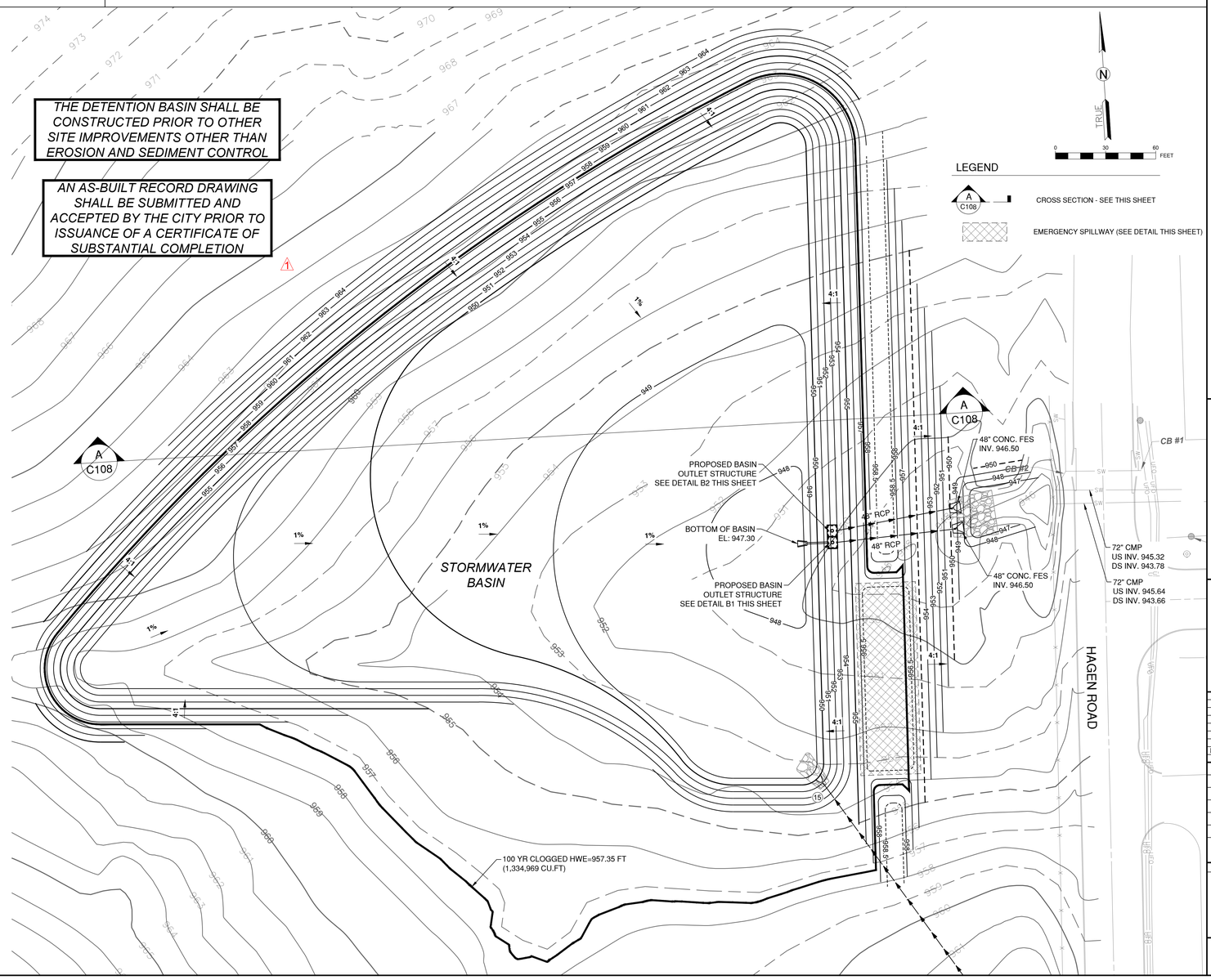
4. ALL EXISTING AND PROPOSED GRADE CONTOURS SHOWN AT 1 FOOT INTERVALS.

5. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.

6. SLOPES SHALL BE A MAXIMUM OF 4:1 OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.

THE DETENTION BASIN SHALL BE CONSTRUCTED PRIOR TO OTHER SITE IMPROVEMENTS OTHER THAN EROSION AND SEDIMENT CONTROL

AN AS-BUILT RECORD DRAWING SHALL BE SUBMITTED AND ACCEPTED BY THE CITY PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION



LEGEND

A / C108 — CROSS SECTION - SEE THIS SHEET

EMERGENCY SPILLWAY (SEE DETAIL THIS SHEET)

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: BASIN DETAIL
DESIGNED BY: WLC
DRAWN BY: WLC
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SHEET TITLE

BASIN DETAIL

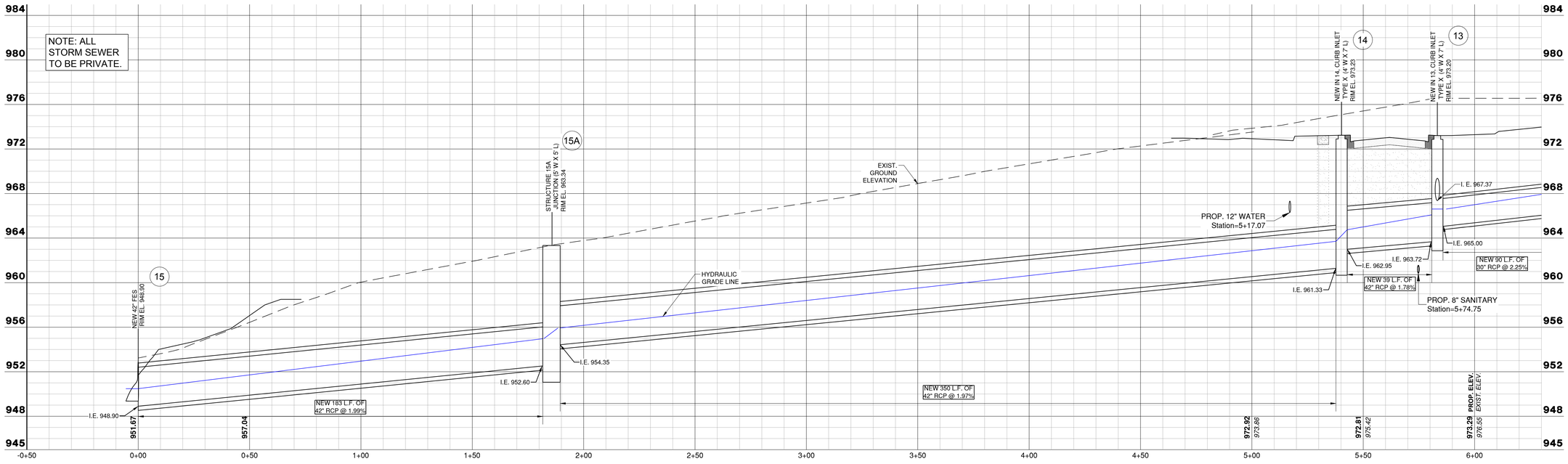
C108

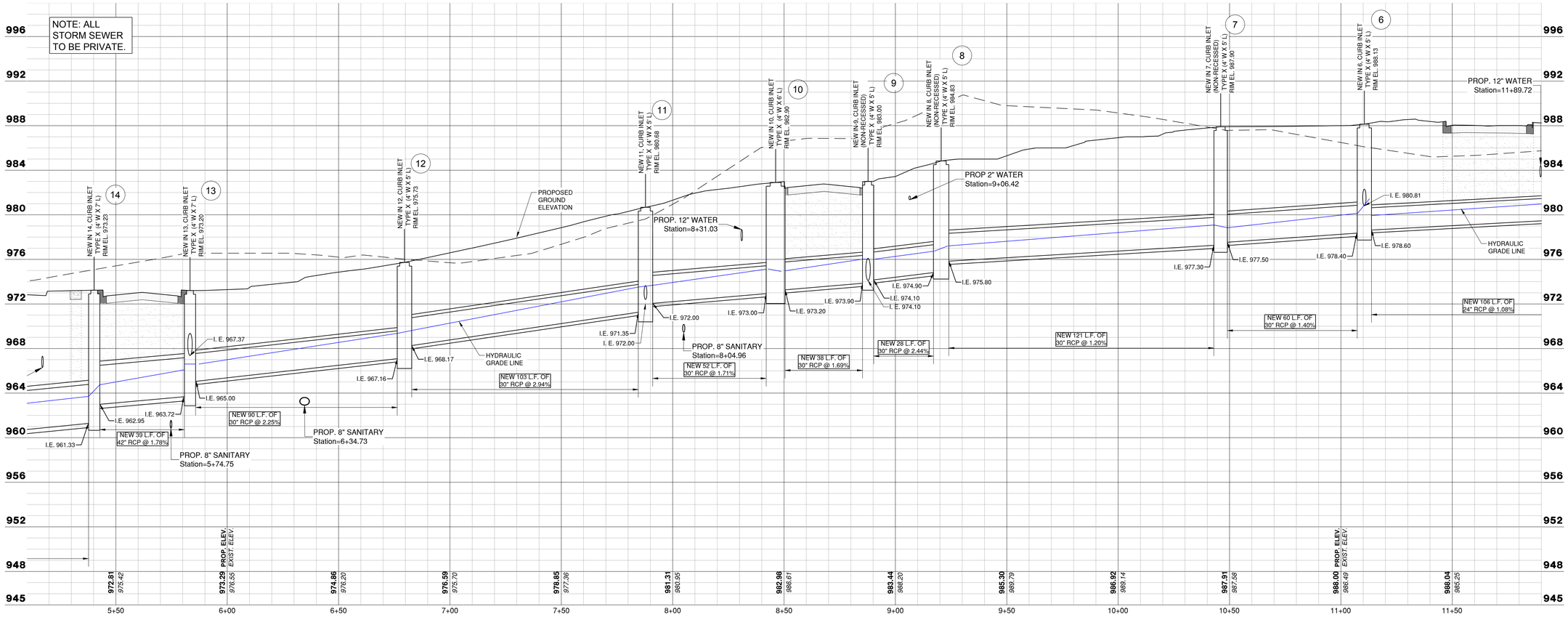
SHEET 018 OF 131

Path: K:\leesummmo\220012238.00\Draw\Sheets\BASIN DETAIL.dwg
User: Wednesday, January 3, 2024 11:25:00

LEGEND

- NEW SIDEWALK
- NEW PAVEMENT
- NEW TRENCH BACKFILL
- NEW CURB AND GUTTER
- EXISTING GROUND ELEVATION
- PROPOSED GROUND ELEVATION
- 25 YEAR HYDRAULIC GRADE LINE





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LEE'S SUMMIT MUNICIPAL AIRPORT
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: STORM PROFILE - SHEET 3
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SHEET TITLE

STORM PROFILE - SHEET 1

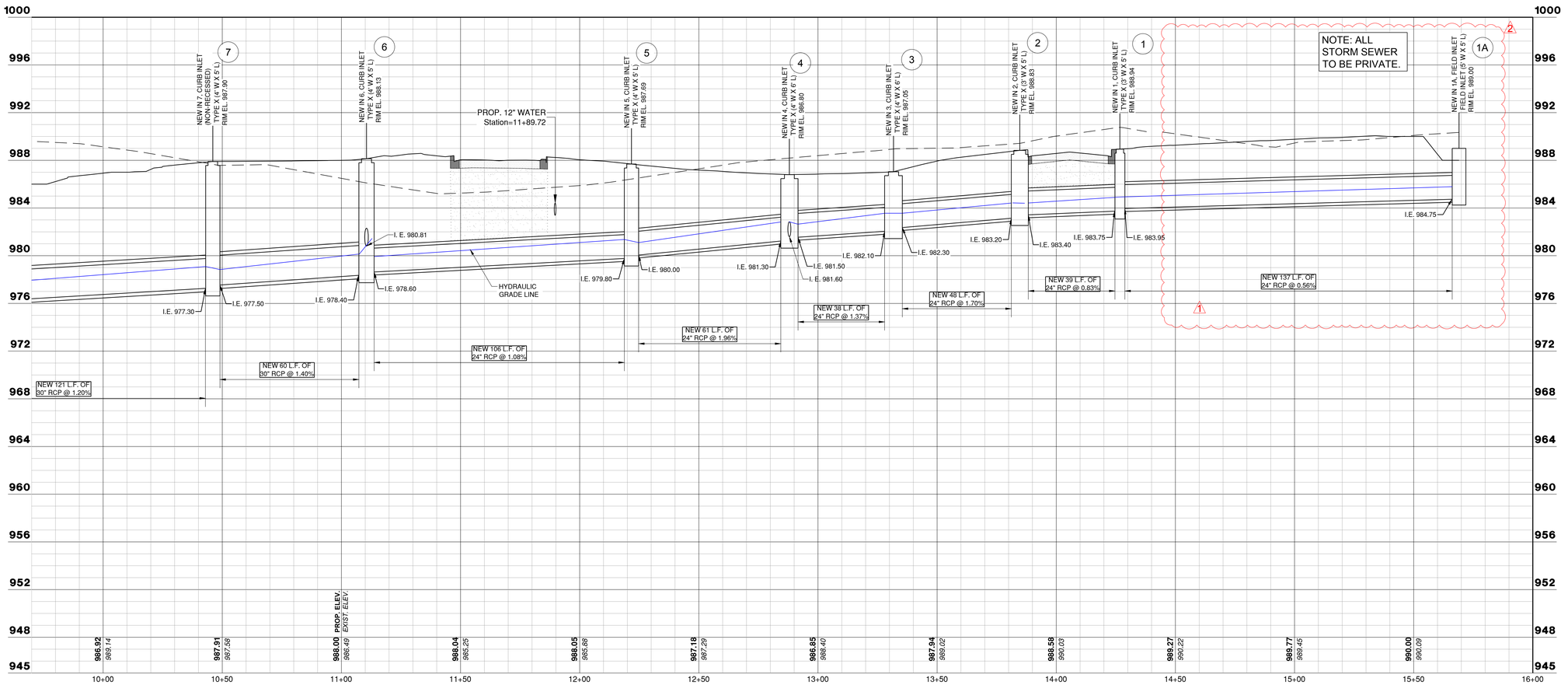
C109

SHEET 019 OF 131

Path: K:\leessummivo\220001238-00\Drawr\Sheets\Storm Profile - Sheet 3.dwg
Date: Wednesday, January 3, 2024 11:22:21

LEGEND

- NEW SIDEWALK
- NEW PAVEMENT
- NEW TRENCH BACKFILL
- NEW CURB AND GUTTER
- EXISTING GROUND ELEVATION
- PROPOSED GROUND ELEVATION
- 25 YEAR HYDRAULIC GRADE LINE



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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
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SHEET TITLE

STORM PROFILE - SHEET 2

C110

SHEET 020 OF 131

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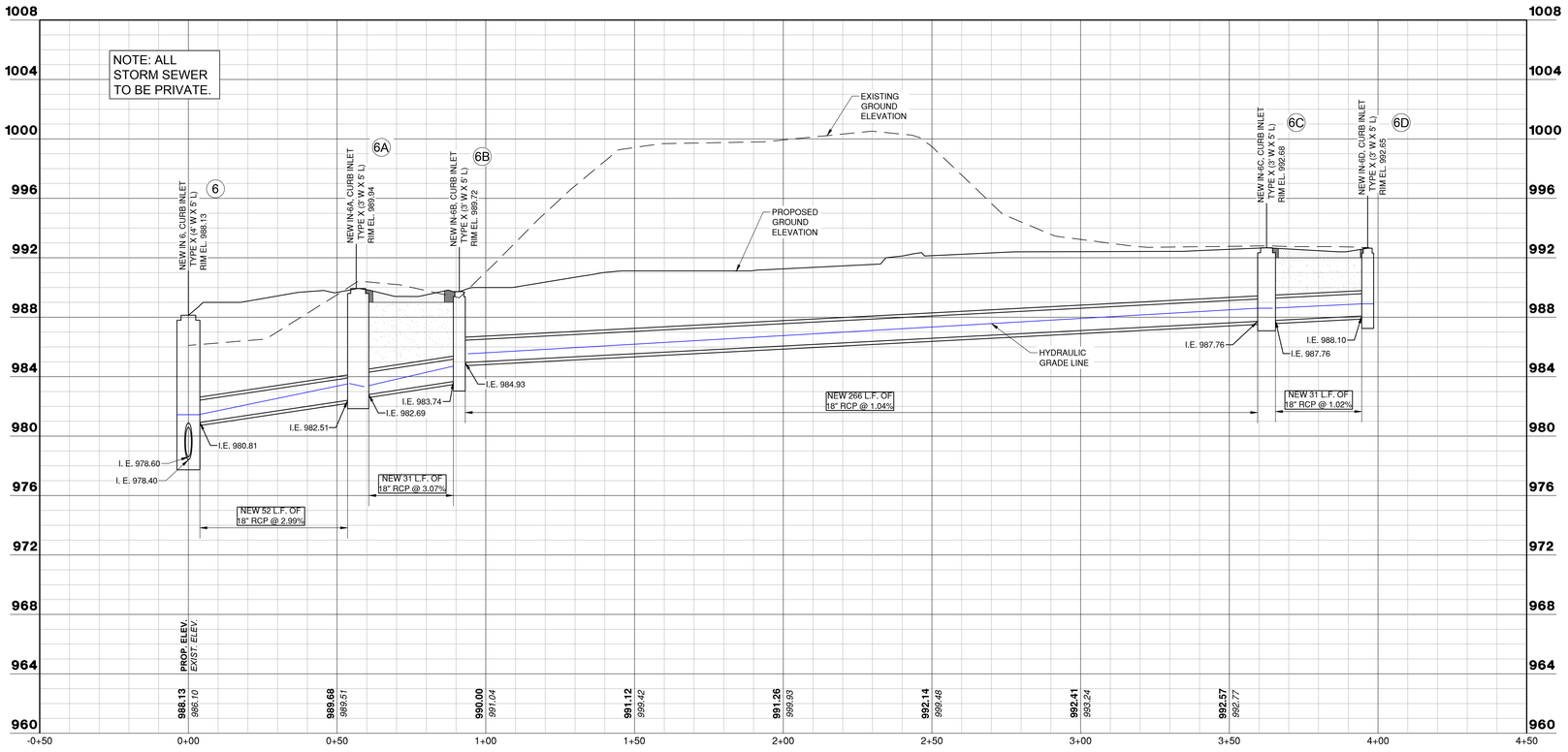

LEGEND

- NEW SIDEWALK
- NEW PAVEMENT
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- EXISTING GROUND ELEVATION
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: STORM PROFILE - SHEET 3
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SHEET TITLE

STORM PROFILE - SHEET 3

C111

SHEET 021 OF 131

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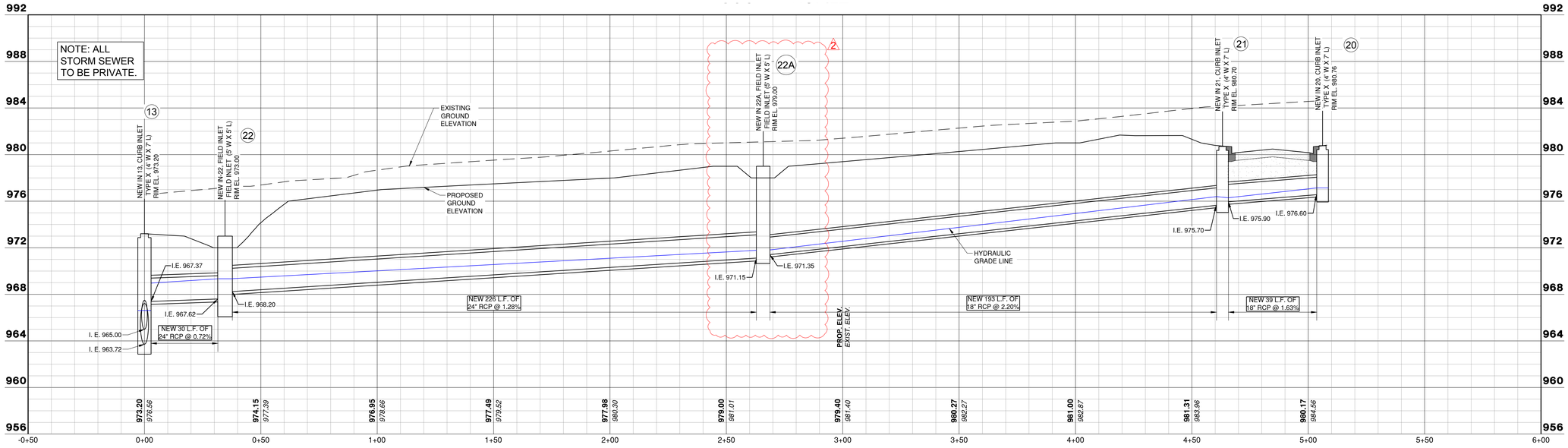

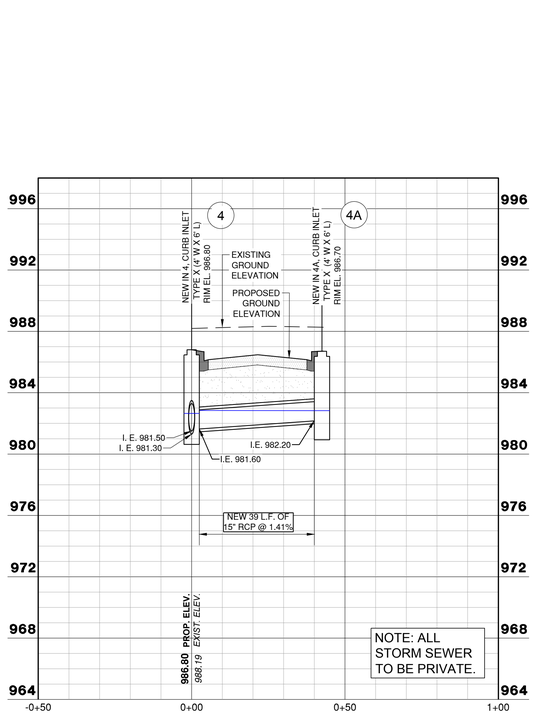

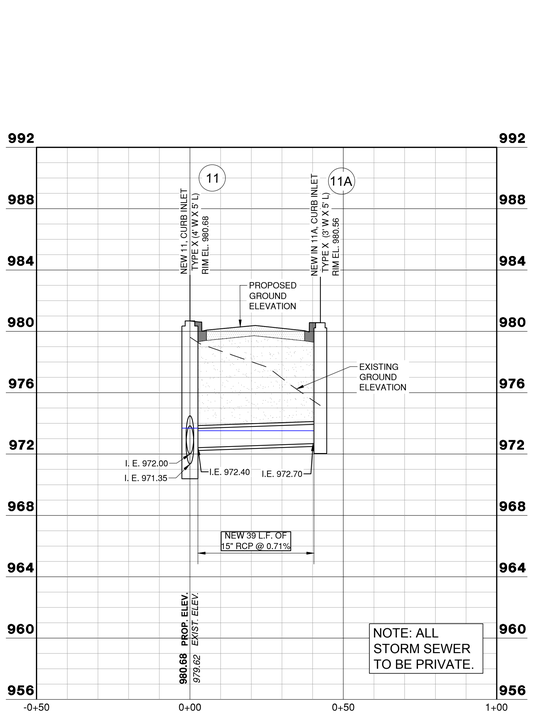

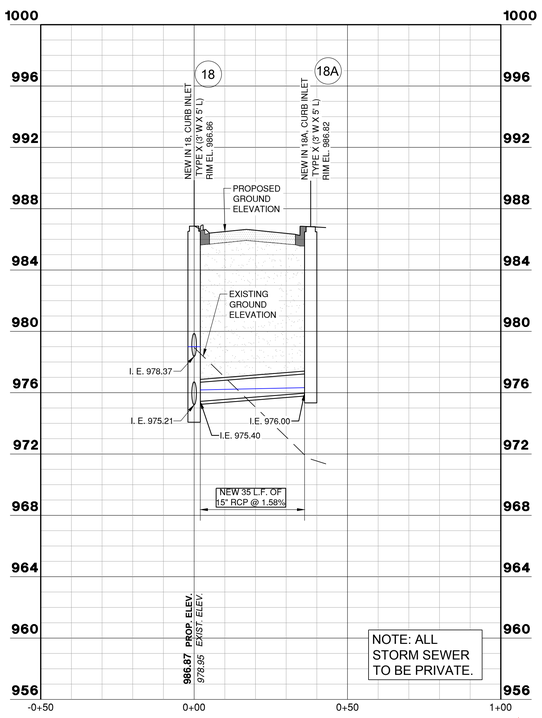

LEGEND

- NEW SIDEWALK
- NEW PAVEMENT
- NEW TRENCH BACKFILL
- NEW CURB AND GUTTER
- EXISTING GROUND ELEVATION
- PROPOSED GROUND ELEVATION
- 25 YEAR HYDRAULIC GRADE LINE

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: STORM PROFILE - SHEET 3
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SHEET TITLE

STORM PROFILE - SHEET 4

C112

SHEET 022 OF 131

Path: K:\leessummimo\22001238-00\Draw\Sheets\Storm Profile - Sheet 3.dwg
Date: Wednesday, January 3, 2024 11:23:33

UTILITY PLAN LEGEND

- EXISTING UNDERGROUND ELECTRIC
- EXISTING FIBER OPTIC LINE
- EXISTING GAS
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING COMMUNICATIONS LINE
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SEWER SERVICE
- PROPOSED FIBER OPTIC LINE
- PROPOSED STORM SEWER
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED STREET LIGHT CIRCUIT
- PROPOSED GAS SERVICE
- PROPOSED FIBER OPTIC LINE
- EXISTING STORM INLET
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY CLEANOUT
- EXISTING LIGHTPOLE
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE
- PROPOSED WATER METER
- PROPOSED HANDHOLE
- PROPOSED LIGHT POLE

PROPOSED BACKFLOW PREVENTION VAULT
12-WAY CONCRETE ENCASED DUCT TO BE PROTECTED AT ALL TIMES DURING CONSTRUCTION.
PROPOSED GAS
PROPOSED ELECTRIC
PROPOSED 12" WATER LINE (SEE PROFILE SHEET)
EXISTING LIGHT POLE
EXISTING AIRFIELD ELECTRIC VAULT
PROPOSED OIL INTERCEPTOR INV. 987.33 (SEE MEP PLANS)
PROPOSED 6" SANITARY SEWER LATERAL AT 1% MIN. SLOPE
PROP. MH-2
PROPOSED 2" WATER METER
PROPOSED FIRE DEPT. CONNECTION - SEE MEP PLANS (PROVIDE KNOX BOX 6' AFF OVER FDC)
PROPOSED ELECTRIC SERVICE ENTRY
PROPOSED SANITARY SEWER EXIT
PROPOSED 8" FIRE WATER SERVICE
PROPOSED GAS METER
PROPOSED 2" DOMESTIC WATER SERVICE (BACKFLOW PREVENTER LOCATED INSIDE BLDG -SEE MEP PLANS)
PROPOSED 6" SANITARY SEWER LATERAL AT 1% MIN. SLOPE
PROPOSED BLDG.
PROPOSED LIGHTING CIRCUIT
PROPOSED SANITARY SEWER EXIT
PROPOSED 8" WATER LINE
PROPOSED LIGHT POLES (TYP.)
EXISTING LIGHT POLE
PROPOSED 10" WATER LINE (SEE PROFILE SHEET)
PROPOSED MH-6
PROPOSED MH-5
PROPOSED 8" SANITARY SEWER (SEE PROFILE SHEET)
PROPOSED 12" WATER LINE (SEE PROFILE SHEET)
PROPOSED STREET LIGHTING CIRCUIT
EXISTING SANITARY (TO BE BUILT BY OTHERS)
PROPOSED WATERLINE BORE UNDER EXISTING 30" WATER LINE AND HAGAN ROAD
CONNECT PROPOSED 12" WATERLINE TO EXISTING 16" WATERLINE
EXISTING FIRE HYDRANT
20' U/E
EXISTING SANITARY (TO BE BUILT BY OTHERS)
PROPOSED 12" WATER LINE (SEE PROFILE SHEET)
PROPOSED 8" SANITARY SEWER (SEE PROFILE SHEET)
PROP. MH-1
EXISTING MH (TO BE BUILT WITH ADJACENT PROJECT EAST OF HAGAN. FIELD VERIFY EXISTING MH PRIOR TO CONSTRUCTING SANITARY LINE.)
EXISTING 30" TRANSMISSION WATER LINE (DO NOT DISTURB)
HAGEN ROAD
EXISTING 16" WATER LINE
EXISTING FIRE HYDRANT
PROPOSED MH-3
15' U/E
PROPOSED MH-4 (DROP MH)
PROPOSED WATERLINE BORE UNDER EXISTING 30" WATER LINE AND HAGAN ROAD
CONNECT PROPOSED 12" WATERLINE TO EXISTING 16" WATERLINE
10' U/E
EXISTING FIRE HYDRANT
EXISTING FIRE HYDRANT
SWMH #1507

N
TRUE
0 40 80 FEET

UTILITY DISCLAIMER

INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTORS ARE RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. INFORMATION SHOWN IS FROM MAPS PROVIDED OR DISCOVERED FROM UTILITY PROVIDERS.

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

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: UTILITY PLAN
DESIGNED BY: WLC
DRAWN BY: WLC
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SHEET TITLE

UTILITY PLAN

C113

SHEET 023 OF 131

Path: K:\lessummitmo\225051238.00\Draw\Sheets\Utility Plan.dwg
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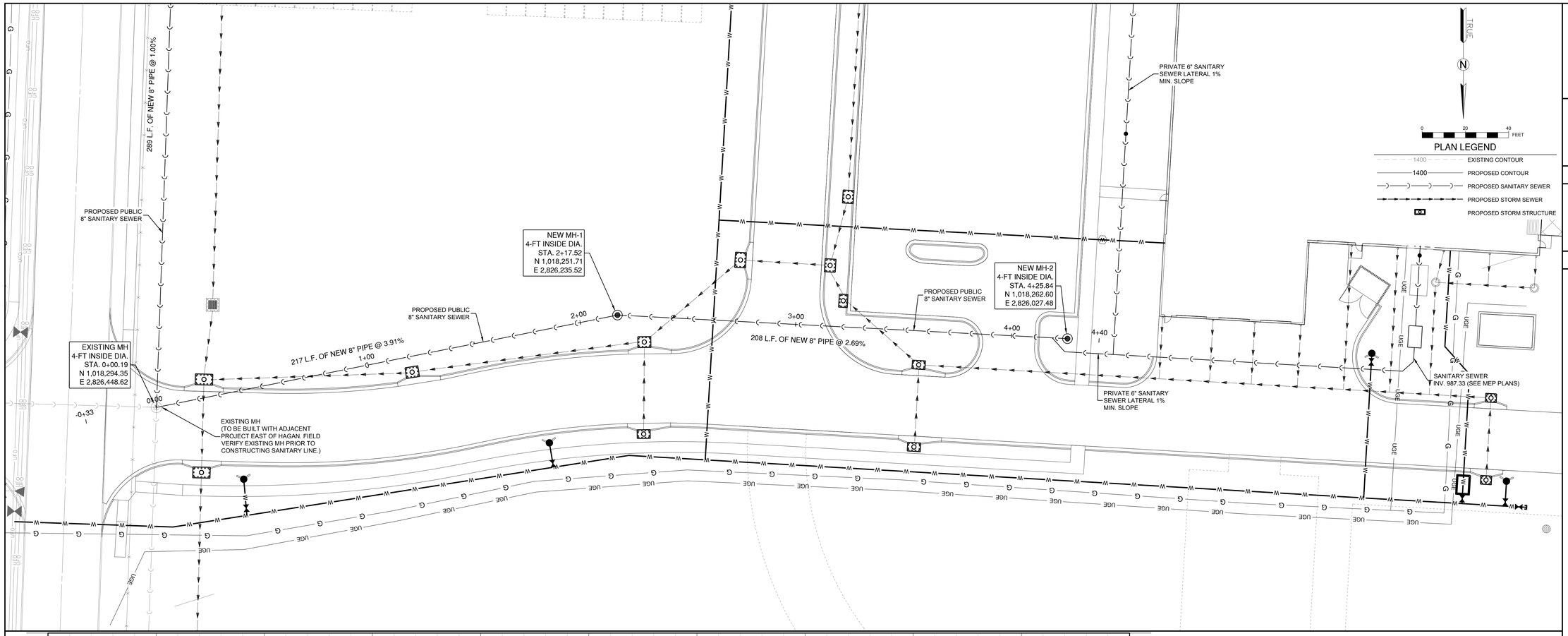

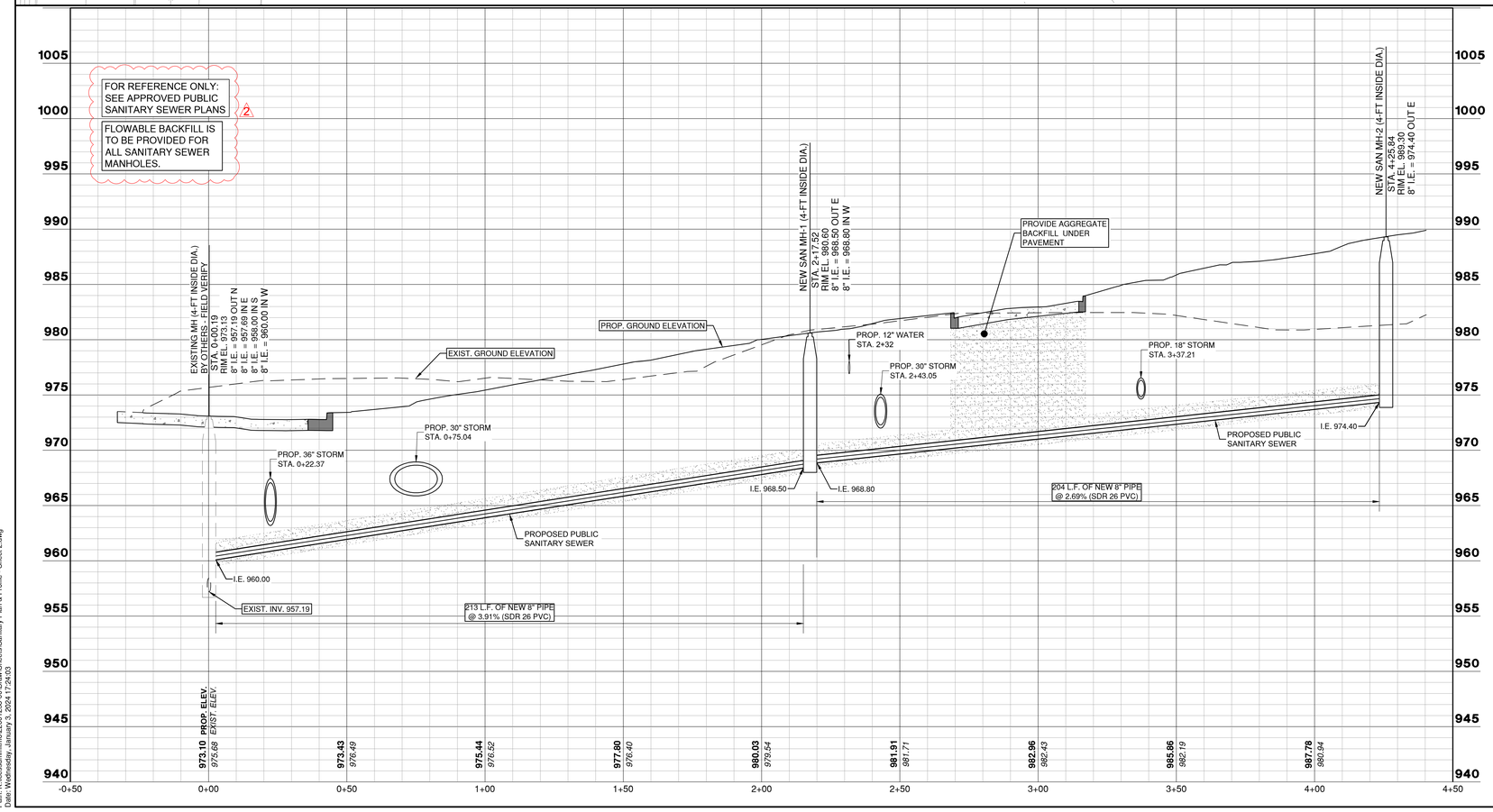

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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PROFESSIONAL ENGINEER
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JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: SANITARY PLAN & PROFILE - SHEET 2
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SHEET TITLE

SANITARY PLAN & PROFILE - SHEET 1

C114

SHEET 024 OF 131

Path: K:\lessummmo\2200\238.00\Draw\Sheets\Sanitary Plan & Profile - Sheet 2.dwg
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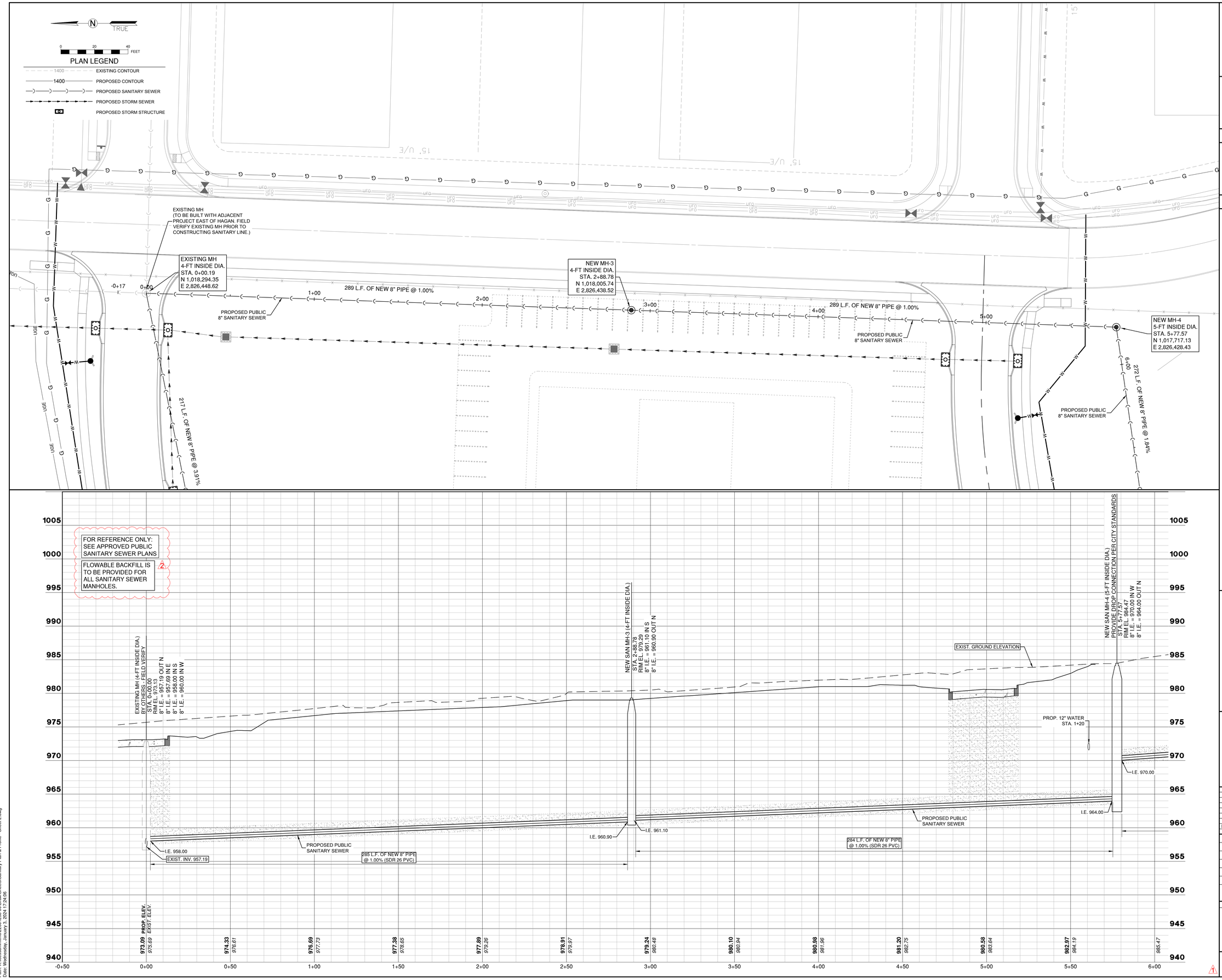

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
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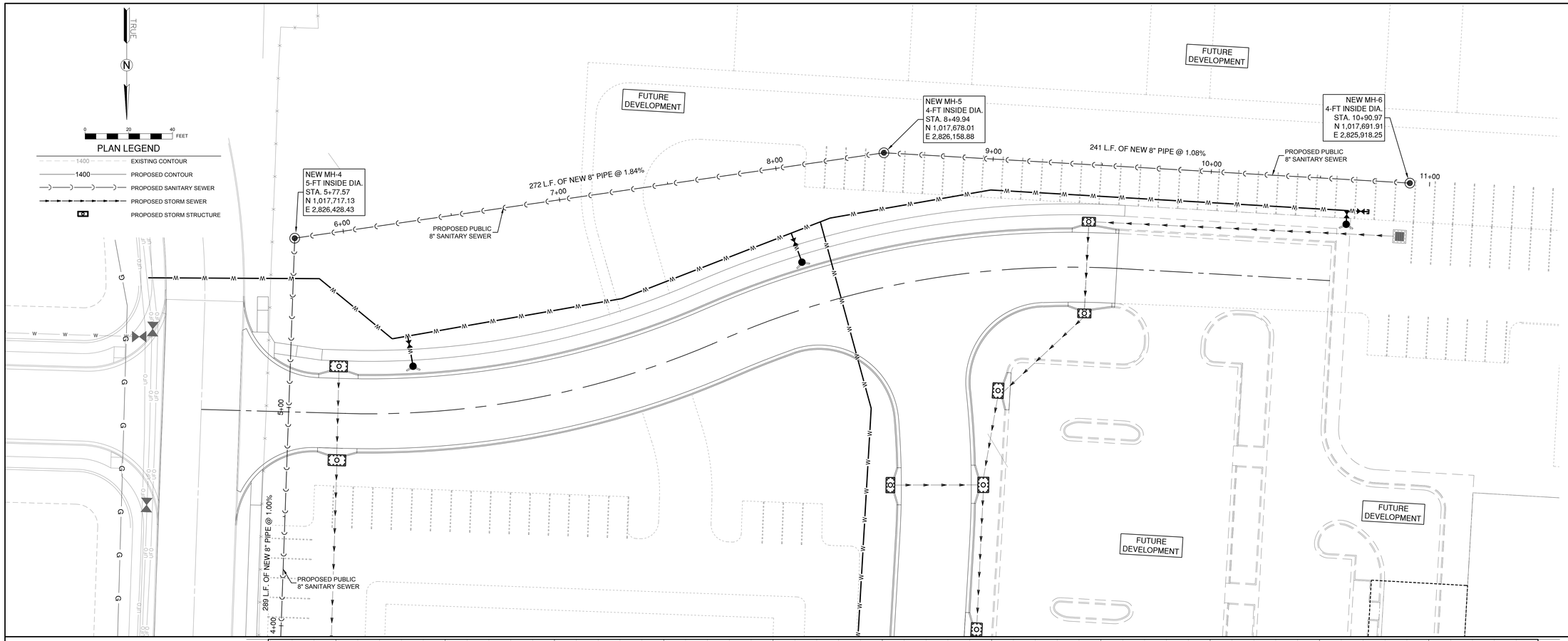
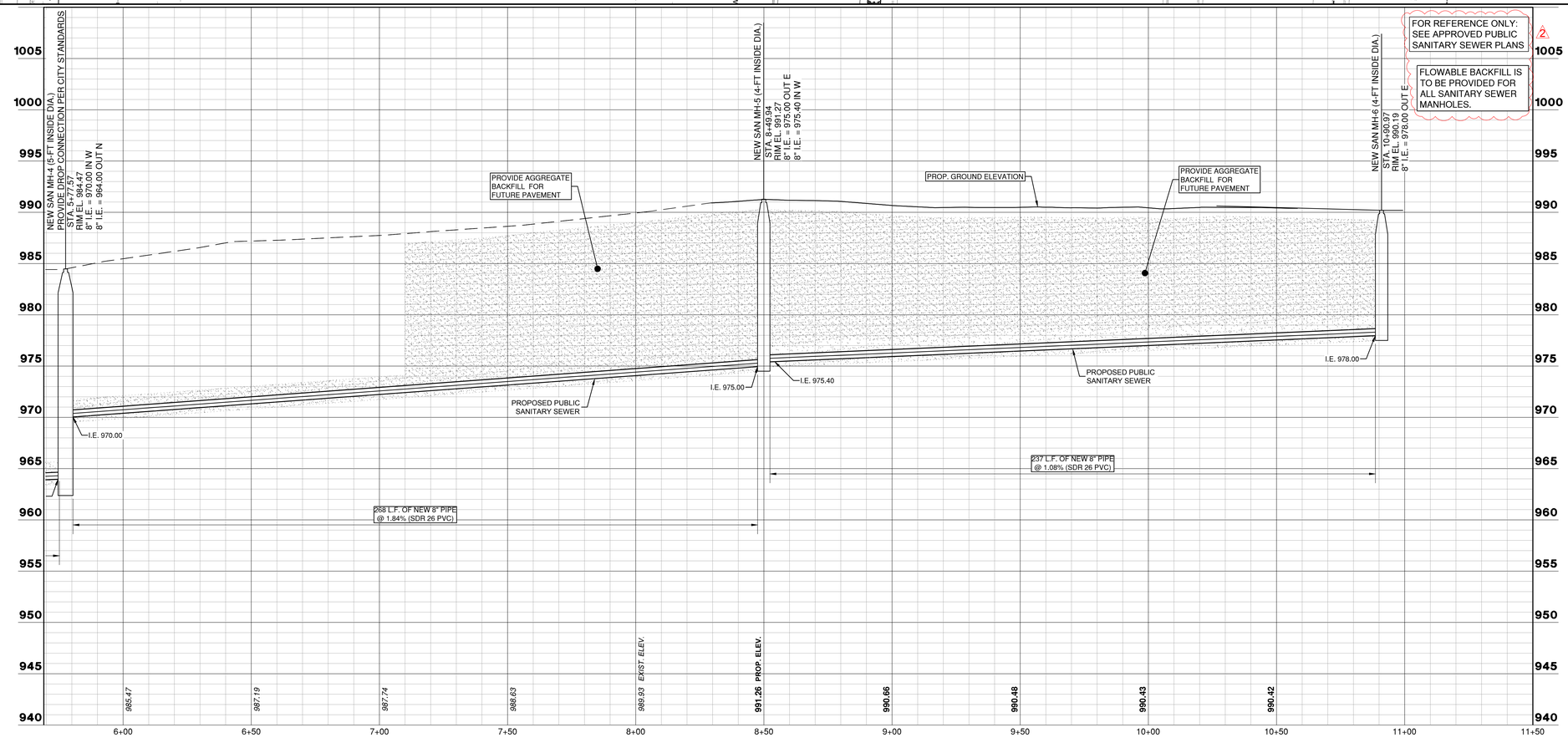
SANITARY PLAN & PROFILE - SHEET 2

C114A

SHEET 025 OF 131





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LEE'S SUMMIT MUNICIPAL AIRPORT
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: SANITARY PLAN & PROFILE - SHEET 2
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SHEET TITLE

SANITARY PLAN & PROFILE - SHEET 3

C115

SHEET 026 OF 131

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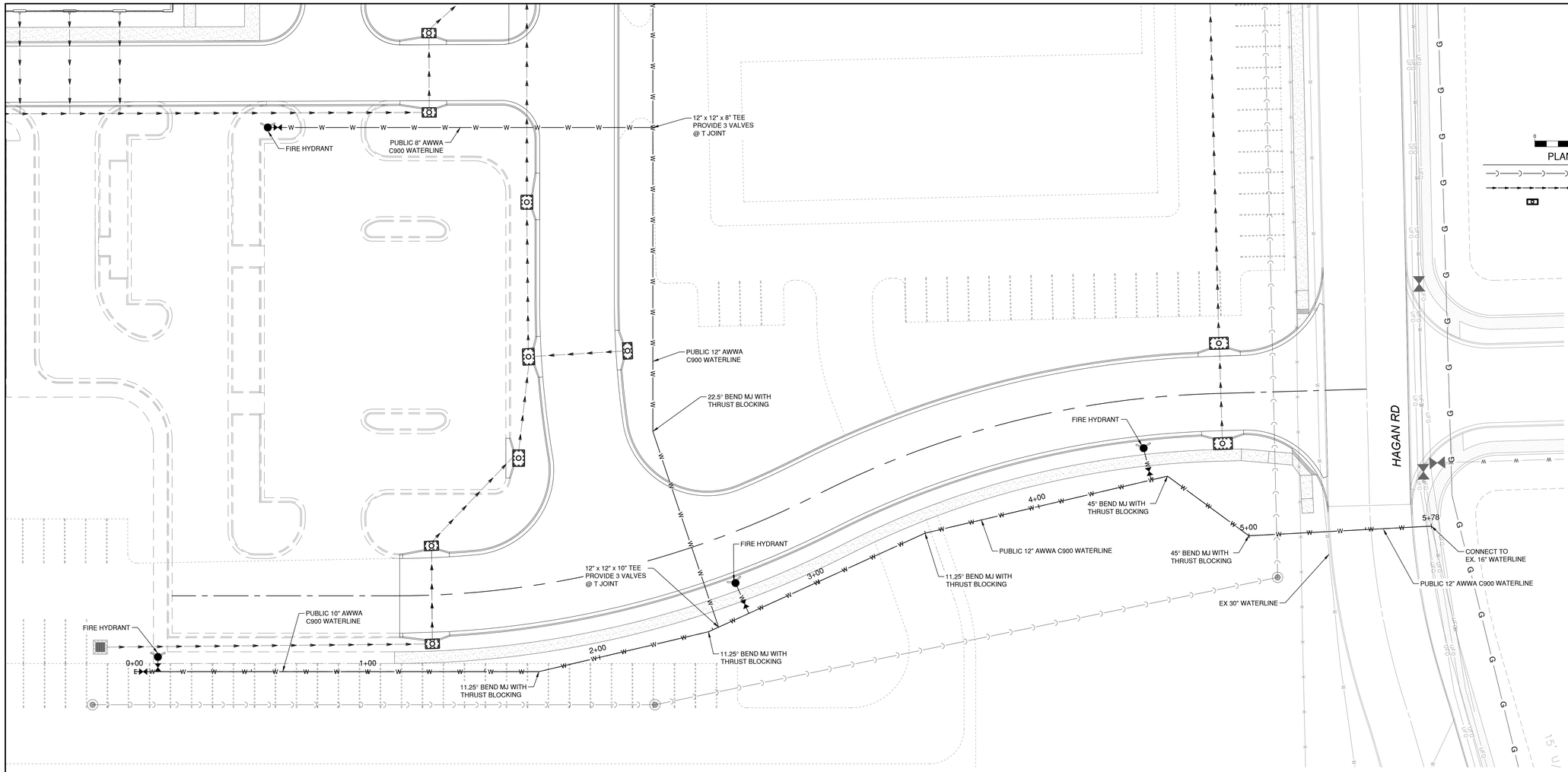

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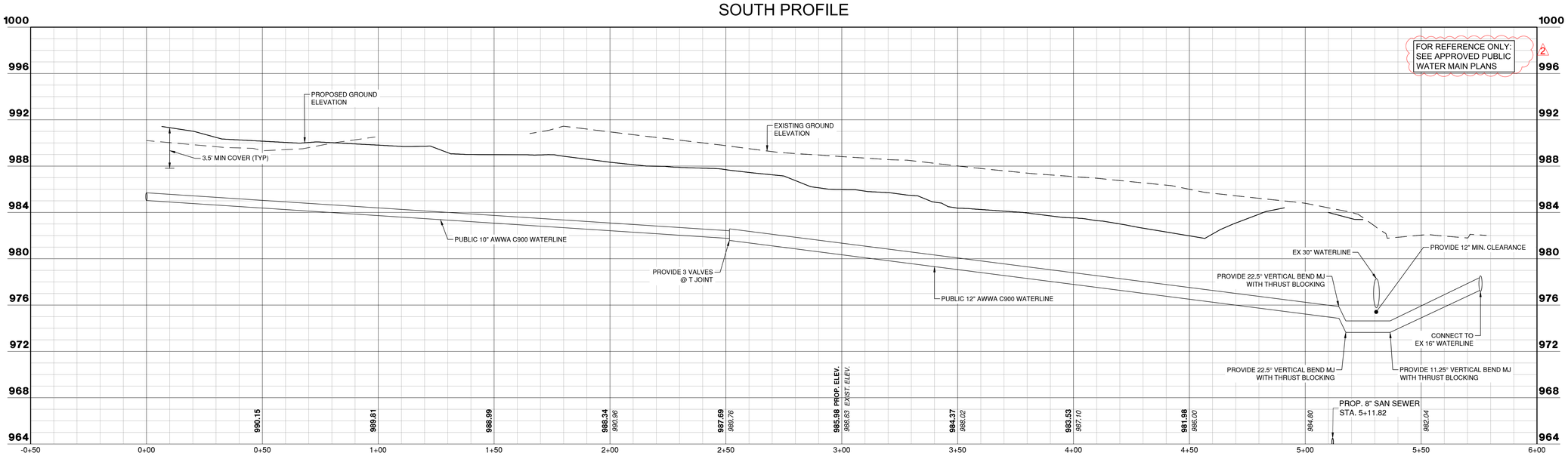

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: WATER LINE PLAN & PROFILE - SHEET 3
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WATER LINE PLAN & PROFILE - SHEET 1

C116

SHEET 027 OF 131

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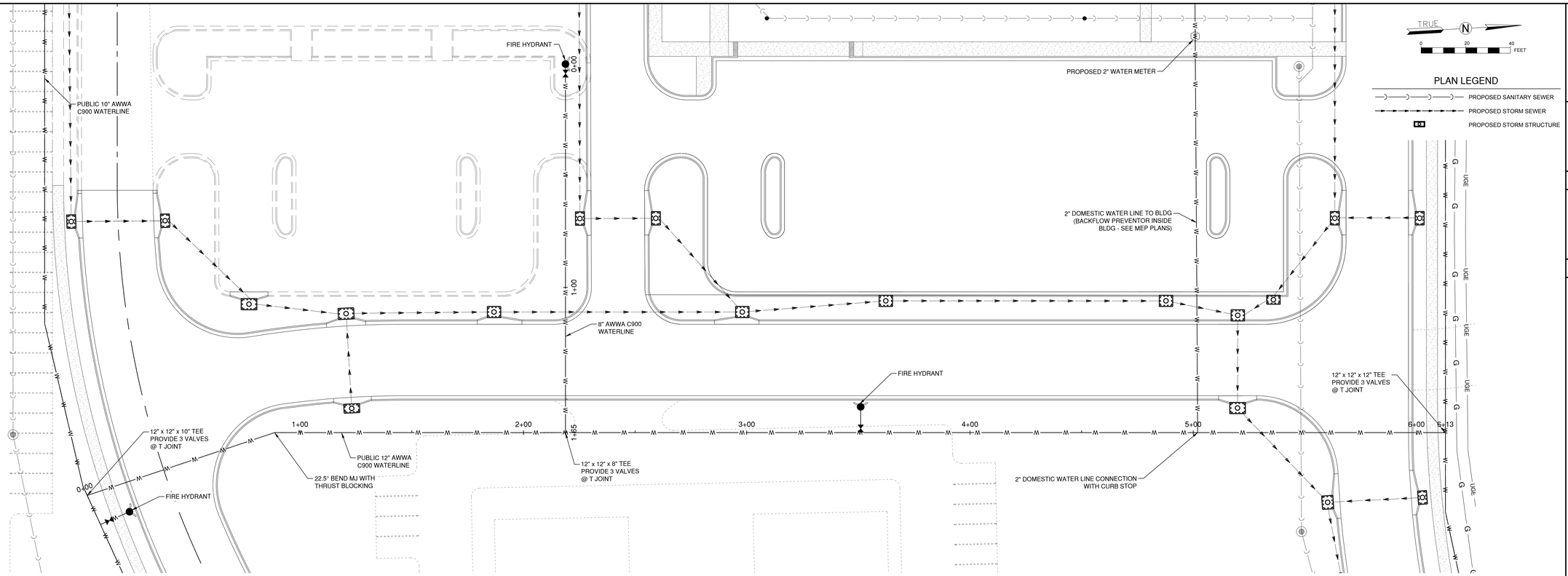
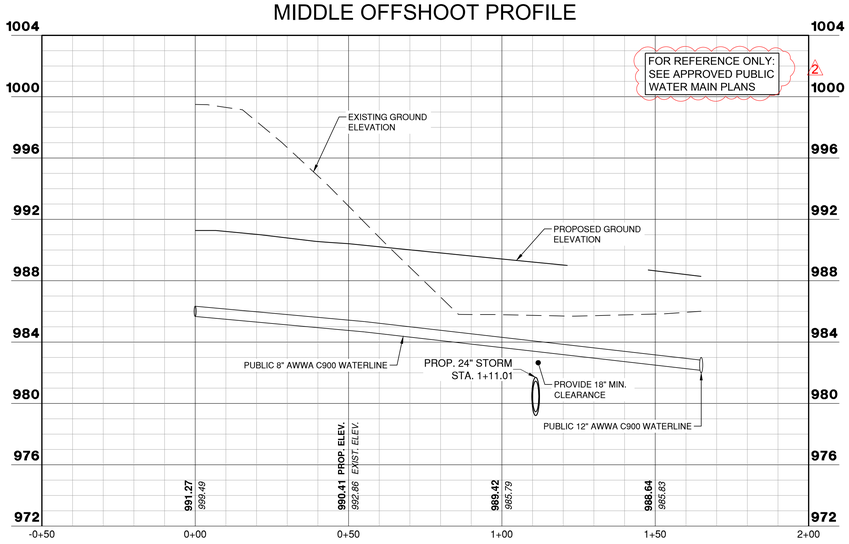


MIDDLE OFFSHOOT PROFILE



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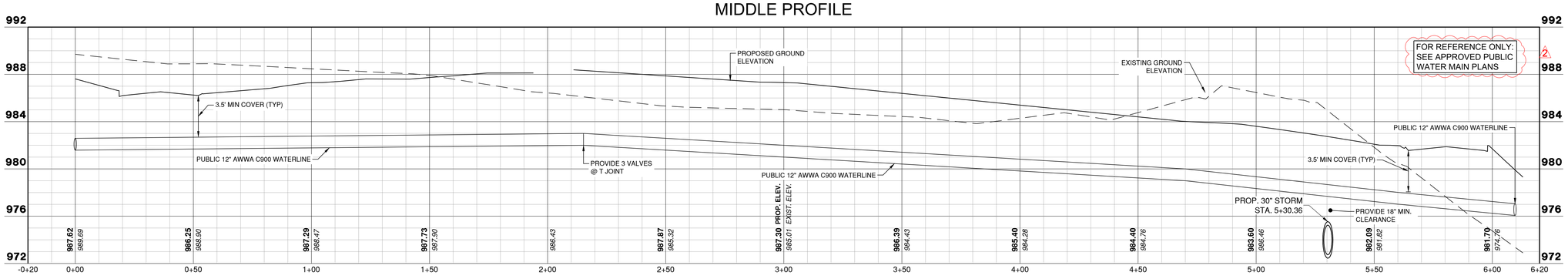

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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	WATER LINE PLAN & PROFILE - SHEET 3
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
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SHEET TITLE

WATER LINE PLAN & PROFILE - SHEET 2

C117

SHEET 028 OF 131

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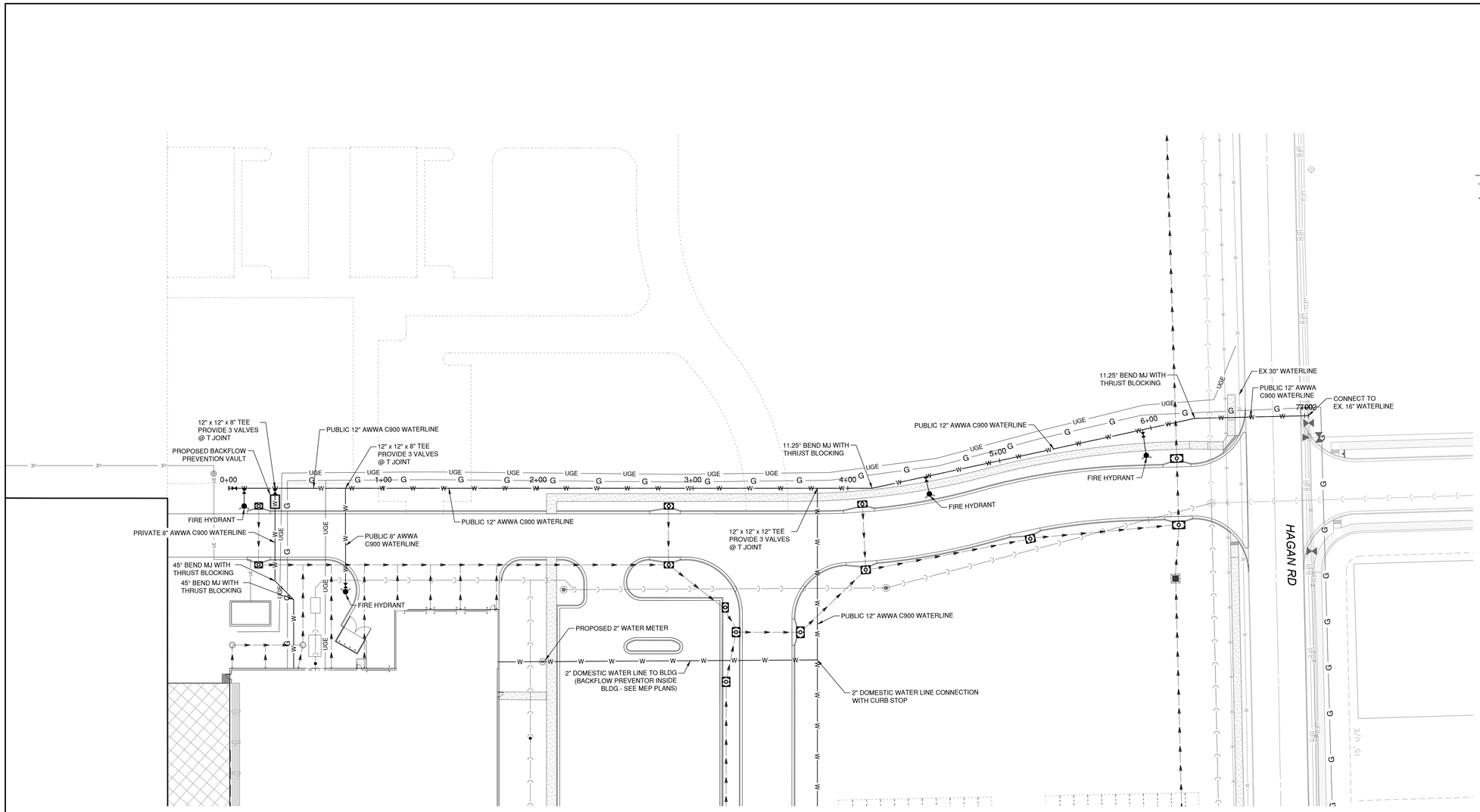
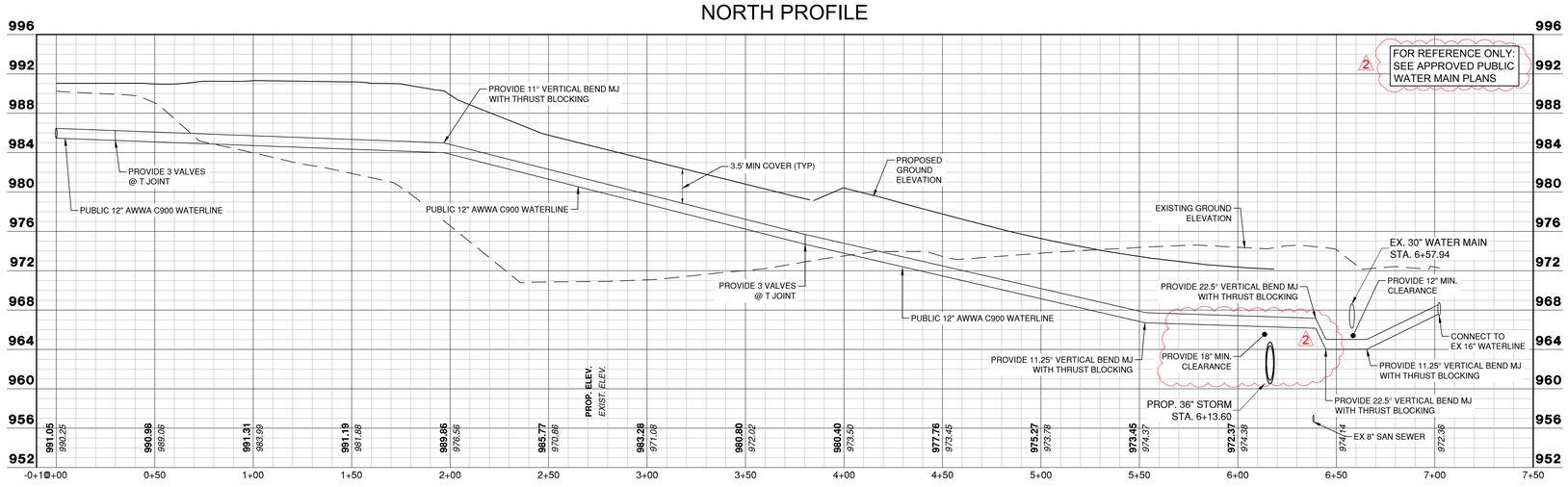


PLAN LEGEND

- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED STORM STRUCTURE

NORTH PROFILE



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LEE'S SUMMIT MUNICIPAL AIRPORT
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	WATER LINE PLAN & PROFILE - SHEET 3
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WATER LINE PLAN & PROFILE - SHEET 3

C118

SHEET 029 OF 131

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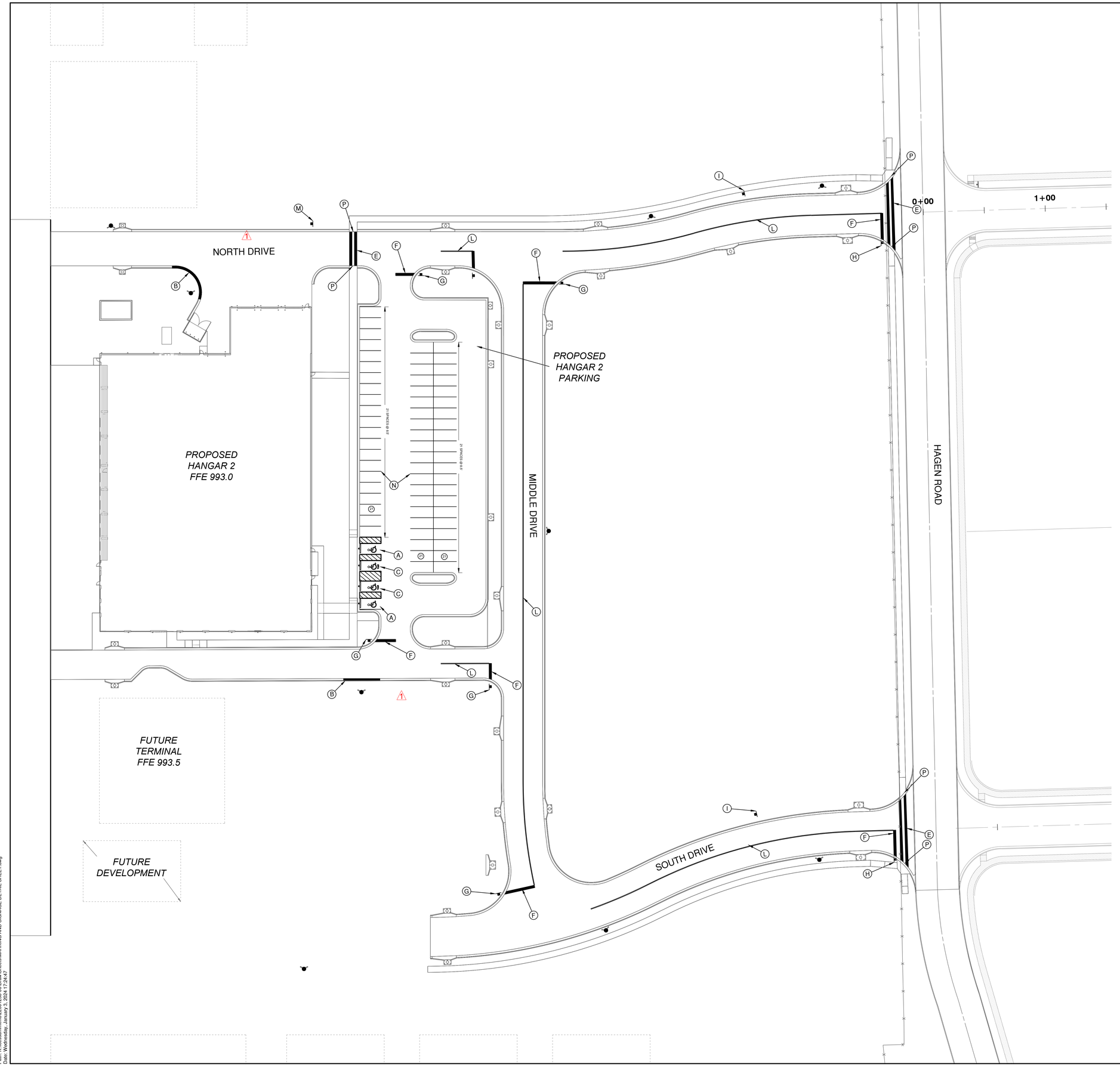

N

TRUE

0 30 60 FEET

PLAN KEYNOTES

- (A) ADA STALL AND BOLLARD MOUNTED SIGNAGE
- (B) FIRE LANE PAVEMENT MARKING
- (C) ADA VAN STALL AND BOLLARD MOUNTED SIGNAGE
- (D) TRAFFIC FLOW ARROWS
- (E) 24" WHITE CROSSWALK LINES PAINTED PERPENDICULAR TO TRAFFIC 24" APART
- (F) 2' WIDE WHITE STOP BAR MARKING
- (G) STOP SIGN
- (H) STOP SIGN WITH STREET NAME SIGNS
- (I) SPEED LIMIT SIGN
- (J) YIELD SIGN
- (K) CONCRETE WHEEL STOP
- (L) DOUBLE YELLOW CENTERLINE PAVEMENT MARKINGS
- (M) AIRPORT AUTHORIZED PERSONNEL ONLY SIGN
- (N) 4" THICK YELLOW PARKING STALL MARKING
- (O) WHITE YIELD PAVEMENT MARKINGS
- (P) ADA RAMP

R5-1 DO NOT ENTER SIGN
SIZE: 30 x 30

R2-1 SPEED LIMIT SIGN
SIZE: 24 x 30 (SINGLE LANE)
SPEED: 25MPH

R1-1 STOP SIGN
SIZE: 30 x 30

D3-1 STREET NAME SIGN
HEIGHT: 8"
LETTERING: 4"
1" THICK BORDER
GREEN BACKGROUND

R1-2 YIELD SIGN
SIZE: 36 x 36 x 36

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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TYLER G. HORN
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PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: MARKING AND SIGNAGE DETAIL SHEET
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MARKING AND SIGNAGE

C119

SHEET 030 OF 131

Path: K:\lessummo\mo-22001238.00\Draw\Sheets\MARKING AND SIGNAGE DETAIL SHEET.dwg
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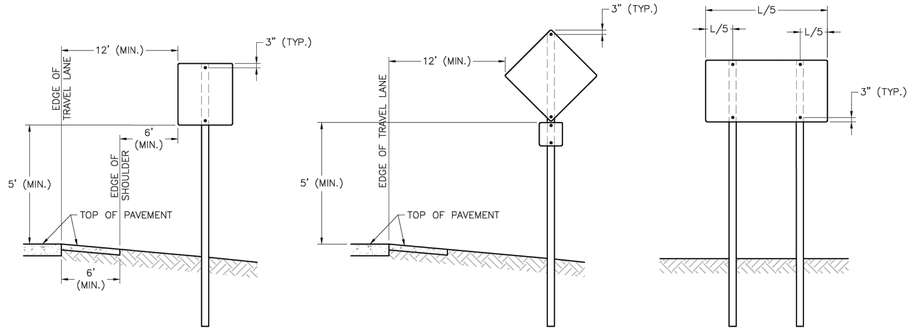
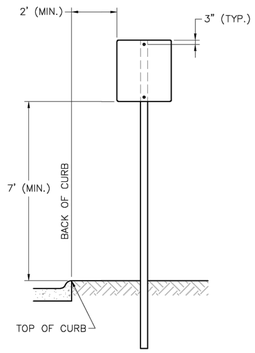


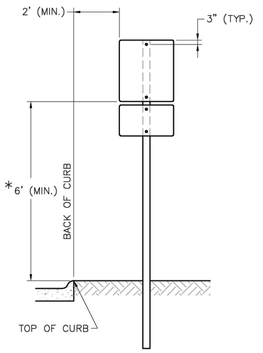
SIGN INSTALLATION FOR NON-CURBED STREET

SIGN INSTALLATION WITH AUXILIARY SIGN FOR NON-CURBED STREET

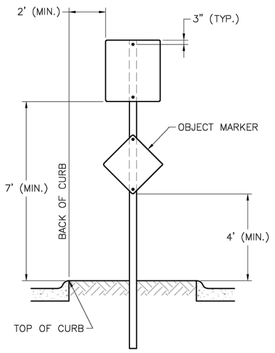
SIGN INSTALLATION WITH TWO SIGN POSTS



SIGN INSTALLATION FOR CURBED STREET



SIGN INSTALLATION WITH AUXILIARY SIGN FOR CURBED STREET

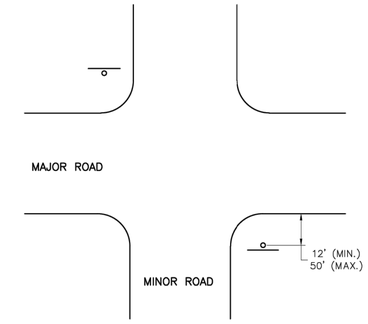


SIGN INSTALLATION FOR RAISED MEDIANS

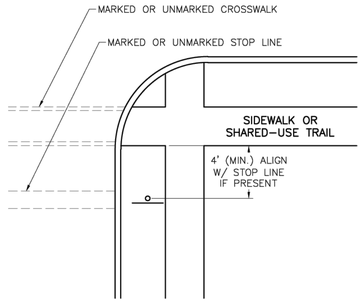
SIGN MOUNTING DETAILS

NOTES:

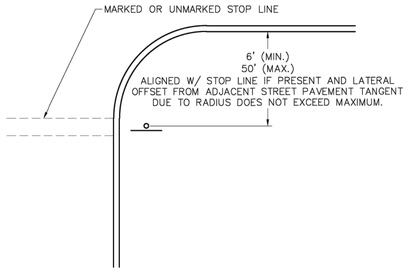
1. GENERALLY, THE SIGN MOUNTING HEIGHT SHOULD NOT BE MORE THAN 1' GREATER THAN THE MINIMUM MOUNTING HEIGHT.
2. *THE HEIGHT TO THE BOTTOM OF A SIGN WHEN IT IS LOCATED IN A PEDESTRIAN WALKWAY OR EXTENDS INTO A WALKWAY SHALL BE A MINIMUM OF 80 INCHES ABOVE THE WALKWAY.



NON-CURBED INTERSECTION INSTALLATION

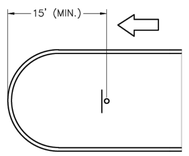


INTERSECTION WITH SIDEWALK/SHARED-USE TRAIL INSTALLATION



CURBED INTERSECTION INSTALLATION

CONTROL SIGN LOCATION



TYPICAL MEDIAN SIGN LOCATION

MEDIAN SIGN LOCATION

NOTES:

1. A 4" P.V.C. SLEEVE SHALL BE INSTALLED IN NEW CONCRETE MEDIANS AT EACH LOCATION WHERE A SIGN IS TO BE INSTALLED.
2. FOR EXISTING CONCRETE MEDIANS, A 4" HOLE SHALL BE CORED INTO THE CONCRETE.

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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

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

Sheet Name: SIGN MOUNTING DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SN-1

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: MARKING AND SIGNAGE DETAIL SHEET
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH

SHEET TITLE
MARKING AND SIGNAGE DETAIL - SHEET 1

C120
SHEET 031 OF 131

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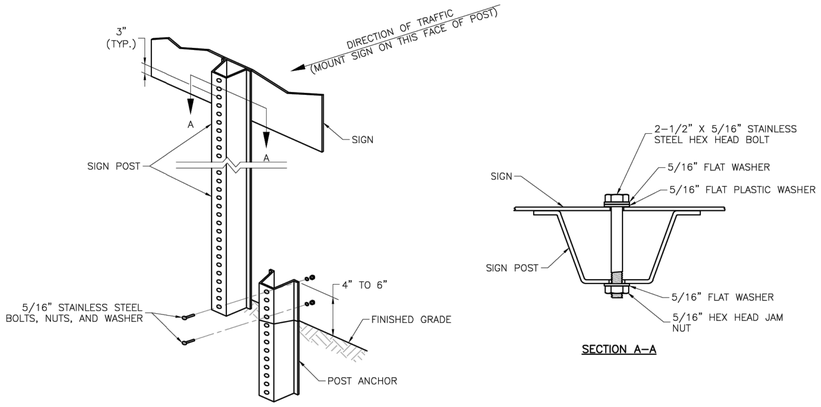


SECTION A–A

U–STEEL POST DETAILS

NOTES:

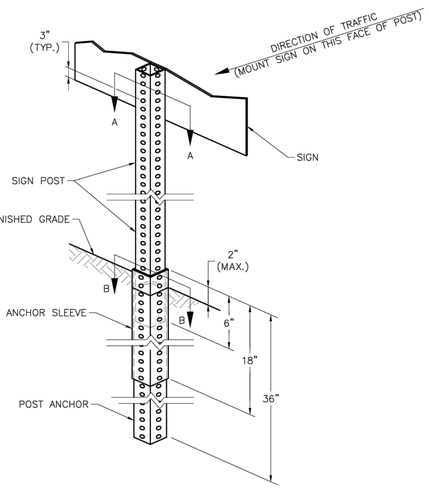
1. SPLICE SHALL BE POSITIONED ENTIRELY BETWEEN FINISHED GRADE LINE AND 18" ABOVE FINISHED GRADE LINE. ONLY ONE SPLICE WILL BE ALLOWED PER POST.
2. U–STEEL POST SHALL BE 3 LB./FT., GALVANIZED ACCORDING TO ASTM A123.
3. U–STEEL POST CAN BE USED FOR INSTALLATION OF SIGNS WITH AN AREA OF LESS THAN 2.5 SQUARE FEET.
4. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET.

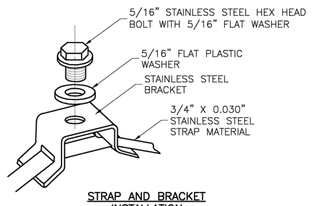
PERMANENT SIGNING GENERAL NOTES:

1. ALL SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY AND ALL UTILITIES WHEN INSTALLING SIGN POSTS, WHETHER THE UTILITY IS INDICATED ON THE PLANS OR NOT.
3. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF LEE'S SUMMIT.
4. THE CONTRACTOR SHALL STAKE THE LOCATION OF ALL SIGN POSTS TO BE INSTALLED. THE CITY INSPECTOR SHALL INSPECT THE STAKING PRIOR TO INSTALLATION. MINOR RELOCATION TO AVOID CONFLICTS MAY BE ALLOWED WITH THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
5. SIGNS SHOWN TO BE INSTALLED ON THE SIDE OF METAL POLES SHALL BE MOUNTED WITH STAINLESS STEEL STRAPS OR WING BRACKETS AS DETAILED. NO SIGNS ARE TO BE INSTALLED ON WOOD POLES. SEE TRAFFIC SIGNAL STANDARD DRAWINGS FOR THE INSTALLATION OF SIGNS ON MAST ARMS.
6. ALL POST MOUNTED SIGNS SHALL BE INSTALLED WITH BREAKAWAY ANCHORS ACCORDING TO THE STANDARD DRAWINGS.
7. ALL EXISTING SIGNS WILL BE USED IN PLACE DURING CONSTRUCTION AND PROTECTED FROM DAMAGE UNLESS OTHERWISE INDICATED IN THE PLANS. IF THE CONTRACTOR DAMAGES ANY EXISTING SIGN OR POSTS DURING CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED TO REPLACE THE DAMAGED MATERIALS WITH NEW SIGNS OR POSTS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING ANY SIGNS THAT ARE TO BE REINSTALLED ON THE PROJECT. ALL EQUIPMENT SHALL BE REINSTALLED IN GOOD CONDITION.
8. EXISTING PERMANENT SIGNS AND POSTS REMOVED BY THE CONTRACTOR FOR CONSTRUCTION PURPOSES WHICH ARE NOT TO BE REINSTALLED SHALL BE DELIVERED TO THE CITY'S PUBLIC WORKS MAINTENANCE FACILITY (1971 SE HAMBLEN ROAD). THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING EQUIPMENT IN GOOD CONDITION AND IS FULLY RESPONSIBLE FOR THE EQUIPMENT UNTIL IT IS DELIVERED.
9. ALL STOP, YIELD, OR STREET NAME SIGNS SHALL BE MAINTAINED IN A CONSPICUOUS LOCATION FOR THE DRIVING PUBLIC. ALL STOP AND YIELD SIGNS REMOVED FOR CONSTRUCTION PURPOSES CAN BE TEMPORARILY ERECTED IN REFLECTORIZED DRUMS (NO LESS THAN 7 FEET ABOVE THE PAVEMENT SURFACE) UNTIL THEY CAN BE REINSTALLED. ANY TEMPORARY STOP OR YIELD SIGN INSTALLATION TO BE LEFT IN PLACE OVERNIGHT WILL REQUIRE PRIOR APPROVAL FROM THE CITY INSPECTOR.

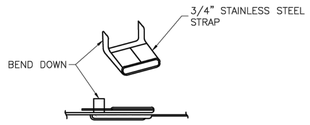
SQUARE STEEL POST INSTALLATION SEQUENCE:

1. SIGN POST ANCHOR DRIVEN PARTIALLY INTO THE GROUND USING A DRIVE CAP WITH A SLEDGE OR POWER EQUIPMENT.
2. ANCHOR SLEEVE SLIPPED OVER ANCHOR AND DRIVE INTO THE GROUND TOGETHER WITH THE SIGN POST ANCHOR.
3. INSERT SIGN POST INTO THE POST ANCHOR AND BOLT IN PLACE.





STRAP AND BRACKET INSTALLATION

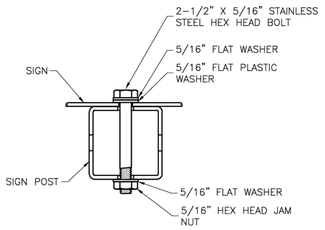


ENDS OF STRAP CLAMPED IN SEAL

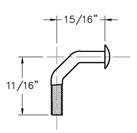
STRAP TYPE SIGN SUPPORT DETAILS

NOTES:

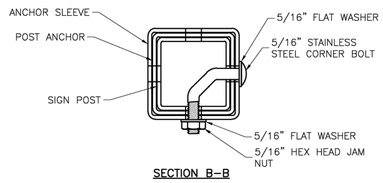
1. SIGNS ON METAL POLES SHALL BE ATTACHED WITH TWO BRACKETS AND STAINLESS STEEL BANDS.
2. HOLES IN SIGN FOR ATTACHMENT TO THE MOUNTING BRACKETS SHALL BE OFFSET A MINIMUM OF 2 INCHES FROM THE EDGE OF THE SIGN.
3. HOLES IN SIGN SHALL BE LOCATED SUCH THAT THE SIGN IS LEVEL.
4. ALL STRAP, BRACKET, AND SEAL MATERIALS SHOULD BE TYPE 201 STAINLESS STEEL.



SECTION A–A



CORNER BOLT



SECTION B–B

SQUARE STEEL POST DETAILS

NOTES:

1. SQUARE STEEL SIGN POSTS AND BREAK–AWAY ANCHOR SHALL CONSIST OF THE FOLLOWING MATERIALS:
   SIGN POST – 14 GA. 2" X 2" SQUARE STEEL POST
   POST ANCHOR – 12 GA. 2 ¼" X 2 ¼" X 36" SQUARE STEEL POST
   ANCHOR SLEEVE – 12 GA. 2 ½" X 2 ½" X 18" SQUARE STEEL POST
2. 14 GA. POSTS MUST MEET A CERTIFIED MINIMUM YIELD STRENGTH OF 60,000 PSI.
3. IN ALL INSTALLATIONS THE FIRST HOLE ABOVE THE FINISHED GRADE LINE ON THE SIGN POST, ANCHOR, AND ANCHOR SLEEVE MUST BE IN LINE FOR THE INSERTION OF THE CORNER BOLT.
4. THE MAXIMUM AREA FOR ONE SIGN POST IS 9.0 SQUARE FEET. A SIGN OR COMBINATION OF SIGNS WITH AN AREA GREATER THAN 9.0 SQUARE FEET WILL REQUIRE TWO POSTS. ALSO, SIGNS WITH A WIDTH GREATER THAN OR EQUAL TO 48" (NOT INCLUDING 36" X 36" DIAMOND SHAPED SIGNS) WILL REQUIRE TWO POSTS.

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

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

Sheet Name: POST DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SN-2

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

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MARKING AND SIGNAGE DETAIL - SHEET 2

C121

SHEET 032 OF 131

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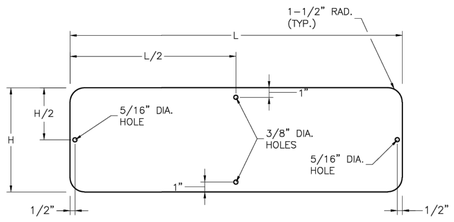
Date: Wednesday, January 3, 2024 17:24:50

STANDARD ABBREVIATION LISTS

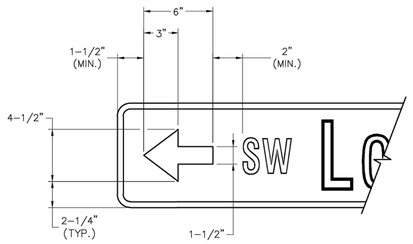
NAMED STREETS	
AVENUE	Ave
BOULEVARD	Blvd
CIRCLE	Cir
CREEK	Cr
COURT	Ct
CROSSING	Xing
DRIVE	Dr
HIGHWAY	Hwy
LANE	Ln
PARKWAY	Pkwy
PLACE	Pl
ROAD	Rd
STREET	St
TERRACE	Ter
TRAIL	Trl
WAY	Way

NUMBERED STREETS	
FIRST	ST
SECOND	ND
THIRD	RD
FOURTH TO TENTH	TH

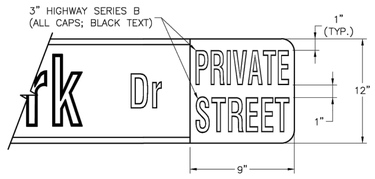


STREET NAME SIGN BLANK DETAILS

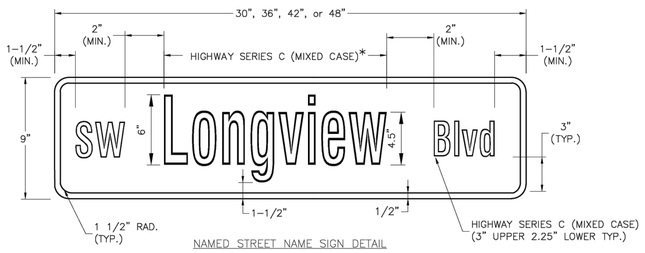
FOR MOUNTING ON SQUARE STEEL POSTS



ARROW DETAIL



PRIVATE STREET TAG DETAIL

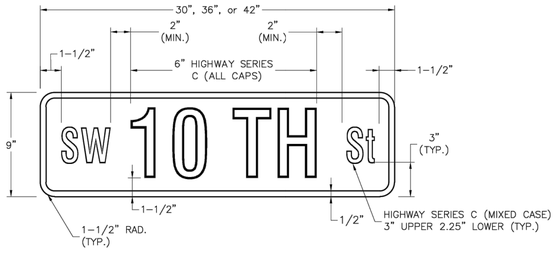


NAMED STREET NAME SIGN DETAIL

* USE HIGHWAY SERIES B (MIXED CASE) IN LIEU OF SERIES C IF NECESSARY TO FIT TEXT ON A 36" SIGN BLANK.

STREET NAME SIGN FACE DETAILS

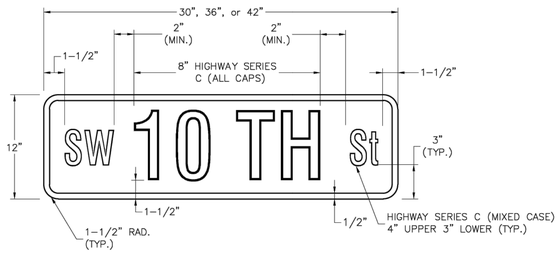
POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

POST MOUNTED 2-LANE ALL SPEEDS AND MULTI-LANE UNDER 40 MPH



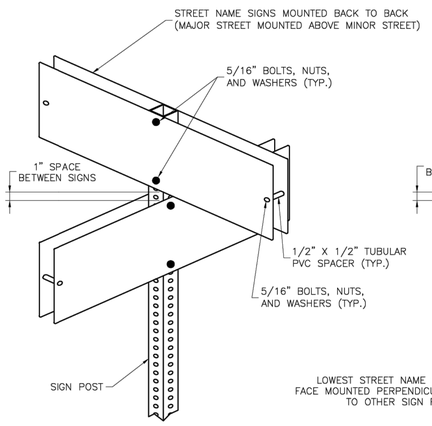
NUMBERED STREET NAME SIGN DETAIL

STREET NAME SIGN FACE DETAILS

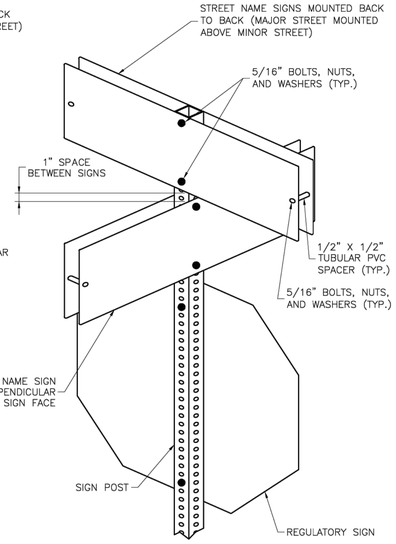
POST MOUNTED MULTI-LANE GREATER THAN 40 MPH

NOTES:

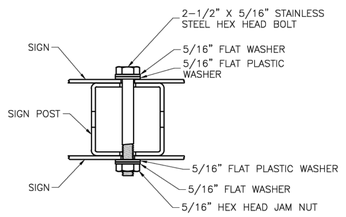
1. FOR ALL STREET NAME SIGNS, THE LEGEND SHALL BE WHITE AND THE BACKGROUND SHALL BE GREEN.
2. ARROWS SHALL BE ADDED TO STREET NAME SIGNS WHERE THE NAME OF A STREET CHANGES AT AN INTERSECTION. STREET NAME SIGNS WITH ARROWS ARE TO BE INSTALLED ON EACH SIDE OF THE INTERSECTION TO INDICATE THE CHANGE IN NAMES. ARROWS SHALL BE WHITE.
3. THE "PRIVATE STREET" TAG SHOULD BE ADDED TO THE END OF STREET NAME SIGNS TO INDICATE WHERE A STREET THAT IS OUTSIDE THE RIGHT-OF-WAY INTERSECTS A PUBLIC STREET. THE BACKGROUND FOR THE "PRIVATE STREET" TAG SHALL BE YELLOW.
4. MULTI-LANE IS DEFINED AS HAVING 2 LANES OR MORE IN EACH DIRECTION, EXCLUDING TURN LANES.
5. OVERHEAD SIGN DETAILS MAY BE FOUND ON THE SIGNAL HEAD MOUNTING DETAIL.



SIGNS INSTALLED SEPARATELY



SIGNS INSTALLED WITH OTHER SIGNS



PLAN VIEW

SQUARE STEEL POST MOUNTING DETAILS

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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

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

Sheet Name: STREET NAME SIGN DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SN-3

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: MARKING AND SIGNAGE DETAIL SHEET
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH

SHEET TITLE
MARKING AND SIGNAGE DETAIL - SHEET 3

C122
SHEET 033 OF 131

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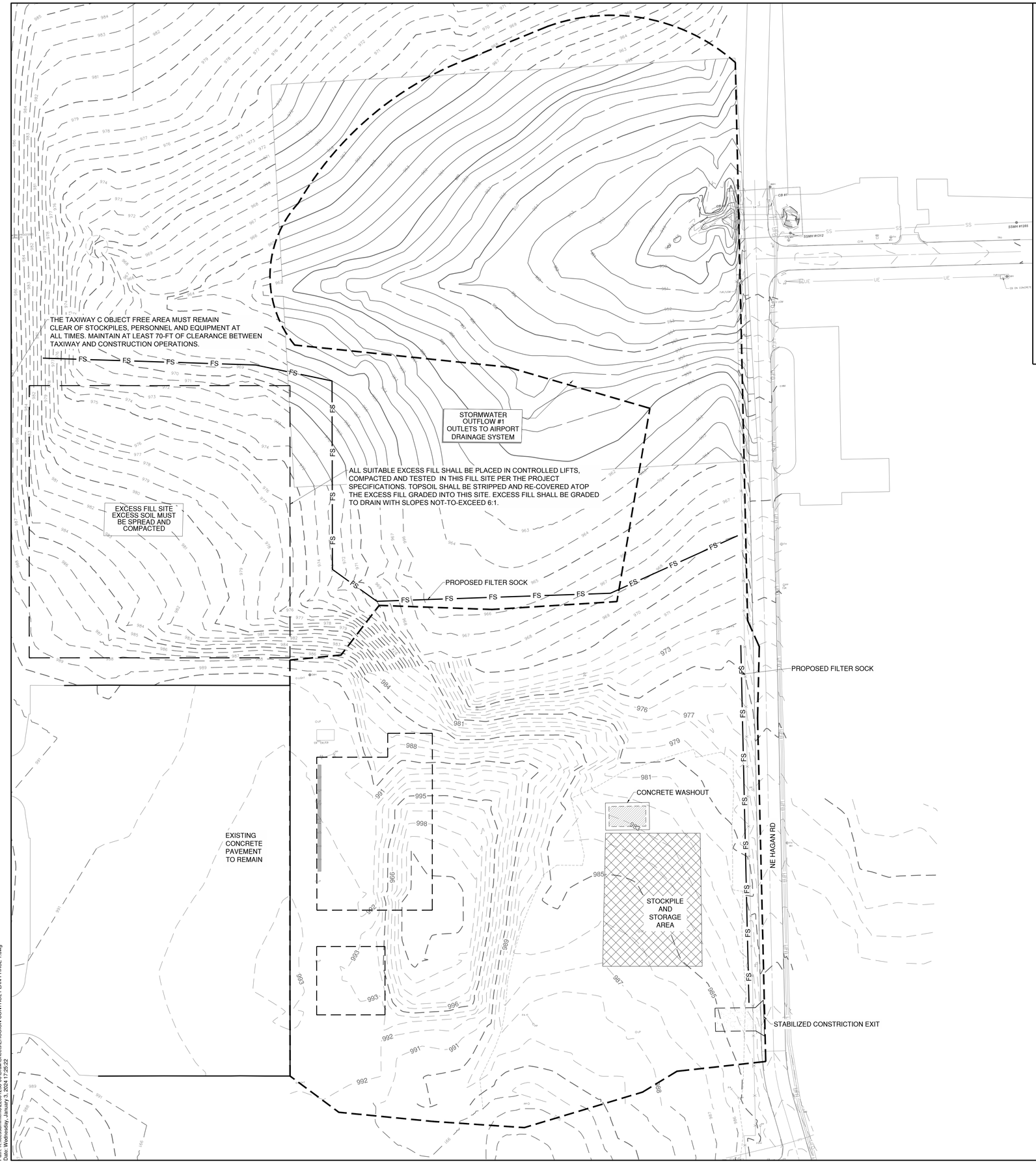

LEGEND

- LIMITS OF DISTURBANCE
- EXISTING CONTOUR (1400)
- PROPOSED CONTOURS (1400)
- PROPOSED FILTER SOCK (FS)
- FLOW ARROW
- TEMPORARY CONCRETE WASHOUT AS REQUIRED FOR PCC CONSTRUCTION
- AREA TO RECEIVE SEEDING / FERTILIZING PER SPECIFICATIONS AND NORTH AMERICAN GREEN EroNet SC150 EROSION CONTROL BLANKET SEE EROSION CONTROL DETAILS
- AREA TO BE SEEDED
- RIP-RAP AT END SECTION SEE EROSION CONTROL DETAILS
- STABILIZED CONSTRICTION ENTRANCE (COORDINATE LOCATION WITH OWNER) SEE EROSION CONTROL DETAILS
- STOCKPILE AND STORAGE AREA

N
TRUE
0 60 120 FEET

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR MUST INSTALL PERIMETER SILT SOCK CONTROLS PRIOR TO GRADING OPERATIONS.
2. WHEN NEW INLETS ARE INSTALLED, CONTRACTOR TO PUT IN PLACE INLET PROTECTION ON NEW INLETS AS SOON AS POSSIBLE AS INDICATED ON THE PLANS.
3. AFTER GRADING OF DITCHES, DITCH CHECKS TO BE PUT IT PLACE AS SOON AS POSSIBLE.
4. ALL INLET PROTECTION, SILT SOCKS, AND DITCH CHECKS TO REMAIN IN PLACE AND BE MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED UNTIL FULL VEGETATION IS ESTABLISHED. CONTRACTOR TO USE SEEDING AND EROSION CONTROL BLANKETS ACCORDING TO REQUIREMENTS OF THIS SHEET AND LANDSCAPE PLANS.

ACREAGE SUMMARY

DISTURBED AREA =	13.71 AC
IMPERVIOUS AREA =	5.17 AC
PERVIOUS AREA =	8.54 AC

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KANSAS CITY, MO 64108

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1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	EROSION CONTROL PLAN-PHASE 1
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
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SHEET TITLE

EROSION CONTROL PLAN-PHASE 1

C123

SHEET 034 OF 131

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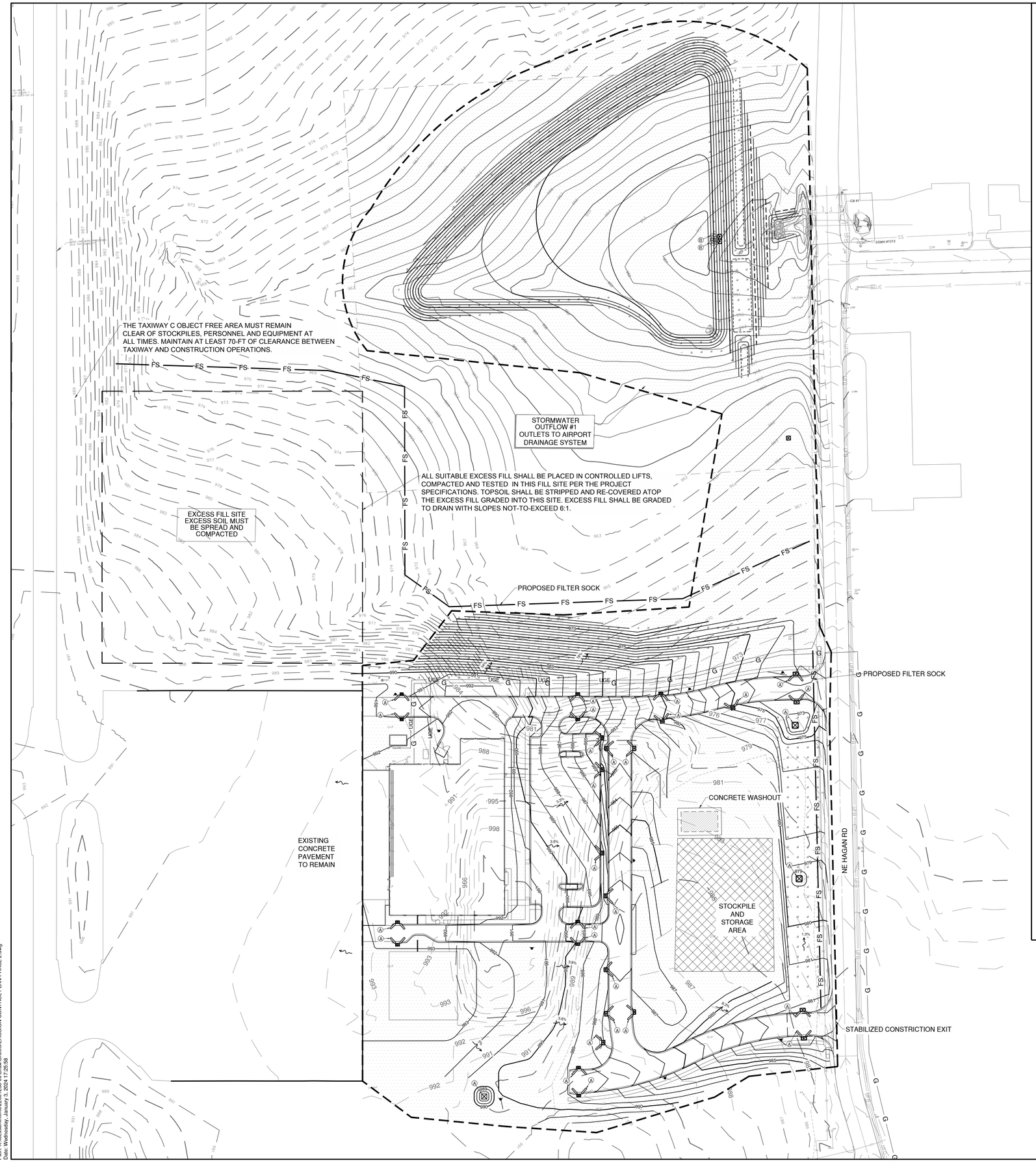

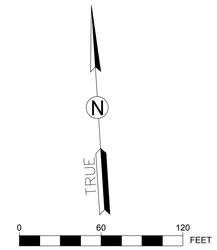

LEGEND

- AREA TO RECEIVE SEEDING / FERTILIZING PER SPECIFICATIONS AND NORTH AMERICAN GREEN EroNet SC150 EROSION CONTROL BLANKET SEE EROSION CONTROL DETAILS
- AREA TO BE SEEDED
- RIP-RAP AT END SECTION SEE EROSION CONTROL DETAILS
- STABILIZED CONSTRICTION ENTRANCE (COORDINATE LOCATION WITH OWNER) SEE EROSION CONTROL DETAILS
- STOCKPILE AND STORAGE AREA
- LIMITS OF DISTURBANCE
- 1400 EXISTING CONTOUR
- 1400 PROPOSED CONTOURS
- FS FS PROPOSED FILTER SOCK
- FLOW ARROW
- INLET PROTECTION
- BASIN OUTFALL PROTECTION
- TEMPORARY CONCRETE WASHOUT AS REQUIRED FOR PCC CONSTRUCTION

SEQUENCE OF CONSTRUCTION:

1. CONTRACTOR MUST INSTALL PERIMETER FILTER SOCK CONTROLS PRIOR TO GRADING OPERATIONS.
2. WHEN NEW INLETS ARE INSTALLED, CONTRACTOR TO PUT IN PLACE INLET PROTECTION ON NEW INLETS AS SOON AS POSSIBLE AS INDICATED ON THE PLANS.
3. AFTER GRADING OF DITCHES, DITCH CHECKS TO BE PUT IT PLACE AS SOON AS POSSIBLE.
4. ALL INLET PROTECTION, SILT SOCKS, AND DITCH CHECKS TO REMAIN IN PLACE AND BE MAINTAINED THROUGHOUT CONSTRUCTION AS REQUIRED UNTIL FULL VEGETATION IS ESTABLISHED. CONTRACTOR TO USE SEEDING AND EROSION CONTROL BLANKETS ACCORDING TO REQUIREMENTS OF THIS SHEET AND LANDSCAPE PLANS.

KEYNOTE

- (A) INLET PROTECTION
- (B) BASIN OUTFALL PROTECTION

ACREAGE SUMMARY

DISTURBED AREA = 13.71 AC

IMPERVIOUS AREA = 5.17 AC

PERVIOUS AREA = 8.54 AC

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: EROSION CONTROL PLAN-PHASE 2
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
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SHEET TITLE

EROSION CONTROL PLAN-PHASE 2

C124

SHEET 035 OF 131

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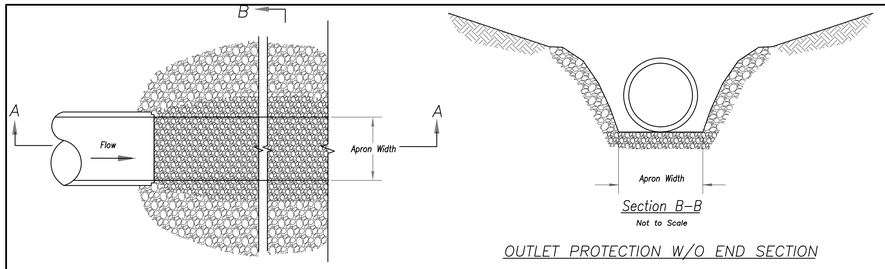
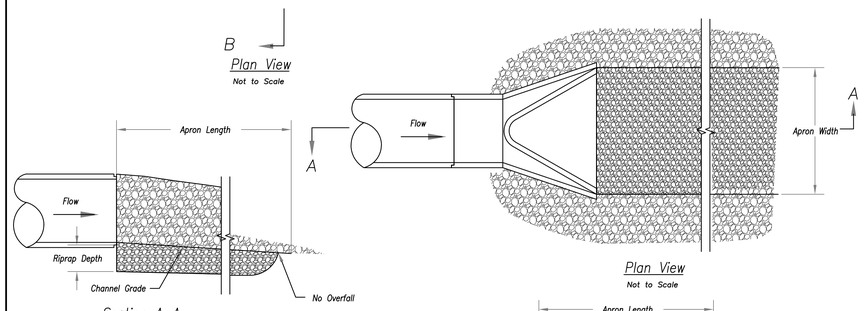


OUTLET PROTECTION W/O END SECTION



OUTLET PROTECTION WITH END SECTION

Notes:

1. *Rock all sides steeper than 3:1.*
2. *Stabilize all disturbed areas downstream of outlet to the limits of disturbance.*
3. *Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.*
4. *Install riprap apron so that it is no higher than flowline of pipe*
5. *Reference APWA Specification 2650 for rock type, size, and placement.*

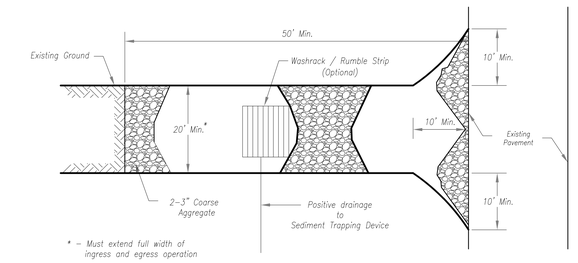
OUTLET PROTECTION E1
N.T.S.

Maintenance for Construction Entrance:

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

Notes for Construction Entrance:

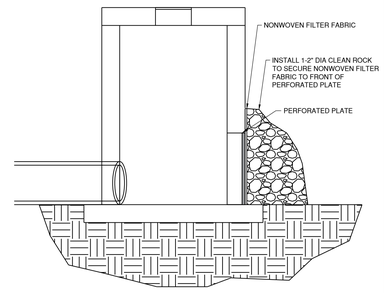
1. *Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.*
2. *Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage*
3. *If slope towards the public road exceeds 2%, construct a 6– to 8–inch high ridge 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.*



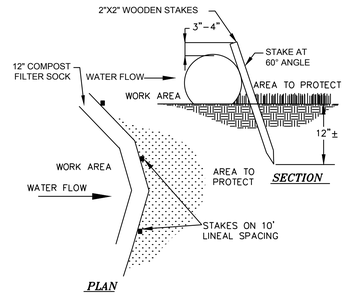
CONSTRUCTION ENTRANCE

STABILIZED CONSTRUCTION ENTRANCE E2
N.T.S.

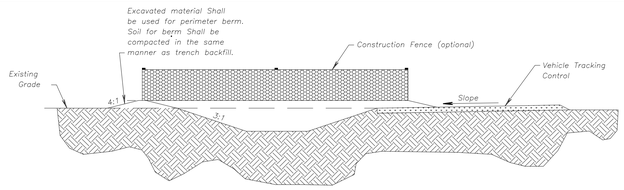
NOTES:
1. REFER TO DEWATERING DETAIL FOR REMOVAL OF WATER.
2. REMOVAL OF WATER VIA TRENCHED RELEASE IS A VIOLATION.
3. SEDIMENT SHALL BE REMOVED PRIOR TO SEEDING THE BASIN.
4. DAM STRUCTURE SHALL BE REMOVED WHEN UPSTREAM AREAS HAVE BEEN STABILIZED.



BASIN OUTFALL PROTECTION E3
N.T.S.



12" FILTER SOCK E4
N.T.S.



CONCRETE WASHOUT

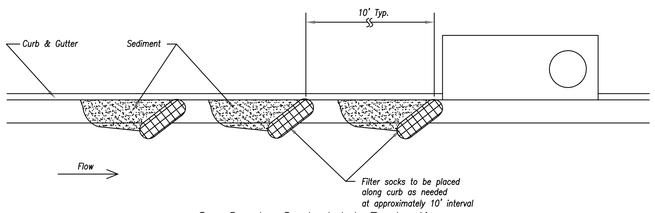
Notes for Concrete Washout:

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.*

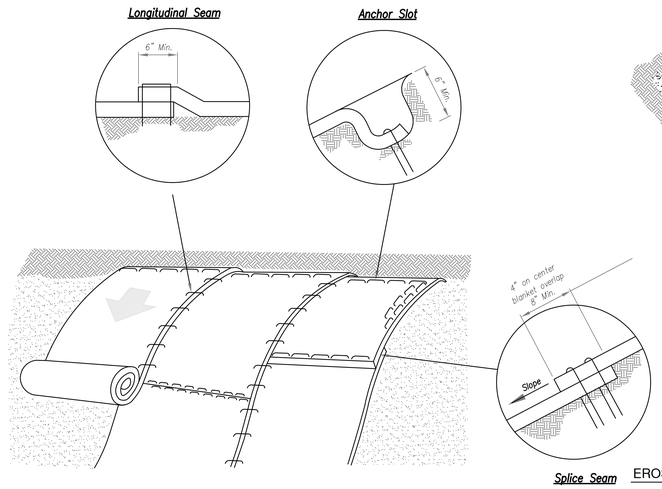
Maintenance for Concrete Washout:

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 property.*
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.*

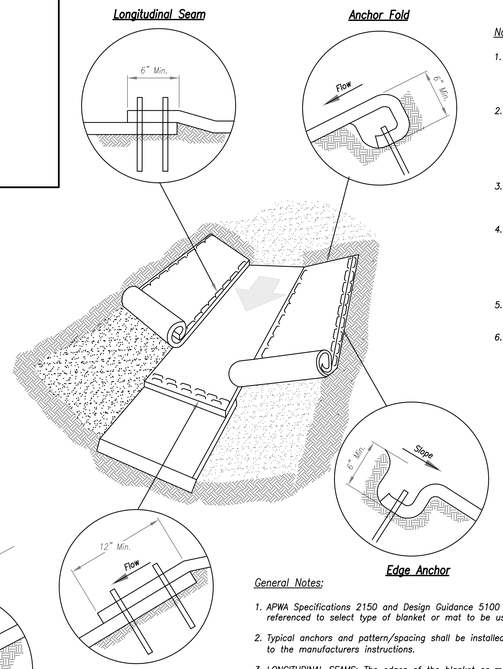
CONCRETE WASHOUT E5
N.T.S.



CURB INLET PROTECTION E6
N.T.S.



EROSION CONTROL BLANKETS E7
N.T.S.



Notes for Installation in Channels:

1. *Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.*
2. *ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.*
3. *SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.*
4. *CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.*
5. *EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.*
6. *TERMINUS: The bottom edge of the mat shall be anchored.*

General Notes:

1. *APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.*
2. *Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.*
3. *LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.*

Maintenance:

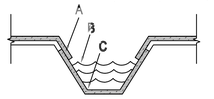
1. *Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.*
2. *Edges or seams that are loose or frayed shall be secured.*

Critical Points:

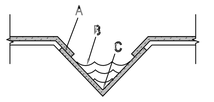
A – *Overlaps and seams;*

B – *Projected water line;*

C – *Channel bottom / side slope vertices;*



Trapezoidal Channel



V Channel

Installation in Channels

CMT
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1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER
SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	EROSION CONTROL DETAILS
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
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SHEET TITLE

EROSION CONTROL DETAILS

C125

SHEET 036 OF 131

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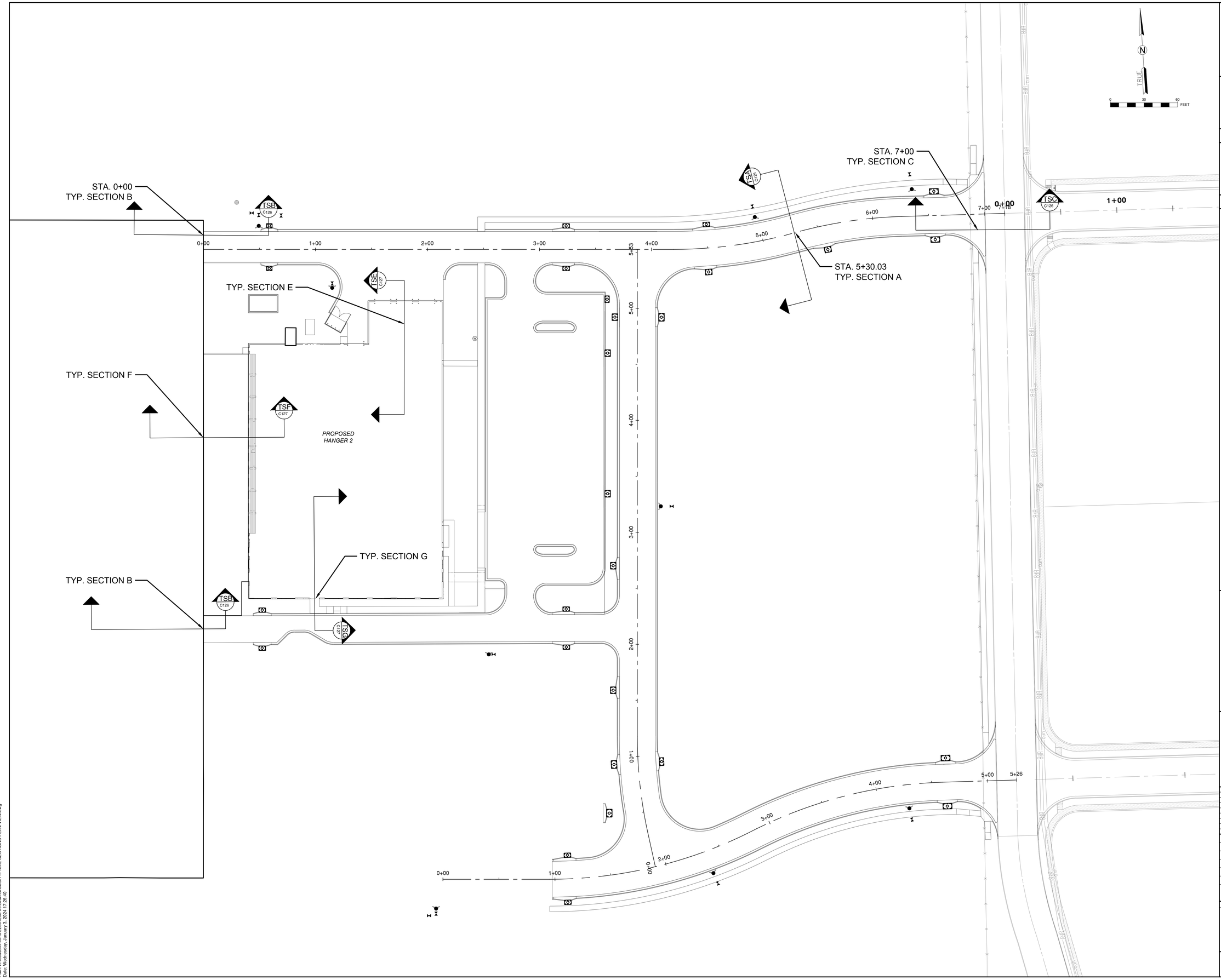

CMT
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KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
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olsson
1301 BURLINGTON STREET
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	TYPICAL SECTIONS PLAN VIEW
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
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SHEET TITLE

TYPICAL SECTIONS PLAN VIEW

C126

SHEET 037 OF 131

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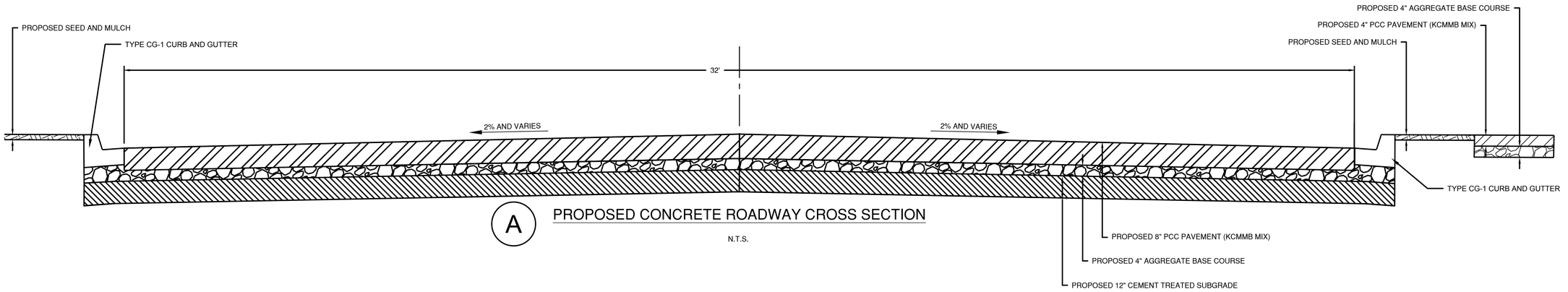
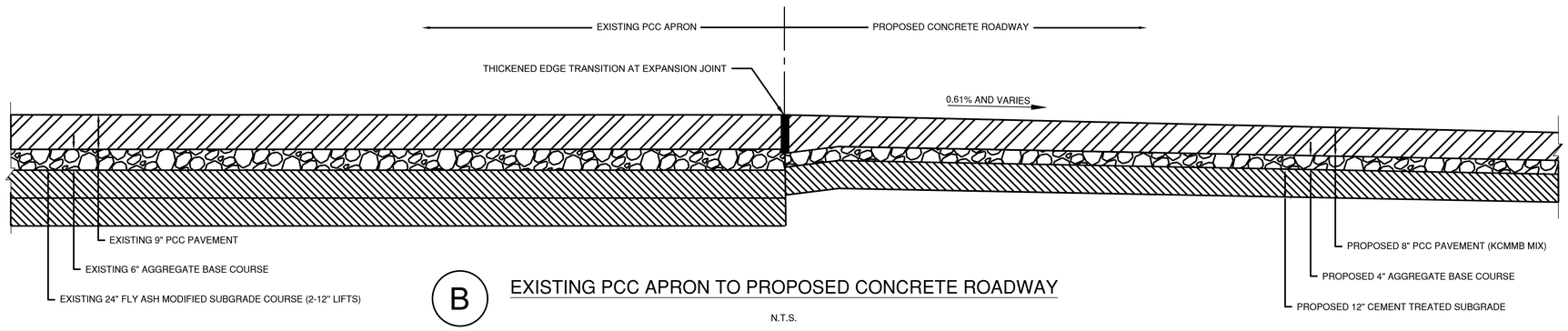


A PROPOSED CONCRETE ROADWAY CROSS SECTION

N.T.S.



B EXISTING PCC APRON TO PROPOSED CONCRETE ROADWAY

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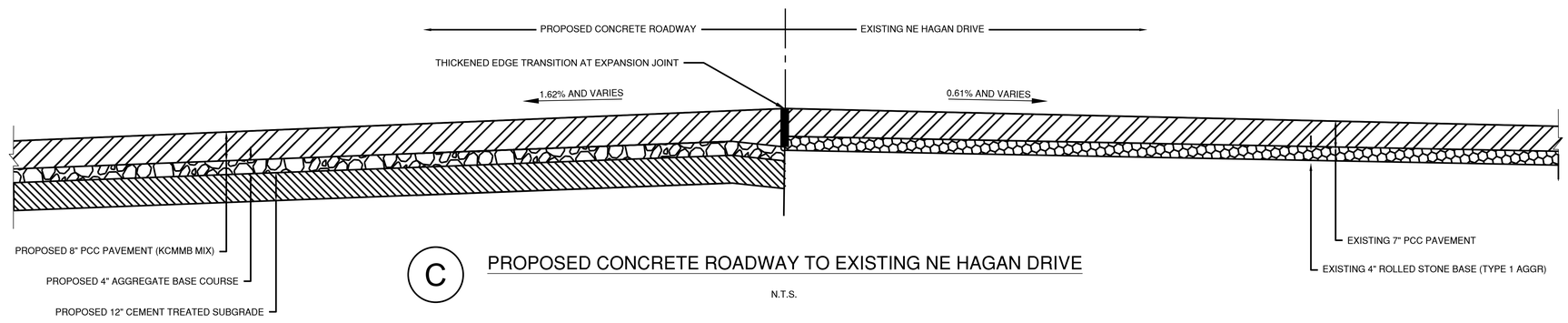
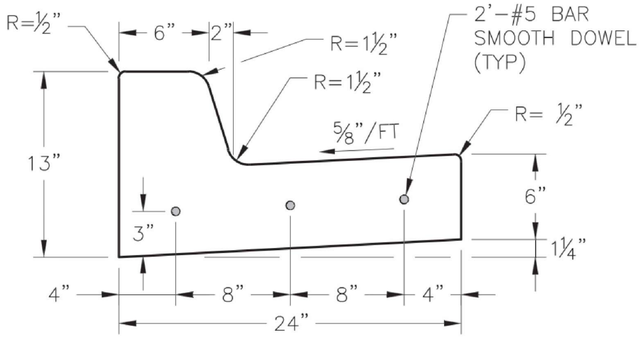


C PROPOSED CONCRETE ROADWAY TO EXISTING NE HAGAN DRIVE

N.T.S.



NOTES:

1. ½" EXPANSION JOINTS WITH 2' DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWELS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED TO MATCH TRANSVERSE JOINTS OF THE ADJACENT PAVEMENT. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. FIX DOWELS WITH BAR SUPPORTS
4. CONCRETE SHALL CONFORM TO MCIB NO WA640-I-4 UNLESS OTHERWISE SPECIFIED IN THE PLANS AND PROJECT MANUAL. SEE SECTION 02290 - CURBING.
5. AT CENTER MARKS - USE ⅝" Ø X 2' SMOOTH DOWELS AT LOCATIONS SHOWN ON EACH TYPICAL SECTION.
6. DEPTH OF CURB SHALL BE MINIMUM OF 8" THRU THE HANDICAP ACCESS RAMP.

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D STRAIGHT BACK CURB AND GUTTER (TYPE CG-1)

N.T.S.

