WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

ARCHITECT

STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MICHIGAN 48067
(248) 546-6700

MECH/PLUMB/ELEC ENGINEER

MA ENGINEERING
180 HIGH OAK RD
BLOOMFIELD HILLS, MI 48304
(248) 258-1610

PROJECT INFORMATION

WSU PROJECT NUMBER: 079-410106

PROJECT DESCRIPTION
RENOVATION TO INCLUDE: REVISE LAYOUT OF EXISTING LOCKER ROOMS, UPGRADED LOUNGE WITH SNACK KITCHENETTE, AND OFFICES RENOVATED TO NEW TEAM ROOMS.

APPLICABLE CODES
2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (MRC)
2015 MICHIGAN MECHANICAL CODE (MMC)
2018 MICHIGAN PLUMBING CODE (MPC)
2015 MICHIGAN ENERGY CODE (MEC)
2013 ANSI/ASHRAE/IES 90.1
2017 NATIONAL ELECTRICAL CODE (NEC)
2015 NFPA 101 LIFE SAFETY CODE

BARRIER FREE REQUIREMENTS:
2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (DOJ)
MBC-2009, CHAPTER 11
ICC / ANSI 117.1 - 2006, EXCEPT SECTION 611 & 707

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION
BUSINESS: B

SHEET DESIGNATION

DRAWINGS ARE NUMBERED ACCORDING TO THE FOLLOWING CONVENTIONS:

A001

- A — DISCIPLINE DESIGNATOR
- 0 — DRAWING TYPE DESIGNATOR
- 01 — DRAWING SEQUENCE NUMBER

G	GENERAL
LS	LIFE SAFETY
AD	ARCHITECTURAL DEMOLITION
A	ARCHITECTURAL
F	FINISHED
TC	TECHNOLOGY
PS	PROJECT SPECIFICATIONS
M	MECHANICAL
E	ELECTRICAL

0	GENERAL, LEGENDS
1	PLANS
2	REFLECTED CEILING PLANS
3	EXTERIOR ELEVATIONS
6	ENLARGED PLANS AND INTERIOR ELEVATIONS
9	DOOR AND WINDOW SCHEDULES AND DETAILS

SHEET INDEX - GENERAL

DWG #	DRAWING NAME	ISSUED FOR	DATE
G001	COVER SHEET, GENERAL INFORMATION, DRAWING INDEX	CONSTRUCTION	03.04.25
G002	STANDARD MOUNTING HEIGHTS, PARTITION TYPES AND DETAILS	CONSTRUCTION	03.04.25
DRAWINGS: 2			

SHEET INDEX - LIFE SAFETY

DWG #	DRAWING NAME	ISSUED FOR	DATE
LS110	CODE INFORMATION AND FLOOR LIFE SAFETY PLAN - EGRESS PLANS	CONSTRUCTION	03.04.25
DRAWINGS: 1			

SHEET INDEX - DEMOLITION

DWG #	DRAWING NAME	ISSUED FOR	DATE
AD100	ARCHITECTURAL DEMOLITION PLANS	CONSTRUCTION	03.04.25
AD210	ARCHITECTURAL DEMOLITION RCP	CONSTRUCTION	03.04.25
DRAWINGS: 2			

SHEET INDEX - ARCHITECTURAL

DWG #	DRAWING NAME	ISSUED FOR	DATE
A110	FIRST LEVEL NEW CONSTRUCITON PLAN	CONSTRUCTION	03.04.25
A210	ARCHITECTURAL REFLECTED CEILING PLAN	CONSTRUCTION	03.04.25
A301	EXTERIOR ELEVATIONS AND STAIR DETAILS	CONSTRUCTION	03.04.25
A610	INTERIOR ELEVATIONS AND ENLARGED PLANS FIRST LEVEL	CONSTRUCTION	03.04.25
A900	DOOR SCHEDULE AND DETAILS	CONSTRUCTION	03.04.25
DRAWINGS: 5			

SHEET INDEX - FINISH

DWG #	DRAWING NAME	ISSUED FOR	DATE
F100	FINISH SCHEDULE & LIST OF MATERIALS	CONSTRUCTION	03.04.25
DRAWINGS: 1			

SHEET INDEX - TECHNOLOGY

DWG #	DRAWING NAME	ISSUED FOR	DATE
TC100	TECHNOLOGY PLAN	CONSTRUCTION	03.04.25
DRAWINGS: 1			

SHEET INDEX - PLUMBING

DWG #	DRAWING NAME	ISSUED FOR	DATE
PS101	PROJECT SPECIFICATION	CONSTRUCTION	03.04.25
PS102	PROJECT SPECIFICATION	CONSTRUCTION	03.04.25
PS103	PROJECT SPECIFICATION	CONSTRUCTION	03.04.25
DRAWINGS: 3			

SHEET INDEX - MECHANICAL/PLUMBING

DWG #	DRAWING NAME	ISSUED FOR	DATE
M000	MECHANICAL SYMBOLS LIST, INDEX, AND NOTES	CONSTRUCTION	03.04.25
M001	MECHANICAL SPECIFICATIONS	CONSTRUCTION	03.04.25
MD100	FIRST LEVEL SANITARY PLUMBING DEMOLITION PLAN	CONSTRUCTION	03.04.25
MD101	FIRST LEVEL DOMESTIC PLUMBING DEMOLITION PLAN	CONSTRUCTION	03.04.25
MD200	FIRST LEVEL HVAC DEMOLITION PLAN	CONSTRUCTION	03.04.25
M100	FIRST LEVEL SANITARY PLUMBING NEW WORK PLAN	CONSTRUCTION	03.04.25
M101	FIRST LEVEL DOMESTIC PLUMBING NEW WORK PLAN	CONSTRUCTION	03.04.25
M200	FIRST LEVEL HVAC NEW WORK PLAN	CONSTRUCTION	03.04.25
M300	MECHANICAL SCHEDULES AND DETAILS	CONSTRUCTION	03.04.25
DRAWINGS: 9			

SHEET INDEX - ELECTRICAL

DWG #	DRAWING NAME	ISSUED FOR	DATE
E001	ELECTRICAL LEGEND, SHEET INDEX, TABLES, AND SPECIFICATION	CONSTRUCTION	03.04.25
E002	PANEL SCHEDULES	CONSTRUCTION	03.04.25
ED100	DEMOLITION FLOOR PLAN - ELECTRICAL	CONSTRUCTION	03.04.25
E210	FLOOR PLAN - LIGHTING	CONSTRUCTION	03.04.25
E310	FLOOR PLAN - POWER	CONSTRUCTION	03.04.25
E510	ELECTRICAL DETAILS	CONSTRUCTION	03.04.25
E610	ELECTRICAL SPECIFICATIONS	CONSTRUCTION	03.04.25
1 OF 1	EMERGENCY LIGHTING PHOTOMETRIC	CONSTRUCTION	03.04.25
DRAWINGS: 8			

NOTE:
THESE CONSTRUCTION DRAWINGS WERE PREPARED FOR COMPLIANCE WITH THE MICHIGAN CONSTRUCTION CODES IN EFFECT AT THE TIME OF PERMIT SUBMITTAL. ALL ENGINEERS, CONTRACTORS AND SUPPLIERS INVOLVED WITH THIS PROJECT SHALL COMPLY WITH THE SAME CODES, ISSUED AND APPROVED CODE MODIFICATIONS AND/OR CITY CODE AUTHORITY CONSTRUCTION BOARDS OF APPEALS RULINGS AND WHENEVER REQUIRED SHALL PROVIDE SHOP DRAWINGS AND SUBMITTALS CLEARLY DESCRIBING COMPLIANCE TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE FOR REVIEW AND APPROVAL.

MATERIAL LEGEND

HATCH PATTERNS

- EARTH
- SAND
- GRAVEL FILL
- CONCRETE
- MASONRY
- GROUT
- MORTAR
- STEEL
- STAINLESS STEEL
- RIGID INSULATION
- GYPSUM BOARD
- CEMENT BOARD

TYPICAL DETAIL SYMBOLS

- STEEL MEMBER
- SPRAY ON FIREPROOFING
- HARDWOOD
- PLYWOOD
- CONTINUOUS BLOCKING
- SHIM
- BATT INSULATION
- SEALANT WITH BACKER ROD

PARTITION PLAN DESIGNATIONS

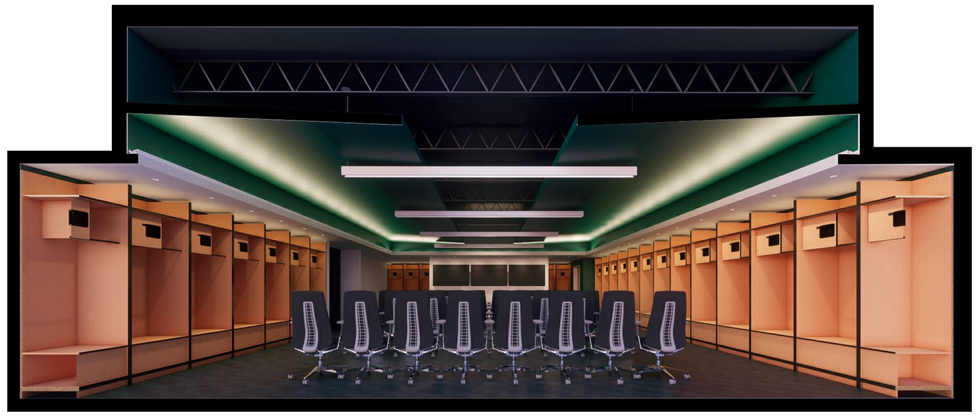
- SMOKE SEPARATION
- 1 HOUR FIRE SEPARATION
- 2 HOUR FIRE SEPARATION
- 3 HOUR FIRE SEPARATION
- METAL STUD PARTITION
- CMU PARTITION
- CONCRETE WALL

SYMBOL LEGEND

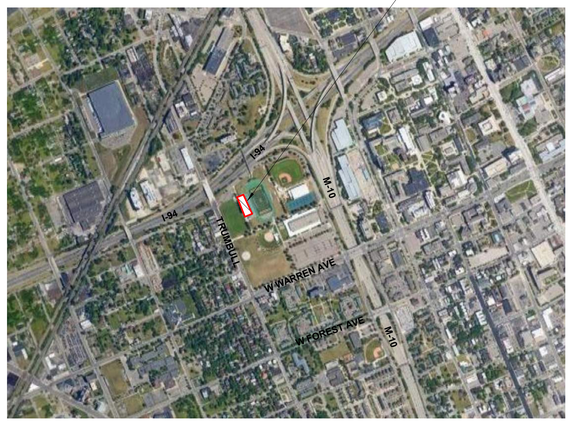
- ENLARGED CALLOUT TAG (1 / A101 SIM)
- INTERIOR ELEVATION TAG (1 / A101 SIM)
- EXTERIOR ELEVATION TAG (1 / A101 SIM)
- DETAIL NUMBER, VIEW TITLE, VIEW SCALE, SHEET NUMBER (X / Sheet — Name — SCALE: X/X" = 1'-0")
- ROOM TAG (ROOM NAME / ROOM NAME / 101)
- LEVEL REFERENCE (FLOOR NAME / ELEV. 100'-0")
- DATUM WORKPOINT (0, 0)
- COLUMN GRIDS
  - NUMBERS DESIGNATE VERTICAL COLUMN LINES
  - LETTERS DESIGNATE HORIZONTAL COLUMN LINES
  - SQUARE DESIGNATE EXISTING COLUMN GRID
- DOOR TAGS
  - NEW DOOR TAG DESIGNATION (101)
  - EXISTING DOOR TAG DESIGNATION (ONLY IF EXISTING DOOR TO BE MODIFIED) (101)
- PARTITION TAG (2C3-Ys)
- KEYNOTE TAG (?)
- EQUIPMENT TAG (?)

ABBREVIATION LEGEND

&	AND
@	AT
℄	CENTERLINE
ACCESS.	ACCESSIBILITY
ACOUS.	ACOUSTICAL
ACT	ACOUSTICAL CEILING TILE
A.D.	AREA DRAIN
ADJ	ADJUSTABLE
AL	ALUMINUM
ASPH.	ASPHALT
BD.	BOARD
BLDG.	BUILDING
BLK.	BLOCKING
BR	BRICK
CAB.	CABINET
CEM.	CEMENT
CER.	CERAMIC
CFMF	COLD FORMED METAL FRAMING
C.J.	CONTROL JOINT
CLG	CEILING
CLKG.	CAULKING
CLR.	CLEAR
COL.	COLUMN
CONC.	CONCRETE
CONT.	CONTINUOUS
CORR.	CORRIDOR
CPT	CARPET
D.F.	DRINKING FOUNTAIN
DET.	DETAIL
DIA.	DIAMETER
DIM.	DIMENSION
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DWR.	DRAWER
D.S.	DOWN SPOUT
DSP	DRY STAND PIPE
DWG.	DRAWING
EA	EACH
E.J.	EXPANSION JOINT
EL	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
E.O.S./EOS	EDGE OF SLAB
E.O.D./EOD	EDGE OF DECK
EP	ELECTRICAL PANEL
EPX	EPOXY
EQ.	EQUAL
EQPM	EQUIPMENT
EXIST./EX	EXISTING
EXT.	EXTERIOR
FA	FIRE ALARM
FD	FLOOR DRAIN
FDN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FHC	FIRE HOSE CABINET
FIN	FINISH
FL	FLOOR
FPRF	FIREPROOF
FRP	FIBERGLASS REINFORCED PANEL
F.S.	FULL SIZE
FT.	FOOT OR FEET
FTG.	FOOTING
FUR	FURRING
GA.	GAUGE
GALV.	GALVANIZED
GFRC.	GLASS FIBER REINFORCED CONCRETE
GL.	GLASS
GYP.	GYPSUM
H.B.	HOSE BIBB
H.C.	HOLLOW CORE
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ.	HORIZONTAL
INSUL	INSULATION
JC	JANITOR'S CLOSET
LT	LIGHT
LVT	LUXURY VINYL TILE
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MFR.	MANUFACTURER
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O/C	ON CENTER
OFC	OFFICE
OPP	OPPOSITE
PL	PLATE
PLAM	PLASTIC LAMINATE
PNT	PAINT
PLYWD	PLYWOOD
RD	ROOF DRAIN
RCP	REFLECTED CEILING PLAN
REQD	REQUIRED
SC	SOLID CORE
SCHED	SCHEDULE
SIM	SIMILAR
SPEC	SPECIFICATIONS
SQ	SQUARE
S.S.	STAINLESS STEEL
SS	SOLID SURFACE
ST	STONE
STD	STANDARD
STL	STEEL
STOR	STORAGE
SUSP	SUSPENDED
SYM	SYMMETRICAL
TRD	TREAD
T.O.C.	TOP OF CURB
T&G	TONGUE AND GROOVE
THK	THICK
T.O.P.	TOP OF PARAPET
TA	TOILET ACCESSORY
TV	TELEVISION
T.O.W.	TOP OF WALL
TOS/ T.O.S.	TOP OF STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT.	VERTICAL
VEST	VESTIBULE
VF	VINYL FLOORING
W/	WITH
WB	WALL BASE
W.C.	WATER CLOSET
WC	WALLCOVERING
WD	WOOD
W/O	WITHOUT
WSCT.	WAINSCOT
WT.	WEIGHT



1 / G001 — Locker Room - Perspective Section (Ceiling)
3/8" = 1'-0"



LOCATION MAP
6" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

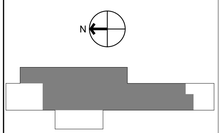
Seal:

STATE OF MICHIGAN — JOHN A. VITALE — ARCHITECT — No. 1301029086 — LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
JML

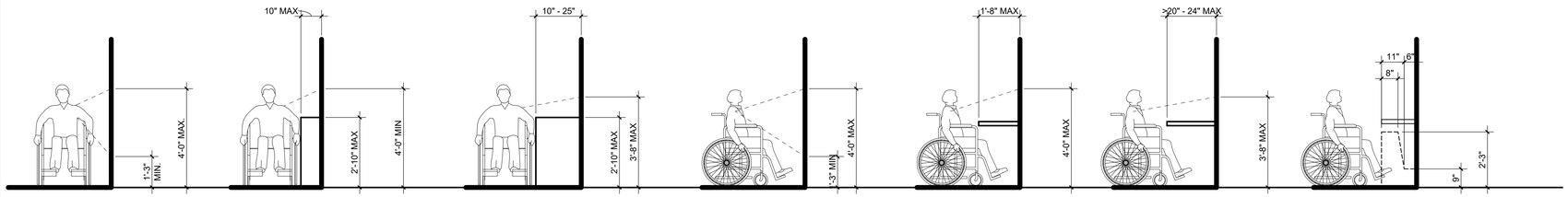
Checked by :
ARR

Sheet Title :
COVER SHEET, GENERAL INFORMATION, DRAWING INDEX

Project No. :
2023.175

Sheet No. :
G001

TYPICAL MOUNTING LEGEND



UNOBSTRUCTED SIDE REACH ADA 2010, ANSI 117.1/2003

OBSTRUCTED SIDE REACH ADA 2010, ANSI 117.1/2003

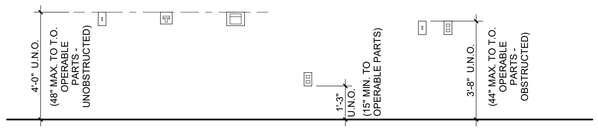
OBSTRUCTED SIDE REACH ADA 2010, ANSI 117.1/2003

UNOBSTRUCTED FORWARD REACH ADA 2010, ANSI 117.1/2003

OBSTRUCTED FORWARD REACH ADA 2010, ANSI 117.1/2003

OBSTRUCTED FORWARD REACH ADA 2010, ANSI 117.1/2003

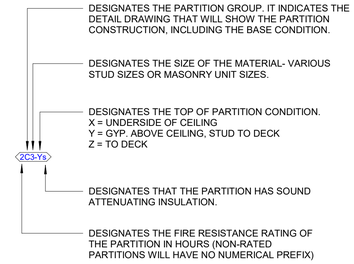
KNEE AND TOE CLEARANCE ADA 2010, ANSI 117.1/2003



SWITCH | FIRE ALARM PULL BOX | THERMOSTAT | WALL OUTLET | SWITCH OR WALL OUTLET ABOVE COUNTER

PARTITION LEGEND

THE PARTITION TAG

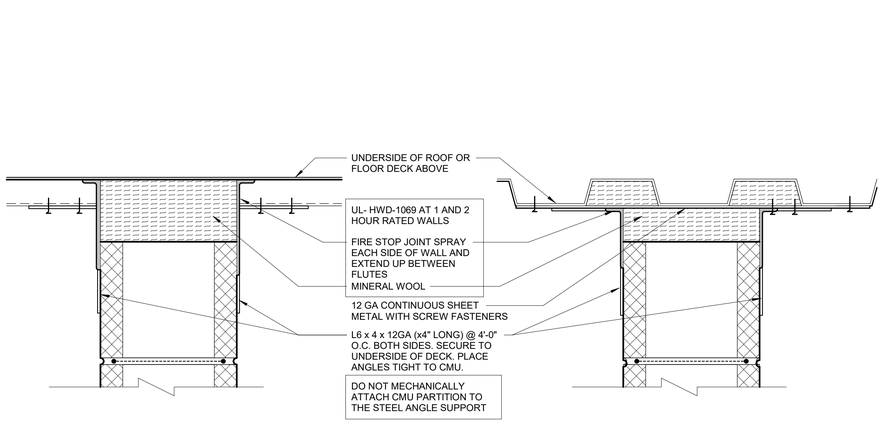


PARTITION GROUPS (REMOVE TYPE FROM NOTE WHEN NOTE USED)

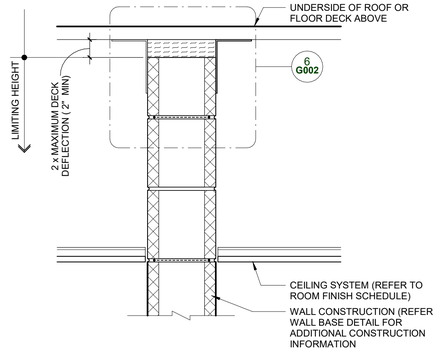
C = ONE LAYER OF GYPSUM BOARD ON BOTH SIDES OF METAL STUDS.
G = CMU

INTERIOR PARTITION SCHEDULE

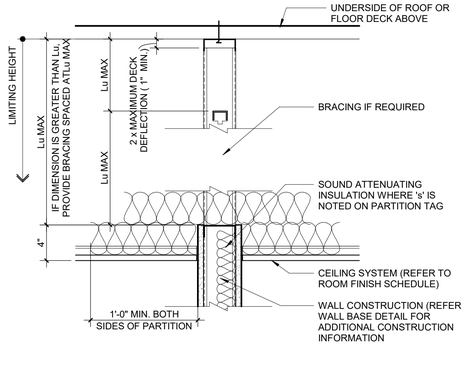
TYPE	DESCRIPTION	WIDTH NOMINAL	WIDTH ACTUAL	DET'L	STUD DEPTH	STUD THICK	STUD SPACING	UL DESIGN 1 HR	UL DESIGN 2 HR	UL DESIGN OTH'R	STC* W/O	STC* W/	REMARKS
C2	1 GYP, BOTH SIDES ON 3 5/8" METAL STUDS	0' - 5"	4 7/8"	1/G002 4/G002	3 5/8"	30 MIL	16" O/C	U419	--	--	42	44	
G3	8" CMU (NORMAL WEIGHT)	0' - 8"	7 5/8"	2/G002 5/G002	--	--	--	--	U905	--	45	51	



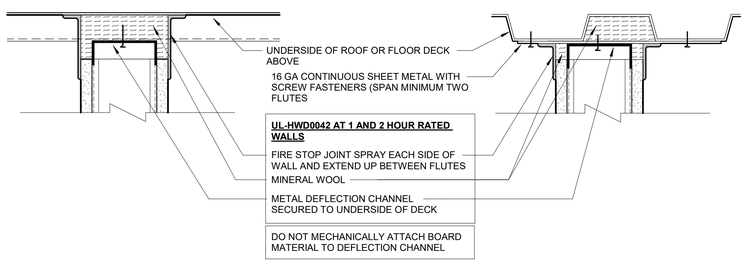
6 G002 Type G Partition Top Enlarged Detail (Rated)
3" = 1'-0"



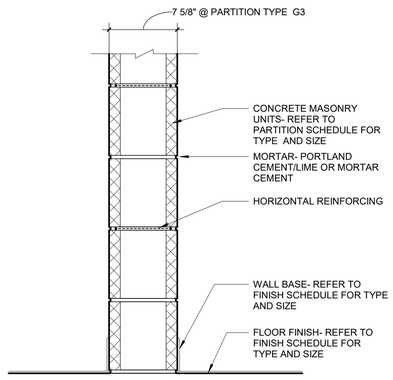
5 G002 Partition Type G Wall Head Detail (.Z)
1 1/2" = 1'-0"



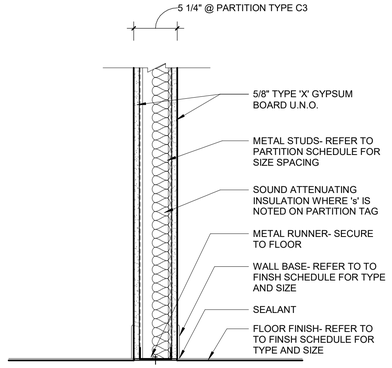
4 G002 Partition Type C Wall Head Detail (.Y)
1 1/2" = 1'-0"



3 G002 Type C Partition Top Enlarged Detail (Rated)
3" = 1'-0"



2 G002 Partition Type G Wall Base Detail
1 1/2" = 1'-0"



1 G002 Partition Type C Wall Base Detail
1 1/2" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : JML
Checked by : ARR
Sheet Title : STANDARD MOUNTING HEIGHTS, PARTITION TYPES AND DETAILS
Project No. : 2023.175
Sheet No. : G002

CODE STUDY

PROJECT SCOPE
RENOVATION TO INCLUDE: REVISE LAYOUT OF EXISTING LOCKER ROOMS, UPGRADED LOUNGE WITH SNACK KITCHENETTE, AND OFFICES RENOVATED TO NEW TEAM ROOMS.

APPLICABLE CODES AND REFERENCES

2015 MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS (MRC)
2021 MICHIGAN MECHANICAL CODE (MMC)
2021 MICHIGAN PLUMBING CODE (MPC)
2015 MICHIGAN ENERGY CODE (MEC)
2013 ANSI/ASHRAE/IES 90.1
2023 NATIONAL ELECTRICAL CODE (NEC)
2015 NFPA 101 LIFE SAFETY CODE

BUILDING CHARACTERISTICS

BUILDING AREA-SQUARE FEET-

EXISTING RENOVATION:	8,187 SF
NOT IN SCOPE:	3,857 SF
TOTAL AREA=	12,044 SF

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION

BUSINESS (B)

CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS

BASED ON TYPE 5B CONSTRUCTION (EXIST'G)

NO CHANGE TO BUILDING HEIGHT OR AREA

CHAPTER 6 - TYPES OF CONSTRUCTION

TABLE 601

FOR TYPE 5B (EXIST'G) FIRE RESISTANCE RATINGS FOR BUILDING ELEMENTS

STRUCTURAL FRAME =	0 HRS
BEARING WALLS (INT. & EXT.) =	0 HRS
NON-LOAD BEARING WALLS (EXT.) =	0 HRS
NON BEARING WALLS & PARTITIONS =	0 HRS
FLOOR CONSTRUCTION =	0 HRS
ROOF CONSTRUCTION =	0 HRS

TABLE 602

FIRE RATING FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE
<30'-0" = 1 HR
>30'-0" = 0 HR

CHAPTER 7 - FIRE AND SMOKE PROTECTION FEATURES
713.4 SHAFT FIRE-RESISTANCE RATING
SHAFT ENCLOSURES SHALL HAVE A FIRE RESISTANCE RATING OF NOT LESS THAT 1 HR. (BUILDING IS LESS THAN FOUR STORIES HIGH)

CHAPTER 10 - MEANS OF EGRESS

1004.0 OCCUPANT LOAD

TOTAL BUILDING OCCUPANCY = 350 OCCUPANTS TOTAL

1005.3.1 STAIRWAYS
CAPACITY OF STAIRWAY IN INCHES OF MEANS OF EGRESS - 0.3"/OCCUPANT, CONSIDERING EACH FLOOR INDIVIDUALLY.

1005.3.2 OTHER EGRESS COMPONENTS
CAPACITY OF OTHER THAN STAIRWAY WIDTH IN INCHES OF MEANS OF EGRESS - 0.2"/OCCUPANT.

1005.5 DISTRIBUTION OF MEANS OF EGRESS
MEANS OF EGRESS SHALL BE CONFIGURED SUCH THAT THE LOSS OF ONE, WHERE MORE THAN ONE IS REQUIRED, WILL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50% OF REQUIRED.

TABLE 1017.2 EXIT ACCESS TRAVEL DISTANCE
B OCCUPANCY, NON-SPRINKLERED = 200'-0"

TABLE 1020.1 CORRIDOR FIRE RESISTANCE RATINGS
B OCCUPANCY GREATER THAN 30, NON-SPRINKLERED = 1 HRS

TABLE 1020.2 MINIMUM CORRIDOR WIDTHS
ACCESS TO MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT = 24"
ANY FACILITY = 44"

1020.4 DEAD ENDS
MAXIMUM DEAD END CORRIDOR LENGTH = 20'-0"

CHAPTER 10(CONT'D) - MEANS OF EGRESS
1024.2 EXIT PASSAGEWAY WIDTH
MINIMUM WIDTH OF EXIT PASSAGEWAYS SHALL NOT BE LESS THAN 44".

1024.3 EXIT PASSAGEWAY CONSTRUCTION
EXIT PASSAGEWAY ENCLOSURES SHALL HAVE WALLS, FLOORS AND CEILINGS OF NOT LESS THAN 1-HOUR FIRE-RESISTANCE RATING, AND NOT LESS THAN THAT REQUIRED FOR ANY CONNECTING INTERIOR EXIT STAIRWAY.

