CONSTRUCT NEW FITNESS CENTER IKE SKELTON TRAINING SITE JEFFERSON CITY, MISSOURI



OWNER:

STATE OF MISSOURI

MICHAEL L. PARSON,

GOVERNOR

DEPARTMENT OF PUBLIC SAFETY

PROJECT

OFFICE OF ADMINISTRATION

MANAGEMENT: DIVISION OF FACILITIES MANAGEMENT,

DESIGN AND CONSTRUCTION

DESIGNER:

KLINGNER & ASSOCIATES, P.C.

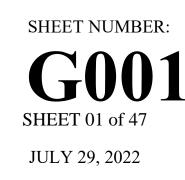
PROJECT NUMBER:

T2041-01

SITE NUMBER: ASSET NUMBER:

6300

8136300040



SHEET NUMBER	SHEET NAME	CURRENT REVISION DATE
G001	COVER SHEET	07/29/22
G002	INDEX SHEET	07/29/22
G101	CODE PLAN & REVIEW	07/29/22
C001	GENERAL NOTES & LEGENDS	07/29/22
CD101	EXISTING CONDITIONS & SITE DEMO PLAN	07/29/22
C101	SITE PLAN	07/29/22
C102	SITE UTILITY PLAN	07/29/22
C103	GRADING & EROSION CONTROL PLAN BASE BID	07/29/22
C103A	GRADING & EROSION CONTROL PLAN ALTERNATE BID #4	07/29/22
C501	SITE DETAILS	07/29/22
C502	SITE DETAILS	07/29/22
C503	SITE DETAILS	07/29/22
C504	SITE DETAILS	07/29/22
A001	PARTITION TYPES AND ADA CLEARANCES	07/29/22
A101	FLOOR PLAN	07/29/22
A102	DIMENSION PLANS	07/29/22
A103	ENLARGED PLANS	07/29/22
A110	INTERIOR FINISH PLAN	07/29/22
A130	ROOF PLAN & RELECTED CEILING PLAN	07/29/22
A201	BUILDING ELEVATIONS - BASE BID	07/29/22
A202	BUILDING ELEVATIONS - ALTERNATE 1	07/29/22
A301	BUILDING SECTIONS	07/29/22
A310	WALL SECTIONS	07/29/22
A401	EQUIPMENT LAYOUT & SCHEDULE	07/29/22
A501	DETAILS	07/29/22
A601	DOOR SCHEDULE & DETAILS	07/29/22
S001	STRUCTURAL NOTES	07/29/22
S101	FOUNDATION PLAN & DETAILS	07/29/22
S102	FOUNDATION DETAILS	07/29/22
MEP001	MEP SYMBOLS LIST	07/29/22
FP101	FIRE PROTECTION FLOOR PLAN	07/29/22
D404	DELOW ELOOP DI LIMPINO DI ANI	07/00/00
P101 P102	BELOW FLOOR PLUMBING PLAN ABOVE FLOOR PLUMBING PLAN	07/29/22 07/29/22
P102 P501	PLUMBING DETAILS	07/29/22
P601	PLUMBING SCHEDULES	07/29/22
P901	ISOMETRIC WASTE AND VENT PLUMBING VIEW	07/29/22
1 301	ISOMETRIC WASTE AND VENTT EUMBING VIEW	01129122
M101	MECHANICAL FLOOR PLAN	07/29/22
M102	MECHANICAL PIPING PLAN	07/29/22
M401	HVAC AIRFLOW SCHEMATICS	07/29/22
M501	MECHANICAL DETAILS	07/29/22
M601	MECHANICAL EQUIPMENT SCHEDULES	07/29/22
M701	CONTROL SCHEMATICS & SEQUENCES	07/29/22
M702	CONTROL SCHEMATICS & SEQUENCES	07/29/22
- -		· ··—
E101	ELECTRICAL POWER PLAN	07/29/22
E102	ELECTRICAL LIGHTING PLAN	07/29/22
E501	ELECTRICAL DETAILS	07/29/22
E601	ELECTRICAL SCHEDULES	07/29/22
GENERAL	NOTES:	

- 1) THE CONTRACTOR(S) SHALL FIELD VERIFY EXISTING DIMENSIONS AND CONDITIONS AND TELL THE ENGINEER OF ANY DISCREPANCIES AND INTERFERENCES ENCOUNTERED PRIOR TO STARTING WORK AFFECTED THEREBY.
- 2) THE CONTRACTOR(S) SHALL COMPLY WITH THE LATEST EDITION OF APPLICABLE CODES AND STANDARDS INCLUDING BUT NOT
 - THE AMERICANS WITH DISABILITIES ACT (ADAAG)
 - INTERNATIONAL BUILDING CODE (IBC) - NATIONAL ELECTRIC CODE (NEC)
 - INTERNATIONAL MECHANICAL CODE (IMC)
 - INTERNATIONAL PLUMBING CODE (IPC)
 - LIFE SAFETY CODE (NFPA 101) ASHRAE STANDARD 90.1
 - AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME) - AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - AMERICAN CONCRETE INSTITUTE (ACI)
 - SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION (SMACNA)
- 3) THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR OSHA COMPLIANCE AND JOB SITE SAFETY.
- 4) CONTRACTOR(S) SHALL VERIFY LOCATIONS OF ALL UTILITIES (TELEPHONE, DATA, GAS, ELECTRIC, SANITARY AND STORM SEWERS, ETC.) AT THE SITE BEFORE STARTING EXCAVATION OR CONSTRUCTION. THESE ITEMS SHALL BE MARKED AND PROTECTED.
- 5) CONTRACTOR(S) SHALL TAKE PRECAUTIONS NECESSARY TO PROTECT ADJACENT PROPERTY FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS.
- 6) CONTRACTOR SHALL PROTECT EXISTING FINISHES AND OTHER BUILDING COMPONENTS FROM DAMAGE. ANY SURFACES AND/OR COMPONENTS DAMAGED DURING THE CONSTRUCTION PROJECTS SHALL BE RETURNED TO PRE-PROJECT CONDITIONS AND/OR MADE TO MATCH ADJACENT MATERIALS. WHERE REQUIRED, A SURFACE MOUNTED ACCESS PANEL MAY BE USED TO CREATE ACCESS TO WALL AND CEILING CAVITIES TO FACILITATE CONSTRUCTION ACTIVITY. SEE DETAIL SHEET FOR ACCESS PANEL INFORMATION.





PROJECT LOCATION MAP

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

8136300040

PROJECT # T2041-01 6300 SITE#

ASSET#

REVISION: DATE: **REVISION:** DATE: REVISION: DATE:

ISSUE DATE: 07/29/22

CAD DWG FILE: G002 DRAWING BY: JLD CHECKED BY: JJN DESIGNED BY: JLD

SHEET TITLE:

INDEX SHEET

SHEET NUMBER:

SHEET 02 of 47 JULY 29, 2022

2018 INTERNATIONAL BUIL	DING CODE REVIEW	
Code Section & Provisions	Code Requirement	Application To This Project
	-	
Chapter 3 - Use And Occupancy Clas		The building continuous most closely recombled a
303.4 Assembly Group A-3	Group A-3 occupancy includes assembly uses intended for recreation and other assemblies not classified elsewhere in Group A including but not limited to: Gymnasiums (without spectator seating)	The building occupancy most closely resembles a gymnasium.
311.1.1 Accessory Storage Spaces	A room or space used for storage purposes that is accessory to another occupancy shall be classified as part of that occupancy.	The design for the storage room is 235 square feet, therefore it shall be classified as part of the Assembly occupancy and no separation is required
Chapter 5 - General Building Heights	And Areas	
501.2 Address Identification	New and existing buildings shall be provided with approved address identification	Provided
in feet above grade plane	Group A, sprinklered, Type IIB = 75 feet	Proposed building height is 18 feet.
504.4, Table: Allowable number of stories above grade plane	Group A, sprinklered, Type IIB = 3 stories	Proposed building is one story above grade plane.
506.2, Table: Allowable building area	Group A-3, sprinklered, Type IIB = 38,000 square feet	Proposed gross building area is 6,150 square feet.
508.2.3 Accessory Occupancies	Aggregate accessory occupancies shall not occupy more than 10 percent of the floor area of the story in which they are located	10% of 6,150 SF = 615 SF > 285 SF Therefore the Janitor and Storage will be considered accessory occupancies
Chapter 6 - Types Of Construction		
601, Table: Fire-resistance rating	Type IIB:	No components are required to be have any fire-resistance
requirements for building elements (hours)	Primary structural frame = 0 hours Exterior bearing walls = 0 hours Interior bearing walls = 0 hours Nonbearing exterior walls = See Table 602 Nonbearing interior walls = 0 hours Floor construction = 0 hours Roof construction = 0 hours	rating.
602, Table: Fire-resistance rating requirements for exterior walls based on fire separation distance	X ≥ 30, Type IIB, Group A = 0 hours	No components are required to be have any fire-resistance rating.
Chapter 8 - Interior Finishes		
803.13, Table: Interior wall and ceiling finish requirements by occupancy	Group A-3, sprinklered: Rooms and enclosed spaces = Class C	A minimum of Class C finishes will be provided.
Chapter 9 - Fire Protection Systems		
903.2.1.3 Automatic sprinkler systems - A-3	An automatic sprinkler system shall be provided throughout stories containing Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving occupancy where one of the following exists: 1. The fire area exceeds 12,000 square feet. 2. The fire area has an occupant load of 300 or more. 3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.	An automatic sprinkler system shall be installed in the building.
906.1 Portable Fire Extinguishers	Portable fire extinguishers shall be installed in all of the following locations: 1. Group A & S occupancies. 2. Within 30 feet distance of travel from commercial cooking equipment 3. In areas where flammable or combustible liquids are stored, used or dispensed. 4. On each floor of structures under construction in accordance with Section 3315.1 of the International Fire Code. 5. Where required by the International Fire Code sections	See code plan for locations of fire extinguishers.

	occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.	
Chapter 10 - Means Of Egress		
1004.5, Table: Maximum floor area allowances per occupant	See occupant load schedule.	See occupant load schedule.
1005.3.2 Means of egress sizing, other egress components	The capacity, in inches, of means of egress components other than stairways shall be calculated by multiplying the occupant load served by such component by a means of egress capacity factor of 0.15 inch per occupant in buildings equipped throughout with an automatic sprinkler system.	See egress calculation tags on code plan. In all cases, the occupant load multiplied by the factor does not exceed the allowable width.
1006.2.1, Table: Spaces with one exit or exit access doorway	Group A maximum occupant load = 49, maximum common path of egress travel with sprinkler system = 75 feet.	See egress calculation tags and paths on code plan. A total of two (2) exits shall be provided.
1007.1.1 Exit and Exit Access Configuration - Two exits or exit access doorways	Where two exits [] are required from any portion of the exit access, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them.	1/2 of 102'-8" = 51' - 4" Exits are 81'-2" apart > 51' - 4" Exit configuration complies.
1009 Accessible Means of Egress	Where more than one means of egress are required by Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress	Per Table 1006.3.1 Two exits are required, therefore a minimum of two (2) accessible means of egress are required, two (2) accessible means are provided.
1010.1.1 Size of doors	The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches.	All doors shall be of sufficient width.
1017.2, Table: Exit access travel	Group A, with sprinkler system = maximum 250 feet	Exit access travel distance does not exceed the code maximum

907.2.1 Fire Alarm & Detection Exception: Manual fire alarm boxes are not required where the An automatic sprinkler system shall be installed. Therefore, a

indicated in Table 906.1.

906.3(1), Table: Fire extinguishers for Class A fire hazards

Light (Low) Hazard Occupancy:

Minimum-rated single extinguisher = 2-A

Maximum floor area per unit of A = 3,000 square feet

Maximum floor area for extinguisher = 11,250 square feet

6. Special-hazard areas ... where required by the fire code official.

Maximum distance of travel to extinguisher = 75 feet

building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1. and

See code plan for locations of fire extinguishers.

fire alarm is not required.

1105.1 Public Entrances	In addition to accessible entrances required by Sections 1105.1.1 through 1105.1.7, at least 60 percent of all public entrances shall be accessible.	All public entrances provided are accessible
1109.2 Toilet and Bathing Facilities	Each toilet room and bathing room shall be accessible	All toilet rooms are designed as accessible

Chapter 29 - Plumbing Systems	
	Plumbing fixtures to be provided:
	Male: 2 water closets, 2 urinals, 2 lavatories, 3 showers
	Female: 2 water closets, 2 lavatories, 2 showers
	1 bi-level drinking fountain
	1 service sink

ROOM#	ROOM NAME	TABLE 100	DOOM	# OF		
		FUNCTION OF SPACE	FLOOR AREA PER OCCUPANT	ROOM AREA	# OF OCCUPANTS	COMMENTS
100	MACHINE AREA	Exercise Rooms	50 SF	1497 SF	30.0	
101	FREE WEIGHTS AREA	Exercise Rooms	50 SF	2923 SF	59.0	
102	WOMEN'S	Locker Rooms	50 SF	244 SF	5.0	
102A	ALCOVE		0 SF	29 SF		
103	MEN'S	Locker Rooms	50 SF	294 SF	6.0	
103A	ALCOVE	Circulation	0 SF	29 SF		
104	JAN.	Accessory Storage Area	300 SF	50 SF	1.0	
105	MECHANICAL	Mechanical Equipment Room	300 SF	284 SF	1.0	
106	STORAGE	Accessory Storage Area	300 SF	230 SF	1.0	
SRAND TO	TAL	1		5581 SF	103.0	

	FIR	E EXTINGUISHER EQUIP	TMENT SCHEDULE		
	#	CABINET TYPE & TRIM	EXTINGUISHER TYPE	EXTINGUISHER UNITS OF A	COMMENTS
FEC-FR	1	FULL RECESSED CABINET	ABC DRY CHEMICAL	4A MIN	FULL GLAZING WITH SAFETY LOCK AND FLUSH PULL HANDLE
FE 4	4	SURFACE MOUNT EXTINGUISHER	ABC DRY CHEMICAL	4A MIN	PROVIDE APPROPRIATE MOUNTING BRACKET AND HARDWARE

CODE PLAN SYMBOL LEGEND					
FEC #	FIRE EXTINGUISH	HER TAG - SEE SCHEDULE			
0 / 0"	EXIT LOAD TAG	OCCUPANTS / WIDTH REQUIRED WIDTH PROVIDED			
F.D.C.	FIRE DEPARTME	NT CONNECTION			
	EGRESS ROUTE				

<u>DESCRIPTION:</u> This project consists of constructing a new Fitness Center located at the Camp Clark Training Site at 18159 South K Highway in Nevada, Missouri. The construction will be Type IIB, with a Assembly (A-3) occupancy. The Fitness Center will have a fire alarm system as well as an automatic fire sprinkler system throughout.

BUILDING AREA SUMMARY:

Fitness Center gross square foot is to be approximately 6,150 SF

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**

> CODY N. BASHAM - ARCHITECT MO # A-2021000203

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

8136300040

PROJECT # T2041-01 6300

REVISION: DATE: **REVISION:**

ASSET#

DATE: REVISION:

DATE: ISSUE DATE: 07/29/2022

CAD DWG FILE: G101
DRAWING BY: CNB
CHECKED BY: MJF DESIGNED BY: CNB

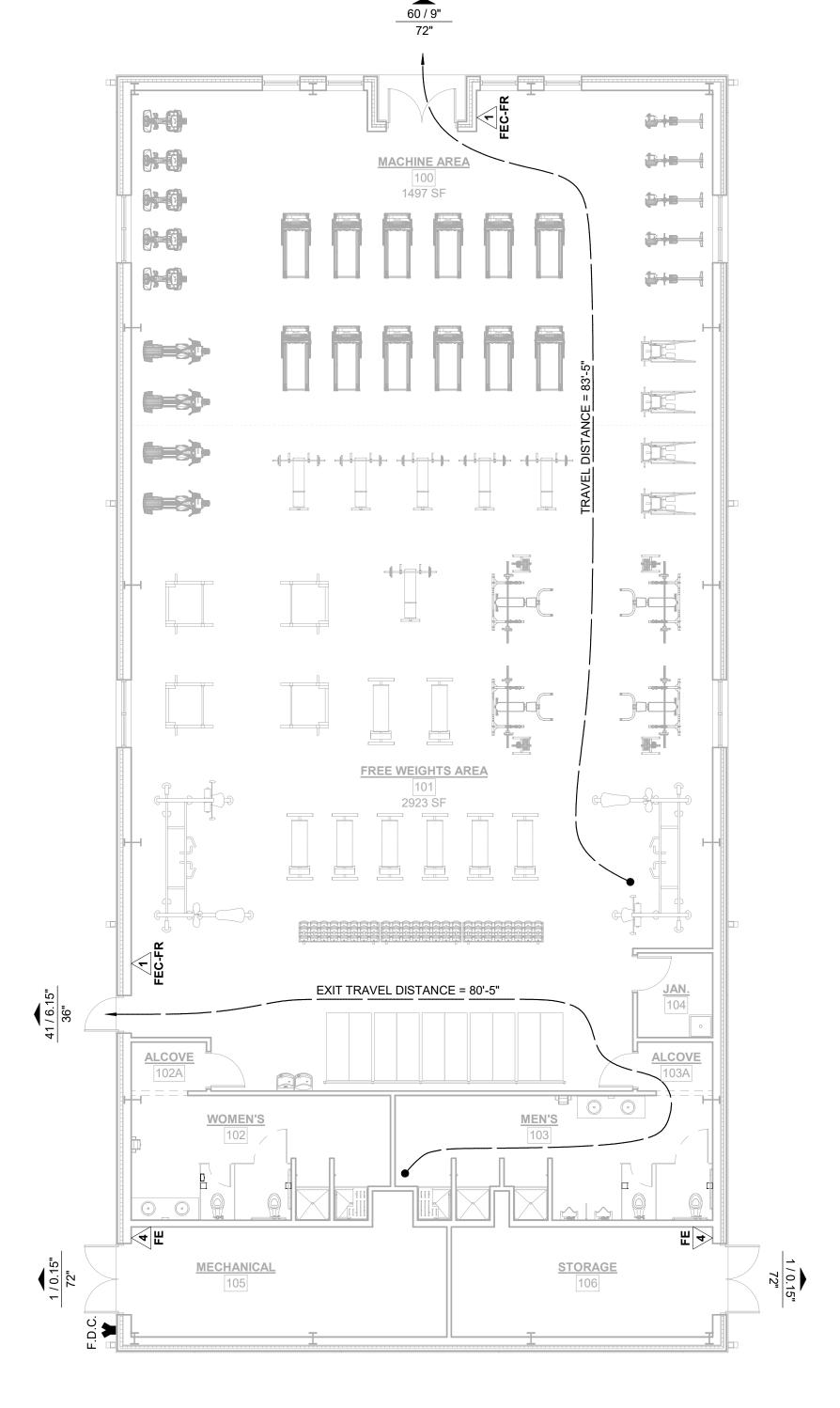
SHEET TITLE:

CODE PLAN & **REVIEW**

SHEET NUMBER:

SHEET 03 of 47 JULY 29, 2022

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



NOTE: NO FIRE-RATED PARTITIONS REQUIRED.

1 CODE PLAN 1/8" = 1'-0"

GENERAL NOTES

- 1. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
- 2. ANY DISCREPANCIES BETWEEN SPECIFICATIONS, DRAWINGS, AND/OR SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- 3. ALL AREAS DESIGNATED TO REMAIN UNDISTURBED SHALL BE PROTECTED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING THE LOCATION OF ALL PROPOSED IMPROVEMENTS, INCLUDING ROUGH AND FINISHED ELEVATIONS AND ALL OTHER PROPOSED IMPROVEMENTS INDICATED ON THE DRAWINGS.
- 5. THE CONTRACTOR SHALL VERIFY THAT ALL APPLICABLE LOCAL, STATE, & FEDERAL CODES ARE FOLLOWED. COORDINATION WILL BE REQUIRED WITH MODOT AND THE OWNER.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY UTILITIES AND SERVICES REQUIRED DURING CONSTRUCTION.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL REFERENCE POINTS, BENCHMARKS, MONUMENTS, STAKES, AND PROPERTY CORNERS DURING CONSTRUCTION. REPLACEMENT OF LOST REFERENCE POINTS SHALL BE AT THE CONTRACTORS EXPENSE.
- 8. REMOVE ALL STRUCTURES, FOUNDATIONS, WALLS, PAVEMENTS, AND ALL OTHER ITEMS IN CONFLICT WITH PROPOSED IMPROVEMENTS IN ACCORDANCE WITH THE SPECIFICATIONS.
- 9. REFERENCES TO "STANDARD SPECIFICATIONS" SHALL MEAN THE MISSOURI DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION", LATEST ADDITION.
- 10. THE MEANS OF THE WORK AND THE SAFETY OF THE CONTRACTOR'S EMPLOYEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 11. NO WORK SHALL BE PERFORMED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT OWNER APPROVAL.
- 12. SITE CLEAN-UP SHALL BE PERFORMED ON A DAILY BASIS. SIDEWALKS, PARKING LOTS. ROADWAYS, AND THE PROJECT SITE SHALL BE KEPT CLEAN AT ALL TIMES. CONTROL DUST IN AND AROUND ALL WORK AND STAGING AREAS.
- 13. ALL OPEN EXCAVATIONS SHALL BE PROTECTED.
- 14. MAINTAIN POSITIVE DRAINAGE ON THE SITE THROUGHOUT THE PROJECT DURATION.
- 15. IF A DISCREPANCY IN THE SPOT ELEVATIONS IS NOTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTING. IF THERE IS A DISCREPANCY BETWEEN THE SPOT ELEVATIONS AND CONTOURS, THE CONTOURS SHALL GOVERN.

EROSION CONTROL NOTES

- 1. EROSION CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, THE DETAILS IN THESE PLANS, AND THE MISSOURI DEPARTMENT OF NATURAL RESOURCES STANDARDS AND REQUIREMENTS FOR EROSION AND SEDIMENT
- 2. THE EROSION CONTROL SHOWN ON THIS SET OF PLANS SHALL BE CONSIDERED THE MINIMUM ACCEPTABLE FOR THIS PROJECT. THERE MAY BE ADDITIONAL EROSION CONTROL REQUIRED DUE TO THE VARIOUS CONSTRUCTION TECHNIQUES, WHICH MAY BE USED. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING AND MAINTAINING ALL THE RUNOFF FROM THE SITE, IN A MANNER WHICH KEEPS ALL SILT ON SITE.
- 3. A LAND DISTURBANCE PERMIT WILL NOT BE REQUIRED SINCE LESS THAN 1 ACRE OF LAND WILL BE DISTURBED BY GRADING OPERATIONS.
- 4. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION OF LANDSCAPE AND SEEDED AREAS.

GRADING NOTES

- 1. TOPSOIL SHALL BE STRIPPED TO A DEPTH OF SIX (6) INCHES WITHIN THE GRADING LIMITS AND STOCKPILED ON SITE FOR USE IN FINAL GRADING (COORDINATE WITH OWNER).
- 2. ALL EXCESS MATERIALS NOT USED FOR CONSTRUCTION OF THE PROJECT SHALL BE DISPOSED AT ON-SITE LOCATION BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE. EXCESS TOPSOIL SHALL BE MOVED TO A DIFFERENT LOCATION ON THE ISTS CAMPUS AS DIRECTED BY
- 3. PROPOSED CONTOURS ARE INTENDED TO PROVIDE A MIN. 1% SLOPE IN PAVEMENT AREAS AND 2% IN TURFED AREAS. CONTRACTORS SHALL BE RESPONSIBLE FOR PROVIDING A SMOOTH UNIFORM DRAINING SURFACE THAT DOES NOT CREATE PONDING WATER OR SHARP BREAKS. CONTOURS OR ELEVATIONS THAT WILL NOT PROVIDE SUCH SURFACE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER/ARCHITECT IMMEDIATELY.
- 4. FINAL ELEVATIONS INDICATED ARE THE FINISHED SURFACE ELEVATIONS, WHETHER GRASS, CONCRETE, PAVEMENT, OR MULCH. THE CONTRACTOR SHALL COORDINATE SUBGRADE ELEVATIONS TO ALLOW FOR PAVEMENT, CONCRETE OR MULCH DEPTHS.
- 5. ALL DISTURBED AREAS NOT WITHIN PAVEMENT & LANDSCAPE AREAS SHALL BE SEEDED PER THE SPECIFICATIONS. THE AREAS INDICATED TO BE SEEDED ON THIS PLAN ARE ESTIMATED DISTURBED AREAS. DISTURBED AREAS OUTSIDE OF THOSE INDICATED SHALL BE SEEDED REGARDLESS OF THE LIMITS INDICATED.
- 6. WHERE INDICATED ON THE PLANS SLOPES 4:1 AND STEEPER SHALL RECEIVE A TEMPORARY EROSION CONTROL BLANKET. PROVIDING PROTECTION FOR UP TO 12 MONTHS IN ACCORDANCE WITH SECTION 806 OF THE MoDOT STANDARD SPECIFICATIONS.

UTILITY NOTES

- 1. THE LOCATION OF EXISTING UTILITIES IN CONSTRUCTION AREAS SHALL BE FIELD VERIFIED BY THE CONTRACTOR BY CONTACTING THE MISSOURI ONE CALL SYSTEM, INC. OR THE INDIVIDUAL UTILITIES NOT PARTICIPATING IN THIS SYSTEM. EXISTING UTILITIES TO REMAIN SHALL BE PROTECTED. ANY REPAIR OR RELOCATION REQUIRED, AS A RESULT OF DAMAGE BY CONSTRUCTION ACTIVITIES SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PAY UTILITY PERMIT AND/OR INSPECTION FEES.
- 2. UTILITY TRENCHES WITHIN PAVEMENT AREAS SHALL BE BACKFILLED WITH APPROVED COMPACTED GRANULAR BACKFILL.
- 3. ADJUST ALL VALVES, MANHOLES, CASTINGS, GAS VENTS, ETC., TO MATCH THE NEW SURFACE. ADJUSTMENT SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO THE CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. REPAIR ANY DAMAGE TO SAID STRUCTURES AND APPURTENANCES THAT OCCUR DURING CONSTRUCTION.
- 4. THE DRAWINGS INDICATE THE BEST KNOWLEDGE OF THE OWNER AND ENGINEER/ARCHITECT ON THE GENERAL LOCATION AND NATURE OF THE EXISTING AND OR PROPOSED UNDERGROUND UTILITIES IN THE AREA OF CONSTRUCTION. VISIBLE UTILITY STRUCTURES WERE SURVEYED AND UNDERGROUND UTILITIES WERE INDICATED BASED ON AVAILABLE PLAN INFORMATION. EXPLORATORY EXCAVATIONS AT THE SITE TO DETERMINE INSITU LOCATIONS WERE NOT

QUALITY LEVELS C & D IN ACCORDANCE WITH CI/ASCE 38-02, STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA, WERE UTILIZED. REGARDLESS OF THE LEVEL OF INVESTIGATION. THE UTILITIES SHOWN SHOULD NOT BE CONSIDERED A WARRANTY OR GUARANTEE OF ACTUAL PRESENCE OR LOCATION AND THE CONTRACTOR REMAINS RESPONSIBLE FOR THE LOCATION, VERIFICATION, AND PROPER NOTIFICATION OF POTENTIAL UTILITIES.

QUALITY LEVELS:

QUALITY LEVEL A - PROVIDES THE HIGHEST LEVEL OF ACCURACY. BY LOCATING OR POTHOLING UTILITIES IN ADDITION TO QUALITY LEVELS B, C, AND D TASKS. THE LOCATED UTILITY INFRASTRUCTURE IS SURVEYED AND MAPPED TO DEVELOP PLAN AND PROFILE INFORMATION.

QUALITY LEVEL B - INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND RECORDING THE INFORMATION THROUGH A SURVEY METHOD. IN ADDITION TO QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL C - INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. IN ADDITION TO QUALITY LEVEL D TASKS

QUALITY LEVEL D - INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS, THAT MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICE MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASE, CONSTRUCTION PLANS, ETC. DATABASES, CONSTRUCTION PLANS, ETC.

PAVEMENT NOTES

- 1. PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, LATEST EDITION.
- 2. PROOF-ROLL SUBGRADE WITH A MINIMUM 25 TON G.V.W. TRUCK TO IDENTIFY AREAS OF SOFT OR UNSTABLE SUBGRADE. REMOVE AND REPLACE UNSTABLE AREAS WITH SUITABLE COMPACTED
- 3. PAVEMENT MARKING SHALL NOT BEGIN UNTIL PAVEMENT SURFACE HAS BEEN POWER BROOMED AND HAND SWEPT AS NECESSARY TO REMOVE LOOSE MATERIALS AND DIRT; AND NOT BEFORE ADEQUATE CURING TIME HAS BEEN OBTAINED ON THE PAVEMENT.
- 4. ALL DIMENSIONS ARE TO EDGE OF PAVEMENT OR PROPERTY LINES UNLESS OTHERWISE NOTED. ALL RADII ARE TO EDGE OF PAVEMENT.

LANDSCAPE NOTES:

- 1. COMMERCIAL EDGING SHALL BE 12 GAUGE, 3/16 INCH STEEL COMMERCIAL GRADE, 6 INCH HEIGHT WITH 16 INCH STAKES. THE EDGING SHALL BE STANDARD POWDER COATED GREEN.
- 2. THE TOPSOIL SHALL BE LOAMY IN NATURE, FREE FROM HARD CLODS, STIFF CLAY, SOD, STONES, ROOTS, STICKS, AND OTHER DEBRIS OVER 1" IN SIZE. TOPSOIL SHALL BE FREE OF TOXIC MATERIALS AND SHALL HAVE A pH RANGE BETWEEN 5.5 AND 7.0.
- 3. THE BACKFILL MIXTURE SHALL CONTAIN NATIVE SOIL TOPSOIL SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
- 4. POLYPROPYLENE WEED BARRIER SHALL BE INSTALLED IN ALL PARKING LOT ISLANDS AND LANDSCAPED BEDS DEFINED BY EDGING. THE LANDSCAPE FABRIC SHALL BE A POLYPROPYLENE FABRIC HAVING A MINIMUM WEIGHT OF 4 OZ/SY.
- 5. ALL LANDSCAPING SHALL BE GUARANTEED BY THE CONTRACTOR FOR MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR. AT THE END OF ONE YEAR ANY DEAD OR UNACCEPTABLE MATERIAL SHALL BE REMOVED AND REPLACED.
- 6. ALL DISTURBED AREAS NOT WITHIN PAVEMENT & LANDSCAPE AREAS SHALL BE SEEDED PER THE SPECIFICATIONS. THE AREAS INDICATED TO BE SEEDED ON THIS PLAN ARE ESTIMATED DISTURBED AREAS. DISTURBED AREAS OUTSIDE OF THOSE INDICATED SHALL BE SEEDED REGARDLESS OF THE LIMITS INDICATED.



Know what's below. Call before you dig.

— NOTE —

UTILITY INFORMATION IS FOR THE CONVENIENCE OF THE CONTRACTOR. BEFORE CONSTRUCTION

BEGINS THE CONTRACTOR SHALL CONTACT MISSOURI ONE CALL SYSTEM, INC. AT 811 OR

1-800-344-7483 AND THE INDIVIDUAL UTILITIES

NOT INCLUDED IN THIS SYSTEM FOR THE

LOCATION OF ALL EXISTING UTILITIES.

BENCHMARKS:

- 1. CHISELED "+" SOUTHWEST BOLT FIRE HYDRANT ELEV 604.65
- 2. CHISELED "+" WEST BOLT FIRE HYDRANT ELEV 606.31
- 3. CHISELED "+" ON SOUTHERN CONCRETE POST NORTHEAST CORNER MILITARY CIRCLE & W. BOUNDARY - ELEV 631.25
- 4. CHISELED "+" EAST BOLT FIRE HYDRANT AT WATER TOWER ELEV 710.97

TOP OF CURB ELEVATION GUTTER LINE ELEVATION

FINISH FLOOR ELEVATION

TOP OF WALL ELEVATION

BOTTOM OF WALL ELEVATION

MATCH EXISTING EDGE OF PAVEMENT

N.I.C. NOT IN CONTRACT

ABBREVIATIONS

FLOWLINE ELEVATION TOP OF GRATE ELEVATION FLARED END SECTION STORM WATER INLET HIGH POINT DOWNSPOUT

MM-

I EGEND

		<u> </u>
EXISTING	PROPOSED	
		PROPERTY LINE
		LOT LINE
		RIGHT OF WAY LINE
		CENTERLINE EASEMENT
		BUILDING SETBACK
		CONSTRUCTION LIMITS
×	x	FENCE LINE
0	0	CHAIN LINK FENCE
		FENCE W/ SQUARE POSTS
		STREAM
_//////////////////////////////////////		STRUCTURE
		PAVEMENT MARKINGS
		EDGE OF PAVEMENT
		CURB AND GUTTER
		RAILROAD TRACKS WATER LINE
W W FP FP	W W FPFP	
G G	G G	GAS LINE
OE OE	OE	
———— UE ————	UE	UNDERGROUND ELECTRIC
OT OT	—— от —— от ——	OVERHEAD TELEPHONE
UT	—— ит—— ит——	UNDERGROUND TELEPHONE
CATVCATV	CATVCATV	CABLE TELEVISION
F0F0	F0F0	FIBER OPTIC
COM	сомсом	COMMUNICATION LINE
) ST)) ST)	STORM SEWER
>SAN>	>SAN>>SAN>	SANITARY SEWER
FMFM	FMFM	FORCE MAIN
ST-SAN	ST-SAN	COMBINED SEWER
IRIR		IRRIGATION SYSTEM
<u>4</u> 4 4 Δ Δ	↑ ↑ ↑	MAST ARM SIGNAL (3 SIGNALS)
<u>\$</u>	‡ ‡	MAST ARM SIGNALS (2 SIGNALS UTILITY TRAFFIC SIGN
ф О	*	SIGN
©		MANHOLE
		STORM WATER INLET
	— ∰⊞	CATCH BASIN
C/0 ₀	c/o	CLEANOUT
 		CULVERT
		BOX CULVERT
\bowtie	181	WATER VALVE
\range	>	FIRE HYDRANT
PIV	PIV	POST INDICATOR VALVE
W	W	WATER METER
\otimes	⊗	GAS VALVE
G	G	GAS METER
T	T ™	TELEPHONE PEDESTAL CABLE TV PEDESTAL
E	E	ELECTRIC METER
Ø	=	UTILITY POLE
,~ -¤-	X	LIGHT STANDARD
0-0	⊕ -□	LIGHT POLE
	<	GUY WIRE
0	•	SURVEY MARKER
→		SUMMIT / HIGH POINT
	601	CONTOURS
<u> </u>	600—	INDEX CONTOURS
$\sim \sim$	\longrightarrow	DIRECTION OF DRAINAGE
×eo'o	600.00	SPOT ELEVATION
	\bigcirc	DECIDUOUS SHRUB
	(+)	DECIDUOUS TREE
J. Marding by	*	CONTERDOLOGOUPUS
to the state of th		CONIFEROUS SHRUB
2,3		CONIFEROUS TREE
/ \		···

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



CURT WAVERING - ENGINEER MO # PE-2011009046

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300 SITE# ASSET# 8136300040

REVISION: DATE **REVISION:** DATE **REVISION:** DATE: ISSUE DATE: 07/22/2022

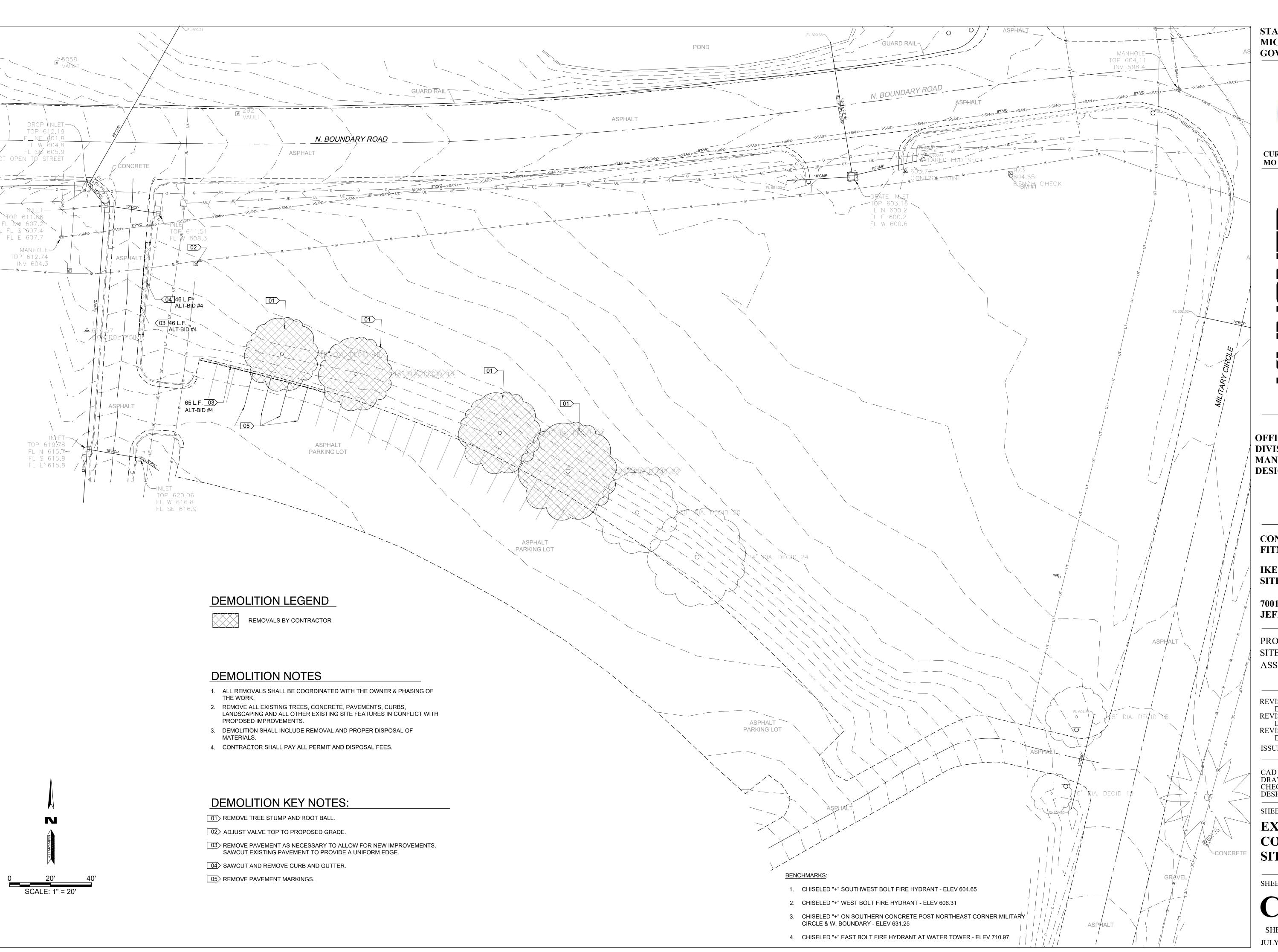
CAD DWG FILE: C001 DRAWING BY: DCD CHECKED BY: CSW DESIGNED BY: DCD

SHEET TITLE:

GENERAL NOTES & LEGEND

SHEET NUMBER:

SHEET 04 of 47 JULY 29, 2022





CURT WAVERING - ENGINEER MO # PE-2011009046

8 A S S O G I A T E S, P. G.
ingineers • Architects • Surveyors
olumbia, Missouri www.klingner.com

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/22/2022

CAD DWG FILE:CD101
DRAWING BY: DCD
CHECKED BY: CSW
DESIGNED BY: DCD

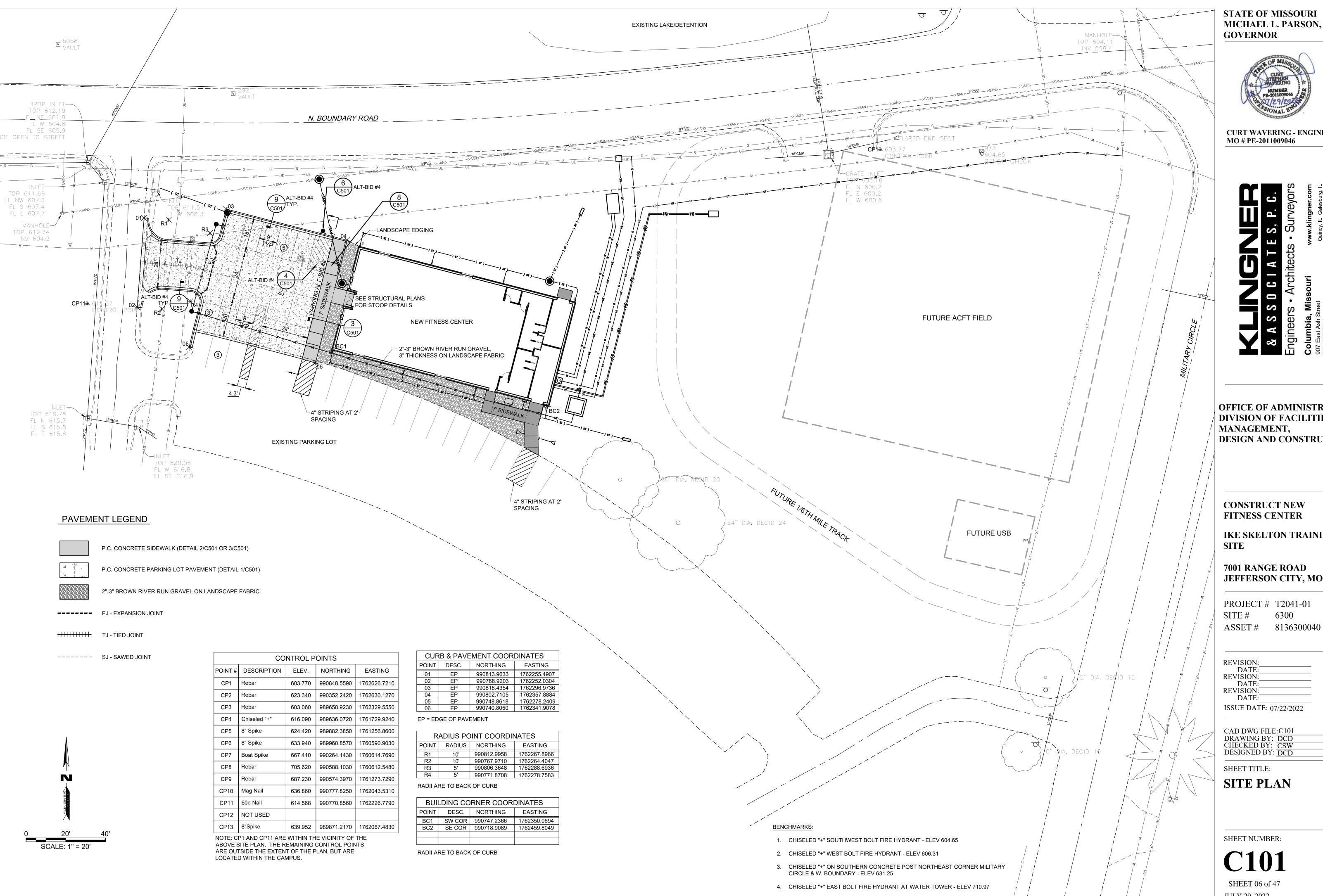
SHEET TITLE:

EXISTING
CONDITIONS &
SITE DEMO PLAN

SHEET NUMBER:

CD101

SHEET 05 of 47 JULY 29, 2022





CURT WAVERING - ENGINEER MO # PE-2011009046

& ASSOCIATES, P.C. - ENGINEE STATE CERTIFICATE OF AUTHO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300

REVISION: DATE **REVISION:**

DATE REVISION: DATE: ISSUE DATE: 07/22/2022

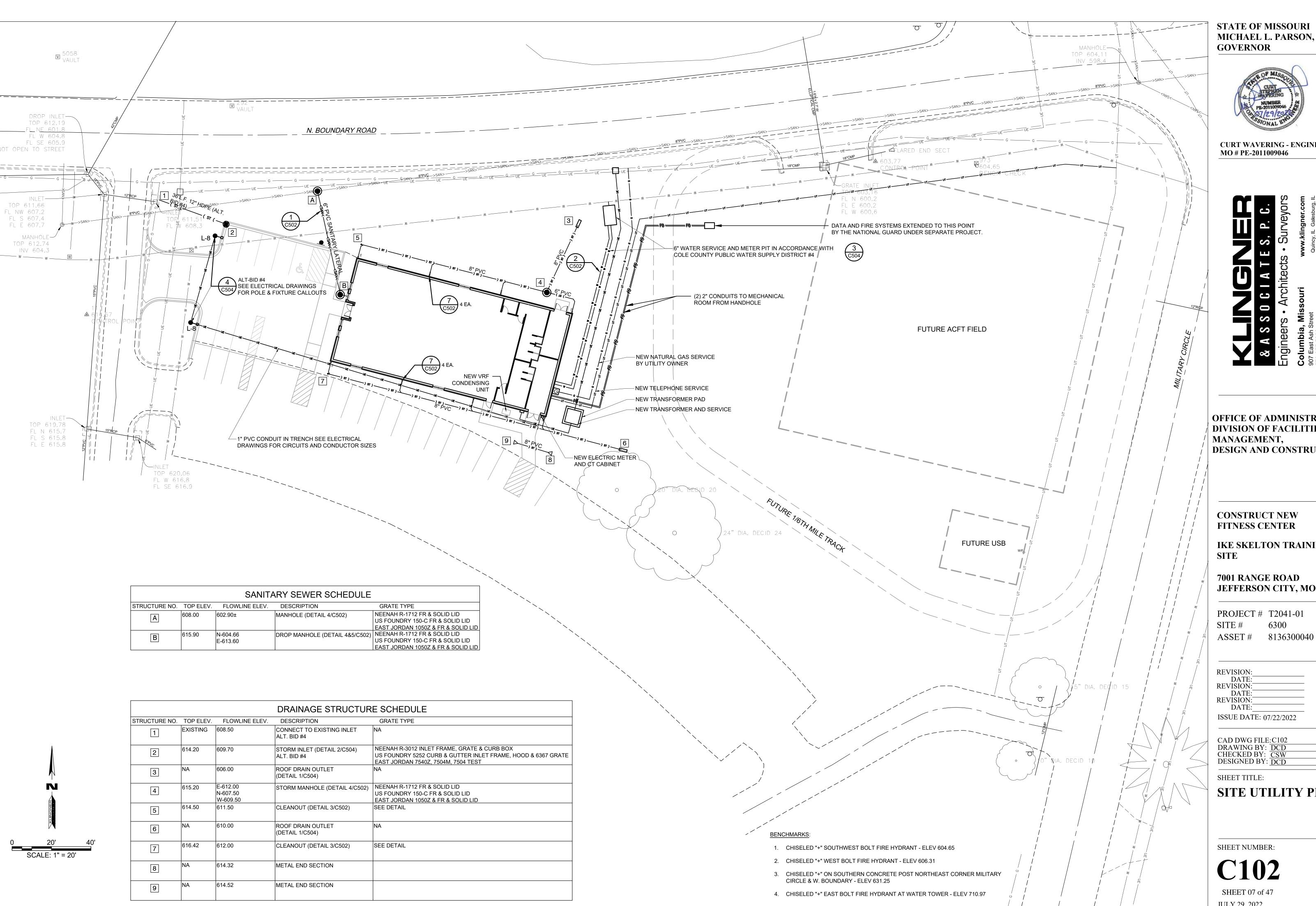
CAD DWG FILE: C101 DRAWING BY: DCD CHECKED BY: CSW DESIGNED BY: DCD

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

SHEET 06 of 47 JULY 29, 2022





CURT WAVERING - ENGINEER MO # PE-2011009046

NGNER & ASSOCIATES, P.C. - ENGINEE SOURI STATE CERTIFICATE OF AUTHO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 6300

REVISION: DATE **REVISION:** DATE REVISION: DATE: ISSUE DATE: 07/22/2022

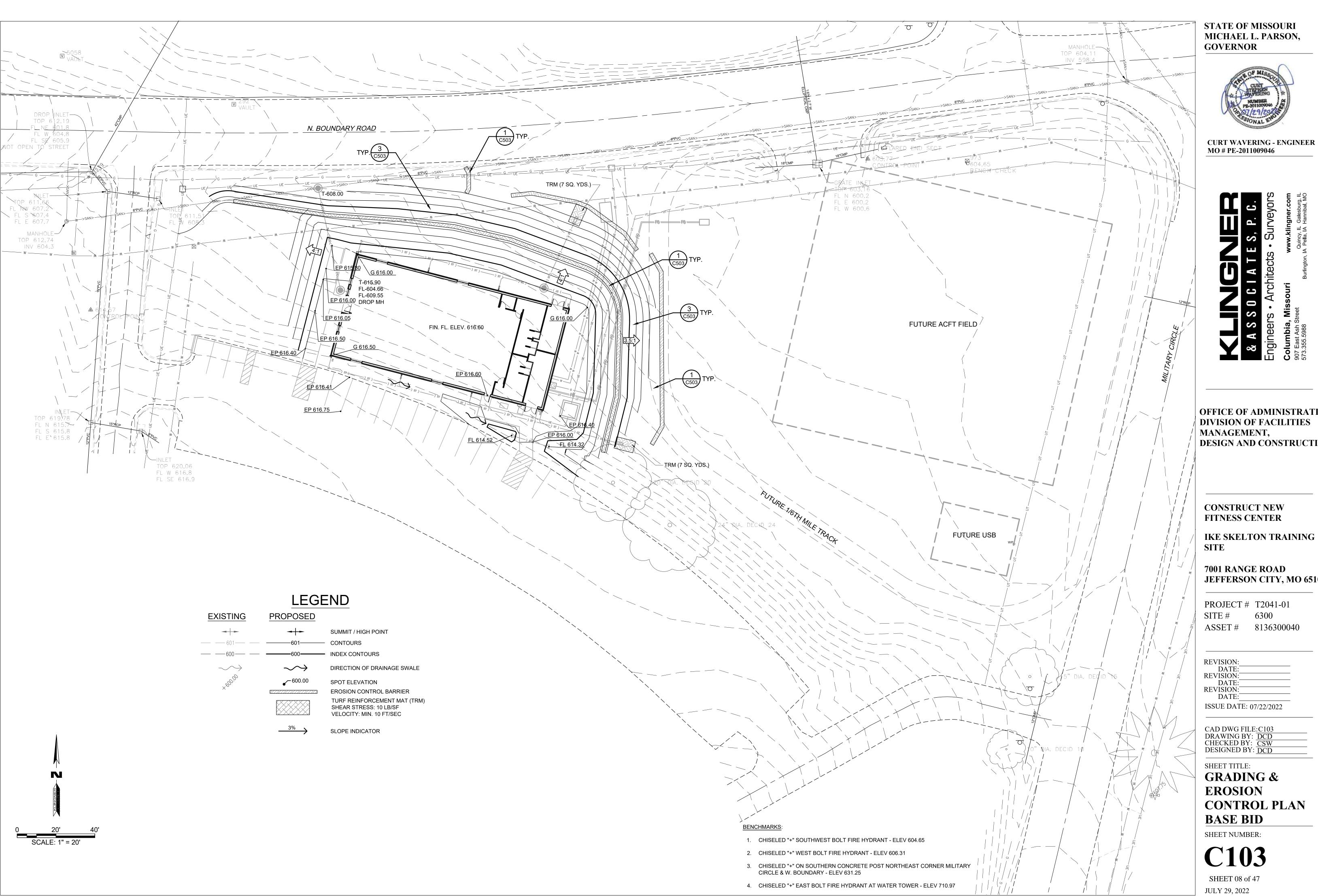
CAD DWG FILE:C102 DRAWING BY: DCD CHECKED BY: CSW DESIGNED BY: DCD

SHEET TITLE:

SITE UTILITY PLAN

SHEET NUMBER:

SHEET 07 of 47 JULY 29, 2022



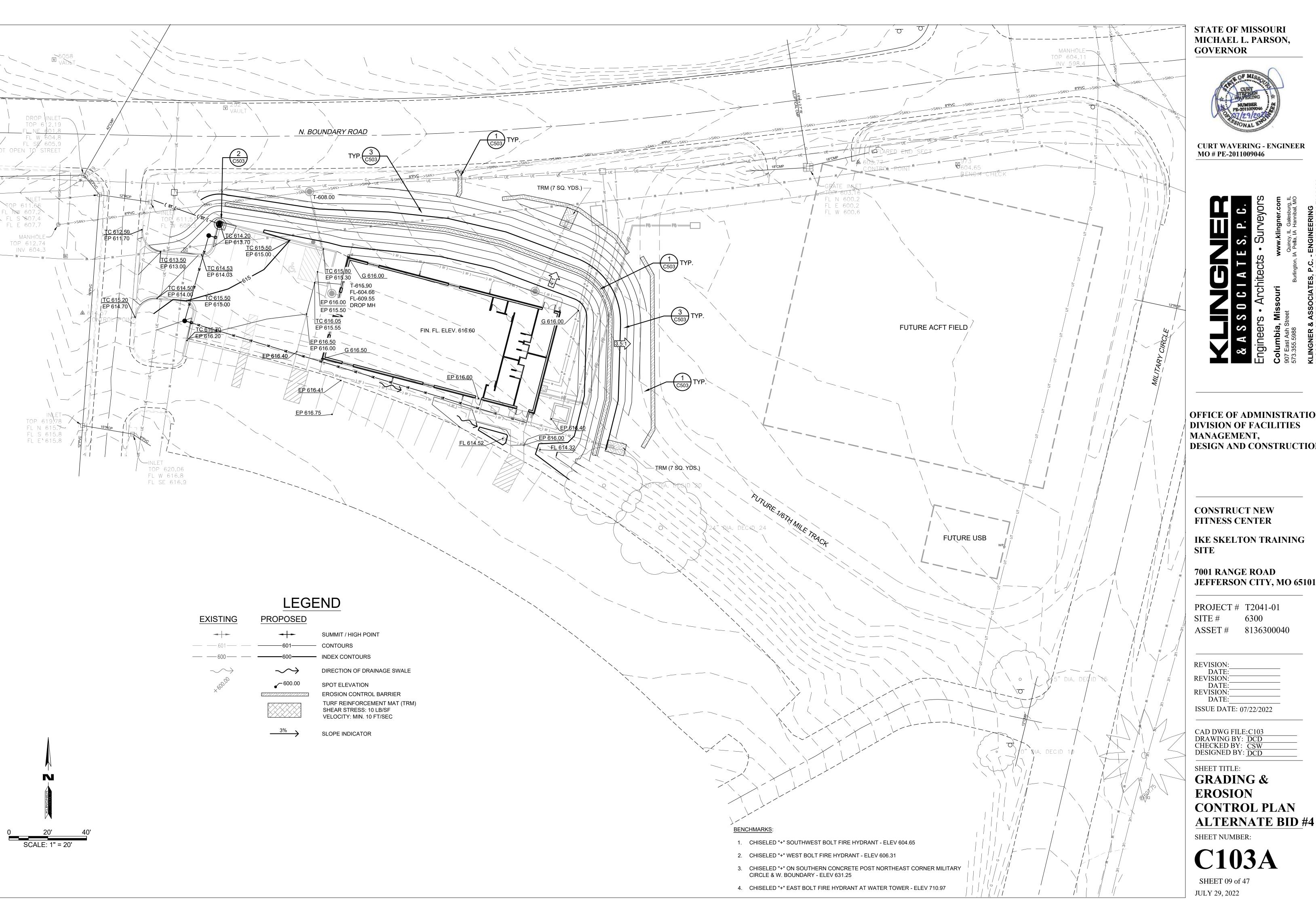
STATE OF MISSOURI MICHAEL L. PARSON,



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES **DESIGN AND CONSTRUCTION**

IKE SKELTON TRAINING

JEFFERSON CITY, MO 65101





CURT WAVERING - ENGINEER MO # PE-2011009046

KLINGNER & ASSOCIATES, P.C. - ENGINEEI MISSOURI STATE CERTIFICATE OF AUTHOI

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300 ASSET # 8136300040

REVISION: DATE: **REVISION:** DATE: **REVISION:** DATE: ISSUE DATE: 07/22/2022

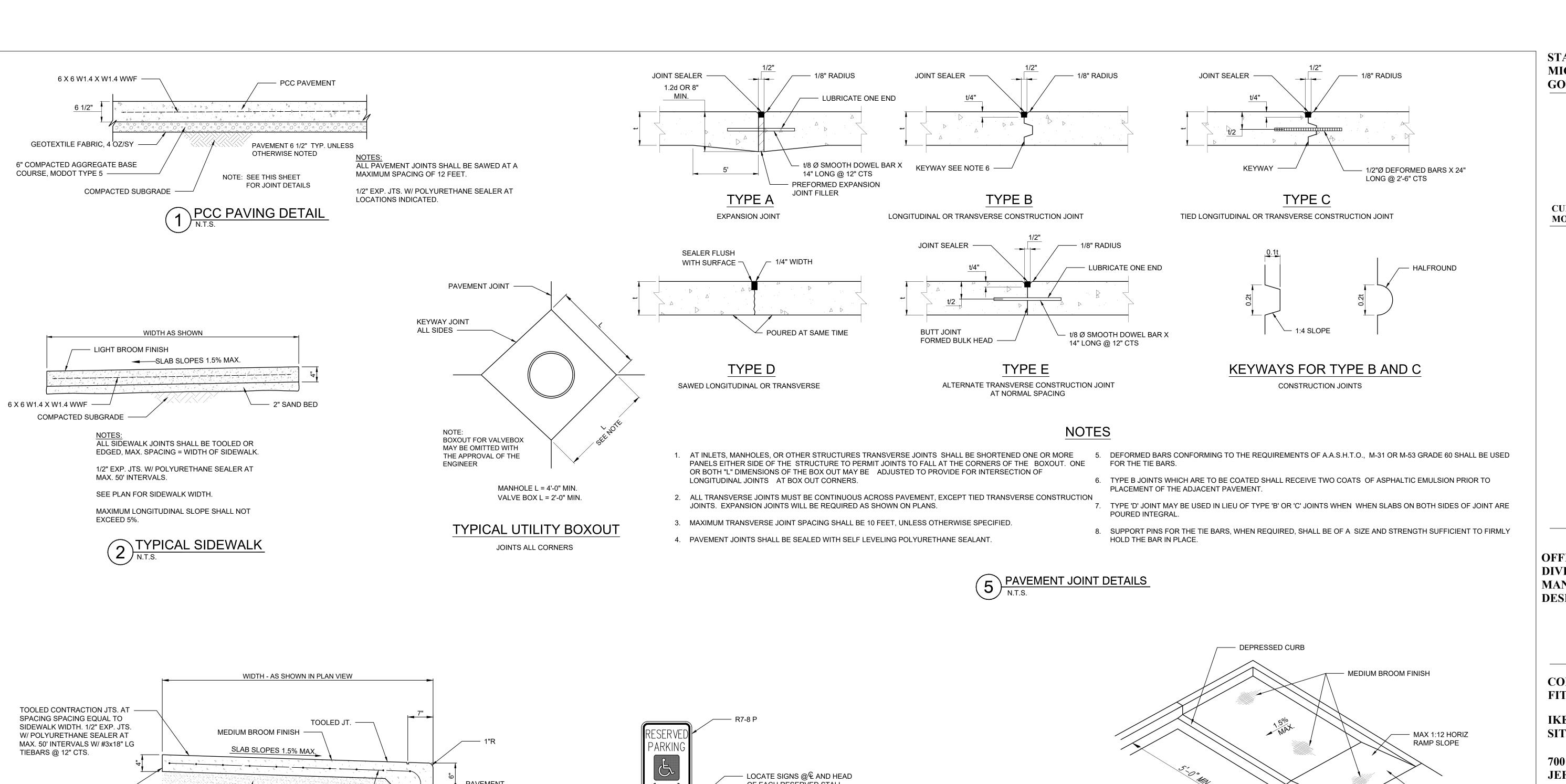
CAD DWG FILE:C103
DRAWING BY: DCD
CHECKED BY: CSW DESIGNED BY: DCD

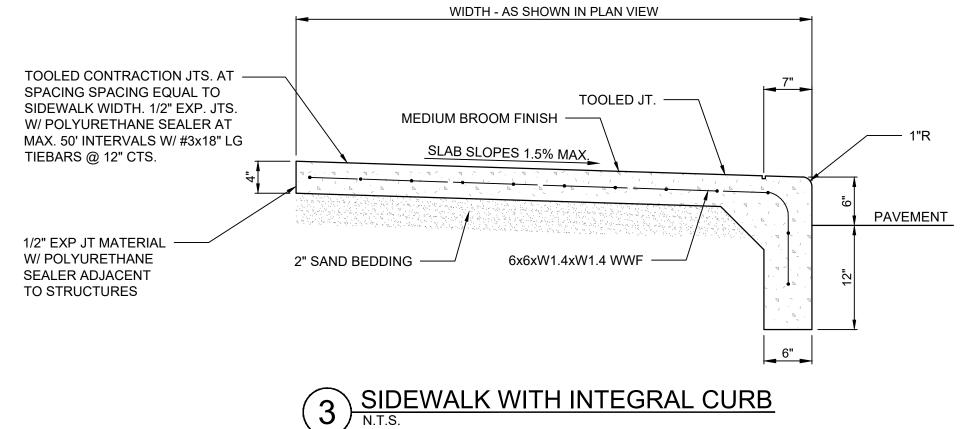
SHEET TITLE: **GRADING & EROSION CONTROL PLAN**

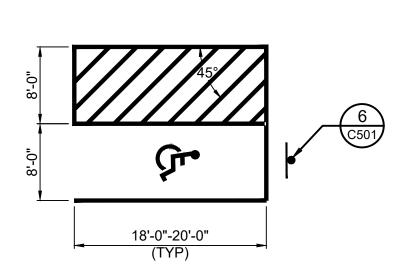
SHEET NUMBER:

C103A

SHEET 09 of 47 JULY 29, 2022

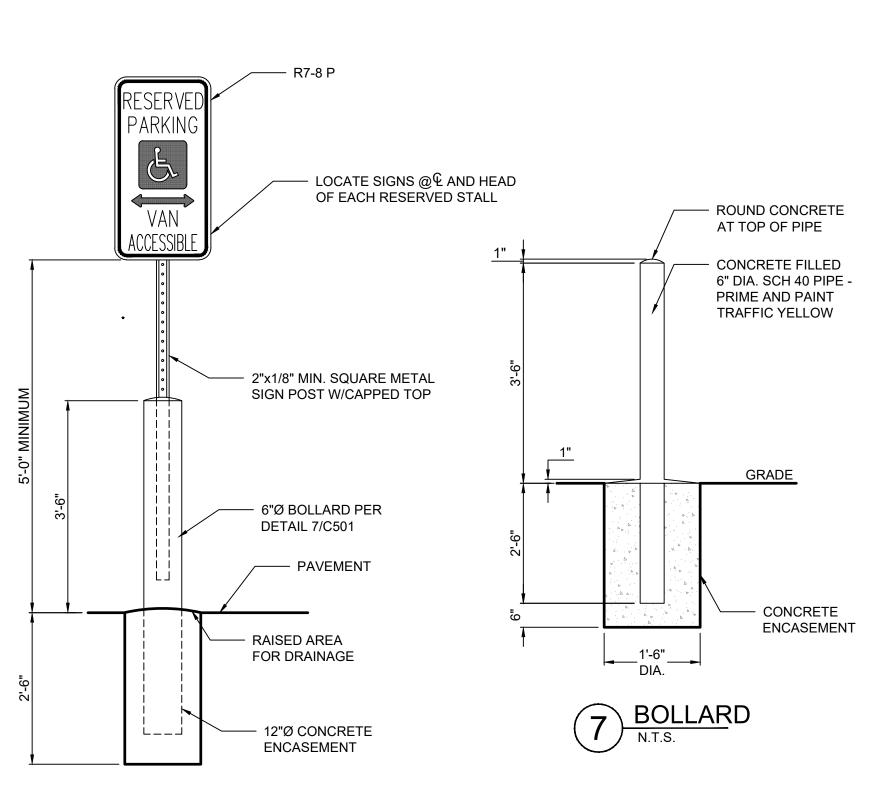






4 ACCESSIBLE STALL DETAILS

N.T.S.



AGGREGATE BASE

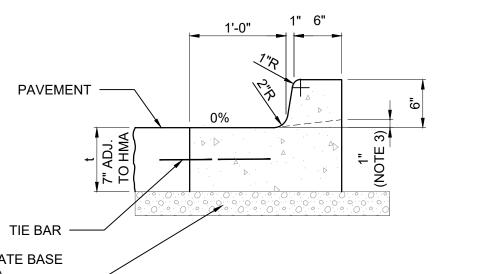
SIGN DIMENSIONS AND COLORS IN ACCORDANCE WITH MUTCD STANDARD R7-8 P 6 ACCESSIBLE PARKING SIGN



(TYPICAL)

RAMP FLARE

8 CURB RAMP



CURB NOTES:

- JOINTS SHALL BE PROVIDED IN PROLONGATION WITH PAVEMENT JOINTS OR A MAXIMUM OF 15' CENTERS. TOOLED 1" EXPANSION JOINTS WITH 2-1" DOWELS ON BOTH SIDES OF DRAINAGE STRUCTURES AND AT START OF ALL RADII.
- POUR CURB INTEGRAL OR INSTALL 2'-6" LONG #4 TIE BARS @ 2'-6" O.C. SHALL BE INSTALLED WHEN PLACED ADJACENT TO PCC PAVEMENT.
- 3. DEPRESS CURB AT DRIVEWAYS, ALLEYS, AND ½" AT RAMPS.
- 4. CONTINUE AGGREGATE BASE (3" MIN. THICKNESS) 6" BEHIND CURB

9 CONCRETE CURB & GUTTER

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



CURT WAVERING - ENGINEER MO # PE-2011009046

& ASSOCIATES, P.C. - ENGINEE STATE CERTIFICATE OF AUTHO

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

8136300040

PROJECT # T2041-01 6300

ASSET#

REVISION: DATE **REVISION:**

DATE REVISION: DATE: ISSUE DATE: 07/22/2022

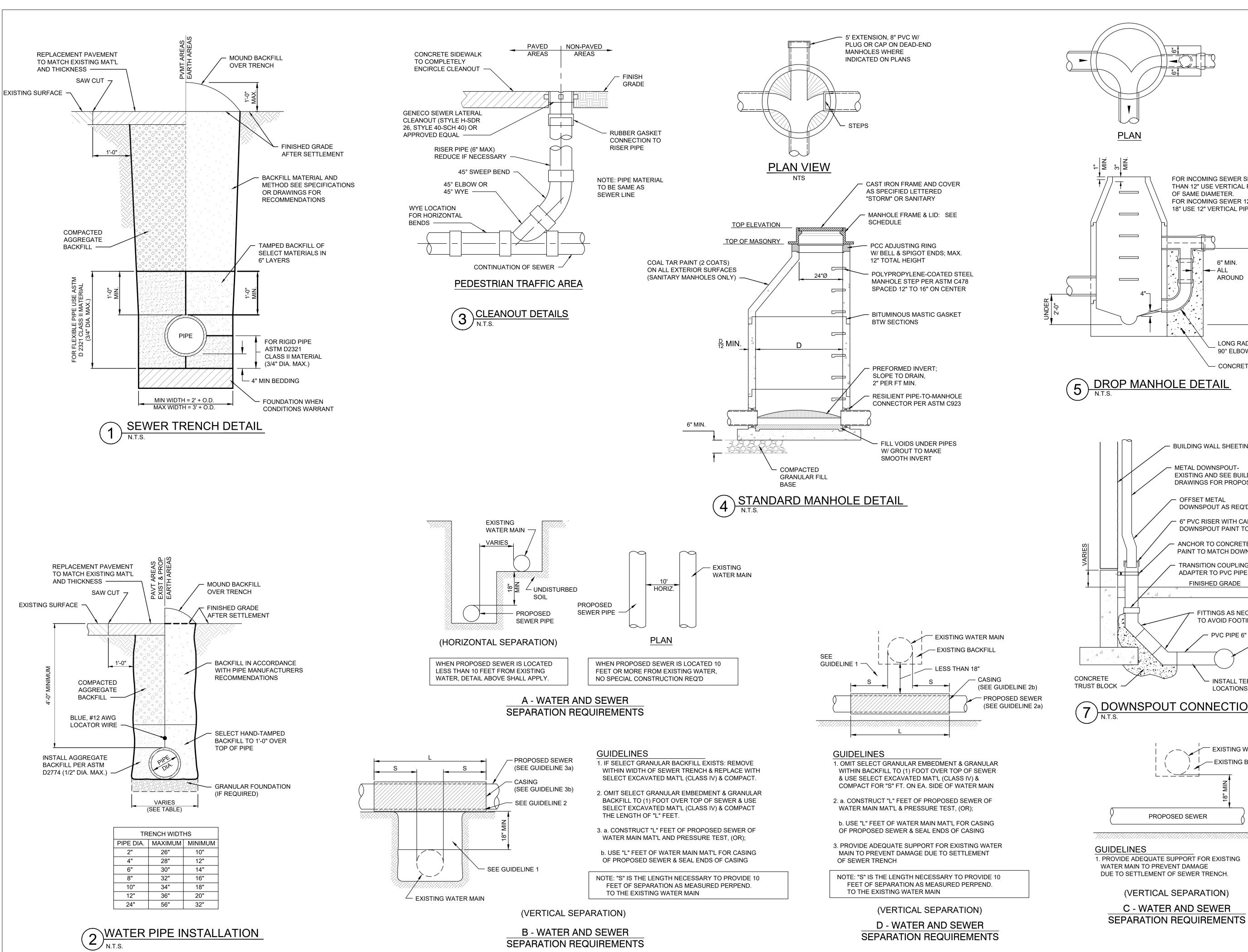
CAD DWG FILE: C501 DRAWING BY: DCD CHECKED BY: CSW DESIGNED BY: DCD

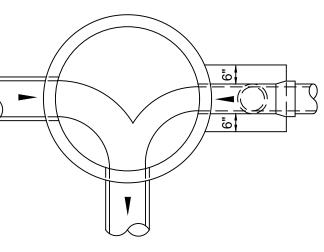
SHEET TITLE:

SITE DETAILS

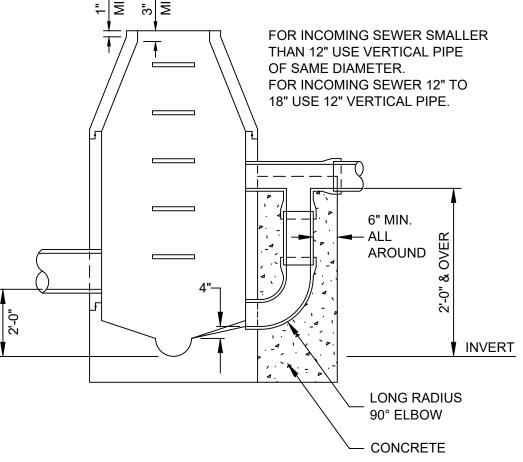
SHEET NUMBER:

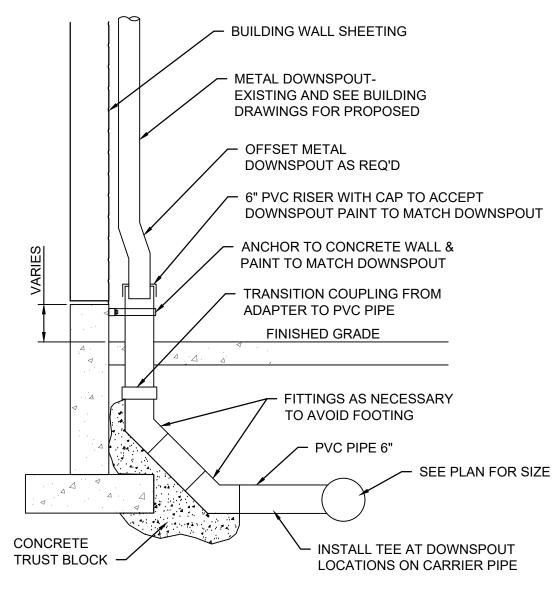
SHEET 10 of 47 JULY 29, 2022



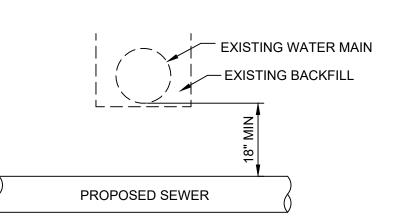


<u>PLAN</u>





7 DOWNSPOUT CONNECTION DETAIL



GUIDELINES 1. PROVIDE ADEQUATE SUPPORT FOR EXISTING

> (VERTICAL SEPARATION) C - WATER AND SEWER

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



CURT WAVERING - ENGINEER MO # PE-2011009046

OCIATES, P.C. - ENGINEE CERTIFICATE OF AUTHO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300 8136300040 ASSET#

REVISION: DATE **REVISION:** DATE REVISION: DATE: ISSUE DATE: 07/22/2022

CAD DWG FILE: C502 DRAWING BY: DCD CHECKED BY: CSW DESIGNED BY: DCD

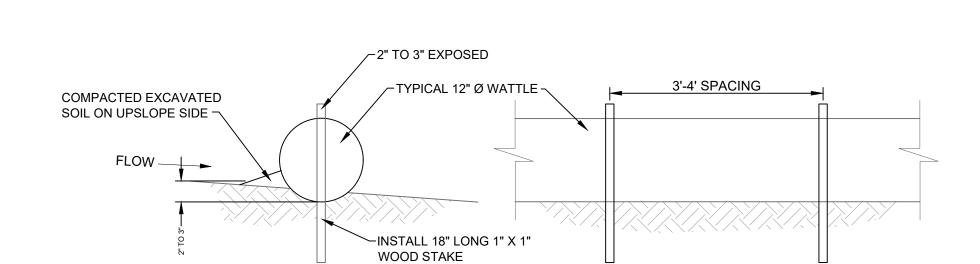
SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

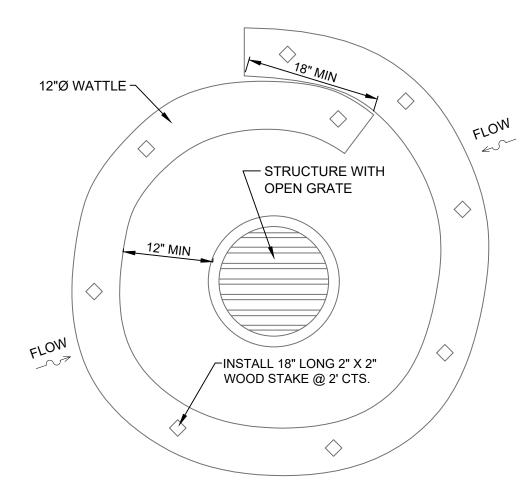
SHEET 11 of 47

JULY 29, 2022

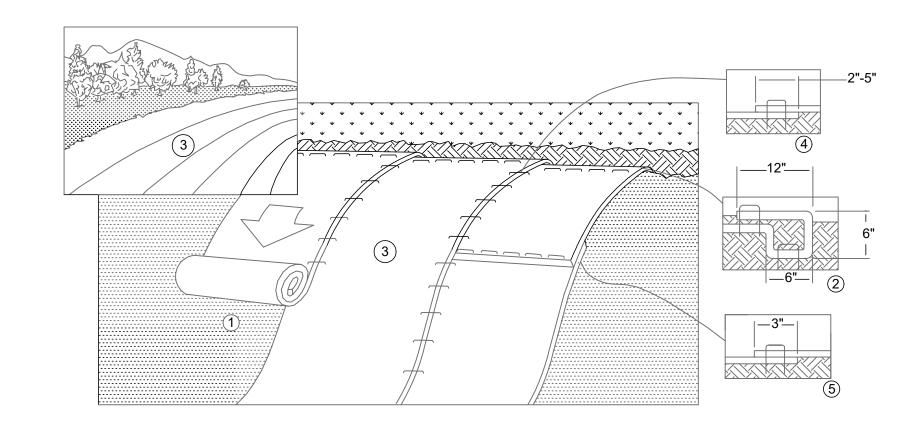


EROSION CONTROL WATTLE CHECK

N.T.S.



2 INLET PROTECTION DETAILS
N.T.S.



- PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION
 OF LIME, FERTILIZER, AND SEED. SEEDING WILL BE COMPLETED BY THE OWNER, CONTRACTOR TO COORDINATE WITH OWNER
 TO ALLOW PROPER TIMING AND COORDINATION FOR THE SEEDING AND EROSION BLANKET INSTALLATION.
- 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH.

 BACKFILL AND COMPACT THE TRENACH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
- 3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROXIMATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROXIMATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" 54" OVERLAP DEPENDING ON RECP,S TYPE.
- 5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP's WIDTH.

IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

6. EROSION CONTROL BLANKET SHALL BE USED ON ALL SLOPES 4:1 AND STEEPER.

(3) EROSION CONTROL BLANKET INSTALLATION DETAILS
N.T.S.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



CURT WAVERING - ENGINEER MO # PE-2011009046



KLINGNER & ASSOCIATES, P.C. - ENGINEE MISSOURI STATE CERTIFICATE OF AUTHO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01

SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/22/2022

CAD DWG FILE:C503
DRAWING BY: DCD
CHECKED BY: CSW
DESIGNED BY: DCD

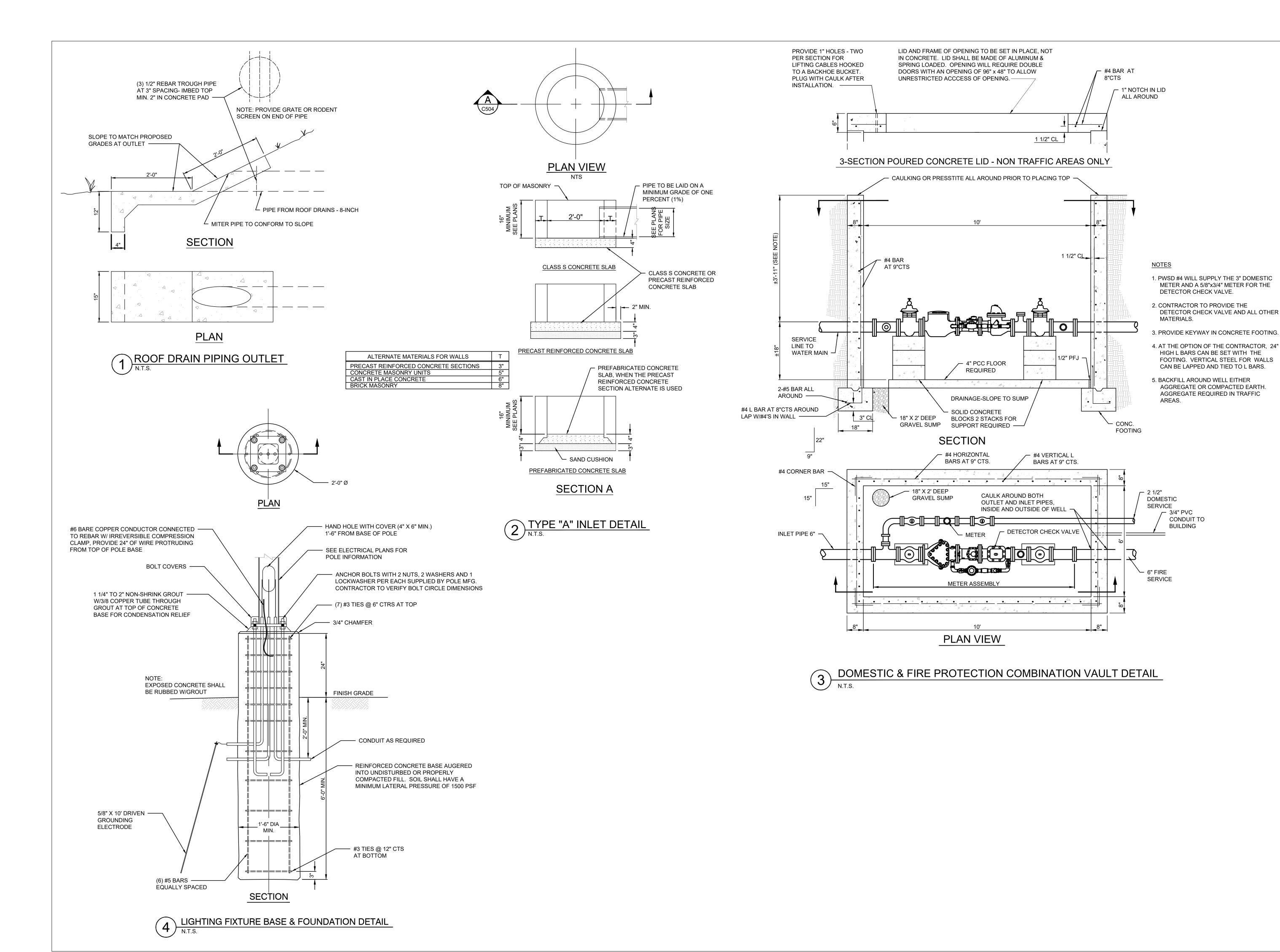
SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

C503

SHEET 12 of 47 JULY 29, 2022





CURT WAVERING - ENGINEER MO # PE-2011009046

& A S S O C I A T E S, P. G.

Igineers • Architects • Surveyors

Sulmbia, Missouri

Feat Ash Street

Burlington. IA Pella, IA Hannibal, MC

Burlington. IA Pella, IA Hannibal, MC

& ASSOCIATES, P.C. - ENGINEE STATE CERTIFICATE OF AUTHO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

8136300040

PROJECT # T2041-01 SITE # 6300

ASSET#

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/22/2022

CAD DWG FILE:C504
DRAWING BY: DCD
CHECKED BY: CSW
DESIGNED BY: DCD

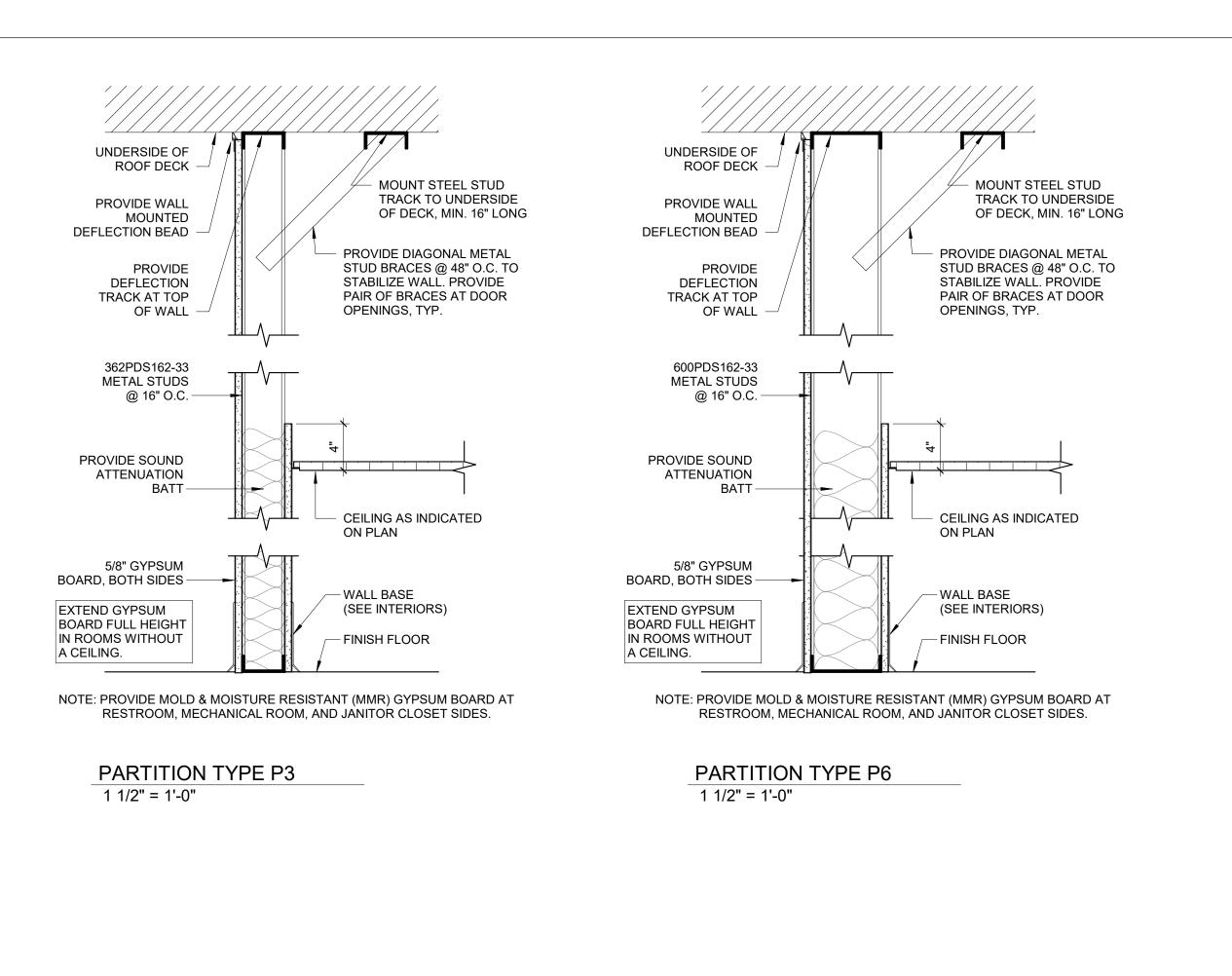
SHEET TITLE:

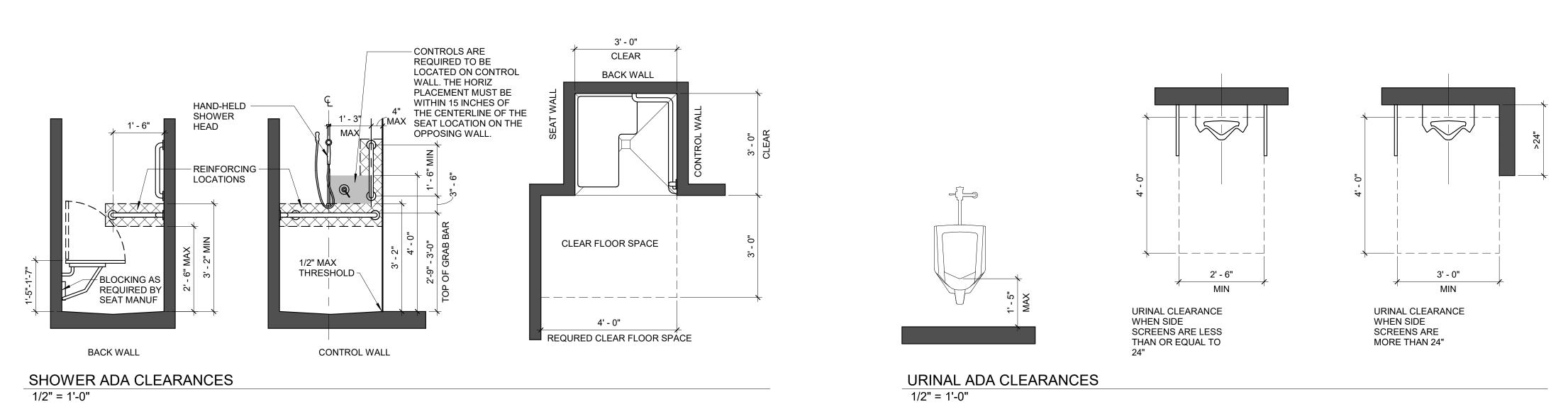
SITE DETAILS

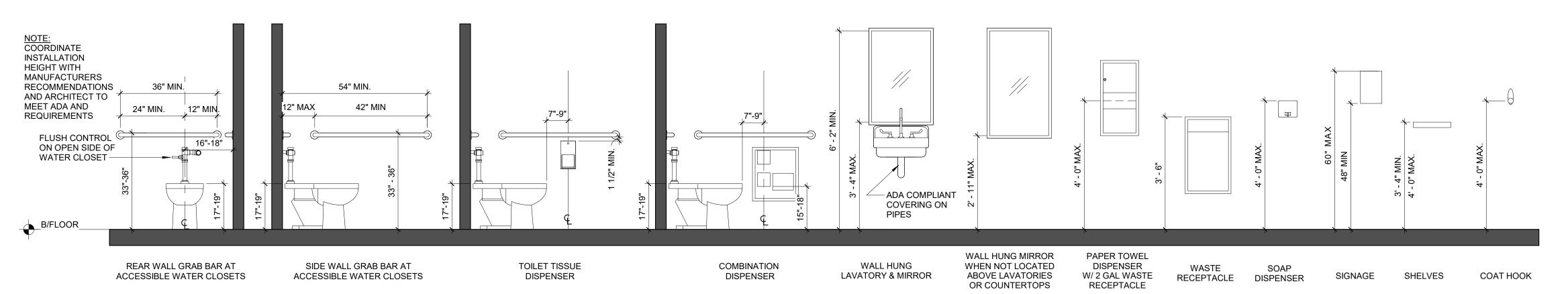
SHEET NUMBER:

C504

SHEET 13 of 47 JULY 29, 2022

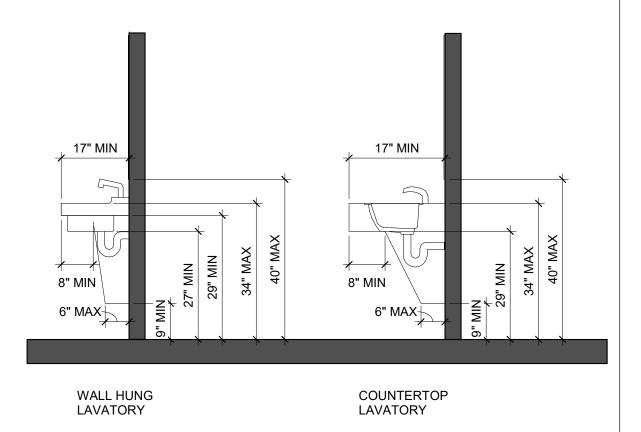






NOTE: WATER CLOSETS SHOWN ARE FLOOR-MOUNTED. ACTUAL TOILETS FOR PROJECT MAY VARY. USE FOR MOUNTING HEIGHTS ONLY.