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KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: TYPICAL SECTIONS
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
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SHEET TITLE

TYPICAL SECTIONS - SHEET 1

C127

SHEET 038 OF 131

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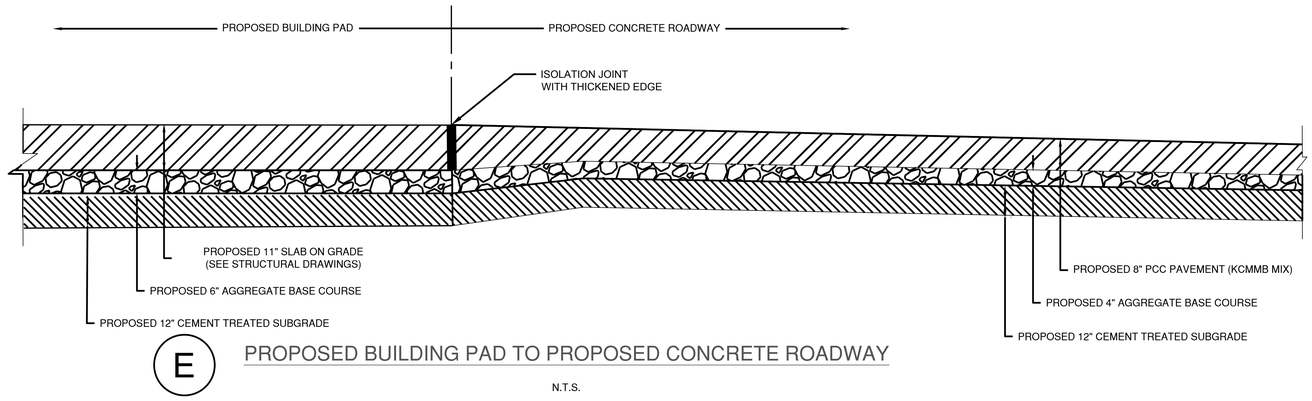

E PROPOSED BUILDING PAD TO PROPOSED CONCRETE ROADWAY

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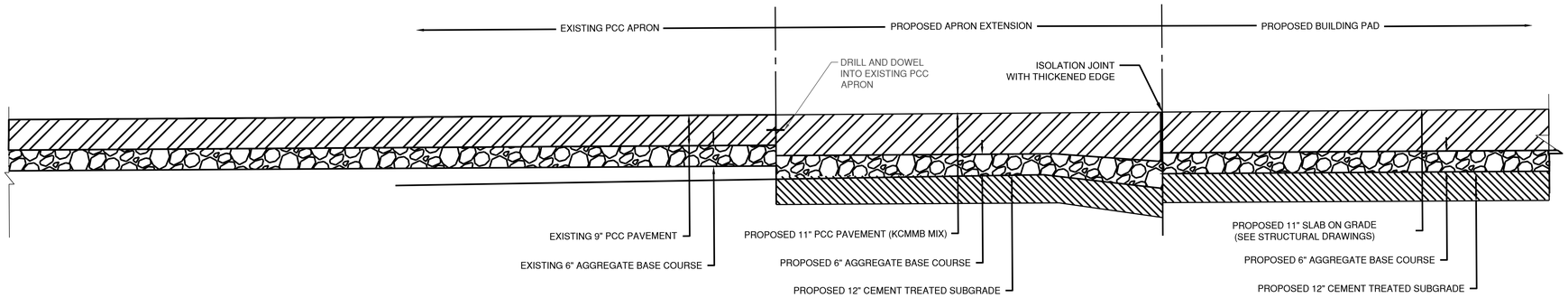

F EXISTING PCC APRON TO PROPOSED APRON EXTENSION TO PROPOSED BUILDING PAD

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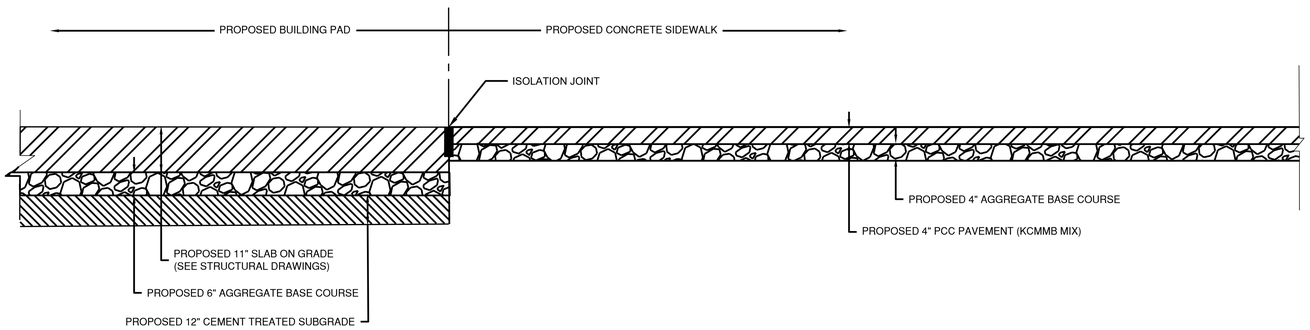

G PROPOSED BUILDING PAD TO PROPOSED CONCRETE SIDEWALK

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KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

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JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	TYPICAL SECTIONS - SHEET 2
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TYPICAL SECTIONS - SHEET 2

C128

SHEET 039 OF 131

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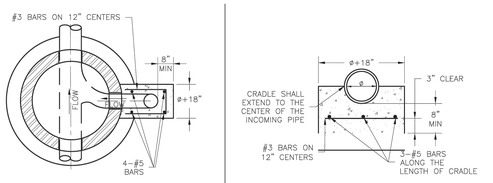
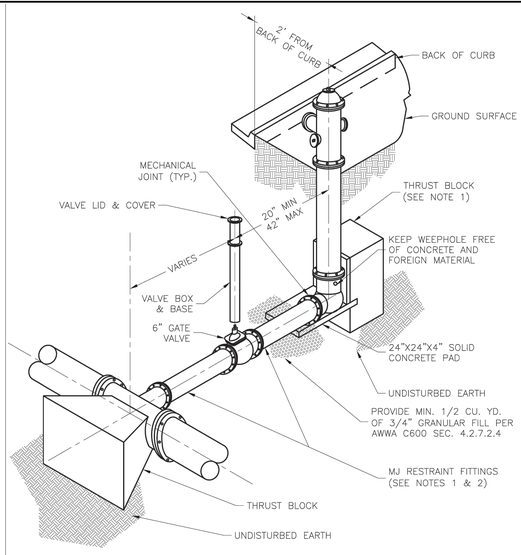


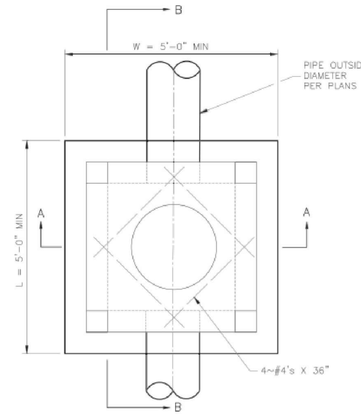
STANDARD OUTSIDE DROP MANHOLE N.T.S. D1



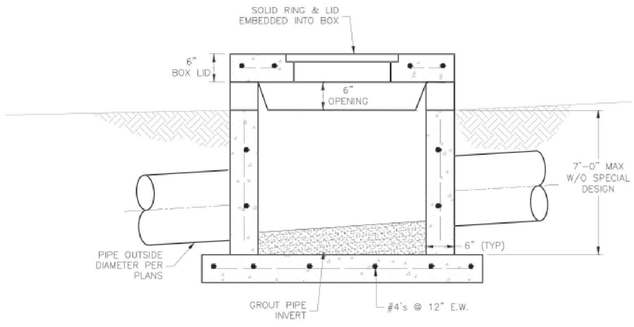
NOTES:

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.

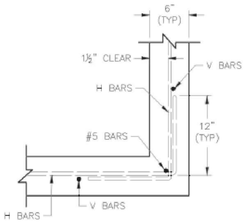
FIRE HYDRANT ASSEMBLY DETAIL N.T.S. D2 1



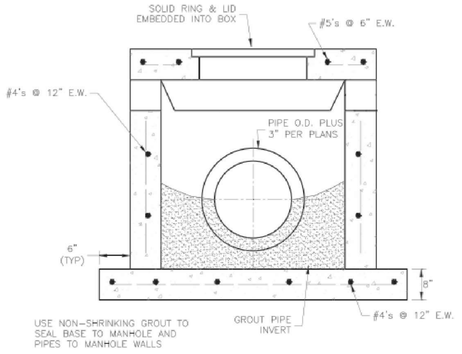
PLAN VIEW



SECTION B–B



WALL CORNER DETAIL

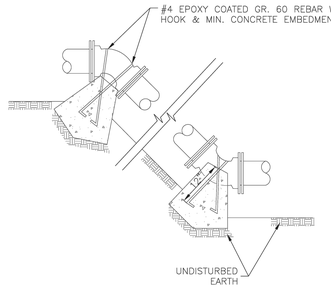


SECTION A–A

GENERAL NOTES:

1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE ¾" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H–BAR OVER A CAST–IN–PLACE PIPE AND 2 H–BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

STANDARD STORM SEWER INLET DETAIL N.T.S. D4



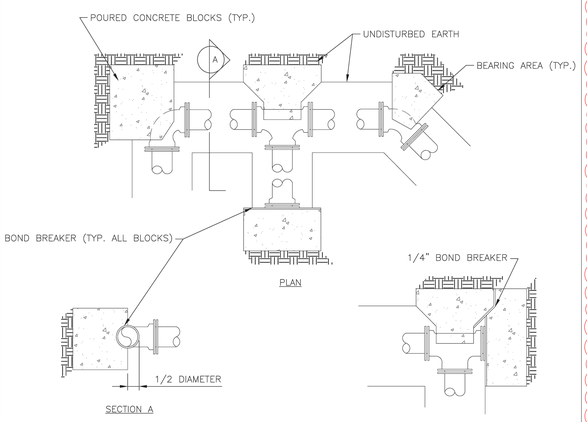
REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

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 MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

VERTICAL THRUST BLOCK N.T.S. D3



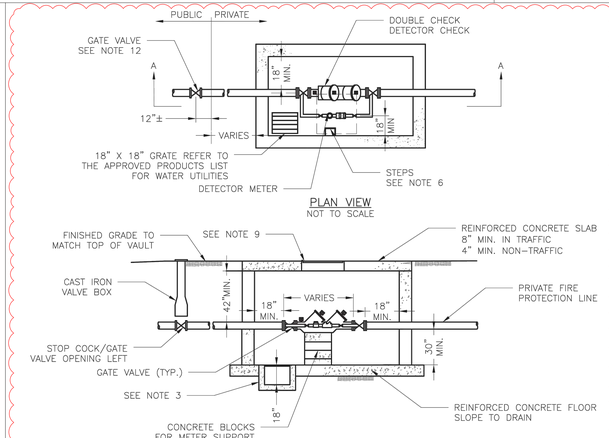
REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

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.

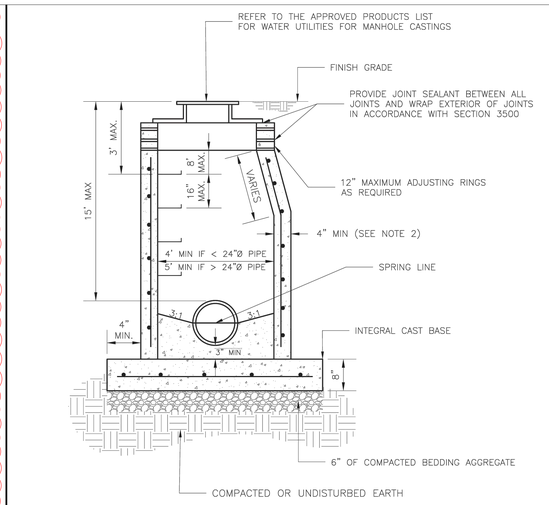
HORIZONTAL THRUST BLOCK N.T.S. D5



GENERAL NOTES:

1. METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE.
2. METER VAULT ROOF TO BE REINFORCED CONCRETE OPENING CENTERED OVER DETECTOR METER.
3. METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA WHERE SURFACE WATER WILL NOT DRAIN INTO IT. VAULT MUST BE KEPT FREE OF WATER. PROVIDE CONCRETE SUMP AS A MINIMUM. WHERE PRACTICAL, PROVIDE A 2" PIPE DRAIN WITH AN ABOVE–GROUND DISCHARGE POINT. PROJECT OWNER MAY DESIRE A PERMANENTLY INSTALLED SUMP PUMP.
4. ALL PIPE SHALL BE DUCTILE IRON CLASS 50. ALL PIPE FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
5. ALL FITTINGS TO BE BRASS.
6. STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
7. A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR CHECK BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT THE WATER UTILITIES OPERATIONS DIVISION AT 816–969–1940. AS OF JANUARY 1, 1987, THE DNR REQUIRES FIRE SPRINKLER SYSTEMS USING CHEMICALS TO HAVE A DNR APPROVED PRESSURE BACKFLOW PREVENTER INSTALLED, PRIOR TO THE MIXING POINT.
8. ALL VALVES SHALL HAVE RISING STEMS.
9. FOR MANHOLE COVERS, SELECT A MANHOLE FOUND ON THE APPROVED PRODUCTS LIST FOR WATER UTILITIES SUITABLE FOR EITHER TRAFFIC OR NON–TRAFFIC CONDITIONS.
10. A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
11. METER SHALL BE OWNED AND MAINTAINED BY THE WATER UTILITIES DEPARTMENT.
12. IF PUBLIC WATER IS LOCATED ON THE OPPOSITE SIDE OF THE STREET, THEN THE PUBLIC WATER MAIN RESPONSIBILITY OF THE WATER UTILITIES DEPARTMENT ENDS AT THE GATE VALVE NEAREST THE VAULT.

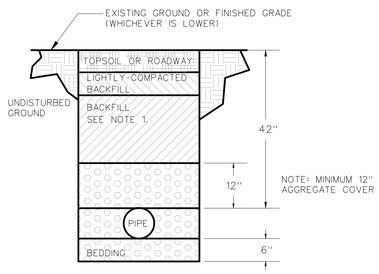
BACKFLOW PREVENTENTION VAULT N.T.S. D15 2



NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE–TWELFTH (X_{12}) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

STANDARD SANITARY PRECAST MANHOLE N.T.S. D6



NOTES:

1. BACKFILL OF ALL PIPES UNDER ROADWAYS, CURB AND GUTTER AND ALL OTHER PAVED AREAS WITHIN THE RIGHT OF WAY SHALL CONSIST OF FLOWABLE BACKFILL AS SPECIFIED IN SECTION 2602.2.H MIX DESIGN TYPE A. THE FLOWABLE FILL SHALL EXTEND TO 2 FEET FROM BACK OF CURB TO 2 FEET BACK OF CURB, UP TO 18 INCHES BELOW FINISHED GRADE. FOR EXISTING ROADWAYS FLOWABLE SHALL BE EXTEND UP TO THE BASE OF PAVEMENT.

TRENCHING AND BACKFILL DETAIL N.T.S. D7 1

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1301 BURLINGTON STREET
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: SITE DETAILS - 2
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SITE DETAILS - SHEET 1

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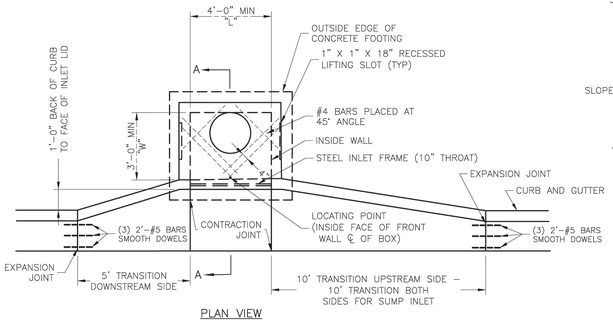
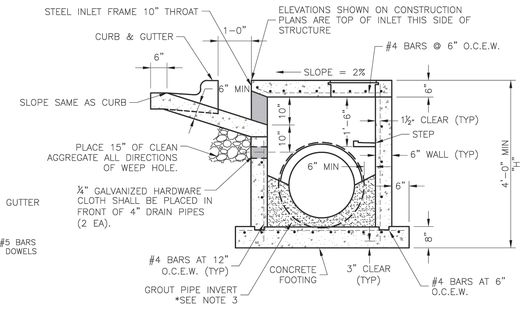
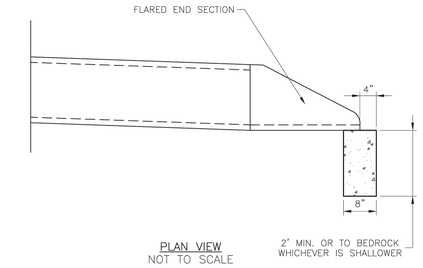


PLAN VIEW



SECTION A–A



PLAN VIEW
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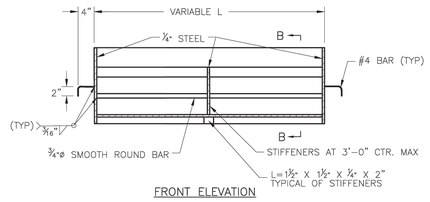

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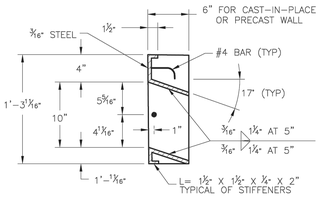

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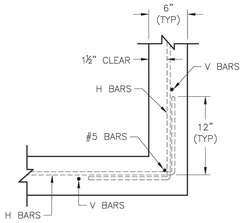

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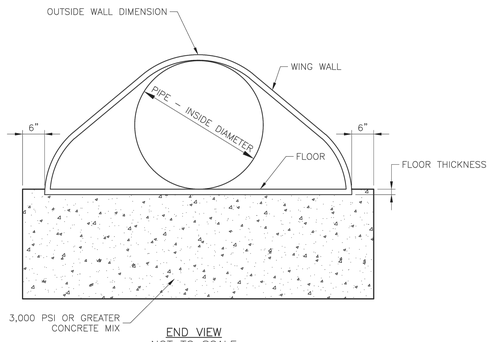

END VIEW
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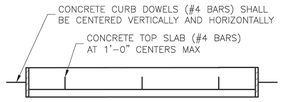


PLAN VIEW

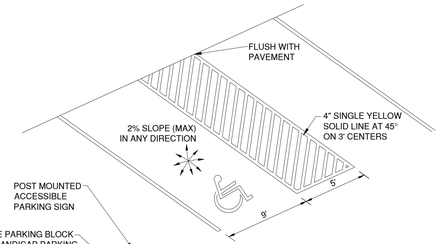
STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

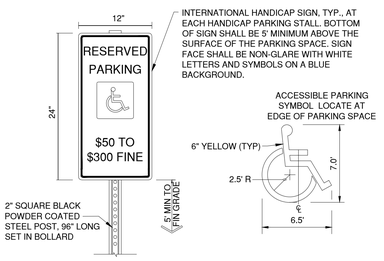
GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

CURB INLET DETAIL D8
N.T.S.

NOTE: INLETS 7, 8, 9 AND 19 ARE NON RECESSED

FLARED END SECTION SUPPORT DETAIL D9
N.T.S.





ADA PARKING STALL DETAIL D10
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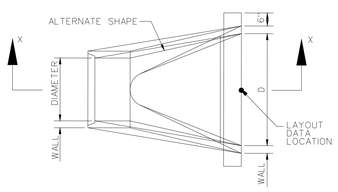
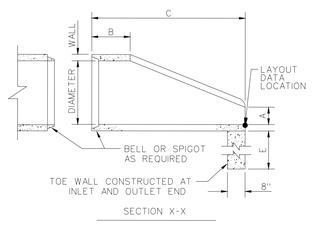
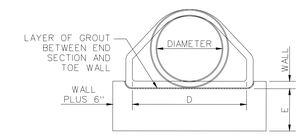


PLAN VIEW

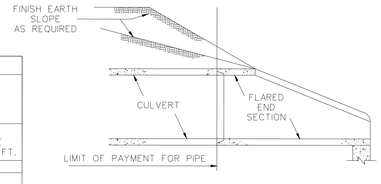


SECTION X–X

DIMENSIONS						
DIA.	WALL	A	B (MIN.)	C (MIN.)	D	E
12"	2"	4"	4'-0"	6"	2'-0"	18"
15"	2-1/4"	6"	3'-10"	6"	2'-6"	18"
18"	2-1/2"	9"	3'-10"	6"	3'-0"	18"
21"	2-3/4"	9"	3'-2"	6"	3'-6"	18"
24"	3"	9-1/2"	2'-6"	6"	4'-0"	24"
27"	3-1/4"	10-1/2"	2'-1"	6"	4'-6"	24"
30"	3-1/2"	1'-0"	1'-7"	6"	5'-0"	24"
24" x 38"	3-3/4"	10-1/4"	1'-6"	6"	5'-0"	24"
36"	4"	1'-3"	2'-10"	8"	6'-0"	24"
42"	4-1/2"	1'-9"	2'-11"	8"	6'-6"	24"
48"	5"	2'-0"	2'-2"	8"	7'-0"	24"
54"	5-1/2"	2'-3"	2'-11"	8"	7'-6"	36"
60"	6"	2'-6"	3'-3"	8"	8'-0"	36"
66"	6-1/2"	2'-0"	1'-9"	8"	8'-6"	36"



END VIEW



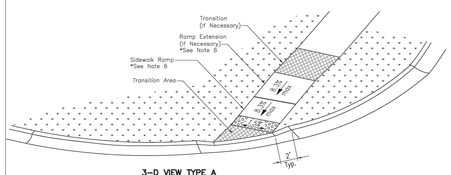
INSTALLATION DETAILS

NOTE:
THE UNIT PRICE PAID FOR CONCRETE FLARED END SECTIONS SHALL INCLUDE THE BARREL. THE BARREL SHALL NOT BE INCLUDED FOR PAYMENT AS CONCRETE PIPE CULVERT.

REINFORCEMENT					
ADJOINING PIPE DIA. INCHES	BARREL SECTION REINFORCEMENT			FLARE SECTION REINFORCEMENT (ONE LAYER ONLY IN CENTER OF WALL)	
	CIRCULAR		ELLIPTICAL		
	INNER CAGE SQ. IN./ LIN. FT.	OUTER CAGE SQ. IN./ LIN. FT.		AREA OF LONGITUDINAL SQ. IN./LIN. FT.	AREA OF TRAVERSE SQ. IN./LIN. FT.
12	0.07			0.048	0.048
15	0.07			0.054	0.054
18	0.07		0.07	0.060	0.060
21	0.07		0.07	0.066	0.066
24	0.07		0.07	0.072	0.072
27	0.13		0.11	0.078	0.078
30	0.14		0.12	0.084	0.084
36	0.12	0.09	0.13	0.096	0.096
42	0.15	0.12	0.17	0.108	0.108
48	0.18	0.14	0.20	0.120	0.120
54	0.22	0.16	0.24	0.132	0.132
60	0.25	0.19	0.28	0.144	0.144
66	0.31	0.23	0.34	0.156	0.156

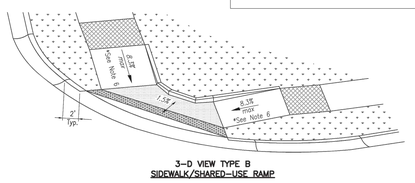
PRECAST CONCRETE FLARED END SECTION D11
N.T.S.

ADA RAMP TYPE A&B DETAIL D14
N.T.S.

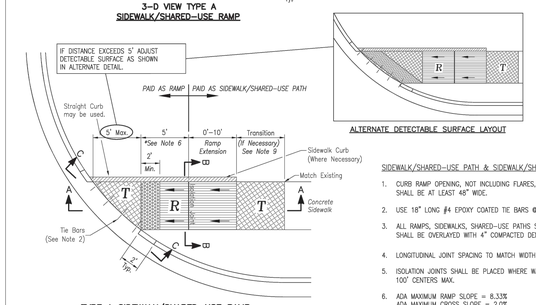


3–D VIEW TYPE A
SIDEWALK/SHARED–USE RAMP

LEGEND
R SIDEWALK RAMP
TS TURNING SPACE
DETECTABLE WARNING SURFACE
T TRANSITION



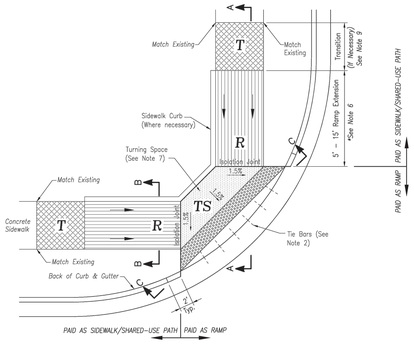
3–D VIEW TYPE B
SIDEWALK/SHARED–USE RAMP



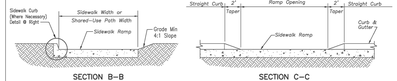
TYPE A SIDEWALK/SHARED–USE RAMP
Not to Scale

ALTERNATE DETECTABLE SURFACE LAYOUT

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 100' 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).



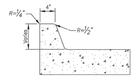
TYPE B SIDEWALK/SHARED–USE RAMP
Not to Scale



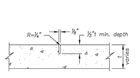
SECTION B–B

SECTION C–C

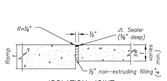
TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale

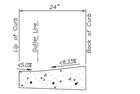


CONTRACTION JOINT

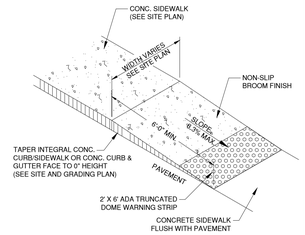


ISOLATION JOINT

JOINT DETAILS
Not to Scale



CURB & GUTTER DETAIL AT RAMP
Not to Scale



ADA SIDEWALK RAMP DETAIL D12
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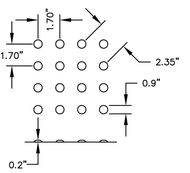
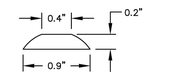


DOME SPACING



DOME SECTION

TRUNCATED DOME DETAIL D13
N.T.S.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: SITE DETAILS - 2
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
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SHEET TITLE

SITE DETAILS - SHEET 2

C130

SHEET 041 OF 131

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Date: Wednesday, January 3, 2024 17:27:20

FENCING NOTES:

1. THE EXISTING CHAIN-LINK FABRIC, BARBED WIRE, POSTS AND OTHER MISCELLANEOUS COMPONENTS OF THE FENCING THAT IS REMOVED SHALL BE OFFERED TO THE AIRPORT AND THE AIRPORT SHALL HAVE THE RIGHT TO RETAIN ANY REMOVED MATERIAL AT NO ADDITIONAL COST TO THE CONTRACT. THE CONTRACTOR SHALL TAKE CARE TO PRESERVE THE INTEGRITY OF THE EXISTING FENCE TO BE REMOVED TO THE GREATEST EXTENT POSSIBLE IN THE REMOVAL PROCESS. ANY MATERIAL DESIRED BY THE AIRPORT SHALL BE STOCKPILED BY THE CONTRACTOR IN A LOCATION AT THE AIRPORT TO BE DETERMINED BY THE ENGINEER. ANY FENCING OR FENCING COMPONENTS THAT ARE NOT DESIRED BY THE AIRPORT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF AIRPORT PROPERTY IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL LAWS. STOCKPILING OF THE MATERIALS AND/OR DISPOSAL OF THE MATERIALS OFF AIRPORT PROPERTY SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE FENCE REMOVAL.
2. THE CONTRACTOR SHALL SEQUENCE THE CONSTRUCTION OF THE NEW FENCE AND THE REMOVAL OF THE OLD FENCE IN A MANNER TO MAINTAIN A SECURED AIRPORT PERIMETER AT ALL TIMES. THE NEW FENCE SHALL BE CONSTRUCTED AND TIED INTO THE EXISTING FENCE PRIOR TO REMOVAL OF THE OLD FENCE.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO PERFORMING ANY WORK ON SITE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT THE EXPENSE OF THE CONTRACTOR.

PLAN LEGEND

- X — EXISTING CHAIN-LINK FENCE
- XX — PROPOSED CHAIN-LINK FENCE

PLAN KEYNOTES

- (A) 32' AUTOMATIC SLIDING GATE WITH GATE CONTROLLER
- (B) STEEL PEDESTAL AND HOUSING WITH ACCESS CONTROL AND INTERCOM
- (C) 18' AUTOMATIC SLIDING GATE WITH GATE CONTROLLER
- (D) 8' TALL CHAIN LINK FENCE WITH 3 STRANDS OF BARBED WIRE - SEE FENCE DETAILS SHEET
- (E) EXISTING PERIMETER FENCE
- (F) REMOVAL OF EXISTING PERIMETER FENCE

NEW CORNER POST
N=1018346.071
E=2825858.161

NEW GATE POST
N=1018323.815
E=2825856.942

NEW CORNER POST
N=1018328.467
E=2826162.938

NEW CORNER POST
N=1018340.843
E=2826300.472

NEW CORNER POST
N=1018356.100
E=2826449.095

BEGIN NEW FENCE INSTALLATION, BEGIN REMOVAL OF EXISTING FENCE. INSTALL NEW CORNER POST
N=1018363.541
E=2826461.324

R470'

R555.5'

NEW GATE POST
N=1018277.317
E=2825854.256

NEW CORNER POST AT BUILDING
N=1018221.964
E=2825851.064

NEW CORNER POST AT BUILDING
N=1017993.923
E=2825838.519

NEW GATE POST
N=1017980.648
E=2825837.732

NEW GATE POST
N=1017957.399
E=2825836.389

NEW CORNER POST
N=1017668.244
E=2825819.708

NEW CORNER POST
N=1017643.520
E=2826247.755

NEW CORNER POST
N=1017630.926
E=2826247.028

END NEW FENCE INSTALLATION, END EXISTING FENCE REMOVAL. INSTALL NEW CORNER POST
N=1017621.072
E=2826417.624

HAGEN ROAD

20' U/E

15' U/E

TRUE

0 30 60 FEET

CMT
1627 MAIN STREET, SUITE 600
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olsson
1301 BURLINGTON STREET
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	FENCING PLAN
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
APPROVED BY:	TGH
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SHEET TITLE

FENCING PLAN

C131

SHEET 042 OF 131

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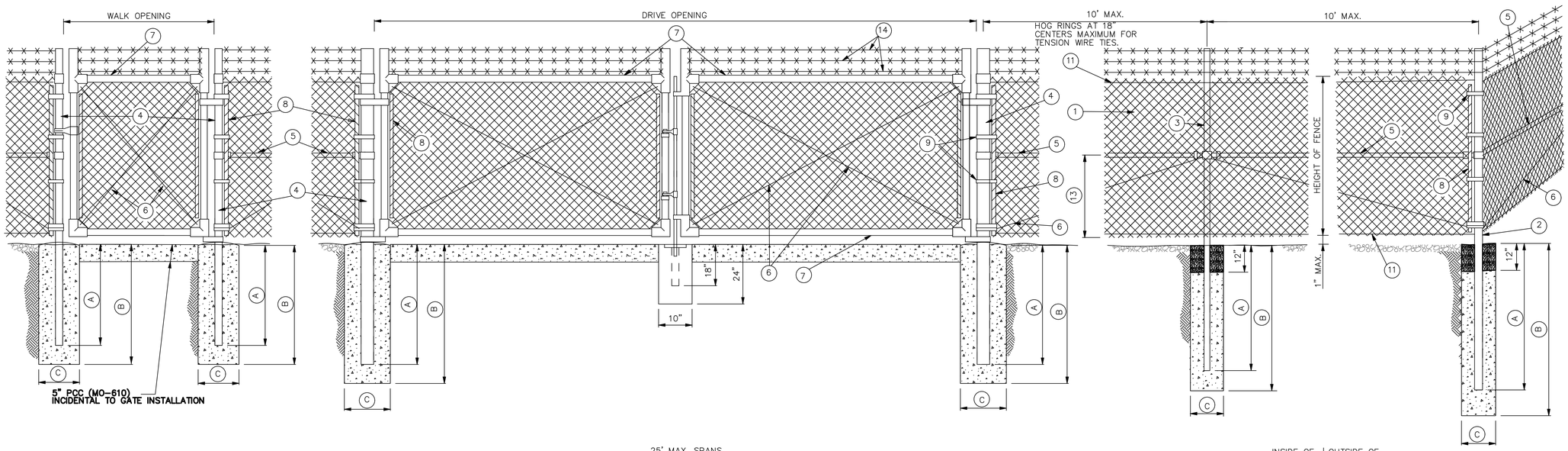
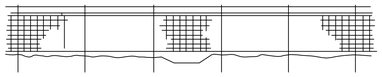
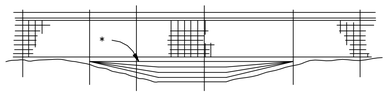
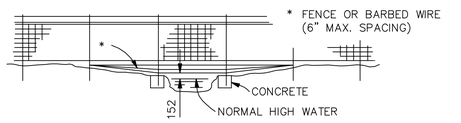




ROADWAY DITCHES OR SMALL SHALLOW CHANNELS
(SPAN WITH NORMAL LINE POST SPACING)

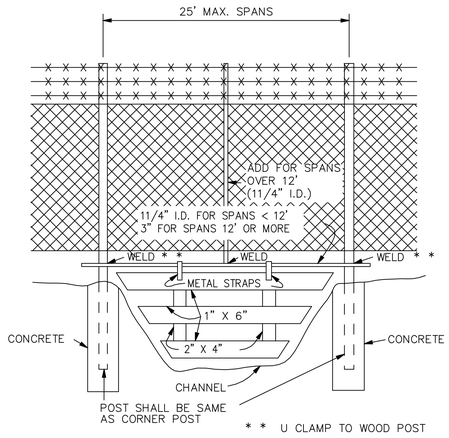


POORLY DEFINED CHANNELS (SMALL DRAINAGE AREAS)

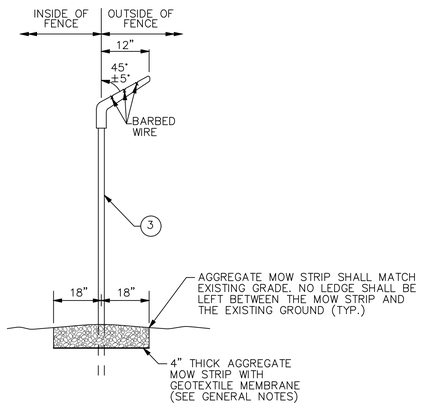


WELL DEFINED CHANNELS (LARGE DRAINAGE AREAS)

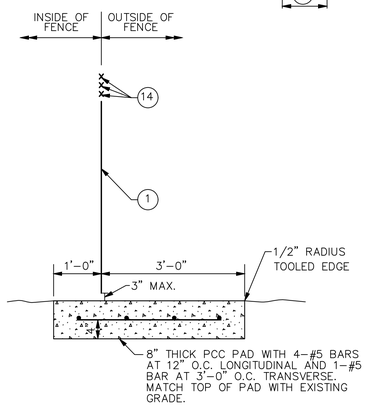
TYPICAL FENCING AT CHANNEL CROSSING



TYPICAL WATER CROSSING GATE



BARBED WIRE EXTENSION BRACKET AND MOW STRIP



CONCRETE PAD AT GATES

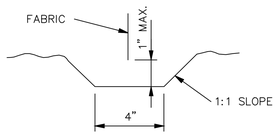
NOTE:
CONCRETE PAD TO BE INSTALLED AT ALL GATE LOCATIONS WHERE PORTLAND CEMENT CONCRETE OR BITUMINOUS CONCRETE DOES NOT ALREADY EXIST.

MINIMUM DEPTH FOR SETTING POSTS

DESCRIPTION		HEIGHT OF FENCE 48" SIZE (IN.)	60" SIZE (IN.)	72" SIZE (IN.)	96" SIZE (IN.)
(2) END CORNER & PULLPOST	(A)	30"	36"	36"	54"
	(B)	36"	42"	42"	60"
	(C)	10"	12"	12"	14"
(3) LINE POST	(A)	24"	27"	36"	48"
	(B)	30"	36"	42"	54"
	(C)	10"	12"	12"	12"
(4) GATE POST	(A)	30"	36"	36"	42"
	(B)	36"	42"	42"	48"
	(C)	10"	12"	12"	14"

WIRE SIZE AND HEIGHT OF FABRIC

SPECIFIED DIAMETER			HEIGHT OF FABRIC
INCHES	MIN. GAGE	MESH INCHES	INCHES
0.120	11	2	36 – 42
0.148	9	2	48 – 96



TYPICAL TRENCH DETAILS

MINIMUM SIZE FOR FENCE HARDWARE

	WIDTH	SIZE (IN.)	LBS/FT.
(2) END CORNER OR PULL POST	N/A	31/2 DIA.	9.10
(3) LINE POST	N/A	2" DIA.	3.65
(4) GATE POST (SINGLE GATE OR 1 LEAF OF DOUBLE)	l 6'	21/2 DIA.	5.79
	l 13'	31/2 DIA.	9.10
	l 18'	6 DIA.	18.97
	Ç 18'	8 DIA.	24.70
(5) BRACE	N/A	11/4 DIA.	2.27
(6) TRUSS ROD	N/A	3/8	–
(7) GATE FRAME	N/A	11/2 DIA.	2.72

LEGEND

(1) FABRIC
(2) END, CORNER OR PULL POST
(3) LINE POST
(4) GATE POST
(5) BRACE
(6) TRUSS ROD
(7) GATE FRAME
(8) STRETCHER BAR 1/4" X 3/4" PLATE
(9) STRETCHER BAR BAND
(10) END OR CORNER CLAMP
(11) TENSION WIRE
(12) FABRIC TIES
(13) ONE-HALF FABRIC HEIGHT OR AS RECOMMENDED BY MANUFACTURER
(14) BARBED WIRE

GENERAL NOTES:

1. WEIGHTS OF MATERIALS SHOWN IN TABLE ARE FOR ASTM F 1043, GROUP IA. SIZES SHOWN ARE FOR STEEL AND ALUMINUM. EQUIVALENT ASTM F 1043 ALTERNATIVES MAY BE USED.
2. PULL POSTS SHALL BE USED AT SHARP BREAKS IN VERTICAL GRADE OR AT APPROXIMATE 300' CENTERS ON STRAIGHT RUNS OR AS DIRECTED BY THE ENGINEER.
3. DRILLED HOLES (C) IN SOLID ROCK SHALL PROVIDE A DIAMETER OF NOT LESS THAN 2" GREATER THAN THE MAXIMUM TRANSVERSE DIMENSION OF THE POST SECTION.
4. ALL POSTS SHALL HAVE PROVISIONS TO SECURELY HOLD THE TOP TENSION WIRE IN POSITION AND ALLOW FOR REMOVAL AND REPLACEMENT OF A POST WITHOUT DAMAGING THE TOP TENSION WIRE.
5. THE MESH SIZE SHALL BE 2 INCHES ± 1/8 IN. MEASURED IN EITHER DIRECTION AS THE MINIMUM CLEAR DISTANCE BETWEEN THE WIRES FORMING THE PARALLEL SIDES OF THE MESH.
6. THE AGGREGATE MOW STRIP SHALL RUN THE ENTIRE LENGTH OF THE FENCELINE AND SHALL BE SURFACED WITH 4" OF WELL-GRADED CRUSHED ROCK AGGREGATE. GEOTEXTILE MEMBRANE SHALL BE INSTALLED UNDER THE AGGREGATE. MEMBRANE SHALL BE NON-WOVEN POLYPROPYLENE FIBERS TO A MINIMUM DENSITY OF 8oz PER SY. TOP OF ROCK SHALL BE BETWEEN 0" TO 1" FROM THE BOTTOM OF THE CHAIN-LINK FABRIC. THIS WORK SHALL BE INCIDENTAL TO THE FENCE PAY ITEM.
7. ALL POSTS SHALL BE ROUND AND SHALL BE SET IN CONCRETE WITH 1 FOOT OF COMPACTED SOIL ABOVE THE CONCRETE.
8. THE MAXIMUM GAP ALLOWED WHERE THE FENCE ABUTS BUILDINGS, AT GATE AND HINGE CLOSURE POSTS, AT CENTER OF DOUBLE GATES, AND AT THE BOTTOM OF GATES SHALL BE 3" OR LESS.
9. THE PCC PAD AT GATES SHALL BE INCIDENTAL TO THE GATE PAY ITEM.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

CHAIN-LINK FENCE

REVISED BY CMT:
DATE: 03-27-2015

EFFECTIVE: 02-01-2007

607.10V

1/1

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: FENCING PLAN
DESIGNED BY: WLC
DRAWN BY: WLC
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FENCING DETAILS

C132

SHEET 043 OF 131

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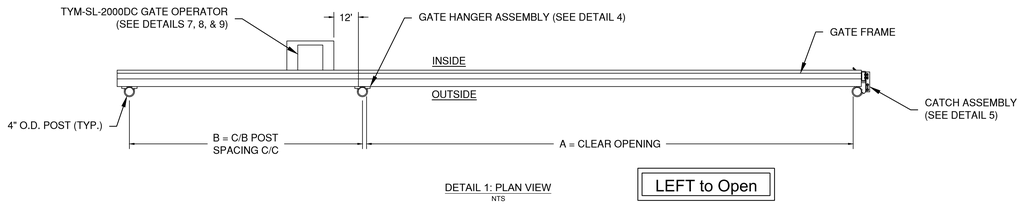
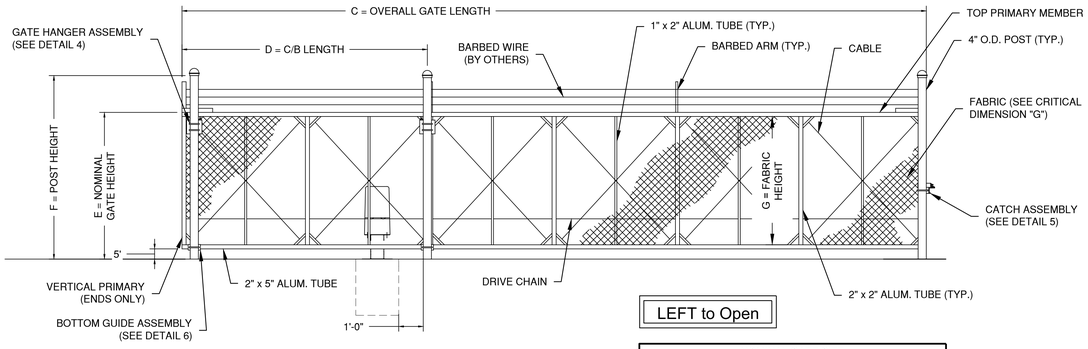


DETAIL 1: PLAN VIEW
NTS

LEFT to Open



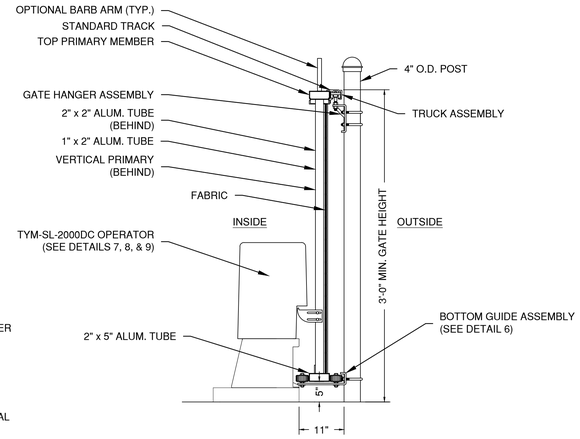
DETAIL 2: ELEVATION VIEW
NTS

LEFT to Open

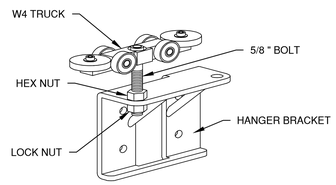
NOTES:
1. ALL FITTINGS PROVIDED FOR 4" O.D. POSTS. OTHER SIZES ARE AVAILABLE UPON REQUEST.
2. GATE ELEVATION IS VIEWED FROM OUTSIDE OF THE SECURE AREA LOOKING IN.
3. BARB ARMS ARE OPTIONAL.
4. THIS GENERIC DRAWING SHOWS A TYPICAL GATE. GATE MANUFACTURED MAY NOT BE EXACTLY AS SHOWN.
5. GATE TO HAVE MILL FINISH.
6. FOR GATES THAT REQUIRE TWO PIECE FABRICATION, A 5" ALUMINUM CHANNEL WILL BE SUBSTITUTED FOR THE 2" x 5" ALUMINUM TUBE.

7. KNOX BOX TO BE INSTALLED AT ALL OPERABLE GATES, COORDINATE SIZE AND LOCATION WITH AHJ AND OWNER

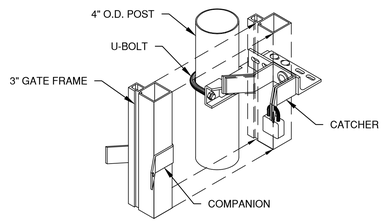
NOMINAL GATE SIZE		
18'W x 8'+1'h		
CRITICAL DIMENSION CHART		
A	CLEAR OPENING	18'-0"
B	COUNTERBALANCE POST SPACING C/C	8'-1"
C	OVERALL GATE LENGTH	27'-0"
D	COUNTERBALANCE LENGTH	9'-0"
E	NOMINAL GATE HEIGHT	8'-0"
F	POST HEIGHT	9'-6"
G	FABRIC HEIGHT	7'-0"



DETAIL 3: ASSEMBLY SECTION
NTS



DETAIL 4: GATE HANGER
NTS



DETAIL 5: CATCH ASSEMBLY
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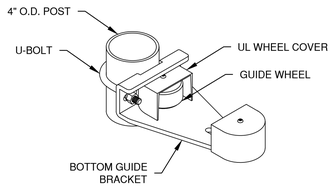
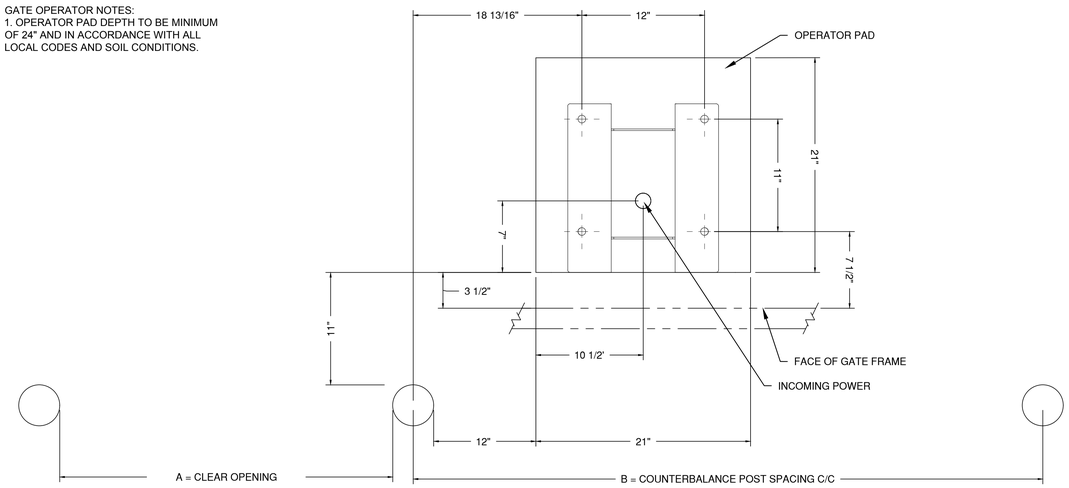
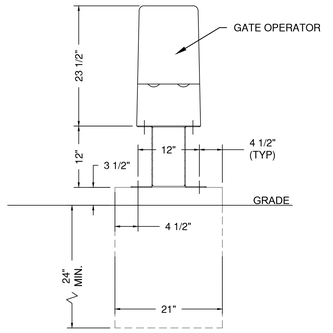


DETAIL 6: BOTTOM GUIDE
NTS

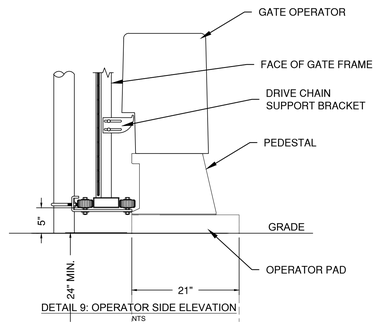
GATE OPERATOR NOTES:
1. OPERATOR PAD DEPTH TO BE MINIMUM OF 24" AND IN ACCORDANCE WITH ALL LOCAL CODES AND SOIL CONDITIONS.



DETAIL 7:OPERATOR PAD LAYOUT PLAN
NTS



DETAIL 8: OPERATOR FRONT ELEVATION
NTS



DETAIL 9: OPERATOR SIDE ELEVATION
NTS

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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: FENCING PLAN
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
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SLIDING GATE DETAILS
SHEET 1

C133

SHEET 044 OF 131

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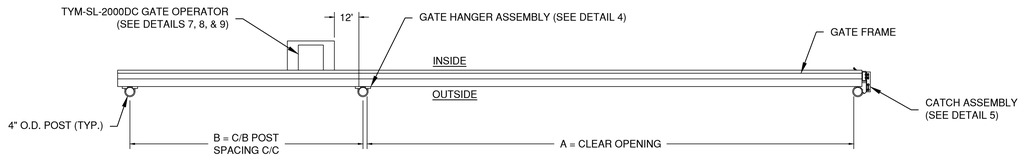
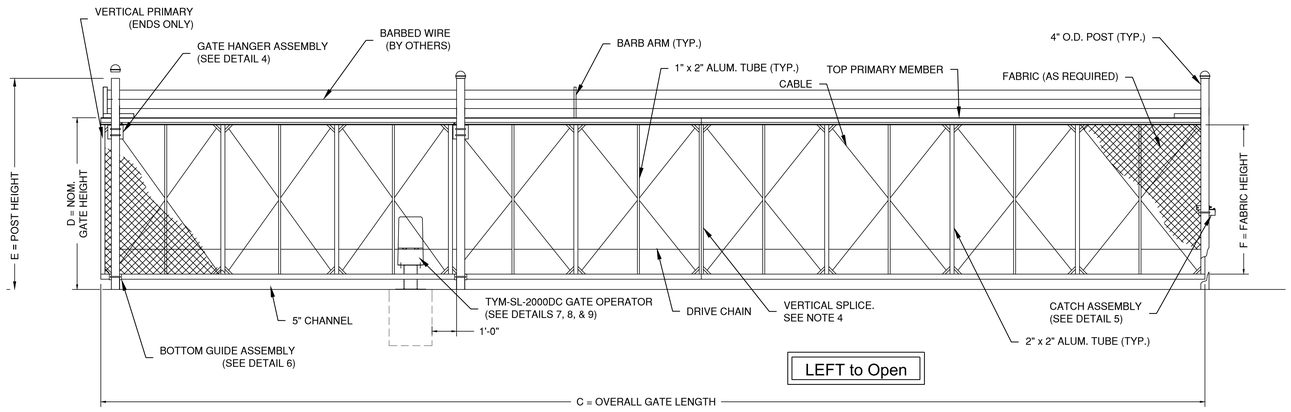


DETAIL 1: PLAN VIEW
NTS

LEFT to Open



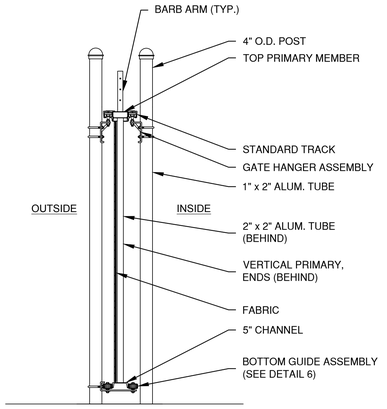
LEFT to Open

DETAIL 2: ELEVATION VIEW
NTS

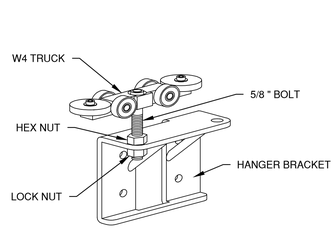
NOTES:
1. ALL FITTINGS PROVIDED FOR 4" O.D. POSTS. OTHER SIZES ARE AVAILABLE UPON REQUEST.
2. BARB ARMS ARE OPTIONAL.
3. GATE TO HAVE MILL FINISH.
4. FOR GATES THAT REQUIRE TWO PIECE FABRICATION, A 5" ALUMINUM CHANNEL WILL BE SUBSTITUTED FOR THE 2" x 5" ALUMINUM TUBE, AND A VERTICAL SPLICE WILL BE ADDED.

5. KNOX BOX TO BE INSTALLED AT ALL OPERABLE GATES, COORDINATE SIZE AND LOCATION WITH AHJ AND OWNER

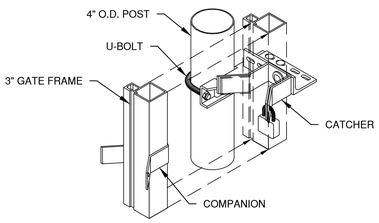
NOMINAL GATE SIZE		
32'W x 8'+1'h		
CRITICAL DIMENSION CHART		
A	CLEAR OPENING	32'-0"
B	POST SPACING C/C	15'-1"
C	OVERALL GATE LENGTH	48'-0"
D	NOMINAL GATE HEIGHT	8'-0"
E	POST HEIGHT	9'-6"
F	FABRIC HEIGHT	7'-0"



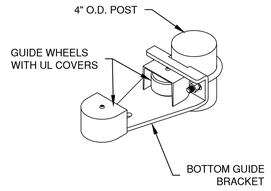
DETAIL 3: ASSEMBLY SECTION
NTS



DETAIL 4: GATE HANGER
NTS

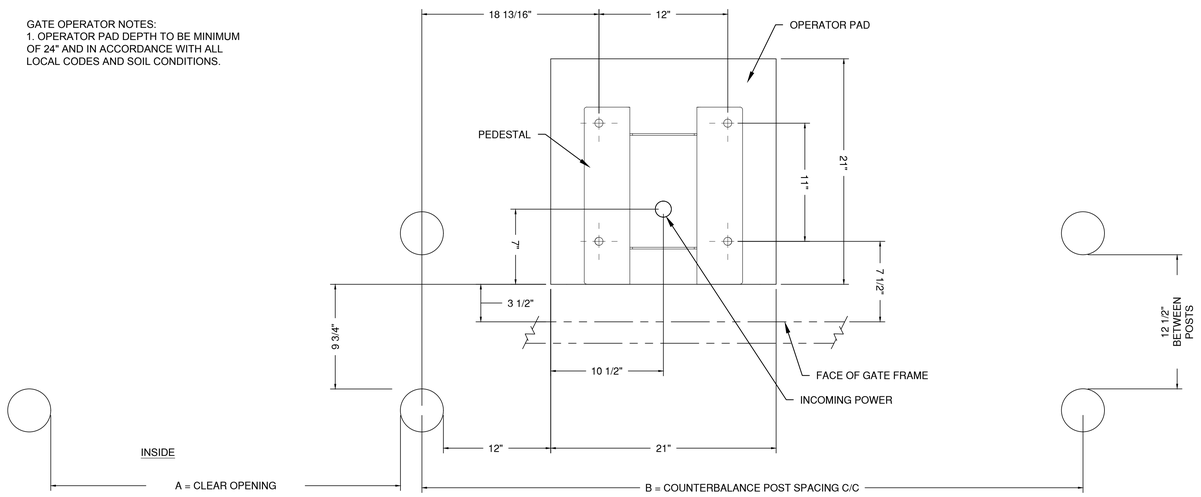


DETAIL 5: CATCH ASSEMBLY
NTS



DETAIL 6: BOTTOM GUIDE
NTS

GATE OPERATOR NOTES:
1. OPERATOR PAD DEPTH TO BE MINIMUM OF 24" AND IN ACCORDANCE WITH ALL LOCAL CODES AND SOIL CONDITIONS.



DETAIL 7:OPERATOR PAD LAYOUT PLAN
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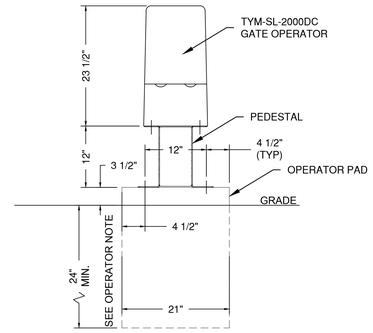

DETAIL 8: OPERATOR FRONT ELEVATION
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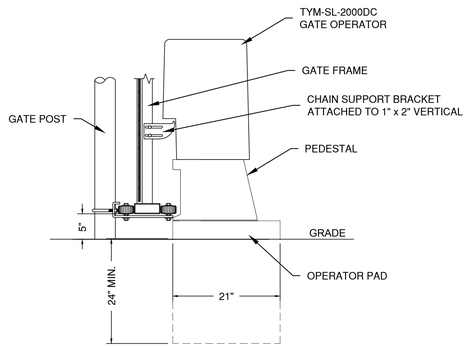

DETAIL 9: OPERATOR SIDE ELEVATION
NTS

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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: FENCING PLAN
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH
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SHEET TITLE

SLIDING GATE DETAILS
SHEET 2

C134

SHEET 045 OF 131

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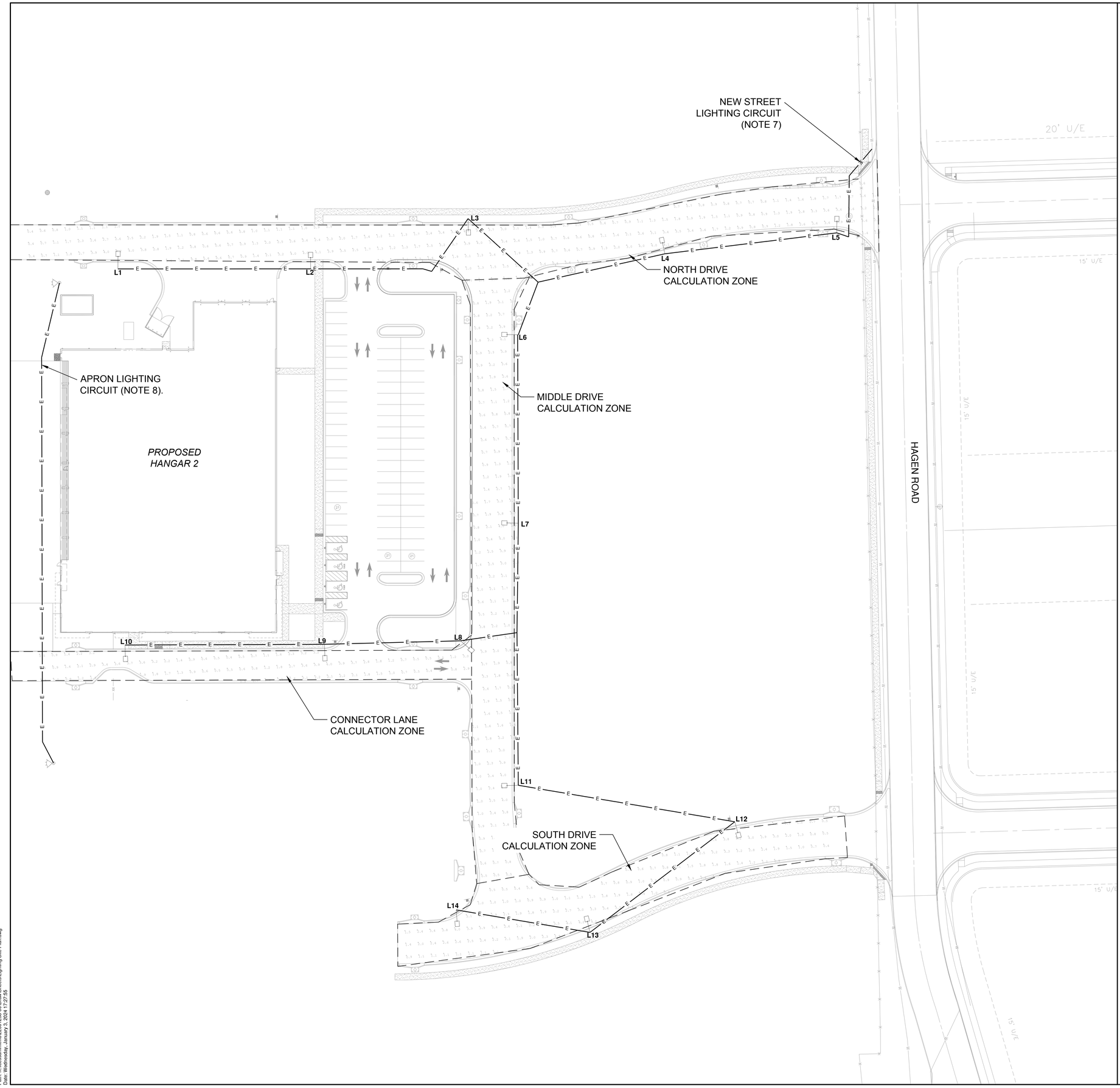


ELECTRICAL LEGEND

- NEW LUMINAIRE WITH 3' MAST ARM ON 25' LIGHT POLE
- PHOTOMETRIC CALCULATION ZONE BOUNDARY
- E — NEW ELECTRICAL STREET LIGHTING CIRCUIT
- EXISTING APRON LIGHT POLE

LIGHTING NOTES

Acceptable Luminaire Manufacturers:

Manufacturer	Model No.	Distribution
Cooper Lighting	VERD-M-CA3-150-722-U-T2	Type II

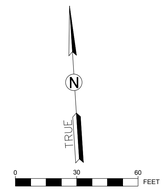
1. LED LUMINAIRES SHALL BE OF THE MANUFACTURER AND TYPE DENOTED ABOVE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, AND WIRING NEW LIGHT POLES. THE LIGHT POLES SHALL MEET THE FOLLOWING CRITERIA:
   - 2.1. 25' LIGHT MOUNTING HEIGHT
   - 2.2. 3' MAST ARMS. MAST ARMS SHALL ALLOW PROPER CONNECTION AND MOUNTING OF LIGHT FIXTURES. THOSE FIXTURES SHALL BE ACUITY BRANDS AUTOBAHN FIXTURES AS INDICATED IN THE ACCEPTABLE LUMINAIRE MANUFACTURERS TABLE.
   - 2.3. COLOR: BLACK
   - 2.4. CONTRACTOR SHALL PROVIDE SUBMITTAL SUBJECT TO APPROVAL BY ENGINEER.
   - 2.5. LIGHT POLE SHALL BE INSTALLED ON A CONCRETE BASE AS SHOWN ON THE ELECTRICAL DETAILS PLAN SHEET.
3. LIGHT LEVELS FOR EACH PORTION OF THE PROJECT AREA SHALL BE IN ACCORDANCE WITH THE FOLLOWING FIXTURE ILLUMINANCE TABLE.

PROPOSED LIGHT EMITTING DIODE (LED) FIXTURE ILLUMINANCE (Fc) WITH 0.7 LLF

CALCULATION ZONE	AVERAGE	MAXIMUM	MINIMUM	AVG/MIN	MAX/MIN
North Drive	1.75	4.2	0.4	4.38	10.5
Middle Drive	1.9	4.1	0.5	3.8	8.2
South Drive	1.88	4.2	0.4	4.7	10.5
Connector Lane	1.65	4	0.4	4.13	10

ELECTRICAL NOTES

1. TO FEDERAL, STATE, AND LOCAL STATUTES, NOTIFY MISSOURI ONE-CALL SYSTEM,INC. AT LEAST 48 HOURS PRIOR TO ANY DIGGING, TRENCHING, EXCAVATION, ETC.
2. INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF TYPE AND LOCATION OF ALL UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.
3. FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK. ANY INTERFERENCE SHALL BE BROUGHT TO ATTENTION OF THE ARCHITECT AND ENGINEER FOR DIRECTION.
4. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT EACH BRANCH CIRCUIT. CONDUCTOR MAY NOT BE INDICATED GRAPHICALLY.
5. ALL STREET LIGHTING FIXTURES AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL SECTION 5800.
6. STREET LIGHTING CIRCUITS SHALL BE FED FROM EXISTING EVERGY UTILITY SOURCE.
7. STREET LIGHTING CIRCUITS SHALL BE 2 X #6 XLP-USE, #12 GND IN 1" CONDUIT.
8. EXTEND APRON LIGHTING CIRCUIT FROM NORTHERN APRON LIGHT TO POWER SOUTHERN APRON LIGHT. APRON LIGHTING CIRCUIT SHALL BE 2 X #4 XLP-USE, 1 X #6 GROUND IN UNIT DUCT. CONTRACTOR SHALL CONNECT NEW CIRCUIT GROUND CONDUCTOR TO EXISTING POLE GROUND LUG.
9. ALL STREET LIGHT POLES MUST BE INSTALLED A MINIMUM OF 3' FROM THE CURB, WHERE APPLICABLE.



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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: LIGHTING SITE PLAN
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SHEET TITLE

LIGHTING SITE PLAN

C135

SHEET 046 OF 131

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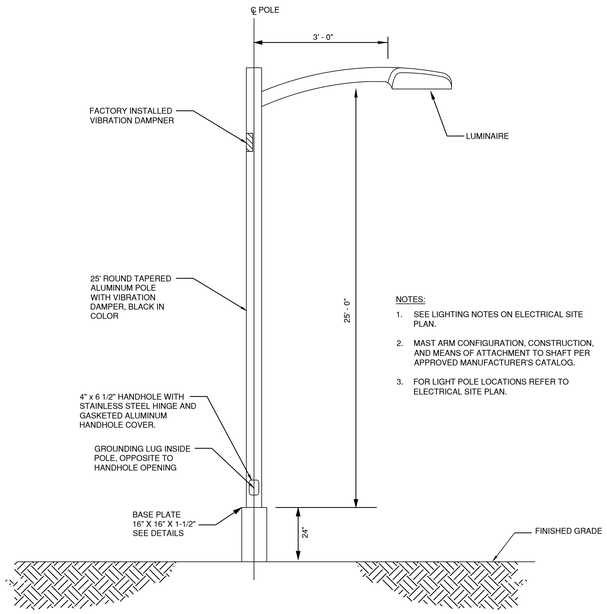

1 LIGHT POLE DETAIL
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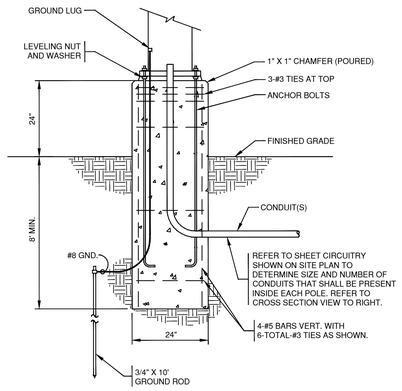

2 LIGHT POLE FOUNDATION DETAIL
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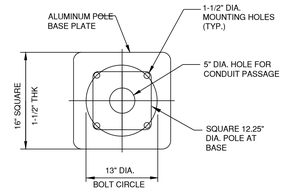
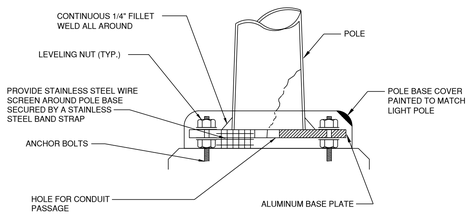


3 LIGHT POLE BASE DETAIL (PLAN)
NOT TO SCALE



4 LIGHT POLE BASE DETAIL (SECTION)
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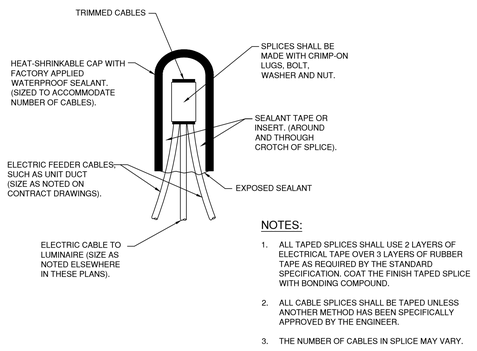
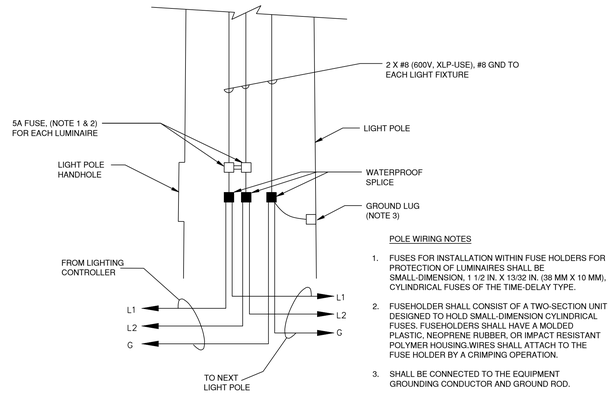
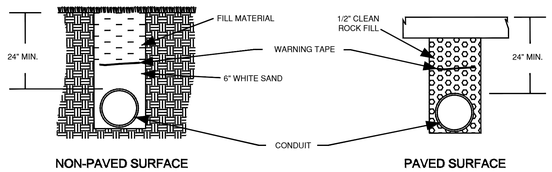


5 TYPICAL CABLE SPLICE DETAIL
NOT TO SCALE



6 TYPICAL POLE WIRING DETAIL
NOT TO SCALE



7 TRENCH AND CONDUIT DETAIL
NOT TO SCALE

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LEE'S SUMMIT, MISSOURI

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LEE'S SUMMIT, MO

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SHEET TITLE
SITE LIGHTING DETAILS

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SHEET 047 OF 131

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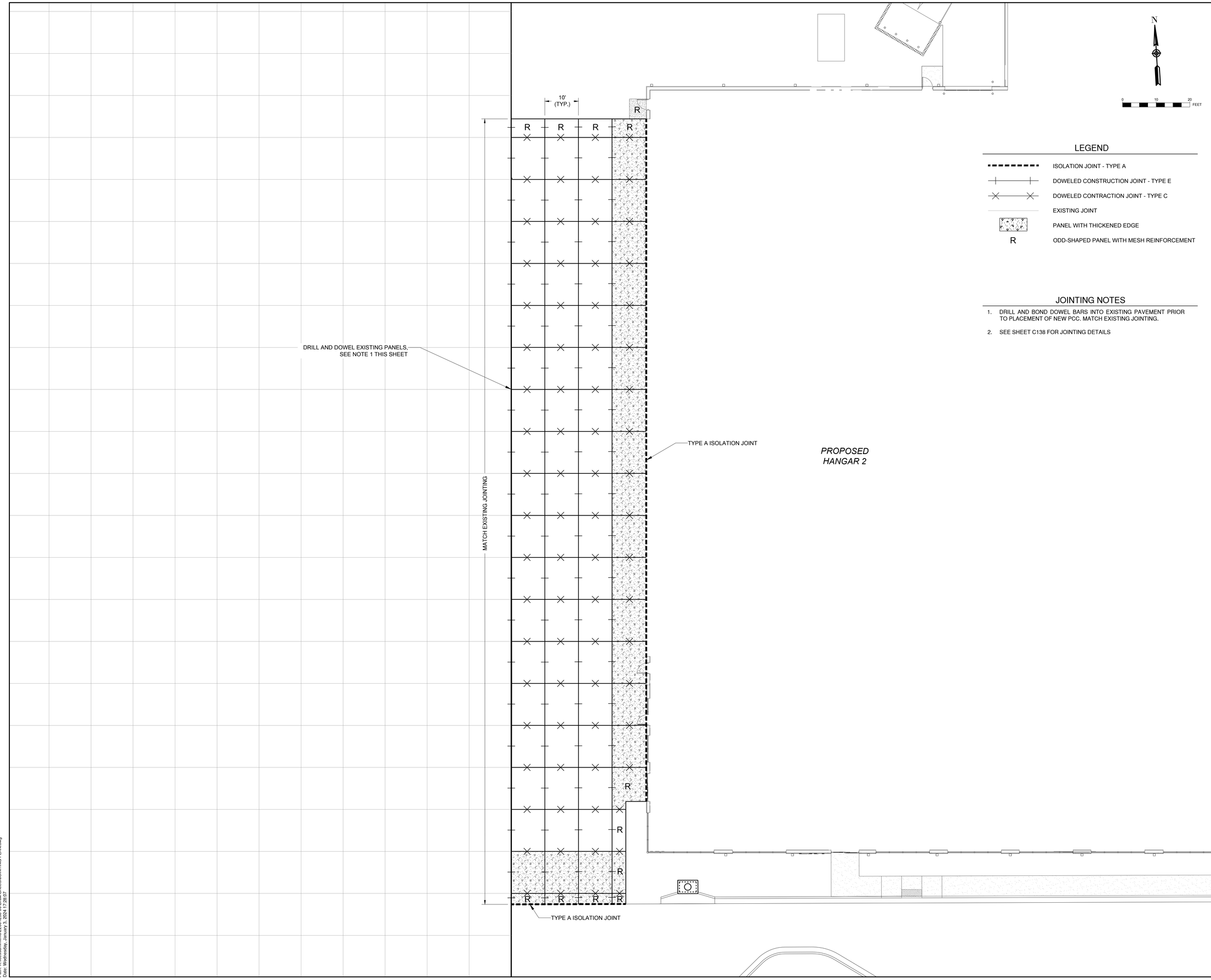

LEGEND

- ISOLATION JOINT - TYPE A
- DOWELED CONSTRUCTION JOINT - TYPE E
- DOWELED CONTRACTION JOINT - TYPE C
- EXISTING JOINT
- PANEL WITH THICKENED EDGE
- R — ODD-SHAPED PANEL WITH MESH REINFORCEMENT

JOINTING NOTES

1. DRILL AND BOND DOWEL BARS INTO EXISTING PAVEMENT PRIOR TO PLACEMENT OF NEW PCC. MATCH EXISTING JOINTING.
2. SEE SHEET C138 FOR JOINTING DETAILS

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	47732472
CAD DWG FILE:	JOINTING PLAN
DESIGNED BY:	WLC
DRAWN BY:	WLC
CHECKED BY:	JRC
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SHEET TITLE

AIRFIELD PAVEMENT JOINTING PLAN

C137

SHEET 048 OF 131

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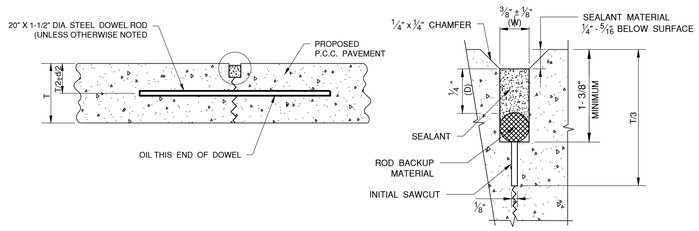
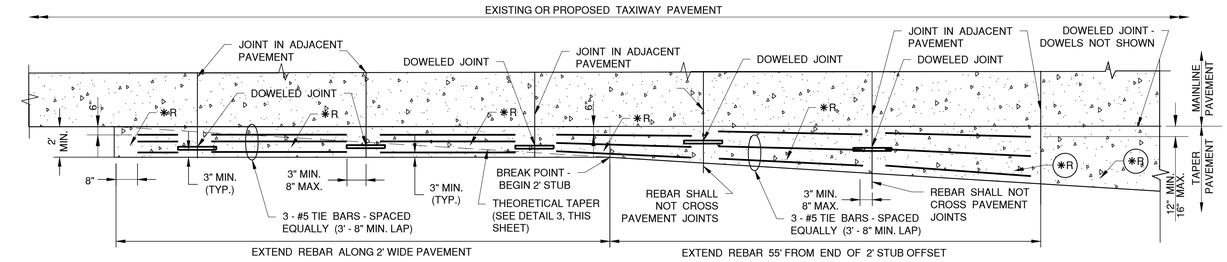
CONTRACTION JOINTS



TYPE C DOWELED

SYMBOL

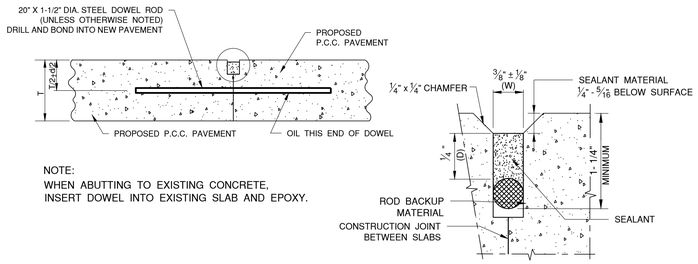


R = ODD SHAPED PANEL REINFORCEMENT SEE DETAILS THIS SHEET

FILLET TAPER DETAIL

NOT TO SCALE

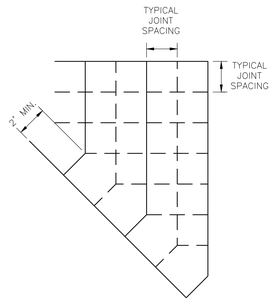
CONSTRUCTION JOINTS



NOTE:
WHEN ABUTTING TO EXISTING CONCRETE, INSERT DOWEL INTO EXISTING SLAB AND EPOXY.

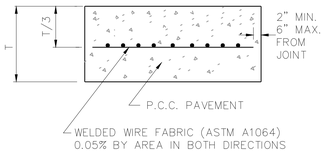
TYPE E DOWELED

SYMBOL



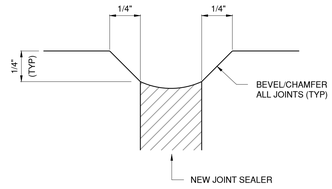
JOINTING AT SKEWED EDGE

NOT TO SCALE



ODD SHAPED PANEL REINFORCEMENT

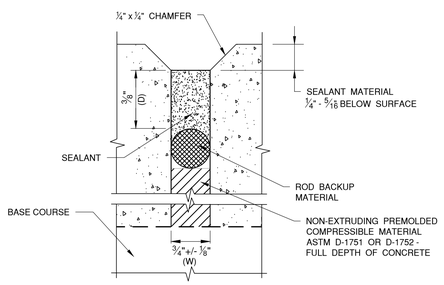
SYMBOL R

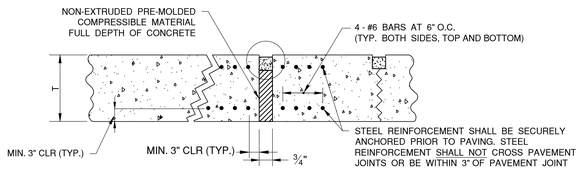


CHAMFER/BEVEL JOINT DETAIL

NOT TO SCALE

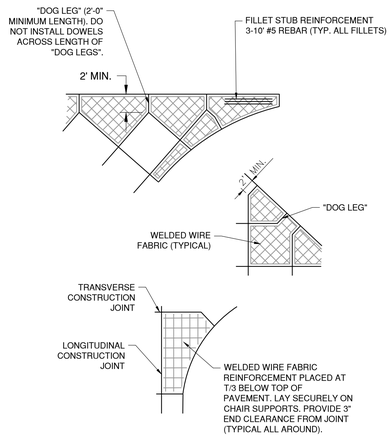
EXPANSION JOINTS





TYPE A ISOLATION

SYMBOL



TYPICAL FILLET AND REINFORCEMENT DETAILS

NOT TO SCALE

DIMENSION TABLES

TABLE 1

PAVEMENT THICKNESS T – INCHES	DEPTH OF CONTRACTION JOINT INITIAL SAW CUT T, INCHES T=(T/3) ±1/4"
8"	T=2.67" ±1/4"
11"	T=3.67" ±1/4"

TABLE 2

PAVEMENT THICKNESS T – INCHES	DOWEL BAR DETAILS			TIE BAR DETAILS		
	DIA. (d)	LENGTH	SPACING	BAR SIZE	LENGTH	SPACING
6"–7"	3/4"	18"	12"	#5	30"	30"
7.5"–12"	1"	18"	12"	#5	30"	30"
12.5"–16"	1 1/4"	20"	15"	#5	30"	30"
16.5"–20"	1 1/2"	20"	18"	#5	30"	30"
20.5"–24"	2"	24"	18"	#5	30"	30"

NOTES:

1. ALL EDGES OF NEW SLABS, FREE STANDING OR CLOSURE, SHALL BE EDGED WITH AN APPROVED TOOL HAVING A RADIUS OF 1/8" TO 1/4" TO FACILITATE SAWING OF THE SEALANT RESERVOIR. A RADIUS > 1/4" WILL NOT BE ACCEPTABLE.
2. THE INITIAL SAWCUT FOR ALL LONGITUDINAL AND TRANSVERSE CONTRACTION JOINTS SHALL BE SAWED AS SOON AS POSSIBLE AFTER PLACEMENT OF THE PAVEMENT. SAWING OF LONGITUDINAL CONTRACTION JOINTS ADJACENT TO THICKENED EDGES SHALL BE GIVEN PRIORITY OVER OTHER LONGITUDINAL JOINT SAWING.
3. ALL DOWEL BARS SHALL BE SECURELY HELD IN PLACE BY MEANS OF A DOWEL BAR ASSEMBLY WHICH WILL ENSURE THAT THEY WILL REMAIN PARALLEL TO THE PAVEMENT LANES. THE DOWEL BAR ASSEMBLIES SHALL BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. ALTERNATE METHODS OF PLACEMENT OF DOWEL BARS MAY BE PROPOSED BY THE CONTRACTOR, TO BE APPROVED BY THE ENGINEER. TRANSVERSE DOWEL BAR IMPLANTING WILL NOT BE ALLOWED.
4. ALL TIE BARS AND MESH SHALL BE SECURELY HELD IN PLACE BY SUPPORT PINS OR PLACED BY OTHER APPROVED METHODS TO PREVENT SHIFTING DURING AND AFTER CONCRETE PLACEMENT.
5. TIE BARS SHALL BE DEFORMED BARS IN CONFORMANCE WITH ASTM A706, EXCEPT THAT RAIL STEEL BARS, GRADE 50 OR 60 SHALL NOT BE USED FOR THE BARS THAT ARE TO BE BENT OR RE-STRAIGHTEND DURING CONSTRUCTION. TIE BARS DESIGNATED AS GRADE 40 IN ASTM A706 CAN BE USED FOR CONSTRUCTION REQUIRING BENT BARS.
6. THE INITIAL SAWCUT SHALL BE MADE TO THE 1/8" WIDTH INDICATED. INITIAL SAWING TO THE DIMENSION OF THE SECOND SAWCUT WILL NOT BE ALLOWED.
7. JOINTS SHALL BE CLEAN AND DRY BEFORE SEALING OPERATIONS BEGIN.
8. SHOULD THE POURING OPERATIONS REQUIRE THE INSERTION OF AN INTERMEDIATE HEADER, A DOWEL BASKET ASSEMBLY OR OTHER APPROVED METHOD OF DOWEL BAR PLACEMENT SHALL BE REQUIRED.
9. EPOXY-COATED DOWEL BASKET ASSEMBLIES MAY BE PROPOSED BY THE CONTRACTOR TO BE APPROVED BY THE DESIGN PROFESSIONAL. DOWELS IN THE APPROVED BASKET ASSEMBLIES SHALL CONFORM TO TABLE 2.
10. CONTRACTOR SHALL CONSTRUCT A 1/4" CHAMFER ON ALL CONCRETE JOINTS PER THE DETAIL ON THIS SHEET.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
TYLER G. HORN
NUMBER PE-2018000214
PROFESSIONAL ENGINEER

SEALED DIGITALLY
JANUARY 4, 2024

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: JOINTING DETAILS
DESIGNED BY: WLC
DRAWN BY: WLC
CHECKED BY: JRC
APPROVED BY: TGH

SHEET TITLE

PAVEMENT JOINTING DETAILS

C138

SHEET 049 OF 131

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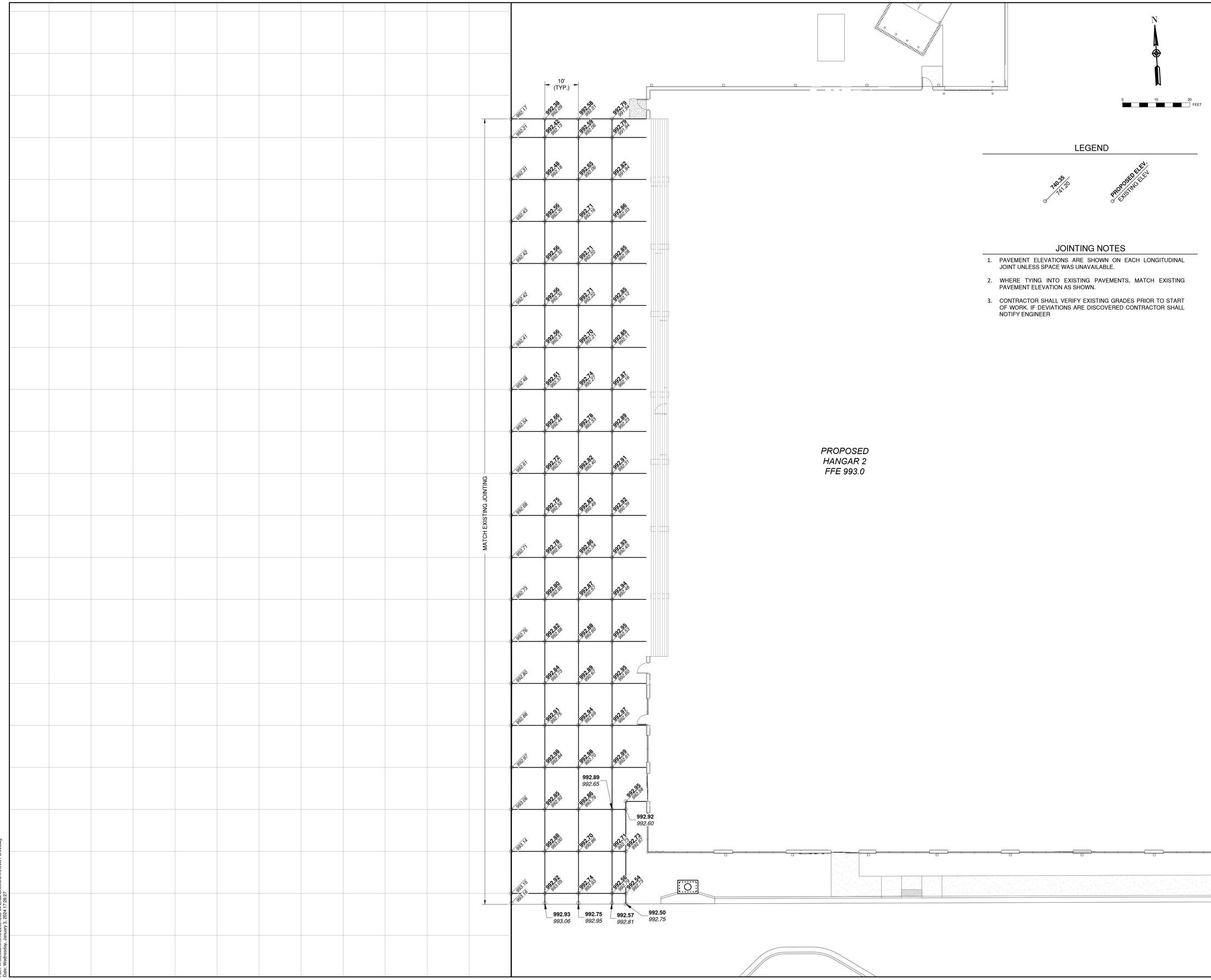

LEGEND

740.35 / 741.20 — PROPOSED ELEV. / EXISTING ELEV

JOINTING NOTES

1. PAVEMENT ELEVATIONS ARE SHOWN ON EACH LONGITUDINAL JOINT UNLESS SPACE WAS UNAVAILABLE.
2. WHERE TYING INTO EXISTING PAVEMENTS, MATCH EXISTING PAVEMENT ELEVATION AS SHOWN.
3. CONTRACTOR SHALL VERIFY EXISTING GRADES PRIOR TO START OF WORK. IF DEVIATIONS ARE DISCOVERED CONTRACTOR SHALL NOTIFY ENGINEER

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, #100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO: 47732472
CAD DWG FILE: STAKING PLAN
DESIGNED BY: WLC
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SHEET TITLE

AIRFIELD PAVEMENT STAKING PLAN

C139

SHEET 050 OF 131

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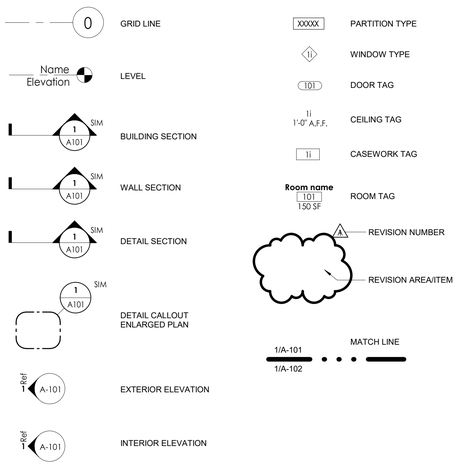
VICINITY MAP

ABBREVIATIONS

ADJ	ADJACENT
A.F.F.	ABOVE FINISHED FLOOR
ALUM	ALUMINUM
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
A.S.	ABOVE SLAB
BB	BASE BID
BD	BOARD
BL	BORROWED LITE
BLDG	BUILDING
BLKG	BLOCKING
BRG	BEARING
BOT	BOTTOM
B.O.	BOTTOM OF
B.O.S.	BOTTOM OF STEEL
CJ	CONTROL JOINT
CL	CLOSET
CLNG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
C.O.	CLEAN OUT
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CPT	CARPET
CT	CERAMIC TILE
CTR	CENTER
DBL	DOUBLE
DEPT	DEPARTMENT
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DR	DOOR
DTL	DETAIL
DW	DISHWASHER
DWG(S)	DRAWING/DRAWINGS
E	EAST
EA	EACH
EJ	EXPANSION JOINT
EL, ELEV	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
ENCL	ENCLOSURE
E.O.S.	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
E.T.R.	EXISTING TO REMAIN
E.W.	EACH WAY
EXIST.	EXISTING
EXT	EXTERIOR
FAP	FIRE ALARM PANEL
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN.	FINISH
FIX, FIXT	FIXTURE
FL, FLR	FLOOR
FLASH	FLASHING
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUD
F.O.W.	FACE OF WALL
FR	FIRE RATED, FIRE RETARDANT
FRP	FIBERGLASS REINFORCED PANEL
FT	FOOT, FEET
FTG	FOOTING
FURR	FURRING
F.V.	FIELD VERIFY
FVC	FIRE VALVE CABINET
GA	GAUGE
GALV	GALVANIZED
G.C.	GENERAL CONTRACTOR
GRND	GROUND
GL	GLASS, GRID LINE
G.S.F.	GROSS SQUARE FOOTAGE
GYP BD	GYPSUM WALLBOARD
GYP	GYPSUM
H.B.	HOSE BIB
HC	HANDICAPPED
HD	HEAD
HDWR	HARDWARE
HM	HOLLOW METAL
HPL	HIGH PRESSURE LAMINATE
HORIZ	HORIZONTAL
HR	HOUR
HT	HEIGHT
HVAC	HEATING, VENTILATION, AIR CONDITIONING
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATION
INT	INTERIOR
JAN	JANITOR
JST	JOIST
JT/ JNT	JOINT
KEC	KITCHEN EQUIPMENT CONTRACTOR
KIT	KITCHEN
L	LONG / LENGTH
LAM	LAMINATE, LAMINATED
LAV	LAVATORY
LT	LIGHT
M&MR	MOLD & MOISTURE RESISTANT
MAT'L	MATERIAL
MAS	MASONRY
MAX.	MAXIMUM
MECH	MECHANICAL
MEMB	MEMBRANE
MTL	METAL
MEZZ	MEZZANINE
MFR, MANUF.	MANUFACTURER
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MR	MOISTURE RESISTANT
MTD	MOUNTED
MWS	MOVABLE WALL SYSTEM
N	NORTH
N.I.C.	NOT IN CONTRACT
NO, NUM	NUMBER
NOM	NOMINAL
N.S.F.	NET SQUARE FEET
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OFF.	OFFICE
OFD	OVERFLOW DRAIN
OGPP	OPERABLE GLASS PANEL PARTITION
OPNG	OPENING
OPP	OPPOSITE
PERP.	PERPENDICULAR
PL	PLATE
PLAM	PLASTICAL LAMINATE
PLYWD	PLYWOOD
PNL, PANEL	PANELBOARD
PR	PAIR
PROP.	PROPERTY
P.T.	PRESSURE TREATED
PNT	PAINT
QT	QUARRY TILE
QTY	QUANTITY
R	RISER
RCP	REFLECTED CEILING PLAN
RB	RUBBER BASE
RAD, R	RADIUS
RD	ROOF DRAIN
REINF, R.I.	REINFORCED
REQ, REQ'D	REQUIRED
REV	REVISION
RM	ROOM
R.O.	ROUGH OPENING
S	SOUTH
SC	SOLID CORE, SEALED CONCRETE
SCHED	SCHEDULE
SECT	SECTION
S.F.	SQUARE FEET
SGD	SAFETY GLASSES DISPENSER
SIM	SIMILAR
SPEC	SPECIFICATION
SQ	SQUARE
S.S.	SOLID SURFACE, STAINLESS STEEL
ST	STAIR
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT.	STRUCTURAL
SUSP	SUSPENDED
SYM	SYMMETRICAL
TRD	TREAD
T.C.	THEATER CONSULTANT
TEMP.	TEMPORARY
THK	THICK
T.O.	TOP OF
T.O.S.	TOP OF STEEL
T.O.M.	TOP OF MASONRY
T.O.W.	TOP OF WALL
TR	TRASH RECEPTACLE
T.S.	TUBE STEEL
TYP	TYPICAL
UNFIN.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
VWC	VINYL WALLCOVERING
W	WEST, WIDE, WIDTH
W/, W/O	WITH, WITHOUT
WC	WATER CLOSET
WDW	WINDOW
WH	WATER HEATER
W.R.	WATER RESISTANT
WOT	WALK OFF TILE

SYMBOLS



GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH THE APPLICABLE BUILDING CODES, REGULATIONS, OCCUPANCY PERMITS AND ORDINANCES. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK. THE CONTRACTOR SHALL APPLY FOR, OBTAIN AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND APPROVALS BY LOCAL AUTHORITIES HAVING JURISDICTION OVER THE PROJECT. IN THE EVENT OF A CONFLICT BETWEEN THE CONSTRUCTION DOCUMENTS AND AN APPLICABLE CODE, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND THE ARCHITECT FOR DIRECTION AND RESOLUTION. FAILURE TO NOTIFY EITHER OF THESE PARTIES PRIOR TO COMMENCEMENT OF THE WORK, SHALL MAKE THE CONTRACTOR RESPONSIBLE FOR ANY CORRECTIVE MEASURES NEEDED TO BRING THE PROBLEM INTO PROPER CONFORMANCE, WITHOUT ADDITIONAL COSTS OR CHARGES TO THE OWNER. PROVIDE COPIES OF ALL TRANSACTIONS TO OWNER.
2. CONTRACTOR SHALL PROVIDE & MAINTAIN A REDLINED AS-BUILT CONSTRUCTION DOCUMENT SET AT THE SITE. THE OWNER OR THE ARCHITECT RESERVES THE RIGHT TO REVIEW THESE DOCUMENTS ON A WEEKLY BASIS.
3. PROVIDE THE ARCHITECT WITH A COMPLETE COPY OF AS-BUILT DRAWINGS AT THE COMPLETION OF THE PROJECT.
4. GENERAL CONTRACTOR SHALL FURNISH A COMPLETE LIST OF CHEMICALS TO BE USED IN THE PROJECT ALONG WITH THE MATERIAL DATA SAFETY SHEET ON EACH PRODUCT TO THE ARCHITECT. A COPY SHALL BE KEPT ON SITE FOR REFERENCE.
5. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR, AND HAVE CONTROL OVER, ALL CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK REQUIRED BY THE CONTRACT DOCUMENTS.
6. NO EQUIP., MATERIALS, OR VEHICLES ARE TO BE STORED OR PARKED ON AREAS NOT WITHIN THE AREAS INDICATED AS BEING DEMOLISHED ON THE DRAWINGS. IF AREAS ARE DISTURBED OR DAMAGED THE CONTRACTOR IS RESPONSIBLE FOR REPLACEMENT AT CONTRACTORS EXPENSE.
7. PRIOR TO LEAVING THE SITE DAILY, THE CONTRACTOR IS TO LEAVE THE FACILITY SECURABLE.
8. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF CONSTRUCTION PERSONNEL AND AUTHORIZED VISITORS.
9. SCOPE OF WORK OF ALL TRADES IS TO INCLUDE ALL MATERIALS AND LABOR AS REQUIRED TO TOTALLY COMPLETE THE PROJECT. ALL WORK SHALL BE COMPLETE, CONSISTENT WITH THE DESIGN INTENT AS EXPRESSED IN THESE DOCUMENTS, WHETHER SPECIFICALLY ADDRESSED IN THESE DOCUMENTS OR NOT. ANY QUESTIONS CONCERNING THE COMPLETENESS OF THE WORK SHALL BE ADDRESSED TO THE ARCHITECT.
10. ALL WORK SHALL BE PERFORMED BY THE GENERAL CONTRACTOR UNLESS OTHERWISE NOTED. ALL REFERENCES TO THE "CONTRACTOR" INCLUDE THE GENERAL CONTRACTOR AND THE SUBCONTRACTORS.
11. THE GENERAL CONTRACTOR SHALL SEE THAT ALL SUBCONTRACTORS RECEIVE COMPLETE SETS OF WORKING DRAWINGS FOR COORDINATION OF THEIR WORK AND DESCRIPTION OF SCOPE.
12. CONTRACTOR SHALL NOT MAKE, CAUSED TO BE MADE, OR PERMIT A SUBCONTRACTOR TO MAKE ANY CHANGE TO WHAT IS SPECIFIED ON THE PLAN WITHOUT SPECIFIC AUTHORIZATION OF THE ARCHITECT.
13. THE ARCHITECT IS NOT RESPONSIBLE FOR ERRORS, OMISSIONS OR DELAYS BY THE CONTRACTOR.
14. DO NOT SCALE DRAWINGS, FOLLOW WRITTEN DIMENSIONS OR KEYED NOTES ONLY. CONTACT ARCHITECT IMMEDIATELY FOR CLARIFICATION IF REQUIRED. VERIFY DIMENSIONS IN THE FIELD. LARGE SCALE DETAILS GOVERN OVER SMALL SCALE DETAILS.
15. ALL WALL DIMENSIONS ARE FOR GENERAL REFERENCE ONLY AND MAY VARY.
16. "MINIMUM" OR "MIN" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS SLIGHTLY ADJUSTABLE BUT MAY NOT VARY TO A DIMENSION OR QUANTITY LESS THAN THAT SHOWN WITHOUT THE APPROVAL OF THE ARCHITECT.
17. "MAXIMUM" OR "MAX" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION IS SLIGHTLY ADJUSTABLE BUT MAY NOT VARY TO A DIMENSION OR QUANTITY GREATER THAN THAT SHOWN WITHOUT THE APPROVAL OF THE ARCHITECT.
18. "±" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE DIMENSION OR QUANTITY IS SLIGHTLY ADJUSTABLE TO ACCOMMODATE ACTUAL CONDITIONS. VERIFY THE EXACT DIMENSION IN THE FIELD PRIOR TO FABRICATION.
19. "TYPICAL" OR "TYP." AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE CONDITION OR DIMENSION IS THE SAME OR REPRESENTATIVE FOR SIMILAR CONDITIONS THROUGHOUT.
20. "MATCH EXIST." AS USED IN THE DOCUMENTS SHALL MEAN THAT THE CONDITION OR MATERIAL IS TO SEAMLESSLY MATCH THE SURROUNDING OR PRESCRIBE MATERIAL IN STYLE, PROFILE, COLOR, TEXTURE & WHERE POSSIBLE MANUFACTURE.
21. "CLEAR" AS USED IN THESE DOCUMENTS SHALL MEAN THAT THE DIMENSION IS NOT ADJUSTABLE WITHOUT THE APPROVAL OF THE ARCHITECT. CLEAR DIMENSIONS SHALL BE ACCURATE TO FINISH WALL MATERIAL. CONTACT ARCHITECT PRIOR TO CONSTRUCTION IF FIELD CONDITIONS DO NOT ACCOMMODATE SAID DIMENSION.
22. "ALIGN" AS USED IN THESE DOCUMENTS SHALL MEAN TO ACCURATELY LOCATE AND FINISH FACES IN THE SAME PLANE; AND/OR TO INSTALL NEW CONSTRUCTION ADJACENT TO EXISTING CONSTRUCTION WITHOUT ANY VISIBLE JOINTS OR SURFACE IRREGULARITIES.
23. ANY DISCREPANCIES AS TO LOCATION BETWEEN THE ARCHITECTURAL AND ENGINEERING DRAWINGS OR BETWEEN THE DRAWINGS AND EXISTING FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR CLARIFICATIONS. WORK INSTALLED IN CONFLICT WITH THE CONTRACT DOCUMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE AND SHALL NOT IMPACT THE SCHEDULE.
24. THE ARCHITECT SHALL HAVE THE RIGHT TO MAKE FIELD ADJUSTMENTS IN ORDER TO MAINTAIN DESIGN INTENT.
25. CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH THE CONDITIONS OF THE CONTRACT. LOCAL CONDITIONS RELATING TO LOCATION, ACCESSIBILITY AND GENERAL CHARACTER OF THE CONSTRUCTION SITE AND LOCAL LABOR CONDITIONS SO THAT HE UNDERSTANDS THE NATURE, EXTENT, DIFFICULTIES AND RESTRICTIONS RELATED TO THE EXECUTION OF THE WORK.
26. INVESTIGATE JOB SITE TO COMPARE CONTRACT DOCUMENTS AND EXISTING CONDITIONS. INCLUDE COST FOR ALL WORK DESCRIBED IN CONTRACT DOCUMENTS AND REQUIRED OR IMPLIED BY EXISTING CONDITIONS. NOTIFY ARCHITECT OF ANY CONFLICTS BETWEEN EXISTING CONDITIONS AND NEW WORK. OMISSIONS OR CONFLICTS IN THE DRAWINGS AND ANY RESTRICTIONS RELATED TO THE EXECUTION OF THE WORK.
27. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR VERIFYING AND LOCATING ALL UNDERGROUND UTILITIES, ETC. PRIOR TO START OF CONSTRUCTION.
28. OBTAIN THE OWNER'S WRITTEN AUTHORIZATION BEFORE ANY WORK IS PERFORMED OR MATERIAL ORDERED WHICH INVOLVES EXTRA COST OVER AND ABOVE CONTRACT PRICE.
29. INSTALL AND MAINTAIN ALL NECESSARY COVERINGS. PROTECTIVE ENCLOSURES, TEMPORARY DOORS AND PARTITIONS AND DUST BARRIERS TO PROTECT ALL OCCUPANTS AND REPLACE ANY DAMAGES CAUSED BY IMPROPER PROTECTION AT NO ADDITIONAL CHARGE TO OWNER.
30. SUBMIT FOR APPROVAL TO THE ARCHITECT FINISHES LISTED AS MATCH EXISTING.
31. WHERE WALLS, CEILINGS, OR FLOORS ARE PATCHED, EXTENDED, OR REPAIRED, MATCH EXISTING MATERIALS, SIZE, PATTERN, TEXTURE, & COLOR UNLESS INDICATED OTHERWISE.
32. MATERIALS INDICATED TO BE REINSTALLED IN PROJECT ARE TO BE CLEANED, PAINTED, REPAIRED AS APPROPRIATE FOR REINSTALLATION IN "LIKE NEW" CONDITION.
33. CONTRACTOR TO PROTECT SITE FROM DAMAGE TO VEGETATION, DRIVES, PAVEMENT, AND WALKS. CONTRACTOR TO REPAIR OR REPLACE DISTURBED OR DAMAGED AREAS.
34. CONTRACTOR SHALL BE RESPONSIBLE TO OPEN AND PATCH BACK AS REQUIRED TO INSTALL SERVICES.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT
MO Certificate of Authority #000767

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

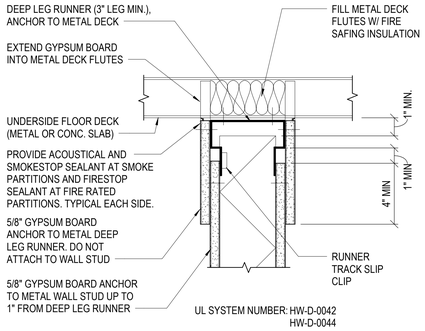
SHEET TITLE

ARCHITECTURAL LEGEND AND ABBREVIATIONS

AG001

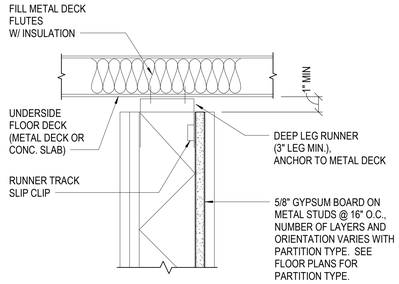
SHEET 051 OF 131

9/29/2023 11:03:59 AM

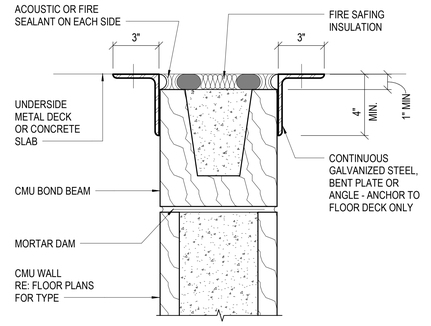


UL SYSTEM NUMBER: HW-D-0042
HW-D-0044

INTERIOR PARTITION DETAILS 6
3" = 1'-0"

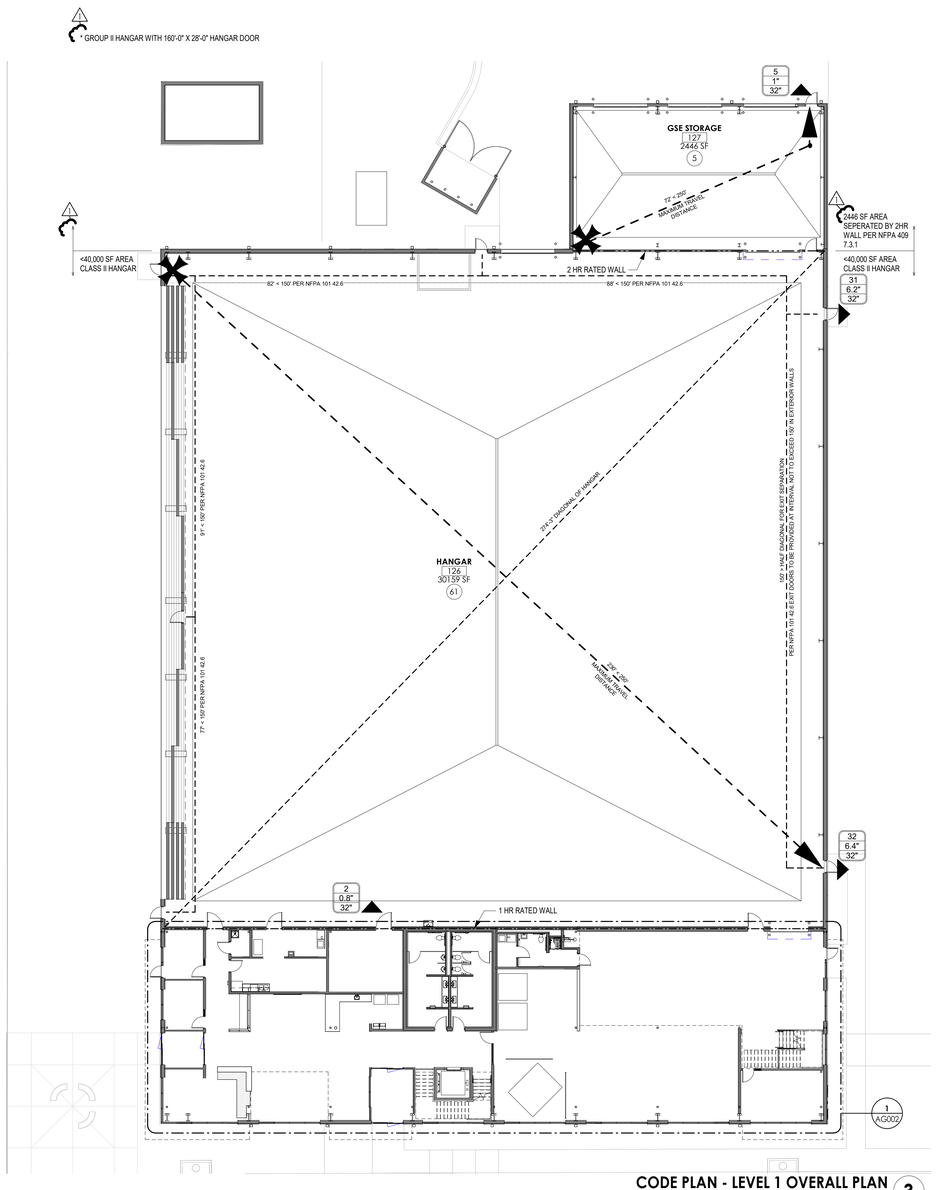


INTERIOR PARTITION DETAILS 5
3" = 1'-0"



UL SYSTEM NUMBER: HW-D-0098
HW-D-0110

INTERIOR PARTITION DETAILS 4
3" = 1'-0"



CODE PLAN - LEVEL 1 OVERALL PLAN 3
1/16" = 1'-0"

START LOCATION OF MAXIMUM TRAVEL DISTANCE

TRAVEL PATH

EXIT

EXIT LOAD (PERSON)

1 HR RATED

2 HR RATED

FE-1 SEMI RECESSED MOUNTED 2-A:20-B:C FIRE EXTINGUISHER

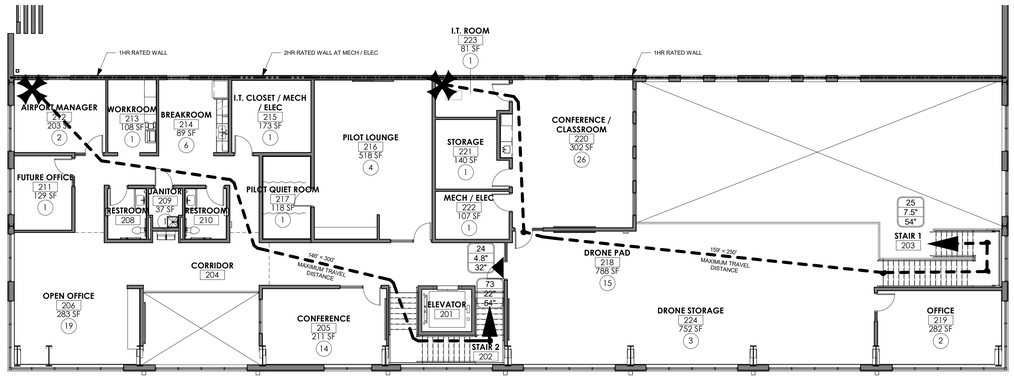
FE-2 BRACKET MOUNTED 2-A:20-B:C FIRE EXTINGUISHER

FIRE EXTINGUISHER AND CABINET TYPE DESIGNATION. PORTABLE FIRE EXTINGUISHERS ARE REQUIRED TO BE INSTALLED IN ACCORDANCE WITH SECTION 906.

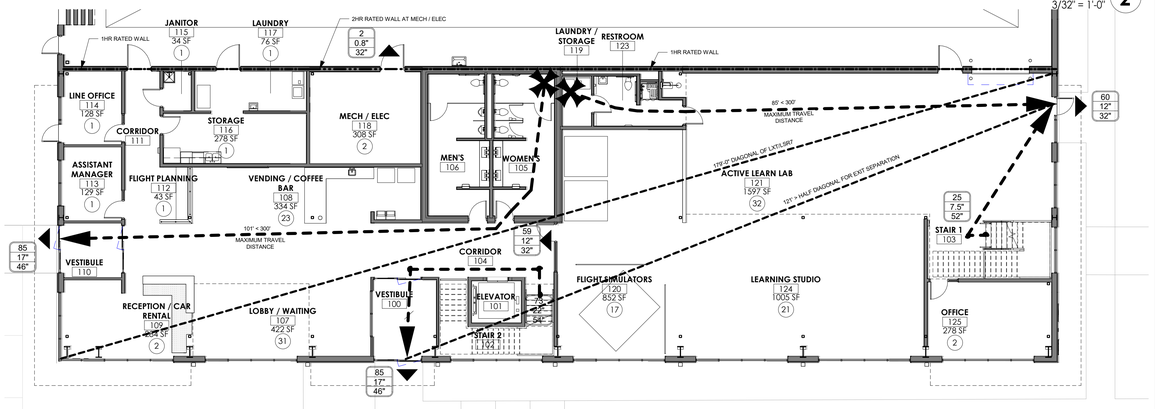
NOTE: FOR PROPERTY LINE LOCATIONS RE:CIVIL

ROOM NAME • XXXXXX
ROOM NUMBER • XXX
SQUARE FEET • XXX SF
NUMBER OF OCCUPANTS • X
OCCUPANT EGRESS • XXXX
EGRESS WIDTH REQUIRED • XXXX
EGRESS WIDTH PROVIDED • XXXX

CODE PLANS LEGEND



CODE PLAN - LEVEL 2 HANGAR 2 2
3/32" = 1'-0"



CODE PLAN - LEVEL 1 HANGAR 2 1
3/32" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
ARCHITECT
A-5006
REGISTERED ARCHITECT
MO Certificate of Authority #000767

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	DM
APPROVED BY:	WAI
COPYRIGHT 2023	

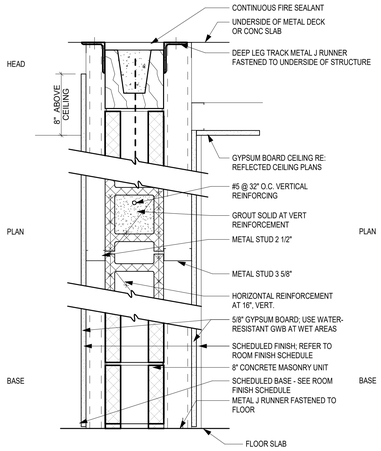
SHEET TITLE

CODE PLANS

AG002

SHEET 052 OF 131

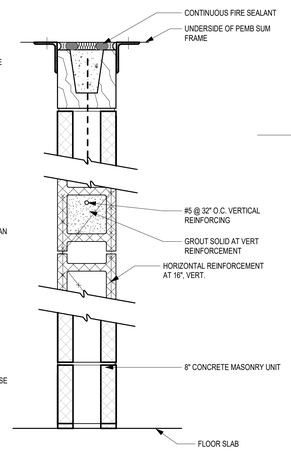
11/8/2023 1:31:47 PM



TYPE M820 NO FIRE RATING 8" CMU WALL TO STRUCTURE ABOVE WITH 2 1/2" MTL. STUD ON EXTERIOR WITH ONE LAYER OF 5/8" GYP. BD. TO 8" ABOVE FINISH CEILING AND 3 5/8" MTL. STUD ON INTERIOR WITH ONE LAYER OF 5/8" GYP. BD. TO CEILING

TYPE M821 U905 1 HOUR FIRE RATING 8" CMU WALL TO STRUCTURE ABOVE WITH 2 1/2" MTL. STUD ON EXTERIOR WITH ONE LAYER OF 5/8" GYP. BD. TO UNDERSIDE OF STRUCTURE AND 3 5/8" MTL. STUD ON INTERIOR WITH ONE LAYER OF 5/8" GYP. BD. TO CEILING

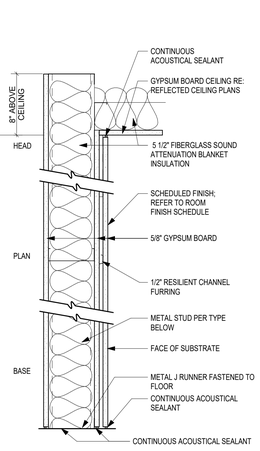
PARTITION TYPE MF - MASONRY



TYPE M802 8" CMU WALL TO TOP OF ELEVATOR SHAFT

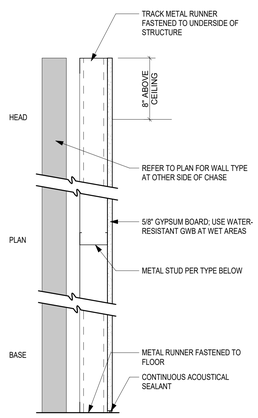
TYPE M800 U905 2HR RATED 8" CMU WALL TO PEMB FRAME / DECK ABOVE

PARTITION TYPE M - MASONRY



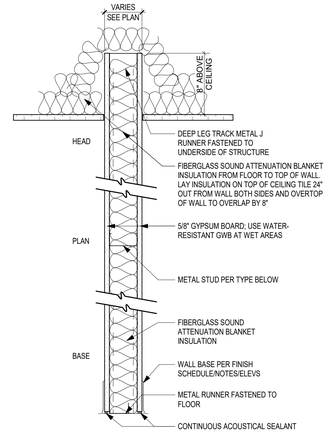
TYPE F630 NO FIRE RATING 6" MTL STUD TO 8" ABOVE CEILING WITH 5/8" GYP BD TO 8" ABOVE FINISH CEILING EXTERIOR SIDE. 5/8 GYP BD AND 1/2" RESILIENT CHANNEL WITH 5/8" GYP. BD. TO FINISH CEILING ON INTERIOR SIDE

PARTITION TYPE RC - FURRING



TYPE CH310 NO FIRE RATING 3 5/8" MTL STUD AND GYP BD TO 8" ABOVE FINISH CEILING ON ONE SIDE ONLY

PARTITION TYPE CH - CHASE WALL (NR)



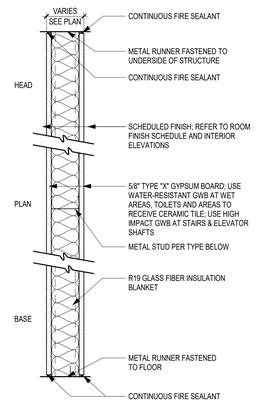
TYPE P320 NO FIRE RATING 3 5/8" MTL STUD & GYP BD. TO 8" ABOVE FINISH CEILING. 5/8" GYP BD ON BOTH SIDE

TYPE P320A NO FIRE RATING 3 5/8" MTL STUD & GYP BD. TO 8" ABOVE FINISH CEILING. 5/8" GYP BD ON BOTH SIDE WITH FIBERGLASS SOUND ATTENUATION BLANKET INSULATION

TYPE P620 NO FIRE RATING 6" MTL STUD & GYP BD. TO 8" ABOVE FINISH CEILING. 5/8" GYP BD ON BOTH SIDE

TYPE P620A NO FIRE RATING 6" MTL STUD & GYP BD. TO 8" ABOVE FINISH CEILING.. 5/8" GYP BD ON BOTH SIDE WITH FIBERGLASS SOUND ATTENUATION BLANKET INSULATION

PARTITION TYPE S - PARTIAL HT

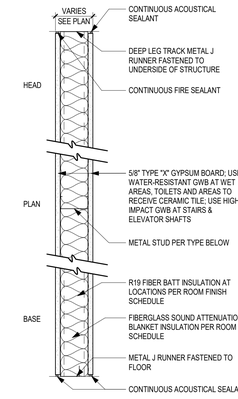


TYPE S821 UL 419 1HR RATED WALL 8" MTL STUD & 5/8" TYPE X GYP BD. TO STRUCTURE ABOVE BOTH SIDE WITH R19 GLASS FIBER INSULATION BLANKET FULL HEIGHT

TYPE S821A UL 419 2HR RATED WALL 8" MTL STUD & 2 LAYERS 5/8" TYPE X GYP BD. TO STRUCTURE ABOVE BOTH SIDE WITH R19 GLASS FIBER INSULATION BLANKET FULL HEIGHT

TYPE S1221 UL 419 1HR RATED WALL 12" MTL STUD & 5/8" TYPE X GYP BD. TO STRUCTURE ABOVE BOTH SIDE WITH R19 GLASS FIBER INSULATION BLANKET FULL HEIGHT

PARTITION TYPE S - 1 HOUR / 2 HOUR



TYPE S320 NO FIRE RATING 3 5/8" MTL STUD & GYP BD. TO STRUCTURE ABOVE. 5/8" GYP BD ON BOTH SIDES

TYPE S320A NO FIRE RATING 3 5/8" MTL STUD & GYP BD. TO STRUCTURE ABOVE. 5/8" GYP BD ON BOTH SIDES WITH FIBERGLASS SOUND ATTENUATION BLANKET INSULATION FULL HEIGHT

TYPE S620 NO FIRE RATING 6" MTL STUD & GYP BD. TO STRUCTURE ABOVE. 5/8" GYP BD ON BOTH SIDES

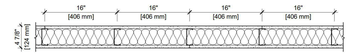
TYPE S620A NO FIRE RATING 6" MTL STUD & GYP BD. TO STRUCTURE ABOVE. 5/8" GYP BD ON BOTH SIDES WITH FIBERGLASS SOUND ATTENUATION BLANKET INSULATION FULL HEIGHT

PARTITION TYPE S - NON RATED

RATED DETAILS

DESIGN NO. UL U419

FIRE RATING:	1 HOUR
STC RATING:	44
SOUND TEST:	USG-160919
SYSTEM THICKNESS:	4-7/8" [124 MM]
LOCATION:	INTERIOR
FRAMING TYPE:	STEEL STUD (NON-LOAD-BEARING)

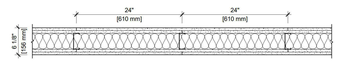


ASSEMBLY REQUIREMENTS:

GYPSUM PANELS:	ONE LAYER 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)
STEEL STUDS:	3-5/8" [92 MM] STEEL STUDS, EQ20 (0.018"), 16" [406 MM] O.C.
INSULATION:	3 1/2" [89 MM] KNAUF ECOBATT® INSULATION
GYPSUM PANELS:	ONE LAYER 5/8" [15.9 MM] SHEETROCK® ECOSMART GYPSUM PANEL (UL TYPE ULIX™)

DESIGN NO. UL U419

FIRE RATING:	2 HOURS
STC RATING:	53
SOUND TEST:	USG-180804
SYSTEM THICKNESS:	6-1/8" [156 MM]
LOCATION:	INTERIOR
FRAMING TYPE:	STEEL STUD (NON-LOAD-BEARING)



ASSEMBLY REQUIREMENTS:

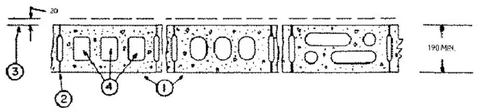
GYPSUM PANELS:	TWO LAYERS 5/8" [15.9 MM] SHEETROCK® GYPSUM PANEL (UL TYPE SCX)
STEEL STUDS:	3-5/8" [92 MM] STEEL STUDS, EQ20 (0.018"), 24" [610 MM] O.C.
INSULATION:	3-1/2" [89 MM] FIBERGLASS INSULATION
GYPSUM PANELS:	TWO LAYERS 5/8" [15.9 MM] SHEETROCK® GYPSUM PANEL (UL TYPE SCX)

Design No. U905

June 18, 2012

Assembly Rating - 2 h

Load Restricted — Assembly evaluated in accordance with Working Stress Design methods, for use under Limit States Design methods; refer to information under Guide BXUVC.



Horizontal Section

Bearing or Nonbearing Wall

1. **Concrete Blocks of Various Designs —** (CAZTC). 2 h rating based on noncombustible members framed into wall. Rating is 1 h when combustible members are framed into wall.

BASALITE CONCRETE PRODUCTS VANCOUVER ULC

EXPOCRETE CONCRETE PRODUCTS LTD

GROUPE PERMACON, DIV OF OLDCASTLE BUILDING PRODUCTS CANADA INC ✔

OK BUILDERS SUPPLIES LTD

RONA INC

TRISTAR BRICK & BLOCK LTD

2. **Mortar —** Blocks laid in full bed of mortar, 13 mm thick, of 3 parts of clean and sharp sand to 1 part Portland Cement (proportioned by volume), and 15% hydrated lime (by cement volume). Vertical jonts staggered.

3. **Portland, Cement, Stucco or Gypsum Plaster —** Add 1/2 h to Classification if used. Where combustible members are framed in wall, plasteror stucco must be applied on the face opposite framing to achieve a max Classification of 1-1/2 h.

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, burned clay or shale (Rotary Kiln Process) or water repellent vermiculite masonry fill insulation, add 2 h to Classification.

WALL TYPE GENERAL NOTES

1. REFER TO PART PLANS AND ENLARGED PLANS FOR PARTITION TYPES AND REQUIRED MINIMUM FIRE RATINGS. FOLLOW THE TERMINOLOGY OF PARTITIONS TO DEVELOP FULLY COMPLIANT ASSEMBLY

2. UTILIZE 3 5/8" METAL STUDS @ 16" O.C. TO AN UNBRACED HEIGHT OF 13'- 8", AT HEIGHTS TO 26' USE 6" 20 GA. STUDS @ 16" O.C. - ADJUST STUD SIZE & SPACING AS REQUIRED. FOR ALLOWABLE L/240 DEFLECTION FOR 5 PSF WIND LOAD. VERIFY STUD GAUGE WITH SUPPLIER.

3. ALL GYPSUM BOARD IS 5/8" TYP., UNO.

4. ALL FIRE RATED PARTITIONS TO BE TYPE "X" GYPSUM BOARD"

5. USE WATER-RESISTANT GYPSUM BOARD ON PARTITIONS SCHEDULED TO RECEIVE CERAMIC TILE AND ALL WET AREAS; EXCEPTION: USE CEMENTITIOUS BACKER BOARD IN SHOWERS.

6. USE MINIMUM 20 GAUGE 3 5/8" WIDE STUDS @ 16" O.C. FOR ALL WALLS TO RECEIVE CERAMIC TILE FINISH AS INDICATED ON INTERIOR ELEVATIONS OR FINISH SCHEDULE.

7. ALL LIMITING HEIGHTS TO BE CONFIRMED BY THE SELECTED MANUFACTURER.

8. PROVIDE CONTINUOUS ACOUSTICAL SEALANT AT SILL AND HEAD PARTITIONS WHERE AN STC RATING IS REQUIRED.

9. PROVIDE SOUND ATTENUATION BLANKET (SAB) TO ACHIEVE STC RATINGS AS REQUIRED.

10. PROVIDE SOUND ATTENUATION FIRE BLANKET (SAFB) TO ACHIEVE FIRE RATINGS AND STC RATINGS AS REQUIRED.

11. TAPE, BED, FLOAT AND FINISH ALL GYPSUM BOARD CORNERS AND JOINTS READY FOR FINISH.

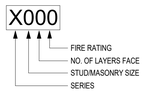
12. PROVIDE CONTINUOUS CAULKING AT ALL DUCT PIPE AND CONDUIT PENETRATIONS THROUGH WALLS REQUIRING FIRE RATING AND ACOUSTICAL SEPARATION.

13. ALL FIRE RATED PARTITIONS SHALL COMPLY WITH APPLICABLE CODE.

14. WALLS, DOORS AND PENETRATIONS AT MDFS TO BE SEALED TO MEET THE REQUIREMENTS OF THE CLEAN AGENT FP SYSTEM

15. STUD TYPE PARTITIONS IN MER ROOMS TO RECEIVE PLYWOOD FINISH FACE INSIDE OF ROOM

16. EXPANSION JOINTS SHALL BE INSTALLED AT A MAX. OF 30'-0". JOINTS SHALL ALSO BE LOCATED TO COORDINATE WITH ANTICIPATED BUILDING MOVEMENT, STRUCTURAL ELEMENTS, AND SUBSTRATE TRANSITIONS.



SERIES NAMES:

F = FURRING
S = STUD
CH = CHASE

STUD /MASONRY SIZE:

0 = 7/8" STL FUR.
1 = 1 5/8" STL STUD
2 = 2 1/2" STL. STUD
3 = 3 5/8" STL STUD
4 = 4" STL STUD
6 = 6" STL STUD

FIRE RATING:

1= 1 HOUR
2= 2 HOUR
3= 3 HOUR
4= 4 HOUR

NOTE: REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL INFORMATION ON ATTRIBUTES.

CODE INFORMATION

FACILITY NAME: EASTSIDE DEVELOPMENT

ADDRESS: NE HAGAN RD LEE'S SUMMIT MISSOURI
OWNER: THE CITY OF LEE'S SUMMIT

PROJECT SCOPE
NEW APPROXIMATELY 40,000 SF FOOTPRINT, WITH 30,000 SF FOR AIRPLANE STORAGE AS FBO SERVICE., 10,000 SF FOR LSR7 SCHOOL DISTRICT, 8,700 FOR FBO TERMINAL, AND 2,400 SF FOR GSE EQUIPMENT STORAGE.

ADOPTED CODES
- 2018 INTERNATIONAL BUILDING CODE
- 2018 INTERNATIONAL MECHANICAL CODE
- 2018 INTERNATIONAL PLUMBING CODE
- 2017 NATIONAL ELECTRICAL CODE
- 2018 INTERNATIONAL FIRE CODE
- 2018 INTERNATIONAL ENERGY CODE
- 2021 LIFE NFPA SAFETY CODE
- ICC/ANSI A117.1-2009
- NFPA 409 (2016 BY REFERENCE BUT BY ACCEPTANCE NEWER 2022 VERSION IS BASIS OF DESIGN)
- ORDINANCES OF THE UNITED GOVERNMENT OF LEE'S SUMMIT, MISSOURI

BUILDING OCCUPANCY, HEIGHT, AND AREA
MIXED USE OCCUPANCY, TYPE II-B NONCOMBUSTIBLE, UNPROTECTED, FULLY SPRINKLED CONSTRUCTION. EDUCATIONAL ASSEMBLY WILL BE LESS THAN 50 PEOPLE AND CONSIDERED AS BUSINESS OCCUPANCY.