1029.2 ASSEMBLY EXIT
WHERE NO SINGLE MAIN EXIT IS DEFINED FOR THE ASSEMBLY, EXITS SHALL BE EVENLY DISTRIBUTED AROUND THE PERIMETER OF THE BUILDING PROVIDE THE TOTAL WIDTH OF EGRESS IS NOT LESS THAN 100% OF THE REQUIRED WIDTH,

350 (TOTAL OCCUPANTS)/2 (MIN. REQUIRED EXITS) = 175 PERSONS/EXIT
REQUIRED DOOR WIDTH (AGGREGATE)/EXIT - 175 X 0.2"/PERSON = 35"
CLEAR WIDTH OF SINGLE 36" DOOR IS 33" - 35"/33" = 1.06 (2) DR'S REQ PER EXIT
2 DR'S REQ'D, 2 DR'S PROVIDED
CAPACITY OF EACH EXIT BASED ON AVAILABLE CLEAR WIDTH :
33" CLEAR WIDTH X 2 DR'S = 66", 66"/0.2"/PERSON = 330 PERSONS PER EXIT MAX.
MINIMUM REQUIRED PERSONS PER EXIT = 175

MICHIGAN REHABILITATION CODE FOR EXISTING BUILDINGS

301.1 GENERAL
SHALL COMPLY WITH THE FOLLOWING METHODS:

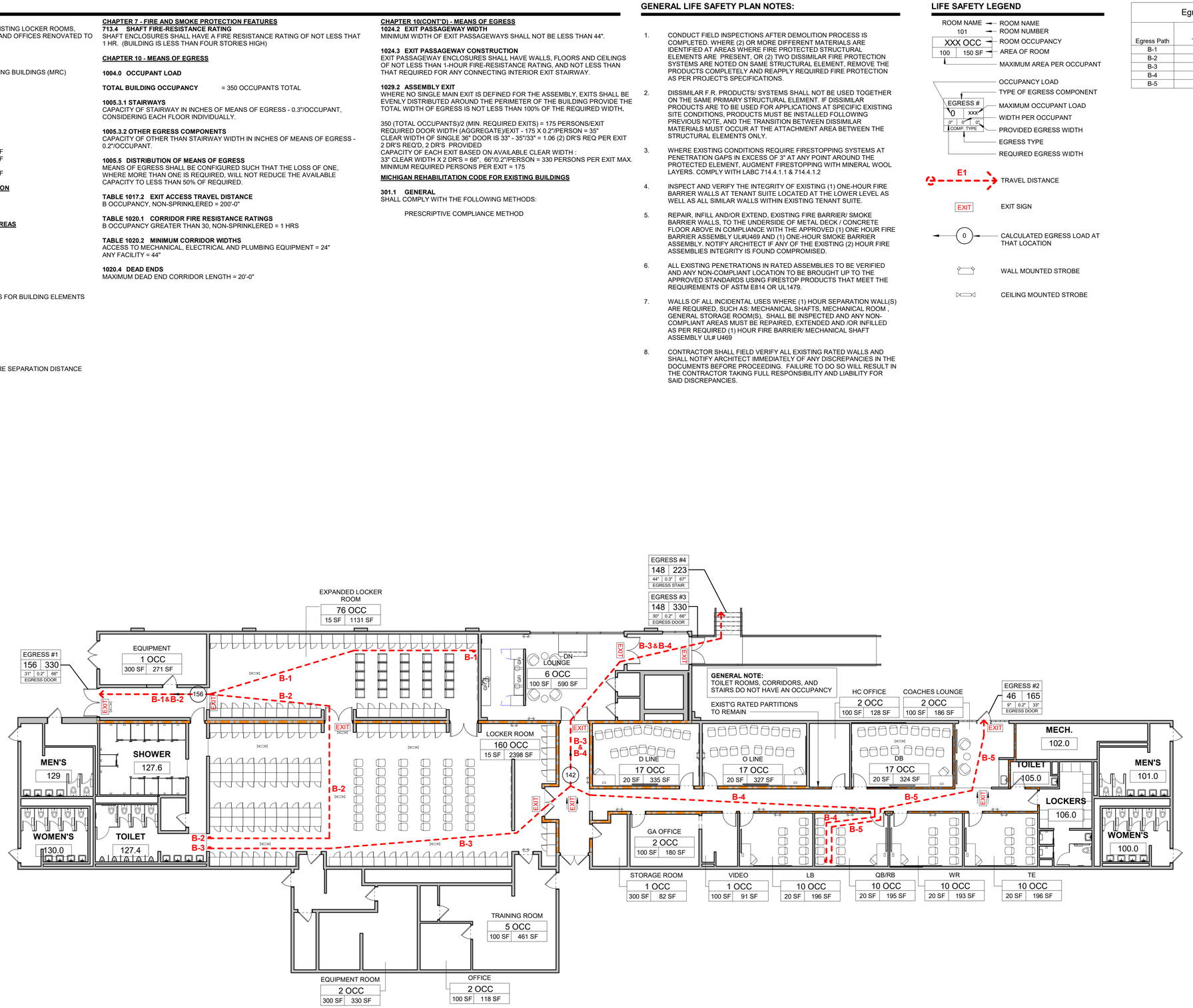
PRESCRIPTIVE COMPLIANCE METHOD

GENERAL LIFE SAFETY PLAN NOTES:

1. CONDUCT FIELD INSPECTIONS AFTER DEMOLITION PROCESS IS COMPLETED. WHERE (2) OR MORE DIFFERENT MATERIALS ARE IDENTIFIED AT AREAS WHERE FIRE PROTECTED STRUCTURAL ELEMENTS ARE PRESENT, OR (2) TWO DISSIMILAR FIRE PROTECTION SYSTEMS ARE NOTED ON SAME STRUCTURAL ELEMENT, REMOVE THE PRODUCTS COMPLETELY AND REAPPLY REQUIRED FIRE PROTECTION AS PER PROJECT'S SPECIFICATIONS.
2. DISSIMILAR F.R. PRODUCTS/ SYSTEMS SHALL NOT BE USED TOGETHER ON THE SAME PRIMARY STRUCTURAL ELEMENT. IF DISSIMILAR PRODUCTS ARE TO BE USED FOR APPLICATIONS AT SPECIFIC EXISTING SITE CONDITIONS, PRODUCTS MUST BE INSTALLED FOLLOWING PREVIOUS NOTE, AND THE TRANSITION BETWEEN DISSIMILAR MATERIALS MUST OCCUR AT THE ATTACHMENT AREA BETWEEN THE STRUCTURAL ELEMENTS ONLY.
3. WHERE EXISTING CONDITIONS REQUIRE FIRESTOPPING SYSTEMS AT PENETRATION GAPS IN EXCESS OF 3" AT ANY POINT AROUND THE PROTECTED ELEMENT, AUGMENT FIRESTOPPING WITH MINERAL WOOL LAYERS. COMPLY WITH LABC 714.4.1.1 & 714.4.1.2
4. INSPECT AND VERIFY THE INTEGRITY OF EXISTING (1) ONE-HOUR FIRE BARRIER WALLS AT TENANT SUITE LOCATED AT THE LOWER LEVEL AS WELL AS ALL SIMILAR WALLS WITHIN EXISTING TENANT SUITE.
5. REPAIR, INFILL AND/OR EXTEND, EXISTING FIRE BARRIER/ SMOKE BARRIER WALLS, TO THE UNDERSIDE OF METAL DECK / CONCRETE FLOOR ABOVE IN COMPLIANCE WITH THE APPROVED (1) ONE HOUR FIRE BARRIER ASSEMBLY UL#U469 AND (1) ONE-HOUR SMOKE BARRIER ASSEMBLY. NOTIFY ARCHITECT IF ANY OF THE EXISTING (2) HOUR FIRE ASSEMBLIES INTEGRITY IS FOUND COMPROMISED.
6. ALL EXISTING PENETRATIONS IN RATED ASSEMBLIES TO BE VERIFIED AND ANY NON-COMPLIANT LOCATION TO BE BROUGHT UP TO THE APPROVED STANDARDS USING FIRESTOP PRODUCTS THAT MEET THE REQUIREMENTS OF ASTM E814 OR UL1479.
7. WALLS OF ALL INCIDENTAL USES WHERE (1) HOUR SEPARATION WALL(S) ARE REQUIRED, SUCH AS: MECHANICAL SHAFTS, MECHANICAL ROOM , GENERAL STORAGE ROOM(S), SHALL BE INSPECTED AND ANY NON-COMPLIANT AREAS MUST BE REPAIRED, EXTENDED AND /OR INFILLED AS PER REQUIRED (1) HOUR FIRE BARRIER/ MECHANICAL SHAFT ASSEMBLY UL# U469
8. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING RATED WALLS AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES.

LIFE SAFETY LEGEND

Egress Travel Distances			
Egress Path	Travel Distance	Maximum Travel Distance	Over
B-1	85' - 2"	200' - 0"	No
B-2	108' - 0"	200' - 0"	No
B-3	145' - 10"	200' - 0"	No
B-4	150' - 9"	200' - 0"	No
B-5	58' - 2"	200' - 0"	No

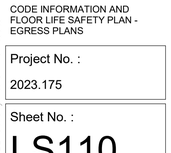


1 LS110 AREA PLAN - FOOTBALL LOCKER RENOVATION
3/32" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

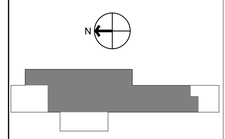
Seal:



Project :
WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
CODE INFORMATION AND FLOOR LIFE SAFETY PLAN - EGRESS PLANS

Project No. :
2023.175

Sheet No. :
LS110

DEMOLITION KEYNOTE LEGEND

KEYNOTE	KEYNOTE DESCRIPTION
D1	EXISTING WALL TO BE DEMOLISHED. PATCH AND REPAIR ADJACENT WALL AND FLOOR AS NECESSARY. DEMOLISHED WALL CONTAINS LOW VOLTAGE CABLES, PERFORM CABLE AUDIT AND PULL CABLE BACK TO IT CLOSET.
D2	PORTION OF EXISTING WALL TO BE DEMOLISHED FOR NEW EXTERIOR GLAZING. SEE WINDOW SCHEDULE FOR FURTHER INFORMAITON.
D3	PORTION OF EXISITNG WALL DEMOLISHED FOR NEW DOOR. SEE DOOR SCHEDULE FOR FURTHER INFORMATION.
D4	EXISTING DOOR, TRIM, AND MOUNTING HARDWARE TO BE DEMOLISHED. PATCH AND REPAIR ADJACENT WALL AND FLOOR AS NECESSARY.
D6	PORTION OF LOCKERS TO BE REMOVED FOR NEW DOOR OPENINGS. ADJACENT LOCKERS TO BE PROTECTED. COORDINATE SALVAGE WITH WSU ATHLETICS.
D7	EXISTING STAIR TO BE DEMOLISHED. INFILL TO MATCH EXISTING ADJACENT FINISH FLOOR.
D8	DEMOLISH EXISTING RAMP, RAILING, AND LANDING. PATCH AND REPAIR ADJACENT EXTERIOR WALL AS NECESSARY.
D9	MOVE EXISTING LOCKERS AS NEEDED FOR NEW DOOR OPENINGS.
D10	12" WIDE TRENCH IN EXISTING CONC. FLOOR FOR NEW DRAINAGE LINES. SEE PLUMBIMG FOR FURTHER INFORMATION.

DEMOLITION PLAN LEGEND

EXISTING

- EXISTING 1 HOUR FIRE SEPARATION TO REMAIN
- EXISTING METAL STUD PARTITION TO REMAIN
- EXISTING CMU PARTITION TO REMAIN
- EXISTING CONCRETE WALL TO REMAIN
- EXISTING DOOR TO REMAIN,
- AREA NOT IN CONTRACT (NIC)

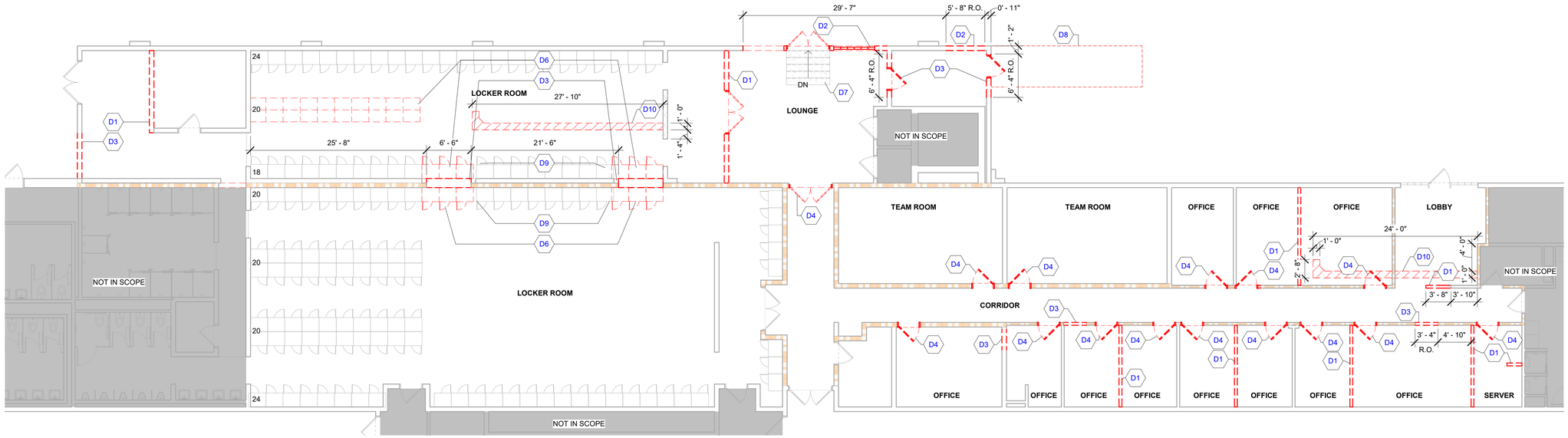
DEMO

- DEMO WALL
- DEMO 1 HOUR FIRE SEPARATION
- DEMO METAL STUD PARTITION
- DEMO CMU PARTITION
- DEMO CONCRETE WALL
- DEMO DOOR

DEMOLITION PLAN LEGEND

1. ALL DEMOLITION WORK REQUIRED IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON THE DEMOLITION PLANS. THE INTENT IS TO REMOVE ALL MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS AS REQUIRED TO FACILITATE NEW CONSTRUCTION.
2. COORDINATE SCOPE AND EXTENT OF DEMOLITION WORK WITH NEW WORK PLANS AND DETAILS.
3. ALL WALLS, DOORS, FRAMES, AND RELATED HARDWARE ASSEMBLIES DESIGNATED AS "TO BE REMOVED" (SHOWN AS DASHED LINES) SHALL BE COMPLETELY REMOVED AND DISPOSED OF AS DESIGNATED BY OWNER/TENANT. ALL EXISTING WALLS NOT DESIGNATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE AND REMAIN "AS-IS".
4. IN OCCUPIED BUILDINGS, ANY CONSTRUCTION BEYOND 48 HOURS MUST BE ISOLATED WITH HARD BARRIER WALL (1 HR. RATED), PER BUILDING CODE.1 HOUR FIRE RATED PLASTIC BARRIER MAY NOT BE USED. PROVIDE ANY/ALL DUST CONTROL AND INFECTION CONTROL MEASURES TO ISOLATE ALL WORK TO PROJECT AREA.
5. PHASED CONSTRUCTION MAY BE REQUIRED, FINAL NUMBER OF PHASES TBD BY OWNER/ ARCHITECT/ GC PRIOR TO CONSTRUCTION. CONTRACTOR PROVIDE ANY/ALL TEMP. CONSTRUCTION MEASURES AS REQUIRED BY LOCAL AHJ (EXIT SIGNS, EMERGENCY LIGHTING, CONSTRUCTION LIGHTING, EGRESS SIGNAGE, ETC.)
6. ALL EQUIPMENT, DOORS, FRAMES, RELATED HARDWARE, AND DESIGNATED ITEMS TO BE SALVAGED SHALL BE REMOVED, PROTECTED FROM DAMAGE, AND STORED FOR REUSE.
7. CLEAN AND REPAIR ALL EXISTING FLOOR FINISHES AS NECESSARY.
8. ALL DEMOLITION WORK SHALL BE PERFORMED IN A NEAT AND WORKMANSHIP MANNER. ALL SURFACES ADJACENT TO AND ABUTTING TO THOSE DESIGNATED "TO BE REMOVED" SHALL BE LEFT WITH A SMOOTH AND FLUSH APPEARANCE.
9. THE CONTRACTOR SHALL EXERCISE ALL REQUISITE CARE NECESSARY TO ENSURE THAT ALL EQUIPMENT, MATERIALS, FINISHES AND ASSEMBLIES WHICH ARE NOT BEING REMOVED ARE PROTECTED FROM DAMAGE DURING DEMOLITION AND SUBSEQUENT CONSTRUCTION OPERATIONS.
10. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DEMOLITION INFORMATION.
11. GENERAL PRECAUTIONS SHALL BE TAKEN AS NECESSARY TO HOLD ALL DISRUPTION, DUST, DIRT, NOISE, AND DEBRIS TO A MINIMUM.
12. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH OWNER TO ENSURE THAT IMPACTS ON THE BALANCE OF THE BUILDING ARE HELD TO A MINIMUM.
13. PREPARE ALL SURFACES TO RECEIVE THE NEW WORK AND FINISHES OF THE CONTRACT.
14. THE CONTRACTOR SHALL DESIGN, PROVIDE, INSTALL AND MAINTAIN ANY AND ALL TEMPORARY BRACING AS REQUIRED TO ENSURE THE STABILITY OF THE BUILDING ASSEMBLY AND/OR ANY SYSTEMS AND/OR SUB-ASSEMBLIES AND/OR SYSTEMS APPURTENANT THERETO UNTIL SAID ASSEMBLY AND/OR SUB-ASSEMBLIES ARE COMPLETE, SELF-SUPPORTING AND/OR STABLE.
15. CONTRACTOR TO HOLD A PRE DEMOLITION WALK-THRU WITH OWNER AND SUBCONTRACTORS
16. SALVAGE AND RETURN SIGNAGE TO OWNER
17. FIRE ALARM DEVICES EXISTING, TO BE REMOVED, OR RELOCATED (TYP.) IT IS A NATIONAL TIME SYSTEM

17. FIRE ALARM DEVICES EXISTING, TO BE REMOVED, OR RELOCATED (TYP.)
IT IS A NATIONAL TIME SYSTEM



1 AD100 ARCHITECTURAL DEMOLITION PLAN
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No.
1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
ARCHITECTURAL DEMOLITION PLANS

Project No. :
2023.175

Sheet No. :
AD100

DEMOLITION KEYNOTE LEGEND

KEYNOTE	KEYNOTE DESCRIPTION
DA	EXISTING CEILING SYSTEM, MOUNTNIG HARDWARE, LIGHT FIXTURES, DIFFUSERS, ETC. TO BE DEMOLISHED.
DB	WIRELESS ACCESS POINTS WITHIN DEMOLISHED CEILINGS SHALL BE SALVAGED FOR REINSTALLATION. SEE TC100 FOR TECHNOLOGY LAYOUT.
DC	SECURITY CAMERAS WITHIN DEMOLISHED CEILINGS SHALL BE SALVAGED AND TURNED OVER TO WSU C&IT FOR REINSTALLATION AFTER PROJECT COMPLETION.

DEMOLITION RCP LEGEND

EXISTING CEILING GRID ASSEMBLY TO REMAIN

CEILING GRID ASSEMBLY TO BE REMOVED

EXISTING CEILING FIXTURE (LIGHT, DIFFUSER, ETC.) TO REMAIN

CEILING (LIGHT, DIFFUSER, ETC.) FIXTURE TO BE REMOVED UNLESS NOTED OTHERWISE

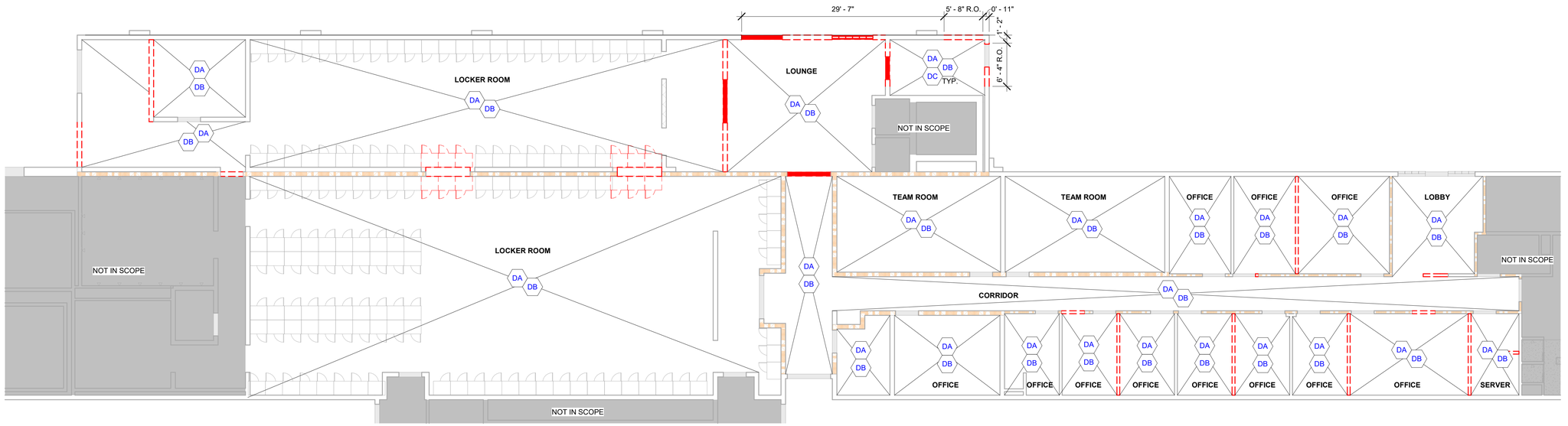
CEILING FINISH TO BE REMOVED

CEILING FINISH TO BE REMOVED

DEMOLITION PLAN LEGEND

1. ALL DEMOLITION WORK REQUIRED IS NOT NECESSARILY LIMITED TO WHAT IS SHOWN ON THE DEMOLITION PLANS. THE INTENT IS TO REMOVE ALL MECHANICAL, ELECTRICAL, AND ARCHITECTURAL ITEMS AS REQUIRED TO FACILITATE NEW CONSTRUCTION.
2. COORDINATE SCOPE AND EXTENT OF DEMOLITION WORK WITH NEW WORK PLANS AND DETAILS.
3. ALL WALLS, DOORS, FRAMES, AND RELATED HARDWARE ASSEMBLIES DESIGNATED AS "TO BE REMOVED" (SHOWN AS DASHED LINES) SHALL BE COMPLETELY REMOVED AND DISPOSED OF AS DESIGNATED BY OWNER/TENANT. ALL EXISTING WALLS NOT DESIGNATED FOR DEMOLITION SHALL BE PROTECTED FROM DAMAGE AND REMAIN "AS-IS".
4. IN OCCUPIED BUILDINGS, ANY CONSTRUCTION BEYOND 48 HOURS MUST BE ISOLATED WITH HARD BARRIER WALL (1 HR. RATED), PER BUILDING CODE.1 HOUR FIRE RATED PLASTIC BARRIER MAY NOT BE USED. PROVIDE ANY/ALL DUST CONTROL AND INFECTION CONTROL MEASURES TO ISOLATE ALL WORK TO PROJECT AREA.
5. PHASED CONSTRUCTION MAY BE REQUIRED, FINAL NUMBER OF PHASES TBD BY OWNER/ ARCHITECT/ GC PRIOR TO CONSTRUCTION. CONTRACTOR PROVIDE ANY/ALL TEMP. CONSTRUCTION MEASURES AS REQUIRED BY LOCAL AHJ (EXIT SIGNS, EMERGENCY LIGHTING, CONSTRUCTION LIGHTING, EGRESS SIGNAGE, ETC.)
6. ALL EQUIPMENT, DOORS, FRAMES, RELATED HARDWARE, AND DESIGNATED ITEMS TO BE SALVAGED SHALL BE REMOVED, PROTECTED FROM DAMAGE, AND STORED FOR REUSE.
7. CLEAN AND REPAIR ALL EXISTING FLOOR FINISHES AS NECESSARY.
8. ALL DEMOLITION WORK SHALL BE PERFORMED IN A NEAT AND WORKMANSHIP MANNER. ALL SURFACES ADJACENT TO AND ABUTTING TO THOSE DESIGNATED "TO BE REMOVED" SHALL BE LEFT WITH A SMOOTH AND FLUSH APPEARANCE.
9. THE CONTRACTOR SHALL EXERCISE ALL REQUISITE CARE NECESSARY TO ENSURE THAT ALL EQUIPMENT, MATERIALS, FINISHES AND ASSEMBLIES WHICH ARE NOT BEING REMOVED ARE PROTECTED FROM DAMAGE DURING DEMOLITION AND SUBSEQUENT CONSTRUCTION OPERATIONS.
10. REFER TO MECHANICAL AND ELECTRICAL DEMOLITION DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DEMOLITION INFORMATION.
11. GENERAL PRECAUTIONS SHALL BE TAKEN AS NECESSARY TO HOLD ALL DISRUPTION, DUST, DIRT, NOISE, AND DEBRIS TO A MINIMUM.
12. THE CONTRACTOR SHALL COORDINATE DEMOLITION WORK WITH OWNER TO ENSURE THAT IMPACTS ON THE BALANCE OF THE BUILDING ARE HELD TO A MINIMUM.
13. PREPARE ALL SURFACES TO RECEIVE THE NEW WORK AND FINISHES OF THE CONTRACT.
14. THE CONTRACTOR SHALL DESIGN, PROVIDE, INSTALL AND MAINTAIN ANY AND ALL TEMPORARY BRACING AS REQUIRED TO ENSURE THE STABILITY OF THE BUILDING ASSEMBLY AND/OR ANY SYSTEMS AND/OR SUB-ASSEMBLIES AND/OR SYSTEMS APPURTENANT THERETO UNTIL SAID ASSEMBLY AND/OR SUB-ASSEMBLIES ARE COMPLETE, SELF-SUPPORTING AND/OR STABLE.
15. CONTRACTOR TO HOLD A PRE DEMOLITION WALK-THRU WITH OWNER AND SUBCONTRACTORS
16. SALVAGE AND RETURN SIGNAGE TO OWNER
17. FIRE ALARM DEVICES EXISTING, TO BE REMOVED, OR RELOCATED (TYP.) IT IS A NATIONAL TIME SYSTEM

17. FIRE ALARM DEVICES EXISTING, TO BE REMOVED, OR RELOCATED (TYP.)
IT IS A NATIONAL TIME SYSTEM



1 AD210 DEMOLITION REFLECTED CEILING PLAN

1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :

WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

N

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

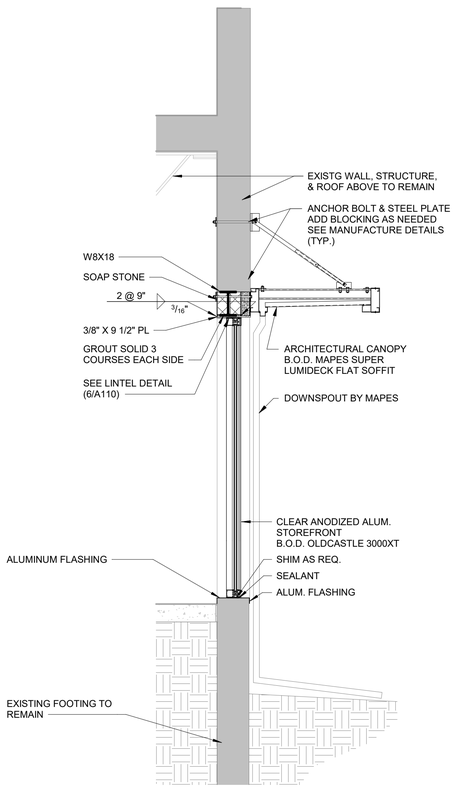
Drawn by :
JML

Checked by :
ARR

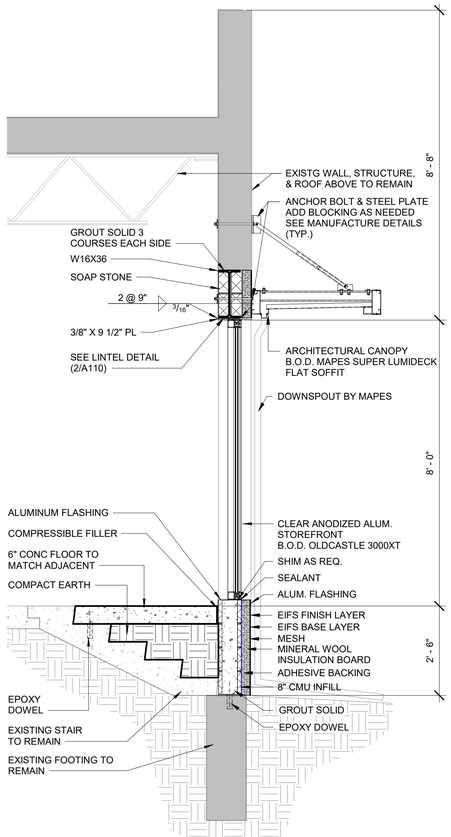
Sheet Title :
ARCHITECTURAL DEMOLITION RCP

Project No. :
2023.175

Sheet No. :
AD210

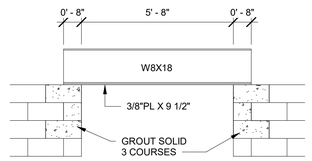


4 A110 WALL SECTION VESTIBULE
1/2" = 1'-0"

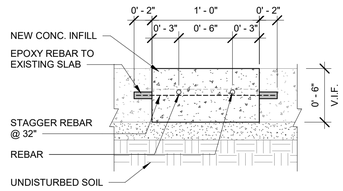


3 A110 WALL SECTION - LOUNGE
1/2" = 1'-0"

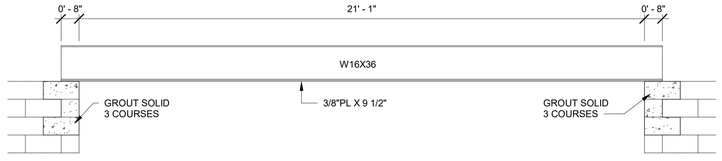
NEW CONSTRUCTION KEYNOTE LEGEND	
KEYNOTE	KEYNOTE DESCRIPTION
001	CONTRACTACTOR TO VERIFY EXISTING WALL AND STRUCTURE CONDITION FOR LINTEL SIZING. PROVIDED LINTEL SIZING IS CONCEPTUAL.
002	PROVIDE 3'X3' PLYWOOD BLOCKING FOR 75"-86" TV'S. ADJUST AS NEEDED FOR DIFFERENT TV SIZES. BLOCKING FOR TV MOUNTED @ 5'- 6" A.F.F. CENTER IN ROOM U.N.O.
003	WSU PROVIDED, CONTRACTOR INSTALLED WHITE BOARD MOUNTED @ 2'-6" A.F.F. TO BOTTOM OF BOARD.
004	DIMENSIONAL BRANDING WALL WITH LED BACKLIGHT BY WSU. DESIGN BY WSU. CONTRACTOR TO PROVIDE ALLOWANCE FOR INSTALLATION.
005	DECORATIVE BOARDS, BRANDING, AND IMAGERY BY WSU. DESIGN BY WSU. CONTRACTOR TO PROVIDE ALLOWANCE FOR COST OF LEVEL 5 FINISH ON GYP WALLS.
006	36" X 80" WALL OPENING.
007	INFILL EXISTG STAIR TO MATCH ADJACENT FINISH FLOOR.
008	MAINTAIN 1HR RATED CMU WALL. CONTRACTOR TO VERIFY EXISTING RATING CONDITION.
009	MAINTAIN 1HR RATED STUD WALL. CONTRACTOR TO VERIFY EXISTING RATING CONDITION.