ADA TYPICAL MOUNTING TYPES 1/2" = 1'-0"



LAVATORY ADA CLEARANCES 1/2" = 1'-0"

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



CODY N. BASHAM - ARCHITECT MO # A-2021000203

> C 0

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD JEFFERSON CITY, MO 65101

8136300040

PROJECT # T2041-01

REVISION: DATE: REVISION: DATE REVISION: DATE: ISSUE DATE: 07/29/2022

ASSET#

CAD DWG FILE: A001 DRAWING BY: CNB CHECKED BY: MJF DESIGNED BY: CNB

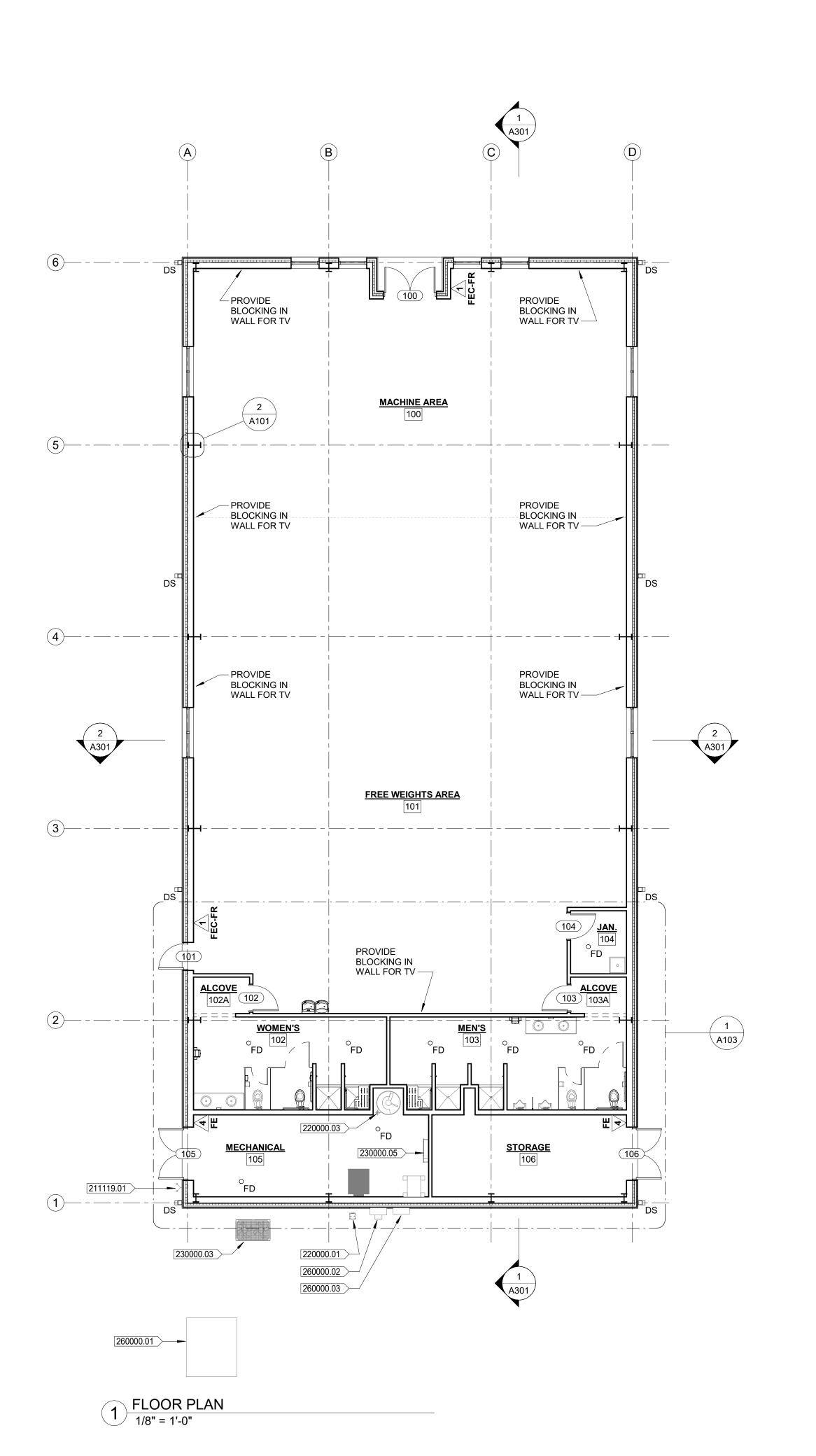
SHEET TITLE:

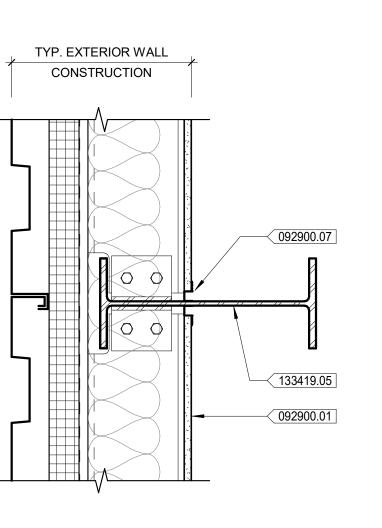
PARTITION TYPES AND ADA CLEARANCES

SHEET NUMBER:

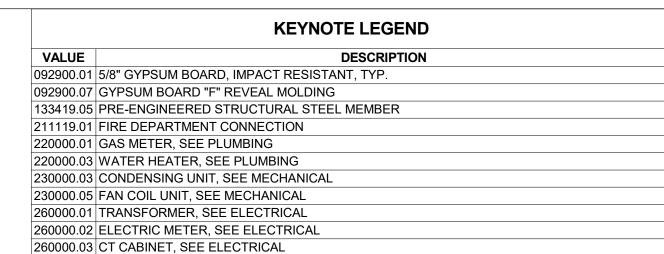


SHEET 14 of 47 JULY 29, 2022





2 TYP. COLUMN DETAIL
1 1/2" = 1'-0"



GENERAL NOTES

- 1. EXTERIOR DIMENSIONS ARE TO OUTSIDE FACE OF PEMB WALL GIRTS.
- 2. INTERIOR DIMENSIONS ARE TO INSIDE FACE OF PEMB WALL GIRTS TO FINISH FACE OF WALL PARTITIONS.
- 3. FINISH FLOOR ELEVATION IS 616.60' ON CIVIL PLANS = 0' 0'' ON ARCHITECTURE PLANS.
- 4. PROVIDE SEALANT UNLESS INDICATED OTHERWISE BETWEEN DISSIMILAR MATERIALS.

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



CODY N. BASHAM - ARCHITECT MO # A-2021000203

• Architects • Surveyors

Issouri www.klingner.com

Quincy, IL Galesburg, IL

Burlington, IA Pella, IA Hannibal, MO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300

ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/2022

CAD DWG FILE: A101 DRAWING BY: MSG CHECKED BY: CNB DESIGNED BY: CNB

SHEET TITLE:

FLOOR PLAN

SHEET NUMBER:

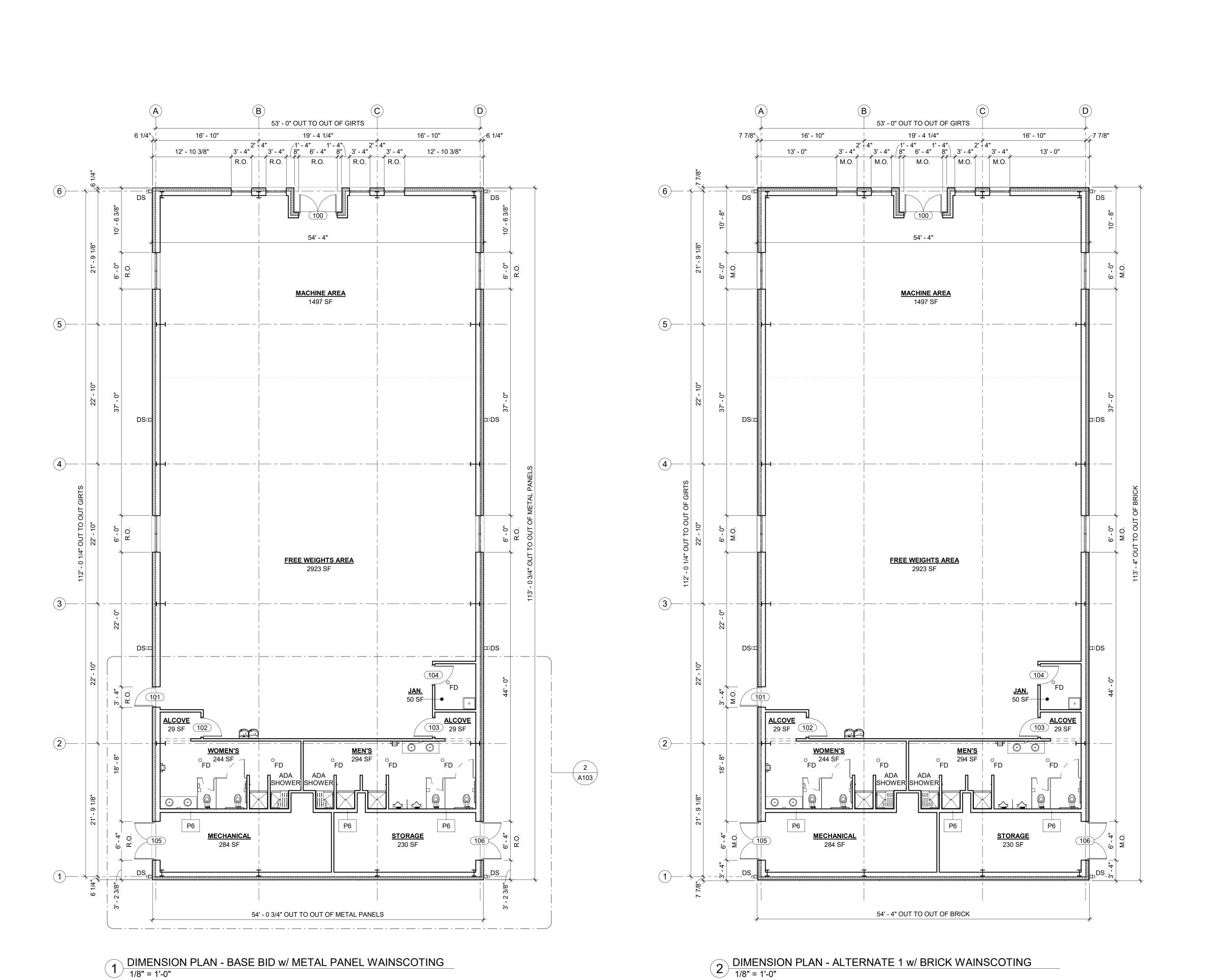
A 1 0 1

SHEET 15 of 47

JULY 29, 2022

0 3" 6" 1' SCALE: 1 1/2" = 1'-0"

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



DIMENSION NOTES 1. WALL LOCATION DIMENSIONS ARE TO FACE OF GWB OR GRIDLINE, U.N.O.
2. FIELD MEASURE AND CONFIRM DIMENSIONS FOR OWNER PROVIDED EQUIPMENT AND FURNISHINGS.
3. MIN. 4" FINISHED FACE OF WALL TO EDGE OF DOOR FRAME, U.N.O. STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



CODY N. BASHAM - ARCHITECT MO # A-2021000203

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 ASSET # 8136300040

REVISION: DATE: REVISION: DATE: REVISION: DATE: ISSUE DATE: 07/29/2022

CAD DWG FILE: A102 DRAWING BY: MSG CHECKED BY: CNB DESIGNED BY: CNB

SHEET TITLE:

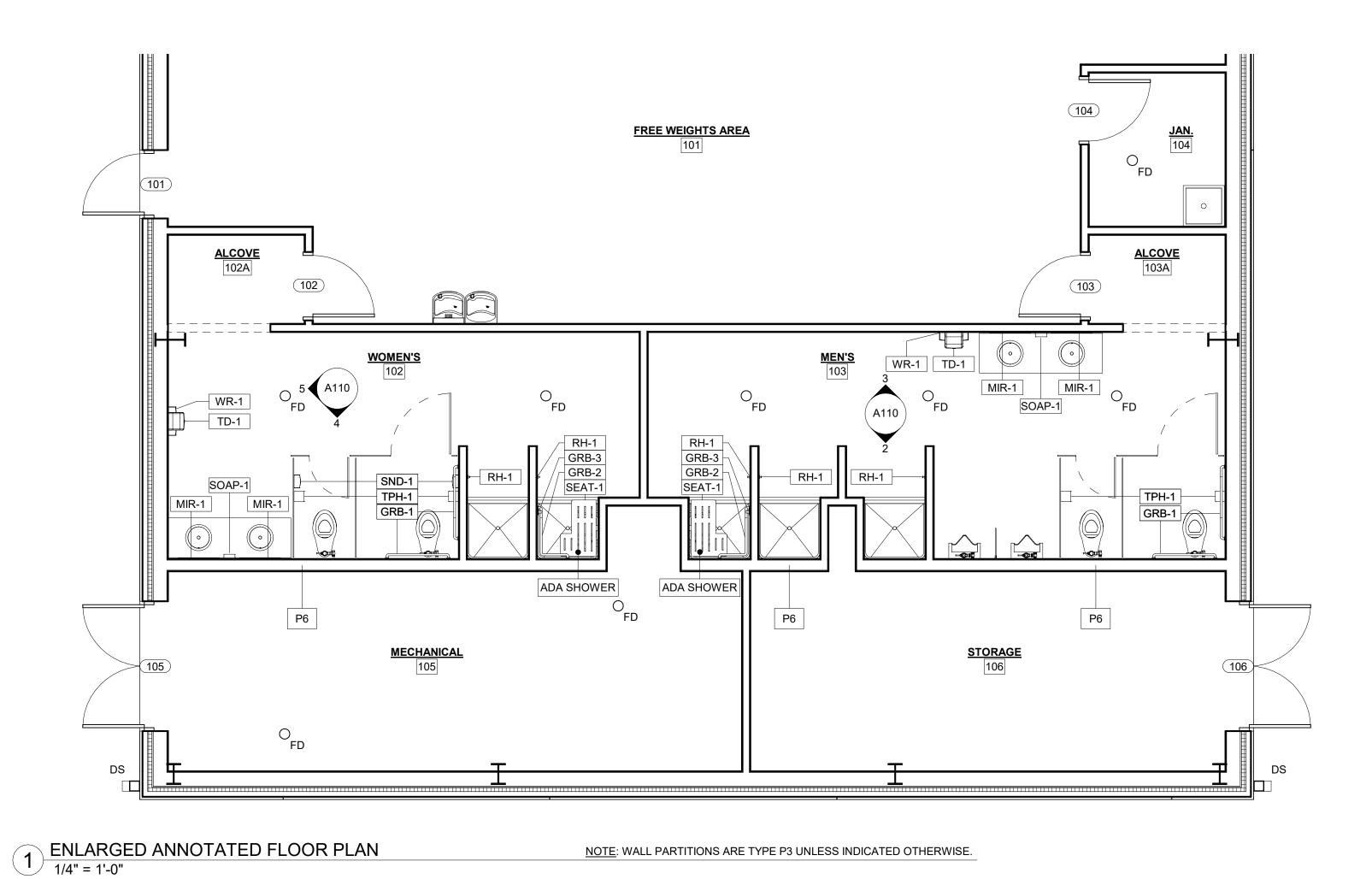
DIMENSION PLANS

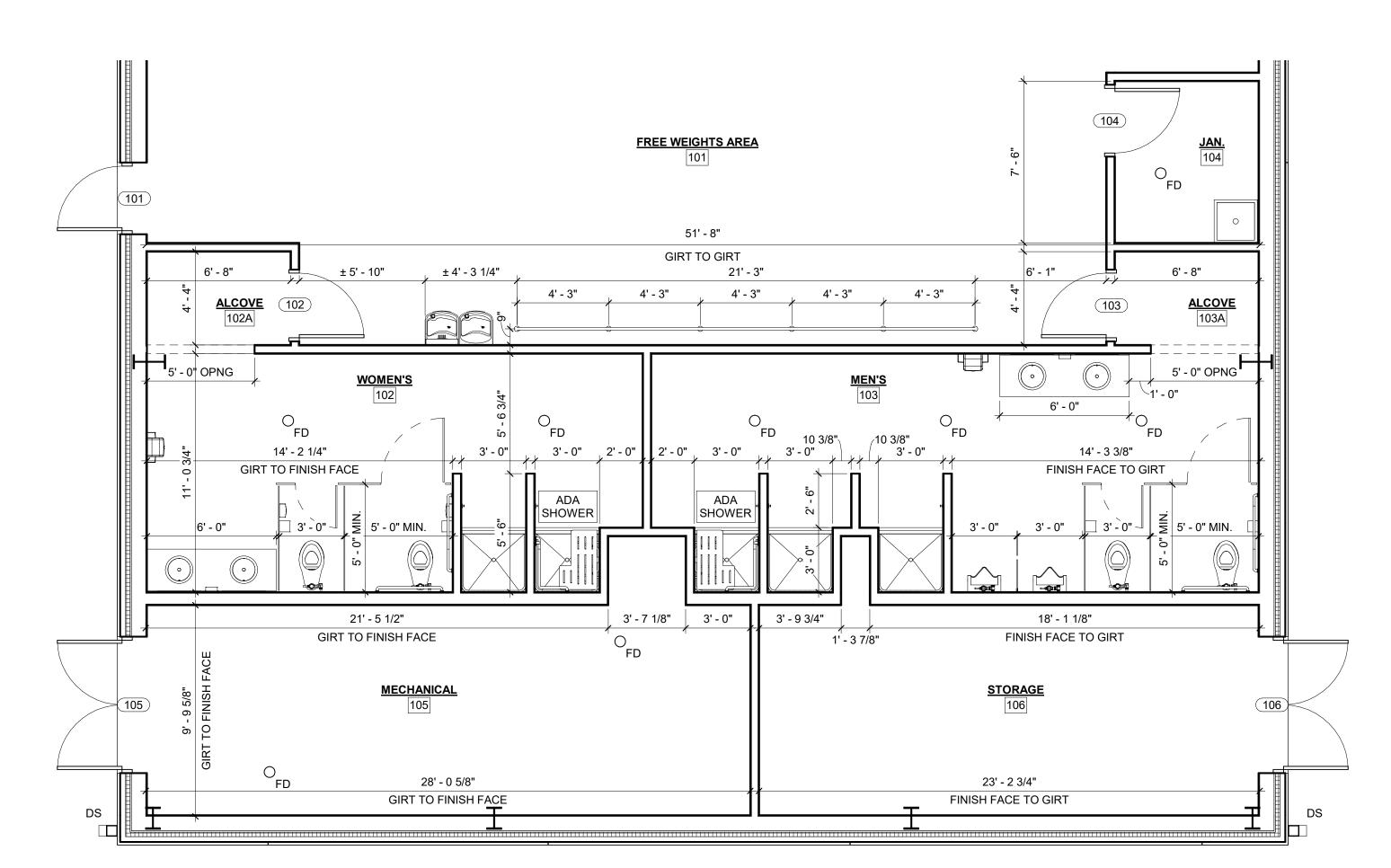
SHEET NUMBER:

JULY 29, 2022

SHEET 16 of 47

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





SPECIALTY EQUIPMENT SCHEDULE

TAG	BASIS OF DESIGN MANUFACTURER	MODEL	COUNT	COMMENTS
GRB-1	Bobrick Washroom Equipment, Inc	B-6806 STRAIGHT GRAB BAR	2	PROVIDE (2) HORIZONTAL - 48" LONG & 36" LONG AT EACH ADA TOILET
GRB-2	Bobrick Washroom Equipment, Inc	B-6861 TWO-WALL GRAB BAR	2	PROVIDE (1) HORIZONTAL - 30" ALONG CONTROL WALL & 18" ALONG BACK WALL AT EACH ADA SHOWER
GRB-3	Bobrick Washroom Equipment, Inc.	B-6806x30	2	PROVIDE (1) VERTICAL - 30" ALONG CONTROL WALL AT EACH ADA SHOWER
MIR-1	Bobrick Washroom Equipment, Inc.	B-165 MIRROR (24"x48")	4	PROVIDE (1) AT EACH LAVATORY
RH-1	Bobrick Washroom Equipment, Inc	B-76717 ROBE HOOK	5	PROVIDE AT EACH SHOWER
SEAT-1	Bobrick Washroom Equipment, Inc.	B-5181 FOLDING SHOWER SEAT	2	PROVIDE AT EACH ADA SHOWER
SND-1	Bobrick Washroom Equipment, Inc.	B-270 SANITARY NAPKIN DISPOSAL	2	PROVIDE (1) IN EACH WOMEN'S TOILET STALL
SOAP-1	Bobrick Washroom Equipment, Inc.	B-4112 SOAP DISPENSER	2	PROVIDE (1) IN EACH RESTROOM
TD-1	Bobrick Washroom Equipment, Inc	B-72974 PAPER TOWEL DISPENSER	2	PROVIDE (1) IN EACH RESTROOM
TPH-1	Bobrick Washroom Equipment, Inc.	B-4288 TOILET PAPER HOLDER	4	PROVIDE (1) IN EACH TOILET STALL
WR-1	Robrick Washroom Equipment, Inc.	B-43644 WASTE RECEPTACLE	2	PROVIDE (1) IN EACH RESTROOM

NOTES:

- 1. SPECIFIED PRODUCT/MANUFACTURER OR APPROVED EQUIVALENTS AS INDICATED. DRAWINGS AND SPECIFICATIONS INDICATE SIZES, PROFILES, DIMENSIONS, AND OTHER CHARACTERISTICS THAT ARE BASED ON THE PRODUCT NAMED. INSTALL PRODUCT COMPLETE WITH ALL REQUIRED ACCESSORIES IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, INSTRUCTION AND DETAILS. SEE SPECIFICATIONS FOR APPROVED EQUIVALENTS.
- 2. SEE SPECIFICATION SECTION 102800 TOILET AND SHOWER ACCESSORIES.

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



CODY N. BASHAM - ARCHITECT MO # A-2021000203

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 8136300040 ASSET#

REVISION: DATE: REVISION: DATE: **REVISION:** DATE: ISSUE DATE: 07/29/2022

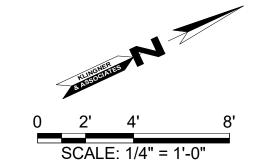
CAD DWG FILE: A103
DRAWING BY: MSG
CHECKED BY: CNB DESIGNED BY: CNB

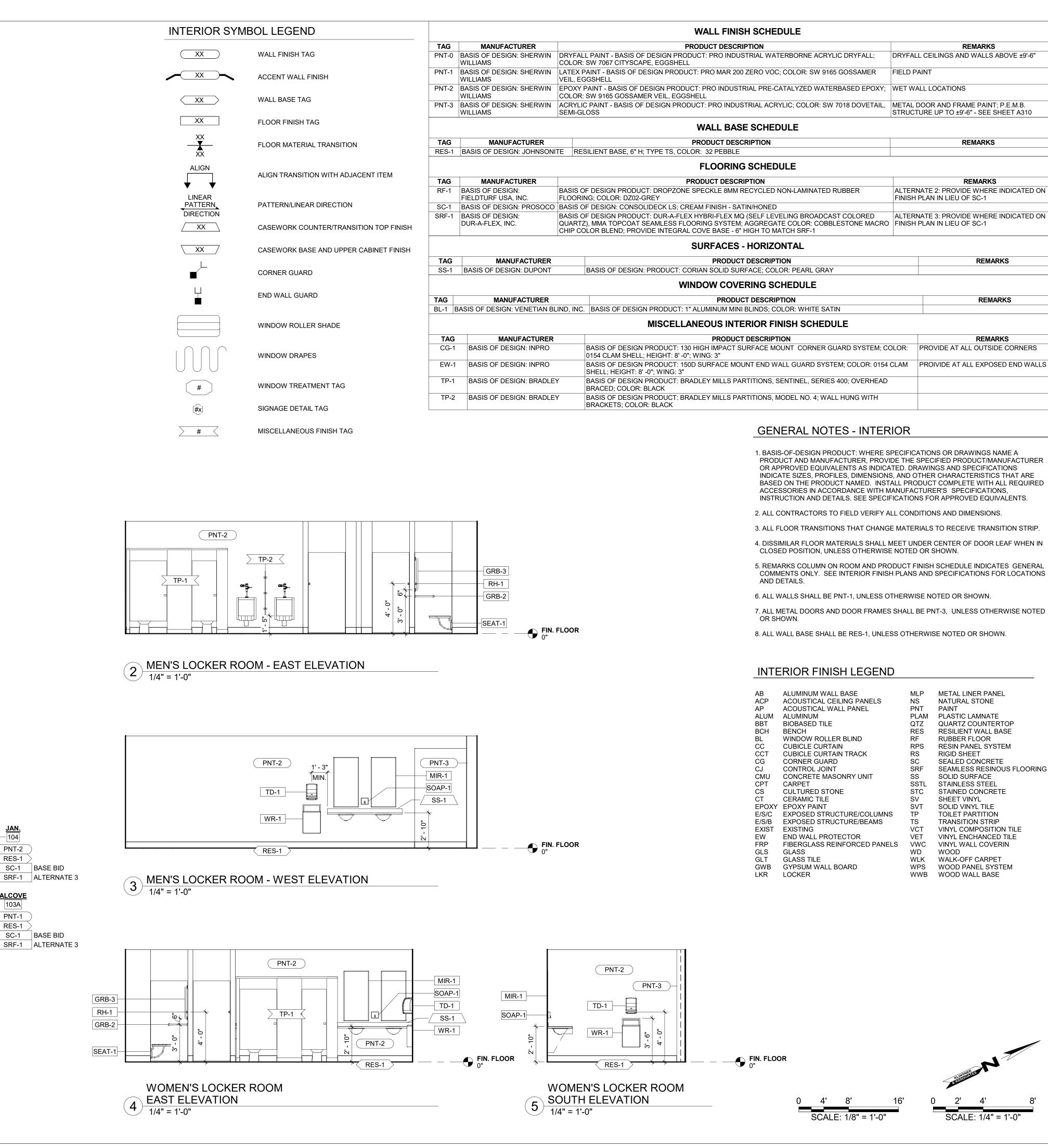
SHEET TITLE:

JULY 29, 2022

ENLARGED PLANS

SHEET NUMBER: **SHEET 17 of 47**





BL-1

BL-1

ALCOVE

102A

PNT-1

RES-1

SC-1 BASE BID

SRF-1 ALTERNATE 3

BL-1

BL-1

106

PNT-1

RES-1

SC-1

104

PNT-2

RES-1

ALCOVE

103A

PNT-1

RES-1

MACHINE AREA

PNT-1

RES-1

SC-1

FREE WEIGHTS AREA

PNT-1

RES-1

PNT-2

RES-1

PNT-2

RES-1

SC-1

INTERIOR FINISH PLAN

SC-1 BASE BID

SRF-1 ALTERNATE 3

─(PNT-2

PNT-0 ABOVE ±9'-6"

SC-1 BASE BID

RF-1 ALTERNATE 2

103

PNT-2

RES-1

SC-1 BASE BID

SRF-1 ALTERNATE

PNT-0 ABOVE ±9'-6"

BASE BID

SRF-1 ALTERNATE 3

- EDGE OF FLOOR

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS

REMARKS



CODY N. BASHAM - ARCHITECT MO # A-2021000203

> C 0

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300 8136300040 ASSET #

REVISION: DATE **REVISION:** DATE **REVISION:** DATE: ISSUE DATE: 07/29/2022

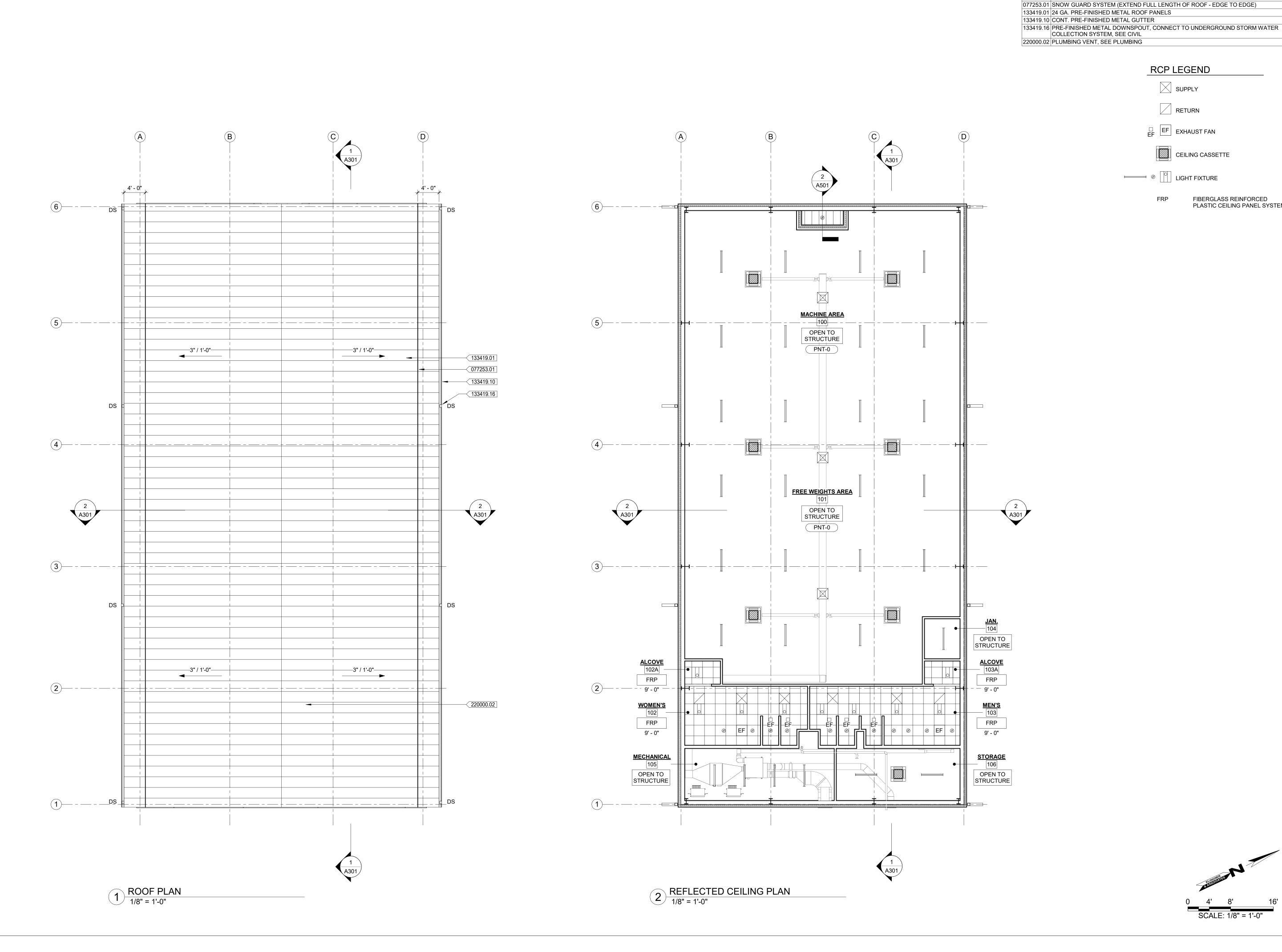
CAD DWG FILE: A110 DRAWING BY: $\overline{\text{MSG}}$ CHECKED BY: CNB

DESIGNED BY: CNB SHEET TITLE:

INTERIOR FINISH PLAN

SHEET NUMBER:

SHEET 18 of 47 JULY 29, 2022



KEYNOTE LEGEND

DESCRIPTION

FIBERGLASS REINFORCED PLASTIC CEILING PANEL SYSTEM



CODY N. BASHAM - ARCHITECT MO # A-2021000203

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 ASSET # 8136300040

REVISION: DATE:_ REVISION: DATE: REVISION: DATE: ISSUE DATE: 07/29/2022

CAD DWG FILE: A130 DRAWING BY: MSG CHECKED BY: CNB DESIGNED BY: CNB

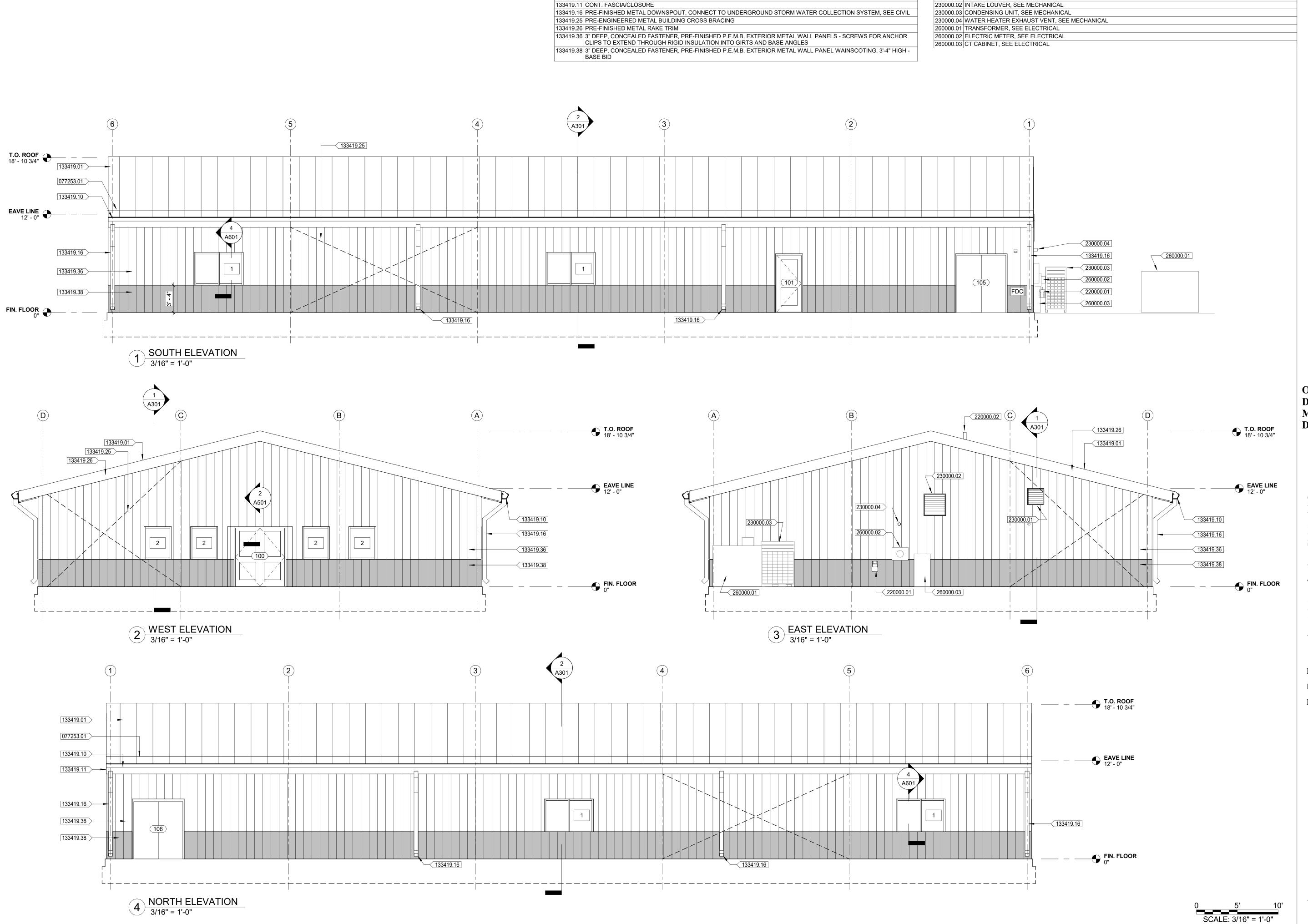
SHEET TITLE:

ROOF PLAN & REFLECTED **CEILING PLAN**

SHEET NUMBER:

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

SHEET 19 of 47 JULY 29, 2022



KEYNOTE LEGEND

077253.01 SNOW GUARD SYSTEM (EXTEND FULL LENGTH OF ROOF - EDGE TO EDGE)

133419.01 24 GA. PRE-FINISHED METAL ROOF PANELS

133419.10 CONT. PRE-FINISHED METAL GUTTER

DESCRIPTION

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR

KEYNOTE LEGEND

VALUE

220000.01 GAS METER, SEE PLUMBING

220000.02 PLUMBING VENT, SEE PLUMBING

230000.01 EXHAUST LOUVER, SEE MECHANICAL

DESCRIPTION



CODY N. BASHAM - ARCHITECT MO # A-2021000203

& A S S O G I A T E S, P. G.
Ingineers • Architects • Surveyors
Columbia, Missouri

OT East Ash Street

Ouincy, IL Galesburg, II

Aunibal, MC

Burlington, IA Pella, IA Hannibal, MC

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/2022

CAD DWG FILE: A201
DRAWING BY: MSG
CHECKED BY: CNB
DESIGNED BY: CNB

SHEET TITLE:

BUILDING ELEVATIONS -BASE BID

SHEET NUMBER:

A20]

SHEET 20 of 47 JULY 29, 2022

133419.16 PRE-FINISHED METAL DOWNSPOUT, CONNECT TO UNDERGROUND STORM WATER COLLECTION SYSTEM, SEE CIVIL 260000.01 TRANSFORMER, SEE ELECTRICAL 133419.25 PRE-ENGINEERED METAL BUILDING CROSS BRACING 260000.02 ELECTRIC METER, SEE ELECTRICAL 133419.26 PRE-FINISHED METAL RAKE TRIM 260000.03 CT CABINET, SEE ELECTRICAL 133419.36 3" DEEP, CONCEALED FASTENER, PRE-FINISHED P.E.M.B. EXTERIOR METAL WALL PANELS - SCREWS FOR ANCHOR CLIPS TO EXTEND THROUGH RIGID INSULATION INTO GIRTS AND BASE ANGLES 133419.25 T.O. ROOF 18' - 10 3/4" 077253.01 133419.10 **EAVE LINE** 12' - 0" 133419.16 260000.01 230000.03 133419.36 260000.02 042000.03 FDC 220000.01 FIN. FLOOR 133419.16 13' - 4" 21' - 4" 22' - 0" 3/16" = 1'-0" T.O. ROOF 18' - 10 3/4" 133419.26 133419.01 133419.25 133419.26 **EAVE LINE** 12' - 0" **EAVE LINE** 12' - 0" 133419.10 133419.10 133419.16 133419.16 133419.36 133419.36 042000.03 042000.03 040523.01 FIN. FLOOR FIN. FLOOR 040523.01 13' - 0" 260000.01 260000.03 13' - 0" 10' - 4" 14' - 0" 13' - 0" 16' - 4" <u>WEST ELEVATION</u> 3/16" = 1'-0" 3 EAST ELEVATION
3/16" = 1'-0" T.O. ROOF 18' - 10 3/4" 133419.01 077253.01 133419.10 **EAVE LINE** 12' - 0" 133419.11 133419.16 133419.36 133419.16 042000.03 FIN. FLOOR 133419.16 133419.16 22' - 0" 21' - 4" 21' - 8" 13' - 4" 22' - 0" 4 NORTH ELEVATION
3/16" = 1'-0"

KEYNOTE LEGEND

040523.01 3/8" EXPANSION JOINT, TYP. @ BRICK WAINSCOTING - ALTERNATE 1

077253.01 SNOW GUARD SYSTEM (EXTEND FULL LENGTH OF ROOF - EDGE TO EDGE)

042000.03 4" BRICK VENEER WAINSCOTING, 3'-4" HIGH - ALTERNATE 1

133419.01 24 GA. PRE-FINISHED METAL ROOF PANELS

133419.10 CONT. PRE-FINISHED METAL GUTTER

133419.11 CONT. FASCIA/CLOSURE

DESCRIPTION

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR

KEYNOTE LEGEND

220000.01 GAS METER, SEE PLUMBING

220000.02 PLUMBING VENT, SEE PLUMBING

230000.01 EXHAUST LOUVER, SEE MECHANICAL

230000.03 CONDENSING UNIT, SEE MECHANICAL

230000.04 WATER HEATER EXHAUST VENT, SEE MECHANICAL

230000.02 INTAKE LOUVER, SEE MECHANICAL

DESCRIPTION



CODY N. BASHAM - ARCHITECT MO # A-2021000203

8 A S S O G I A T E S, P. G.

Igineers • Architects • Surveyors

Slumbia, Missouri www.klingner.com

7 East Ash Street

8.355.5988

Burlington, IA Pella, IA Hannibal, MC

INGNER & ASSOCIATES P. G. ARCHITECTI IRE

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/2022

CAD DWG FILE: A202
DRAWING BY: MSG
CHECKED BY: CNB
DESIGNED BY: CNB

SHEET TITLE:

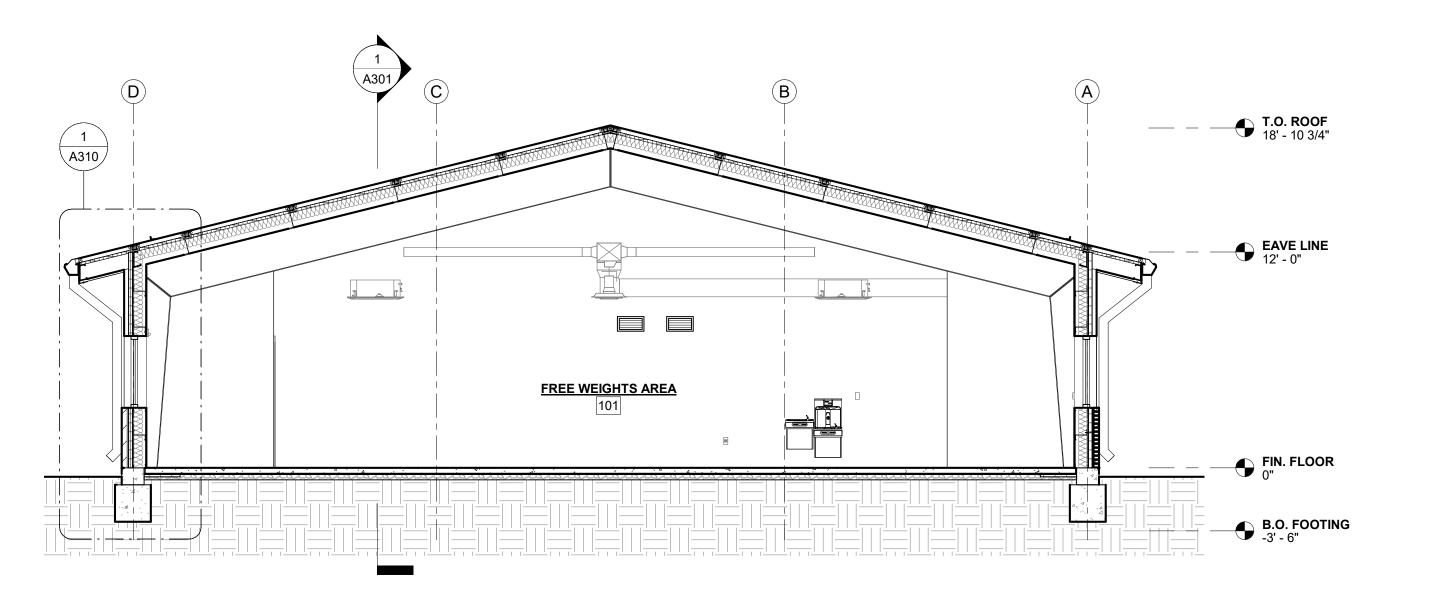
BUILDING ELEVATIONS -ALTERNATE 1

SHEET NUMBER:

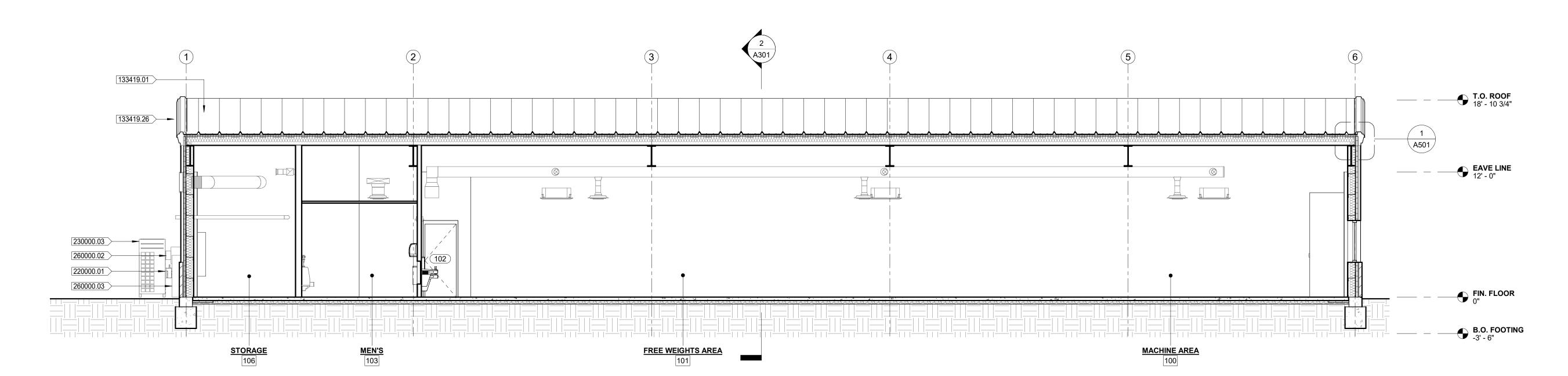
A202

SCALE: 3/16" = 1'-0"

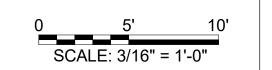
SHEET 21 of 47 JULY 29, 2022



2 TRANSVERSE BUILDING SECTION
3/16" = 1'-0"



1 LONGITUDINAL BUILDING SECTION
3/16" = 1'-0"



STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



CODY N. BASHAM - ARCHITECT MO # A-2021000203

& A S S O C I A T E S, P. C.