B OCCUPANCY FOB:	ALLOWABLE: 92,000 SF, 4 STORIES ACTUAL: 8,640 SF, 2 STORY
E OCCUPANCY LSR7:	ALLOWABLE: 58,000 SF, 3 STORIES ACTUAL: 7,223 SF INTERIOR, 2 STORY (ASSEMBLY LESS THAN 50 PEOPLE IS TYPE B)
S-1 OCCUPANCY HANGAR:	ALLOWABLE: 40,000 SF PER NFPA, 3 STORIES, 75 FEET ACTUAL: 33,416 SF INTERIOR 1 STORY, 45 FEET

SEE THE ATTACHED ADJACENT LETTER FROM THE LEE'S SUMMIT REORGNIZED SCHOOL DISTRICT NO 7 FOR LIMITING OCCUPANT LOAD TO 49

TYPES OF CONSTRUCTION
FIRE-RESISTANCE RATING REQUIREMENTS OF II-B CONSTRUCTION FOR BUILDING ELEMENTS

BUILDING ELEMENT	FR RATING (HOURS)
PRIMARY STRUCTURAL FRAME	0
EXTERIOR WALLS WITH FIRE SEPARATION DISTANCE > 10'	0
INTERIOR BEARING WALLS	0
NONBEARING WALLS & PARTITIONS	0
FLOOR CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS	0
ROOF CONSTRUCTION & ASSOCIATED SECONDARY MEMBERS	0

FIRE PROTECTION AND LIFE SAFETY SYSTEMS
AUTOMATIC SPRINKLER SYSTEM SHALL BE INSTALLED THROUGHOUT IN ACCORDANCE WITH NFPA 13 FOR BUSINESS AND EDUCATION. NFPA 409 FOR THE STORAGE (HANGAR)
NOTE: SPRINKLER SYSTEM IS TO BE DESIGN BUILD BY G.C. - DEFERRED SUBMITTAL
ALARM SYSTEM IS TO BE DESIGN BUILD BY GC IF REQUIRED - DEFERRED SUBMITTAL
-G.C.SHALL PROVIDE CUT SHEETS FOR IMPACT RESISTANT DOORS, WINDOWS, ETC TO THE CITY AS REQUIRED, DEFERRED SUBMITTAL

NFPA 409 FOR THE STORAGE OF AIRCRAFT
SECTION 6.1.2 GROUP II AIRCRAFT HANGAR: HANGAR SHALL HAVE AN AIRCRAFT ACCESS DOOR HEIGHT OF 28 FT MAXIMUM AND A SINGLE FIRE AREA OF MAXIMUM 40,000 SQFT FOR TYPE II CONSTRUCTION PER TABLE 6.1.2.
THE PROTECTION REQUIREMENTS IN 9.1.1 SHALL BE PERMITTED TO BE MODIFIED WITHIN THE AIRCRAFT STORAGE AND SERVICE AREA WHERE A RISK ASSESSMENT, AS OUTLINED IN SECTION 4.2 FIRE RISK ASSESSMENT IS SUBMITTED AND APPROVED BY THE AUTHORITY HAVING JURISDICTION.

CONSTRUCTION OF GROUP I AND GROUP II AIRCRAFT HANGARS CHAPTER 7
SECTION 7.3.3 PARTITIONS AND CEILINGS SEPARATING AIRCRAFT STORAGE AND SERVICING AREAS FROM ALL OTHER AREAS, SHOPS, OFFICES, AND PARTS STORAGE AREAS SHALL HAVE AT LEAST A 1-HOUR FIRE RESISTANCE RATING WITH OPENINGS PROTECTED BY LISTED FIRE DOORS OR SHUTTERS HAVING A MINIMUM FIRE RESISTANCE RATING OF 45 MINUTES.

SECTION 7.7.3.2 THE USE OF NOZZLES OR OPEN-HEAD SPRINKLERS WITH ANY NOMINAL K-FACTOR FOR COLUMN PROTECTION SHALL BE PERMITTED

EXITING

1004.2 OCCUPANT LOAD			
HANGAR	500 GROSS	33,416 SF	67
BUSINESS - FOB	150 GROSS	6,548 SF	44
ASSEMBLY CONCENTRATED (LOBBY)	7 NET	813 SF	116
ASSEMBLY UNCONCENTRATED (CONF. RM)	15 NET	279 SF	19
EDUCATION CLASSROOM (BUSINESS)	150 GROSS	1,388 SF	10
EDUCATION SHOP	50 NET	5,446 SF	109
ACCESSORY STORAGE/MECHANICAL	300 GROSS	649 SF	3
TOTAL OCCUPANT LOAD			376

EXIT ACCESS - COMMON PATH OF EGRESS TRAVEL PER TABLE 1006.2.1
B & S OCCUPANCY WITH SPRINKLER SYSTEM
B OCCUPANTS = 100'
A OCCUPANCY = 75'
E OCCUPANCY = 75'
S OCCUPANTS = 100'

EXIT AND EXIT ACCESS DOORWAYS
B OCCUPANCY: MORE THAN ONE EXIT REQUIRED WHEN OCCUPANT LOAD EXCEEDS 49
S OCCUPANCY: MORE THAN ONE EXIT REQUIRED WHEN OCCUPANT LOAD EXCEEDS 29
EXIT ARRANGEMENT WITH SPRINKLER: NOT LESS THE ONE-THIRD THE LENGTH OF THE MAXIMUM OVERALL DIAGONAL DIMENSION OF AREA TO BE SERVED

EXIT ACCESS TRAVEL DISTANCE WITH SPRINKLER SYSTEM PER TABLE 1017.2
B OCCUPANCY: 300'
E OCCUPANCY: 250'
S-1 OCCUPANCY: 250'

MINIMUM CORRIDOR WIDTH:
REQUIRED OCCUPANCY CAPACITY < 50 = 36"
REQUIRED OCCUPANCY CAPACITY ≥ 50 = 44"

PLUMBING FIXTURES: (SECTION 29 TABLE 2902.1)

PLUMBING FIXTURE CALCULATIONS:

	WATER CLOSETS		URINALS		LAVATORIES	
	REQUIRED	PROVIDED	PROVIDED		REQUIRED	PROVIDED
HANGAR	1	1	0		1	1
BUSINESS	3	2	1		2	2
ASSEMBLY (LOBBY)	2	1	0		1	1
EDUCATION SHOP	3	3	1		2	2
TOTAL	9	7	2		7	7

	DRINKING FOUNTAIN		SERVICE SINK	
	REQUIRED	PROVIDED:	REQUIRED	PROVIDED:
HANGAR	1	0	1	0
BUSINESS	1	1	1	1
ASSEMBLY (LOBBY)	1	1	1	0
EDUCATION SHOP	2	2	1	1
TOTAL	5	4	4	2

SERVICE SINKS
THE HANGAR AND ASSEMBLY (LOBBY) ARE CONSIDERED ACCESSORY TO THE TERMINAL USE AND THE SERVICE SINKS IN THE TERMINAL (BUSINESS) WILL BE USED FOR THESE TWO SPACES.

DRINKING FOUNTAIN
SINKS AT COFFEE BAR AND BREAKROOM ARE BEING COUNTED AS PART OF THE TOTAL DRINKING FOUNTAIN COUNT.

ICC/ANSI A117.1-2009
TABLE C402.1.3 OPAQUE THERMAL ENVELOPE INSULATION COMPONENT MINIMUM REQUIREMENTS
CLIMATE ZONE 4
METAL BUILDING ROOFS R-19 LINER SYSTEM MINIMUM
METAL BUILDING WALLS R-11 LINER SYSTEM MINIMUM
METAL FRAMED WALLS R-11 INSULATION MINIMUM
SLAB-ON-GRADE FLOORS, UNHEATED SLABS R-10 FOR MINIMUM 24" BELOW GRADE (BECAUSE THE INSULATION WILL ALSO ACT AS PROTECTION BOARD, IT WILL EXTEND DOWN TO THE TOP OF THE FOOTING.)

LINER SYSTEM DEFINED AS: A SYSTEM THAT INCLUDES THE FOLLOWING:
1. A CONTINUOUS VAPOR BARRIER LINER MEMBRANE THAT IS INSTALLED BELOW THE PURLINS/GIRTS AND THAT IS UNINTERRUPTED BY FRAMING MEMBERS.
2. AN UNCOMPRESSED, UNFACED INSULATION RESTING ON TOP OF THE LINER MEMBRANE AND LOCATED BETWEEN THE PURLINS/GIRTS. FOR MULTILAYER INSTALLATIONS, THE LAST RATED R-VALUE OF INSULATION IS FOR UNFACED INSULATION DRAPED OVER PURLINS/GIRT AND THEN COMPRESS WHEN THE METAL PANELS ARE ATTACHED.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
NOTARIAL SEAL
A-5006
REGISTERED ARCHITECT
MO Certificate of Authority #000767

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

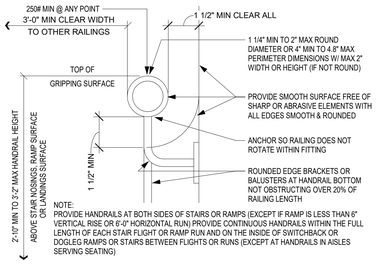
SHEET TITLE

CODE INFORMATION AND WALL TYPES

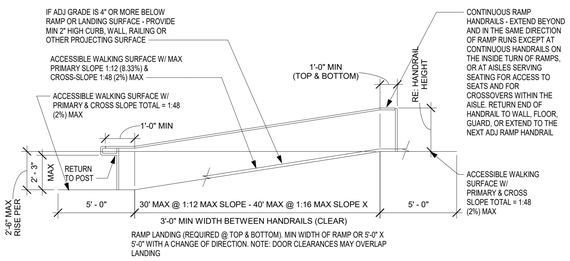
AG003

SHEET 053 OF 131

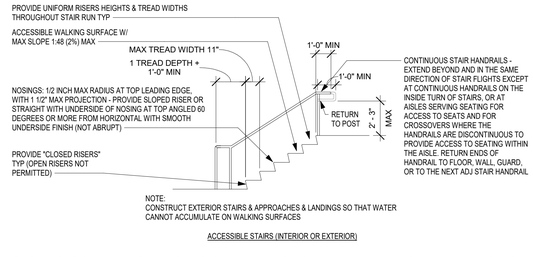
11/8/2023 2:36:18 PM



RAMP & STAIR HANDRAILS (INTERIOR OR EXTERIOR)

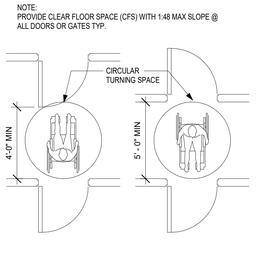


ACCESSIBLE RAMPS (INTERIOR OR EXTERIOR)

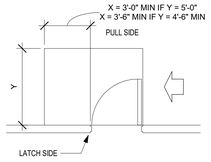


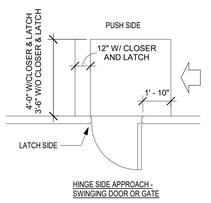
ACCESSIBLE STAIRS (INTERIOR OR EXTERIOR)

ACCESSIBLE STAIRS/RAMPS & HANDRAIL DETAILS

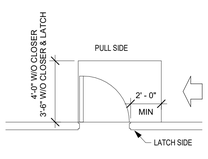


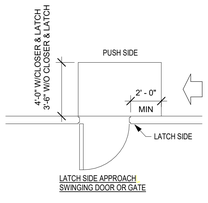
DOORS/GATES IN SERIES



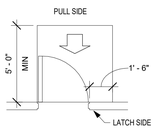


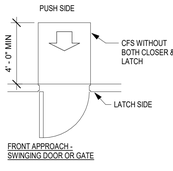
HINGE SIDE APPROACH - SWINGING DOOR OR GATE



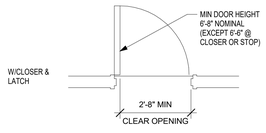


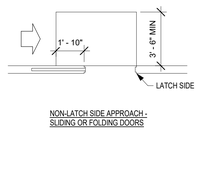
LATCH SIDE APPROACH SWINGING DOOR OR GATE



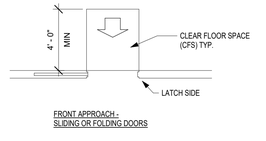


FRONT APPROACH - SWINGING DOOR OR GATE

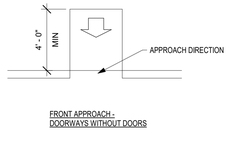




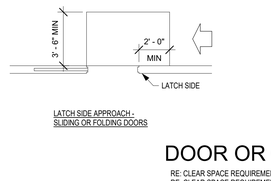
NON-LATCH SIDE APPROACH - SLIDING OR FOLDING DOORS



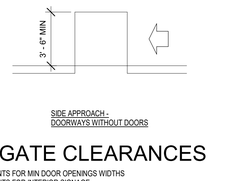
FRONT APPROACH - SLIDING OR FOLDING DOORS



FRONT APPROACH - DOORWAYS WITHOUT DOORS



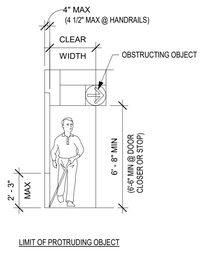
LATCH SIDE APPROACH - SLIDING OR FOLDING DOORS



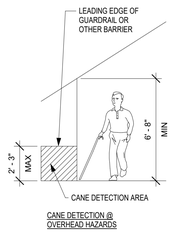
SIDE APPROACH - DOORWAYS WITHOUT DOORS

DOOR OR GATE CLEARANCES

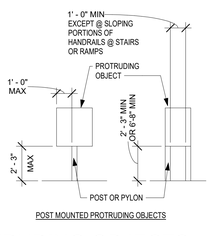
RE: CLEAR SPACE REQUIREMENTS FOR MIN DOOR OPENINGS WIDTHS
RE: CLEAR SPACE REQUIREMENTS FOR INTERIOR SIGNAGE



LIMIT OF PROTRUDING OBJECT

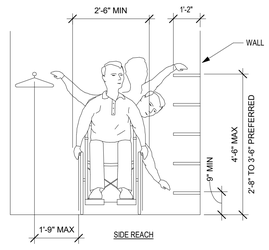


CANE DETECTION @ OVERHEAD HAZARDS

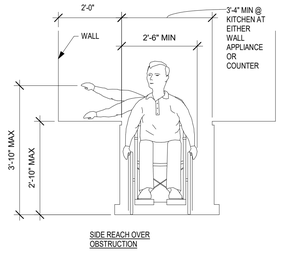


POST MOUNTED PROTRUDING OBJECTS

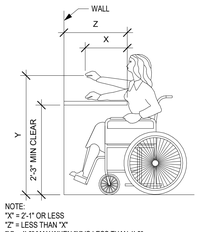
PROTRUDING OBJECTS



SIDE REACH

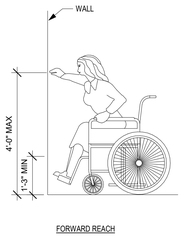


SIDE REACH OVER OBSTRUCTION



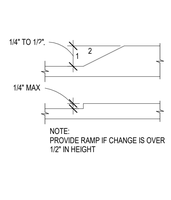
NOTE:
"X" = 2'-1" OR LESS
"Z" = LESS THAN "X"
"Y" = 4'-0" MAX WHEN "X" IS LESS THAN 1'-8"
OR "Y" = 3'-0" MAX WHEN "X" IS 1'-8" TO 2'-1"

FORWARD REACH OVER OBSTRUCTION



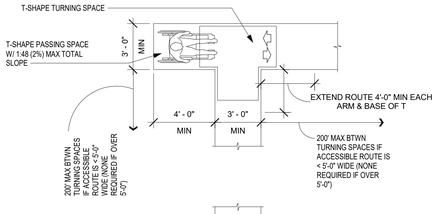
FORWARD REACH

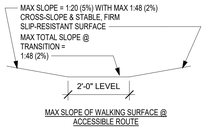
REACH RANGES



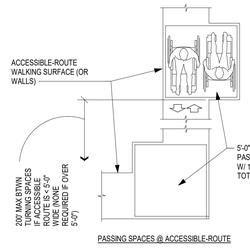
NOTE:
PROVIDE RAMP IF CHANGE IS OVER 1/2" IN HEIGHT

ALLOWABLE CHANGE IN LEVEL



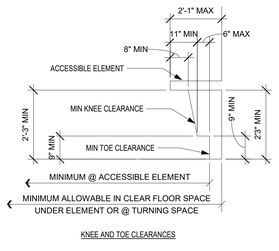


MAX SLOPE OF WALKING SURFACE @ ACCESSIBLE ROUTE

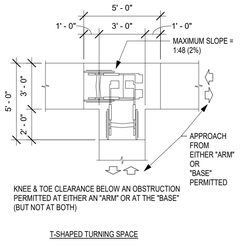


PASSING SPACES @ ACCESSIBLE-ROUTE

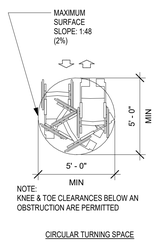
ACCESSIBLE ROUTES REQUIREMENTS



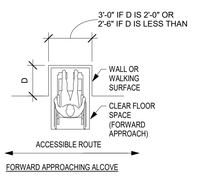
KNEE AND TOE CLEARANCES



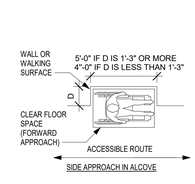
T-SHAPED TURNING SPACE



CIRCULAR TURNING SPACE

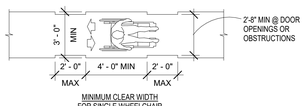


FORWARD APPROACHING ALCOVE

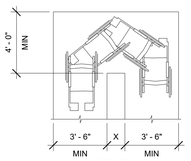


SIDE APPROACH IN ALCOVE

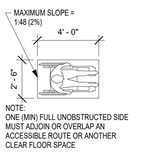
CLEAR SPACE REQUIREMENTS



MINIMUM CLEAR WIDTH FOR SINGLE WHEELCHAIR



TURNS AROUND AN OBSTRUCTION



NOTE:
ONE (MIN) FULL UNOBSTRUCTED SIDE MUST ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE OR ANOTHER CLEAR FLOOR SPACE

CLEAR FLOOR SPACE (CFS) REQUIREMENTS

THE INFORMATION ON THESE ACCESSIBILITY DRAWINGS IS PROVIDED AS A GUIDE TO THE CONTRACTOR AND TO ANY OTHER ENTITIES INSTALLING BUILDING EQUIPMENT OR FIXTURES. THESE DRAWINGS ARE ABBREVIATED AND DO NOT INDICATE ALL CONDITIONS THAT MAY BE ENCOUNTERED AND THEY DO NOT INCLUDE ALL REQUIREMENTS OF EITHER THE ADA OR ICC/ANSI A117.1 IN THEIR ENTIRETY.

THE AMERICANS WITH DISABILITIES ACT (ADA) IS A CIVIL-RIGHTS LAW (NOT A BUILDING CODE) AND IS THEREFORE NOT NECESSARILY ENFORCEABLE BY AUTHORITIES HAVING JURISDICTION. EXCEPT IN CERTAIN STATES WITH THEIR OWN ACCESSIBILITY REQUIREMENTS (INCLUDING BUT NOT LIMITED TO CALIFORNIA, TEXAS & ILLINOIS), THE ACCESSIBILITY REQUIREMENTS OF ICC/ANSI A117.1 ARE TYPICALLY REQUIRED THROUGH THE BUILDING CODE.

COMPLY WITH REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA) EVEN IF NOT REQUIRED BY BUILDING CODES, REGULATIONS OR ORDINANCES (ADA IS A FEDERAL LAW), AND AS INDICATED ON THESE DRAWINGS:

ACCESSIBLE ROUTE:

PROVIDE AN ACCESSIBLE ROUTE CONNECTING ALL ACCESSIBLE SPACES AND ELEMENTS, INCLUDING WALKING SURFACES, RAMPS & CURB-RAMPS (EXCLUDING THE FLARED SIDES), DOORS & DOORWAYS, AND/OR ELEVATORS & PLATFORM LIFTS. AN ACCESSIBLE ROUTE MAY BE LOCATED AT EXTERIOR WALKS, AISLES, HALLS, CORRIDORS, SKYWALKS OR TUNNELS

ACCESSIBLE WALKING SURFACES: PROVIDE STABLE, FIRM, & SLIP-RESISTANT SURFACE FINISHES W/ SURFACE OPENINGS (GRATINGS) NOT TO PERMIT PASSAGE OF A 1/2" DIAMETER SPHERE - WITH LONGEST DIMENSION PERPENDICULAR TO DIRECTION OF TRAVEL

MINIMUM WHEELCHAIR TURNING SPACE CAN INCLUDE ALLOWABLE FIXTURE KNEE & TOE CLEARANCES UNO. DOOR SWINGS ARE PERMITTED TO OVERLAP TURNING SPACE UNO.

ACCESSIBLE BUILDING ENTRANCES:

PROVIDE 60% (MIN) OF ALL PUBLIC BUILDING ENTRANCES (EXCLUDING THOSE FOR LOADING OR SERVICE USE) ACCESSIBLE FROM: ACCESSIBLE PARKING, A PUBLIC TRANSPORTATION STOP, OR FROM A PASSENGER LOADING ZONE (AS APPLICABLE) WITHOUT STEPS OR ABRUPT CHANGES IN LEVEL.

PROVIDE ONE (1 - MIN) ACCESSIBLE BUILDING ENTRANCE AT THE GROUND FLOOR LEVEL AND ONE (1 - MIN) ACCESSIBLE ENTRANCE TO EACH PROPOSED TENANT SPACE IN A MULTIPLE-TENANT BUILDING.

PROVIDE ACCESSIBLE ENTRANCE AT SERVICE OR LOADING ENTRIES (NOT INTENDED FOR ENTRANCE BY THE PUBLIC) IF THAT IS THE ONLY ENTRANCE TO A SPACE OR BUILDING.

MULTI-LEVEL BUILDINGS: PROVIDE ONE (1 - MIN) ACCESSIBLE ROUTE (INCLUDING AN ELEVATOR TO CONNECT EACH BUILDING LEVEL ABOVE OR BELOW ACCESSIBLE LEVELS INCLUDING MEZZANINES) UNLESS THE FLOOR AREA IS LESS THAN 3,000 SF AND DOES NOT INCLUDE FIVE (5) OR MORE MULTIPLE MERCANTILE (GROUP M) TENANTS, OR THE OFFICES OF HEALTH CARE PROVIDERS.

OPERABLE PARTS:

ACCESSIBLE OPERABLE PARTS INCLUDE CONTROLS AND OPERATING MECHANISMS (DOOR HARDWARE, WINDOW OPERATORS, DISPENSERS, LIGHT SWITCHES, CONVENIENCE OUTLETS, THERMOSTATS, ALARM CONTROLS, AND SIMILAR ELEMENTS).

PROVIDE AN ACCESSIBLE CLEAR-FLOOR SPACE AT ALL OPERATIONAL PARTS

OPERATION: BY USE OF ONE (1) HAND WITH A SINGLE EFFORT WITHOUT TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST - WITH FIVE (5.0) POUNDS MAXIMUM OPERATIONAL FORCE. COMPLY WITH ALLOWABLE REACH RANGES FOR HEIGHT OF OPERABLE PARTS.

ACCESSIBLE DOOR & GATE REQUIREMENTS:

REVOLVING DOORS OR GATES ARE NOT ACCESSIBLE.

SECURITY & MAINTENANCE DOORS (INCLUDING SERVICE-ACCESS DOORS) DO NOT NEED TO COMPLY WITH ACCESSIBILITY REQUIREMENTS.

DOUBLE-LEAF DOORS OR GATES: ONLY ONE LEAF (MIN) MUST COMPLY WITH ACCESSIBILITY REQUIREMENTS

RECESSED DOORS: PROVIDE FORWARD APPROACH CLEARANCE WITH ANY OBSTRUCTION WITHIN 18 INCH OF LATCH SIDE OF DOORWAY PROJECTING MORE THAN 8 INCHES BEYOND THE FACE OF DOOR MEASURED PERPENDICULAR TO FACE OF DOOR.

DOOR SURFACES: PROVIDE SMOOTH SURFACE WITHIN TEN (10) INCH AFF ON PUSH-SIDE EXTENDING FULL WIDTH WITH MAX 1/16 INCH BETWEEN SURFACE PLANE AND ANY PARTS (KICKPLATE). CAP CAVITIES FORMED BY KICKPLATES EXCEPT AT SLIDING DOORS. TEMPERED GLASS DOORS WITHOUT SIDE STILES WITH A BOTTOM RAIL WITH ITS TOP EDGE SLOPED 60 DEGREES FROM HORIZONTAL OR MORE, OR AT DOORS NOT EXTENDING TO 10 INCHES AFF

SIDELITES OR VISION LITES: AT DOORS AND SIDELITES ADJACENT TO DOORS WITH ONE OR MORE GLAZING PANELS PERMITTING VIEWING, PROVIDE BOTTOM EDGE OF AT LEAST ONE PANEL ON EITHER THE DOOR OR THE ADJACENT SIDELITE AT 43 INCHES MAXIMUM AFF, EXCEPT AT VISION LITES (ONLY) WITH THE LOWEST PART MORE THAN 66 INCHES AFF.

ACCESSIBLE DOOR & GATE HARDWARE:

PROVIDE ACCESSIBLE HARDWARE WITH AN EASY-TO-GRASP SHAPE COMPLYING WITH OPERABLE PARTS REQUIREMENTS (LEVERS PUSH/PULLS, OR PANIC DEVICES ARE ACCEPTABLE), MOUNTED BETWEEN 2'-10" AND 4'-0" AFF, WITH MAX PROJECTION (INTO REQUIRED MIN CLEARANCES) OF 4 INCH BTWN 34 - 80 INCH AFF

SLIDING DOOR/GATE HARDWARE: OPERABLE PARTS MUST BE EXPOSED AND USABLE FROM BOTH SIDES WHEN DOOR IS FULLY OPEN

DOOR/GATE CLOSERS: ADJUST UNITS TO PROVIDE FIVE (5) SECOND (MIN) TIME TO MOVE DOOR/GATE FROM 90-DEGREE OPEN-POSITION TO 12-DEGREE OPEN-POSITION.

DOOR/GATE SPRING-HINGES: ADJUST TO PROVIDE 1-1/2 SECOND MINIMUM TIME TO MOVE DOOR/GATE FROM 70-DEGREE OPEN-POSITION TO CLOSED-POSITION

OPENING-FORCE OF CLOSERS OR SPRING-HINGES: 5.0 LBS MAX @ INTERIOR HINGED, SLIDING OR FOLDING DOORS OR GATES (NOT APPLICABLE TO LATCH-BOLT RETRACTION FORCE AND NOT APPLICABLE TO OPENING FORCE AT FIRE-DOORS - TO BE AS REQD BY AJH)

AUTOMATIC DOORS OR GATES:

REFERENCED STANDARDS: COMPLY WITH ANSI/BHMA A156.10, AND FOR POWER-ASSIST AND LOW-ENERGY DOORS, COMPLY WITH ANSI/BHMA A156.19 (UNLESS DOORS OR GATES ARE DESIGNED TO BE OPERATED ONLY BY SECURITY PERSONNEL)

COMPLY WITH ACCESSIBLE CLEAR-FLOOR SPACE, THRESHOLD / FLOOR-SURFACE, AND DOORS-IN- SERIES REQUIREMENTS.

MANUAL CONTROLS: COMPLY WITH "OPERABLE PARTS" REQMTS WITH THE CLEAR FLOOR SPACE ADJACENT TO THE CONTROL SWITCH LOCATED BEYOND THE DOOR/GATE SWING.

ACCESSIBLE WINDOWS:

PROVIDE OPERATIONAL PARTS LOCATED PER "OPERABLE PARTS" REQMTS W/ MIN ACCESSIBLE CLEAR-FLOOR SPACE ADJACENT TO THE WINDOW.

SPECIAL ACCESS (PLATFORM) LIFTS (INTERIOR OR EXTERIOR):

COMPLY WITH ASME A17.1 SAFETY CODE FOR ELEVATORS AND ESCALATORS, SECTION XX (WITH ACCESSIBLE KEY-CONTROLS IF LIFT TRAVEL AREA IS NOT ENCLOSED) AND AS FOLLOWS:

- MAXIMUM TRAVEL HEIGHT: 60 INCHES
- MINIMUM CAPACITY: 400 POUNDS
- MINIMUM PLATFORM SIZE: 30 X 48 INCH
- MAXIMUM SPEED: 20 FPM

CMT
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER A-5006
REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	JW
APPROVED BY:	KP
COPYRIGHT 2023	

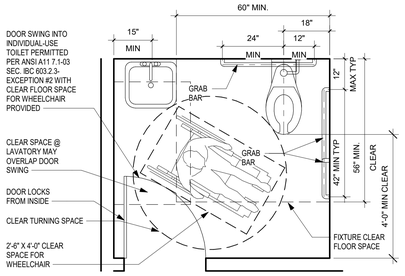
SHEET TITLE

GENERAL ACCESSIBILITY

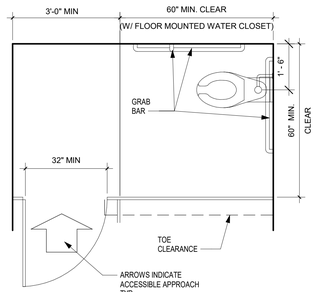
AG004

SHEET 054 OF 131

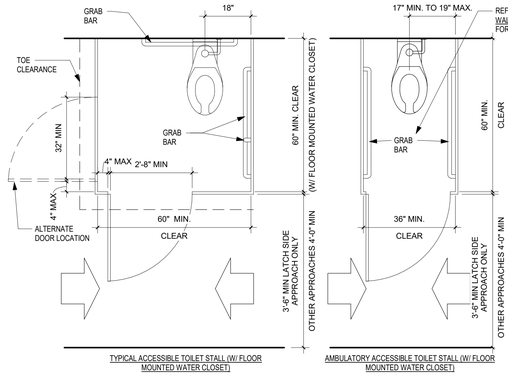
9/29/2023 11:04:08 AM



INDIVIDUAL-USE OR UNI-SEX TOILET ROOM



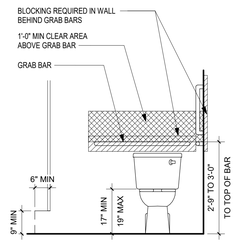
END OF ROW ACCESSIBLE TOILET STALL



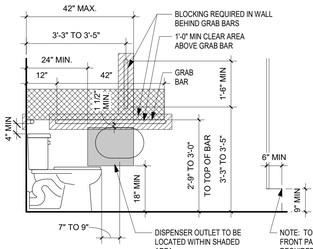
TYPICAL ACCESSIBLE TOILET STALL (W/ FLOOR MOUNTED WATER CLOSET)

AMBULATORY ACCESSIBLE TOILET STALL (W/ FLOOR MOUNTED WATER CLOSET)

TOILET APPROACHES FOR PUBLIC RESTROOMS



GRAB BAR AT BACK OF WATER CLOSET

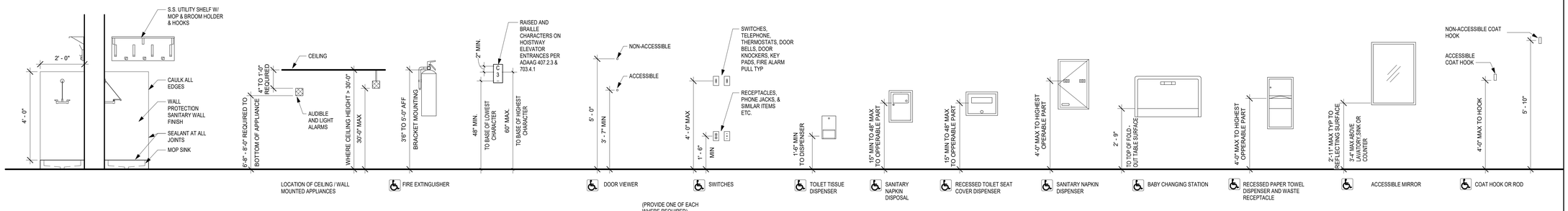


ACCESSORIES @ SIDE WALL OF WATER CLOSET

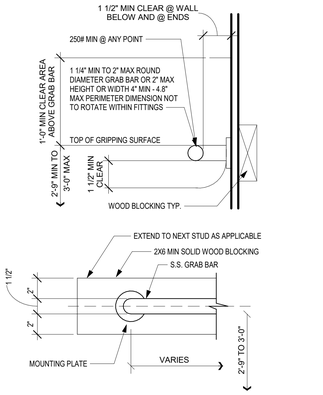
NOTE: FLUSH CONTROLS FOR ACCESSIBLE WATER CLOSETS TO BE LOCATED ON THE WIDE SIDE OF TOILET COMPARTMENTS NO MORE THAN 44 INCHES ABOVE FINISHED FLOOR.

NOTE: TOE CLEARANCE AT FRONT PARTITION NOT REQUIRED IN COMPARTMENTS GREATER THAN 62" DEEP W/ WALL-HUNG WC OR 65" W/ FLOOR MOUNTED WC. TOE CLEARANCES AT THE SIDE PARTITION IS NOT REQUIRED IN A COMPARTMENT GREATER THAN 66" WIDE.

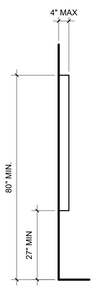
ACCESSIBLE TOILETS



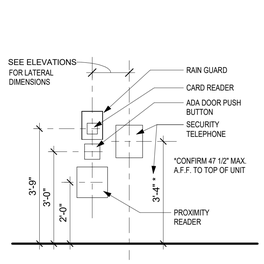
FIXTURE MOUNTING HEIGHTS



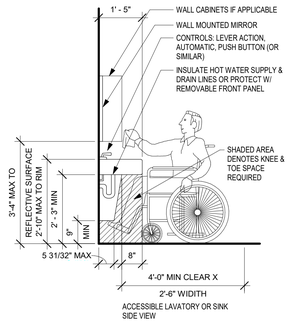
GRAB BAR DETAIL



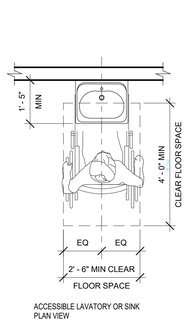
PROTRUDING OBJECTS



SECURITY DEVICE MOUNTING DIAGRAM

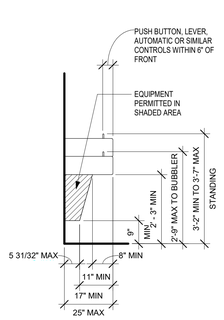


ACCESSIBLE LAVATORY OR SINK SIDE VIEW

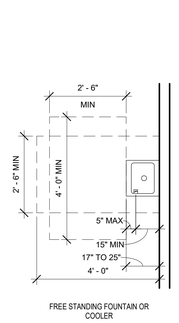


ACCESSIBLE LAVATORY OR SINK PLAN VIEW

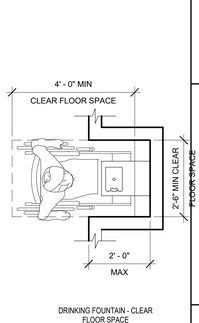
ACCESSIBLE LAVATORY OR SINK



DRINKING FOUNTAIN - SIDE VIEW

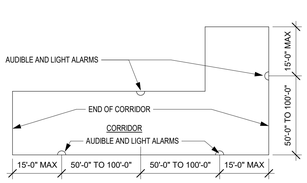


FREE STANDING FOUNTAIN OR COOLER



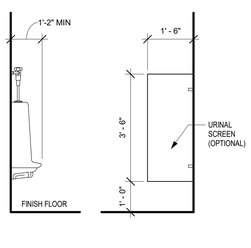
DRINKING FOUNTAIN - CLEAR FLOOR SPACE

DRINKING FOUNTAINS



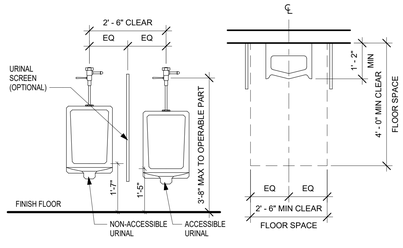
ALARM SPACING IN CORRIDOR

ALARM SPACING IN CORRIDOR



URINAL - SIDE VIEW

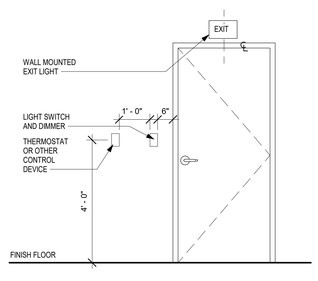
URINAL - PARTITION SIDE VIEW



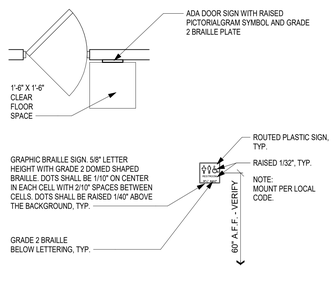
URINAL - FRONT VIEW

URINAL - CLEAR FLOOR SPACE PLAN VIEW

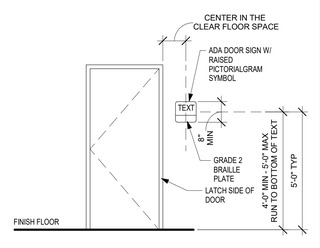
URINALS AND URINAL PARTITION



MISC APPLIANCE HEIGHTS



WALL MOUNTED SIGNS



ACCESSIBLE SIGNAGE

INTERIOR SIGNAGE

CMT
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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767

STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER A-5006
REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	JW
APPROVED BY:	KP

SHEET TITLE

INTERIOR ACCESSIBILITY

AG005

SHEET 055 OF 131

9/29/2023 11:04:10 AM

CODE MODIFICATION REQUEST

(COMMERCIAL)

BUILDING/STRUCTURE NAME: LEE'S SUMMIT AIRPORT EASTSIDE DEVELOPMENT AND HANGAR 2

PREMISE ADDRESS: 2740 NE HAGAN RD, LEES SUMMIT, MO 64064

PERMIT NUMBER (if applicable): PRCOM20235113

OWNER'S NAME: City of Lee's Summit, MO

TO: Director of Development Services

In accordance with the Lee's Summit Building Code, I wish to apply for a modification to one or more provisions of the code as I feel that the spirit and intent of the Lee's Summit Building Code are observed the public health, welfare and safety are assured. The following articulates my request for your review and action. (NOTE: ATTACH ANY ADDITIONAL INFORMATION NECESSARY)

We request modification to use 2024 IBC 2902.1.2 to count single user toilets in fixture count, and 2902.2.5 to not designate single-user toilet rooms by sex.

SUBMITTED BY:

NAME: Julie Wellner, AIA ( ) OWNER (x) OWNER'S AGENT

ADDRESS: 1627 Main, #100 Tel.# 816-381-9040

CITY, STATE, ZIP: Kansas City, MO 64108 SIGNATURE:

TRACY DEISTER – MANAGER OF CODES ADMINISTRATION: (X) APPROVAL ( ) DENIAL

SIGNATURE: Tracy Deister DATE:

AIMEE NASSIF – DEPUTY DIRECTOR OF DEVELOPMENT SERVICES: (X) APPROVED ( ) DENIED

SIGNATURE: DATE: 10/25/23

COMMENTS:

A COPY MUST BE ATTACHED TO THE APPROVED PLANS ON THE JOB SITE

9/18/2023 N:\CODES ADMIN\Forms 2019

Development Services | 220 SE Green Street, Lee's Summit, MO 64063
P: 816.969.1200 | F: 816. 969.1201 | cityofls.net

Reorganized School District No. 7
502 S.E. Transport Drive
Lee's Summit, Missouri 64081
(816) 986-2438 FAX (816) 986-2435

Facilities Services

September 20, 2023

City of Lee's Summit – Development Services
220 SE Green
Lee's Summit, MO 64063

RE: Lee's Summit School District – STA – Aerospace Academy
Program Enrollment Capacity

To Whom It May Concern:

Please accept this letter as your Notice of Lee's Summit R7 School District's understanding of the allowable occupancy for the new building being designed and constructed in partnership with the City of Lee's Summit.

Lee's Summit R7 School District will limit our space's capacity to 49 occupants. This is being done to satisfy the building code regarding storm shelter requirements in educational buildings.

Please get in touch with me with any questions you may have. I can be reached at 816-986-3414. We look forward to working with your team and anticipate a successful project for all.

Sincerely,
Lee's Summit R-7 School District

Dr. Jeremy Bonnesen
Principal | Director
STA @ Missouri Innovation Campus

Cc: Kyle Gorrell / Steve Shelton / David Mandelkern – Wellner Architects)
file

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WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT
MO Certificate of Authority #000767

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	Designer
DRAWN BY:	Author
CHECKED BY:	Checker
APPROVED BY:	Approver

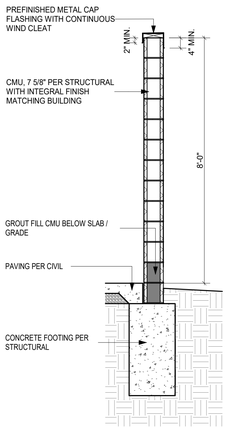
SHEET TITLE

CODE INFORMATION

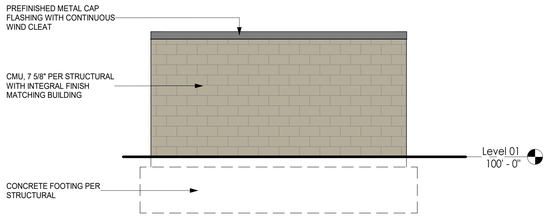
AG006

SHEET 056 OF 131

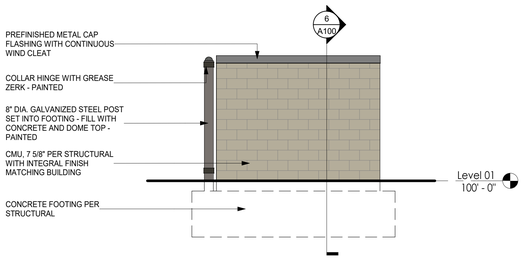
11/8/2023 2:32:36 PM



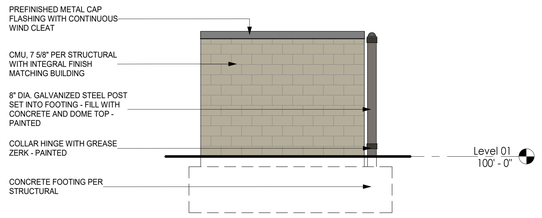
WALL SECTION - TRASH ENCLOSURE 6
1/2" = 1'-0"



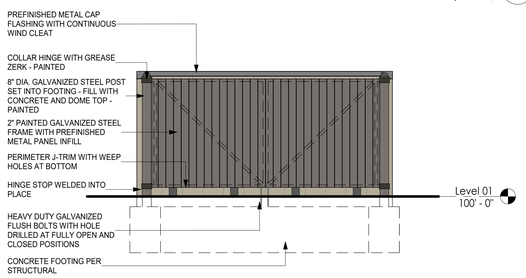
SOUTH WEST - TRASH ENCLOSURE 4
1/4" = 1'-0"



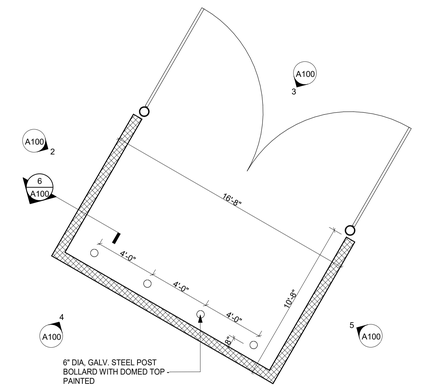
NORTH WEST - TRASH ENCLOSURE 2
1/4" = 1'-0"



SOUTH EAST - TRASH ENCLOSURE 5
1/4" = 1'-0"



NORTH EAST - TRASH ENCLOSURE 3
1/4" = 1'-0"



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

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI

SHEET TITLE

ARCHITECTURAL SITE DETAILS

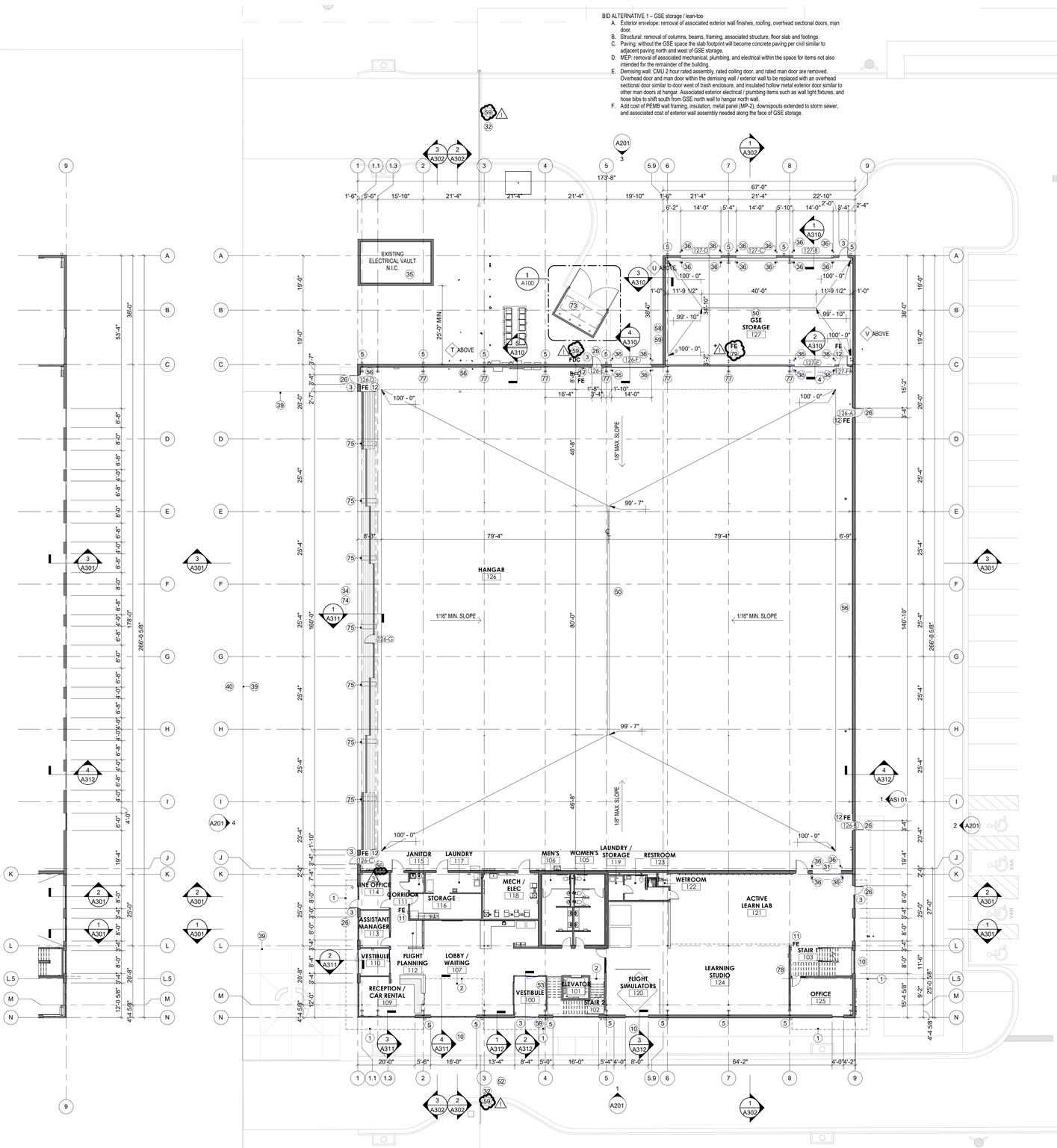
A100

SHEET 057 OF 131

9/29/2023 11:04:13 AM

BID ALTERNATIVE 1 – GSE storage / lean-too

A. Exterior envelope: removal of associated exterior wall finishes, roofing, overhead sectional doors, man door.
B. Structural: removal of columns, beams, framing, associated structure, floor slab and footings.
C. Paving: without the GSE space the slab footprint will become concrete paving per civil similar to adjacent paving north and west of GSE storage.
D. MEP: removal of associated mechanical, plumbing, and electrical within the space for items not also intended for the remainder of the building.
E. Demising wall: CMU 2 hour rated assembly, rated coiling door, and rated man door are removed. Overhead door and man door within the demising wall / exterior wall to be replaced with an overhead sectional door similar to door west of trash enclosure, and insulated hollow metal exterior door similar to other man doors at hangar. Associated exterior electrical / plumbing items such as wall light fixtures, and hose bibs to shift south from GSE north wall to hangar north wall.
F. Add cost of PEMB wall framing, insulation, metal panel (MP-2), downspouts extended to storm sewer, and associated cost of exterior wall assembly needed along the face of GSE storage.



PARTIAL PLAN - HANGAR GLAZING 2
1/16" = 1'-0"

PLAN - LEVEL 1 OVERALL PLAN 1
1/16" = 1'-0"

1/24/2024 9:07:31 AM

CONSTRUCTION NOTES

#	
1	LINE OF CANOPY ABOVE
2	LINE OF SOFFIT / SLAB EDGE ABOVE
3	FURNISH AND INSTALL ACCESS CONTROLS ON DOORS PER OWNER REQUIREMENTS AND HARDWARE SCHEDULE
4	FURNISH AND INSTALL 2 HOUR RATED FIRE RATED COILING OVERHEAD DOOR PER DOOR SCHEDULE
5	FURNISH AND INSTALL PREFINISHED DOWNSPOUT WITH INTEGRAL OVERFLOW AND CONNECT TO STORM SEWER PER CIVIL
6	FURNISH AND INSTALL HIGH / LOW DRINKING FOUNTAIN WITH BOTTLE FILLER PER PLUMBING AND ADA
7	REFER TO ENLARGED PLANS AND ELEVATIONS FOR RESTROOM LAYOUT AND ACCESSORIES PER ADA
8	FURNISH AND INSTALL FLOOR DRAIN PER PLUMBING, SLOPE SLAB AS NEEDED TO PROVIDE DRAINAGE
9	FURNISH AND INSTALL CONCRETE FILLED METAL PAN STAIR WITH GUARDRAIL AND CONTINUOUS HANDRAILS PER DETAILS
10	FURNISH AND INSTALL DECORATIVE GRAVEL STRIP AROUND BUILDING PER LANDSCAPE PLANS
11	FURNISH AND INSTALL 3A-40BC RATED F.E. (min 5lbs.) IN SEMI RECESSED STAINLESS STEEL CABINET, MOUNTED NO HIGHER THAN 5'-0" TO T.O. extinguisher. Monroe Extinguisher Comp - ADA 1027/10 with V style door. VERIFY FINAL QUANTITY AND LOCATION WITH FIRE MARSHAL AND CONFIRM WITH ARCHITECT
12	FURNISH AND INSTALL 3A-40BC RATED F.E. (min 5lbs.) SURFACE MOUNTED NO HIGHER THAN 5'-0" TO T.O. EXTINGUISHER. Monroe Extinguisher Comp - ADA 1027/10 with V style door. VERIFY FINAL QUANTITY AND LOCATION WITH FIRE MARSHAL AND CONFIRM WITH ARCHITECT
13	FURNISH AND INSTALL CHECK-IN DESK PER DETAILS, PROVIDE ADEQUATE POWER AND DATA TO FLOOR STUB FOR 2 COMPUTERS, AND PRINTER
14	FURNISH AND INSTALL LOWER AND UPPER CASEWORK AND COUNTER TOPS PER INTERIOR ELEVATIONS, DETAILS, AND FINISH PLANS
15	FURNISH AN INSTALL ADEQUATE ELECTRICAL FOR OWNER PROVIDED REFRIGERATOR, AND MICROWAVE
16	FURNISH AND INSTALL ADEQUATE ELECTRICAL AND WATERLINE FOR COFFEE MAKER
17	FURNISH AND INSTALL UNDERMOUNT STAINLESS STEEL SINK WITH DISPOSAL PER PLUMBING, ADA AND DETAILS
18	FURNISH AND INSTALL ADA COUNTER HEIGHT UNDERCOUNTER FRIDGE WITH ADEQUATE POWER AND CASEWORK TRIM PIECES FOR BUILT IN APPEARANCE
19	PAINT ALL EXPOSED STRUCTURE PER FINISH PLANS
20	FURNISH AND INSTALL JANITORS MOP BASIN WITH CUSTODIAL MOP AND BROOM HOLDER AND FRP PER FINISH LEGEND ON ADJACENT WALLS BEYOND MOP SINK
21	FURNISH AND INSTALL PULL DOWN IN WALL EMERGENCY SHOWER AND EYE WASH STATION PER PLUMBING
22	FURNISH AND INSTALL 48" TALL LOW WALL WITH SOLID SURFACE CAP PER FINISH PLANS AND LEGEND
23	FURNISH AND INSTALL COUNTER TOP AT 34" A.F.F. PER INTERIOR ELEVATIONS, DETAILS, AND FINISH LEGEND
24	PROVIDE EXPANSION JOINT BETWEEN SECOND FLOOR SLAB AND PEMB STRUCTURE AND EXTERIOR WALL PER DETAILS. PEMB STRUCTURE TO BE LIMITED TO 2'-3" MAX COLUMN DEPTH AT 2ND FLOOR
25	GC TO COORDINATE AND PROVIDE INSTALLATION OF OWNER PROVIDED FURNITURE
26	FURNISH AND INSTALL STOOPS EXTERIOR DOORS PER STRUCTURAL
27	FURNISH AND INSTALL WATER LINE OF ICE MAKER
28	FURNISH AND INSTALL IN SLAB FLOOR OUTLETS FOR POWER / DATA / VOICE. COORDINATE FINAL LOCATIONS WITH FURNITURE SUPPLIER AND OWNER AND CONFIRM WITH ARCHITECT
29	FURNISH AND INSTALL OUTLETS AT WALL OF COUNTER FOR CHARGING STATIONS
30	FURNISH AND INSTALL ADEQUATE POWER, PLUMBING, AND VENTILATION FOR WASHER AND DRYER
31	FURNISH AND INSTALL 1 HOUR RATED FIRE RATED COILING OVERHEAD DOOR PER DOOR SCHEDULE
32	FURNISH AND INSTALL SECURED SLIDING GATE, PROVIDE CONDUIT AND ADEQUATE POWER AND CONTROLS PER OWNER REQUIREMENTS
33	FURNISH AND INSTALL ELEVATOR EQUIPMENT PER SUPPLIER, SCHINDLER 3100 MRL TRACTION ELEVATOR IS BASIS OF DESIGN
34	FURNISH AND INSTALL "FLOATING" 160'-0 X 28'-0" HANGAR DOOR WITH CONTINUOUS HEAVY 12 GAUGE GALVANIZED STEEL ANGLE FLASHINGS ON BOTH SIDES OF EACH RAILING PROVIDING A FLUSH SURFACE AND LEVEL CROSSING FOR AIRCRAFT, PROVIDE ADEQUATE POWER, TRACK HEATING, AND DRAINAGE PER DETAILS
35	EXISTING ELECTRICAL VAULT TO REMAIN. COORDINATE CONSTRUCTION ACTIVITIES AS TO NOT DISRUPT SERVICE PROVIDED FROM THIS BUILDING
36	FURNISH AND INSTALL 6" DIAMETER CONCRETE FILLED GALVANIZED PIPE BOLLARDS PER DETAIL - PAINTED
37	PROVIDE ADEQUATE POWER FOR VENDING MACHINES
38	PROVIDE ADEQUATE POWER / DATA FOR COPIER / PRINTER
39	LINE OF CONCRETE APRON, REFER TO CIVIL
40	EXISTING APRON, REFER TO CIVIL
41	PROVIDE ADEQUATE POWER / DATA CONNECTIONS FOR COMPUTER WORKSTATION
42	FURNISH AND INSTALL BLOCKING AND ELECTRICAL / DATA FOR OWNER PROVIDED FLAT SCREEN TVS. FINAL LOCATIONS AND MOUNTING HEIGHT TO BE VERIFIED WITH OWNER
43	FURNISH AND INSTALL CABLE GUARD RAILING AT 42" A.F.F. PER DETAILS
44	FURNISH AND INSTALL RAILING PER DETAILS AT UNDERSIDE OF STAIR OR AS SHOWN IN PLAN AT UNDERSIDE OF STAIRS TO MEET ADA
45	FURNISH AND INSTALL 1 HOUR RATED DOOR AND GLAZING PER DETAILS AND SCHEDULES
46	FURNISH AND INSTALL 1 HOUR RATED GLAZING IN HOLLOW METAL FRAMES AT RATED WALLS PER DETAILS
47	FURNISH AND INSTALL REMOVEABLE RAILING AROUND FLIGHT SIMULATOR, COORDINATE FINAL LAYOUT AND CLEARANCES WITH OWNER
48	PROVIDE ADEQUATE POWER / DATA CONNECTION FOR OWNER PROVIDED REDBIRD AMS FLIGHT SIMULATOR. COORDINATE INSTALLATION AND CLEAR SPACE FOR RAILING WITH OWNER
49	PROVIDE ADEQUATE POWER / DATA CONNECTION FOR OWNER PROVIDED REDBIRD LD FLIGHT SIMULATORS. COORDINATE INSTALLATION AND CLEAR SPACE WITH OWNER
50	FURNISH AND INSTALL TRENCH DRAINS WITH OIL / SAND INTERCEPTOR REFER TO PLUMBING, SLOPE FLOOR TO TRENCH AND FLOOR DRAIN SYSTEMS
51	CANOPY PER DETAILS
52	FURNISH AND INSTALL CONDUIT FOR FUTURE RUNS BETWEEN HANGAR AND FUTURE TERMINAL BUILDING PER CIVIL
53	FURNISH AND INSTALL FIRE ANNUNCIATOR PANEL
54	FURNISH AND INSTALL 8"X16" CMU WITH INTEGRAL 8" SCORE PATTERN AND MORTAR MATCHING CMU FINISH COLOR, RAKE ALL MORTAR JOINTS TO ALIGN WITH CMU SCORE PATTERN
55	FURNISH AND INSTALL SANITARY LAVATORY LINE AND FIXTURE FOR AIRPLANE WASTE DISPOSAL
56	FURNISH AND INSTALL LINER PANEL TO GIRTS FROM FLOOR TO 10'-0" AFF AT PERIMETER WALLS
57	FURNISH AND INSTALL 3/4" FIRE TREATED PLYWOOD PANEL 8' WIDE X 8' TALL FOR WALL MOUNTED I.T., CONFIRM FINAL LOCATION WITH OWNER
58	FIRE DEPARTMENT CONNECTION (FDC)
59	KNOX BOX AT DOOR ABOVE FDC.KNOX KEY SWITCHES AT OPERABLE GATES, COORDINATE SIZE/LOCATION WITH AHJ AND OWNER
60	ELEVATOR KEY KNOX BOX ADJACENT TO ELEVATOR, COORDINATE SIZE AND LOCATION WITH AHJ AND OWNER
61	PROVIDE ADEQUATE POWER / DATA CONNECTION FOR OWNER PROVIDED OPEN FLIGHT SIMULATORS. PROVIDE BLOCKING AS NEEDED FOR MONITORS MOUNTED TO WALL PER OWNER REQUIREMENTS
62	FURNISH AND INSTALL WALL MOUNTED POWER TRACK AT 3'-6" A.F.F. BETWEEN STRUCTURAL GRIDS 6 TO 8
63	FURNISH AND INSTALL CONDUIT / ROUGH AND CAT 6 FOR OWNER PROVIDED SECURITY CAMERAS PER OWNER REQUIREMENTS, COORDINATE MOUNTING HEIGHT WITH OWNER
64	FURNISH AND INSTALL CONDUIT WITH POWER AND DATA ALONG COLUMNS WITH POWER REEL, REFER TO ELECTRICAL DRAWINGS
65	PROVIDE ADEQUATE POWER FOR BATTERY CHARGING STATIONS
66	FURNISH AND INSTALL POWER FOR WIFI ROUGH IN AT 12'-0" A.F.F., CONFIRM FINAL LOCATIONS WITH OWNER
67	FURNISH AND INSTALL 2" X 2" X 48" STAINLESS STEEL CORNER GUARDS AT 1'-0" A.F.F.
68	PROVIDE POWER FOR AIR COMPRESSOR
69	FURNISH AND INSTALL SG4 SCHOOL GUARD GLASS AT DOORS AND SIDELIGHTS
70	FURNISH AND INSTALL STAINLESS STEEL WALL MOUNTED SINK WITH EMERGENCY EYE WASH STATION PER PLUMBING
71	FURNISH AND INSTALL ADA COUNTER HEIGHT DISHWASHER PROVIDE ADEQUATE POWER AND WATER CONNECTIONS PER MEP
72	FURNISH AND INSTALL STAINLESS STEEL WALL MOUNTED SINK PER PLUMBING, PROVIDE INSULATED COVERING PER ADA
73	REFER TO ENLARGED PLANS AND ELEVATIONS FOR TRASH ENCLOSURE DETAILS
74	FURNISH AND INSTALL STEEL CONDUIT UNDER TRACKS FOR HEATING PER ELECTRICAL. REFER TO DETAILS
75	FURNISH AND INSTALL RAIL DRAINAGE COLLECTORS AND DIVERT IT TO BUILDING DRAINAGE PER PLUMBING
76	FURNISH AND INSTALL SEMI-TRANSPARENT BLACK MESH CURTAINS WITH SILENT TRACK / CURTAIN RINGS
77	FURNISH AND INSTALL PAINT AT FRONT FACE OF PEMB COLUMNS TO 28'-0" IN CONTRASTING COLOR PER FINISH LEGEND
78	FURNISH AND INSTALL 180° WALL MOUNTED DIAGONAL PROJECTOR SCREEN, PROVIDE BLOCKING AS NEEDED
79	FURNISH AND INSTALL 4-A-20-B-C RATED F.E. SURFACE MOUNTED NO HIGHER THAN 5'-0" TO T.O. EXTINGUISHER. VERIFY FINAL QUANTITY AND LOCATION WITH FIRE MARSHAL AND CONFIRM WITH ARCHITECT

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
NOTARY PUBLIC
A-5006
REGISTERED ARCHITECT
- MO Certificate of Authority #000787 -

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
3	1/24/24	REV-3
2	12/01/23	REV-2

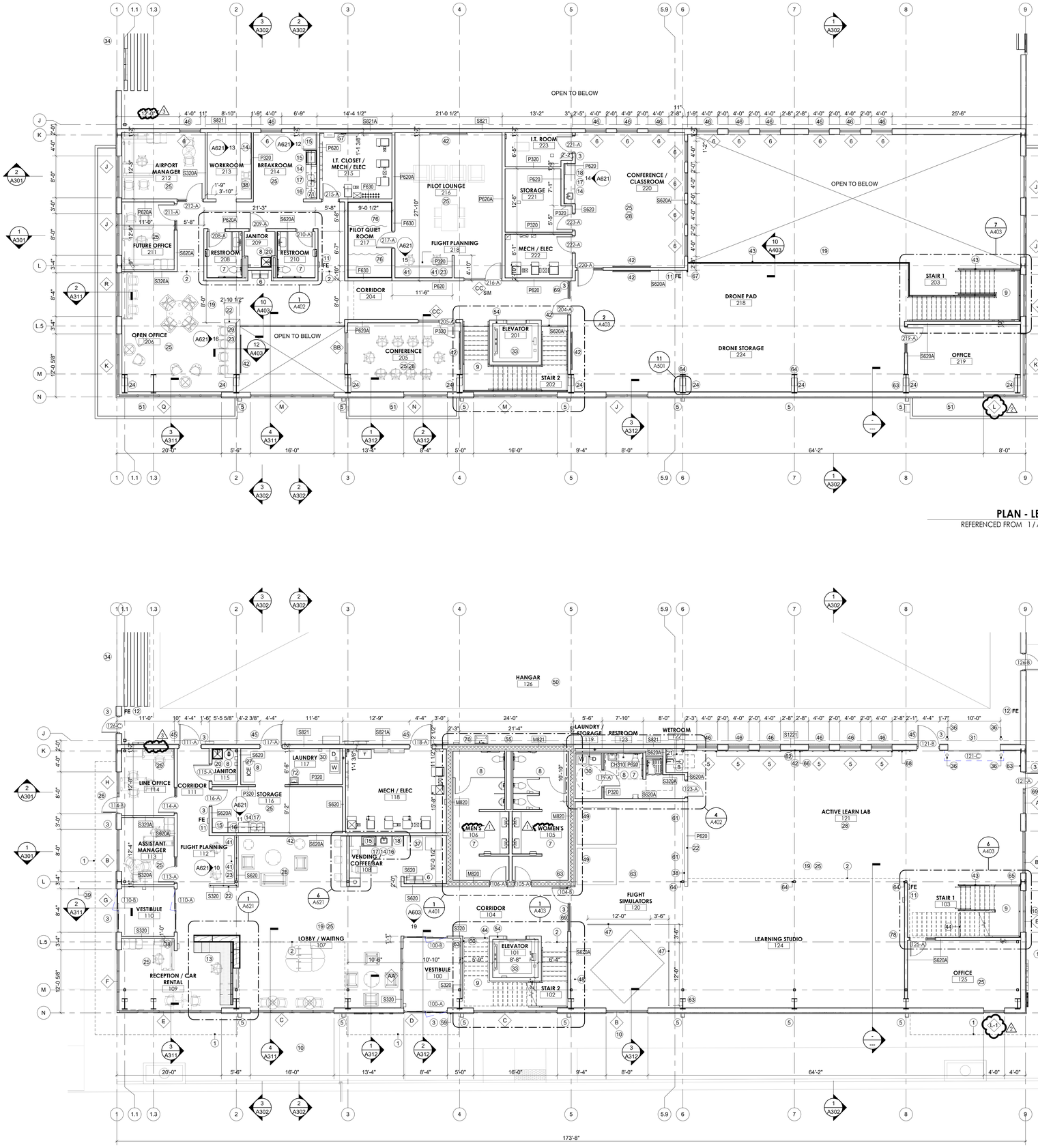
PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI

SHEET TITLE

OVERALL FLOOR PLAN LEVEL

A101

SHEET 058 OF 131



PLAN - LEVEL 2 HANGAR 2

REFERENCED FROM 1 / A201 1/8" = 1'-0" (2)

PLAN - LEVEL 1 HANGAR 2

REFERENCED FROM 2 / A100 1/8" = 1'-0" (1)

CONSTRUCTION NOTES (#)

1	LINE OF CANOPY ABOVE
2	LINE OF SOFFIT / SLAB EDGE ABOVE
3	FURNISH AND INSTALL ACCESS CONTROLS ON DOORS PER OWNER REQUIREMENTS AND HARDWARE SCHEDULE
4	FURNISH AND INSTALL 2 HOUR RATED FIRE RATED COILING OVERHEAD DOOR PER DOOR SCHEDULE
5	FURNISH AND INSTALL PREFINISHED DOWNSPOUT WITH INTEGRAL OVERFLOW AND CONNECT TO STORM SEWER PER CIVIL
6	FURNISH AND INSTALL HIGH / LOW DRINKING FOUNTAIN WITH BOTTLE FILLER PER PLUMBING AND ADA
7	REFER TO ENLARGED PLANS AND ELEVATIONS FOR RESTROOM LAYOUT AND ACCESSORIES PER ADA
8	FURNISH AND INSTALL FLOOR DRAIN PER PLUMBING, SLOPE SLAB AS NEEDED TO PROVIDE DRAINAGE
9	FURNISH AND INSTALL CONCRETE FILLED METAL PAN STAIR WITH GUARDRAIL AND CONTINUOUS HANDRAILS PER DETAILS
10	FURNISH AND INSTALL DECORATIVE GRAVEL STRIP AROUND BUILDING PER LANDSCAPE PLANS
11	FURNISH AND INSTALL 3A-40BC RATED F.E. (min 5lbs.) IN SEMI RECESSED STAINLESS STEEL CABINET, MOUNTED NO HIGHER THAN 5'-0" TO T.O. extinguisher. Monroe Extinguisher Comp - ADA 1027V10 with V style door. VERIFY FINAL QUANTITY AND LOCATION WITH FIRE MARSHAL AND CONFIRM WITH ARCHITECT
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55	FURNISH AND INSTALL SANITARY LAVATORY LINE AND FIXTURE FOR AIRPLANE WASTE DISPOSAL
56	FURNISH AND INSTALL LINER PANEL TO GIRTS FROM FLOOR TO 10'-0" AFF AT PERIMETER WALLS
57	FURNISH AND INSTALL 3/4" FIRE TREATED PLYWOOD PANEL 8' WIDE X 8' TALL FOR WALL MOUNTED I.T., CONFIRM FINAL LOCATION WITH OWNER
58	FIRE DEPARTMENT CONNECTION (FDC)
59	KNOX BOX AT DOOR ABOVE FDC,KNOX KEY SWITCHES AT OPERABLE GATES. COORDINATE SIZE/LOCATION WITH AHJ AND OWNER
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65	PROVIDE ADEQUATE POWER FOR BATTERY CHARGING STATIONS
66	FURNISH AND INSTALL POWER FOR WIFI ROUGH IN AT 12'-0" A.F.F., CONFIRM FINAL LOCATIONS WITH OWNER
67	FURNISH AND INSTALL 2" X 2" X 48" STAINLESS STEEL CORNER GUARDS AT 1'-0" A.F.F.
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76	FURNISH AND INSTALL SEMI-TRANSPARENT BLACK MESH CURTAINS WITH SILENT TRACK / CURTAIN RINGS
77	FURNISH AND INSTALL PAINT AT FRONT FACE OF PEMB COLUMNS TO 28'-0" IN CONTRASTING COLOR PER FINISH LEGEND
78	FURNISH AND INSTALL 160' WALL MOUNTED DIAGONAL PROJECTOR SCREEN, PROVIDE BLOCKING AS NEEDED
79	FURNISH AND INSTALL 4-A-20-B-C RATED F.E. SURFACE MOUNTED NO HIGHER THAN 5'-0" TO T.O. EXTINGUISHER. VERIFY FINAL QUANTITY AND LOCATION WITH FIRE MARSHAL AND CONFIRM WITH ARCHITECT

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767
JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT STATE OF MISSOURI
09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
3	1/24/24	REV-3
2	12/01/23	REV-2

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI

SHEET TITLE

FLOOR PLANS

A102

SHEET 059 OF 131

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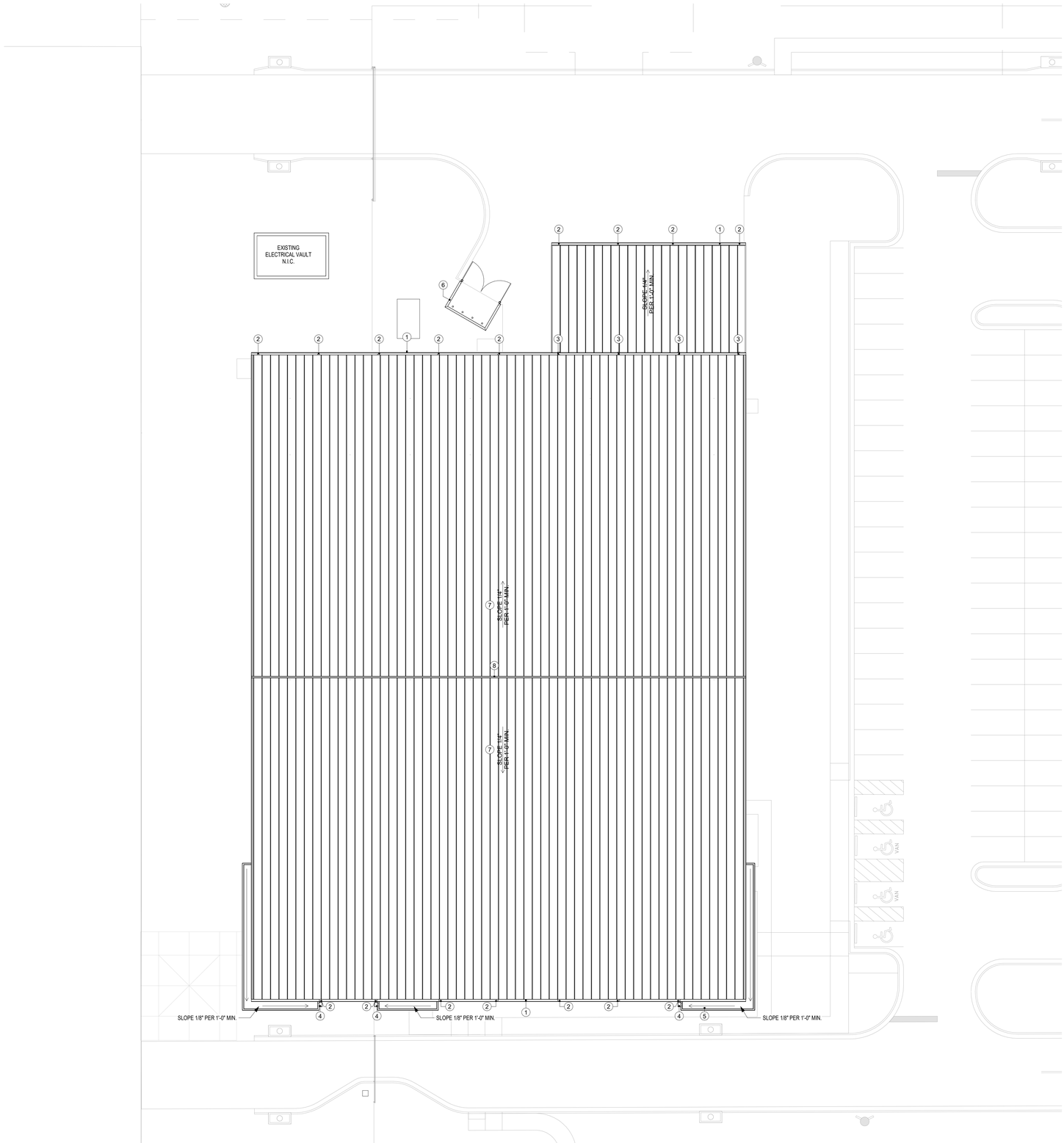

ROOF PLAN 1

REFERENCED FROM 1 / A201 1/16" = 1'-0"

CONSTRUCTION NOTES - ROOF #

1	FURNISH AND INSTALL 7 1/2" X 10" PREFINISHED METAL GUTTER
2	FURNISH AND INSTALL 8" X 8" PREFINISHED METAL DOWNSPOUTS CONNECTED TO STORM PIPE PER CIVIL, COORDINATE SLEEVE IN FOUNDATIONS WHERE NEEDED PER STRUCTURAL
3	FURNISH AND INSTALL 8" X 8" PREFINISHED METAL DOWNSPOUTS DISCHARGING ONTO ROOF BELOW
4	FURNISH AND INSTALL THROUGH WALL SCUPPER AND COLLECTOR BOX WITH DOWNSPOUT TIED INTO PRIMARY ROOF DOWNSPOUT
5	FURNISH AND INSTALL 60MIL GRAY FULLY ADHERED ROOF MEMBRANE AND GRAVEL STOP FLASHING AT CANOPIES, REFER TO DETAILS
6	FURNISH AND INSTALL PREFINISHED METAL CAP FLASHING PER DETAILS
7	FURNISH AND INSTALL PREFINISHED STANDING SEAM ROOF WITH STANDING SEAM STYLE SNOW GUARDS PER DETAILS
8	FURNISH AND INSTALL CONTINUOUS RIDGE VENT

GENERAL NOTES

- ROOFING PROVIDER TO VERIFY ALL ALL RIDGE AND SOFFIT VENTING REQUIREMENTS AND TO INCLUDE ADDITIONAL ROOF VENTING AS REQUIRED. VERIFY ADDITIONAL LOCATIONS WITH ARCHITECT PRIOR TO INSTALL.
- ROOFING PROVIDER TO VERIFY ALL GUTTER AND DOWNSPOUT SIZES.

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 - STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI
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SHEET TITLE

OVERALL ROOF PLAN

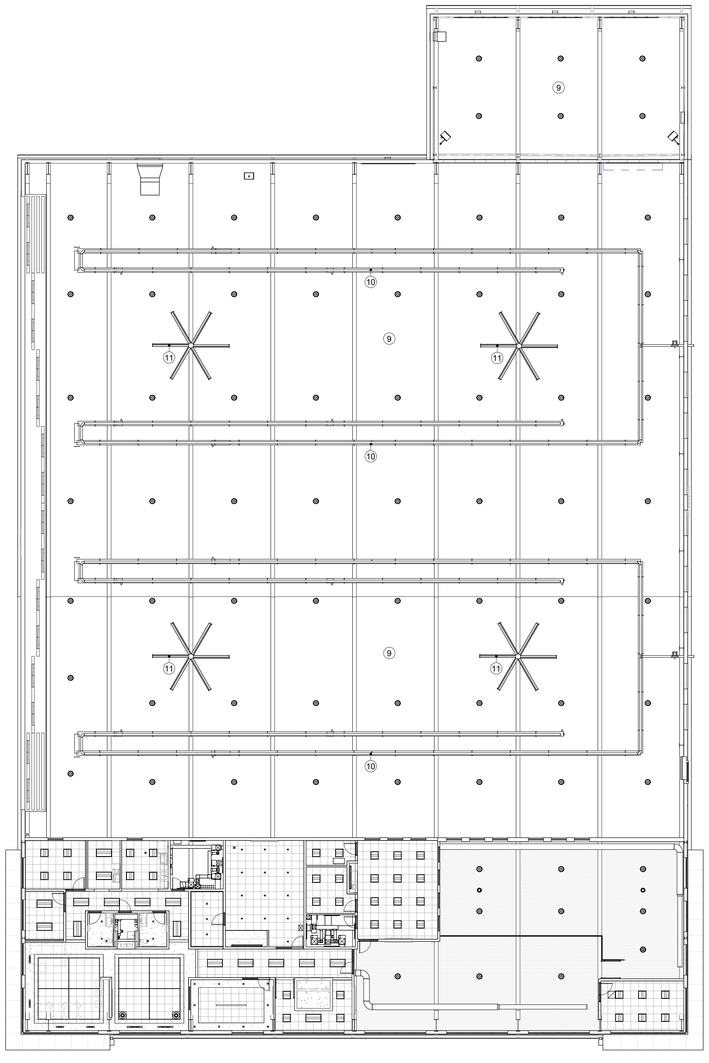
A111

SHEET 060 OF 131

9/29/2023 11:04:29 AM

LIGHT / MECHANICAL FIXTURE LIST	* REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR TYPES
2' X 4' LIGHT FIXTURE WITH DIRECT / INDIRECT LENS	
RECESSED SQUARE LIGHT	
RECESSED CAN LIGHT	
HIGH BAY PENDANT LIGHT FIXTURE	
8' LINEAR PENDANT FIXTURE	
4' SURFACE MOUNTED LIGHT FIXTURE	
6'-0" recessed strip light fixture	
8'-0" recessed strip light fixture	
2' x 2' supply diffuser	
4' linear diffuser	
1' x 1' supply diffuser	
2' x 2' return diffuser	
exposed spiral ductwork	
destratification fan with ceiling trim per RCP	

ALL EXPOSED MEZZANINE DECK, ROOF DECK, EXPOSED STEEL, EXPOSED CMU, AND EXPOSED SPIRAL DUCTS TO REMAIN CLEAN AND FREE OF DAMAGE FOR FINAL UNFINISHED APPEARANCE. PROVIDE ADDITIONAL PROTECTION AS REQUIRED.



OVERALL REFLECTED CEILING PLAN 1

REFERENCED FROM 1 / A201 1/16" = 1'-0"

RCP NOTES #

	RCP NOTES
1	CEILING CLOUD WITH BOARDER TRIM PER FINISH SCHEDULE
2	FURNISH AND INSTALL DRYFALL PAINT AT ALL EXPOSED FRAMING STEEL AND DECK
3	EXPOSED SPIRAL MECHANICAL DUCTS
4	FURNISH AND INSTALL SOUND ATTENUATION INSULATION ABOVE CEILING
5	FURNISH AND INSTALL STRUCTURAL LID AT TOP OF ELEVATOR SHAFT, REFER TO ELEVATOR DETAILS
6	PAINT GYP CEILING PNT-6
7	PAINT GYP CEILING PNT-7
8	FURNISH AND INSTALL PERFORATED METAL PANEL AT UNDERSIDE OF DECK / INSULATION
9	FURNISH AND INSTALL HIGH BAY LIGHTING PER ELECTRICAL
10	FURNISH AND INSTALL INFRARED HEATING SYSTEM PER MECHANICAL
11	FURNISH AND INSTALL HIGH VOLUMN LOW SPEED FAN PER MECHANICAL
12	FURNISH AND INSTALL DESTRATIFICATION FAN PER MECHANICAL
13	KEEP ALL MECHANCIAL, SPRINKLERS, LIGHTING, ETC TIGHT TO THE UNDERSIDE OF STRUCTURE AND TIGHT TO WALLS
14	FURNISH AND INSTALL 24"X24" ACCESS PANEL

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olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
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APPROVED BY:	WAI
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OVERALL REFLECTED CEILING PLAN

A121

SHEET 061 OF 131

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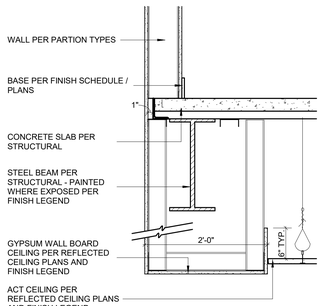
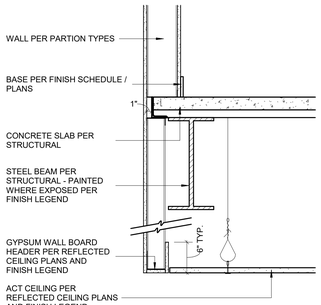


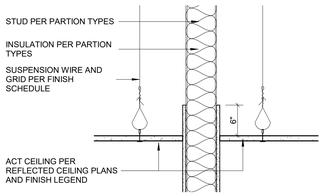
DETAIL - CEILING COFFER 3

REFERENCED FROM 1 / A122 1" = 1'-0"



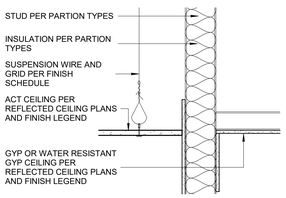
DETAIL - CEILING SOFFIT 4

REFERENCED FROM 1 / A122 1" = 1'-0"



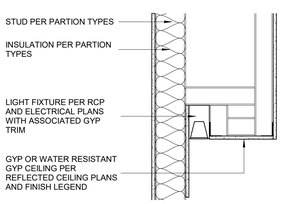
DETAIL - CEILING ACT / ACT 5

REFERENCED FROM 1 / A122 1" = 1'-0"



DETAIL - CEILING GYP / ACT 6

REFERENCED FROM 1 / A122 1" = 1'-0"



DETAIL - CEILING GYP AT LINEAR FIXTURE 7

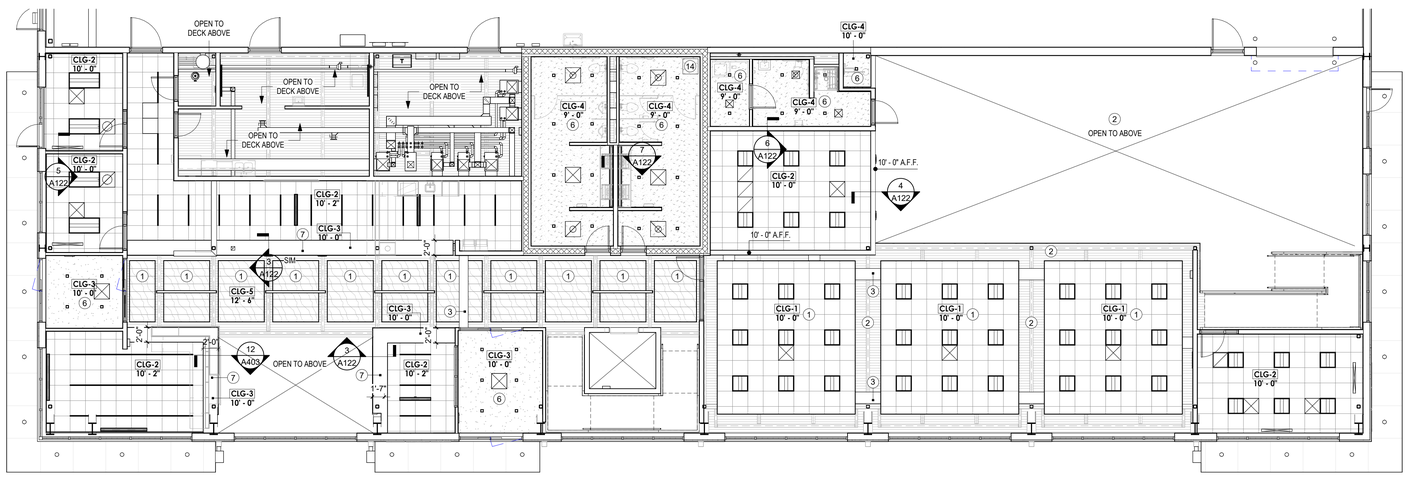
REFERENCED FROM 1 / A122 1" = 1'-0"

REFLECTED CEILING PLAN LEVEL 2 2

1/8" = 1'-0"

LIGHT / MECHANICAL FIXTURE LIST	* REFER TO ELECTRICAL AND MECHANICAL DRAWINGS FOR TYPES
2' X 4' LIGHT FIXTURE WITH DIRECT / INDIRECT LENS	
RECESSED SQUARE LIGHT	
RECESSED CAN LIGHT	
HIGH BAY PENDANT LIGHT FIXTURE	
8' LINEAR PENDANT FIXTURE	
4' SURFACE MOUNTED LIGHT FIXTURE	
6'-0" recessed strip light fixture	
8'-0" recessed strip light fixture	
2' x 2' supply diffuser	
4' linear diffuser	
1' x 1' supply diffuser	
2' x 2' return diffuser	
exposed spiral ductwork	
destratification fan with ceiling trim per RCP	

ALL EXPOSED MEZZANINE DECK, ROOF DECK, EXPOSED STEEL, EXPOSED CMU, AND EXPOSED SPIRAL DUCTS TO REMAIN CLEAN AND FREE OF DAMAGE FOR FINAL UNFINISHED APPEARANCE. PROVIDE ADDITIONAL PROTECTION AS REQUIRED.



REFLECTED CEILING PLAN - LEVEL 1 1

1/8" = 1'-0"

RCP NOTES

#	
1	CEILING CLOUD WITH BOARDER TRIM PER FINISH SCHEDULE
2	FURNISH AND INSTALL DRYFALL PAINT AT ALL EXPOSED FRAMING STEEL AND DECK
3	EXPOSED SPIRAL MECHANICAL DUCTS
4	FURNISH AND INSTALL SOUND ATTENUATION INSULATION ABOVE CEILING
5	FURNISH AND INSTALL STRUCTURAL LID AT TOP OF ELEVATOR SHAFT. REFER TO ELEVATOR DETAILS
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767
STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
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REFLECTED CEILING PLAN

A122

SHEET 062 OF 131

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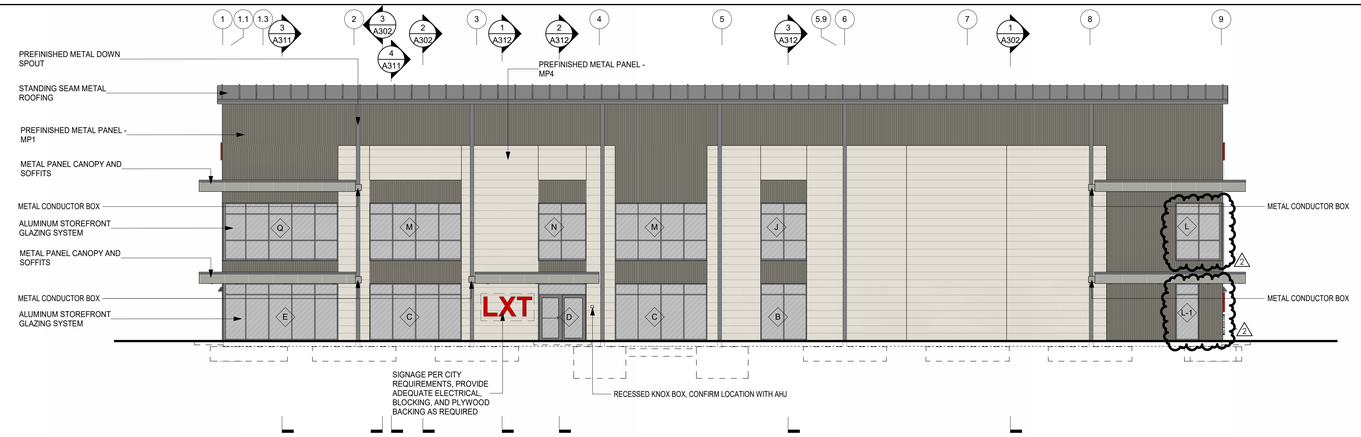
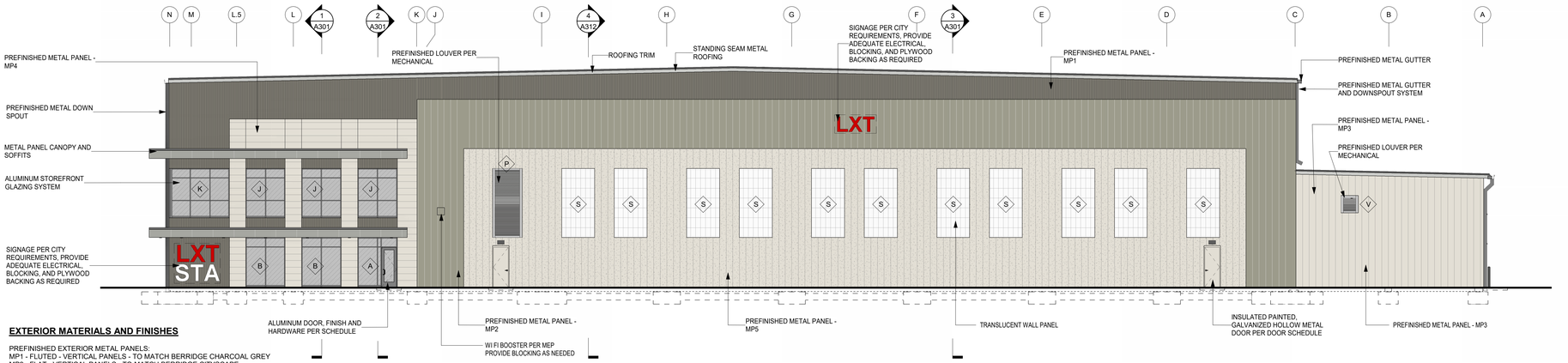
BID ALTERNATIVE 1 – GSE storage / lean-too

A. Exterior envelope: removal of associated exterior wall finishes, roofing, overhead sectional doors, man door.
B. Structural: removal of columns, beams, framing, associated structure, floor slab and footings.
C. Paving: without the GSE space the slab footprint will become concrete paving per civil similar to adjacent paving north and west of GSE storage.
D. MEP: removal of associated mechanical, plumbing, and electrical within the space for items not also intended for the remainder of the building.
E. Demising wall: CMU 2 hour rated assembly, rated coiling door, and rated man door are removed. Overhead door and man door within the demising wall / exterior wall to be replaced with an overhead sectional door similar to door west of trash enclosure, and insulated hollow metal exterior door similar to other man doors at hangar. Associated exterior electrical / plumbing items such as wall light fixtures, and hose bibs to shift south from GSE north wall to hangar north wall.
F. Add cost of PEMB wall framing, insulation, metal panel (MP-2), downspouts extended to storm sewer, and associated cost of exterior wall assembly needed along the face of GSE storage.



SOUTH ELEVATION 1
3/32" = 1'-0"



EAST ELEVATION 2
3/32" = 1'-0"

EXTERIOR MATERIALS AND FINISHES

PREFINISHED EXTERIOR METAL PANELS:
MP1 - FLUTED - VERTICAL PANELS - TO MATCH BERRIDGE CHARCOAL GREY
MP2 - FLAT - VERTICAL PANELS - TO MATCH BERRIDGE CITYSCAPE
MP3 - FLAT - VERTICAL PANELS - TO MATCH BERRIDGE PARCHMENT
MP4 - FLAT - HORIZONTAL PANELS - TO MATCH BERRIDGE PARCHMENT
MP5 - FLAT - VERTICAL PANELS - STUCCO FINISH - TO MATCH BERRIDGE PARCHMENT

TRANSLUCENT WALL PANELS:
LIGHT-TRANSMITTING WALL PANELS

CANOPY:
PREFINISHED EXTERIOR METAL PANELS - TO MATCH BERRIDGE LEAD-COTE

GLASS:
1" INSULATED SOLARBAN 60 (2) SOLARGRAY + CLEAR, LOW E GLASS WITH ARGON FILL - (TO MEET U-VALUE OF .29 OR BETTER AND SHGC OF .25 OR BETTER)

STOREFRONT SYSTEM:
ANODIZED ALUMINUM FRAMES, CLEAR FINISH - AL-1

HOLLOW METAL DOORS:
INSULATED, PAINTED TO MATCH ADJACENT WALLS. U.N.O.

OVERHEAD DOORS:
PREFINISHED TO MATCH BERRIDGE CHARCOAL GREY

LOUVERS:
PREFINISHED TO MATCH ADJACENT WALL COLOR

FLASHING:
PREFINISHED METAL FLASHING TO MATCH ADJACENT WALL COLORS

DOWNSPOUTS / GUTTERS:
PREFINISHED METAL TO MATCH STANDING SEAM ROOF

BOLLARDS:
PAINTED IN CONTRASTING COLOR MATCHING BUILDING FINISHES

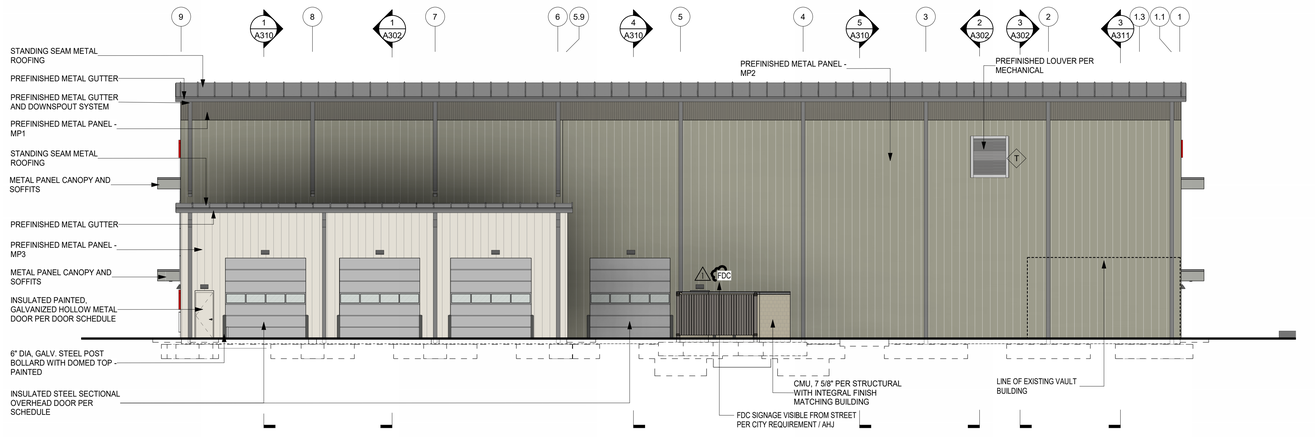
CAULK:
TO MATCH ADJACENT WALL FINISHES

SIGNAGE:
4" DEEP CHANNEL LETTER SIGNS FRONT-LIT PIN MOUNTED - TO MEET CITY SIGNAGE STANDARDS

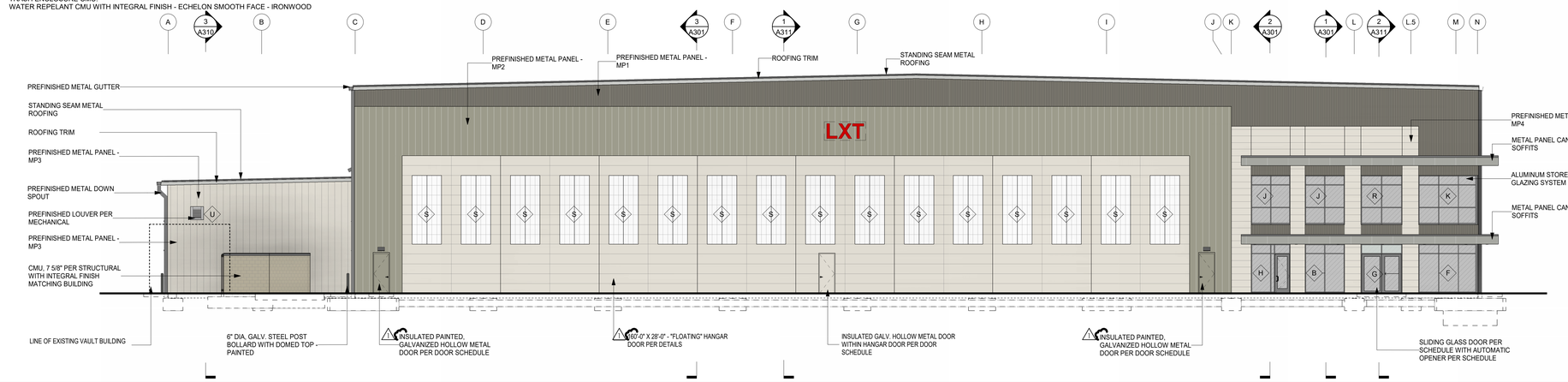
1 FURNISH AND INSTALL APPROVED ADDRESS NUMBERS ON FRONT AND REAR OF BUILDING IN CONTRASTING COLOR PER CITY AND FIRE CODE REQUIREMENTS.

ROOFING:
STANDING SEAM ROOF TO MATCH BERRIDGE CITY SCAPE

TRASH ENCLOSURE CMU:
WATER REPELANT CMU WITH INTEGRAL FINISH - ECHELON SMOOTH FACE - IRONWOOD



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



WEST ELEVATION 4
3/32" = 1'-0"

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000787 - 09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
2	12/01	REV-2
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
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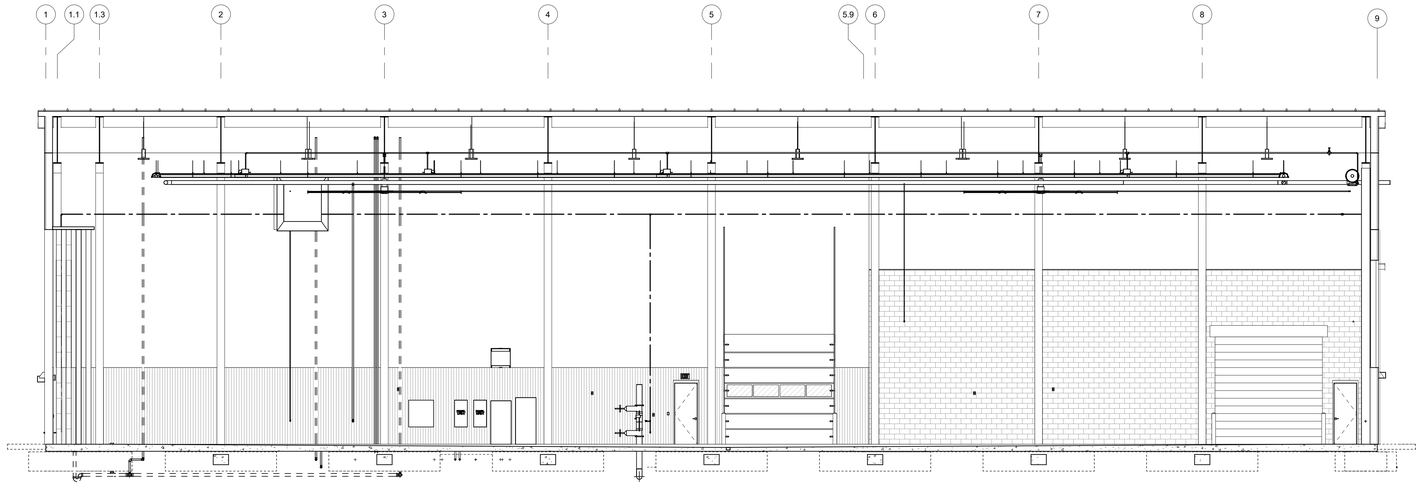
SHEET TITLE

BUILDING ELEVATIONS

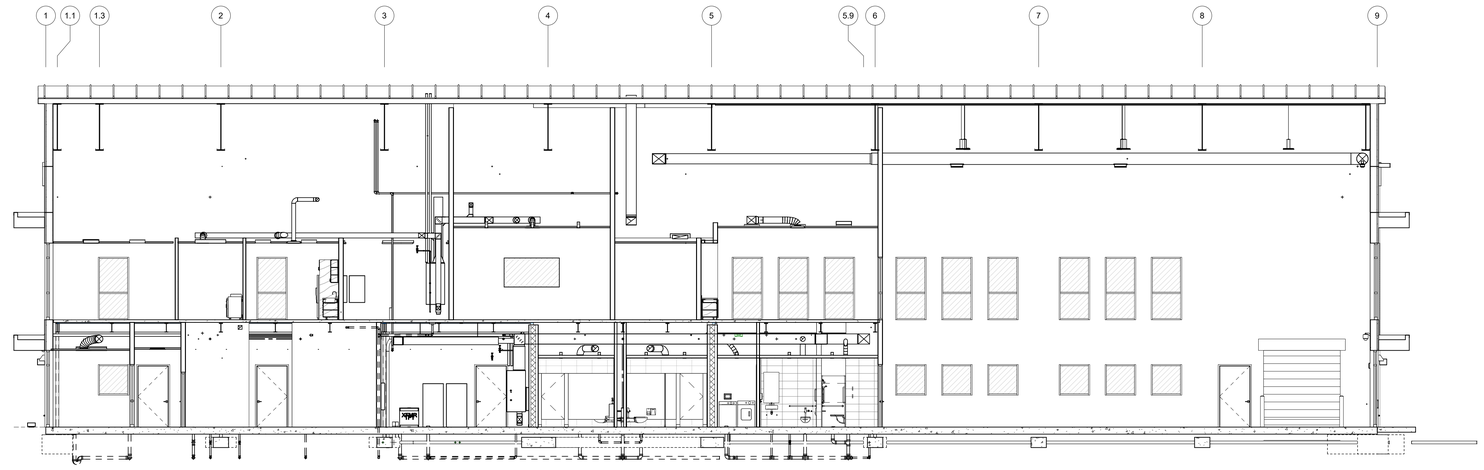
A201

SHEET 063 OF 131

1/2/2024 8:25:15 AM



BUILDING SECTION HANGER 3
REFERENCED FROM 1 / A101 1/8" = 1'-0"



BUILDING SECTION 2
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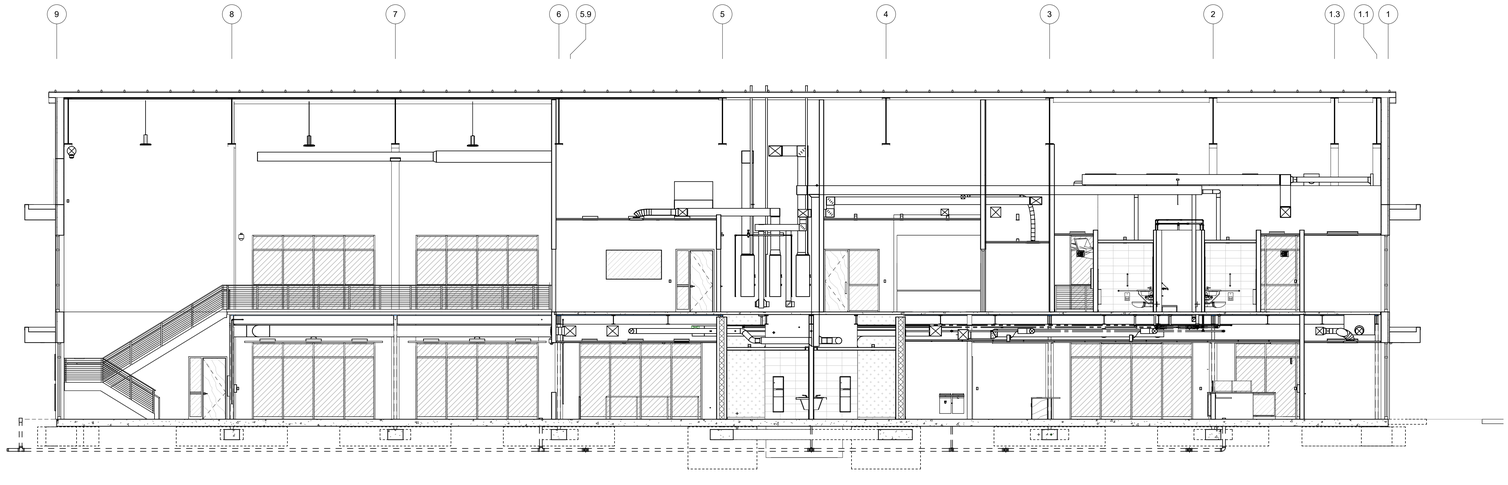

BUILDING SECTION 1
REFERENCED FROM 1 / A101 1/8" = 1'-0"

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Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER A-5006
REGISTERED ARCHITECT
MO Certificate of Authority #000787

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LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

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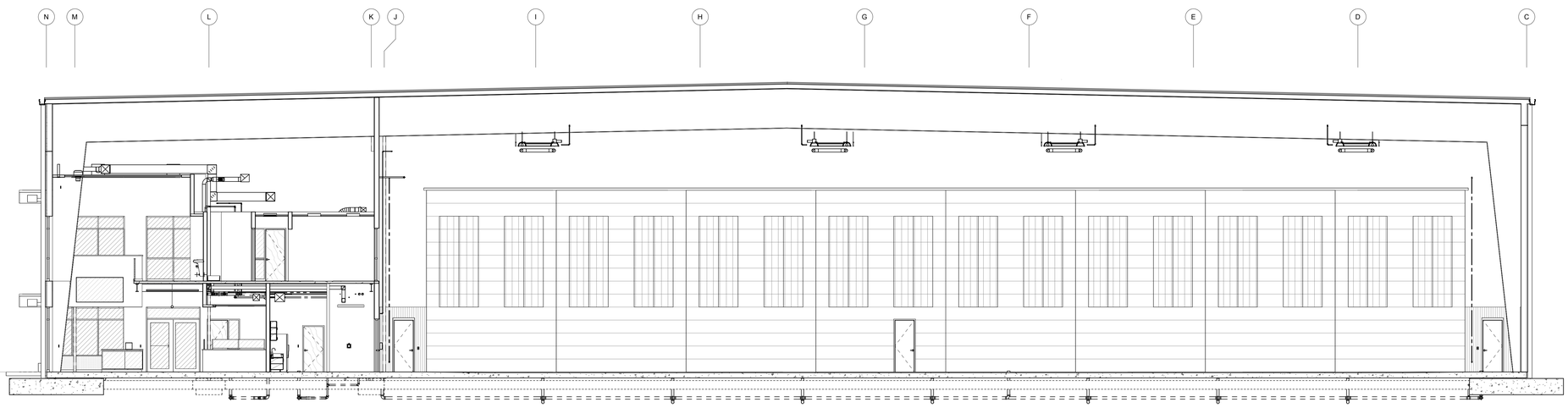
APPROVED BY:	WAI

SHEET TITLE
BUILDING SECTIONS

A301
SHEET 064 OF 131

9/29/2023 11:05:26 AM



BUILDING SECTION 3
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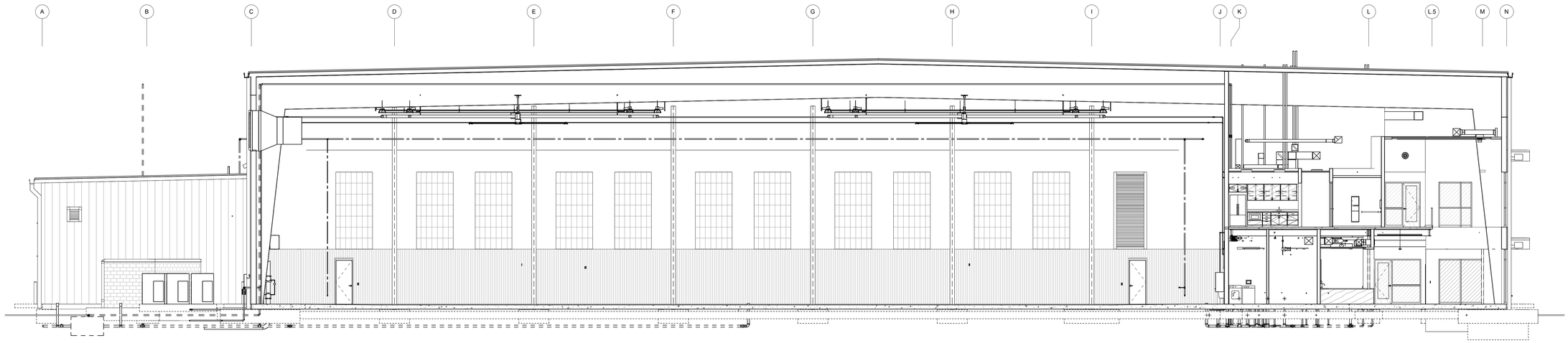

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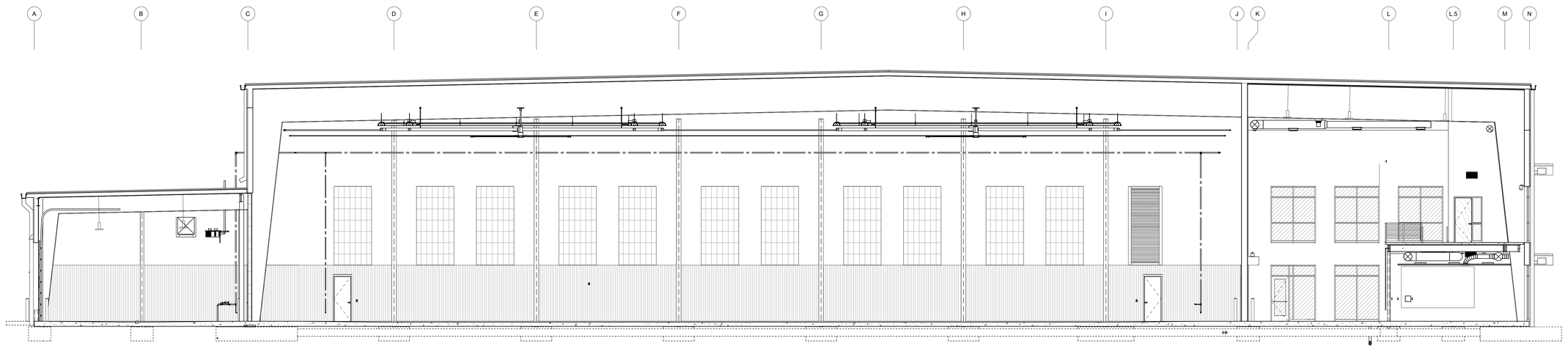

BUILDING SECTION 1
REFERENCED FROM 1 / A101 1/8" = 1'-0"

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STATE OF MISSOURI
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LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

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BUILDING SECTIONS

A302
SHEET 065 OF 131

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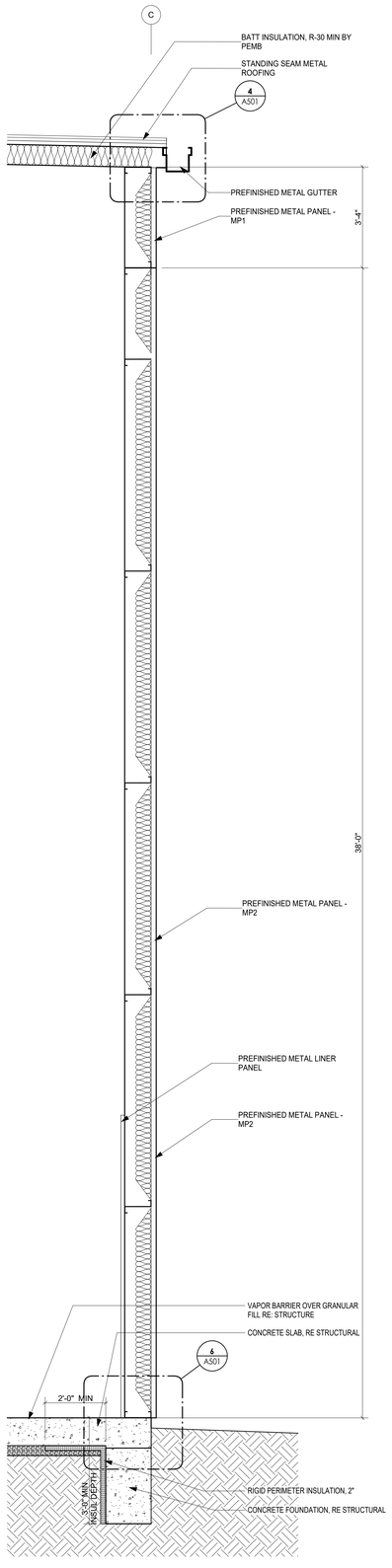
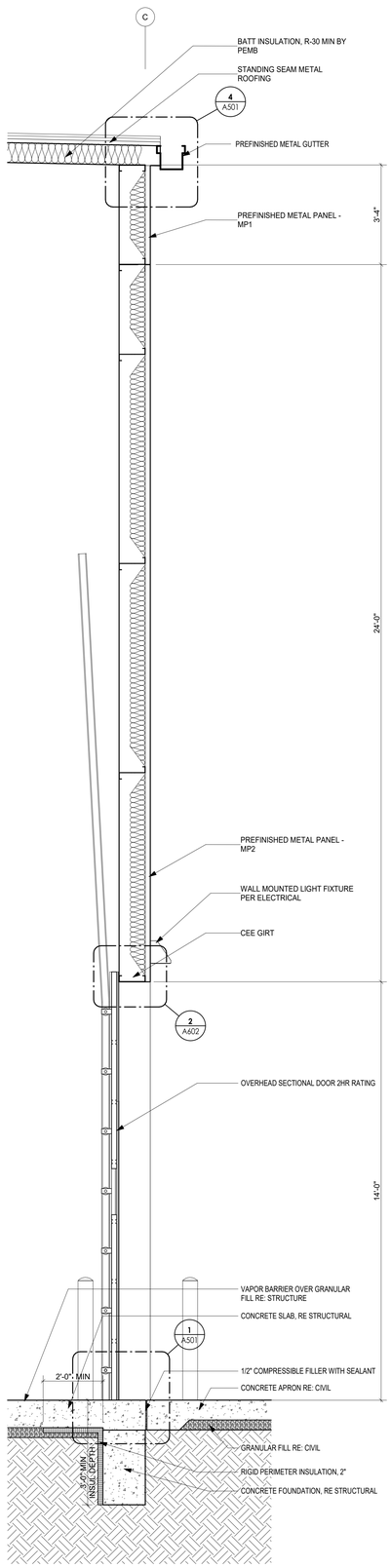


WALL SECTION - 05 (5)
REFERENCED FROM 1 / A101 1/2" = 1'-0"



WALL SECTION - 04 (4)
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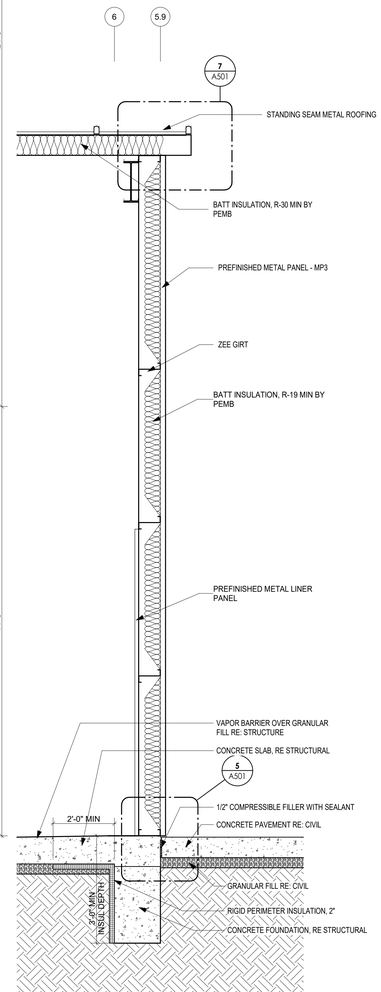

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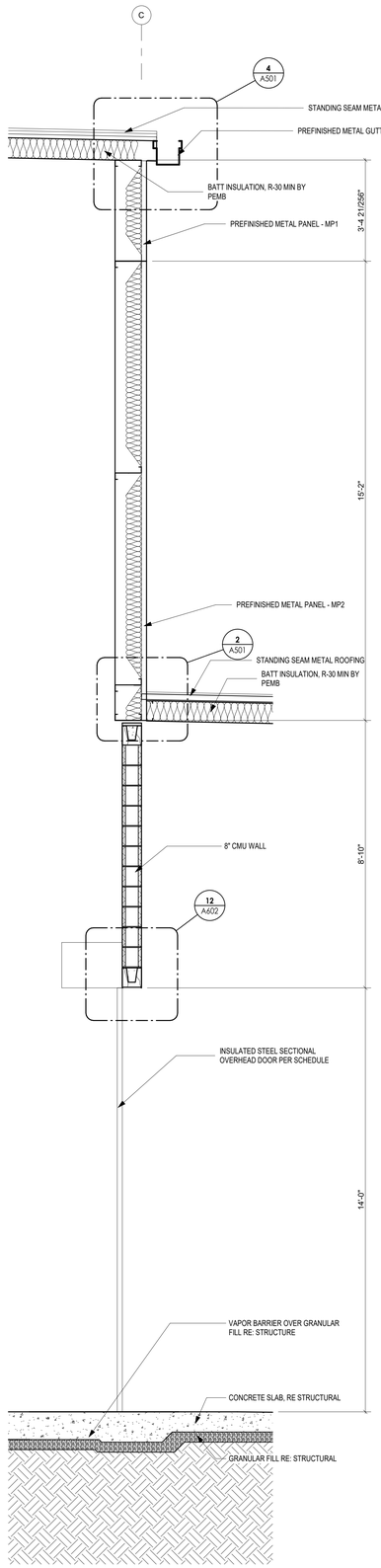

WALL SECTION - 02 (2)
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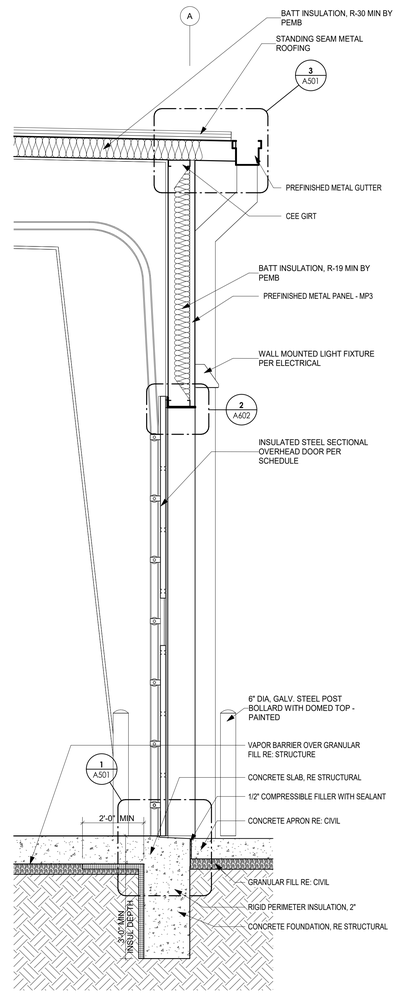

WALL SECTION - 01 (1)
REFERENCED FROM 1 / A101 1/2" = 1'-0"

9/29/2023 11:05:35 AM

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09-29-2023

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LEES SUMMIT, MO

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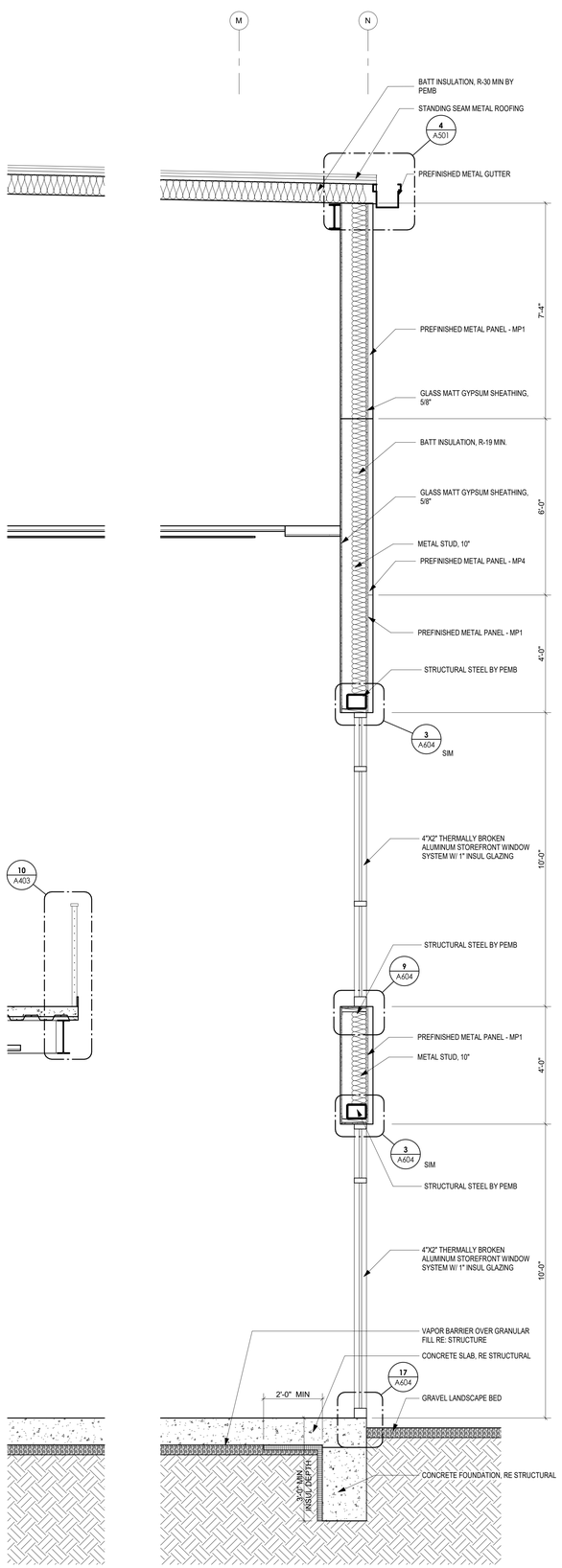
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

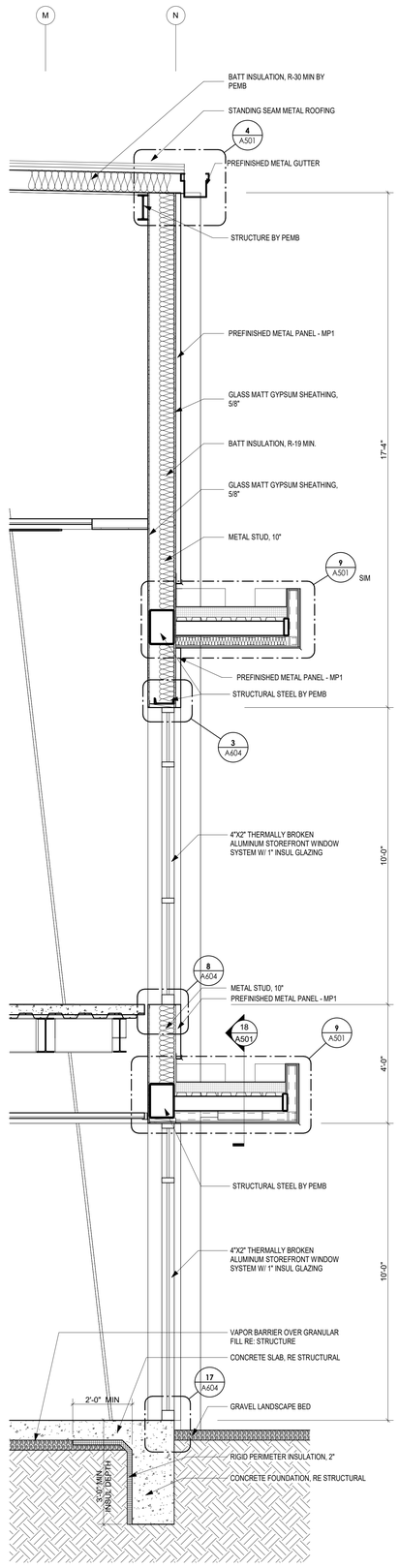
SHEET TITLE

WALL SECTIONS

A310



WALL SECTION - 09 4
REFERENCED FROM 1 / A101 1/2" = 1'-0"



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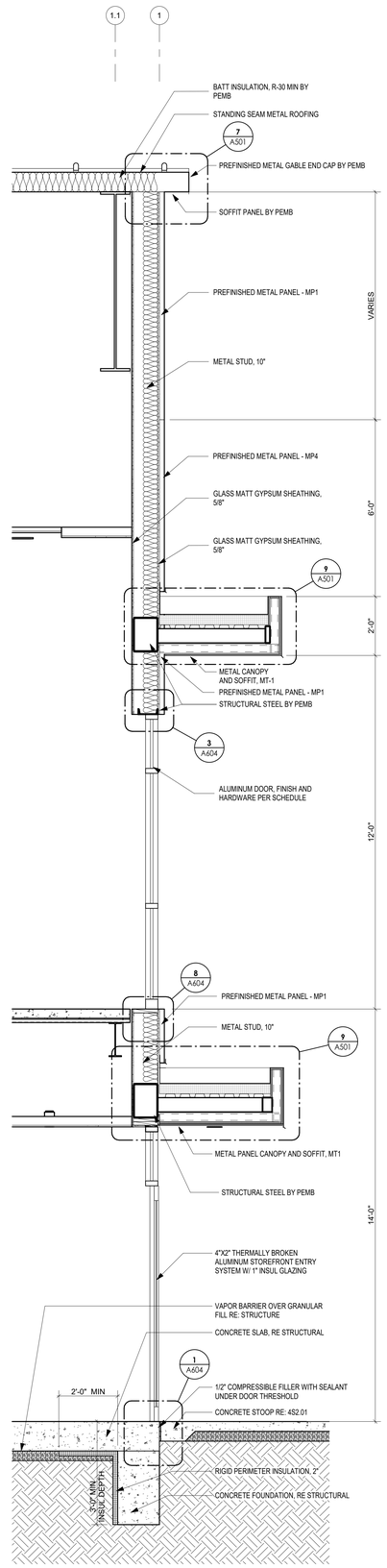