6 A110 VESTIBULE LINTEL ELEVATION DETAIL
3/8" = 1'-0"



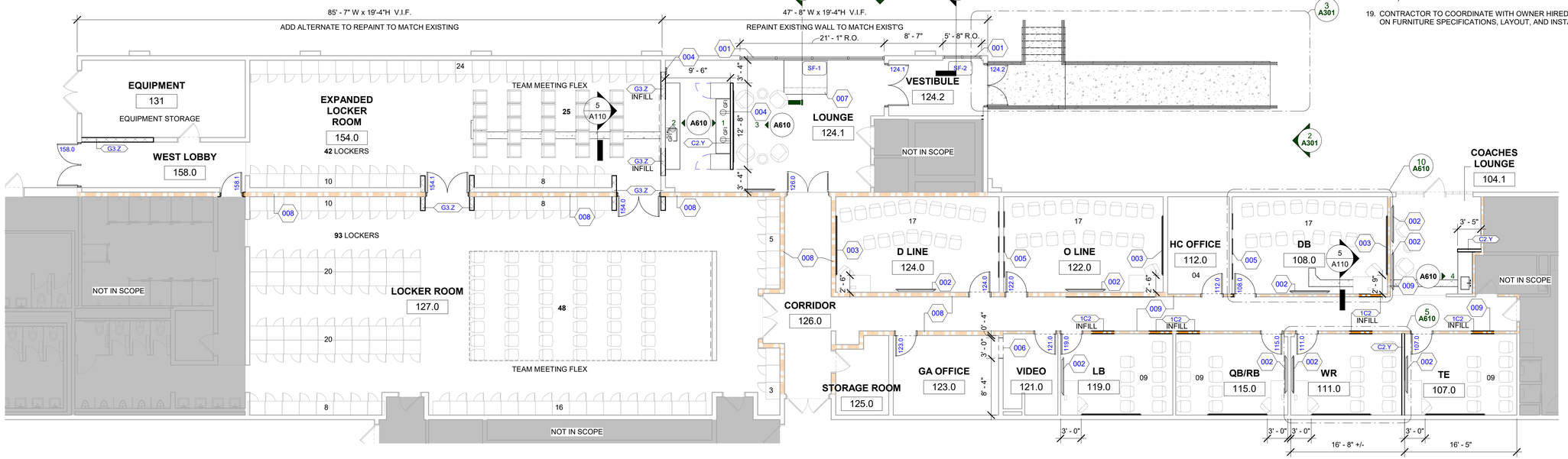
5 A110 POUR BACK DETAIL
1 1/2" = 1'-0"



2 A110 LOUNGE LINTEL ELEVATION DETAIL
3/8" = 1'-0"

GENERAL PLAN NOTES

1. THIS DRAWING IS DIAGRAMMATIC AND SHOULD BE USED TO DETERMINE THE DESIGN INTENT. THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE SET OF WORK AS INDICATED AND SHALL FIELD VERIFY ALL WORK, COORDINATE ALL DRAWINGS / NEW WORK AND SHALL NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES IN THE DOCUMENTS BEFORE PROCEEDING. FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR TAKING FULL RESPONSIBILITY AND LIABILITY FOR SAID DISCREPANCIES.
2. ALL DIMENSIONS ARE SHOWN FROM FINISH FACE TO FINISH FACE OF PARTITION UNLESS OTHERWISE NOTED.
3. WALL THICKNESS' ARE NOMINAL NOT ACTUAL DIMENSIONS. SEE WALL SCHEDULE FOR ACTUAL DIMENSIONS.
4. ALL WOOD, INCLUDING BLOCKING, USED ON THE PROJECT SHALL BE FIRE RETARDANT TREATED.
5. ALL WORK SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE, COUNTY CODE REGULATIONS, O.S.H.A., AND THE AMERICAN WITH DISABILITIES ACT (ADA). REFER TO THE CODE PLAN FOR MORE INFORMATION.
6. PROVIDE POSITIVE SLOPE TO ALL FLOOR DRAINS WHILE KEEPING FLOOR LEVEL AT WALL BASE CONDITION.
7. PROVIDE TRANSITION STRIPS AT EACH CHANGE IN FLOOR FINISH MATERIALS.
8. PAINT, PATCH AND REPAIR THE FOLLOWING TO MATCH EXISTING MATERIALS: FLOOR, WALL, AND CEILING SURFACES AS REQUIRED ADJACENT TO AREAS BEING DEMOLISHED. REFER TO DEMOLITION DRAWINGS FOR MORE INFORMATION.
9. REINFORCE WALL AND PROVIDE BLOCKING AS REQUIRED TO SUPPORT WALL CABINETS AND COUNTERTOPS.
10. THE CONTRACTOR SHALL PROVIDE AND INSTALL WALL REINFORCING FOR INSTALLATION OF ACCESSORIES, COAT RACKS, CHART RACKS, CASEWORK, WALL MOUNTED TV'S, AND OTHER WALL MOUNTED ITEMS.
11. CLEAN AND REPAIR ALL EXISTING FLOOR FINISHES AS NECESSARY.
12. ALL EXPOSED PIPES, DUCTS, AND CONDUIT TO BE PAINTED TO MATCH EXISTING.
13. PROVIDE CONTROL JOINTS IN GYPSUM BOARD PARTITIONS AT 30'-0" O.C. MAXIMUM AND AS INDICATED IN THE CONTRACT DOCUMENTS.
14. COORDINATE WITH OWNER'S EQUIPMENT SUPPLIER FOR INSTALLATION REQUIREMENTS / LOCATIONS OF FLOOR / WALL / CEILING MOUNTED ITEMS; IE. CAMERAS, TV'S, SPEAKERS, SENSORS, SECURITY WIRING, VAULTS, ATM'S.
15. CONTRACTOR SHALL CONDUCT A ROUGH ELECTRICAL INSPECTION WITH OWNER, PRIOR TO ENCLOSING WALLS, FOR THE PURPOSE OF CONFIRMING ALL J-BOX LOCATIONS FOR POWER, DATA, VOICE, SWITCH, THERMOSTAT, ETC.
16. CONTRACTOR TO FILL ANY AND ALL EQUIPMENT PENETRATIONS OR DEPRESSIONS INTO OR THROUGH THE EXISTING SLAB THAT WILL NOT BE UTILIZED TO FEED NEW EQUIPMENT (I.E. ABANDONED FLOOR CORES, IMPRESSION FROM PREVIOUS EQUIPMENT FLOOR PLATE REMOVAL). PENETRATIONS SHALL BE FILLED WITH NON- SHRINK GROUT. THE SIDES OF ANY EXISTING OPENINGS SHALL BE MODIFIED/TAPERED SO THAT THEY ARE WIDER AT THE TOP THAN AT THE BOTTOM. FOR LARGE OPENINGS, PROVIDE ONE (1) #5 BAR 2" UP FROM BOTTOM OF HOLE.
17. A TACTILE SIGN STATING 'EXIT' AND COMPLYING WITH ICC-A117.1 SHALL BE PROVIDED ADJACENT TO EACH DOOR TO AN 'AREA OF REFUGE', AN EXTERIOR AREA FOR ASSISTED RESCUE, AN EXIT STAIRWAY, AN EXIT RAMP, AN EXIT PASSAGEWAY, AND THE EXIT DISCHARGE.
18. PROVIDE PERMANENT MIN 3-INCH HIGH CONTRASTING COLOR MARKING AND IDENTIFICATION AT ALL FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS, SMOKE PARTITIONS OR ANY OTHER WALL REQUIRED TO HAVE PROTECTED OPENINGS OR PENETRATIONS WITHIN 15 FEET AT THE END OF EACH WALL, AND NOT EXCEEDING 30 FEET MAXIMUM HORIZONTAL INTERVALS, MINIMUM 2 LOCATIONS EACH WALL. TYPICAL FOR ACCESSIBLE CONCEALED FLOOR, FLOOR-CEILING, OR ATTIC SPACES PER CODE (MBC 703.7)
19. CONTRACTOR TO COORDINATE WITH OWNER HIRED FURNITURE VENDOR ON FURNITURE SPECIFICATIONS, LAYOUT, AND INSTALL.



1 A110 CONSTRUCTION PLAN - FOOTBALL LOCKER ROOM
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
FIRST LEVEL NEW CONSTRUCITON PLAN

Project No. :
2023.175

Sheet No. :
A110

RCP KEYNOTE LEGEND

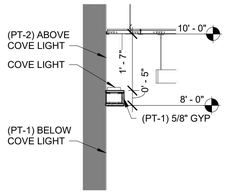
KEYNOTE	KEYNOTE DESCRIPTION
CP-1	1' X 4' SUSPENDED CEILING GRID. CENTER IN ROOM UNLESS NOTED. PROVIDE PERIMETER TRIM.
CP-2	GYP. SOFFIT.
CP-3	EXISTING STRUCTURE TO BE COATED IN 1" K-13 SPRAY.
CP-4	EXISTING EXPOSED STRUCTURE TO BE PAINTED BLACK.
CP-5	12' LINEAR PENDANT LIGHT FIXTURE TO BE MOUNTED @ 8'-8" A.F.F.
CP-6	10' LINEAR PENDANT LIGHT FIXTURE TO BE MOUNTED @ 9'-0" A.F.F.
CP-7	4' LINEAR PENDANT LIGHT FIXTURE TO BE MOUNTED @ 9'-0" A.F.F.
CP-8	4" RECESSED CAN LIGHT @ LOCKERS. TYP.
CP-9	SUSPENDED PENDANT LIGHT. ALIGN WITH ADJACENT CEILING HEIGHT.
CP-10	4' RECESSED LINEAR LIGHT FIXTURE.
CP-11	COVE LIGHTING.
CP-12	EXTERIOR WALL SCONCE @ 9'-8" BELOW PARAPET.
CP-13	EXPOSED HVAC. SEE MECHANICAL FOR FURTHER INFORMATION.
CP-14	CEILING MOUNTED PROJECTOR. SEE TC100 FOR FURTHER INFORMATION.
CP-15	CANOPY LIGHTING ATTACHED TO U.S. OF CANOPY.
CP-16	PROVIDE EDGE BANDING BY CEILING MANUFACTURE.

REFLECTED CEILING LEGEND

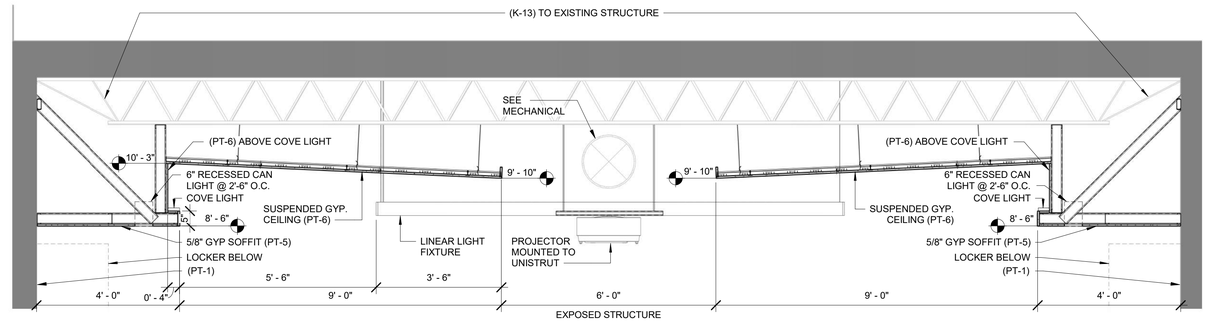
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	ACOUSTIC CEILING TILE SYSTEM PER SCHEDULE AND/OR SPECIFICATIONS		COVE LIGHTING		RETURN AIR GRILL
	GYPSUM BOARD CEILING AND/OR SOFFIT		WALL SCONCE FIXTURE		EXHAUST AIR GRILL
	1'X4' LIGHT FIXTURE		EMERGENCY LIGHT FIXTURE W/ BATTERY SUPPLY	S	SMOKE DETECTOR
	SUSPENDED LINEAR FIXTURE		EXIT LIGHT (SHADING INDICATES LIGHTED FACE)	S	SPEAKER
	RECESSED CAN LIGHT	AP	ACCESS PANEL - COORDINATE FINAL LOCATION WITH MEP	HEIGHT	ELEVATION ABOVE FINISHED FLOOR
	SUSPENDED PENDANT FIXTURE		SUPPLY AIR DIFFUSER		

GENERAL RCP NOTES

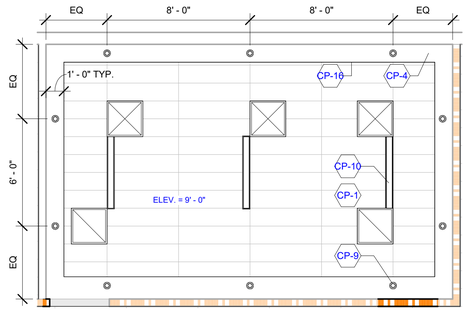
1. CONTRACTOR TO CENTER ALL CEILING MOUNTED ITEMS (i.e., RECESSED LIGHT FIXTURES, SMOKE DETECTORS, FIRE SUPPRESSION HEADS) WITHIN THE ASSOCIATED CEILING TILE AS SHOWN. COORDINATE FINAL LOCATION WITH THE APPROPRIATE MECHANICAL, ELECTRICAL, FIRE ALARM, AND FIRE SUPPRESSION DRAWINGS AS REQUIRED.
2. CONTRACTOR SHALL VERIFY IN FIELD IF DESIGNATED CEILING HEIGHTS IN ROOMS AREA POSSIBLE. IF NOT, MAXIMIZE CEILING HEIGHTS AND NOTIFY ARCHITECT, ENGINEER OR PROJECT MANAGER OF ANY DISCREPANCY.
3. CONTRACTOR SHALL PROVIDE ACOUSTIC SOUND BATT INSULATION ABOVE THE ENTIRE CEILING IN THE FOLLOWING ROOMS (TYPICAL UNO): TOILET ROOMS, OFFICES, RECEPTION AREAS,
4. ACCESS PANELS TO BE INDEPENDENTLY MOUNTED, DO NOT SUPPORT ON CEILING TILE GRID ASSEMBLY, SUPPORT FROM STRUCTURE ABOVE ONLY. COORDINATE SIZE, QUANTITY AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS; IF NOT SHOWN, CONTRACTOR TO PROVIDE WHERE REQUIRED AND COORDINATE FINAL LOCATIONS IN FIELD WHERE REQUIRED PER MEP EQUIPMENT AND DRAWINGS.
5. PROVIDE EXTERIOR MOUNTED EMERGENCY EGRESS LIGHT AT ALL EXTERIOR EXITS AS REQUIRED BY CODE, BATTERY BACK-UP AND MOUNTED 36" ABOVE DOOR UNO.
6. REFER TO WALL TYPES FOR WALLS THAT PENETRATE CEILINGS.
7. REFER TO MECHANICAL HVAC PLANS FOR DIFFUSER / GRILLE SIZES.
8. FOR LIGHT FIXTURE TYPES SEE ELECTRICAL LIGHTING PLANS.
9. REFER TO DIMENSIONS ON REFLECTED CEILING PLAN TO LOCATE / LAYOUT CEILING GRID AND LIGHT FIXTURES.



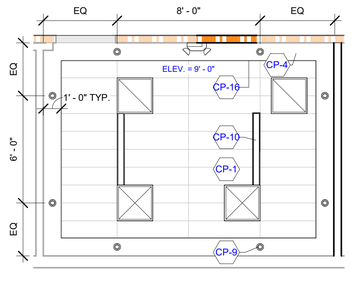
6 A210 CORRIDOR CEILIGN DETAIL
1/2" = 1'-0"



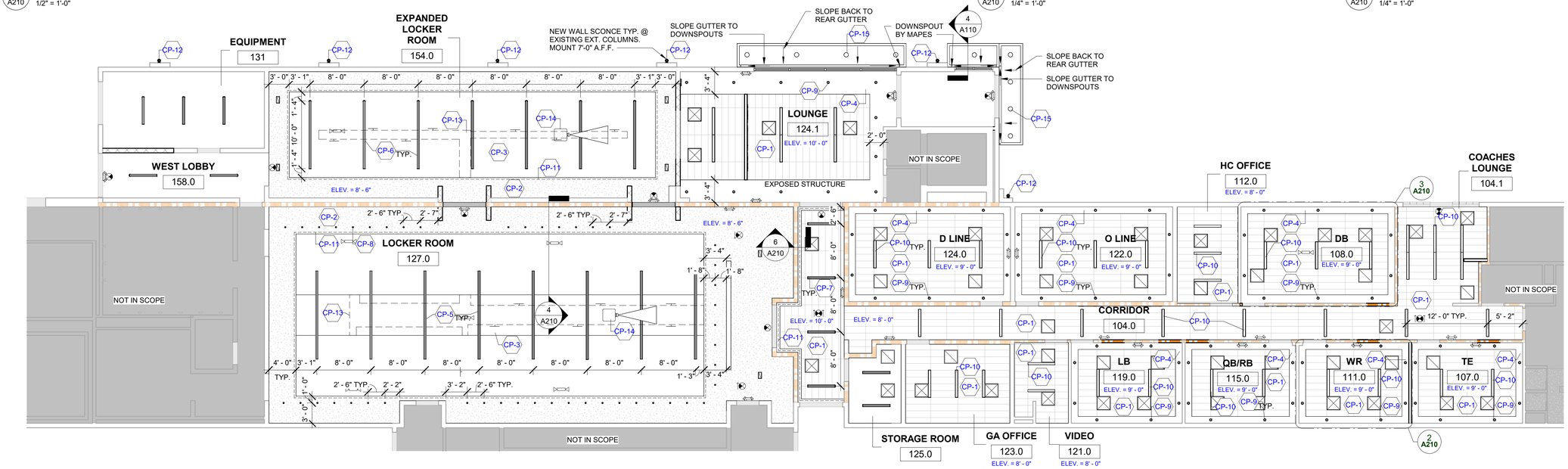
4 A210 LOCKER ROOM CEILING DETAIL
1/2" = 1'-0"



3 A210 ENLARGED TEAM ROOM RCP - TYPE B
1/4" = 1'-0"



2 A210 ENLARGED TEAM ROOM RCP - TYPE A
1/4" = 1'-0"



1 A210 ARCHITECTURAL REFLECTED CEILING PLAN
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

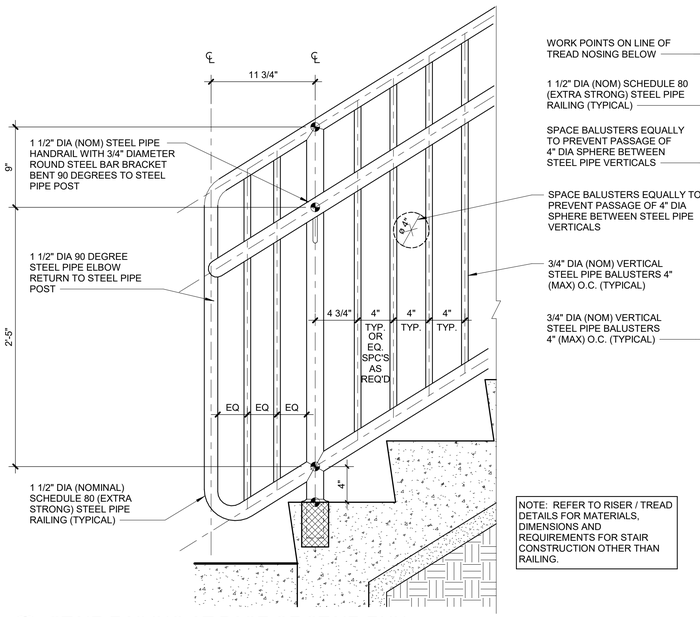
Drawn by : JML

Checked by : ARR

Sheet Title : ARCHITECTURAL REFLECTED CEILING PLAN

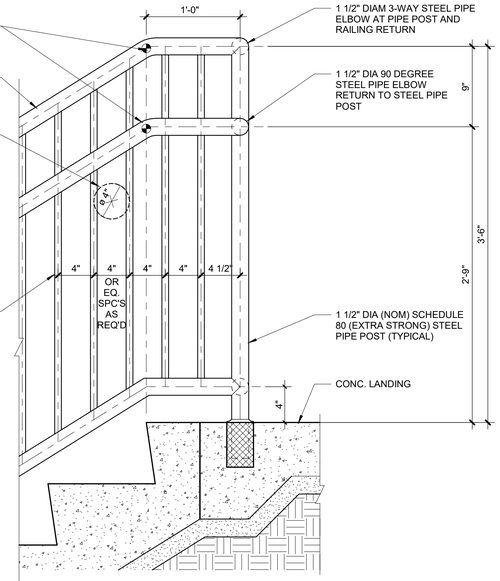
Project No. : 2023.175

Sheet No. : A210

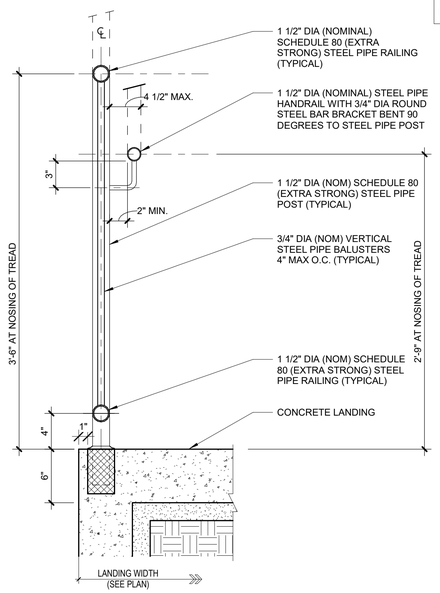


NOTE: REFER TO RISER / TREAD DETAILS FOR MATERIALS, DIMENSIONS AND REQUIREMENTS FOR STAIR CONSTRUCTION OTHER THAN RAILING.

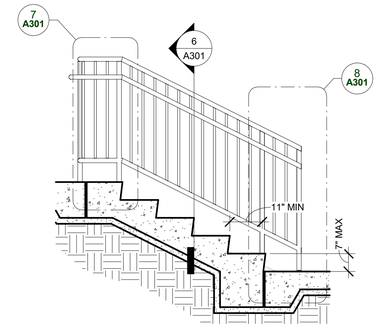
8 A301 STAIR RAILING AT BASE OF STAIR RUN
1 1/2" = 1'-0"



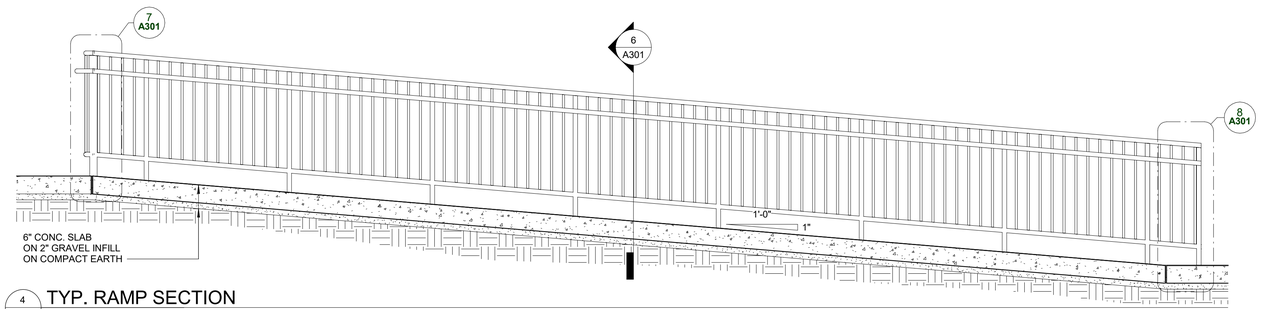
7 A301 STAIR RAILING AT UPPER LANDING
1 1/2" = 1'-0"



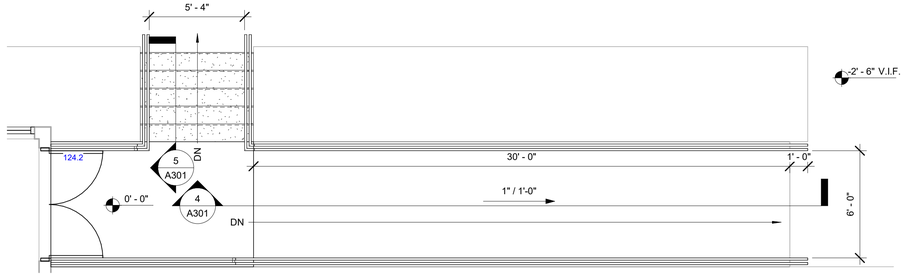
6 A301 GUARDRAIL AT STAIR RAILING WITH HANDRAIL
1 1/2" = 1'-0"



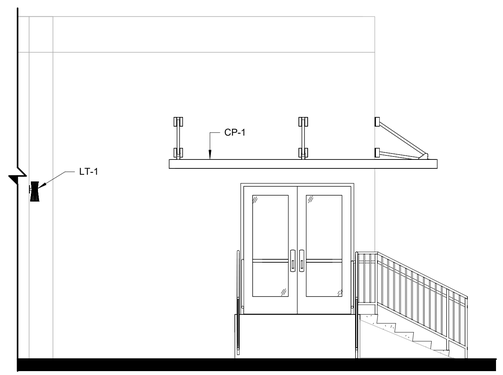
5 A301 TYP. CAST IN PLACE STAIR SECTION
1/2" = 1'-0"



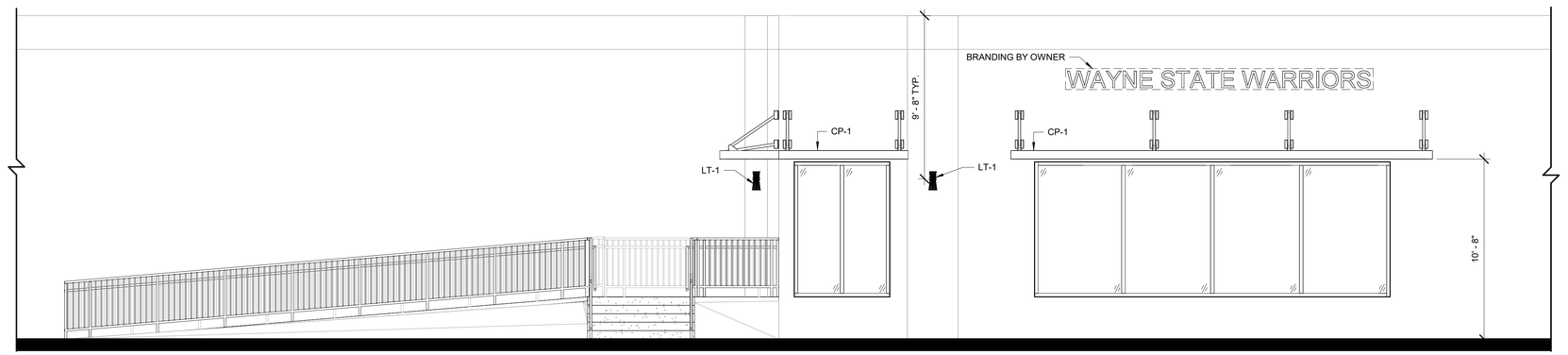
4 A301 TYP. RAMP SECTION
1/2" = 1'-0"



3 A301 ENLARGED STAIR AND RAMP FLOOR PLAN
1/4" = 1'-0"



2 A301 EXTERIOR ELEVATION B
1/4" = 1'-0"



1 A301 EXTERIOR ELEVATION
1/4" = 1'-0"

GENERAL NOTE:
CONTRACTOR TO PROVIDE SITE SURVEYING OF EXTERIOR MODIFICATIONS REQUIRED FOR STAIR AND RAMP.