Engineers • Architects • Surveyors

Columbia, Missouri www.klingner.com
907 East Ash Street
573.355.5988

KLINGNER & ASSOCIATES, P.C. - ARCHITECTURE
MISSOURI STATE CERTIFICATE OF AUTHORITY #20

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/2022

CAD DWG FILE: A301
DRAWING BY: MSG
CHECKED BY: CNB
DESIGNED BY: CNB

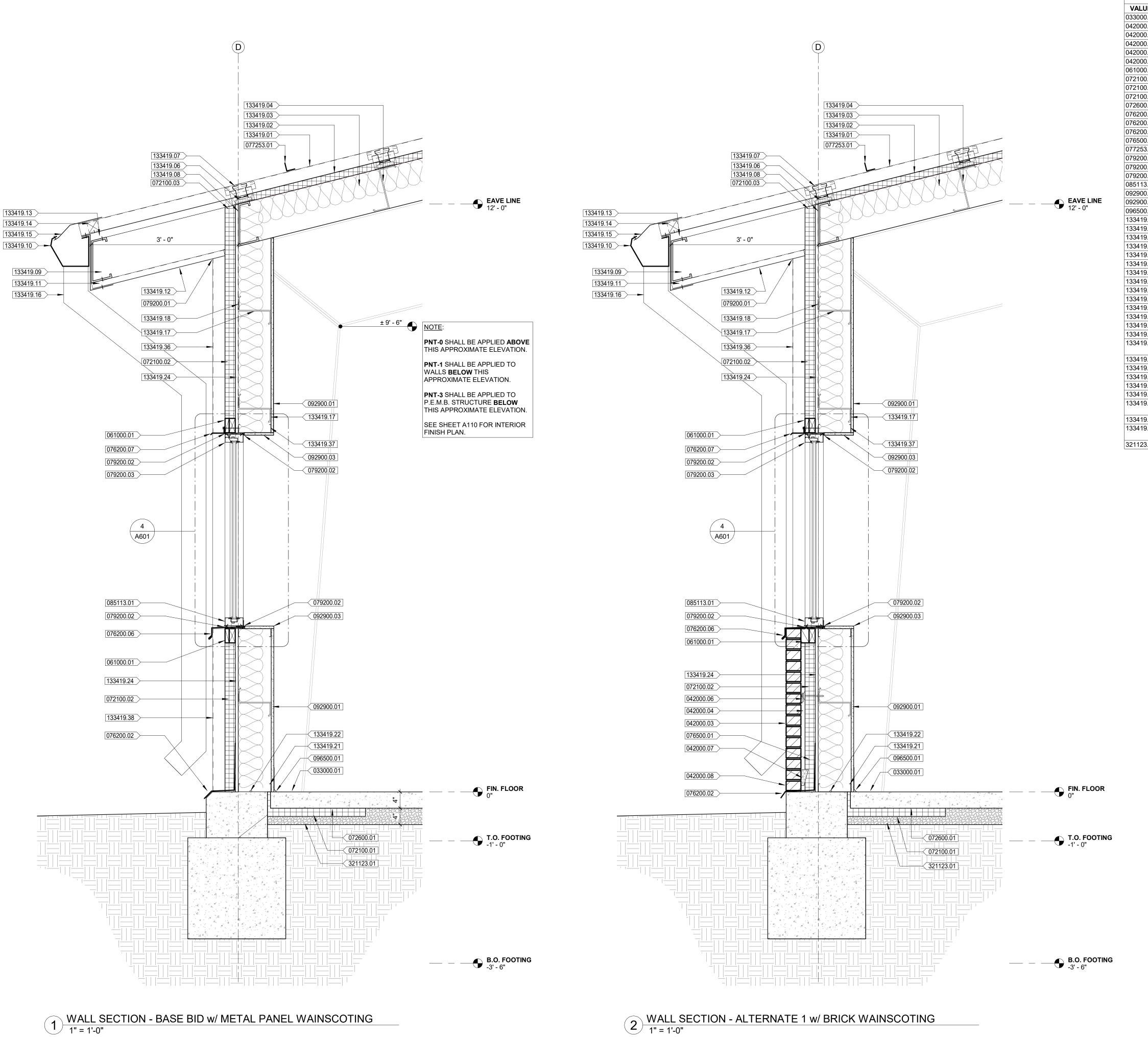
SHEET TITLE:

BUILDING SECTIONS

SHEET NUMBER:



SHEET 22 of 47 JULY 29, 2022



KEYNOTE LEGEND DESCRIPTION 033000.01 4" CONCRETE SLAB-ON-GRADE, SEE STRUCTURAL 042000.03 4" BRICK VENEER WAINSCOTING, 3'-4" HIGH - ALTERNATE 1 042000.04 1" MIN. AIR SPACE 042000.06 BRICK TIES @ 24" O.C. VERT. & 16" HORIZ, TYP. 042000.07 MORTAR NET 042000.08 WEEP VENTS @ 24" O.C. 061000.01 FIRE-RETARDANT TREATED WOOD BLOCKING 072100.01 2" MIN. R-15 RIGID INSULATION, 2'-0" HORIZ. 072100.02 2 1/2" MIN. R-14 RIGID INSULATION, TAPE & SEAL ALL JOINTS 072100.03 BATT INSULATION - FILL VOID 072600.01 15 MIL VAPOR RETARDER 076200.02 THROUGH-WALL FLASHING WITH DRIP EDGE 076200.06 SILL FLASHING WITH HEMMED DRIP EDGE 076200.07 PRE-FINISHED HEAD TRIM WITH DRIP EDGE 076500.01 FLEXIBLE FLASHING 077253.01 SNOW GUARD SYSTEM (EXTEND FULL LENGTH OF ROOF - EDGE TO EDGE) 079200.01 SEALANT 079200.02 BACKER ROD & SEALANT 079200.03 BACKER ROD & SEALANT, BOTH SIDES 085113.01 PRE-FINISHED INSULATED ALUMINUM WINDOW (TYP.) 092900.01 5/8" GYPSUM BOARD, IMPACT RESISTANT, TYP. 092900.03 5/8" GYPSUM BOARD RETURN 096500.01 6" RESILIENT WALL BASE, SEE INTERIOR FINISH PLAN 133419.01 24 GA. PRE-FINISHED METAL ROOF PANELS 133419.02 UNFACED R-11 METAL BUILDING INSULATION 133419.03 FACED R-19 METAL BUILDING INSULATION, FACING SHALL BE BLACK 133419.04 ROOF PURLIN 133419.06 CONT. THERMAL BLOCK (1" x EXTRUDED POLYSTYRENE FOAM SPACER BLOCK - MIN. R-5/IN.) 133419.07 ROOF PANEL CLIP 133419.08 CONT. METAL BUILDING EAVE STRUT 133419.09 CONT. EAVE CHANNEL 133419.10 CONT. PRE-FINISHED METAL GUTTER 133419.11 CONT. FASCIA/CLOSURE 133419.12 PRE-FINISHED METAL SOFFIT PANELS 133419.13 PRE-ENGINEERED METAL BUILDING EAVE STRUCTURAL SUPPORT PER MFR. 133419.14 CLOSURE PLUG 133419.15 EAVE GUTTER STRAP 133419.16 PRE-FINISHED METAL DOWNSPOUT, CONNECT TO UNDERGROUND STORM WATER COLLECTION SYSTEM, SEE CIVIL 133419.17 PRE-ENGINEERED METAL BUILDING WALL GIRTS @ 24" O.C. 133419.18 CONT. THERMAL BLOCK (MIN. R-0.375) 133419.21 PRE-ENGINEERED METAL BUILDING BASE ANGLE OR CHANNEL PER MFR. 133419.22 CONC. FASTENERS AT 24" O.C. 133419.24 3/4" PRE-FINISHED METAL WALL PANEL (CONCEALED) 133419.36 3" DEEP, CONCEALED FASTENER, PRE-FINISHED P.E.M.B. EXTERIOR METAL WALL PANELS - SCREWS FOR ANCHOR CLIPS TO EXTEND THROUGH RIGID INSULATION INTO GIRTS AND BASE ANGLES 133419.37 PRE-ENGINEERED METAL BUILDING HEAD CHANNEL 133419.38 3" DEEP, CONCEALED FASTENER, PRE-FINISHED P.E.M.B. EXTERIOR METAL WALL PANEL WAINSCOTING, 3'-4" HIGH - BASE BID 321123.01 4" COMPACTED GRAVEL FILL (FREE-DRAINING GRANULAR MATERIAL)

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



CODY N. BASHAM - ARCHITECT MO # A-2021000203

3 A S S O C I A T E S, P. C.
gineers • Architects • Surveyors
lumbia, Missouri www.klingner.com
East Ash Street Quincy, IL Galesburg, IL
355.5988 Burlington, IA Pella, IA Hannibal, MO

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:

ISSUE DATE: 07/29/2022

CAD DWG FILE: A310
DRAWING BY: MSG
CHECKED BY: CNB
DESIGNED BY: CNB

SHEET TITLE:

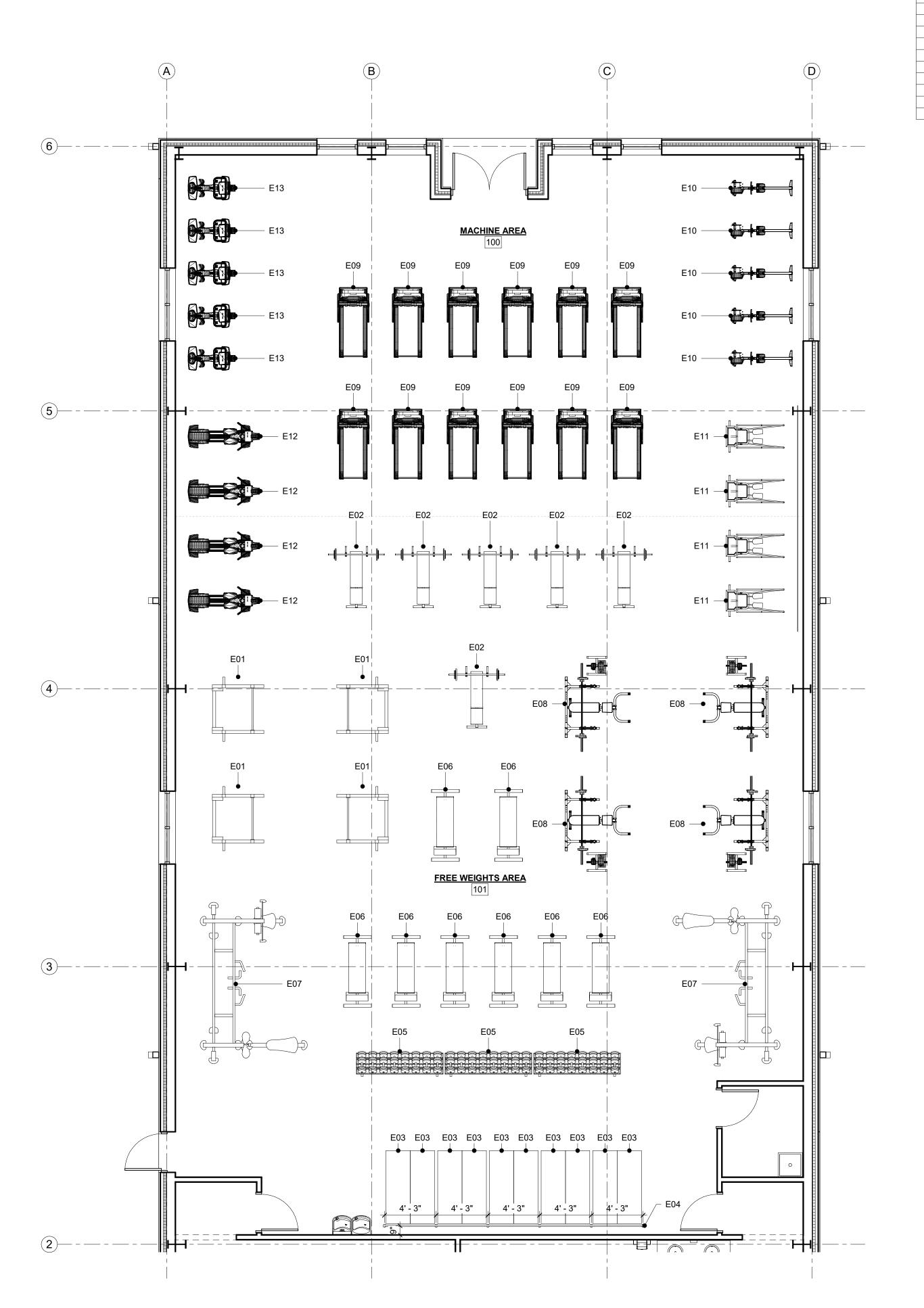
WALL SECTIONS

SHEET NUMBER:

SCALE: 1" = 1'-0"

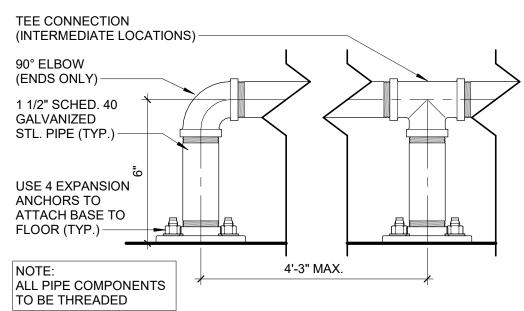
A310

SHEET 23 of 47 JULY 29, 2022



1 EQUIPMENT LAYOUT 3/16" = 1'-0"

STATE OF MISSOURI **EQUIPMENT SCHEDULE** POWER BASIS OF DESIGN COUNT **FURNISHED** INSTALLED SQUAT RACK W/ PULL-UP BAR LEGEND FITNESS MODEL #3121 OWNER OWNER LIFTING BENCH BY OTHERS OWNER OWNER YOGA MAT BY OTHERS OWNER OWNER CONTRACTOR FLOOR-MOUNTED SIT-UP BARS SEE DETAIL 2/A401 CONTRACTOR DUMBBELL RACK BY OTHERS OWNER OWNER BY OTHERS OWNER BENCH OWNER CABLE CROSSOVER MACHINE LEGEND FITNESS MODEL # 1132 OWNER OWNER BENCH PRESS W/ BARBELLS BY OTHERS **OWNER** OWNER TREADMILL 120V, 1-PH BY OTHERS OWNER OWNER ROWING MACHINE 120V, 1-PH BY OTHERS OWNER OWNER STAIR CLIMBER 120V, 1-PH BY OTHERS OWNER OWNER E12 ELLIPTICAL 120V, 1-PH BY OTHERS OWNER OWNER E13 EXERCISE BIKE 120V, 1-PH BY OTHERS OWNER OWNER



2 SIT-UP BAR DETAIL
3" = 1'-0"

EQUIPMENT NOTES

1. ALL EQUIPMENT HAS BEEN SHOWN ON THE PLAN FOR PLANNING AND LAYOUT PURPOSES. REFER TO EQUIPMENT SCHEDULE FOR ITEMS TO BE INCLUDED IN THE CONTRACT.

2. POWER SHOWN IN THE SCHEDULE IS FOR THE OWNER'S USE IN THE SELECTION OF SPECIFIC EQUIPMENT.

3. THE BASIS-OF-DESIGN HAS BEEN NOTED IN THE SCHEDULE. ACCEPTABLE MANUFACTURERS (OR EQUAL PRODUCTS)

B. ROGUE FITNESS

INCLUDE: A. LEGEND FITNESS

C. PRECOR

SCALE: 3/16" = 1'-0"

SCALE: 3" = 1'-0"

MICHAEL L. PARSON,

BASHAM

CODY N. BASHAM - ARCHITECT

MO # A-2021000203

GOVERNOR

KLINGNER & ASSOCIATES, P.C. - ARCHITECTUR MISSOURI STATE CERTIFICATE OF AUTHORITY

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES**

ngineer

CONSTRUCT NEW

FITNESS CENTER

MANAGEMENT,

IKE SKELTON TRAINING **SITE**

DESIGN AND CONSTRUCTION

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 ASSET # 8136300040

REVISION: DATE: REVISION: DATE: **REVISION:** DATE: ISSUE DATE: 07/29/2022

CAD DWG FILE: A401 DRAWING BY: MSG CHECKED BY: CNB DESIGNED BY: CNB

SHEET TITLE:

EQUIPMENT LAYOUT & **SCHEDULE**

SHEET NUMBER:



SHEET 24 of 47 JULY 29, 2022

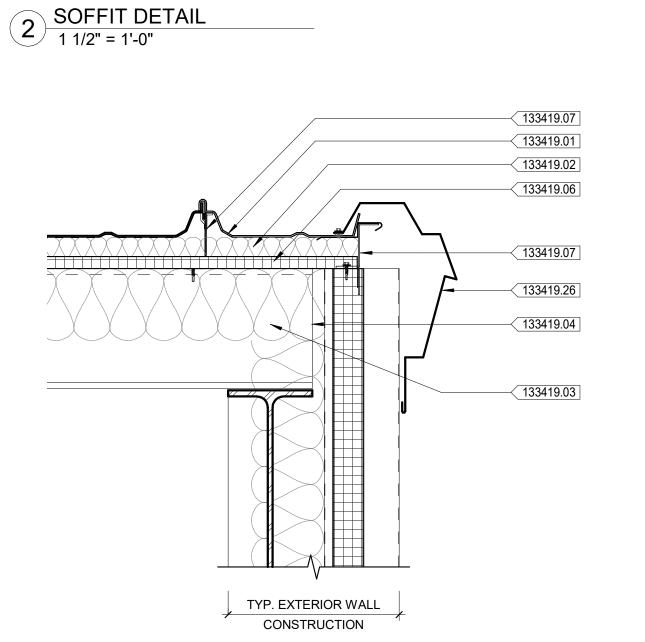
KEYNOTE LEGEND DESCRIPTION 061000.01 FIRE-RETARDANT TREATED WOOD BLOCKING 072100.02 2 1/2" MIN. R-14 RIGID INSULATION, TAPE & SEAL ALL JOINTS 072100.04 BATT INSULATION 072700.01 VAPOR BARRIER 076200.04 SHEET METAL FLASHING 076200.07 PRE-FINISHED HEAD TRIM WITH DRIP EDGE 079200.02 BACKER ROD & SEALANT 079200.03 BACKER ROD & SEALANT, BOTH SIDES 084113.01 PRE-FINISHED ALUM DOOR & FRAME 092216.03 362S162-33 METAL STUDS AT 16" O.C. 092216.05 PROVIDE DEFLECTION TRACK AT TOP OF WALL 092216.06 DIAGONAL METAL STUD BRACING @ 48" O.C. 092900.02 5/8" GYPSUM BOARD, BOTH SIDES 092900.03 5/8" GYPSUM BOARD RETURN 092900.08 PROVIDE WALL MOUNTED DEFLECTION BEAD AT UNDERSIDE OF ROOF DECK 133419.01 24 GA. PRE-FINISHED METAL ROOF PANELS 133419.02 UNFACED R-11 METAL BUILDING INSULATION | 133419.03 | FACED R-19 METAL BUILDING INSULATION, FACING SHALL BE BLACK 133419.04 ROOF PURLIN 133419.06 CONT. THERMAL BLOCK (1" x EXTRUDED POLYSTYRENE FOAM SPACER BLOCK - MIN. R-5/IN.) 133419.07 ROOF PANEL CLIP 133419.12 PRE-FINISHED METAL SOFFIT PANELS 133419.20 CONT. PRE-FINISHED METAL WALL PANEL J-TRIM END TERMINATION 133419.26 PRE-FINISHED METAL RAKE TRIM

133419.36 3" DEEP, CONCEALED FASTENER, PRE-FINISHED P.E.M.B. EXTERIOR METAL WALL PANELS - SCREWS FOR ANCHOR CLIPS TO EXTEND THROUGH RIGID INSULATION INTO GIRTS AND

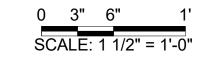
BASE ANGLES

133419.37 PRE-ENGINEERED METAL BUILDING HEAD CHANNEL

092900.08 092216.05 TYP. EXTERIOR WALL CONSTRUCTION 092216.06 072700.01 092216.03 092216.03 072100.04 072100.02 092900.02 072100.02 133419.12 061000.01 079200.02 133419.36 076200.07 092900.03 076200.07 079200.03 079200.02



1 GABLE END DETAIL
1 1/2" = 1'-0"



STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



CODY N. BASHAM - ARCHITECT MO # A-2021000203

& A S S O C I A T E S, P. C.
Engineers • Architects • Surveyor
Columbia, Missouri

Nov East Ash Street

Burlington, IA Pella, IA Hannibal, IA

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/2022

CAD DWG FILE: A501
DRAWING BY: MSG
CHECKED BY: CNB
DESIGNED BY: CNB

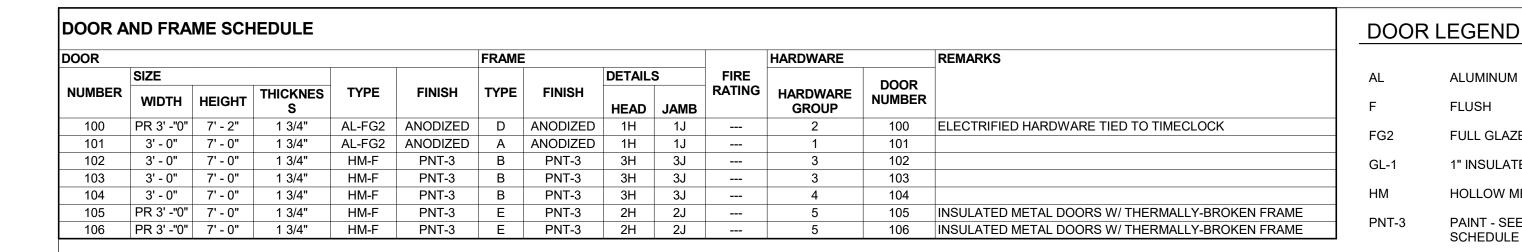
SHEET TITLE:

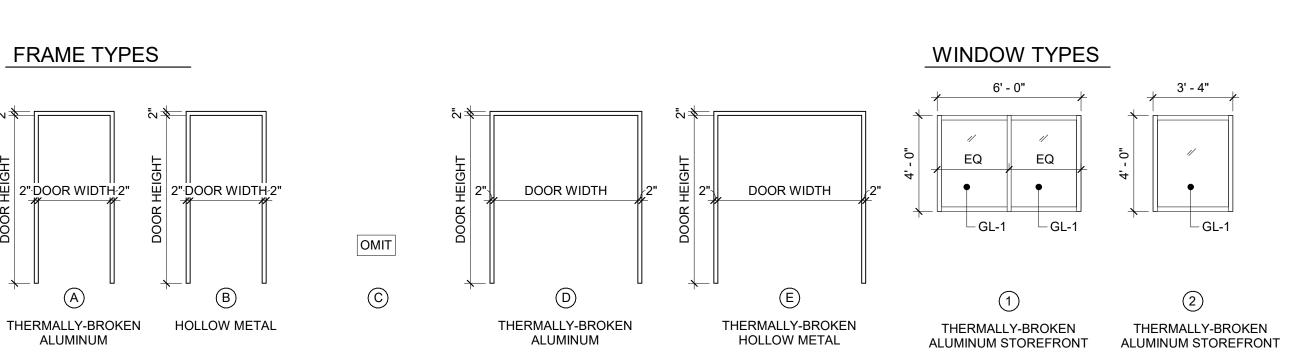
DETAILS

SHEET NUMBER:

A501

SHEET 25 of 47 JULY 29, 2022





GENERAL DOOR NOTES

- 1. DOOR HARDWARE SHALL BE COORDINATED BY THE GENERAL CONTRACTOR AND APPROVED BY THE OWNER. THE GENERAL CONTRACTOR SHALL COORDINATE ALL KEYING REQUIREMENTS.
- 2. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERATING DEVICES ON ACCESSIBLE DOORS SHALL HAVE A SHAPE THAT IS EASY TO GRASP WITH ONE HAND AND DOES NOT REQUIRE
- 3. THE GENERAL CONTRACTOR SHALL VERIFY ALL DOOR OPENING SIZES, FRAME SIZES, AND WALL WIDTHS PRIOR TO PLACING ORDER.

TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE.

- 4. DOOR CLOSERS SHALL BE ADJUSTED SO THAT FROM AN OPEN POSITION OF 90 DEGREES, THE TIME REQUIRED TO MOVE THE DOOR TO A POSITION OF 12 DEGREES FROM THE LATCH IS 5
- 5. THE FORCE FOR PUSHING OR PULLING OPEN A DOOR OTHER THAN FIRE DOORS SHALL BE AS A) INTERIOR HINGED DOORS AND GATES= 5LBS MAXIMUM.
- 6. ALL GLASS BELOW THE HEIGHT OF 7 FEET ABOVE THE FINISHED FLOOR SHALL BE TEMPERED
- 8. CONTRACTOR SHALL COORDINATE KEYING WITH THE OWNER.

KEYNOTE LEGEND DESCRIPTION

GOVERNOR 061000.01 FIRE-RETARDANT TREATED WOOD BLOCKING 072116.01 SOUND ATTENUATION BATT 076200.01 BREAK METAL 076200.06 SILL FLASHING WITH HEMMED DRIP EDGE 076200.07 PRE-FINISHED HEAD TRIM WITH DRIP EDGE 079200.01 SEALANT 079200.02 BACKER ROD & SEALANT 079200.03 BACKER ROD & SEALANT, BOTH SIDES 079200.04 SEALANT, BOTH SIDES 081100.01 HOLLOW METAL FRAME 081100.02 THERMALLY-BROKEN HOLLOW METAL FRAME

STATE OF MISSOURI

MICHAEL L. PARSON,

CODY N. BASHAM - ARCHITECT MO # A-2021000203

> C 0

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES

CONSTRUCT NEW FITNESS CENTER

DESIGN AND CONSTRUCTION

MANAGEMENT,

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300 ASSET # 8136300040

REVISION: DATE: REVISION: DATE **REVISION:** DATE:

ISSUE DATE: 07/29/2022

CAD DWG FILE: A601 DRAWING BY: MSG CHECKED BY: CNB DESIGNED BY: CNB

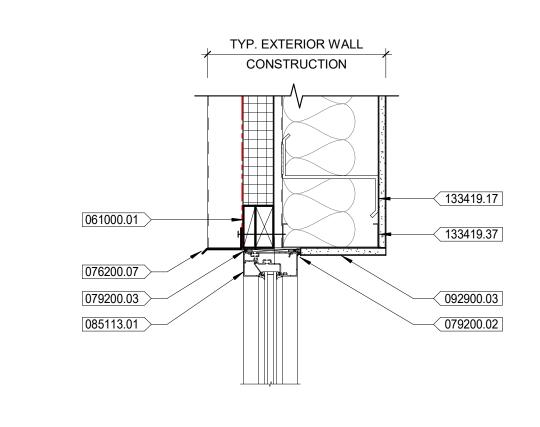
SHEET TITLE:

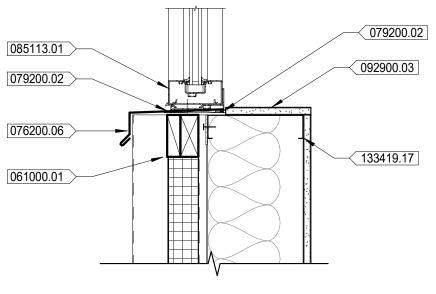
DOOR SCHEDULE & DETAILS

SHEET NUMBER:

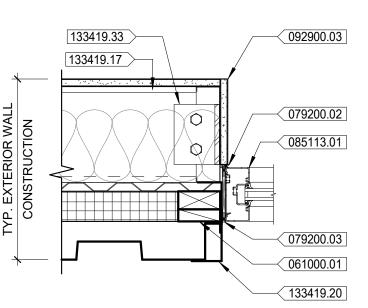
A601 SHEET 26 of 47

JULY 29, 2022

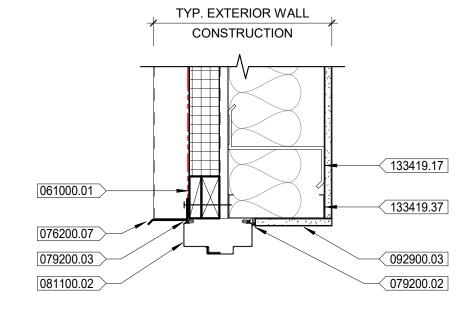




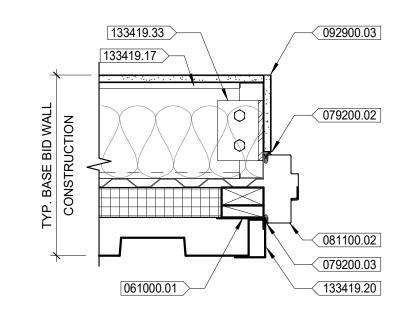




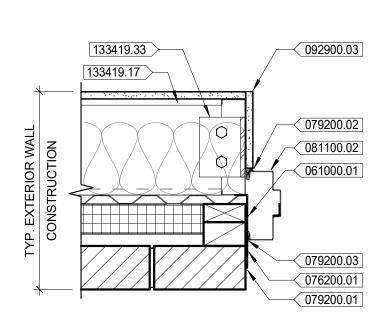
S WINDOW JAMB DETAIL 1/2" = 1'-0"



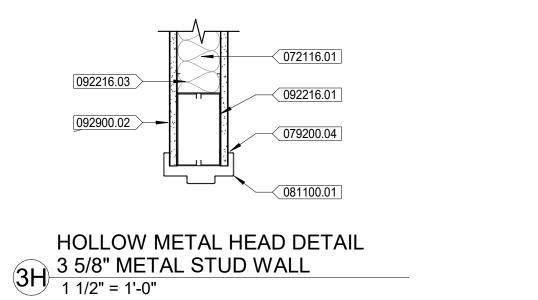




HOLLOW METAL JAMB DETAIL BASE BID: METAL PANEL
1 1/2" = 1'-0"



HOLLOW METAL JAMB DETAIL ALTERNATE 1: BRICK WAINSCOT 2Ja 1 1/2" = 1'-0"



ALUMINUM

FULL GLAZED DIVIDED

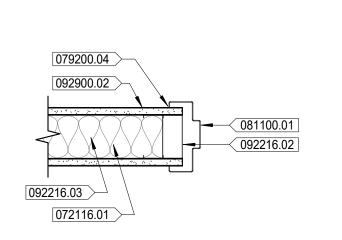
HOLLOW METAL

SCHEDULE

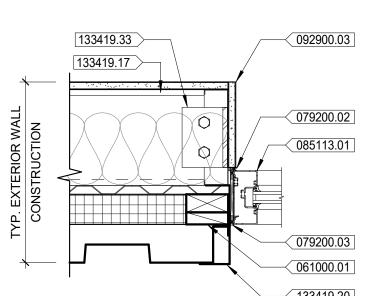
1" INSULATED GLASS UNIT

PAINT - SEE INTERIOR FINISH

FLUSH



HOLLOW METAL JAMB DETAIL 3 5/8" METAL STUD WALL
1 1/2" = 1'-0"



ALUMINUM HEAD DETAIL 1H EXTERIOR WALL
1 1/2" = 1'-0" 092900.03 079200.02

DOOR TYPES

SEE SCHD

FULL GLAZED DIVIDED

AL-FG2

TYP. EXTERIOR WALL

CONSTRUCTION

133419.17

133419.37

092900.03

079200.02

133419.20

SEE SCHD

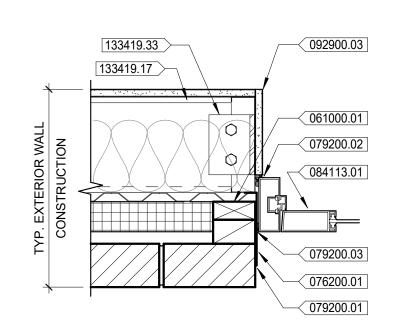
HM-F

061000.01

076200.07

079200.03

ALUMINUM JAMB DETAIL BASE BID: METAL PANEL
1 1/2" = 1'-0"



ALUMINUM JAMB DETAIL 1Ja ALTERNATE 1: BRICK WAINSCOT

079200.02

133419.17

0 3" 6"

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

084113.01 PRE-FINISHED ALUM DOOR & FRAME 085113.01 PRE-FINISHED INSULATED ALUMINUM WINDOW (TYP.) 092216.01 | HEADER - (2) 600S162-54 METAL STUDS

092900.02 5/8" GYPSUM BOARD, BOTH SIDES

092216.02 (2) 362S162-33 METAL STUDS AT JAMB 092216.03 362S162-33 METAL STUDS AT 16" O.C. B) SLIDING OR FOLDING DOORS= 5LBS MAXIMUM.

092900.03 5/8" GYPSUM BOARD RETURN GLASS. ALL GLASS ADJACENT TO DOORS SHALL BE TEMPERED. 133419.17 PRE-ENGINEERED METAL BUILDING WALL GIRTS @ 24" O.C. 133419.20 CONT. PRE-FINISHED METAL WALL PANEL J-TRIM END TERMINATION 7. FIRE RATED LABELS ON DOORS AND FRAMES SHALL NOT BE PAINTED OVER.

133419.33 PRE-ENG. MTL. BLDG. STEEL CHANNEL & CLIP AT EACH GIRT (BEYOND) 133419.37 PRE-ENGINEERED METAL BUILDING HEAD CHANNEL

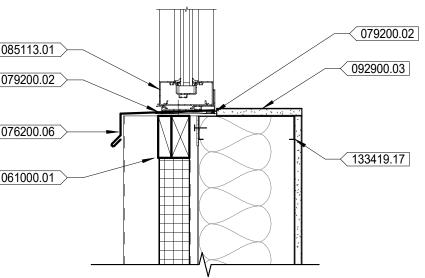
079200.02

076200.06

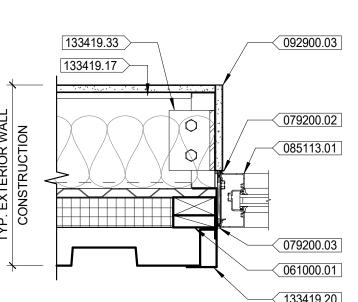
061000.01

WINDOW SILL DETAIL

ALTERNATE 1: BRICK WAINSCOT 1 1/2" = 1'-0"







DESIGN CRITERIA BUILDING CODES A. IBC 2018 B. ASCE 7-16 2. DESIGN LOADS: A. Occupancy Category II B. Dead Loads a. Dead load = weight of PEMB framing as determined by PEMB manufacturer b. Roof = 20 psf c. Collateral C. Live Loads a. Roof = 20psf D. Roof Snow Load a. Ground Snow Load, Pg = 20 psf b. Flat Roof Snow Load, P_f = 14 psf c. Snow Load Importance, I_s = 1.0 d. Snow Exposure Factor, C_e = 1.0 e. Roof Thermal Factor, C_t = 1.0 f. Drifting: (See Special Loading Diagram for Drift Loads) E. Wind Loading a. Basic Wind Speed, V_{ult} = 108 mph b. Risk Category = II c. Exposure Category = C d. Internal pressure Coefficient, $GC_{pi} = \pm 0.18$ e. Components and Cladding Design per ASCE 7-16 F. Seismic Loading a. Risk Category = II b. Importance Factor, I_e = 1 c. Site Class C d. $S_{ds} = 0.163 (S_s = 18.8\%)$ e. $S_{d1} = 0.121 (S_1 = 10.1\%)$ f. Seismic Response Coefficient, C_s = 0.055 g. Seismic Design Category B h. Design Coefficients and Factors for Seismic Force-Resisting Systems • Resisting System - Steel Ordinary Concentriically Braced Frames. . Response Coefficient, R = 3.25 2. Deflection Amplification Factor, C_d = 3.25 3. System Overstrength Factor, $\Omega_0 = 2.00$ Component Design per ASCE 7-16 j. Seismic Base Shear = W x C_s PRE-ENGINEERED METAL BUILDING (PEMB)

- 1. The entire pre-engineered metal building system shall be designed by the metal building manufacturer in conformance to the 2018 International Building Code and/or state/local requirements.
- 2. The pre-engineered metal building manufacturer is responsible for the design of the complete building system (steel framing, anchor bolts, purlins, girts, bracing, connections, roofing, wall panels, etc.) The manufacturer shall provide a letter sealed by a Professional Engineer licensed in the state of Missouri stating the building meets the indicated code, performance, and loading
- 3. The pre-engineered metal building manufacturer shall be certified by the American Institute of Steel Construction (AISC) Category
- MB, and building shall be produced in an AISC-Certified Facility. 4. The metal building shall be designed, detailed, fabricated, and erected according to all requirements of AISC, AISI, AWS, and the
- latest edition of The Metal Building Manufacturers' Association publication titled, "Metal Building Systems Manual." 5. The Contractor shall submit shop drawings of the entire metal building system for review. The Contractor shall also submit a complete structural design analysis of the building system. The shop drawing submittal shall include all anchor bolt requirements and foundation reactions. All shop drawings and calculation submittal shall be sealed by a Professional Engineer licensed in the state of Missouri. All drawings and calculations submitted for review shall be 100% complete; incomplete submittals will not be reviewed by the Structural Engineer of Record.
- 6. Design loads to be used in connection with the Metal Building design are per the "Design Criteria" on sheet S001. In addition to the actual dead load, an additional collateral roof framing dead load of 5psf shall be included. Coordinate any equipment loads with the mechanical and architectural drawings
- 7. The pre-engineered manufacturer shall provide all girts, purlins, and other components required for a complete system. The components shall be properly supported by the metal building system. Allowable deflection of components shall be in accordance with the 2018 International Building Code.
- 8. The foundation design is based on industry standards. The Contractor shall be responsible for coordination of and revisions required as a result of a change in the building design assumptions, including redesign of foundations.
- 9. The size, number, and placement pattern of all anchor bolts shall be determined by the pre-engineered building manufacturer. All
- columns shall have a minimum of (4) F1554 anchor bolts. 10. The pre-engineered metal building shall be designed by the manufacturer to resist lateral loads as follow:
- A. Interior frame lines Rigid frames (pinned based columns)
- B. Perimeter wall lines Braced bays (coordinate brace locations with Architectural plans)
- 11. The metal building erector shall provide all temporary guying and bracing. 12. Unless otherwise noted or specified, all steel members shall be cleaned and painted in accordance with the manufacturer's
- standard procedures or the contract documents, whichever is more stringent.
- 13. The foundations have been designed for pinned column bases. Fixed base columns are not permitted without the Structural Engineer of Record's written approval.
- 14. Base plates shall not be modified without written approval from the Structural Engineer of Record and the pre-engineer metal building engineer.
- 15. Metal wall and roof panels are considered structural component and shall not be cut/altered without authorization from the preengineered metal building engineer. Door and window locations shall not deviate from the plans without written authorization from the Architect and pre-engineered metal building engineer.