WALL SECTION - 07 2
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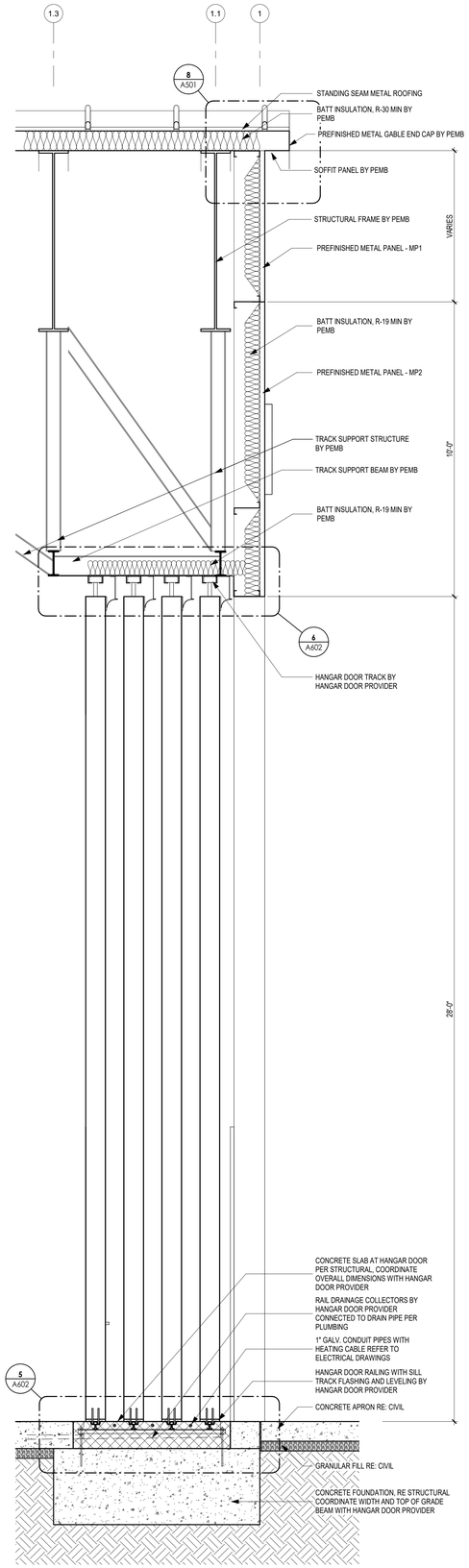

WALL SECTION - 06 1
REFERENCED FROM 1 / A101 1/2" = 1'-0"

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LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

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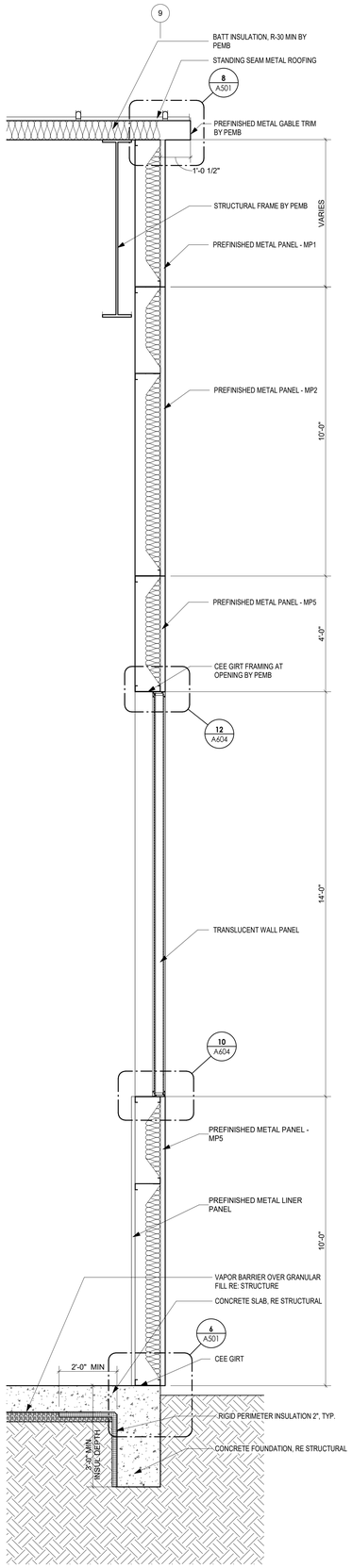
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

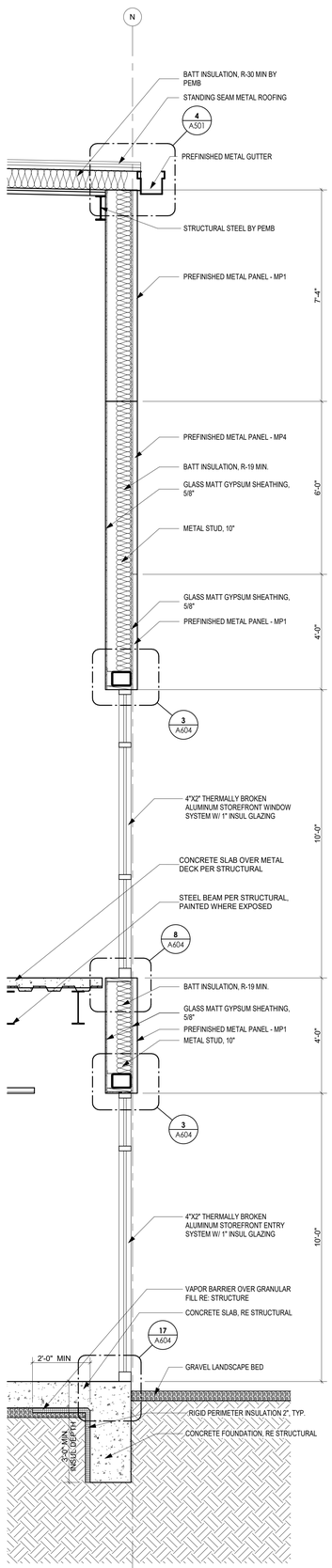
SHEET TITLE
WALL SECTIONS

A311
SHEET 067 OF 131

9/29/2023 11:05:38 AM



WALL SECTION - 13 (4)
REFERENCED FROM 1 / A101 1/2" = 1'-0"



WALL SECTION - 12 (3)
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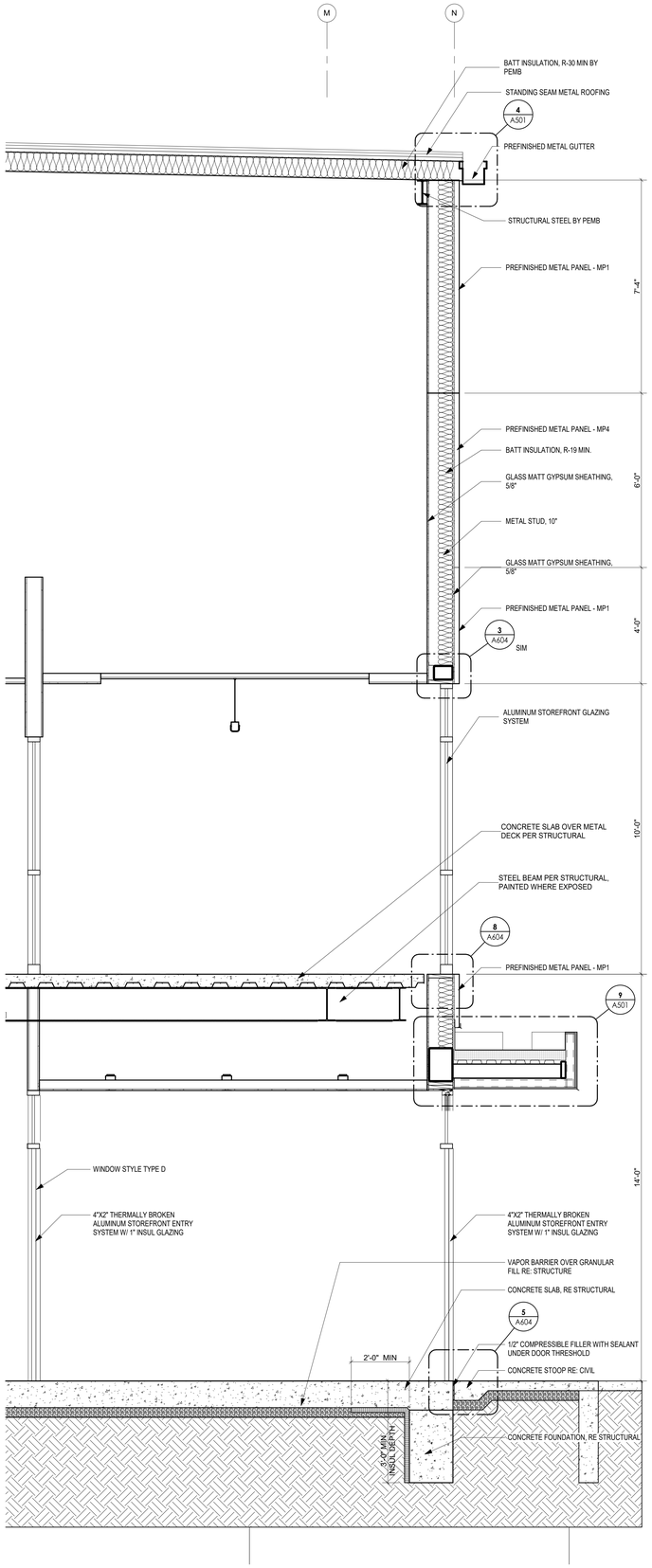
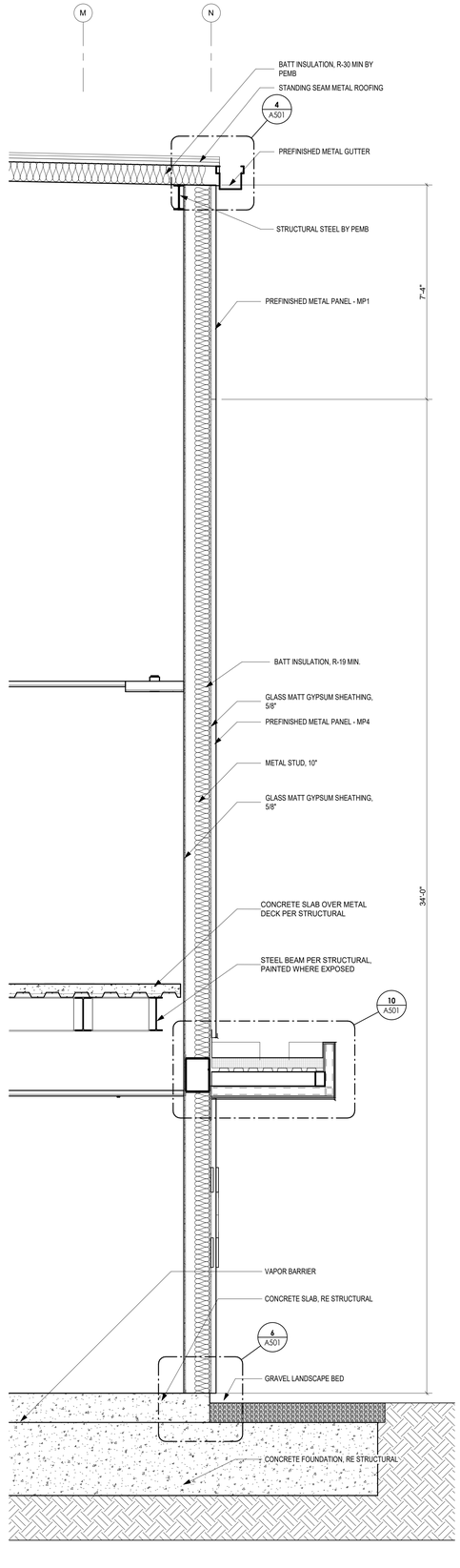


WALL SECTION - 11 (2)
REFERENCED FROM 1 / A101 1/2" = 1'-0"



WALL SECTION - 10 (1)
REFERENCED FROM 1 / A101 1/2" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767
STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

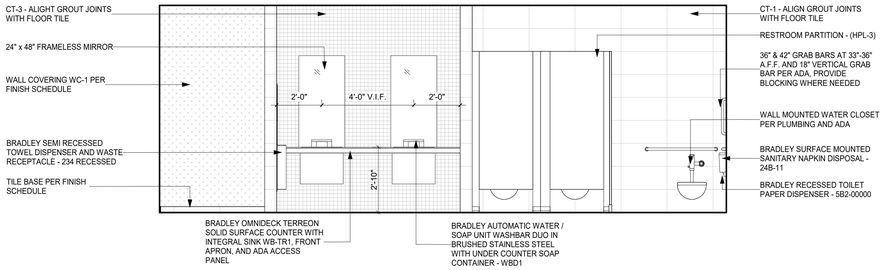
MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

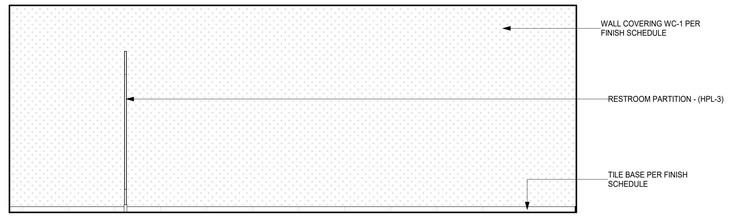
SHEET TITLE
WALL SECTIONS

A312
SHEET 068 OF 131

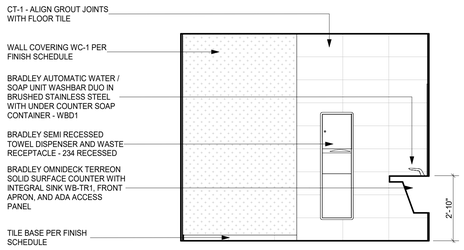
9/29/2023 11:05:41 AM



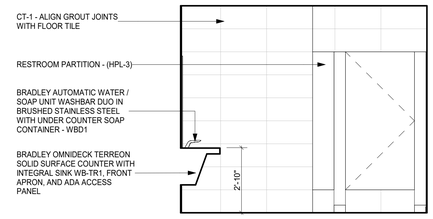
105 WOMEN'S WEST 9
REFERENCED FROM 1 / A401 3/8" = 1'-0"



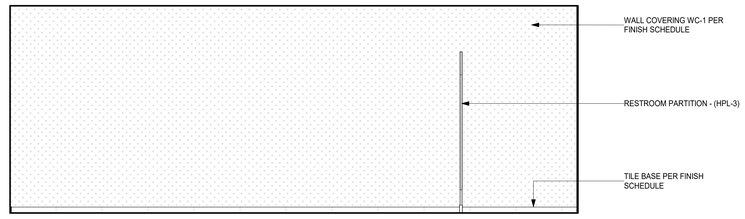
105 WOMEN'S EAST 7
REFERENCED FROM 1 / A401 3/8" = 1'-0"



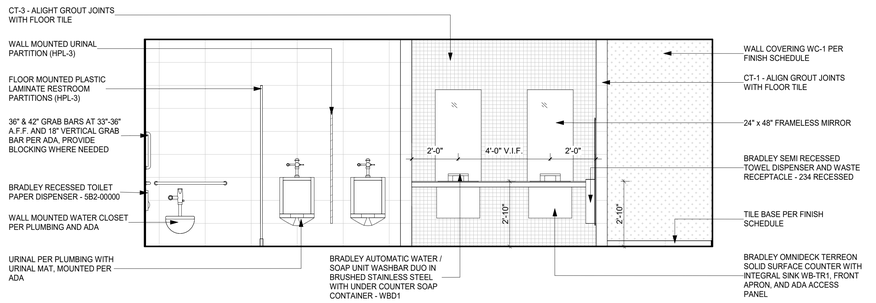
105 WOMEN'S SOUTH 8
REFERENCED FROM 1 / A401 3/8" = 1'-0"



105 WOMEN'S NORTH 6
REFERENCED FROM 1 / A401 3/8" = 1'-0"



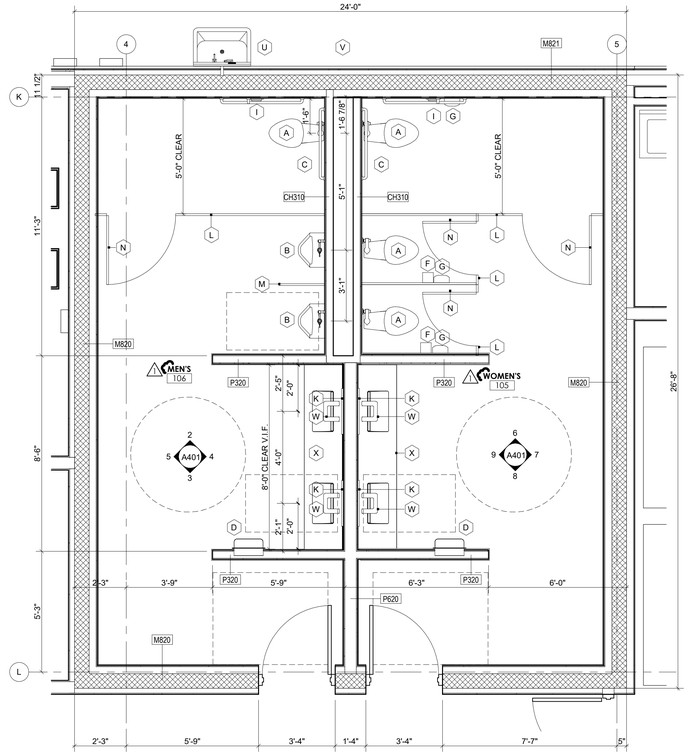
106 MEN'S WEST 5
REFERENCED FROM 1 / A401 3/8" = 1'-0"



106 MEN'S EAST 4
REFERENCED FROM 1 / A401 3/8" = 1'-0"

FIXTURES AND TOILET ACCESSORIES #

A	WALL MOUNTED WATER CLOSET PER PLUMBING AND ADA
AA	36" x 36" CLEAR ADA FIBERGLASS TRANSFER SHOWER STALL WITH COLLAPSIBLE RUBBER DAM
B	URINAL PER PLUMBING WITH URINAL MAT, MOUNTED PER ADA
BB	BRADLEY WALL MOUNTED AUTOMATIC ROLL TOWEL DISPENSER - 2494
C	36" & 42" GRAB BARS AT 33"-36" A.F.F. AND 18" VERTICAL GRAB BAR PER ADA, PROVIDE BLOCKING WHERE NEEDED
CC	BRADLEY WASTE RECEPTACLE, SEMI-RECESSED - 346-10
D	BRADLEY SEMI RECESSED TOWEL DISPENSER AND WASTE RECEPTACLE - 234 RECESSED
E	SOLID SURFACE COUNTERTOP AT 34" A.F.F. WITH ADA APRON PER DETAILS AND ADA
F	BRADLEY WALL MOUNTED TOILET PAPER DISPENSER - 5B2-110000
G	BRADLEY SURFACE MOUNTED SANITARY NAPKIN DISPOSAL - 24B-11
H	BRADLEY WALL MOUNTED SOAP DISPENSER - 6B1-11, PROVIDE DRIP TRAY
I	BRADLEY RECESSED TOILET PAPER DISPENSER - 5B2-00000
J	24" X 24" MOP BASIN WITH MOP RACK AND FRP ON WALLS PER FINISH SCHEDULE
K	24" x 48" FRAMELESS MIRROR ABOVE SINK, BOTTOM OF REFLECTIVE SURFACE AT 40" A.F.F. MAX PER ADA
L	FLOOR MOUNTED PLASTIC LAMINATE RESTROOM PARTITIONS (HPL-3)
M	WALL MOUNTED URINAL PARTITION (HPL-3)
N	BRADLEY STAINLESS STEEL HOOK 9B1-1102 MOUNTED AT 48" AND 60" AT ADA STALLS AND SINGLE RESTROOMS AND 60" AT STANDARD STALLS
O	UNDERMOUNT SINK WITH FAUCET PER PLUMBING AND ADA
P	HIGH / HOW DRINKING FOUNTAIN WITH BOTTLE DISPENSER PER PLUMBING AND ADA
Q	STAINLESS HEAVY DUTY SHOWER CURTAIN ROD WITH CONCEALED MOUNTING, VINYL CURTAIN AND STAINLESS RINGS. MOUNTING HEIGHT AT 74 1/2" A.F.F. PER MANUFACTURE'S RECOMMENDATION
R	ADA TWO-WALL SHOWER STAINLESS GRAB BAR AT 33"-36" A.F.F. AND 18" VERTICAL GRAB BARS PER ADA, PROVIDE ADEQUATE BLOCKING AS REQUIRED.
S	ADA KIT ON ADJUSTABLE MOUNT WITH 60" HOSE PER ADA. PROVIDE DIVERTER CONTROLS TO CONTROL WATER FROM STANDARD HEAD TO ADA COMPLIANT HAND HELD SHOWER HEAD
T	WALL MOUNTED SINK AND FAUCET PER ADA AND PLUMBING, PROVIDE INSULATED COVERING PER ADA
U	STAINLESS STEEL WALL MOUNTED SINK WITH EMERGENCY EYE WASH PER ADA AND PLUMBING
V	SANITARY LAVATORY LINE AND FIXTURE FOR AIRPLANE WASTE DISPOSAL PER PLUMBING
W	BRADLEY AUTOMATIC WATER / SOAP UNIT WASHBAR DUO IN BRUSHED STAINLESS STEEL WITH UNDER COUNTER SOAP CONTAINER - WBD1
X	BRADLEY OMNIDECK TERREON SOLID SURFACE COUNTER WITH INTEGRAL SINK WB-TR1, FRONT APRON, AND ADA ACCESS PANEL
Y	HAWS BARRIER FREE RECESSED EMERGENCY SHOWER AND EYE WASH STATION - 8356WCC
Z	BRADLEY WALL MOUNTED ADA SHOWER SEAT - 9569-00000, MOUNTED PER ADA



ENLARGED PLAN - LEVEL 1 RESTROOMS 1
REFERENCED FROM 1 / A102 3/8" = 1'-0"

11/8/2023 1:33:00 PM

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

- Julie Black Weilner - Architect - MO #A-5006 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NOTARY PUBLIC
A-5006
REGISTERED ARCHITECT
- MO Certificate of Authority #0007167 -

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

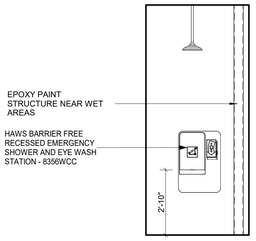
PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI

SHEET TITLE

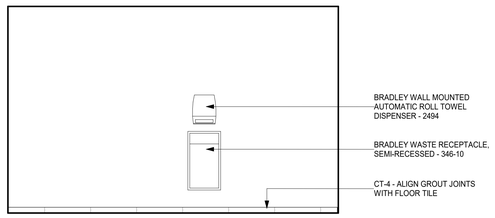
ENLARGED RESTROOM PLANS & ELEVATIONS

A401

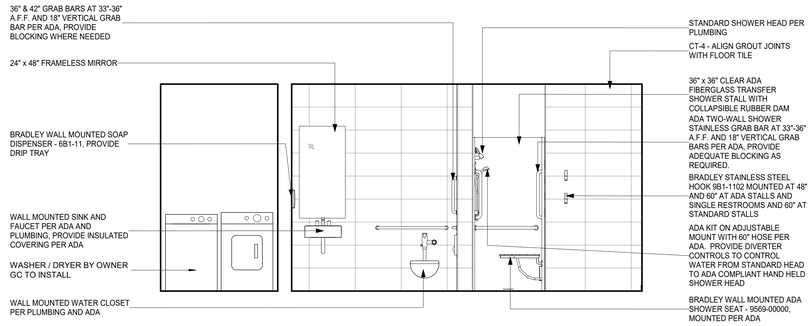
SHEET 069 OF 131



122 WETROOM WEST 15
REFERENCED FROM 4 / A402 3/8" = 1'-0"



123 RESTROOM SOUTH 14
REFERENCED FROM 1 / A401 3/8" = 1'-0"



123 RESTROOM NORTH 13
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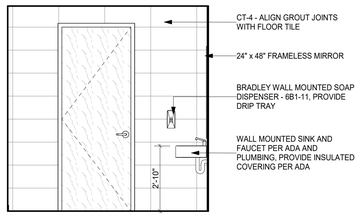
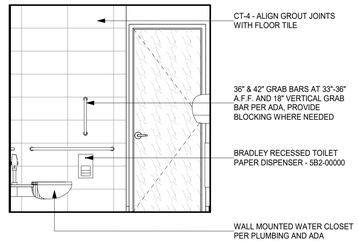
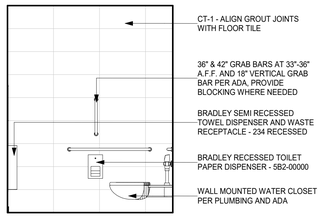


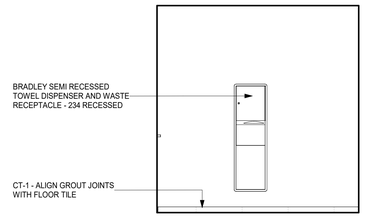
123 RESTROOM WEST 12
REFERENCED FROM 4 / A402 3/8" = 1'-0"



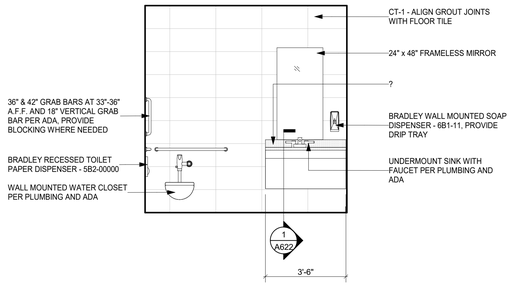
123 RESTROOM EAST 11
REFERENCED FROM 4 / A402 3/8" = 1'-0"



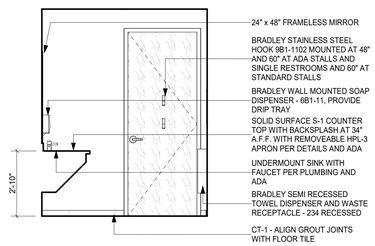
210 RESTROOM SOUTH 10
REFERENCED FROM 1 / A402 3/8" = 1'-0"



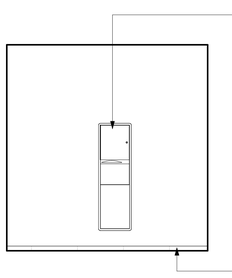
210 RESTROOM EAST 9
REFERENCED FROM 1 / A402 3/8" = 1'-0"



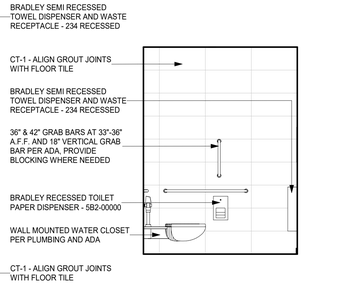
210 RESTROOM WEST 8
REFERENCED FROM 1 / A402 3/8" = 1'-0"



210 RESTROOM NORTH 7
REFERENCED FROM 1 / A402 3/8" = 1'-0"



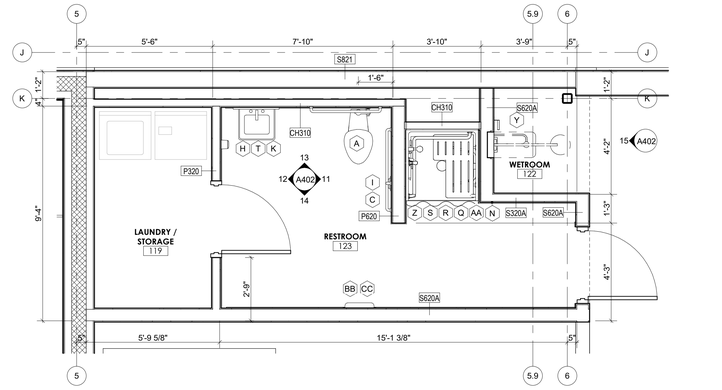
208 RESTROOM WEST 6
REFERENCED FROM 1 / A402 3/8" = 1'-0"



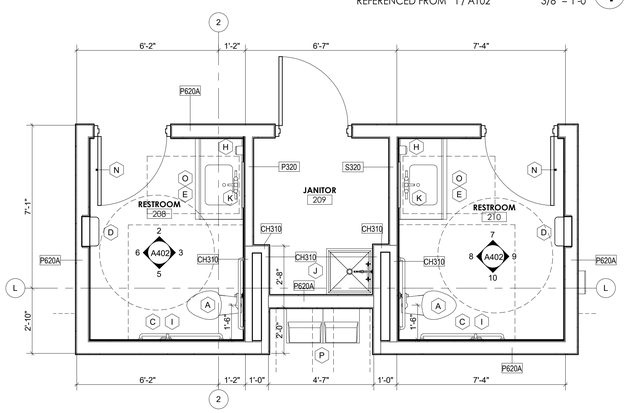
208 RESTROOM SOUTH 5
REFERENCED FROM 1 / A402 3/8" = 1'-0"

FIXTURES AND TOILET ACCESSORIES (#)

A	WALL MOUNTED WATER CLOSET PER PLUMBING AND ADA
AA	36" x 36" CLEAR ADA FIBERGLASS TRANSFER SHOWER STALL WITH COLLAPSIBLE RUBBER DAM
B	URINAL PER PLUMBING WITH URINAL MAT, MOUNTED PER ADA
BB	BRADLEY WALL MOUNTED AUTOMATIC ROLL TOWEL DISPENSER - 2494
C	36" & 42" GRAB BARS AT 33"-36" A.F.F. AND 18" VERTICAL GRAB BAR PER ADA, PROVIDE BLOCKING WHERE NEEDED
CC	BRADLEY WASTE RECEPTACLE, SEMI-RECESSED - 346-10
D	BRADLEY SEMI RECESSED TOWEL DISPENSER AND WASTE RECEPTACLE - 234 RECESSED
E	SOLID SURFACE COUNTERTOP AT 34" A.F.F. WITH ADA APRON PER DETAILS AND ADA
F	BRADLEY WALL MOUNTED TOILET PAPER DISPENSER - 5B2-110000
G	BRADLEY SURFACE MOUNTED SANITARY NAPKIN DISPOSAL - 24B-11
H	BRADLEY WALL MOUNTED SOAP DISPENSER - 6B1-11, PROVIDE DRIP TRAY
I	BRADLEY RECESSED TOILET PAPER DISPENSER - 5B2-00000
J	24" X 24" MOP BASIN WITH MOP RACK AND FRP ON WALLS PER FINISH SCHEDULE
K	24" x 48" FRAMELESS MIRROR ABOVE SINK, BOTTOM OF REFLECTIVE SURFACE AT 40" A.F.F. MAX PER ADA
L	FLOOR MOUNTED PLASTIC LAMINATE RESTROOM PARTITIONS (HPL-3)
M	WALL MOUNTED URINAL PARTITION (HPL-3)
N	BRADLEY STAINLESS STEEL HOOK 9B1-1102 MOUNTED AT 48" AND 60" AT ADA STALLS AND SINGLE RESTROOMS AND 60" AT STANDARD STALLS
O	UNDERMOUNT SINK WITH FAUCET PER PLUMBING AND ADA
P	HIGH / HOW DRINKING FOUNTAIN WITH BOTTLE DISPENSER PER PLUMBING AND ADA
Q	STAINLESS HEAVY DUTY SHOWER CURTAIN ROD WITH CONCEALED MOUNTING, VINYL CURTAIN AND STAINLESS RINGS. MOUNTING HEIGHT AT 74 1/2" A.F.F. PER MANUFACTURE'S RECOMMENDATION
R	ADA TWO-WALL SHOWER STAINLESS GRAB BAR AT 33"-36" A.F.F. AND 18" VERTICAL GRAB BARS PER ADA, PROVIDE ADEQUATE BLOCKING AS REQUIRED.
S	ADA KIT ON ADJUSTABLE MOUNT WITH 60" HOSE PER ADA, PROVIDE DIVERTER CONTROLS TO CONTROL WATER FROM STANDARD HEAD TO ADA COMPLIANT HAND HELD SHOWER HEAD
T	WALL MOUNTED SINK AND FAUCET PER ADA AND PLUMBING, PROVIDE INSULATED COVERING PER ADA
U	STAINLESS STEEL WALL MOUNTED SINK WITH EMERGENCY EYE WASH PER ADA AND PLUMBING
V	SANITARY LAVATORY LINE AND FIXTURE FOR AIRPLANE WASTE DISPOSAL PER PLUMBING
W	BRADLEY AUTOMATIC WATER / SOAP UNIT WASHBAR DUO IN BRUSHED STAINLESS STEEL WITH UNDER COUNTER SOAP CONTAINER - WBD1
X	BRADLEY OMNIDECK TERREON SOLID SURFACE COUNTER WITH INTEGRAL SINK WB-TR1, FRONT APRON, AND ADA ACCESS PANEL
Y	HAWS BARRIER FREE RECESSED EMERGENCY SHOWER AND EYE WASH STATION - 8356WCC
Z	BRADLEY WALL MOUNTED ADA SHOWER SEAT - 9569-00000, MOUNTED PER ADA



ENLARGED PLAN - LEVEL 1 RESTROOMS SCHOOL 4
REFERENCED FROM 1 / A102 3/8" = 1'-0"



RESTROOMS 208 & 210 1
REFERENCED FROM 2 / A102 3/8" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

- Julie Black Wellner - Architect - MO #A-5006 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT
- MO Certificate of Authority #000767 -

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI

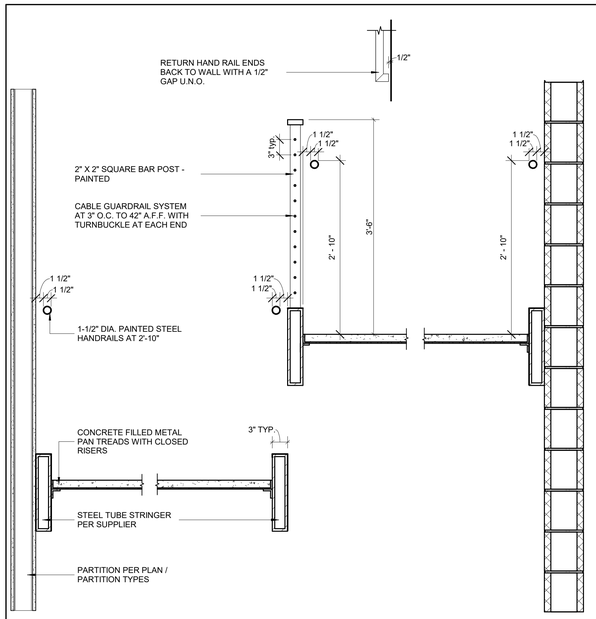
SHEET TITLE

ENLARGED RESTROOM PLANS & ELEVATIONS

A402

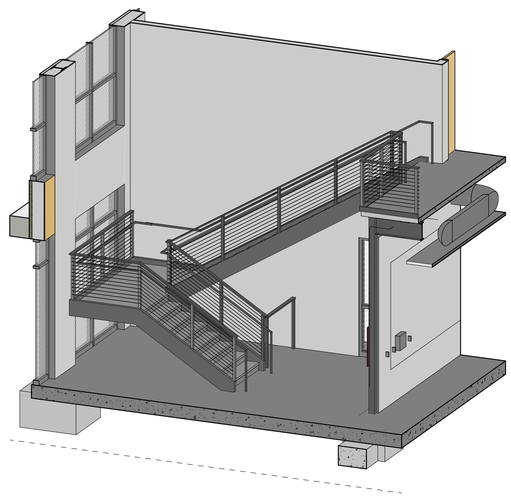
SHEET 070 OF 131

9/29/2023 11:05:54 AM

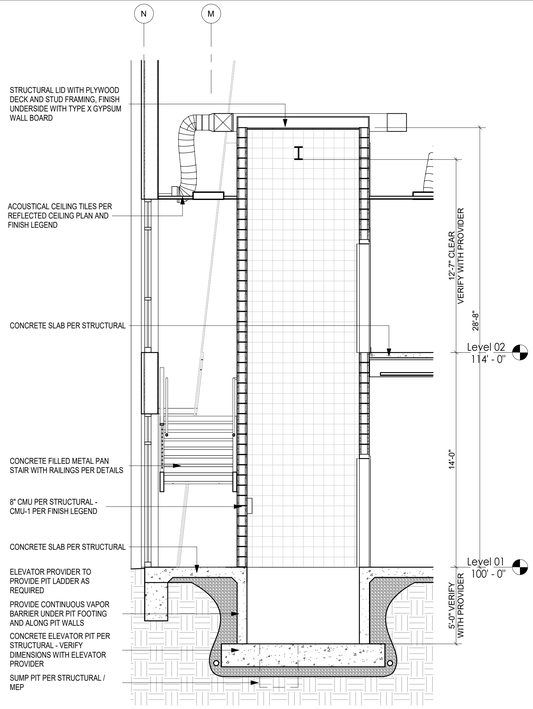


DETAIL - STAIRS 11
1" = 1'-0"

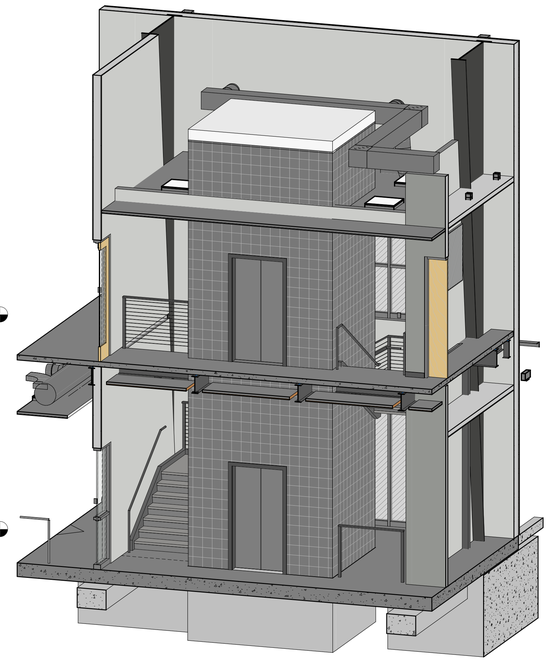
ALL EXPOSED MEZZANINE DECK, ROOF DECK, EXPOSED STEEL, EXPOSED CMU, AND EXPOSED SPIRAL DUCTS TO REMAIN CLEAN AND FREE OF DAMAGE FOR FINAL UNFINISHED APPEARANCE. PROVIDE ADDITIONAL PROTECTION AS REQUIRED.



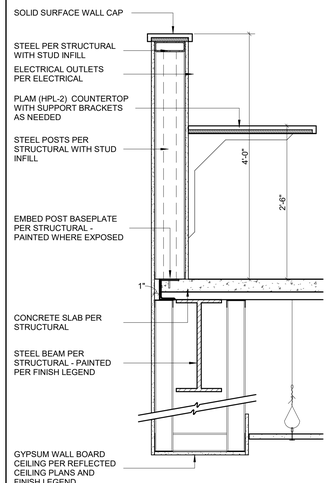
ISOMETRIC - STAIR 1 8



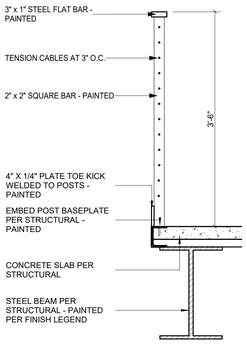
SECTION - ELEVATOR 5
1/4" = 1'-0"



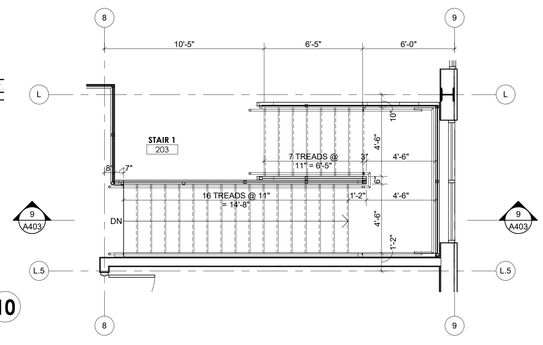
ISOMETRIC - STAIR 2 & ELEVATOR 3



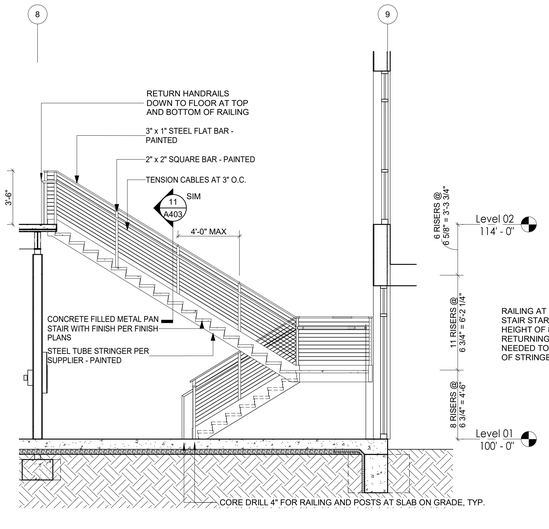
DETAIL - WALL RAILING AT SLAB EDGE 12
1" = 1'-0"



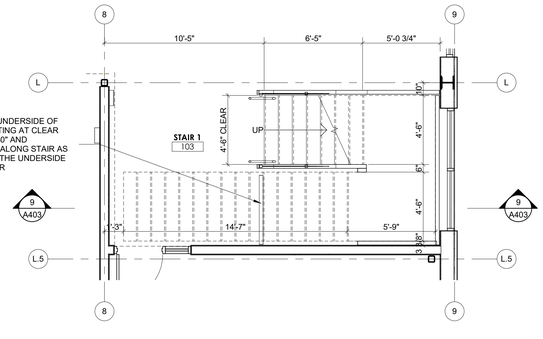
DETAIL - GUARDRAILS 10
1" = 1'-0"



ENLARGED PLAN - STAIR 1 LEVEL 2 7
1/4" = 1'-0"



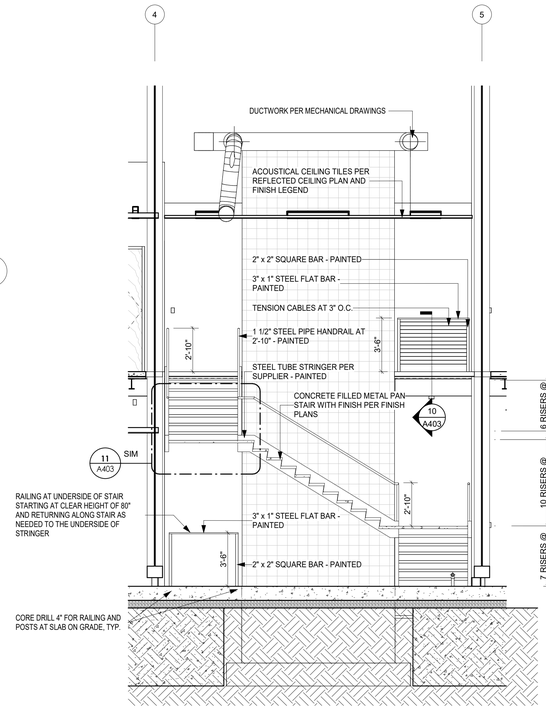
SECTION - STAIR 1 9
1/4" = 1'-0"



ENLARGED PLAN - STAIR 1 LEVEL 1 6
1/4" = 1'-0"

STAIR / RAILING / GUARDRAIL NOTES:

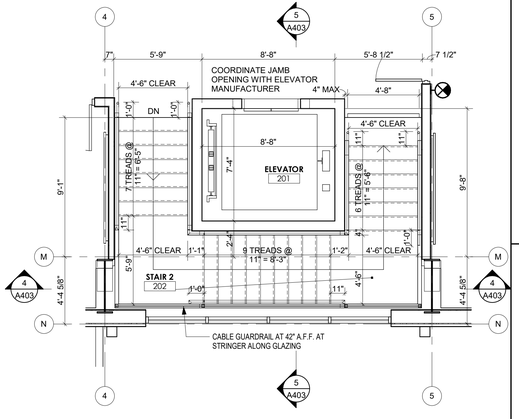
- MINIMUM GUARDRAIL HEIGHT IS 42" AS MEASURED FROM ADJACENT WALKING SURFACES, ON STAIRS FROM THE LINE OF THE CONNECTING LEADING EDGES OF THE TREAD NOSING, AND ON RAMPS FROM THE RAMP SURFACE.
- FROM FLOOR / TREAD HEIGHT UP TO 34" - GUARDRAIL CONSTRUCTION TO NOT ALLOW PASSAGE OF 4" SPHERE.
- FROM HEIGHT OF 34" TO 42", GUARDRAIL CONSTRUCTION TO NOT ALLOW THE PASSAGE OF 4 3/8" SPHERE.
- HANDRAILS ARE TO BE GRASPABLE A MINIMUM DIAMETER OF 1-1/4" AND MAX. OF 2".
- MAXIMUM RISER HEIGHT TO BE 7"
- MINIMUM TREAD DEPTH TO BE 11"
- ALL WELDS EXPOSED TO VIEW TO BE GROUND SMOOTH.
- ALL STAIRS TO HAVE CLOSED RISER CONSTRUCTION.
- THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY 0.375 INCH.
- THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY 0.375 INCH.
- STEEL STRINGER SHALL RUN CONTINUOUS AT LANDINGS AND TRANSITIONS OF SLOPE - STEEL FILLERS SHALL BE WELDED AND GROUND SMOOTH FOR SEAMLESS APPEARANCE.
- STRUCTURAL DESIGN OF STAIRS AND STAIR COMPONENTS PER SUPPLIER.
- STAIR STRUCTURE TO BE COORDINATED TO FIT WITHIN WALL FRAMING WHERE POSSIBLE.
- PROVIDE PROTECTIVE RAILING UNDER STAIRS TO THE MINIMUM CLEAR HEAD HEIGHT OF 80".
- GUARDRAILS TO MEET HORIZONTAL FORCE REQUIREMENTS PER CODE.
- ALL EXPOSED STEEL TO BE PAINT U.N.O.
- PROVIDE TURNBUCKLES AT ALL CABLE RAILING RUNS TO ALLOW FOR TIGHTENING TO MEET GUARDRAIL SPACING REQUIREMENTS.



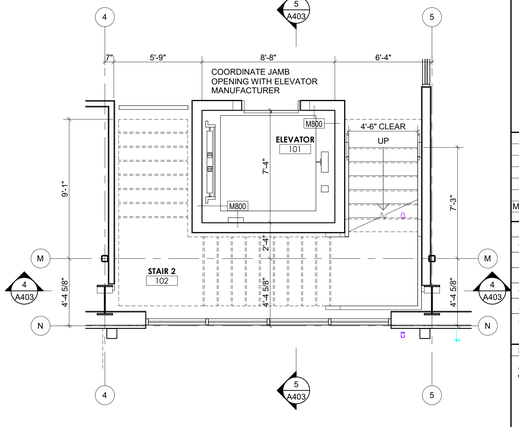
SECTION - STAIR 2 4
1/4" = 1'-0"

ELEVATOR FINISHES

ELEVATOR B.O.D. IS SCHINDLER 3100 MRL, WITH POWDER COATED PAINTED WALLS **ELE-1** AND STANDARD BRUSHED STAINLESS STEEL CEILING WITH LINEAR LED LINE LIGHTS AND ANODIZED ALUMINUM CORNERS AND SKIRTING. HANDRAILS TO BE RECTANGULAR WITH CUT ENDS. INTEGRATED TILE FLOOR **CT-1**, ALONG WITH STANDARD CAR AND OPERATING PANELS. STRUCTURE TO BE **CMU-1**. REFER TO FINISH LEGEND AND SCHEDULE FOR MATERIAL DESIGNATIONS



ENLARGED PLAN - STAIR LEVEL 2
REFERENCED FROM 2 / A102 1/4" = 1'-0" 2



ENLARGED PLAN - STAIR LEVEL 1
REFERENCED FROM 1 / A102 1/4" = 1'-0" 1

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1627 MAIN STREET, SUITE 100
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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000787 - STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	DM
CHECKED BY:	WAI
APPROVED BY:	WAI

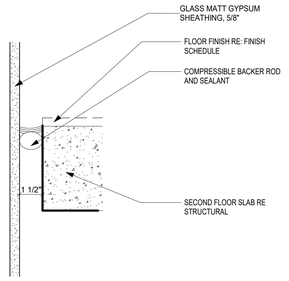
SHEET TITLE

STAIR AND ELEVATOR DETAILS

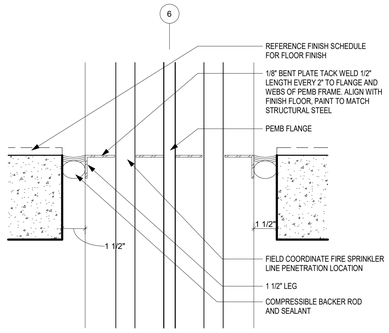
A403

SHEET 071 OF 131

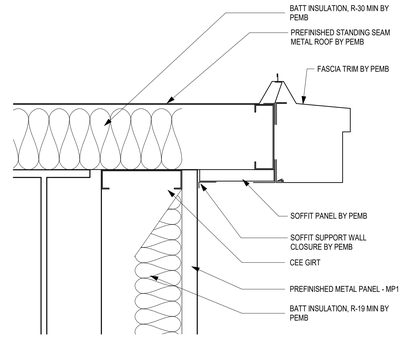
9/29/2023 11:06:03 AM



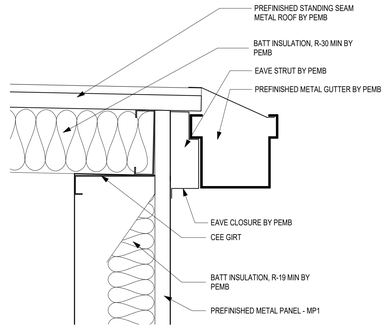
EXP JOINT A EXT WALL 16
3" = 1'-0"



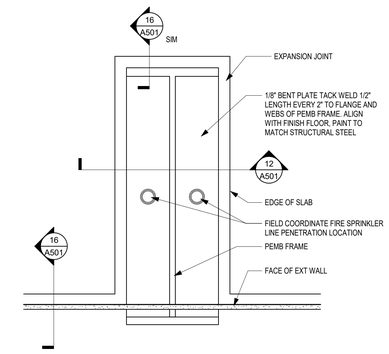
EXT JOINT AT PEMB 12
3" = 1'-0"



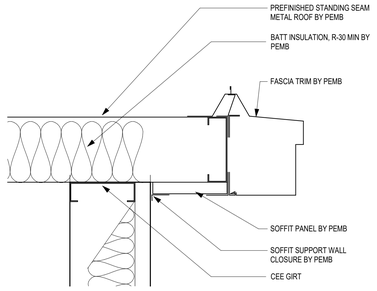
DETAIL AT GABLE 8
REFERENCED FROM 1 / A311 1 1/2" = 1'-0"



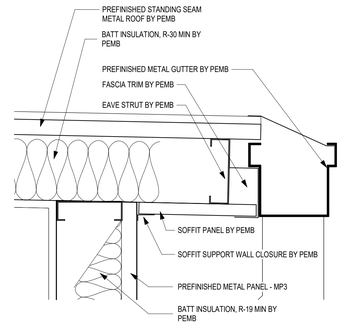
DETAIL AT GUTTER 4
REFERENCED FROM 2 / A310 1 1/2" = 1'-0"



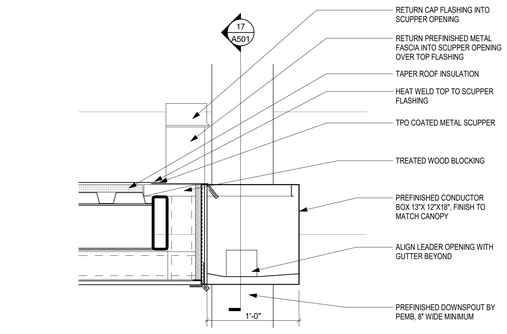
DETAIL - SECOND FLOOR EXP JOINT 11
1 1/2" = 1'-0"



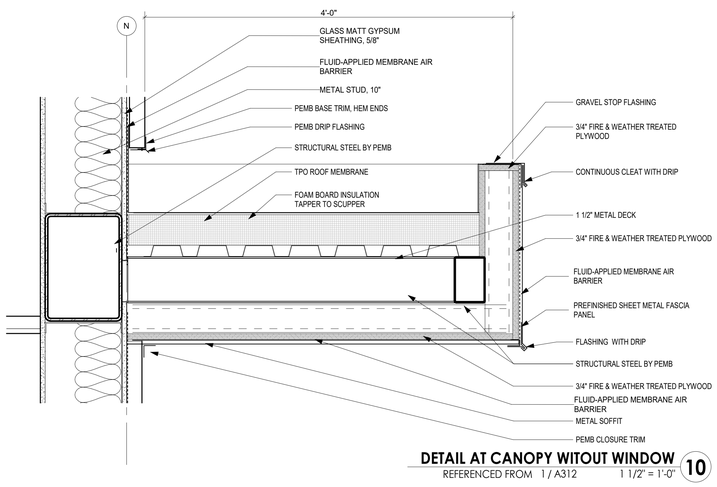
DETAIL AT GBLE & SOFFIT 7
REFERENCED FROM 3 / A310 1 1/2" = 1'-0"



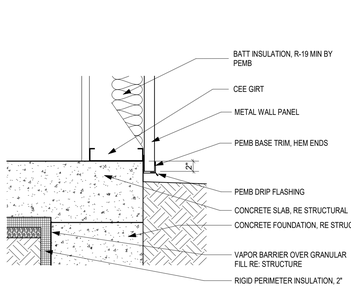
DETAIL AT GUTTER & SOFFIT 3
REFERENCED FROM 1 / A310 1 1/2" = 1'-0"



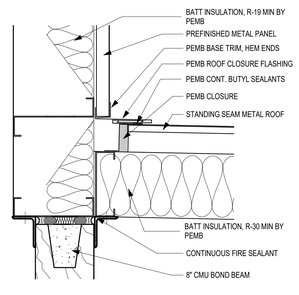
SETAIL - SCUPPER SECTION 18
REFERENCED FROM 3 / A311 1 1/2" = 1'-0"



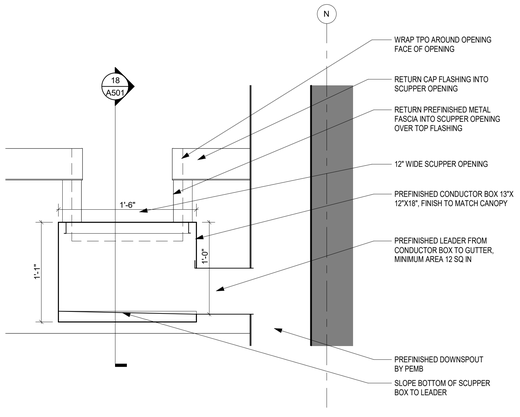
DETAIL AT CANOPY WITOUT WINDOW 10
REFERENCED FROM 1 / A312 1 1/2" = 1'-0"



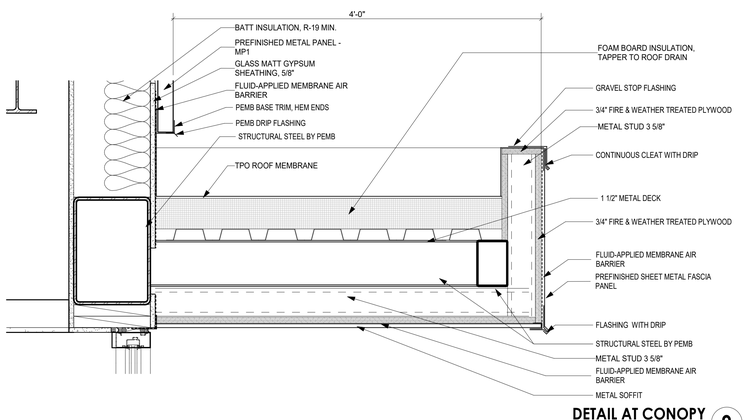
DETAIL AT MTL PANEL BASE 6
REFERENCED FROM 5 / A310 1" = 1'-0"



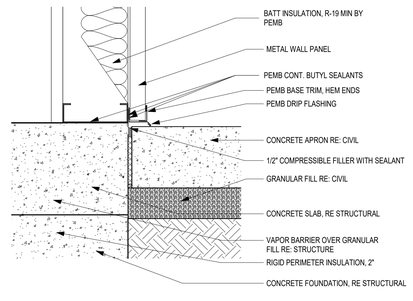
DETAIL WALL TO ROOF 2
REFERENCED FROM 2 / A310 1 1/2" = 1'-0"



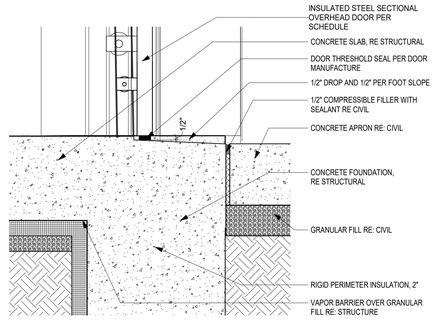
DETAIL - COLLECTOR BOX SECTION 17
REFERENCED FROM 18 / A501 1 1/2" = 1'-0"



DETAIL AT CANOPY 9
REFERENCED FROM 2 / A311 1 1/2" = 1'-0"



DETAIL AT MTL PANEL BASE 5
REFERENCED FROM 3 / A310 1 1/2" = 1'-0"



DETAIL O.H. DOOR SILL 1
REFERENCED FROM 1 / A310 1 1/2" = 1'-0"

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KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT
EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000787 -
STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT
09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI
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SHEET TITLE

DETAILS

A501

SHEET 072 OF 131

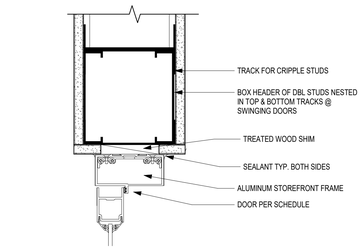
9/29/2023 11:06:09 AM

DOOR SCHEDULE

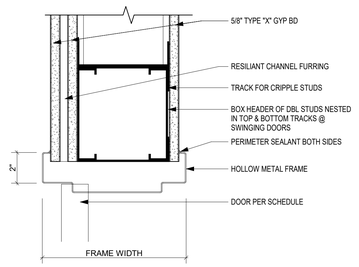
	DOORS						FRAMES								
				size						DETAILS			FIRE	HARDWARE	
door #	TYPE	MATERIAL	FINISH	width	height	thickness	TYPE	MATERIAL	FINISH	HEAD	JAMB	SILL	RATING	GROUP	remarks
100-A	A	ALUM	ANOD.	8' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	7A604	6A604	5A604	-	17	
100-B	A	ALUM	ANOD.	8' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	7A604	6A604	5A604	-	17	
104-B	E	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	4	HM	PT	7A601	6A601	-	-	05	4, 5
105-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	3A601	2A601	-	-	15	
106-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	3A601	2A601	-	-	15	
110-A	A	ALUM	ANOD.	8' - 0"	8' - 1"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	7A604	6A604	5A604	-	17	
110-B	A	ALUM	ANOD.	8' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	7A604	6A604	5A604	-	17	
111-A	D	HM	PT	4' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	45 MIN	07	1
113-A	C	WD	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	13	4
114-A	C	WD	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	13	4
114-B	B	ALUM	ANOD.	3' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	7A604	6A604	5A604	-	02	*
115-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	06	
116-A	C	WD	WD-1	3' - 0"	7' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	08	
117-A	D	HM	PT	4' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	45 MIN	07	1
118-A	H	HM	PT	4' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	90 MIN	04	1
119-A	C	WD	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	06	4
121-A	B	ALUM	ANOD.	3' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	7A603	6A604	5A604	-	02	5
121-B	D	HM	PT	4' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	45 MIN	12	1
121-C	F	STL	PREFINISHED	10' - 0"	10' - 0"	0" - 2"	-	-	-	4A602	3A602	-	45 MIN	18	2
123-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	14	4
125-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	13	4
126-A	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	03	1
126-B	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	03	1
126-C	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	01	1
126-D	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	01	1
126-E	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	01	1
126-F	G	STL	PT	14' - 0"	10' - 0"	0" - 2"	-	-	-	2A602	1A602	1A501	-	18	2
126-G	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	03	1, 3
127-A	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	15A604	14604	-	-	01	1
127-B	G	STL	PREFINISHED	14' - 0"	10' - 0"	0" - 2"	-	--	-	2A602	1A602	1A501	-	18	2
127-C	G	STL	PREFINISHED	14' - 0"	10' - 0"	0" - 2"	-	-	-	2A602	1A602	1A501	-	18	2
127-D	G	STL	PREFINISHED	14' - 0"	10' - 0"	0" - 2"	-	-	-	2A602	1A602	1A501	-	18	2
127-E	F	STL	PREFINISHED	14' - 0"	14' - 0"	0" - 2"	-	-	-	2A602	1A602	-	90 MIN	18	2
127-F	D	HM	PT	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	11A601	10A601	-	90 MIN	11	
204-A	E	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	3	HM	PT	7A601	6A601	-	-	05	4, 5
205-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	12A601	12A601	-	-	13	
208-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	14	
209-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	06	
210-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	14	
211-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	13	
212-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	13	
215-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	09	
216-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	STOREFRONT	ALUM	ANOD.	12A601	12A601	-	-	11	
217-A	C	WD	WD-1	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	8A601	4A601	-	-	16	
219-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	13	4
220-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	2	HM	PT	7A601	6A601	-	-	10	4
221-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	08	4
222-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	06	4
223-A	C	HM	WOOD GRAIN	3' - 0"	8' - 0"	0" - 1 3/4"	1	HM	PT	7A601	6A601	-	-	06	4

GENERAL NOTES:
1. REFER TO SPECIFICATIONS FOR HARDWARE SETS LISTED IN SPECIFICATIONS 087100

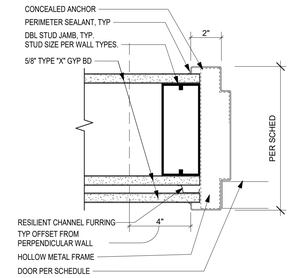
NOTES:
1. INSULATED OVERHEAD DOOR
2. INSULATED SECTIONAL DOOR
3. CORRDINATE EGRESS DOOR WITHIN HANGAR DOOR WITH HANGAR DOOR PROVIDER
4. STEEL-CRAFT WOOD GRAIN DOORS WITH FINISH MATCHING WD-1
5. GLAZING TO BE SG4 SCHOOL GUARD GLASS AT DOORS AND SIDELIGHTS



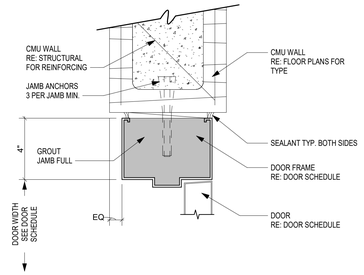
DOOR JAMB/HEAD AT GYP BD INT STOREFRONT 12
3" = 1'-0"



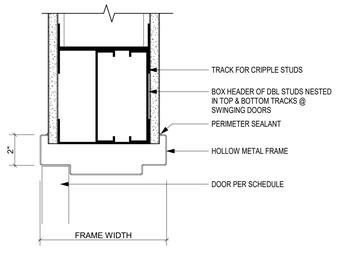
DOOR HEAD AT PILOT QUIET RM 8
3" = 1'-0"



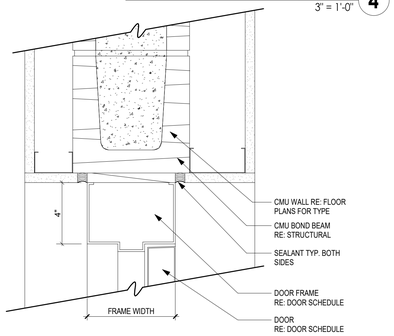
DOOR JAMB AT PILOT QUIET RM 4
3" = 1'-0"



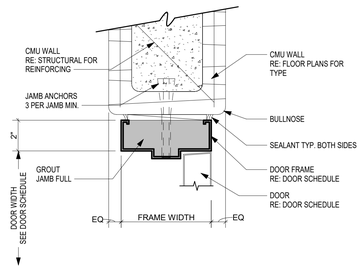
DOOR HEAD AT CMU 11
3" = 1'-0"



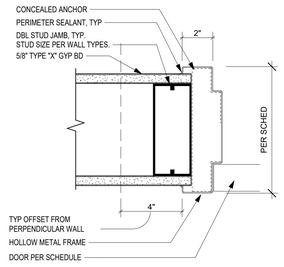
DOOR HEAD AT GYP BD 7
3" = 1'-0"



DOOR HEAD AT CMU 3
3" = 1'-0"

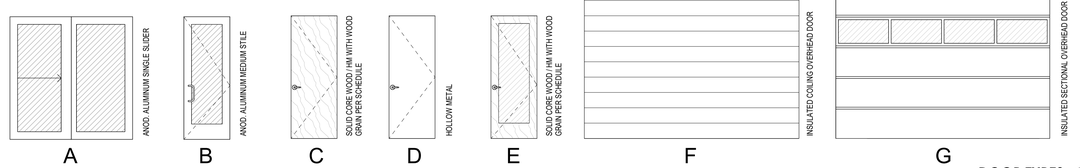


DOOR JAMB AT CMU 10
3" = 1'-0"



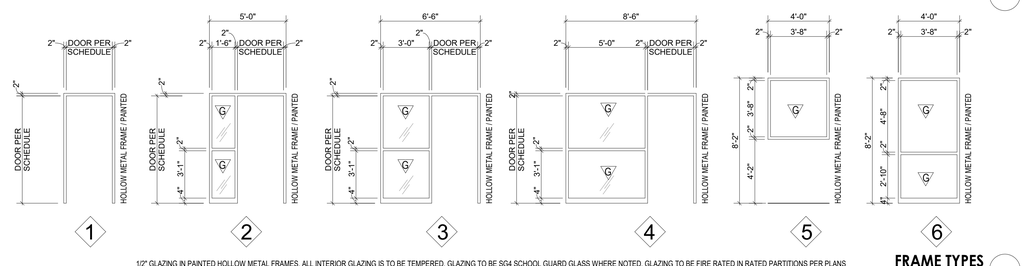
DOOR JAMB AT GYP BD 6
3" = 1'-0"

DOOR JAMB AT CMU 2
3" = 1'-0"



EXTERIOR GLAZING PER GLAZING ELEVATIONS, ALL INTERIOR GLAZING IS TO BE TEMPERED, GLAZING TO BE SG4 SCHOOL GUARD GLASS WHERE NOTED, GLAZING / DOORS TO BE FIRE RATED IN RATED PARTITIONS PER PLANS

DOOR TYPES



1/2" GLAZING IN PAINTED HOLLOW METAL FRAMES, ALL INTERIOR GLAZING IS TO BE TEMPERED, GLAZING TO BE SG4 SCHOOL GUARD GLASS WHERE NOTED, GLAZING TO BE FIRE RATED IN RATED PARTITIONS PER PLANS

FRAME TYPES

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 - STATE OF MISSOURI - JULIE BLACK WELLNER - NUMBER A-5006 - REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI
COPYRIGHT 2023	

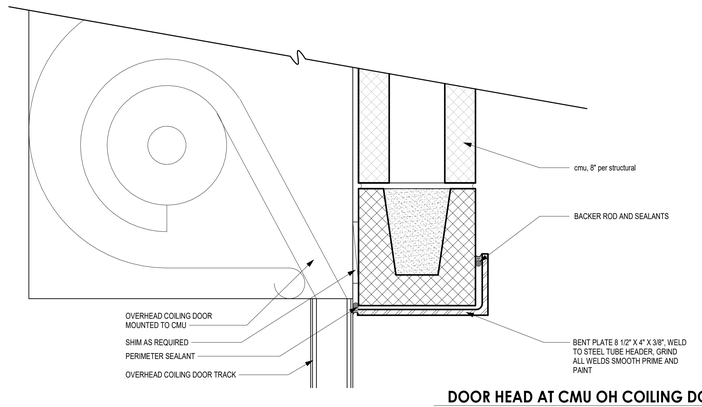
SHEET TITLE

DOOR/WINDOW SCHEDULE & DETAILS

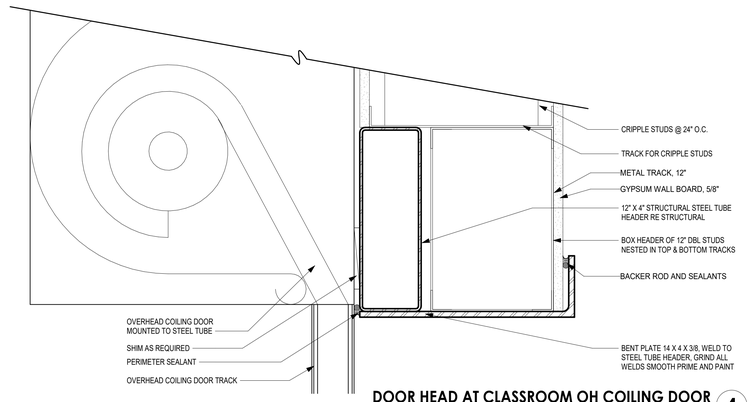
A601

SHEET 073 OF 131

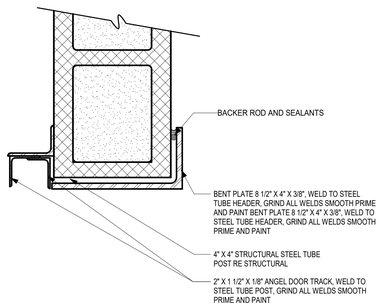
11/8/2023 1:33:04 PM



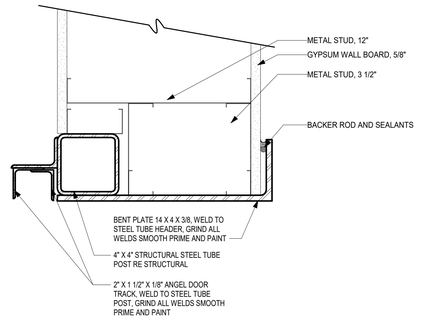
DOOR HEAD AT CMU OH COILING DOOR 12
REFERENCED FROM 2 / A310 3" = 1'-0"



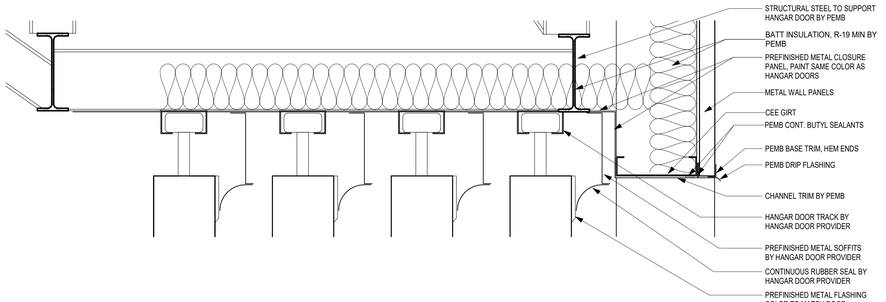
DOOR HEAD AT CLASSROOM OH COILING DOOR 4
3" = 1'-0"



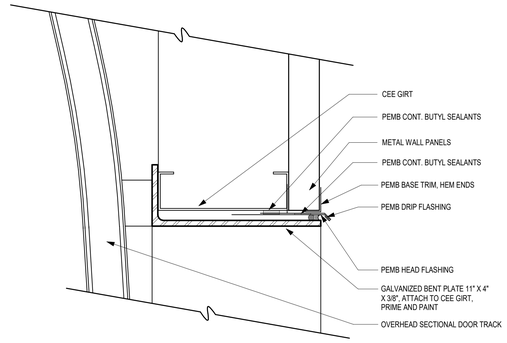
DOOR JAMB AT CMU OH COILING DOOR 7
REFERENCED FROM / 3" = 1'-0"



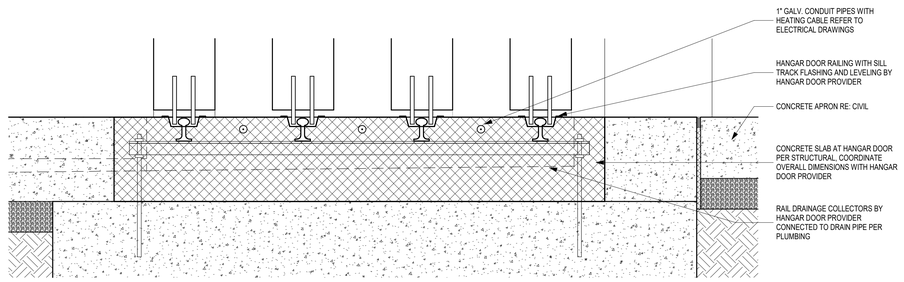
DOOR JAMB AT CLASSROOM OH COILING DOOR 3
3" = 1'-0"



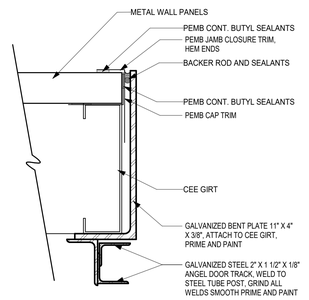
DETAIL - HANGER DOOR HEAD 6
REFERENCED FROM 1 / A311 1 1/2" = 1'-0"



DOOR HEAD AT STORAGE OH SECTIONAL DOOR 2
3" = 1'-0"



DETAIL - HANGER DOOR TRACK 5
REFERENCED FROM 1 / A311 1 1/2" = 1'-0"



DOOR JAMB AT STORAGE OH SECTIONAL DOOR 1
3" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000787 - STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

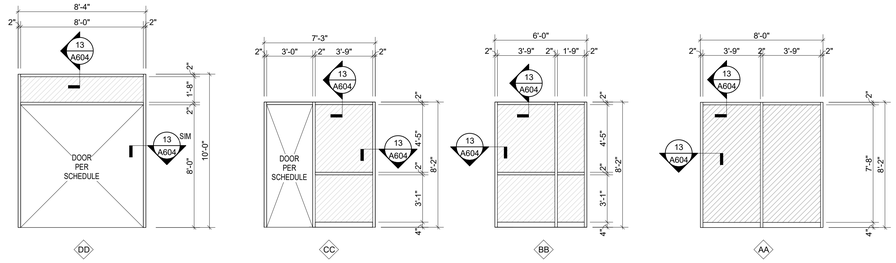
SHEET TITLE

DOOR/WINDOW DETAILS

A602

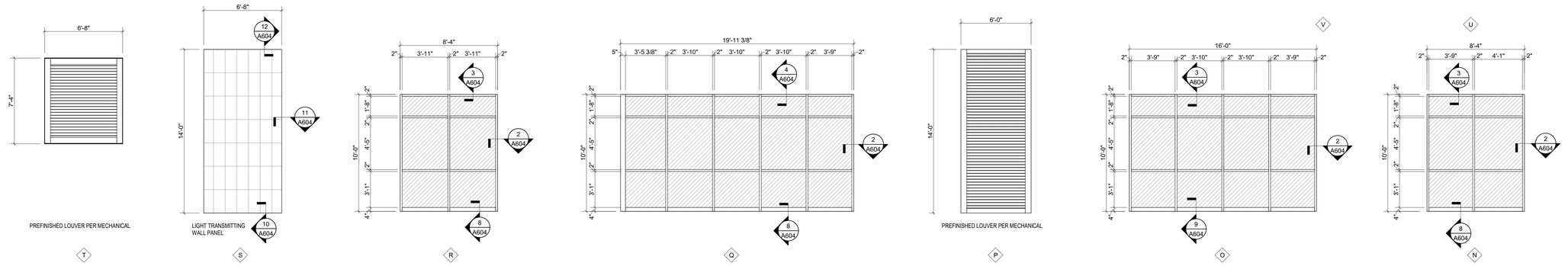
SHEET 074 OF 131

9/29/2023 11:06:15 AM



1/2" GLAZING IN CLEAR ANODIZED ALUMINUM STOREFRONT FRAMES, ALL INTERIOR GLAZING IS TO BE TEMPERED, GLAZING TO BE SG4 SCHOOL GUARD GLASS WHERE NOTED, GLAZING TO BE FIRE RATED IN RATED PARTITIONS PER PLANS

INTERIOR GLAZING ELEVATIONS 2
1/4" = 1'-0"



1" INSULATED GLASS (U-VALUE OF .29) WITH LOW E COATING AND ARGON FILL IN THERMALLY BROKEN CLEAR ANODIZED ALUMINUM STOREFRONT FRAMES

FURNISH AND INSTALL TEMPERED GLASS AT ALL DOORS AT A MINIMUM FO 24" EITHER SIDE OF DOOR TO A MINIMUM HEIGHT OF 60". TEMPERED GLASS SHALL ALSO BE INSTALLED AT ALL GLASS WITHIN 18" IF FUBUSG FLOOR OR ADJACENT TO SIDEWALK AREAS.

EXTERIOR GLAZING / LOUVER ELEVATIONS 1
1/4" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

- Julie Black Weilner - Architect - MO #A-5006 -
STATE OF MISSOURI
JULIE BLACK WEILNER
NOTARY PUBLIC
A-5006
REGISTERED ARCHITECT
- MO Certificate of Authority #000767 -

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
2	12/01	REV-2

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	DM
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

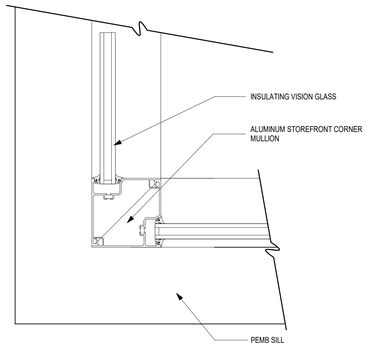
SHEET TITLE

ALUM. STOREFRONT DOOR/WINDOW SCHEDULE

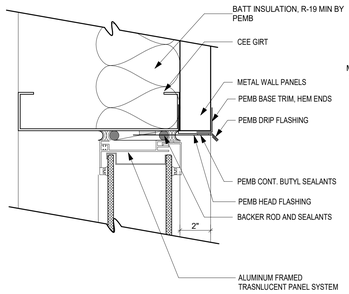
A603

SHEET 075 OF 131

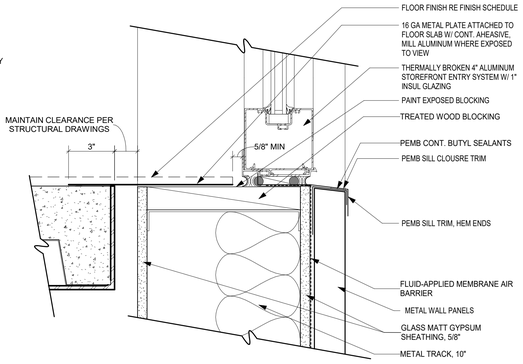
1/2/2024 8:25:24 AM



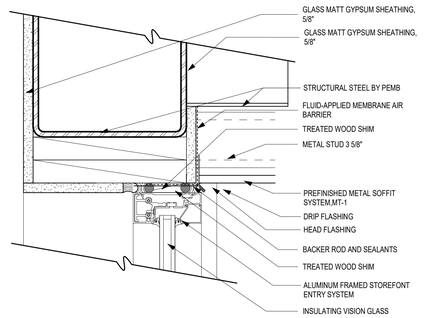
DETAIL - STOREFRONT CORNER 16
3" = 1'-0"



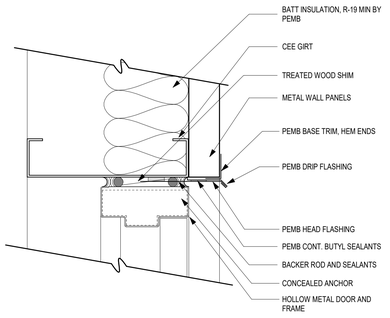
DETAIL - TRANSLUCENT PANEL HEAD 12
3" = 1'-0"



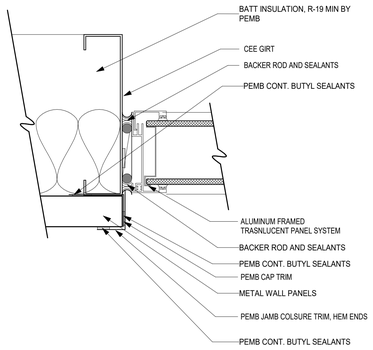
DETAIL - STOREFRONT 2ND FLOOR AT PEBM 8
3" = 1'-0"



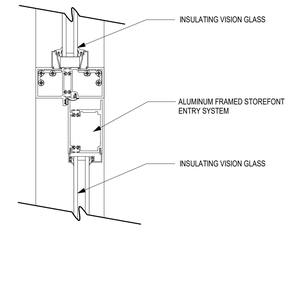
DETAIL - STOREFRONT HEAD AT CANOPY 4
3" = 1'-0"



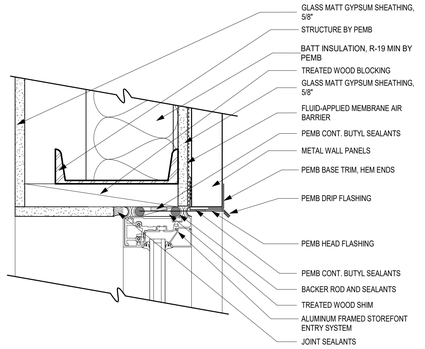
DETAIL - HM HEAD AT MTL PANEL 15
3" = 1'-0"



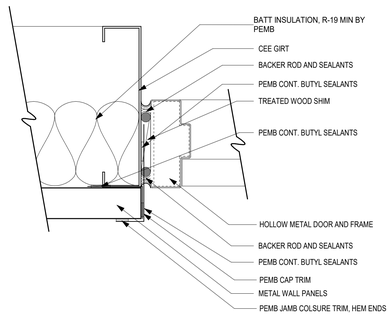
DETAIL - TRANSLUCENT PANEL JAMB 11
3" = 1'-0"



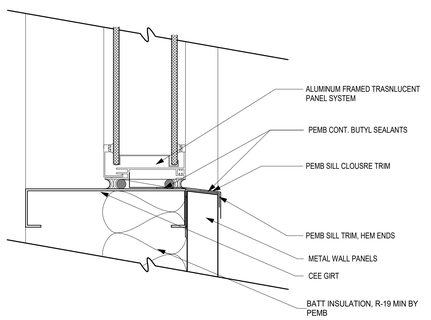
DETAIL - STOREFRONT HEAD ENTRY 7
3" = 1'-0"



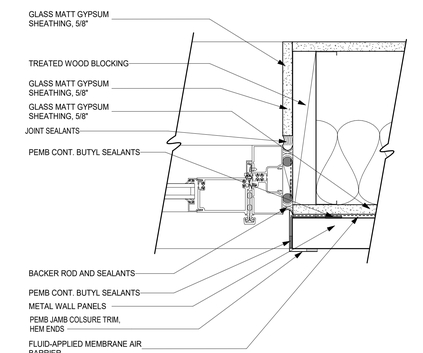
DETAIL - STOREFRONT HEAD 3
3" = 1'-0"



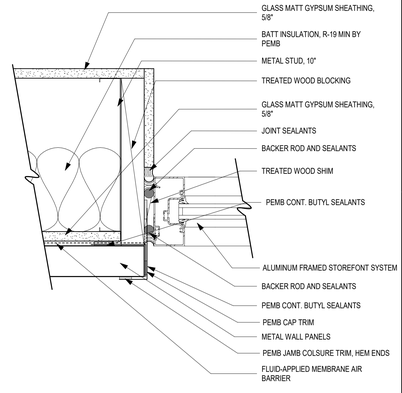
DETAIL - HM JAMB MTL PANEL 14
3" = 1'-0"



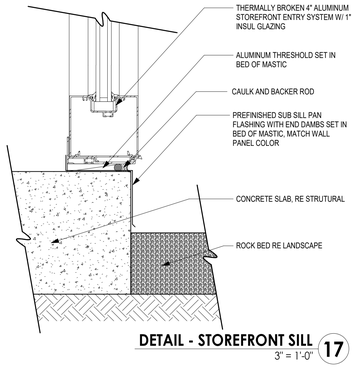
DETAIL - TRANSLUCENT PANEL SILL AT PEBM 10
3" = 1'-0"



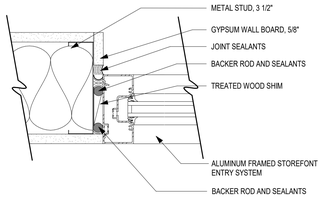
DETAIL - STOREFRONT JAMB AT DOOR 6
3" = 1'-0"



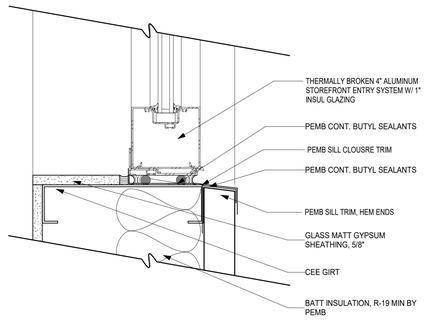
DETAIL - STOREFRONT JAMB 2
3" = 1'-0"



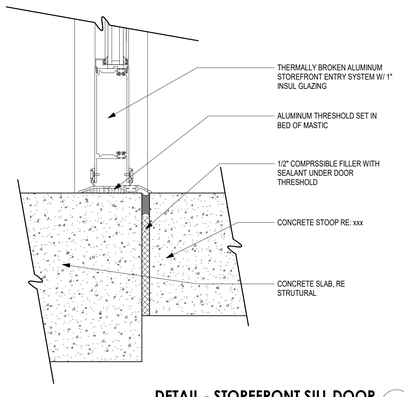
DETAIL - STOREFRONT SILL 17
3" = 1'-0"



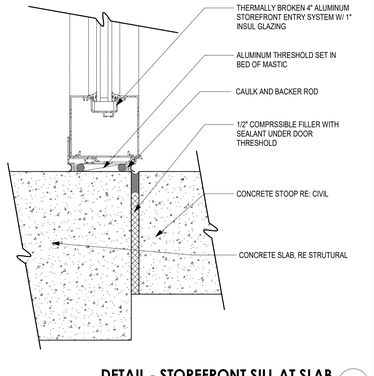
DETAIL - INTERIOR STOREFRONT JAMB/HEAD 13
3" = 1'-0"



DETAIL - STOREFRONT SILL AT PEBM 9
3" = 1'-0"



DETAIL - STOREFRONT SILL DOOR 5
3" = 1'-0"



DETAIL - STOREFRONT SILL AT SLAB 1
3" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

- Julie Black Wellner - Architect - MO #A-5006 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT
- MO Certificate of Authority #000787 -

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	KP
DRAWN BY:	KP
CHECKED BY:	WAI
APPROVED BY:	WAI

SHEET TITLE

STOREFRONT DETAILS

A604

SHEET 076 OF 131

9/29/2023 11:06:24 AM

FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALL				REMARKS
				NORTH	EAST	SOUTH	WEST	
100	VESTIBULE	WOT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
101	ELEVATOR	CT-1	-	CMU-1	CMU-1	CMU-1	CMU-1	2
102	STAIR 2	SC-1	-	PNT-1	PNT-1	PNT-1	PNT-1	
103	STAIR 1	SC-1	-	PNT-1	PNT-2	PNT-1	PNT-1	
104	CORRIDOR	SC-1	RB-1	PNT-2	PNT-1	PNT-1	PNT-1	
105	WOMEN'S	CT-1	CTB-1	CT-2	WC-1	WC-1	CT-2	3
106	MEN'S	CT-1	CTB-1	CT-2	CT-2	WC-1	WC-1	3
107	LOBBY / WAITING	SC-1 / CPT-1	RB-1	PNT-4	PNT-1	PNT-1	PNT-1	
108	VENDING / COFFEE BAR	SC-1	RB-1	PNT-4	PNT-4	PNT-2	PNT-1	
109	RECEPTION / CAR RENTAL	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
110	VESTIBULE	WOT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
111	CORRIDOR	SC-1	RB-1	PNT-1	PNT-4	PNT-1	PNT-1	
112	FLIGHT PLANNING	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
113	ASSISTANT MANAGER	SC-1	RB-1	PNT-4	PNT-1	PNT-1	PNT-1	
114	LINE OFFICE	SC-1	RB-1	PNT-4	PNT-1	PNT-1	PNT-1	
115	JANITOR	SC-1	RB-2	FRP-1/PNT-1	PNT-1/FRP-1	PNT-1	PNT-1	4
116	STORAGE	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
117	LAUNDRY	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
118	MECH / ELEC	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
119	LAUNDRY / STORAGE	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
120	FLIGHT SIMULATORS	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
121	ACTIVE LEARN LAB	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
122	WETROOM	SC-1	RB-2	PNT-5	PNT-5	PNT-5	PNT-5	1
123	RESTROOM	CT-4	CTB-2	CT-5	PNT-5	PNT-5	CT-5	
124	LEARNING STUDIO	CPT-1	RB-1	PNT-1	PNT-2	PNT-1	PNT-1	
125	OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
126	HANGAR	PNT-9	-	-	-	-	-	5,6
127	GSE STORAGE	SC-1	-	-	-	-	-	5,6
201	ELEVATOR	CT-1	-	CMU-1	CMU-1	CMU-1	CMU-1	
202	STAIR 2	SC-1	-	PNT-1	PNT-1	PNT-1	PNT-1	
203	STAIR 1	SC-1	-	PNT-1	PNT-1	PNT-1	PNT-1	
204	CORRIDOR	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
205	CONFERENCE	CPT-2	RB-1	PNT-1	PNT-4	PNT-1	PNT-1	
206	OPEN OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
207	CORRIDOR	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
208	RESTROOM	CT-1	CTB-1	PNT-5	CT-2	CT-2	PNT-5	
209	JANITOR	SC-1	RB-2	PNT-1	PNT-1/FRP-1	PNT-1/FRP-1	PNT-1	4
210	RESTROOM	CT-1	CTB-1	PNT-5	PNT-5	CT-2	CT-2	
211	FUTURE OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
212	AIRPORT MANAGER	CPT-1	RB-1	PNT-1	PNT-1	PNT-2	PNT-1	
213	WORKROOM	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
214	BREAKROOM	SC-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
215	I.T. CLOSET / MECH / ELEC	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
216	PILOT LOUNGE	CPT-2	RB-1	PNT-4	PNT-4	PNT-1	PNT-4	
217	PILOT QUIET ROOM	CPT-2	RB-1	PNT-4	PNT-4	PNT-4	PNT-4	
218	DRONE PAD	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
218	FLIGHT PLANNING	CPT-2	RB-1	-	PNT-1	PNT-1	PNT-4	
219	OFFICE	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
220	CONFERENCE / CLASSROOM	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	
221	STORAGE	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
222	MECH / ELEC	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
223	I.T. ROOM	SC-1	RB-2	PNT-1	PNT-1	PNT-1	PNT-1	
224	DRONE STORAGE	CPT-1	RB-1	PNT-1	PNT-1	PNT-1	PNT-1	

FINISH LEGEND

Symbol	Manufacturer	Series/Pattern	Number	Color	Remarks
Carpet Tile					
CPT-1	Shaw Commercial	Flat Weave/Community	5T321 - 01518/01519	Raid / Raid Marjorelle	9 In x 36 in, 1:5 Ratio Stagger Installation - Mostly Netural Raid Color
CPT-2	Shaw Commercial	Flat Weave/Community	5T321 - 01500/01501	Souk / Souk Mosaic	9 In x 36 in, 1:5 Ratio Staggar Installation - Mostly Netural Souk Color
Ceilings					
CLG-1	Armstrong	Optima	1410	White	24" x 24" x 5/8" in 15/16" Prelude grid system with 1 15/16" Axiom Classic Trim in White
CLG-2	Armstrong	Optima	1410	White	24" x 24" x 5/8" in 15/16" Prelude grid system
CLG-3	GYPSUM WALL BRD			Painted per RCP	Hard Lid Ceiling
CLG-4	GYPSUM WALL BRD	Water Resistant		Painted per RCP	Wet area ceilings
CLG-5	Armstrong	Woodworks Linear Solid Wood	8177W1	Golden Maple	12" x 96" Prelude 15/16 Black grid system with 1 15/16" Axiom Classic Trim in Etched Gun Metal
CLG-6	INTERIOR LINER PANEL			White	Perforated, 29 Guage, by PEMB Supplier at underside of roof insulation
Ceramic Tile					
CT-1	Anatolia	La Marca	ANALMNV2424H	Nero Venato	24" x 24" Rectified, Honed
CT-2	Anatolia	La Marca	ANALMNV1224H	Nero Venato	12" x 24" Rectified, Honed
CT-3	Anatolia	La Marca	ANALMNVMOS22H	Nero Venato	2" x 2" Rectified, Honed
CT-4	Anatolia	La Marca	ANALMPA2424H	Paradiso Argento	24" x 24" Rectified, Honed, School Side RR
CT-5	Anatolia	La Marca	ANALMPA1224H	Paradiso Argento	12" x 24" Rectified, Honed, School Side RR
Ceramic Tile Base					
CTB-1	Anatolia	La Marca	ANALMNVBN312H	Nero Venato	3" x 12" Bullnose, Honed
CTB-2	Anatolia	La Marca	ANALMPABN312H	Paradiso Argento	3" x 12" Bullnose, Honed, School Side RR
Door Wood Finish					
WD-1	VT			Cherry Clear	Doors
Elevator					
ELE-1	Schinlder		3100	Tupelo Taupe - Prime	Interior Elevator Finish
Fiberglass Reinforced Panel					
FRP-1	Marlite		P 151	Light Gray	
Ground Face Masonry Unit					
CMU-1	Trenwyth Masonry	Trendstone		Shadow Gray	8"X16" CMU WITH INTEGRAL 8" SCORE PATTERN AND MORTAR MATCHING CMU FINISH COLOR, RAKE ALL MORTAR JOINTS TO ALIGN WITH CMU SCORE PATTERN
Grout					
G-1	Mapei				
G-2	Mapei				School Side RR
High Pressure Laminate					
HPL-1	Arborite		W2001-AW	Artisian Natural Walnut	Cabinets, Front Desk
HPL-2	Formica		6126-58	Sheer Fabric	Back Counters
HPL-3	Formica		8909-NG	Cascara Teakwood	RR Partitions
Interior Door Frames					
IDF-1	Sherwin Williams		SW7069	Iron Ore	Match PNT-3
Paint					
PNT-1	Sherwin Williams	Eggshell	SW7064	Passive	PER FINISH PLANS
PNT-2	Sherwin Williams	Eggshell	SW9163	Tin Lizzie	PER FINISH PLANS
PNT-3	Sherwin Williams	Eggshell	SW7069	Iron Ore	EXPOSED STRUCTURE, STAIR, AND RAILINGS PER DETAILS
PNT-4	Sherwin Williams	Eggshell	-	-	PER FINISH PLANS
PNT-5	Sherwin Williams	Epoxy Paint	SW7064	Passive	PER RCP
PNT-6	Sherwin Williams	Dryfall	SW7004	Snowbound	HARD LID CEILINGS/SOFFITS PER RCP
PNT-7	Sherwin Williams	Dryfall	SW9163	Tin Lizzie	HARD LID CEILINGS/SOFFITS PER RCP
PNT-8	Sherwin Williams	Dryfall	SW7069	Iron Ore	EXPOSED STRUCTURE/BEAMS
PNT-9	SikaFloor Multidur HS	Epoxy	-	White	HANGAR FLOOR
PNT-10	Sherwin Williams		SW9500	Safety Red	AT FRONT FACES OF PEMB COLUMNS UP TO HEIGHT OF 28-0"
Resilient Base					
B-1	Johnsonite	4" Mandalay	TA4	Gateway WG	
B-2	Johnsonite	4" Standard	TA4	Gateway WG	
Schluter					
SCH-1				Clear Anodized Aluminum	
Sealed Concrete					
SC-1		Sealed Concrete			WITH CLEAR SEALER, CONCRETE FLOORS TO BE FREE OF BUMPS, PITS, OR SCRAPES
Solid Surface					
SS-1	Formica	Everform	109	Brite White	
SS-2	Bradley	Terreon		Alpine White	Bradley OmniDeck with WashBar Duo
Steel Railings					
SR-1					Match PNT-3
Walkoff Tile					
WOT-1	Shaw Commercial	Swift/All Access	5T414/14549	Step	24" X 24"
Wall Covering					
WC-1	MDC	Scribble	WS2D01	Cloudy Ink	

FINISH SCHEDULE REMARKS KEY

1. EPOXY PAINT ON COLUMN
2. ELEVATOR STRUCTURE CMU-1, CT-1 FLOORING IN CAB, WITH ELE-1 CAB FINISHES
3. CT-3 MOSAIC BEHIND SINKS, PER ELEVATIONS
4. FRP-1 AT MOP BASIN @ A HEIGHT OF 8'-0" AFF - EXTEND 3' OUT EITHER DIRECTION OF MOP BASIN AS ALLOWED.
5. PREFINISHED LINER PANEL (WHITE) AND PAINTED COLUMNS PER PLAN NOTES
6. PAINT CMU WALL TO MATCH LINER PANEL

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1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 -
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER
A-5006
REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	HM
DRAWN BY:	HM
CHECKED BY:	WAI
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FINISH SCHEDULE

A610

SHEET 077 OF 131

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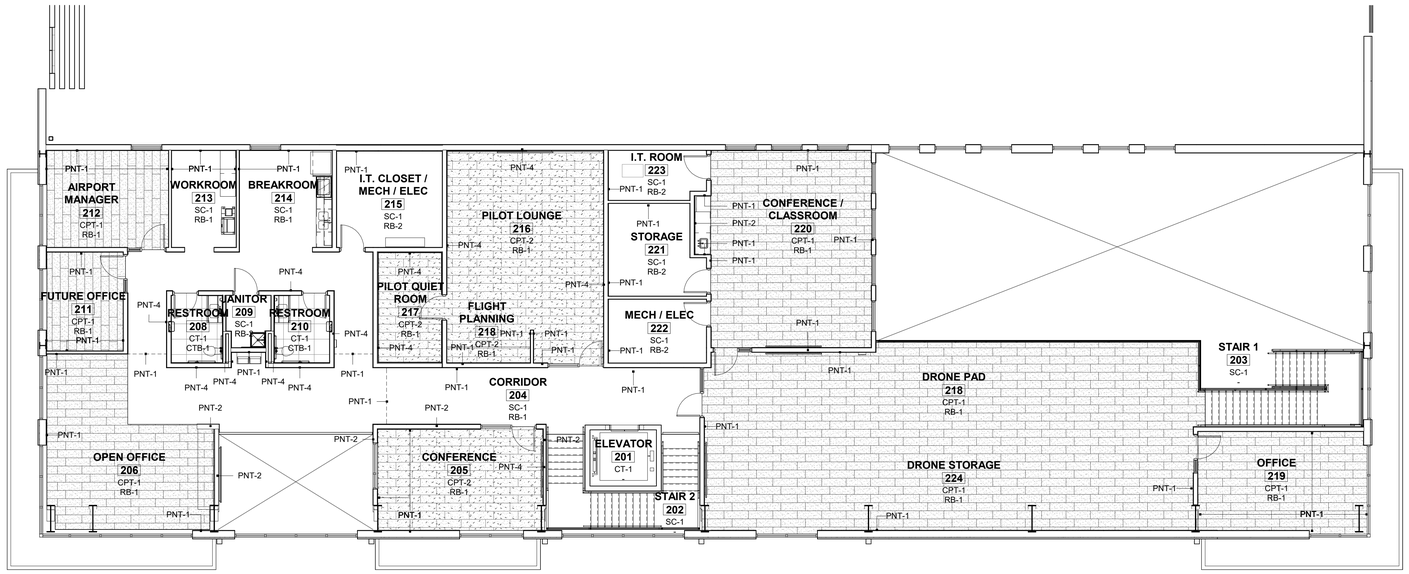
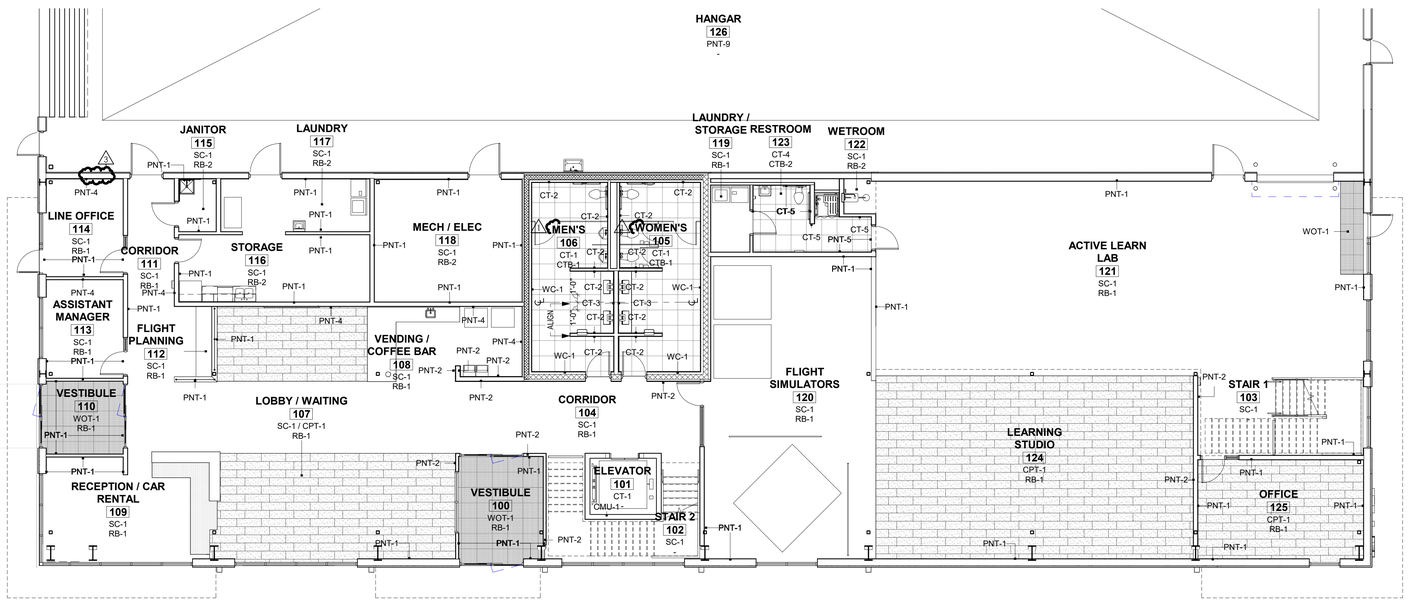


FINISH PLAN - LEVEL 2 (2)
1/8" = 1'-0"



FINISH PLAN - LEVEL 1 (1)
1/8" = 1'-0"

FINISH TAG KEY

ROOM NAME	ROOM
ROOM #	123
FLOOR FINISH	CPT-1
BASE FINISH	B-1

WALL FINISH PT-1

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767
STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
3	1/24/24	REV-3
1	11/10/23	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	HM
DRAWN BY:	HM
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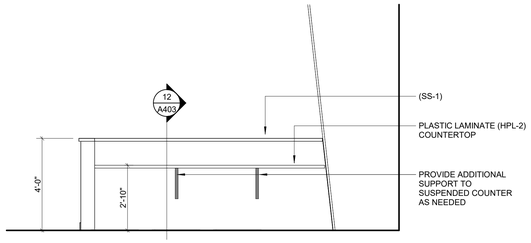
FINISH FLOOR PLANS

A611

SHEET 078 OF 131

1/24/2024 9:07:37 AM

APPLIANCE SCHEDULE						
(#)	Item Name	Room	Electrical Required	Plumbing Required	Basis of Design Model	Comments
A	UNDER COUNTER REFRIDGERATOR	108, 220	YES	NO	Summit AL57G 23 5/8"	ADA
B	MICROWAVE	108, 214	YES	NO	Sharp SMD2470ASY	24" Hidden Controls
C	WASHER	117, 119	YES	YES	SWNMN2SP115TW01	Speed Queen Commerical
D	DRYER	117, 119	YES	NO	SDEMNRG5173TW01	Speed Queen Commerical
E	ICE MAKER	117	YES	YES	IYI0500A/D570	Manitowoc 550 lb
F	REFRIDGERATOR/FREEZER	214	YES	YES	FRIGIDAIRE PROFESSIONAL PRFG2383AF	ADA
G	DISHWASHER	214	YES	YES	BOSCH SGX78B55UC	ADA



206 OBSERVATION DECK 16
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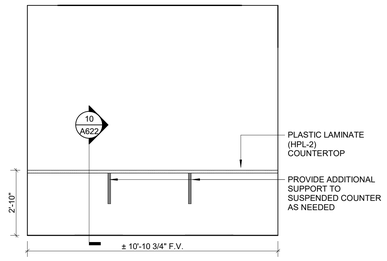

218 FLIGHT PLANNING 15
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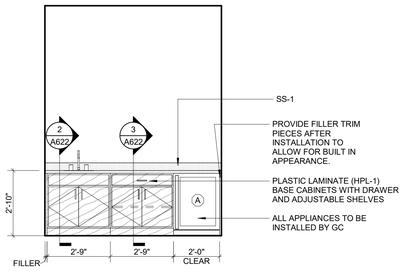

220 CONFERENCE/CLASSROOM 14
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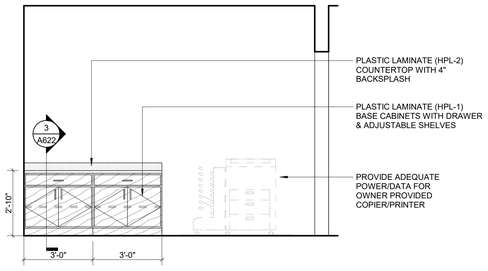

213 WORKROOM 13
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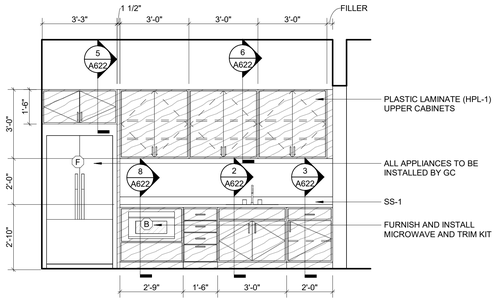

214 BREAKROOM 12
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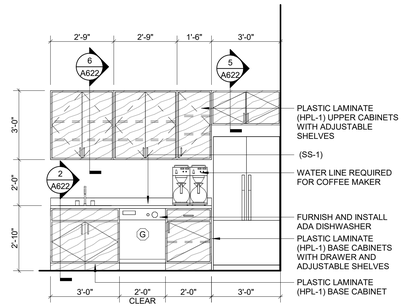

STORAGE ROOM CASEWORK 11
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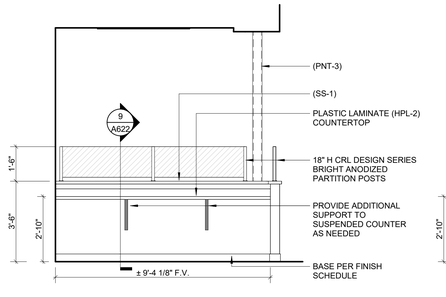

112 FLIGHT PLANNING 10
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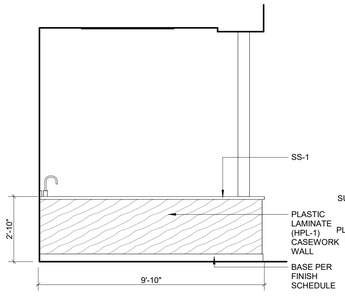
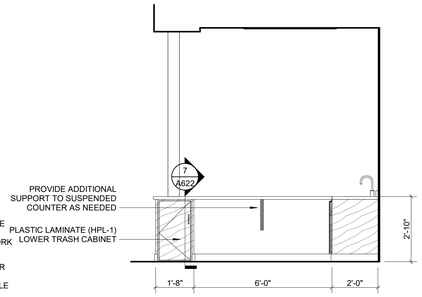


VENDING/COFFEE C 9
REFERENCED FROM 6 / A621 3/8" = 1'-0"



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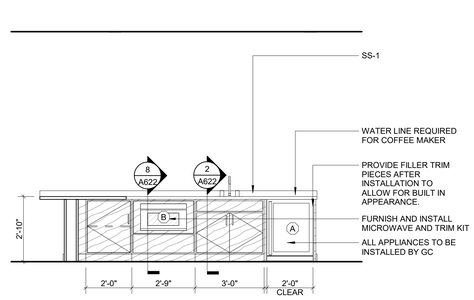

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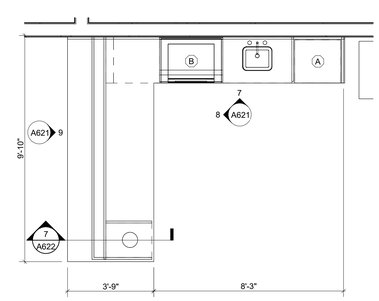

ENLARGED PLAN - VENDING / COFFEE BAR 6
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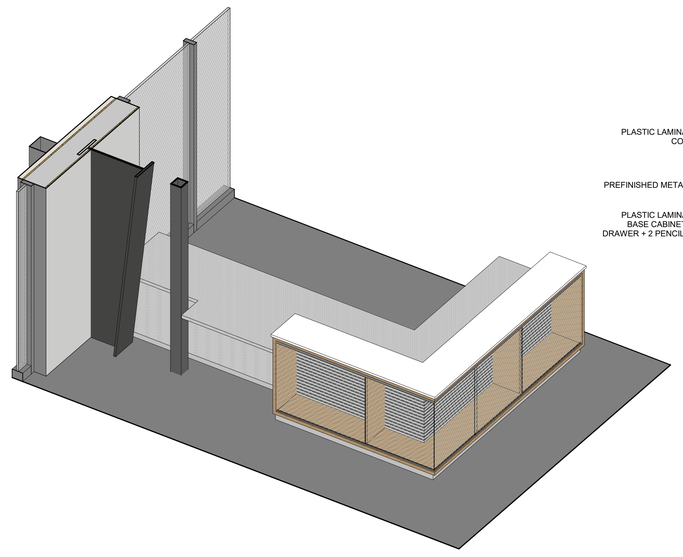

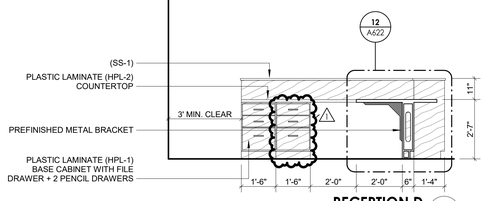

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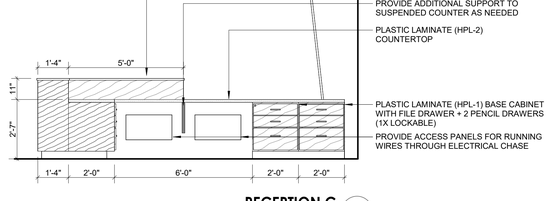

RECEPTION C 4
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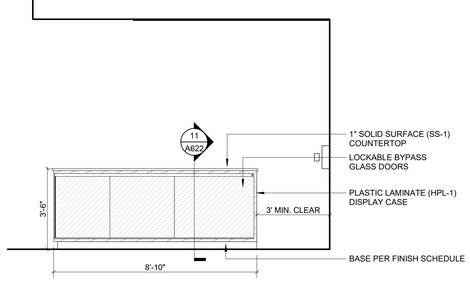

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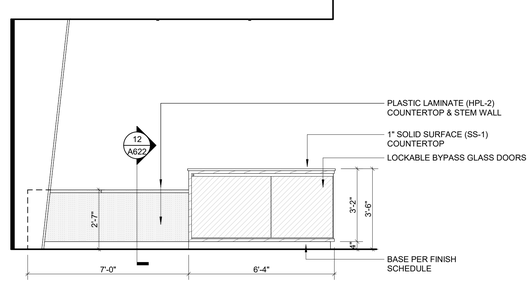

RECEPTION A 2
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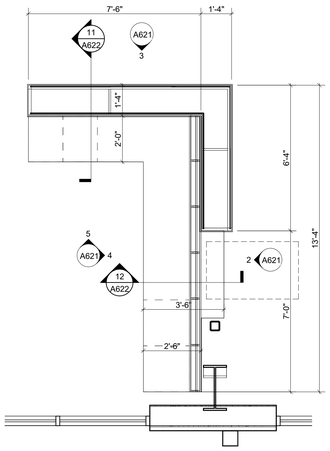

ENLARGED PLAN - RECEPTION DESK 1
REFERENCED FROM 1 / A102 3/8" = 1'-0"

11/8/2023 1:33:30 PM

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KANSAS CITY, MO 64108

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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 - STATE OF MISSOURI JULIE BLACK WELLNER NOTARY PUBLIC A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	HM
DRAWN BY:	HM
CHECKED BY:	WAI
APPROVED BY:	WAI
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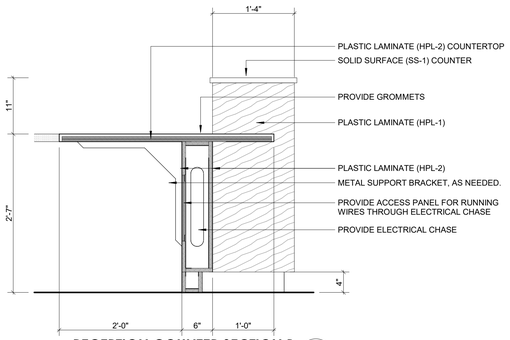
CASEWORK ELEVATIONS

A621

SHEET 079 OF 131



RECEPTION COUNTER SECTION B 12
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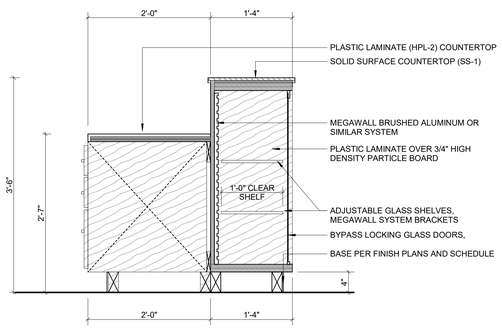

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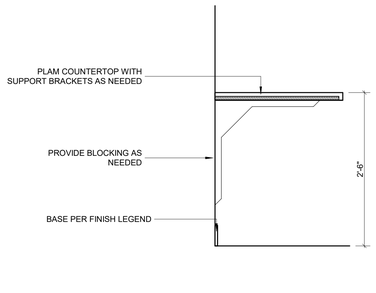
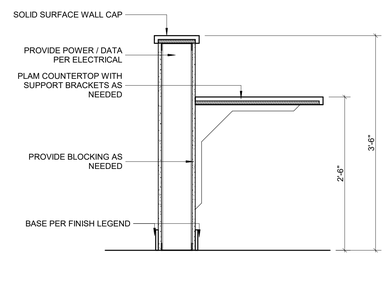
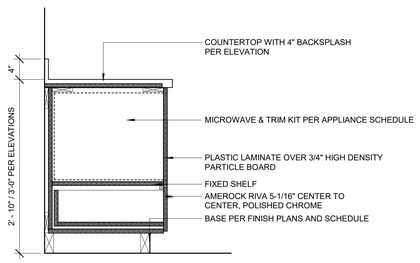


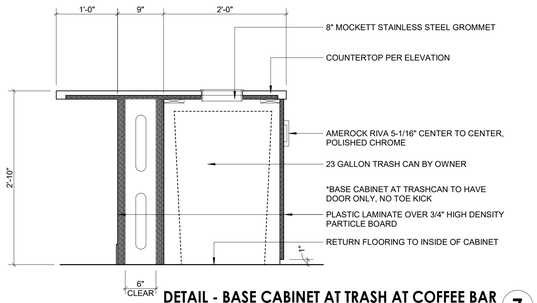
DETAIL - WALL MOUNTED COUNTER 10
1" = 1'-0"



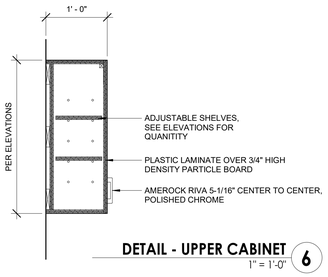
DETAIL - COUNTER AT LOW WALL 9
1" = 1'-0"



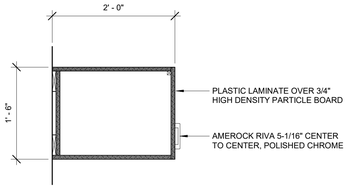
DETAIL - PLAM BASE MICROWAVE CABINET 8
1" = 1'-0"



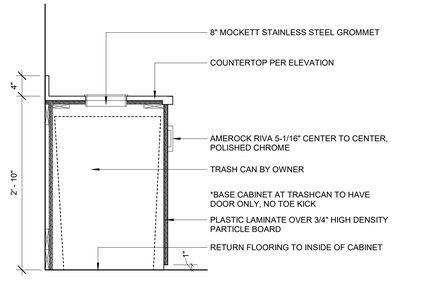
DETAIL - BASE CABINET AT TRASH AT COFFEE BAR 7
1" = 1'-0"



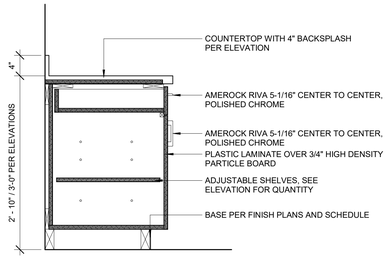
DETAIL - UPPER CABINET 6
1" = 1'-0"



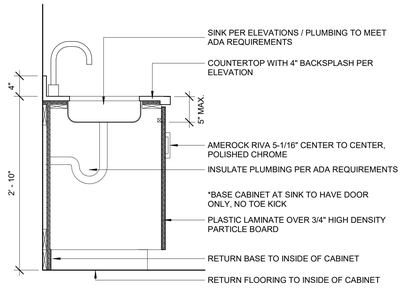
DETAIL - PLAM UPPER CABINET AT FRIDGE 5
1" = 1'-0"



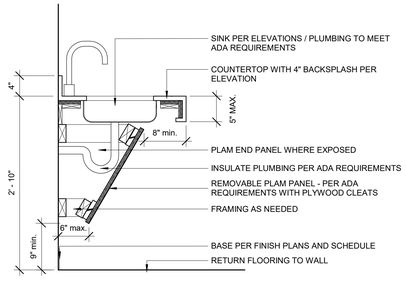
DETAIL - BASE CABINET AT TRASH 4
1" = 1'-0"



DETAIL - PLAM BASE CABINET 3
1" = 1'-0"



DETAIL - BASE CABINET AT SINK 2
1" = 1'-0"



DETAIL - APRON AT SINK 1
1" = 1'-0"

9/29/2023 11:06:43 AM

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006
STATE OF MISSOURI
JULIE BLACK WELLNER
NUMBER A-5006
REGISTERED ARCHITECT
MO Certificate of Authority #000767

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	HM
DRAWN BY:	HM
CHECKED BY:	WAI
APPROVED BY:	WAI
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SHEET TITLE

CASEWORK DETAILS

A622

SHEET 080 OF 131

SIGNAGE TYPES

EXTRUDED CURVED PROFILE, CLEAR ANODIZED ALUMINUM FINISH. BOD VISTA SYSTEM'S "VISTA SYSTEM" SIGN FAMILY

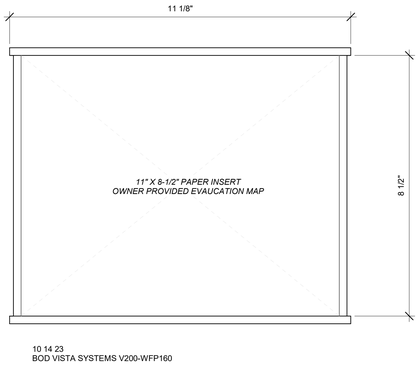
- NON-GLARE CLEAR PHOTOPOLYMER INSERT WITH BRAILLE, TACTILE CHARACTERS, & PICTOGRAMS
- REF. DRAWINGS & SCHEDULE FOR SIGNS WITH CUSTOM PRINTED PHOTOPOLYMER INSERT
- SIGNS MOUNTED ON GLASS TO RECEIVE ALUMINUM SHEET MATCHING SIGN MATERIAL AND FINISH, IN SIZE MATCHING SIGN, MOUNTED ONTO OPPOSITE SIDE OF GLASS TO CONCEAL BACK OF SIGN
- TEXT FOR INSERTS (PERSONNEL NAMES, ET.AL.) TO BE PROVIDED BY THE OWNER. PRINTED INSERTS TO BE PROVIDED AND INSTALLED BY CONTRACTOR

FLAT PROFILE 1/4" THICK PHOTOPOLYMER SIGNS

- ALL SIDES PAINTED WHITE
- SIGNS MOUNTED ON GLASS TO RECEIVE BACKER SHEET MATCHING SIGN MATERIAL AND FINISH, IN SIZE MATCHING SIGN, MOUNTED ONTO OPPOSITE SIDE OF GLASS TO CONCEAL BACK OF SIGN
- TACTILE CHARACTERS AND PICTOGRAMS TIPPED CHARCOAL GRAY

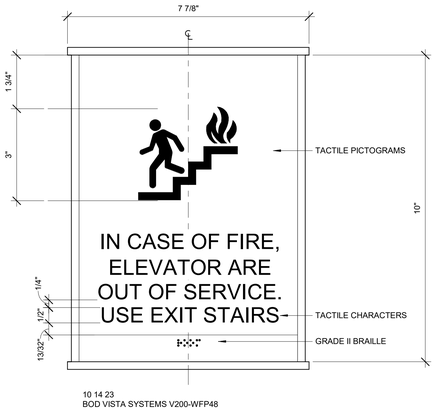
GENERAL SIGNAGE REQUIREMENTS

- SIGNAGE TO MEET IBC AND A117.1 SIGNAGE REQUIREMENTS
- GRADE II BRAILLE NOT TIPPED
- PICTOGRAMS TO BE REVIEWED BY ARCHITECT
- FONT: HELVETICA NEUE, REGULAR
- ALL SIGNAGE SHALL BE CODE COMPLIANT
- BRAILLE TO BE VERIFIED BY CERTIFIED EXPERT
- A SIGN STATING "EXIT" COMPLYING WITH ICC A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR LEADING TO THE EXTERIOR, AN AREA OF REFUGE, AN EXIT STAIRWAY, OR OTHER EXIT DISCHARGE
- TEMPORARY SIGNAGE TO BE PLACED AND REVIEWED WITH OWNER PRIOR TO INSTALLATION OF PERMANENT SIGNAGE
- PROVIDE 10 ADDITIONAL SIGNS 11" X 9" MAX, IN BASE BID, TO BE USED AS REQUIRED TO ADDRESS OWNER REVISIONS ARTWORK TO BE REVIEWED BY ARCHITECT
- ALL DIMENSIONS AND MOUNTING CONDITIONS MUST BE VERIFIED IN THE FIELD PRIOR TO FINAL ARTWORK RELEASE
- ALL ATTACHMENTS TO BE CONCEALED UNO. PROVIDE BLOCKING AS REQUIRED FOR SECURE ANCHORAGE. SEE ARCHITECTURAL WALL FOR CONSTRUCTION
- SIGNAGE COLOR TO BE VERIFIED WITH OWNER AND CONFIRMED BY ARCHITECT



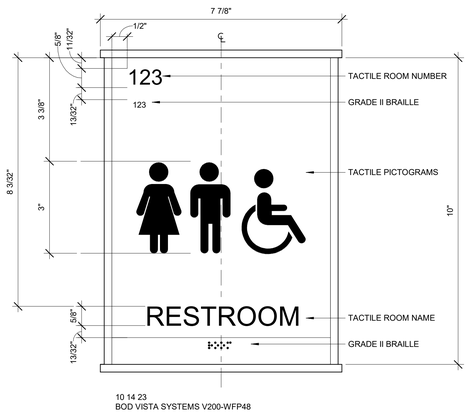
10 14 23
BOD VISTA SYSTEMS V200-WFP160

ID06 EVAC HOLDER 9
6" = 1'-0"



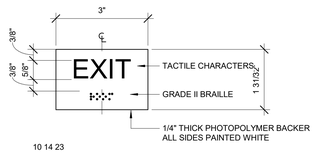
10 14 23
BOD VISTA SYSTEMS V200-WFP48

ID05 IN CASE OF FIRE 6
6" = 1'-0"



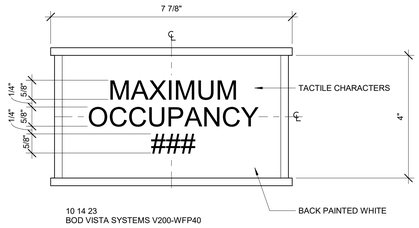
10 14 23
BOD VISTA SYSTEMS V200-WFP48

ID04 RESTROOM 5
6" = 1'-0"



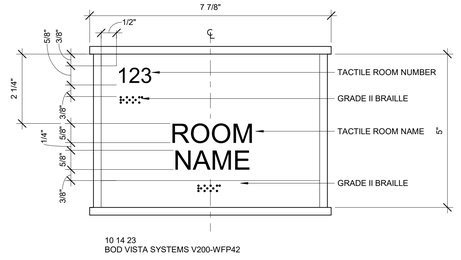
10 14 23

ID03 EXIT 4
6" = 1'-0"



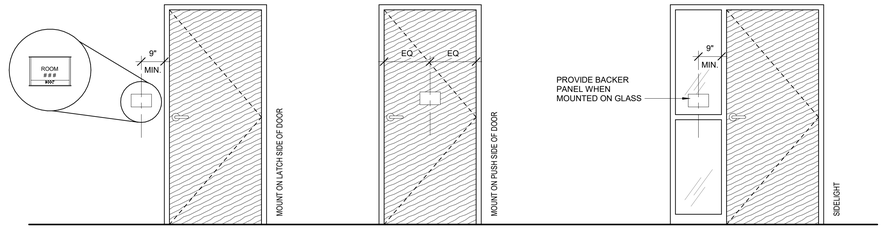
10 14 23
BOD VISTA SYSTEMS V200-WFP40

ID02 MAXIMUM OCCUPANCY 3
6" = 1'-0"



10 14 23
BOD VISTA SYSTEMS V200-WFP42

ID01 ROOM NAME AND NUMBER 2
6" = 1'-0"



DRAFTING VIEW - DOOR SIGNAGE ELEVATION 1
1/2" = 1'-0"

PROJECT PICTOGRAMS

ACCESSIBLE

IN CASE OF EMERGENCY

WOMEN

MEN

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT AIRPORT

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

Julie Black Wellner - Architect - MO #A-5006 - MO Certificate of Authority #000767 - STATE OF MISSOURI JULIE BLACK WELLNER NUMBER A-5006 REGISTERED ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	2219
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	HM
DRAWN BY:	HM
CHECKED BY:	WAI
APPROVED BY:	WAI
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SHEET TITLE

ADA & CODE SIGNAGE

A623

SHEET 081 OF 131

9/29/2023 11:06:44 AM

BUILDING CODE AND STANDARDS

2018 INTERNATIONAL BUILDING CODE (IBC 2018) WITH STANDARDS AS REFERENCED IN IBC CHAPTER 35.

STRUCTURAL DESIGN LOADS:

	UNIFORM (PSF)	CONCENTRATED (LB)
DEAD LOAD - ACTUAL WEIGHT OF MATERIALS USED ADDING THE FOLLOWING:		
ALLOWANCE FOR CEILING / MEP (MEZZANINE)	10	
ALLOWANCE FOR FIRE PROTECTION (MEZZANINE)	5	
ALLOWANCE FOR MEP (COLLATERAL LOAD PEMB)	10	
FLOOR LIVE & MISC LOADS		
GULFSTREAM G650 (DESIGN AIRCRAFT)		100,000 / 4 REAR WHEELS
1ST FLOOR CORRIDOR	100	
CORRIDOR ABOVE 1ST FLOOR	80	2,000
OFFICE	50*	2,000
PARTITIONS (WHERE LL < 80 PSF)	15	
DINING ROOMS	100	
OFFICES	50	
OFFICE LOBBIES	100	
SCHOOLS - CLASSROOMS	40	
SIDEWALKS	250	
STAIRS AND EXITS	100	
LIGHT STORAGE	120	
MECHANICAL EQUIPMENT ROOM	150 OR EQUIP WT	
PARTITION (LATERAL LOAD)	5	
RAILING (LATERAL LOAD AT TOP)	50 PLF	200
*INDICATES REDUCIBLE LOAD		
ROOF LIVE LOAD	20 PSF	

SNOW DESIGN DATA

GROUND SNOW LOAD, P_G	20 PSF
FLAT ROOF SNOW LOAD, P_F	14 PSF
MINIMUM SNOW LOAD, P_M	20 PSF
SNOW EXPOSURE FACTOR, C_E	1.0
SNOW LOAD IMPORTANCE FACTOR, I_S	1.0
THERMAL FACTOR, C_T	1.0
DRIFT SURCHARGE LOAD	79 PSF (@ GSE LEAN-TO)
DRIFT WIDTH	19 FT (@ GSE LEAN-TO)

WIND DESIGN DATA

BASIC WIND SPEED, V_{ULT}/V_{ASD}	109 MPH/84 MPH		
RISK CATEGORY	II		
WIND EXPOSURE	C		
INTERNAL PRESSURE COEFFICIENT, GC_{PI}	±0.55		
COMPONENTS AND CLADDING (ULT. PSF)			
	10 SF	50 SF	100 SF
INTERIOR ROOF (ZONE 1)	-61.8 / +23.3	-53.9 / +21.4	-50.5 / +20.6
EDGE ROOF (ZONE 2)	-78.3 / +23.3	-73.9 / +21.4	-63.7 / +20.6
CORNER ROOF (ZONE 3)	-103 / +23.3	-82.6 / +21.4	-73.9 / +20.6
INTERIOR WALL (ZONE 4)	-42.3 / +39.8	-39.2 / +36.8	-37.9 / +35.5
CORNER WALL (ZONE 5)	-49.7 / +39.8	-43.6 / +36.8	-41.0 / +35.5
OVERHANG (ZONES 1 AND 2)	-63.2	-49.6	-43.9
OVERHANG (ZONE 3)	-87.9	-64.1	-53.9
END ZONE DISTANCE (a)	17 FT		

EARTHQUAKE DESIGN DATA

RISK CATEGORY	II
SEISMIC IMPORTANCE FACTOR	1.0
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS	S_S = 0.099 g; S_1 = 0.068 g
DESIGN SPECTRAL RESPONSE COEFF'S	S_{DS} = 0.106 g; S_{D1} = 0.109 g
SEISMIC DESIGN CATEGORY	B
SEISMIC FORCE-RESISTING SYSTEM	MEZZANINE: INTERMEDIATE REINFORCED MASONRY SHEAR WALLS GSE LEAN-TO: BY PEMB DESIGNER HANGAR: BY PEMB DESIGNER
DESIGN BASE SHEAR	MEZZANINE: V_U = 20 K GSE LEAN-TO: V_U = BY PEMB DESIGNER HANGAR: V_U = BY PEMB DESIGNER
SEISMIC RESPONSE COEFFICIENT	MEZZANINE: C_S = 0.035 GSE LEAN-TO: C_S = BY PEMB DESIGNER HANGAR: C_S = BY PEMB DESIGNER
RESPONSE MODIFICATION COEFFICIENT	MEZZANINE: R = 3.5 GSE LEAN-TO: R = BY PEMB DESIGNER HANGAR: R = BY PEMB DESIGNER
ANALYSIS PROCEDURE	MEZZANINE: EQUIVALENT LATERAL FORCE PROCEDURE GSE LEAN-TO: BY PEMB DESIGNER HANGAR: BY PEMB DESIGNER

GEOTECHNICAL DESIGN DATA

NET ALLOWABLE SOIL BEARING PRESSURE	4,000 PSF

MATERIAL DATA:

CONCRETE & REINFORCING

CONCRETE WEIGHT	ALL CONCRETE SHALL BE NORMAL-WEIGHT UNLESS NOTED OTHERWISE.
C.I.P. CONCRETE STRENGTH (MIN f'_c at 28 days)	4,500 PSI (AE) - EXTERIOR FLATWORK 4,500 PSI (AE) - FOOTINGS AND FOUNDATION WALLS 4,000 PSI INTERIOR SLABS ON GRADE 4,000 PSI INTERIOR SLABS ON DECK 9,000 PSI - NON-SHRINK GROUT FOR BASE PLATES
MAX WATER/CEMENT RATIO	0.45 UNLESS OTHERWISE NOTED
CEMENT TYPE	PORTLAND TYPE I/II - ASTM C150
AGGREGATES	REGULAR WEIGHT HARDROCK TYPE - ASTM C33
ADMIXTURES	ASTM C494
AIR-ENTRAINMENT	ASTM C260
REINFORCING STEEL	ASTM A615, GRADE 60, DEFORMED
WELDABLE REINFORCING STEEL	ASTM A706, GRADE 60, DEFORMED
WELDED WIRE REINFORCEMENT	ASTM A1064, PROVIDE SHEET-TYPE; ROLL-TYPE IS NOT ACCEPTABLE
PREFORMED EXPANSION JOINT (1/2", UON)	ASTM D1751

STEEL

W SHAPES, WT SHAPES	ASTM A992
C AND MC SHAPES, ANGLES	ASTM A36
PLATES	ASTM A572, GRADE 50
HSS SQUARE AND RECTANGULAR TUBES	ASTM A500 GRADE C, F_y = 50 ksi
HSS ROUNDS	ASTM A500, GRADE C, F_y = 46 ksi
PIPES	ASTM A53, GRADE B, F_y = 35 ksi
ANCHOR RODS	ASTM F1554, GRADE 105, UON
HIGH STRENGTH BOLTS	ASTM F3125, GRADE 325 TYPE 1, UON ASTM F3125, GRADE 490 TYPE 1
WASHERS FOR HIGH STRENGTH BOLTS	ASTM F436
DIRECT-TENSION INDICATING WASHERS	ASTM F959
HEAVY HEX NUTS	ASTM A563
STICK ELECTRODES	AWS CLASS E70XX AWS CLASS E6010 OR E6011 (GALV. SURFACES)
HEADED STUDS	ASTM A108 GRADES C1010 THRU C1020 (Fu = 55 ksi)
METAL DECKING	ASTM A1008 OR ASTM A653
LIGHT GAGE STEEL STUDS/JOISTS 18+ GAGE	ASTM A1003 (G60 GALVANIZING PER ASTM A653 & C955) ST33H (Fy = 33 KSI)

MASONRY

ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH TMS 602/ACI 530.1/ASCE 6.