EXTERIOR FINISH SCHEDULE

LIGHT	LT-1	DECORATIVE WALL SCONCE MFR: OCL STYLE: FIORI COLOR: BLACK
GLASS	GL-1	1", LOW-E, INSULATED GLASS UNIT (IGU, TYP) MFR: VIRACON OR APPROVED EQUAL COLOR/STYLE: CLEAR
	GL-2	3/4" OR 13/16" INSULATED GLASS UNIT (IGU, TYP) MFR: PER DOOR MANUF COLOR/STYLE: CLEAR
MISC.	CP-1	ARCHITECTURAL CANOPY MFR: MAPES MODEL:SUPER LUMIDECK FLAT SOFFIT COLOR: STONE GRAY DRAINAGE: REAR GUTTER/ DOWNSPOUT BY MAPES SIZE: MATCH R.O. BELOW

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

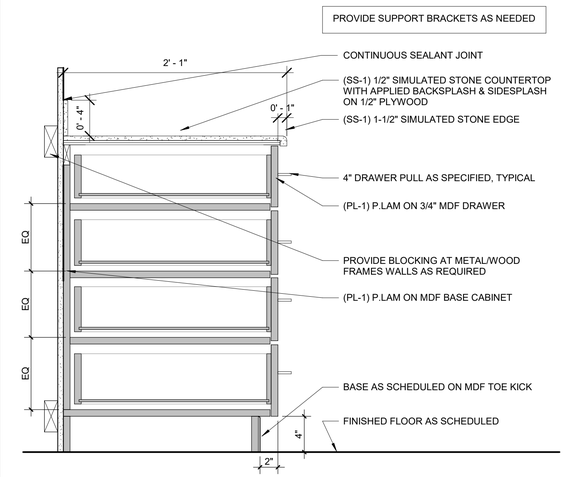
Drawn by :
JML

Checked by :
ARR

Sheet Title :
EXTERIOR ELEVATIONS AND STAIR DETAILS

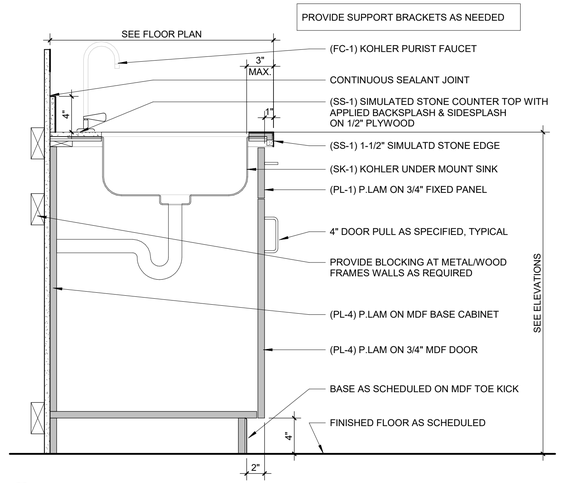
Project No. :
2023.175

Sheet No. :
A301



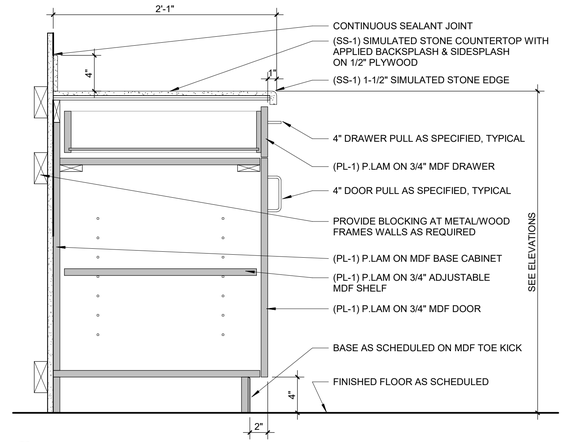
18 A610 BASE CABINET 4 DRAWER - SIMULATED STONE

1 1/2" = 1'-0"



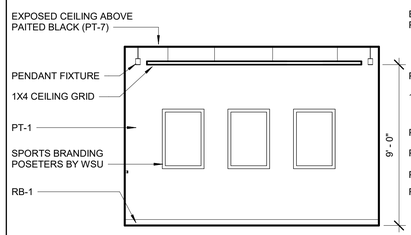
17 A610 SINK BASE CABINET - SIMULATED STONE

1 1/2" = 1'-0"



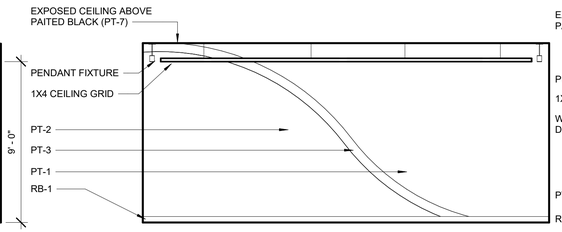
16 A610 BASE CABINET - SIMULATED STONE

1 1/2" = 1'-0"



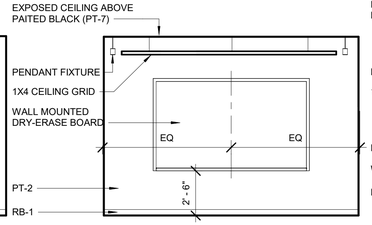
14 A610 INTERIOR ELEVAITON PLAN WEST TEAM ROOM TYPE B

1/4" = 1'-0"



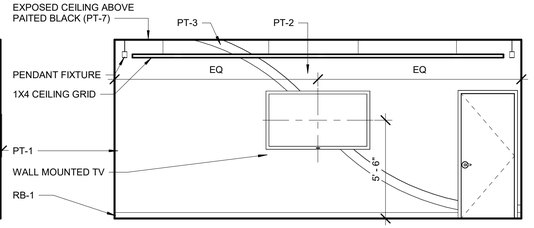
13 A610 INTERIOR ELEVAITON PLAN NORTH TEAM ROOM TYPE B

1/4" = 1'-0"



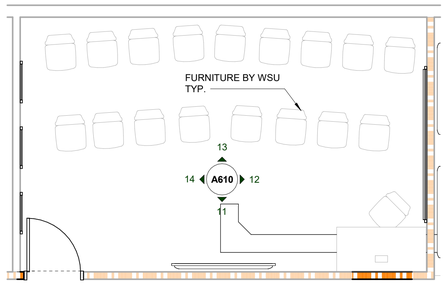
12 A610 INTERIOR ELEVAITON PLAN EAST TEAM ROOM TYPE B

1/4" = 1'-0"



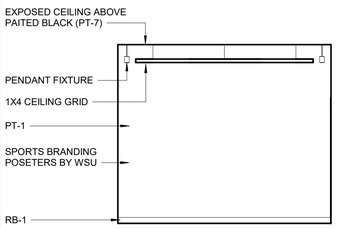
11 A610 INTERIOR ELEVAITON PLAN SOUTH TEAM ROOM TYPE B

1/4" = 1'-0"



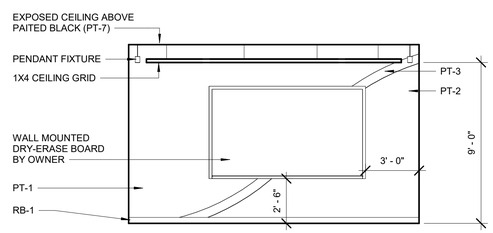
10 A610 ENLARGED FLOOR PLAN TEAM ROOM TYPE B

1/4" = 1'-0"



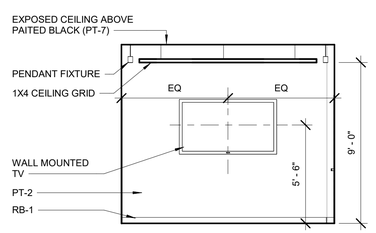
9 A610 INTERIOR ELEVAITON PLAN EAST TEAM ROOM TYPE A

1/4" = 1'-0"



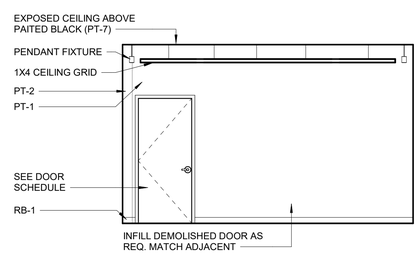
8 A610 INTERIOR ELEVAITON PLAN SOUTH TEAM ROOM TYPE A

1/4" = 1'-0"



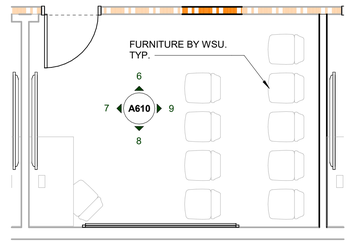
7 A610 INTERIOR ELEVAITON PLAN WEST TEAM ROOM TYPE A

1/4" = 1'-0"



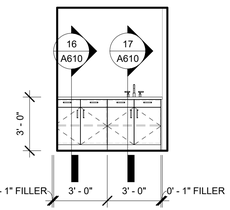
6 A610 INTERIOR ELEVAITON PLAN NORTH TEAM ROOM TYPE A

1/4" = 1'-0"



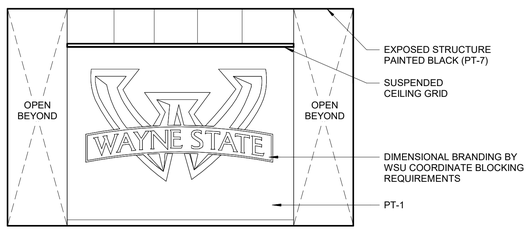
5 A610 ENLARGED FLOOR PLAN TEAM ROOM TYPE A

1/4" = 1'-0"



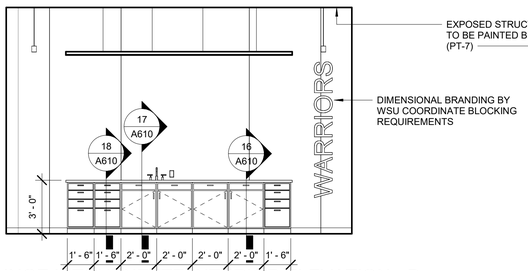
4 A610 COACHES LOUNGE MILLWORK

1/4" = 1'-0"



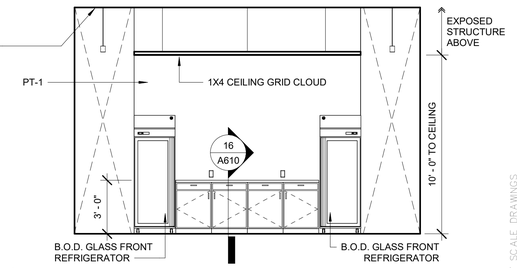
3 A610 LOUNGE WALL GRAPHIC

1/4" = 1'-0"



2 A610 LOUNGE KITCHENETTE INTERIOR ELEVATION - B

1/4" = 1'-0"



1 A610 LOUNGE KITCHENETTE INTERIOR ELEVATION - A

1/4" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

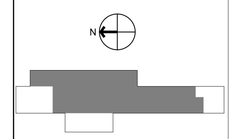
STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :

WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
INTERIOR ELEVATIONS AND ENLARGED PLANS FIRST LEVEL

Project No. :
2023.175

Sheet No. :
A610

General notes:

1. Contractor shall verify all existing field conditions and notify architect immediately if that which exists differs from that which is shown on drawings.
2. All work to comply with current Federal, State and Local codes, laws and ordinances. The requirements of ICC/ANSI A117.1 and the Americans with disabilities act (ADA) are to be fully satisfied. All work shall meet the most stringent requirements of both including, but not limited to clearances, limitations, accessories, etc.
3. These drawings are prepared in accordance with the limited services for which the architect was contracted. The architect makes no representation that the interpretation of these documents will result in complete compliance with the ADA.
4. All doors required to be labeled shall be set in labeled frames and identified with UL label and be provided with approved self-closing devices and positive latching hardware.
5. All designated exit doors shall be equipped with the required egress hardware.
6. Furnish hardware as scheduled without substitution, no alternates will be approved.
7. Provide Cylinders, Combinated IC Cores and keys; keyed to Master System. Include key conference and key system schedule. Furnish a keyed core and two cut keys for each locking device specified.
8. Furnish and provide all necessary reinforcements, brackets, fasteners, spacers and fillers to provide a complete functioning opening.
9. Provide complete shop drawings, submittals and cut sheets complying with DHI prescribed methods and vertical format double spaced hardware schedule.
10. All access control modules, fobs and readers, to be furnished by Security Vender under a separate section. Line voltage, circuits, cable, conduits from above the ceiling down to door frames for low voltage access control wiring, and installation of power supplies for controllers and access control peripherals to be furnished and installed by electrical contractor

Hardware Set 1 – Classroom Lock [Lock / Unlock]

3	ea.	Butt Hinge BB81 4 ½" x 4 ½" NRP	26D	PBB
1	ea.	Classroom Lock MR 148 BJSJ SF7L	32D	PDQ
1	ea.	SFIC Final Cores – Match WSU Master Key System	26D	WSU
1	ea.	Wall Stop 1407	26D	Don Jo

Hardware Set 2 – Office Lock [Lock / Unlock]

3	ea.	Butt Hinge BB81 4 ½" x 4 ½" NRP	26D	PBB
1	ea.	Office Lockset MR 181 ADA BJSJ SF7L	32D	PDQ
1	ea.	SFIC Final Cores – Match WSU Master Key System	26D	WSU
1	ea.	Wall Stop 1407	26D	Don Jo

Hardware Set 3 – Custom Pull Set x Push Bar [Always Unlocked] + Closers
(Requires min. 4" stiles, 6" top rail and 10" bottom rail)

6	ea.	Butt Hinge 4B81 4 ½" x 4 ½" NRP	26D	PBB
2	sets	Custom WSU Handles, Coordinate with Owner	----	TBD
2	ea.	Push Bar 147	32D	Don Jo
2	ea.	Closer 7101 BC EDA x DPPA-BS-NFB	689	PDQ
2	ea.	Wall Stop 1492	26D	Don Jo

Hardware Set 4 – Custom Pull Set x MLR Panics [Access Control] + Closers
(Requires min. 4" stiles, 6" top rail and 10" bottom rail)

6	ea.	Butt Hinge 4B81 4 ½" x 4 ½" NRP	26D	PBB
2	ea.	Electric SVR Panics 6400V MLR	32D	PDQ
1	ea.	Rim Cylinder Housing I5308 (03)	26D	PDQ
1	ea.	SFIC Final Cores – Match WSU Master Key System	26D	WSU
2	sets	Custom WSU Handles, Coordinate with Owner	----	TBD
2	ea.	Closer 7101 BC EDA x DPPA-BS-NFB	689	PDQ
2	ea.	Power Transfer PTM-10	AL	SDC
1	ea.	Power Supply 632RF	----	SDC
1	ea.	Access Control Module & Card Reader by Security Vender	----	Sec Vender

Note: Access control module, card reader and peripherals furnished by Security Vender, Coordinated by GC/CM.

Hardware Set 5 – Custom Pull Set x Push Bar [Always Unlocked] + Hold-Open Closers
(Requires min. 4" stiles, 6" top rail and 10" bottom rail)

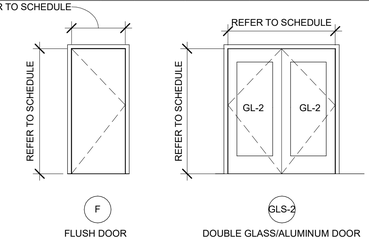
6	ea.	Butt Hinge 4B81 4 ½" x 4 ½" NRP	26D	PBB
2	sets	Custom WSU Handles, Coordinate with Owner	----	TBD
2	ea.	Push Bar 147	32D	Don Jo
2	ea.	Hold-Open Closer 7101 BC EDAHO x DPPA-BS-NFB	689	PDQ
2	ea.	Wall Stop 1492	26D	Don Jo

Hardware Set 6 – Exit Only Panics [Always Locked] + Closers
(Requires min. 4" stiles, 6" top rail and 10" bottom rail)

6	ea.	Butt Hinge 4B51 4 ½" x 4 ½" NRP	32D	PBB
2	ea.	Exit Only SVR Panics 6400V EO	32D	PDQ
2	ea.	Closer 7101 BC SCS Stop x DPPA-BS-NFB	689	PDQ
1	ea.	Threshold S205A	AL	Reese
2	ea.	Sweep 354A –Mount pull side	AL	Reese
1	set	Weatherstrip by door and frame supplier	AL	DFS

DOOR & FRAME SCHEDULE

		DOOR SIZE			DOOR					FRAME				DETAILS		
NUMBER	ROOM NAME	WIDTH	HEIGHT	HDWE SET	TYPE	MATERIAL	FINISH	GLASS	THRESHOLD TYPE	MATERIAL	FINISH	GLASS	FIRE RATING	HEAD	JAMB	REMARKS
Level 1																
107.0	TE	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
108.0	DB	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
111.0	WR	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
112.0	HC OFFICE	3' - 0"	7' - 0"	2	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
115.0	QB/RB	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
119.0	LB	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
121.0	VIDEO	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
122.0	O LINE	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
123.0	GA OFFICE	3' - 0"	7' - 0"	2	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
124.0	D LINE	3' - 0"	7' - 0"	1	F	WD	STN	-		ALUM	PFN	-	-	1/A900	2/A900	
124.1	LOUNGE	6' - 0"	7' - 2"	3	GLS-2	ALUM	PFN	GL-2		ALUM	PFN	-	-	1/A900	2/A900	
124.2	VESTIBULE	6' - 0"	7' - 2"	4	GLS-2	ALUM	PFN	GL-2		HM	PFN	-	-	1/A900	2/A900	OUTFIT WITH EXISTING PEGASIS CARD SYSTEM
126.0	CORRIDOR	6' - 0"	8' - 0"	3	GLS-2	ALUM	PFN	GL-2		ALUM	PFN	-	45	1/A900	2/A900	
154.0	LOCKER ROOM	6' - 0"	7' - 2"	5	GLS-2	ALUM	PFN	GL-2		ALUM	PFN	-	45	1/A900	2/A900	
154.1	LOCKER ROOM	6' - 0"	7' - 2"	5	GLS-2	ALUM	PFN	GL-2		ALUM	PFN	-	45	1/A900	2/A900	
158.0	WEST LOBBY	6' - 0"	7' - 2"	6	GLS-2	ALUM	PFN	GL-2		ALUM	PFN	-	-	1/A900	2/A900	
158.1	WEST LOBBY	3' - 0"	7' - 2"	3	F	ALUM	PFN	-		ALUM	PFN	-	45	1/A900	2/A900	



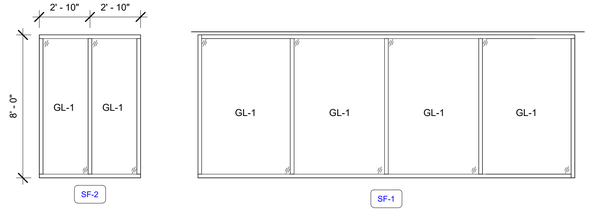
GENERAL GLASS AND WINDOW NOTES

1. REFER TO EXTERIOR ELEVATIONS & DETAILS FOR ADDITIONAL INFORMATION.
2. ALL GLASS TO BE TEMPERED WHERE REQUIRED BY MBC.
3. PROVIDE LAMINATED GLASS FOR ALL SAFETY GLASS, NO WIRE GLASS PERMITTED.
4. PROVIDE FIRE-RATED CLEAR CERAMIC GLASS AT ALL REQUIRED LOCATIONS.
5. WINDOW AND STOREFRONT FRAMING COMPONENTS SIZES, LAYOUT, AND SPACING SHOWN ON THE DRAWINGS ARE AESTHETIC MINIMUMS. THE FABRICATOR / CONTRACTOR SHALL AUGMENT THE DESIGN OF THE COMPONENTS AS REQUIRED TO MEET THE PERFORMANCE REQUIREMENTS SPECIFIED IN THE PROJECT SPECIFICATIONS AND/OR CODE REQUIREMENTS.

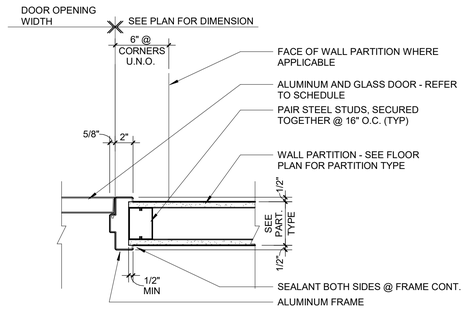
GLASS TYPES:

GL-1 1", LOW-E, INSULATED GLASS UNIT (IGU, TYP)
MFR: VIRACON OR APPROVED EQUAL
COLOR/STYLE: CLEAR

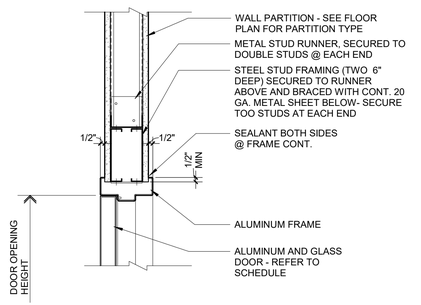
GL-2 3/4" OR 13/16" INSULATED GLASS UNIT (IGU, TYP)
MFR: PER DOOR MANUF
COLOR/STYLE: CLEAR



4 A900 WINDOW TYPES
1/4" = 1'-0"



2 A900 JAMB AT TYPICAL STUD PARTITION
1 1/2" = 1'-0"



1 A900 ALUMINUM HEAD AT STUD PARTITION DETAIL
1 1/2" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

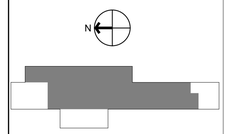
Consultants

Seal:

Project :
WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : JML
Checked by : ARR
Sheet Title : DOOR SCHEDULE AND DETAILS

Project No. : 2023.175

Sheet No. : A900

FINISH SCHEDULE

RM #	ROOM NAME	FLOOR FINISH	BASE FINISH	WALL PAINT				Ceiling Finish	REMARKS
				NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL		
104.0	CORRIDOR	CPT-1	RB-1	N/A	PT-2	PT-2	PT-2	ACT-1	
104.1	COACHES LOUNGE	CPT-1	RB-1	PT-2	PT-1	PT-1	PT-1	ACT-1	
107.0	TE	CPT-1	RB-1	PT-2	PT-1	PT-1	SEE 8/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
108.0	DB	CPT-1	RB-1	PT-1	SEE 13/A610	PT-2	SEE 11/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
111.0	WR	CPT-1	RB-1	PT-2	PT-1	PT-1	SEE 8/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
112.0	HC OFFICE	CPT-1	RB-1	PT-1	PT-2	PT-1	PT-1	ACT-1	
115.0	QB/RB	CPT-1	RB-1	PT-1	PT-1	PT-2	SEE 8/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
119.0	LB	CPT-1	RB-1	PT-2	PT-1	PT-1	SEE 8/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
121.0	VIDEO	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
122.0	O LINE	CPT-1	RB-1	PT-1	SEE 13/A610	PT-2	SEE 11/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
123.0	GA OFFICE	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	
124.0	D LINE	CPT-1	RB-1	PT-1	SEE 13/A610	PT-2	SEE 11/A610	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
124.1	LOUNGE	PC-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1/PT-7	EXPOSED STRUCTURE PAINTED BLACK
124.2	VESTIBULE	PC-1	RB-1	PT-1	PT-1	PT-1	PT-2	ACT-1	
126.0	CORRIDOR	CPT-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	
127.0	LOCKER ROOM	CPT-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-5/PT-6/K-13	
131	EQUIPMENT	PC-1	RB-1	PT-1	PT-1	PT-1	PT-1	-	
154.0	EXPANDED LOCKER ROOM	CPT-2	RB-1	PT-1	PT-1	PT-1	PT-1	PT-5/K-13	
158.0	WEST LOBBY	PC-1	RB-1	PT-1	PT-1	PT-1	PT-1	ACT-1	

Level 1: 18

TOTAL ROOMS: 18

KEYNOTE - FINISH FLOOR PLAN

KEYNOTE	KEYNOTE DESCRIPTION
F1	PROVIDE TRANSITION STRIPS BETWEEN FLOOR FINISHES.
F2	UNDERSIDE OF SOFFIT TO BE PAINTED (PT-5), NEW CEILING TO BE PAINTED (PT-6), EXPOSED STRUCTURE TO RECEIVE K-13 SPRAY.
F3	PAINT WALL PT-2 ABOVE COVE LIGHTING. SEE DETAIL (6/A210)
F4	NEW EXTERIOR CONCRETE TO RECIEVE BRUSHED FINSH.

FLOOR PATTERN LEGEND

TYP FOR ALL A600 SHEETS ONLY

- CPT-1
- CPT-2
- PC-1
- OUT OF SCOPE

WALL TYPE LEGEND

TYP THIS SHEET ONLY

(COLORS DO NOT REPRESENT ACTUAL COLOR OF PRODUCT)

PT-1 IS USED IN ALL AREAS WITHIN SCOPE NOT MARKED OTHERWISE

- PT-2
- SEE (8/A610)
- SEE (11/A610)
- SEE (13/A610)

LIST OF MATERIALS

06410 - ARCHITECTURAL CASEWORK

PL-1 PLASTIC LAMINATE
MANUFACTURER: WILSONART
MODEL:STANDARD HPL
PRODUCT #: 15509
COLOR: PORCELAIN VELVET
FINISH: TRACELESS FINISH
LOCATION: REFER TO FINISH PLAN FOR EXACT LOCATION

09510 - SUSPENDED ACOUSTICAL CEILING

ACT-1 ACOUSTIC CEILING TILE
MANUFACTURER: ARMSTRONG
COLLECTION: ULTIMA
COLOR: WHITE
SIZE: 1 X 4
EDGE: SQUARE LAY IN EDGE
GRID PROFILE: KEEP EXISTING (WARREN)
LOCATION: SEE RCP FOR MORE DETAIL
NOTE: WHEN EXISTING GRID IS PRESENT, MATCH WHEN POSSIBLE

09650 - RESILIENT FLOORING

RB-1 RUBBER WALL BASE
MANUFACTURER: ROPPE
COLOR: LUNAR DUST 114
SIZE: 4 1/4"h, 1/4" THICK (USE 8' LENGTHS, NOT COIL)
LOCATION: LVT & CPT, REFER TO FINISH PLAN FOR LOCATION.
CONTACT:

CPT-1 CARPET
MANUFACTURER: KINETEX
STYLE: TIMBER DEMI-PLANK
COLOR: CATALPA 1924
LOCATION: SEE SCHEDULE

CPT-2 CARPET
MANUFACTURER: KINETEX
STYLE: NETWORK DEMI-PLANK
COLOR: PROTOCOL 2858
LOCATION: SEE SCHEDULE

PC-1 POLISHED CONCRETE
MANUFACTURER: LATICRETE
PRODUCT : L & M LION HARD
STYLE/COLOR: FINE AGGREGATE
FINISH SATIN HONED
LOCATION: REFER TO FINISH PLAN FOR EXACT LOCATION
CONTACT:
NOTE: CONTRACTOR TO PROVIDE A TEST AREA FOR ARCH APPROVAL

09910 - PAINT

PT-1 INTERIOR FIELD PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: SNOWBOUND SW7004
FINISH: EGG-SHELL
LOCATION: REFER TO FINISH PLAN FOR EXACT LOCATION

PT-2 INTERIOR ACCENT PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: STARBOARD SW6755
FINISH: EGG-SHELL
LOCATION: REFER TO FINISH PLAN FOR EXACT LOCATION

PT-3 INTERIOR ACCENT PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: FUN YELLOW SW6908
FINISH: EGG-SHELL
USE: 8" TRANSITION BETWEEN PT-1 & PT-2 @ ACCENBT WALLS. SEE INTERIOR ELEVATIONS
LOCATION: REFER TO FINISH PLAN FOR EXACT LOCATION

PT-4 INTERIOR ACCENT PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: REPOSE GRAY
FINISH: EGG-SHELL
LOCATION: REFER TO FINISH PLAN FOR EXACT LOCATION

PT-5 CEILING PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: SNOWBOUND SW7004
FINISH: SATIN
LOCATION: TYP. AT NEW CEILINGS

PT-6 CEILING PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: STARBOARD SW6755
FINISH: SATIN
LOCATION: TYP. AT NEW LOCKER AND EXPANDED LOCKER ROOM CEILING

PT-7 CEILING PAINT
MANUFACTURER:SHERWIN WILLIAMS
COLOR: TRICORN BLACK SW 6258
FINISH: SATIN
LOCATION: TYP. AT NEW CEILINGS

12000 - SIMULATED STONE

SS-1 SIMULATED STONE
MANUFACTURER: WILSONART
MODEL: QUARTZ
PRODUCT #: Q1009
COLOR: WHITE
THICKNESS: 3 CM

15000 - ELECTRICAL

- FACE PLATES
COLOR: STAINLESS STEEL

- DEVICES
COLOR: WHITE

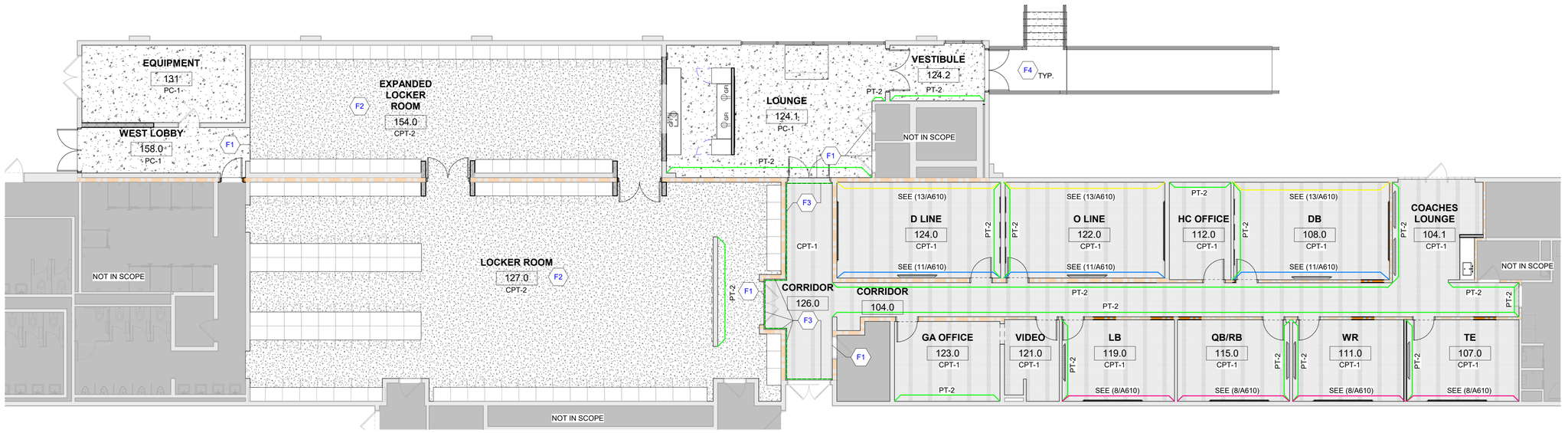
- MISC.