ABBREVIATIONS

& AB ALT ARCH @	AND ANCHOR BOLT ALTERNATE ARCHITECT AT	LG LL LLH LLV LONG LWC	LONG LIVE LOAD LONG LEG HORIZONTAL LONG LEG VERTICAL LONGITUDINAL LIGHT WEIGHT CONCRETE
BLDG BM BO BOT BRG	BUILDING BEAM BOTTOM OF BOTTOM BEARING	MAX MECH MIN	MAXIMUM MECHANICAL MINIMUM
BRDG BYD	BRIDGING BEYOND	NO (#) NTS	NUMBER NOT TO SCALE
CIP CJ CL (&) CLR CMU	CAST IN PLACE CONSTRUCTION JOINT CENTERLINE CLEAR CONCRETE MASONRY UNIT	OC OH OPNG OPP	ON CENTER OPPOSITE HAND OPENING OPPOSITE
COL CONC CTR	COLUMN CONCRETE CENTER	PAR PEMB PERP PL (P)	PARALLEL PRE-ENGINEERED METAL BUILDING PERPENDICULAR PLATE
DBL DIA (Ø) DIAPH	DOUBLE DIAMETER DIAPHRAGM	PSF PT	POUNDS PER SQUARE FOOT PRESSURE TREATED
DL DWLS	DEAD LOAD DOWELS	REINF RO RTU	REINFORCING ROUGH OPENING ROOF TOP UNIT
EA EF ELEV (EL) EMBED EW EX	EACH EACH FACE ELEVATION EMBEDMENT EACH WAY EXISTING	SCH SIM SL (﴿) STAGG STD STIFF	SCHEDULE SIMILAR STEEL LINE STAGGERED STANDARD STIFFENER
FB FDN FF FLR FTG FV	FIELD BEND FOUNDATION FINISHED FLOOR FLOOR FOOTING FIELD VERIFY	TBR THK THRU TO TOF TOS	TO BE REMOVED THICK THROUGH TOP OF TOP OF FOOTING TOP OF STEEL
GA GALV	GAUGE GALVANIZED	TOW TRANS TYP	TOP OF WALL TRANSVERSE TYPICAL
HDG HDR HGR	HOT DIP GALVANIZED HEADER HANGER	UNO	UNLESS OTHERWISE NOTED
HORIZ HS HSS HT	HORIZONTAL HEADED STUD HOLLOW STRUCTURAL SECTION HEIGHT	VERT W/ WF	VERTICAL WITH WIDE FLANGE
ID	INSIDE DIAMETER	W/O WP	WITHOUT WORKING POINT
JST	JOIST	WWF	WELDED WIRE FABRIC

- 1. The structure is designed to be self-supporting and stable after the building is fully completed. It is solely the contractor's responsibility to determine erection procedure and sequence and insure the safety of the construction personnel, public, building and its components parts, and adjacent buildings and properties. This includes the addition of whatever temporary or permanent shoring, bracing, needling, underpinning, or sheet piling, etc. that may be necessary to brace new construction, adjacent buildings, so that the structure is braced for wind, seismic, gravity, construction loads, etc. and that no horizontal or vertical settlement or any damage occurs to the adjacent existing structure. Temporary supports shall be maintained in place until permanents supports and/or shoring and bracing are
- 2. Fall protection support from perimeter columns or walls shall be provided in accordance with OSHA requirements as required. Such material shall remain the contractor's property after the completion of the project.
- 3. It is the contractor's responsibility to enforce all applicable safety codes and regulations during all phases of construction. 4. The contractor shall perform all construction for the project in a manner and sequence that are based on accepted industry standards
- that recognize the interaction of the components that comprise the structure, without causing distress, unanticipated movements or irregular load paths as a result of the construction means and methods employed. 5. Construction loads shall not exceed design live loads. The contractor shall be responsible for all design required to support
- construction equipment used in constructing this project. Shoring and reshoring is the responsibility of the contractor. 6. Principal openings through the framing are shown on these drawings. The general contractor shall examine the structural and mechanical drawings for the required openings and shall verify size and location of all openings with the mechanical contractor. Providing all openings required by the mechanical, electrical, plumbing, or other trades shall be part of the general contract, whether or not shown in the structural drawings. Any deviation from the openings shown on the structural drawings shall be brought to the
- engineer's attention for review. 7. All contractors are required to examine the drawings and specifications carefully, visit the site and fully inform themselves as to all existing conditions and limitations, prior to agreeing to perform the work. Failure to visit the site and familiarize themselves with the existing conditions and limitations will in no way relieve the contractor from furnishing any materials or performing any work in accordance with drawings and specifications without additional cost to the owner.
- 8. Contractor shall verify all dimensions and conditions at the job site before commencing work and shall report any discrepancies to the
- 9. Omissions or conflicts between various elements of the drawings, notes, details and specifications shall be brought to the attention of the engineer and resolved before proceeding with the work.
- 10. Details labeled "Typical Details" on drawings apply to situations occurring on the project that are the same or similar to those specifically details. Such details apply whether or not details are referenced at each location. Notify engineer of clarification regarding
- applicability of "Typical Details". 11. Work these drawings with architectural, civil, mechanical, and electrical drawings.
- 12. Do not scale drawings.
- 13. Should any of the general notes conflict with any details or instructions on plans, the strictest provision shall govern.
- A. These drawings shall be checked and coordinated with other materials and contracts by the general contractor and shop drawings and submittals shall bear the contractor's review stamp with the checker's initials before being submitted to the architect for
- B. When the fabricator has been authorized to use the architect and engineer's drawings as erection drawings, the fabricator must remove all title blocks, professional seals and any other reference to the architect and engineer from that erection drawing. The fabricator's name and title shall be placed on the erection drawing.

- All building pad preparation shall follow the recommendations of the geotechnical report, unless otherwise noted. 2. All trees, brush, roots, topsoil, rubble, organically contaminated or otherwise objectionable materials encountered are to be removed
- from the structural areas of the site. 3. Subgrade sectors which will exist in cut and those which are to support fill structures are to be proof rolled. Areas exhibiting instability
- are to be undercut and back filled on a lift-by-lift basis with each lift carefully compacted.
- 4. If unstable subgrade sectors cannot be stabilized by excavation and recompaction, then crushed stone or similar coarse aggregate
- material shall be rolled into the subgrade until a firm subgrade reaction is achieved. 5. The proposed engineered fill materials are to be placed in lifts not exceeding eight (8) inches in loose measured thickness.
- A. Each lift is to be compacted as follows: a. Slab-on-grade: Minimum of 98% maximum density by ASTM D698

STRUCTURAL STEEL

- 1. Detailing, fabrication and erection shall conform to the AISC Specifications and Standard Code of Practice for the year referenced in the building code noted, except as modified by these notes and the project specifications.
- 2. Steel shall conform to the following grades unless otherwise noted: A. W Shapes – ASTM A992 Grade 50 (Fy=50 ksi)
- B. Plate, Angles, M, S and C Shapes ASTM A36 (Fy=36 ksi)
- C. HSS Tubular Shapes ASTM A500 Grade B (Fy=46 ksi)
- D. Pipes ASTM A53 (Fy=35 ksi) Bolts - ASTM 325-N, 3/4" diameter minimum.
- F. Washers ASTM F436
- G. Deformed Bar Anchor (DBA) ASTM A496 (FY-60 ksi) and AWS D1.1
- H. Anchor Rods (Bolts) ASTM F1554 Grade 36 (Fy=36 ksi) (If exposed to weather or incontact with treated timber hot dip
- galvanize per ASTM A123) Welding Electrodes – E70xx 3. Unless being Galvanized, all structural steel shall be primed. Asphaltic paints are not acceptable. Exposed Steel shall be painted.
- Field Touch up Primer and Paint. 4. All column base plates shall have a minimum of four (4) anchor rods.
- 5. Bolts not designated as slip critical bolts shall be considers bearing bolts. Tighten bearing bolts to a snug condition per AISC
- 6. All welding shall be in accordance with the "Structural Welding Code", AWS D1.1, Latest Edition.
- 7. Fabricate all beams with the mill camber up. 8. Work these drawings with architectural drawings for architectural clearances.
- 9. General contractor shall verify all structural beam locations, mechanical units weights and opening sizes and locations with
- mechanical contractor and vendor's drawings for actual mechanical unit purchased. 10. Splicing of structural members where not detailed on the drawings is prohibited without prior approval of the structural engineer. 11. Cuts, holes, coping, etc. required for work of other trades shall be shown on the shop drawings and made in the shop. Cuts or
- burning of holes in the structural steel members in the field will not be permitted, unless specifically approved in each case by the 12. All structural steel, including base plates and top of anchor bolts that are exposed to soil are to be coated with an approved coal tar
- epoxy, 16 mils minimum thickness. 13. Anchor Rods shall be located using templates with exposed threads (only) of rods greased after concrete has set. 14. Grout for Baseplates: Prepacked, non-metallic, non-gaseous and non-shrink per CRD C621 and ASTM C1107 at fluid consistency
- (flow cone) of 20-30 seconds. Minimum 28 Day Compressive Strength = 7000 PSI. 15. Slip critical bolts shall be used at moment connections, column splices, and cross bracing connections, unless noted otherwise. Slip
- critical bolts shall be tightened per AISC Specifications.
- 16. Unless otherwise noted, all connections at HSS sections shall be designed and detailed in accordance with the AISC "Hollow Structural Sections Connection," first edition.

POST INSTALLED ANCHORS

- 1. Concrete adhesive anchors Hilti HY200 or approved equal. Concrete Mechanical Anchors Hilti Kwik Bolt TZ or approved equal. 2. Masonry adhesive anchors Hilti HY270 or approved equal. Masonry Mechanical Anchors Hilti Kwik Bolt III in grouted CMU or approved equal.
- 3. Submit ICC-ES reports for all post installed anchors.
- 4. Install all post installed anchors per the product's ICC-ES report and the manufacturer's written instructions. 5. Post installed anchors shall be inspected per the product's ICC-ES report.
- 6. Install adhesive anchors in dry hammer drilled holes.

FOUNDATION

- 1. The contractor shall familiarize themselves with the survey and the geotechnical investigation report before starting construction. All foundation work shall be in accordance with the recommendation of the geotechnical report by Geotechnics dated November 12, 2020, except where noted otherwise on drawings or specifications
- 2. A soils testing laboratory will be retained by the owner for project construction review to insure conformance with the construction documents during the excavation, back fill, and foundation phases of the project.
- 3. Foundation design is based on:
- A. 2000 psf net allowable soil bearing pressure for isolated column footings. B. 1500 psf net allowable soil bearing pressure for continuous wall footings.
- 4. All fill material shall be free of organic contaminations and other deleterious matter.
- 5. All soil surrounding and under footings shall be protected from frost action and freezing during the course of construction. 6. Notify structural engineer of any unusual soil conditions that are in variance with the geotechnical report.
- 7. Footing excavations should be made to the required lines and grades as rapidly as possible. Footing excavations be left open for a minimum of time to prevent disturbance to the foundation soils. Foot traffic should be prevented on the base of the footing excavations if disturbance is noted. Hand cleaning, if required and setting of reinforcing steel should then be accomplished from the sides of the excavation.

OVER EXCAVATION FILL UNDER ALL FOOTINGS

- 1. Portions of the loessial soils and/or recent fill will be soft and unstable due to excessive moisture. Unsuitable (soft or unstable) natural soils and/or recent fill shall be removed from the footing excavations, and replaced with suitable material as recommended below. Observation by a geotechnical engineer is required at the time of excavation to determine the presence and competency of the expected bearing strata and to document removal of unsuitable soils.
- 2. Replacement material for unsuitable soils in footings may consist of suitable lean clay (LL≤45%, Pl≤22%) or granular material (MODOT Type V) that is placed in 8" or less lifts and compacted to at least 95% of the standard proctor maximum dry density (ASTM D 698) at moisture contents of - 2% to +4% of optimum or flowable fill (Controlled Low Strength Material, CLSM).
- 3. The depth of overexcavation under footings should be at least 2 feet below the bottom of footing(or to adequate bearing material, whichever is deeper) and the overexcavation should be at least 50% wider than the footing width for lateral stress dissipation. If flowable fill is used as replacement material below footings, over widening is not necessary. Backfill materials required for confined spaces such as the former septic tank (if present) and/or other buried structures left in-place should consist of clean gravel or crushed stone that is compacted to at least 75% of the maximum relative dry density as per ASTM D 4253 and D 4254 or flowable fill.

SPECIAL STRUCTURAL INSPECTIONS AND TESTING

- 1. Owner will engage a qualified testing and inspecting agency to perform field special structural inspections and testing in accordance
- with the applicable International Building Code and to submit reports. 2. Special inspections will conform to Chapter 17 of the International Building Code, IBC, 2018. Special inspections include:
- A. Steel Construction 1705.2 B. Concrete Construction - 1705.3
- C. Soils 1705.6
- D. Wind Resistance Construction 1705.11

E. Siesmic Resistance Construction - 1705.12

CAST-IN-PLACE CONCRETE

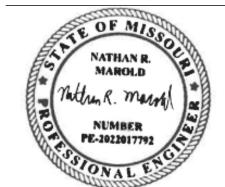
- 1. All concrete construction shall conform to ACI 301, "Specification for Structural Concrete" and ACI 302, "Guide for Concrete Floor and Slab Construction", ACI 305 "Specification for Hot Weather Concreting" and ACI 306, "Standard Specification for Cold Weather Concreting", unless noted otherwise for the year referenced in the building code noted.
- 2. All detailing, fabrication and placing of reinforcing bars, unless otherwise noted, shall conform to ACI 318, "Building Code Requirements for Structural Concrete", ACI 117, "Specification for Tolerances for Concrete Construction and Materials", and the latest ACI detailing manual. 3. Concrete Types:
- A. Interior Concrete:
- a. Min. Cementitious Content = 564 lb/cu yd
- b. Max Water-Cement Ratio = 0.45 c. Specified 28-day Compressive Strength, fc' = 4000 psi
- d. Specified Slump Range for Placement (with W.R.) = 3 5 inches e. Specified Air Content % by Volume = 0 - 3 (Entrapped)
- f. Max Size Aggregate = 3/4"
- B. Concrete Permanently Exposed to Weather; Exterior Walls, Exterior Footings: a. Min. Cementitious Content = 564 lb/cu yd
- b. Max Water-Cement Ratio = 0.45 c. Specified 28-day Compressive Strength, fc' = 4000 psi
- d. Specified Slump Range for Placement (with W.R.) = 3 5 inches e. Specified Air Content % by Volume = 6.0 ± 1.5
- f. Max Size Aggregate = 3/4" C. Concrete Permanently Exposed to Weather & Deicing Chemicals; Exterior Stoops:
- a. Min. Cementitious Content = 564 lb/cu yd
- b. Max Water-Cement Ratio = 0.40 c. Specified 28-day Compressive Strength, fc' = 4000 psi
- d. Specified Slump Range for Placement (with W.R.) = 3 5 inches e. Specified Air Content % by Volume = 6.0 ± 1.5
- . Max Size Aggregate = 3/4"
- D. All cement shall be Type I or Type III Portland Cement per ASTM C150. Types IA and IP are not acceptable. Use one brand of cement
- E. Minimum cementitious content shall consist of 100% cement or a combination of flyash per Note e, or a combination of cement and ground granulated blast furnace slag (GGBFS) per note f. Flyash shall not be used in combination with GGBFS as a substitute for
- F. Flyash is permitted and shall conform to ASTM C618 Type C or F, but shall not exceed 20% of cementitious content by weight indicated above on a substitution basis and shall be included in the water-cement ratio.
- G. Ground granulated blast furnace slag (GGBFS) is permitted and shall conform to ASTM C989, but shall not exceed 15% of cementitious content by weight indicated above on a substitution basis and shall be included in the water-cement ratio.
- H. Concrete used for floors shall have 1800 psi, 3 day strength. Mixes to be pumped shall be so identified on the mix design submittal. All pumped mixes shall have a mid-range or high-range water reducer.
- I. All admixtures other than superplasticizers shall be added at the batch plant. Superplasticizers, designed for addition to the mix at the plant, may be added at the batch plant with verifications from the engineer and verification that the water-cement ratio has not been exceeded. Superplasticizers added at the site shall be in pre-measured containers from the batch plant.
- J. All concrete used for cast-in-place concrete slabs shall contain the specified water reducing or water reducing/retarding admixture. All concrete slabs, placed at air temperature 50°F shall contain the specified non-corrosive, non-chloride accelerator. All concrete placed a air temperature above 80°F shall contain specific water-reducing/retarder admixture. All concrete required to be air-entrained shall contain an approved air-entraining admixture. All pumped concrete shall contain the specified high-range water-reducing admixture. Concrete with
- a water-cement ratio between 0.4 and 0.6 shall contain the specified water-reducer. K. Calcium chloride shall not be permitted nor shall any admixture containing calcium chloride be permitted.
- 4. All pipe sleeve openings through concrete slabs shall be formed with standard steel pipe. 5. No electrical conduit shall be placed above the welded wire fabric or top reinforcing of slab.
- 6. All aluminum in contact with concrete or dissimilar metals shall be coated with two coats of coal tar epoxy, approved by the engineer, unless
- 7. Concrete shall be discharged at the site within 1 ½ hours after water has been added to the cement and aggregates. Addition of water to the mix at the project site will not be permitted. All water must be added at the batch plant. Slump may be adjusted only through the use of additional water reducing admixtures or high range water reducing admixture.
- 8. All concrete shall be placed without horizontal construction joints, except where specifically noted. 9. All exposed edges of concrete members shall be chamfered ¾" unless shown otherwise.
- 10. See architectural drawings for concrete finishes, masonry anchors, and for miscellaneous embedded plates, bolts, anchors, angles, etc. 11. The placement of sleeves, outlet boxes, box-outs, anchors, etc., for the mechanical, electrical and plumbing trades is the responsibility of the trade involved; however, any box-outs not covered by typical details in structural drawings shall be submitted for approval.
- 12. Reinforcing bars shall conform to ASTM A615, Grade 60, No tack welding of reinforcing in the field will be permitted. 13. Wire bar supports shall be furnished for all reinforcing within slabs, inclusive of welded wire fabric. Bottom bars in slabs-on-grade may be supported by other suitable supports. Reinforcing shall be properly positioned prior to concrete placement and may not be re-positioned once concrete operations have begun. Wire bar and other types of supports shall be in accordance with the concrete reinforcing steel institute manual of standard practice.
- 14. Reinforcement shall be continuous through all construction joints unless otherwise noted on drawings. 15. All hooks shown on drawings shall be ACI standard hooks, unless otherwise noted.
- 16. Where continuous bars are called for, they shall run continuously around corners and be lapped at necessary splices. Lap lengths shall be as
- given in the splice and development table. 17. Provide additional reinforcing at the side and corners of all openings in concrete in accordance with typical details.
- A. Minimum additional requirements are as follows: a. (2)-#5 top and bottom in slabs
- b. (2)-#5 each face in walls
- c. (2)-#5 x 4'-0" long diagonally each corner of opening
- B. Extend bars a minimum of 2'-0" beyond openings, hook where extension is not possible. 18. In reinforced concrete walls, grade beams and trench footing provide corner dowels of same size and spacing as horizontal reinforcing.
- Dowels shall lap with horizontal reinforcing in each direction.
- 19. The following minimum concrete cover shall be provide for reinforcement, unless otherwise noted: A. Earth formed and cast directly against soil – 3"
- B. Cast against forms but exposed to earth and weather
- a. #6 and Larger 2" b. #5 and Smaller - 1 ½"
- C. Slabs and walls not exposed to earth or weather $-\frac{3}{4}$ " D. Others - 2" 20. Reinforcing bars shall have a minimum clear spacing or 4"
- 1'-7"
- 2'-0" 2'-6" 3'-6" 4'-0"

21. SPLICE LENGTHS:

- A. When lapping two different size bars, use the lap dimension of the smaller bar or the anchorage dimension of the larger bar, use
- whichever dimension is larger.

4'-6"

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



07/29/2022 NATHAN R. MAROLD - ENGINEER MO # PE-2022017792

> C 0

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 8136300040 ASSET#

REVISION: DATE **REVISION:** DATE **REVISION:** DATE:

ISSUE DATE: 07/29/2022 CAD DWG FILE: S001 DRAWING BY: NRM/ANM CHECKED BY: AMB DESIGNED BY: NRM/ANM

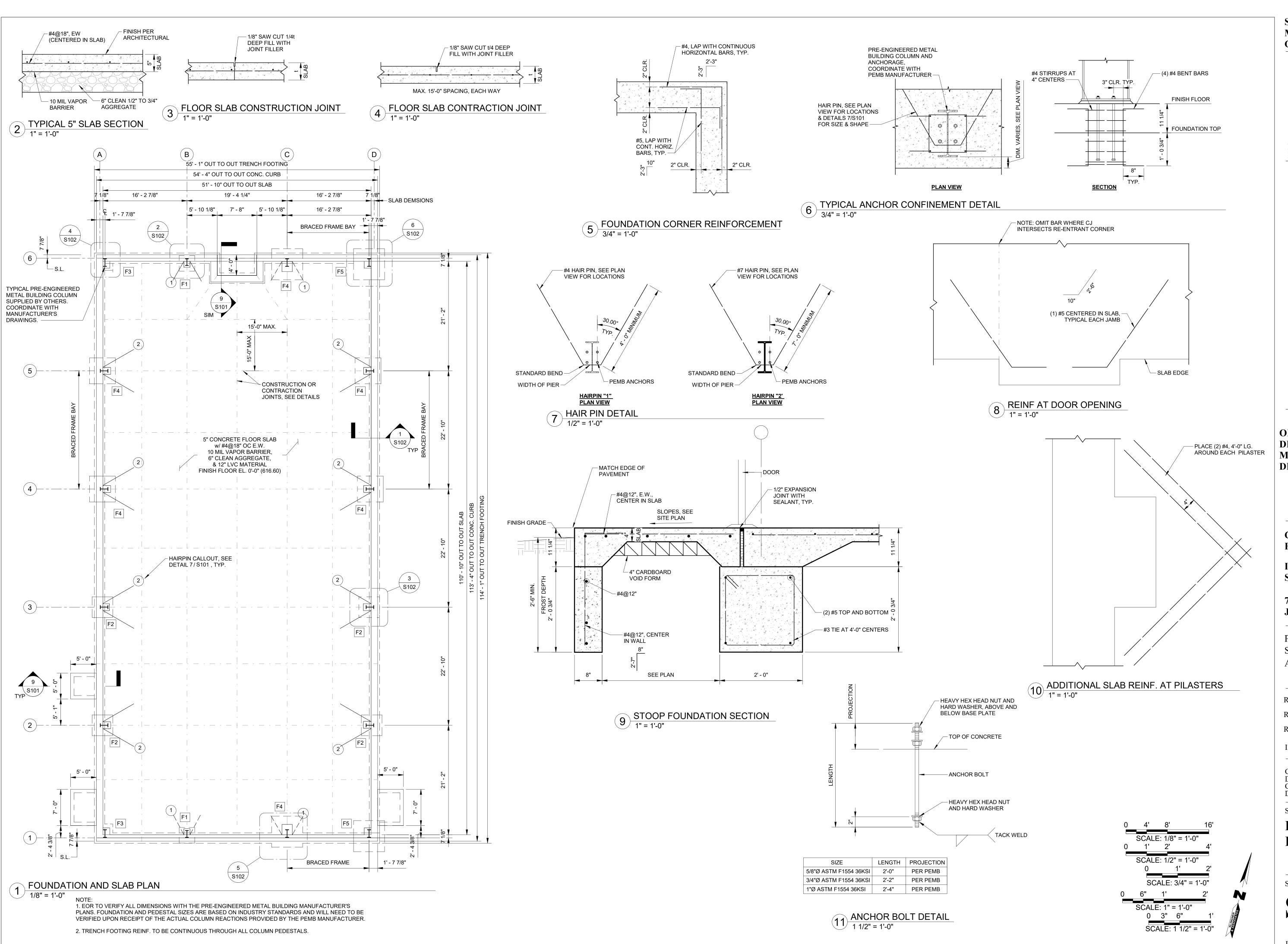
SHEET TITLE:

STRUCTURAL NOTES

SHEET NUMBER:



JULY 29, 2022





NATHAN R. MAROLD - ENGINEER MO # PE-2022017792

A S S O C I A T E S, P. G.

neers · Architects · Surveyors

mbia, Missouri www.klingner.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300

DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/2022

CAD DWG FILE: S101
DRAWING BY: NRM/ANM
CHECKED BY: AMB

DESIGNED BY: NRM/ANM

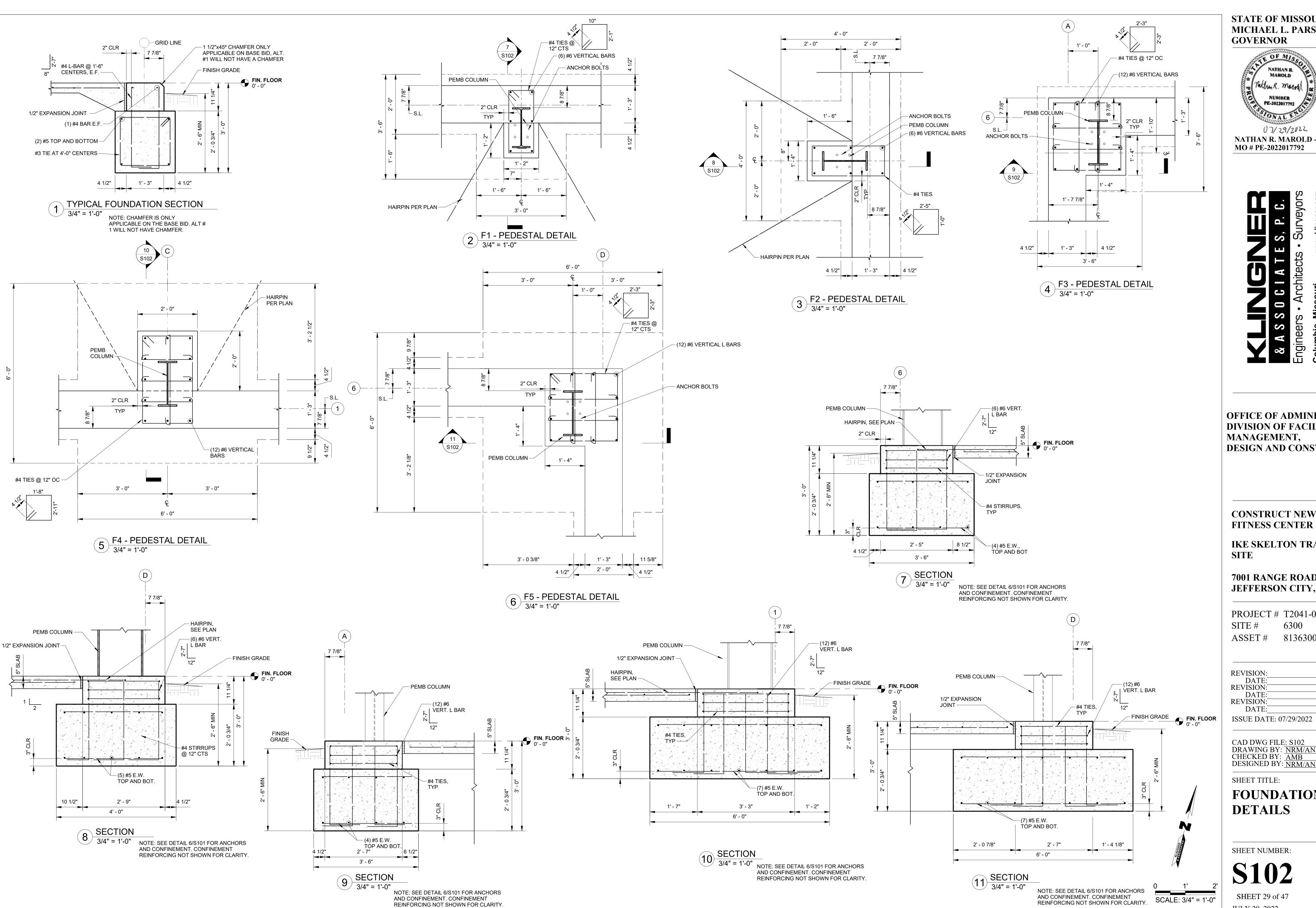
SHEET TITLE:

FOUNDATION PLAN & DETAILS

SHEET NUMBER:

S101SHEET 28 of 47

SHEET 28 of 4 JULY 29, 2022





07/29/2022 NATHAN R. MAROLD - ENGINEER MO # PE-2022017792

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

8136300040

PROJECT # T2041-01

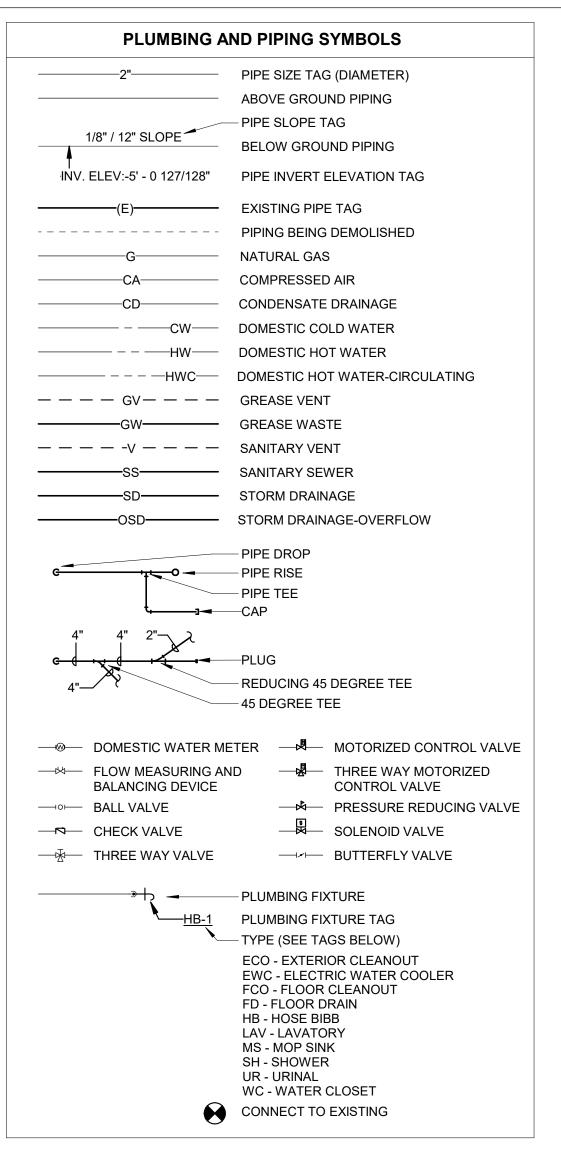
REVISION: DATE: REVISION: DATE **REVISION:** DATE:

CAD DWG FILE: S102 DRAWING BY: NRM/ANM
CHECKED BY: AMB DESIGNED BY: NRM/ANM

SHEET TITLE: **FOUNDATION DETAILS**

SHEET NUMBER:

SHEET 29 of 47 JULY 29, 2022



GENERAL PLUMBING NOTES:

SEPARATED BY DIELECTRIC COUPLINGS

TO EACH PIECE OF EQUIPMENT.

AND TERMINATE WITH A GAS COCK.

CODES AND REGULATIONS.

INSTALL HIS WORK.

1. ALL WORK SHALL COMPLY WITH APPLICABLE LOCAL, AND STATE

4. PIPING SHALL BE SEPARATELY HUNG AND ANCHORED, FREE TO

EXPAND AND CONTRACT QUIETLY, WITHOUT IMPOSING STRAINS ON

STRUCTURE, PIPING, VALVES, DEVICES, AND EQUIPMENT. PIPING

SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES.

8. PROVIDE BALL VALVE ON PIPES TO EACH GROUP OF FIXTURES OR

LOCATIONS OF PIPING. EXACT LOCATIONS SHALL BE COORDINATED

2. MATERIALS MUST BE NEW, IN FIRST CLASS CONDITION.

3. PIPE INSTALLATION SHALL BE COORDINATED WITH OTHER

5. CONNECTIONS BETWEEN DISSIMILAR METALS SHALL BE

7. PIPING, ETC., SHALL BE TESTED TO AT LEAST 125 PSI.

9. INSTALL GAS PIPING TO WITHIN 2' OF EACH APPLIANCE

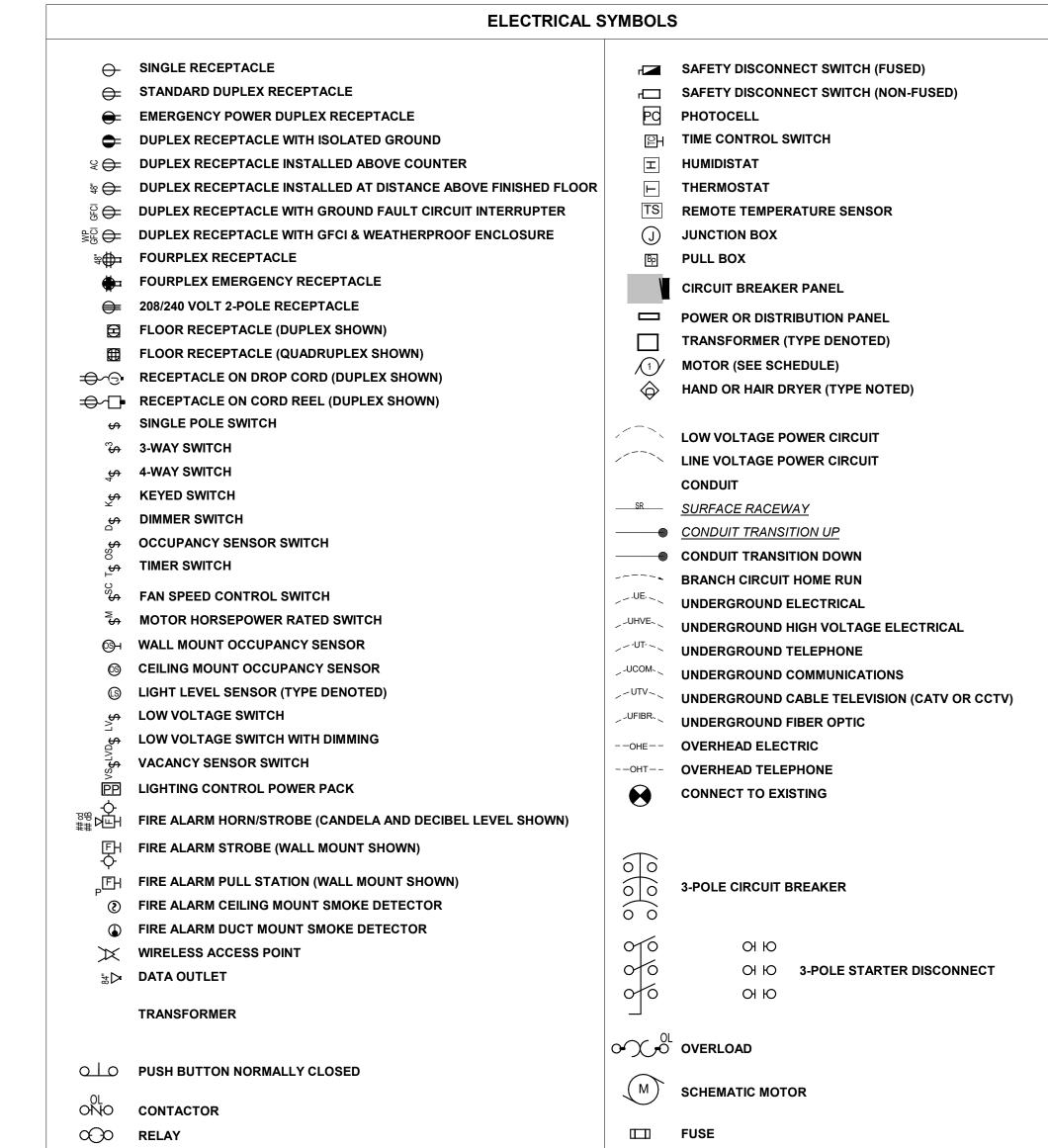
REQUIRING ACCESS IN AN EASILY ACCESSIBLE AREA.

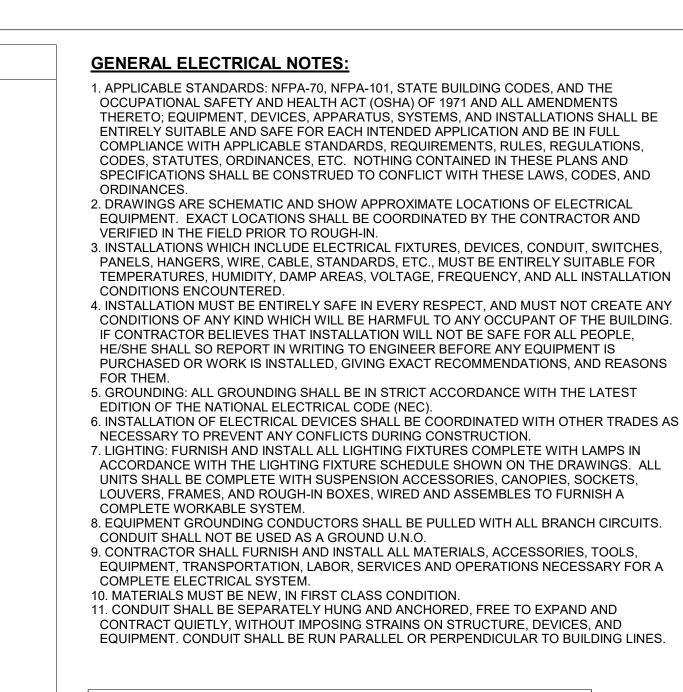
11. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE

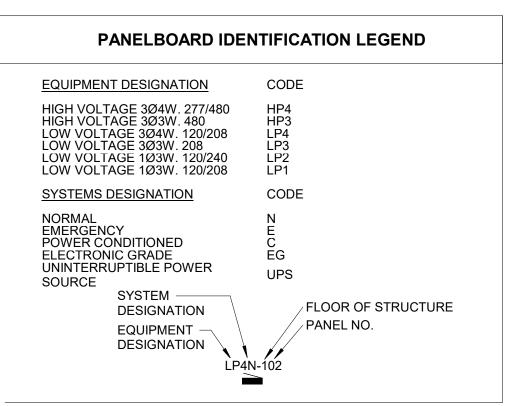
6. CONTRACTOR SHALL PERFORM EXCAVATION REQUIRED TO

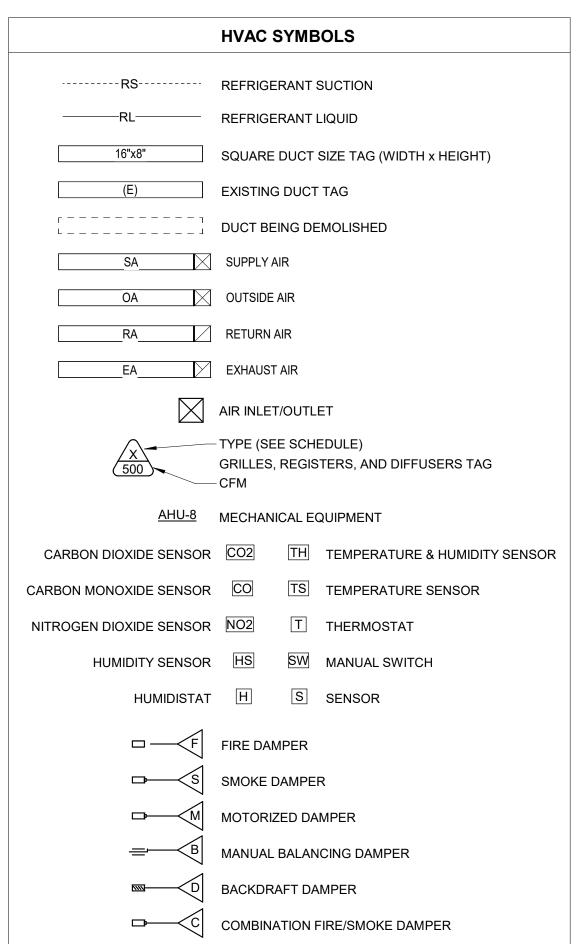
10. LOCATE ALL SHUT-OFFS, CLEANOUTS, AND OTHER DEVICES

BY THE CONTRACTOR AND VERIFIED IN THE FIELD PRIOR TO

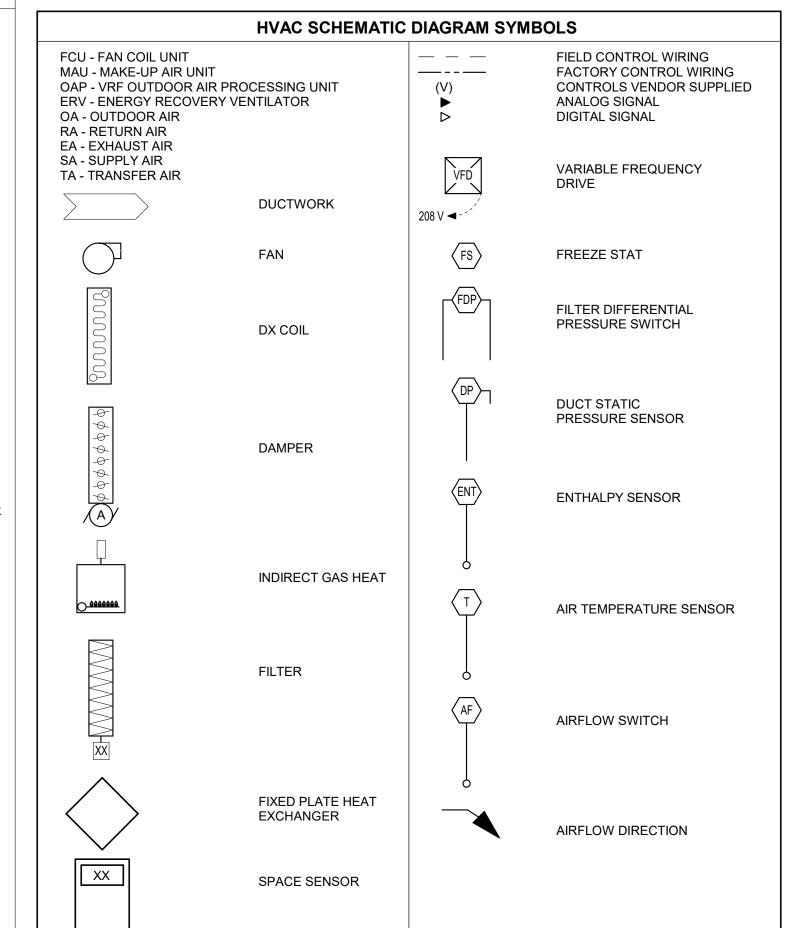








CONNECT TO EXISTING



GENERAL HVAC NOTES:

1. ALL MECHANICAL INSTALLATIONS SHALL CONFORM TO NFPA 90A, SMACNA, ASHRAE AND ALL OTHER STATE AND LOCAL CODES. 2. UPON COMPLETION OF CONSTRUCTION, REPLACE ALL FILTERS. 3. ALL MAIN AND BRANCH DUCTS SHALL BE RECTANGULAR GALV. STEEL SIZED AS NOTED ON THE PLANS. SIZE SHALL REFER TO UNOBSTRUCTED INTERNAL AIRFLOW AREA. DUCTWORK SHALL BE MOUNTED TIGHT TO JOISTS ABOVE OR RUN IN SPACE BETWEEN JOISTS, U.N.O. CLEARANCES FROM FINISH FLOOR SHALL BE MAXIMIZED WHERE POSSIBLE. 4. ALL RUNOUTS TO DIFFUSERS SHALL HAVE A VOLUME CONTROL DAMPER AT THE CONNECTION TO THE BRANCH OR MAIN DUCT.

5. FLEXIBLE DUCT SHALL BE A MAXIMUM OF FIVE (5) FEET IN LENGTH AND SHALL BE ROUTED TO MINIMIZE LENGTH WITH NO KINKS OR SHARP BENDS. 6. CONTRACTOR SHALL CONNECT RUNOUT TO FABRICATED BOOT AS NECESSARY TO ACCOMMODATE DIFFUSER.

7. A FLEXIBLE CONNECTION BETWEEN MECHANICAL UNITS AND BOTH THE SUPPLY AND RETURN AIR DUCTWORK IS REQUIRED FOR VIBRATION ISOLATION AND NOISE REDUCTION. 8. INSULATE DUCTWORK AS REQUIRED IN THE SPECIFICATIONS. 9. SERVICE OPENINGS SHALL BE LOCATED IN THE DUCTWORK BEFORE AND AFTER EACH TURNING VANE. SEE SPECIFICATIONS

AND NFPA 90A FOR LOCATIONS OF ADDITIONAL ACCESS DOORS AND PANEL REQUIRED THROUGHOUT THE AIR DISTRIBUTION 10. ROUTE DUCTWORK BETWEEN JOISTS WHERE POSSIBLE TO INCREASE CLEARANCES BELOW.