MASONRY STRENGTH (f'm AT 28 DAYS)	2,000 PSI
CONCRETE MASONRY UNITS (CMU)	ASTM C90 NORMAL WEIGHT
CMU STRENGTH	2,350 PSI (BASED ON NET AREA)
MORTAR TYPE	ASTM C270, TYPE S BELOW GRADE, TYPE N ABOVE GRADE, PROPORTION METHOD
GROUT TYPE	ASTM C476 - MAX. AGGREGATE SIZE = 3/8"
GROUT STRENGTH (AT 28 DAYS)	2,000 PSI
HORIZONTAL WIRE REINFORCING	ASTM A951, LADDER-TYPE AT 16" OC VERTICALLY IN 10 FT. LENGTHS 9 GAGE WIRE PER ASTM A1064
INTERIOR WALLS	MILL GALVANIZE
EXTERIOR WALLS	HOT DIP GALVANIZED PER ASTM A 153 CLASS B-2
VERTICAL WALL REINFORCEMENT	(1) #5 AT 32" OC, FULL HEIGHT UNLESS OTHERWISE NOTED
CONTINUOUS BOND BEAM REINFORCING	(2) #5 BARS CONTINUOUS

*** NOTE ***
ALL PEMB FOUNDATIONS MUST BE VERIFIED FOR THE REACTIONS FROM THE PEMB MANUFACTURER. PLANS ARE SUBJECT TO CHANGE ONCE THIS INFORMATION HAS BEEN RECEIVED.

GENERAL NOTES

1. THE STRUCTURAL DRAWINGS ARE TO BE COORDINATED AND USED IN CONJUNCTION WITH THE CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS AND IMMEDIATELY NOTIFY THE STRUCTURAL ENGINEER OF ANY DISCREPANCIES.
2. OLSSON SHALL NOT BE RESPONSIBLE FOR, NOR HAVE CHARGE OF, CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES FOR THE SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THIS PROJECT AND SHALL NOT BE RESPONSIBLE FOR CONTRACTOR'S FAILURE TO CARRY OUT WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
3. OLSSON SHALL NOT BE RESPONSIBLE FOR, NOR HAVE CONTROL OVER, THE ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, ANY OF THEIR AGENTS OR EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THEM TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
4. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR ALL TEMPORARY SHORING AND BRACING REQUIRED FOR THE CONSTRUCTION OF THIS PROJECT. ALL SHORING AND BRACING MEMBERS AND CONNECTIONS SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT THE IMPOSED LOADS. TEMPORARY MEMBERS AND CONNECTIONS SHALL NOT BE REMOVED UNTIL PERMANENT MEMBERS ARE IN PLACE AND FINAL CONNECTIONS ARE MADE.
5. THE CONTRACTOR SHALL VERIFY IN FIELD ALL DIMENSIONS, ELEVATIONS, AND MEMBER SIZES AS SHOWN ON THE CONTRACT DRAWINGS FOR THE EXISTING CONSTRUCTION PRIOR TO THE DETAILING OR FABRICATION OF ANY NEW STRUCTURAL ELEMENT. THE CONTRACTOR SHALL DOCUMENT ANY CONSTRUCTION-RELATED DISCREPANCIES. PRIOR TO THE SCHEDULED START OF ANY DETAILING OR FABRICATION, THE CONTRACTOR SHALL FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE STRUCTURAL ENGINEER FOR REVIEW.
6. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND/OR SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS CAUSED BY CONSTRUCTION TECHNIQUES IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. NO FIELD MODIFICATIONS TO ANY STRUCTURAL COMPONENTS SHALL BE MADE WITHOUT PRIOR APPROVAL BY THE STRUCTURAL ENGINEER. THIS INCLUDES, BUT IS NOT LIMITED TO, REVISIONS DUE TO MIS-LOCATION, MISFIT, OR ANY OTHER CONSTRUCTION ERRORS.
8. NO OPENING SHALL BE PLACED IN ANY STRUCTURAL MEMBER (OTHER THAN AS INDICATED ON APPROVED SHOP DRAWINGS) UNTIL THE LOCATION HAS BEEN APPROVED BY THE STRUCTURAL ENGINEER.
9. PROVIDE SLEEVE LAYOUTS FOR ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS FOR ALL TRADES. LAYOUTS ARE TO BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
10. ALL ROOF MOUNTED EQUIPMENT OR EQUIPMENT SUSPENDED FROM FLOORS OR THE ROOF SHALL BE SUPPORTED BY BEAMS DESIGNATED FOR SUCH PURPOSE ONLY. IF NO SUPPORT HAS BEEN DESIGNATED, OR IF A QUESTION ARISES, NOTIFY STRUCTURAL ENGINEER PRIOR TO ERECTION OF EQUIPMENT.
11. ALL DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS ARE INTENDED TO BE TYPICAL FOR SIMILAR SITUATIONS ELSEWHERE UNLESS OTHERWISE NOTED. SEE THE ARCHITECTURAL DRAWINGS FOR DETAILS AND DIMENSIONS NOT INDICATED ON THE STRUCTURAL DRAWINGS.
12. MATERIALS AND EQUIPMENT SHALL BE STORED AND TRANSPORTED IN A MANNER SO AS NOT TO EXCEED THE ALLOWABLE CAPACITY OF THE CONSTRUCTION.
13. THE SPECS AND REQUIREMENTS INDICATED ON THIS SHEET ARE INTENDED AS A BASIC SUMMARY OF THE MATERIAL, CONSTRUCTION, AND INSPECTION REQUIREMENTS FOR THE PROJECT. ADDITIONAL, MORE STRINGENT REQUIREMENTS MAY BE GIVEN IN THE PROJECT SPECIFICATIONS. IN THE EVENT OF A CONFLICT BETWEEN THE REQUIREMENTS INDICATED ON THIS SHEET AND THOSE IN THE PROJECT SPECS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
14. FOR LOCATIONS AND DIMENSIONS OF SLEEVES, CURBS, OPENINGS, AND DEPRESSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, SEE CIVIL, ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. CONTRACTOR SHALL VERIFY AND COORDINATE LOCATION OF ABOVE ITEMS WHETHER SHOWN ON THE STRUCTURAL DRAWINGS OR NOT.
15. EMBEDDED ITEMS, SUCH AS PIPE SLEEVES, CONDUITS, AND INSERTS, SHALL BE IN PLACE BEFORE CONCRETE PLACEMENT.
16. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.
17. THE STEEL FRAMING COMPONENTS SHOWN RELY ON BUILDING COMPONENTS OTHER THAN STRUCTURAL STEEL FOR FINAL STRUCTURAL STABILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN AND PROVISION OF ANY AND ALL TEMPORARY BRACING AND SHORING AGAINST WIND, ERECTION AND ALL CONSTRUCTION LOADS UNTIL ALL ELEMENTS, MEMBERS, AND CONNECTIONS (FLOORS, ROOF, SHEAR WALLS, ETC), AS SHOWN ON THE CONTRACT DOCUMENTS ARE COMPLETELY INSTALLED. THE STRUCTURAL MEMBERS SHOWN ON THE CONTRACT DOCUMENTS ARE DESIGNED FOR THE ANTICIPATED LOADS THAT THE STRUCTURE WILL BE SUBJECTED TO ONLY AFTER ALL STRUCTURAL ELEMENTS ARE IN PLACE AND FINAL CONNECTIONS ARE COMPLETE.

SHOP DRAWINGS

1. ALL SHOP DRAWING SUBMITTALS SHALL BE AS DESCRIBED IN THE PROJECT SPECIFICATIONS OR IN THESE NOTES.
2. SHOP DRAWINGS AND RELATED MATERIALS PREPARED BY SUPPLIERS AND SUBCONTRACTORS SHALL BE REVIEWED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTING TO THE STRUCTURAL ENGINEER.
3. THE GENERAL CONTRACTOR SHALL REVIEW ALL SUBMISSIONS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, MEANS, METHODS, TECHNIQUES, SEQUENCES, AND OPERATION OF CONSTRUCTION, TECHNICAL CONTENT, COORDINATION OF TRADES, DIMENSIONAL ACCURACY, SAFETY PRECAUTIONS AND PROGRAMS INCIDENTAL THERETO, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
4. THE GENERAL CONTRACTOR SHALL APPROVE AND SO STAMP EACH SUBMISSION.
5. SHOP SUBMITTALS SHALL BE SUBMITTED IN A DIGITAL FORMAT. MULTIPLE COPIES OF DRAWINGS WILL NOT BE MARKED-UP WITH REVIEW COMMENTS.
6. THE STRUCTURAL DRAWINGS SHALL NOT BE USED AS BACKGROUNDS FOR THE PRODUCTION OF ANY SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW.
7. ANY DEVIATIONS FROM THE ORIGINAL DESIGN OR DESIGN CRITERIA AS SPECIFIED ON THE "FOR CONSTRUCTION" DESIGN DOCUMENTS OF THE PROJECT SHALL BE BOLDLY NOTED AND BUBBLED ON THE SHOP DRAWINGS THAT ARE SUBMITTED FOR APPROVAL TO BRING TO THE EOR'S ATTENTION.
8. ALL CHANGES TO RESUBMITTED SHOP DRAWINGS SHALL BE BUBBLED.

DEFERRED SUBMITTALS

THE FOLLOWING BUILDING COMPONENTS ARE TO BE DESIGNED BY THE COMPONENT SUPPLIER FOR THE LOADS INDICATED ON THIS AND OTHER SHEETS IN THESE DRAWINGS. THE DESIGN OF THESE COMPONENTS SHALL MEET ALL APPLICABLE CODES AND REQUIRED STANDARDS.

1. PRE-ENGINEERED METAL BUILDING SYSTEMS AND THEIR ATTACHMENT TO FOUNDATIONS.
2. STEEL STAIRS & GUARDRAIL ASSEMBLIES.
3. COLD-FORMED METAL FRAMING SYSTEMS (INTERIOR AND EXTERIOR), INCLUDING NON-LOAD-BEARING (CURTAIN WALL) WALL FRAMING.
4. RAMMED AGGREGATE PIERS (GEO-PIERS) FOR DESIGN NET ALLOWABLE FOUNDATION BEARING PRESSURE OF 4,000 PSF.

EARTHWORK

1. !!STOP!! CALL BEFORE YOU DIG! THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "811" AND COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. NOTIFY THE STRUCTURAL ENGINEER WHENEVER CONFLICTS ARE ENCOUNTERED.
2. REFERENCE THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY KTI, DATED 07-18-2023. CONTRACTOR SHALL OBTAIN A COPY OF SAID REPORT AND ANY AVAILABLE ADDENDA OR SUPPLEMENTS AND FOLLOW ALL REQUIREMENTS SPECIFIED THEREIN.
3. GEOPIERS: ALL FOUNDATIONS HAVE BEEN DESIGNED TO BE SUPPORTED ON SOIL IMPROVED USING RAMMED AGGREGATE PIERS. THESE PIERS PROVIDE AN ALLOWABLE SOIL BEARING PRESSURE OF 4,000 PSF.
4. GENERAL CONTRACTOR SHALL COMPACT EXPOSED FOOTING BOTTOMS AND EXPOSED AGGREGATE PIER SURFACES WITH HAND-OPERATED, MECHANICAL COMPACTION EQUIPMENT AFTER EACH FOOTING EXCAVATIONS IS COMPLETED AND PRIOR TO PLACING STEEL OR CONCRETE.
5. ALL UNSUITABLE SOILS SHALL BE REMOVED WITHIN THE EXCAVATION AREA OF THE FOUNDATIONS. ALL FOOTINGS SHALL BEAR ON VIRGIN SOIL OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL.
6. FOUNDATIONS EXPOSED TO FROST SHALL BE PLACED SUCH THAT THE BOTTOM OF FOUNDATION IS AT LEAST 36" BELOW THE ADJACENT FINISHED GRADE.
7. SHOULD UNSUITABLE BEARING CONDITIONS BE ENCOUNTERED DURING EXCAVATION, NOTIFY THE OWNER, ARCHITECT, AND STRUCTURAL ENGINEER BEFORE CONTINUING WITH CONSTRUCTION.
8. THE CONTRACTOR MUST PROVIDE SURFACE DRAINAGE AND PUMPS TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR RE-PREPARATION AND RE-APPROVAL OF THE SUBGRADE.
9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER, FROST, OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.
10. RECORDS OF ANY EXISTING SUBGRADE INTERFERENCES, OTHER THAN THOSE INTERFERENCES SHOWN OR INDICATED ON THE CIVIL CONSTRUCTION DOCUMENTS, ARE NOT CURRENTLY AVAILABLE. DURING EXCAVATION WORK, INTERFERENCES MAY BE DISCOVERED. CONTRACTOR SHALL DOCUMENT CONSTRUCTION-RELATED DIMENSIONS OF ALL INTERFERENCES. CONTRACTOR SHALL FURNISH THE ABOVE INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE STRUCTURAL ENGINEER FOR REVIEW.
11. THE CONTRACTOR SHALL REVIEW ALL EXISTING SITE CONDITIONS AND THE SUBSURFACE SOILS EXPLORATION REPORT AND ESTABLISH SPECIFIC "CONSTRUCTION PROCEDURES AND SEQUENCES" FOR THE EXCAVATION, COMPACTION, FILL, AND INSTALLATION OF THE NEW BUILDING FOUNDATION. SUBMIT THESE FOR REVIEW TO THE OWNER'S SOIL TESTING LABORATORY, OWNER'S REPRESENTATIVE, AND STRUCTURAL ENGINEER.
12. ALL SLABS-ON-GRADE SHALL BE PLACED OVER A LOW PERMEANCE VAPOR BARRIER, 15 MIL MINIMUM THICKNESS, OVER A BASE/SUBBASE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER FOR THE PROJECT. EXISTING SUBBASE WILL BE CUT OUT AND REPLACED WITH AN ENGINEERED FILL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.
13. ALL SLABS-ON-GRADE SHALL BE PLACED OVER A 4" FREE DRAINING GRAVEL CAPILLARY BREAK LAYER OVER PREPARED BASE/SUBGRADE AS SPECIFIED BY THE GEOTECHNICAL ENGINEER PROVIDE ASTM E1745 CLASS A VAPOR RETARDER DIRECTLY UNDER THE SLAB WHERE CALLED OUT ON PLAN.

STRUCTURAL CONCRETE

1. CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:
   A. ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE"
   B. ACI 302 - "GUIDE TO CONCRETE FLOOR AND SLAB CONSTRUCTION"
   C. ACI 311 - "ACI MANUAL OF CONCRETE INSPECTION"
   D. ACI 304 - "GUIDE FOR FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
   E. ACI 315 - "GUIDE TO PRESENTING REINFORCING STEEL DETAILS"
   F. ACI 318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
   G. ACI 347 - "GUIDE TO FORM WORK FOR CONCRETE"
2. CONCRETE MIX FOR INTERIOR CONCRETE SLABS ON GRADE & DECK SHALL ADHERE TO THE FOLLOWING CRITERIA:
   A. FLY ASH MAY REPLACE 15% OF PORTLAND CEMENT MAXIMUM.
      a. DO NOT USE POZZOLANS IN MIXES FOR FINISHED FLOOR SLABS.
   B. AGGREGATE SHALL BE WELL GRADED WITH 1" MAXIMUM DIAMETER.
   C. THE MIX SHALL CONTAIN NO ADMIXTURES THAT EXACERBATE SHRINKAGE.
3. CURE SPECIFIC CONCRETE ELEMENTS AS INDICATED BELOW:
   A. SLAB-ON-GRADE: MOISTURE-RETAINING COVER CURING.
   B. STRUCTURAL SLABS: MOISTURE-RETAINING COVER CURING.
4. LABORATORY TEST REPORTS OR MATERIAL CERTIFICATES FOR CONCRETE MATERIALS AND MIX DESIGN TEST DATA, IN CONFORMANCE WITH ACI STANDARDS, SHALL BE SUBMITTED FOR REVIEW FOR EACH TYPE OF CONCRETE TO BE USED. EACH SUBMITTED MIX DESIGN SHALL IDENTIFY THE APPLICATION FOR WHICH THE MIX WILL BE USED.
5. THE CONTRACTOR SHALL SUBMIT CHECKED, DETAILED REINFORCEMENT SHOP DRAWINGS SHOWING THE LOCATIONS AND DETAILING OF ALL FOOTINGS, WALLS, PIERS, BEAMS, COLUMNS, SLABS, CONSTRUCTION JOINTS, CONTROL JOINTS, ETC, PRIOR TO FABRICATION. DETAILS SHALL INCLUDE BAR SIZES, LAPS, SPACING, AND PLACEMENT.
6. WELDED WIRE FABRIC SHALL BE LAPPED TWO PANELS AT EDGES AND ENDS, AND TIED SECURELY.
7. THE MINIMUM CONCRETE COVER FOR CAST-IN-PLACE (NON-PRESTRESSED) CONCRETE SHALL BE IN ACCORDANCE WITH THE FOLLOWING:
   A. CONCRETE CAST AGAINST/PERMANENTLY EXPOSED TO EARTH: 3"
   B. CONCRETE EXPOSED TO EARTH OR WEATHER:
      a. NO 6 THROUGH NO 18 BARS 2"
      b. NO 5 BAR, W31 OR D31 WIRE, AND SMALLER 1 1/2"
   C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
      a. SLABS, WALLS, JOISTS:
         • NO 14 AND NO 18 BARS 1 1/2"
         • NO. 11 BAR AND SMALLER 3/4"
      b. BEAMS, COLUMNS:
         • PRIMARY REINFORCEMENT 1 1/2"
      c. TIES, STIRRUPS, SPIRALS 1 1/2"
8. PROVIDE LAP SPLICES AS INDICATED BELOW UNLESS OTHERWISE NOTED IN THE DRAWINGS.

BAR SIZE	SPLICE LENGTH TOP BARS*	SPLICE LENGTH OTHER BARS
#3	24"	19"
#4	32"	25"
#5	40"	31"
#6	48"	37"
#7	70"	54"
#8	80"	62"
#9	90"	69"
#10	76"	77"

   *TOP BAR CONDITION OCCURS WHERE HORIZONTAL REINFORCEMENT IS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST BELOW THE SPLICE.
9. ALL HOOKS SHALL BE "STANDARD" PER ACI SPECIFICATIONS, UNLESS OTHERWISE NOTED.
10. MECHANICAL COUPLERS CAPABLE OF SUSTAINING 125% OF THE BAR ULTIMATE TENSILE CAPACITY MAY BE USED IN LIEU OF LAP SPLICES.
11. CORNER BARS MATCHING HORIZONTAL BARS SHALL BE PROVIDED AT ALL WALL CORNERS AND INTERSECTIONS.
12. ALL EXPOSED CONCRETE EDGES SHALL HAVE 3/4" CHAMFERS.

POST-INSTALLED ANCHORS

1. EXPANSION ANCHORS:
   A. ALL EXPANSION ANCHORS INSTALLED INTO CONCRETE SHALL BE HILTI KWIK BOLT TZ OR APPROVED EQUIVALENT.
      a. MINIMUM EMBEDMENT, UNLESS OTHERWISE NOTED, SHALL BE:
         • 4" FOR 1/2" DIAMETER.
         • 5" FOR 5/8" DIAMETER.
         • 6" FOR 3/4" DIAMETER.
   B. ALL EXPANSION ANCHORS INSTALLED INTO GROUT FILLED CONCRETE MASONRY SHALL BE HILTI KWIK BOLT 3 OR APPROVED EQUIVALENT.
      a. MINIMUM EMBEDMENT, UNLESS OTHERWISE NOTED, SHALL BE:
         • 4" FOR 1/2" DIAMETER.
         • 5" FOR 5/8" DIAMETER.
         • 5" FOR 3/4" DIAMETER.
   C. ALL EXPANSION ANCHORS SHALL BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER'S GUIDELINES FOR INSTALLATION.
   D. SUBSTITUTE EXPANSION ANCHORS QUALIFIED PER ACI 355.2 AND ICC-ES AC193. SPEC. FS A-A 1923A, TYPE 4 MAY BE USED ONLY AFTER SUBMISSION OF TEST DATA OR DESIGN CHARTS AND APPROVAL BY ENGINEER.
2. ADHESIVE ANCHORS:
   A. EPOXY: HILTI HIT-HY 200 WITH SAFESET APPLICATION OR AUTHORIZED EQUAL, UNLESS OTHERWISE SPECIFIED.
   B. MINIMUM EMBEDMENT SHALL BE 9 TIMES ANCHOR DIAMETER UNLESS OTHERWISE SPECIFIED OR LIMITED BY THICKNESS OF CONCRETE.
3. ALL POST-INSTALLED ANCHORS SHALL BE INSTALLED BY QUALIFIED INDIVIDUALS IN STRICT CONFORMANCE TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
4. ALL POST-INSTALLED ANCHORS SHALL CONFORM TO THE REQUIREMENTS OF THE MOST RECENT VERSIONS OF ACI 355.2 OR ACI 355.4.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDING AND BRIDGES".
2. THE STEEL FABRICATOR/ERECTOR SHALL DOCUMENT ANY CONSTRUCTION RELATED DISCREPANCIES AND SHALL FURNISH SAID INFORMATION IN THE FORM OF DETAILED SKETCHES TO THE STRUCTURAL ENGINEER FOR REVIEW. THERE SHALL BE RESOLUTION TO THE NOTED DISCREPANCIES PRIOR TO FABRICATION OF ANY NEW STRUCTURAL ELEMENTS.
3. THE FABRICATOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW, ENGINEERED AND CHECKED DRAWINGS SHOWING FABRICATION DETAILS, FIELD ASSEMBLY DETAILS, AND ERECTION DIAGRAMS FOR ALL STRUCTURAL STEEL ELEMENTS.
4. ALL BEAMS AND JOISTS SHALL BE FABRICATED WITH THE NATURAL CAMBER UP.
5. ALL WELDING SHALL BE PERFORMED BY CERTIFIED/QUALIFIED WELDERS AND SHALL CONFORM TO THE LATEST EDITION OF AWS D1.1 "STRUCTURAL WELDING CODE - STEEL".
6. ALL BOLTED STEEL CONNECTIONS SHALL UTILIZE HIGH STRENGTH BOLTS IN BEARING-TYPE CONNECTIONS, UNLESS OTHERWISE NOTED. TENSION-CONTROLLED BOLTS (T/C BOLTS) MAY BE USED AT THE ERECTOR'S DISCRETION.
7. BOLTS ARE TO BE TIGHTENED, AT A MINIMUM, TO THE "SNUG TIGHT" CONDITION, UNLESS NOTED AS "PRETENSIONED" OR "SLIP CRITICAL".
8. WHERE GALVANIZED TENSION-CONTROLLED (T/C) BOLTS ARE SPECIFIED, COLD-GALVANZED PAINT SHALL BE APPLIED TO THE UNCOATED ENDS OF THE TC BOLTS FOLLOWING INSTALLATION.
9. BOLTS DESIGNATED AS "PRETENSIONED" OR "SLIP CRITICAL" ARE TO BE TIGHTENED IN ACCORDANCE WITH AN APPROVED METHOD OUTLINED IN THE AISC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS.
10. THERE SHALL BE NO FIELD CUTTING OF STRUCTURAL STEEL MEMBERS WITHOUT THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER. REFER TO ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STEEL NOT SHOWN ON STRUCTURAL DRAWINGS.

MISCELLANEOUS STEEL

1. ALL GRATINGS SHALL BE 1 1/4"X3/16" GALVANIZED WELDED BAR TYPE W-19-4 OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.
2. STEEL STAIRS, LADDERS, HANDRAILS, AND OTHER MISCELLANEOUS DETAILS SHALL CONFORM TO THE STANDARD DETAILS SHOWN ON THE DRAWINGS.
3. ALL KICK PLATES SHALL EXTEND A MINIMUM OF 4" ABOVE WALKING SURFACE WITH A MAXIMUM OF 1/2" BETWEEN KICKPLATE AND FINISHED FLOOR.
4. PROVIDE GALVANIZED FASTENERS FOR ALL BOLTED CONNECTIONS WHERE ONE OR MORE MEMBERS OR ELEMENTS ARE OF GALVANIZED MATERIAL.
5. MISCELLANEOUS ANCHOR BOLTS, EXPANSION ANCHORS, AND FASTENERS NOT INDICATED, BUT REQUIRED FOR ANCHORAGE OF EQUIPMENT AND MATERIALS, SHALL BE PROVIDED (AS RECOMMENDED BY MANUFACTURER OF ITEMS). ANCHORAGE WILL BE SUBJECT TO REVIEW BY ENGINEER.
6. ALL STAIRS SHALL BE PROVIDED AS WELDED UNITS. ALL STAIR STRINGERS TO BE RECTANGULAR HSS SECTIONS, UNLESS OTHERWISE NOTED. ALL SPLICES IN STRINGERS SHALL BE FULL PENETRATION (CJP) BUTT OR GROOVE WELDED, GROUND SMOOTH.
7. ALL GUARDRAIL POSTS TO BE HSS2X2X1/8, UNLESS OTHERWISE NOTED. SHIP GUARDRAIL AS SEPARATE UNITS FOR FIELD WELDING.

METAL DECK

1. TYPICAL COMPOSITE FLOOR DECK:
   A. 2" X 20 GAGE WIDE-RIB COMPOSITE METAL DECK CONFORMING TO SDI REQUIREMENTS WITH A MINIMUM YIELD STRENGTH OF 40 KSI, UNLESS OTHERWISE NOTED.
      a. WELD OR FASTEN DECK TO ALL SUPPORTS, EDGE MEMBERS, OPENING FRAMES, ETC, WITH 5/8" PUDDLE WELDS, OR AN APPROVED MECHANICAL FASTENER. FASTEN SIDELAPS WITH #10 TEK SCREWS OR 5/8" PUDDLE WELDS, MINIMUM.
      b. ATTACHMENT PATTERN: 36/4 + SIDELAPS AT 36" ON CENTER MAXIMUM, UNLESS OTHERWISE NOTED.
      c. FASTEN DECK AT 6" ON CENTER AT ALL BUILDING PERIMETER SUPPORTS.
      d. PROVIDE FILLER SHEETS AS REQUIRED TO ENSURE ATTACHMENT IS MADE TO ALL PERIMETER SUPPORTS.
      e. ALL JOINTS SHALL BE MADE OVER SUPPORTING MEMBERS ONLY AND PROVIDE DOUBLE SPANS, MINIMUM.
2. METAL DECK SHALL HAVE A MINIMUM 1 1/2" END BEARING AT SUPPORTS.
3. METAL DECK MANUFACTURER SHALL PROVIDE POUR STOPS, COLUMN CLOSURES, END CLOSURES, COVER PLATES, GIRDER FILLERS, AND ALL OTHER ACCESSORIES AS REQUIRED BY THE SDI TO COMPLETE THE WORK, AND SHALL SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE PROJECT ENGINEER.
4. FILLER SHEETS SHALL BE PROVIDED AT DECK SIDELAP ON EDGE ANGLE LOCATIONS AS REQUIRED BY THE DECK LAYOUT TO ENSURE THAT A "LOW HAT" BEARS ON THE ANGLE, AND SHALL BE WELDED TO THE ANGLE AND SCREWED TO THE ADJACENT DECK UNIT AT 6" ON CENTER.
5. ALL OPENINGS IN METAL FLOOR DECK LARGER THAN 12" IN ANY DIRECTION SHALL BE REINFORCED WITH C8X11.5 CHANNELS ON ALL SIDES SPANNING TO THE NEAREST STRUCTURAL MEMBERS, UNLESS DETAILED OTHERWISE.
6. FLOOR OR ROOF OPENINGS WIDER THAN 2'-0" IN THE DIRECTION PERPENDICULAR TO DECK SPAN SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW. SEE MECHANICAL/ELECTRICAL DRAWINGS FOR OPENINGS IN ADDITION TO THOSE SHOWN ON FRAMING PLANS.

REINFORCED MASONRY

1. PLACING CONCRETE MASONRY UNITS:
   A. USE RUNNING BOND. FULLY BOND CORNERS BY OVERLAPPING OF UNITS. BOND WALL INTERSECTIONS WITH CORROSION-RESISTANT 1'-8"X4" STRAP ANCHORS SPACED AT 24" OC VERTICALLY.
   B. PLACE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT EVERY SECOND BED JOINT. PLACE REINFORCEMENT AT FIRST AND SECOND JOINTS ABOVE AND BELOW OPENINGS. LAP SPLICES 6" MINIMUM.
   C. MAINTAIN FLUSH FACE ON EXPOSED MASONRY SURFACES.
   D. FACE SHELLS: FULLY MORTARED.
   E. WEBS: FULLY MORTARED IN PIERS, PILASTERS, STARTING COURSE AT FOUNDATION OR FLOOR LEVEL AND WHERE ADJACENT CELLS OR CAVITIES ARE TO BE GROUTED.
   F. HEAD SHELLS: MORTARED FROM EACH FACE EQUAL TO THE FACE SHELL THICKNESS.
   G. KEEP VERTICAL CELLS THAT ARE TO BE GROUTED ALIGNED AND FREE FROM OBSTRUCTIONS AND MORTAR FINS.
   H. DO NOT LAY DAMAGED UNITS.
   I. PERFORM JOB SITE CUTTING WITH PROPER TOOLS TO PROVIDE STRAIGHT AND TRUE UNCHIPPED EDGES.
   J. TOOL JOINTS WHEN MORTAR IS THUMB PRINT HARD TO FORM CONCAVE JOINTS.
   K. COVER TOP OF UNFINISHED MASONRY WORK.
2. GROUTING:
   A. VERIFY REINFORCEMENT IS PROPERLY PLACED AND SECURED IN POSITION PRIOR TO GROUTING.
   B. ALL BOND BEAMS SHALL BE GROUTED SOLID.
   C. FULLY GROUT CELLS AT EACH SIDE OF OPENINGS AND CONTROL JOINTS WITH (1) #5 BAR PLACED IN CENTER OF CELL, UNLESS OTHERWISE SHOWN ON DRAWINGS.
   D. PLACE GROUT IN LIFTS NOT EXCEEDING 8'-0". CONSOLIDATE AT TIME OF PLACEMENT BY RODDING OR VIBRATING FOLLOWED BY RECONSOLIDATION LATER BEFORE PLASTICITY IS LOST.
   E. IF TOTAL HEIGHT OF GROUT PLACEMENT IS TO EXCEED 8'-0", PLACE GROUT IN 4'-0" LIFTS. IF GROUTING IS STOPPED FOR MORE THAN ONE HOUR BETWEEN LIFTS, FORM A HORIZONTAL CONSTRUCTION JOINT BY STOPPING THE POUR 4" BELOW THE TOP OF THE CONCRETE MASONRY UNIT.
3. HOT AND COLD WEATHER CONDITIONS:
   A. COLD WEATHER: CONFORM TO THE REQUIREMENTS OF ACI/ASCE 530 WHEN THE AMBIENT TEMPERATURE FALLS BELOW 40°F.
   B. HOT WEATHER: WHEN AIR TEMPERATURE EXCEEDS 90°F DO NOT SPREAD MORTAR BED MORE THAN 4'-0" AHEAD OF MASONRY. SET MASONRY UNITS WITHIN ONE MINUTE OF SPREADING MORTAR.
4. SEALANTS:
   A. INTERIOR JOINTS: ONE COMPONENT POLYURETHANE APPLIED OVER BACKER ROD.
   B. EXTERIOR JOINTS: MULTICOMPONENT POLYURETHANE OR TWO COMPONENT POLYSULFIDE SEALANT APPLIED OVER BACKER ROD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
   C. FIRE-STOP SEALANT: FYRE-SIL MFG BY TREMCO.
   D. BACKER ROD: ROUND CLOSED CELL POLYETHYLENE.
   E. MINERAL WOOL: 6 LBS PER CUBIC FOOT DENSITY COMPRESSED INTO PLACE. DO NOT USE FIBERGLASS BATTS.
5. CONSTRUCTION PRECAUTIONS:
   A. ADEQUATELY BRACE ALL WALLS DURING CONSTRUCTION.
   B. IF INTERIOR WALLS ARE CONSTRUCTED PRIOR TO ENCLOSURE OF STRUCTURE, PROVIDE ADEQUATE TEMPORARY BRACING. REMOVE BRACING AFTER STRUCTURE IS ENCLOSED.
   C. DO NOT EMBED ALUMINUM CONDUIT, PIPE OR ACCESSORIES IN MASONRY.

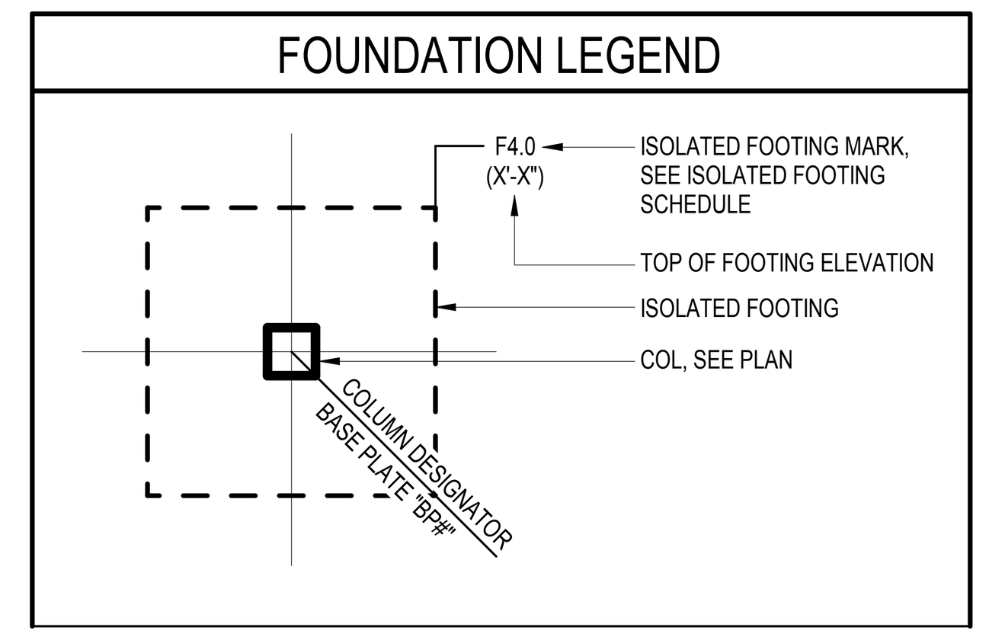
LIGHT GAUGE METAL FRAMING

1. LIGHT GAUGE METAL CONTRACTOR TO DESIGN, DETAIL, FABRICATE, AND ERECT STRUCTURAL LIGHT GAUGE METAL FRAMING IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE STANDARD FOR COLD-FORMED STEEL FRAMING - GENERAL PROVISIONS AND THE STANDARD FOR COLD FORMED STEEL FRAMING - HEADER DESIGN.
2. LIGHT GAUGE METAL CONTRACTOR TO DESIGN, DETAIL, FABRICATE, AND ERECT STRUCTURAL LIGHT GAGE METAL TRUSSES IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE STANDARD FOR COLD-FORMED STEEL FRAMING - TRUSS DESIGN.
3. ALL LIGHT GAUGE MEMBERS AND MEMBER CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE LIGHT GAUGE METAL CONTRACTOR'S "SPECIALTY ENGINEER". SHOP DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY THE "SPECIALTY ENGINEER" LICENSED IN THE STATE IN WHICH THE PROJECT IS LOCATED SHALL BE SUBMITTED FOR REVIEW.
4. ALL MEMBERS SHALL BE FORMED FROM CORROSION RESISTANT STEEL CORRESPONDING TO THE REQUIREMENTS OF ASTM A1003, STRUCTURAL GRADE, TYPE H. ALL MEMBERS SHALL BE MINIMUM 18 GAUGE, UNLESS OTHERWISE NOTED.
5. ALL MEMBERS SHALL BE ZINC COATED MEETING ASTM A653.
6. ALL CONNECTIONS FROM LIGHT GAUGE METAL FRAMING TO PRIMARY BUILDING STRUCTURE MEMBERS SHALL BE DESIGNED, DETAILED, AND PROVIDED BY THE LIGHT GAUGE METAL CONTRACTOR.
7. COMPONENTS SHALL BE FASTENED WITH SELF-TAPPING SCREWS OR WELDING. SCREWS AND WELDING SHALL BE SUFFICIENT SIZE TO ENSURE THE STRENGTH OF THE CONNECTION. WIRE-TYING OF COMPONENTS SHALL NOT BE PERMITTED. ALL WELDS SHALL BE TOUCHED-UP WITH ZINC-RICH PAINT.
8. CONNECTIONS OF ALL LIGHT GAUGE FRAMING TO LIGHT GAUGE FRAMING SHALL BE WITH MINIMUM OF TWO (2) #10 SELF TAPPING SHEET METAL SCREWS WITH LOW PROFILE HEAD, UNLESS OTHERWISE NOTED.
9. ALL WELDING SHALL BE PERFORMED BY QUALIFIED WELDERS AND SHALL CONFORM TO THE LATEST EDITION OF THE AWS D1.3, STRUCTURAL WELDING CODE - SHEET STEEL.
10. SHOP DRAWINGS: SHOW LAYOUT, SPACINGS, SIZES, THICKNESSES, AND TYPES OF LIGHT GAUGE METAL FRAMING. SHOW FABRICATION, FASTENING AND ANCHORAGE DETAILS (INCLUDING MECHANICAL FASTENERS), REINFORCING CHANNELS, OPENING FRAMING, SUPPLEMENTAL FRAMING, STRAPPING, BRACING, BRIDGING, SPLICES, ACCESSORIES, CONNECTION DETAILS, AND ATTACHMENT TO ADJOINING WORK.
11. PROVIDE ADDITIONAL INFORMATION WITH SHOP DRAWING SUBMITTAL AS INDICATED IN PROJECT SPECIFICATIONS.
12. STRUCTURAL PERFORMANCE REQUIREMENTS: PROVIDE LIGHT GAUGE METAL FRAMING CAPABLE OF WITHSTANDING DESIGN LOADS WITHIN LIMITS AND UNDER CONDITIONS INDICATED:
   A. DESIGN LOADS:
      a. DEAD LOADS: WEIGHTS OF MATERIALS AND CONSTRUCTION.
      b. LIVE LOADS: AS INDICATED ON DRAWINGS.
      c. WIND LOADS: AS INDICATED ON DRAWINGS.
      d. SEISMIC LOADS: AS INDICATED ON DRAWINGS.
   B. HORIZONTAL DEFLECTION LIMITS FOR WALLS: DESIGN WALL FRAMING SYSTEMS TO WITHSTAND DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:
      a. EXTERIOR WALL FRAMING AT LOCATIONS WHERE BRICK VENEER IS TO BE LATERALLY SUPPORTED: 1/600 OF THE WALL HEIGHT OR 0.30", WHICHEVER IS SMALLER, UNDER COMPONENT WIND OR SERVICE LEVEL SEISMIC LOADS.
      b. EXTERIOR WALL FRAMING AT LOCATIONS WHERE NON-BRITTLE VENEER IS TO BE LATERALLY SUPPORTED: 1/360 OF THE WALL HEIGHT OR 0.50", WHICHEVER IS SMALLER, UNDER COMPONENT WIND OR SEISMIC SERVICE LEVEL SEISMIC LOADS.
   C. VERTICAL DEFLECTION LIMITS FOR JOISTS: DESIGN JOISTS TO WITHSTAND DESIGN LOADS WITHOUT DEFLECTIONS GREATER THAN THE FOLLOWING:
      a. TOTAL LOAD DEFLECTION LIMIT: L/240
      b. LIVE LOAD DEFLECTION LIMIT: L/360
   D. DESIGN FRAMING SYSTEMS TO PROVIDE FOR MOVEMENT OF FRAMING MEMBERS WITHOUT DAMAGE OR OVERSTRESSING, SHEATHING FAILURE, CONNECTION FAILURE, UNDUE STRAIN ON FASTENERS AND ANCHORS, OR OTHER DETRIMENTAL EFFECTS WHEN SUBJECT TO A MAXIMUM AMBIENT TEMPERATURE CHANGE OF 120° F.
   E. DESIGN FRAMING SYSTEM TO MAINTAIN CLEARANCES AT OPENINGS, TO ALLOW FOR CONSTRUCTION TOLERANCES, AND TO ACCOMMODATE FLOOR AND ROOF FRAMING LIVE LOAD DEFLECTION OF PRIMARY BUILDING STRUCTURE OF PLUS OR MINUS 1.0".
13. INTERIOR NON-LOAD BEARING COLD-FORMED PARTITION FRAMING SHALL BE DESIGNED, DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE ARCHITECTURAL SPECIFICATIONS.

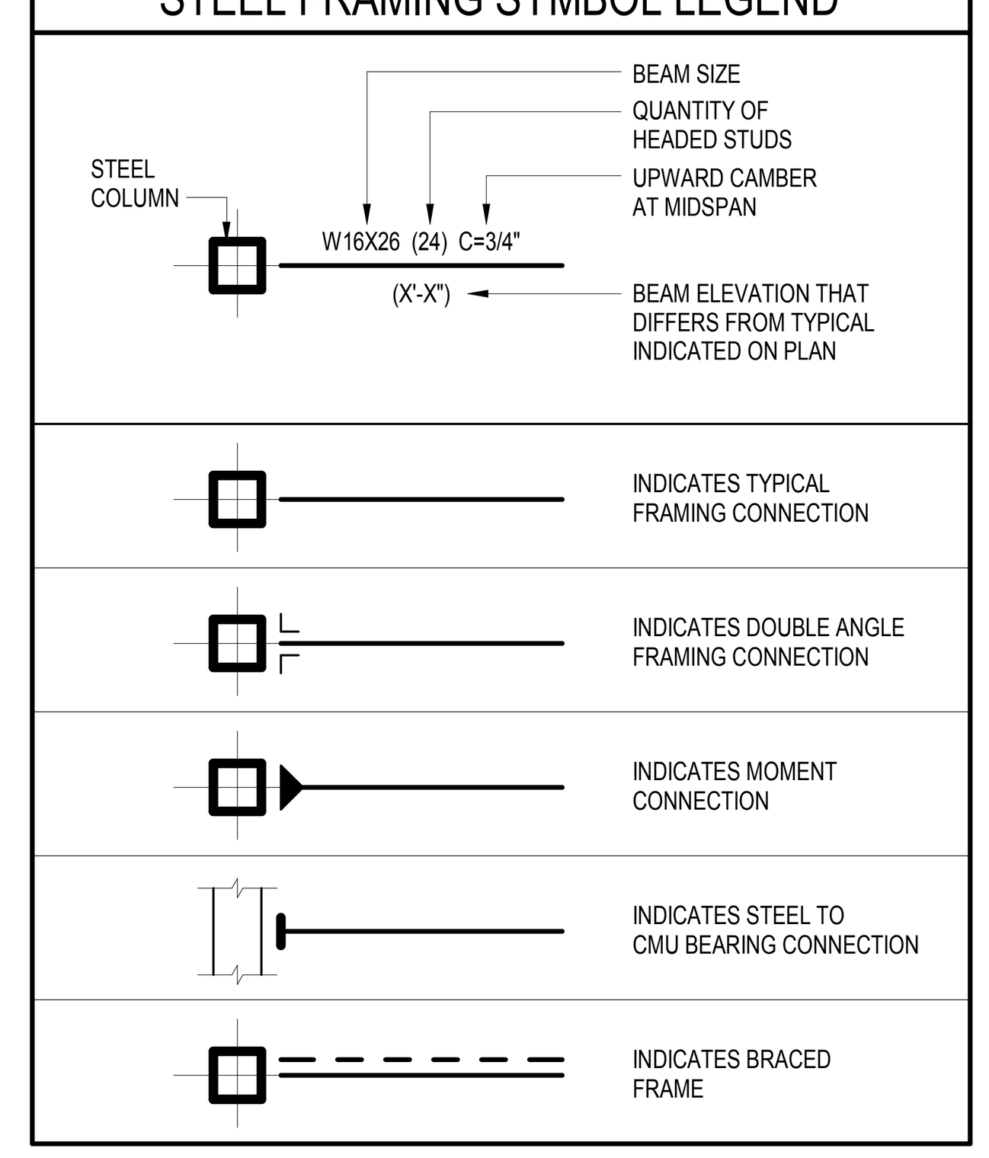
STRUCTURAL ABBREVIATIONS

AE	AIR ENTRAINING
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL)
B/	BOTTOM OF
BLDG	BUILDING
BM	BEAM
BOT	BOTTOM
BRG	BEARING
C	COMPRESSION
CA	CAISSON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUE(D)(OUS)
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION(S)
DL	DEAD LOAD
DP	DRILLED PIER
DWG	DRAWING
EA	EACH
ECC	ECCENTRICITY
EF	EACH FACE
EJ	EXPANSION JOINT
ELEV	ELEVATION
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
ES	EACH SIDE
EW	EACH WAY
EWEF	EACH WAY EACH FACE
FF	FINISHED FLOOR
FND	FOUNDATION
FT	FEET (FOOT)
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GL	GLUE LAMINATE TIMBER
HORZ	HORIZONTAL
HS	HEADED STUD
ID	INSIDE DIAMETER
K	KIP (1000 POUNDS)
KLF	KIPS PER LINEAR FOOT
LB, #	POUNDS
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LVL	LAMINATED VENEER LUMBER
MAX	MAXIMUM
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MICELLANEOUS
NA	NOT APPLICABLE
NO, #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
PEMB	PRE-ENGINEERED METAL BUILDING
PJF	PREMOLDED JOINT FILLER
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUND PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PT	POST TENSION(ED)
QTY	QUANTITY
R	RADIUS
REINF	REINFORCE(D)
REV	REVISED/REVISION
RH	RIGHT HAND
RO	ROUGH OPENING
RTU	ROOF TOP UNIT
SF	SQUARE FOOT
SIM	SIMILAR
SPEC	SPECIFICATION
SS	STAINLESS STEEL
STD	STANDARD
T	TENSION
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROVE
T/	TOP OF
TBD	TO BE DETERMINED
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	SHEAR
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WG	WORKABLE GAGE
WP	WORKING POINT
WWR	WELDED WIRE REINFORCEMENT

FOUNDATION LEGEND



STEEL FRAMING SYMBOL LEGEND



CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	22001238-00
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS

SHEET TITLE

STRUCTURAL GENERAL NOTES

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PRE-ENGINEERED METAL BUILDINGS

1. PREFABRICATED METAL BUILDINGS SHALL BE DESIGNED IN ACCORDANCE WITH THE METAL BUILDING MANUFACTURER'S ASSOCIATION "METAL BUILDING SYSTEMS MANUAL" AND THE AMERICAN IRON AND STEEL INSTITUTE'S "SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS".

2. PREFABRICATED METAL BUILDINGS SHALL CONSIST OF METAL ROOF PANELS, PURLINS, RIGID FRAMES OR ROOF BEAMS, COLUMNS, GIRTS, AND WIND BRACING CAPABLE OF SUPPORTING THE LOADS SPECIFIED HEREIN AND AS SHOWN ON THE DRAWINGS.

3. SUBMIT COMPLETE MANUFACTURER'S LITERATURE AND TECHNICAL DATA REQUIRED FOR COMPLETE INSTALLATION OF THE PROPOSED PREFABRICATED METAL BUILDING. INDICATE ANY DEVIATIONS FROM THE DRAWINGS AND SPECIFICATIONS.

4. CONFORM TO BAY SPACING, MINIMUM CLEARANCES, AND DIMENSIONS AS SHOWN ON THE DRAWINGS.

5. TYPICAL ROOF SLOPE: 1/4 IN 12.

6. RELATED WORK PROVIDED BY OTHERS:
   A. CONCRETE FOUNDATIONS AND FLOOR SLAB.
   B. ANCHOR RODS.

7. DESIGN REQUIREMENTS:
   A. DESIGN TO INCORPORATE A 2" EXPANSION JOINT BETWEEN HANGAR PEMB AND GSE PEMB.
   B. DESIGN PRIMARY AND SECONDARY STRUCTURAL MEMBERS AND EXTERIOR COVERING PANELS FOR APPLICABLE LOADS AND COMBINATIONS OF LOADS TO PRODUCE MAXIMUM STRESSES WITHIN THE STRUCTURE IN ACCORDANCE WITH THE SPECIFIED BUILDING CODE.
   C. ENERGY CODE: AS REQUIRED BY APPLICABLE LOCAL BUILDING CODE.
   D. DEAD LOADS: THE DEAD LOAD SHALL BE THE WEIGHT OF THE METAL BUILDING SYSTEM AND AS DETERMINED BY THE SYSTEM MANUFACTURER.
   E. ROOF COLLATERAL LOADS: THE COLLATERAL LOAD SHALL BE 10 PSF MINIMUM APPLIED TO SECONDARY AND PRIMARY FRAMING, PLUS ANY ADDITIONAL LOADS, AS SHOWN ON THE CONTRACT DRAWINGS.
   F. ALL OTHER LOADS SHALL BE AS DEFINED IN THE CONTRACT DOCUMENTS.
   G. RAINFALL INTENSITY: ALL EXTERIOR GUTTERS AND DOWNSPOUTS SHALL BE DESIGNED FOR RAINFALL INTENSITY BASED UPON A 5-YEAR RECURRENCE INTERVAL FOR A FIVE-MINUTE DURATION. ALL INTERIOR GUTTERS, VALLEYS AND DOWNSPOUTS SHALL BE DESIGNED FOR RAINFALL INTENSITY BASED UPON A 25-YEAR RECURRENCE INTERVAL BASED ON A FIVE-MINUTE DURATION.

8. DEFLECTIONS SHALL BE LIMITED AS FOLLOWS:
   A. "L" IS THE SPAN OF THE ELEMENT BETWEEN SUPPORT POINTS, AND "H" IS THE EAVE HEIGHT OF THE BUILDING.
      a. PRIMARY FRAMING:
         - L/180 FOR ROOF SNOW LOAD + ROOF COLLATERAL LOAD.
         - H/240 FOR 10-YEAR WIND LOAD.
      b. SECONDARY FRAMING:
         - L/150 FOR ROOF DEAD LOAD + ROOF SNOW LOAD + ROOF COLLATERAL LOAD.
         - BUT NOT LESS THAN THAT REQUIRED TO MAINTAIN POSITIVE DRAINAGE FOR THE GREATER OF DEAD LOAD + 1/2 ROOF SNOW LOAD + ROOF COLLATERAL LOAD.
      c. WALL AND ROOF PANELS:
         - L/120 FOR 10-YEAR WIND LOAD ON WALLS AND ROOF PANELS.
         - L/180 FOR ROOF SNOW LOAD (BUT NOT LESS THAN 20 PSF) ON PANELS.
   B. THERMAL EFFECTS: ASSEMBLY TO PERMIT MOVEMENT OF COMPONENTS WITHOUT BUCKLING, FAILURE OF JOINT SEALS, UNDUE STRESS ON FASTENERS, OR OTHER DETRIMENTAL EFFECTS, WHEN SUBJECT TO TEMPERATURE RANGE OF -20 TO 120 DEGREES F.

9. SUBMITTALS:
   A. MANUFACTURER DRAWINGS, DESIGN CALCULATIONS, AND LETTER OF CERTIFICATION SHALL BEAR THE PROFESSIONAL SEAL AND SIGNATURE OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE BUILDINGS WILL BE ERECTED.
   B. SUBMIT ANCHOR BOLT PLACEMENT PLAN, COLUMN REACTIONS, PRIMARY FRAMING, AND PRIMARY FRAMING PROFILES WITHIN 14 CALENDAR DAYS OF NOTICE TO PROCEED WITH ENGINEERING.
   C. PRODUCT DATA: PROVIDE DATA ON PROFILES, COMPONENT DIMENSIONS, FASTENERS, AND COLOR SELECTION.
   D. MANUFACTURER'S INSTALLATION SEQUENCING AND INSTRUCTIONS: INDICATE PREPARATION REQUIREMENTS, ASSEMBLY SEQUENCE, AND PHASED CONSTRUCTION AS REQUIRED TO ACCOMMODATE PROCESS PIPING AND EQUIPMENT INSTALLATION.
   E. SHOP AND ERECTION DRAWINGS: INDICATE ASSEMBLY DIMENSIONS, LOCATIONS OF STRUCTURAL MEMBERS, CONNECTIONS, ATTACHMENTS, OPENINGS, CAMBERS, LOADS, WALL AND ROOF SYSTEM DIMENSIONS, PANEL LAYOUT, GENERAL CONSTRUCTION DETAILS, ANCHORAGES AND METHOD OF ANCHORAGE, INSTALLATION, FRAMING ANCHOR BOLT SETTINGS, SIZES, AND LOCATIONS FROM DATUM, FOUNDATION LOADS, FIELD WELDED CONNECTIONS (WITH AWS A2.4 WELDING SYMBOLS), AND NET WELD LENGTHS.

10. QUALITY ASSURANCE:
   A. FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC - SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS AND, FOR ITEMS NOT COVERED, MBMA METAL BUILDING SYSTEMS MANUAL.

11. QUALIFICATIONS:
   A. MANUFACTURER: THE COMPANY MANUFACTURING THE PRODUCTS SPECIFIED IN THIS SECTION SHALL HAVE A MINIMUM OF 20 CONSECUTIVE YEARS EXPERIENCE IN THE MANUFACTURE OF STEEL BUILDING SYSTEMS. THE MANUFACTURING COMPANY SHALL BE CERTIFIED UNDER THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION'S CATEGORY MB CERTIFICATION PROGRAM.
   B. STRUCTURAL FRAMING AND COVERING SHALL BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER EXPERIENCED IN PEMB DESIGN.
   C. ERECTOR SHALL HAVE SPECIALIZED EXPERIENCE IN THE ERECTION OF COMPARABLE STEEL BUILDING SYSTEMS FOR A PERIOD OF AT LEAST 5 CONSECUTIVE YEARS.

12. FIELD MEASUREMENTS:
   A. METAL BUILDING CONTRACTOR TOGETHER WITH FOUNDATION CONTRACTOR SHALL VERIFY THAT CONCRETE AND ANCHORS ARE AS INDICATED ON ERECTION DRAWINGS.
   B. METAL BUILDING CONTRACTOR SHALL VERIFY THAT CRITICAL PRIMARY FRAMING CLEARANCES ARE IN CONFORMANCE AS INDICATED ON CONTRACT AND RELEASED SHOP DRAWINGS.

13. WARRANTY:
   A. BUILDING MANUFACTURER SHALL PROVIDE MANUFACTURER'S STANDARD MATERIAL WARRANTY.
   B. METAL BUILDING CONTRACTOR/ERECTOR SHALL PROVIDE A WORKMANSHIP WARRANTY OF 1 YEAR, MINIMUM.

14. MATERIALS:
   A. ROOF SYSTEM
      a. SHEET STEEL STOCK: 20 YEAR WARRANTY ZINC-ALUMINUM COATED STEEL, MINIMUM 80,000 PSI YIELD STRENGTH.
   B. ROOF INSULATION: SEE ARCH DRAWINGS / SPECS.
   C. STANDING-SEAM ROOFING:
      a. MINIMUM 24 GAUGE.
      b. STANDARD PROFILE.
      c. UL CLASS 90 UPLIFT RATING.
      d. LAPPED EDGES WITH CONTINUOUS SEALANT.
      e. ENCLOSURES: MANUFACTURER'S STANDARD TYPE, CLOSED CELL OR METAL.
      f. FASTENERS: MANUFACTURER'S STANDARD TYPE SCREWS: SIZE AND DESIGN TO MAINTAIN LOAD AND WEATHER TIGHTNESS REQUIREMENTS. BASE BID GALVANIZED FASTENERS.
      g. SEALANT: MANUFACTURER'S STANDARD TYPE.
      h. SEE ARCH DRAWINGS / SPECS FOR ADDITIONAL REQUIREMENTS.
   D. WALL SYSTEMS:
      a. SHEET STEEL STOCK: ZINC-ALUMINUM COATED OR GALVANIZED STEEL 50,000 PSI OR 80,000 PSI YIELD STRENGTH.
      b. WALL INSULATION: SEE ARCH DRAWINGS / SPECS.
      c. SIDING: MINIMUM 26 GAUGE METAL THICKNESS.
         - MANUFACTURER'S STANDARD PROFILE WITH LAPPED EDGES.
         - LINER: MINIMUM 28 GAUGE METAL THICKNESS.
         - MANUFACTURER'S STANDARD PROFILE, LAPPED EDGES.
         - CLOSURES: MANUFACTURER'S STANDARD TYPE, CLOSED CELL OR METAL.
         - FASTENERS: MANUFACTURER'S STANDARD TYPE SCREWS: SIZE AND DESIGN TO MAINTAIN LOAD AND WEATHER TIGHTNESS REQUIREMENTS. BASE BID GALVANIZED FASTENERS.
         - SEALANT: MANUFACTURER'S STANDARD TYPE.
         - SEE ARCH DRAWINGS / SPECS FOR ADDITIONAL REQUIREMENTS.
      d. TRIM: SEE ARCH DRAWINGS / SPECS.
      e. METAL ROUGH OPENING FOR DOOR AND WINDOWS:
         - FRAMING MEMBERS FOR ROUGH OPENINGS SHALL BE DESIGNED TO MEET THE SPECIFIED WIND LOAD PROVISIONS.
      f. WINDOWS:
         - WINDOWS SHALL BE DESIGNED BY THEIR MANUFACTURER TO MEET THE SPECIFIED WIND LOAD PROVISIONS.
         - BUILDING SYSTEMS MANUFACTURER'S STANDARD WINDOW AND FRAME TYPE OF NOMINAL SIZE, AS SHOWN ON PLANS OR SCHEDULES.
      g. ACCESSORIES:
         - VENTILATOR: CONTINUOUS RIDGE, WITH SCREENS AND OPERATORS.
         - WALL LOUVERS: PROVIDE FRAMED ROUGH OPENING FOR LOUVERS PROVIDED BY OTHERS AND DESIGNED TO MEET THE SPECIFIED WIND LOAD PROVISIONS.
         - CURBS FOR HVAC EQUIPMENT, SKYLIGHTS, HATCHES, ETC, SHALL BE COMPATIBLE WITH STEEL ROOF PANEL AND SEALED AGAINST WATER PENETRATION IN ACCORDANCE WITH BUILDING MANUFACTURER'S INSTRUCTIONS.

PRE-ENGINEERED METAL BUILDINGS (CONTINUED)

15. FABRICATION - PRIMARY FRAMING:
   A. FRAMING MEMBERS: CLEAN AND PREPARE IN ACCORDANCE WITH SSPC-SP2 (AS A MINIMUM), AND COAT WITH BUILDING MANUFACTURER'S STANDARD GRAY PRIMER.
   B. HOT ROLLED MEMBERS SHALL BE FABRICATED IN ACCORDANCE WITH AISC SPECIFICATION FOR PIPE, TUBE, AND ROLLED STRUCTURAL SHAPES.
   C. FABRICATE BUILT-UP MEMBERS IN ACCORDANCE WITH AISC SPECIFICATION, MBMA METAL BUILDING SYSTEMS MANUAL, AND WHERE NOT INCLUDED IN REFERENCES, COMMON INDUSTRY PRACTICES.

16. FABRICATION - SECONDARY:
   A. FRAMING MEMBERS: CLEAN AND PREPARE IN ACCORDANCE WITH SSPC-SP2 (AS A MINIMUM), AND COAT WITH BUILDING MANUFACTURER'S GRAY STANDARD PRIMER. GIRTS AND PURLINS SHALL BE FORMED FROM GALVANIZED FLAT MATERIAL AND NOT PAINTED
   B. COLD-FORMED MEMBERS: COLD-FORMED STRUCTURAL SHAPES SHALL BE FABRICATED IN ACCORDANCE WITH MBMA METAL BUILDING SYSTEMS MANUAL COMMON INDUSTRY PRACTICES.

17. FABRICATION - GUTTERS, DOWNSPOUTS, FLASHINGS AND TRIM:
   A. FABRICATE GUTTERS, FLASHINGS AND TRIMS FROM MANUFACTURER'S STANDARD MATERIAL. FINISH COLOR AS SPECIFIED.
   B. FABRICATE OR FURNISH DOWNSPOUTS WITH ELBOWS FROM MANUFACTURER'S STANDARD MATERIAL. FINISH COLOR AS SPECIFIED.
   C. FORM GUTTERS AND DOWNSPOUTS OF PROFILE AND SIZE TO COLLECT AND REMOVE WATER.
   D. FORM FLASHING AND TRIM SECTIONS IN MAXIMUM POSSIBLE LENGTHS. HEM EXPOSED EDGES. ALLOW FOR EXPANSION AT JOINTS.
   E. FABRICATE OR FURNISH GUTTER SUPPORT STRAPS OF MANUFACTURER'S STANDARD MATERIAL. DESIGN AND FINISH.
   F. FABRICATE OR FURNISH DOWNSPOUT CLIPS OR SUPPORT STRAPS OF MANUFACTURER'S STANDARD MATERIAL. FINISH COLOR AS SELECTED.

18. EXECUTION:
   A. VERIFY THAT FOUNDATION, FLOOR SLAB, MECHANICAL AND ELECTRICAL UTILITIES, AND PLACED ANCHORS ARE IN CORRECT POSITION AND PROPERLY SQUARED.
   B. PROVIDE ACCESS TO THE WORK AS SCHEDULED FOR OWNER PROVIDED INSPECTIONS. IF REQUIRED, THE COST OF ANY REQUIRED INSPECTIONS IS THE RESPONSIBILITY OF THE OWNER.
   C. DO NOT PROCEED UNTIL UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.
   D. PROCEED WITH STAGED CONSTRUCTION, AS INDICATED IN CONSTRUCTION DOCUMENTS.

19. ERECTION - FRAMING:
   A. ERECT FRAMING IN ACCORDANCE WITH MBMA METAL BUILDING SYSTEMS MANUAL COMMON INDUSTRY PRACTICES.
   B. USE TEMPLATES FOR ACCURATE SETTING OF ANCHOR RODS. WHEN REQUIRED, LEVEL BEARING PLATE AREA WITH STEEL WEDGES, SHIMS, OR GROUT. CHECK ALL PREVIOUSLY PLACED ANCHORAGES.
   C. ERECT BUILDING FRAME TRUE AND LEVEL WITH VERTICAL MEMBERS PLUMB AND BRACING PROPERLY INSTALLED. MAINTAIN STRUCTURAL STABILITY OF FRAME DURING ERECTION.
   D. REAM HOLES REQUIRING ENLARGEMENT TO ADMIT BOLTS. BURNED HOLES FOR BOLTED CONNECTIONS ARE NOT PERMITTED WITHOUT WRITTEN APPROVAL BY DESIGNER. BURNED HOLES TO BE REAMED.
   E. TIGHTEN BOLTS AND NUTS IN ACCORDANCE WITH "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS" USING SPECIFIED PROCEDURE.
   F. THE ERECTOR SHALL FURNISH TEMPORARY GUYS AND BRACING WHERE NEEDED FOR SQUARING, PLUMBING, AND SECURING THE STRUCTURAL FRAMING AGAINST LOADS, SUCH AS WIND LOADS ACTING ON THE EXPOSED FRAMING AND SEISMIC FORCES, AS WELL AS, LOADS DUE TO ERECTION AND ERECTION OPERATION, BUT NOT INCLUDING LOADS RESULTING FROM THE PERFORMANCE OF WORK BY OTHERS. BRACING FURNISHED BY THE MANUFACTURER FOR THE METAL BUILDING SYSTEM CANNOT BE ASSUMED TO BE ADEQUATE DURING ERECTION AND ARE NOT TO BE USED TO PULL FRAMES INTO PLUMB CONDITION. THE TEMPORARY GUYS, BRACES, FALSEWORKS, AND CRIBBING ARE THE PROPERTY OF THE ERECTOR, AND THE ERECTOR SHALL REMOVE THEM IMMEDIATELY UPON COMPLETION OF ERECTION.
   G. DO NOT FIELD CUT OR MODIFY STRUCTURAL MEMBERS WITHOUT APPROVAL OF THE METAL BUILDING MANUFACTURER.
   H. AFTER ERECTION, ERECTOR TO PRIME WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR NEEDING TOUCH-UP.

20. ERECTION - WALL AND ROOFING SYSTEMS:
   A. INSTALL ALL WALL AND ROOFING SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND DETAILS.
   B. EXERCISE CARE WHEN CUTTING PREFINISHED MATERIAL TO ENSURE CUTTINGS DO NOT REMAIN ON FINISH SURFACE.
   C. FASTEN CLADDING SYSTEM TO STRUCTURAL SUPPORTS, USING PROPER FASTENERS ALIGNED LEVEL AND PLUMB.
   D. SET PURLINS AND GIRTS AT RIGHT ANGLE AND BOLT TO APPROPRIATE CLIPS. ATTACH TO CLIPS AS REQUIRED TO SATISFY DESIGN LOADS AND AS SHOWN ON DRAWINGS.
   E. PLACE SCREW-DOWN ROOF PANELS AT RIGHT ANGLE TO PURLINS AND GIRTS. ATTACH AND PLUMB WALL PANELS AS SHOWN ON DRAWINGS. PLACE END LAPS OVER PURLINS OR GIRTS. APPLY MANUFACTURER'S ROOF PANEL SIDE AND END LAP SEALANT BETWEEN PANEL ENDS AND SIDE LAPS TO PROVIDE WATER-TIGHT INSTALLATION PER DETAILS FURNISHED.

21. ERECTION - GUTTER, DOWNSPOUT, FLASHINGS AND TRIM:
   A. INSTALL GUTTERS AND DOWNSPOUTS, FLASHINGS AND TRIM IN STRICT ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS, USING PROPER SHEET METAL PROCEDURES.
   B. INSTALL DOWNSPOUTS TO UTILIZE SPLASH PANS FURNISHED BY OTHERS.

22. TOLERANCES:
   A. ALL WORK SHALL BE PERFORMED BY EXPERIENCED WORKMEN IN A WORKMANLIKE MANNER TO PUBLISHED TOLERANCES.
   B. INSTALL FRAMING IN ACCORDANCE WITH MBMA METAL BUILDING SYSTEMS MANUAL AND COMMON INDUSTRY PRACTICES.

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

STATE OF MISSOURI
JAMES E. RONGISH
NUMBER PE-2021043194
PROFESSIONAL ENGINEER

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	22001238-00
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS

SHEET TITLE

STRUCTURAL GENERAL NOTES

S001

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IBC SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	CODE REFERENCE	REMARKS
GENERAL				
CONDUCT WEEKLY VISUAL OBSERVATIONS OF THE STRUCTURAL SYSTEMS FOR GENERAL CONFORMANCE TO THE CONSTRUCTION DOCUMENTS AND PREPARE WEEKLY REPORTS OF OBSERVATIONS DESCRIBING WORK PROGRESS AND NON-CONFORMING ITEMS		X		
EARTHWORK				
VERIFY MATERIAL BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY		X		
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL		X		ALL FOOTING AND PILE CAP EXCAVATIONS SHALL BE OBSERVED AND APPROVED PRIOR TO CONCRETE PLACEMENT
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS		X		TEST EACH SOURCE
DURING FILL PLACEMENT, VERIFY USE OF PROPOER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT, VERIFY DENSITIES AND LIFT THICKNESSES FURING PLACEMENT AND COMPACTION OF COMPACTED FILL	X			
DURING PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY		X		
OBSERVE PROOF ROLLING OF SUBGRADE PRIOR TO FILL PLACEMENT				COORDINATE FREQUENCY WITH GEOTECHNICAL REQUIREMENTS
TESTING AND EVALUATION OF IN-PLACE DENSITY OF COMPACTED FILL AS WORK PROGRESSES		X		ONE DENSITY TEST FOR EACH LIFT, DAYS OPERATION, OR 5000 SQ. FT. OF FILL AREA
INSPECT VAPOR RETARDER FOR CONFORMANCE WITH MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS		X		
METAL DECK				
VERIFY COMPLIANCE OF MATERIALS (DECK AND ALL DECK ACCESSORIES) WITH CONSTRUCTION DOCUMENTS, INCLUDING PROFILES, MATERIAL, PROPERTIES, AND BASE METAL THICKNESS	X			
DOCUMENT ACCEPTANCE OR REJECTION OF DECK AND DECK ACCESSORIES	X			
VERIFY COMPLIANCE OF DECK AND ALL DECK ACCESSORIES INSTALLATION WITH CONSTRUCTION DOCUMENTS		X		
VERIFY DECK MATERIALS ARE REPRESENTED BY THE MILLS CERTIFICATIONS THAT COMPLY WITH THE CONSTRUCTION DOCUMENTS		X		
DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF DECK AND DECK ACCESSORIES	X			
OBSERVE WELDING PROCEDURE SPECIFICATIONS (WPS), MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES, MATERIAL IDENTIFICATION (TYPE/GRADE), AND WELDING EQUIPMENT TO BE USED.		X		
OBSERVE USE OF QUALIFIED WELDERS, CONTROL AND HANDLING OF WELDING CONSUMABLES, ENVIRONMENTS CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE), AND WPS FOLLOWED		X		
VERIFY SIZE AND LOCATION OF WELDS, INCLUDING SUPPORT, SIDELAP, AND PERIMETER WELDS		X		
VERIFY WELDS MEET VISUAL INSPECTION CRITERIA		X		
VERIFY REPAIR ACTIVITIES AS APPLICABLE		X		
DOCUMENT ACCEPTANCE OR REJECTION OF WELDS	X			
OBSERVE MANUFACTURER INSTALLATION INSTRUCTIONS, PROPER TOOLS, AND PROPER STORAGE FOR MECHANICAL FASTENERS		X		
VERIFY FASTENERS POSITIONED AS REQUIRED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER INSTRUCTIONS		X		
VERIFY SPACING, TYPE, AND INSTALLATION OF SUPPORT, SIDELAP, AND PERIMETER FASTENERS		X		
VERIFY REPAIR ACTIVITIES AS APPLICABLE		X		
DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICAL FASTENERS	X			

IBC SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	CODE REFERENCE	REMARKS
CONCRETE & REINFORCING STEEL				
INSPECT REINFORCEMENT, INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT PRIOR TO CLOSING OF FORMS AND ARRIVAL OF CONCRETE TO THE JOB-SITE		X	IBC: 1908.4 ACI 318: CH. 20, 25.2, 25.3. 26.6.1-26.6.3	
REINFORCING BAR WELDING:				
a. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706		X	AWS D1.4 ACI 318: 26.6.4	
b. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"		X		
c. INSPECT ALL OTHER WELDS	X			
OBSERVE & VERIFY PLACEMENT OF EMBEDDED BOLTS & RODS PRIOR TO CONCRETE PLACEMENT	X			
INSPECT ANCHORS CAST IN CONCRETE		X	ACI 318: 17.8.2	
INSPECT ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS:				
a. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY UP UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	X		ACI 318: 17.8.2.4	SPECIFIC REQUIREMENTS FOR SPECIAL INSPECTION SHALL BE INCLUDED IN THE RESEARCH REPORT FOR THE ANCHOR ISSUED BY AN APPROVED SOURCE IN ACCORDANCE WITH 17.8.2 IN ACI 318, OR OTHER QUALIFICATION PROCEDURES. WHERE SPECIFIC REQUIREMENTS ARE NOT PROVIDED, SPECIAL INSPECTION REQUIREMENTS SHALL BE SPECIFIED BY THE REGISTERED DESIGN PROFESSIONAL AND SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF THE WORK
b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED ABOVE		X	ACI 318: 17.8.2	
VERIFY USE OF REQUIRED MIX DESIGN		X	IBC: 1904.1, 1904.2, 1908.2, 1908.3 ACI 318: CH. 19, 26.4.3, 26.4.4	
PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE	X		IBC: 1908.10 ASTM: C172, C31 ACI 318: 26.5, 26.12	ADDITIONAL CYLINDERS SHALL BE MADE AS NEEDED FOR EARLY FORM REMOVAL. NOTE: TWO 6X12 OR 4X8 CYLINDERS ARE REQUIRED FOR AN ACCEPTABLE TEST.
SAMPLE CONCRETE SPECIMENS FOR STRENGTH TESTS TO BE PERFORMED IN LAB. A MINIMUM OF FIVE (5) CYLINDERS SHALL BE MADE. TEST TWO AT 7 DAYS AND TWO AT 28 DAYS. THE 5TH CYLINDER SHALL BE HELD IN RESERVE	X			OBTAIN ONE COMPOSITE SAMPLE FOR EACH 100 CUBIC YARDS OR FRACTION THEREOF OF EACH CONCRETE MIX PLACED EACH DAY. WHEN FREQUENCY OF TESTING WILL PROVIDE FEWER THAN FIVE COMPRESSIVE STRENGTH TESTS FOR EACH CONCRETE MIX, TESTING SHALL BE CONDUCTED FROM AT LEAST FIVE RANDOMLY SELECTED BATCHES OR FROM EACH BATCH IF FEWER THAN FIVE ARE USED.
PERFORM CONCRETE STRENGTH TESTING		X		
MAINTAIN A SPREADSHEET SHOWING DATE, SEQUENTIAL ORDER OF STRENGTH TEST RESULTS, AND INDICATE RUNNING AVERAGE	X		ACI 318 PAR. 6.2	
INSPECT CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	X		IBC: 1908.6, 1908.7, 1908.8 ACI 318: 26.5	
VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES		X	IBC: 1908.9 ACI 318: 26.5.3-26.5.5	
VERIFY THAT THE NECESSARY DESIGN STRENGTH HAS BEEN REACHED PRIOR TO THE REMOVAL OF FORMS		X		
INSPECT PRESTRESSED CONCRETE FOR:				
a. APPLICATION OF PRESTRESSING FORCES	X		ACI 318: 26.10	
b. GROUTING OF BONDED PRESTRESSING TENDONS	X			
INSPECT ERECTION OF PRECAST CONCRETE MEMBERS AND CONNECTIONS		X	ACI 318: CH. 26.9	
VERIFY IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST-TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		X	ACI 318: CH. 26.11.2	
INSPECT CONCRETE FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED		X	ACI 318: 26.11.1.2(b)	
VERIFY CORRECT MATERIAL USED, INCLUDING THE USE OF A706 IN WELDED SPLICES, IF ANY		X	AWS: D1.4	
VERIFY FABRICATION/ QUALITY CONTROL PROCEDURES FOR PRECAST CONCRETE MANUFACTURER		X		VERIFY PLANT IS PCI CERTIFIED
MEASURE FLOOR FLATNESS AND LEVELNESS AS DIRECTED		X		
FOR PRECAST CONCRETE DIAPHRAGM CONNECTIONS OR REINFORCEMENT AT JOINTS CLASSIFIED AS MODERATE OR HIGH DEFORMABILITY ELEMENTS (MDE OR HDE) IN STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY C, D, OR F, INSPECT SUCH CONNECTIONS AND REINFORCEMENT FOR:			ACI 318: CH. 26.13.1.3	
a. INSTALLATION OF THE EMBEDDED PARTS	X			
b. COMPLETION OF THE CONTINUITY OF REINFORCEMENT ACROSS JOINTS	X		ACI 550.5	
c. COMPLETION OF CONNECTIONS IN THE FIELD	X			
MEASURE FLOOR FLATNESS AND LEVELNESS AS DIRECTED		X	ACI 318: CH. 26.13.1.3	

IBC SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	CODE REFERENCE	REMARKS
STRUCTURAL STEEL				
VISIT FABRICATION SHOP TO OBSERVE FABRICATION PROCEDURES		X		ONLY ONE INSPECTION IS REQUIRED UNLESS ON-SITE EVENTS INDICATE FURTHER INSPECTIONS ARE NECESSARY
VERIFY FABRICATOR CERTIFICATION		X		
VERIFY CORRECT STRUCTURAL STEEL MATERIAL DELIVERED TO JOB SITE.		X		
VERIFY WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	X			
VERIFY MANUFACTURERS CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE	X			
VERIFY MATERIAL IDENTIFICATIONS (TYPE/GRADE)		X		
OBSERVE WELDER IDENTIFICATION SYSTEM		X		THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTEM BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE LOW-STRESS TYPE.
OBSERVE FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY FOR JOINT PREPARATION, DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION), BACKING TYPE AND FIT (IF APPLICABLE)		X		
OBSERVE CONFIGURATION AND FINISH OF ACCESS HOLES		X		
OBSERVE FIT-UP OF FILLET WELDS, DIMENSIONS (ALIGNMENT, GAPS AT ROOT), CLEANLINESS (CONDITION OF STEEL SURFACES), TACKING (TACK WELD QUALITY AND LOCATION)		X		
OBSERVE USE OF QUALIFIED WELDERS		X		
OBSERVE CONTROL AND HANDLING OF WELDING CONSUMABLES, (PACKAGING AND EXPOSURE CONTROL)		X		
VERIFY NO WELDING OVER CRACKED TACK WELDS		X		
OBSERVE ENVIRONMENTAL CONDITIONS (WIND SPEED WITHIN LIMITS, PRECIPITATION, AND TEMPERATURE)		X		
VERIFY WPS FOLLOWED (WELDING EQUIPMENT SETTINGS, TRAVEL SPEED, SELECTED WELDING MATERIALS, SHIELDING GAS TYPE/FLOW RATE, PREHEAT APPLIED, INTERPASS TEMPERATURE MAINTAINED (MIN/MAX), PROPER POSITION (F, V, H, OH))		X		
OBSERVE WELDING TECHNIQUES (INTERPASS AND FINAL CLEANING, EACH PASS WITHIN PROFILE LIMITS AND EACH PASS MEETS QUALITY REQUIREMENTS)		X		
VISUALLY INSPECT ALL WELDS FOR SIZE, LENGTH, AND LOCATION OF WELD. PROVIDE CONTINUOUS INSPECTION ON ALL FULL OR PARTIAL PENETRATION WELDS AND FILLET WELDS GREATER THAN 5/16"	X			
PERFORM ULTRASONIC TESTING ON ALL FULL PENETRATION WELDS	X			
VERIFY NO ARC STRIKES EXIST	X			
VISUALLY INSPECT k-AREA, WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES, OR STIFFENERS HAS BEEN PERFORMED IN THE k-AREA, FOR CRACKS WITHIN 3" OF THE WELD	X			
VERIFY REPAIR ACTIVITY ACCEPTABILITY AS APPLICABLE	X			
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINTS OR MEMBERS	X			
PERFORM MAGNETIC PARTICLE TESTING ON 20% OF ALL PARTIAL PENETRATION AND FILLET WELDS GREATER THAN 5/16"		X		
PERFORM MAGNETIC PARTICLE TESTING OR PENETRANT TESTING THERMALLY CUT SURFACES OF ACCESS HOLES WHERE THE FLANGE THICKNESS EXCEEDS 2 IN. FOR ROLLED SHAPES, OR WHEN THE WEB THICKNESS EXCEEDS 2 IN. FOR BUILT-UP SHAPES.		X		ANY CRACK SHALL BE DEEMED UNACCEPTABLE REGARDLESS OF THE SIZE OR LOCATION
VERIFY MANUFACTURER'S CERTIFICATIONS FOR FASTENER MATERIALS ARE AVAILABLE	X			
VERIFY FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		X		
VERIFY PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)		X		
VERIFY PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL		X		
VERIFY CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		X		
CONFIRM PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED		X		
VERIFY PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		X		
VERIFY FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		X		
VERIFY JOINT BROUGHT TO SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		X		
VERIFY FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		X		
VERIFY FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		X		
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS		X		
OBSERVE AND TEST ALL FIELD APPLIED HEADED STUDS	X			VERIFY CORRECT NUMBER, LOCATION, AND WELDING
DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	X			

IBC SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	CODE REFERENCE	REMARKS
MASONRY - QUALITY ASSURANCE LEVEL B				
VERIFY SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) AS DELIVERED TO THE PROJECT SITE IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.5.B.1.b.3 FOR SELF-CONSOLIDATING GROUT				
VERIFY f'_m AND f'_{AAC} IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION, EXCEPT WHERE SPECIFICALLY EXEMPTED				
VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS		X	ACI 530.1: ART. 1.5	
AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. PROPORTIONS OF SITE-PREPARED MORTAR		X	ACI 530.1: ART. 2.1, 2.6A, 2.6C	
b. CONSTRUCTION OF MORTAR JOINTS		X	ACI 530.1: ART. 3.3B	
c. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES		X	ACI 530.1: ART. 2.4B, 2.4H	
d. LOCATION OF REINFORCEMENT, CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES		X	ACI 530.1: ART. 3.4, 3.6A	
e. PRESTRESSING TECHNIQUE		X	ACI 530.1: ART. 3.6B	
f. PROPERTIES OF THIN-BED MORTAR FOR AAC MASONRY	X	X	ACI 530.1: ART. 2.1C	CONTINUOUS FOR THE FIRST 5,000 SQUARE FEET, PERIODIC THEREAFTER
PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:				
a. GROUT SPACE		X	ACI 530.1: ART. 3.2D, 3.2F	
b. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES		X	ACI 530: SEC.1.16 ACI 530.1: ART. 2.4, 3.6	
c. PLACEMENT OF REINFORCEMENT, CONNECTORS AND PRESTRESSING TENDONS AND ANCHORAGES		X	ACI 530: SEC.1.16 ACI 530.1: ART. 3.2E, 3.4, 3.6A	
d. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS		X	ACI 530.1: ART. 2.6B, 2.4G.1.b	
e. CONSTRUCTION OF MORTAR JOINTS		X	ACI 530.1: ART. 3.3B	
VERIFY DURING CONSTRUCTION:				
a. MATERIALS AND PROCEDURES WITH APPROVED SUBMITTALS		X	ACI 530.1: ART. 1.5	
b. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION		X	ACI 530.1: ART. 3.3B	
c. SIZE AND LOCATION OF STRUCTURAL ELEMENTS		X	ACI 530.1: ART. 3.3F	
d. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION		X	ACI 530: SEC. 1.16.4.3, 1.17.1 1.2.1(e), 6.2.1, 6.3.1	
e. WELDING OF REINFORCEMENT	X		ACI 530: SEC.6..1.6.1.2	
f. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F)		X	ACI 530.1: ART 1.8C, 1.8D	
g. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE	X		ACI 530.1: ART. 3.6B	
h. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	X		ACI 530.1: ART. 3.5, 3.6C	
i. PLACEMENT OF AAC MASONRY UNITS AND CONSTRUCTION OF THIN-BED MORTAR JOINTS	X	X	ACI 530.1: ART. 3.3B B.9.3.F.1.b	CONTINUOUS FOR THE FIRST 5,000 SQUARE FEET, PERIODIC THEREAFTER
OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS		X	ACI 530.1: 1.4B.2.a.3, 1.4B.2.b.3, 1.4B.2.c.3, 1.4B.3 1.4B.4	

IBC SCHEDULE OF SPECIAL INSPECTION SERVICES

INSPECTION ITEM REQUIRED	FREQUENCY CONTINUOUS	FREQUENCY PERIODIC	CODE REFERENCE	REMARKS
COLD-FORMED STEEL				
WHERE TRUSS SPAN IS 60 FEET OF GREATER, VERIFY THAT THE TEMPORARY INSTALLATION RESTRAINT/BRACING AND THE PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT/BRACING ARE INSTALLED IN ACCORDANCE WITH THE APPROVED TRUSS SUBMITTAL PACKAGE		X		IBC 2207.1
VERIFY COMPLIANCE OF COLD-FORMED STEEL STRUCTURAL MEMBERS	X			
VERIFY COMPLIANCE OF CONNECTORS	X			
DOCUMENT ACCEPTANCE OR REJECTION OF COLD-FORMED STEEL STRUCTURAL MEMBERS AND CONNECTORS	X			
VERIFY WELDING PROCEDURE SPECIFICATION AVAILABLE		X		
VERIFY MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABLE		X		
VERIFY MATERIAL IDENTIFICATION (TYPE/GRADE)		X		
CHECK WELDING EQUIPMENT		X		
VERIFY USE OF QUALIFIED WELDERS		X		
VERIFY CONTROL AND HANDLING OF WELDING CONSUMABLES		X		
VERIFY ENVIRONMENTAL CONDITIONS (WIND SPEED, MOISTURE, TEMPERATURE)		X		
VERIFY WELDING PROCEDURE SPECIFICATIONS FOLLOWED		X		
VERIFY COMPLIANCE OF WELDS	X			
VERIFY WELDS MEET VISUAL ACCEPTANCE CRITERIA	X			
VERIFY REPAIR ACTIVITIES AS APPLICABLE	X			
DOCUMENT ACCEPTANCE OR REJECTION OF WELDED CONNECTIONS	X			
VERIFY MECHANICAL FASTENER MANUFACTURER INSTALLATION INSTRUCTIONS AVAILABLE FOR MECHANICAL FASTENERS		X		
VERIFY PROPER TOOLS AVAILABLE FOR MECHANICAL FASTENER INSTALLATION		X		
VERIFY PROPER STORAGE FOR MECHANICAL FASTENERS		X		
VERIFY MECHANICAL FASTENERS ARE POSITIONED AS REQUIRED AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS		X		
VERIFY COMPLIANCE OF MECHANICAL FASTENERS WITH CONSTRUCTION DOCUMENTS	X			
VERIFY REPAIR ACTIVITIES AS APPLICABLE	X			
DOCUMENT ACCEPTANCE OR REJECTION OF MECHANICALLY FASTENED CONNECTIONS	X			
VERIFY COMPLIANCE OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION	X			
DOCUMENT ACCEPTANCE OR REJECTION OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION	X			
VERIFY COMPLIANCE OF SHEAR WALL AND DIAPHRAGM SHEATHING, DIAGONAL STRAP BRACING, AND HOLD-DOWNS	X			
DOCUMENT ACCEPTANCE OR REJECTION OF SHEAR WALL AND DIAPHRAGM SHEATHING, DIAGONAL STRAP BRACING, AND HOLD-DOWNS	X			
OBSERVE WELDER IDENTIFICATION SYSTEM FOR LATERAL FORCE-RESISTING SYSTEM PRIOR TO WELDING		X		A SYSTEM MAINTAINED BY THE COMPONENT MANUFACTURER OR INSTALLER, AS APPLICABLE, BY WHICH A WELDER WHO HAS WELDED A JOINT OR MEMBER CAN BE IDENTIFIED
OBSERVE FIT-UP OF WELDS (ALIGNMENT, GAPS, CONDITION OF STEEL SURFACES) FOR LATERAL FORCE-RESISTING SYSTEM PRIOR TO WELDING		X		
VERIFY PROPER FASTENERS SELECTED FOR LATERAL FORCE-RESISTING SYSTEM PRIOR TO INSTALLATION		X		
VERIFY PROPER INSTALLATION PROCEDURE SELECTED FOR LATERAL FORCE-RESISTING SYSTEM PRIOR TO INSTALLATION		X		
VERIFY JOINT BROUGHT TIGHT (e.g., CLAMPED) TO AVOID GAPS BETWEEN PLIES FOR SCREW CONNECTIONS		X		
VERIFY TOOL ADJUSTED TO AVOID STRIPPED AND OVERDRIVEN FASTENERS FOR SCREW CONNECTIONS		X		
VERIFY INSTALLATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR POST-INSTALLED CONNECTIONS TO CONCRETE	X			
VERIFY COMPLIANCE OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEM INSTALLATION	X			
DOCUMENT ACCEPTANCE OR REJECTION OF INSTALLATION OF COLD-FORMED STEEL LATERAL FORCE-RESISTING SYSTEM	X			

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

STATE OF MISSOURI
JAMES E. RONGISH
NUMBER PE-2021043194
PROFESSIONAL ENGINEER
09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	22001238-00
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS

SHEET TITLE

SPECIAL INSPECTIONS

S002

SHEET 084 OF 131

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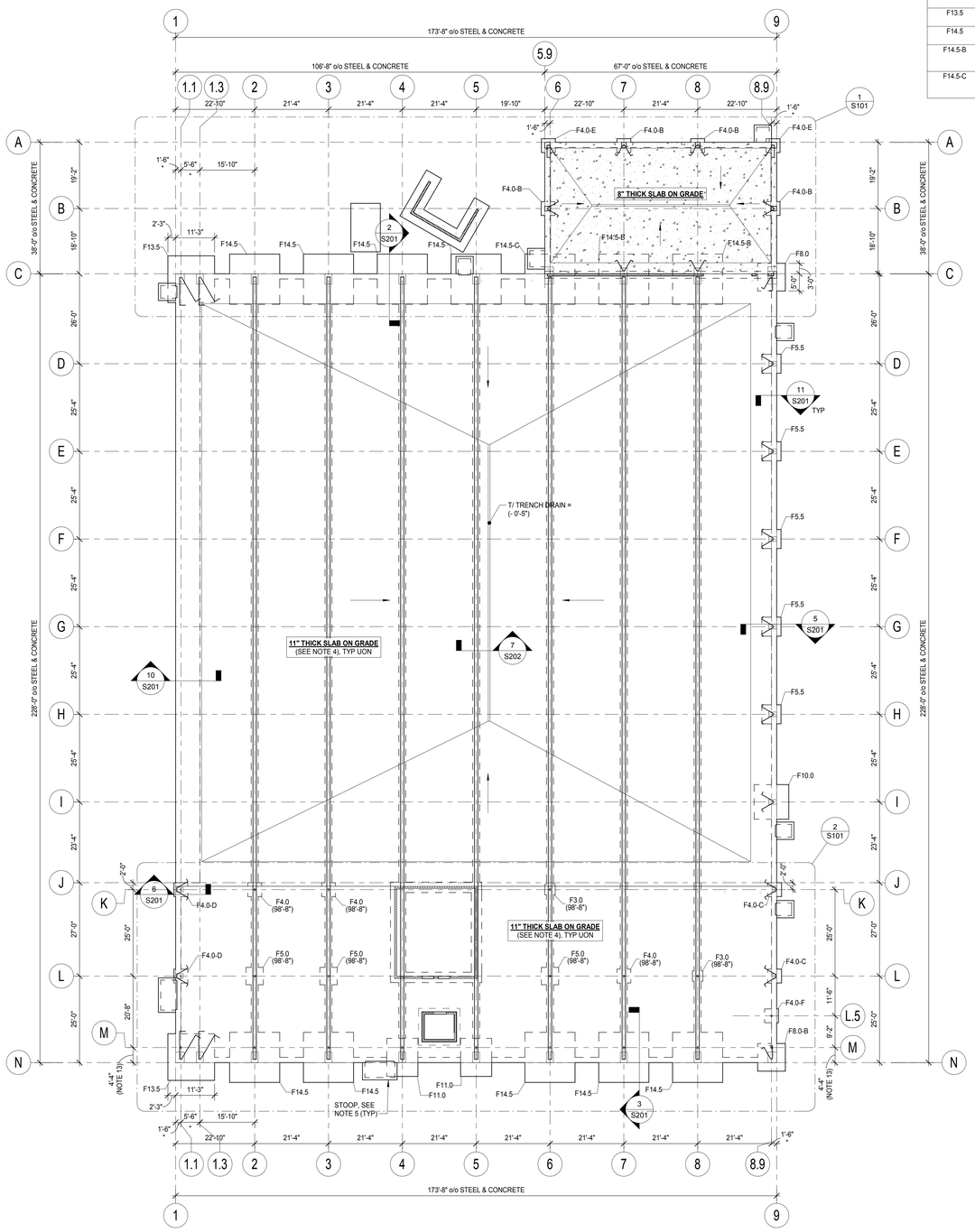

1 **FOUNDATION PLAN**
NORTH
SCALE = 1/16" = 1'-0"

FOOTING & PIER SCHEDULE

TYPE	LENGTH	WIDTH	THICKNESS	REINFORCING	HAIRPIN	T.O. FTG	PIER TYPE & SIZE (WxD)	PIER REINF	T.O. PIER ELEV	COMMENTS
F3.0	3'-0"	3'-0"	16"	(3) #6 BARS EW BOTTOM	---	98'-8"	---	---	N/A	
F4.0	4'-0"	4'-0"	16"	(4) #6 BARS EW BOTTOM	---	98'-8"	---	---	N/A	
F4.0-B	4'-0"	4'-0"	30"	(5) #5 BARS EW TOP & BOT	#5	99'-0"	A 16"x20"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F4.0-C	4'-0"	4'-0"	30"	(5) #5 BARS EW TOP & BOT	#5	99'-0"	A 16"x16"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F4.0-D	4'-0"	4'-0"	30"	(5) #5 BARS EW TOP & BOT	#5	99'-0"	A 16"x26"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F4.0-E	4'-0"	4'-0"	30"	(5) #5 BARS EW TOP & BOT	#5	99'-0"	B 18"x20"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F4.0-F	4'-0"	4'-0"	30"	(5) #5 BARS EW TOP & BOT	---	99'-0"	---	---	N/A	
F5.0	5'-0"	5'-0"	16"	(5) #6 BARS EW BOTTOM	---	98'-8"	---	---	N/A	
F5.5	5'-6"	5'-6"	30"	(6) #5 BARS EW TOP & BOT	#5	99'-0"	A 16"x28"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F8.0	8'-0"	8'-0"	30"	(9) #5 BARS EW TOP & BOT	#4	99'-0"	E 30"x60"	(8) #6 VERT W/ #4 TIES AT 6" OC FOR SOUTH COL, (4) #6 VERT W/ #4 TIES AT 6" OC FOR NORTH COL HOOK VERT BARS AT TOP & BOT	100'-0"	
F8.0-B	8'-0"	8'-0"	30"	(9) #5 BARS EW TOP & BOT	#4	99'-0"	B 30"x36"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F10.0	10'-0"	10'-0"	30"	(11) #5 BARS EW TOP & BOT	#5	99'-0"	A 16"x24"	(4) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F11.0	11'-0"	9'-0"	66"	#6 AT 12" OC EW TOP & BOT	(4) #8 TIE BARS	99'-0"	A 24"x36"	(12) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	SEE DETAIL 2/S201 FOR PIER REINF DETAILING
F13.5	13'-6"	13'-6"	30"	(11) #6 BARS EW TOP & BOT	(2) #9	99'-0"	B 30"x36" AND A 24"x36"	(2) SETS OF (8) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	
F14.5	14'-6"	14'-6"	30"	(12) #6 BARS EW TOP & BOT	(4) #8 TIE BARS	99'-0"	A 24"x36"	(12) #6 VERT W/ #4 TIES AT 6" OC HOOK VERT BARS AT TOP & BOT	100'-0"	SEE DETAIL 2/S201 FOR PIER REINF DETAILING
F14.5-B	14'-6"	14'-6"	30"	(12) #6 BARS EW TOP & BOT	(4) #8 TIE BARS ON SOUTH, #5 HAIRPIN ON NORTH	99'-0"	D 24"x56"	(12) #6 VERT W/ #4 TIES AT 6" OC FOR SOUTH COL, (4) #6 VERT W/ #4 TIES AT 6" OC FOR NORTH COL, HOOK VERT BARS AT TOP & BOT	100'-0"	SEE DETAIL 2/S201 FOR PIER REINF DETAILING
F14.5-C	14'-6"	14'-6"	30"	(12) #6 BARS EW TOP & BOT	(4) #8 TIE BARS	99'-0"	E 30"x60"	(12) #6 VERT W/ #4 TIES AT 6" OC FOR SOUTH COL, (4) #6 VERT W/ #4 TIES AT 6" OC FOR NORTH COL, HOOK VERT BARS AT TOP & BOT	100'-0"	SEE DETAIL 2/S201 FOR PIER REINF DETAILING

FOUNDATION PLAN NOTES:

1. TOP OF SLAB AND REFERENCE ELEVATION = 100'-0", UNLESS OTHERWISE NOTED BY A (+) OR (-) FROM THIS ELEVATION. SLOPE TO FLOOR DRAINS WHERE NOTED BY ARROWS ON PLAN.
2. TOP OF FOOTING ELEVATION = 99'-0", UNLESS OTHERWISE NOTED.
3. ISOLATED FOOTINGS ARE CENTERED ON COLUMNS, UNLESS OTHERWISE NOTED.
4. TYPICAL SLAB ON GRADE, UNLESS OTHERWISE NOTED: 11" SLAB ON GRADE ON 15 MIL VAPOR RETARDER ON 6" GRANULAR FILL. REINFORCE WITH w/ #5 BARS @ 16" OC EW, CENTERED IN SLAB. SEE GEOTECH FOR SUBGRADE PREPARATION REQUIREMENTS. SLOPE TO FLOOR DRAINS WHERE NOTED (SEE ALSO ARCH & MEP DRAWINGS). SEE SHEET S200 FOR TYPICAL JOINT & RE-ENTRANT CORNER REINFORCEMENT DETAILS. CONTRACTOR TO PROVIDE CONTROL / CONSTRUCTION JOINTS AT MAXIMUM SPACINGS OF 27'-6", AND A MAXIMUM SLAB PANEL LENGTH / WIDTH RATIO OF 1.5.
5. CONTRACTOR TO PROVIDE STOOP PER TYPICAL DETAIL ON SHEET S200. CONTRACTOR TO COORDINATE SIZE, LOCATION, & QUANTITY WITH ARCHITECTURAL DRAWINGS.
6. COORDINATE FLOOR DRAIN LOCATIONS WITH MEP DRAWINGS.
7. REFER TO ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS, OPENINGS, AND ELEVATIONS. CONTINUOUS FOOTINGS ARE CENTERED ON WALL, UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO COORDINATE ELEVATOR PIT SUMP LOCATION WITH ELEVATOR MANUFACTURER. SEE DETAIL 2 / S202.
9. WHERE TIE BEAMS INTERSECT WITH FOOTINGS, RUN REINFORCEMENT CONTINUOUS THROUGH FOOTINGS.
10. LIGHT GAUGE METAL FRAMING CONTRACTOR TO DESIGN FULL-HEIGHT OF WALL FOR ±16 PSF WIND LOAD. COORDINATE WALL LATERAL SUPPORT AT ROOF WITH PEMB MANUFACTURER.
11. CONTRACTOR TO COORDINATE FINAL LOCATIONS OF FOOTINGS WITH PEMB STRUCTURE. COORDINATE DOWNSPOUT PENETRATIONS AND SLEEVES AT FOOTINGS.
12. DIMENSIONS MARKED WITH *** SHALL BE VERIFIED WITH THE PEMB MANUFACTURER.
13. THIS DIMENSION IS BASED ON A MAXIMUM PEMB COLUMN DEPTH OF 3'-3" AT THE MEZZANINE LEVEL, AS WELL AS A 1 1/2" CLEAR DISTANCE FROM THE PEMB STRUCTURE TO EDGE OF SLAB. THE MEZZANINE IS DESIGNED TO BE COMPLETELY SEPARATE FROM THE PEMB STRUCTURE AND FACADE. CONTRACTOR TO VERIFY WITH PEMB MANUFACTURER.
14. ALL FOUNDATIONS HAVE BEEN DESIGNED TO BE SUPPORTED ON SOIL IMPROVED USING RAMMED AGGREGATE PIERS. THESE PIERS SHALL PROVIDE AN ALLOWABLE SOIL BEARING PRESSURE OF 4,000 PSF.

CMT
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KANSAS CITY, MO 64108

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09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

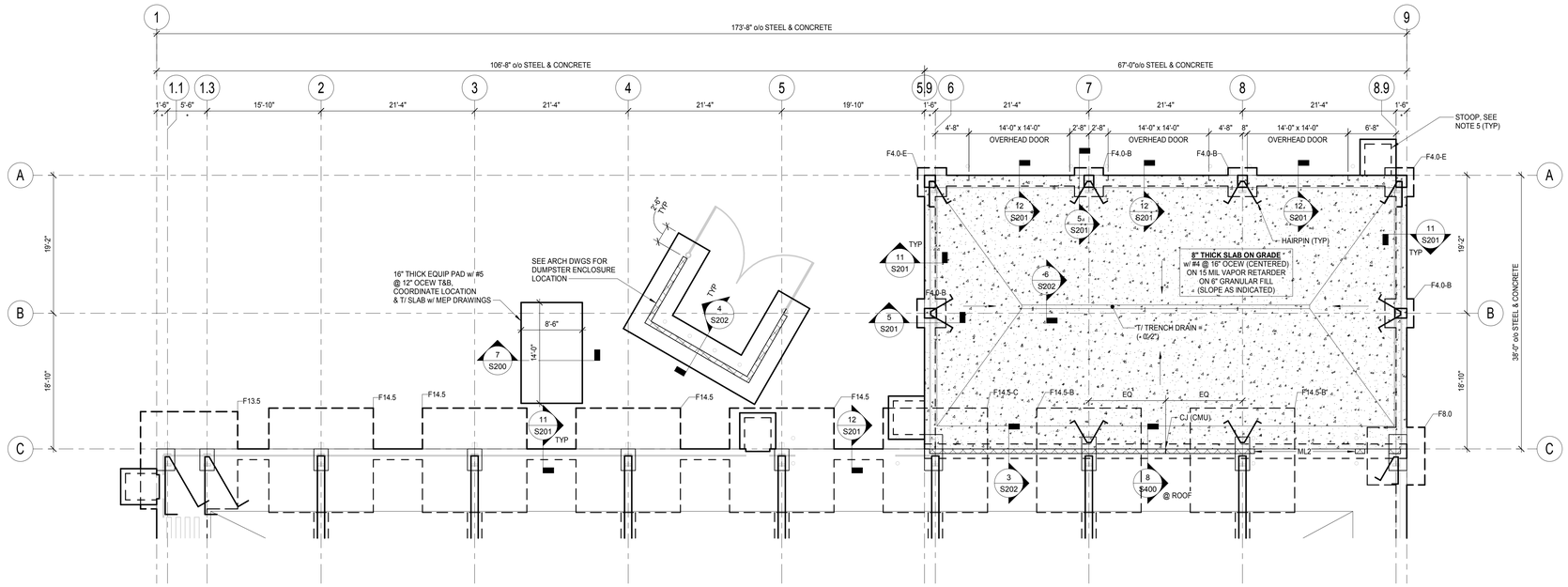
PROJECT NO:	22001238-00
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS

SHEET TITLE
FOUNDATION PLAN - OVERALL

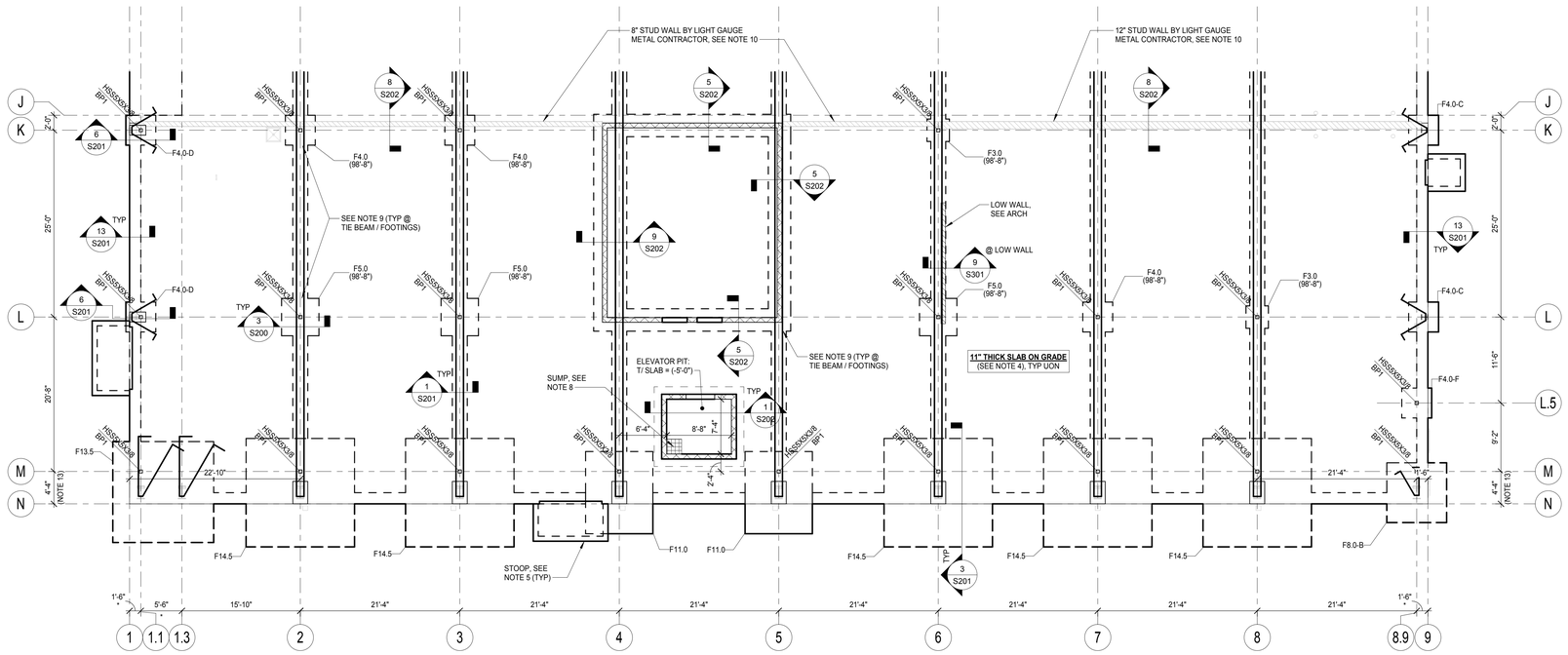
S100

SHEET 085 OF 131

9/28/2023 4:36:49 PM



1 **FOUNDATION PLAN - NORTH**
SCALE = 1/8" = 1'-0"



2 **FOUNDATION PLAN - SOUTH**
SCALE = 1/8" = 1'-0"

FOUNDATION PLAN NOTES:

1. TOP OF SLAB AND REFERENCE ELEVATION = 100'-0", UNLESS OTHERWISE NOTED BY A (+) OR (-) FROM THIS ELEVATION. SLOPE TO FLOOR DRAINS WHERE NOTED BY ARROWS ON PLAN.
2. TOP OF FOOTING ELEVATION = 99'-0", UNLESS OTHERWISE NOTED.
3. ISOLATED FOOTINGS ARE CENTERED ON COLUMNS, UNLESS OTHERWISE NOTED.
4. TYPICAL SLAB ON GRADE, UNLESS OTHERWISE NOTED: 11" SLAB ON GRADE ON 15 MIL VAPOR RETARDER ON 6" GRANULAR FILL. REINFORCE WITH w/ #5 BARS @ 16" OC EW, CENTERED IN SLAB. SEE GEOTECH FOR SUBGRADE PREPARATION REQUIREMENTS. SLOPE TO FLOOR DRAINS WHERE NOTED (SEE ALSO ARCH & MEP DRAWINGS). SEE SHEET S200 FOR TYPICAL JOINT & RE-ENTRANT CORNER REINFORCEMENT DETAILS. CONTRACTOR TO PROVIDE CONTROL / CONSTRUCTION JOINTS AT MAXIMUM SPACINGS OF 27'-6", AND A MAXIMUM SLAB PANEL LENGTH / WIDTH RATIO OF 1.5.
5. CONTRACTOR TO PROVIDE STOOP PER TYPICAL DETAIL ON SHEET S200. CONTRACTOR TO COORDINATE SIZE, LOCATION, & QUANTITY WITH ARCHITECTURAL DRAWINGS.
6. COORDINATE FLOOR DRAIN LOCATIONS WITH MEP DRAWINGS.
7. REFER TO ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS, OPENINGS, AND ELEVATIONS. CONTINUOUS FOOTINGS ARE CENTERED ON WALL, UNLESS OTHERWISE NOTED.
8. CONTRACTOR TO COORDINATE ELEVATOR PIT SUMP LOCATION WITH ELEVATOR MANUFACTURER. SEE DETAIL 2 / S202.
9. WHERE TIE BEAMS INTERSECT WITH FOOTINGS, RUN REINFORCEMENT CONTINUOUS THROUGH FOOTINGS.
10. LIGHT GAUGE METAL FRAMING CONTRACTOR TO DESIGN FULL-HEIGHT OF WALL FOR ±16 PSF WIND LOAD. COORDINATE WALL LATERAL SUPPORT AT ROOF WITH PEMB MANUFACTURER.
11. CONTRACTOR TO COORDINATE FINAL LOCATIONS OF FOOTINGS WITH PEMB STRUCTURE. COORDINATE DOWNSPOUT PENETRATIONS AND SLEEVES AT FOOTINGS.
12. DIMENSIONS MARKED WITH *** SHALL BE VERIFIED WITH THE PEMB MANUFACTURER.
13. THIS DIMENSION IS BASED ON A MAXIMUM PEMB COLUMN DEPTH OF 3'-3" AT THE MEZZANINE LEVEL, AS WELL AS A 1 1/2" CLEAR DISTANCE FROM THE PEMB STRUCTURE TO EDGE OF SLAB. THE MEZZANINE IS DESIGNED TO BE COMPLETELY SEPARATE FROM THE PEMB STRUCTURE AND FACADE. CONTRACTOR TO VERIFY WITH PEMB MANUFACTURER.
14. ALL FOUNDATIONS HAVE BEEN DESIGNED TO BE SUPPORTED ON SOIL IMPROVED USING RAMMED AGGREGATE PIERS. THESE PIERS SHALL PROVIDE AN ALLOWABLE SOIL BEARING PRESSURE OF 4,000 PSF.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

JAMES E. RONGISH
NUMBER PE-2021043194
STATE OF MISSOURI
PROFESSIONAL ENGINEER
09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

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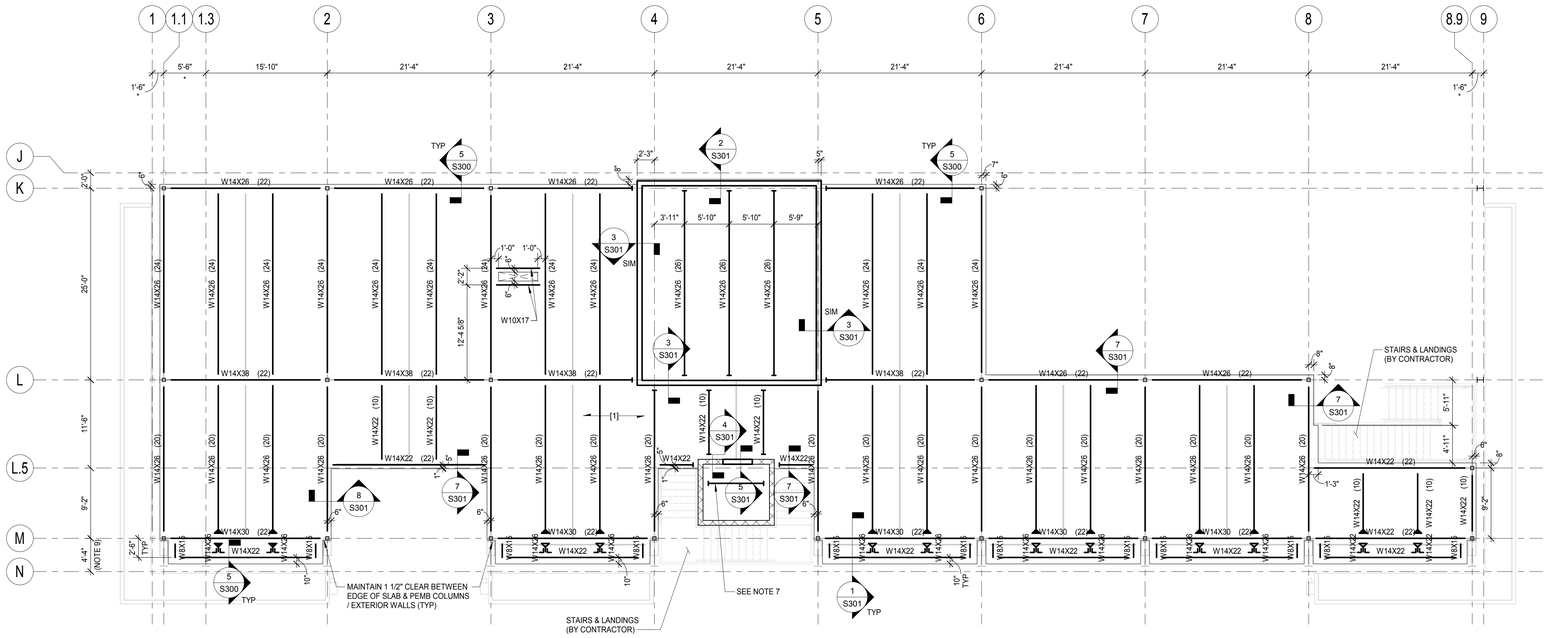
SHEET TITLE
FOUNDATION PARTIAL PLANS

S101
SHEET 086 OF 131

9/28/2023 4:36:51 PM



1 LEVEL 2 FRAMING PLAN

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

FRAMING PLAN NOTES:

1. TOP OF SLAB AND REFERENCE ELEVATION = 114'-0", UNLESS OTHERWISE NOTED BY A (+) OR (-) FROM THIS ELEVATION.
2. TOP OF STEEL = (-0-5 1/2"), UNLESS OTHERWISE NOTED BY A (+) OR (-) FROM REFERENCE ELEVATION.
3. —{1}— INDICATES DIRECTION OF SPAN OF 2" - 20 GA COMPOSITE METAL DECK WITH 3 1/2" NORMAL WEIGHT CONCRETE FILL (TOTAL SLAB THICKNESS = 5 1/2"). REINFORCE WITH 6X6 W2.9XW2.9 WWR.
4. BEAMS ARE SPACED EVENLY BETWEEN GRID LINES, UNLESS OTHERWISE NOTED.
5. CONTRACTOR TO VERIFY ALL EDGE OF SLAB DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
6. REFER TO ARCHITECTURAL DRAWINGS FOR WALL LOCATIONS, OPENINGS, AND ELEVATIONS.
7. CONTRACTOR TO COORDINATE ELEVATION & LOCATION OF W8X31 HOIST BEAM WITH ELEVATOR MANUFACTURER. BEAM TO BEAR ON CMU WALL PER DETAIL 7 / S400.
8. DIMENSIONS MARKED WITH *** SHALL BE VERIFIED WITH THE PEMB MANUFACTURER.
9. THIS DIMENSION IS BASED ON A MAXIMUM PEMB COLUMN DEPTH OF 3'-3" AT THE MEZZANINE LEVEL, AS WELL AS A 1 1/2" CLEAR DISTANCE FROM THE PEMB STRUCTURE TO EDGE OF SLAB. THE MEZZANINE IS DESIGNED TO BE COMPLETELY SEPARATE FROM THE PEMB STRUCTURE AND FACADE. CONTRACTOR TO VERIFY WITH PEMB MANUFACTURER.

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LEE'S SUMMIT, MISSOURI

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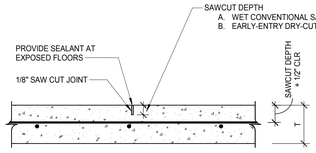
SHEET TITLE

MEZZANINE FRAMING PLAN

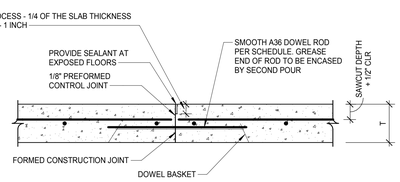
S102

SHEET 087 OF 131

9/28/2023 4:36:52 PM

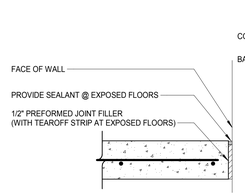


CONTROL JOINT (CJ)

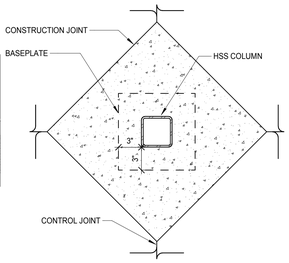


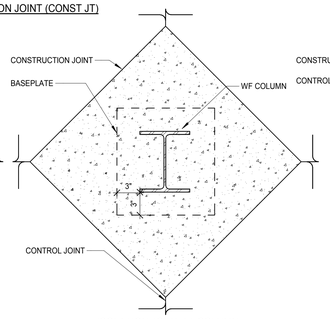
CONSTRUCTION JOINT (CONST JT)

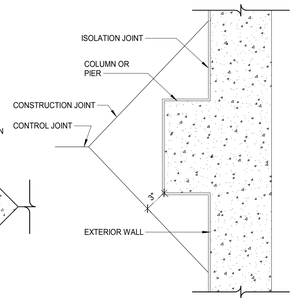
DOWEL ROD SIZE AND SPACING		
SLAB DEPTH	SMOOTH ROUND DOWEL DIMENSIONS	DOWEL SPACING, CENTER-TO -CENTER
6 TO 8 INCHES	3/4" DIA X 16" LONG	12 INCHES
8 TO 9 INCHES	1" DIA X 16" LONG	12 INCHES
9 TO 11 INCHES	1-1/4" DIA X 18" LONG	12 INCHES



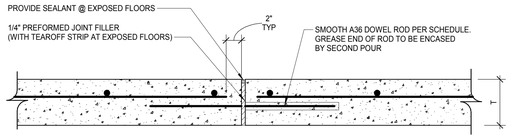
ISOLATION JOINT (IJ)







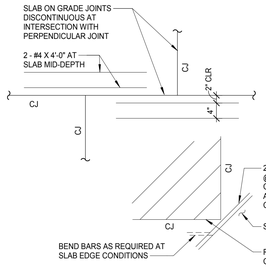
ISOLATION JOINT AT COLUMN



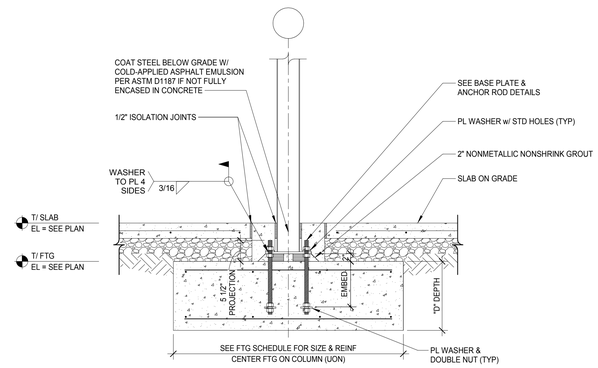
EXPANSION JOINT (EJ)

NOTES:
1. "T" = SLAB DEPTH, SEE PLANS & NOTES.
2. THE TIMING OF THE SAWCUTS SHALL BE BASED ON ACTUAL JOB SITE CONDITIONS AT TIME OF PLACEMENT AND THE EXPERIENCE AND JUDGMENT OF THE SUBCONTRACTOR.
   A. WET CONVENTIONAL SAWCUTING AFTER SLAB PLACEMENT SHALL BE PERFORMED NO LATER THAN 4 HOURS IN HOT WEATHER CONDITIONS AND 12 HOURS IN COLD WEATHER CONDITIONS.
   B. EARLY-ENTRY DRY-CUT SAW CUTTING AFTER SLAB PLACEMENT SHALL BE PERFORMED NO LATER THAN 1 HOUR IN HOT WEATHER CONDITIONS AND 4 HOURS IN COLD WEATHER CONDITIONS.
3. JOINTS NOTED ON PLAN AS CJ MAY BE EITHER CONSTRUCTION JOINTS OR CONTROL JOINTS AT CONTRACTOR'S OPTION. JOINTS TERMINATING AT POUR SHALL BE CONSTRUCTION JOINTS, EXCEPT AT WALLS AND COLUMNS THESE ARE ISOLATION JOINTS. ALL OTHER JOINTS MARKED CJ ARE CONTROL JOINTS.
4. FILL OR SEAL JOINTS AS INDICATED OR SPECIFIED.
5. SEE PLANS FOR TYPICAL REINFORCING.
6. PROVIDE DOWEL BASKETS AND/OR ALIGNMENT DEVICES AT DOWELED JOINTS. THE DOWELS SHOULD BE PARALLEL TO THE TOP SURFACE, EACH OTHER, AND PERPENDICULAR TO THE JOINT FACE
7. SEE PLANS FOR JOINT LOCATIONS.