SK-1 SINK
MANUFACTURER: KOHLER
FIXTURE: STRIVE
COLOR: STAINLESS STEEL
LOCATION: TYP. AT NEW SINK LOCATIONS

FC-1 FAUCET
MANUFACTURER: KOHLER
FIXTURE: PURIST
COLOR: VIBRANT STAINLESS
LOCATION: TYP. AT NEW SINK LOCATIONS

- DOOR PULL
STYLE: STANDARD 4" CURVED
COLOR: BLACK STAINLESS
LOCATION: TYP. AT MILLWORK

K-13 THERMAL SPRAY INSULATION
MANUFACTURER: INTERNATIONAL CELLULOS CORP.
TYPE: K-13
COLOR: BLACK
THICKNESS: 1"
LOCATION: LOCKER ROOM AND EXPANDED LOCKER ROOM



1 F100 FINISH PLAN

1/8" = 1'-0"

SVA

STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :

WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : JML

Checked by : ARR

Sheet Title : FINISH SCHEDULE & LIST OF MATERIALS

Project No. : 2023.175

Sheet No. : F100

KEYNOTE - TECH PLAN

KEYNOTE	KEYNOTE DESCRIPTION
TC-01	75" TV PROVIDED BY WSU C&IT. INSTALLED BY CONTRACTOR. TV TO BE CONNECTED TO MAIN SERVER.
TC-02	DATA AND POWER @ 42" A.F.F. HDMI CABLE TO RUN FROM WALL PANEL TO ADJACENT TV. COORDINATE CABLE REQUIREMENTS WITH MANUFACTURE & WSU C&IT.
TC-03	DATA AND POWER @ 60" A.F.F. BEHIND WALL MOUNTED TV. DATA CONNECTION TO RUN FROM PANEL TO ADJACENT TV. COORDINATE CABLE REQUIREMENTS WITH MANUFACTURE & WSU C&IT.
TC-04	DATA AND POWER/CONTROL PANEL @ 42" A.F.F. FOR CEILING MOUNTED PROJECTOR, SCREEN, AND AV SPEAKERS CONTROL.
TC-05	CEILING MOUNTED PROJECTOR. MOUNTING LOCATION BASED ON SCREEN SIZE & MANUFACTURE SPEC. COORDINATE.
TC-06	CONTRACTOR TO PROVIDE (2) SEPARATE DATA DROPS TO PROJECTOR. (1) DATA DROP TO SCREEN WALL FOR OPERATION & (1) DATA DROP BACK TO SERVER CLOSET FOR PROJECTOR EFFICIENCY CONTROL.
TC-07	ANY EXISTING CAMERAS REMOVED DURRING CONSTRUCTION TO BE RETURNED TO WSU C&IT. REINSTALLATION TO BE HANDLED BY C&IT LOW VOLTAGE INSTALLER AFTER PROJECT COMPLETION.
TC-08	86" TV PROVIDED BY WSU C&IT. INSTALLED BY CONTRACTOR.
TC-09	75" TV PROVIDED BY WSU C&IT. INSTALLED BY CONTRACTOR.
TC-10	CEILING MOUNTED WIRELESS ACCESS POINT. PROVIDED BY WSU C&IT, INSTALLED BY CONTRACTOR. COORDINATE MOUNTING WITH ANY PROJECTOR'S TO ENSURE NO DISRUPTION TO PROJECTURE FUNCTION.
TC-11	EXISTING PEGASIS CARD SWIPE SYSTEM TO BE RELOCATED BY CONTRACTOR.
TC-12	CONTRACTOR TO PERFORM CABLE AUDIT PER WSU STANDARDS. NEW NETWORK SWITCH MAY BE REQUIRED. NETWORK SWTICH TO BE PROVIDED AND INSTALLED BY WSU C&IT.
TC-13	PROJECTOR SCREEN PROVIDED BY WSU C&IT INSTALLED BY CONTRACTOR. COORDINATE INSTALLATION REQUIREMENTS WITH MANUFACTURE AND PROJECTOR.

GENERAL NOTES:
WSU STANDARDS FOR COMMUNICATIONS INFRASTRUCTURE MUST BE ADHERED TO BY THE PROJECT - https://tech.wayne.edu/docs/wsu-communications-standards.pdf

- PERFORM A CABLE AUDIT BEFORE DEMOLITION PER WSU STANDARDS. PLEASE REFER TO THE WSU STANDARDS FOR COMMUNICATIONS INFRASTRUCTURE, PAGE 8. INCLUDE THE TYPE OF CABLE (EXAMPLE CAT 5, CAT 5E OR CAT 6) ON AUDIT REPORT. ANY CABLING BEING ABANDONI MUST BE DEMOLISHED TO THE PATCH PANEL AND DOCUMENTED FOR NETWORK PORT DEACTIVATION AND PATCHES
- IF CEILING IS REMOVED DURING DEMOLITION, ALL CAMERAS AND WIRELESS ACCESS POINTS MUST BE TURNED OVER TO WSU C&IT FOR STORAGE AND REINSTALLATION.
- EXISTING CABLES TO REMAIN.
- ANY AND ALL CABLES WITHIN DEMOLISHED WALLS TO BE PULLED BACK TO IT CLOSET.

WIRELESS ACCESS POINTS:
-THE CURRENT LIST OF APPROVED WIRELESS EQUIPMENT IS AVAILABLE FOR REVIEW UPON REQUEST FROM WSU CIT.
-EXISTING ACCESS POINTS REMOVED DURRING CONSTRUCTION TO BE REUSED.
-ARUBA WIRELESS EQUIPMENT REQUIRES SINGLE DATA JACK
-ARUBA AP'S WILL TAKE ADVANTAGE OF M-GIG (MULTI-GIG) CAPABILITIES. THIS MEANS THAT NEWER DEVICES CAN SUPPORT INCREASED BANDWIDTH FROM 1Gb UP TO 2.5Gb USING THE SAME PHYSICAL CONNECTION.
-G.C. TO INSTALL WIRELESS EQUIPMENT AND CABLE INFRASTRUCTURE
-WHERE POSSIBLE, ALL AP'S SHOULD BE CONNECTED TO THE CEILING GRID.
-ALL AP'S SHOULD BE CONNECTED TO DATA JACKS LOCATED ABOVE THE CEILING TILES.

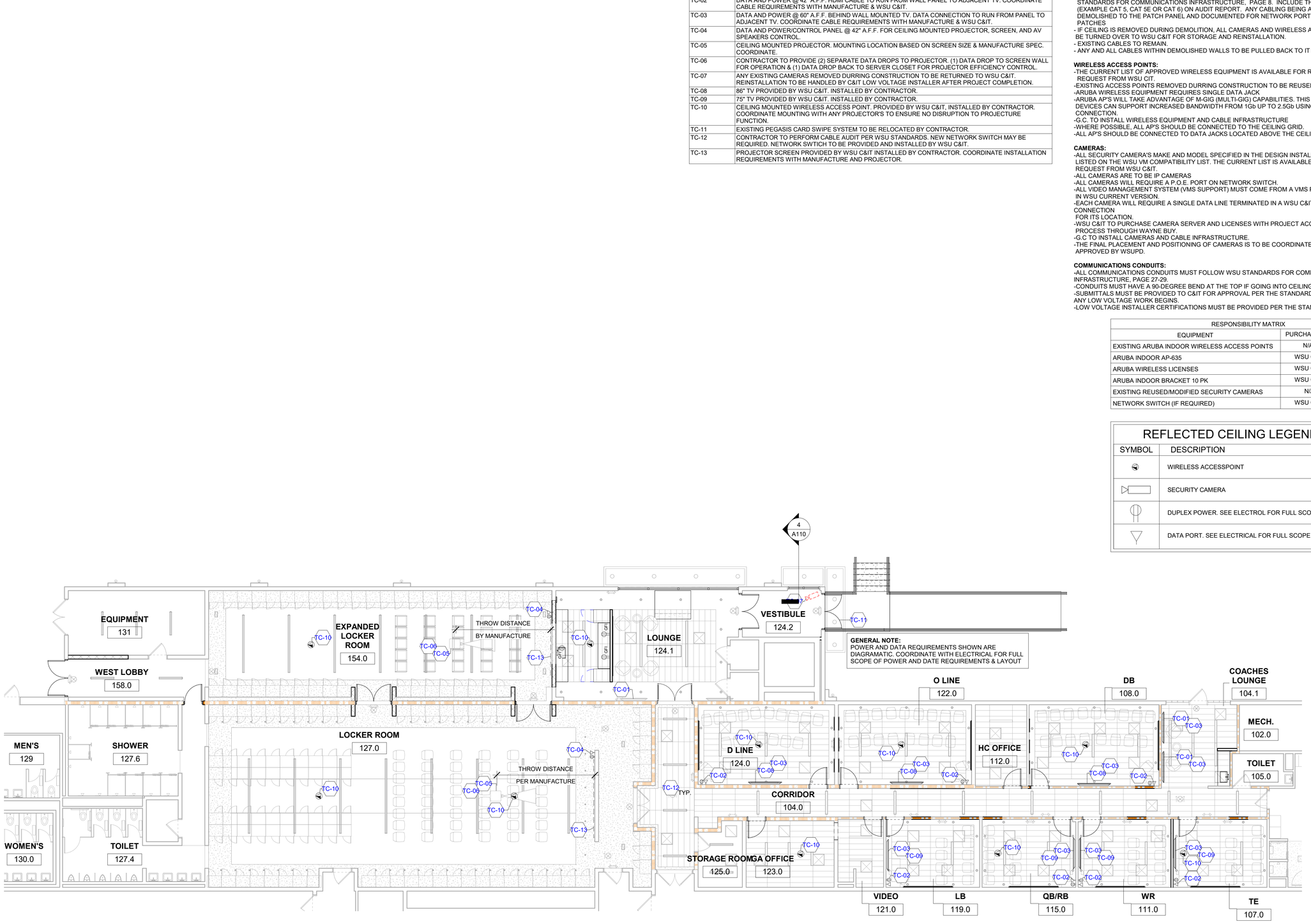
CAMERAS:
-ALL SECURITY CAMERA'S MAKE AND MODEL SPECIFIED IN THE DESIGN INSTALLATION MUST BE LISTED ON THE WSU VM COMPATIBILITY LIST. THE CURRENT LIST IS AVAILABLE FOR DESIGN UPON REQUEST FROM WSU C&IT.
-ALL CAMERAS ARE TO BE IP CAMERAS
-ALL CAMERAS WILL REQUIRE A P.O.E. PORT ON NETWORK SWITCH.
-ALL VIDEO MANAGEMENT SYSTEM (VMS SUPPORT) MUST COME FROM A VMS PROVIDED CERTIFIED IN WSU CURRENT VERSION.
-EACH CAMERA WILL REQUIRE A SINGLE DATA LINE TERMINATED IN A WSU C&IT APPROVED CONNECTION FOR ITS LOCATION.
-WSU C&IT TO PURCHASE CAMERA SERVER AND LICENSES WITH PROJECT ACCOUNT NUMBER AND PROCESS THROUGH WAYNE BUY.
-G.C TO INSTALL CAMERAS AND CABLE INFRASTRUCTURE.
-THE FINAL PLACEMENT AND POSITIONING OF CAMERAS IS TO BE COORDINATED WITH CIT AND APPROVED BY WSUPD.

COMMUNICATIONS CONDUITS:
-ALL COMMUNICATIONS CONDUITS MUST FOLLOW WSU STANDARDS FOR COMMUNICATIONS INFRASTRUCTURE, PAGE 27-29.
-CONDUITS MUST HAVE A 90-DEGREE BEND AT THE TOP IF GOING INTO CEILING SPACE.
-SUBMITTALS MUST BE PROVIDED TO C&IT FOR APPROVAL PER THE STANDARDS, PAGE 26 - **BEFORE** ANY LOW VOLTAGE WORK BEGINS.
-LOW VOLTAGE INSTALLER CERTIFICATIONS MUST BE PROVIDED PER THE STANDARDS

RESPONSIBILITY MATRIX		
EQUIPMENT	PURCHASED BY	INSTALLED BY
EXISTING ARUBA INDOOR WIRELESS ACCESS POINTS	N/A	G.C
ARUBA INDOOR AP-635	WSU C&IT	G.C.
ARUBA WIRELESS LICENSES	WSU C&IT	WSU C&IT
ARUBA INDOOR BRACKET 10 PK	WSU C&IT	G.C.
EXISTING REUSED/MODIFIED SECURITY CAMERAS	N/A	WSU C&IT
NETWORK SWITCH (IF REQUIRED)	WSU C&IT	WSU C&IT

REFLECTED CEILING LEGEND

SYMBOL	DESCRIPTION	CODE
	WIRELESS ACCESSPOINT	
	SECURITY CAMERA	
	DUPLEX POWER. SEE ELECTROL FOR FULL SCOPE	
	DATA PORT. SEE ELECTRICAL FOR FULL SCOPE	



1 TC100 TECHNOLOGY FLOOR PLAN
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : JML
Checked by : ARR
Sheet Title : TECHNOLOGY PLAN

Project No. : 2023.175

Sheet No. : TC100

SECTION 00-7100

CONTRACTING DEFINITIONS

1. The following is a general list of definitions as used in the specifications.

Architect/Engineer	Refers to Stucky + Vitale Architects
Contractor	Refers to the General Contractor
Subcontractor	Refers to trades people having subcontractual agreements with the Contractor.
Owner	Refers to the person, organization or authorized representative identified in the contract documents.
Contract Documents	Consist of the documents enumerated in the agreement and generally includes the contract proposal, drawings and specifications.
Drawings	Are diagramatic interpretations of the physical work to be performed on the project.
Work	Refers to labor, materials, equipment and services related to the project.
Project	Refers to total of the work to be performed including drawings, engineering and construction.
Change Order	Is an order from the Owner or an agreement between the Owner and Contractor to make a change in the project.
N.I.C.	Is an abbreviation for "Not Included In Contract" and indicates that a particular item is not to be included in the work to be done by the Contractor.

2. The following is a general list of technical societies referenced in the Specifications.

AIA	American Institute of Architects
ACI	American Concrete Institute
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AITC	American Institute of Timber Construction
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
NAFM	National Association of Fan Manufacturers
NEC	National Electrical Code
NEMA	National Electrical Manufacturer's Assoc.
RCSC	Research Council on Structural Connections
UL	Underwriters Laboratories

SECTION 00-7300

SUPPLEMENTARY CONDITIONS

1. PERMITS, TAPS AND FEES AND BONDS
The Contractor shall obtain building permits, test borings, surveys, licenses, certificates, inspections and other permits as required. The Contractor shall be fully reimbursed for the above items by the Owner upon proper transfer of all receipts.
Utility taps and fees and bonds shall be reimbursed by the Owner.
Plumbing, HVAC, Electrical and Signage subcontractors shall be responsible to obtain and pay for their own permits.

2. ELECTRICAL SERVICE
Temporary service shall be installed by the Electrical subcontractor.
Temporary electrical consumption shall be paid by the General Contractor.

3. TEMPORARY SANITARY FACILITY
The Contractor shall provide self-contained chemical sanitary facilities on the site for workers and Subcontractor's workers for the duration of the construction period.

4. TEMPORARY HEAT AND PROTECTION
If temporary heat is required for the protection of the work, the Contractor shall provide approved salamanders, stoves with smoke pipes to the outside, or other approved apparatus. All apparatus shall be properly vented to the outside. The Contractor shall also provide temporary apparatus for the drying out of work as necessary. No work shall be damaged by the apparatus.

When the permanent heating apparatus is available for use and the building is enclosed, the Owner shall furnish heat and air circulation for that portion of the building that is permanent.

If the HVAC units are used during the construction period, the filters shall be changed as needed but at least per month. New filters shall be installed at substantial completion at which time Subcontractor warranty shall commence.

5. CUTTING AND PATCHING
EACH SUBCONTRACTOR shall be required to perform all cutting, patching and excavating necessary for his particular work unless specifically stated otherwise.
The Contractor shall be responsible for COORDINATING the cutting and patching. The Contractor shall only perform cutting and patching or fitting necessary for his own work and as necessary to assure that all parts and work of other Subcontractors comes together properly.

6. WORK BY OTHERS
The Owner agrees to provide any work and/or materials not an obligation of the Contractor at such time and in such a manner so as not to delay the progress of the work of the Contractor.

7. RELOCATION OF UTILITIES
The Owner will pay for the relocation of all public utilities that conflict with construction.

8. OCCUPANCY BY OWNER
The Owner may occupy any part or parts of the work and use any equipment which is a reasonable degree of completion (provided the building department will allow such) as will in his opinion make such areas or parts reasonable safe, fit, and convenient for his use, under the conditions established for such occupancy.

9. RELOCATING OWNER'S EQUIPMENT
The Owner shall be responsible for and pay for the relocation and installation of any of his equipment.

10. CONSTRUCTION TELEPHONE
The Contractor shall maintain a telephone located in the field office at the jobsite. A cellular phone held by the on-site Superintendent meets this requirement.

SECTION 01-4000

QUALITY REQUIREMENTS

1. Independent Professional Testing Agencies shall be retained by the Contractor (reimbursed by the Owner) to inspect and test the materials and methods of construction as hereinafter specified for compliance with the requirements of the Contract Documents and to perform specialized technical services as may be required.

The Laboratory, inspection service, and soils engineer shall be acceptable to the Architect/Engineer.

2. The Agency field services shall include:
FOUNDATIONS: (See Section 02110)
Provide the services of a Senior Engineering Technician for foundation inspection. Inspection shall include visual examination and penetration testing of soil at the foundation base for determination of suitable bearing material and confirm adequate bearing capacity.

ENGINEERED FILL: (See Section 02110)
Provide the services of a Senior Engineering Technician for inspection and control of filling and backfilling operations. This shall consist of review of materials to be used, review of contractor's methods and equipment and field density testing.
Provide Nuclear Gauge for field density testing of engineered fill.

CONCRETE: (See Section 03010 and 03100)
Provide the services of a Senior Engineering Technician for quality control of concrete. Work shall consist of concrete testing and inspection, including entrained air tests, slump and yield tests, unit weight and temperature tests of concrete, and molding of concrete test cylinders.
Compressive strength tests shall be made at 7 days and 28 days.

SECTION 02-1100

SITE PREPARATION, EARTHWORK AND EXCAVATION

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, material, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
Site Preparation
- Limited grubbing.
- Provide and maintain traffic control measures.
- Provide and maintain protective barriers.
- Sawcut and remove previous site improvement curbs and paving.
- Tree and stump removal and disposal.
- Keep streets clear of tracked spoils.

SECTION 02-1100 (cont'd)

SITE PREPARATION, EARTHWORK AND EXCAVATION

Earthwork and Excavation
- Site stripping and stockpiling.
- Site cutting, filling and removing spoils.
- Excavate for foundation work.
- Shore and brace and dewater as necessary.
- Filling and backfilling slabs and foundations.
- Coordinate with Contractor for compaction testing services.
- Lawful disposal of excess and waste materials.
- Prepare uniform compacted subgrade for asphalt paved areas.
- Prepare uniform compacted subgrade and granular base for concrete paved areas.
- Rough grading and fine grading of green areas to within 2" of final grade.

3. Related work by others specified elsewhere:
- Any environmental remediation.
- 2" topsoil and final grading of "green areas". (See Section 02218)
- Site and Building layout shall be by General Contractor.
- Storm sewer (See Section 02710)
- Water service and Sanitary service (See Section 02710)

4. The Subcontractor shall visit the site to familiarize himself with the extent of work prior to submitting a bid for the work.

5. Subsurface soil investigations have been made. The foundations have been designed for a soil bearing capacity of 3500 psf. Soils shall be tested during excavation at the design depth of the footings. If adequate soil bearing capacity is not available, the Architect/Engineer shall be notified immediately for instructions whether to proceed to a deeper depth or to increase the size of the footings.

6. Soil conditions or obstructions which cannot be anticipated by careful examination of premises and drawings which add to cost of work will be subject to unit prices of Contractor's approval and will be an extra to the contract.

7. Provide and maintain erosion control methods as indicated on the plans and in accordance with the authorities having jurisdiction for the entire duration of the construction program.

8. Conduct site clearing operations to ensure minimum traffic interference with roads, streets, walks and other adjacent occupied or used facilities. Do not close or obstruct streets or walks without permission from authorities having jurisdiction.

Protect improvements on adjoining properties and on Owner's property.

Restore damaged improvements to their original conditions, as acceptable to parties having jurisdiction.

9. The site shall be cleared of any indicated trees, stumps, and all other materials within the periphery of the construction area including parking area and drives.

10. Strip and remove sod and vegetation from the construction area.
All stripped vegetation and any building debris encountered shall be legally disposed off site.
Legally dispose off site all excess and waste materials.

11. Strip away any previous site improvements indicated on the plans such as paved access drives and paved parking lots and dispose the debris properly off-site. Prepare the subgrade for the proposed new construction.

12. Sawcut and remove portions of curbing and pavement in the Right of Way as indicated on the plans. Get permission from the appropriate authorities and provide traffic barriers as necessary. Remove and dispose all debris properly off-site.

13. Excavate for foundations to sizes and depths as indicated. Excavate to exact size where forms are not to be used. Excavate for formed construction to allow placing, removing, and inspecting of forms.

Contractor shall provide and pay for testing and inspection of soil conditions prior to installation of foundations. (See Section 01400). Submit reports for testing and inspection of foundation excavations and footing subgrades.

The Owner shall reimburse the Contractor for soils tests upon the proper transfer of receipts.

If satisfactory soil conditions are not found at depth indicated on drawing, contact Architect/Engineer. Such additional work shall be paid for in accordance with unit prices of proposal.

If any piping, drains, construction materials, etc. are encountered in excavating, unless ordered removed shall be supported, braced and protected from damage. If utility lines are encountered, contractor shall notify engineer and shall not disturb lines unless so approved by Engineer.

Protect bottoms of excavations from frost.

Shore and brace excavation, if necessary, to prevent cave ins. Construct work of sound lumber, all accurately placed and securely braced. Maintain shoring and bracing until immediately before backfilling and then remove it by stages as backfilling progresses.

Provide, maintain and operate sufficient pumping equipment to keep all excavations free from water at all times. Conduct water a sufficient distance away from foundations to prevent damage to work.

This contractor shall make good any damage resulting from failure of this work or non-observance of these requirements.

14. The subgrade shall be thoroughly compacted with an 8 ton roller or vibrating compactor before filling. Do not compact subgrade when it is too wet to reach required compaction.

Proof roll the subgrade with a loaded tandem truck to detect any soft yielding zones. Any yielding zones discovered should be undercut and replaced with clean, approved fill and compacted. Stabilization of isolated unstable subsurface materials may be possible using crushed stone which is "bridged" or "choked" into the yielding materials. Do not place fill or backfill on muddy or frozen surfaces. Fill and backfill shall meet the following requirements.

Fill and backfill shall meet the following requirements:

Under and against structures, floor slabs and pavements provide sand fill free of clay, rock or gravel larger than 2", debris, vegetation and frozen material. Sand shall be MDOT Class II A or better. Compact top 12" of subgrade and each layer of fill to 95% maximum density per ASTM D-1557. Fill shall be placed in layers, 9" thick maximum, properly moistened, compacted and graded as required to provide positive drainage.

Submit compaction tests, one for every 2000 square foot of building or pavement area. Do not backfill against foundation walls or retaining walls until walls for bearing surfaces have reached design strength, or are properly braced, or are simultaneously backfilled on both sides of wall.

Excavated granular fill may be suitable for backfill against foundation walls if the above requirements are met with the following exception. It shall not contain pieces of brick, concrete or cinders larger than 3".

Filling and Grading for General Surface Area: fill and rough grade area within contract limits other than above, to 2" of finish grade. Fill material shall be free from debris, perishable, combustible material, stones over 3" in diameter and frozen material. Deposit fill in layers and compact to 90% maximum density per ASTM D 1557.

Remove from site all excess earth material which results from excavation and that cannot be reused for backfilling, filling or grading.

15. The contractor will, upon becoming aware of subsurface or latent physical conditions differing from those disclosed by the original soil investigation work, promptly notify the owner verbally to permit verification of the conditions, and in writing, as to the nature of the differing conditions. No claim by the Contractor for any conditions differing from those anticipated in the plans and specifications and disclosed by the soil studies will be allowed unless the Contractor has so notified the owner, verbally and in writing, as required above, of such differing subsurface conditions.

16. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 02-4100

DEMOLITION

Refer to Division 1 - General Requirements

1. Subcontractor shall provide all labor, materials, equipment, and incidentals necessary and required for the completion of this Work.

2. Scope of Work shall include but not be limited to the following:
- Building demolition excluding removal of hazardous materials and toxic substances.
- Selective demolition of built site elements.
- Selective demolition of building elements for alteration purposes.
- Removal of existing utilities and utility structures.

3. Related Work by Others specified elsewhere:
- Division 1 - Summary: Limitations on Contractor's use of site and premises.
- Division 1 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- Division 1 - Execution Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- Division 2 - Site Clearing: Vegetation and existing debris removal.
- Division 2 - Grading: Fill material for filling holes, pits, and excavations generated as a result of removal operations.
- Division 2 - Fill and Backfill: Filling holes, pits, and excavations generated as a result of removal operations.

4. REFERENCE STANDARDS
- 29 CFR 1926 - U.S. Occupational Safety and Health Standards; current edition.
- NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations

SECTION 02-4100 (cont'd)

DEMOLITION

5. SUBMITTALS
- Site Plan showing: Areas for temporary construction and field offices.
- Demolition Plan: Submit demolition plan as specified by OSHA and local authorities. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences. Identify demolition firm and submit qualifications. Include a summary of safety procedures.
- Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

6. GENERAL PROCEDURES AND PROJECT CONDITIONS
- Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
-- Obtain required permits.
-- Use of explosives is not permitted.
-- Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
-- Provide, erect, and maintain temporary barriers and security devices. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
-- Conduct operations to minimize effects on and interference with adjacent structures and occupants. Do not close or obstruct roadways or sidewalks without permit.
-- Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
-- Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- Do not begin removal until receipt of notification to proceed from Owner.
- Do not begin removal until built elements to be salvaged or relocated have been removed.
- Protect existing structures and other elements that are not to be removed. Provide bracing and shoring. Prevent movement or settlement of adjacent structures. Stop work immediately if adjacent structures appear to be in danger.
- Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.
- Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

7. EXISTING UTILITIES
- Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- Protect existing utilities to remain from damage. Do not disrupt public utilities without permit from authority having jurisdiction. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.
- Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

8. SELECTIVE DEMOLITION FOR ALTERATIONS
- Drawings showing existing construction and utilities are based on casual field observation and existing record documents only. Verify that construction and utility arrangements are as shown. Report discrepancies to Architect before disturbing existing installation. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- Separate areas in which demolition is being conducted from other areas that are still occupied. Provide, erect, and maintain temporary dustproof partitions of construction indicated on drawings. Provide sound retardant partitions of construction indicated on drawings in locations indicated on drawings.
- Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- Remove existing work as indicated and as required to accomplish new work. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
- Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove existing systems and equipment as indicated.
-- Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
-- Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
-- Verify that abandoned services serve only abandoned facilities before removal. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.
- Protect existing work to remain.
-- Prevent movement of structure; provide shoring and bracing if necessary.
-- Perform cutting to accomplish removals neatly and as specified for cutting new work.
-- Repair adjacent construction and finishes damaged during removal work.
-- Patch as specified for patching new work.