11. LEAVE ADEQUATE SPACE FOR INSTALLATION OF PLUMBING

FIRE PROTECTION SYMBOLS —FP-D——— FIRE PROTECTION DRY FIRE PROTECTION OTHER —FP-O— FIRE PROTECTION PRE-ACTION -FP-PA--FP-W-FIRE PROTECTION WET ---FP-DOM-W--- COMBINATION FIRE & DOMESTIC **UPRIGHT SPRINKLER HEAD** PENDENT SPRINKLER HEAD RECESSED SPRINKLER HEAD CONCEALED SPRINKLER HEAD SIDEWALL SPRINKLER HEAD EXTENDED COVERAGE SIDEWALL SPRINKLER HEAD 'D' REPRESENTS DRY SPRINKLER HEAD FLOW SWITCH OBSTRUCTION FROM 48"x18" SA DUCTWORK 48" AND GREATER CONNECT TO EXISTING

GENERAL FIRE PROTECTION NOTES:

1. THE INFORMATION PROVIDED ON THE FIRE PROTECTION DRAWINGS IS INTENDED TO SERVE AS THE "PRELIMINARY PLANS" FOR THE PROJECT AS DEFINED BY NFPA 13 FOR THE PURPOSE OF PRELIMINARY BUILDING PERMIT APPROVAL AND CONSTRUCTION BIDDING. "WORKING PLANS", IN ACCORDANCE WITH THE "HYDRAULIC CALCULATION METHODS" DEFINED BY NFPA 13, SHALL BE DEVELOPED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND THE AUTHORITY HAVING JURISDICTION PRIOR TO PRUCHASE OR INSTALLATION OF ANY FIRE PROTECTION SYSTEM

EQUIPMENT. 2. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DRAWINGS ASSOCIATED WITH THE PROJECT TO UNDERSTAND BUILDING COMPONENTS AND ARRANGEMENTS (INCLUDING CONCEALED SPACE THAT COULD IMPACT THE FINAL DESIGN OF THE FIRE SPRINKLER SYSTEM.

3. ALL AREAS OF THE BUILDING SHALL BE PROVIDED WITH SPRINKLERS EXCEPT WHERE SPRINKLER OMISSION IS PERMITTED BY NFPA 13. 4. PRELIMINARY FLOW ANALYSIS HAS DETERMINED THAT A FIRE PUMP IS NOT REQUIRED FOR THE PROPOSED FIRE PROTECTION

BIDDING PERIOD IF THEY BELIEVE A FIRE PUMP IS REQUIRED.

SYSTEM. CONTRACTOR SHALL NOTIFY THE ENGINEER DURING THE

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

> C 0

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT. **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 6300 SITE# 8136300040 ASSET#

REVISION: DATE REVISION: DATE REVISION:

CAD DWG FILE: MEP001 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

DATE:

ISSUE DATE: 07/29/22

MEP SYMBOLS LIST

SHEET NUMBER:

MEP001

SHEET 30 of 47 JULY 29, 2022

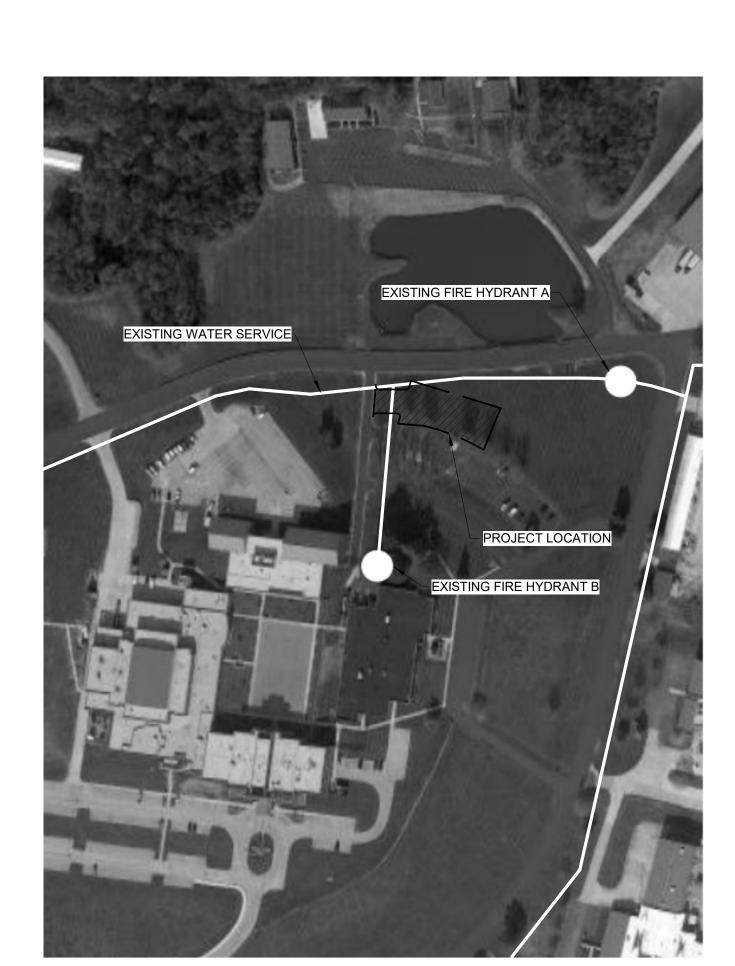
		FIDE OU												
	FIRE SUPPRESSION SYSTEM SUMMARY													
ROOM#	ROOM NAME	AREA (SF)	OCCUPANCY HAZARD TYPE (NFPA 13)	MINIMUM REQUIRED DENSITY (GPM/SF)	SYSTEM NAME									
100	MACHINE AREA	1,497	LIGHT HAZARD	0.07	WET RISER #1									
101	FREE WEIGHTS AREA	2,923	LIGHT HAZARD	0.07	WET RISER #1									
102	WOMEN'S	244	LIGHT HAZARD	0.07	WET RISER #1									
102A	ALCOVE	29	LIGHT HAZARD	0.07	WET RISER #1									
103	MEN'S	294	LIGHT HAZARD	0.07	WET RISER #1									
103A	ALCOVE	29	LIGHT HAZARD	0.07	WET RISER #1									
104	JAN. CLOSET	50	LIGHT HAZARD	0.07	WET RISER #1									
105	MECH/ELEC ROOM	289	LIGHT HAZARD	0.07	WET RISER #1									
106	STORAGE	235	LIGHT HAZARD	0.07	WET RISER #1									

KEYNO	KEYNOTE LEGEND											
VALUE	DESCRIPTION											
F01	REDUCED PRESSURE ZONE DEVICE (RPZ).											
F02	FIRE DEPARTMENT CONNECTION.											
F03	WET PIPE SYSTEM RISER.											

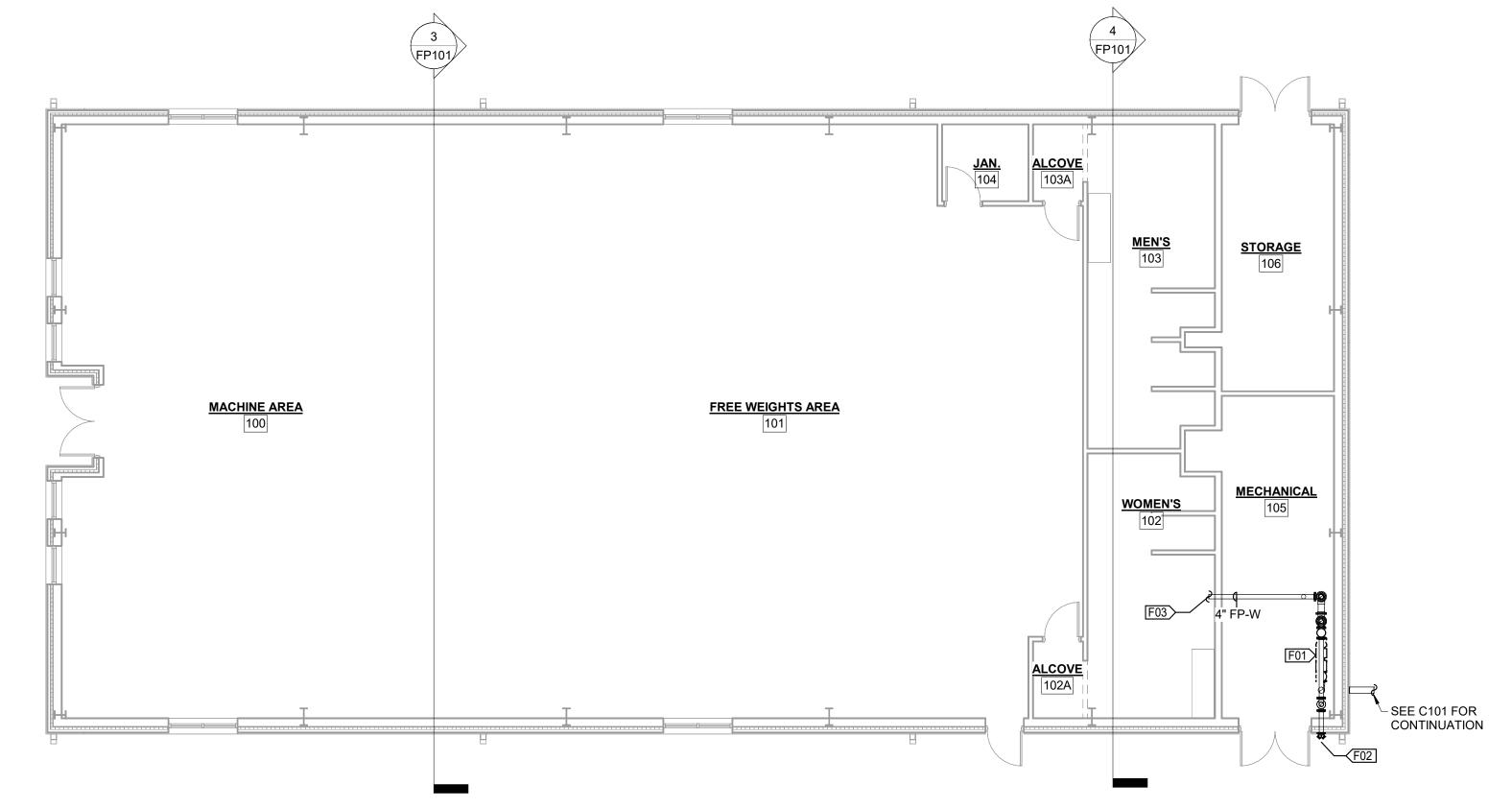
1. INSIDE HOSE ALLOWANCE: 0 GPM 2. OUTSIDE HOSE ALLOWANCE: 100 GPM

FLOW DATA INFORMATION:

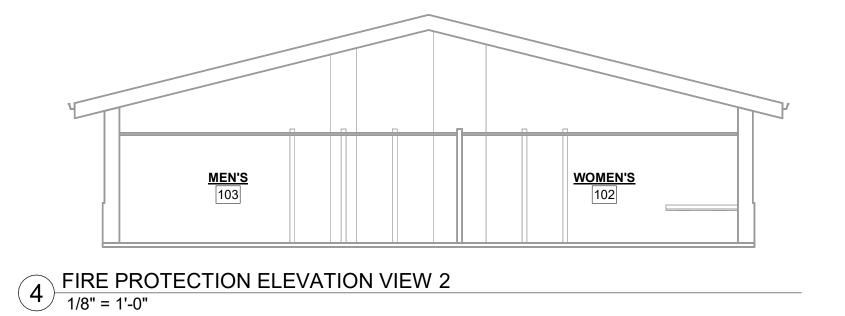
- 1. SUBSEQUENT FLOW DATA WAS PROVIDED BY COLE COUNTY WATER DEPARTMENT. THIS INFORMATION IS PRESENTED FOR INITIAL
- SYSTEM SIZING ESTIMATES ONLY.
 2. DATE OF FLOW TEST: DECEMBER 2015
 3. STATIC PRESSURE AT HYDRANT A: 61 PSI
- 4. FLOW AT HYDRANT A: 2,500 GPM 5. RESIDUAL PRESSURE AT HYDRANT B: 58 PSI

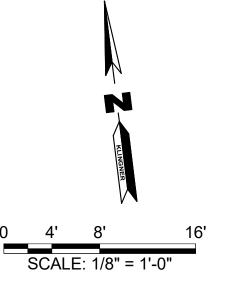


2 EXISTING FIRE HYDRANT LOCATIONS NTS



1 FIRE PROTECTION FLOOR PLAN
1/8" = 1'-0"





STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 ASSET # 8136300040

REVISION:_ DATE:_ REVISION:_ DATE: REVISION: DATE: ISSUE DATE: 07/29/22

CAD DWG FILE: FP10 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

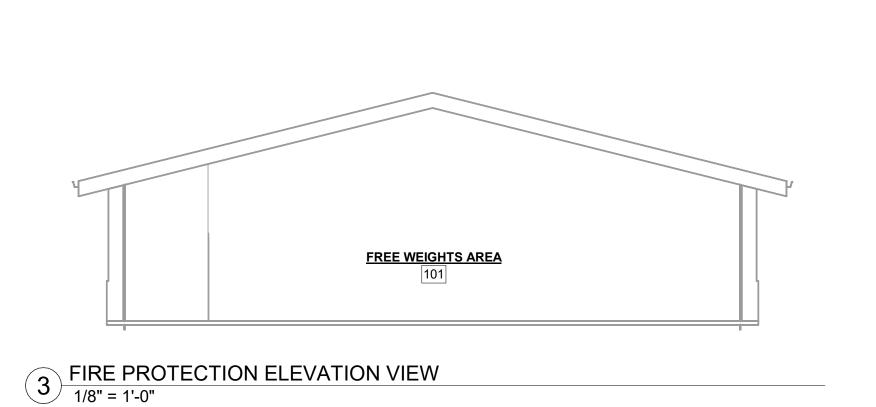
SHEET TITLE:

FIRE PROTECTION FLOOR PLAN

SHEET NUMBER:



SHEET 31 of 47 JULY 29, 2022



0 5' 10' SCALE: 3/16" = 1'-0" STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR

KEYNOTE LEGEND

DESCRIPTION

P01 CONNECT PROPOSED SANITARY MAIN TO PROPOSED MANHOLE AT AN ELEVATION OF +/- 5 FEET BELOW GRADE.



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

SSOCIATES, P. C.

Property of the street of

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: P101
DRAWING BY: JLD
CHECKED BY: JJN
DESIGNED BY: JLD

SHEET TITLE:

BELOW FLOOR PLUMBING PLAN

SHEET NUMBER:

P101
SHEET 32 of 47

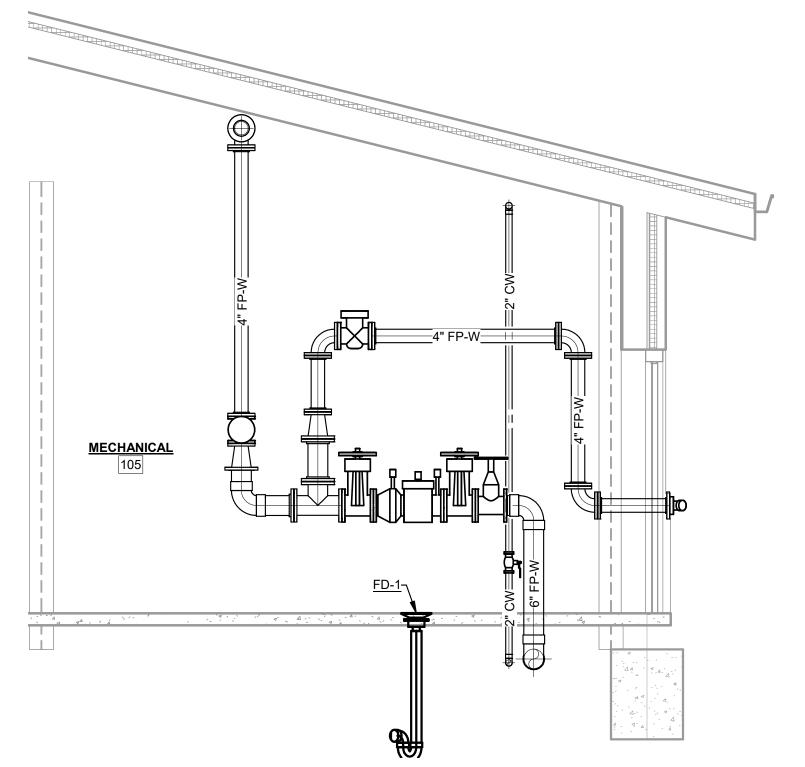
JULY 29, 2022

2 BELOW FLOOR PLUMBING PLAN
3/16" = 1'-0"

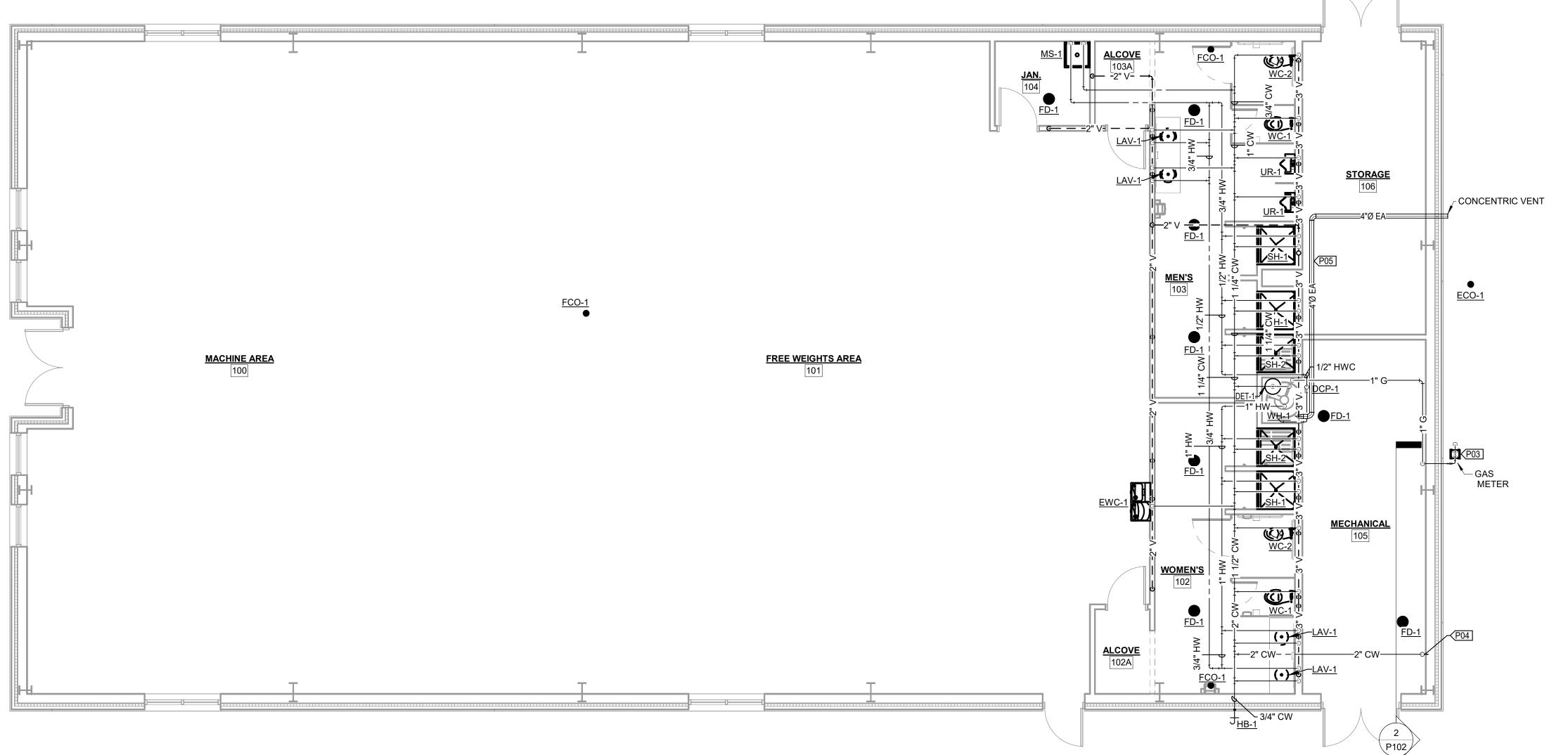


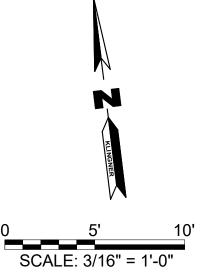
- 1. SHOWER FIXTURES IN ROOMS 102 AND 103 TO BE PROVIDED WITHIN ALTERNATE BID #1. SUPPLY, WASTE, AND VENT ROUGH-INS
- TO BE PROVIDED WITHIN BASE BID.

 2. LAVATORY, WATER CLOSET, AND URINAL PLUMBING FIXTURES WITHIN ROOMS 102 AND 103 TO BE PROVIDED WITHIN ALTERNATE BID #2. SUPPLY, WASTE, AND VENT ROUGH-INS TO BE PROVIDED WITHIN BASE BID.



2 WATER SERVICE ELEVATION NTS





KEYNOTE LEGEND

P03 GAS PRESSURE: 4.4 TO 14 IN. W.C.; GAS DEMAND: 120,000

P04 REDUCED PRESSURE ZONE DEVICE (RPZ) ON INCOMING DOMESTIC WATER SERVICE PIPING. INSTALL HORIZONTALLY.

DESCRIPTION

P05 A 4 INCH INTAKE DUCT IS LOCATED BELOW THE 4 INCH EXHAUST DUCT.

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01

ASSET # 8136300040

REVISION: DATE: REVISION: DATE: **REVISION:** DATE:

ISSUE DATE: 07/29/22

CAD DWG FILE: P102 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

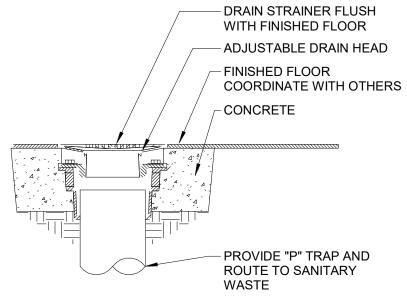
ABOVE FLOOR PLUMBING PLAN

SHEET NUMBER:

P102

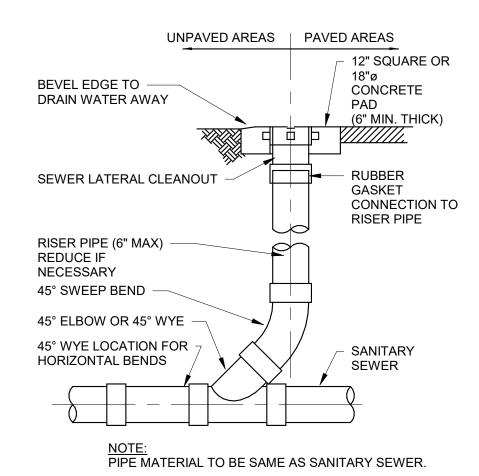
SHEET 33 of 47 JULY 29, 2022

ABOVE FLOOR DOMESTIC PLUMBING PLAN
3/16" = 1'-0"

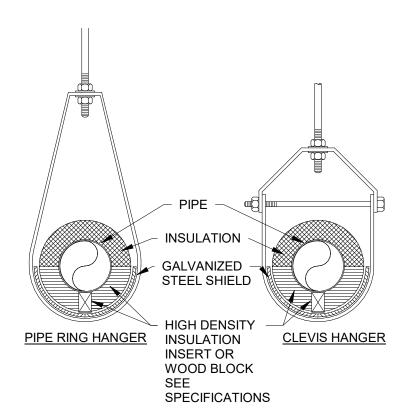


NOTE: ALL FLOOR DRAINS SHALL BE VENTED

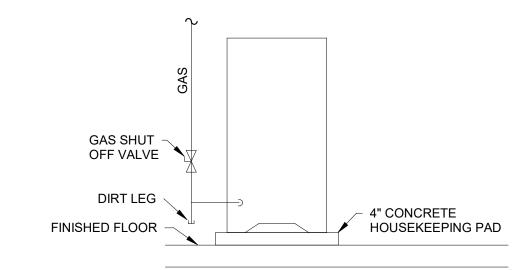
1 FLOOR DRAIN DETAIL NTS



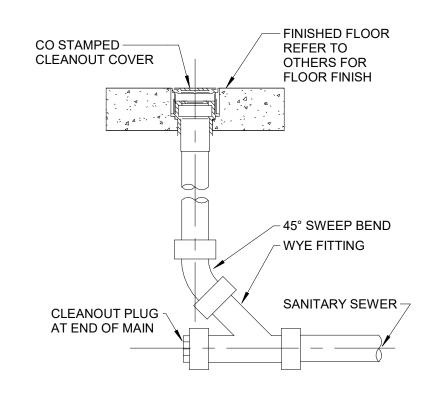
3 EXTERIOR CLEANOUT DETAIL NTS



5 INSULATED PIPE AT HANGER DETAIL NTS

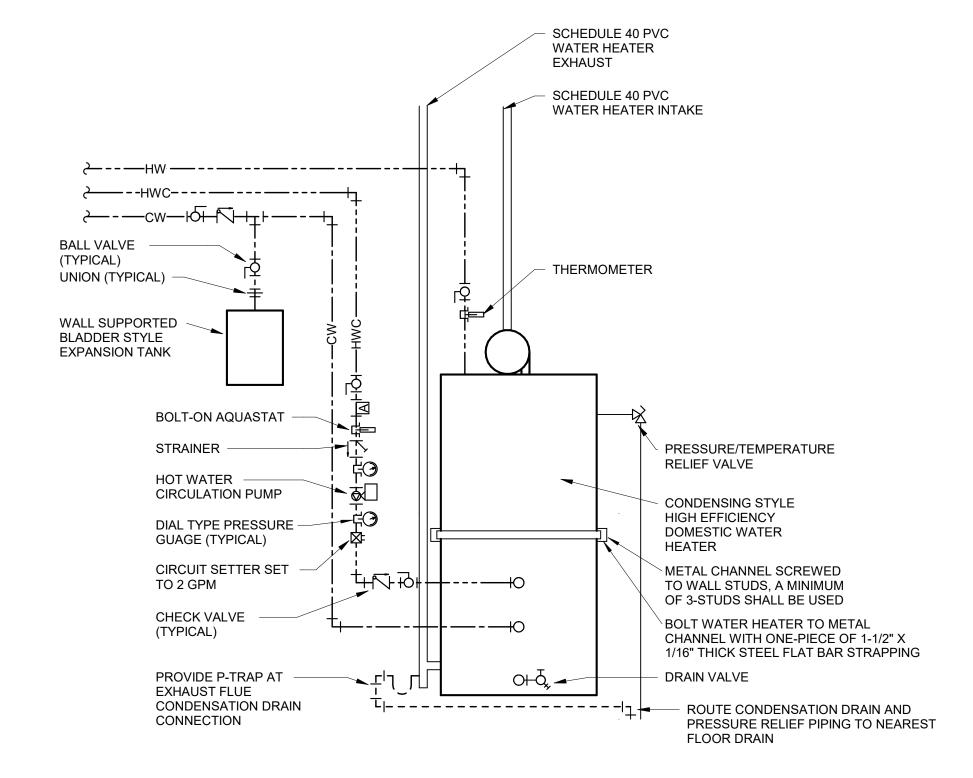


DOMESTIC WATER HEATER GAS CONNECTION DETAIL NTS



NOTE:
PIPE MATERIAL TO BE SAME AS SANITARY SEWER.

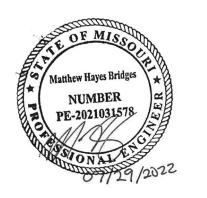
4 INTERIOR CLEANOUT DETAIL NTS



- CONTRACTOR SHALL PROVIDE ALL PIPE, VALVES, AND ACCESSORIES AS REQUIRED BY WATER HEATER MANUFACTURER RECOMMENDATIONS.
- HOT WATER CIRCULATOR SHALL RUN WHEN HWC TEMPERATURE IS BELOW 120°F AS DETERMINED BY A
- PIPE MOUNTED AQUASTAT (NOT INTEGRAL TO THE PUMP). ROUTE WATER HEATER INTAKE AND EXHAUST PIPE TO A CONCENTRIC WALL PENETRATION. REFER TO

6 DOMESTIC WATER HEATER PIPING SCHEMATIC NTS

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

8136300040

PROJECT # T2041-01 SITE# 6300

ASSET#

REVISION: DATE: **REVISION:** DATE: **REVISION:** DATE: ISSUE DATE: 07/29/22

CAD DWG FILE: P501 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

PLUMBING DETAILS

SHEET NUMBER:

P501

SHEET 34 of 47 JULY 29, 2022

									PLUMBIN	G FIXTURE SCHEDULE			
			R	OUGH II	N PIPE S	IZE BASIS O	F DESIGN				BASIS OF DESIGN FIXTU	IRE ACCESSORIES	
TAG			CW	HW	SS	V MAKE	MODEL	FIXTURE REMARKS	TYPE	DESCRIPTION	MAKE	MODEL	ACCESSORY REMARKS
ECO-1	No	CAST IRON WITH BRONZE PLUG & RUBBER GASKET CONNECTION TO PIPE	0"	0"	4"	0" ZURN JAY R SMITH MIFAB	ZN-1400-BP-SG-SM 4021S C1220-1	COORDINATE FINISH ELEVATION					
EWC-1	Yes	MECHANICAL PUSHBAR ACTUATED WATER COOLER	1/4"		1 1/4"	1 1/4" ELKAY MANUFACTURING MURDOCK OASIS	G LVRCTL8WSK PG8EBFSLTT A172108F-UBL-BF1						PROVIDE WITH OFF FLOOR FIXTURE CARRIER
FCO-1	No	ADJUSTABLE, CAST IRON BODY W/ POLISHED NICKEL BROZE TOP & BRONZE PLUG	0"	0"	4"	0" ZURN JAY R SMITH MIFAB	ZN-1400-BP-SG-SM 4021S C1220-1	COORDINATE FINISH ELEVATION					
FD-1	No	POLISHED NICKEL BRONZE STRAINER, CAST IRON BODY, PROVIDE WITH DEEP SEAL TRAP & 5" DIA. TYPE B STRAINER	0"	0"	3"	2" SIOUX CHIEF JOSAM ZURN	860-4-P-i-U FD-370 FD2360						
HB-1	No	EXTERIOR FROSTPROOF, BACKFLOW PREVENTER, ANTI-SIPHON, AUTOMATIC DRAINING, W/ LOOSE KEY	3/4"			WOODFORD JAY R SMITH WATTS	MODEL 67 5619 HY-42						
LAV-1	Yes	COUNTERTOP LAVATORY, 19-1/8" DIA. VITREOUS CHINA W/FAUCET HOLES ON 4" CENTERS	1/2"	1/2"	1 1/4"	1 1/4" AMERICAN STANDARD GERBER KOHLER	RONDALYN 0491.019 12-884 K-2202-4		FAUCET MIXING VALVE	4" CENTERS,SELF CLOSING METERING TYPE W/SEPARATE HOT & COLE WATER CONTROL AND 0.5 GPM FLOW CONTROL WALL MOUNTED WATER MIXING VALVE W/ LOCKING TEMP. REGULATOR INTERNAL COLD WATER BYPASS, BIMETAL THERMOSTAT, HIGH TEMP. LIMIT STOP, UNION CHECKSTOPS, DIAL THERMOMETER	GERBER TSBRASS RLEONARD	802-VE2805-665ABCP 44-340 B-0831 TA-300-LF W/ TA-300-LF-STSTL-REC S19-2000 ETV200	PROVIDE WITH POINT OF USE THERMOSTATIC MIXING VALVE SET TO 104
MS-1	No	3" DRAIN, MOLDED ONE-PIECE CONSTRUCTION	1/2"	1/2"	3"	2" SWAN FIAT ACORN	MS-2424 MSBID2424 TRH-242410		HOSE	5/8" DIA. REINFORCED RUBBER HOSE, SPRING LOADED RUBBER HOLDER	SWAN FIAT MUSTEE	MS2405 832AA 665.700	
									CORNER GUARD	20 GA. TYPE 304 STAINLESS STEEL	SWAN FIAT MUSTEE	MSG2436 67.2436	
									RIM GUARD	STAINLESS STEEL	SWAN FIAT MUSTEE	E-88-AA 63.403	
									MOP HOLDER	SPRING LOADED RUBBER ON STAINLESS STEEL WALL PLATE	SWAN FIAT	MS2437 889-CC	
									FAUCET	8" ADJUSTABLE CENTERS, LEVER ACTUATED TYPE W/ SEPARATE HOT COLD WATER CONTROL, VACUUM BREAKER NOZZLE, WALL BRACE, AND ROUGH CHROME PLATED FINISH		65.600 MS-2412 830-AA 63.600A	
SH-1	Yes	36" TRANSFER SHOWER	1/2"	1/2"	2"	2" AQUATIC FREEDOM SHOWERS COMFORT DESIGNS	1363BFC2P APF3838BF4P.5 SSS3637BF3PRRF						PROVIDE WITH POINT OF USE THERMOSTATIC MIXING VALVE SET TO 104 FIXTURE WALL, SOAP DISH, GRAB BARS, FOLD UP SEAT, HAND HELD SHOWER ASSEMBLY, REMOVABLE THRESHOLD, AND CURTAIN ROD.
SH-2	Yes	36" TRANSFER SHOWER - ADA COMPLIANT	1/2"	1/2"	2"	2" AQUATIC FREEDOM SHOWERS COMFORT DESIGNS	1363BFC2P APF3838BF4P.5 SSS3637BF3PRRF						PROVIDE WITH POINT OF USE THERMOSTATIC MIXING VALVE SET TO 104 FIXTURE WALL, SOAP DISH, GRAB BARS, FOLD UP SEAT, HAND HELD SHOWER ASSEMBLY, REMOVABLE THRESHOLD, AND CURTAIN ROD.
UR-1	No	WALL MOUNTED, WASHOUT FLUSHING ACTION, VITREOUS CHINA URINAL WITH TOP SPUD	3/4"	0"	2"	2" AMERICAN STANDARD GERBER KOHLER	WASHBROOK FLOWIS 6590.001 27-780	E	FLUSH VALVE	BATTERY POWERED, SENSOR OPERATED	SLOAN KOHLER TOTO	8186-0.5 K-10949 TEU1LA	
							K-4904-ET		CARRIER	W/ FLUSH VALVE SUPPORT AND LOWER BEARING PLATE	WADE JAY R SMITH ZURN	400-AM1-AM11 0617 Z1222-58	
WC-1	Yes	FLOOR MOUNTED VITREOUS CHINA, ELONGATED BOWL SIPHON JET, WATER SAVING, W/ TOP SPUD	1"	0"	4"	2" AMERICAN STANDARD GERBER KOHLER	MADERA FLOWISE 3043.001 25-733	16-1/2 - 17" FLOOR TO RIM		ELONGATED HEAVY DUTY, SOLID PLASTIC, OPEN FRONT, WITH LIFT OFF HINGE SYSTEM	BEMIS KOHLER AMERICAN STANDARD	2155CTJ K-4666-CA 5901.100	
							K-96057		FLUSH VALVE	SENSOR OPERATED	SLOAN AMERICAN STANDARD ZURN	ROYAL 111 E S-S-YO 606B.161 W/ PJ00.HAC ZEMS6000AV-MOB-W1	
WC-2	Yes	FLOOR MOUNTED VITREOUS CHINA, ELONGATED BOWL SIPHON JET, WATER SAVING, W/ TOP SPUD	1"	0"	4"	2" AMERICAN STANDARD GERBER KOHLER	MADERA FLOWISE 3043.001 25-733	16-1/2 - 17" FLOOR TO RIM		ELONGATED HEAVY DUTY, SOLID PLASTIC, OPEN FRONT, WITH LIFT OFF HINGE SYSTEM	BEMIS KOHLER AMERICAN STANDARD	2155CTJ K-4666-CA 5901.100	
							K-96057		FLUSH VALVE	SENSOR OPERATED	SLOAN AMERICAN STANDARD ZURN	ROYAL 111 E S-S-YO 606B.161 W/ PJ00.HAC ZEMS6000AV-MOB-W1	

	GAS WATER HEATER SCHEDULE													
						RATI	NGS		ELECTRICAL	-	BASIS	OF DESIGN	MAX.	
		WATER											OPERATING	
TAG	DESCRIPTION	VOLUME	FUEL TYPE	INPUT CAP.	MIN. UEF	MAX. PRES.	MAX. TEMP.	VOLT	POLES	AMPS	MAKE	MODEL	WEIGHT	REMARKS
WH-1	MODULATING COMMERCIAL GAS WATER HEATER	60.0 gal	NATURAL GAS	120000 Btu/h	95	150 PSI	180 °F	120 V	1	15	A.O. SMITH	BTH-120	1388 lb	
												HCG3-60T120-3N		
											RHEEM	HE55-130		

PROVIDE WITH MANUFACTURER'S CONCENTRIC VENT KIT.
 HOT WATER STORAGE TEMPERATURE: 120F.
 BURNER PRESSURE: 4.4 TO 14 IN. W.C.

	DOMESTIC CIRCULATING PUMP SCHEDULE													
TAG	TYPE	FLOW	HEAD	VOLT	POLES	MOP	MAKE	MODEL	WEIGHT	REMARKS				
DCP-1	IN-LINE	3.2 GPM	4.3 ftH2O	120 V	1	1 A	TACO GRUNDFOS BELL & GOSSETT	006 ALPHA1 15-55F XL 20-35	25 lb	1				

NOTES:

1. PROVIDE WITH AQUASTAT.

	DOMESTIC EXPANSION TANK SCHEDULE												
					TANK	ACCEPTANCE	ВА	SIS OF DESIGN					
TAG	DESCRIPTION	MAX. PRES.	MAX. TEMP.	PRE-CHARGE	VOLUME	VOLUME	MAKE	MODEL	WEIGHT	REMARKS			
DET-1	POTABLE WATER, BLADDER STYLE EXPANSION TANK	150 psi	200 °F	50 psi	10.0 gal	10.3 gal	AMTROL	ST	110 lb				
							BELL & GOSSETT	PT					
							ZURN	WTTA					

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 6300

ASSET # 8136300040

REVISION:_ DATE:_ REVISION:_ DATE: REVISION: DATE: ISSUE DATE: 07/29/22

CAD DWG FILE: P601 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

PLUMBING SCHEDULES

SHEET NUMBER:

SHEET 35 of 47 JULY 29, 2022

VALUEDESCRIPTIONP02STACK VENT SHALL BE ROUTED THROUGH ROOF.

1 ISOMETRIC - WASTE AND VENT PLUMBING NTS

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR

KEYNOTE LEGEND



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: P901 DRAWING BY: JLD CHECKED BY: JJN DESIGNED BY: JLD

SHEET TITLE:

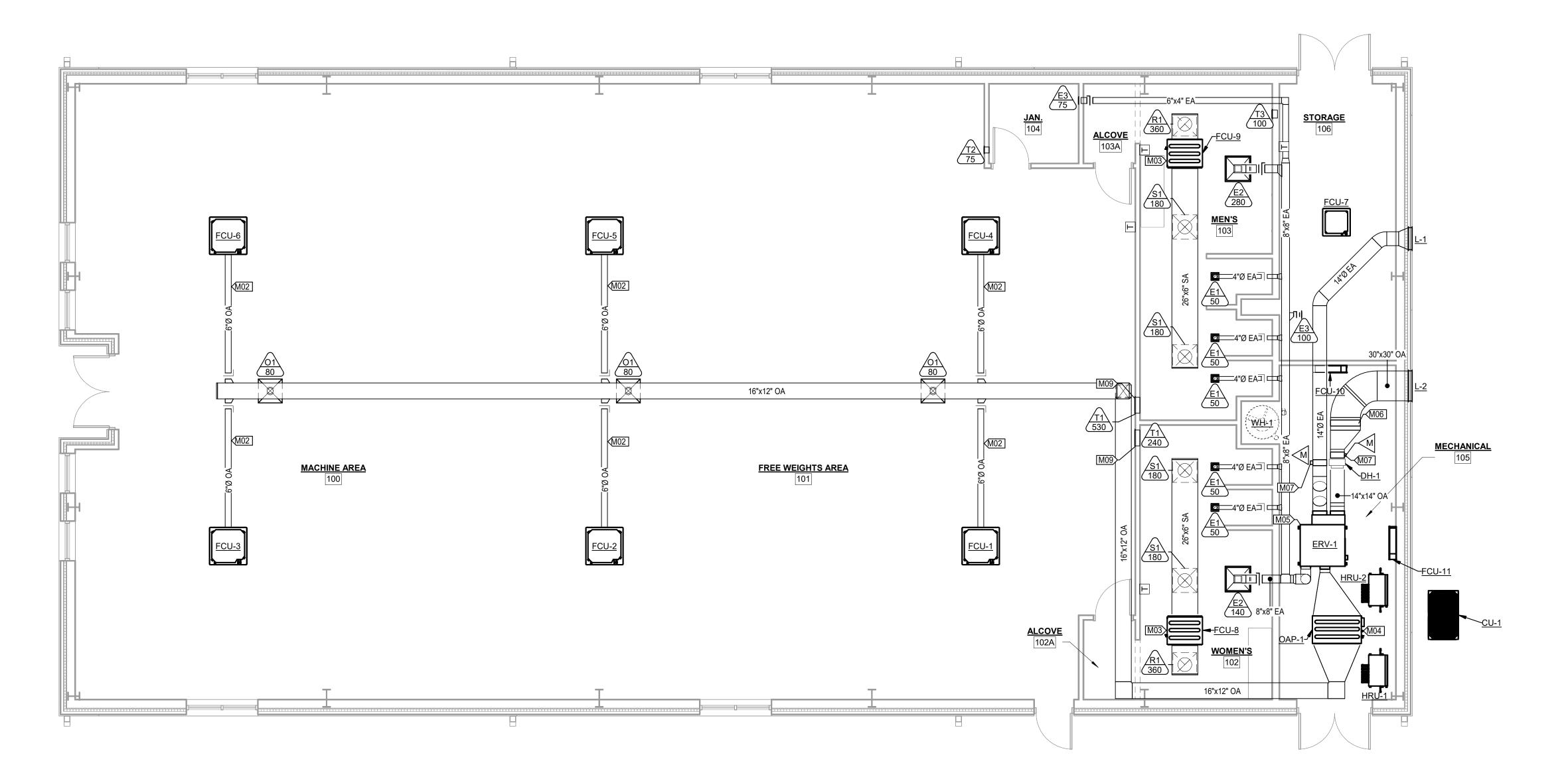
ISOMETRIC
WASTE AND VENT
PLUMBING VIEW

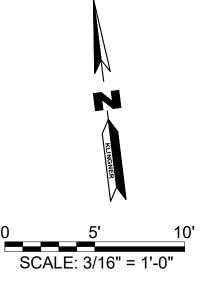
SHEET NUMBER:



SHEET 36 of 47 JULY 29, 2022

VALUE	DESCRIPTION
M02	PROVIDE 160 CFM OF OUTDOOR AIR DIRECTLY TO EACH 4-WAY CEILING CASSETTE IN THE MACHINE AREA AND FREE WEIGHTS AREA.
M03	INSTALL DUCTED FAN COIL UNITS ABOVE SAT CEILING.
M04	SUSPEND OUTDOOR AIR PROCESSING UNIT AS HIGH AS POSSIBLE FROM MECHANICAL ROOM CEILING.
M05	SUSPEND ERV-1 AS HIGH AS POSSIBLE FROM MECHANICAL ROOM CEILING.
M06	SIDE ACCESS FILTER HOUSING WITH 24"X24"X2" DISPOSABLE MERV 8 FILTER.
M07	CONTROL DAMPER WITH 24V, 2-POSITION, FAIL-CLOSED ACTUATOR.
M09	INSTALL TRANSFER GRILLES WITHIN 4 INCHES OF SAT CEILING.







MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

ASSOCIATES, P. C.
gineers • Architects • Surveyor
umbia, Missouri

Market* Achitects ** Surveyor
Missouri* Achitects ** Surveyor
Missouri Achitects ** Surveyor
**Missouri*

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: M101 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

MECHANICAL FLOOR PLAN

SHEET NUMBER:

M101

SHEET 37 of 47

JULY 29, 2022

1 HVAC EQUIPMENT LAYOUT
3/16" = 1'-0"

VALUE	DESCRIPTION
M01	ROUTE REFRIGERANT PIPING ABOVE SAT CEILING. NO REFRIGERANT PIPING TO BE INSTALLED ABOVE THE JANITOR'S CLOSET 104 OR ANY ALCOVE.
M08	ROUTE CONDENSATE PIPING ABOVE SAT CEILING.
M10	ROUTE CONDENSATE DOWN TO MOP SINK.

GENERAL NOTES:

STORAGE 106

·--REFRIGERANT PIPING--

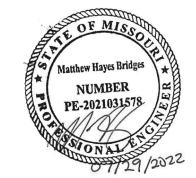
REFRIGERANT PIPING LAYOUT IS SCHEMATIC. PROVIDE ALL REFRIGERANT PIPING REQUIRED BASED ON MANUFACTURER'S REQUIREMENTS.

 PROVIDE THE REFRIGERANT PIPE SIZE AND TYPE AND QUANTITY OF VRF BRANCH BOXES REQUIRED TO MEET THE ZONING REQUIREMENTS OF THE PROJECT AS DETERMINED BY THE MANUFACTURER.

 OF REPLACE RESOLUTE MENTS FOR ALL LIVAGE COMPONENTS WITH PINISON OF

3. COORDINATE POWER REQUIREMENTS FOR ALL HVAC COMPONENTS WITH DIVISION 26.

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578



OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01

ASSET # 8136300040

REVISION: DATE: REVISION: DATE: REVISION: DATE: ISSUE DATE: 07/29/22

CAD DWG FILE: M102 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

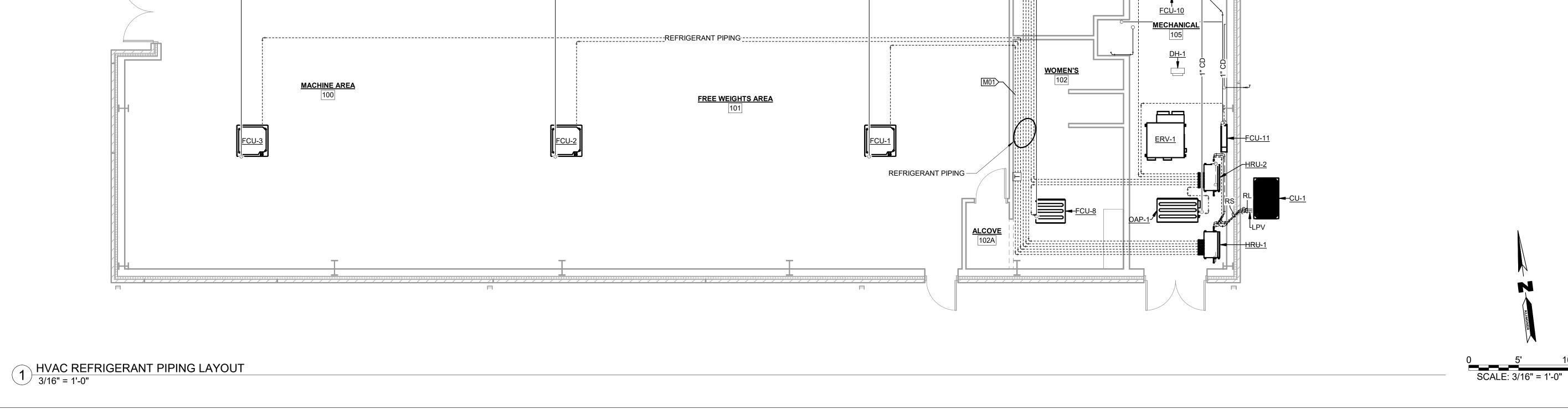
SHEET TITLE:

MECHANICAL PIPING PLAN

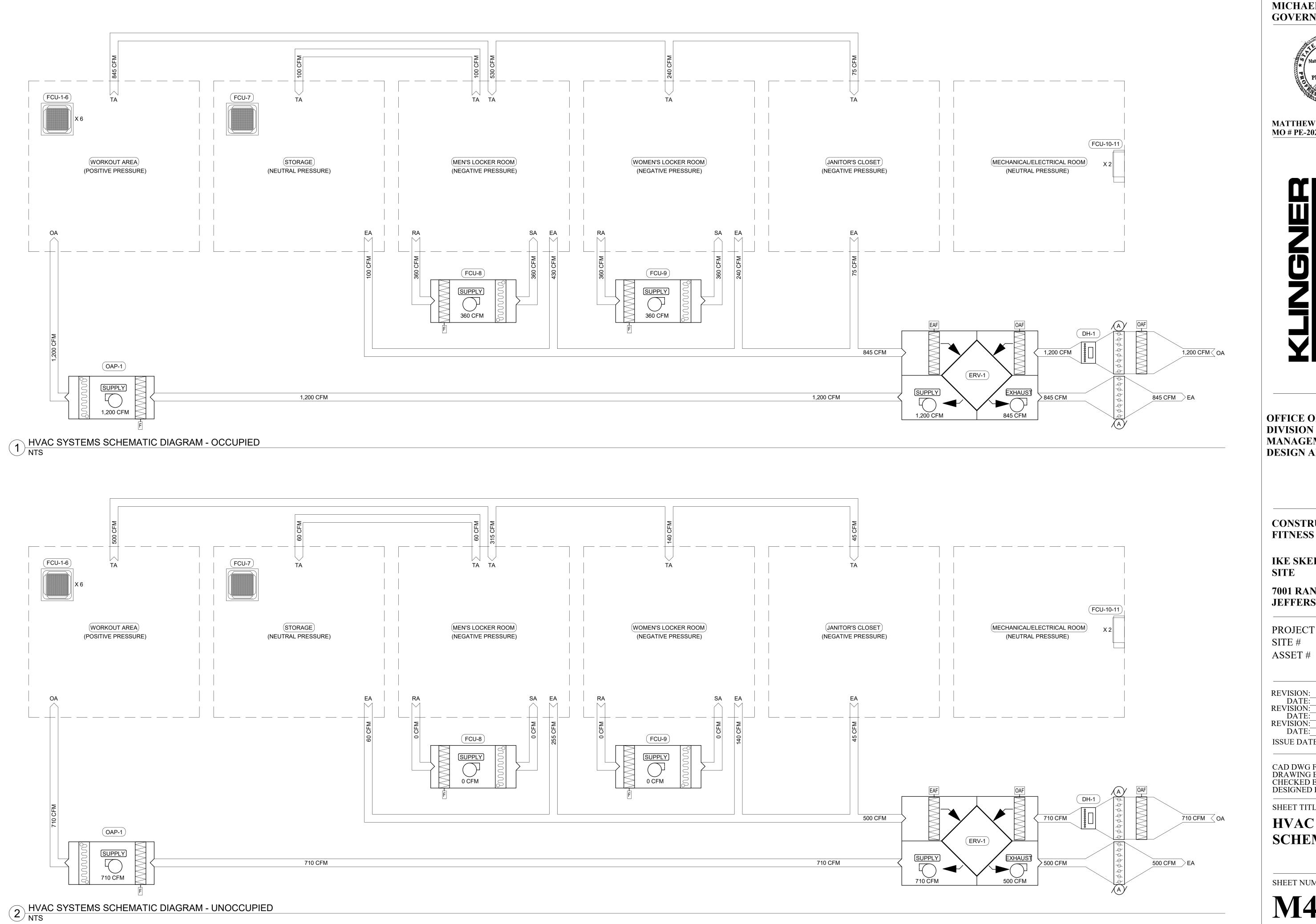
SHEET NUMBER:

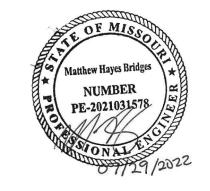
SHEET 38 of 47

JULY 29, 2022



REFRIGERANT PIPING





MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING **SITE**

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

8136300040

PROJECT # T2041-01

REVISION: DATE: **REVISION:** DATE: REVISION:

DATE: ISSUE DATE: 07/29/22

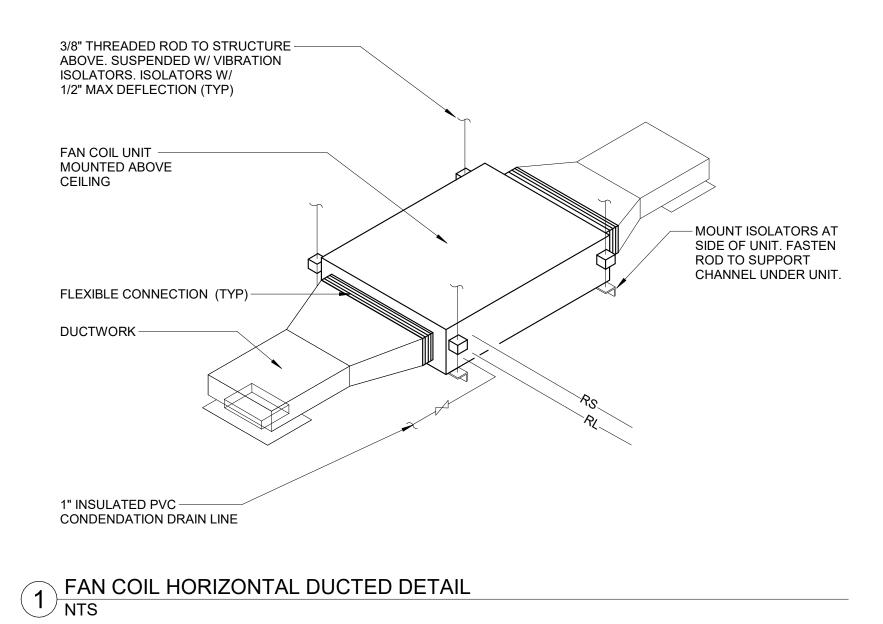
CAD DWG FILE: M401 DRAWING BY: MBH CHECKED BY: ALD DESIGNED BY: MBH

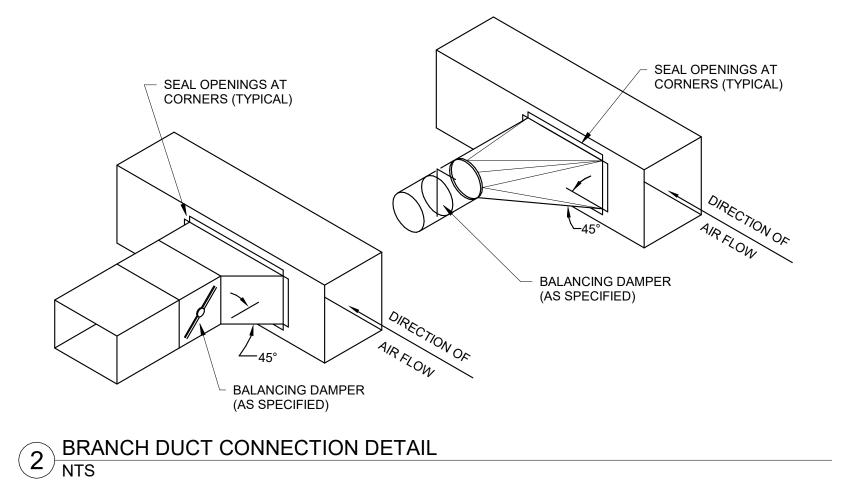
SHEET TITLE:

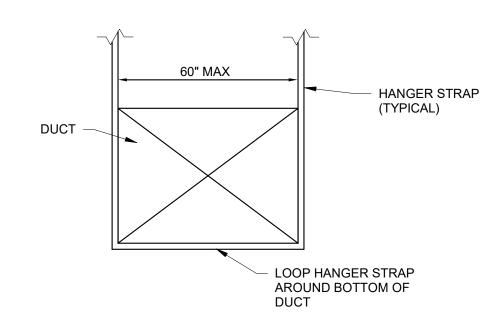
HVAC AIRFLOW SCHEMATICS

SHEET NUMBER:

SHEET 39 of 47 JULY 29, 2022

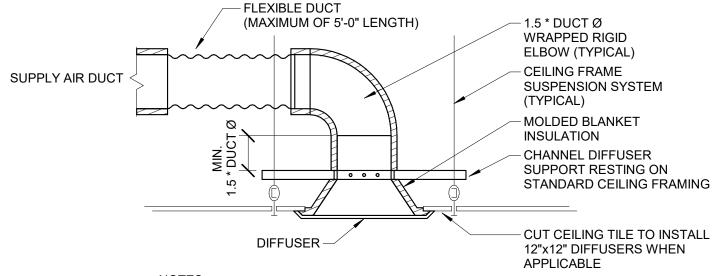






NOTE:
CONTRACTOR SHALL VERIFY ALL LOAD LIMITS ON HANGER
AND WEIGHTS OF DUCT TO ASSURE ALLOWABLE LOAD
LIMITS ARE NOT EXCEEDED.

3 STRAP HANGER DETAIL NTS

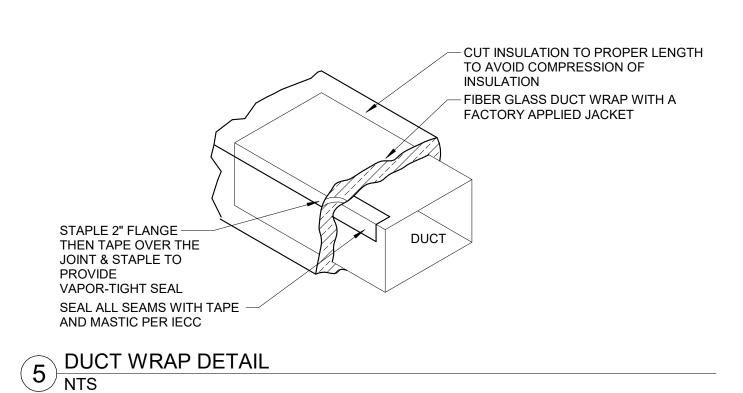


NOTES:

1. THE CEILING SUPPORT SYSTEM MUST SUPPORT DIFFUSER WEIGHTWHEN FLEXIBLE CONNECTIONS ARE USED. THE DIFFUSER SHOULD NOT SUPPORT THE TILE AND THE TILES SHOULD NOT SUPPORT THE DIFFUSER.

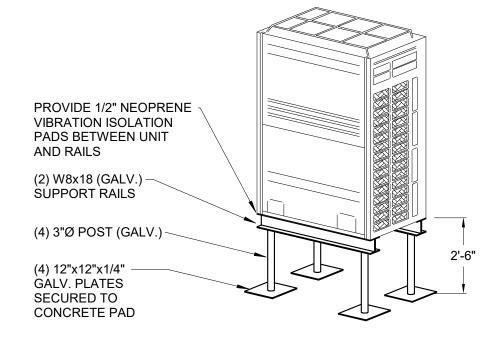
TILES SHOULD NOT SUPPORT THE DIFFUSER.

2. IF THERE IS NOT SUFFICIENT SPACE ABOVE A CEILING TO PROVIDE A LENGTH OF DUCT THAT IS A MINIMUM OF 1.5 * DUCT CONNECTION DIAMETER REQUEST DIRECTION FROM THE ENGINEER.



ALL DUCT 90° ELBOWS SHALL BE RADIUS
ELBOWS (1.5 * DEPTH) UNLESS
CLEARANCES REQUIRE A SQUARE RADIUS.
ALL SQUARE RADIUS ELBOWS SHALL
INCLUDE TURNING VANES PER
SPECIFICATIONS.

6 TURNING VANE DETAIL
NTS



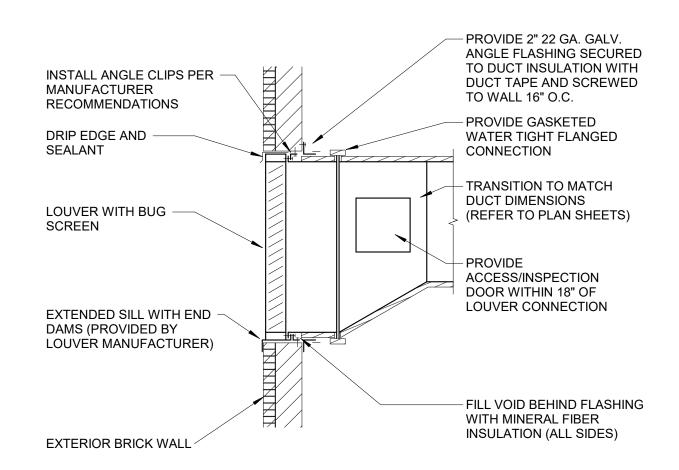
NOTES:

1. MAINTAIN A MINIMUM CLEARANCE OF 30" BETWEEN BOTTOM OF HEAT PUMP AND ROOF FOR ICE BUILDUP CAUSED BY DEFROST CYCLE.

2. SECURE HEAT PUMP TO RAILS THROUGH VIBRATION ISOLATION PADS.

3. COORDINATE FASTERNERS WITH BASE STRUCTURE.

7 OUTDOOR HEAT PUMP NTS



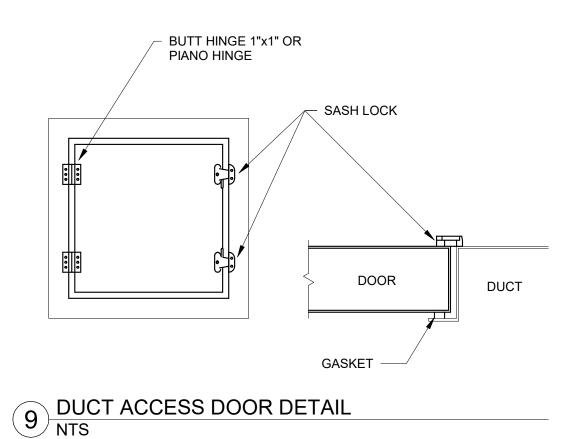
NOTES:

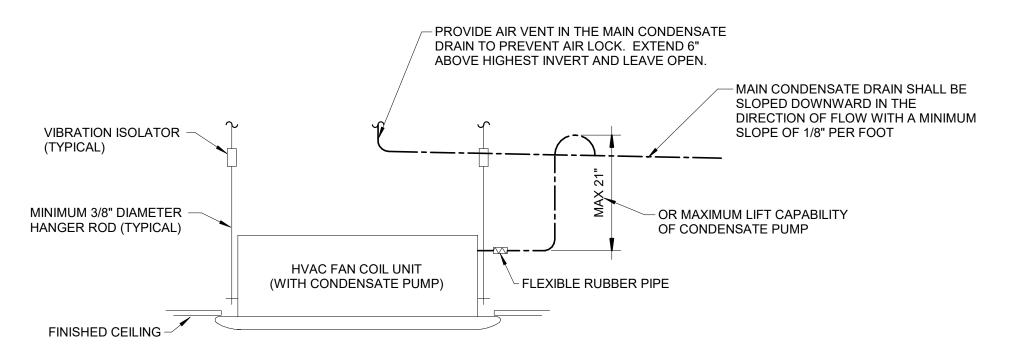
1. FINAL COLOR SELECTION BY ARCHITECT SELECTION FROM MANUFACTURER STANDARD COLOR OPTIONS.

2. COORDINATE PENETRATION FRAMING AND ALL FLASHING AND SEALANT WITH GENERAL CONTRACTOR.

8 LOUVER INSTALLATION DETAIL NTS

4 DIFFUSER CONNECTION DETAIL NTS





10 VRF CASSETTE UNIT DETAIL NTS

STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578



OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: M501
DRAWING BY: MHB
CHECKED BY: JJN
DESIGNED BY: MHB

SHEET TITLE:

MECHANICAL DETAILS

SHEET NUMBER:

M501

SHEET 40 of 47 JULY 29, 2022

	VRF HEAT RECOVERY CONDENSING UNIT SCHEDULE													
	BASIS OF I	DESIGN		CAPACITY	(BTU/HR)	OPERATIN	ELECTRICAL							
				COOLING (95F	HEATING (-12F									
MARK	MANUFACTURER	MODEL	REFRIGERANT	AMBIENT)	AMBIENT)	COOLING	HEATING	VOLT	HZ	PHASE	MCA	MOCP	NOTES	
CU-1												1,2,3,4		

NOTES:

PROVIDE THE REQUIRED NUMBER OF REFRIGERANT BRANCH BOXES REQUIRED TO SERVE THE CONTROL ZONES AND PIPING LENGTHS.
 REFER TO M501, DETAIL 7 FOR EQUIPMENT SUPPORT REQUIREMENTS.
 PROVIDE WITH HAIL GUARD.

4. REFER TO VARIABLE REFRIGERANT FLOW SYSTEMS SPECIFICATION 238200 FOR APPROVED ALTERNATE VENDORS.

	VRF FAN COIL UNIT SCHEDULE														
		BASIS OF D	ESIGN		CAPACITY (BTU/HR)		AIRFLOW								
MARK	DESCRIPTION	MANUFACTURER	MODEL	REFRIGERANT	COOLING	HEATING	CFM	ESP (IN WG)	VOLT	HZ	PHASE	MCA	RLA	NOTES	
FCU-1	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU283TMA4	R-410A	28000	31500	812		208	60	1	1.6	1.3	1,3	
FCU-2	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU283TMA4	R-410A	28000	31500	812		208	60	1	1.6	1.3	1,3	
FCU-3	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU283TMA4	R-410A	28000	31500	812		208	60	1	1.6	1.3	1,3	
FCU-4	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU283TMA4	R-410A	28000	31500	812		208	60	1	1.6	1.3	1,3	
FCU-5	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU283TMA4	R-410A	28000	31500	812		208	60	1	1.6	1.3	1,3	
FCU-6	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU283TMA4	R-410A	28000	31500	812		208	60	1	1.6	1.3	1,3	
FCU-7	4-WAY CEILING CASSETTE	LG ELECTRONICS	ARNU053TRD4	R-410A	5500	6100	265		208	60	1	0.25	0.2	1,3	
FCU-8	DUCTED UNIT	LG ELECTRONICS	ARNU073M1A4	R-410A	7500	8500	360	0.25	208	60	1	2	0.19	1,3	
FCU-9	DUCTED UNIT	LG ELECTRONICS	ARNU073M1A4	R-410A	7500	8500	360	0.25	208	60	1	2	0.19	1,3	
FCU-10	WALL MOUNTED UNIT	LG ELECTRONICS	ARNU153SJA4	R-410A	15400	17100	370		208	60	1	0.31	0.25	2,3	
FCU-11	WALL MOUNTED UNIT	LG ELECTRONICS	ARNU153SJA4	R-410A	15400	17100	370		208	60	1	0.31	0.25	2,3	
OAP-1	DUCTED UNIT	LG ELECTRONICS	ARNU543M3A4	R-410A	54000	61400	1195	1.5	208	60	1	3.1	2.5	1,3	

1. PROVIDE 4-WAY CEILING CASSETTES AND DUCTED UNITS WITH INTEGRAL CONDENSATE PUMPS.
2. PROVIDE WALL MOUNTED UNIT WITH EXTERNAL CONDENSATE PUMP.
3. REFER TO VARIABLE REFRIGERANT FLOW SYSTEMS SPECIFICATION 238200 FOR APPROVED ALTERNATE VENDORS.

						I	ENERGY F	RECOVERY L	JNIT SCHED	JLE											
		BASIS OF	DESIGN			AIRFLO	OW			SUM	IMER			WIN	TER			ELEC	TRICAL		
					SI	UPPLY	EXH	IAUST	SUPPLY AIR	SUPPLY AIR	EXHAUST AIR	EXHAUST AIR	SUPPLY AIR	SUPPLY AIR	EXHAUST AIR	EXHAUST AIR				RATED	
MARK	DESCRIPTION	MANUFACTURER	MODEL	MODE	CFM	ESP (IN WG)	CFM	ESP (IN WG)	ENTERING	LEAVING	ENTERING	LEAVING	ENTERING	LEAVING	ENTERING	LEAVING	VOLT	HZ	PHASE	AMPS	NOTES
ERV-1	CROSS-FLOW FIXED-CORE ENERGY RECOVERY VENTILATOR	LG ELECTRONICS	ARVU123ZFA2 O	CCUPIED	1200	0.5	845	1.0	96/77	86.8/73.4	75/62	87.8/68.4	20/15	41/31.4	68/52	38.7/22.8	208	60	1	5.62	1,2
			U	NOCCUPIED	710	0.4	500	0.5	96/77	86.1/72.8	75/62	89.1/68.4	20/15	42.3/33.4	68/52	36.3/22.8					

NOTES:

1. REFER TO AIR TO AIR ENERGY RECOVERY EQUIPMENT SPECIFICATION 237200 FOR APPROVED ALTERNATE VENDORS. 2. ERV TO PROVIDE 24V POWER TO THE FAIL-CLOSED SUPPLY AND EXHAUST CONTROL DAMPERS.

			D	OUCT HEATE	R SCHEDUL	.E					
	BASIS OF D	ESIGN	CAPACITY	DUCT HIEGHT	DUCT WIDTH			ELECTRIC	AL		
MARK	MANUFACTURER	MODEL	(KW)	(IN.)	(IN.)	VOLT	HZ	PHASE	MCA	MOCP	NOTES
DH-1	GREENHECK	IDHE	10	14	14	208	60	3	27.8	30	1,2,3,4

NOTES:

1. PROVIDE WITH SCR CONTROLLER.

2. INSTALL TEMPERATURE SENSOR IN DUCTWORK DOWNSTREAM OF ELECTRIC HEATER TO MAINTAIN A MINIMUM OF 20F AIR TEMPERATURE TO THE ERV -1 OUTDOOR AIR INTAKE.

3. PROVIDE WITH FACTORY INSTALLED DISCONNECT SWITCH.

4. REFER TO AIR COILS SPECIFICATION 238216 FOR APPROVED ALTERNATE VENDORS.

			GRII	LLES, F	REGISTE	RS, AND DI	FFUSERS SCHI	EDULE									
			FACE	SIZE	CON	NNECTION SIZE			THROW						BASIS (OF DESIGN	
					RECTA	NGULAR		150	100	50 N	IAX.						
TAG	TYPE	DISCRIPTION	LENGTH	WIDTH	LENGTH	WIDTH RO	UND TOTAL P.D.		FPM		NC DAMPER	MATERIAL	FINISH	FRAME	MAKE	MODEL	REMARKS
E1	EXHAUST GRILLE	1/2" x 1/2" x 1" EGGCATE GRID.	8"	6"	4"	6"					OPPOSED BLADE 0 DAMPER	ALUMINUM	WHITE ENAMEL	SURFACE MOUNT	TITUS	PXP-AA	NOTE 1, NOTE 2
E2	EXHAUST GRILLE	1/2" x 1/2" x 1" EGGCATE GRID.	26"	6"	24"	24"					OPPOSED BLADE DAMPER	ALUMINUM	WHITE ENAMEL	SURFACE MOUNT	TITUS	PXP-AA	NOTE 1, NOTE 2
E3	EXHAUST GRILLE	35 DEG. FIXED DEFLECTION REGISTER WITH BLADES PARALLEL TO LONG DIMENSION. 3/4" SPACING.	8"	6"	4"	6"					OPPOSED BLADE DAMPER	ALUMINUM	WHITE ENAMEL	WALL MOUNT	TITUS	350FL	NOTE 1
01	CEILING DIFFUSER	24x24 MODULAR FULL-FACE DIFFUSER WITH ROUND NECK	24"	24"			8" 0.05 in-wg	2'	2'	5'	10	ALUMINUM	WHITE ENAMEL	DUCT-MOUNTED	TITUS	CSR-P	NOTE 1
R1	CEILING RETURN GRILLE	1/2" x 1/2" x 1" EGGCRATE GRID.	24"	24"			14"				OPPOSED BLADE DAMPER	ALUMINUM	WHITE ENAMEL	SURFACE MOUNT	TITUS	PXP-AA	NOTE 1, NOTE 2
S1	CEILING DIFFUSER	24x24 MODULAR FULL-FACE DIFFUSER WITH ROUND NECK	24"	24"			0.05 in-wg	2'	2'	5'	OPPOSED BLADE 10 DAMPER	ALUMINUM	WHITE ENAMEL	SURFACE MOUNT	TITUS	TMSA	NOTE 1, NOTE 2
T1	TRANSFER GRILLE	SIGHT PROOF GRILLE WITH INVERTED-V BLADES IN HORIZONTAL POSITION.	18"	12"	16"	8"					0	ALUMINUM	WHITE ENAMEL	WALL MOUNT	TITUS	350FL	WALL MOUNTED, NOT
T2	TRANSFER GRILLE	SIGHT PROOF GRILLE WITH INVERTED-V BLADES IN HORIZONTAL POSITION.	8"	6"	6"	4"					0	ALUMINUM	WHITE ENAMEL	WALL MOUNT	TITUS	350FL	WALL MOUNTED, NOTE
T3	TRANSFER GRILLE	SIGHT PROOF GRILLE WITH INVERTED-V BLADES IN HORIZONTAL POSITION.	10"	12"	8"	8"					0	ALUMINUM	WHITE ENAMEL	WALL MOUNT	TITUS	350FL	WALL MOUNTED, NOTI

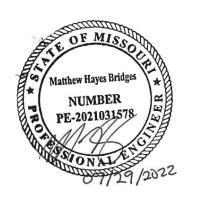
1. REFER TO DIFFUSERS, REGISTERS AND GRILLES SPECIFICATION 233713 FOR APPROVED ALTERNATE VENDORS. 2. PROVIDE WITH CONCEALED FASTENERS.

										LOUVI	ER SCHEDULE					
						FRAME			MAX.			DAMPER	2	BASIS C	F DESIGN	
TA	G DESCRIPTION	FUNCTION	AIRFLOW	WIDTH	HEIGHT	DEPTH	FREE AREA	MAX. P.D.	MAX. VELOCTIY	MATERIAL	FINISH	TYPE	ACTUATOR	MAKE	MODEL	REMARKS
L-	1 STATIONARY EXHAUST LOUVER	EXHAUST AIR	845 CFM	2' - 0"	2' - 0"	0' - 4"	1.5 SF	0.18 in-wg	470 FPM	ALUMINUM	BAKED ENAMEL	NA	NA	RUSKIN	ELF375X	INCLUDED EXTENDED SILL AND END DAMS AND INSECT SCREEN. COORDINATE LOUVER COLOR WITH ARCHITECT. NOTE 1
L-:	2 STATIONARY INTAKE LOUVER	OUTDOOR AIR INTAKE	1200 CFM	2' - 8"	2' - 8"	0' - 4"	2.6 SF	0.18 in-wg	460 FPM	ALUMINUM	BAKED ENAMEL	NA	NA	RUSKIN	ELF375X	INCLUDED EXTENDED SILL AND END DAMS AND INSECT SCREEN. COORDINATE LOUVER COLOR WITH ARCHITECT.

NOTES:

1. REFER TO LOUVER SPECIFICATION 239100 FOR APPROVED ALTERNATE VENDORS.

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578



OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 SITE# ASSET# 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: M601 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

MECHANICAL EQUIPMENT SCHEDULES

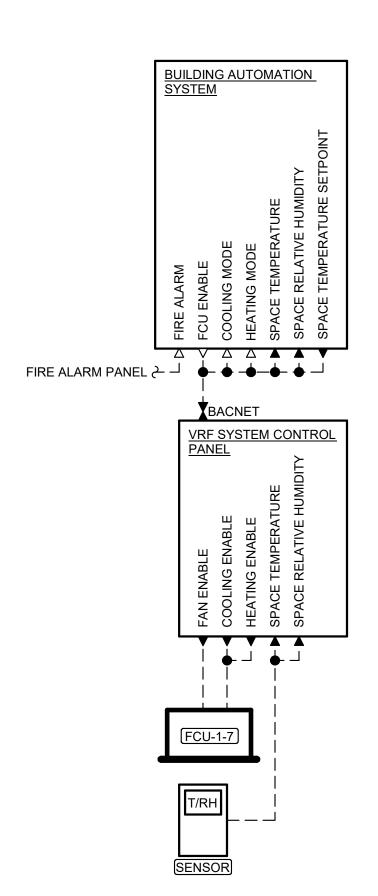
SHEET NUMBER:

SHEET 41 of 47 JULY 29, 2022

SEQUENCE OF OPERATION

GENERAL OPERATION

- A. OCCUPANCY MODE:
- 1. THE OCCUPANCY MODE (OCCUPIED OR UNOCCUPIED) SHALL BE DETERMINED THROUGH A USER-ADJUSTABLE, GRAPHICAL, SCHEDULING PROGRAM. SCHEDULING PROGRAM SHALL SUPPORT SEVEN-DAY SCHEDULING, CALENDAR SCHEDULING, AND HOLIDAY SCHEDULE OVERRIDE. THE BAS SHALL SUPPORT DIFFERENT OCCUPANCY SCHEDULES FOR EACH OF THE FOLLOWING:
- a. FCUS SERVING WORKOUT AREA, STORAGE ROOM, RESTROOMS, AND MECHANICAL ROOM.
- b. OUTDOOR AIR PROCESSING UNIT. c. ENERGY RECOVERY VENTILATOR.
- B. ZONE SETPOINTS
- 1. INITIAL OCCUPIED PERIOD ZONE SETPOINTS (REGULARLY SCHEDULED WORK DAYS FROM 5:00 AM- 6:00 PM, MONDAY-FRIDAY)
- a. COOLING 1. 72°F (ADJUSTABLE BETWEEN 65°F AND 80°F)
- 2. USERS SHALL BE ABLE TO OVERRIDE INDIVÍDUAL ZONE SETPOINTS AT THE LOCAL THERMOSTATS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0°F-10°F) AND WITHIN THE COOLING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO UN-OCCUPIED
- b. HEATING
- 1. 65°F (ADJUSTABLE BETWEEN 60°F AND 75°F) 2. USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ZONE SETPOINTS AT THE LOCAL THERMOSTATS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0°F-10°F) AND WITHIN THE COOLING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO UN-OCCUPIED
- 2. INITIAL UN-OCCUPIED PERIOD ZONE SETPOINTS (ALL REMAINING TIME THAT IS NOT DEFINED AS OCCUPIED)
- 1. 80°F (ADJUSTABLE BETWEEN 65°F AND 80°F)
- 2. USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ZONE SETPOINTS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0°F-10°F) AND WITHIN THE COOLING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO OCCUPIED CONDITION.
- b. HEATING
- 1. 60°F (ADJUSTABLE BETWEEN 60°F AND 75°F) 2. USERS SHALL BE ABLE TO OVERRIDE INDIVIDUAL ZONE SETPOINTS. USER SELECTED RANGE SHALL BE LIMITED TO +/-5°F (ADJUSTABLE FROM 0°F-10°F) AND WITHIN THE COOLING SETPOINT RANGE DESCRIBED ABOVE. USER OVERRIDES SHALL RESET FOLLOWING SYSTEM SWITCHOVER TO OCCUPIED CONDITION.
- 1. UNIT FLOW RATES FOR OCCUPIED AND UN-OCCUPIED PERIODS SHALL BE AS SHOWN ON THE DRAWINGS.
- D. OUTDOOR AIR TEMPERATURE AND RELATIVE HUMIDITY MONITORING
- 1. A COMBINATION AIR TEMPERATURE AND RELATIVE HUMIDITY SENSOR SHALL BE INSTALLED WHERE SHOWN ON EXTERIOR OF THE BUILDING IN AN OUTDOOR RATED ENCLOSURE. THE SENSOR SHALL PROVIDE OUTDOOR AIR TEMPERATURE AND RELATIVE HUMIDITY TO THE BUILDING AUTOMATION SYSTEM FOR TRENDING.
- E. ALL SETPOINTS INDICATED SHALL BE ADJUSTABLE WITHIN THE BAS SYSTEM.

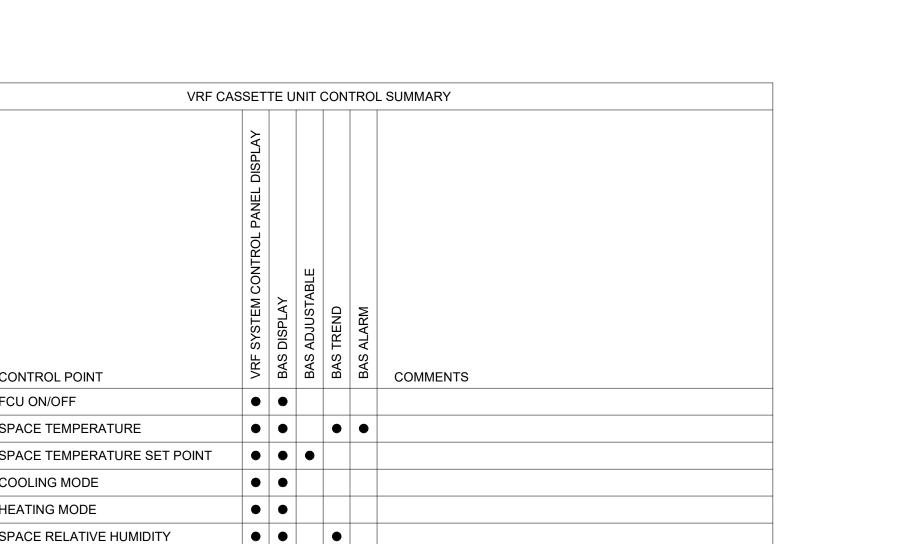


VRF CA	SSET	TE U	NIT (CON	TRO	L SUMMARY
CONTROL POINT	VRF SYSTEM CONTROL PANEL DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	BAS TREND	BAS ALARM	COMMENTS
FCU ON/OFF	•	•				
SPACE TEMPERATURE	•	•		•	•	
SPACE TEMPERATURE SET POINT	•	•	•			
COOLING MODE	•	•				
HEATING MODE	•	•				
SPACE RELATIVE HUMIDITY		•				

VRF HEAT RECOVERY SYSTEM SEQUENCE OF OPERATION

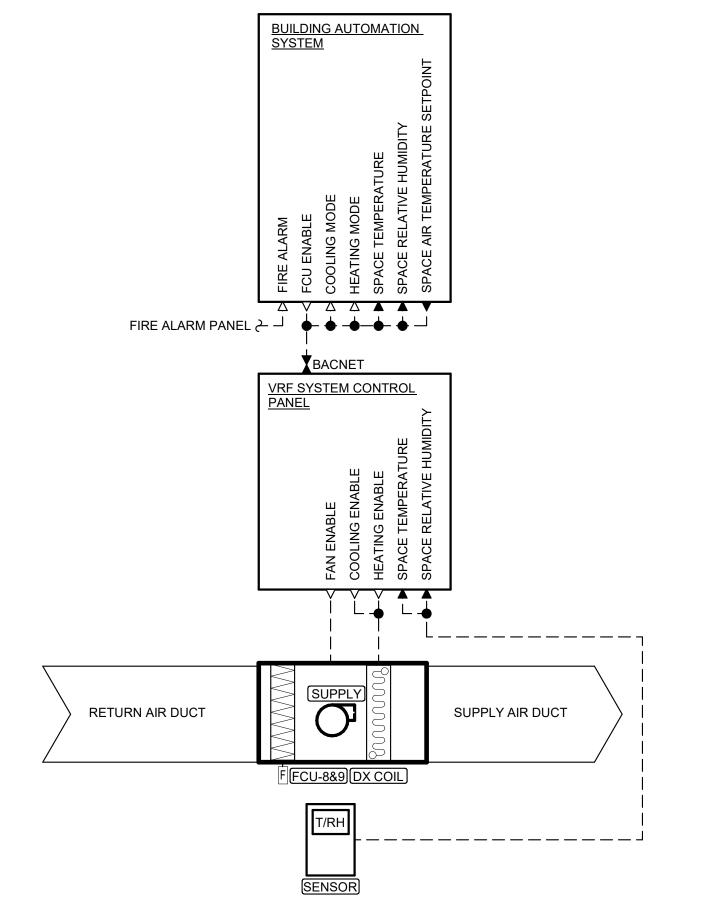
- 1. THE BAS SHALL ENABLE THE VRF HEAT RECOVERY SYSTEM AT ALL TIMES.
- 2. SAFETY SHUTDOWNS/ALARM GENERATION:
- VRF HEAT RECOVERY SYSTEM.
- 3. FAN COIL UNITS (FCU-1 THROUGH 7)
- a. SETPOINTS: AS PROVIDED WITHIN THE GENERAL BAS SYSTEM DESCRIPTION.
- B. VRF SYSTEM CONTROLLER
- 1. FAN COIL UNITS (FCU-1 THROUGH 7)
- a. FCUS SHALL OPERATE TO MAINTAIN SPACE SETPOINT.
- b. FCUS OPERATING MODE SHALL AUTOMATICALLY SWITCH BETWEEN HEATING AND COOLING BASED ON THE SPACE TEMPERATURE RELATIONSHIP TO SET POINT.
- c. SYSTEM SHALL SUPPORT SIMULTANEOUS HEATING AND COOLING BY DIFFERENT FCUS.
- d. SPACE TEMPERATURE SETPOINTS SHALL BE CONTROLLED THROUGH THE BAS WITH TEMPORARY OCCUPANT OVERRIDE AT TEMPERATURE SENSORS.
- TEMPERATURE SETPOINT WITH TEMPORARY OCCUPANT OVERRIDE. EACH UNIT SHALL SENSE AND CONTROL TO SPACE TEMPERATURE THROUGH THE UNIT MOUNTED RETURN AIR THERMISTOR.

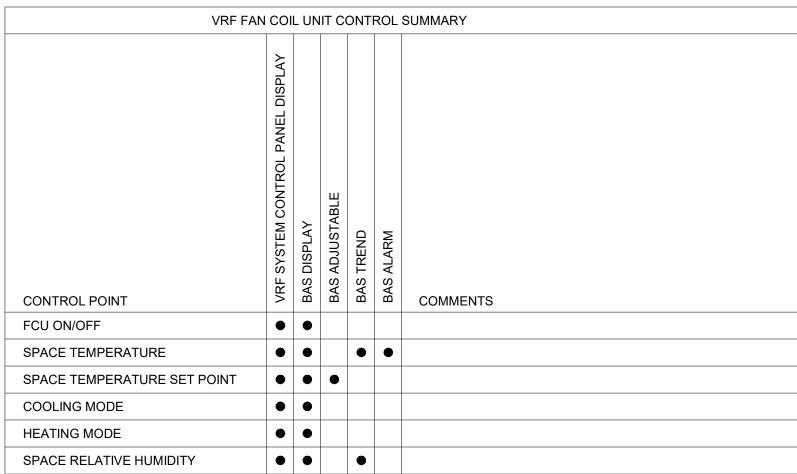




- A. CENTRAL BAS SYSTEM CONTROL
- a. BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF ALL OF THE COMPONENTS COMPRISING THE
- b. AN FCU GENERAL ALARM SHALL BE GENERATED IF THE SPACE TEMPERATURE IS GREATER THAN +/-5°F (ADJUSTABLE BETWEEN 2°F AND 10°F) FROM SETPOINT FOR MORE THAN FIVE MINUTES (ADJUSTABLE BETWEEN 1

- e. FCU-1 THROUGH 6 SHALL HAVE A COMMON THERMOSTAT TO PROVIDE SPACE TEMPERATURE AND SPACE





VRF HEAT RECOVERY SYSTEM SEQUENCE OF OPERATION

A. CENTRAL BAS SYSTEM CONTROL

VRF HEAT RECOVERY SYSTEM.