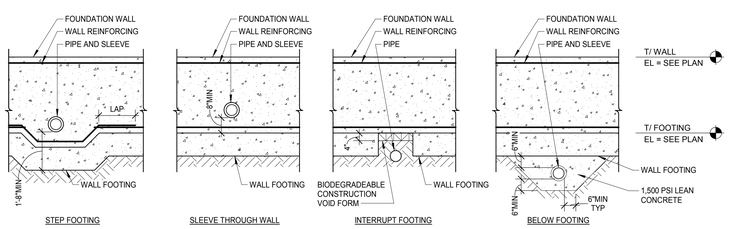
1 TYPICAL SLAB ON GRADE JOINTS
SCALE = 1 1/2" = 1'-0"



2 TYPICAL RE-ENTRANT CORNER REINFORCING DETAIL
SCALE = 3/4" = 1'-0"

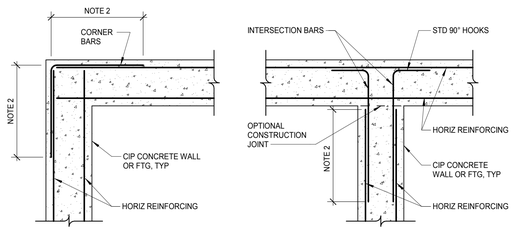


3 TYPICAL INTERIOR SPREAD FOOTING DETAIL
SCALE = 3/4" = 1'-0"



NOTES:
1. DIAMETER OF SLEEVE FOR PIPE SHALL BE 2" LARGER THAN PIPE DIAMETER. INSTALL PIPE AT CENTER OF SLEEVE.

4 TYPICAL FOUNDATION WALL PENETRATION
SCALE = 3/8" = 1'-0"

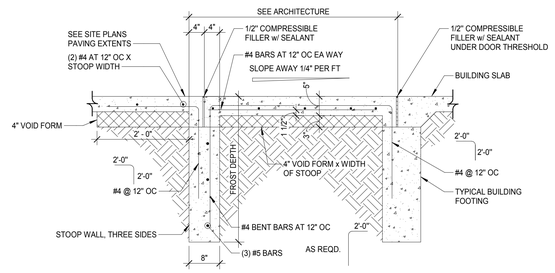


TYPICAL CORNER DETAIL

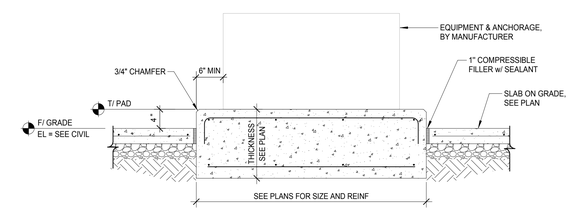
TYPICAL "T"-INTERSECTION DETAIL

NOTES:
1. CORNER BARS & INTERSECTION BARS SHALL HAVE SAME SIZE AND SPACING AS HORIZONTAL BARS.
2. FOR CORNER BAR AND INTERSECTION BAR LAP LENGTH, USE LAP SPICE DIMENSION SHOWN IN STRUCTURAL GENERAL NOTES FOR "ALL OTHER BARS", OR 2'-0" MIN.
3. VERTICAL REINFORCEMENT NOT SHOWN FOR CLARITY.
4. DO NOT PLACE VERTICAL CONSTRUCTION JOINTS WITHIN 5'-0" OF CORNER.

5 TYPICAL GRADE BEAM / FOOTING CORNER / T-INTERSECTION REINFORCING
SCALE = 3/4" = 1'-0"

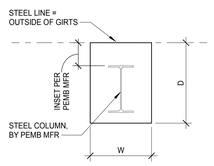


6 TYPICAL STOOP DETAIL
SCALE = 3/4" = 1'-0"

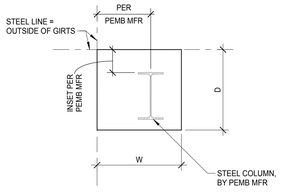


NOTES:
1. COORDINATE LOCATION OF PADS WITH MEP DRAWINGS AND EQUIPMENT SUPPLIERS.
2. CONTRACTOR SHALL VERIFY THAT ALL ITEMS REQUIRED BY THE EQUIPMENT THAT ARE REQUIRED TO BE EMBEDDED INTO PADS ARE PLACED BEFORE PADS ARE POURED.
3. SUBGRADE TO BE COMPACTED PER GEOTECHNICAL RECOMMENDATIONS.

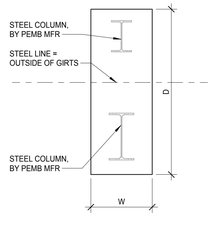
7 TYPICAL EQUIPMENT PAD
SCALE = 3/4" = 1'-0"



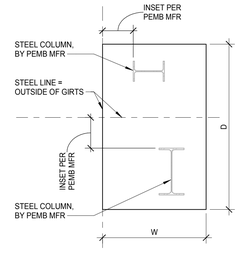
8 PIER TYPE "A"
NOT TO SCALE



9 PIER TYPE "B"
NOT TO SCALE



11 PIER TYPE "D"
SCALE = 3/4" = 1'-0"



12 PIER TYPE "E"
SCALE = 3/4" = 1'-0"

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SHEET TITLE

TYPICAL FOUNDATION DETAILS

S200

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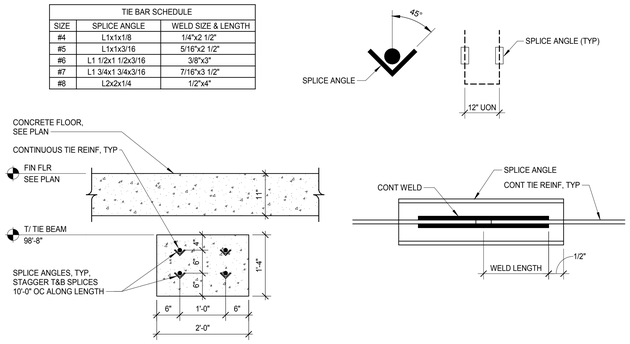
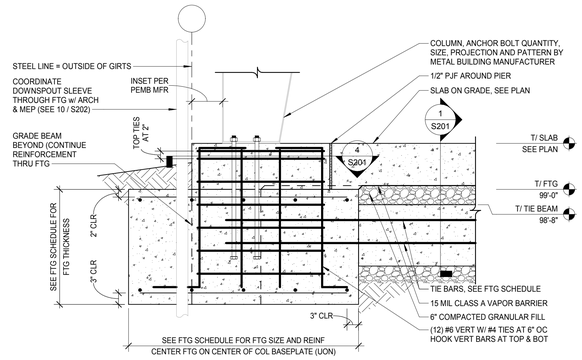
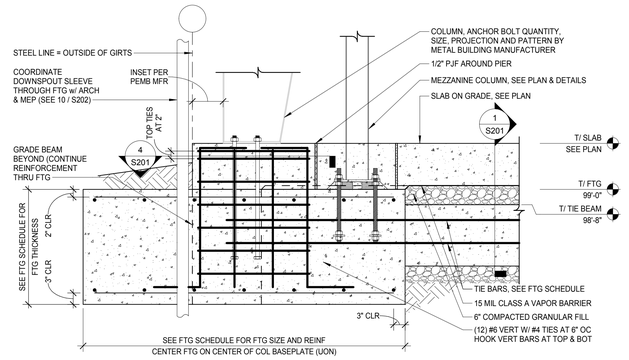
TIE BAR SCHEDULE		
SIZE	SPLICE ANGLE	WELD SIZE & LENGTH
#4	L1x1x1/8	1/4"x2 1/2"
#5	L1x1x3/16	5/16"x2 1/2"
#6	L1 1/2x1 1/2x3/16	3/8"x3"
#7	L1 3/4x1 3/4x3/16	7/16"x3 1/2"
#8	L2x2x1/4	1/2"x4"



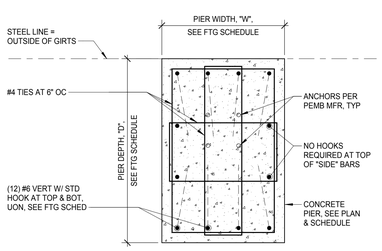
1 TYPICAL TIE BAR DETAIL
SCALE = 3/4" = 1'-0"



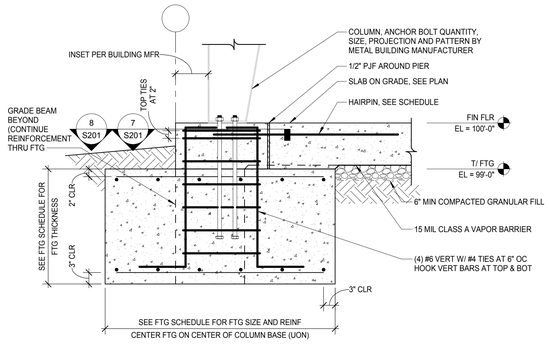
2 FOOTING F11.0 AND F14.5 - TYPICAL SECTION
SCALE = 3/4" = 1'-0"



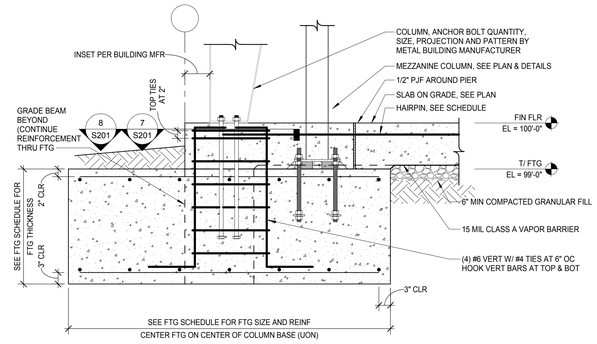
3 FOOTING F11.0 AND F14.5 - SECTION WITH MEZZANINE
SCALE = 3/4" = 1'-0"



4 FOOTINGS F11.0 AND F14.5 - PIER REINF DETAIL
SCALE = 1" = 1'-0"

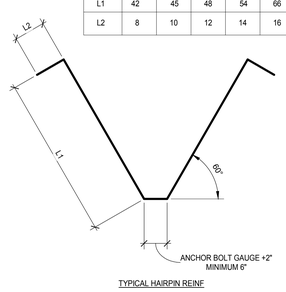


5 TYPICAL EXTERIOR COLUMN WITH HAIRPIN
SCALE = 3/4" = 1'-0"

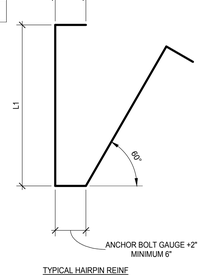


6 TYPICAL EXTERIOR COLUMN WITH HAIRPIN AT MEZZANINE
SCALE = 3/4" = 1'-0"

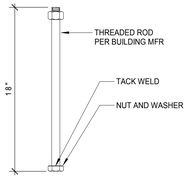
HAIRPIN REBAR DIMENSIONS (IN)							
SIZE	#4	#5	#6	#7	#8	#9	#10
L1	42	45	48	54	66	84	96
L2	8	10	12	14	16	18	20



TYPICAL HAIRPIN REINF

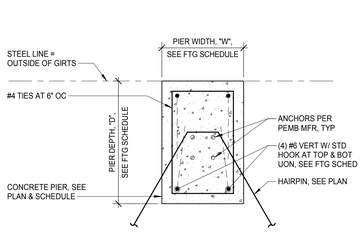


TYPICAL HAIRPIN REINF

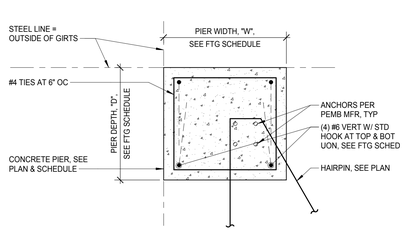


TYPICAL ANCHOR ROD

9 TYPICAL REINFORCEMENT DETAILS
SCALE = 3/4" = 1'-0"



7 SIDE PIER WITH HAIRPIN
SCALE = 1" = 1'-0"



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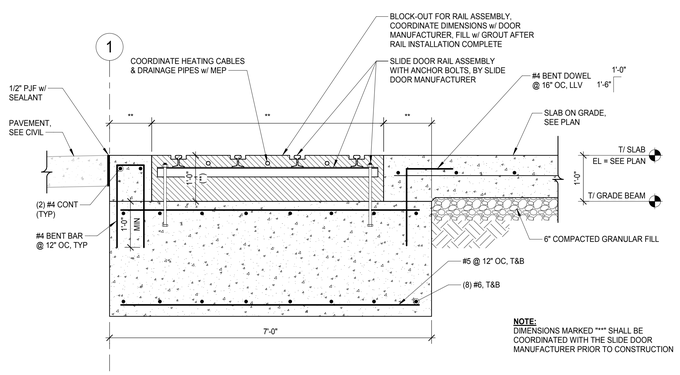

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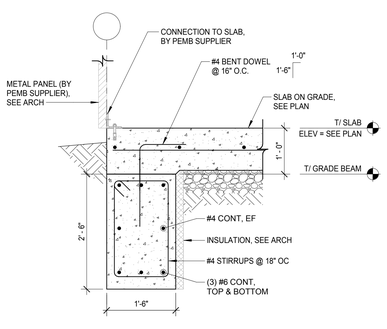

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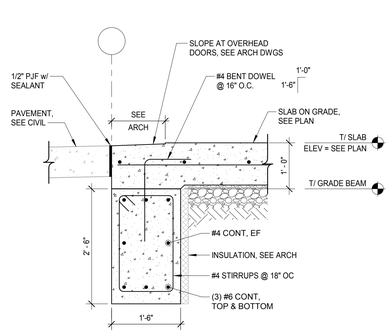

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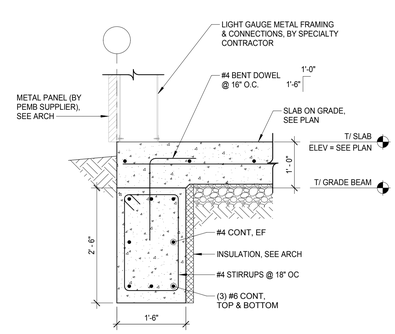

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SCALE = 3/4" = 1'-0"

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olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

STATE OF MISSOURI
JAMES E. RONGISH
NUMBER PE-2021043194
PROFESSIONAL ENGINEER
09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	22001238-00
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS
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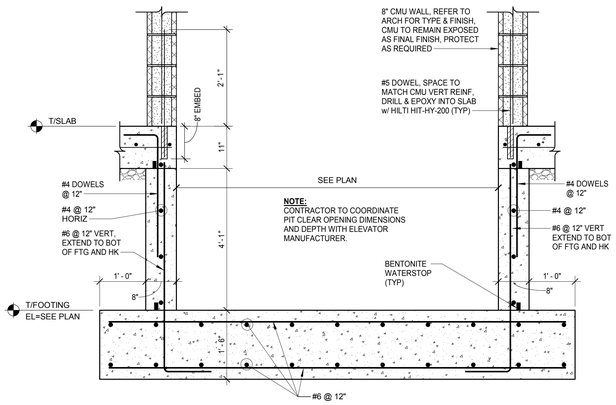
S201

SHEET 089 OF 131



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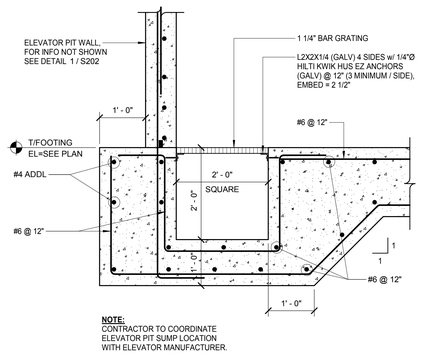

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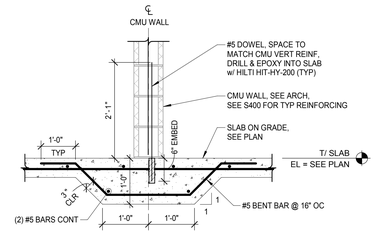

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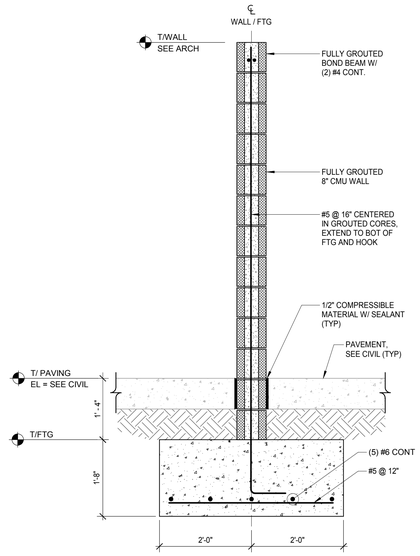

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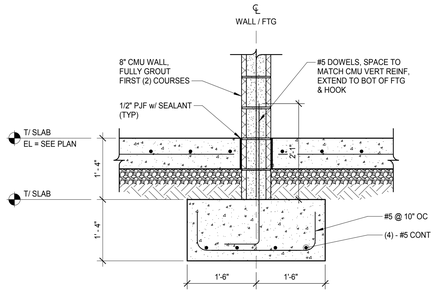

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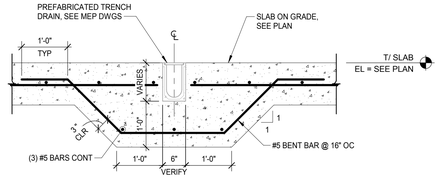

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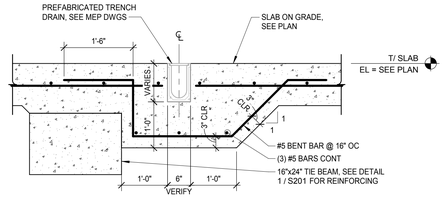

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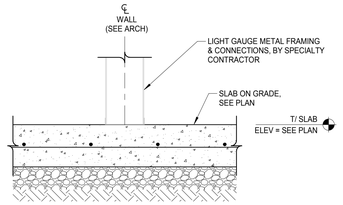

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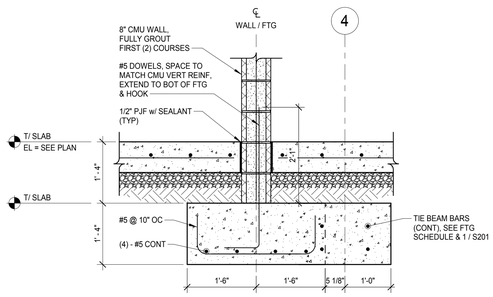

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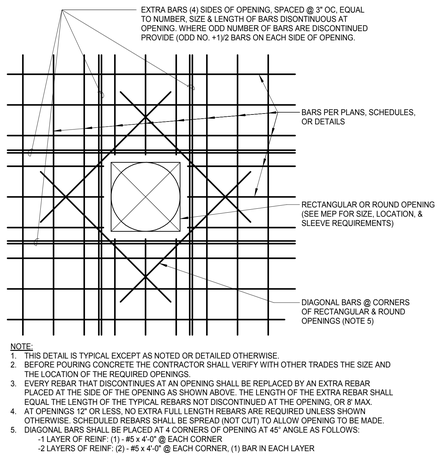

NOTE:
1. THIS DETAIL IS TYPICAL EXCEPT AS NOTED OR DETAILED OTHERWISE.
2. BEFORE POURING CONCRETE THE CONTRACTOR SHALL VERIFY WITH OTHER TRADES THE SIZE AND THE LOCATION OF THE REQUIRED OPENINGS.
3. EVERY REBAR THAT DISCONTINUES AT AN OPENING SHALL BE REPLACED BY AN EXTRA REBAR PLACED AT THE SIDE OF THE OPENING AS SHOWN ABOVE. THE LENGTH OF THE EXTRA REBAR SHALL EQUAL THE LENGTH OF THE TYPICAL REBARS NOT DISCONTINUED AT THE OPENING, OR 8' MAX.
4. AT OPENINGS 12" OR LESS, NO EXTRA FULL LENGTH REBARS ARE REQUIRED UNLESS SHOWN OTHERWISE. SCHEDULED REBARS SHALL BE SPREAD (NOT CUT) TO ALLOW OPENING TO BE MADE.
5. DIAGONAL BARS SHALL BE PLACED AT 4 CORNERS OF OPENING AT 45° ANGLE AS FOLLOWS:
   -1 LAYER OF REINF: (1) - #5 x 4'-0" @ EACH CORNER
   -2 LAYERS OF REINF: (2) - #5 x 4'-0" @ EACH CORNER, (1) BAR IN EACH LAYER

10 **TYPICAL REINFORCING AT OPENINGS IN SLABS & FOOTINGS**
SCALE = 3/4" = 1'-0"

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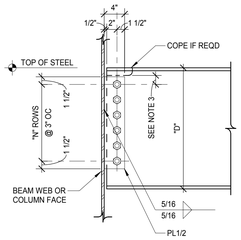
SHEET TITLE
FOUNDATION DETAILS

S202
SHEET 090 OF 131



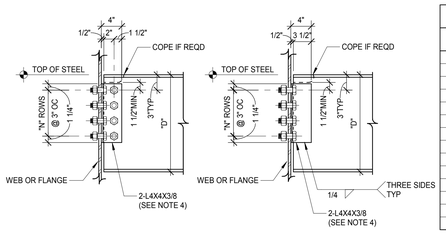
SINGLE PLATE BEAM CONN SCHEDULE	
NOMINAL BEAM SIZE "D"	NUMBER OF BOLT ROWS "N"
W8	2
W10	2
W12	3
W14	3
W16	4
W18	5
W21	6
W24	6
W27	7
W30	8
W33	9
W36	10

NOTES:

1. ALL BOLTS SHALL BE 7/8"ø A325 OR F1852 IN STANDARD HOLES, UNLESS OTHERWISE NOTED.
2. PROVIDE MINIMUM BOLT NUMBER BOLTS TYPICAL. WHERE BOLT ROWS AND/OR BOLT SIZE ARE INDICATED I.E. 4 - 1" Ø AT CONNECTION, INCREASE NUMBER OF ROWS AND/OR BOLT DIAMETER AS INDICATED.
3. MIN. DISTANCE FROM TOP BOLT TO A COPE SHALL BE 1 1/2". INCREASE DISTANCE FROM TOP OF BEAM TO TOP OF BOLT, IF REQUIRED.

1 TYPICAL SINGLE PLATE SHEAR CONNECTION (SHEAR TAB) - 7/8"Ø BOLTS

SCALE = 1" = 1'-0"



BOLTED - BOLTED **BOLTED - WELDED**

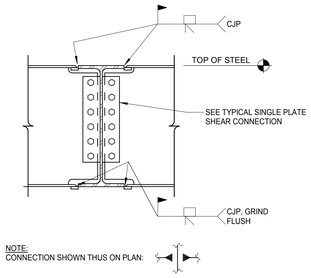
DOUBLE ANGLE CONNECTION SCHEDULE	
NOMINAL BEAM SIZE "D"	NUMBER OF BOLT ROWS "N"
W8	2
W10	2
W12	2
W14	3
W16	3
W18	3
W21	4
W24	4
W27	5
W30	5
W33	8
W36	8
W40	10
W44	12

NOTES:

1. AT CONTRACTOR'S OPTION, ANGLES MAY BE BOLTED OR WELDED TO BEAM WEB. ALL DOUBLE ANGLE CONNECTIONS SHOWN ON PLAN SHEETS MUST BE WELDED TO THE BEAM WEB.
2. ALL BOLTS SHALL BE 3/4"øA325 OR F1852 IN STANDARD HOLES, UNLESS OTHERWISE NOTED.
3. STAGGER BOLTS AND USE SHORTER OUTSTANDING LEGS AS REQUIRED FOR CLEARANCE.
4. MIN DISTANCE FROM TOP BOLT TO A COPE SHALL BE 1 1/2". WHERE DEEP COPES ARE REQD, INCREASE DISTANCE FROM TOP OF BEAM TO CENTERLINE OF TOP BOLT.
5. PROVIDE MINIMUM BOLT NUMBER AND 3/4"Ø BOLTS TYPICAL. WHERE BOLT ROWS AND / OR BOLTS SIZE ARE INDICATED, I.E. 4 - 1" Ø AT CONNECTION, INCREASE NUMBER OF ROWS AND / OR BOLT DIAMETER AS INDICATED.
6. STAGGER BOLT SPACING AS REQUIRED TO MEET OSHA ERECTION GUIDELINES.
7. AT EXTERIOR CONNECTION WHERE NO BEAM IS PRESENT ON OPPOSITE SIDE OF GIRDER, PROVIDE PL3/8 FITTED STIFFENER PLATE.

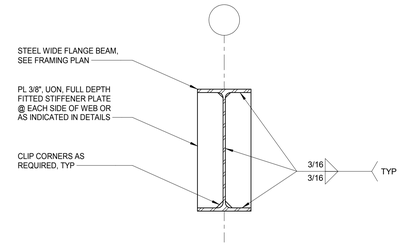
2 TYPICAL DOUBLE ANGLE CONNECTION - 7/8"Ø BOLTS

SCALE = 1" = 1'-0"



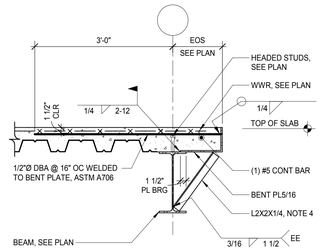
3 TYPICAL BEAM THRU BEAM CONNECTION

SCALE = 1" = 1'-0"

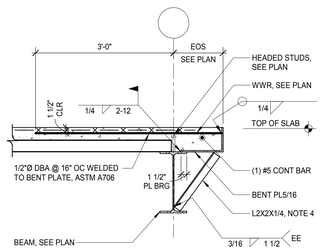


4 TYPICAL WEB STIFFENER PLATE

SCALE = 1 1/2" = 1'-0"



DECK PARALLEL TO BEAM



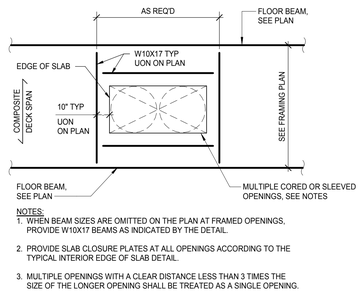
DECK PERPENDICULAR TO BEAM

NOTES:

1. USE SPECIAL CARE TO ASSURE THAT PLAN DIMENSION "W" SHALL NOT VARY BY MORE THAN + OR - 3/8" FROM INTENDED GRID LINE LOCATION REGARDLESS OF TOLERANCES PERMITTED IN SUPPORTING STEEL FRAMEWORK.
2. REBAR ANCHORS MUST BE SHOP WELDED TO PLATE AND PLATE FIELD WELDED TO BEAM.
3. PROVIDE DECK CLOSURE PLATES AT EACH RIB.
4. WHERE EOS DIMENSION EXCEEDS 1'-0", PROVIDE ANGLE BRACING SHOWN @ EE OF PL AND @ 2'-0" OC MAX.

5 TYPICAL COMPOSITE SLAB EDGE DETAIL

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

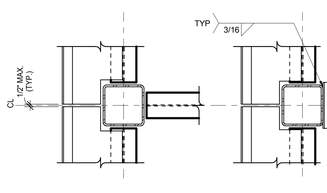


NOTES:

1. WHEN BEAM SIZES ARE OMITTED ON THE PLAN AT FRAMED OPENINGS, PROVIDE W10X17 BEAMS AS INDICATED BY THE DETAIL.
2. PROVIDE SLAB CLOSURE PLATES AT ALL OPENINGS ACCORDING TO THE TYPICAL INTERIOR EDGE OF SLAB DETAIL.
3. MULTIPLE OPENINGS WITH A CLEAR DISTANCE LESS THAN 3 TIMES THE SIZE OF THE LONGER OPENING SHALL BE TREATED AS A SINGLE OPENING.

6 TYPICAL SUPPLEMENTAL FRAMING AT COMPOSITE SLAB OPENING

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

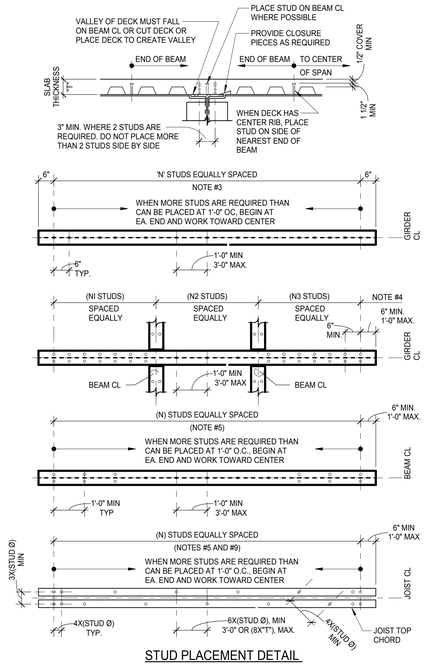


NOTES:

1. METAL DECK NOT SHOWN FOR CLARITY.
2. PROVIDE TYPICAL ANGLE AT EXTERIOR COLUMNS AND INTERIOR COLUMNS WHERE BEAMS ARE NOT PRESENT.
3. ANGLES NOT SHOWN ON OTHER SECTIONS FOR CLARITY.
4. PROVIDE SHEET METAL DECK CLOSURE PIECE TO PREVENT CONCRETE LEAKAGE AT COLUMNS.

7 TYPICAL DECK SUPPORT @ HSS COLUMNS

SCALE = 1" = 1'-0"



STUD PLACEMENT DETAIL

PLACEMENT INSTRUCTIONS - HEADED STUD TYPE SHEAR CONNECTORS FOR COMPOSITE BEAMS

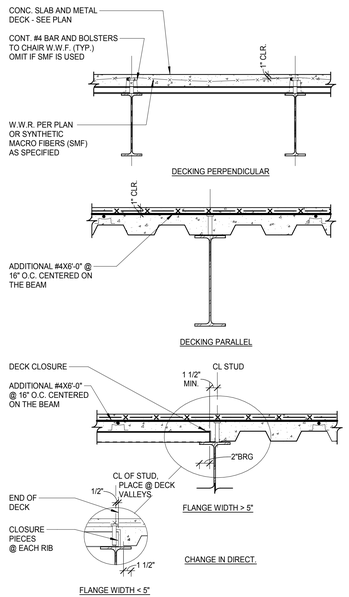
(REFFERRED TO AS "STUDS" IN THE FOLLOWING NOTES)

1. STUD PROPERTIES :
   DIAMETER: **3/4"Ø**
   HEIGHT AFTER WELDING: **4 1/2" (3" DECK)** **3 1/2(.)2" DECK)** **2 1/2" (1 1/2" DECK)**
2. WHEN A SINGLE NUMBER IN PARENTHESES (N) IS INDICATED ON THE FRAMING PLAN BESIDE A BEAM OR GIRDER THAT NUMBER IS THE NUMBER OF SHEAR STUDS TO BE PLACED ALONG THE BEAM LENGTH. WHEN MORE THAN ONE NUMBER IN PARENTHESES (N,N2,N3) ETC. IS SHOWN BESIDE A BEAM OR GIRDER: EACH NUMBER INDICATES THE NUMBER OF SHEAR STUDS TO BE PLACED WITHIN THAT SEGMENT OF THE BEAM OR GIRDER (I.E. SEGMENTS OF GIRDER DEFINED BY INTERSECTING BEAMS).
3. WHEN DECK RIBS ARE PARALLEL, AND THE STUD SPACING IS NOT SEGMENTED, SPACE STUDS EQUALLY ALONG GIRDER CENTERLINE, AS THE NUMBER OF STUDS INCREASES, DECREASE SPACING TO 1'-0" MINIMUM. WHEN NUMBER OF STUDS IS GREATER THAN 1'-0" SPACING PERMITS, DIVIDE REMAINDER AND BEGINNING AT EACH END. INSTALL STUDS AT 6" O.C. ALONG GIRDER CENTERLINE UNTIL REQUIRED NUMBER OF STUDS ARE PROVIDED.
4. WHEN THE DECK RIBS ARE PARALLEL AND THE STUD SPACING IS "SEGMENTED", SPACE THE STUDS EQUALLY ALONG THE GIRDER CENTERLINE OVER THAT SEGMENT. WHEN THE SPACING OF A SINGLE ROW OF STUDS BECOMES LESS THAN 6", PROVIDE DOUBLE STUDS EQUALLY SPACED. SEGMENTED STUD SPACING IS INDICATED IN THE BEAM CALL-OUT WHERE MORE THAN ONE NUMBER IS SHOWN FOR STUDS, I.E. W24X55 (5,6,11,2). FOR THIS CONDITION, N1 IS 5, N2 IS 6, N3 IS 11, ETC. SEGMENTS ARE BEAM SPACING FROM LEFT TO RIGHT AS THE BEAM CALL-OUT IS READ. THE TOTAL NUMBER OF STUDS IS THE SUM OF THE NUMBER IN PARENTHESIS.
5. WHEN DECK RIBS ARE PERPENDICULAR, SPACE STUDS AT 3'-0" O.C. ALONG CENTERLINE OF BEAM. DIVIDE REMAINDER OF STUDS AND BEGINNING AT EACH END INSTALL AT 1'-0" O.C. UNTIL REQUIRED NUMBER OF STUDS ARE PROVIDED. WHEN NUMBER OF STUDS EXCEED THE 1'-0" SPACING, BEGINNING AT EACH END PLACE TWO STUDS AT 1'-0" O.C. UNTIL REQUIRED NUMBER OF STUDS ARE PROVIDED.
6. CHALK BEAM CENTERLINE WHEN DECK SPAN IS PERPENDICULAR.
7. PREPARE STUD PLACEMENT DRAWING AND INCLUDE TOTAL NUMBER OF STUDS REQUIRED FOR EACH BEAM AND LOCATION OF ALL STUDS. DIMENSION STUDS FROM BEAM OR COLUMN CENTERLINES. PROVIDE STRUCTURAL ENGINEER ONE COPY FOR RECORD.
8. WHEN NO STUDS ARE SHOWN, PROVIDE STUDS ON ALL BEAMS W12 AND LARGER AT 12" O.C.
9. STAGGER SINGLE STUDS FOR COMPOSITE JOIST.

STUD PLACEMENT NOTES

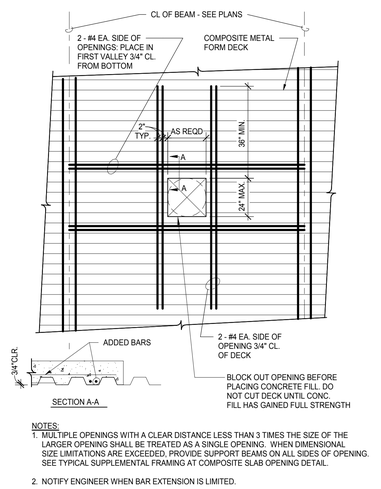
8 TYPICAL COMPOSITE SLAB HEADED STUD SHEAR CONNECTOR LAYOUT

SCALE = 1/2" = 1'-0"



9 TYPICAL COMPOSITE SLAB REINFORCING

SCALE = 1" = 1'-0"



NOTES:

1. MULTIPLE OPENINGS WITH A CLEAR DISTANCE LESS THAN 3 TIMES THE SIZE OF THE LARGER OPENING SHALL BE TREATED AS A SINGLE OPENING. WHEN DIMENSIONAL SIZE LIMITATIONS ARE EXCEEDED, PROVIDE SUPPORT BEAMS ON ALL SIDES OF OPENING. SEE TYPICAL SUPPLEMENTAL FRAMING AT COMPOSITE SLAB OPENING DETAIL.
2. NOTIFY ENGINEER WHEN BAR EXTENSION IS LIMITED.
3. DETAIL IS TYPICAL FOR ALL OPENINGS UNLESS NOTED OTHERWISE ON PLANS.
4. CONTRACTOR SHALL COORDINATE EXACT SIZE AND LOCATION OF OPENING WITH APPLICABLE DISCIPLINE(S). NOT ALL OPENINGS ARE SHOWN ON STRUCTURAL DRAWINGS.

10 TYPICAL UNFRAMED OPENING IN COMPOSITE SLAB

SCALE = 1/2" = 1'-0"

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TYPICAL STEEL FRAMING DETAILS

S300

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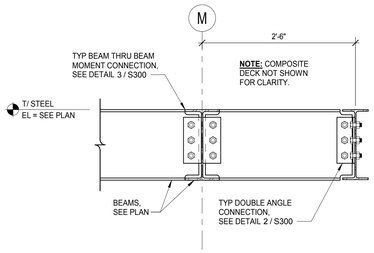

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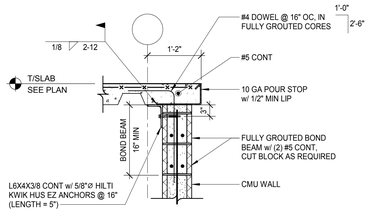

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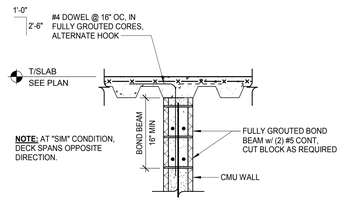
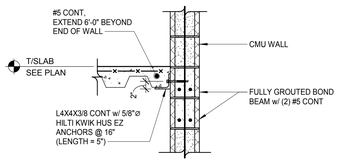


3 SECTION
SCALE = 3/4" = 1'-0"



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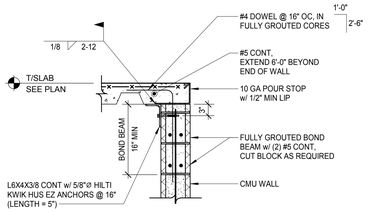
SCALE = 3/4" = 1'-0"



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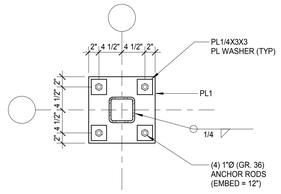
SCALE = 3/4" = 1'-0"



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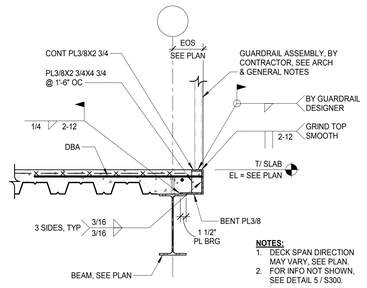
SCALE = 1" = 1'-0"



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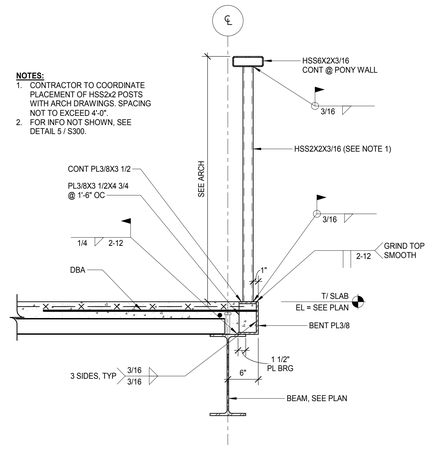

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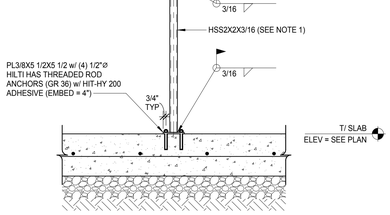

9 SECTION
SCALE = 3/4" = 1'-0"

CMT
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KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

STATE OF MISSOURI
JAMES E. RONGISH
NUMBER PE-2010043194
PROFESSIONAL ENGINEER
09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	22001238-00
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS

SHEET TITLE

STEEL FRAMING DETAILS

S301

SHEET 092 OF 131

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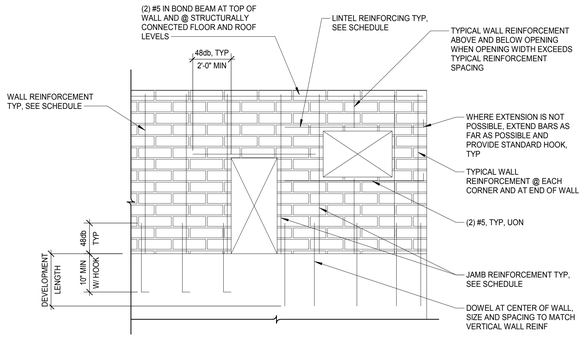
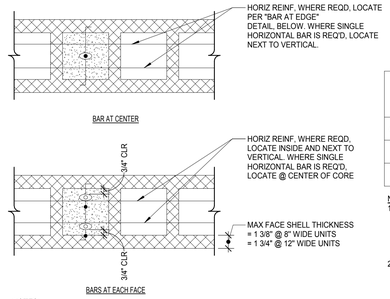


1 TYPICAL MASONRY REINFORCEMENT ELEVATION

SCALE = 1" = 1'-0"



MINIMUM CMU WALL REINFORCING SCHEDULE		
CMU SIZE	VERTICAL REINFORCEMENT	HORIZONTAL REINFORCEMENT
8 IN	#5 BARS @ 32" OC CENTERED IN WALL	LADDER TYPE JOINT REINFORCEMENT AT 16" CENTERS
12 IN	#5 BARS @ 32" OC EF OF WALL	

NOTES:
1. SEE PLANS AND STRUCTURAL NOTES FOR BAR SIZE.
2. LOCATE REINFORCING @ ALL CORNERS, EACH SIDE OF OPENING, CONTROL JOINTS AND @ SPACING SHOWN ON PLANS.
3. PROVIDE WIRE REBAR POSITIONERS TO HOLD BARS IN PLACE.

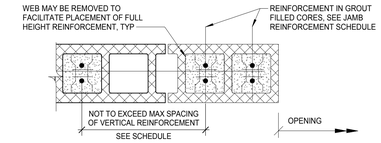
NOTES:
1. IN ADDITION TO THE SCHEDULED REINFORCEMENT, WALLS SHALL HAVE A CONTINUOUS BOND BEAM WITH AT LEAST TWO #5 BARS AT OR NEAR THE TOP COURSE, SCHEDULEDREINFORCEMENT AT OPENINGS, AND ALL OTHER HORIZONTAL AND VERTICAL REINFORCEMENT AS INDICATED ON THE STRUCTURAL DRAWINGS.
2. ALL WALLS SHALL BE REINFORCED WITH THE MINIMUMS LISTED ABOVE.

2 TYPICAL MASONRY WALL REINFORCING PLACEMENT & SCHEDULE

SCALE = 1 1/2" = 1'-0"

JAMB REINFORCING SCHEDULE			
CMU SIZE	MAXIMUM OPENING WIDTH	INTERIOR WALL REINFORCEMENT	EXTERIOR WALL REINFORCEMENT
8 IN	≤ 4' - 0"	TWO CELLS W/ (1) #5 BAR EACH	TWO CELLS W/ (1) #5 BAR EACH
8 IN	4'-0" < W ≤ 8' - 0"	THREE CELLS W/ (1) #5 BAR EACH	THREE CELLS W/ (1) #5 BAR EACH
12 IN	≤ 8' - 0"	TWO CELLS W/ (1) #5 BAR EACH	TWO CELLS W/ (2) #5 BARS EACH, (1) EA FACE
12 IN	> 8' - 0"	THREE CELLS W/ (1) #5 BAR EACH	FOUR CELLS W/ (2) #5 BARS EACH, (1) EA FACE

NOTES:
1. AN INTERIOR WALL IS A WALL IN WHICH NO PORTION OF THE WALL IS EXPOSED TO THE EXTERIOR.
2. FOR SITUATIONS THAT DO NOT FALL WITHIN THE TABLE ABOVE, CONTACT ENGINEER OF RECORD.



3 TYP MASONRY JAMB PLAN AND REINFORCING SCHEDULE

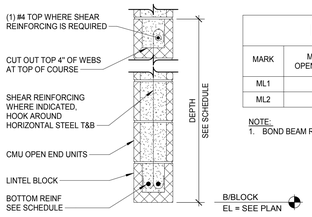
SCALE = 1 1/2" = 1'-0"

MASONRY REINFORCING SPLICE TABLE						
BAR SIZE	(1) BAR PER CELL @ CENTERLINE OF WALL				(2) BARS PER CELL, (1) EA FACE OF WALL	REMARKS
	6" CMU	8" CMU	10" CMU	12" CMU	8", 10", & 12" CMU	
#3	1'-3"	1'-3"	1'-3"	1'-3"	1'-5"	
#4	1'-10"	1'-8"	1'-8"	1'-8"	2'-6"	
#5	2'-11"	2'-1"	2'-1"	2'-1"	3'-9"	
#6	4'-6"	3'-8"	2'-9"	2'-6"	4'-6"	
#7	5'-3"	5'-1"	3'-9"	3'-0"	5'-3"	
#8	6'-0"	6'-0"	5'-9"	4'-7"	6'-0"	

NOTES:
1. MINIMUM MASONRY COMRESSIVE STRENGTH, f'm = 2,000 PSI.
2. MINIMUM MASONRY CLEAR COVER (EDGE OF BAR TO OUTSIDE FACE OF CMU) AT ALL \(2) BARS PER CELL' CASES = 2".
3. SPLICE LENGTHS ABOVE HAVE BEEN CALCULATED PER PER TMS 402-16 EQUATION 6-1.
4. PER IBC 2018 SECTIONS 2107 AND 2108, MINIMUM SPLICE LENGTHS SHALL BE 40 BAR DIAMETERS. MAXIMUM SPLICE LENGTHS NEED NOT EXCEED 72 BAR DIAMETERS.
5. MECHANICAL SPLICES CAPABLE OF DEVELOPING 1.25 x YIELD STRESS OF BAR MAY BE USED IN LIEU OF LAP LENGTHS SHOWN ABOVE FOR ANY BAR SIZE.

4 MASONRY REINFORCING SPLICE TABL

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

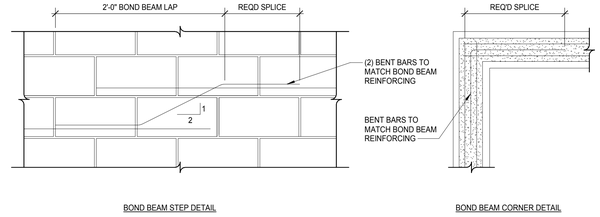


MASONRY LINTEL SCHEDULE				
MARK	MAXIMUM OPENING WIDTH	DEPTH	BOTTOM REINFORCEMENT	SHEAR REINFORCEMENT
ML1	≤ 4'-0"	1'-4"	(2) #5	NONE
ML2	≤ 8'-0"	3'-4"	(2) #5	NONE

NOTE:
1. BOND BEAM REINFORCING SHALL BE CONTINUOUS WITHOUT SPLICES.

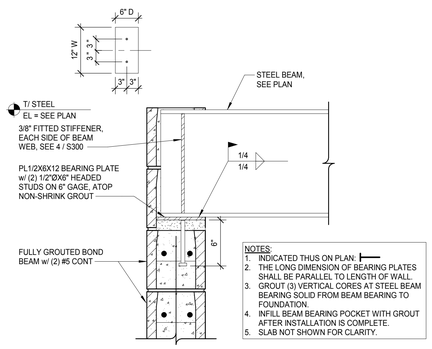
5 TYP MASONRY BEAM/LINTEL DETAIL

SCALE = 1" = 1'-0"



6 TYPICAL BOND BEAM DETAILS

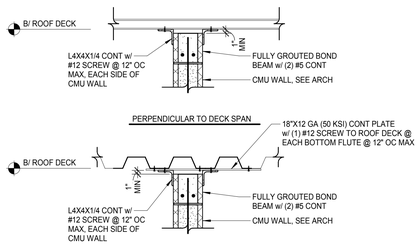
SCALE = 3/4" = 1'-0"



NOTES:
1. INDICATED THUS ON PLAN:
2. THE LONG DIMENSION OF BEARING PLATES SHALL BE PARALLEL TO LENGTH OF WALL.
3. GROUT (3) VERTICAL CORES AT STEEL BEAM BEARING SOLID FROM BEAM BEARING TO FOUNDATION.
4. INFILL BEAM BEARING POCKET WITH GROUT AFTER INSTALLATION IS COMPLETE.
5. SLAB NOT SHOWN FOR CLARITY.

7 TYPICAL STEEL BEAM BEARING PERPENDICULAR TO CMU WALL

SCALE = 1 1/2" = 1'-0"



8 TYPICAL MASONRY NON-LOAD BEARING WALL SUPPORT AT ROOF

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

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LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT CITY
PROJECT NO. - 47732472

STATE OF MISSOURI
JAMES E. RONGISH
NUMBER PE-2021043194
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LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

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CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	JER
DRAWN BY:	JER
CHECKED BY:	CWS
APPROVED BY:	CWS

SHEET TITLE

TYPICAL CMU FRAMING DETAILS

S400

SHEET 093 OF 131

ELECTRICAL SYMBOL LEGEND

POWER DEVICES

- DUPLEX RECEPTACLE
- SINGLE RECEPTACLE
- FOUR PLEX RECEPTACLE
- DUPLEX RECEPTACLE, 6" ABOVE COUNTERTOP UNLESS OTHERWISE NOTED
- GFI GROUND FAULT DUPLEX RECEPTACLE
- DUPLEX RECEPTACLE ON EMERGENCY CIRCUIT
- FOUR PLEX RECEPTACLE ON EMERGENCY CIRCUIT
- WP GROUND FAULT DUPLEX RECEPTACLE WITH WHILE-IN-USE COVER
- USB DUPLEX RECEPTACLE WITH USB OUTLETS
- IG ISOLATED GROUND RECEPTACLE
- SPECIAL-PURPOSE OUTLET. LETTER DESIGNATES TYPE, SEE SPECIAL CONNECTION SCHEDULE FOR REQUIREMENTS
- WALL MOUNTED JUNCTION BOX
- CEILING MOUNTED JUNCTION BOX
- FLOOR MOUNTED JUNCTION BOX
- SURFACE RACEWAY WITH OUTLETS AS INDICATED ON PLANS,MOUNTED AT 18" TO CENTER OF DEVICE AFF UNLESS OTHERWISE NOTED
- PUSHBUTTON SWITCH
- COMBINATION PUSHBUTTON SWITCH
- MUSHROOM EMERGENCY SHUT-OFF SWITCH
- FLOOR MOUNTED DUPLEX RECEPTACLE
- FLOOR MOUNTED FOUR PLEX RECEPTACLE
- CEILING MOUNTED DUPLEX RECEPTACLE
- CEILING MOUNTED FOUR PLEX RECEPTACLE
- ELECTRICAL DISTRIBUTION PANEL
- RECESS MOUNT ELECTRICAL PANEL
- SURFACE MOUNT ELECTRICAL PANEL
- T ELECTRICAL POWER TRANSFORMER
- DISCONNECT SWITCH PROVIDED WITH EQUIPMENT
- FUSED DISCONNECT SWITCH
- NON-FUSED DISCONNECT SWITCH
- COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH
- STARTER/MOTOR CONTROLLER
- ELECTICAL MOTOR - SINGLE PHASE
- ELECTRICAL MOTOR - THREE PHASE
- R RELAY
- B BATTERY PACK
- MOTORIZED DAMPER
- TV TELEVISOIN OUTLET. PROVIDE DATA RECEPTACLE AND DUPLEX RECEPTACLE FOR EACH TV LOCATION MOUNTED AT HEIGHT INDICATED ON PLANS
- WM METER PER UTILITY REQUIREMENTS

LIGHTING

- OS CEILING OR WALL-MOUNTED OCCUPANCY SENSOR
- PC CEILING OR WALL-MOUNTED PHOTO CELL
- LC LIGHTING CONTACTOR
- TC TIME CLOCK, AS INDICATED ON PLANS
- ER EMERGENCY RELAY, AS INDICATED ON PLANS
- RC ROOM CONTROLLER, AS INDICATED ON PLANS
- $ SINGLE-POLE SWITCH
- $2 DOUBLE-POLE SWITCH
- $3 3-WAY SWITCH
- $4 4-WAY SWITCH
- $L LOW VOLTAGE OVERRIDE SWITCH
- $D LOW VOLTAGE OVERRIDE DIMMING SWITCH

SPECIAL SYSTEMS

- DATA OUTLET
- TELEPHONE OUTLET
- COMBINATION DATA/TELEPHONE OUTLET
- WAP WIRELESS ACCESS POINT, CEILING MOUNTED
- CABLE TRAY
- GROUND BAR
- FB MULTI-SERVICE POWER AND DATA FLOOR BOX/POKE THRU. "FF" ADJACENT TO SYMBOL INDACTES FURNITURE FEED.

FIRE ALARM

- M MAGNETIC DOOR HOLD DEVICE
- FS SPRINKLER FLOW SWITCH
- TS SPRINKLER TAMPER SWITCH
- EXTERIOR REMOTE FLASHING STROBE LIGHT
- F MANUAL PULL STATION; ADA COMPLIANT
- F HORN & STROBE; ADA COMPLIANT
- F STROBE; ADA COMPLIANT
- F SPEAKER & STROBE; ADA COMPLIANT
- FIRE ALARM VOICE WALL MOUNT SPEAKER
- B MULTIPLE TONE BUZZER
- FIRE ALARM VOICE CEILING MOUNT SPEAKER
- F FIRME ALARM STROBE, CEILING MOUNTED
- SMOKE DETECTOR
- DUCT MOUNTED SMOKE DETECTOR
- HD THERMAL HEAT DETECTOR
- PIV POST INDICATOR VALVE
- B BELL
- R SHUTDOWN RELAY WITH REMOTE TEST SWITCH
- RT SHUTDOWN RELAY AND TEST SWITCH
- FACP FIRE ALARM CONTROL PANEL
- RAP REMOTE ANNUNCIATOR PANEL
- NAC NOTIFICATION APPLIANCE CURCUIT
- SMOKE DAMPER
- FIRE DAMPER
- COMBINATION FIRE AND SMOKE DAMPER
- A CLEAN AGENT ABORT STATION. MOUNT ADJACENT TO MANUAL RELEASE STATION

SECURITY DEVICES

- ES ELECTRIC DOOR STRIKER
- VIDEO CAMERA, WITH MOUNTING HARDWARE
- ML ELECTRIC MAGNETIC LOCK
- CL ELECTRIC CYLINDER LOCK
- CR CARD READER
- REX REQUEST TO EXIT
- D DOOR CONTACT
- M MOTION DETECTOR, CEILING MOUNTED
- M MOTION DETECTOR, WALL MOUNTED
- EMERGENCY DOOR RELEASE BUTTON
- PANIC BUTTON
- SECURITY BUZZER HORN

CIRCUITRY

- —P-UG— EXISTING, NEW, OR DEMO POWER FEEDER BELOW GRADE
- — — — ITEM BELOW GRADE (NEW WORK) OR TO BE DEMOLISHED (DEMO)
- BRANCH CIRCUIT. 2#12 AND 1#12G IN 3/4" CONDUIT UNO

ABBREVIATIONS/MODIFIERS

X	SHEET NOTE TAG, LABEL INDICATES NOTE NUMBER
XX	FEEDER TAG
*	ABOVE COUNTER
A	AMPERE
AD	AUTOMATIC DAMPER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AFCI	ARC FAULT CIRCUIT INTERUPTER
ATS	AUTOMATIC TRANSFER SWITCH
C	CONDUIT
CB	CIRCUIT BREAKER
CIR	CIRCUIT
CUH	CABINET UNIT HEATER
E	EXISTING DEVICES TO REMAIN
EF	EXHAUST FAN
EMT	ELECTRIC METALLIC TUBING
ER	NEW LOCATION OF EXISTING RELOCATED
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FA	FIRE ALARM
FB	FLOOR BOX
FMC	FLEXIBLE METALLIC TUBING
GFI	GROUND FAULT INTERRUPTER
HD	HAND DRYER
IG	ISOLATED GROUND
MAU	MAKE-UP AIR UNIT
MD	MOTORIZED DAMPER
NF	NON-FUSED
NL	NIGHT LIGHT
NR	NEW TO REPLACE EXISTING
P	POLE
PE	PRIMARY ELECTRIC SERVICE
PTD	ELECTRIC PAPER TOWEL DISPENSER
PVC	POLYVINYL CHLORIDE CONDUIT
RE	REMOVE EXISTING
REF	ROOF EXHAUST FAN
RL	RELOCATE EXISTING
RMC	RIGID METALLIC CONDUIT
RR	REMOVE AND REPLACE ON NEW SURFACE
RTU	ROOFTOP UNIT
SD	SMOKE DAMPER
SE	SECONDARY ELECTRIC SERVICE
S&P	SPACE AND PROVISION
T	TELEPHONE SERVICE
TCP	TEMPERATURE CONTROL PANEL
TP	TAMPER PROOF
TV	TELEVISION
UGE	UNDERGROUND ELECTRICAL
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
WG	WIRE GUARD
WP	WEATHERPROOF
WR	WEATHER RESISTANT
XFMR	TRANSFORMER

GENERAL NOTES

A. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE ADOPTED ELECTRICAL CODE.

B. ELECTRICAL DESIGN HAS BEEN BASED ON THE INSTALLATION OF 90-DEGREE CONDUCTORS CONNECTED TO TERMINAL LUGS AND EQUIPMENT UL LISTED FOR A MINIMUM OF 75-DEGREES. CONDUCTORS TERMINATED ON EQUIPMENT WITH A LOWER RATING OR NO RATING SHALL HAVE CONDUCTOR SIZE INCREASED TO CONFORM TO THE ADOPTED ELECTRICAL CODE.

C. CONTACT ELECTRIC UTILITY AND ARRANGE FOR ELECTRICAL SERVICE AS INDICATED ON DRAWINGS. INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY UTILITY COMPANY INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR ELECTRIC SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITIES.

D. INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATION AS TO TYPE AND LOCATION OF SAME AS MAY BE NECESSARY TO AVOID DAMAGE THERE OF.

E. FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK. ANY INTERFERENCE SHALL BE BROUGHT TO ATTENTION OF THE ARCHITECT AND ENGINEER FOR DIRECTION.

F. PLANS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED.

G. COOPERATE CLOSELY WITH ALL OTHER TRADES TO EXPEDITE CONSTRUCTION AND AVOID INTERFERENCES AND CONFLICTS. BEFORE ANY PIPING, DUCTWORK, CONDUIT, ETC. IS INSTALLED, IT SHALL BE COORDINATED CAREFULLY BETWEEN ALL TRADES.

H. GUARANTEE ALL EQUIPMENT, ACCESSORIES, AND MATERIAL FURNISHED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE AGAINST ALL DEFECTS.

I. ALL WIRING SHALL BE INSTALLED IN CONDUIT AND BE CONCEALED. REFER TO CONDUIT APPLICATION SCHEDULE.

J. COORDINATE EQUIPMENT LOCATIONS AND ELECTRICAL CONNECTIONS FOR MECHANICAL AND PLUMBING EQUIPMENT.

K. ALL BRANCH CIRCUITS SHALL CONSIST OF (2) #12 AND (1)#12 EQUIPMENT GROUND IN 1/2" EMT CONDUIT, UNLESS OTHERWISE NOTED.

L. ALL ELECTRICAL RACEWAYS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR SIZED PER THE ADOPTED ELECTRICAL CODE.

M. MINIMUM CONDUIT SIZE SHALL BE 1/2" ABOVE GRADE AND 3/4" BELOW GRADE.

N. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULLSTRING.

O. ALL MATERIALS EXPOSED IN PLENUM SPACES SHALL BE NON-COMBUSTIBLE OR HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING NOT MORE THAN 50.

P. COORDINATE INSTALLATION OF ELECTRICAL WORK WITH OTHER TRADES. INSTALL AT THE GREATEST POSSIBLE CLEARANCE FOR INSTALLATION OF OTHER TRADES. TRADES WITH REQUIRED SLOPES SHALL HAVE PLACEMENT PRIORITY. WHERE POSSIBLE RACEWAYS SHALL BE ROUTED THROUGH TRUSSES.

Q. ALL LOW VOLTAGE CABLING (FIBER, CATV, TELEPHONE, DATA/NETWORK, ETC.) SHALL BE PROVIDED BY OTHERS UNLESS OTHERWISE NOTED. ALL CABLING SHALL BE PLENUM RATED.

R. ALL CONDUITS THAT PENETRATE AN EXTERIOR WALL SHALL BE SEALED AIR TIGHT INSIDE THE CONDUIT, TO PREVENT COLD AIR AND WARM AIR FROM MISSING INSIDE THE CONDUIT.

S. DEFINITIONS:
1. PROVIDE - CONTRACTOR SHALL FURNISH AND INSTALL
2. FURNISH - CONTRACTOR SHALL OBTAIN FOR OTHERS TO INSTALL.
3. INSTALL - CONTRACTOR IS RESPONSIBLE FOR ALL LABOR AND CONSTRUCTION EQUIPMENT NECESSARY TO SET IN PLACE, CONNECT, CALIBRATE.

T. REFER TO ARCHITECTURAL PLANS AND INTERIOR ELEVATIONS FOR ALL WALL FIXTURE MOUNTING HEIGHTS AND INSTALLATION DETAILS.

U. ALL CONDUITS THAT TERMINATE INSIDE MECHANICAL EQUIPMENT SHALL BE SEALED AIR TIGHT TO PREVENT AIR FROM TRANSFERRING THROUGH THE CONDUIT.

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

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olsson
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	SH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

GENERAL ELECTRICAL INFORMATION

E001

SHEET 094 OF 131

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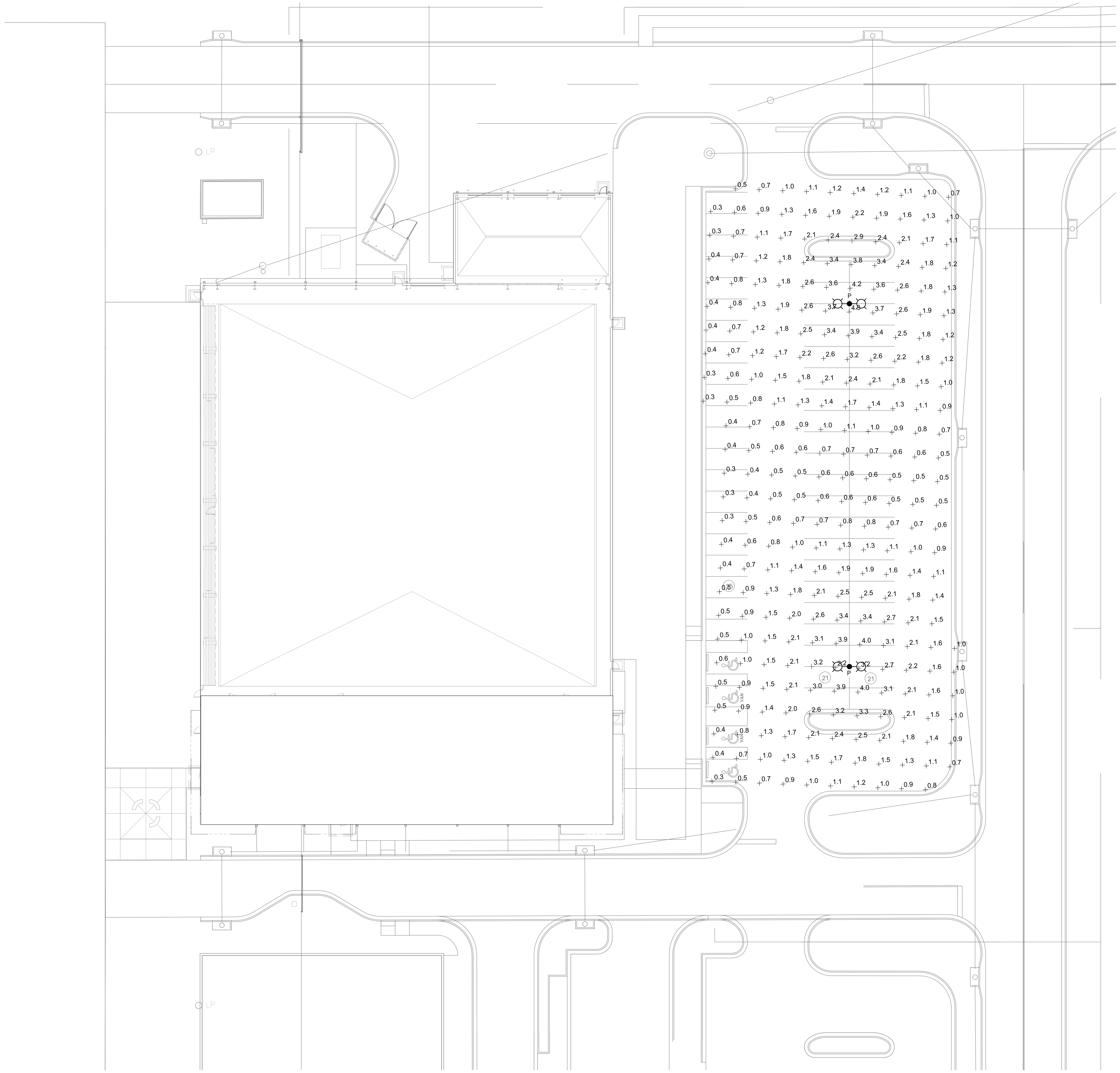
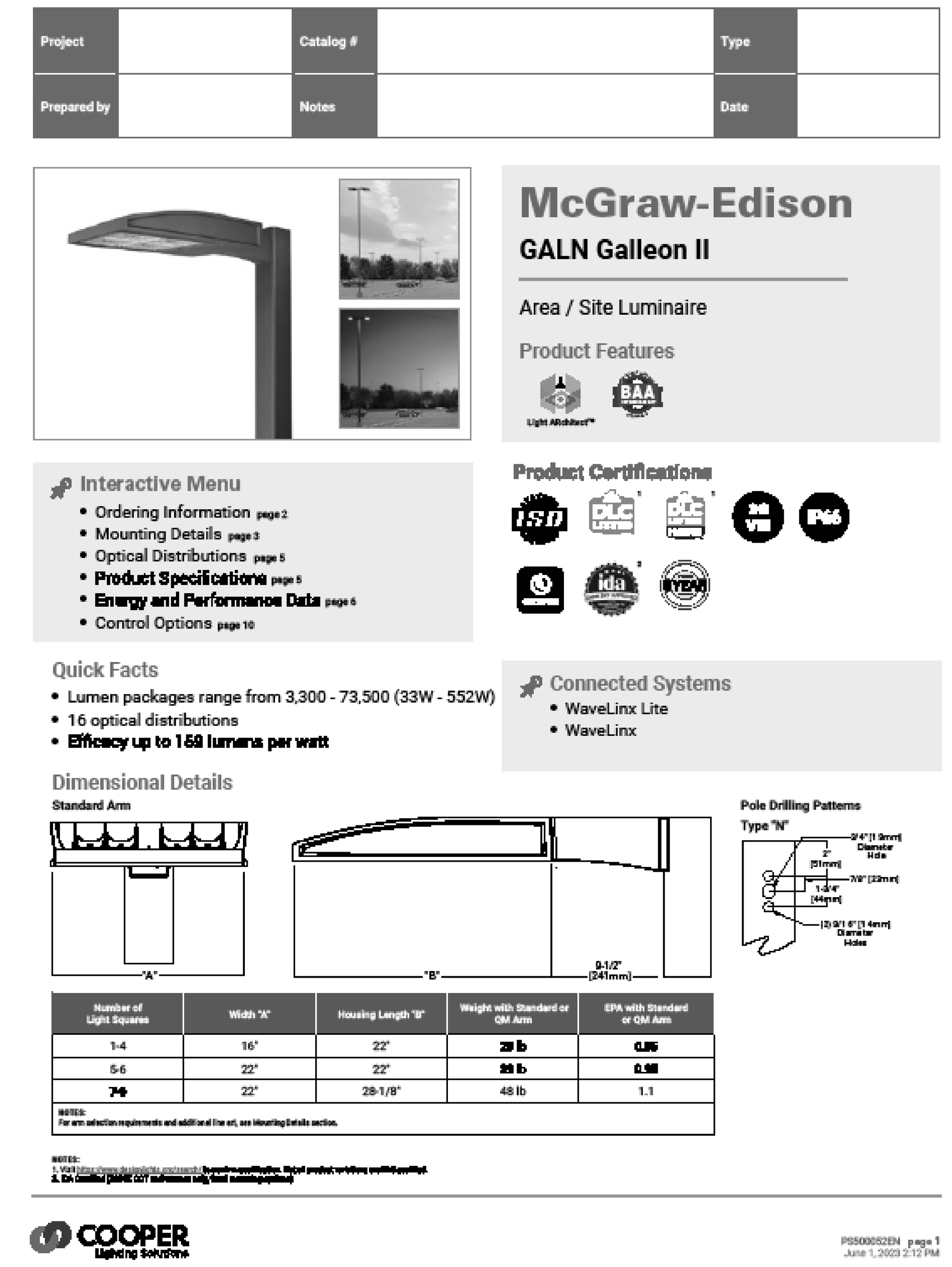




Project		Catalog #		Type	
Prepared by		Notes		Date	

McGraw-Edison
GALN Galleon II
Area / Site Luminaire

Product Features

Interactive Menu
- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 5
- Product Specifications page 5
- Energy and Performance Data page 6
- Control Options page 10

Product Certifications

Quick Facts
- Lumen packages range from 3,300 - 73,500 (33W - 552W)
- 16 optical distributions
- Efficacy up to 159 lumens per watt

Connected Systems
- WaveLinx Lite
- WaveLinx

Dimensional Details
Standard Arm

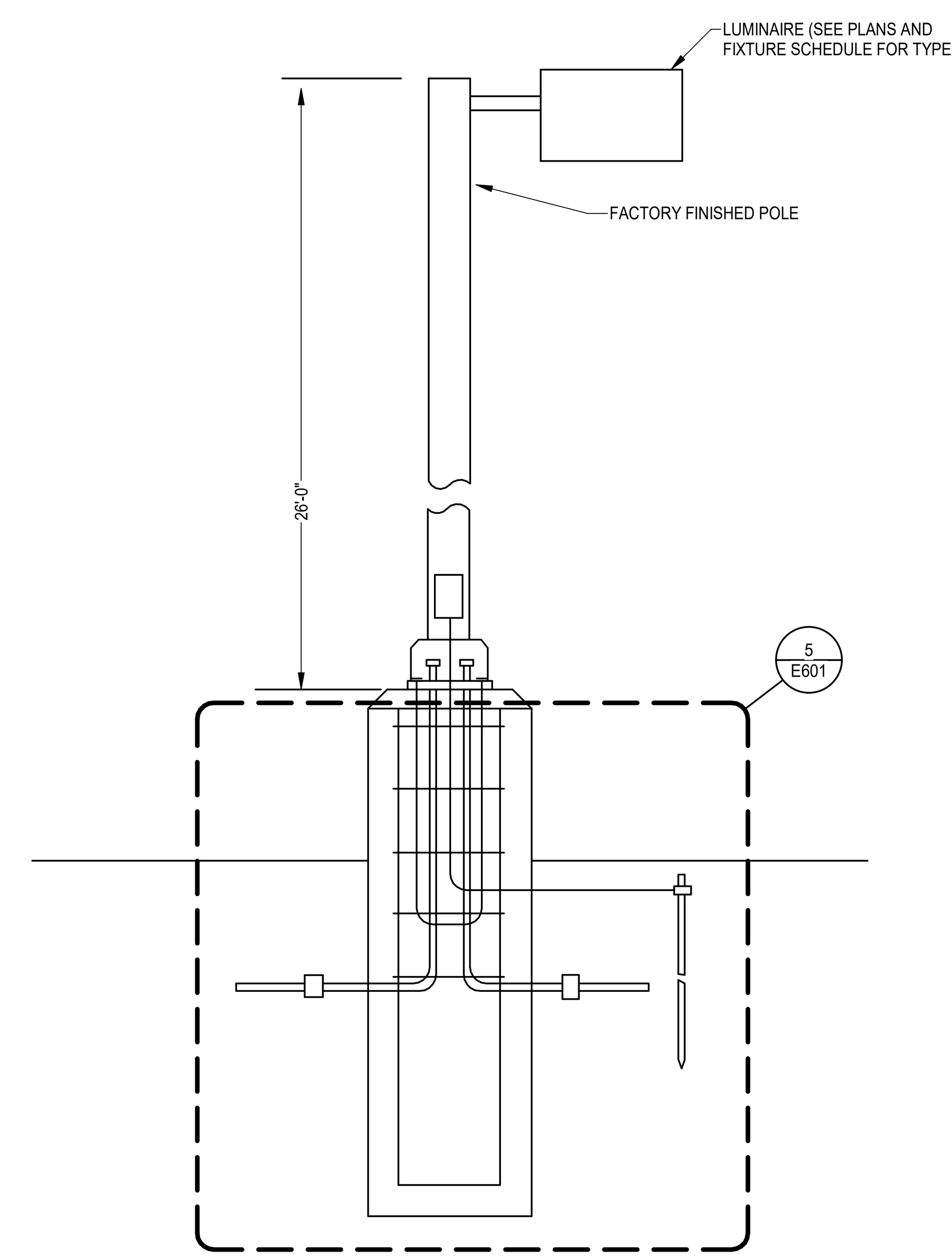
Pole Drilling Patterns
Type "N"

Number of Light Squares	Width "A"	Housing Length "B"	Weight with Standard or QM Arm	EPA with Standard or QM Arm
1-4	16"	22"	[illegible]	[illegible]
5-6	22"	22"	[illegible]	[illegible]
7-8	22"	28-1/8"	48 lb	1.1

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

COOPER Lighting Solutions

PS500052EN page 1
June 1, 2023 2:12 PM



LIGHT POLE DETAIL (2)
NOT TO SCALE

STATISTICS						
DESRIPTION	SYMBOL	AVG	MAX	MIN	MAX/MIN	AVG/MIN
PARKING	+	1.5	4.3	0.3 fc	14.3:1	5.0:1

SITE LIGHTING PHOTOMETRICS PLAN (1)
1" = 20'-0"

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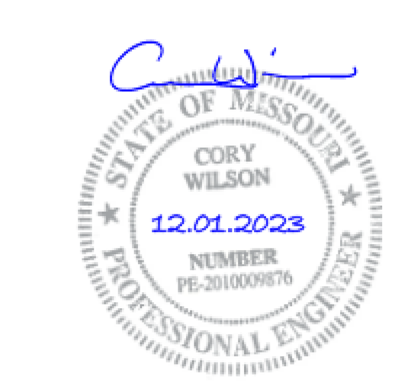
LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472



09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

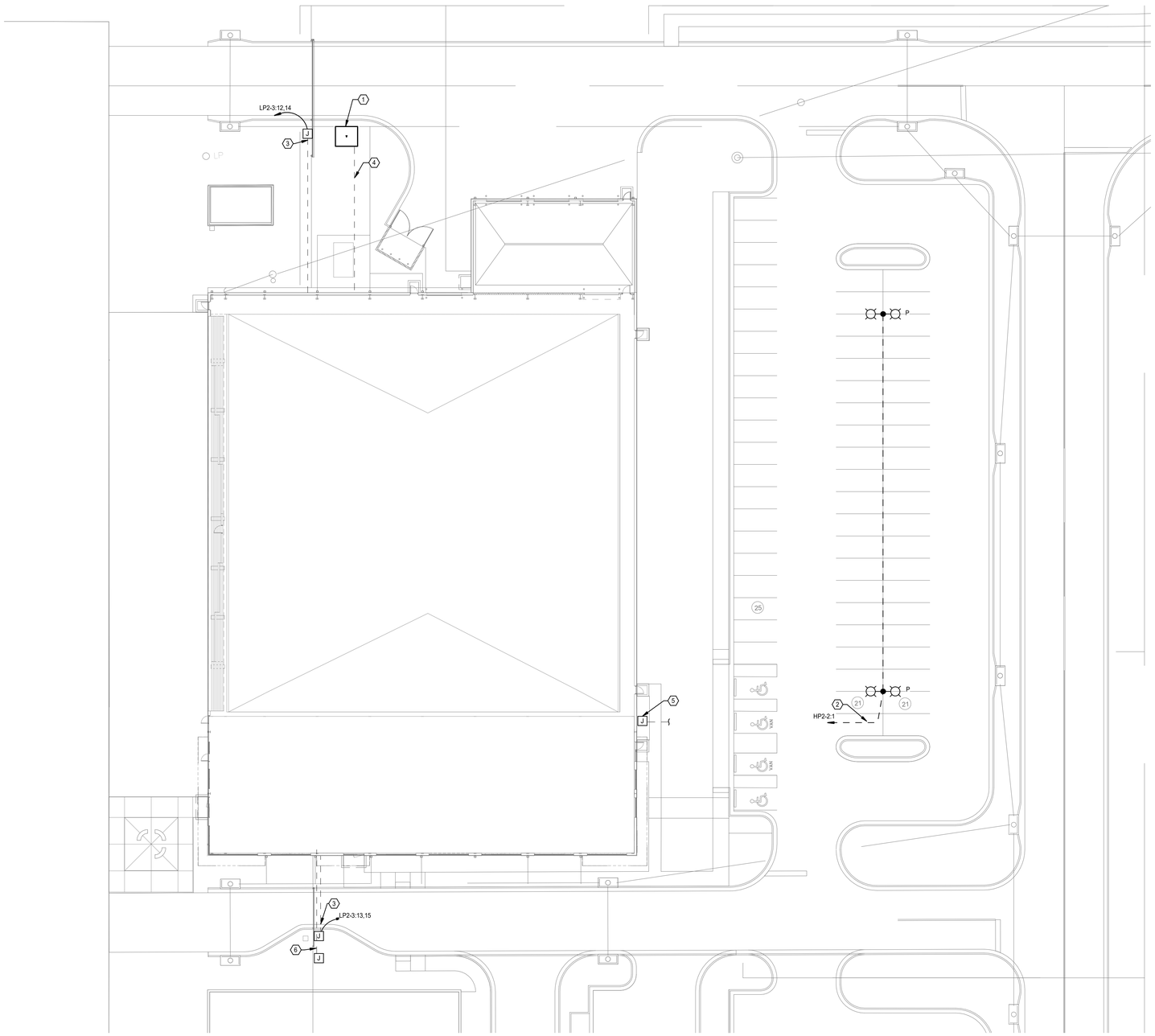
MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	SH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE
SITE LIGHTING PHOTOMETRICS PLAN

E002

12/1/2023 11:41:14 AM



POWER SITE PLAN 1
1" = 20'-0"

GENERAL SHEET NOTES

A. TO FEDERAL, STATE, AND LOCAL STATUTES, NOTIFY MISSOURI ONE-CALL SYSTEM, INC. AT LEAST 48 HOURS PRIOR TO ANY DIGGING, TRENCHING, EXCAVATION, ETC.

B. INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF TYPE AND LOCATION OF ALL UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

C. FIELD VERIFY LOCATION OF ALL UTILITIES PRIOR TO BEGINNING WORK. ANY INTERFERENCE SHALL BE BROUGHT TO ATTENTION OF THE ARCHITECT AND ENGINEER FOR DIRECTION.

D. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT EACH BRANCH CIRCUIT. CONDUCTOR MAY NOT BE INDICATED GRAPHICALLY.

ELECTRICAL KEYNOTES

1 PAD MOUNTED UTILITY TRANSFORMER. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY. ROUTE SECONDARY FEEDER BELOW GRADE AND STUB UP ON EXTERIOR WALL INTO CT CABINETS. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

2 ROUTE EXTERIOR LIGHTING CIRCUIT THROUGH LIGHTING RELAY CONTROL PANEL. LIGHTING SHALL BE CONTROLLED BY TIME CLOCK.

3 ROUTE POWER AND 1" EMPTY CONDUIT WITH PULL STRINGS FOR GATE POWER.

4 SECONDARY FEEDER ROUTED BELOW GRADE FROM UTILITY TRANSFORMER. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.

5 (2)-4" EMPTY CONDUITS ROUTED BELOW GRADE FROM TELECOM JUNCTION BOX AND STUBBED UP IN ELECTRICAL ROOM. CAP CONDUITS WITH PULL STRINGS. COORDINATE EXACT LOCATION OF JUNCTION BOX WITH TELECOM SERVICE PROVIDER. PROVIDE TRACER WIRE WITH PULL STRINGS. ROUTE CONDUITS TO SERVICE PROVIDER DEMARC LOCATION. COORDINATE LOCATION WITH SERVICE PROVIDER.

6 4" CONDUIT ROUTED BELOW GRADE FROM ELECTRICAL ROOM AND TERMINATED IN JUNCTION BOX FOR FUTURE TERMINAL BUILDING COMMUNICATION CABLING. PROVIDE EMPTY CONDUIT WITH PULL STRINGS.

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

CORY WILSON
STATE OF MISSOURI
12.01.2023
NUMBER PE-2010000676
PROFESSIONAL ENGINEER

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	SH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE
ELECTRICAL SITE PLAN

E003
SHEET 096 OF 131

12/1/2023 11:41:16 AM

GENERAL SHEET NOTES

A. REFER TO LIGHTING FIXTURE AND SEQUENCE SCHEDULE FOR ADDITIONAL INFORMATION.

B. DESIGNATED EMERGENCY LIGHTING SHALL BE CONTROLLED WITH A NORMAL SOURCE CIRCUIT FROM NEAREST FIXTURE AND ASSOCIATED CONTROLS WITHIN IN SPACE. PROVIDE UL924 EMERGENCY LIGHTING CONTROL RELAY TO BY PASS LOCAL CONTROLS DURING LOSS OF POWER. REFER TO ROOM CONTROLLER EMERGENCY DETAIL FOR ADDITOINAL INFORMATION.

ELECTRICAL KEYNOTES

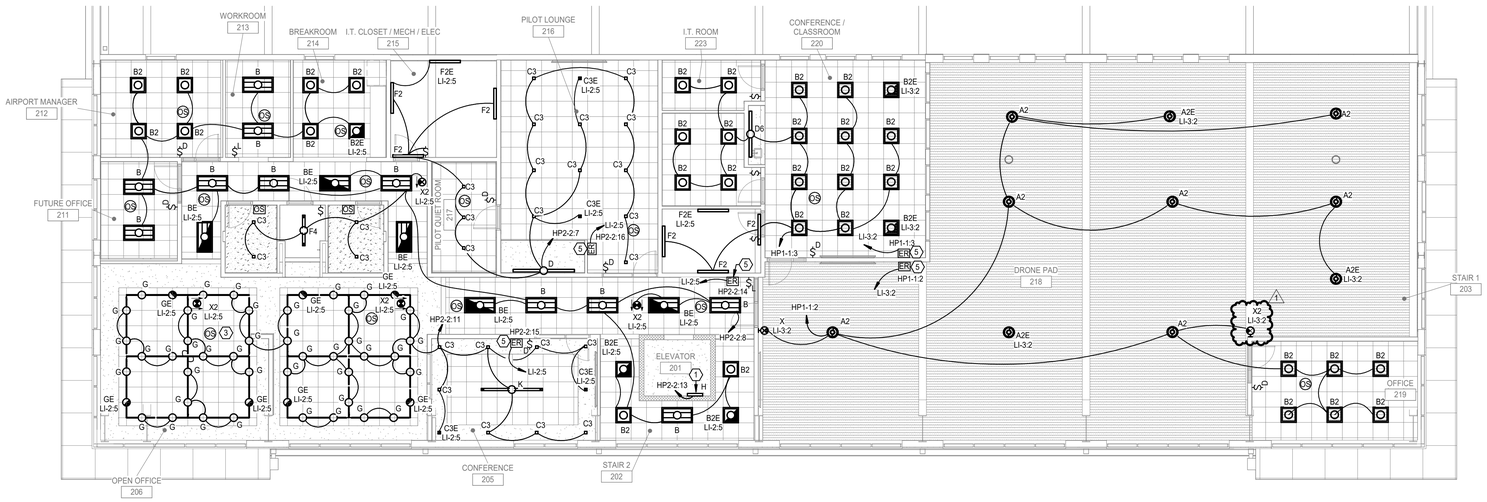
1 SURFACE MOUNT ELEVATOR PIT LIGHT FIXTURE BELOW ELEVATOR OPENING IN ELEVATOR PIT AND ABOVE OPENING AT TOP OF SHAFT. COORDINATE EXACT LOCATION WITH ELEVATOR EQUIPMENT AND OTHER TRADES PRIOR TO INSTALLATION.

2 ROUTE EXTERIOR LIGHTING CIRCUIT THROUGH LIGHTING RELAY CONTROL PANEL. LIGHTING SHALL BE CONTROLLED BY TIME CLOCK.

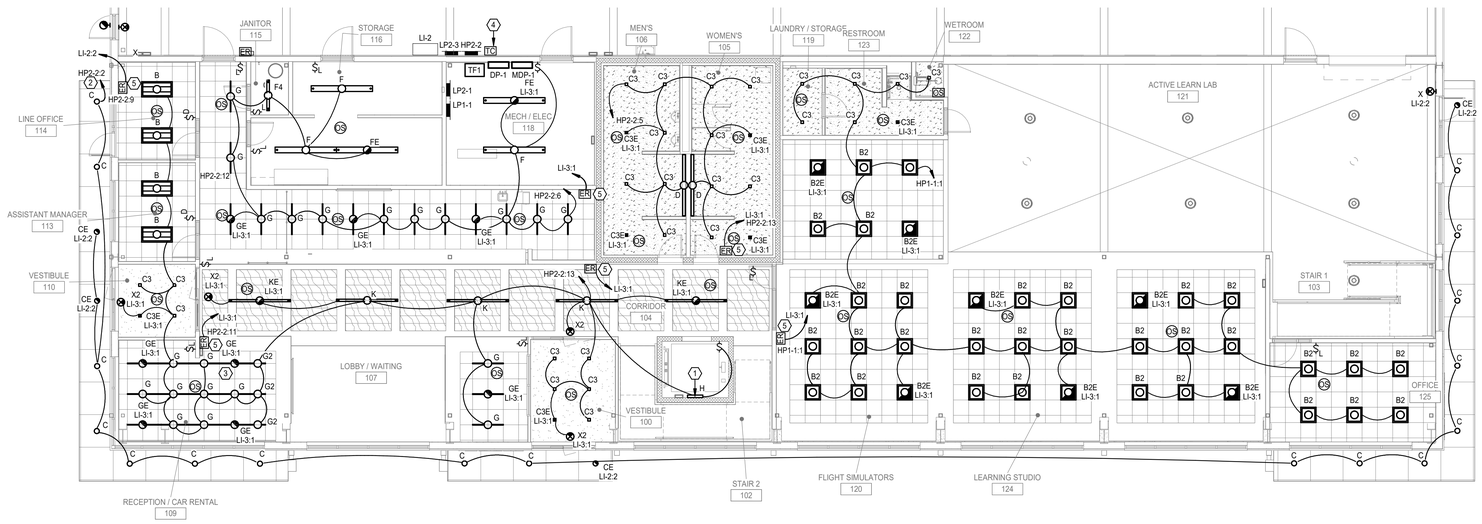
3 PROVIDE 277.24V LOW VOLTAGE TRANSFORMER ABOVE CEILING FOR T-BAR LIGHT FIXTURES.

4 PROVIDE LIGHTING CONTROL PANEL EQUAL TO WATTSTOPPER# LMCP 24.

5 ROUTE EMERGENCY LIGHTING CIRCUIT THROUGH UL 924 EMERGENCY RELAY. REFER TO LIGHTING CONTROL PANEL FOR ADDITIONAL INFORMATION.



LIGHTING SECOND FLOOR PLAN (2)
1/8" = 1'-0"



LIGHTING FIRST FLOOR PLAN (1)
1/8" = 1'-0"

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI · CORY WILSON · 11.08.2023 · NUMBER PE-2010000878 · PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

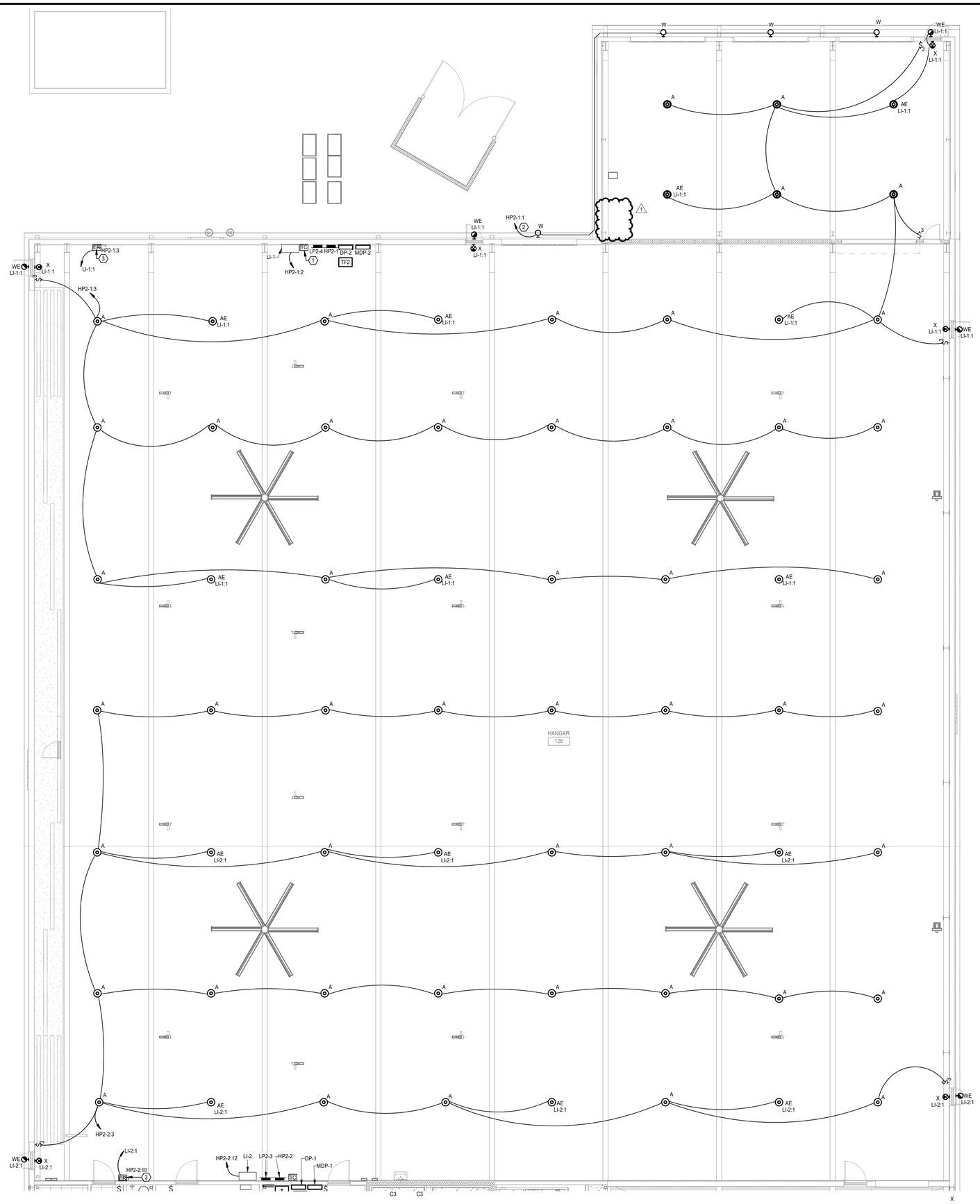
SHEET TITLE

LIGHTING FLOOR PLANS

E101

SHEET 097 OF 131

11/8/2023 11:54:14 AM



LIGHTING HANGAR PLAN 1
1/8" = 1'-0"

GENERAL SHEET NOTES

A. DESIGNATED EMERGENCY LIGHTING SHALL BE CONTROLLED WITH A NORMAL SOURCE CIRCUIT FROM NEAREST FIXTURE AND ASSOCIATED CONTROLS WITHIN IN SPACE. PROVIDE UL924 EMERGENCY LIGHTING CONTROL RELAY TO BY PASS LOCAL CONTROLS DURING LOSS OF POWER. REFER TO ROOM CONTROLLER EMERGENCY DETAIL FOR ADDITOINAL INFORMATION.

ELECTRICAL KEYNOTES

1 PROVIDE LIGHTING CONTROL PANEL EQUAL TO WATTSTOPPER# LMCP 24.
2 ROUTE EXTERIOR LIGHTING CIRCUIT THROUGH LIGHTING RELAY CONTROL PANEL. LIGHTING SHALL BE CONTROLLED BY TIME CLOCK.
3 ROUTE EMERGENCY LIGHTING CIRCUIT THROUGH UL 924 EMERGENCY RELAY. REFER TO LIGHTING CONTROL PANEL FOR ADDITIONAL INFORMATION.

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000875
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

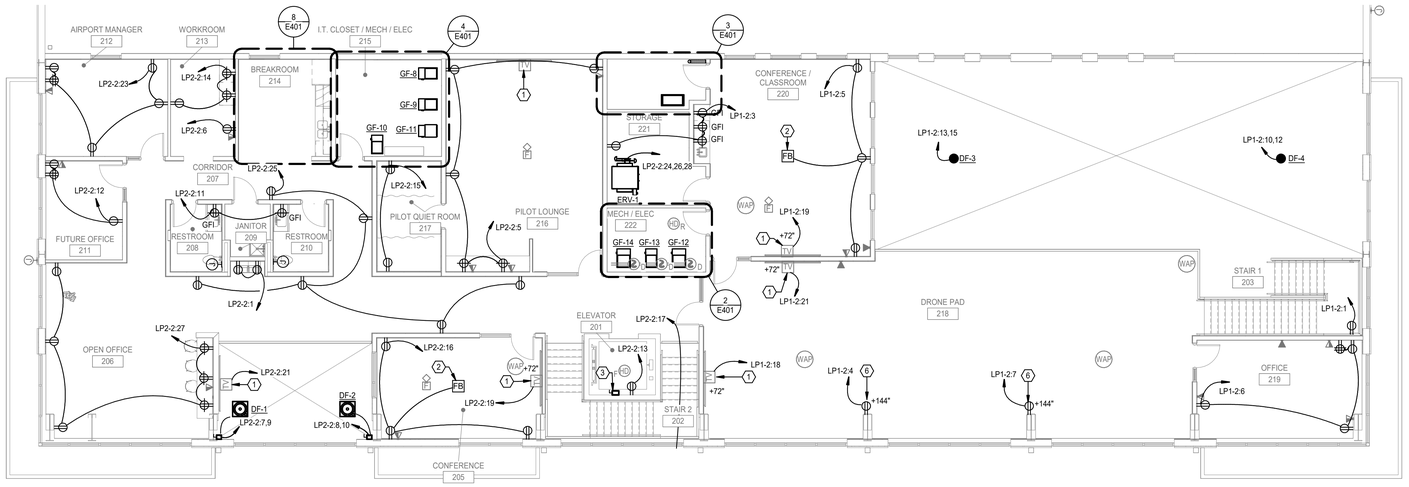
SHEET TITLE
LIGHTING HANGAR FLOOR PLAN

E102
SHEET 098 OF 131

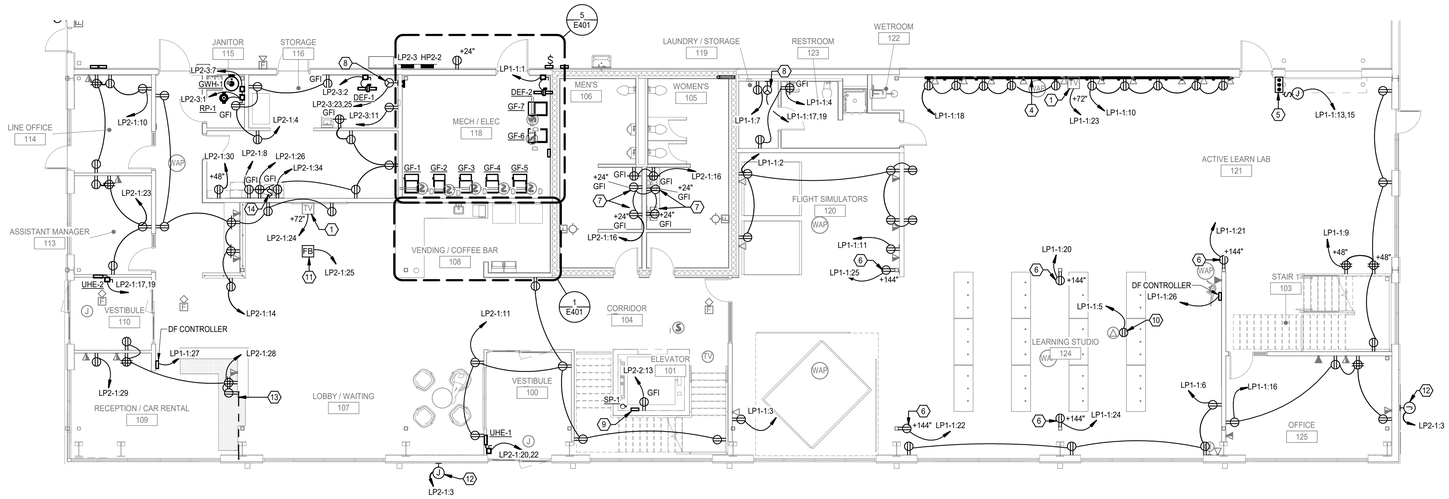
11/8/2023 11:54:17 AM

ELECTRICAL KEYNOTES

1. PROVIDE TV OUTLET EQUAL TO LEGRAND# TV3WTVSSW WITH CONDUIT TO ABOVE ACESSIBLE CEILING PER AV INFRASTRUCTURE DETAIL. COORDINATE ALL DEVICE REQUIREMENTS WITH OWNER. REFER TO ARCHITECTURAL PLANS FOR EXACT MOUNTING HEIGHTS.
2. COMBINATION POWER/DATA POKE-THRU FLOOR BOX. PROVIDE LEGRAND 6AT SERIES OR EQUIVALENT WITH COVER PLATE, TWO (2) DUPLEX RECEPTACLES, DATA ACTIVATIONS, AND AV CABLING FEED THROUGH. PROVIDE ONE (1) 3/4" CONDUIT FOR POWER AND ONE (1) 1-1/4" CONDUIT FOR DATA. REFER TO SYSTEMS PLANS FOR ADDITIONAL INFORMATION ON DATA CONDUIT ROUTING REQUIREMENTS.
3. NON-FUSED, ENCLOSED, EXTERNALLY-OPERABLE MOTOR DISCONNECT CAPABLE OF BEING LOCKED IN THE OPEN POSITION. THIS SWITCH IS TO BE IN LINE OF SIGHT OF THE MOTOR CONTROLLER.
4. PROVIDE DUAL CHANNEL RACEWAY EQUAL TO WIREMOLD ALDS4000 SERIES WITH DUPLEX RECEPTACLES AND DATA OUTLETS LOCATED 4'-0" ON CENTER.
5. PROVIDE START/STOP PUSH BUTTON FOR COILING OVERHEAD DOOR PER MANUFACTURER REQUIREMENT.
6. PROVIDE CORD AND REEL WITH TRIPLE TAP OUTLET EQUAL TO HUBBELL HBL24012ITT. REEL SHALL BE MOUNTED TO STRUCTURAL COLUMN OR FROM STRUCTURE ABOVE AT 12'-0" A.F.F.
7. PROVIDE RECEPTACLE ABOVE CEILING FOR LOW VOLTAGE POWER TO FLUSH VALVES. PROVIDE RECEPTACLE FOR LAVATORIES PER MANUFACTURER.
8. PROVIDE NEMA 14-30R OR 10-30R RECEPTACLE WITH (3)#10 AND (1)#10 GROUND IN 3/4" CONDUIT FOR DRYER. REFER TO MANUFACTURER AND PROVIDE EXACT REQUIREMENTS.
9. SUMP PUMP ALARM PANEL. PROVIDE (1) 2" CONDUIT WITH PULL STRING FROM SUMP PUMP ALARM PANEL STUBBED INTO ELEVATOR PIT FOR ROUTING OF POWER AND CONTROL CABLE TO SUMP PUMP.
10. PROVIDE RECEPTACLE AND DATA OUTLET ABOVE CEILING FOR PROJECTOR. COORDINATE LOCATION WITH CEILING AND VERIFY ALL REQUIREMENTS WITH MANUFACTURER AND OWNER.
11. COMBINATION POWER/DATA FLOOR BOX. PROVIDE LEGRAND RFB SERIES OR EQUIVALENT WITH COVER PLATE, TWO (2) DUPLEX RECEPTACLES, DATA ACTIVATIONS, AND AV CABLING FEED THROUGH. REFER TO FLOOR BOX DETAIL AND SYSTEMS PLANS FOR ADDITIONAL INFORMATION.
12. PROVIDE POWER ROUGH IN FOR SIGN LIGHTING.
13. ROUTE CONDUIT BELOW FLOOR AND STUB UP IN CASEWORK. COORDINATE EXACT LOCATION WITH CASEWORK.
14. ROUTE CIRCUIT FOR GARBAGE DISPOSAL OUTLET THROUGH TOGGLE SWITCH.



POWER SECOND FLOOR PLAN (2)
1/8" = 1'-0"



POWER FIRST FLOOR PLAN (1)
1/8" = 1'-0"

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1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000878
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

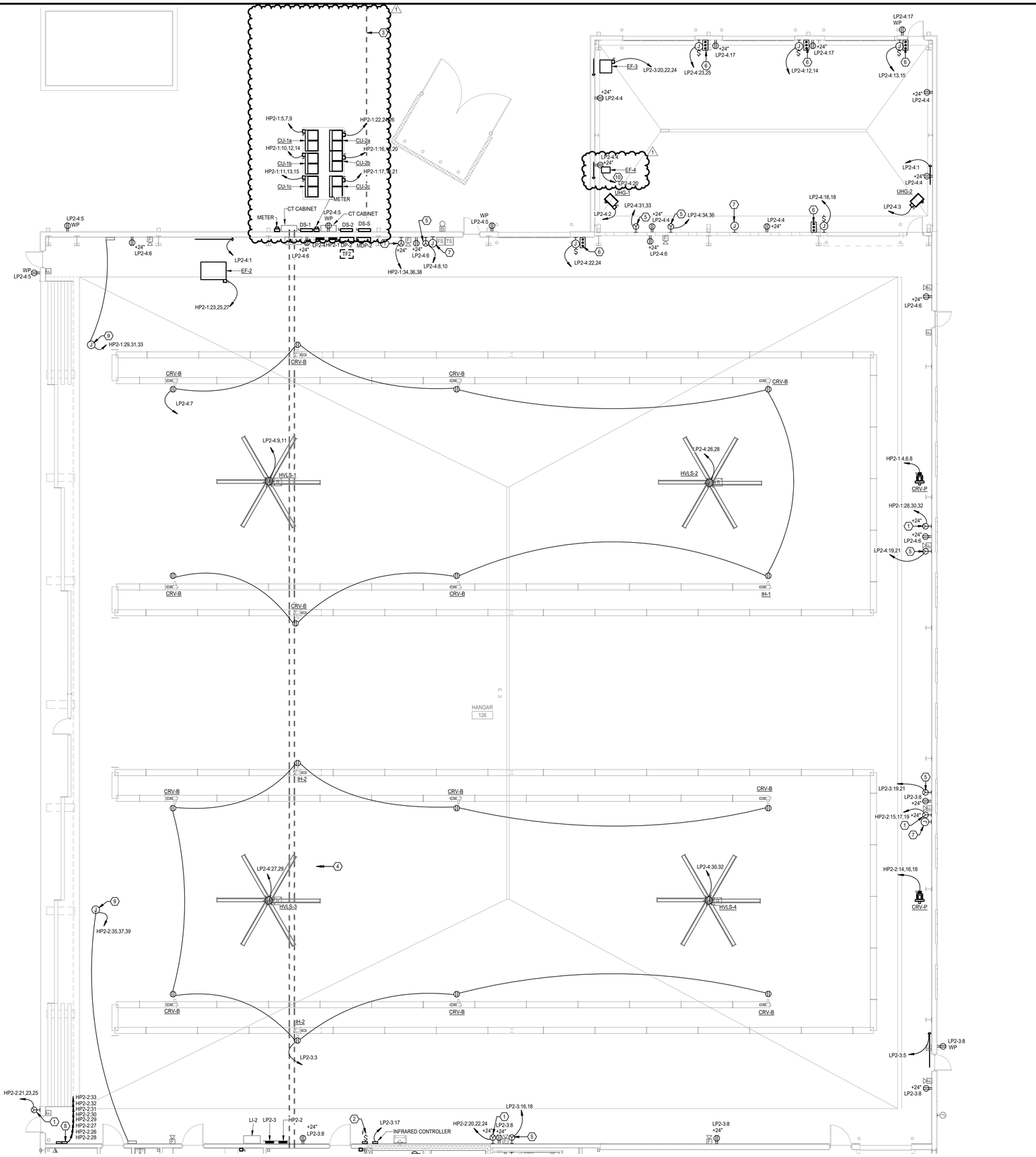
MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE
POWER FLOOR PLANS

E201
SHEET 099 OF 131

11/8/2023 11:54:22 AM



POWER HANGAR PLAN
1/8" = 1'-0"

ELECTRICAL KEYNOTES

1. PROVIDE RECEPTACLE FOR OWNER PROVIDED GROUND POWER UNIT GPU. REFER TO MANUFACTURER MANUAL FOR EXACT REQUIREMENTS. PROVIDE (3)#4 AND (1)#8 GROUND IN 1-1/4" CONDUIT.
2. ROUTE CIRCUIT FOR CEILING FANS THROUGH CONTROL KEYPAD.
3. SECONDARY FEEDER ROUTED BELOW GRADE FROM UTILITY TRANSFORMER. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
4. FEEDER ROUTED BELOW FROM SERVICE ENTRANCE. REFER TO ONE-LINE DIAGRAM FOR ADDITIONAL INFORMATION.
5. PROVIDE NEMA 6-30R RECEPTACLE FOR OWNER PROVIDED EQUIPMENT. COORDINATE WITH MANUFACTURER FOR EXACT REQUIREMENTS. PROVIDE (2)-#10 AND (1)-#10 GROUND IN 0.75" CONDUIT.
6. PROVIDE START/STOP PUSH BUTTON FOR COILING OVERHEAD DOOR PER MANUFACTURER REQUIREMENT.
7. PROVIDE BACK BOX AND 1-1/4" CONDUIT ROUGH-IN FOR OWNER PROVIDED EQUIPMENT. ROUTE EMPTY CONDUIT WITH PULL STRINGS TO NEAREST 208Y PANELBOARD.
8. PROVIDE CIRCUITS FOR SNOW MELT RELAY PANEL. REFER TO MANUFACTURER FOR ADDITIONAL INFORMATION.
9. PROVIDE (3)-#10 AND (1)-#10 GROUND IN 3/4" CONDUIT FOR HANGER DOOR MOTORS. PROVIDE ADDITIONAL POWER CONNECTIONS TO EACH MOTOR LOCATION PER MANUFACTURER'S REQUIREMENT. ROUTE LOW VOLTAGE CABLING TO CONTROLLER.
10. ROUTE 120V POWER TO HYDROGEN GAS DETECTOR FOR EXHAUST FAN CONTROL. REFER TO MECHANICAL PLANS AND MANUFACTURER DETAILS FOR ADDITIONAL INFORMATION.

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
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SHEET TITLE

POWER HANGAR PLAN

E202

SHEET 100 OF 131

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GENERAL SHEET NOTES

A. WHERE TELE/DATA OUTLET SYMBOL IS SHOWN PROVIDE BACK BOX AND CONDUIT ROUGH IN TO ABOVE ACCESSIBLE CEILING. REFER TO COMMUNICATION ROUGH-IN DETAIL FOR ADDITIONAL INFORMATION.

B. COORDINATE ALL TELECOMM/DATA DEVICE LOCATION AND MOUNTING HEIGHTS WITH OWNER/ARCHITECT PRIOR TO INSTALLATION.

C. PROVIDE TRACER WIRE WITH PULL STRINGS.

ELECTRICAL KEYNOTES

1 PROVIDE 1-1/4" CONDUIT FROM FLOOR BOX/POKE-THRU TO TV OUTLET LOCATION FOR DATA AND AV CABLING.

2 HEAT DETECTOR IN ELEVATOR SHAFT WITHIN 2FT OF SPRINKLER HEAD. REFER TO ELEVATOR INTERLOCK WITH FIRE ALARM DETAIL FOR ADDITIONAL INFORMATION. COORDINATE LOCATION WITH SPRINKLER PROVIDER.

3 PROVIDE JUNCTION BOX AND 3/4" CONDUIT ROUGH IN FOR CAMERA. ROUTE CONDUIT BACK TO IT ROOM. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH OWNER AND SECURITY PROVIDER. IN AREAS WITH NO ABOVE CEILING ROUTE CONDUIT HIGH AND TIGHT TO STRUCTURE ABOVE.

4 PROVIDE BOX WITH 1-1/4" EMPTY CONDUIT WITH PULL STRINGS TO PROJECTOR OUTLET BOX.

5 2"X12" WIRE MESH CABLE TRAY ABOVE ACCESSIBLE CEILING.

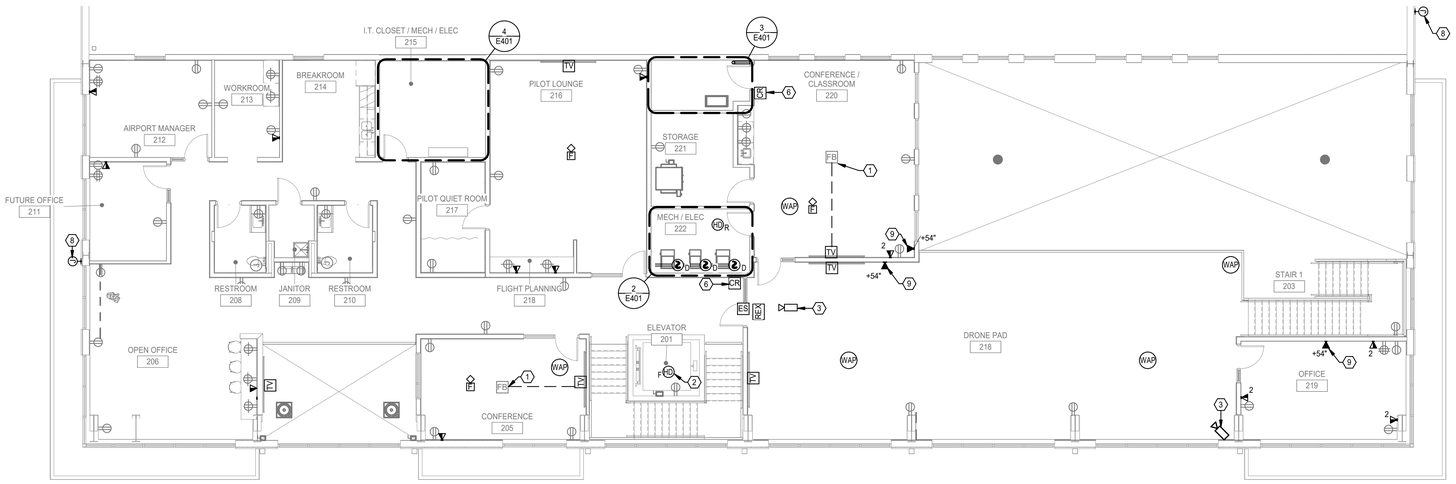
6 PROVIDE POWER ROUGH IN FOR CARD READER. REFER TO ACCESS CONTROL DETAIL FOR ADDITIONAL INFORMATION.

7 (2)-4" EMPTY CONDUITS ROUTED BELOW GRADE FROM TELECOM JUNCTION BOX AND STUBBED UP IN ELECTRICAL ROOM. CAP CONDUITS WITH PULL STRINGS. COORDINATE EXACT LOCATION OF JUNCTION BOX WITH TELECOM SERVICE PROVIDER. PROVIDE TRACER WIRE WITH PULL STRINGS. ROUTE CONDUITS TO SERVICE PROVIDER DEMARC LOCATION. COORDINATE LOCATION WITH SERVICE PROVIDER.

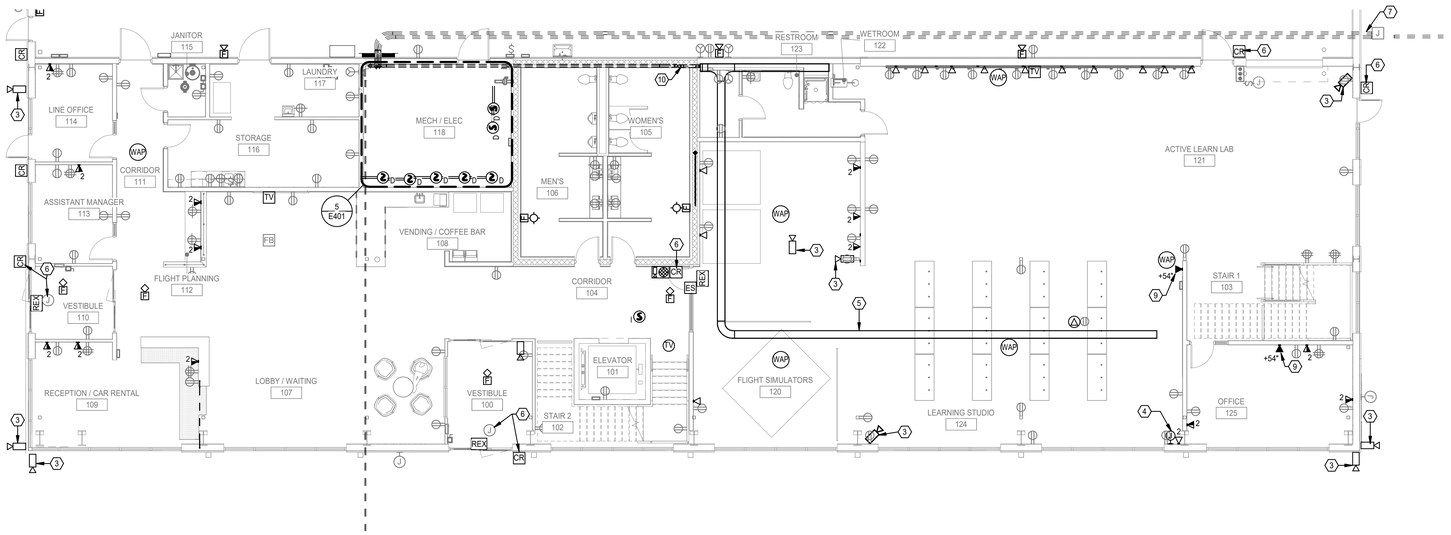
8 MOUNT SINGLE BOX AT 15'-0" A.F.G. WITH 1" CONDUIT WITH CAT 6A ROUTED WITHIN STRUCTURE FOR OWNER SUPPLIED EXTERIOR WIFI BOOSTER, EQUAL TO CISCO CATALYST 9166 SERIES WITH BRACKET AND ARM. REFER TO MANUFACTURER FOR MOUNTING REQUIREMENTS. PROVIDE BLOCKING AS REQUIRED. COORDINATE EXACT LOCATION WITH ONWER AND ARCHITECT.

9 PROVIDE DOUBLE GANGE BACK BOX WITH 4" LUG SPACING MATCHING PHONE HARDWARE. REFER TO PHONE MANUFACTURER FOR EXACT MOUNTING REQUIREMENTS.

10 ROUTE (2)-4" EMPTY CONDUIT TO ABOVE CEILING ON FIRST FLOOR BELOW AND PROVIDE FIRE RATED PENETRATION THRU FIRE WALL. CONDUIT TO STUB OUT WALL TO CABLE TRAY ABOVE CEILING ON FIRST FLOOR.



SYSTEMS SECOND FLOOR PLAN 2
1/8" = 1'-0"



SYSTEMS FIRST FLOOR PLAN 1
1/8" = 1'-0"

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000875
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

SYSTEMS FLOOR PLANS

E301

SHEET 101 OF 131

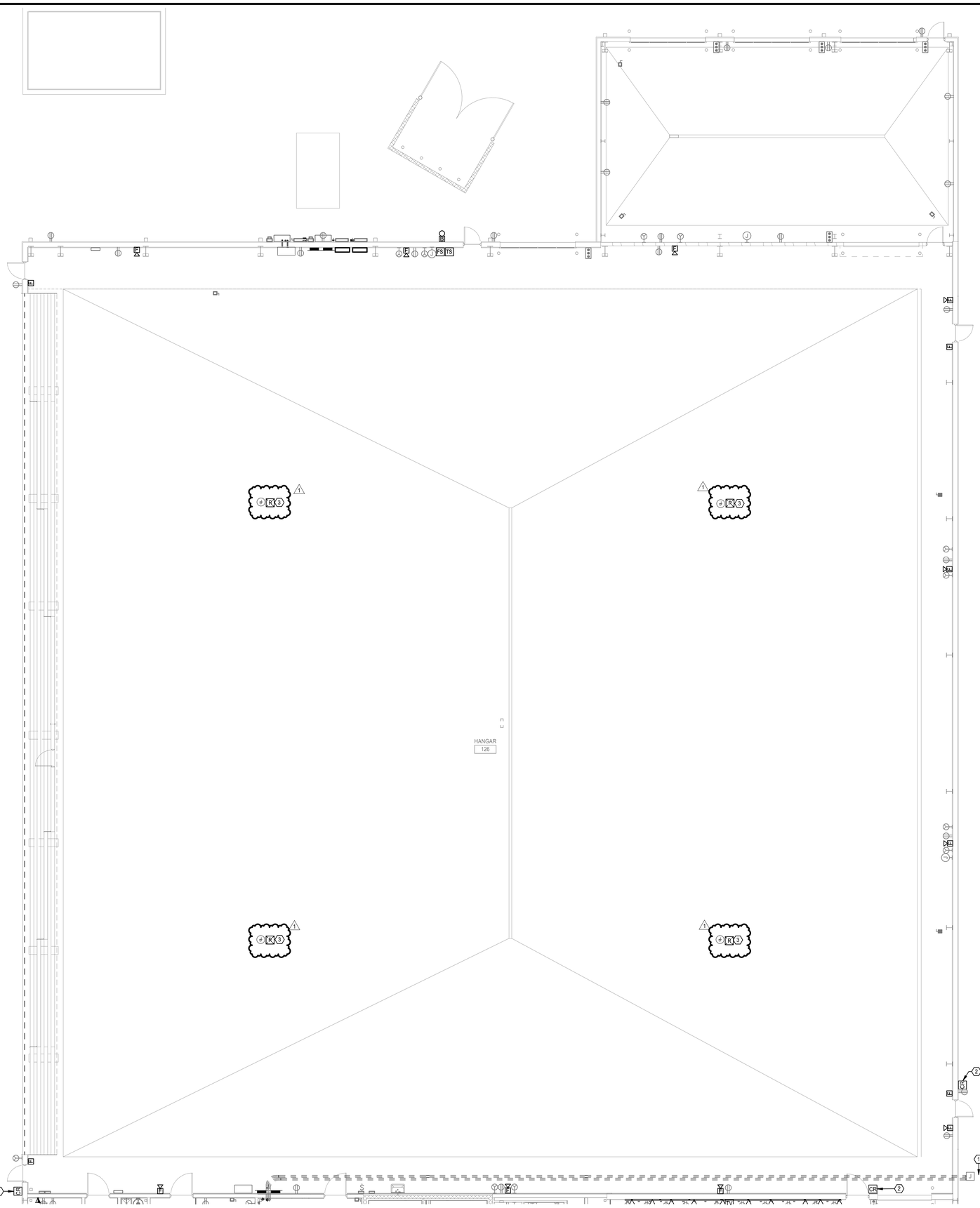
11/8/2023 11:54:29 AM

ELECTRICAL KEYNOTES

1 (2)-4" EMPTY CONDUITS ROUTED BELOW GRADE FROM TELECOM JUNCTION BOX AND STUBBED UP IN ELECTRICAL ROOM. CAP CONDUITS WITH PULL STRINGS. COORDINATE EXACT LOCATION OF JUNCTION BOX WITH TELECOM SERVICE PROVIDER. PROVIDE TRACER WIRE WITH PULL STRINGS. ROUTE CONDUITS TO SERVICE PROVIDER DEMARC LOCATION. COORDINATE LOCATION WITH SERVICE PROVIDER.

2 PROVIDE POWER ROUGH IN FOR CARD READER. REFER TO ACCESS CONTROL SECTION FOR FURTHER COORDINATION.

3 PROVIDE FAN SHUT DOWN RELAY TO SHUT FAN DOWN UPON ACTIVATION OF FIRE ALARM SYSTEM.



SYSTEMS HANGAR PLAN
1/8" = 1'-0"

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

SYSTEMS HANGAR PLAN

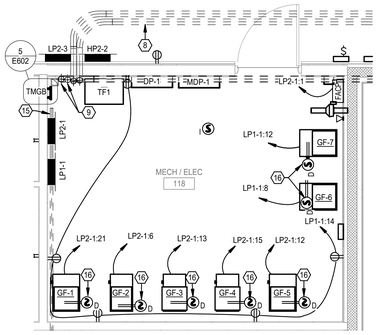
E302

SHEET 102 OF 131

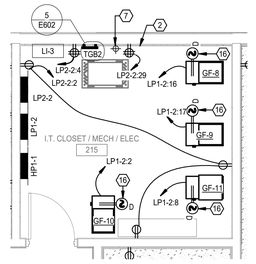
11/8/2023 11:54:31 AM

ELECTRICAL KEYNOTES

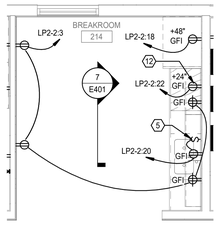
1. LADDER CABLE TRAY MOUNTED HIGH TO CEILING AND ON WALL.
2. 5/8" FIRE RATED PLYWOOD PAINTED TO MATCH WALL. PROVIDE 96" TALL TO FULL WIDTH OF WALL SHEET.
3. PROVIDE A FUSED, HEAVY DUTY, LOCKABLE DISCOUNT POWER MODULE EQUAL TO BUSSMANN PS1-T48-R2-G-A WITH CLASS J FUSES, FIRE ALARM SYSTEM INTERFACE, GREEN PILOT LIGHT AND ALL NECESSARY INTERLOCKING CONTACTS. PROVIDE FINAL ELECTRICAL CONNECTION TO ELEVATOR CONTROLLER. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR MANUFACTURER.
4. PROVIDE 20A, 120V, SINGLE POLE FUSED DISCONNECT SWITCH FOR ELEVATOR CAB LIGHTS. MOUNT AT +6'-0" A.F.F. PROVIDE FINAL ELECTRICAL CONNECTION TO ELEVATOR CONTROLLER. COORDINATE EXACT REQUIREMENTS WITH ELEVATOR MANUFACTURER. SWITCH SHALL BE CAPABLE OF BEING LOCKED "OFF".
5. ROUTE CIRCUIT FOR GARBAGE DISPOSAL OUTLET THROUGH TOGGLE SWITCH.
6. COORDINATE RECEPTACLE WITH CASEWORK.
7. 4" EMPTY CONDUIT STUBED UP AT 3" A.F.F. AND CAPPED WITH PULL STRINGS. ROUTED FROM FLOOR BELOW.
8. (2)-4" EMPTY CONDUITS STUBED UP AT 3" A.F.F. AND CAPPED WITH PULL STRINGS. ROUTED FROM EXTERIOR BUILDING AND TERMINATED IN GRADE JUNCTION BOX. COORDINATE EXACT LOCATION WITH TELECOMMUNICATION PROVIDER.
9. 4" EMPTY CONDUIT WITH PULL STRINGS ROUTED TO IT ROOM ON FLOOR ABOVE. PROVIDE FIRE RATED PENETRATION THRU FIRE WALL.
10. ROUTE (2)-4" EMPTY CONDUIT TO ABOVE CEILING ON FIRST FLOOR BELOW AND PROVIDE FIRE RATED PENETRATION THRU FIRE WALL. CONDUIT TO STUB OUT WALL TO CABLE TRAY ABOVE CEILING ON FIRST FLOOR.
11. WIRE MESH CABLE TRAY ABOVE CEILING ON FIRST FLOOR BELOW. REFER TO FIRST FLOOR SYSTEM PLAN FOR CONTINUATION.
12. COORDINATE MICROWAVE RECEPTACLE MOUNTING HEIGHT WITH CASEWORK.
13. VERTICAL LADDER TRAY FROM FLOOR TO 96".
14. 4" EMPTY CONDUIT WITH PULL STRINGS ROUTED FROM ELECTRICAL ROOM ON FIRST FLOOR. PROVIDE FIRE RATED PENETRATION THRU FIRE WALL.
15. 4" CONDUIT ROUTED BELOW GRADE FROM ELECTRICAL ROOM AND TERMINATED IN JUNCTION BOX FOR FUTURE TERMINAL BUILDING COMMUNICATION CABLING. PROVIDE EMPTY CONDUIT WITH PULL STRINGS.
16. PROVIDE DUCT MOUNTED SMOKE DETECTOR IN RETURN AIR DUCT. CONNECT TO FIRE ALARM CONTROL PANEL.