9. DEBRIS AND WASTE REMOVAL
- Remove debris, junk, and trash from site. Leave site in clean condition, ready for subsequent work. Clean up spillage and wind-blown debris from public and private lands.

SECTION 03-0000

CONCRETE FLAT WORK

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, material, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Provide reinforcing steel shop drawings and concrete mix designs.
- Inspect compacted granular subbase.
- Layout paved areas.
- Provide all formwork related to flat work.
- Supply and install all reinforcing steel for flat work.
- Concrete walks and porch slabs.
- Concrete paving.
- Inspect gravel base and install vapor barrier where indicated.
- Supply and install rigid perimeter insulation.
- Concrete slabs on grade.
- Provide and arrange concrete testing for this portion of work.

3. Related work by others specified elsewhere:
- Compacted granular Subbase, see Section 02110.
- Concrete Formwork, see Section 03100.
- Building footings, piers, and foundations, see Section 03100.
- Supplying steel guard posts, see Section 05100.
- Concrete pads for furnaces and condensers.
- Concrete lamp bases and transformers, see Electrical Drawings.

4. Concrete Flat Work subcontractor shall supply and install reinforcing for flat work.

5. Subcontractor shall submit (4) sets of shop drawings for approval of Architect/Engineer prior to commencing cutting and bending operations.

6. Reinforcing steel bars shall be ASTM A 615 grade 60, deformed. Welded wire fabric shall be ASTM A 185, flat sheets only.

7. Reinforcing steel detailing and placing shall follow ACI 315 and ACI 318.

8. All bars shall be clean and free from rust and scale. Bars shall be accurately placed and wired securely to suitable chairs and spacers. Provide proper lapping. Provide bent bars at all corners. Space chair supports at 48" centers.

9. Unless otherwise noted, concrete paving shall be reinforced with one layer of 6" x 6" #8/8 welded wire fabric. Use flat sheets only.

10. Unless otherwise noted, concrete floor slabs shall be reinforced with one layer 6" x 6" #10/10 welded wire fabric. Use flat sheets only.

13. Inspect granular SUBBASE for proper grades and adequate compaction as previously specified prior to placing any concrete. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.

14. Inspect compacted gravel and sand base prior to allowing placement of concrete for slabs. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.

15. Coordinate all buried work with other trades.

16. Commencement of work under this section shall be considered as an acceptance of such work of other trades.

17. Layout concrete-paved areas.

18. Provide all stakes and forms necessary to perform concrete paving.

19. Install ASTM-E1745, 10 mil multi-layer polyolefin plastic extrusion vapor retarder with 6" laps, sealed with manufacturer's approved tape under floor slab on top of compacted granular fill. Extend edges at walls and penetrations vertically to the height of the top of slab. Joints at pipes and other penetrations shall be sealed with bituminous plastic cement or as approved by manufacturer. DO NOT PUNCTURE VAPOR RETARDER.

20. Construction of concrete paving shall be governed by "Guide for Design and Construction of Concrete Parking Lots" ACI 330R-08 and "Texturing Concrete Pavements" ACI 325.6R-88.

21. Minimum ultimate compressive strength of concrete at 28 days, with max W/C Ratio, shall be:
Refer to Structural Construction Documents and Geotechnical Report for strengths.

SECTION 03-0000

21. Minimum ultimate compressive strength of concrete at 28 days, with max W/C Ratio, shall be:
Refer to Structural Construction Documents and Geotechnical Report for strengths.

22. Portland Cement shall be ASTM C 150 Type I, use one brand throughout the project.

23. Aggregates shall be ASTM C 33 requirements, course grading
ASTM C 33 Size 57.

24. Only nonchloride admixtures may be used, if needed.

25. All Concrete Paving exposed to the weather shall be air entrained with approved additives, per ASTM C 260 and air entraining shall be limited to 6% plus or minus 1-1/2%.

26. Maximum slump is as follows: Slabs: 5"

27. Concrete supplier shall design and submit the concrete mix he proposes to use for each type. Follow methods specified in ACI 301.84. Submit four (4) copies of mix designs to the Engineer for approval after award of contract.

28. Notify Architect/Engineer 24 hours prior to start of concrete placement for inspection of subgrades.

29. Quality Control Tests shall be arranged by the Contractor.
See Section 01400.
One set of 3 standard concrete cylinders shall be made for each days pour, each strength concrete or each 100 cubic yard, per ASTM C

30. One compressive strength test shall be made at 7 days and 2 at 28 days, for each set of cylinders, per ASTM C 39.
Submit reports to Architect/Engineer and Contractor within 24 hours of testing.

31. Consolidate placed concrete by mechanical vibrating equipment supplemented by hand spading, rodding or tamping. Use equipment and procedures for consolidation of concrete in accordance with ACI recommended practices. Water shall not to be added at the jobsite to increase slump.

32. Broom finish exterior slabs, walks and pavement unless noted otherwise.
Tolerance shall be 1/8" maximum in 10 feet from a true plane.

33. Provide steel trowel finish for interior slabs and broom finish for exterior slabs. Tolerance shall be 1/8" maximum in 10 feet from a true plane.

34. Provide expansion and control joints at locations as indicated on drawings.
Expansion Joints shall be comprised of a joint filler and a joint sealant.
The joint filler shall be 1/2" premolded bituminous impregnated fiberboard. The top edge shall be protected with a temporary cap to be removed after concrete is placed on both sides.
The joint sealer shall be hot poured bituminous asphalt.
Concealed expansion joints need not be sealed.

35. Sawcut control joints are to be cut as soon after initial set as possible.
Cut the joints as soon as the surface will not be torn or abraded by the cutting action.
Do not wait more than 8 hours after initial set.
Zip-cap preformed control joints may be used as an alternate to sawcutting.

36. Concrete slabs shall be moist cured.
A liquid membrane-forming curing compound conforming to ASTM C 309 may be used for curbs, walks, exterior slabs and paving.
Curing compounds shall not be used on any interior walls or slabs intended to receive finishes as adhesion will be impaired.

37. Protect concrete from freezing during cold weather following ACI 306. Temperature of concrete should be 60 to 70 degrees Fahrenheit when placed. Heat aggregate and cement if frozen. Cover work completely and insulate for 7 days. Protect from premature drying due to wind or applied heat. Apply heat if concrete temperature cannot be maintained at 50 degrees Fahrenheit. Allow concrete to gradually cool down for 24 hours after heating is disconnected.

38. Remove all laitance from exposed surfaces to assure a neat and clean finish appearance. Hand scrub or power wash as necessary.

39. Provide one year written warranty against defects in materials and workmanship.

40. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

41. Refer to structural drawings for additional specifications.

SECTION 03-3511

CONCRETE FLOOR FINISHES

Refer to Division 1 - General Requirements.

1. SECTION INCLUDES
- Finishing slabs on grade.
- Surface treatment with sealer.

2. SUBMITTALS
- Product Data: Provide data on sealer, including information on compatibility of different products and limitations.

3. MANUFACTURERS: Dayton Superior Corporation; Product Safe Cure & Seal 30%: www.daytonsuperior.com or equal.

4. EXAMINATION: Verify that floor surfaces are acceptable to receive the work of this section.

5. FLOOR FINISHING: Finish concrete floor surfaces in accordance with ACI 301 and ACI 302.1R.

6. FLOOR SURFACE TREATMENT: Apply sealer to floor surfaces in accordance with manufacturer's instructions.

SECTION 04-7200

CAST STONE MASONRY

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, material, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Portland cement based manufactured stone veneer and trim.

3. Related work by others specified elsewhere:
- Masonry back-up wall, see Section 04200.
- Furnish and install wall framing, see Section 09250.
- Furnish and install wall sheathing, see Section 09250.
- Joint Sealants, see Section 07900.

4. Submittals
- Submit product data.
- Submit sample board consisting of small-scale pieces of veneer units showing full range of textures and colors.
- Veneer manufacturer's installation instructions.
- Maintenance Instructions.
- Warranties.

5. Follow manufacturer's instructions for delivery, handling, and storage.

6. When air temperature is 40 degrees F (4.5 degrees C) or below, consult local building code for Cold-Weather Construction requirements.

7. Warranty: Provide manufacturer's standard warranty coverage against defects in materials when installed in accordance with manufacturer's installation instructions.

8. Provide all stone veneer units, trim pieces, accent pieces, moisture barrier, anchors, reinforcing, mortar, bonding agents and sealants for a complete installation.

9. Veneer Unit properties: Precast veneer units consisting of portland cement, lightweight aggregates, and mineral oxide pigments.
- Compressive Strength: ASTM C 192 and ASTM C 39, 5 sample average: greater than 1,800 psi (12.4MPa).
- Shear Bond: ASTM C 482: 50 psi (345kPa).
- Water Absorption: UBC Standard 15-5: Less than 22 percent.
- Freeze-Thaw Test: ASTM C 67: Less than 3 percent weight loss and no disintegration.
- Thermal Resistance: ASTM C 177: 0.473 at 1.387 inches thick

10. Moisture Barrier: At exterior applications provide Sto-Guard air and moisture barrier, minimum 10-mil thickness.

11. Reinforcing: ASTM C 847, 2.5lb/yd2 (1.4kg/m2) galvanized expanded metal lath complying with code agency requirements for the type of substrate over which stone veneer is installed.

12. Mortar: Type S
- Cement: Any cement complying with ASTM C 270.
- Lime: ASTM C 207.
- Sand: ASTM C 144, natural or manufactured sand.
- Color Pigment: ASTM C 979, mineral oxide pigments.
- Water: Potable.
- Pre-Packaged Latex-Portland Cement Mortar: ANSI A118.4.

13. Bonding Agent: Exterior integral bonding agent meeting ASTM C 932.

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

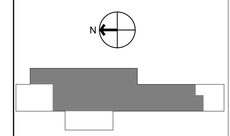
Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for
CONSTRUCTION 03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
PROJECT SPECIFICATION

Project No. :
2023.175

Sheet No. :
PS101

SECTION 04-7200

CAST STONE MASONRY

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, material, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Portland cement based manufactured stone veneer and trim.

3. Related work by others specified elsewhere:
- Masonry back-up wall, see Section 04200.
- Furnish and install wall framing, see Section 09250.
- Furnish and install wall sheathing, see Section 09250.
- Joint Sealants, see Section 07900.

4. Submittals
- Submit product data.
- Submit sample board consisting of small-scale pieces of veneer units showing full range of textures and colors.
- Veneer manufacturer's installation instructions.
- Maintenance Instructions.
- Warranties.

5. Follow manufacturer's instructions for delivery, handling, and storage.

6. When air temperature is 40 degrees F (4.5 degrees C) or below, consult local building code for Cold-Weather Construction requirements.

7. Warranty: Provide manufacturer's standard warranty coverage against defects in materials when installed in accordance with manufacturer's installation instructions.

8. Provide all stone veneer units, trim pieces, accent pieces, moisture barrier, anchors, reinforcing, mortar, bonding agents and sealants for a complete installation.

9. Veneer Unit properties: Precast veneer units consisting of portland cement, lightweight aggregates, and mineral oxide pigments.
- Compressive Strength: ASTM C 192 and ASTM C 39, 5 sample average: greater than 1,800 psi (12.4MPa).
- Shear Bond: ASTM C 482: 50 psi (345kPa).
- Water Absorption: UBC Standard 15-5: Less than 22 percent.
- Freeze-Thaw Test: ASTM C 67: Less than 3 percent weight loss and no disintegration.
- Thermal Resistance: ASTM C 177: 0.473 at 1.387 inches thick

10. Moisture Barrier: At exterior applications provide Sto-Guard air and moisture barrier, minimum 10-mil thickness.

11. Reinforcing: ASTM C 847, 2.5lb/yd2 (1.4kg/m2) galvanized expanded metal lath complying with code agency requirements for the type of substrate over which stone veneer is installed.

12. Mortar: Type S
- Cement: Any cement complying with ASTM C 270.
- Lime: ASTM C 207.
- Sand: ASTM C 144, natural or manufactured sand.
- Color Pigment: ASTM C 979, mineral oxide pigments.
- Water: Potable.
- Pre-Packaged Latex-Portland Cement Mortar: ANSI A118.4.

13. Bonding Agent: Exterior integral bonding agent meeting ASTM C 932.

14. Sealer: Water based silane or siloxane masonry sealer, clear or semi-gloss as selected by Architect.

15. Examine substrates upon which work will be installed.

16. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

17. Commencement of work by installer is acceptance of substrate.

18. Protection: Protect adjacent work from contact with mortar.

19. Surface Preparation: Prepare substrate in accordance with manufacturer's installation instructions for the type of substrate being covered.

20. Install and clean stone in accordance with manufacturer's installation instructions for Standard Installation (Grouted Joint) or Jointless/Dry-Stacked Installation.

21. Apply sealer in accordance with sealer manufacturer's installation instructions.

22. Cleaning
- Remove protective coverings from adjacent work.
- Cleaning Veneer Units: Wash with soft bristle brush and water/granulated detergent solution and rinse immediately with clean water.
- Removing Effloresence: Allow veener to dry thoroughly, Scrub with soft bristle brush and clean water, Rinse immediately with clean water; and allow to dry. If efflorescence is still visible, repeat procedure using a solution of 1 part household vinegar and 5 parts water. Rinse immediately with clean water.

SECTION 05-2000

STRUCTURAL STEEL FRAMING

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, material, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Provide shop drawings.
- Supply steel columns and beams.
- Fabricate and erect steel columns and beams for framing.
- Supply loose lintels, anchor bolts, leveling and bearing plates.

3. Related work by others specified elsewhere:
- Concrete fill, see Section 03010.
- Reinforcing mesh, see Section 03010 and 03100.
- Reinforcing bars, see Section 03100 and 03100.
- Loose lintel installation, see Section 04200.

4. STRUCTURAL STEEL AND MISCELLANEOUS IRON:
A. Structural tubes shall be ASTM A 500 GR. B (FY = 46ksi); all other structural steel shall be ASTM A 36 for shapes, plates and bars.

B. High Strength Bolts and Nuts to be ASTM A325, bearing type and shall be designed based on allowable stresses with threads in the shear plane. Hardened washers are to be ASTM F436.

Bolts to be tightened to the snug tight condition per Research Council on Structural Connections, June 5, 1985 unless noted otherwise.

C. Machine Bolts and Nuts; Anchor bolts, nuts and washers: ASTM A 307, Grade A, sized as noted, square heads and nuts.

D. Welding Electrodes - AWS E 70 LH Series, manual, shielded or submerged arc.

E. The design, fabrication, and erection of all structural steel components shall comply with the following:

1) "Load and Resistance Factor Design Specification for Structural Steel Buildings" - AISC (September 1, 1986).

2) "Code of Standard Practice for Steel Buildings and Bridges" - AISC (September 1, 1986).
Paragraph 4.2.1 of the above code is hereby modified by deletion of the following sentence: "This approval constitutes the Owner's acceptance of all responsibility for the design adequacy of any detail configuration of connections developed by the fabricator as part of his preparation of these shop drawings."

3) "Structural Welding Code", AWS D1-1 (latest edition).

4) "Specification for Structural Joints using ASTM A325 or A490 Bolts" - RCSC (November 13, 1985).

F. Shop connections shall be made with high tensile bolts or welded in strict accordance with AWS Standards. Field connections shall be made with high tensile bolts or field welded in strict accordance with AWS Standards. All connections shall be standard unless otherwise indicated. Fabricate and assemble in the shop to the greatest extent possible.

G. All steel shall be cleaned and painted in accordance with the Federal Structural Steel Painting Council. Paint shall be SSPC Paint 2, a red-iron oxide oil-alkyd metal primer. Contact surfaces of bolted connections can be painted, areas to be field welded can not be painted. All connections shall be field painted after installation.

H. Furnish anchor bolts, straps, clips, leveling plates and lintels to proper trades for installation.

I. Shop drawings are drawings, diagrams, schedules and other data specially prepared for the work by the contractor or any Subcontractor, manufacturer, supplier or distributor to illustrate some portion of the work.
1) After award of the contract, but prior to the start of detailed shop drawings, submit four (4) sets of shop drawings for approval of the AISC Type 1 and Type 2 connections that are to be used, with calculations supporting the design. These typical details as accepted shall be used as the basis for developing detailed shop drawings.

SECTION 05-2000 (cont'd)

2) Submit four (4) sets of shop drawings and erection drawings for approval of Engineer prior to commencing work.

J. Field check alignments and levels prior to erection and report discrepancies for correction to the Engineer. Field measure as necessary prior to fabrication.

K. Construct all work plumb and true to line and level and adequately secure all work during erection with required bracing and any temporary seat angles.

L. Materials and fabrication procedures are subject to inspection and tests in mill, shop and field, conducted by a qualified inspection agency. Such inspections and tests will not relieve Subcontractor of responsibility for providing materials and fabrication procedures in compliance with specific requirements.

M. Holes in base plate shall allow tolerance for anchor bolt placement.

5. Provide one year written guarantee warranting against defects in materials and workmanship.

6. The Subcontractor shall keep the premises and surrounding areas free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal of his trade's debris.

7. Refer to structural drawings for additional specifications.

SECTION 06-1000

CARPENTRY WORK

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
Rough Carpentry:
- Install lumber and materials for rough carpentry.
- Install sill sealer, see Section 06010.
- Sheath exterior walls.
- Sheath roof areas at canopy.
- Frame interior partitions.
- Frame all ceiling drops; use metal studs for long runs.
- Install wood grounds, nailers, blocking and backing for equipment.
- Install air infiltration barrier, see Section 06010.

Finish Carpentry:
- Install casings/extensions for doors and borrowed lites.
- Furnish and install mouldings; crown & trim etc.
- Install wood frames for doors and borrowed lites, see Section 08210.
- Install wood doors, see Section 08210.
- Install finish hardware, see Section 08712.
- Install wood trim for doors and borrowed lites.
- Install cabinets and counters furnished by others, see Section 06400.
- Install grommets supplied by others, see Section 06400.
- Install wood trim supplied by others, see Section 06400.

3. Related Work by others specified elsewhere:
- Supply carpentry materials, see Section 06010.
- Insulation; see Section 07213.
- Staining and finishing; see Section 09900.

4. Store all lumber off of the ground to ventilate and cover it to protect it from the elements.

- All lumber used for roof nailers, curbs and cants, grounds or furring or to be used in contact with concrete or masonry shall be preservative treated " wolmanized" or equal.
- All framing shall be plumb and true to line and level.

5. Rough out the building shell as indicated on the plans.
- All framing shall be plumb and true to line and level.
- Frame, sheath and raise exterior walls and place atop sill sealer.
- Frame conventional roof areas and sheath entire roof.
- Install attic and ceiling plywood draftstop curtains.
- Frame interior partitions and ceiling drops.
- Furnish and install blocking, draftstops and firestops as necessary.
- Provide continuous blocking at the countertop areas when the base cabinets are not as deep as the countertop.

8. Install WOOD DOORS AND FRAMES supplied by others, **see Section 08210**.
Cut and Trim to fit as necessary.
Hardware machining shall be done in the field except on fire rated doors which shall be machined in a certified shop.

10. WINDOW STOOLS.
Install all PLASTIC LAMINATE CLAD window stools provided by others. Cut to fit as necessary. (**See Section 06400**). Finish to be determined by Owner.

11. Install all CABINETRY AND CASEWORK supplied by others. Cut and fit as necessary, (**See Section 06400**).

12. Install plastic GROMMETS provided by others in casework. Coordinate with Owner for exact locations. (**See Section 06400**).

13. Broom clean all spaces in preparation for the painter and clean and sand all soiled surfaces as required to receive painter's finish.

14. Install FINISH HARDWARE supplied by others in accordance with manufacturer's standards and tag, index and file all keys. **See Section 08712.**

16. Provide one year written guarantee for all carpentry work warranting all carpentry work against defective material and improper workmanship.

17. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 06-4100

ARCHITECTURAL WOOD CASEWORK

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include the following:
- Supply plastic laminate counters.
- Supply plastic laminate cabinets with proper hardware.
- Supply plastic laminate clad window stools.
- Supply wood casings and trims.
- Delivery and offloading of all millwork items.
- Prepare and provide shop drawings.

3. Related work by others specified elsewhere:
- Cabinetry installation by others, see Section 06010.
- Cabinetry field finishing by others, see Section 09900.
- Wood doors and frames, see Section 08210.

4. Subcontractor shall obtain measurements at the construction site for all items which are to be fabricated elsewhere so that all parts fit perfectly. Subcontractor shall make necessary adjustments should items not fit.

5. Fabricate, load, deliver and off-load at the construction site, all wood cases, counters, cabinetry and miscellaneous millwork as indicated or as herein specified.

Consult with Contractor's Project Superintendent to determine appropriate cabinetry fabrication lengths for ease of delivery and installation.

6. All Millwork shall be mid-range quality conforming to the "CUSTOM-GRADE" standards of the American Woodwork Institute.
(Not high-end "Premium-Grade" and Not low-end "Economy-Grade")

7. CABINETRY materials shall be as follows:

All SOLID WOOD shall be 3/4" thick kiln dried unless otherwise noted.
a. Exposed or semi-concealed Stained - BIRCH
b. Exposed or semi-concealed Painted - POPLAR
c. Concealed - Douglas Fir

All PLYWOOD shall be
a. Exposed or semi-concealed Stained - Premium Red BIRCH
b. Exposed or semi-concealed Painted - Paint Grade Birch Veneer
c. Concealed - Douglas Fir

All PARTICAL BOARD
a. General; Tops, Panels, Shelves etc. - 3/4" thick 45# density
b. Bulkheads with flush overlay doors - 5/8" thick 45# density
c. Use fire-rated materials when specifically required by code.

SECTION 06-4100 (CONT'D)

All MELAMINE TD PANELS (Thermoset Decorative)
a. For Cabinetry interiors PLAM
b. Use fire-rated materials when specifically required by code.

All PLASTIC LAMINATE surfacing shall be "Formica" unless indicated otherwise the Color and Material Schedule.
a. All exposed surfaces of countertops- .050"
b. All exterior surfaces of cabinetry - .035"
c. All interior surfaces of cabinetry - .035" (balanced)
d. Use fire-rated materials when specifically required by code.

8. Plastic Laminate clad CABINETRY components shall be as follows:

b. CABINET FRONTS AND SIDES shall be 5/8" MDF with plastic laminates. Exposed sides shall be constructed same as fronts. Drawer face height shall be 6" except bottom of cabinet shall be 12" unless otherwise indicated on the plans. Scribe as necessary for tight fit at walls.

c. CABINET BACKS shall be 1/2" laminate clad MDF rabbetted into all four sides.

d. DOORS AND DRAWER FRONTS shall be laminate clad 5/8" MDF.

e. INTERIOR SHELVES shall be laminated MDF with matching PVC or plastic laminate edges. Shelves shall be adjustable on 32 mm line bore system with shelf pins. Provide shelves as follows:
- Cabinets under 18" tall: None required.
- Cabinets 18" to 25" tall: 1 shelf
- Cabinets 25" to 35" tall: 2 shelves
- Cabinets 36" to 48" tall: 3 shelves
(No shelves required at sink fronts.)

f. DRAWERS shall be constructed using the Blum Metabox System.
The drawer shall be fabricated with a plastic laminate clad MDF front panel, back panel and bottom. The sides of drawers shall consist of Blum Metabox enameled steel side panels with an integrated slide mechanism. The drawer usable space shall be made as large as possible.

g. GENERAL - Extend cabinet corners and shelves to provide useable space for all of cabinet interior.
Provide 1/8" between adjacent doors and drawers.
Provide 1/4" between top and face of cabinet below.
Provide 1/2" projection of tops beyond face of cabinets.
Unit dimensions show locations of vertical dividers.
No intermediate dividers or stiles are to be provided at units with double doors.
Provide scribes at all edges meeting walls.
Ship loose laminates for some splash and face edges.Consult Contractor.

9. Supply and install cabinetry hardware as follows:
- Finish: Refer to color & material schedule.
US32D satin stainless in toilet rooms.
- Hinges: Blum 100 degree concealed type.
- Drawer Glides: Blum Metabox steel combination sides and glides.
- Pulls: Stanley #4484 for plastic laminate cabinets.
- Drawer bumpers: Rubber; 1/8" thick, 2 per drawer.
- Shelf supports: 32 mm system Line bore and shelf pins.
- Counter splices: K & V Tite Joint Fasteners.
- Grommets: Doug Mockett & Company plastic grommets:
Style XG Series 3" hole (3 1/2" outside diameter).
Provide color samples to Architect for selection.

10. Plastic laminate clad window stools shall be constructed in accordance with the recommended details of the Architectural Woodwork Institute.
The substrate shall consist of an exterior grade plywood core, typically 3/4" thick.
The exposed stool and apron faces of the substrate shall be clad with a high pressure decorative laminate (HPDL) of a color and manufacture as indicated in the color and material schedule.
The concealed sides shall be clad with a plastic laminate backer board.
The bottom edge of any apron that is less than 30" above the floor need not be clad with laminate.
The stools shall be field-scribed and fitted and secured to the subsill with mastic or construction adhesive.
The raw edge of the substrate abutting the sash shall be sealed with paint to prevent moisture absorption and the joint between the sash and laminated stool shall be neatly dressed with sealant.

11. Submit four (4) sets of shop drawings for approval of Architect prior to commencing work.

12. Provide one year written guarantee warranting against defects in materials and workmanship.

13. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 07-6200

SHEET METAL FLASHING AND TRIM

REFER TO DIVISION 1 - GENERAL REQUIREMENTS.
1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this Work.

2. Scope of Work shall include but not be limited to the following:
- Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, sheet metal roofing, and other items indicated in Schedule.

3. Related Work by Others specified elsewhere:
- Division 4 - Masonry: Through-wall flashings in masonry.
- Section 07611 - Custom Sheet Metal Roofing.
- Section 07900 - Joint Sealers.
- Section 09900 - Paints and Coatings: Field painting.

4. REFERENCES
- AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; American Architectural Manufacturers Association; 1998.
- AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels; 2005.
- ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2009a.
- ASTM A 666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2003.
- ASTM B 209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2007.
- ASTM B 209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate [Metric]; 2007.
- ASTM D 4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free; 2007.
- SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

5. SUBMITTALS
- See Section 01300 - Administrative Requirements, for submittal procedures.
- Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- Samples: Submit two samples 3x4 inch in size illustrating metal finish color.

6. QUALITY ASSURANCE
- Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.
- Fabricator and Installer Qualifications: Company specializing in sheet metal work with (3) three years of documented experience.
7. DELIVERY, STORAGE, AND HANDLING
- Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- Prevent contact with materials that could cause discoloration or staining.
8. SHEET MATERIALS
- Clear Anodized Finish: AAMA 611 AA-M12C22A41 Class I clear anodic coating not less than 0.7 mils thick.
- Color Anodized Finish: AAMA 611 AA-M12C22A42/44 Class I integrally or electrolytically colored anodic coating not less than 0.7 mils thick.
9. ACCESSORIES
- Fasteners: Same material and finish as flashing metal, with soft neoprene washers.
- Primer: Zinc chromate type.
- Protective Backing Paint: Zinc molybdate alkyd.
- Sealant: Type as specified in Section 07900.
- Plastic Cement: ASTM D 4586, Type I.
10. FABRICATION
- Form sections true to shape, accurate in size, square, and free from distortion or defects.
- Form pieces in longest possible lengths.
- Hem exposed edges on underside 1/2 inch; miter and seam corners.
- Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- Fabricate corners from one piece with minimum 24 inch long legs; seam for rigidity, seal with sealant.
- Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.
- Fabricate flashings to allow toe to extend 2 inches over roofing gravel. Return and brake edges.
14. INSTALLATION
- Conform to drawing details.
- Secure flashings in place using concealed fasteners. Use exposed fasteners only where permitted.
- Apply plastic cement compound between metal flashings and felt flashings.
- Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- Seal metal joints watertight.

SECTION 08-1113

HOLLOW METAL DOORS AND FRAMES

1. Refer to Division 1 - General Requirements

2. Work shall include but not be limited to the following:
- Furnish and install non-rated and fire rated rolled steel doors and frames.
- Coordinate installation of hardware.