- 1. THE BAS SHALL ENABLE THE VRF HEAT RECOVERY SYSTEM AT ALL TIMES.
- 2. SAFETY SHUTDOWNS/ALARM GENERATION: a. BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF ALL OF THE COMPONENTS COMPRISING THE
- b. AN FCU GENERAL ALARM SHALL BE GENERATED IF THE SPACE TEMPERATURE IS GREATER THAN +/-5°F (ADJUSTABLE BETWEEN 2°F AND 10°F) FROM SETPOINT FOR MORE THAN FIVE MINUTES (ADJUSTABLE BETWEEN 1
- 3. FAN COIL UNITS (FCU-8 & 9) a. SETPOINTS: AS PROVIDED WITHIN THE GENERAL BAS SYSTEM DESCRIPTION.
- B. VRF SYSTEM CONTROLLER
- 1. FAN COIL UNITS (FCU-8 & 9) a. FCUS SHALL OPERATE TÓ MAINTAIN SPACE SETPOINT.
- b. FCUS OPERATING MODE SHALL AUTOMATICALLY SWITCH BETWEEN HEATING AND COOLING BASED ON THE SPACE TEMPERATURE RELATIONSHIP TO SET POINT.
- c. SYSTEM SHALL SUPPORT SIMULTANEOUS HEATING AND COOLING BY DIFFERENT FCUS.
- d. SPACE TEMPERATURE SETPOINTS SHALL BE CONTROLLED THROUGH THE BAS WITH TEMPORARY OCCUPANT OVERRIDE AT TEMPERATURE SENSORS.

2 VRF FAN COIL UNIT CONTROLS DIAGRAM NTS

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

8136300040

PROJECT # T2041-01 6300

ASSET #

REVISION: DATE **REVISION:** DATE **REVISION:** DATE:

ISSUE DATE: 07/29/22

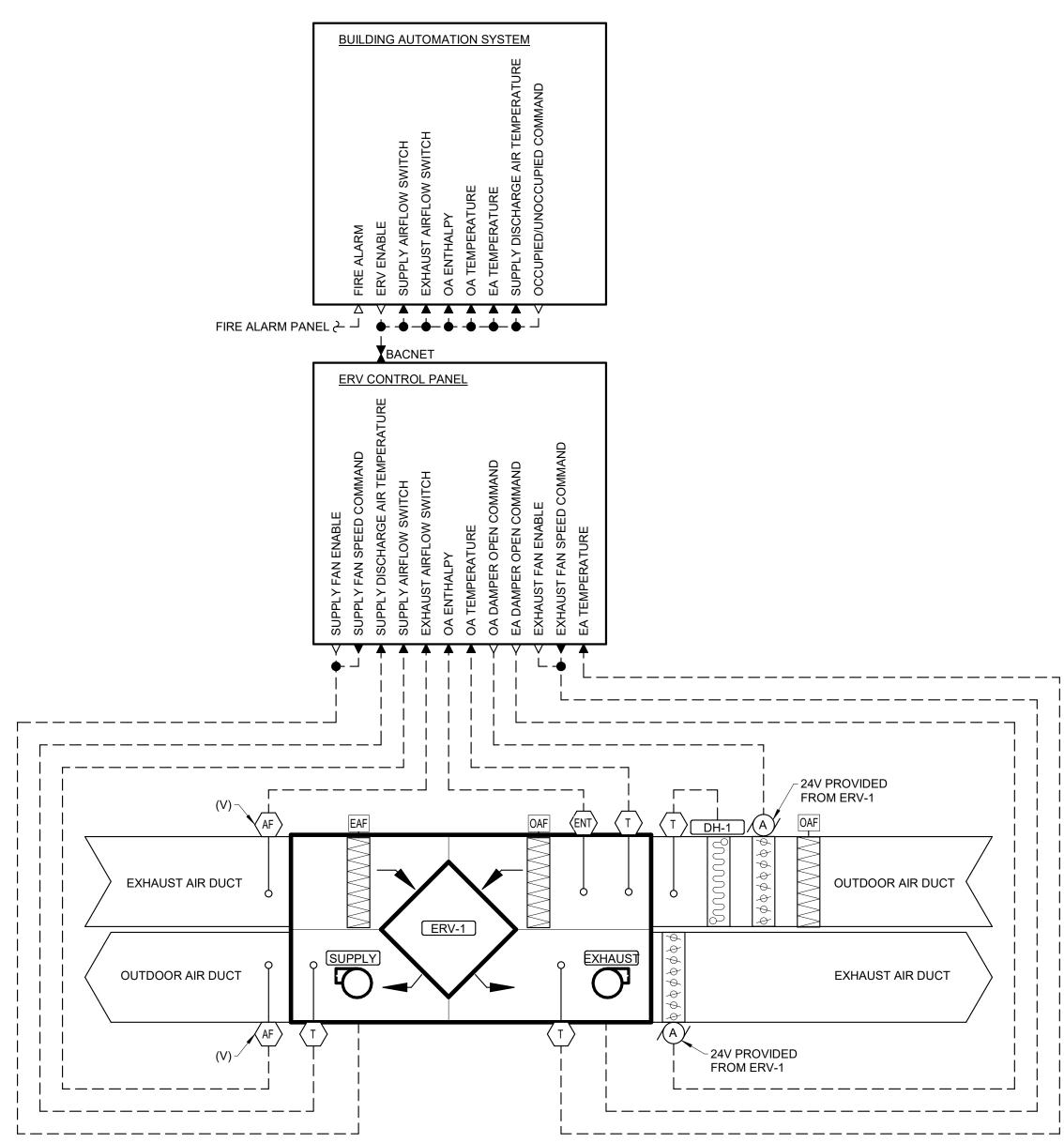
CAD DWG FILE: M70 DRAWING BY: MHE CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

CONTROL SCHEMATICS & SEQUENCES

SHEET NUMBER:

SHEET 42 of 47 JULY 29, 2022

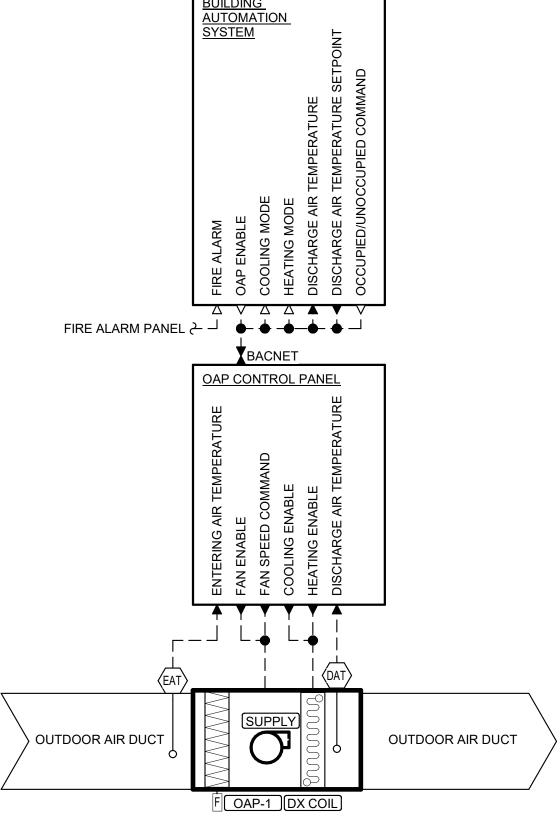


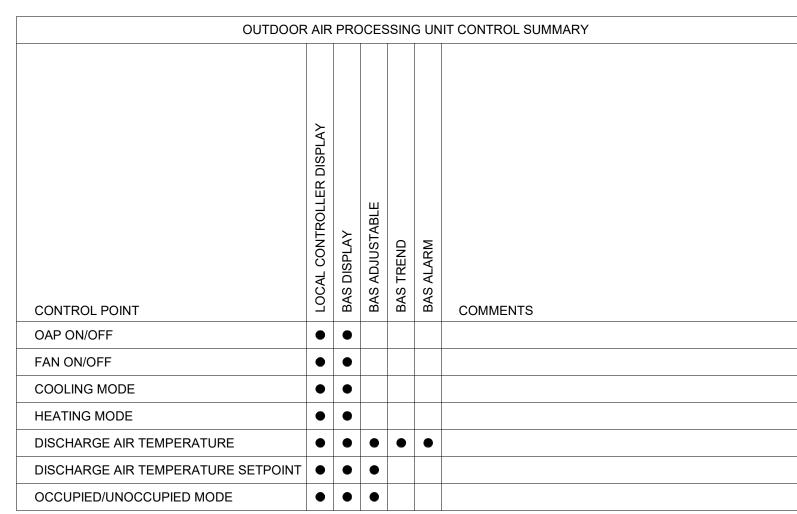
ENERGY	/ REC	COVE	ERY \	VEN	ΓΙLΑΤ	OR CONTROL SUMMARY
CONTROL POINT	LOCAL CONTROLLER DISPLAY	BAS DISPLAY	BAS ADJUSTABLE	BAS TREND	BAS ALARM	COMMENTS
ERV ON/OFF	•	•				
OUTDOOR AIR TEMPERATURE	•	•		•		
OUTDOOR AIR ENTHALPY	•	•		•		
SUPPLY FAN ON/OFF	•					
SUPPLY FAN SPEED COMMAND	•					
EXHAUST FAN ON/OFF	•					
EXHAUST FAN SPEED COMMAND	•					
DISCHARGE AIR TEMPERATURE	•	•		•		
EXHAUST AIR TEMPERATURE	•	•		•		
OA AIRFLOW SWICTH					•	ALARM IF ERV ON AND NO AIRFLOW AFTER 2 MINUTES
EA AIRFLOW SWITCH					•	ALARM IF ERV ON AND NO AIRFLOW AFTER 2 MINUTES
OCCUPIED/UNOCCUPIED MODE	•	•	•			

ENERGY RECOVERY VENTILATOR SEQUENCE OF OPERATION

- A. CENTRAL BAS SYSTEM CONTROL
- 1. THE BAS SHALL ENABLE THE ERV-1 AT ALL TIMES.
- 2. SAFETY SHUTDOWNS/ALARM GENERATION:
- a. BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF THE ERV-1.
- b. AN ERV-1 GENERAL ALARM SHALL BE GENERATED IF THE ERV-1 IS NOT PROVEN BY THE SUPPLY AIR FLOW SWITCH WITHIN TWO MINUTES OF GENERATING AN ERV RUN SIGNAL.
- c. AN ERV-1 GENERAL ALARM SHALL BE GENERATED IF THE ERV-1 IS NOT PROVEN BY THE EXHAUST AIR FLOW SWITCH WITHIN TWO MINUTES OF GENERATING AN ERV RUN SIGNAL.
- 3. SUPPLY AND EXHAUST FANS
- a. UPON ENABLING OF THE ERV-1 THE SUPPLY AND EXHAUST FANS SHALL BE ENERGIZED AND THE SUPPLY AIR AND EXHAUST AIR FANS SHALL ADJUST SPEED TO PROVIDE THE OCCUPIED/UNOCCUPIED AIRFLOW RATES SHOWN ON THE EQUIPMENT SCHEDULE.
- 4. SUPPLEMENTARY COMPONENTS a. ELECTRIC DUCT HEATER TO BE INSTALLED UPSTREAM OF THE OUTDOOR AIR INTAKE OF ERV-1 TO MAINTAIN A MINIMUM OF 20F ENTERING AIR TEMPERATURE TO THE ERV-1 OUTDOOR AIR INTAKE.
- b. ELECTRIC DUCT HEATER TO BE CONTROLLED BY A DUCT TEMPERATURE SENSOR BETWEEN THE DUCT HEATER AND ERV-1.
- c. THE OUTDOOR AIR AND EXHAUST AIR CONTROL DAMPERS SHALL BE OPEN WHENEVER ERV-1 IS ENABLED.

1 ENERGY RECOVERY VENTILATOR CONTROLS DIAGRAM NTS



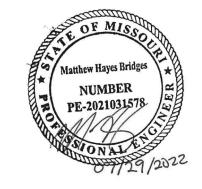


OUTDOOR AIR PROCESSING UNIT SEQUENCE OF OPERATION

- A. CENTRAL BAS SYSTEM CONTROL
- 1. THE BAS SHALL ENABLE THE OAP AT ALL TIMES.
- 2. SAFETY SHUTDOWNS/ALARM GENERATION: a. BUILDING FIRE ALARM ACTIVATION SHALL DISABLE OPERATION OF THE OAP.
- b. AN OAP GENERAL ALARM SHALL BE GENERATED IF THE DX COIL LEAVING AIR TEMPERATURE IS GREATER THAN +/-5°F (ADJUSTABLE BETWEEN 2°F AND 10°F) FROM SETPOINT FOR MORE THAN FIVE MINUTES (ADJUSTABLE BETWEEN 1 AND 20 MINUTES)
- SUPPLY FAN a. UPON ENABLING OF THE OAP THE SUPPLY FAN SHALL BE ENERGIZED AND THE SUPPLY AIR FAN SHALL ADJUST SPEED TO PROVIDE THE OCCUPIED/UNOCCUPIED AIRFLOW RATES SHOWN ON THE EQUIPMENT SCHEDULE.
- 4. THE BAS SYSTEM SHALL DETERMINE SETPOINTS ACCORDING TO THE FOLLOWING:
- a. IF THE OUTDOOR AIR TEMPERATURE IS ABOVE 65°F, THE DX COIL LEAVING AIR TEMPERATURE SETPOINT SHALL BE 55°F (ADJUSTABLE BETWEEN 55°F AND 65°F).
- b. IF THE OUTDOOR AIR TEMPERATURE IS BELOW 55°F, THE DX COIL LEAVING AIR TEMPERATURE SETPOINT SHALL BE 65°F (ADJUSTABLE BETWEEN 60°F AND 90°F).
- c. WHEN THE OUTDOOR AIR TEMPERATURE IS WITHIN THE DEADBAND TEMPERATURE BETWEEN HEATING AND COOLING, THE DX COIL SHALL BE INACTIVE.
- d. DISCHARGE AIR TEMPERATURE SETPOINTS AND OUTDOOR AIR OPERATIONAL RANGES SHALL BE ADJUSTABLE THROUGH BAS.
- B. LOCAL OAP UNIT CONTROLLER
- 1. THE LOCAL OAP CONTROLLER SHALL OPERATE THE REFRIGERANT SYSTEM TO PROVIDE THE DX COIL LEAVING AIR TEMPERATURE SETPOINTS PROVIDED BY THE BAS.

OUTDOOR AIR PROCESSING UNIT CONTROLS DIAGRAM
NTS

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578



OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING

7001 RANGE ROAD **JEFFERSON CITY, MO 65101**

PROJECT # T2041-01 8136300040 ASSET #

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: M70 DRAWING BY: MHB CHECKED BY: JJN DESIGNED BY: MHB

SHEET TITLE:

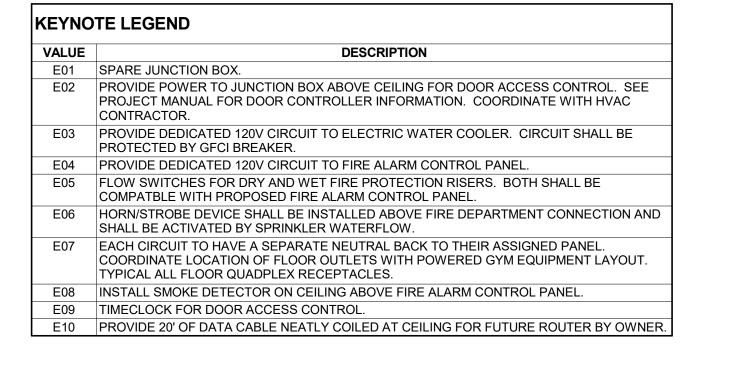
CONTROL SCHEMATICS & SEQUENCES

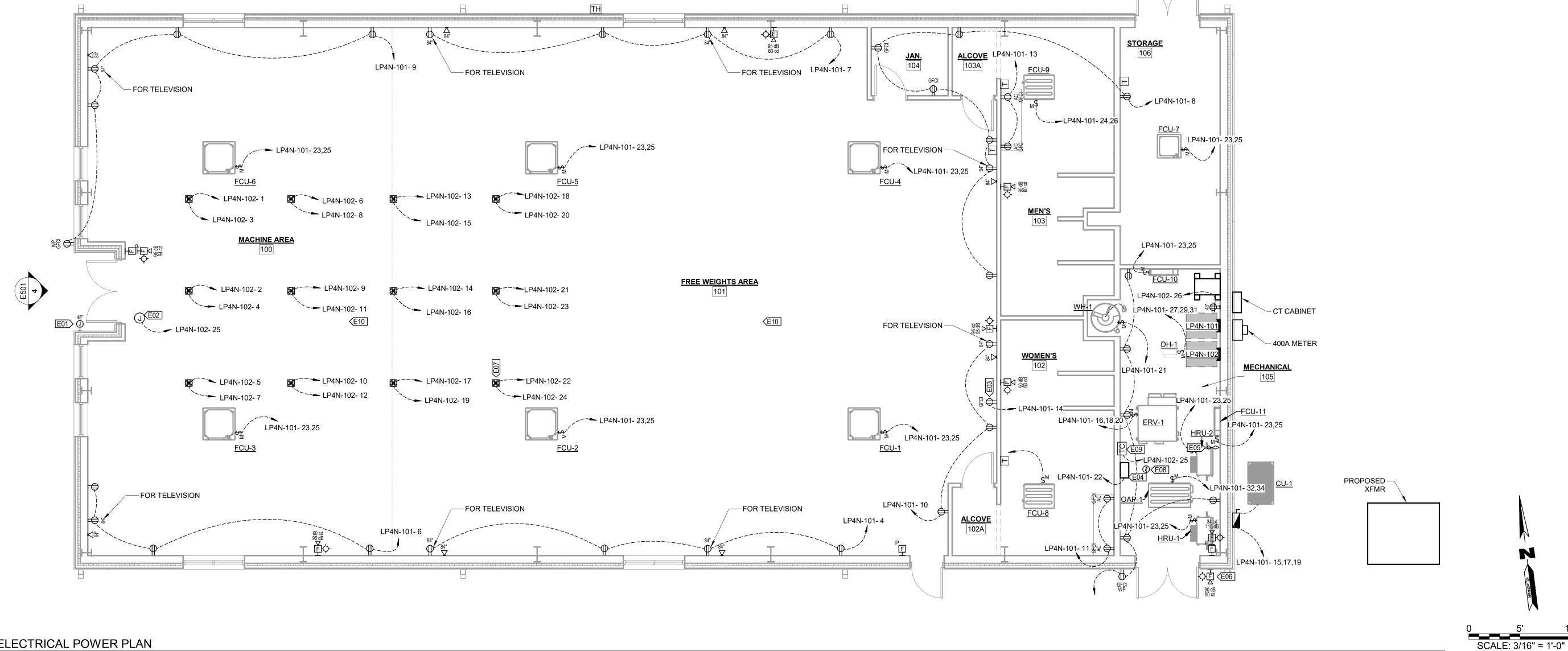
SHEET NUMBER:

SHEET 43 of 47 JULY 29, 2022

ELECTRICAL GENERAL NOTES:

1. COORDINATE LOCATION OF RECEPTACLES AND DATA OUTLETS FOR TELEVISIONS WITH BLOCKING IN WALL.





STATE OF MISSOURI MICHAEL L. PARSON, GOVERNOR



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: E101
DRAWING BY: JLD
CHECKED BY: JJN
DESIGNED BY: JLD

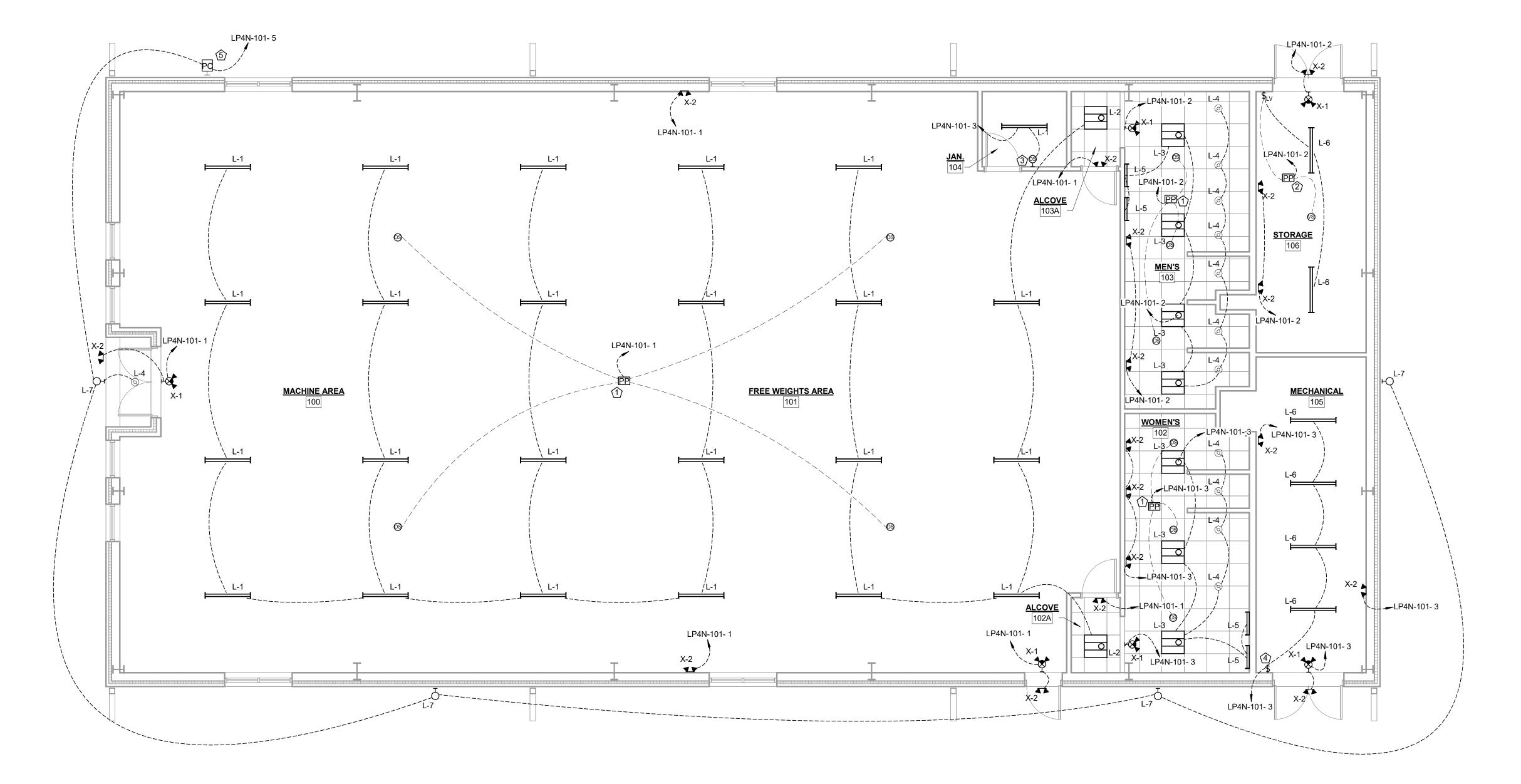
SHEET TITLE:

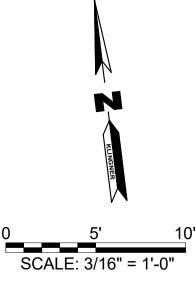
ELECTRICAL POWER PLAN

SHEET NUMBER:

E101
SHEET 44 of 47

JULY 29, 2022







MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

& A S S O G I A T E S, P. G.
ingineers • Architects • Surveyor
tolumbia, Missouri www.klingner.com

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 SITE # 6300 ASSET # 8136300040

REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
REVISION:
DATE:
ISSUE DATE: 07/29/22

CAD DWG FILE: E102 DRAWING BY: JLD CHECKED BY: JJN DESIGNED BY: JLD

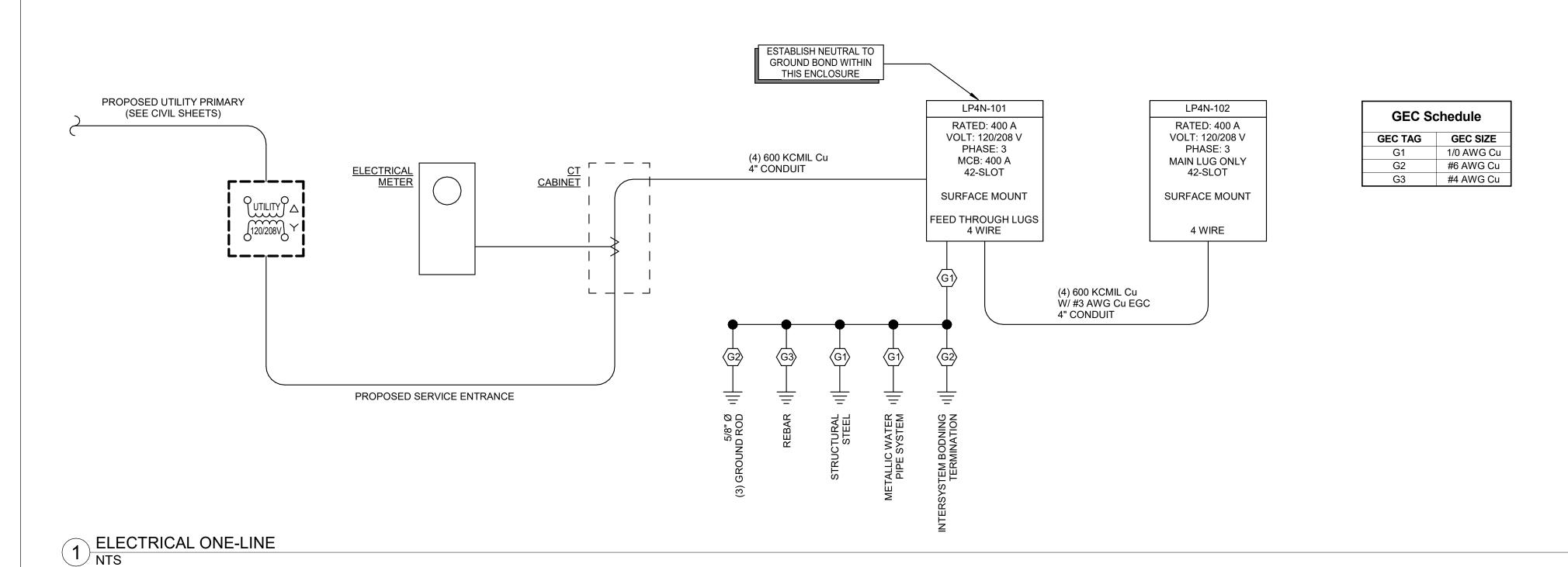
SHEET TITLE:

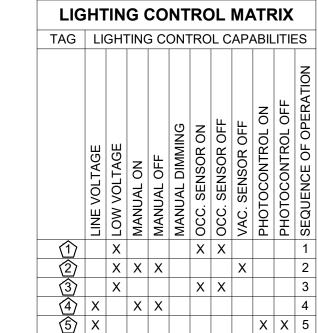
ELECTRICAL LIGHTING PLAN

SHEET NUMBER:

E102

SHEET 45 of 47 JULY 29, 2022



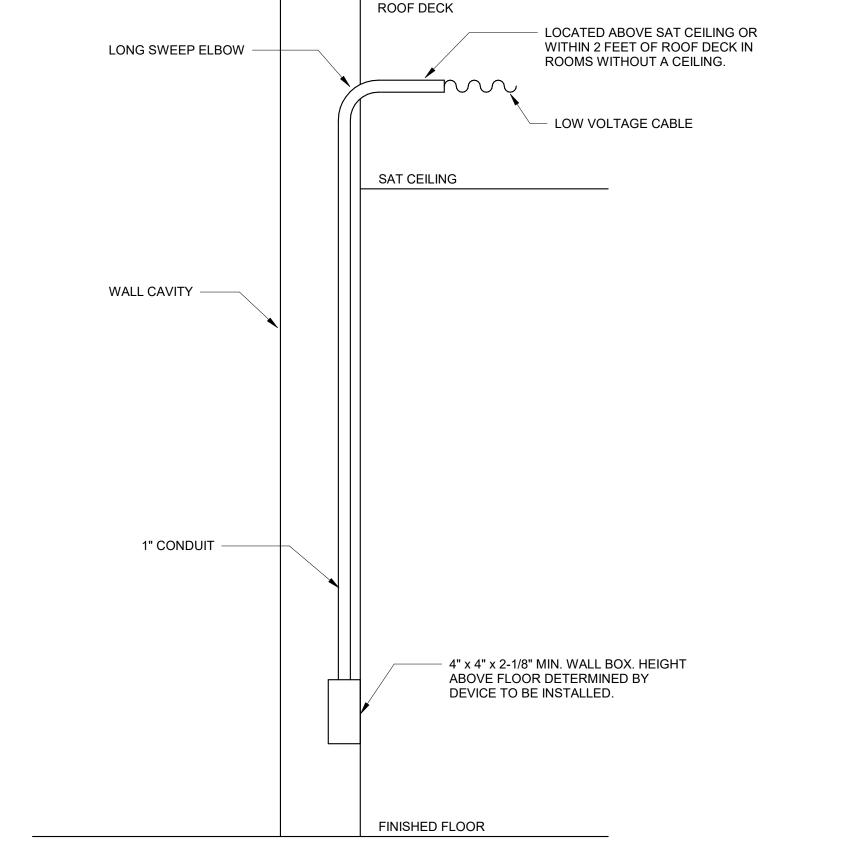


LIGHTING CONTROL SEQUENCES OF OPERATION

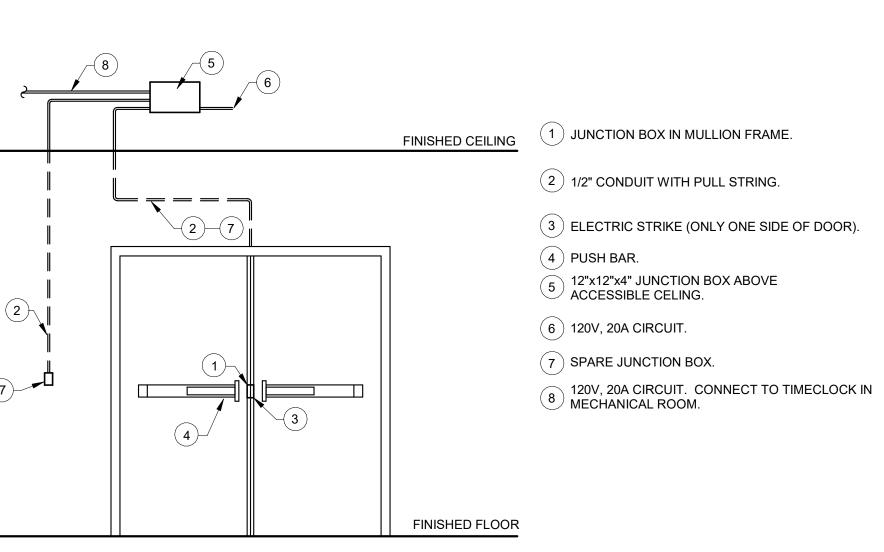
- CEILING MOUNT, LOW VOLTAGE, OCCUPANCY SENSOR CONTROL.
 UPON DETECTION OF MOTION BY ANY OCCUPANCY SENSOR IN THE ZONE, ALL LIGHTING SHALL BE ON. B. AFTER NO MOTION DETECTION FOR 20 MINUTES, LIGHTING SHALL BE OFF.
- CEILING MOUNT, LOW VOLTAGE, VACANCY SENSOR & MANUAL CONTROL.
- A. UPON ACTIVATION BY MANUAL BUTTON, LIGHTING SHALL BE ON. B. AFTER NO MOTION DETECTION FOR 20 MINUTES, LIGHTING SHALL BE OFF.
- C. LIGHTNG MAY BE DEACTIVATED BY MANUAL BUTTON.
- 3. WALL MOUNT, LOW VOLTAGE, OCCUPANCY SENSOR CONTROL. A. UPON DETECTION OF MOTION BY ANY OCCUPANCY SNESOR IN THE ZONE, ALL LIGHTING SHALL BE ON. B. AFTER NO MOTION DETCTION FOR 20 MINUTES, LIGHTING SHALL BE OFF.
- 4. WALL MOUNT, LINE VOLTAGE, MANUAL CONTROL.
- A. UPON ACTIVATION BY MANUAL BUTTON, LIGHTING SHALL BE ON.
- B. LIGHTING SHALL BE DEACTIVATED BY MANUAL BUTTON.
- 5. WALL MOUNT, LINE VOLTAGE, PHOTOCELL CONTROL. A. LIGHTING FICTURE SHALL BE CONTROLLED BY EXTERIOR WALL MOUNTED PHOTOCELL.

CONTRACTOR NOTES: 1. COORDINATE COMPATABILITY OF ALL LIGHTING CONTROLS AND LIGHT FIXTURE DRIVERS.

- 2. PROVIDE ALL WIRE, DEVICES, POWER PACKS, SENSORS, ETC. AS NECESSARY TO CREATE A STAND ALONE SYSTEM THAT ACCOMPLISHES THE DESCRIBED SEQUENCE OF OPERATION.
- 3. ALL LIGHTING CONTROLS SHALL BE HARD WIRED (WIRELESS SYSTEMS ARE NOT ACCEPTABLE) ACCEPTABLE CONTROL DEVICE MANUFACTURERS SHALL INCLUDE CRESTRON, ACUITY, WATTSTOPPER, HUBBELL AND LUTRON. SUBSTITUTIONS SHALL BE ALLOWED WITH ENGINEERS
- WRITTEN APPROVAL WITH SUBMISSION ON STATE'S SUBSTITUTION REQUEST FORM. 4. WHERE OCCUPANCY AND/OR VACANCY SENSOR LOCATIONS ARE SHOWN, ENTIRE ROOM/SPACE IN WHICH THE SENSORS ARE PLACED SHALL HAVE TOTAL COVERAGE PROVIDED.



3 LOW VOLTAGE DEVICE ROUGH-IN DETAIL NTS



4 ACCESS CONTROL DETAIL - DOUBLE DOOR NTS

STATE OF MISSOURI MICHAEL L. PARSON, **GOVERNOR**



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION **DIVISION OF FACILITIES** MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

8136300040

PROJECT # T2041-01 6300 SITE#

ASSET#

REVISION: DATE REVISION: DATE **REVISION:** DATE:

ISSUE DATE: 07/29/22

CAD DWG FILE: E50 DRAWING BY: JLD CHECKED BY: JJN DESIGNED BY: JLD

SHEET TITLE:

ELECTRICAL DETAILS

SHEET NUMBER:

E501

SHEET 46 of 47 JULY 29, 2022

	LOCATION: MECH SUPPLY FROM: XFMR MOUNTING: SURF		ROOM 10	5		VOLTS: PHASES: WIRES:	3				PANEL	ATING: 42,000 AMPS SYMMETRICAL TYPE: MCB ATING: 400 A	
	ENCLOSURE: NEMA	.1			ACCE	SSORIES:						AKER: 400 A	
СКТ	CIRCUIT DESCRIPTION	TRIP	POLES		4	E	3			POLES	TRIP	CIRCUIT DESCRIPTION	СКТ
1	LTG - WORKOUT AREA	20 A	1	1236 VA	418 VA					1	20 A	LTG - WOMENS, STOR. & ALCOVE	2
3	LTG - MENS, JAN., MECH. & ALCOVE	20 A	1			481 VA	540 VA			1	20 A	RCPT - SE. WORKOUT AREA	4
5	LTG - EXTERIOR	20 A	1					155 VA	720 VA	1	20 A	RCPT - SW. WORKOUT AREA	6
7	RCPT - NE. WORKOUT AREA	20 A	1	540 VA	1080 VA					1	20 A	RCPT - E. WORKOUT & STORAGE	8
9	RCPT - NW. WORKOUT AREA	20 A	1			900 VA	540 VA			1	20 A	RCPT - E. WORKOUT AREA	10
11	RCPT - WOMEN'S RESTROOM	20 A	1					360 VA	1080 VA	1	20 A	RCPT - MECHANICAL ROOM	12
13	RCPT - MEN'S RESTROOM	20 A	1	360 VA	180 VA					1	20 A	RCPT - EWC-1 ***	14
15						6821 VA	675 VA						16
17	CU-1	80 A	3					6821 VA	675 VA	3	15 A	ERV-1	18
19				6821 VA	675 VA								20
21	WH-1 & DCP-1	25 A	1			2375 VA	300 VA			1	20 A	FIRE ALARM CONTROL PANEL	22
23	FOLL 4 TO 7 40 44 9 UDU 4 9	00.4	0					903 VA	20 VA		45.0	FOLLO	24
25	FCU-1 TO 7,10,11 & HRU-1,2	20 A	2	903 VA	20 VA					2	15 A	FCU-9	26
27						2080 VA	20 VA				45.4	5011.0	28
29	DH-1	30 A	3					2080 VA	20 VA	2	15 A	FCU-8	30
31				2080 VA	260 VA						00.4	0.45.4	32
33	SPARE	20 A	1			0 VA	260 VA			2	20 A	OAP-1	34
35	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
		PHAS	E LOAD:	18,23	0 VA	17,81	5 VA	15,66	57 VA	**TOTA	L LOAD	51,708 VA	1
		PHAS	E AMPS:	155		15		13		**TOTA		,	1
FIFI C	VERIFY BREAKER SIZE WITH ACTUA		_									1	

	LOCATION: ME SUPPLY FROM: LP4 MOUNTING: SUF ENCLOSURE: NEM	N-101 RFACE	ROOM 10	5	ACCE	VOLTS: PHASES: WIRES: SSORIES:	_				PANEL .	TING: 42,000 AMPS SYMMETRICAL TYPE: MLO TING: 400 A	
СКТ	CIRCUIT DESCRIPTION	TRIP	POLES		Δ.		В		c	POLES	TRIP	CIRCUIT DESCRIPTION	CK
1	RCPT - TREADMILL	20 A	1	400 VA	400 VA					1	20 A	RCPT - TREADMILL	2
3	RCPT - TREADMILL	20 A	1			400 VA	400 VA			1		RCPT - TREADMILL	4
5	RCPT - TREADMILL	20 A	1					400 VA	400 VA	1	20 A	RCPT - TREADMILL	6
7	RCPT - TREADMILL	20 A	1	400 VA	400 VA					1		RCPT - TREADMILL	8
9	RCPT - TREADMILL	20 A	1			400 VA	400 VA			1		RCPT - TREADMILL	10
11	RCPT - TREADMILL	20 A	1					400 VA	400 VA	1	20 A	RCPT - TREADMILL	12
13	RCPT - ADDITIONAL FLOOR	20 A	1	400 VA	400 VA					1	20 A	RCPT - ADDITIONAL FLOOR	14
15	RCPT - ADDITIONAL FLOOR	20 A	1			400 VA	400 VA			1	20 A	RCPT - ADDITIONAL FLOOR	16
17	RCPT - ADDITIONAL FLOOR	20 A	1					400 VA	400 VA	1		RCPT - ADDITIONAL FLOOR	18
19	RCPT - ADDITIONAL FLOOR	20 A	1	400 VA	400 VA					1	20 A	RCPT - ADDITIONAL FLOOR	20
21	RCPT - ADDITONAL FLOOR	20 A	1			400 VA	400 VA			1	20 A	RCPT - ADDITIONAL FLOOR	22
23	RCPT - ADDITIONAL FLOOR	20 A	1					400 VA	400 VA	1	20 A	RCPT - ADDITIONAL FLOOR	24
25	ACCESS CONTROL	20 A	1	500 VA	360 VA					1	20 A	RCPT - DATA RACK	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	28
29	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	30
31	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	32
33	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	34
35	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A	SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	20 A	SPARE	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A	SPARE	42
	-1	PHAS	E LOAD:	4,01	3 VA	3,19	7 VA	3,19	7 VA	**TOTA	L LOAD:	10,403 VA	
		PHAS	E AMPS:	33	3 A	27	' A	27	7 A	**TOTA	L AMPS:	29 A	

			L	_AMP					BASIS OF DESIGN		
TAG	DESCRIPTION	MOUNT	TYPE	COLOR TEMP.	OUTPUT	VOLT	LOAD	MAKE	MODEL	ACCESSORIES	REMARKS
L-1	4' LED LINEAR WRAPAROUND	SURFACE SUSPENDED	LED	4000 K	7000 lm	120 V	62 VA	DAY-BRITE	BLWP4 72L ADSM MVOLT EZ1 LP840 FSW470L840-UNV-DIM 4SNLED-LD5-74HL-LN-UNV-L8XX-CD1-U		
L-2	LENSED TROFFER	LAY-IN	LED	4000 K	3800 lm	120 V	33 VA	LITHONIA	2FGG-38L-840-2-D-UNV 2GTL 2 40L LP840 22GR-LD5-23-F1-UNV-L840		
L-3	LENSED TROFFER	GYPSUM FRAME	LED	4000 K	4500 lm	120 V	47 VA	LITHONIA	2FGG-45L-840-2-D-UNV-FMA22 2GTL 2 48L LP840 DGA22 22GR-LD5-43-F1-UNV-L840-DF-22W-U	"F" MOUNTING FRAME KIT	1
L-4	DOWNLIGHT	RECESSED CEILING	LED	4000 K	1000 lm	120 V	14 VA	LITHONIA	MD3R069301F LDN3 40/10 L03 HLB3059401E		
L-5	WALL BRACKET	WALL	LED	4000 K	800 lm	120 V	7 VA	LITHONIA	TAB2L-SYM-120-40K WL2 08L P830 2BCED-LD4-8SL-UNV-L840		
L-6	STRIPLIGHT	SURFACE	LED	4000 K	3000 lm	120 V	29 VA	LITHONIA	T231-UNV-1/1 MSL 4000LM MVOLT 40K 4ST1L2040R		
L-7	EXTERIOR LED WALL PACK	WALL	LED	4000 K	4400 lm	120 V	36 VA	LITHONIA	WP-50-NW-G1-PCB-8 TWX2 LED P2 40K MVOLT PE WPMLED10-PC		
L-8	AREA LIGHTING	POLE	LED	4000 K	6500 lm	120 V	51 VA	LITHONIA	VTS-E02-LED-UNV-5WQ-IM-BZ RSX1-LED-P1-40K-R5-MVOLT-SPA-DDBXD ECF-S-32L-365-NW-G2-AR-5W-UNV-BZ		2,3,4,5
X-1	EXIT/UNIT COMBO	WALL	LED	4000 K	200 lm	120 V	4 VA		VLTCR3R ECR LED M6 APCH7RSQ		
X-2	EMERGENCY REMOTE HEAD	WALL	LED	4000 K	200 lm	120 V	2 VA	DAY-BRITE LITHONIA COOPER			

- "F" MOUNTING FRAME FOR GYPSUM BOARD CEILING SHALL BE ORDERED SEPARATELY.
 SEE CIVIL SHEETS FOR FIXTURE LOCATION AND FOUNDATION INFORMATION.
 POLE HEIGHT SHALL BE 25 FEET.
 POLE TO BE 4" x 4" PAINTED SQUARE STEEL.
 CONRACTOR TO FIELD VERIFY FINISH OF EXISTING POLES AND SUBMIT SAME FINISH IN SHOP DRAWING PRIOR TO ORDERING PROPOSED POLES.



MATTHEW H. BRIDGES - ENGINEER MO # PE-2021031578

OFFICE OF ADMINISTRATION DIVISION OF FACILITIES MANAGEMENT, **DESIGN AND CONSTRUCTION**

CONSTRUCT NEW FITNESS CENTER

IKE SKELTON TRAINING SITE

7001 RANGE ROAD JEFFERSON CITY, MO 65101

PROJECT # T2041-01 ASSET # 8136300040

REVISION:_ DATE:_ REVISION:_ DATE: REVISION: DATE: ISSUE DATE: 07/29/22

CAD DWG FILE: <u>E601</u> DRAWING BY: <u>JLD</u> CHECKED BY: <u>JJN</u> DESIGNED BY: <u>JLD</u>

SHEET TITLE:

ELECTRICAL SCHEDULES

SHEET NUMBER:

SHEET 47 of 47 JULY 29, 2022