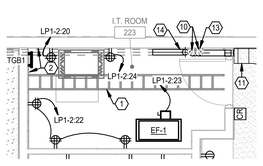
ENLARGED ELECTRICAL ROOM PLAN 5
1/4" = 1'-0"



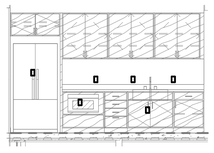
ENLARGED 2ND FLOOR PLAN 4
1/4" = 1'-0"



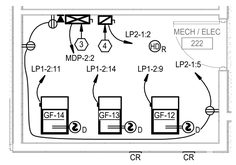
ENLARGED 2ND FLOOR BREAK ROOM 8
1/4" = 1'-0"



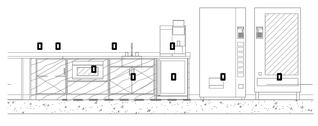
ENLARGED 2ND FLOOR IT ROOM 3
1/4" = 1'-0"



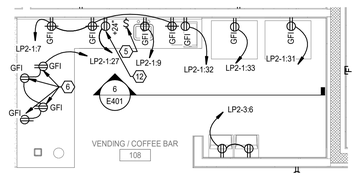
BREAK ROOM SECTION 7
NOT TO SCALE



ENLARGED 2ND FLOOR MECH ROOM 2
1/4" = 1'-0"



COFEE BAR SECTION 6
NOT TO SCALE



ENLARGED 1ST FLOOR BREAK ROOM 1
1/4" = 1'-0"

CMT
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KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010005975
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

ENLARGED PLANS

E401

SHEET 103 OF 131

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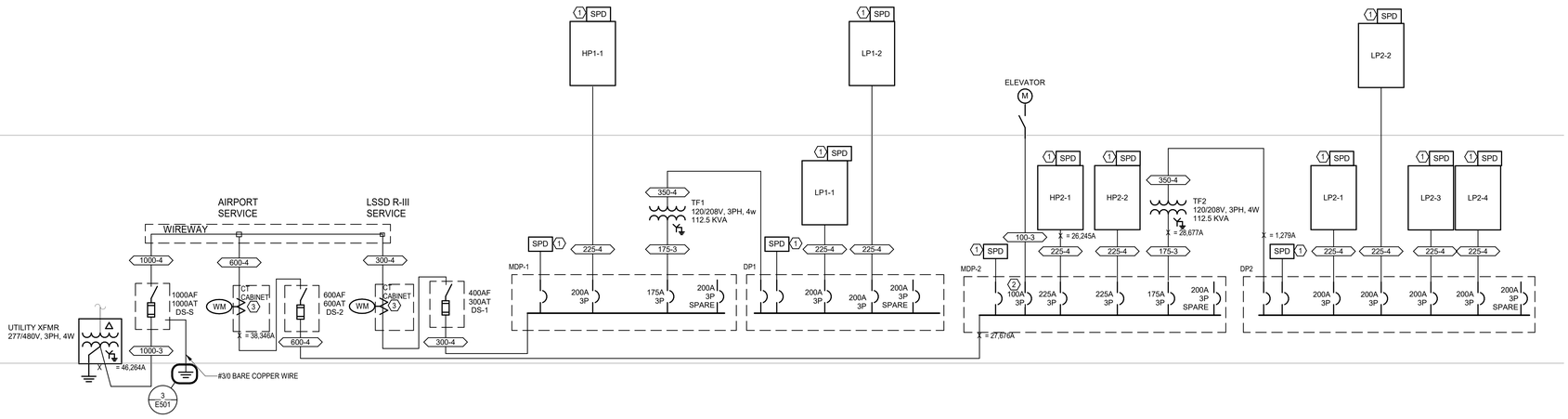
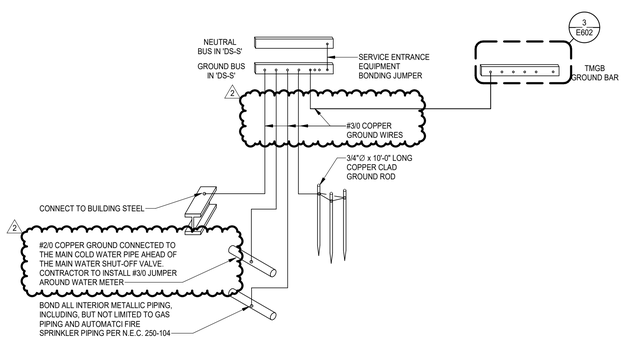


ONE-LINE DIAGRAM 1
NOT TO SCALE



BUILDING SERVICE GROUNDING DIAGRAM 3
NOT TO SCALE

GENERAL SHEET NOTES

A. PROVIDE ARC FLASH ANALYSIS AND COORDINATION STUDY PER SPECIFICATIONS.

B. COORDINATION STUDY SHALL BE PERFORMED PRIOR TO ORDERING PANELBOARDS.

ELECTRICAL KEYNOTES

1. PROVIDE SURGE PROTECTION DEVICE TO THE TOP OF THE PANELBOARD. CONDUCTORS FROM THE BREAKER TO THE SPD SHALL BE LONGER THAN 18" AND SHALL BE INSTALLED IN PVC NIPPLE. COORDINATE BREAKER LOCATION WITH SPD LOCATION TO ENSURE CONDUCTORS ARE AS SHORT AND STRAIGHT AS POSSIBLE.
2. VERIFY EXACT AMPERAGE SIZE FOR ELEVATOR WITH MANUFACTURER SUBMITTAL.
3. METER AND CT CABINET PER UTILITY REQUIREMENTS.

UTILITY CONTACT:

EVERGY

GARY JONES

EMAIL: gary.jones@evergy.com
PHONE:816-813-1998

FEEDER SCHEDULE - COPPER

FEEDER	AMPACITY	NO. SETS	FEEDER WIRE AND CONDUIT
100-3	100A	1	3-#3 CU, #8 CU GND - 1-1/4" C.
175-3	175A	1	3-#2/0 CU, #6 CU GND - 2-1/2" C.
225-4	225A	1	4-#4/0 CU, #4 CU GND - 2-1/2" C.
300-4	300A	1	4-400 KCMIL CU, #4 CU GND - 3" C.
350-4	350A	2	4-#3/0 CU, #3 CU GND - 2-1/2" C.
600-4	600A	2	4-350 KCMIL CU, #1 CU GND - 3" C.
1000-3	1000A	3	3-400 KCMIL CU, #2/0 CU GND - 3" C.
1000-4	1000A	3	4-400 KCMIL CU, #2/0 CU GND - 3-1/2" C.

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

600AF
600AT
DS-2

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

CORY WILSON
12.01.2023
NUMBER PE-2010009078
STATE OF MISSOURI
PROFESSIONAL ENGINEER

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
2	12/01	REV-2
1	11/10	REV-1

PROJECT NO:	022-04268
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DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

DIAGRAMS

E501

SHEET 104 OF 131

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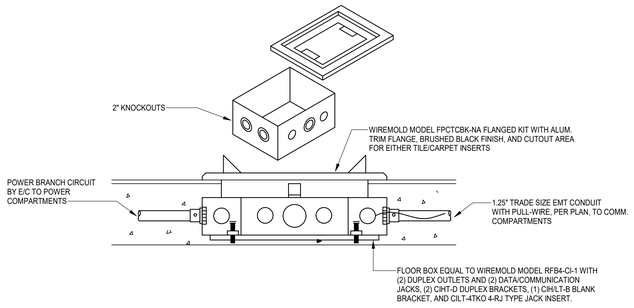
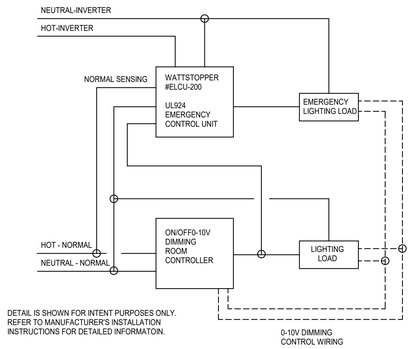
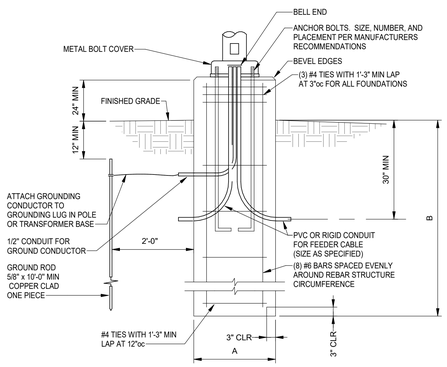


FLOOR BOX DETAIL 7
NOT TO SCALE



ROOM CONTROLLER EMERGENCY DETAIL 6
NOT TO SCALE



CONCRETE LIGHT POLE BASE 5
NOT TO SCALE

FOUNDATION DESIGN LIMITATIONS

L 1. THIS FOUNDATION WAS DESIGNED FOR A MINIMUM LATERAL SOIL DEFORMATION MODULUS OF 0.50 KSI

L 2. THIS FOUNDATION WAS DESIGNED FOR A MINIMUM LATERAL SOIL UNDRAINED SHEAR STRENGTH OF 0.50 KSF

L 3. THIS FOUNDATION WAS DESIGNED FOR A MAXIMUM ALLOWABLE LATERAL DEFLECTION OF 1/2 INCH OVERALL AT GRADE ELEVATION

L 4. THIS FOUNDATION WAS DESIGNED WITH AN ASSUMED DEPTH TO ROCK GREATER THAN TWENTY FEET FROM FINISHED GRADE

L 5. THIS FOUNDATION WAS DESIGNED WITH AN ASSUMED WATER TABLE LOCATED AT THE SOIL SURFACE.

L 6. THIS FOUNDATION WAS NOT DESIGNED TO WITHSTAND THE EFFECTS OF SCOURING.

L 7. IF CONDITIONS OTHER THAN THOSE SPECIFIED HEREIN ARE PRESENT AT THE SITE, INCLUDING NON-COHESIVE SOILS FOUND IN BORINGS, PLEASE CONTACT THE ENGINEER OF RECORD.

STRUCTURAL CONCRETE

CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:
ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
ACI 302 - "RECOMMENDED PRACTICE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION"
ACI 304 - "ACI MANUAL OF CONCRETE INSPECTION"
ACI 311 - "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
ACI 315 - "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
ACI 318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 347 - "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"

ALL HOOKS SHALL BE "STANDARD" PER ACI SPECIFICATIONS.

EARTHWORK

E 1. THE CONTRACTOR MUST PROVIDE SURFACE DRAINAGE AND PUMPS TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR RE-PREPARATION OF THE SUBGRADE.

E 2. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER, FROST, OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT STRUCTURE.

E 3. REFER TO THE GEOTECH REPORT FOR SUBSURFACE CONDITIONS AND CONSTRUCTION CONSIDERATIONS.

LIGHT FOUNDATION DATA		
MOUNTING HEIGHT	A	B
UP TO 30'	2'-0"	5'-0"
31' TO 40'	2'-0"	5'-6"

CONCRETE CLASS "KCMMB 4000"

HEAVY HEX GALVANIZED NUTS: (AASHTO M291, GR A)
FLAT WASHERS GALVANIZED: (AASHTO M293)

GENERAL NOTES

G 1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES BEFORE CONSTRUCTING NEW FOUNDATIONS.

G 2. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.

G 3. EXCAVATE SHAFTS FOR DRILLED FOUNDATIONS TO INDICATED ELEVATIONS. REMOVE LOOSE DEBRIS, MATERIALS AND/OR MUCK TO MAKE BOTTOM SURFACES LEVEL WITHIN ACI 336.1 TOLERANCES.

G 4. CONSTRUCTION TOLERANCES:
A. BOTTOM DIAMETER: MINUS ZERO, PLUS 6 INCHES, MEASURED IN ANY DIRECTION.
B. MAXIMUM VARIATION FROM PLUMB: 1:40.
C. MAXIMUM BOTTOM LEVEL: PLUS OR MINUS 2 INCHES.

G 5. AT NO ADDITIONAL COST, CASE PIER SHAFTS AS NECESSARY. PROTECT EXCAVATED WALLS WITH TEMPORARY WATERTIGHT STEEL CASINGS OF SUFFICIENT LENGTH TO PREVENT WATER INTRUSION, CAVE-INS, DISPLACEMENT OF SURROUNDING EARTH, INJURY TO PERSONNEL AND DAMAGE TO CONSTRUCTION OPERATIONS. MAINTAIN EXCAVATIONS IN ESSENTIALLY DRY CONDITION, USING PUMPS WHERE NECESSARY. REMOVE WATER TO A MAXIMUM DEPTH OF 6 INCHES FROM EXCAVATED SHAFT PRIOR TO CONCRETE PLACEMENT.

G 6. CONVEY CONCRETE FROM THE MIXER TO PLACE OF DEPOSIT BY BEST INDUSTRY METHODS THAT WILL PREVENT SEGREGATION AND LOSS OF MATERIAL. SIZE AND DESIGN THE EQUIPMENT FOR CONVEYING CONCRETE TO ENSURE UNIFORM, CONTINUOUS PLACEMENT OF CONCRETE. PLACE CONCRETE IN ACCORDANCE WITH ACI 316. PLACE CONCRETE IN A CONTINUOUS OPERATION AND WITHOUT SEGREGATION INTO DRY EXCAVATIONS WHENEVER POSSIBLE. USE ALL PRACTICABLE MEANS TO OBTAIN A DRY EXCAVATION BEFORE AND DURING CONCRETE PLACEMENT.

G 7. WHEN PULLING CASING, MAINTAIN LEVEL OF CONCRETE ABOVE BOTTOM OF CASING GREATER OR EQUAL TO LEVEL OF GROUND KEEP BOTTOM OF CASING AT LEAST 10 FEET BELOW TOP OF CONCRETE. PREVENT IN-SITU MATERIALS FROM FALLING INTO AND MIXING WITH CONCRETE. PULL CASING IN SHORT SLOW VERTICAL LIFTS (ESSENTIALLY CONTINUOUS), MAINTAINING PLUMB ALIGNMENT AND SUFFICIENT HEAD OF CONCRETE.

G 8. ALL CONCRETE SHALL BE CLASS KCMMB 4000

G 9. ALL REINFORCING SHALL BE STRUCTURAL GRADE 60 PER ASTM-A615 AND HAVE AT LEAST 3" OF CONCRETE COVER.

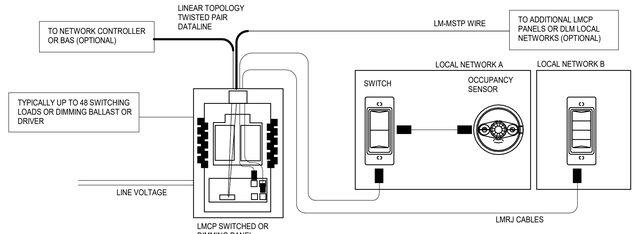
G 10. ANCHOR BOLTS ARE TO BE FURNISHED BY THE FOUNDATION CONTRACTOR UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PLACE ALL REBAR SO AS TO NOT INTERFERE WITH ANCHOR BOLTS.

G 11. ALL ABOVE GRADE FOUNDATION SURFACES SHALL BE STEEL TROWEL FINISHED UNLESS OTHERWISE NOTED.

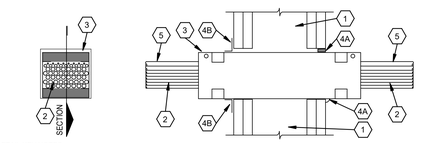
G 12. EACH PIER FOUNDATION SHALL BE CONSTRUCTED IN A SINGLE CONTINUOUS POUR.

G 13. NO EXCAVATION OR VIBRATION-INDUCING ACTIVITIES ARE ALLOWED WITHIN 3 PIER DIAMETERS OF A SUBJECT PIER UNTIL AT LEAST 24 HOURS HAVE ELAPSED SINCE THE TIME OF CONCRETE PLACEMENT. COVER ALL EXCAVATIONS BETWEEN OPERATIONS. REMOVE FOREIGN AND LOOSE MATERIAL FROM APPROVED EXCAVATION.

G 14. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND/OR SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING EXCAVATION AND FOUNDATION CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS CAUSED BY CONSTRUCTION TECHNIQUES IS THE RESPONSIBILITY OF THE CONTRACTOR.



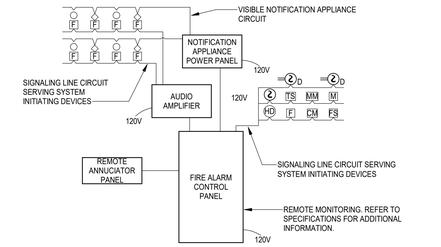
LCMP SWITCHED PANEL 4
NOT TO SCALE



DETAIL KEY NOTES:

1. 1 OR 2 HOUR FIRE-RATED GYPSUM BOARD WALL ASSEMBLY.
2. DATA/COMMUNICATION CABLES PASSING THROUGH FIRESTOP DEVICE. CABLE MAY OCCUPY FROM 0 TO 100 PERCENT VISUAL FILL. CABLE FILL TO BE DISTRIBUTED AT A UNIFORM HEIGHT ACROSS THE WIDTH OF THE FIRESTOP DEVICE MODULE. CABLES TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. ANY COMBINATION OF THE FOLLOWING CABLE TYPES MAY BE USED:
   A. 25 PAIR No. 24 AWG (OR SMALLER) COPPER CONDUCTOR TELECOMMUNICATION CABLE WITH POLYVINYL CHLORIDE (PVC) PLENUM RATED JACKETING AND INSULATION.
   B. 4 PAIR No. 24 AWG (OR SMALLER) COPPER CONDUCTOR DATA CABLE WITH POLYVINYL CHLORIDE (PVC) PLENUM RATED JACKETING AND INSULATION.
   C. "RG/U" COAXIAL CABLE WITH FLUORINATED ETHYLENE PLENUM RATED JACKETING AND INSULATION.
3. FIRE RATED POKE THROUGH DEVICE. 3" BY 3" BY 10-1/2" LONG GALVANIZED STEEL TUBE WITH AN INTUMESCENT MATERIAL LINING. FIRESTOP DEVICE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. SPACE BETWEEN THE DEVICE AND THE PERIPHERY OF THE OPENING SHALL BE MINIMUM 0" (POINT OF CONTRACT), TO MAXIMUM 1/2". POKE THROUGH DEVICE TO BE "SPECIFIED TECHNOLOGIES, INC. "EZ-PATH" U.L. SYSTEM WL-3218 FOR NEW CONSTRUCTION OR WL-3219 FOR RETROFIT APPLICATIONS. S.T.I. #EZOP33FW & EZP133W. FIRESTOP DEVICE MODULE IS TO BE INSTALLED WITH ITS ENDS PROJECTING AN EQUAL DISTANCE BETWEEN EACH SURFACE OF THE WALL ASSEMBLY.
4. NEW WALL APPLICATION ONLY - STEEL WALL PLATE AND GASKET FURNISHED WITH FIRE RATED RATED POKE THROUGH DEVICE. WALL PLATE AND GASKET INSTALLED ON BOTH SIDE OF WALL AND SECURED TO EACH DEVICE BY MEANS OF STEEL SET SCREWS PROVIDED WITH DEVICE.

FIRE RATED WALL PENETRATION SCHEDULING 3
NOT TO SCALE

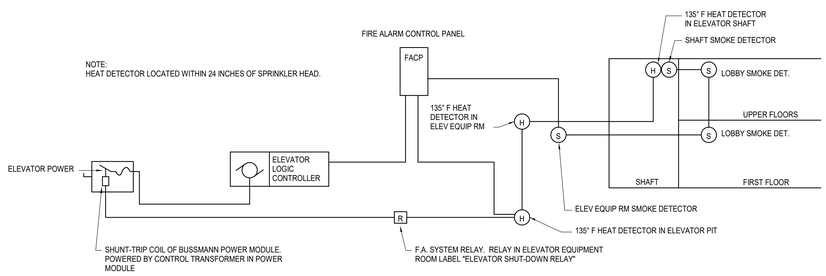


RISER DIAGRAM IS SCHEMATIC IN NATURE. NOT ALL DEVICES ARE SHOWN, REFER TO PLANS AND SPECIFICATIONS FOR DEVICE AND EQUIPMENT QUANTITIES AND L LOCATIONS.

DUCT DETECTORS MAY HAVE INTEGRAL RELAYS FOR AIR HANDLING UNIT SHUTDOWN AND FIRE/SMOKE DAMPER CONTROL WIRING FOR THIS FUNCTION HAS NOT BEEN SHOWN. COORDINATE WITH MECHANICAL SYSTEM INSTALLER.

REFER TO PLANS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.

FIRE ALARM RISER DIAGRAM - ADDRESSABLE SYSTEM (VOICE) 2
NOT TO SCALE



ELEVATOR SEQUENCE OF OPERATION: (DURING SMOKE/HEAT ALARM)

1. UPON SENSING SMOKE FROM ON OR MORE LOBBY, ELEVATOR SHAFT OR ELEVATOR EQUIPMENT ROOM SMOKE DETECTORS, THE SMOKE DETECTOR SHALL SIGNAL THE F.A.C.P., WHICH WILL FORWARD THE SIGNAL TO THE ELEVATOR LOGIC CONTROLLER TO RECALL ELEVATOR CAB TO THE DESIGNATED MAIN FLOOR. IF DESIGNATED FLOOR'S LOBBY SMOKE DETECTOR SENSES SMOKE AT THE FLOOR THE ELEVATOR CONTROLLER WILL SEND THE ELEVATOR CAB TO THE NEXT FLOOR CLEAR OF SMOKE. ONCE THE ELEVATOR CAB HAS REACHED THE DESIGNATED FLOOR, THE ELEVATOR CAB DOORS WILL OPEN AND THE CONTROLLER WILL LOCK THE ELEVATOR CAB AT THE FLOOR DISABLING THE ELEVATOR CAB CONTROLS, UNLESS A FIREMAN'S KEY IS USED TO OVERRIDE AUTOMATIC CONTROLS.
2. ALL SMOKE DETECTORS (LOBBY'S, HOISTWAY, MACHINE ROOM) TO TRANSMIT A SEPARATE AND DISTINCT VISIBLE ANNUNCIATION AT THE F.A.C.P. AND ANNUNCIATOR PANEL.
3. HEAT DETECTORS IN THE ELEVATOR SHAFT PIT AND ELEVATOR EQUIPMENT ROOM WILL SEND A SIGNAL TO THE SHUNT-TRIP SWITCH POWERING THE ELEVATOR AND WILL SHUT DOWN POWER TO THAT CIRCUIT (THIS IS A NON-AUTO RESET SWITCH). WHEN THE SPRINKLER HEAD HAS REACHED ITS CRITICAL TEMPERATURE OF 165° F., THE HEAD WILL BEGIN DISCHARGE OF WATER.

ELEVATOR INTERLOCK WITH FIRE ALARM 1
NOT TO SCALE

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000878
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE
ELECTRICAL DETAILS

E601

SHEET 105 OF 131

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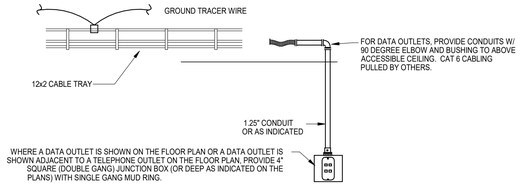
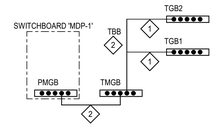


A) TYPICAL COMMUNICATION WALL BOX

COMMUNICATION ROUGH-IN DETAIL 4
NOT TO SCALE



TBBIBC - TELECOMMUNICATIONS BONDING BACKBONE INTERCONNECTING BONDING CONDUCTOR
PBBIBC - POWER BONDING BACKBONE INTERCONNECTING BONDING CONDUCTOR

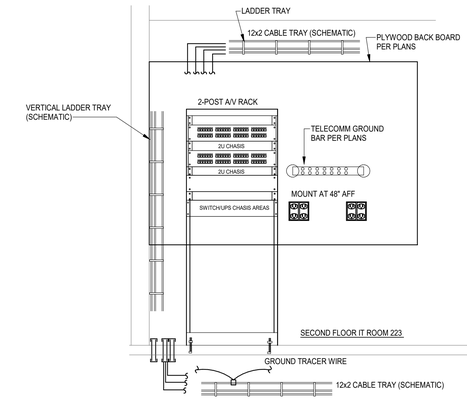
PMGB - POWER MAIN GROUNDING BUSBAR
TMGB - TELECOMMUNICATIONS MAIN GROUNDING BUSBAR
TGB - TELECOMMUNICATIONS GROUNDING BUSBAR

TBB - TELECOMMUNICATIONS BONDING BACKBONE (CONDUCTOR IS TO BE CONTINUOUS FROM TMGB TO THE VERY LAST TGB, NO SPLICES)

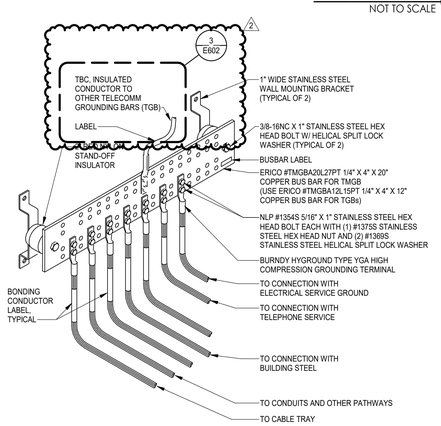
◇DETAIL KEYNOTES

1. BONDING CONDUCTOR (#6 INSULATED THHN) BETWEEN TBB AND TGB MUST BE CONTINUOUS AND MUST BE ROUTED IN THE SHORTEST, STRAIGHT LINE PATH POSSIBLE.
2. #1 INSULATED THHN.

GROUND BAR DIAGRAM 3
NOT TO SCALE



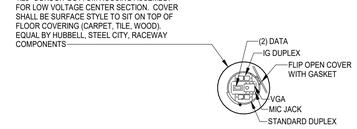
TELECOM DETAIL 6
NOT TO SCALE



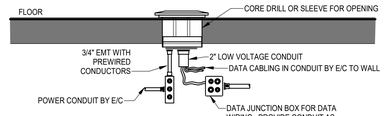
NOTES:
2 A. REFER TO ELECTRICAL ROOM PLANS FOR BUSBAR MOUNTING LOCATIONS.
B. REFER TO SPECIFICATIONS FOR ALL REQUIREMENTS.

TELECOMM GROUND BAR (TMGB/TGB) 5
NOT TO SCALE

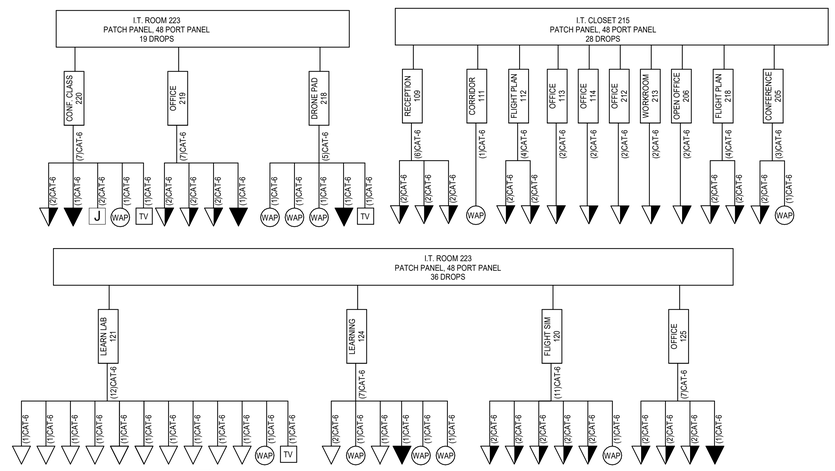
WHERE A COMBINATION POKE-THRU IS SHOWN ON THE PLAN, PROVIDE WIREMOLD EVOLUTION SERIES, FIRE RATED, MODEL 6ATCPBK, WITH BLACK ALUMINUM COVER, 3-1/4" RECESSED DEVICES, TWO SIDE STANDARD DUPLEXES (68REC), AND 6MAAP2A CENTER MOUNT PLATE WITH TWO COMMUNICATION KEYSTONE JACKS, AND OPEN SLOT FOR OWNER A/V (TBD). PROVIDE 575CHA BOTTOM HOUSING ASSEMBLY FOR POWER SIDE COMPARTMENTS AND 1125CHA 1.25" CONDUIT BOTTOM HOUSING ASSEMBLY FOR LOW VOLTAGE CENTER SECTION. COVER SHALL BE SURFACE STYLE TO SIT ON TOP OF FLOOR COVERING (CARPET, TILE, WOOD). EQUAL BY HUBBELL, STEEL CITY, RACEWAY COMPONENTS



PLAN VIEW



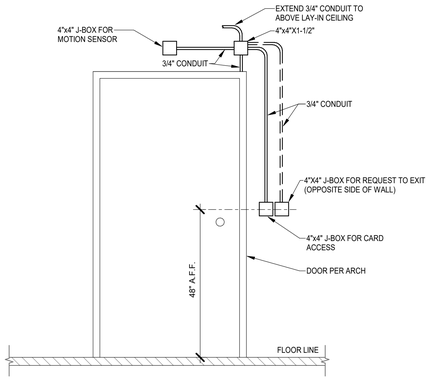
POKE-THRU ROUGH IN 2
NOT TO SCALE



NOTES:

1. INSTALL CONDUIT AS INDICATED THROUGH WALLS WHERE APPLICABLE ON PLANS.
2. INSTALL CABLE IN CABLE TRAY WHERE INDICATED ON PLAN.
3. REMAINDER OF DATA CABLE SHALL BE INSTALLED IN J-HOOKS EXCEPT WHERE INDICATED OTHERWISE ON PLAN.
4. DETAIL IS SCHEMATIC. REFERENCE SPECIFICATIONS AND DRAWINGS FOR ADDITIONAL INFORMATION.

TELECOMM RISER DIAGRAM 7
NOT TO SCALE



NOTES:
A. PROVIDE CARD READER AND MOTION SENSOR DEVICES AS SHOWN ON POWER PLAN.

B. PROVIDE CONNECTION TO EXISTING SECURITY SYSTEM.

ACCESS ROUGH-IN 1
NOT TO SCALE

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

CORY WILSON
STATE OF MISSOURI
12.01.2023
NUMBER PE-2010000636
PROFESSIONAL ENGINEER

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
2	12/01	REV-2

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

ELECTRICAL DETAILS

E602

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LIGHTING CONTROL SEQUENCE SCHEDULE

ROOM NAME	MANUAL ON	MANUAL OFF	DIMMING SWITCH	OVERRIDE SWITCH	MULTIZONE SWITCH	KEY SWITCH	TIME CLOCK ON	TIME CLOCK OFF	OCCUPANCY SENSOR ON	OCCUPANCY SENSOR OFF	PHOTOCONTROL SWITCHING	PHOTOCONTROL DIMMING	INTERIOR PHOTOCELL ON/OFF	EXTERIOR PHOTOCELL ON/OFF	WIRING DIAGRAM REFERENCE	SEQUENCE OF OPERATIONS	NOTES
VESTIBULE			X						X	X						5	SEE SEQUENCE 3 BELOW
CONFERENCE/ CLASSROOMS			X		X				X	X						4	SEE SEQUENCE 3 BELOW
CORRIDOR/ LOBBY / WATING				X					X	X						1	SEE SEQUENCE 3 BELOW
RESTROOM									X	X						1	SEE SEQUENCE 3 BELOW
PILOT LOUNGE/ PILOT QUIET ROOM			X						X	X						5	SEE SEQUENCE 3 BELOW
OFFICES			X						X	X						5	SEE SEQUENCE 3 BELOW
JANITOR / MECH / ELEC	X	X														2	
EXTERIOR								X									SEE SEQUENCE 3 BELOW
LARGE RESTROOM									X	X						4	
BREAKROOM									X	X						4	
STORAGE									X	X							SEE SEQUENCE 3 BELOW
HANGAR	X	X															SEE SEQUENCE 3 BELOW

NOTES:

A. OCCUPANCY ON SENSOR SHALL BE SET TO STAY ON FOR 20 MIN

SEQUENCE OF OPERATIONS

1. LIGHTING FIXTURES SHALL BE CONTROLLED BY OCCUPANCY SENSOR. WHEN SPACE IS OCCUPIED LIGHTS SHALL TURN ON 100%. WHEN SPACE IS UNOCCOUPIED LIGHTS SHALL TURN OFF. SPACE SHALL HAVE A MANUAL OVERRIDE SWITCH TO OVERRIDE OCCUPANCY SENSING
2. LIGHTING FIXTURES SHALL BE CONTROLLED BY TOGGLE ON/OFF LIGHT SWITCH.
3. LIGHTING FIXTURES WHERE SHOWN TO BE EMERGENCY LIGHT FIXTURES SHALL HAVE UL924 DEVICE TO OVERRIDE CONTROLS IN SPACE AND BE CIRCUITED TO INVERTER. DURING LOSS OF POWER LIGHT FIXTURES SHOWN AS EMERGENCY SHALL TURN ON 100%. LIGHT FIXTURES SHOWN AS NIGHT LIGHTS SHALL HAVE AN UNSWITCHED HOT CONDUCTOR AND SHALL BE TURNED ON 100% REGARDLESS OF LOCAL CONTROLS.
4. LIGHTING FIXTURES SHALL BE CONTROLLED BY OCCUPANCY SENSOR WITH DIMMING SCENE SELECTOR SWITCH OVERRIDE. SCENE SELECTION SHALL BE THE FOLLOWING: 1. ALL OFF. 2. ALL DIM TO 50%. 3. FRONT OF ROOM OFF AND BACK ROOM DIM TO 50%. 4.ALL DIM.
5. LIGHTING FIXTURES SHALL BE CONTROLLED BY OCCUPANCY SENSOR AND DIMMING SWITCH OVERRIDE. WHEN SPACE IS OCCUPIED LIGHTS SHALL TURN ON 100%. WHEN SPACE IS UNOCCOUPIED LIGHTS SHALL TURN OFF. DIMMING SWITCH SHALL DIM LIGHT FIXTURES TO OFF.

LIGHTING FIXTURE SCHEDULE

FIXTURE TYPE	MOUNTING	DESCRIPTION	MANUFACTURER	MODEL	LAMP TYPE	LAMP CCT	INPUT POWER	VOLTAGE	
A	SUSPENDED	16" DIAMETER LED HIGH BAY LIGHT FIXTURE	METALUX	SSLED-LD5-24-W-UNV-L840-CD1	LED	4000 K	190 VA	277 V	PENDANT MOUNT FIXTURE FROM STRUCTURE ABOVE TO 32'-0" A.F.F.
A2	SUSPENDED	16" DIAMETER LED HIGH BAY LIGHT FIXTURE	METALUX	SSLED-LD5-12-M-UNV-L840-CD1	LED	4000 K	85 VA	277 V	PENDANT MOUNT FIXTURE FROM STRUCTURE ABOVE TO 32'-0" A.F.F.
A2E	SUSPENDED	16" DIAMETER LED HIGH BAY LIGHT FIXTURE, EMERGENCY CIRCUIT	METALUX	SSLED-LD5-12-M-UNV-L840-CD1	LED	4000 K	85 VA	277 V	PENDANT MOUNT FIXTURE FROM STRUCTURE ABOVE TO 32'-0" A.F.F.
AE	SUSPENDED	16" DIAMETER LED HIGH BAY LIGHT FIXTURE, EMERGENCY CIRCUIT	METALUX	SSLED-LD5-24-W-UNV-L840-CD1	LED	4000 K	190 VA	277 V	PENDANT MOUNT FIXTURE FROM STRUCTURE ABOVE TO 32'-0" A.F.F.
B	RECESSED	RECESSED 2X4 DIRECT/INDIRECT LED TROFFER	CORELITE	R2X-W0-2L40-LD5-UNV-24-T1-STD-	LED	4000 K	35 VA	277 V	
B2	RECESSED	RECESSED 2X2 DIRECT/INDIRECT TROFFER	CORELITE	R2X-W0-5-L40-LD5-UNV-22-T1-STD	LED	4000 K	38 VA	277 V	
B2E	RECESSED	RECESSED 2X2 DIRECT/INDIRECT TROFFER, EMERGENCY CIRCUIT	CORELITE	R2X-W0-5-L40-LD5-UNV-22-T1-STD	LED	4000 K	38 VA	277 V	
BE	RECESSED	RECESSED 2X4 DIRECT/INDIRECT LED TROFFER, EMERGENCY CIRCUIT	CORELITE	R2X-W0-2L40-LD5-UNV-24-T1-STD-E4L14W	LED	4000 K	35 VA	277 V	
C	RECESSED	6" DIAMETER LED DOWN LIGHT	HALO	HC6-25-D010 HM6-3040-840-61-MD-C	LED	4000 K	28 VA	277 V	
C3	RECESSED	4" LED SQUARE DOWN LIGHT	HALO	PRS4-FS34-30-D010-SM4348FS-41S-WD-C	LED	4000 K	27 VA	277 V	
C3E	RECESSED	4" LED SQUARE DOWN LIGHT, EMERGENCY CIRCUIT	HALO	PRS4-FS34-30-D010-SM4348FS-41S-WD-C	LED	4000 K	27 VA	277 V	
CE	RECESSED	6" DIAMETER LED DOWN LIGHT WITH EMERGENCY CIRCUIT	HALO	HC6-25-D010-IEM14 HM6-3040-840-61-MD-C	LED	4000 K	28 VA	277 V	
D	RECESSED	4"X 8' LED RECESSED LINEAR WITH REGRESSED LENS DIRECT, 0-10V DIMMING	FINELITE	HP-4-RRG-D-8'-H-840-RG-D-96LG-277-SC-FC-10-C1	LED	4000 K	56 VA	277 V	
D6	RECESSED	4"x 6' LED RECESSED LINEAR WITH REGRESSED LENS DIRECT, 0-10V DIMMING	FINELITE	HP-4-RRG-D-6'-H-840-RG-D-96LG-277-SC-FC-10-C1	LED	4000 K	43 VA	277 V	
F	SUSPENDED	8' SUSPENDED LENSED LED STRIP LIGHT	METALUX	8SNX-44SL-LN-FDL-UNV-L840-CD-1-Y-TOGGLE-102PK	LED	4000 K	28 VA	277 V	
F2	SURFACE	4' LED SURFACE MOUNTED STRIP WITH ROUND CLEAR LENS	LITHONIA	4SNX-45SL-LC-UNV-L840-CD-1	LED	4000 K	30 VA	277 V	
F2E	SURFACE	4' LED SURFACE MOUNTED STRIP WITH ROUND CLEAR LENS	LITHONIA	4SNX-45SL-LC-UNV-L840-CD-1	LED	4000 K	30 VA	277 V	
F4	SUSPENDED	4' SUSPENDED LENSED LED STRIP LIGHT	METALUX	4SNX-45SL-LN-FDL-UNV-L840-CD-1-Y-TOGGLE-102PK	LED	4000 K	37 VA	277 V	
FE	SUSPENDED	8' SUSPENDED LENSED LED STRIP LIGHT, EMERGENCY CIRCUIT	METALUX	8SNX-44SL-LN-FDL-UNV-L840-CD-1-Y-TOGGLE-102PK	LED	4000 K	28 VA	277 V	
G	RECESSED	4FT T-BAR LED	JLC-TECH	TBSL-MN-4-15-D-U-W	LED	4000 K	40 VA	277 V	VERIFY CEILING GRID TYPE. PROVIDE LOW VOLTAGE TRANSFORMER
G2	RECESSED	T-BAR LED	JLC-TECH	TBSL-MN-2-D-U-W	LED	4000 K	20 VA	277 V	VERIFY CEILING GRID TYPE. PROVIDE LOW VOLTAGE TRANSFORMER
GE	RECESSED	T-BAR LED, EMERGENCY CIRCUIT	JLC-TECH	TBSL-MN-4-15-D-U-W	LED	4000 K	40 VA	277 V	VERIFY CEILING GRID TYPE. PROVIDE LOW VOLTAGE TRANSFORMER
H	SURFACE	2' LED LINEAR VAPORTITE	HE WILLIAMS	96-4-L29-8-40-PCFR-DIM-UNV	LED	4000 K	25 VA	277 V	
K	SUSPENDED	4"x 8' LED SUSPENDED LINEAR DIRECT/INDIRECT, 0-10V DIMMING	FINELITE	HP-0-P-ID-8-H-S-840-F-F-277-SC-FC-10	LED	4000 K	56 VA	277 V	PENDANT MOUNT FIXTURE FROM STRUCTURE ABOVE TO 9'-0" A.F.F.
KE	SUSPENDED	4"x 8' LED SUSPENDED LINEAR DIRECT/INDIRECT, EMERGENCY CIRCUIT	FINELITE	HP-0-P-ID-8-H-S-840-F-F-277-SC-FC-10	LED	4000 K	56 VA	277 V	PENDANT MOUNT FIXTURE FROM STRUCTURE ABOVE TO 9'-0" A.F.F.
P	POLE	LED DOUBLE HEAD LIGHT FIXTURE ON 26'-0 POLE AND CONCRETE BASE	McGRAW EDISON	GALN-SA-4C-740-U-T3 POLE; SSS-5-A-26-S-Y	LED	4000 K	320 VA	277 V	
W	WALL	LED WALL PACK	LUMARK	XTOR4B-W-BK	LED	4000 K	38 VA	277 V	
WE	WALL	LED WALL PACK, EMERGENCY CIRCUIT	LUMARK	XTOR4B-W-BK	LED	4000 K	38 VA	277 V	
X	WALL	EXIT SIGN BACK MOUNT WITH WIRE GAURD AND EMERGENCY CIRCUIT	SURE-LITES	LPX-7-WG10	LED	4000 K	5 VA	277 V	
~~X2~~	~~CEILING~~	~~CEILING MOUNTED EXIT SIGN WITH EMERGENCY CIRCUIT~~	~~SURE-LITES~~	~~LPX-7~~	~~LED~~	~~4000 K~~	~~5 VA~~	~~277 V~~	
X2	WALL	EXIT SIGN END MOUNT	SURE-LITES	LPX-7	LED	4000 K	5 VA	277 V	

LIGHTING INVERTER SCHEDULE

INVERTER TAG:	MANUFACTURER:	MODEL NUMBER:	WATTAGE:	CONNECTED WATTAGE:	INPUT VOLTAGE:	OUTPUT VOLTAGE:	BREAKERS
LI-1	MEYERS	6-EM-3-S-BD10-05	2200	1692 VA	277	277	5
LI-2	MEYERS	6-EM-4-S-BD10-05	2800	2098 VA	277	277	5
LI-3	MEYERS	6-EM-3-S-BD10-05	2200	1082 VA	277	277	5

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

ITEM	DESCRIPTION	VOLTS	PHASE	DISC. BY	DISC. TYPE	DISC. SIZE	NEMA	CONDUCTORS PHASE	CONDUCTORS NEUTRAL	CONDUCTORS GROUND	CONDUIT SIZE
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-B	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
CRV-P	VACUUM PUMP	480 V	3	DIV 26	MS	30A	3R	3-#10	-	1-#10	3/4"
CRV-P	VACUUM PUMP	480 V	3	DIV 26	MS	30A	3R	3-#10	-	1-#10	3/4"
CU-1a	CONDENSING UNIT	480 V	3	DIV 26	ND	30A	3R	3-#10	-	1-#10	3/4"
CU-1b	CONDENSING UNIT	480 V	3	DIV 26	ND	30A	3R	3-#10	-	1-#10	3/4"
CU-1c	CONDENSING UNIT	480 V	3	DIV 26	ND	30A	3R	3-#10	-	1-#10	3/4"
CU-2a	CONDENSING UNIT	480 V	3	DIV 26	ND	60A	3R	3-#10	-	1-#10	3/4"
CU-2b	CONDENSING UNIT	480 V	3	DIV 26	ND	30A	3R	3-#10	-	1-#10	3/4"
CU-2c	CONDENSING UNIT	480 V	3	DIV 26	ND	30A	3R	3-#10	-	1-#10	3/4"
DEF-1	DUCT EXHAUST FAN	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
DEF-2	DUCT EXHAUST FAN	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
DF-1	DESTRATIFICATION FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
DF-2	DESTRATIFICATION FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
DF-3	DESTRATIFICATION FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
DF-4	DESTRATIFICATION FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
EF-1	EXHAUST FAN	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
EF-2	EXHAUST FAN	480 V	3	-	-	-	-	3-#10	-	1-#10	3/4"
~~EF-3~~	~~EXHAUST FAN~~	~~208 V~~	~~3~~	~~-~~	~~-~~	~~-~~	~~-~~	~~3-#10~~	~~-~~	~~1-#10~~	~~3/4"~~
EF-4	EXHAUST FAN	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
~~ERV-1~~	~~ENERGY RECOVERY VENTILATOR~~	~~208 V~~	~~3~~	~~DIV 26~~	~~ND~~	~~30A~~	~~1~~	~~3-#12~~		~~1-#12~~	~~3/4"~~
GF-1	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-2	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-3	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-4	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-5	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-6	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-7	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-8	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-9	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-10	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-11	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-12	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-13	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GF-14	GAS FURNACE	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
GWH-1	GAS WATER HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
HVLS-1	CEILING FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
HVLS-2	CEILING FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
HVLS-3	CEILING FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
HVLS-4	CEILING FAN	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-1	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
IH-2	INFRARED HEATER	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
RP-1	RECIRCULATION PUMP	120 V	1	DIV 26	TOG	30A	1	1 -#12	1-#12	1-#12	3/4"
SP-1	SUMP PUMP	120 V	1	-	-	-	-	1 -#12	1-#12	1-#12	3/4"
UHE-1	WALL HEATERS	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
UHE-2	WALL HEATERS	208 V	1	-	-	-	-	2-#12	-	1-#12	3/4"
UHG-1	GAS UNIT HEATER	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"
UHG-2	GAS UNIT HEATER	120 V	1	DIV 26	ND	30A	1	1 -#12	1-#12	1-#12	3/4"

11/8/2023 11:54:41 AM

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO: 022-04268
CAD DWG FILE: Lee's Summit - Hangar 2.rvt
DESIGNED BY: SH
DRAWN BY: OH
CHECKED BY: AF
APPROVED BY: TWD

SHEET TITLE

ELECTRICAL SCHEDULES

E701

PANEL HP2-2
VOLTAGE 480Y/277V Wye
MCB OR MLO MLO
FED FROM MDP-2

PHASE BUS RATING 225 A
AIC RATING 30K

LOCATION HANGAR 126
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	PARKING LOT LIGHTING	20 A	1	1	320	468					2	1	20 A	EXTERIOR LIGHTING	
	LTG HANGER SOUTH	20 A	1	3			4940	0			4	1	20 A	SPARE	
	LTG RR 105/106	20 A	1	5					436	561	6	1	20 A	LTG MECH/STORAGE BK RM	
	PILOT LOUNGE LIGHTING	20 A	1	7	524	872					8	1	20 A	LTG 2nd FLR CORRIDOR/OFFICES	
	SPARE	20 A	1	9			0	0			10	1	20 A	SPARE	
	OPEN OFFICE/CONFERENCE - 205...	20 A	1	11					1909	757	12	1	20 A	LI-2	
	LTG OFFICES AND CORRIDOR	20 A	1	13	1034	943					14	3	20 A	VACUUM PUMP 2	
	GPU RECEPT	60 A	3	15			7202	943			16	--	--	--	--
--	--	--	--	17					7202	943	18	--	--	--	--
--	--	--	--	19	7202	7202					20	3	60 A	GPU RECEPT	
	GPU RECEPT - EXTERIOR	60 A	3	21			7202	7202			22	--	--	--	--
--	--	--	--	23					7202	7202	24	--	--	--	--
--	--	--	--	25	7202	3650					26	1	20 A	DEICER	GFPE
GFPE	DEICER	20 A	1	27			3650	3650			28	1	20 A	DEICER	GFPE
GFPE	DEICER	20 A	1	29					3650	3650	30	1	20 A	DEICER	GFPE
GFPE	DEICER	20 A	1	31	3650	3650					32	1	20 A	DEICER	GFPE
GFPE	DEICER	20 A	1	33			3650	0			34	1	20 A	SPARE	
	HANGER DOOR	30 A	3	35					3878	0	36	1	20 A	SPARE	
--	--	--	--	37	3878	0					38	3	30 A	SPD	
--	--	--	--	39			3878	0			40	--	--	--	--
	SPARE	20 A	1	41					0	0	42	--	--	--	--
					KVA 41.93...		**KVA** 42.317		**KVA** 37.39...						
					AMPS 154		**AMPS** 155		**AMPS** 135						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	3650 VA	100.00%	3650 VA
Lighting	12842 VA	125.00%	16052 VA
Motor	2829 VA	125.00%	3536 VA
Non Concurrent	11634 VA	100.00%	11634 VA
Other	25870 VA	100.00%	25870 VA
Receptacle	64818 VA	57.71%	37409 VA

CONNECTED LOAD: 121.6... 146
MAXIMUM DEMAND: 98.15... 118

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

Distribution: DP-2

MAINS TYPE: MCB
OCPD RATING: 350A
AIC RATING: 10K
SERVICE VOLTAGE: 208Y/120V 3PH, 3-Phase, 4-Wire

LOCATION: HANGAR 126
MOUNTING: SURFACE
FED FROM ID: TF2

NOTES:

LOAD DESCRIPTION	CKT NO.	P	A	B	C	NOTES
SPD	1	1	--			REFER TO ONE-LINE
LP2-1	2	3	10195.0	11435.0	9550.0	REFER TO ONE-LINE
LP2-2	3	3	6453.3	7273.3	5913.3	REFER TO ONE-LINE
LP2-3	4	3	3462.1	3418.3	3568.3	REFER TO ONE-LINE
LP2-4	5	3	7767.0	7124.0	6940.0	REFER TO ONE-LINE
SPARE	6	1	0.0			REFER TO ONE-LINE
		Total Load:	27.9 kVA	29.3 kVA	26.0 kVA	
		Total Amps:	234.8 A	246.2 A	216.4 A	

Load Classification	Connected...	Demand...	Estimated...	Panel Totals	
Appliance - Dwelling Unit	44 VA	100.00%	44 VA		
HVAC	17014 VA	100.00%	17014 VA	**Total Conn. Load:**	83.1 kVA
HVAC_Heating	6000 VA	100.00%	6000 VA	**Total Conn. Current:**	230.7 A
Lighting	360 VA	125.00%	450 VA	**Total Est. Demand:**	63.92 kVA
Motor	1700 VA	122.06%	2075 VA	**Total Est. Demand...**	177.4 A
Other	6990 VA	100.00%	6990 VA	**Future Load Growth:**	
Power	1712 VA	100.00%	1712 VA	**Min. Panel Rating...**	
Receptacle	49280 VA	60.15%	29640 VA	**Adjusted Demand...**	
				Total Adjusted Deman...	

Distribution: MDP-2

MAINS TYPE: MLO
OCPD RATING: 600A
AIC RATING: 42K
SERVICE VOLTAGE: 480Y/277V Wye, 3-Phase, 4-Wire

LOCATION: HANGER 126
MOUNTING: SURFACE
FED FROM ID:

NOTES:

LOAD DESCRIPTION	CKT NO.	P	A	B	C	NOTES
SPD	1	1	--			REFER TO ONE-LINE
ELEVATOR	2	3	5321.0	5321.0	5321.0	REFER TO ONE-LINE
HP2-1	3	3	55742.7	58078.7	53898.7	REFER TO ONE-LINE
HP2-2	4	3	42317.0	37390.1	41935.5	REFER TO ONE-LINE
DP2 VIA TF2	5	3	27877.4	29250.7	25971.7	REFER TO ONE-LINE
SPARE	6	1	0.0			REFER TO ONE-LINE
		Total Load:	131.3...	130.0...	127.1...	
		Total Amps:	475.5 A	471.1 A	458.9 A	

Load Classification	Connected...	Demand...	Estimated...	Panel Totals	
Appliance - Dwelling Unit	44 VA	100.00%	44 VA		
HVAC	22164 VA	100.00%	22164 VA	**Total Conn. Load:**	388.4 kVA
HVAC_Cooling	68505 VA	100.00%	68505 VA	**Total Conn. Current:**	467.2 A
HVAC_Heating	6000 VA	100.00%	6000 VA	**Total Est. Demand:**	323.88 kVA
Lighting	19226 VA	125.00%	24032 VA	**Total Est. Demand...**	389.6 A
Motor	57337 VA	107.51%	61644 VA	**Future Load Growth:**	
Non Concurrent	23268 VA	100.00%	23268 VA	**Min. Panel Rating...**	
Other	32860 VA	100.00%	32860 VA	**Adjusted Demand...**	
Power	1712 VA	100.00%	1712 VA	**Total Adjusted Deman...**	
Receptacle	157310 VA	53.18%	83655 VA		

PANEL LP2-1
VOLTAGE 208Y/120V 3PH
MCB OR MLO MLO
FED FROM DP-2

PHASE BUS RATING 225 A
AIC RATING 10K

LOCATION MECH / ELEC 118
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
HLO	FIRE ALARM CONTROL PANEL	20 A	1	1	0	200					2	1	20 A	ELEVATOR CAB LIGHITING	
	EXTERIOR SIGN LIGHTING	20 A	1	3			360	720			4	1	20 A	RECEPT: JANOTOR/STORAGE- 115/116	
	RECEPT: MECH/ELEC - 222	20 A	1	5					540	850	6	1	15 A	GF-2	
	RECEPT: VENDING ROOM - 108	20 A	1	7	540	1000					8	1	20 A	RECEPT DISHWASHER	
	RECEPT DISPOSAL	20 A	1	9			1000	1080			10	1	20 A	RECEPT: RM - 114	
	RECEPT: LOBBY/VESTIBULE - 100	20 A	1	11					1080	1500	12	1	20 A	GF-5	
	GF-3	15 A	1	13	1115	1260					14	1	20 A	RECEPT: CORRIDOR/LOBBY	
	GF-4	15 A	1	15			1115	1080			16	1	20 A	RECEPT: RESTROOM - 105/106	
	UHE-2	20 A	2	17					1500	180	18	1	20 A	RECEPT M ICROWAVE	
--	--	--	--	19	1500	1500					20	2	20 A	UHE-1	
	GF-1	20 A	1	21			1500	1500			22	--	--		--
	RECEPT: RM - 113	20 A	1	23					900	1000	24	1	20 A	TV LOBBY/WAITING	
	LOBBY FLOOR BOX	20 A	1	25	180	900					26	1	20 A	RECEPT: BREAKROOM -116	
	RECEPT - CASEWORK	20 A	1	27			180	900			28	1	20 A	RECEPT: RECEPCTION - 109	
	RECEPT: RECEPTION PRINTER	20 A	1	29					1000	1000	30	1	20 A	RECEPT-REFRIGERATOR	
	RECEPT: VENDING MACHINE 1 - 108	20 A	1	31	1000	1000					32	1	20 A	RECEPT: MIN REFRIGERATOR-	
	RECEPT: VENDING MACHINE 2 - 108	20 A	1	33			1000	1000			34	1	20 A	RECEPT DISPOSAL	
	SPARE	20 A	1	35					0	0	36	1	20 A	SPARE	
	SPARE	20 A	1	37	0	0					38	3	30 A	SPD	
	SPARE	20 A	1	39			0	0			40	--	--		--
	SPARE	20 A	1	41					0	0	42	--	--		--
					KVA 10.195		**KVA** 11.435		**KVA** 9.55						
					AMPS 86		**AMPS** 96		**AMPS** 80						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	4580 VA	100.00%	4580 VA
HVAC_Heating	6000 VA	100.00%	6000 VA
Lighting	360 VA	125.00%	450 VA
Motor	1500 VA	125.00%	1875 VA
Other	180 VA	100.00%	180 VA
Power	200 VA	100.00%	200 VA
Receptacle	18360 VA	77.23%	14180 VA

CONNECTED LOAD: 31.18 87
MAXIMUM DEMAND: 27.465 76

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

PANEL HP2-1
VOLTAGE 480Y/277V Wye
MCB OR MLO MLO
FED FROM MDP-2

PHASE BUS RATING 225 A
AIC RATING 30K

LOCATION HANGAR 126
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	EXTERIOR LIGHTING	20 A	1	1	152	1692					2	1	20 A	LI-1	
	LTG HANGER NORTH	20 A	1	3			4180	943			4	3	20 A	VACUUM PUMP 1	
	CU-1a	25 A	3	5					4567	943	6	--	--	--	--
--	--	--	--	7	4567	943					8	--	--	--	--
--	--	--	--	9			4567	4567			10	3	25 A	CU-1b	
	CU-1c	25 A	3	11					4567	4567	12	--	--	--	--
--	--	--	--	13	4567	4567					14	--	--	--	--
--	--	--	--	15			4567	4567			16	3	25 A	CU-2b	
	CU-2c	25 A	3	17					4567	4567	18	--	--	--	--
--	--	--	--	19	4567	4567					20	--	--	--	--
--	--	--	--	21			4567	5742			22	3	35 A	CU-2a	
	EF-2	30 A	3	23					6097	5742	24	--	--	--	--
--	--	--	--	25	6097	5742					26	--	--	--	--
--	--	--	--	27			6097	7202			28	3	60 A	GPU RECEPT	
	HANGER DOOR	30 A	3	29					3878	7202	30	--	--	--	--
--	--	--	--	31	3878	7202					32	--	--	--	--
--	--	--	--	33			3878	7202			34	3	60 A	GPU RECEPT	
	SPARE	20 A	1	35					0	7202	36	--	--	--	--
	SPD	30 A	3	37	0	7202					38	--	--	--	--
--	--	--	--	39			0	0			40	1	20 A	SPARE	
--	--	--	--	41					0	0	42	1	20 A	SPARE	
					KVA 55.74...		**KVA** 58.07...		**KVA** 53.89...						
					AMPS 202		**AMPS** 211		**AMPS** 195						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC_Cooling	68505 VA	100.00%	68505 VA
Lighting	6024 VA	125.00%	7530 VA
Motor	38345 VA	111.23%	42652 VA
Non Concurrent	11634 VA	100.00%	11634 VA
Other	0 VA	0.00%	0 VA
Receptacle	43212 VA	61.57%	26606 VA

CONNECTED LOAD: 167.72 202
MAXIMUM DEMAND: 156.9... 189

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

PANEL LP2-2
VOLTAGE 208Y/120V 3PH
MCB OR MLO MLO
FED FROM DP-2

PHASE BUS RATING 225 A
AIC RATING 10K

LOCATION I.T. CLOSET / MECH / ELEC...
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
GFCI	RECEPT: 2nd FLR DRINK FOUNTAIN	20 A	1	1	360	540					2	1	20 A	RECEPT IT/MECH/ELEC - 215	
	RECEPT: BRK RM - 214	20 A	1	3			720	360			4	1	0 A	RECEPT - IT QUAD	
	RECEPT: PILOT LOUNGE - 216	20 A	1	5					900	1000	6	1	20 A	RECEPT: WORKROOM PRINTER	
	DF-1	20 A	2	7	0	0					8	2	20 A	DF-2	
--	--	--	--	9			0	0			10	--	--	--	--
	RECEPT: RESTROOM - 208/210	20 A	1	11					360	540	12	1	20 A	RECEPT: RM 211	
	RECEPT: ELEVATOR PIT	20 A	1	13	360	540					14	1	20 A	RECEPT: WORKROOM - 213	
	RECEPT: PILOT QUIET RM - 217	20 A	1	15			360	900			16	1	20 A	RECEPT: CONFERENCE - 205	
	TV STAIR 2 - 202	20 A	1	17					1000	1000	18	1	20 A	RECEPT: REFRIGERATOR BRK RM -...	
	TV CONFERENCE - 205	20 A	1	19	1000	1000					20	1	20 A	RECEPT: DISPOSAL BRK RM - 214	
	TV OPEN OFFICE	20 A	1	21			1000	1000			22	1	20 A	RECEPT: MICROWAVE BRK RM - 214	
	RECEPT: RM 212	20 A	1	23					1080	1033	24	3	15 A	ERV-1	
	RECEPT: CORRIDOR - 207	20 A	1	25	1080	1033					26	--	--	--	--
	RECEPT: OBSERVATION DECK - 206	20 A	1	27			1080	1033			28	--	--	--	--
	RECEPT - IT QUAD	20 A	1	29					360	0	30	1	20 A	SPARE	
	SPARE	20 A	1	31	0	0					32	1	20 A	SPARE	
	SPARE	20 A	1	33			0	0			34	1	20 A	SPARE	
	SPARE	20 A	1	35					0	0	36	1	20 A	SPARE	
	SPD	30 A	3	37	0	0					38	1	20 A	SPARE	
--	--	--	--	39			0	0			40	1	20 A	SPARE	
--	--	--	--	41					0	0	42	1	20 A	SPARE	
					KVA 5.913...		**KVA** 6.453...		**KVA** 7.273...						
					AMPS 49		**AMPS** 54		**AMPS** 61						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	3100 VA	100.00%	3100 VA
Motor	0 VA	0.00%	0 VA
Other	1360 VA	100.00%	1360 VA
Power	0 VA	0.00%	0 VA
Receptacle	15180 VA	82.94%	12590 VA

CONNECTED LOAD: 19.64 55
MAXIMUM DEMAND: 17.05 47

NOTES:
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CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

PANEL LP2-3
VOLTAGE 208Y/120V 3PH
MCB OR MLO MLO
FED FROM DP-2

PHASE BUS RATING 225 A
AIC RATING 10K

LOCATION HANGAR 126
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	RP-1	20 A	1	1	44	90					2	1	20 A	DEF-1	
	RECEPT: INFRARED HEATERS	20 A	1	3			1440	0			4	1	20 A	SPARE	
	DAMPER	20 A	1	5					50	360	6	1	20 A	RECEPT- WATER FOUNTAIN - 108	GFCI
	GWH-1	20 A	1	7	180	1080					8	1	20 A	HANGER RECEPT	
	SPARE	20 A	1	9			0	0			10	1	20 A	SPARE	
	RECEPT: WASHER - 116	20 A	1	11					1000	90	12	2	20 A	SLIDING GATE 2	
	SLIDING GATE 1	20 A	2	13	90	90					14	--	--	--	--
--	--	--	--	15			90	500			16	2	30 A	HANGER RECEPT	
	HVAC	0 A	1	17					180	500	18	--	--	--	--
	HANGER RECEPT	30 A	2	19	500	888					20	3	20 A	EF-3	
--	--	--	--	21			500	888			22	--	--	--	--
	RECEPT DRYER	20 A	2	23					500	888	24	--	--	--	--
--	--	--	--	25	500	0					26	1	20 A	SPARE	
	SPARE	20 A	1	27			0	0			28	1	20 A	SPARE	
	SPARE	20 A	1	29					0	0	30	1	20 A	SPARE	
	SPARE	20 A	1	31	0	0					32	1	20 A	SPARE	
	SPARE	20 A	1	33			0	0			34	1	20 A	SPARE	
	SPARE	20 A	1	35					0	0	36	1	20 A	SPARE	
	SPD	30 A	3	37	0	0					38	1	20 A	SPARE	
--	--	--	--	39			0	0			40	1	20 A	SPARE	
--	--	--	--	41					0	0	42	1	20 A	SPARE	
					KVA 3.462...		**KVA** 3.418...		**KVA** 3.568...						
					AMPS 29		**AMPS** 28		**AMPS** 30						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
Appliance - Dwelling...	44 VA	100.00%	44 VA
HVAC	180 VA	100.00%	180 VA
Motor	1383 VA	124.10%	1716 VA
Other	450 VA	100.00%	450 VA
Power	1512 VA	100.00%	1512 VA
Receptacle	6880 VA	100.00%	6880 VA

CONNECTED LOAD: 10.44... 29
MAXIMUM DEMAND: 10.78... 30

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

ELECTRICAL SCHEDULES

E702

SHEET 108 OF 131

11/8/2023 11:54:43 AM

Distribution: DP-1

MAINS TYPE: MCB
OCPD RATING: 350A
AIC RATING: 10K
SERVICE VOLTAGE: 208Y/120V 3PH, 3-Phase, 4-Wire
LOCATION: MECH / ELEC 118
MOUNTING: SURFACE
FED FROM ID: TF1

NOTES:

LOAD DESCRIPTION	CKT NO.	P	A	B	C	NOTES
SPD	1	1	--			REFER TO ONE-LINE
LP1-1	2	3	7029.7	6920.0	6800.0	REFER TO ONE-LINE
LP1-2	3	3	5442.5	5785.0	6936.5	REFER TO ONE-LINE
SPARE	4	1	0.0			REFER TO ONE-LINE
	5					
	6					
Total Load:			12.5 kVA	12.7 kVA	13.7 kVA	
Total Amps:			103.9 A	106.2 A	114.8 A	

Load Classification	Connected...	Demand...	Estimated...	Panel Totals	
HVAC	9587 VA	100.00%	9587 VA		
Motor	2850 VA	113.16%	3225 VA	**Total Conn. Load:**	38.9 kVA
Other	450 VA	100.00%	450 VA	**Total Conn. Current:**	108.0 A
Power	1127 VA	100.00%	1127 VA	**Total Est. Demand:**	31.84 kVA
Receptacle	24900 VA	70.08%	17450 VA	**Total Est. Demand...**	88.4 A
				Future Load Growth:	
				Min. Panel Rating...	
				Adjusted Demand...	
				Total Adjusted Deman...	

Distribution: MDP-1

MAINS TYPE: MLO
OCPD RATING: 400A
AIC RATING: 42K
SERVICE VOLTAGE: 480Y/277V Wye, 3-Phase, 4-Wire
LOCATION: HANGAR 126
MOUNTING:
FED FROM ID:

NOTES:

LOAD DESCRIPTION	CKT NO.	P	A	B	C	NOTES
SPD	1	1	--			REFER TO ONE-LINE
HP1-1	2	3	2650.0	741.0	0.0	REFER TO ONE-LINE
DP1 VIA TF-1	3	3	12472.2	12705.0	13736.5	REFER TO ONE-LINE
SPARE	4	1	0.0			REFER TO ONE-LINE
	5					
	6					
Total Load:			15.1 kVA	13.4 kVA	13.7 kVA	
Total Amps:			54.8 A	48.5 A	49.8 A	

Load Classification	Connected...	Demand...	Estimated...	Panel Totals	
HVAC	9587 VA	100.00%	9587 VA		
Lighting	3391 VA	125.00%	4239 VA	**Total Conn. Load:**	42.3 kVA
Motor	2850 VA	113.16%	3225 VA	**Total Conn. Current:**	50.9 A
Other	450 VA	100.00%	450 VA	**Total Est. Demand:**	36.08 kVA
Power	1127 VA	100.00%	1127 VA	**Total Est. Demand...**	43.4 A
Receptacle	24900 VA	70.08%	17450 VA	**Future Load Growth:**	
				Min. Panel Rating...	
				Adjusted Demand...	
				Total Adjusted Deman...	

PANEL LP1-1
VOLTAGE 208Y/120V 3PH
MCB OR MLO MLO
FED FROM DP-1
PHASE BUS RATING 225 A
AIC RATING 10K
LOCATION MECH / ELEC 118
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	DEF-2	20 A	1	1	90	360					2	1	20 A	RECEPT: RM - 120	
	RECEPT: FLIGHT SIMULATOR	20 A	1	3			180	360			4	1	20 A	RECEPT: STORAGE - 119/ RESTROO...	
	RECEPT: PROJECTOR - 124	20 A	1	5					180	720	6	1	20 A	RECEPT: RM - 124	
	RECEPT - WASHER - 119	20 A	1	7	1000	1500					8	1	20 A	GF-6	
	RECEPT: STAIR 1 - 103	20 A	1	9			1080	1720			10	1	20 A	RECEPT: RM - 121	
	RECEPT: COPIER -120	20 A	1	11					1000	1500	12	1	20 A	GF-7	
	COILING DOOR -121	20 A	2	13	500	900					14	1	20 A	RECEPT MECH/ELEC 118	
--	--	--	--	15			500	900			16	1	20 A	RECEPT: RM - 125	
	RECEPT DRYER	20 A	2	17					500	900	18	1	20 A	RECEPT: RM - 121	
--	--	--	--	19	500	1000					20	1	20 A	RECEPT: REELS 4	
	RECEPT: REELS 5	20 A	1	21			1000	1000			22	1	20 A	RECEPT: REELS 2	
	TV LEARN LAB	20 A	1	23					1000	1000	24	1	20 A	RECEPT: REELS 3	
	RECEPT: REELS 1	20 A	1	25	1000	180					26	1	20 A	DF CONTROLLER	
	DF CONTROLLER	20 A	1	27			180	0			28	1	20 A	SPARE	
	SPARE	20 A	1	29					0	0	30	1	20 A	SPARE	
	SPARE	20 A	1	31	0	0					32	1	20 A	SPARE	
	SPARE	20 A	1	33			0	0			34	1	20 A	SPARE	
	SPARE	20 A	1	35					0	0	36	1	20 A	SPARE	
	SPD	30 A	3	37	0	0					38	1	20 A	SPARE	
--	--	--	--	39			0	0			40	1	20 A	SPARE	
--	--	--	--	41					0	0	42	1	20 A	SPARE	
					KVA 7.029...		**KVA** 6.92		**KVA** 6.8						
					AMPS 59		**AMPS** 58		**AMPS** 57						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	1860 VA	100.00%	1860 VA
Motor	2500 VA	115.00%	2875 VA
Other	90 VA	100.00%	90 VA
Receptacle	16300 VA	80.67%	13150 VA

CONNECTED LOAD: 20.74... 58
MAXIMUM DEMAND: 17.97... 50

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

PANEL HP1-1
VOLTAGE 480Y/277V Wye
MCB OR MLO MLO
FED FROM MDP-1
PHASE BUS RATING 225 A
AIC RATING 30K
LOCATION I.T. CLOSET / MECH / ELEC...
MOUNTING SURFACE
NO. OF POLES 24

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	LTG:- FLITE SIMULATORS	20 A	1	1	1340	228					2	1	20 A	LTG: LEARN LAB	
	LTG: CONF - 220 / IT/MECH/ELEC	20 A	1	3			741	0			4	1	20 A	SPARE	
	SPARE	20 A	1	5					0	0	6	1	20 A	LI-3	
	SPARE	20 A	1	7	0	0					8	1	20 A	SPARE	
	SPARE	20 A	1	9			0	0			10	1	20 A	SPARE	
	SPARE	20 A	1	11					0	0	12	1	20 A	SPARE	
	SPARE	20 A	1	13	0	0					14	1	20 A	SPARE	
	SPARE	20 A	1	15			0	0			16	1	20 A	SPARE	
	SPARE	20 A	1	17					0	0	18	1	20 A	SPARE	
	SPD	30 A	3	19	0	0					20	1	20 A	SPARE	
--	--	--	--	21			0	0			22	1	20 A	SPARE	
--	--	--	--	23					0	0	24	1	20 A	SPARE	
					KVA 2.65		**KVA** 0.741		**KVA** 0						
					AMPS 10		**AMPS** 3		**AMPS** 0						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
Lighting	3391 VA	125.00%	4239 VA
Other	0 VA	0.00%	0 VA

CONNECTED LOAD: 3.391 4
MAXIMUM DEMAND: 4.23875 5

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

PANEL LP2-4
VOLTAGE 208Y/120V 3PH
MCB OR MLO MLO
FED FROM DP-2
PHASE BUS RATING 225 A
AIC RATING 10K
LOCATION HANGAR 126
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	DAMPER	20 A	1	1	150	444					2	1	20 A	UHG-1	
	UHG-2	20 A	1	3			444	1080			4	1	20 A	STORAGE - 127 RECEPT	
	EXTERIOR RECEPT	20 A	1	5					720	1080	6	1	20 A	HANGER RECEPTS	
	RECEPT: INFRARED HEATERS	20 A	1	7	1440	500					8	2	30 A	HANGER 208V OUTLET	
	HVLS-1	20 A	2	9			700	500			10	--	--	--	--
--	--	--	--	11					700	500	12	2	20 A	O.H. HANGER DOOR	
	O.H. DOOR HANGER - 127	20 A	2	13	500	500					14	--	--	--	--
--	--	--	--	15			500	500			16	2	20 A	O.H. DOOR HANGER - 127	
	RECEPT - GSE	20 A	1	17					540	500	18	--	--	--	--
	HANGER 208V RECEPT	30 A	2	19	500	1333					20	1	20 A	EF-4	
--	--	--	--	21			500	500			22	2	20 A	O.H. DOOR HANGER	
	O.H. DOOR HANGER - 127	20 A	2	23					500	500	24	--	--	--	--
--	--	--	--	25	500	700					26	2	20 A	HVLS-2	
	HVLS-3	20 A	2	27			700	700			28	--	--	--	--
--	--	--	--	29					700	700	30	2	20 A	HVLS-4	
	RECEPT -TUG GSE	30 A	2	31	500	700					32	--	--	--	--
--	--	--	--	33			500	500			34	2	30 A	RECEPT -TUG GSE	
	SPARE	20 A	1	35					0	500	36	--	--	--	--
	SPD	30 A	3	37	0	0					38	1	20 A	SPARE	
--	--	--	--	39			0	0			40	1	20 A	SPARE	
--	--	--	--	41					0	0	42	1	20 A	SPARE	
					KVA 7.767		**KVA** 7.124		**KVA** 6.94						
					AMPS 65		**AMPS** 60		**AMPS** 58						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	6488 VA	100.00%	6488 VA
Motor	1483 VA	122.47%	1816 VA
Other	5000 VA	100.00%	5000 VA
Receptacle	8860 VA	100.00%	8860 VA

CONNECTED LOAD: 21.831 61
MAXIMUM DEMAND: 22.16... 62

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

PANEL LP1-2
VOLTAGE 208Y/120V 3PH
MCB OR MLO MLO
FED FROM DP-1
PHASE BUS RATING 225 A
AIC RATING 10K
LOCATION I.T. CLOSET / MECH / ELEC...
MOUNTING SURFACE
NO. OF POLES 42

NOTE	LOAD DESCRIPTION	AMP	P	CKT. NO.	A		B		C		CKT. NO.	P	AMP	LOAD DESCRIPTION	NOTE
	RECEPT: 2nd FLOOR STAIR 1 - 203	20 A	1	1	180	850					2	1	15 A	GF-10	
	RECEPT: CONFERENCE - 220A	20 A	1	3			540	1000			4	1	20 A	RECEPT: 2nd REELS 2	
	RECEPT: CONFERENCE - 220	20 A	1	5					900	900	6	1	20 A	RECEPT: RM 219	
	RECEPT: 2nd REELS 1	20 A	1	7	1000	1115					8	1	15 A	GF-11	
	GF-12	20 A	1	9			1500	88			10	2	20 A	DF-4	
	GF-14	20 A	1	11					1500	88	12	--	--	--	--
	DF-3	20 A	2	13	88	850					14	1	15 A	GF-13	
--	--	--	--	15			88	850			16	1	15 A	GF-8	
	GF-9	15 A	1	17					850	1000	18	1	20 A	TV DRONE PAD - 218	
	TV CONFERENCE - 220	20 A	1	19	1000	360					20	1	20 A	RECEPT - IT QUAD	
	TV DRONE PAD - 218	20 A	1	21			1000	720			22	1	20 A	RECEPT: 2nd IT ROOM	
	EF-1	20 A	1	23					1339	360	24	1	20 A	RECEPT - IT QUAD	
	SPARE	20 A	1	25	0	0					26	1	20 A	SPARE	
	SPARE	20 A	1	27			0	0			28	1	20 A	SPARE	
	SPARE	20 A	1	29					0	0	30	1	20 A	SPARE	
	SPARE	20 A	1	31	0	0					32	1	20 A	SPARE	
	SPARE	20 A	1	33			0	0			34	1	20 A	SPARE	
	SPARE	20 A	1	35					0	0	36	1	20 A	SPARE	
	SPARE	20 A	1	37	0	0					38	3	30 A	SPD	
	SPARE	20 A	1	39			0	0			40	--	--	--	--
	SPARE	20 A	1	41					0	0	42	--	--	--	--
					KVA 5.4425		**KVA** 5.785		**KVA** 6.9365						
					AMPS 45		**AMPS** 49		**AMPS** 58						

LOAD CLASSIFICATIONS	CONNECTED (VA)	DEMAND FACTOR	DEMAND (VA)
HVAC	6227 VA	100.00%	6227 VA
Motor	1850 VA	120.27%	2225 VA
Other	360 VA	100.00%	360 VA
Power	1127 VA	100.00%	1127 VA
Receptacle	8600 VA	100.00%	8600 VA

CONNECTED LOAD: 18.164 50
MAXIMUM DEMAND: 18.539 51

NOTES:
AFCI - ARC FAULT CIRCUIT INTERRUPTION TYPE CIRCUIT BREAKER
CZ# - CONTROL ZONE NUMBER FOR REMOTE CONTROL
BMS# - ROUTE CIRCUIT THROUGH BUILDING MANAGEMENT SYSTEM
GFCI - GROUND FAULT CIRCUIT INTERRUPTING TYPE CIRCUIT...
GFPE - GROUND FAULT PROTECTION EQUIPMENT CIRCUIT BREAKER
HLO - HANDLE LOCK ON DEVICE FOR CIRCUIT BREAKER
HPL- PADLOCK ATTACHMENT TO LOCK C/B HANDLE IN OPEN POSITION

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olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009529
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	SH
DRAWN BY:	OH
CHECKED BY:	AF
APPROVED BY:	TWD

SHEET TITLE

ELECTRICAL SCHEDULES

E703

SHEET 109 OF 131

11/8/2023 11:54:44 AM

FIRE SPRINKLER SYMBOL LEGEND

GENERAL

- EXISTING
- UNDERGROUND
- NEW
- NEW TO EXISTING
- (#) SHEET NOTE
- (#) REVISION DELTA

VALVES

- T & P RELIEF VALVE
- ISOLATION VALVE
- ISOLATION VALVE IN VERTICAL POSITION
- CHECK VALVE
- BALANCING VALVE
- AUTOMATIC 2-WAY VALVE
- AUTOMATIC 3-WAY VALVE
- STRAINER
- UNION
- PRESSURE REDUCING & REGULATING VALVE
- PRESSURE REGULATING VALVE
- DIAPHRAGM VALVE
- ANGLE VALVE

FIRE

- F — FIRE PROTECTION PIPING
- FIRE DEPARTMENT CONNECTION
- TS — TAMPER SWITCH
- FS — FLOW SWITCH
- SPRINKLER HEAD, PENDANT
- SPRINKLER HEAD, SIDE WALL
- ALARM VALVE, WET
- ALARM VALVE, DRY
- ALARM VALVE, DRY
- POST INDICATOR VALVE
- TS — POST INDICATOR VALVE WITH TAMPER SWITCH
- FM — BUILDING SPRINKLER FIRE MAIN

FIRE PROTECTION DESIGN CRITERIA

THE FIRE PROTECTION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A NEW FIRE SPRINKLER SYSTEM UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER, AND ALL MATERIAL REQUIRED FOR A COMPLETE INSTALLATION. CONTRACTOR SHALL PREPARE ALL NEEDED DRAWINGS, ALL REQUIRED CALCULATIONS AND PE SEALS, AND HAVE APPROVAL OF ALL STATE, LOCAL, AND INSURANCE UNDERWRITING AUTHORITIES, AS WELL AS MEETING ALL NFPA REQUIREMENTS. THE SPRINKLER SYSTEM SHALL BE TESTED UNDER PRESSURE BY FIRE PROTECTION CONTRACTOR, INSPECTED AND APPROVED BY LOCAL FIRE MARSHAL, PRIOR TO ACCEPTANCE BY OWNER. CONSULT WITH LANDLORD REPRESENTATIVE FOR EXACT EXISTING CONDITIONS OF FIRE PROTECTION SYSTEM, FOR LOCATION, CONNECTION POINT, SIZE, TYPE, ETCETERA.

1

WATER FLOW TEST INFOMRATION

CONDUCTED BY: CITY OF LEES SUMMIT
DATE: 08/10/2023
STATIC PRESSURE: 101 PSI
WATER FLOW: 2300 GPM
RESIDUAL PRESSURE: 76 PSI
TEST HYDRANTS: 014-011, 014-13

FIRE PROTECTION GENERAL NOTES

A. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.

B. SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODESFIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIERVERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.

C. INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE FINAL SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS, COORDINATION WITH ALL OTHER TRADES, AND SYSTEM CALCULATIONS REQUIRED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, ENGINEER, AND OWNERS INSURER.

D. THE CONTRACTOR SHALL FOLLOW THE ENGINEER OF RECORD'S SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS EXCEPT WHERE MODIFICATION TO THE DESIGN IS NECESSARY. MODIFICATIONS SHALL BE REFLECTED IN THE CONTRACTOR'S SHOP DRAWINGS AND CALCULATIONS.

E. DEVIATIONS FROM ENGINEER'S DESIGN WILL NOT BE CONSIDERED UNLESSA FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED.

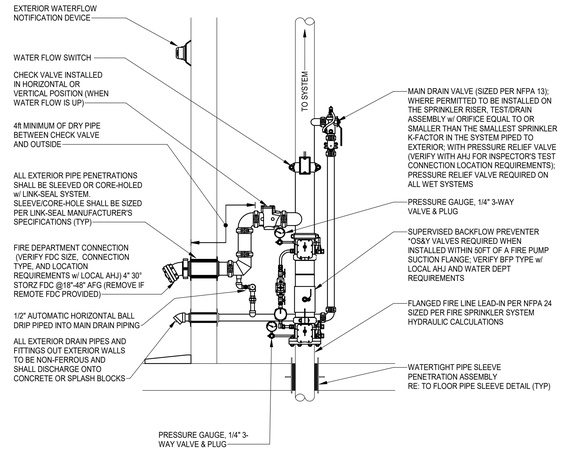
F. THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.

G. WHERE EXISTING SYSTEMS ARE PRESENT, CONTRACTOR SHALL MODIFY, RELOCATE AND/OR PROVIDE ADDITIONAL EQUIPMENT AS REQUIRED FOR SCOPE OF WORK AS REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. COORDINATE WITH WALLS, CEILINGS, LIGHTS, DIFFUSERS, STRUCTURE, OBSTRUCTIONS, ETC. IN AREAS AFFECTED BY SCOPE OF WORK. NEW EQUIPMENT SHALL BE COMPATIBLE WITH EXISTING SYSTEMS. CONTRACTOR SHALL REMOVE ALL ABANDONED EQUIPMENT, COORDINATE SYSTEM MODIFICATIONS TO MINIMIZE SYSTEM IMPAIRMENT, AND PROVIDE FIRE WATCH AND/OR INTERIM FIRE PROTECTION MEASURES WHERE REQUIRED BY THE AUTHORITY HAVING JURISDICTION, INSURANCE CARRIER OR OWNER.

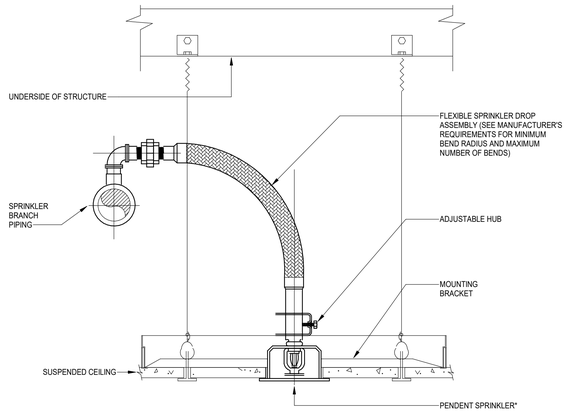
H. PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.

I. FORWARD COMPLETED CERTIFICATE OF COMPLETION AND CONTRACTOR MATERIAL TEST CERTIFICATES TO THE OWNER.

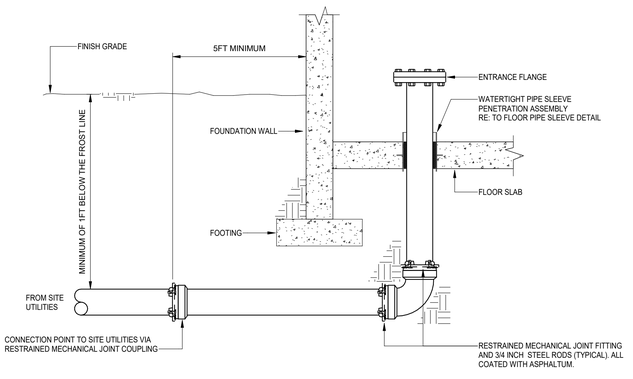
J. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.



2 FIRE SPRINKLER RISER
NOT TO SCALE



3 FLEXIBLE HOSE SPRINKLER DROP
NOT TO SCALE



1 UNDERGROUND FIRE SERVICE ENTRY
NOT TO SCALE

CMT
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009276
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	REG
DRAWN BY:	REG
CHECKED BY:	KLC
APPROVED BY:	TWD
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SHEET TITLE

FIRE PROTECTION GENERAL NOTES AND DETAILS

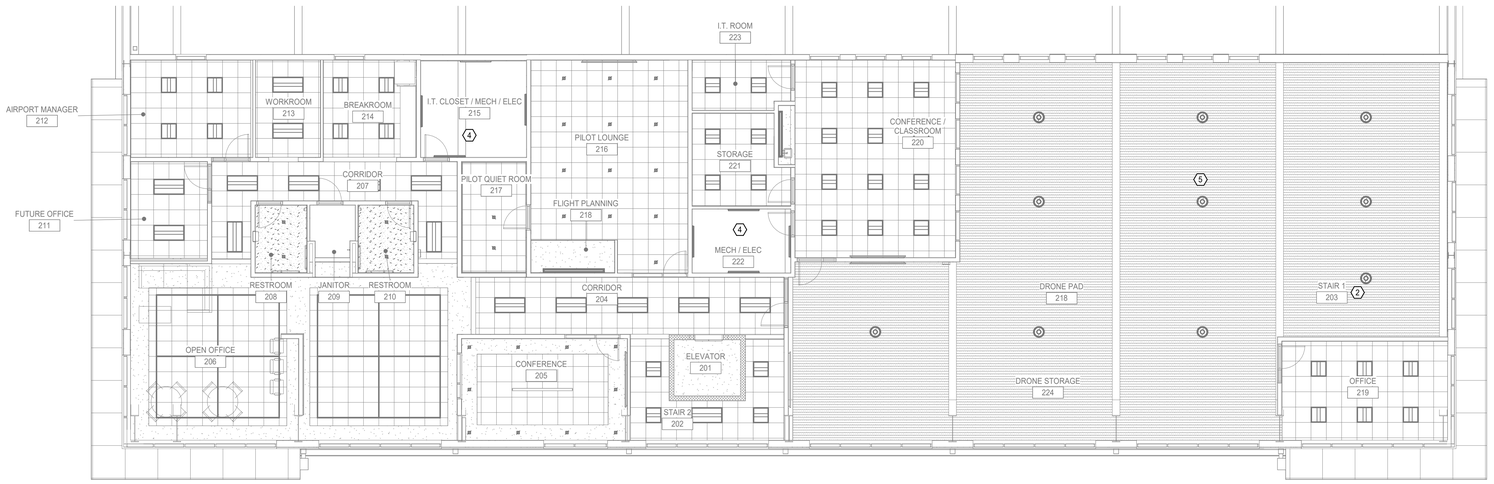
FP001

SHEET 110 OF 131

11/8/2023 9:42:53 AM

⬡ FIRE PROTECTION KEYNOTES

1. INSTALL SIDEWALL SPRINKLER WITHIN 2 FEET OF ELEVATOR HOISTWAY PIT FLOOR. PROVIDE SPRINKLER PROTECTION AT THE TOP OF THE ELEVATOR HOISTWAY.
2. PROVIDE SPRINKLER PROTECTION AT THE TOP OF STAIRWAY AND BENEATH THE LOWEST STAIRWAY LANDING.
3. PROVIDE CONCEALED SPRINKLERS WITH FACTORY MOUNTED COVER PLATE. TO MATCH SURROUNDING SURFACES. FINAL COLOR SHALL BE COORDINATED WITH ARCHITECT.
4. DO NOT ROUTE SPRINKLER PIPING ABOVE ELECTRICAL DISTRIBUTION EQUIPMENT.
5. PROVIDE PROTECTIVE GUARDS FOR SPRINKLERS WITHIN AREA INDICATED.
6. PROVIDE SPRINKLER PROTECTION AT ALL STRUCRURAL COLUMNS TO CREATE 2 HOUR FIRE RESISTNACE RATING. PROTECTION SHALL BE NOT LESS THAN 0.25 GPM/SQFT OVER THE ENTIRE WETTED AREA OF THE COLUMN. COLUMN PROTECTION SHALL BE IN ACCORANCE WITH NFPA 409.
7. AREA OPEN TO ABOVE.



FIRE PROTECTION SECOND FLOOR PLAN (2)
1/8" = 1'-0"

FIRE PROTECTION FIRST FLOOR PLAN (1)
1/8" = 1'-0"

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KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000878
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	REG
DRAWN BY:	REG
CHECKED BY:	KLC
APPROVED BY:	TWD

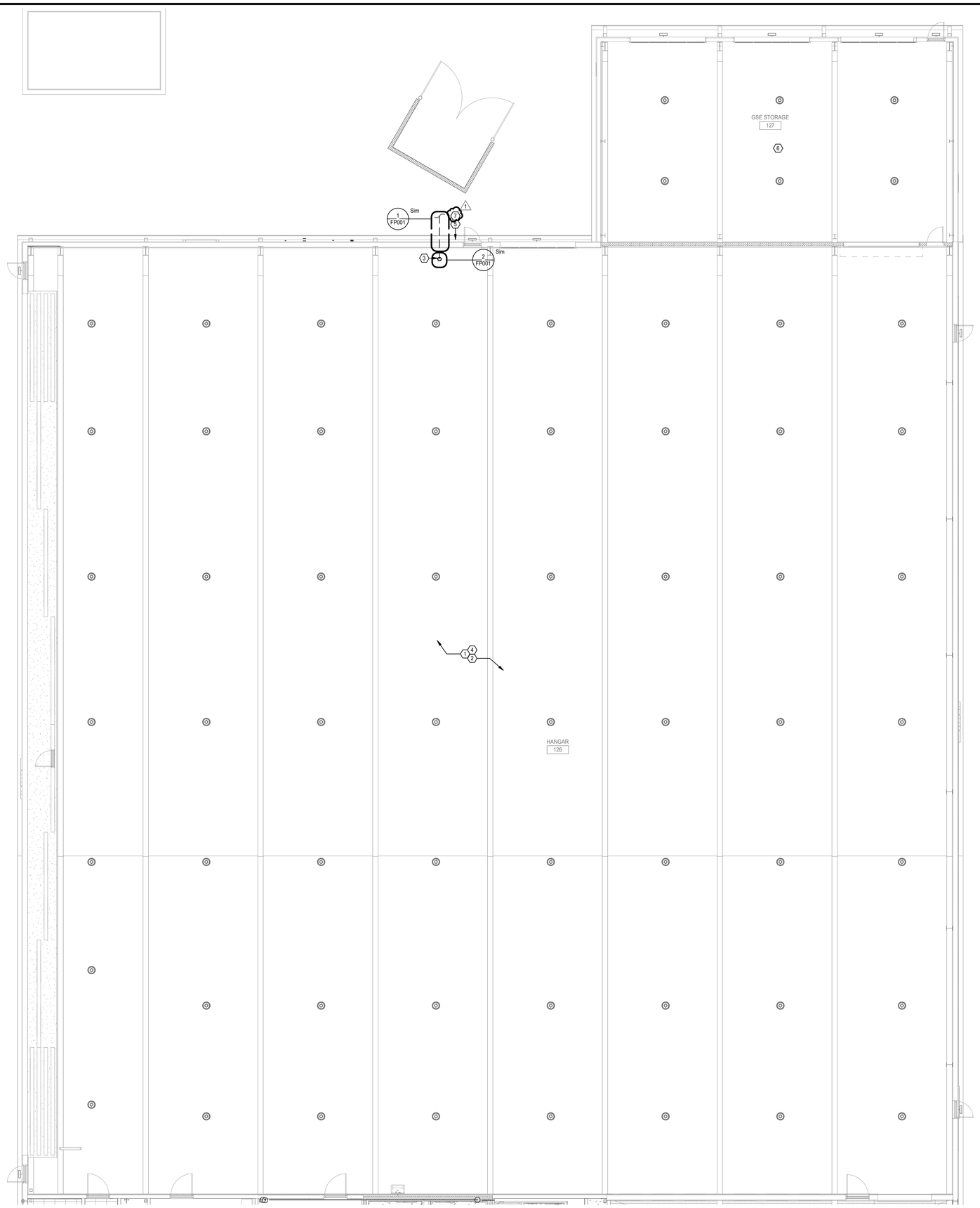
SHEET TITLE

FIRE PROTECTION FLOOR PLANS

FP101

SHEET 111 OF 131

11/8/2023 9:42:58 AM



FIRE PROTECTION KEYNOTES

1. PROVIDE WET SYSTEM SPRINKLER PROTECTION THROUGHOUT HANGAR IN ACCORDANCE WITH NFPA 409. DESIGN DENSITY SHALL BE 0.17 GPM/SQFT OVER THE MOST DEMANDING 5000 SQFT.
2. FIRE SPRINKLERS SHALL BE SPACED AROUND HIGH-VOLUME LOW SPEED FANS IN ACCORDANCE WITH NFPA 13.
3. 8-INCH FIRE PROTECTION SERVICE ENTRANCE. REFER TO CIVIL FOR CONTINUATION.
4. PROVIDE SPRINKLER PROTECTION AT ALL STRUCRURAL COLUMNS TO CREATE 2 HOUR FIRE RESISTNACE RATING. PROTECTION SHALL BE NOT LESS THAN 0.25 GPM/SQFT OVER THE ENTIRE WETTED AREA OF THE COLUMN. COLUMN PROTECTION SHALL BE IN ACCORANCE WITH NFPA 409.
5. PROVIDE FIRE DEPARTMENT CONNECTION. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION. CONTRACTOR TO CONFIRM TYPE WITH LOCAL FIRE DEPARTMENT.
6. COORDINATE TEMPERATURE RATING OF SPRINKLERS NEAR HEAT PRODUCING SOURCES IN ACCORDANCE WITH NFPA 13 FOR ANTICIPATED AMBIENT CEILING TEMPERATURES.
7. FDC SIGNAGE SHALL BE LOCATED AT HEIGHT ADEQUATE TO BE VISIBLE FROM DRIVE AND NOT BLOCKED BY DUMPSTER.

FIRE ALARM HANGAR PLAN 1 — 1/8" = 1'-0"

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olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

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STATE OF MISSOURI
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11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
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FIRE PROTECTION HANGAR FLOOR PLAN

FP102

SHEET 112 OF 131

11/8/2023 9:43:01 AM

MECHANICAL SYMBOL LEGEND

GENERAL

- EXISTING
- DEMOLITION
- NEW
- NEW TO EXISTING
- SHEET NOTE
- REVISION DELTA
- PIPE OR DUCT UP
- PIPE OR DUCT DOWN
- PIPE OR DUCT CAP
- PIPE ANCHOR
- PIPE GUIDE
- PIPE ROLLER SUPPORT
- FLOW DIRECTION ARROW
- PIPE EXPANSION JOINT
- FLEXIBLE CONNECTOR
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- CONCRETE
- GRAVEL

VALVES

- T & P RELIEF VALVE
- ISOLATION VALVE
- ISOLATION VALVE IN VERTICAL POSITION
- CHECK VALVE
- BALANCING VALVE
- AUTOMATIC 2-WAY VALVE
- AUTOMATIC 3-WAY VALVE
- STRAINER
- UNION
- PRESSURE REDUCING & REGULATING VALVE
- PRESSURE REGULATING VALVE
- DIAPHRAGM VALVE
- ANGLE VALVE

HVAC

- CD-1 8"ø 200 — CEILING DIFFUSER — DESIGNATION, NECK SIZE, CFM
- LD-1 4'-0" 300 — LINEAR DIFFUSER — DESIGNATION, DIFFUSER LENGTH, CFM
- R-1 10x8 250 — SUPPLY REGISTER — DESIGNATION, SIZE, CFM
- RA-1 12x12 250 — RETURN AIR GRILLE — DESIGNATION, SIZE, CFM (OPTIONAL)
- G-1 12x8 250 — RETURN AIR GRILLE — DESIGNATION, SIZE, CFM (OPTIONAL)
- X-1 12x8 300 — EXHAUST AIR GRILLE — DESIGNATION, SIZE, CFM
- THERMOSTAT
- HUMIDISTAT
- CO2 — CARBON DIOXIDE SENSOR
- 12x8 — RECTANGULAR DUCT (WxH)
- 12"ø — ROUND DUCT (DIA)
- 12/8 — OVAL DUCT (W/H)
- FLEXIBLE DUCT
- TURNING VANES
- HCG — HARDWARE CLOTH GRILLE
- VOLUME EXTRACTOR
- SUPPLY AIR/OUTSIDE AIR UP AND DOWN
- RETURN AIR UP AND DOWN
- EXHAUST AIR UP AND DOWN
- MANUAL VOLUME DAMPER
- MOTORIZED DAMPER
- BACKDRAFT DAMPER
- FIRE DAMPER
- SMOKE DAMPER
- COMBINATION FIRE AND SMOKE DAMPER

SPECIALTY SYSTEMS

- OX — OXYGEN PIPING
- A — COMPRESSED AIR
- CO2 — CARBON DIOXIDE
- N — NITROGEN
- A — AIR OUTLET
- VAC — VACUUM (AIR)
- LV — LABORATORY VACUUM
- MV — MEDICAL VACUUM
- N2O — NITROUS OXIDE
- LOX — LIQUID OXYGEN
- LA — LABORATORY COMPRESSED AIR
- MA — MEDICAL COMPRESSED AIR
- RD — REFRIGERANT DISCHARGE
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUCTION
- FOV — FUEL OIL VENT
- LPG — LIQUID PETROLEUM GAS
- LR — LIQUID REFRIGERANT
- SR — SUCTION REFRIGERANT
- RL — PAIR REFRIGERANT LINES (SUCTION, LIQUID)

FIRE

- F — FIRE PROTECTION PIPING
- FIRE DEPARTMENT CONNECTION
- DUCT — (S) — DUCT SMOKE DETECTOR AND RELAY
- TS — TAMPER SWITCH
- FS — FLOW SWITCH
- SPRINKLER HEAD, PENDANT
- SPRINKLER HEAD, SIDE WALL
- ALARM VALVE, WET
- ALARM VALVE, DRY
- ALARM VALVE, DRY
- POST INDICATOR VALVE
- POST INDICATOR VALVE WITH TAMPER SWITCH
- FM — BUILDING SPRINKLER FIRE MAIN

STEAM

- BBD — BOILER BLOW DOWN
- CD — STEAM CONDENSATE DRAIN ABOVE GRADE
- CD — STEAM CONDENSATE DRAIN BELOW GRADE
- HPC — HIGH PRESSURE CONDENSATE
- HPS — HIGH PRESSURE STEAM
- STEAM TRAP
- LPC — LOW PRESSURE CONDENSATE
- LPS — LOW PRESSURE STEAM
- MPC — MEDIUM PRESSURE CONDENSATE
- MPS — MEDIUM PRESSURE STEAM

HYDRONIC

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- MU — MAKE-UP WATER
- HHWR — HEATING WATER RETURN
- HHWS — HEATING WATER SUPPLY
- HCWR — HOT/CHILLED WATER RETURN
- HCWS — HOT/CHILLED WATER SUPPLY
- HPR — HEAT PUMP RETURN
- HPS — HEAT PUMP SUPPLY
- CTR — COOLING TOWER RETURN
- CTS — COOLING TOWER SUPPLY
- CR — CONDENSER WATER RETURN
- CS — CONDENSER WATER SUPPLY
- ERR — ENERGY RECOVERY RETURN
- ERS — ENERGY RECOVERY SUPPLY
- AUTOMATIC AIR VENT
- MANUAL AIR VENT

GENERAL NOTES

A. CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.

B. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY AND THE AUTHORITY HAVING JURISDICTION. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.

C. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE RISES, DROPS, AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE STARTING WORK.

D. REFER TO STRUCTURAL DRAWINGS TO COORDINATE LOCATIONS OF ALL DUCTWORK AND PIPING PENETRATIONS.

E. DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS.

F. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25, AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84. ALL EXPOSED WIRING IN THE PLENUM SHALL BE PLENUM RATED.

G. DUCT DIMENSIONS: UNLESS OTHERWISE NOTED, DUCT DIMENSIONS ON THE DRAWINGS ARE INSIDE CLEAR DIMENSIONS.

H. PROVIDE DUCT TRANSITIONS AT CONNECTIONS TO ALL DUCTED MECHANICAL EQUIPMENT.

I. COORDINATE ALL CEILING INSTALLED EQUIPMENT AND DIFFUSER, REGISTER, AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND ELECTRICAL LIGHTING PLANS.

J. INSTALL BALANCING DAMPERS IN ALL DUCT BRANCHES TO INDIVIDUAL AIR DISTRIBUTION DEVICES. INSTALL AS CLOSE AS POSSIBLE TO BRANCH DUCT TAKEOFF FROM LARGER DUCT UNLESS SHOWN OTHERWISE ON THE FLOOR PLANS. DAMPERS IN AIR DISTRIBUTION DEVICES SHALL NOT BE USED TO BALANCE SYSTEMS.

K. MAINTAIN 3'-0" CLEARANCE IN FRONT OF ELECTRICAL PANELS AND EQUIPMENT. DO NOT ROUTE ANY PIPING OR DUCTWORK OVER ELECTRICAL EQUIPMENT.

L. BRANCH DUCTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE DIFFUSER NECK UNLESS NOTED OTHERWISE. MAXIMUM LENGTH OF FLEXIBLE DUCT ROUTING TO BE 5'-0" (NO EXCEPTIONS).

M. TEMPERATURE SENSORS/THERMOSTATS/CO2 SENSORS SHALL BE LOCATED ON WALL NEAR LOCATIONS SHOWN. LOCATE ON WALL WITH CENTER AT 3'-8" A.F.F. TO CENTER OF T-STAT (MATCHING LIGHT SWITCH HEIGHT).

N. ALL ROOF-MOUNTED EQUIPMENT SHALL BE LOCATED MINIMUM 10'-0" FROM ROOF EDGE UNLESS MINIMUM 42" GUARD OR PARAPET IS NOTED ON DRAWINGS.

O. DEFINITIONS:
1. PROVIDE - CONTRACTOR SHALL FURNISH AND INSTALL
2. FURNISH - CONTRACTOR SHALL OBTAIN FOR OTHERS TO INSTALL.
3. INSTALL - CONTRACTOR IS RESPONSIBLE FOR ALL LABOR AND CONSTRUCTION EQUIPMENT NECESSARY TO SET IN PLACE, CONNECT, CALIBRATE.

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010030878
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

SHEET TITLE

GENERAL MECHANICAL INFORMATION

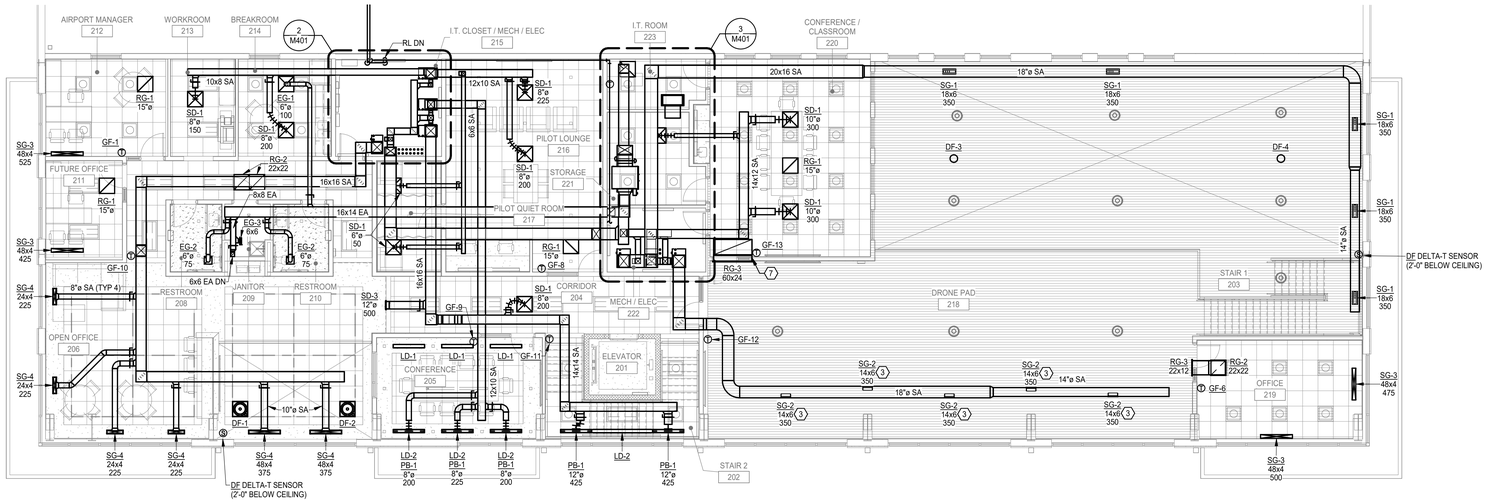
M001

SHEET 113 OF 131

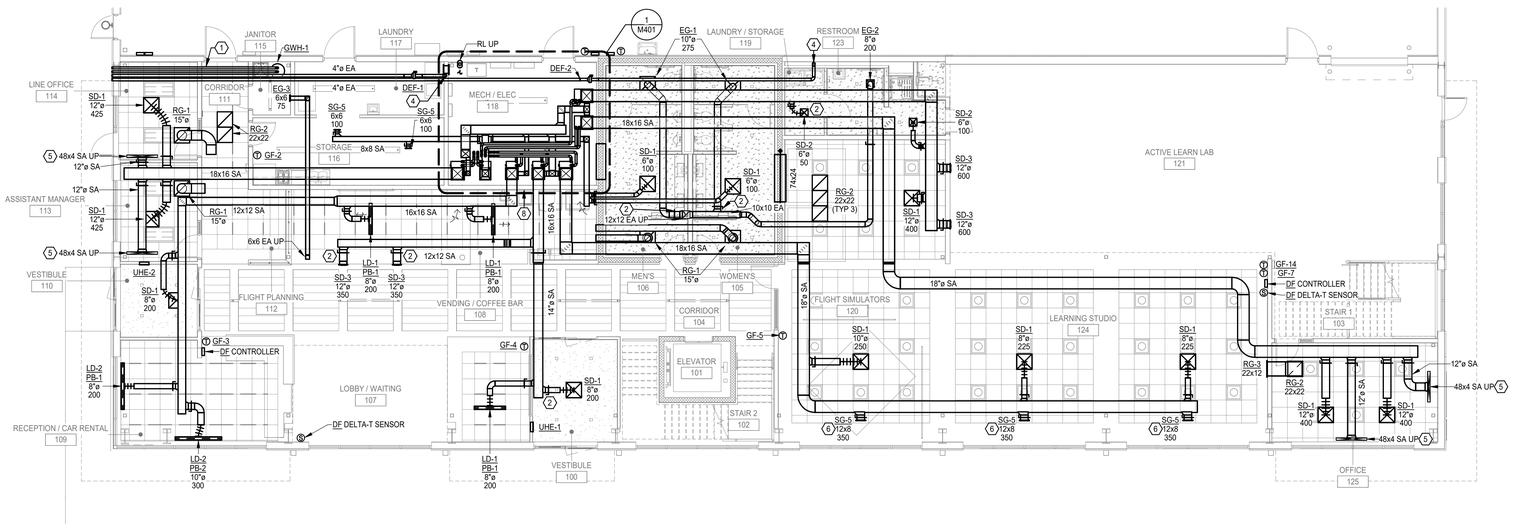
11/8/2023 9:27:00 AM

MECHANICAL KEYNOTES

1. PROVIDE AL29-4C VENT AND INTAKE PIPING TO EXTERIOR WALL. TERMINATE WITH CONCENTRIC VENT KIT. SIZE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. ALL DAMPERS LOCATED ABOVE INACESSIBLE CEILINGS SHALL BE REMOTE, CABLE-OPERATED DAMPERS. METROPOLITAN AIR TECHNOLOGIES RT-200-250 OR EQUAL. ROUTE DAMPER CABLE ACTUATOR TO BACKPAN OF AIR DEVICE.
3. INSTALL AIR DEVICE AT 45° BELOW HORIZONTAL.
4. 4"Ø DRYER VENT TO WALL VENT CAP. DYER VENT SHALL BE SEALED AIR/WATER TIGHT. PROVIE RECESSED ALUMINUM DRYER CONNECTION BOX IN WALL "DRYER BOX" OR EQUAL.
5. DUCT UP TO FLOOR MOUNTED GRILLE.
6. ANGLE AIR DEVICE DOWN 45° TO WASH WINDOWS.
7. RETURN AIR BOOT WITH 1" ACCOUSTICAL LINER.
8. WALL GYPSUM BOARD SHALL TERMINATE 6" ABOVE CEILING FOR RETURN AIR PATH BACK TO FURNACES.



MECHANICAL SECOND FLOOR PLAN 2
1/8" = 1'-0"



MECHANICAL FIRST FLOOR PLAN 1
1/8" = 1'-0"

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KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
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DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

SHEET TITLE
MECHANICAL FLOOR PLANS

M101

SHEET 114 OF 131

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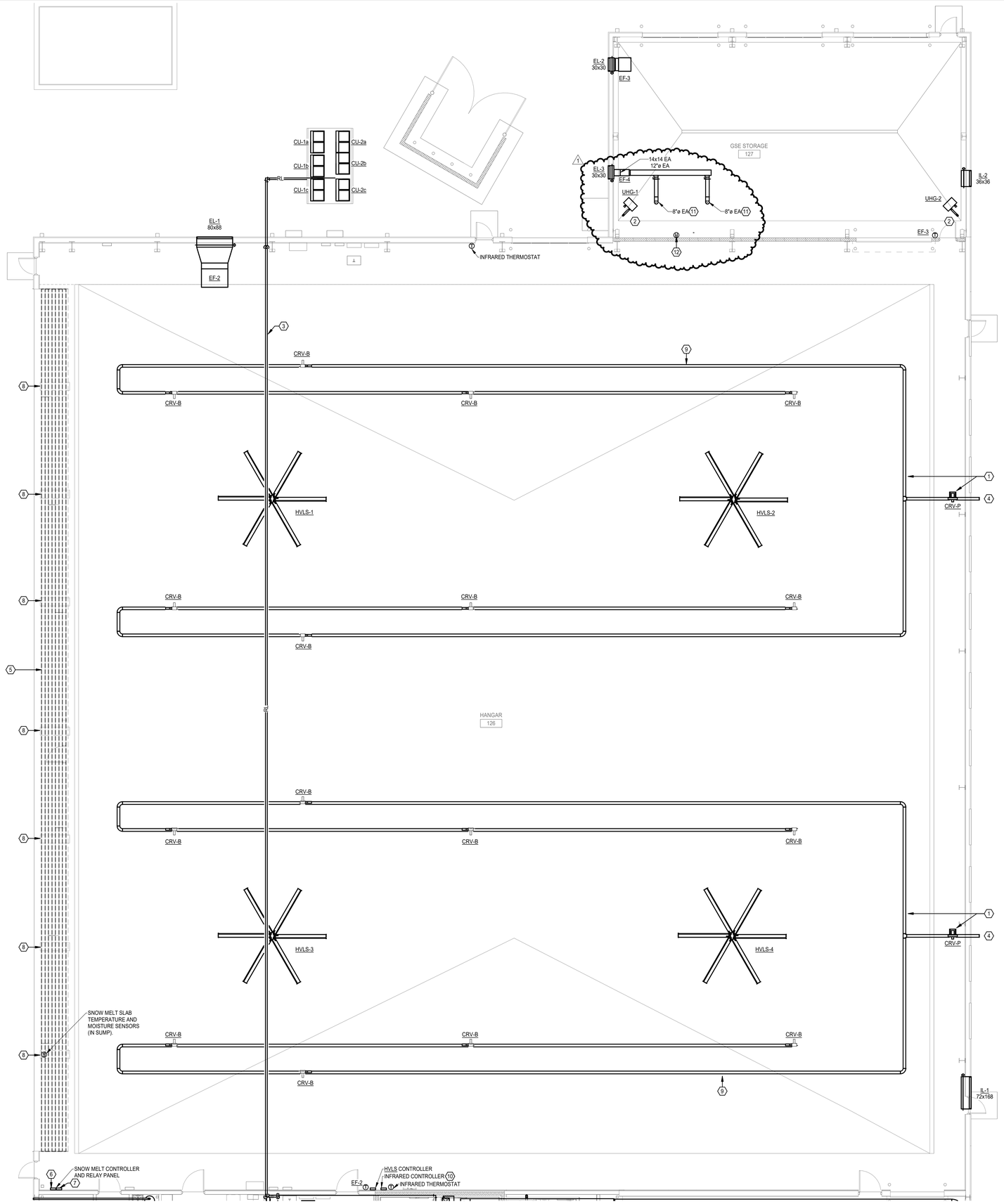

MECHANICAL HANGAR FLOOR PLAN
1/8" = 1'-0" (1)

MECHANICAL KEYNOTES

1. PROVIDE GAS-FIRED INFRARED HEATING SYSTEM IN HANGAR. BASIS OF DESIGN IS ROBERTS-GORDON CORAYVAC. SYSTEM SHALL CONSIST OF (8) B-10 BURNERS (CRV-B) (120V/1PH, 0.3A) FOR A TOTAL CAPACITY OF 800 MBH, 2 HP VACUUM PUMP (CRV-P) (480V/3PH), AND STAINLESS STEEL REFLECTORS ON ALL RADIANT PIPE AND TAILPIPE.
2. ROUTE UNIT HEATER FLUE PIPING IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
3. ROUTE ALL REFRIGERANT PIPING IN HANGAR AT 40'-0" AFF.
4. PROVIDE 6"Ø VENT PIPING TO EXTERIOR WALL. TERMINATE WITH BIRD SCREEN. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5. PROVIDE MINERAL INSULATED CABLE - ELECTRIC SNOW MELT SYSTEM UNDERNEATH DOOR RAILINGS. PROVIDE 8 TOTAL CABLES SPACED 3' FROM THE EDGE OF EACH RAIL AND AT A DEPTH OF 2" BELOW SLAB. CABLES SHALL BE SIZED AT 22 W/FT AND SHALL EXTEND FULL LENGTH OF THE DOOR RAIL SYSTEM (160'). PROVIDE COLD LEADS AS NECESSARY FROM RELAY PANEL TO BEGINNING OF RAIL SYSTEM.
6. PROVIDE SNOW MELT CONTROLLER WITH SLAB TEMPERATURE SENSOR AND MANUAL OPERATOR OVERRIDE SWITCH.
7. PROVIDE SNOW MELT RELAY PANEL WITH MINIMUM 8 SEPARATE CIRCUITS.
8. BEND SNOW MELT CABLING DOWN AT EACH SUMP PIT SO THAT CABLING IS INSTALLED 2" BELOW CONCRETE SURFACE AT ALL TIMES. DO NOT ROUTE CABLING OPEN AIR THROUGH SUMP PITS.
9. INFRARED TUBING INSTALLED AT 34'-0" AFF. HEAT TREATED ALUMINIZED STEEL TUBING.
10. PROVIDE MULTIBURNER CONTROL PANEL TO CONTROL BOTH RADIANT HEATING SYSTEMS THROUGHOUT FACILITY.
11. 8"Ø DOWN TO 96" AFF FOR BATTERY EXHAUST. FURNISH WITH 1/2"x1/2" WIRE MESH SCREEN. COORDINATE EXACT HEIGHT AND LOCATION OF BATTERIES WITH OWNER.
12. HYDROGEN GAS DETECTOR/ALARM AND RELAY. DETECTOR SHALL INITIATE WARNING LIGHT EXHAUST FAN AT 1% HYDROGEN CONCENTRATION. DETECTOR SHALL INITIATE AUDIBLE/VISUAL ALARM AT 2% HYDROGEN CONCENTRATION. EXHAUST FAN SHALL CONTINUE TO RUN.

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KANSAS CITY, MO 64108

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1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009576
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
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PROJECT NO:	022-04268
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SHEET TITLE

MECHANICAL
HANGAR FLOOR PLAN

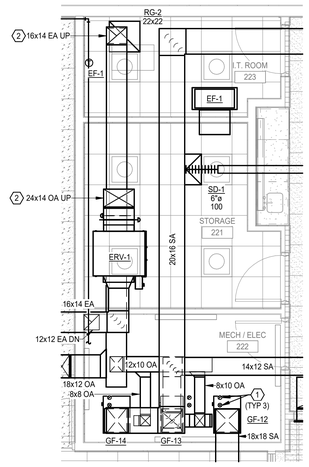
M102

SHEET 115 OF 131

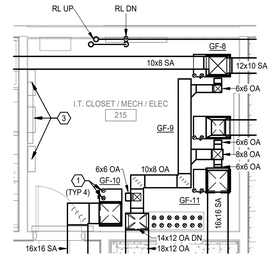
11/8/2023 9:27:08 AM

MECHANICAL KEYNOTES

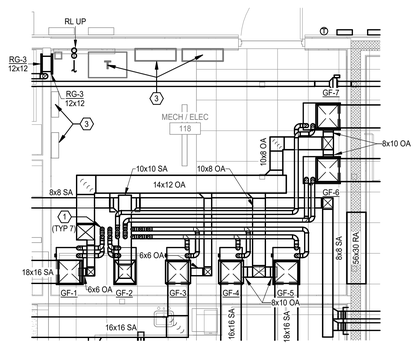
1. PROVIDE AL29-4C VENT AND INTAKE PIPING TO ROOF. TERMINATE WITH CONCENTRIC VENT KIT. SIZE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
2. DUCT UP TO ROOF HOOD (ON ROOF). LOREN COOK TR OR EQUAL. PROVIDE WITH 12" ROOF CURB.
3. DO NOT ROUTE DUCTWORK OR PIPING OVER ELECTRICAL PANELS OR EQUIPMENT. MAINTAIN WORKING CLEARANCES AS DEFINED BY THE ELECTRICAL CODE.



ENLARGED IT / STORAGE / MECH / ELEC 3
1/4" = 1'-0"



ENLARGED IT CLOSET / MECH / ELEC 2
1/4" = 1'-0"



ENLARGED MECH / ELEC 1
1/4" = 1'-0"

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KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
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KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
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LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
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11.08.2023
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LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

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SHEET TITLE

ENLARGED PLANS

M401

SHEET 116 OF 131

11/8/2023 9:27:12 AM

SEQUENCE OF OPERATIONS
GENERAL ORGANIZATION

THE SEQUENCE OF OPERATIONS IS ORGANIZED INTO THE FOLLOWING MAIN CATEGORIES: OPERATING MODES, CONTROL SETPOINT RESETS, SAFETIES, OVERRIDES, AND INTERLOCKS, AND COMPONENT CONTROL LOOPS. THE OPERATING MODES DESCRIBE THE CRITERIA THAT EITHER ENABLE OR DISABLE THE VARIOUS MODES OF OPERATION. IF A MODE OF OPERATION IS NOT LISTED WITHIN A COMPONENT CONTROL LOOP SECTION, THEN THAT MODE OF OPERATION HAS NO DIRECT INFLUENCE ON THE OPERATION OF THE COMPONENT. THE CONTROL SETPOINT RESET SECTION DESCRIBES THE LOGIC AND REFERENCE VARIABLES THAT WILL BE USED TO RESET CONTROL SETPOINTS TO A NEW VALUE WITHIN ITS RESET RANGE. THE SAFETIES, OVERRIDES, AND INTERLOCKS SECTION OUTLINES SAFETIES AND INTERLOCKS WHICH TAKE PRECEDENCE OVER ALL OTHER CONTROL STRATEGIES OUTLINED IN THIS DOCUMENT. THE CONTROL RESPONSES OF EACH COMPONENT FOR THE VARIOUS MODES OF OPERATION ARE DESCRIBED IN THE COMPONENT CONTROL LOOP SECTIONS.

THE SEQUENCE OF OPERATIONS, THE POINTS LIST AND CONTROL DIAGRAMS SHALL BE USED TO PROVIDE A COMPLETE DESCRIPTION OF THE CONTROL INTENT FOR THE CONTROLLED EQUIPMENT. INDIVIDUAL SETPOINT VALUES, RESET RANGES, AND ALARM ACTION LEVELS ARE LISTED IN THE POINTS LIST. COMPONENTS AND CONTROL SENSOR LOCATIONS ARE GRAPHICALLY DEPICTED ON THE CONTROL DIAGRAM.

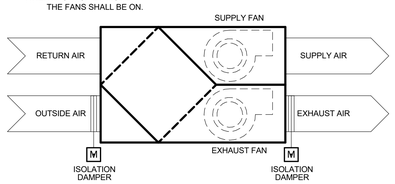
SEQUENCE OF OPERATIONS
ENERGY RECOVERY VENTILATOR
GENERAL DESCRIPTION
THE ENERGY RECOVERY VENTILATOR CONSISTS OF SUPPLY FAN, EXHAUST FAN, FIXED PLATE ENTHALPY HEAT EXCHANGER, MOTORIZED ISOLATION DAMPERS, AND FILTERS TO PROVIDE VENTILATION AIR FOR THE SPACES SHOWN ON THE DRAWINGS.

OPERATING MODES
UNOCCUPIED MODE
THE ERV SHALL BE IN UNOCCUPIED MODE PER THE OWNER'S OCCUPANCY SCHEDULE.
OCCUPIED MODE
THE ERV SHALL BE IN OCCUPIED MODE PER THE OWNER'S OCCUPANCY SCHEDULE.

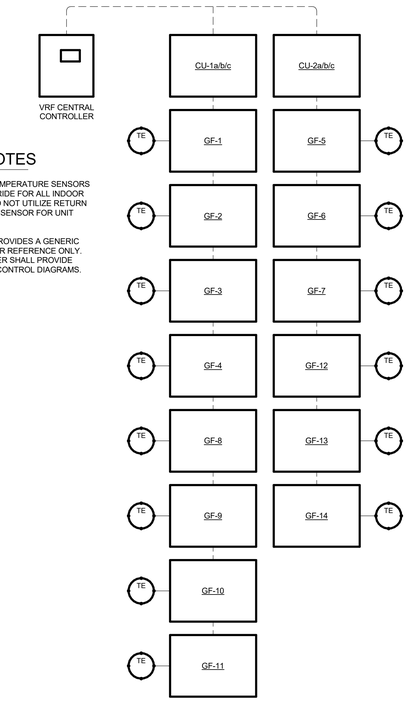
CONTROL SETPOINT RESETS
NOT USED.

SAFETIES AND INTERLOCKS
ISOLATION DAMPER INTERLOCK
MOTORIZED ISOLATION DAMPER SHALL BE INTERLOCKED WITH ASSOCIATED FAN. DAMPER SHALL OPEN WHEN FAN IS ON AND CLOSE WHEN FAN IS OFF.

COMPONENT CONTROL LOOPS
EXHAUST/SUPPLY FAN
WHEN IN UNOCCUPIED MODE:
THE FANS SHALL BE OFF.
WHEN IN OCCUPIED MODE:
THE FANS SHALL BE ON.



ENERGY RECOVERY VENTILATOR P&ID



GENERAL NOTES

1. PROVIDE WIRED TEMPERATURE SENSORS WITH LOCAL OVERRIDE FOR ALL INDOOR FAN COIL UNITS. DO NOT UTILIZE RETURN AIR TEMPERATURE SENSOR FOR UNIT CONTROL.
2. THIS SCHEMATIC PROVIDES A GENERIC WIRING LAYOUT FOR REFERENCE ONLY. VRF MANUFACTURER SHALL PROVIDE SYSTEM SPECIFIC CONTROL DIAGRAMS.

VRF SYSTEM NETWORK

SEQUENCE OF OPERATIONS
VARIABLE REFRIGERANT FLOW (VRF) SYSTEM

GENERAL DESCRIPTION
THE VARIABLE REFRIGERANT FLOW (VRF) SYSTEM CONSISTS OF INDOOR FAN COIL UNITS (GF'S) AND OUTDOOR CONDENSING UNITS (CU'S) THAT PROVIDE HEATING AND COOLING FOR THE CONDITIONED SPACE AS SHOWN ON THE DRAWINGS. EACH CU IS CAPABLE OF SERVING MULTIPLE INDOOR UNITS WITH INDEPENDENT TEMPERATURE CONTROL FOR EACH GF.

OPERATING MODES
UNOCCUPIED MODE
THE UNIT SHALL BE IN UNOCCUPIED MODE PER THE OWNER'S OCCUPANCY SCHEDULE.
OCCUPIED MODE
THE UNIT SHALL BE IN OCCUPIED MODE PER THE OWNER'S OCCUPANCY SCHEDULES.
COOLING MODE
THE VRF SYSTEM SHALL BE IN COOLING MODE BASED ON THE GREATEST CALL FOR COOLING FROM THE ZONE LEVEL INDOOR UNITS, SUBJECT TO THE VRF SYSTEM CONTROLLER.
HEATING MODE
THE VRF SYSTEM SHALL BE IN HEATING MODE BASED ON THE GREATEST CALL FOR HEATING FROM THE ZONE LEVEL INDOOR UNITS, SUBJECT TO THE VRF SYSTEM CONTROLLER. VRF SYSTEMS SERVING AHU COILS SHALL NOT ENTER HEATING MODE.

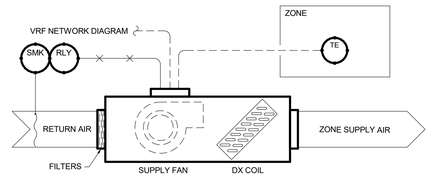
CONTROL SETPOINT RESETS
NOT USED.

SAFETIES AND INTERLOCKS
SMOKE DETECTOR INTERLOCK
EACH GF SHALL BE HARDWIRED INTERLOCKED WITH A RETURN A SMOKE DETECTOR TO SHUTDOWN UNIT UPON DETECTION OF SMOKE.

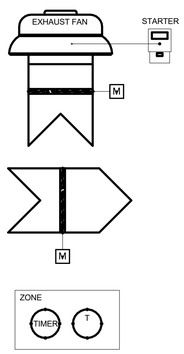
COMPONENT CONTROL LOOPS
OUTDOOR CONDENSING UNIT
WHEN IN ALL MODES:
THE CONDENSING UNIT SHALL OPERATE SUBJECT TO THE INTEGRATED FACTORY DIGITAL CONTROLS (DDC) SYSTEM.

INDOOR FAN COIL UNIT
WHEN IN ALL MODES:
THE FAN COIL UNIT SHALL OPERATE SUBJECT TO THE INTEGRATED FACTORY DIGITAL CONTROLS (DDC) SYSTEM.