3. Related Work by Others specified elsewhere:
- Section 04100 - Mortar: Masonry mortar fill of metal frames.
- Section 08210 - Wood Doors.
- Section 08712 - Hardware.
- Section 09900 - Painting: Field painting of doors and frames.

4. REFERENCES
- DHI - Door Hardware Institute: The Installation of Commercial Steel Doors and Steel Frames, Insulated Steel Doors in Wood Frames and Builder's Hardware.
- NFPA 80 - Standard for Fire Doors and Other Opening Protectives.
- NFPA 252 - Fire Tests for Door Assemblies.
- SDI-100 - Standard Steel Doors and Frames.
- SDI-105 - Recommended Erection Instructions for Steel Frames.

5. QUALITY ASSURANCE
- All work shall be executed in strict accordance with referenced standards and these Specification.
- Conform to requirements of SDI-100.
- Fire rated door and frame construction to conform to NFPA 252.
- Installed frame and door assembly to conform to NFPA 80 for fire rated class indicated on Drawings.
- Wherever provisions of pertinent codes, referenced standards, and/or these Specifications conflict, the more stringent shall govern.

6. REGULATORY REQUIREMENTS
- Conform to applicable code for fire rated / accessible frames and doors.

7. SUBMITTALS
- Submit shop drawings and product data under provisions of Section 01300.
- Indicate frame configuration, anchor types and spacings, location of cutouts for hardware, reinforcement, and finish.
- Indicate door elevations, internal reinforcement, closure method, and cut outs for glazing and/or louvers.

8. DELIVERY, STORAGE AND PROTECTION
- Deliver products to the site, store, handle, and protect under provisions of Section 01600.
- Protect doors and frames with resilient packaging sealed with heat shrunk plastic.
- Break seal on-site to permit ventilation.

9. ACCEPTABLE MANUFACTURERS
- Assa Abloy Ceco or Curries
- Steelcraft
- Windsor Republic Doors
- Substitutions: Under provisions of Section 01600.

10. DOORS AND FRAMES
- Accessibility: Comply with ANSI/ICC A117.1.
- Exterior Doors: SDI-100 Grade III Model 3.
- Interior Doors: SDI-100 Grade II Model 3.
- Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with all the specified requirements for each type. Where two requirements conflict, comply with the most stringent.
- Exterior Frames: 16 gage thick material, core thickness.
- Interior Frames: 16 gage Thick material, core thickness.
- Top Closures for Outswinging Doors: Flush with top of faces and edges.

11. DOOR CORE
TYPICAL FOR EXT DRS Polystyrene Foam Core; Polystyrene insulation with steel channel grid. Space vertical reinforcing 6 inches oc and extend full door height. Spot weld reinforcing to both face sheets at 5 inches oc maximum.

13. FABRICATION
- Fabricate frames as welded unit.
- Fabricate frames and doors with hardware reinforcement plates welded in place. Provide mortar guard boxes.
- Reinforce frames wider than 48 inches with roll formed steel channels fitted tightly into frame head, flush with top.
- Terminate door stops 6 inches above finished floor. Cut stop at 90 degree angle and close.
- Prepare frame for silencers. Provide three single rubber silencers for single doors and mullions of double doors on strike side, and two single silencers on frame head at double doors without mullions.
- Attach fire rated label to each frame and door unit. LABEL SHALL NOT BE COVERED OR PAINTED, ETC.
- Close top edge of exterior door flush with inverted steel channel closure. Seal joints watertight.
- Configure exterior frames with special profile to receive snap-in weatherstripping.
- Fabricate frames for masonry wall coursing with 4 inch head member.

14. FINISH
- Factory Finish: Complying with ANSI A 250.3
- Manufacturer's standard coating.
- Interior Units: 0.60 oz/sq ft galvanized.- Exterior Units: 2.0 oz/ sq ft galvanized.
- Primer: Baked on.
- Coat inside of frame profile with bituminous coating to a thickness of 1/16 inch . Coating may be shop or field applied.
- Coatings shall be continuous at top and bottom of doors, typical.

15. INSTALLATION
- Install frames in accordance with SDI-105.
- Install doors in accordance with DHI.
- Coordinate with masonry and wallboard wall construction for anchor placement.
- Coordinate with electrical and/or security items and trades.
- Install roll formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.

16. TOLERANCES
- Clearances Between Door and Frame: As specified in ANSI A250.8.
- Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

17. ADJUSTING AND CLEANING
- Adjust hardware for smooth and balanced door movement.

18. SCHEDULE
- See drawings for door and frame schedule.

SECTION 08-1116

ALUMINUM DOORS, WINDOWS AND FRAMES

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Prepare and submit shop drawings.
- Supply and install aluminum doors and frames.
- Supply and install aluminum entrance hardware.

3. Related work by others specified elsewhere:
- Glass and glazing, see Section 08800.

4. Supply and install storefront entrance doors, sidelights, arched top transom and aluminum framing system. Extruded aluminum framing shall be equal to Kawneer TRIFAB 451 (2" x 4-1/2") Flush Glaze Framing System.

The doors shall be medium stile equal to series 350 as manufactured by the Kawneer Company. All glazing shall be 1/4".

Size shall be 3' x 7' x 1 3/4" typical. Color shall be standard Clear Anodized.

The hardware shall be as specified on door schedule

6. Rope and sealant to match frame color shall be installed around all aluminum by this subcontractor. Be sure not to seal required weeps at sill.

7. Subcontractor shall make field measurements and present four sets of shop drawings for the Architect's approval prior to fabrication.

8. Subcontractor shall precisely follow the manufacturers fabrication and installation instructions.

9. Provide one year written guarantee warranting against defects in materials and workmanship.

10. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

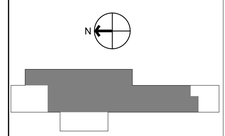
Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for
CONSTRUCTION 03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
PROJECT SPECIFICATION

Project No. :
2023.175

Sheet No. :
PS102

SECTION 08-1416

FLUSH WOOD DOORS

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all materials and incidentals as required for the proper completion of this work.

2. Scope of work shall include the following:
- Prepare and provide shop drawings.
- Supply flush wood doors.

3. Related work by others specified elsewhere:
- Installation shall be by Carpentry Trades, see Section 06100.
- Wood frames, trim and casings by others, see Section 06010

4. Refer to Plans for location, size and swing of each door.

5. Submit four (4) sets of shop drawings for approval of Architect prior to commencing work.

6. Supply FLUSH WOOD DOORS.
Interior flush wood doors shall be solid core construction with wood veneer face panels for transparent finish.
WOOD VENEER FACE PANELS shall be selected. To be approved by Owner.

GRADE may be AWI PREMIUM where solid wood rails and stiles match the face veneer.
GRADE may be AWI CUSTOM only if solid wood rails and stiles match the face veneer.

DOOR CONSTRUCTION shall be SOLID CORE.
9 ply construction.

7. All doors shall have a two year full warranty against defects.
Provide two-year written guarantee warranting against defects in materials and workmanship.

8. Deliver and offload at site.
Installation shall be performed by Carpentry Trades, see Division 6.

SECTION 08-8000

GLASS AND GLAZING

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include:
- Submit shop drawings for approval.
- Supply and install all glass for Aluminum doors/windows and storefront.
- Supply and install vision glass for doors and borrowed lites.
- Supply and install mirrors in toilet rooms.

3. Related work by others specified elsewhere:
- Aluminum doors and frames, see Section 08400.
- Wood doors and frames, see Section 08210.

4. All glass shall conform with Federal Specifications DD-G-451. All tempered glass shall conform with Federal Specifications DD-G-1403.

5. Glass for exterior Aluminum entry DOORS shall be 1/4" clear tempered plate glass.

Glass for interior Aluminum entry DOORS shall be 1/4" clear tempered plate glass.

Glass for Exterior Aluminum vestibule ENCLOSURE AND SIDELITES shall be 1" insulated units composed of 1/4" clear tempered plate glass outboard lite, 1/2" sealed air space, and 1/4" clear tempered plate glass inboard lite.

Glass for INTERIOR DOORS and interior wood-framed BORROWED LITES shall be 1/4" clear tempered plate glass.

6. Provide mirrors of 1/4" polished plate glass with copper back and clear anodized aluminum frame with rubber wall cushions and theft proof concealed mounting for toilet rooms as indicated.

7. Glazing Subcontractor shall remove stops and replace when glazing is complete.

8. Replace all broken glass or cracked glass due to improper setting.

9. Final cleaning of the glass shall be performed by the Contractor.

10. Subcontractor shall make field measurements and present four sets of shop drawings for the Architect's approval prior to fabrication.

11. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

12. Provide one year warranty against defects in materials and workmanship.

SECTION 09-2300

GYPSUM BOARD,SOUND INSULATION AND METAL STUDS

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Boarding and finishing interior face of exterior walls.
- Boarding and finishing of interior partitions.
- Boarding and finishing of interior ceilings as indicated.
- Boarding and finishing ceiling drops.
- Supply and install sound blanket insulation.
- Supply and install metal studs for interior wall framing.

3. Related work by others specified elsewhere:
- Rough wood stud framing, see Section 09250
- Ceiling blanket insulation and wire strapping, see Section 07213.
- Exterior wall blanket insulation, see Section 07213.

4. Gypsum Board work:
A. Provide and install gypsum wall panels such as USG Sheetrock brand SW or equal with tapered edges.
Include the following types as required:
- In general, board shall be 5/8" thick.
- Board for walls shall be 5/8" thick unless indicated otherwise.
- Board for ceilings shall be 5/8" thick unless indicated otherwise.
- Use Type "X" fire retardant gypsum board on all fire rated assemblies. Board thickness shall depend on the design requirements.
- Water resistant board shall be used in all toilet rooms, janitor closets and mechanical rooms. Coordinate with finishes to determine if water resistant gypsum board is to be used.
- Fire resistant sheathing, such as USG Gypsum Sheathing.
- Exterior Dens glass gypsum sheathing. (If required).

All gypsum board shall be installed horizontally across the partition and wall framing except as otherwise approved.
When resilient channels or furring must be installed horizontally, the board may be run vertically. Be extremely careful to prevent waves in appearance.

All gypsum board shall be glued and screwed to metal studs. Screws shall be of the self tapping variety and shall be spaced at 12" o.c.

B. Provide and install corner beads, casing beads, expansion joints and trims as necessary, (wherever gypsum board abuts another material).
All trim beads and accessories shall be metal unless otherwise indicated.
Plastic trims shall be used only where the gypsum board terminates against a dissimilar metal or incompatible material.

All outside corner beads must be glued in addition to screwing or stapling to assure continuous securement.

C. All joints and interior corners shall be reinforced with USG Perf a Tape reinforcing tape prior to finishing with jointing compound.

D. All concealed portions of gypsum board shall be fire taped but need not be finished. All exposed portions of walls and drops located below the ceiling line shall be finished accordingly to receive paint or wall coverings as indicated.

5. Sound insulation shall consist of 3 1/2" minimum thickness unfaced fiberglass sound attenuating blanket insulation x appropriate widths for wall stud spacing.
Sound insulation in partition walls shall extend to just above the ceiling line in all locations.

6. Metal Stud Work: Refer to Structural Drawings for additional stud framing specifications.

A. Metal studs for interior partitions shall be 3-5/8" or 6" Series ST standard 25 gauge galvanized steel as manufacturer by United States Gypsum and shall be installed in accordance with manufacturer's instructions. All studs shall be installed in full lengths without splices. All studs shall be spaced at a minimum 16" o.c.

Metal studs that extend beyond the ceiling by more than 4" shall have metal blocking at the ceiling line to prevent waves in the gypsum board and provide anchorage for the wall angles of the suspended ceiling system.

SECTION 09-2300 (cont'd).

B. All runner tracks and shoes for interior partitions shall be not less than 22 gauge galvanized cold rolled steel.

C. Install Donn Fire Front 650 Suspended Ceiling Furring System, or equal, from structural framing in areas shown on the plans to have gypsum board ceilings.

D. Provide all rough hardware and fasteners as necessary for the proper completion of this work.

E. Supply and install acoustical sealant for all partition walls. Sealant shall be USG Acoustical Sealant or equal and shall be used at all partition perimeters. Apply two beads of acoustical sealant to all metal runners at floor and roof and any perimeter studs. The sealant shall be held back from the face of board.

7. Do all work in strict accordance with the manufacturer's printed instructions.

8. Provide one year written guarantee warranting against defects in material and workmanship.

9. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 09-5100

ACOUSTICAL CEILINGS

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Suspended metal grid for acoustical tile ceiling system.
- Acoustical ceiling tile units.

3. Related work by others specified elsewhere:
- Metal suspension system for drywall ceilings, see Section 09250.

4. Supply and install suspended metal ceiling grids compatible with the selected ceiling tiles.
Furnish and install Chicago Metallic Intermediate Duty "200" or equal metal grid suspension system with 10 gauge galvanized soft steel wires and accompanying wall angles and cross tees to match indicated tile sizes. Space support wires in accordance with manufacturers recommendations and secure to STRUCTURE above. Provide 8 gauge hanger clips for steel beam flanges as needed.

Provide sufficient additional hangers at corners of light fixtures and at splices in the suspension members and at any other locations recommended by the manufacturer.

See Color and Material Schedule for GRID COLOR.

5. Acoustical Tile Units shall be as indicated:
(See Color and Material Schedule on the plans)

6. Subcontractor shall SUBMIT LETTER OF INTENT stating that each item to be used shall be exactly as specified in the Color and Material Schedule.

7. Provide one year written warranty against defects in materials and workmanship.

8. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 09-6000

CONTRACT FLOORCOVERINGS

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Submit samples and manufacturer's installation and maintenance manuals.
- Supply and install resilient flooring.
- Supply and install reducers and transition strips.
- Supply and install wall base.
- Supply and install Broadloom Carpet.
- Supply and install vinyl base in rooms to be carpeted.

3. Related work by others specified elsewhere:
- Flat steel troweled and fine broomed slabs, see Section 03010.

4. Subcontractor shall submit samples of each item specified in this division for approval prior to ordering. Submit four copies of the manufacturer's printed installation and maintenance manuals.

5. Subcontractor shall examine the substrate conditions and work of other trades which affects the work under this section. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.

6. Commencement of work under this section shall be considered as an acceptance of such work of other trades.

7. Subcontractor shall prepare all surfaces to receive resilient flooring, to assure proper conditions for its installation. New concrete shall be thoroughly cured and sufficiently dry to achieve a bond with adhesive in accordance with the flooring manufacturer's installation instructions. The existing concrete shall be thoroughly cleaned and prepared. Patch, seal, prime and level all floors as necessary. All materials shall be supplied from a single source and be compatible with the resilient floorings. Patching and leveling compounds shall be latex based. Concrete and other floor primers shall be a non-staining type. Adhesives shall be waterproof, stabilized type to suit material and substrate conditions.

8. Supply and install wall base as indicated.
Wall base shall be: (Refer to Color and Materials Schedule for manufacturer, size, and color.)

9. Supply and install reducers and transition strips as indicated.
Reducers and Transition strips shall be:
(Refer to Color and Materials Schedule for manufacturer, style and color).

10. Resilient Flooring:
A. Refer to Color and Material Schedule for manufacturer, size and color.

B. Assure proper temperatures and broom clean, vacuum, and brush clean all foreign materials from the subfloor prior to commencing installation.

C. Install resilient tile and base in accordance with the standards of the Resilient Floor Covering Institute (RFCI) and the manufacturer's printed installation instructions. Center floor covering transitions where indicated on Drawings or centered under doors.

D. Follow the manufacturer's printed instructions and perform the initial maintenance after installation and preparation for Commercial use.

11. Broadloom Carpeting:
A. See Color and Material Schedule for manufacturer, size and color.

B. All bidding shall be based upon seam layout as determined by the Architect. (See Room Finishes Floor Plan.)

C. Subcontractor shall state in his proposal the carpet yardage included. Adequate yardage shall be included to provide a complete installation with a minimum number of end seams.

D. Carpet without cushion pad over concrete floors shall be as installed as a direct-glue application.
Sections of carpet shall be fit into each space prior to application of adhesive. Trim edges and butt cuts with seaming cement.
Apply adhesive uniformly to the substrate in accordance with the manufacturer's instructions. Butt carpet edges tightly together to form seams without gaps. Roll entire carpet lightly to eliminate air pockets and ensure uniform bond. Remove any adhesive promptly from face of carpet by method which will not damage carpet face.

12. Comply with manufacturer's recommendations for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile. Follow seaming diagrams as indicated. At doors, center seams under doors; do not place seams in traffic direction at doorway.

13. If the carpet nap is laying in the wrong direction at any carpet seams and it is determined to be in the factory roll and not because the carpet was laid in an improper direction, the carpet subcontractor shall be responsible for steam cleaning the carpet to release the nap so it lays in the proper direction.

14. Provide one year written guarantee warranting against defects in material and workmanship.

15. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SECTION 09-9000

PAINTING AND COATINGS

Refer to Division 1 - General Requirements.

1. Subcontractor shall provide all labor, materials, equipment and incidentals necessary and required for the completion of this work.

2. Scope of work shall include but not be limited to the following:
- Submit Letter of Intent or drawdown samples.
- Provide specified finish on exposed surfaces including, but not limited to the following;
  - Prime coated mechanical units, piping, pipe covering, sprinkler piping, interior duct surfaces visible behind grilles, radiation covers, cabinet unit heaters, exposed ductwork, louvers and grilles.
  - Electrical panel box covers and surface raceways (over factory finish), conduits and boxes.
  - Hollow metal doors and frames, steel stairs, ladders and railings, catwalks, and safety mesh grilles, prime painted fire extinguisher cabinets, access panels, prime painted hardware, coiling grilles and doors (unless factory finished), metal supports for counters and exposed miscellaneous metals, exposed structural steel, exposed underside of roof / floor deck.
- Spot-spackling, caulking and sealing required for finishing.
- Do all caulking, sealing and spot spackling as required for finishing.
- Finish wood doors and frames and casings.
- Finish wood borrow lite frames and casings.
- Finish crown mouldings and trims.
- Paint gypsum walls and ceilings where indicated.
- Seal gypsum wall board to receive wall covering.
- Paint electrical panels.
- Paint guard posts.
- Paint all plumbing and HVAC roof vents and roof stacks.
- Paint all exterior meters and cabinets.
- Paint all exterior wood trims and siding.
- Paint all exterior wood soffits.
- Coordinate any wall covering work with WSU

3. Related work by others specified elsewhere:
- Priming structural steel, see Section 05100.
- Prefinished metal flashings, see Section 07300.

4. All surfaces scheduled to receive paint or wallcoverings shall be cleaned and properly prepared in accordance with manufacturer's instructions.
Fill nail holes with non-shrink putty colored to match stain.
Caulk excessive open joints between trims and wall surfaces.

5. Subcontractor shall examine the substrate conditions and work of other trades which affects the work under this section. Subcontractor shall report to the Contractor and Architect in writing all defects found therein. Contractor shall see that appropriate subcontractors make corrections.

6. Commencement of work under this section shall be considered as an acceptance of such work of other trades.

7. Painting shall be of the very best workmanship as follows:
- Exterior ferrous metals- 1 ct primer and 2 cts enamel.
- Exterior galvanized metals- 1 ct primer and 2 cts enamel.
- Interior ferrous metals- 1 ct primer, 1 ct enamel undercoat and 1 ct enamel Eggshell.(Luster-Low eggshell semi-gloss)
- Stain millwork-: 1 ct stain, 1 ct sealer, 1 ct spirit reduced gloss varnish, 1 ct satin varnish, (sand between sealer and varnish coats).
- Stained wood cabinetry- (two-tone stain where indicated) 1 ct stain, 1 ct sealer, 1 ct spirit reduced gloss varnish, 2 cts satin varnish, (sand between sealer and varnish coats).
- Paint millwork- 1 ct enamel undercoat, 2 cts interior alkyd eggshell enamel. (Luster-Low eggshell semi-gloss)
- Paint gyp board- 1 ct latex primer, 2 cts alkyd eggshell enamel. (Luster-Low eggshell semi-gloss)
- Paint gyp board ceilings- 1 ct latex primer, 2 cts alkyd eggshell enamel. (FLAT)
- Vinyl covered gyp board- 1 ct oil base primer - sealer.
- Int. painted masonry - 1 ct block filler, 1 ct flat wall finish, 1 ct satin enamel.
- Ext. painted masonry- 1 ct block filler, 2 cts masonry paint.
- Ext. wood siding/trims- 2 cts stain. (1 on ground, 1 in place) Backprime all items with 1 ct stain.
- Ext wood soffits/trims- 2 cts stain. (1 on ground, 1 in place) Backprime all items with 1 ct stain.

The number of coats indicated above shall be considered as minimum. Apply additional coats where required for adequate coverage or to correct defects.

8. For the purpose describing "Finish appearance" the following general values shall be used:

Description Light Reflectance Value Remarks

Flat 0-5 No sheen. Hides flaws but lacks washability and durability because pigment is at the surface.

Eggshell 6-15 No sheen. Cannot tell difference from Flat but product has improved washability and durability.

Satin 20-35 Sheen can only be detected with a light held at an angle. Has improved scrubability.

Semi-gloss 35-60 Noticeable sheen.

Gloss over 60 High sheen.

9. All paint coats shall be tinted to approximate shade of the final coat.
Each successive coat shall be slightly darker than the preceding coat.
All coats shall be thoroughly dry before applying succeeding coat.

10. Colors shall be as selected by Architect and paint manufacturers may be Sherwin-Williams, Pratt & Lambert, Benjamin Moore or Olympic or as approved by Owner.

11. Subcontractor shall submit Letter of Intent stating that of each item to be used shall be exactly as specified in the Color and Material Schedule. If a manufacturer other than the one specified in the Color and Material Schedule is intended to be used, the Subcontractor shall submit paint drawdown samples for each color selection for Architects approval.

12. Protect work of other trades from damage of painting and staining and correct any damage by cleaning, repairing, or replacing as acceptable to the Architect.
Before painting, remove hardware, accessories and light fixtures, etc., and replace upon completion.

Finish top, bottom and edges of doors same as balance of door after fitting.
Remove doors, if necessary, to finish bottom edge.

13. Store all materials in a single location and keep neat and clean. Remove oily rags every night to avoid fire.

14. All exterior wood shall be stained as indicated. All wood trims, siding, and wood soffits shall be back primed and one coat applied while material is on the ground and the final coat applied after the material is installed. Provide additional coats as necessary to obtain acceptable uniform color and coverage.

15. All wall fabric shall be installed in strict accordance with manufacturer's instructions. Proper adhesive must be used and all excess adhesive must be immediately removed. Due care must be exercised in making joints to get proper match and adhesion without bubbles or wrinkles. Vertical joints at outside corners will not be acceptable. Inside corners shall be wrapped around corners when possible and where corner joints are necessary, the corner shall be prime painted with a color to match the fabric to avoid show through when the paper shrinks.

16. All vinyl wallcovering shall be a minimum Type 1 Light Duty material and shall meet the standards of ASTM E 84-87 with a flame spread rating of 25 or less. Refer to Color and Material Schedule for manufacturers, pattern and color.

17. Subcontractor shall submit samples of each item specified for Architect's approval prior to ordering.

18. Provide one year written guarantee warranting against defects in materials and workmanship.

19. The Subcontractor shall keep the premises and surrounding area free from the accumulation of waste materials or rubbish caused by operations under contract. The Subcontractor shall be responsible for the complete removal and disposal of his trade's debris.

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

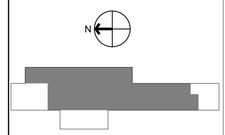
Seal:

STATE OF MICHIGAN
JOHN A. VITALE
ARCHITECT
No. 1301029086
LICENSED ARCHITECT

Project :
WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for
CONSTRUCTION 03.04.25

Drawn by :
JML

Checked by :
ARR

Sheet Title :
PROJECT SPECIFICATION

Project No. :
2023.175

Sheet No. :
PS103

ABBREVIATIONS

ACCU	AIR CONDITIONING CONDENSING UNIT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
ASR	AUTOMATIC SPRINKLER RISER
BTU	BRITISH THERMAL UNIT
CC	COOLING COIL
CF	CENTRIFUGAL FAN
CFM	CUBIC FEET PER MINUTE
CI	CAST IRON
CO	CLEAN OUT
COND	CONDENSATE
CONT	CONTINUATION
CUH	CABINET UNIT HEATER
CW	COLD WATER
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
Db	DRY BULB TEMPERATURE, °F
dB	DECIBELS
DDC	DIRECT DIGITAL CONTROL
DET	DETAIL
DIA	DIAMETER
DN.	DOWN
DS	DOWNSPOUT
DWG.	DRAWING
EA	EXHAUST AIR
ECUH	ELECTRIC CABINET UNIT HEATER
EF	EXHAUST FAN
ELEV.	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EUH	ELECTRIC UNIT HEATER
EX.	EXISTING
EXH	EXHAUST
EXIST	EXISTING

F	FAHRENHEIT
FD	FLOOR DRAIN
FLR	FLOOR
FPM	FEET PER MINUTE
FSW	FLOW SWITCH
FS	FLOOR SINK
FT.	FEET
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HO	HUB OUTLET
HP	HORSEPOWER
HW	HOT WATER (POTABLE)
HWR	HOT WATER RETURN (POTABLE)
IN	INCHES
INL	INLET
INV	INVERT
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LBS/HR	POUNDS PER HOUR
LWT	LEAVING WATER TEMPERATURE
MAX.	MAXIMUM
MBH	1000 BTU/HR
MECH	MECHANICAL
MIN.	MINIMUM
MISC	MISCELLANEOUS
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM.	NOMINAL
NFWH	NON FREEZE WALL HYDRANT
OA	OUTSIDE AIR
OF	OVERFLOW
OFD	OVERFLOW DRAIN

P	PUMP
PD	PRESSURE DROP (FEET OF WATER)
PSI	POUNDS PER SQUARE INCH
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
RD/SP	ROOF DRAIN/STAND PIPE
BAL.	BALANCE
RET	RETURN
RF	RETURN FAN
RH	REHEAT COIL
Rh	RELATIVE HUMIDITY
RPM	REVOLUTIONS PER MINUTE
RS	ROOF SUMP
RC	RAIN CONDUCTOR
REL	RELOCATED
REB	REBALANCE
SA	SUPPLY AIR
SAN	SANITARY WASTE
SD	SMOKE DETECTOR
SF	SUPPLY FAN
SG	SPECIFIC GRAVITY
SP	STATIC PRESSURE (INCHES OF WATER)
SP	STAND PIPE
SPR	SPRINKLER
SPR/STP	SPRINKLER STANDPIPE
SPS	STATIC PRESSURE SENSOR
STK	STACK
TP	TOTAL PRESSURE
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
V	VALVE
VTR	VENT THRU ROOF
W	WASTE
WG	WATER GAUGE
WH	WALL HYDRANT

PLUMBING, PIPING & FIRE PROTECTION

- ITEM TO BE REMOVED
- EXISTING WORK
- NEW WORK
- ISOLATION VALVE
- CHECK VALVE
- WATER FLOW SWITCH
- VALVE IN RISER
- STRAINER
- PIPE ANCHOR
- EXPANSION JOINT – SLIDING
- ALIGNMENT GUIDE
- UNION
- SPRINKLER HEAD (PENDANT)
- SPRINKLER HEAD (UPRIGHT)
- CO — CLEANOUT
- FCO — CLEANOUT FLOOR
- WCO — CLEANOUT WALL
- GCO — CLEANOUT GRADE
- FLOOR DRAIN (FD)
- REDUCER – CONCENTRIC
- PRESSURE GAUGE WITH COCK
- THERMOMETER
- CAP OR PLUG
- ELBOW – TURNED DOWN
- ELBOW – TURNED UP
- TEE OUTLET – DOWN
- TEE OUTLET – UP
- DIRECTION OF FLOW
- BALANCING VALVE
- TWO-WAY MODULATING CONTROL VALVE
- THREE-WAY MODULATING CONTROL VALVE
- MANUAL AIR VENT
- TEST PLUG (PRESSURE/TEMPERATURE)
- NEW CONNECTION
- COLD WATER PIPING
- HOT WATER PIPING
- HOT WATER RETURN PIPING
- VENT PIPING
- SAN — SANITARY LINE (UNDERGROUND)
- SAN — SANITARY LINE (ABOVE GROUND)
- ST — STORM LINE
- STM — STEAM
- CR — CONDESATE RETURN
- OXY — OXYGEN
- VAC — VACUUM
- MA — MEDICAL AIR
- N2 — NITROGEN
- N2O — NITROUS OXIDE
- G — NATURAL GAS
- F — FIRE SPRINKLER PIPE (FS)
- HHWS — HEATING HOT WATER SUPPLY
- HHWR — HEATING HOT WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED HOT WATER RETURN

MECHANICAL SHEET INDEX

GENERAL HVAC NOTES:

THE FOLLOWING NOTES APPLY TO ALL HVAC DRAWINGS, EXCEPT WHERE OTHERWISE INDICATED.