FILTER MONITORING
THE UNIT FILTERS SHALL BE MONITORED FOR PREVENTATIVE MAINTENANCE.
WHEN IN ALL MODES:
THE CONTROLLER SHALL MONITOR THE FAN RUNTIME TO PROVIDE MAINTENANCE REMINDER AT 50% OF FILTER ELAPSED TIME (1100 HOURS) AND AN ALARM AT 100% ELAPSED TIME (2200 HOURS).



VRF SYSTEM P&ID



SEQUENCE OF OPERATIONS
EXHAUST FAN (THERMOSTAT AND 8-HOUR TWIST TIMER)

GENERAL DESCRIPTION
FAN QUANTITY AND SERVICE IS SCHEDULED IN THE FAN SCHEDULE ON THE DRAWINGS. FANS SHALL BE PROVIDED WITH ZONE THERMOSTAT AND MANUAL TWIST TIMER.

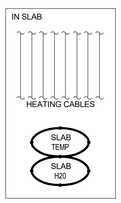
OPERATING MODES
EXHAUST FAN DISABLED MODE
FAN SHALL BE IN DISABLED MODE UNLESS ENABLED AS INDICATED BELOW.
EXHAUST FAN ENABLED MODE
THERMOSTAT: FAN SHALL BE IN ENABLED MODE SUBJECT TO SIGNAL FROM WALL-MOUNTED THERMOSTAT.
OR
TWIST TIMER: FAN SHALL BE IN ENABLE MODE SUBJECT TO SIGNAL FROM WALL-MOUNTED TWIST TIMER. (EF-2 ONLY)

CONTROL SETPOINT RESETS
NOT USED.

SAFETIES AND INTERLOCKS
ISOLATION DAMPER INTERLOCK
THE MOTORIZED ISOLATION DAMPER(S) SHALL BE INTERLOCKED WITH THE ASSOCIATED FAN. DAMPER(S) SHALL OPEN PRIOR TO FAN START SIGNAL. DAMPER(S) SHALL CLOSE AFTER FAN IS COMMANDED OFF.

COMPONENT CONTROL LOOPS
EXHAUST FAN
WHEN IN EXHAUST FAN DISABLED MODE:
THE EXHAUST FAN IS OFF.
WHEN IN EXHAUST FAN ENABLED MODE:
THE EXHAUST FAN IS ON.

EXHAUST FAN P&ID



SEQUENCE OF OPERATIONS
IN-FLOOR RADIANT HEAT

GENERAL DESCRIPTION
THE IN-FLOOR RADIANT HEAT SYSTEM CONSISTS OF ELECTRIC HEAT CABLES INSTALLED IN THE FLOOR SLAB WITH SLAB TEMPERATURE AND MOISTURE SENSORS TO PROVIDE SNOW MELT AT THE DOOR RAILS.

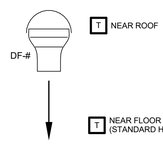
OPERATING MODES
HEATING MODE
THE SYSTEM SHALL BE IN HEATING MODE WHEN THE SLAB TEMPERATURE IS LESS THAN 40°F (ADJ.) AND MOISTURE IS DETECTED.

CONTROL SETPOINT RESETS
NOT USED.

SAFETIES AND INTERLOCKS
NOT USED.

COMPONENT CONTROL LOOPS
HEATING CABLE - ELECTRIC
WHEN IN HEATING MODE:
THE HEATING CABLES SHALL BE ON.

IN-FLOOR RADIANT HEAT P&ID



SEQUENCE OF OPERATIONS
DESTRATIFICATION FAN
DF-1, DF-2, DF-3, DF-4

GENERAL DESCRIPTION
DESTRAT FANS WILL BE PROVIDED WITH A DELTA-T CONTROL SYSTEM WITH LOW AND HIGH TEMPERATURE SENSORS TO OPERATE FANS BASED ON TEMPERATURE DIFFERENCE.

OPERATING MODES
DESTRATIFICATION FAN DISABLED MODE
FAN SHALL BE IN DISABLED MODE WHEN THE TEMPERATURE DIFFERENCE IS LESS THAN 5°F (ADJ.).
DESTRATIFICATION FAN ENABLED MODE
FAN SHALL BE IN ENABLED MODE WHEN THE TEMPERATURE DIFFERENCE IS GREATER THAN 5°F (ADJ.).

CONTROL SETPOINT RESETS
NOT USED.

SAFETIES AND INTERLOCKS
NOT USED.

COMPONENT CONTROL LOOPS
DESTRATIFICATION FAN
WHEN IN DESTRATIFICATION FAN DISABLED MODE:
THE DESTRATIFICATION FAN IS OFF.
WHEN IN DESTRATIFICATION FAN ENABLED MODE:
THE DESTRATIFICATION FAN IS ON.

DESTRAT FAN P&ID

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

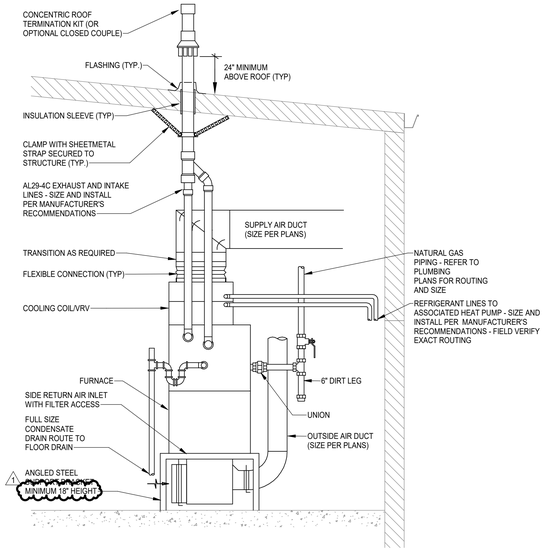
MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

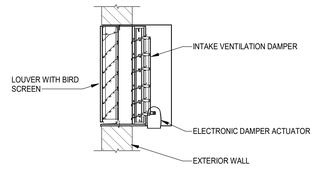
SHEET TITLE
P&ID'S

M501

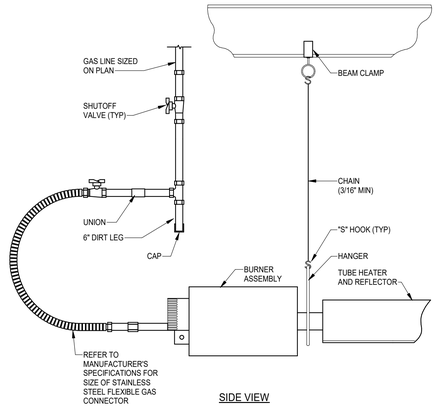
11/8/2023 9:27:12 AM



FURNACE - HEAT PUMP 12
NOT TO SCALE

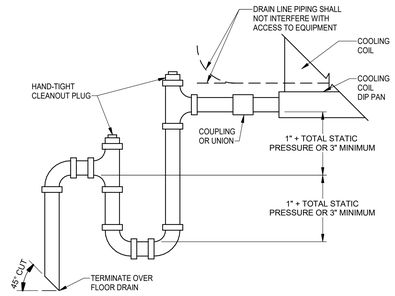


MOTORIZED LOUVER/DAMPER 9
NOT TO SCALE



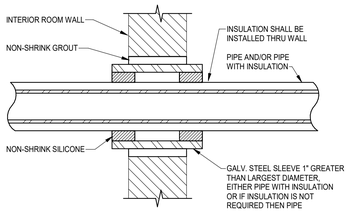
SIDE VIEW

GAS-FIRED INFARED BURNER INSTALL 6
NOT TO SCALE



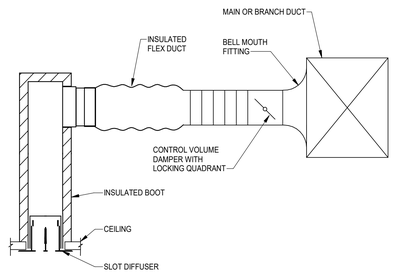
NOTES:
A. FOR EQUIPMENT WITHOUT INTERNAL CONDENSATE TRAPS.
B. PIPING TO BE COPPER, TYPE L
C. PIPING LOCATED INDOORS TO BE INSULATED, SEE SPECS.

CONDENSATE TRAP 3
NOT TO SCALE

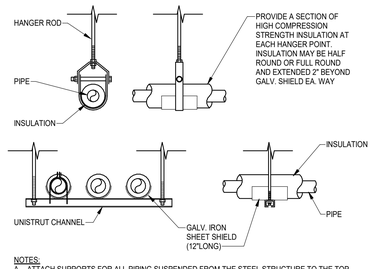


NOTES:
A. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES OR STUD WALLS.

PIPE SLEEVE THRU NON-RATED INTERIOR WALL 11
NOT TO SCALE

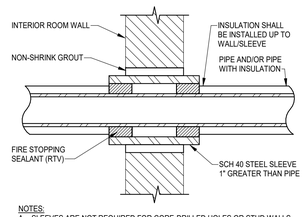


SLOT DIFFUSER 8
NOT TO SCALE



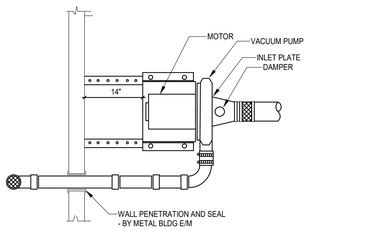
NOTES:
A. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAMS.
B. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.

PIPE INSULATION 5
NOT TO SCALE

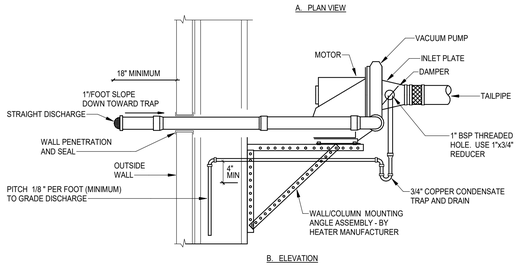


NOTES:
A. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES OR STUD WALLS.

PIPE SLEEVE THRU RATED INTERIOR WALL 2
NOT TO SCALE



A. PLAN VIEW

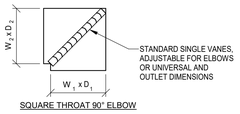


B. ELEVATION

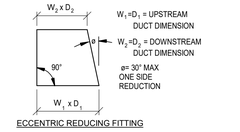
DETAIL NOTES:
1. COORDINATE INSTALLATION AND MOUNTING REQUIREMENTS WITH THE METAL BUILDING MANUFACTURER.

VACUUM PUMP INSTALLATION DETAIL 10
1/2" = 1'-0"

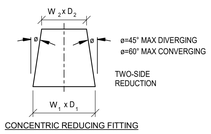
RECTANGULAR DUCT



SQUARE THROAT 90° ELBOW

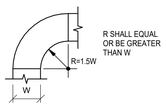


ECCENTRIC REDUCING FITTING



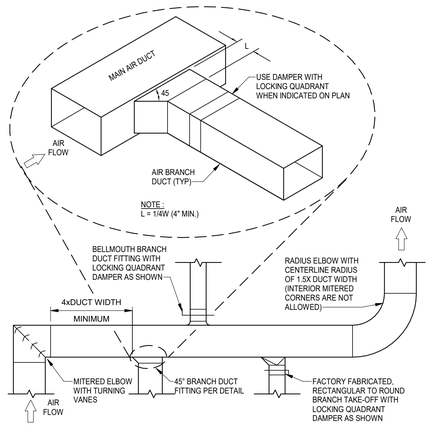
CONCENTRIC REDUCING FITTING

ROUND DUCT

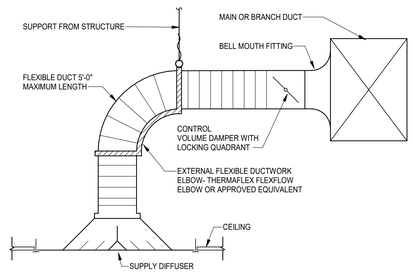


STANDARD RADIUS ELBOW

SHEET METAL FITTINGS 7
NOT TO SCALE



DUCTWORK CONSTRUCTION 4
NOT TO SCALE



CEILING DIFFUSER 1
NOT TO SCALE

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KANSAS CITY, MO 64108

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1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000878
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

SHEET TITLE
MECHANICAL DETAILS

M601
SHEET 118 OF 131

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LOUVER SCHEDULE

LABEL	MANUFACTURER	MODEL NO	MIN FREE AREA (SQ FT)	CFM	MAX. VELOCITY (FPM)	MAX PD (IN WC)	SIZE (IN) WIDTH	HEIGHT	DEPTH	NOTES
EL-1	RUSKIN	ELF6375DX	37.5	30,000	800	0.1	80	88	6	ALL
EL-2	RUSKIN	ELF6375DX	2.3	1,850	800	0.1	30	30	6	ALL
EL-3	RUSKIN	ELF6375DX	0.5	400	800	0.1	30	30	6	ALL
EL-4	RUSKIN	ELF6375DX	3.0	30,000	800	0.1	72	108	6	ALL
IL-2	RUSKIN	ELF6375DX	3.7	1,850	500	0.1	36	36	6	ALL

NOTES:

1. PROVIDE WITH 3/4" X 0.051 EXPANDED, FLATTENED ALUMINUM BIRD SCREEN IN REMOVABLE FRAME.
2. STANDARD COLOR TO MATCH EXTERIOR. COORDINATE WITH ARCHITECT.
3. SPACE AROUND NEW LOUVER OF FRAME SHALL BE FILLED WITH GROUT, FLASHING, AND CAULK.

EXHAUST FAN SCHEDULE

LABEL	MANUFACTURER	MODEL NO	CFM	EXT SP	TYPE	DRIVE	ELECTRICAL VOLTS	PH	HP (W)	UNIT WEIGHT (LBS)	NOTES
DEF-1	FANTECH	DEDPV	160	0.2	INLINE	DIRECT	120	1	(70)	25	1
DEF-2	FANTECH	DEDPV	160	0.2	INLINE	DIRECT	120	1	(70)	25	1
EF-1	LOREN COOK	GC	800	0.2	CEILING	DIRECT	120	1	1/2	100	2
EF-2	LOREN COOK	54TID	30,000	0.5	INLINE	DIRECT	480	3	10	500	3
EF-3	LOREN COOK	SQID	1,850	0.5	INLINE	DIRECT	480	3	3	250	3
EF-4	LOREN COOK	SQND	400	0.5	INLINE	DIRECT	120	1	1/4	100	3

NOTES:

1. PROVIDE WITH INDICATOR PANEL, TEMPERATURE LIMIT SWITCH, AND SECONDARY LINT TRAP.
2. PROVIDE DISCONNECT, STARTER, SPEED CONTROL, INLET GRILLE, REMOTE THERMOSTAT AND CONTROL TRANSFORMER, AND SUSPENSION MOUNTING KIT. PROVIDE STARTER AS REQUIRED.
3. PROVIDE DISCONNECT, STARTER, 480V MOTORIZED BACKDRAFT DAMPER, BIRD SCREEN, INLET SCREEN AND MOTOR GUARD, REMOTE THERMOSTAT, 8-HOUR TWIST TIMER, AND CONTROL TRANSFORMER, AND WALL MOUNTING KIT. PROVIDE STARTER AS REQUIRED.
4. PROVIDE DISCONNECT, STARTER, 208V MOTORIZED BACKDRAFT DAMPER, BIRD SCREEN, SPEED CONTROL, INLET SCREEN, REMOTE
5. PROVIDE DISCONNECT, STARTER, 120V MOTORIZED BACKDRAFT DAMPER, BIRD SCREEN, SPEED CONTROL, INLET SCREEN, HYDROGEN DETECTION CONTROL, AND WALL MOUNTING KIT. PROVIDE STARTER AS REQUIRED.

DESTRATIFICATION FAN SCHEDULE

LABEL	MANUFACTURER	MODEL NO	MIN. FPM @ 30'	DRIVE	ELECTRICAL VOLTS	PH	W	UNIT WEIGHT (LBS)	NOTES
DF-1	AIRIUS	S-25-EC-STD	195	DIRECT	208	1	30	20	ALL
DF-2	AIRIUS	S-25-EC-STD	195	DIRECT	208	1	30	20	ALL
DF-3	AIRIUS	A-45-EC-STD	400	DIRECT	208	1	175	15	ALL
DF-4	AIRIUS	A-45-EC-STD	400	DIRECT	208	1	175	15	ALL

NOTES:

1. PROVIDE DISCONNECT, SPEED CONTROL, REMOTE CONTROLLER WITH TWO DELTA-T SENSORS AND MANUAL OVERRIDE, AND SUSPENSION MOUNTING KIT.

HVLS FAN SCHEDULE

LABEL	MANUFACTURER	MODEL NO	BLADES	FAN DIAMETER (')	HP	MAX RPM	ELECTRICAL VOLTS	PH	UNIT WEIGHT (LBS)	NOTES
HVLS-1	GREENHECK	DS-6-20	6	20	1.5	78	208	1	225	ALL
HVLS-2	GREENHECK	DS-6-20	6	20	1.5	78	208	1	225	ALL
HVLS-3	GREENHECK	DS-6-20	6	20	1.5	78	208	1	225	ALL
HVLS-4	GREENHECK	DS-6-20	6	20	1.5	78	208	1	225	ALL

NOTES:

1. PROVIDE WITH DISCONNECT SWITCH, CONTROL KEYPAD, FACTORY-INSTALLED VARIABLE FREQUENCY DRIVE, POWERFOIL BLADES, UNIVERSAL MOUNT, AND SAFETY RESTRAINT SYSTEM.
2. PROVIDE RELAY TO SHUTDOWN FAN ON SIGNAL FROM FIRE ALARM SYSTEM.
3. MOUNT FAN 3' MIN. BELOW CEILING DECK WITH MIN. 3' CLEAR ON ALL SIDES.

UNIT HEATER SCHEDULE (GAS)

LABEL	MANUFACTURER	MODEL NO	CFM	EAT	HEATING (GAS) MBH INPUT	MBH OUTPUT	ELECTRICAL VOLTS	PH	HP	UNIT WEIGHT (LBS)	NOTES
UHG-1	MODINE	HD45	720	70	45	36.9	120	1	1/15	100	ALL
UHG-2	MODINE	HD45	720	70	45	36.9	120	1	1/15	100	ALL

NOTES:

1. PROVIDE SUSPENSION KIT. SINGLE STAGE, INTERMITTENT PILOT IGNITION (100% SHUT-OFF WITH CONTINUOUS RETRY), SINGLE STAGE THERMOSTAT (MOUNT ON UNIT), FACTORY INSTALLED TRANSFORMER, AND DIRECTIONAL DISCHARGE LOUVERS. INSTALL FLUE PIPING PER MANUFACTURER'S INSTRUCTIONS.

UNIT HEATER SCHEDULE (ELECTRIC)

LABEL	MANUFACTURER	MODEL NO	HEATING EAT (°F)	KW	ELECTRICAL VOLTS	PH	UNIT WEIGHT (LBS)	NOTES
UHE-1	QMARK	LFK404F	50	3.0	208	1	25	ALL
UHE-2	QMARK	LFK404F	50	3.0	208	1	25	ALL

NOTES:

1. PROVIDE WITH DISCONNECT, UNIT-MOUNTED THERMOSTAT, AND NECESSARY MOUNTING BRACKET/ACCESSORIES. WALL-MOUNTED UNITS SHALL BE RECESSED MOUNTED WHERE POSSIBLE.

ENERGY RECOVERY VENTILATOR SCHEDULE

MN	MANUFACTURER	MODEL NO	SUPPLY CFM	SUPPLY HP	EXHAUST CFM	EXHAUST HP	EXT SP IN WC SUPPLY/EXHAUST	SUMMER OA DB/WB	SUMMER RA DB/WB	SUMMER SA DB/WB	WINTER OA DB	WINTER RA DB	WINTER SA DB	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL MCA	ELECTRICAL MOCP	UNIT WEIGHT (LBS)	NOTES
ERV-1	RENEWAIRE	HE 2XINV	1,825	1.5	1,425	1.5	0.6 / 1.0	97.2 / 76.4	75.0 / 62.4	82.0 / 70.6	-4	70	40.6	208	3	10.8	15	450	ALL

NOTES:

1. EXTERNAL STATIC PRESSURE INCLUDES DUCTWORK EXTERNAL TO UNIT ONLY. UNIT TOTAL STATIC PRESSURE SHALL INCLUDE EXTERNAL STATIC PERSSURE, PLUS COMPONENTS SUCH AS CLEAN FILTERS, DAMPERS, FLAT PLATE HEAT EXCHANGER, ETC. PROVIDE 1" PRESSURE DROP ALLOWANCE FOR DIRTY FILTERS.
2. PROVIDE 2" MERV-8 FITLERS FOR EXHAUST AIRSTREAM, AND 2" MERV-13 FILTERS FOR OUTSIDE AIRSTREAM, 24V MOTORIZED ISOLATION DAMPER FOR OUTSIDE AND EXHAUST AIRSTREAMS, POLYMER CROSS FLOW PLATE HEAT EXCHANGER, AND SPRING/NEOPRENE HANGERS..

FURNACE SCHEDULE (GAS FIRED)

LABEL	ASSOCIATED CONDENSING UNIT	AREA SERVED	MANUFACTURER	FURNACE MODEL NO	COOLING COIL MODEL NO	CFM	EXT SP	MIN OA CFM	HP	COOLING EAT DB/WB °F	COOLING LAT DB/WB °F	COOLING MBH TOTAL	COOLING MBH SENS	HEATING (GAS) EAT °F	HEATING (GAS) LAT °F	HEATING (GAS) MBH INPUT	HEATING (GAS) MIN MBH OUTPUT	MIN. EFFICIENCY	ELECTRICAL VOLTS	ELECTRICAL PH	ELECTRICAL MCA	ELECTRICAL MOCP	UNIT WEIGHTS (LBS)	NOTES
GF-1	CU-1	WEST OFFICES	DAIKIN	DM97MC1005CN	CXTQ60TASBLU	1,800	0.5	75	1	72.4 / 60.5	54.0 / 53.5	40.8	38.3	68.8	90.0	100	41.3	95	120	1	15.4	20	250	ALL
GF-2	CU-1	LAUNDRY / RR	DAIKIN	DM97MC0603BN	CXTQ24TASBLU	400	0.5	0	1/2	72.0 / 60.0	54.0 / 53.5	8.5	8.3	70.0	90.0	60	8.6	95	120	1	8.8	15	250	ALL
GF-3	CU-1	RECEPTION	DAIKIN	DM97MC0804CN	CXTQ36TASBLU	1,100	0.5	100	3/4	72.9 / 61.1	54.0 / 53.5	27.0	24.0	67.3	90.0	80	26.9	95	120	1	11.6	15	250	ALL
GF-4	CU-1	LOBBY	DAIKIN	DM97MC0804CN	CXTQ36TASBLU	1,100	0.5	100	3/4	72.9 / 61.1	54.0 / 53.5	27.0	24.0	67.3	90.0	80	26.9	95	120	1	11.6	15	250	ALL
GF-5	CU-2	LEARNING STUDIO	DAIKIN	DM97MC1005CN	CXTQ60TASBLU	1,750	0.5	250	1	73.5 / 61.8	54.0 / 53.5	46.4	39.3	65.7	90.0	100	45.9	95	120	1	15.4	20	250	ALL
GF-6	CU-2	EAST OFFICES	DAIKIN	DM97MC1005CN	CXTQ60TASBLU	1,775	0.5	50	1	72.3 / 60.4	54.0 / 53.5	39.4	37.5	69.2	90.0	100	39.9	95	120	1	15.4	20	250	ALL
GF-7	CU-2	ACTIVE LEARN LAB	DAIKIN	DM97MC1005CN	CXTQ60TASBLU	1,750	0.5	250	1	73.5 / 61.8	54.0 / 53.5	46.4	39.3	65.7	90.0	100	45.9	95	120	1	15.4	20	250	ALL
GF-8	CU-1	PILOT LOUNGE	DAIKIN	DM97MC0603BN	CXTQ36TASBLU	875	0.5	125	1/2	73.4 / 61.7	54.0 / 53.5	23.1	19.6	65.8	90.0	60	22.9	95	120	1	8.8	15	250	ALL
GF-9	CU-1	CONFERENCE	DAIKIN	DM97MC0603BN	CXTQ24TASBLU	625	0.5	100	1/2	73.6 / 61.9	54.0 / 53.5	16.9	14.1	65.3	90.0	60	16.7	95	120	1	8.8	15	250	ALL
GF-10	CU-1	OBSERVATION DECK	DAIKIN	DM97MC0603BN	CXTQ48TASBLU	1,650	0.5	75	1/2	72.5 / 60.6	54.0 / 53.5	37.7	35.2	68.7	90.0	60	38.0	95	120	1	8.8	15	250	ALL
GF-11	CU-1	STAIRS / CORRIDOR	DAIKIN	DM97MC0804CN	CXTQ36TASBLU	1,550	0.5	100	3/4	72.7 / 60.8	54.0 / 53.5	36.5	33.4	68.1	90.0	80	36.7	95	120	1	11.6	15	250	ALL
GF-12	CU-2	MEZZANINE	DAIKIN	DM97MC1005CN	CXTQ60TASBLU	1,750	0.5	250	1	73.5 / 61.8	54.0 / 53.5	46.4	39.3	65.7	90.0	100	45.9	95	120	1	15.4	20	250	ALL
GF-13	CU-2	CONFERENCE	DAIKIN	DM97MC0603BN	CXTQ24TASBLU	700	0.5	75	1/2	73.1 / 61.3	54.0 / 53.5	17.6	15.4	66.7	90.0	60	17.5	95	120	1	8.8	15	250	ALL
GF-14	CU-2	ACTIVE LEARN LAB	DAIKIN	DM97MC1005CN	CXTQ60TASBLU	1,750	0.5	250	1	73.5 / 61.8	54.0 / 53.5	46.4	39.3	65.7	90.0	100	45.9	95	120	1	15.4	20	250	ALL

NOTES:

1. PROVIDE 97% AFUE FURNACE WITH 24 VOLT, SEVEN DAY PROGRAMMABLE THERMOSTAT WITH CONTROL WIRING (PLENUM RATED), UPFLOW CONFIGURATION, BOTTOM FILTER RACK, MERV 8 FILTER, CONCENTRIC VENT TERMINATION KIT, MATCHING CASED AND INSULATED COOLING COIL WITH THERMAL EXPANSION VALVE TO PROVIDE SCHEDULED UNIT CAPACITY AND ALL ACCESSORIES PER MANUFACTURER'S RECOMMENDATIONS FOR A COMPLETE WORKING SYSTEM.
2. PROVIDE WITH RETURN AIR SMOKE DETECTOR TO SHUTDOWN UNIT ON DETECTION OF SMOKE.

CONDENSING UNIT SCHEDULE

LABEL	MANUFACTURER	MODEL NO	TYPE	MBH COOLING	MBH HEATING	AMBIENT °F	EER	ELECTRICAL DATA VOLTS	PH	MCA	MOCP	UNIT WEIGHT (LBS)	NOTES
CU-1a	DAIKIN	RXYQ120XAYDA	HEAT PUMP	120	135	100	9.8	480	3	20.6	25	600	1,3,4,5,6
CU-1b	DAIKIN	RXYQ120XAYDA	HEAT PUMP	120	135	100	9.8	480	3	20.6	25	600	1,3,4,5,6
CU-1c	DAIKIN	RXYQ120XAYDA	HEAT PUMP	120	135	100	9.8	480	3	20.6	25	600	1,3,4,5,6
CU-2a	DAIKIN	RXYQ168XAYDA	HEAT PUMP	168	188	100	9.5	480	3	25.9	35	750	2,3,4,5,6
CU-2b	DAIKIN	RXYQ120XAYDA	HEAT PUMP	120	135	100	9.5	480	3	20.6	25	600	2,3,4,5,6
CU-2c	DAIKIN	RXYQ96XAYDA	HEAT PUMP	96	108	100	9.5	480	3	20.6	25	600	2,3,4,5,6

NOTES:

1. CONDENSING UNITS SHALL BE PAIRED TOGETHER. DIAKIN RXYQ360XAYDA OR EQUAL.
2. CONDENSING UNITS SHALL BE PAIRED TOGETHER. DIAKIN RXYQ384XAYDA OR EQUAL.
3. PROVIDE WITH METAL EQUIPMENT SUPPORT STANDS TO BE INSTALLED ON HOUSEKEEPING PAD.
4. PROVIDE UNIT WITH COMPRESSOR HIGH AND LOW PRESSURE SWITCHES, HAILGAURDS, COMPRESSOR SERVICE VALVES, MINIMUM 3 MINUTE TIME DELAY ON COMPRESSOR RE-START, LOW AMBIENT TEMPERATURE CONTROLS (OPERATION DOWN TO 0°F AMBIENT TEMPERATURE). DISCONNECT SHALL BE BY DIVISION 26 CONTRACTOR.
5. PROVIDE REFRIGERANT LINE KIT SIZED PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL REFRIGERANT SPECIALTIES REQUIRED FOR A COMPLETE OPERATING SYSTEM, INCLUDING FILTER DRIER, SIGHT GLASS, ETC.
6. HEATING CAPACITY SHALL BE SIZED AT 0°F AMBIENT TEMPERATURE. COOLING CAPACITY SHALL BE SIZED AT 100°F AMBIENT TEMPERATURE.

AIR DISTRIBUTION DEVICE SCHEDULE

LABEL	MANUFACTURER	MODEL NO	FACE	CONSTRUCTION TYPE	FACE SIZE (")	MAX PRESSURE (")	MAX NC	NOTES
RG-1	TITUS	OMNI-AA	PLAQUE	ALUMINUM	24x24	0.1	25	2,3,5
SD-1	TITUS	OMNI-AA	PLAQUE	ALUMINUM	24x24	0.1	25	1,2,3,5
SD-2	TITUS	OMNI-AA	PLAQUE	ALUMINUM	12x12	0.1	25	1,2,3,5
SD-3	SEIHO	NTX	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	2,5
SG-1	TITUS	S-DL	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	6
SG-2	TITUS	S300 FL	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	4,6
SG-3	TITUS	CT-480	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	2,4,5,7
SG-4	TITUS	CT-580	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	2,4,5
SG-5	TITUS	300 FL	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	2,3,4,5
LD-1	TITUS	FL-15-HT	1.5" LINEAR SLOT	ALUMINUM	1.5" LINEAR SLOT	0.1	25	5
LD-2	TITUS	FL-15-JT	1.5" LINEAR SLOT	ALUMINUM	1.5" LINEAR SLOT	0.1	25	5
PB-1	TITUS	FBPI	1.5" SLOT PLENUM	STEEL	4'-0" NOMINAL	0.1	25	-
PB-2	TITUS	FBPI	1.5" SLOT PLENUM	STEEL	6'-0" NOMINAL	0.1	25	-
RG-1	TITUS	OMNI-AA	PLAQUE	ALUMINUM	24x24	0.1	25	2,3,5
RG-2	TITUS	PAR-AA	PERFORATED	ALUMINUM	SEE PLANS	0.1	25	2,3,5
RG-3	TITUS	350 FL	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	2,3,5
EG-1	TITUS	OMNI-AA	PLAQUE	ALUMINUM	24x24	0.1	25	2,3,5
EG-2	TITUS	OMNI-AA	PLAQUE	ALUMINUM	12x12	0.1	25	2,3,5
EG-3	TITUS	350 FL	LOUVERED	ALUMINUM	SEE PLANS	0.1	25	2,3,5

NOTES:

1. 4-WAY THROW PATTERN UNLESS OTHERWISE INDICATED BY FLOW ARROWS ON DRAWINGS.
2. NECK SIZE SHOWN ON DRAWINGS. PROVIDE BRANCH DUCT TO MATCH NECK SIZE UNLESS OTHERWISE SHOWN ON DRAWINGS.
3. BAKED ENAMEL FINISH. COLOR TO BE REVIEWED WITH ARCHITECT.
4. FRONT BLADES PARALLEL TO LONG DIMENSION.
5. FRAME TO MATCH CEILING/WALL CONSTRUCTION. COORDINATE WITH ARCHITECTURAL REFLECTED CEILING/WALL PLAN.
6. PROVIDE WITH AIR SCOOP FOR BALANCING.
7. PROVIDE WITH HEAVY DUTY CORE AND FRAME FOR FLOOR MOUNTED APPLICATIONS.

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OUTDOOR AIR CALCULATIONS (2018 IMC)

SYSTEM LABEL	AREA SERVED	OCCUPANCY CATEGORY	SYSTEM FLOOR AREA (SQ FT)	SYSTEM POPULATION (PEOPLE)	AREA OUTDOOR AIR RATE FOR SYSTEM (CFM/SQ FT)	PEOPLE OUTDOOR AIR RATE FOR SYSTEM (CFM/PERSON)	OCCUPANT DIVERSITY	ZONE AIR DISTRIBUTION EFFECTIVENESS	SYSTEM PRIMARY AIRFLOW (CFM)	AVERAGE OUTDOOR AIR FRACTION	VENTILATION EFFICIENCY	REQUIRED ZONE OUTDOOR AIRFLOW (CFM)	PROVIDED ZONE OUTDOOR AIRFLOW (CFM)
GF-1	WEST OFFICES	OFFICE SPACE	590	4	0.06	5	-	0.8	-	-	-	69	75
GF-2	LAUNDRY / RR	NO LISTING	355	0	0	0	-	0.8	-	-	-	0	0
GF-3, GF-4	RECEPTION / LOBBY	MULTIPLE ZONE	2290	5	0.06	5	0.7	0.8	2200	0.08	0.87	186	200
GF-5, GF-7, GF-12, GF-14	LEARNING	MULTIPLE ZONE	5380	18	0.12	10	0.5	0.8	7000	0.11	0.82	978	1000
GF-6	EAST OFFICES	OFFICE SPACE	560	2	0.06	5	-	0.8	-	-	-	27	50
GF-8	PILOT LOUNGE	MULTIPLE ZONE	885	6	0.07	5	0.4	0.8	875	0.1	0.93	95	125
GF-9	CONFERENCE	CONFERENCE / MEETING	290	10	0.12	5	-	0.8	-	-	-	84	100
GF-10, GF-11	OBSERVATION DECK STAIRS / CORRIDOR	MULTIPLE ZONE	1435	12	0.06	5	0.7	0.8	3200	0.03	1	126	175
GF-13	CONFERENCE	MULTIPLE ZONE	440	10	0.06	5	0.5	0.8	700	0.07	1	51	75

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472
LEE'S SUMMIT, MISSOURI

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009576
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

SHEET TITLE

MECHANICAL SCHEDULES

M701

SHEET 119 OF 131

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PLUMBING SYMBOL LEGEND

GENERAL

- EXISTING
- DEMOLITION
- NEW
- NEW TO EXISTING
- SHEET NOTE
- REVISION DELTA
- PIPE OR DUCT UP
- PIPE OR DUCT DOWN
- PIPE OR DUCT CAP
- PIPE ANCHOR
- PIPE GUIDE
- PIPE ROLLER SUPPORT
- FLOW DIRECTION ARROW
- PIPE EXPANSION JOINT
- FLEXIBLE CONNECTOR
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- CONCRETE
- GRAVEL

SANITARY & DOMESTIC

- SANITARY DRAIN BELOW GRADE (PLAN)
- SANITARY DRAIN ABOVE GRADE (PLAN)
- COLD WATER (CW)
- HOT WATER (HW)
- HOT WATER CIRCULATING (HWC)
- 140 HW — 140°F DOMESTIC HOT WATER
- T — TEMPERED WATER
- TC — TEMPERED WATER CIRCULATING
- V — VENT
- VBF — VENT BELOW FLOOR
- CD — CONDENSATE DRAIN PIPING
- RD — ROOF DRAIN (ABOVE GRADE)
- RD — ROOF DRAIN (BELOW GRADE)
- OD — OVERFLOW DRAIN (ABOVE GRADE)
- OD — OVERFLOW DRAIN (BELOW GRADE)

FIXTURES

- VTR — VENT THRU ROOF
- RD-1 — ROOF DRAIN
- OD-1 — OVERFLOW DRAIN
- GCO — GRADE CLEAN OUT
- FCO — FLOOR CLEAN OUT
- WCO — WALL CLEAN OUT
- CO — HORIZ. CLEAN OUT
- FD-1/FS-1 — FLOOR DRAIN OR SINK AND TYPE
- HB-1 — HOSE BIBB
- WH-1 — WALL HYDRANT
- YH-1 — YARD HYDRANT
- DOWNSPOUT NOZZLE

SITE

- W — WATER SERVICE
- CURB STOP VALVE
- SAN — SANITARY SEWER (SITE)
- SS — STORM SEWER (SITE)
- W — WELL
- YHT — YARD HYDRANT
- GAR — GAS RISER
- M — GAS METER
- SD — STORM DRAIN
- THRUST BLOCK
- W — WATER MAIN

SPECIALTY SYSTEMS

- RO — REVERSE OSMOSIS
- OX — OXYGEN PIPING
- RD — REFRIGERANT DISCHARGE
- FOR — FUEL OIL RETURN
- FOS — FUEL OIL SUCTION
- FOV — FUEL OIL VENT
- G — NATURAL GAS
- LPG — LIQUID PETROLEUM GAS
- A — COMPRESSED AIR
- LR — LIQUID REFRIGERANT
- SR — SUCTION REFRIGERANT
- RL — PAIR REFRIGERANT LINES (SUCTION, LIQUID)
- P — PROPANE
- CO2 — CARBON DIOXIDE
- N — NITROGEN
- A — AIR OUTLET
- VAC — VACUUM (AIR)
- DI — DISTILLED WATER
- LV — LABORATORY VACUUM
- MV — MEDICAL VACUUM
- N2O — NITROUS OXIDE
- LOX — LIQUID OXYGEN
- LA — LABORATORY COMPRESSED AIR
- MA — MEDICAL COMPRESSED AIR
- DE — DEIONIZED WATER

GENERAL NOTES

A. CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.

B. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY AND THE AUTHORITY HAVING JURISDICTION. PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.

C. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE RISES, DROPS, AND OFFSETS AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE STARTING WORK.

D. PROVIDE ALL FITTINGS, ACCESSORIES, OFFSETS, AND MATERIALS NECESSARY TO FACILITATE THE PLUMBING SYSTEM'S FUNCTIONING AS INDICATED BY THE DESIGN AND THE EQUIPMENT INDICATED.

E. VERIFY SERVICE CONNECTION POINTS, SIZES, ELEVATIONS AND METERING LOCATIONS FOR PROJECT WITH LOCAL UTILITY COMPANIES AND/OR CIVIL ENGINEER, AS APPLICABLE.

F. DRAWINGS ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR EXACT MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE PIPING, CONNECTIONS, FITTINGS, VALVES, OFFSETS, AND ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM.

G. ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES OR IN OPEN CEILING ARCHITECTURE. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING PROVIDE AN ISOLATING DIELECTRIC FITTING. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.

H. THOROUGHLY CLEAN ITEMS BEFORE INSTALLATION. CAP PIPE OPENINGS TO EXCLUDE DIRT UNTIL FIXTURES ARE INSTALLED AND FINAL CONNECTIONS HAVE BEEN MADE. SET FIXTURES LEVEL AND IN PROPER ALIGNMENT. INSTALL SUPPLIES IN PROPER ALIGNMENT WITH FIXTURES. INSTALL SILICONE SEALANT BETWEEN FIXTURES AND ADJACENT MATERIAL AT SANITARY JOINTS.

I. SUSPEND HORIZONTAL SERVICE PIPING FROM UNDERSIDE OF STRUCTURE UNLESS OTHERWISE INDICATED - DO NOT SUPPORT FROM ROOF DECKING. INSTALL PIPING AS HIGH AS POSSIBLE. EXTEND PIPING DOWN IN WALLS, PARTITIONS AND CHASES TO SERVE FIXTURES AND EQUIPMENT.

J. PROVIDE CLEANOUTS AT THE BEGINNING OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL STORM, WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE (UP TO 4"), CONFORMING TO CODE REQUIREMENTS. PROVIDE SUITABLE WALL OR FLOOR CLEANOUTS WITH ACCESSORIES TO OBSCURE FROM VIEW.

K. ACCESS PANELS SHALL BE PROVIDED WHERE CONCEALED CONTROL DEVICES AND VALVES ARE CONCEALED WITHIN WALLS OR ABOVE INACCESSIBLE CEILINGS.

L. USE OF COMBUSTIBLE MATERIALS IS NOT ALLOWED IN THE RETURN AIR PLENUM. MATERIALS USED IN THE PLENUM SHALL HAVE FLAME SPREAD RATING NOT TO EXCEED 25 AND SMOKE DEVELOPED RATING NOT TO EXCEED 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84.

M. MAINTAIN MANDATORY 10'-0" SEPARATION FROM ALL VENTS/EXHAUST AND OUTSIDE AIR INTAKES. REFER TO MECHANICAL PLANS PRIOR TO ROUGH-IN.

N. DEFINITIONS:
1. PROVIDE - CONTRACTOR SHALL FURNISH AND INSTALL
2. FURNISH - CONTRACTOR SHALL OBTAIN FOR OTHERS TO INSTALL.
3. INSTALL - CONTRACTOR IS RESPONSIBLE FOR ALL LABOR AND CONSTRUCTION EQUIPMENT NECESSARY TO SET IN PLACE, CONNECT, CALIBRATE.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

SHEET TITLE

GENERAL PLUMBING INFORMATION

P001

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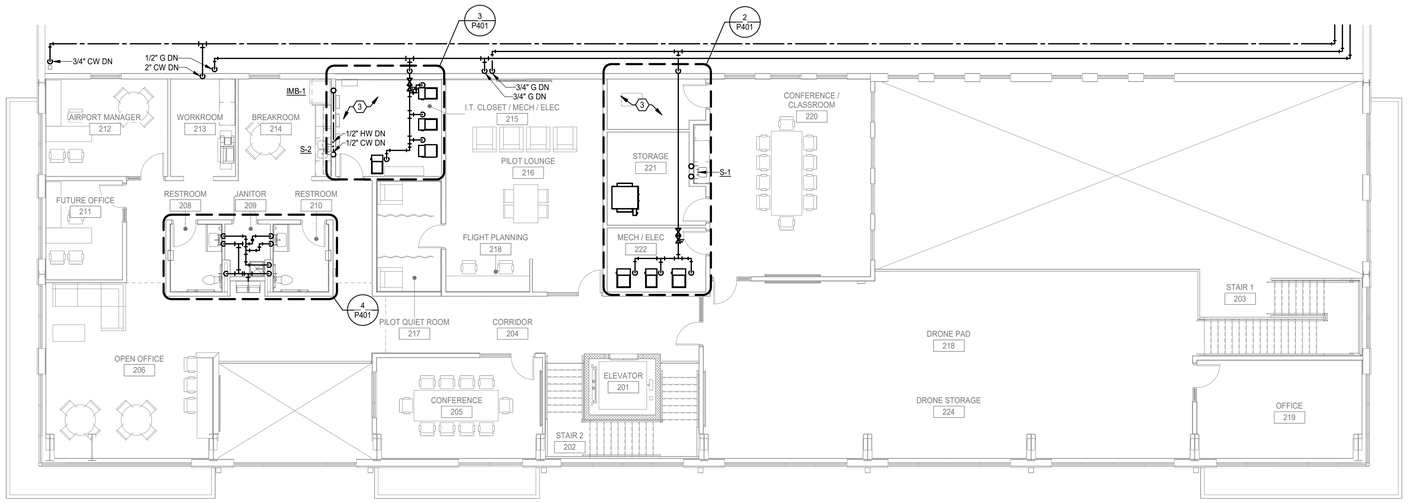
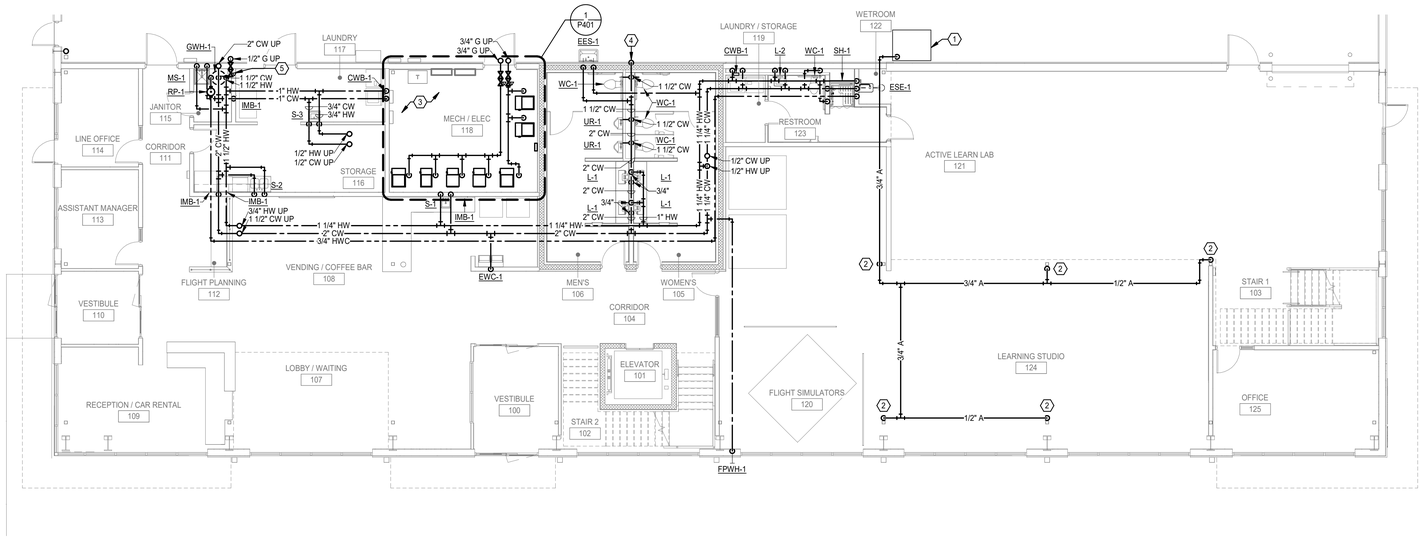
PLUMBING KEYNOTES

1. OWNER-FURNISHED COMPRESSOR. COORDINATE SPECIFIC REQUIREMENTS WITH OWNER.
2. 1/2" COMPRESSED AIR DROP. PROVIDE QUICK COUPLER CONNECTION FOR OWNER SUPPLIED HOSE AND VALVE. COORDINATE SPECIFIC REQUIREMENTS AND ELEVATIONS WITH OWNER.
3. DO NOT ROUTE PIPING OVER ELECTRICAL PANELS OR EQUIPMENT. MAINTAIN WORKING CLEARANCES AS DEFINED BY THE ELECTRICAL CODE.
4. 3/4" SHUTOFF VALVE AND VACUUM BREAKER INSTALLED AT 48" AFF. ROUTE 3/4" CW PIPING BELOW SLAB TO 3/4" AND 1/2" CW CONNECTIONS ON FLUSHING FLOOR DRAIN.
5. PROVIDE 2 PSI TO 7" W.C. PRESSURE REDUCING VALVE.



DOMESTIC WATER & NATURAL GAS PIPING SECOND FLOOR PLAN (2)
1/8" = 1'-0"



DOMESTIC WATER & NATURAL GAS PIPING FIRST FLOOR PLAN (1)
1/8" = 1'-0"

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1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

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DOMESTIC WATER & NATURAL GAS PIPING FLOOR PLANS

P101

SHEET 121 OF 131

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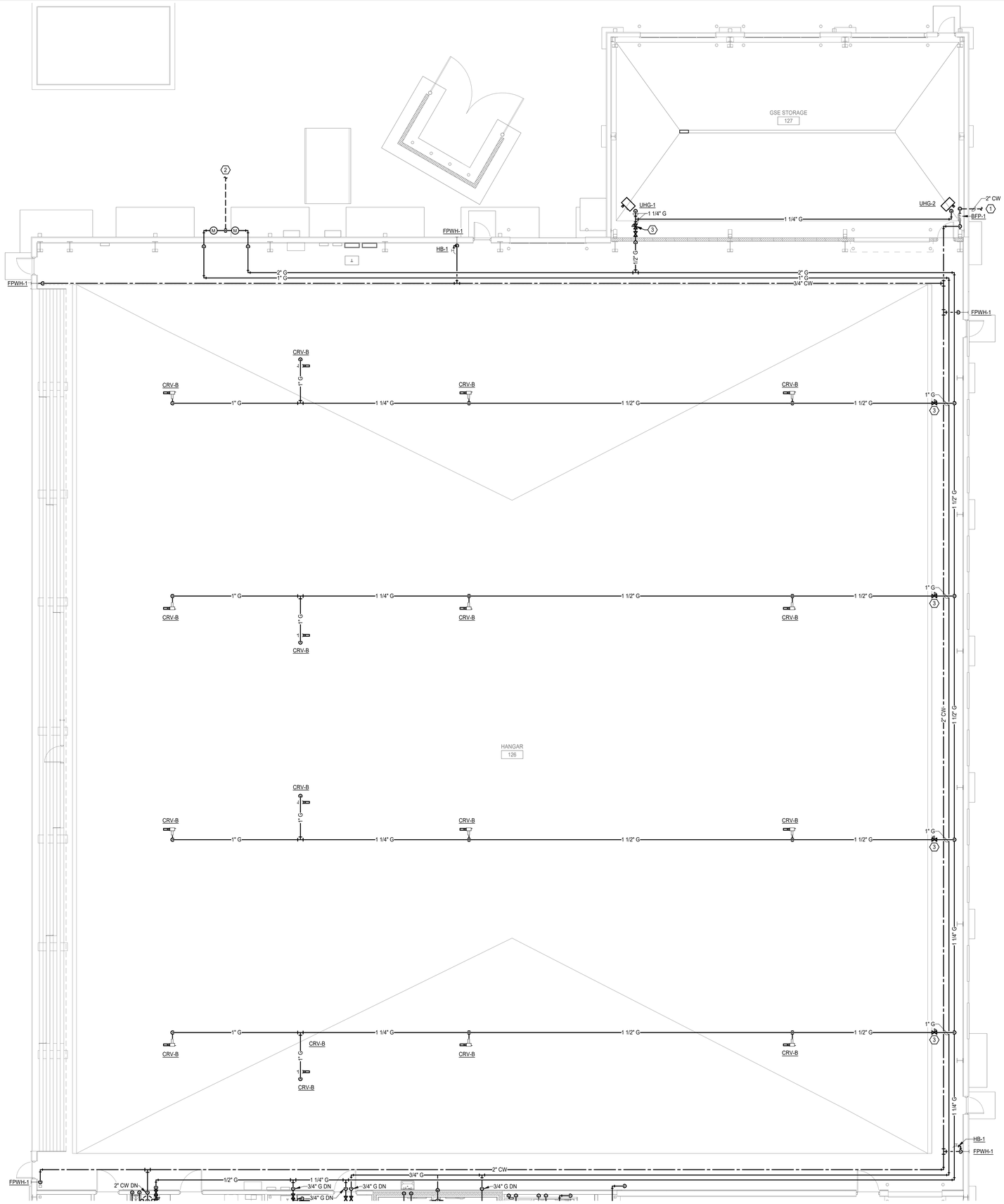

PLUMBING KEYNOTES

1 REFER TO CIVIL DRAWINGS FOR SIZE, LOCATION, AND INVERT OF CONNECTION.
2 PROVIDE 2 PSI GAS SERVICE. REFER TO GAS CONNECTED LOAD TABLES.
3 PROVIDE 2 PSI TO 7" W.C. PRESSURE REDUCING VALVE.

LEE'S SUMMIT EXECUTIVE AIRPORT GAS CONNECTED LOAD TABLE

EQUIPMENT	BTUH
GF-1	100
GF-2	60
GF-3	80
GF-4	80
GF-8	60
GF-9	60
GF-10	60
GF-11	80
RADIANT SYSTEM #1	800
RADIANT SYSTEM #2	800
UHG-1	45
UHG-2	45
GWH-1	120
TOTAL SYSTEM LOAD	2,390

MAIN AND BRANCH LINES HAVE BEEN SIZED USING THE "LONGEST LENGTH METHOD" FROM 2018 IFGC. THE LONGEST RUN TO THE FURTHEST MOST EQUIPMENT FROM THE METER IS 550 FT. ASSUMED 2 PSI DISTRIBUTION PRESSURE WITH A MAXIMUM 1 PSI PRESSURE DROP.

LEE'S SUMMIT SCHOOL DISTRICT GAS CONNECTED LOAD TABLE

EQUIPMENT	BTUH
GF-5	100
GF-6	100
GF-7	100
GF-12	100
GF-13	60
GF-14	100
TOTAL SYSTEM LOAD	560

MAIN AND BRANCH LINES HAVE BEEN SIZED USING THE "LONGEST LENGTH METHOD" FROM 2018 IFGC. THE LONGEST RUN TO THE FURTHEST MOST EQUIPMENT FROM THE METER IS 510 FT. ASSUMED 2 PSI DISTRIBUTION PRESSURE WITH A MAXIMUM 1 PSI PRESSURE DROP.

DOMESTIC WATER & NATURAL GAS PIPING HANGAR FLOOR PLAN (1)
1/8" = 1'-0"

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
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SHEET TITLE

DOMESTIC WATER & NATURAL GAS PIPING HANGAR FLOOR PLAN

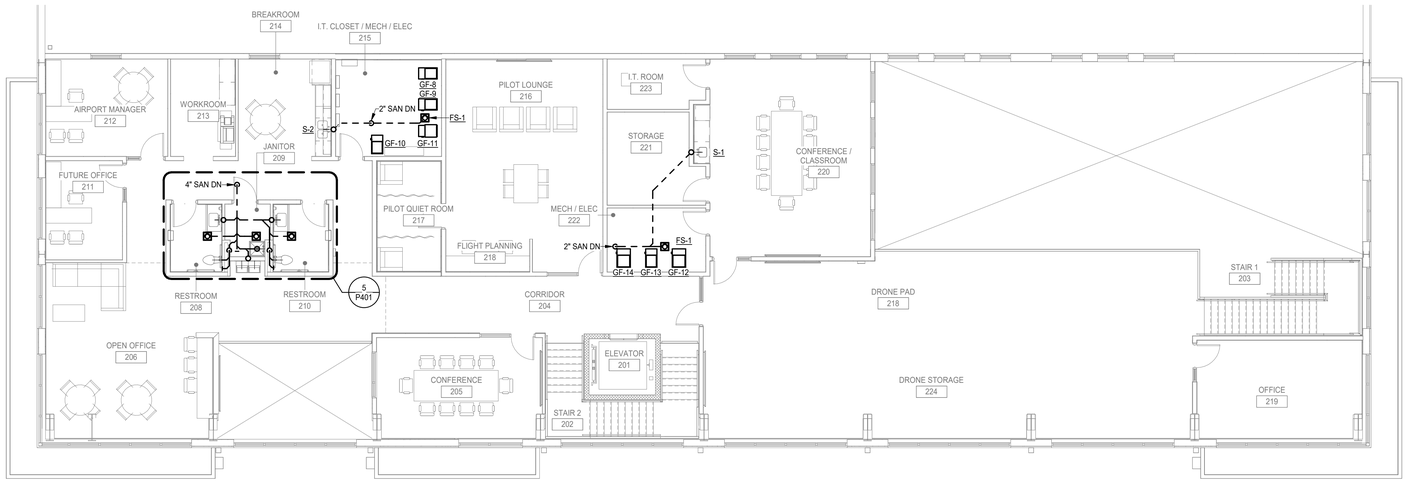
P102

SHEET 122 OF 131

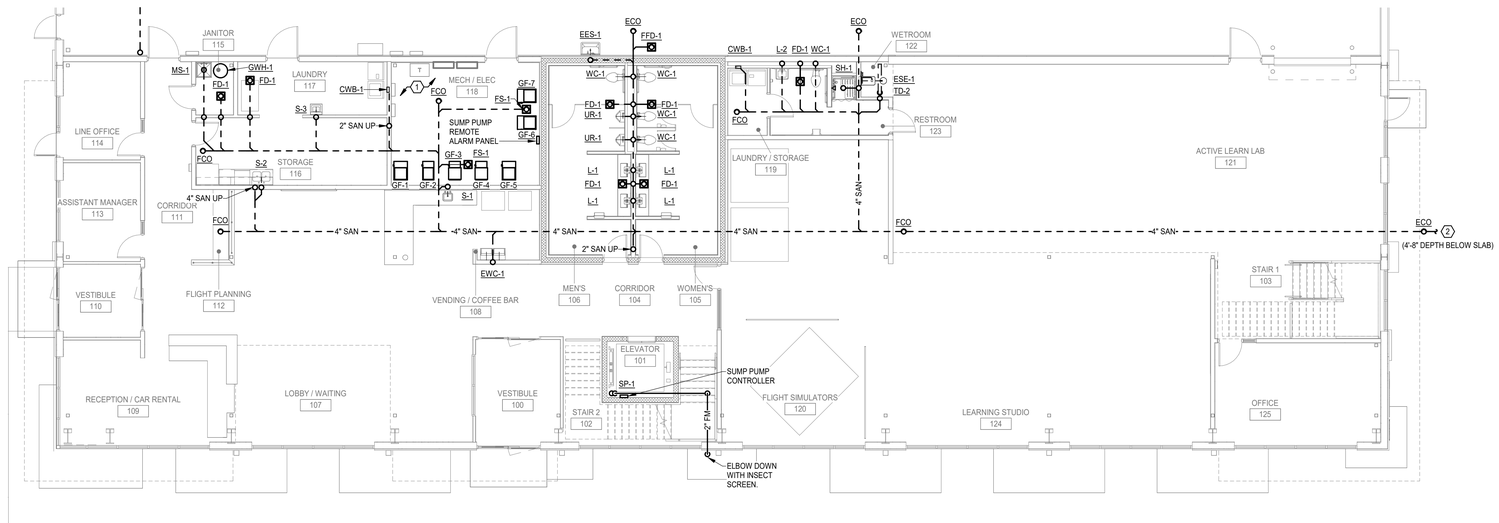
11/8/2023 9:27:25 AM

PLUMBING KEYNOTES

1 DO NOT ROUTE PIPING OVER ELECTRICAL PANELS OR EQUIPMENT. MAINTAIN WORKING CLEARANCES AS DEFINED BY THE ELECTRICAL CODE.
2 REFER TO CIVIL DRAWINGS FOR SIZE, LOCATION, AND INVERT OF CONNECTION.



SANITARY PIPING SECOND FLOOR PLAN (2)
1/8" = 1'-0"



SANITARY PIPING FIRST FLOOR PLAN (1)
1/8" = 1'-0"

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1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010000876
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
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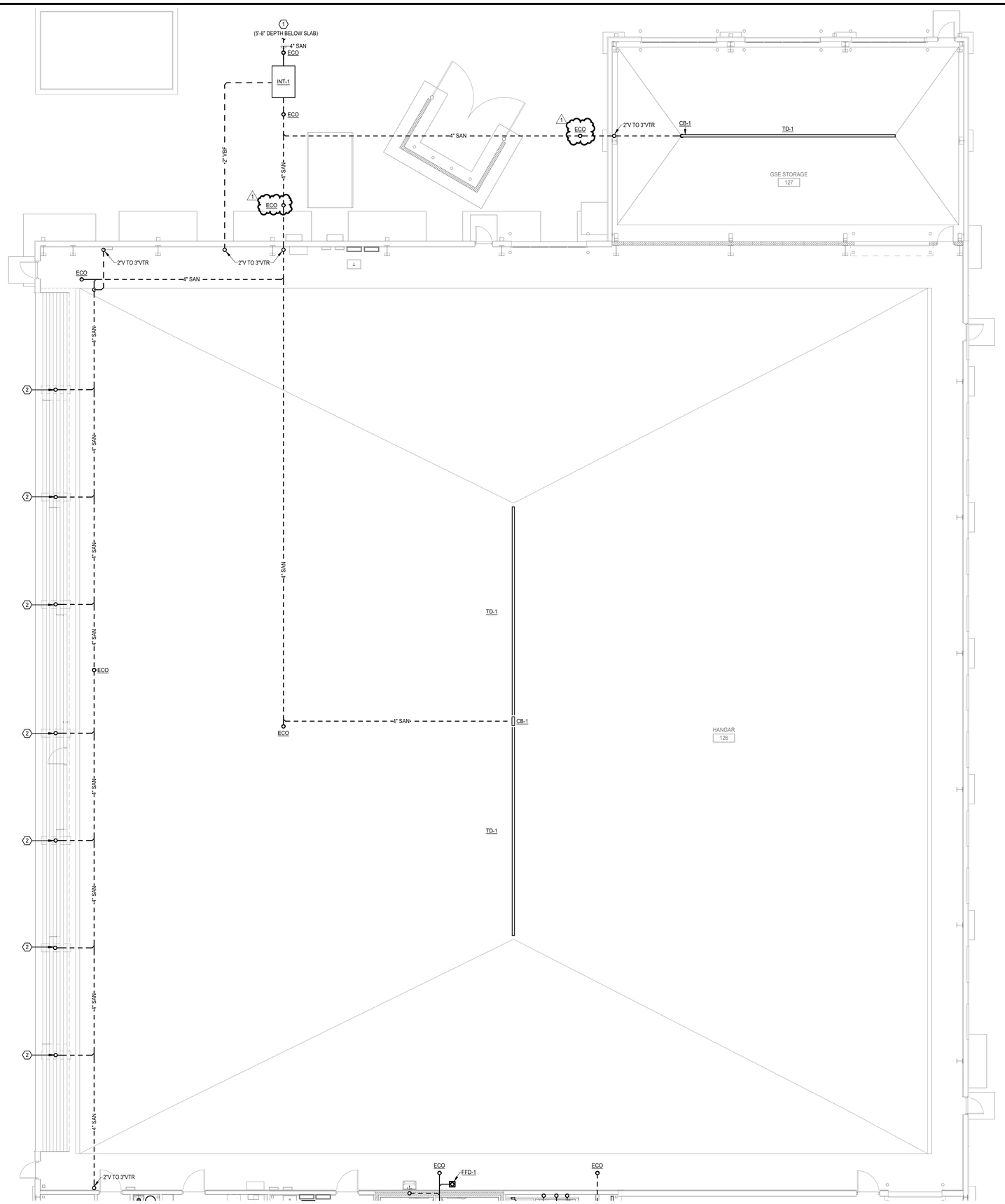
SHEET TITLE
SANITARY PIPING FLOOR PLANS

P201

SHEET 123 OF 131

11/8/2023 9:27:29 AM



SANITARY PIPING HANGAR FLOOR PLAN 1
1/8" = 1'-0"

PLUMBING KEYNOTES

1 REFER TO CIVIL DRAWINGS FOR SIZE, LOCATION, AND INVERT OF CONNECTION.

2 PROVIDE 4" SANITARY CONNECTION ON BOTTOM OF SUMP. COVER WITH DOME STRAINER.

HANGAR SANITARY SYSTEMS ARE VENTED IN ACCORDANCE WITH 2018 IPC SECTION 915: COMBINATION WASTE AND VENT SYSTEM.

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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10	REV-1

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
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SHEET TITLE

SANITARY PIPING HANGAR FLOOR PLAN

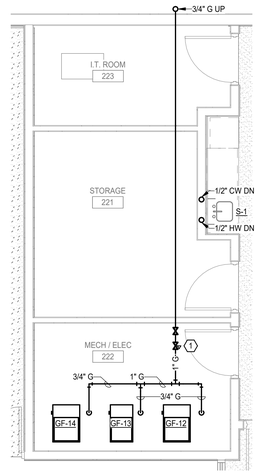
P202

SHEET 124 OF 131

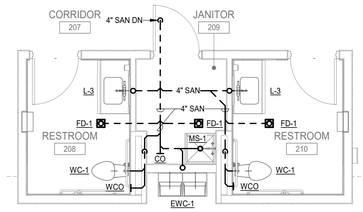
11/8/2023 9:27:31 AM

⬡ PLUMBING KEYNOTES

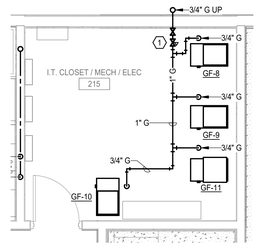
1 PROVIDE 2 PSI TO 7" W.C. PRESSURE REDUCING VALVE.



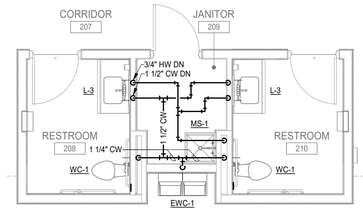
ENLARGED IT ROOM / STORAGE / MECH / ELEC 3
1/4" = 1'-0"



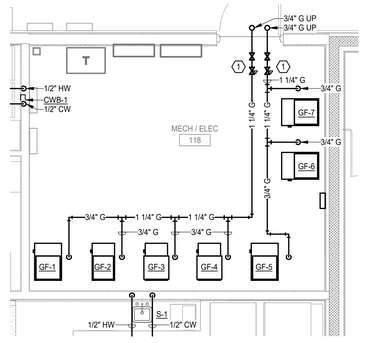
ENLARGED SANITARY PIPING SECOND FLOOR RESTROOMS 5
1/4" = 1'-0"



ENLARGED IT CLOSET / MECH / ELEC 2
1/4" = 1'-0"



ENLARGED DOMESTIC WATER SECOND FLOOR RESTROOMS 4
1/4" = 1'-0"



ENLARGED MECH / ELEC 1
1/4" = 1'-0"

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009276
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
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SHEET TITLE

ENLARGED PLANS

P401

SHEET 125 OF 131

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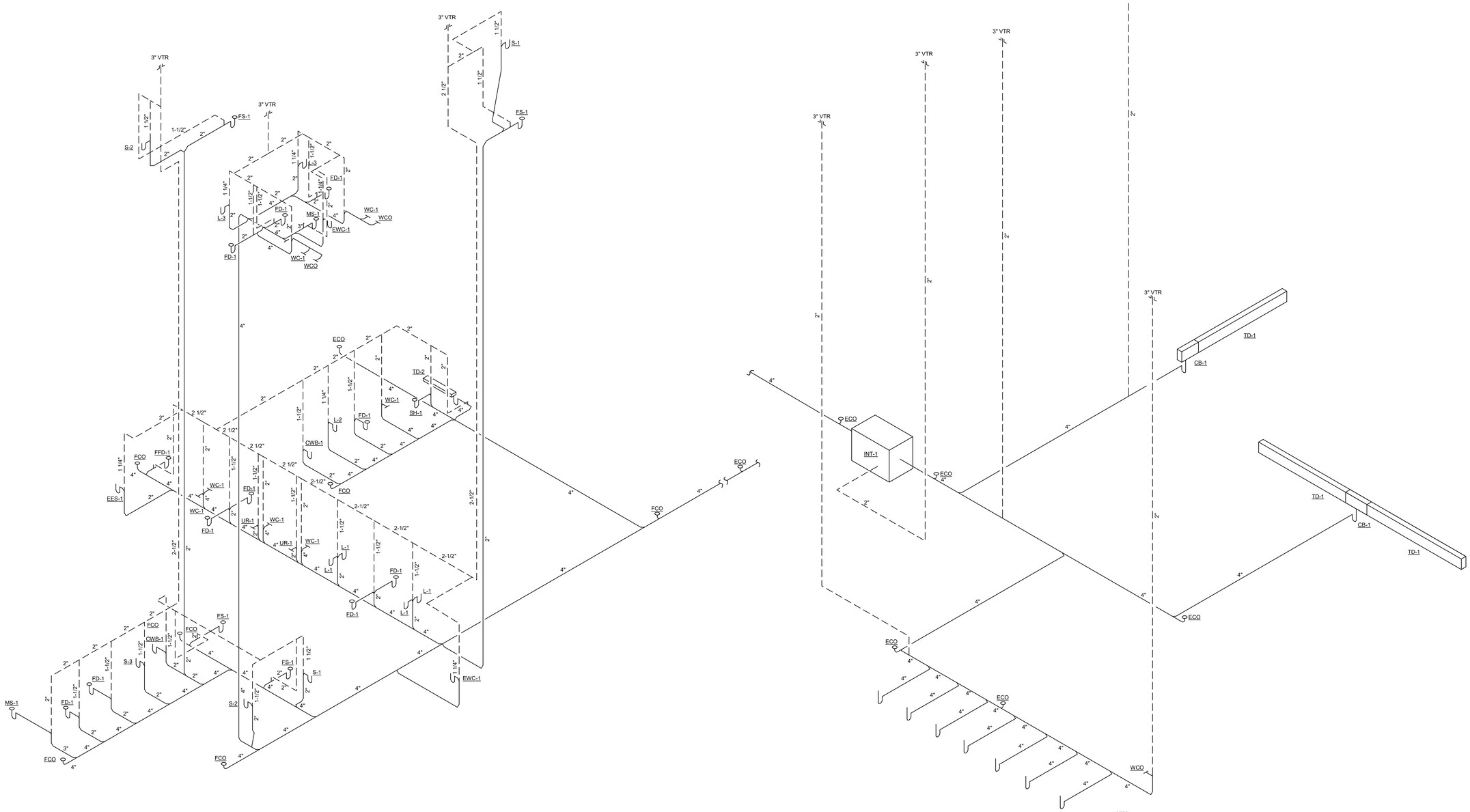

NOTES:

A. VENTS THRU ROOF SHALL BE A MINIMUM OF 10'-0" FROM ALL FRESH AIR INTAKES OR EDGE OF ROOF.
B. ALL PIPING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS WHEREVER POSSIBLE.
C. ALL WASTE AND VENT PIPING BELOW GRADE SHALL BE 2" MINIMUM.
D. REFER TO PLUMBING FIXTURE SCHEDULE FOR MINIMUM PIPE SIZES TO FIXTURES.
E. PIPING CONNECTION TO FIXTURES IS SHOWN DIAGRAMATICALLY. PROVIDE ALL FIXTURES WITH TRAPS AS REQUIRED BY CODE.

WASTE & VENT RISER 1
NOT TO SCALE

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KANSAS CITY, MO 64108

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009578
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
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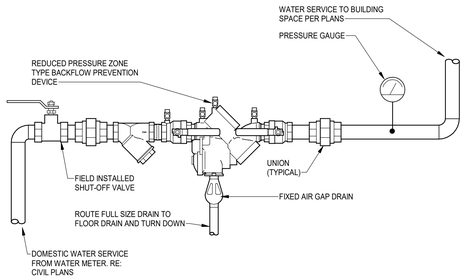
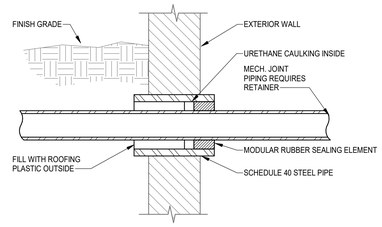
SHEET TITLE
DIAGRAMS, RISERS

P501
SHEET 126 OF 131

11/8/2023 9:27:35 AM

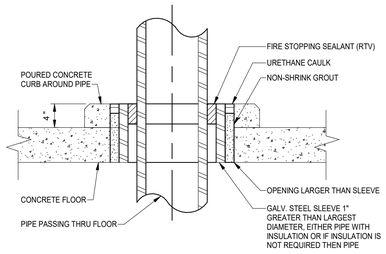


DOMESTIC WATER SERVICE ENTRANCE 9
NOT TO SCALE



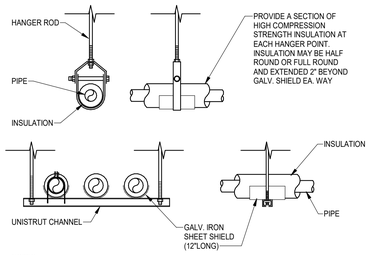
NOTES:
A. IF PIPING PASSES THROUGH WALL ABOVE GRADE, SLEEVE SHALL BE FLUSH WITH EXTERIOR SIDE OF WALL.
B. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.

PIPE SLEEVE THRU EXTERIOR WALL 6
NOT TO SCALE



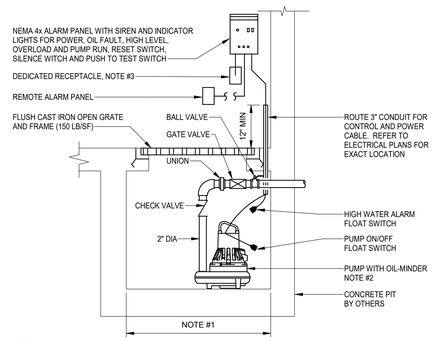
NOTES:
A. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES.

PIPE SLEEVE THRU FLOOR 3
NOT TO SCALE



NOTES:
A. ATTACH SUPPORTS FOR ALL PIPING SUSPENDED FROM THE STEEL STRUCTURE TO THE TOP CORD OF JOISTS OR BEAMS.
B. PROVIDE COPPER OR PLASTIC COATED HANGERS FOR NON-INSULATED COPPER PIPE.

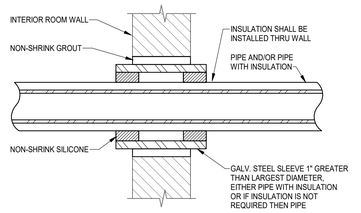
PIPE INSULATION 10
NOT TO SCALE



NOTES:
A. NO PVC PIPING ALLOWED FOR PUMP DISCHARGE PIPING.

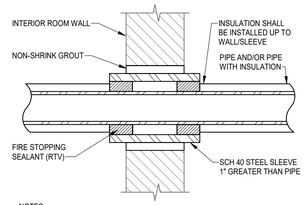
KEY NOTES:
1. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR BASIN DESIGN REQUIREMENTS (MINIMUM SIZE TO BE 24" x 24" x 24").
2. SET ON/OFF FLOAT SWITCH AND HIGH WATER ALARM AS REQUIRED BY THE MANUFACTURER.
3. LABEL RECEPTACLE "FOR ELEVATOR ALARM/SUMP PUMP ONLY". REFER TO ELECTRICAL DRAWING FOR EXACT LOCATION.

ELEVATOR SUMP PUMP 8
NOT TO SCALE



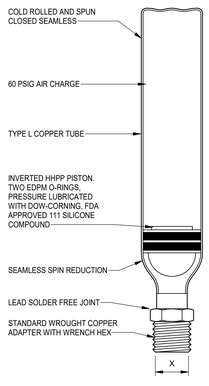
NOTES:
A. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES OR STUD WALLS.

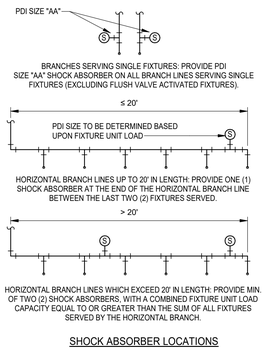
PIPE SLEEVE THRU NON-RATED INTERIOR WALL 5
NOT TO SCALE



NOTES:
A. SLEEVES ARE NOT REQUIRED FOR CORE-DRILLED HOLES OR STUD WALLS.

PIPE SLEEVE THRU RATED INTERIOR WALL 2
NOT TO SCALE





SHOCK ABSORBER LOCATIONS

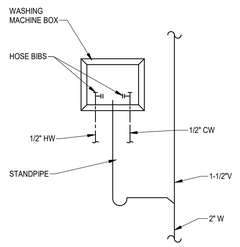
* FIXTURE	SUPPLY TYPE	FIXTURE UNIT LOADS					
		PUBLIC			PRIVATE		
		TOTAL	CW	HW	TOTAL	CW	HW
WATER CLOSET	FLUSH VALVE (1.6 GPF)	8.0	8.0	--	5.0	5.0	--
WATER CLOSET	FLUSH TANK (1.6 GPF)	5.0	5.0	--	2.5	2.5	--
URINAL	FLUSH VALVE (1.0 GPF)	4.0	4.0	--	--	--	--
LAVATORY	FAUCET	2.0	1.5	1.5	1	1	1
SINK	FAUCET	2.0	1.5	1.5	1	1	1
SHOWER	MIXING VALVE	4	2	3	2	1	2
BATHTUB	FAUCET	4	2	3	2	1.5	1.5
SERVICE SINK	FAUCET	3	3	3	--	--	--
WASHING MACHINE	AUTOMATIC (8 lb)	3	2.5	2.5	1.5	1	1

* ALL FIXTURES NOT LISTED IN TABLE SHALL HAVE FIXTURE UNIT LOAD VALUE DETERMINED BY 2006 IPC TABLE E103.3

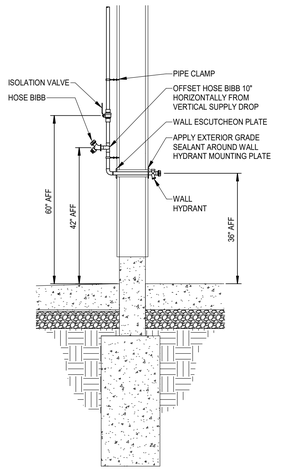
PDI SIZE	PIPE SIZE (X)	FIXTURE UNIT LOAD
AA	0.5"	1-3
A	0.5"	4-11
B	0.75"	12-32
C	1"	33-60
D	1"	61-113
E	1"	114-154
F	1"	155-330

PROVIDE SHOCK ABSORBERS ON ALL PLUMBING BATTERIES AND SINGLE FIXTURES AS SPECIFIED. ALL SHOCK ABSORBERS SHALL BE PROVIDED, SIZED, AND INSTALLED PER PDI STANDARD WH-201.

SHOCK ABSORBER 7
NOT TO SCALE



WASHING MACHINE BOX 4
NOT TO SCALE



WALL HYDRANT/HOSE BIBB DETAIL 1
NOT TO SCALE

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KANSAS CITY, MO 64108

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NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
CORY WILSON
11.08.2023
NUMBER PE-2010009578
PROFESSIONAL ENGINEER

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD
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SHEET TITLE
PLUMBING DETAILS

P601
SHEET 127 OF 131

11/8/2023 9:27:37 AM

WATER HEATER SCHEDULE (GAS)

LABEL	LOCATION	MANUFACTURER	MODEL NO	EFFICIENCY (%)	STORAGE (GAL)	RECOVERY (GPH @ 100°F)	TEMP RISE (°F)	TEMP SETTING (°F)	FUEL TYPE	INPUT (MBH)	NOTES
GWH-1	115 - JANITOR	A.O. SMITH	BTH-120	95	60	138	88	140	NG	120	ALL

NOTES:

1. PROVIDE POWERED ANODE ROD, HIGH LIMIT RESET, DRAIN VALVE, AND T&P RELIEF VALVE, AMTROL ST-5 EXPANSION TANK, AND CONCENTRIC TERMINATION KIT.
2. GLASS-LINED TANK WITH 160 PSI MAX WORKING PRESSURE.
3. INSTALL ON 4" CONCRETE HOUSEKEEPING PAD.
4. INSTALL THERMOMETER ON OUTLET OF HEATER SYSTEM.
5. INSTALL WITH MASTER MIXING VALVE SET TO 105°F. POWERS LFMM432 OR APPROVED EQUAL.

BACKFLOW PREVENTER SCHEDULE

LABEL	MANUFACTURER	MODEL NO	LOCATION	TYPE	SERVES	BFP SIZE	DRAIN SIZE	LINE SIZE	NOTES
BFP-1	WATTS	LF909M1QT	HANGAR	REDUCED PRESSURE	DOM WATER	2"	2"	2"	ALL

NOTES:

1. PROVIDE WITH MANUFACTURER REQUIRED AIRGAP, EXTEND FULL SIZE DRAIN PIPING TO FLOOR.
2. PROVIDE WITH "Y" TYPE STRAINER.
3. PROVIDE WITH UNION END BALL VALVES ON ASSEMBLY.

PUMP SCHEDULE

LABEL	MANUFACTURER	MODEL NO	SERVICE	GPM	HEAD	RPM	ELECTRICAL			NOTES
							VOLTS	PH	HP (W)	
RP-1	TACO	006E3	HW RECIRC	5.0	10	-	120	1	(44)	1
SP-1	STANCOR	SE-50A	ELEVATOR SUMP	50	25	-	120	1	1/2	2

NOTES:

1. PROVIDE WITH TIME CLOCK FOR OPERATION DURING OCCUPIED HOURS. DISCONNECT PROVIDED BY DIVISION 26 CONTRACTOR.
2. PROVIDE 120V HIGH LEVEL ALARM CONTROLLER INCLUDING NEMA 4X ENCLOSURE, FLOAT SWITCH, REMOTE AUDIBLE ALARM WITH TEST/SILENCE BUTTON, OIL MINDER, AND AUTO RESET. INSTALL CONTROLLER AND REMOTE ALARM WHERE SHOWN ON PLANS.

PLUMBING FIXTURE SCHEDULE

MARK	TYPE	MANUFACTURER	MODEL	DESCRIPTION	ACCESSORIES	CONNECTIONS			
						WASTE	VENT	CW	HW
CB-1	TRENCH DRAIN CATCH BASIN	ABT	2900	19.6"X6.1" CATCH BASIN WITH PREFORMED CUTOUTS FOR POLYDRAIN CHANNELS ON BOTH ENDS. 4" PREFORMED PIPE OUTLET.	-	4"	2"	-	-
CWB-1	CLOTHES WASHER RECESSED OUTLET BOX	GUY GRAY	SSWB3	RECESSED, STAINLESS STEEL CENTER DRAIN WASHING MACHINE OUTLET BOX. 2" DRAIN OPENING. 1/4 TURN BRASS SUPPLY BALL VALVES WITH WATER HAMMER ARRESTORS. INCLUDE SUPPORT BRACKETS.	-	2"	1-1/2"	1/2"	1/2"
ECO	EXTERIOR CLEANOUT	ZURN	Z1400-HD	ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY, WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG, AND SQUARE TOP WITH ROUND SCORIATED SECURED HEAVY DUTY TOP, ADJUSTABLE TO FINISH FLOOR.	CLEANOUT SHALL BE THE SAME SIZE AS PIPING UP TO 4". 4" AND LARGER PIPING SHALL BE A 4" CLEANOUT.	-	-	-	-
EES-1	HAND WASH SINK WITH EYE/FACE WASH	HAWS	7661	WALL MOUNTED, BARRIER-FREE HAND WASH SINK WITH PULLDOWN EYE/FACE WASH. CONSTRUCTION TO BE 14 GAUGE TYPE 304 STAINLESS STEEL. 1.2 GPM LAMINAR FLOW, MOTION-ACTIVATED FAUCET, 3.7 GPM EYE/FACE WASH.	PROVIDE WITH MIXING VALVE MODEL 9201EW.	1-1/2"	1-1/4"	1/2"	1/2"
ESE-1	EMERGENCY SHOWER AND EYE WASH	HAWS	8356WCC	BARRIER FREE COMBINATION SHOWER AND EYE/FACE WASH WITH 10" STAINLESS STEEL SHOWERHEAD AND FULLY RECESSED STAINLESS STEEL EYEWASH RECEPTOR. SHOWERHEAD AND EYEWASH ACTIVATED BY PULL DOWN LEVER. 20 GPM SHOWER, 4.2 GPM EYE/FACE WASH.	PROVIDE WITH MIXING VALVE MODEL 9201E. PROVIDE 1-1/2" CHROME-PLATED CAST-BRASS TRAP WITH CLEANOUT AND WALL ESCUTCHEON. 1/2" CHROME-PLATED SUPPLIES WITH QUARTER-TURN STOPS AND WALL ESCUTCHEON. PROVIDE WITH GRID STRAINER.	2"	1-1/2"	1-1/4"	1-1/4"
EWC-1	ELECTRIC WATER COOLER W/ BOTTLE FILLER, TWO STATION ADA	ELKAY	LZSTL8WSLK	BI-LEVEL, TWO STATION, WALL MOUNT WATER COOLER. 8 GPH AT 90°F AMBIENT, 370 WATTS, 5.0 FLA, SELF-CLOSING EASY-TOUCH CONTROLS ON THE FRONT, LEFT AND RIGHT OF UNIT, AND FLEX-GUARD SAFETY BUBBLER. 1.1 GPM LAMINAR FLOW BOTTLE FILLER, ELECTRIC SENSOR FOR TOUCHLESS ACTIVATION, MOUNTED AT ADA HEIGHT	PROVIDE CHROME-PLATED COPPER SUPPLY STOPS. CHROME-PLATED CAST-BRASS TRAP WITH CLEANOUT (0.045" THICK TUBULAR BRASS WASTE TO WALL) AND WALL ESCUTCHEONS.	1-1/2"	1-1/4"	1/2"	-
FCO	FLOOR CLEANOUT	ZURN	Z1400	CAST IRON BODY, WITH GAS AND WATER-TIGHT ABS TAPERED THREAD PLUG AND ROUND POLISHED BRONZE SCORIATED SECURED TOP, ADJUSTABLE TO FINISH FLOOR.	CLEANOUT SHALL BE THE SAME SIZE AS PIPING UP TO 4". 4" AND LARGER PIPING SHALL BE A 4" CLEANOUT.	-	-	-	-
FD-1	ROUND FLOOR DRAIN	ZURN	Z415B	CAST IRON TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEEP HOLES, REVERSIBLE CLAMPING COLLAR, NICKEL BRONZE ADJUSTABLE STRAINER.	DIMENSIONS OF TOP STRAINER: 2" OUTLET WITH A 5" STRAINER, 3" OR 4" OUTLET WITH 8" STRAINER, 6" OUTLET WITH A 10" STRAINER. PROVIDE A GASKETED TRAP SEALER IN NECK OF FLOOR DRAIN BY SURE-SEAL OR EQUAL. VERIFY PIPE SIZES ON PLANS.	2"	(2" BELOW SLAB)	-	-
FFD-1	FLUSHING RIM FLOOR DRAIN	ZURN	Z300	CAST IRON BODY WITH INTEGRAL DOUBLE WALL TRAP, WHITE ACID RESISTANT EPOXY EXTERIOR AND INTERIOR, FLUSHING RIM TOP AND FLUSHING TRAP.	PROVIDE WITH SOLID HINGED TOP AND CLAMPING COLLAR.	4"	2"	3/4"	-
FPWH-1	EXPOSED FREEZE-PROOF WALL HYDRANT	WOODFORD	65	NON-FREEZE, SELF DRAINING TYPE WITH POLISHED BRASS FINISH, HOSE THREAD SPOUT, VACUUM BREAKER, AND REMOVABLE KEY.	PROVIDE WITH SPARE KEY FOR EACH HYDRANT PROVIDED.	-	-	3/4"	-
FS-1	SQUARE FLOOR SINK	ZURN	Z1901	12x12x8 DEEP CAST IRON BODY AND SQUARE SLOTTED MEDIUM DUTY GRATE, WITH WHITE ACID RESISTING PORCELAIN ENAMEL INTERIOR AND TOP. COMPLETE WITH WHITE ABS ANTI-SPLASH INTERIOR BOTTOM DOME STRAINER.	PROVIDE WITH 1/2 GRATE AND SECURITY SCREWS.	2"	(2" BELOW SLAB)	-	-
HB-1	EXPOSED HOSE BIBB	WOODFORD	24	EXPOSED WALL HOSE BIBB WITH CHROME FINISH, HOSE THREAD SPOUT, VACUUM BREAKER, AND REMOVABLE KEY OPERATOR.	-	-	-	1/2"	-
IMB-1	ICE MAKER RECESSED OUTLET BOX	GUY GRAY	SSIB1AB	RECESSED, ICE MAKER BOX, 1/4 TURN BRASS SUPPLY BALL VALVE, STAINLESS STEEL PLATE. INCLUDE SUPPORT BRACKETS.	-	-	-	1/2"	-
INT-1	OIL INTERCEPTOR	ZURN	Z1188-250-HD	LARGE CAPACITY ACID RESISTANT COATED INTERIOR AND EXTERIOR FABRICATED STEEL WITH BRONZE CLEANOUT PLUG, VISIBLE DOUBLE WALL TRAP SEAL, REMOVABLE COMBINATION PRESSURE EQUALIZING/FLOW DIFFUSING BAFFLE AND SEDIMENT BUCKET, AND HORIZONTAL BAFFLE. COMPLETE WITH SECURED, GASKETED, NON-SKID COVER WITH REMOVEABLE LIFT HANDLES AND FLOW CONTROL FITTING.	PROVIDE WITH EXTENSION COLLAR FOR COVER PLATES. COORDINATE REQUIRED LENGTH WITH INSTALLED DEPTH.	4"	2"	-	-
L-1	UNDER COUNTER MOUNTED LAVATORY	BRADLEY	LD-3010-WB-TR1	SOLID SURFACE COUNTERTOP WITH UNDERMOUNT LAVATORY. REFER TO ARCHITECT FOR SPECIFICATIONS.	PROVIDE WITH BRADLEY WBD1 WASHBAR - REFER TO ARCHITECT FOR SPECIFICATIONS. PROVIDE WITH CHROME PLATED COPPER SUPPLIES WITH QUARTER-TURN ANGLE STOPS. PROVIDE CHROME PLATED CAST-BRASS TRAP WITH CLEANOUT, TRAP ARM EXTENSION TO WALL, AND WALL ESCUTCHEON. COVER EXPOSED COLD AND HOT SUPPLIES AND WASTE PIPING WITH PROTECTIVE SHIELDING GUARD, TRUEBRO INSULATED VINYL PIPE COVERS WITH ANTI-MICROBIAL, REUSABLE FASTENERS, AND STOP VALVE LOCKING ACCESS COVER. PROVIDE 24V TRANSFORMER FOR FAUCET.	1-1/2"	1-1/4"	1/2"	1/2"
L-2	LAVATORY WALL HUNG	KOHLER	"SOHO" K-2054-N	RECTANGULAR WALL MOUNTED, ASME A112.19.2 COMPLIANT VITREOUS CHINA LAVATORY WITH 20"x18" RECTANGULAR BOWL, AND MOUNTING KIT. REFER TO ARCHITECT FOR MOUNTING HEIGHT. FINISH TO BE WHITE.	PROVIDE WITH MANUAL OPERATED FAUCET DELTA MODEL 2559. 0.5 GPM FAUCET WITH MOUNTING HARDWARE. PROVIDE WITH CHROME PLATED FINISH, GRID STRAINER, ANTI-SCALD FEATURE. PROVIDE WITH CHROME PLATED COPPER SUPPLIES WITH QUARTER-TURN ANGLE STOPS. PROVIDE CHROME PLATED CAST-BRASS TRAP WITH CLEANOUT, TRAP ARM EXTENSION TO WALL, AND WALL ESCUTCHEON. COVER EXPOSED COLD AND HOT SUPPLIES AND WASTE PIPING WITH PROTECTIVE SHIELDING GUARD, TRUEBRO INSULATED VINYL PIPE COVERS WITH ANTI-MICROBIAL, REUSABLE FASTENERS, AND STOP VALVE LOCKING ACCESS COVER. PROVIDE 24V TRANSFORMER FOR FAUCET.	1-1/2"	1-1/4"	1/2"	1/2"
L-3	LAVATORY WALL HUNG	BRADLEY	LD-3010-S53-3300	SOLID SURFACE COUNTERTOP WITH UNDERMOUNT LAVATORY. REFER TO ARCHITECT FOR SPECIFICATIONS.	PROVIDE WITH BRADLEY S53-3300 FAUCET - REFER TO ARCHITECT FOR SPECIFICATIONS. PROVIDE WITH CHROME PLATED COPPER SUPPLIES WITH QUARTER-TURN ANGLE STOPS. PROVIDE CHROME PLATED CAST-BRASS TRAP WITH CLEANOUT, TRAP ARM EXTENSION TO WALL, AND WALL ESCUTCHEON. COVER EXPOSED COLD AND HOT SUPPLIES AND WASTE PIPING WITH PROTECTIVE SHIELDING GUARD, TRUEBRO INSULATED VINYL PIPE COVERS WITH ANTI-MICROBIAL, REUSABLE FASTENERS, AND STOP VALVE LOCKING ACCESS COVER.	1-1/2"	1-1/4"	1/2"	1/2"
MS-1	MOP SINK	FIAT	MSB 2424	24"x24"x10" MOLDED STONE BASIN WITH 3" DRAIN OUTLET WITH STRAINER.	PROVIDE WITH 30" FLEXIBLE RUBBER HOSE AND WALL BRACKET. FAUCET MODEL 830-AA, CHROME-PLATED, WALL MOUNTED, WITH VACUUM BREAKER, INTEGRAL STOPS, ADJUSTABLE WALL BRACE, PAIL HOOK AND 3/4" HOSE THREAD ON SPOUT.	3"	2"	1/2"	1/2"
S-1	SINGLE BOWL SINK	ELKAY	ECTRU17179T	UNDERCOUNTER MOUNTED, ASME A112.19.3 COMPLIANT, 18 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL SINGLE BOWL SINK WITH SATIN FINISH ON EXPOSED SURFACES AND SOUND DAMPENING UNDERCOATING APPLIED TO CONCEALED SURFACES. SINK SHALL HAVE 18"X18" BOWL, 9" BOWL DEPTH, RADIUS CORNERS, REAR CENTER DRAIN OPENING, AND MOUNTING CLIPS. COORDINATE FAUCET HOLE QUANTITY AND SPACING WITH FAUCET SPECIFIED. COORDINATE COUNTERTOP CUTOUTS WITH GENERAL CONTRACTOR.	PROVIDE WITH DELTA FAUCET MODEL 9959-LS-DST - FAUCET SHALL BE ASME A112.18.1 AND NSF 61 COMPLIANT. FAUCET TO INCLUDE ALL BRASS CONSTRUCTION, DECK ESCUTCHEON, BRASS VALVE BODIES, QUARTER TURN WASHERLESS CERAMIC DISC VALVES, 6-1/2" MULTI-SWIVEL SWING PULL DOWN SPOUT, AND 1.8 GPM AERATOR. PROVIDE 1-1/2" CHROME-PLATED CAST-BRASS TRAP WITH CLEANOUT AND WALL ESCUTCHEON. PROVIDE WITH GRID STRAINER DRAIN. PROVIDE WITH 3/4 HP GARBAGE DISPOSAL. DO NOT PROVIDE GARBAGE DISPOSAL FOR SCHOOL DISTRICT SPACES.	2"	1-1/2"	1/2"	1/2"
S-2	DOUBLE BOWL SINK	ELKAY	ECTRU3179T	UNDERCOUNTER MOUNTED, ASME A112.19.3 COMPLIANT, 18 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL DOUBLE BOWL SINK WITH SATIN FINISH ON EXPOSED SURFACES AND SOUND DAMPENING UNDERCOATING APPLIED TO CONCEALED SURFACES. SINK SHALL HAVE 17"X14-1/2" BOWLS, 9" BOWL DEPTH, RADIUS CORNERS, REAR CENTER DRAIN OPENING, AND MOUNTING CLIPS. COORDINATE FAUCET HOLE QUANTITY AND SPACING WITH FAUCET SPECIFIED. COORDINATE COUNTERTOP CUTOUTS WITH GENERAL CONTRACTOR.	PROVIDE WITH DELTA FAUCET MODEL 9159-LS-DST - FAUCET SHALL BE ASME A112.18.1 AND NSF 61 COMPLIANT. FAUCET TO INCLUDE ALL BRASS CONSTRUCTION, DECK ESCUTCHEON, BRASS VALVE BODIES, QUARTER TURN WASHERLESS CERAMIC DISC VALVES, 9-1/2" MULTI-SWIVEL SWING PULL DOWN SPOUT, AND 1.8 GPM AERATOR. PROVIDE 1-1/2" CHROME-PLATED CAST-BRASS TRAP WITH CLEANOUT AND WALL ESCUTCHEON. 1/2" CHROME-PLATED SUPPLIES WITH QUARTER-TURN STOPS AND WALL ESCUTCHEON. PROVIDE WITH 3/4 HP GARBAGE DISPOSAL.	2"	1-1/2"	1/2"	1/2"
S-3	SINGLE BOWL SINK KIT	ELKAY	CHSB1716C	WALL MOUNTED, ASME A112.19.3 COMPLIANT, 20 GAUGE TYPE 304 NICKEL BEARING STAINLESS STEEL SINGLE BOWL SINK WITH SATIN FINISH ON EXPOSED SURFACES. SINK SHALL HAVE 12"X9-1/4" BOWL, 6" BOWL DEPTH, RADIUS CORNERS, AND CENTER DRAIN OPENING.	PROVIDE WITH ELKAY FAUCET MODEL LKB400 - FAUCET SHALL BE ASME A112.18.1 AND NSF 61 COMPLIANT. FAUCET TO INCLUDE ALL BRASS CONSTRUCTION, BRASS VALVE BODIES. QUARTER TURN WASHERLESS CERAMIC DISC VALVES, 3-1/2" SPOUT, AND 2.2 GPM AERATOR. PROVIDE 1-1/2" CHROME-PLATED CAST-BRASS TRAP WITH CLEANOUT AND WALL ESCUTCHEON. 1/2" CHROME-PLATED SUPPLIES WITH QUARTER-TURN STOPS AND WALL ESCUTCHEON.	2"	1-1/2"	1/2"	1/2"
SH-1	ADA TRANSFER SHOWER	EVERFAB	S3839A	ONE-PIECE TRANSFER TYPE SHOWER STALL WITH CENTER DRAIN. COORDINATE SEAT LOCATION WITH ARCHITECTURAL DRAWINGS.	PROVIDE WITH SOLID BRASS TEMPERATURE CONTROL TRIM MOEN MODEL T8346 WITH ANTI-SCALD SAFETY STOP, LEVER HANDLE, POLISHED CHROME FINISH, THERMOSTATIC MIXING VALVE WITH SHAPE MEMORY ALLOY, INTEGRATED SERVICE STOPS, 1/2" NPT CONNECTIONS, AND CORROSION RESISTANCE. TRIM SHALL BE ASME A112.18.1 AND ADA COMPLIANT. PROVIDE WITH SINGLE SPRAY SHOWERHEAD WITH HOSE, 30" SLIDE BAR, AND CAULKLESS BRASS DRAIN WITH STRAINER. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHTS OF ALL COMPONENTS.	-	-	1/2"	1/2"
TD-1	TRENCH DRAIN	ABT	POLYDRAIN	6" WIDE, 4" THROAT, PRE-SLOPED MODULAR FIBER REINFORCED POLYMER CHANNELS, SEE PLANS FOR LENGTH REQUIRED.	PROVIDE WITH CLASS F DUCTILE IRON SLOTTED GRATE.	4"	2"	-	-
TD-2	TRENCH DRAIN	ZURN	Z886	6" WIDE, 4" THROAT, PRE-SLOPED MODULAR FIBER REINFORCED POLYMER CHANNELS, SEE PLANS FOR LENGTH REQUIRED.	PROVIDE WITH CLASS C DUCTILE IRON SLOTTED GRATE.	4"	2"	-	-
UR-1	URINAL WALL MOUNTED FLUSH VALVE	AMERICAN STANDARD	"WASHBROOK" 6515	WHITE, VITREOUS CHINA, WASHOUT TYPE, WALL MOUNTED, 3/4" TOP SPUD, STRAINER, WALL OUTLET, 1.0 GPF.	INCLUDE HEAVY DUTY FIXTURE CARRIER. PROVIDE WITH ASSE 1037 COMPLIANT 1.0 GPF AUTOMATIC INFRARED SENSOR ACTIVATED FLUSH VALVE TYPICAL OF SLOAN ECOS 8186-1.0, ADA COMPLIANT, WITH CHROME-PLATED EXPOSED PIECES.	2"	1-1/2"	1"	-
WC-1	WATER CLOSET WALL MOUNTED FLUSH VALVE	AMERICAN STANDARD	"AFWALL" 2634	WALL MOUNTED, VITREOUS CHINA, ASME A112.19.2 COMPLIANT, 1.6 GPF SIPHON JET FLUSH WATER CLOSET WITH ELONGATED BOWL, 1-1/2" TOP SPUD, AND 2-1/8" TRAPWAY. FINISH SHALL BE WHITE. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.	PROVIDE WITH WHITE OPEN FRONT ELONGATED SEAT LESS COVER. PROVIDE WITH ASSE 1037 COMPLIANT 1.6 GPF AUTOMATIC INFRARED SENSOR ACTIVATED FLUSH VALVE TYPICAL OF SLOAN ECOS ESS 8111-1.6 WITH 1" ANGLE STOP, 1-1/2" VACUUM BREAKER. UNIT SHALL INCLUDE A DIAPHRAM VALVE WITH STAINLESS STEEL SELF-CLEANING SOLENOID, WITH 24 HOUR MAINTENANCE FLUSH. PROVIDE WITH HEAVY DUTY FLOOR MOUNTED CARRIER COMPATIBLE WITH FIXTURE SPECIFIED.	4"	2"	1 1/4"	-
WCO	WALL CLEANOUT	ZURN	Z1446	CLEANOUT TEE, DURA-COATED CAST IRON BODY, GAS AND WATERTIGHT TAPERED THREAD BRONZE PLUG, POLISHED STAINLESS STEEL COVER WITH SECURING SCREW.	CLEANOUT SHALL BE THE SAME SIZE AS PIPING UP TO 4". 4" AND LARGER PIPING SHALL BE A 4" CLEANOUT.	-	-	-	-

NOTES:

1. VERIFY ALL CONNECTIONS & MOUNTING HEIGHTS WITH CODES, MANUFACTURERS, AND PLANS.
2. SIZES LISTED INDICATE MIN. SIZE ONLY, SEE PLUMBING RISERS AND FLOOR PLANS FOR LARGER SIZES.

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

LEES SUMMIT MUNICIPAL AIRPORT AUTHORITY
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.rvt
DESIGNED BY:	NPB
DRAWN BY:	NPB
CHECKED BY:	KLC
APPROVED BY:	TWD

SHEET TITLE

PLUMBING SCHEDULES

P701

SHEET 128 OF 131

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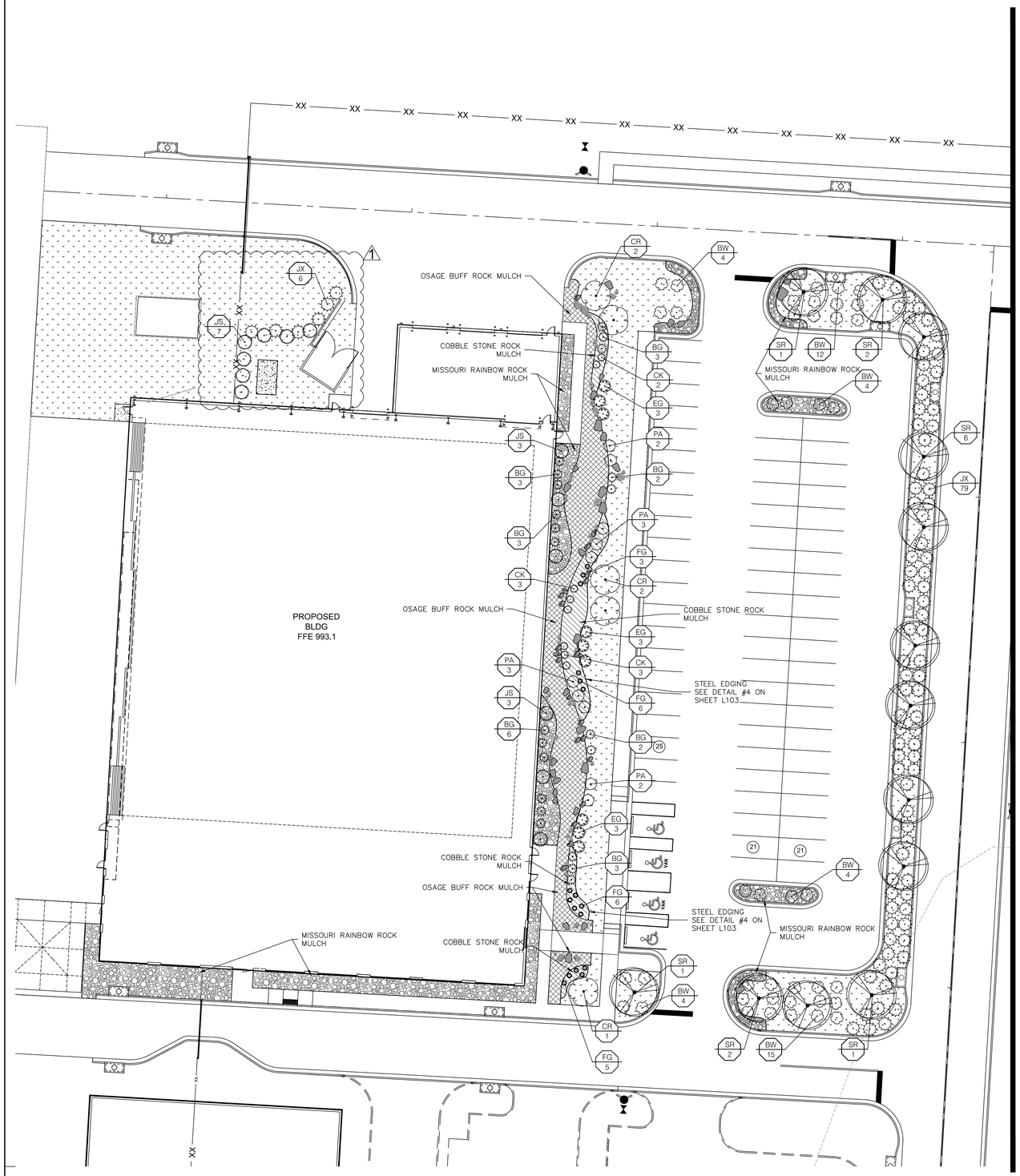

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	CR	5	COTINUS COGGYGRIA 'ROYAL PURPLE' / ROYAL PURPLE SMOKE TREE	3" CAL
	JS	13	JUNIPERUS CHINENSIS 'SPARTAN' / SPARTAN JUNIPER	8` HT
	SR	13	SYRINGA RETICULATA / JAPANESE TREE LILAC	3" CAL
SHRUBS	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**
	BW	43	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM' / WINTER GEM JAPANESE BOXWOOD	3 GAL
	BG	22	BUXUS X 'GREEN VELVET' / GREEN VELVET BOXWOOD	3 GAL
	EG	9	EUONYMUS FORTUNEI 'EMERALD GAIETY' / EMERALD GAIETY WINTERCREEPER	3 GAL
	JX	85	JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	3 GAL
GRASSES	**CODE**	**QTY**	**BOTANICAL / COMMON NAME**	**SIZE**
	CK	8	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS	2 GAL
	FG	17	FESTUCA GLAUCA / BLUE FESCUE	2 GAL
	PA	10	PENNISETUM ALOPECUROIDES / FOUNTAIN GRASS	2 GAL

GROUNDCOVERS

	3-6" MISSOURI RAINBOW ROCK -	4,522 SF
	TURF SOD DROUGHT TOLERANT BLEND -	18,134 SF
	1-3" OSAGE BUFF -	4,784 SF
	4-8" COBBLESTONE ROCK -	1,811 SF
	COBBLESTONE BOULDERS	VARY

NOTES:

1. ALL DISTURBED AREA NOT OTHERWISE SPECIFIED WITH GROUNDCOVER SHALL BE PLANTED WITH TURF SEED – DROUGHT TOLERANT DWARF FESCUE BLEND.
2. PLANTING BEDS AND TREE PLANTING AREAS SHALL RECEIVE MISSOURI RAINBOW ROCK AT A DEPTH OF 3" WITH SHOVEL–CUT EDGE OR STEEL EDGING AS CALLED OUT ON PLAN.
4. COMPLETE COVERAGE IRRIGATION SHALL BE PROVIDED BY CONTRACTOR FOR ALL TURF AND MULCHED PLANTING AREAS, REFER TO HATCHING IN SCHEDULE. IRRIGATION PLANS SHALL BE SUBMITTED TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
5. AREAS OF TURF SEED PLANTED ON SLOPES EXCEEDING 4:1 (SEE GRADING PLANS) SHALL BE INSTALLED WITH AN EROSION CONTROL MEASURERS PER MANUFACTURER'S SPECIFICATIONS.
6. QUANTITIES LISTED IN THE PLANT LIST SCHEDULE ARE FOR ESTIMATES ONLY. TREES, SHRUBS, AND GROUND COVER OF CONTRACT QUANTITIES SHALL BE THE NUMBER OF ITEMS SHOWN ON THE DRAWINGS.
7. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK. ANY DIFFERENCE IN QUANTITIES SHOULD BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
8. CONTRACTOR SHALL REFER TO ENGINEERING DRAWINGS FOR ANY AND ALL EXISTING AND/OR PROPOSED UTILITIES. IF THERE ARE ANY DISCREPANCIES, CONFLICTS AND/OR DEVIATIONS BETWEEN THE LANDSCAPE DRAWINGS AND THE EXISTING OR PROPOSED CONDITIONS, THE CONTRACTOR IS TO CONTACT THE LANDSCAPE ARCHITECT IMMEDIATELY.
9. ALL UNDERGROUND UTILITIES ARE TO BE FIELD–VERIFIED PRIOR TO COMMENCEMENT OF WORK.
10. LANDSCAPE CONTRACTOR SHALL SUBMIT SPECIFICATIONS OF SEED, SOIL, AND MULCH, AND REPRESENTATIVE PHOTOS OF TREES AND SHRUBS, TO LANDSCAPE ARCHITECT FOR REVIEW AND ACCEPTANCE PRIOR TO COMMENCEMENT OF WORK. SUBSTITUTIONS MUST BE APPROVED BY LANDSCAPE ARCHITECT.
11. INSTALLATION OF LANDSCAPING SHALL TAKE PLACE DURING EITHER THE SPRING (MARCH 15 – JUNE 15) OR FALL (SEPTEMBER 15–OCTOBER 15) PLANTING SEASON AND WITH WATER AVAILABLE FOR IRRIGATION PURPOSES.
12. IF UNDERGROUND OBSTRUCTIONS ARE ENCOUNTERED IN EXCAVATION FOR PLANTING OF TREES OR SHRUBS, NOTIFY LANDSCAPE ARCHITECT IMMEDIATELY. NEW LOCATIONS MAY BE SELECTED BY LANDSCAPE ARCHITECT OR INSTRUCTIONS MAY BE ISSUED TO DIRECT REMOVAL OF OBSTRUCTIONS. PROCEED WITH WORK ONLY AFTER APPROVAL OF LANDSCAPE ARCHITECT.
13. LANDSCAPE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND MATERIALS INJURIOUS TO PLANT GROWTH FROM PLANTING PITS AND BEDS PRIOR TO BACKFILLING WITH PLANTING MIX.
14. A PRE–EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANTING BEDS PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
15. BACKFILL ALL PLANTING BEDS TO A MINIMUM 12–INCH DEPTH WITH PLANTING SOIL MIX. PLANTING SOIL MIX SHALL CONSIST OF ONE (1) PART PERLITE, ONE (1) PART PEAT MOSS, AND TWO (2) PARTS CLEAN LOAM TOPSOIL. THOROUGHLY MIX PLANTING SOIL COMPONENTS PRIOR TO PLACEMENT. ALL LANDSCAPE AREAS SHALL BE UNIFORMLY GRADED SO THAT FINISHED SURFACES CONFORM TO THE TYPICAL SECTIONS AND PROPOSED GRADES SHOWN. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED AND FREE FROM IRREGULAR SURFACE DRAINAGE. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING THE FINISH GRADE AND SHALL BEAR FINAL RESPONSIBILITY FOR PROPER SURFACE DRAINAGE OF PLANTED AREAS.
16. LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR WATERING AND GENERAL HEALTH OF ALL PLANT MATERIALS UNTIL FINAL ACCEPTANCE. ANY MATERIAL WHICH DIES PRIOR TO ACCEPTANCE OF WORK SHALL BE PROMPTLY REMOVED AND REPLACED.
17. LANDSCAPE BEDS SHALL BE FREE OF WEEDS AND VOLUNTEER PLANT MATERIAL.
18. LANDSCAPE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE. CONTRACTOR WILL MAKE ALL REPLACEMENTS PROMPTLY UNDER THIS GUARANTEE (AS PER DIRECTION OF OWNER).

LEE'S SUMMIT MUNICIPAL AIRPORT - LANDSCAPE CALCULATIONS

BUILDING COVERAGE (SF)	PARKING SPACES	LANDSCAPE ISLANDS AREA (SF)	PARKING LOT AREA (SF)	PARKING AREA LANDSCAPE ISLAND % (5% MIN.)	R/W LENGTH (LF)		(1) LANDSCAPE STRIP BETWEEN PARKING/LOADING AREA AND R/W	(1) STREET FRONTAGE TREES	(2) STREET FRONTAGE SHRUBS	(3) OPEN YARD AREA PROVIDED (SF)	(3A) OPEN YARD AREA TREES	(3B) OPEN YARD AREA SHRUBS	(4A) BUFFER TREES: DECIDUOUS / ORNAMENTAL / EVERGREEN	(4B) BUFFER SHRUBS	(5) PARKING LOT SCREENING SHRUBS
42,400	42	6,015	31,845	18.89%	N/A	REQUIRE	N/A	N/A	N/A	18,432	4	7	N/A	N/A	79
						PROVIDE	N/A	N/A	N/A		5	63	N/A	N/A	79

LANDSCAPE REQUIREMENTS DESCRIPTIONS

(1) ANY PARKING OR LOADING AREA VISIBLE FROM A STREET SHALL BE SEPARATED FROM THE STREET RIGHT-OF-WAY WITH A LANDSCAPE STRIP AT LEAST 20' WIDE, PLANTED WITH 1 TREE PER 30 LF OF STREET
(2) ANY PARKING OF LOADING AREA LANDSCAPE STRIP SHALLL BE PLANTED WITH ONE (1) SHRUB FOR EVERY 20 LF OF STREET FRONTAGE.
(3A) IN ADDITION TO STREET FRONTAGE TREES, ONE (1) TREE SHALL BE PROVIDED FOR EVERY 5,000 SF OF OPEN YARD AREA
(3B) OPEN YARD AREAS SHALL BE LANDSCAPED WITH TWO (2) SHRUBS PER 5,000 SF OF TOTAL LOT AREA
(4) A 20' WIDE BUFFER SCREEN SHALL BE PROVIDED PER PLAN, IN THE FORM OF (4A) 1 SHADE TREE PER 1,000 SF, 1 ORNAMENTAL TREE PER 500 SF, 1 EVERGREEN TREE PER 500; AND (4B) 1 SHRUB PER 500 SF
(5) A HEDGE CONSISTING OF AT LEAST 12 SHRUBS PER 40 LINEAR FEET

N

0' 10' 20' 40'
SCALE IN FEET

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
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olsson
1301 BURLINGTON STREET
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LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
JACOB HODSON
NUMBER PL-2023009558
PROFESSIONAL LANDSCAPE ARCHITECT
11/10/23

09-29-2023

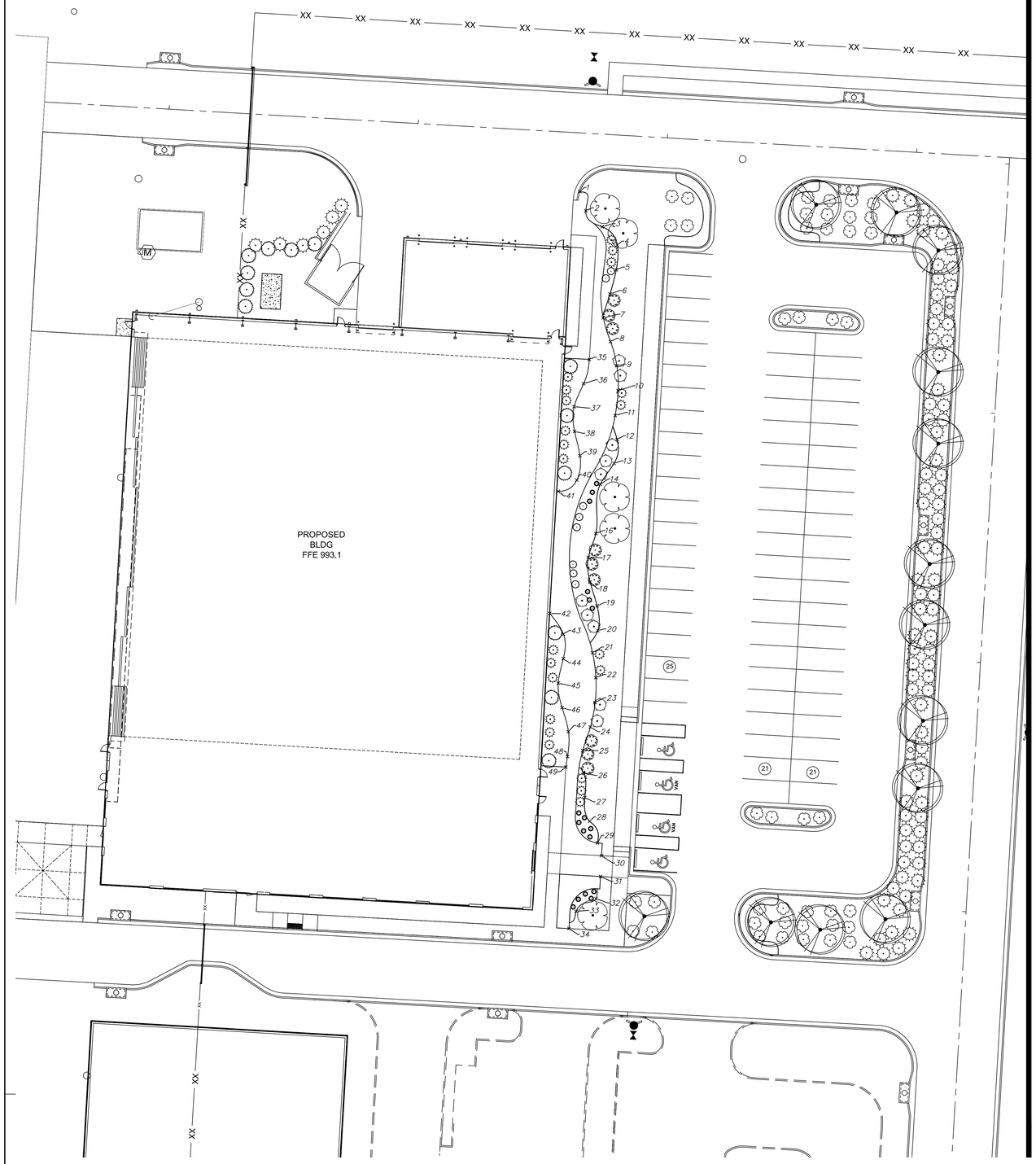
LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10/23	PER CITY COMMENTS

PROJECT NO: 022-04268
CAD DWG FILE: Lee's Summit - Hangar 2.DWG
DESIGNED BY: JIH
DRAWN BY: OEM
CHECKED BY: JIH
APPROVED BY: JIH

SHEET TITLE
OVERALL LANDSCAPE PLAN

L100



PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	CR	5	COTINUS COGGYGRIA 'ROYAL PURPLE' / ROYAL PURPLE SMOKE TREE	3" CAL
	JS	13	JUNIPERUS CHINENSIS 'SPARTAN' / SPARTAN JUNIPER	8` HT
	SR	13	SYRINGA RETICULATA / JAPANESE TREE LILAC	3" CAL

SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	BW	43	BUXUS MICROPHYLLA JAPONICA 'WINTER GEM' / WINTER GEM JAPANESE BOXWOOD	3 GAL
	BG	22	BUXUS X 'GREEN VELVET' / GREEN VELVET BOXWOOD	3 GAL
	EG	9	EUONYMUS FORTUNEI 'EMERALD GAIETY' / EMERALD GAIETY WINTERCREEPER	3 GAL
	JX	85	JUNIPERUS X 'GREY OWL' / GREY OWL JUNIPER	3 GAL

GRASSES	CODE	QTY	BOTANICAL / COMMON NAME	SIZE
	CK	8	CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER' / KARL FOERSTER FEATHER REED GRASS	2 GAL
	FG	17	FESTUCA GLAUCA / BLUE FESCUE	2 GAL
	PA	10	PENNISETUM ALOPECUROIDES / FOUNTAIN GRASS	2 GAL

GROUNDCOVERS

	3-6" MISSOURI RAINBOW ROCK -	4,522 SF
	TURF SOD DROUGHT TOLERANT BLEND -	18,134 SF
	1-3" OSAGE BUFF -	4,784 SF
	4-8" COBBLESTONE ROCK -	1,811 SF
	COBBLESTONE BOULDERS	VARY

POINT TABLE		
POINT #	NORTHING	EASTING
1	1018274.4322	2825988.4551
2	1018266.7673	2825990.8330
3	1018260.3359	2825997.3710
4	1018253.0186	2826003.4178
5	1018243.0910	2826003.0136
6	1018233.4166	2826000.5044
7	1018223.8840	2825997.8283
8	1018214.3296	2826000.7336
9	1018204.6670	2826003.2436
10	1018194.6982	2826003.7838
11	1018184.7766	2826002.5823
12	1018175.1647	2826003.3518
13	1018165.5636	2826002.1355
14	1018157.2015	2825996.6731
16	1018137.4806	2825994.8373
17	1018127.9557	2825991.8238
18	1018118.0724	2825992.5538
19	1018108.4691	2825995.3374
20	1018098.6232	2825995.6070

POINT TABLE		
POINT #	NORTHING	EASTING
21	1018089.6708	2825993.5183
22	1018079.7709	2825994.8492
23	1018069.7860	2825994.5620
24	1018059.9789	2825992.6644
25	1018050.4784	2825989.5601
26	1018041.5864	2825989.8944
27	1018031.7376	2825990.4086
28	1018022.2279	2825992.3392
29	1018013.5224	2825995.4743
30	1018008.4000	2825997.1338
31	1018000.0765	2825996.7235
32	1017991.1949	2825994.8889
33	1017986.1121	2825986.9708
34	1017979.2187	2825984.0802
35	1018207.2134	2825992.2376
36	1018197.5342	2825989.9649
37	1018188.3078	2825986.1467
38	1018178.3954	2825986.3230
39	1018168.6351	2825988.4826
40	1018158.8719	2825987.2116

POINT TABLE		
POINT #	NORTHING	EASTING
41	1018154.3314	2825979.8244
42	1018105.4908	2825976.3872
43	1018097.1620	2825981.8336
44	1018087.3351	2825981.8131
45	1018077.5618	2825979.7793
46	1018067.7438	2825981.3139
47	1018058.0894	2825983.8642
48	1018048.1407	2825983.4766
49	1018043.9005	2825982.8070

N

0' 10' 20' 40'
SCALE IN FEET

CMT
1627 MAIN STREET, SUITE 600
KANSAS CITY, MO 64108

WELLNER ARCHITECTS, INC
1627 MAIN STREET, SUITE 100
KANSAS CITY, MO 64108

olsson
1301 BURLINGTON STREET
NORTH KANSAS CITY, MO 64116

LEE'S SUMMIT MUNICIPAL AIRPORT
LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
JACOB HODSON
NUMBER PL-2010029258
PROFESSIONAL LANDSCAPE ARCHITECT
11/16/23

09-29-2023

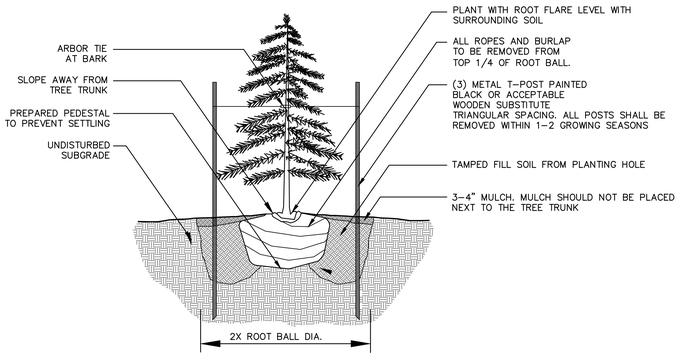
LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10/23	PER CITY COMMENTS

PROJECT NO:	022-04268
CAD DWG FILE:	Lee's Summit - Hangar 2.DWG
DESIGNED BY:	JIH
DRAWN BY:	QEM
CHECKED BY:	JIH
APPROVED BY:	JIH

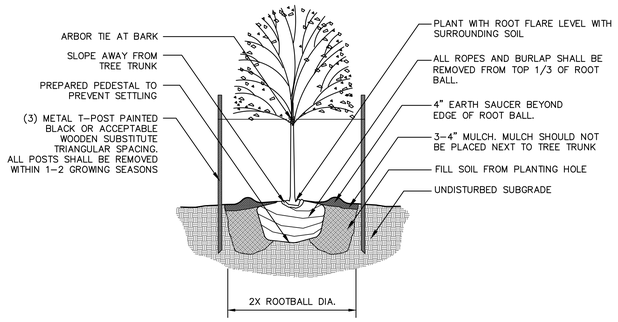
SHEET TITLE
LANDSCAPE LAYOUT PLAN

L101



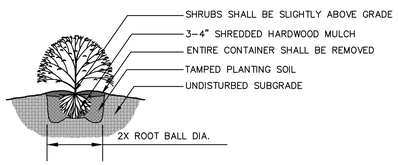
NOTES:
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING
2. IN AREAS OF TURF, SURROUND BED WITH 6' DIAMETER OF MULCH

1 Evergreen Tree Planting Detail
not to scale



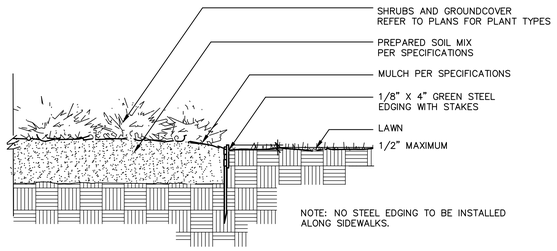
NOTES:
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING
2. IN AREAS OF TURF, SURROUND BED WITH 6' DIAMETER OF MULCH

2 Deciduous Tree Planting Detail
not to scale



NOTES:
1. MINIMUM ROOT SPREAD TO BE IN ACCORDANCE WITH ANLA STANDARDS
2. PRUNE DAMAGED LIMBS OR ROOTS AFTER INSTALLATION
3. MAKE SURE ROOTS DO NOT DRY OUT DURING INSTALLATION
4. SOAK GENEROUSLY TO COMPACT AND SETTLE

3 Shrub Planting Detail
not to scale



4 Steel Edging Detail
not to scale

CMT
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LEE'S SUMMIT, MISSOURI

EASTSIDE DEVELOPMENT
CITY PROJECT NO. - 47732472

STATE OF MISSOURI
JACOB HODSON
NUMBER PL-2009020
11/10/23
PROFESSIONAL LANDSCAPE ARCHITECT

09-29-2023

LEES SUMMIT MUNICIPAL AIRPORT
LEES SUMMIT, MO

MARK	DATE	DESCRIPTION
1	11/10/23	PER CITY COMMENTS

PROJECT NO:	022-04268
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APPROVED BY:	JIH

SHEET TITLE
LANDSCAPE DETAILS

L102

SHEET 131 OF 131