1. WHEREVER VOLUME DAMPERS OCCUR ABOVE CEILINGS WITHOUT REMOVABLE TILE AND AN ACCESS PANEL IS NOT FURNISHED, PROVIDE AN EXPOSED DAMPER REGULATOR TO ALLOW DAMPER ADJUSTMENT FROM BELOW CEILING. UNIT TO BE EQUAL TO VENTLOCK No. 666 IN 1/2"x3/8" SIZE.
2. ALL DIMMENSION SHOWN FOR DUCTWORK ARE NET INSIDE DIMENSIONS.
3. DIFFUSER AND REGISTER LOCATIONS SHALL BE COORDINATED WITH ARCHITECTURAL REFLECTED CEILING PLAN.
4. THOUGH SOME OFFSETS & TRANSITIONS ARE SHOWN IN PIPING AND SHEET METAL TO HELP INDICATE THE PHYSICAL RELATIONSHIP BETWEEN THEM. IT IS NOT THE INTENT OF THE DRAWINGS TO SHOW ALL PIPING AND SHEET METAL OFFSET & TRANSITIONS REQUIRED. THE CONTRACTOR SHALL FULLY COORDINATE THE MECHANICAL WORK WITHIN ITSELF AND WITH THE WORK OF ALL TRADES TO PROVIDE COMPLETE AND OPERABLE SYSTEMS WITHOUT INTERFERENCES.
5. DUCT PRESSURE CONSTRUCTION CLASSIFICATION SHALL BE AS SPECIFIED.
6. ALL ROUND RUNOUTS AND DROPS TO DIFFUSERS SHALL BE SAME NOMINAL SIZE AS INDICATED ON THE DRAWINGS.
7. ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASE OR SUSPENDED CEILING.
8. ACCESS PANELS AND DOORS ARE REQUIRED THROUGH BUILDING CONSTRUCTION ASSEMBLIES SUCH AS WALLS, CEILING, PARTITONS AND FLOORS TO SERVICE AND MAINTAIN DAMPERS, CONTROL MOTORS, REGULATORS, VALVES, FLEXIBLE DUCT CONNECTIONS AND OTHER ITEMS OR DEVICES INCORPORATED IN MECHANICAL WORK. SUCH PANELS AND DOORS SHALL BE PROVIDED AND INSTALLED UNDER THE ARCHITECTURAL SPECIFICATIONS. MECHANICAL CONTRACTOR SHALL COORDINATE LOCATION OF ACESS DOORS AND PANELS AND VERIFY THE EXACT QUANTITY, SIZE, FIRE-RATING AND LOCATION AFTER THE SYSTEMS AND EQUIPMENT REQUIRING ACCESS HAVE BEEN INSTALLED AND PRIOR TO THE CLOSURE OF THE AFFECTED CEILING AND BUILDING ASSEMBLIES. MINIMUM ACCESS PANEL AND DOOR SIZE SHALL BE 24 INCHES BY 18 INCHES UNLESS OTHERWISE NOTED.
9. ALL DUCTWORK PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE PROVIDED WITH FIRE DAMPERS AND ACCESS DOOR.

PLUMBING GENERAL NOTES:

1. FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES AND VARIOUS PIECES OF EQUIPMENT REFER TO SPECIFICATIONS.
2. IN ALL WASTE DRAINAGE PIPING THE CONTRACTOR SHALL FURNISH AND INSTALL CLEANOUTS (IN ADDITION TO THE CLEANOUTS INDICATED ON DRAWINGS AS REQUIRED BY THE GOVERNING PLUMBING CODE).
3. REFER TO HVAC GENERAL NOTE-4
4. FOR ADDITION NOTES COMMON TO PLUMBING REFER TO HVAC NOTES.

HVAC LEGEND & SYMBOLS

- 18x6 — INDICATES RECTANGULAR DUCT WITH DUCT SIZE 18 INCHES WIDE (IN PLANE OF DRAWING) AND 6 INCHES DEEP. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT UNLESS OTHERWISE NOTED.
- 22x14ø — INDICATES FLAT OVAL DUCT WITH DUCT SIZE 22 INCHES WIDE (IN PLANE OF DRAWING) AND 14 INCHES DEEP. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT UNLESS OTHERWISE NOTED.
- 6"ø — INDICATES ROUND DUCT WITH DUCT SIZE OF 6 INCHES IN DIAMETER. SIZE PERTAINS TO THE ENTIRE RUN OF DUCT (FROM DUCT ORIGIN AT TAP TO END OF DUCT) UNLESS OTHERWISE NOTED.
- VANE TURN ELBOW & AIR SPLIT TYPE DUCT TAKE-OFF
- RISE — INCLINED RISE IN RESPECT TO AIR FLOW
- DN. — INCLINED DROP IN RESPECT TO AIR FLOW
- VANED ELBOW (PROVIDE ALL SQUARE OR RECTANGULAR ELBOWS WITH VANES)
- VANED ELBOW (SHORT RADIUS)
- INDICATES FLEXIBLE DUCT (RUNOUT) OF SIZE AS SCHEDULED OR SHOWN. LENGTH SHALL NOT EXCEED 5 FT.
- DUCT TURNING UP
- DUCT TURNING DOWN
- VERTICAL FIRE DAMPER
- HORIZONTAL FIRE DAMPER
- POINT OF NEW CONNECTION
- SD — DUCT SMOKE DETECTOR
- ITEM TO BE REMOVED
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILLE
- LINEAR SUPPLY AIR DIFFUSER
- SUPPLY AIR GRILLE
- MD — VOLUME CONTROL DAMPER (MANUAL)
- FLEXIBLE CONNECTION OR FLEXIBLE DUCT CONNECTOR
- M — MOTORIZED DAMPER
- C — COMBINATION FIRE AND SMOKE DAMPER
- RF — RF SHEILDING DAMPER
- T — THERMOSTAT
- S — TEMPERATURE SENSOR

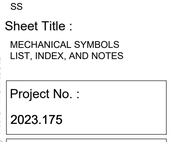
SVA

STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

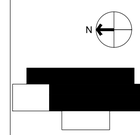


Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
MECHANICAL SYMBOLS
LIST, INDEX, AND NOTES

Project No. :
2023.175

Sheet No. :
M000

MECHANICAL SPECIFICATION

MECHANICAL MATERIALS, METHODS AND EXECUTION WORK INCLUDED:

WORK INCLUDED:

A. FURNISH ALL LABOR AND MATERIAL, APPLIANCES, EQUIPMENT AND SUPERVISION TO PUT IN PLACE A COMPLETE AND FUNCTIONING MECHANICAL INSTALLATION READY FOR OPERATION, AS SPECIFIED HEREIN AND AS INDICATED ON THE DRAWINGS. SYSTEMS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO THE FOLLOWING MAJOR EQUIPMENT OR OPERATIONS:
1. PLUMBING.
2. HEATING, VENTILATING AND AIR CONDITIONING.
3. INSULATION.
4. FIRE PROTECTION.
5. TEMPERATURE CONTROLS.

DEFINITIONS:
A. "PROVIDE": TO FURNISH AND COMPLETELY INSTALL SPECIFIED PRODUCTS AND INCIDENTALS, WHETHER SPECIFICALLY INDICATED OR NOT, NECESSARY FOR A COMPLETE, FUNCTIONAL INSTALLATION. INCLUDES ALL GENERAL AND SPECIALIZED LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THE INSTALLATION.
B. "PIPING": A COMPLETE SYSTEM, INCLUDING PIPE, TUBING, FITTINGS, HANGERS, SUPPORTS, VALVES, AND ALL SPECIALTIES THAT COMPRISE A FULLY FUNCTIONAL PIPING SYSTEM, WHETHER SPECIFICALLY INDICATED OR NOT.

CODES, ORDINANCES, AND STANDARDS:
A. ALL WORK SHALL CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE LATEST ADOPTED FEDERAL, STATE AND LOCAL CODES, ORDINANCES, AND STANDARDS HAVING JURISDICTION OVER THE WORK.
B. WHERE CONTRACT DOCUMENT REQUIREMENTS EXCEED THE REQUIREMENTS OF THE REFERENCED CODES, ORDINANCES, AND STANDARDS, THE CONTRACT DOCUMENT REQUIREMENTS SHALL BE TAKEN AS MINIMUM.
C. ALL EQUIPMENT CONTAINING ELECTRICAL WIRING AND/OR ELECTRICAL COMPONENTS SHALL HAVE A UNDERWRITERS LABORATORIES (UL) "PACKAGE" LABEL.
D. ALL GAS FIRED EQUIPMENT SHALL HAVE THE AMERICAN GAS ASSOCIATION (AGA) LABEL.

PERMITS, FEES AND INSPECTIONS:
A. SECURE ALL NECESSARY PERMITS, CONNECTION FEES, TAD FEES, LICENSES AND APPROVALS AND ARRANGE FOR ALL INSPECTIONS, INCLUDE ALL RELATED COSTS.
B. FURNISH CERTIFICATES OF FINAL INSPECTION AND APPROVAL UPON COMPLETION OF PROJECT.

EXAMINATION OF SITE:
A. VISIT PROJECT SITE AND BECOME FULLY COGNIZANT OF ALL EXISTING ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL AND SITE CONDITIONS, OR EXISTING CODE VIOLATIONS WHICH MAY AFFECT THE WORK.
B. NOTIFY ARCHITECT PRIOR TO SUBMITTING BID IF REVISIONS TO CONTRACT DOCUMENTS ARE NECESSARY TO RECTIFY ANY OF THE AFOREMENTIONED EXISTING CONDITIONS.
C. NO "EXTRAS" TO CONTRACT PRICE WILL BE ALLOWED AFTER RECEIVING BID IN ORDER TO RECTIFY EXISTING CONDITIONS IN ORDER TO MEET THE DESIGN INTENT OF THE CONTRACT DOCUMENTS OR SATISFY CODE REQUIREMENTS.

COORDINATION WITH OTHER TRADES:
A. COORDINATE ALL WORK BEFORE AND DURING CONSTRUCTION WITH ALL OTHER AFFECTED TRADES.
B. WHERE INTERFERENCES DEVELOP, NOTIFY ARCHITECT FOR RESOLUTION OF CONFLICT.
C. RELOCATION OF CONFLICTING INSTALLED WORK, DUE TO LACK OF COORDINATION, OR POOR COORDINATION WILL NOT BE CONSIDERED EXTRA WORK.

APPROVED MANUFACTURERS:
A. USE ONLY MATERIALS SPECIFICALLY INDICATED IN CONTRACT DOCUMENTS, OR COMPARABLE MATERIALS BY OTHER LISTED ACCEPTABLE MANUFACTURERS. NOTE THAT "ACCEPTABLE MANUFACTURER" DOES NOT CONSTRUE AUTOMATIC APPROVAL OF SPECIFIC MATERIALS BY ONE OR ALL OF THE LISTED ACCEPTABLE MANUFACTURERS. ARCHITECT AND/OR ENGINEER OF RECORD RESERVES THE RIGHT OF FINAL DETERMINATION OF ACCEPTABILITY OF EACH ITEM.

SHOP DRAWINGS:
A. SUBMIT COMPLETE SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT INTENDED FOR USE ON THIS PROJECT.
B. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL PHYSICAL, PERFORMANCE AND ELECTRICAL CHARACTERISTICS FOR ALL MATERIALS AND EQUIPMENT.
C. SUBMIT ELECTRONIC COPY OF ALL SHOP DRAWINGS FOR REVIEW.
D. NO WORK IS TO BE INSTALLED PRIOR TO RETURN OF ARCHITECT REVIEWED SHOP DRAWINGS.

OPERATION AND MAINTENANCE MANUALS:
A. UPON COMPLETION OF PROJECT, SUBMIT TWO (2) COMPLETE BOUND SETS OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND SYSTEMS INSTALLED IN THIS PROJECT.
B. MANUALS SHALL INCLUDE GUARANTEE(S), COMPLETE OPERATING INSTRUCTIONS, REPAIR PARTS LIST, PREVENTATIVE MAINTENANCE SCHEDULE, BELT AND FILTER SCHEDULE, AND LIST OF ALL SUBCONTRACTORS ASSOCIATED WITH THE WORK, INCLUDING TELEPHONE NUMBER AND CONTACT PERSON.

OPERATING AND MAINTENANCE INSTRUCTIONS:
A. PRIOR TO FINAL ACCEPTANCE BY OWNER, PROVIDE ALL PERSONNEL, EQUIPMENT, AND LABOR AS NECESSARY TO INSTRUCT OWNER'S PERSONNEL IN PROPER OPERATION AND MAINTENANCE OF THE SYSTEMS AND EQUIPMENT INSTALLED IN THIS PROJECT. PROVIDE INSTRUCTIONAL SESSION DURING TIME PERIOD AGREED TO WITH OWNER.

CUTTING AND PATCHING:
A. ALL CUTTING AND PATCHING SHALL BE PROVIDED BY THE GENERAL TRADES UNDER THE DIRECTION OF THE MECHANICAL TRADES. COST WILL BE PAID BY THE MECHANICAL TRADE REQUESTING THE WORK.
B. RESTORED SURFACES SHALL BE OF SAME MATERIALS AND QUALITY AS ADJACENT SURFACES, AND SHALL MATCH SURROUNDING SURFACES, AND/OR BE RESTORED TO PRE-CONSTRUCTION CONDITION.

PROTECTION OF EXISTING SERVICES:
A. PROTECT FROM ALL DAMAGE, EXISTING SERVICES (I.E., GAS, WATER, ELECTRICAL, ETC.), ENCOUNTERED IN THE WORK, NOT SPECIFICALLY INDICATED TO BE DEMOLISHED. INCLUDE ALL RELATED COSTS.
B. REPAIR AND/OR REPLACE EXISTING ACTIVE SERVICES INTENDED TO REMAIN IN SERVICE, BUT DAMAGED DURING THE COURSE OF CONSTRUCTION. ABSORB ALL RELATED COSTS. NO "EXTRAS" WILL BE PAID TO RESTORE EXISTING ACTIVE SERVICES DAMAGED DURING CONSTRUCTION.
C. ARCHITECT WILL DETERMINE COURSE OF ACTION WHEN EXISTING INACTIVE SERVICES ARE DAMAGED DURING COURSE OF CONSTRUCTION. ABSORB ALL COSTS RELATIVE TO ADDITIONAL DEMOLITION, TERMINATION, RELOCATION AND/OR RESTORATION OF EXISTING, DAMAGED INACTIVE SERVICES AS DIRECTED BY ARCHITECT.

ELECTRICAL WORK:
A. PROVIDE ALL ELECTRICAL WORK ASSOCIATED WITH, AND NECESSARY TO COMPLETE THIS PROJECT, WHICH IS NOT INCLUDED AS ELECTRICAL TRADES WORK.
B. PROVIDE ALL ELECTRICAL WORK, AS APPLICABLE, IN ACCORDANCE WITH DIVISION 16 REQUIREMENTS.
C. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION (WITH ELECTRICAL TRADES) OF CORRECT VOLTAGES FOR ALL MECHANICAL EQUIPMENT. IN CASE OF DISCREPANCY, NOTIFY ENGINEER IMMEDIATELY AND PRIOR TO SHOP DRAWING SUBMITTALS. FAILURE TO COMPLY WITH THIS REQUIREMENT HOLDS THE CONTRACTOR FULLY RESPONSIBLE FOR ANY SUBSEQUENT PROBLEMS

CLEANING AND FINISHING:
A. PRIOR TO FINAL ACCEPTANCE BY OWNER, THOROUGHLY CLEAN ALL WORK INSIDE AND OUT AS APPLICABLE, AND LEAVE ALL SYSTEMS AND EQUIPMENT IN PERFECT WORKING ORDER. THOROUGHLY CLEAN ALL PLUMBING FIXTURES, EXPOSED PIPING, FLOOR DRAIN GRATES, AND CLEANOUT COVERS AS APPLICABLE.

GUARANTEE:
A. REFER TO ARCHITECTURAL SPECIFICATIONS FOR GUARANTEES, IF NONE EXIST THE FOLLOWING MINIMUM GUARANTEES SHALL BE PROVIDED.
1. PROVIDE A ONE (1) YEAR GUARANTEE COVERING ALL LABOR AND MATERIAL PROVIDED IN THIS PROJECT. GUARANTEE SHALL INCLUDE ALL SHIPPING AND TRANSPORTATION CHARGES NECESSARY TO RETURN DEFECTIVE MATERIALS TO MANUFACTURER, AS WELL AS LABOR CHARGES NECESSARY TO REMOVE AND REPLACE DEFECTIVE MATERIALS.
2. PROVIDE 5 YEAR GUARANTEE FOR ALL COMPRESSORS.
3. DEFECTIVE MATERIALS AND/OR EQUIPMENT MAY BE REPAIRED IN LIEU OF REPLACED WITH PRIOR APPROVAL OF ARCHITECT AND/OR OWNER.

PIPING:

SANITARY WASTE AND VENT PIPE AND FITTINGS:

BELOW GRADE AND/OR BELOW FLOOR SLABS WITHIN BUILDING WALLS AND EXTENDING 5'-0" OUTSIDE:
UP TO 6" DIAMETER:
PIPE: ASTM D2665 SCHEDULE 40 PVC-DWV INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
FITTINGS: ASTM D1554 SOLVENT CEMENTED.
SOLVENT CEMENT: ASTM D2564.
INSTALLATION: IN ACCORDANCE WITH ASTM D2321.

ABOVEGROUND SANITARY WASTE AND VENT PIPING AND FITTINGS:
PIPE 4" AND UNDER: ASTM A-53, SCHEDULE 40, GALVANIZED STEEL.
PIPE OVER 4": ASTM A-53, SCHEDULE 40, GRADE A AND GRADE B, SEAMLESS OR ERW GALVANIZED STEEL.
FITTINGS: ANSI B2.1 THREADS.

PIPE AND FITTINGS: CAST IRON HUBLESS SOIL PIPE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 310 AND LOCAL CODE REQUIREMENTS. HUBLESS COUPLING GASKETS SHALL CONFORM TO ASTM STANDARD C-564.

DOMESTIC WATER PIPING:

ABOVEGROUND DOMESTIC HOT AND COLD WATER 2" AND SMALLER:

ASTM B88, TYPE L, SEAMLESS HARD DRAWN RIGID COPPER WATER TUBE. FITTINGS: ANSI B16.22, WROUGHT COPPER, ASTM B32-95TA SOLDER JOINT.

DOMESTIC HOT AND COLD WATER VALVES:
BALL VALVES:
BALL VALVES 1/4" TO 1" PIPE SIZE: APOLLO 77C-140-01 FULL PORT, TWO PIECE WITH SCREWED ENDS, BRONZE BODY AND END PIECE, STAINLESS STEEL BALL, TEFLON SEAT RINGS, STAINLESS STEEL STEM, REINFORCED PTFE TEFLON PACKING WITH BRASS PACKING GLAND, ZINC PLATED STEEL HANDLE WITH PLASTIC GRIP SECURED BY ZINC PLATED STEEL HANDLE NUT, 150 PSI STEAM, 600 PSI WOG WORKING PRESSURE.
BALL VALVES 1-1/4" TO 2" PIPE SIZE: APOLLO 82-140-01, 3 PIECE, FULL SIZE PORT WITH SCREWED ENDS, BRONZE BODY, STAINLESS STEEL BALL, TEFLON DOUBLE SEAL SEATS AND THRUST WASHER, BRASS PACKING GLAND, REINFORCED TAFLON PACKING, STAINLESS STEEL STEM, PLASTIC COATED ZINC PLATED STEEL HANDLE AND ZINC PLATED STEEL HANDLE NUT, 150 PSI SATURATES STEAM, 600 PSI WOG.

CHECK VALVES:
INDUSTRIAL SERVICE, 150 LB., SWP 300 LB., WOG COMPOSITION DISC, THREADED ENDS. MILWAUKEE NO. 510.

CLEANOUT:

PROVIDE CLEANOUTS AS REQUIRED BY LOCAL CODES. THE FINISH OF COVER PLATES, TOP AND TOP FRAME ACCESS COVERS SHALL BE NICKEL BRONZE, UNLESS OTHERWISE SCHEDULED.

PIPING INSTALLATION:

INSTALL ALL PIPING PARALLEL OR PERPENDICULAR TO BUILDING WALL AND COLUMNS IN LOCATIONS TO AVOID INTERFERENCE WITH DUCTWORK, STRUCTURE, OTHER PIPING, LIGHTING AND ELECTRICAL EQUIPMENT OR OTHER EQUIPMENT.

DO NOT LOCATE PIPING ABOVE OR WITHIN 3 FEET HORIZONTALLY OF ELECTRICAL PANELS OR EQUIPMENT.

FOR PIPING PASSING THROUGH WALLS, PACK VOID BETWEEN PIPE AND STRUCTURE WITH APPROVED, NON-COMBUSTIBLE MATERIAL.

DO NOT ALLOW CONTACT BETWEEN PIPING AND MASONRY OR CONCRETE SURFACES.

PROVIDE ALL THE NECESSARY HANGERS, RODS, SUPPORTS, CHANNELS, ANGLES, STRUCTURAL MEMBERS AND CONCRETE INSERTS TO PROPERLY SECURE PIPING AND RELATED EQUIPMENT. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE LATEST REQUIREMENTS OF ANSI CODE FOR PRESSURE PIPING B31.1, AND MSS STANDARD PRACTICE SP-58.

PROTECT ALL INSULATED PIPE LINES AGAINST INSULATION DAMAGE AT ALL HANGERS BY THE USE OF 1 FOOT LONG, 12 GAUGE STEEL SEMI-CIRCULAR SHIELDS FOR PIPE SIZES WITH 12" OD AND LESS (INCLUDING INSULATION) AND 2 FOOT LONG, 1/2" STEEL SEMI-CIRCULAR SHIELDS FOR PIPE SIZES OVER 12" OD (INCLUDING INSULATION). SECURELY CEMENT ALL SHIELDS TO THE INSULATION. PROVIDE RIGID PIPE INSULATION AT EACH HANGER.

PIPING INSTALLATION:

PROVIDE ALL THE NECESSARY HANGERS, RODS, SUPPORTS, CHANNELS, ANGLES, STRUCTURAL MEMBERS AND CONCRETE INSERTS TO PROPERLY SECURE PIPING AND RELATED EQUIPMENT. ALL SUPPORTS AND PARTS SHALL CONFORM TO THE LATEST REQUIREMENTS OF ANSI CODE FOR PRESSURE PIPING B31.1, AND MSS STANDARD PRACTICE SP-58.

DUCT SMOKE DETECTORS:

SMOKE DETECTORS SHALL BE PROVIDED BY CONTROL TRADES. IF THERE IS NO CONTROL TRADES, THIS CONTRACTOR SHALL PROVIDE DETECTORS. FOR AIR HANDLING UNITS SUPPLYING MORE THAN 2000 CFM, DUCT SMOKE DETECTORS SHALL BE PROVIDED IN RETURN AIR STREAM. FOR AIR HANDLING UNITS SUPPLYING MORE THAN 15,000 CFM, DUCT SMOKE DETECTORS SHALL BE PROVIDED IN RETURN AIR AND SUPPLY AIR STREAM. DUCT SMOKE DETECTORS FOR AIR HANDLING UNITS SHALL BE 24VDC PHOTOELECTRIC TYPE WITH 2 AUXILIARY CONTACTS, ONE FOR FAN SHUTDOWN AND ONE FOR ANNUNCIATION. DETECTORS SHALL BE COMPLETE WITH SAMPLING TUBES. IN OCCUPANCIES NOT REQUIRED TO BE EQUIPPED WITH A FIRE ALARM SYSTEM, ACTUATION OF A SMOKE DETECTOR SHALL ACTIVATE A VISIBLE AND AN AUDIBLE SIGNAL IN AN APPROVED LOCATION. SMOKE DETECTOR TROUBLE CONDITIONS SHALL ACTIVATE A VISIBLE OR AUDIBLE SIGNAL IN AN APPROVED LOCATION AND SHALL BE IDENTIFIED AS AIR DUCT DETECTOR TROUBLE.

FLEXIBLE DUCTWORK:

ALL LOW PRESSURE AND HIGH PRESSURE FLEXIBLE DUCT SHALL BE FLEXMASTER USA, INC., TYPE #8M INSULATED FLEXIBLE DUCT CONSISTING OF A FACTORY FABRICATED ASSEMBLY OF A TRILAMINATE ALUMINUM FOIL, FIBERGLASS AND POLYESTER. THE FLEXIBLE DUCT SHALL BE UL LISTED 181 CLASS 1 AIR DUCT AND COMPLY WITH NFPA 90A AND 90B AND HAVE A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED OF NOT OVER 50. THE FLEXIBLE DUCT SHALL HAVE A MINIMUM PRESSURE RATING OF 12" WC THROUGH TEMPERATURE RANGE OF -20 DEGREES F. TO + 250 DEGREES F.

SHEET METAL NOTES:

INSTALL TRANSFER GRILLES IN ALL FULL HEIGHT PARTITIONS TO ALLOW RETURN AIR FLOW. SIZE PER MECHANICAL ENGINEER REQUIREMENTS. THESE SHALL BE FIRE DAMPERS IN RATED WALLS.

BLANK-OFF RETURN DUCTWORK IN AREAS OF WORK THAT CREATES DUST TO PREVENT DEBRIS FROM ENTERING MECHANICAL SYSTEM.

LOW PRESSURE DUCTWORK: ALL DUCTWORK ON DISCHARGE OF HVAC UNIT, ALL RETURN AIR DUCTWORK AND EXHAUST AIR DUCTWORK SHALL BE CONSTRUCTED AND SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST SMACNA'S ISSUE OF "LOW PRESSURE DUCT CONSTRUCTION STANDARDS".

IN ADDITION, ALL JOINTS AND SEAMS SHALL BE SEALED WITH DUCT SEALANT EQUAL TO FOSTER #32-14. APPROVED SEALANT MANUFACTURERS: 3M COMPANY, BENJAMIN FOSTER COMPANY, UNITED SHEET METAL, FLINTKOTE.

FLEXIBLE CONNECTIONS:
AT EACH POINT OF CONNECTION OF DUCTWORK TO FANS, PROVIDE A FLEXIBLE CONNECTION, VENTFABRICS, INC., "VENTGLAS L.A." NOT LESS THAN 12" IN LENGTH AND MADE OF HEAVY GRADE GLASS FABRIC DOUBLE COATED WITH NEOPRENE AND PROVIDED WITH A SUITABLE FRAME AT EACH END ARRANGED FOR BOLTING TO INLET AND OUTLET OF FAN AND DUCTWORK, RESPECTIVELY.

VANES AND DEFLECTORS: ALL ELBOWS AND TURNS SHALL BE MADE WITH A RADIUS NOT LESS THE 1-1/2" TIMES THE DUCT DIAMETER OR WIDTH. WHERE BUILDING CONSTRUCTION DOES NOT PERMIT A LONG RADIUS ELBOW OR TURN OR IF SHOWN ON THE CONTRACT DOCUMENTS, ACOUSTICAL TURNING VANES AND DEFLECTORS SHALL BE PROVIDED.

PIPING INSULATION:

ALL ADHESIVES, SEALERS AND COATINGS SHALL BE INCOMBUSTIBLE. INSULATION SHALL BE APPLIED BY EXPERIENCED PIPE COVERERS AS PER BEST TRADE PRACTICE. WHERE EXISTING INSULATED PIPING AND SURFACES ARE EXPOSED DUE TO RENOVATIONS, RE-INSULATE EXPOSED SURFACES TO MATCH THE EXISTING INSTALLATION. APPLY INSULATION TO PIPE LINES AND EQUIPMENT ONLY AFTER TESTING AND INSPECTION, AND ALL SURFACES HAVE BEEN THOROUGHLY CLEANED.

DOMESTIC HOT AND COLD WATER PIPINGS SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION. PIPING INSULATION AND COVERING SHALL HAVE FLAME SPREAD RATING OF 25 AND SMOKE DEVELOPED RATING OF 50 AND SHALL BE SIMILAR TO OWENS-CORNING NO. 25ASJ/55L-11.

FIRE DAMPERS:

A. MANUFACTURERS: SUBJECT TO COMPLIANCE WITH REQUIREMENTS, PROVIDE PRODUCTS BY ONE OF THE FOLLOWING:
1. GREENHECK FAN CORPORATION.
2. AIR BALANCING; A DIVISION OF MESTEK, INC.
3. NAILOR INDUSTRIES, INC.
4. RUSKIN COMPANY.
B. TYPE: STATIC AND DYNAMIC; RATED AND LABELED BY ACCORDING TO UL 555 BY AN NRTL.
C. CLOSING RATING IN DUCTS UP TO 4-INCH WG (1-KPA) STATIC PRESSURE CLASS AND MINIMUM 4000-FPM (20-M/S) VELOCITY.
D. FIRE RATING: 1-1/2 AND 3 HOURS.
E. FRAME: FABRICATED WITH ROLL-FORMED, 0.034-INCH- (0.85-MM-) THICK GALVANIZED STEEL; WITH MITERED AND INTERLOCKING CORNERS.
F. MOUNTING SLEEVE: FACTORY- OR FIELD-INSTALLED, GALVANIZED SHEET STEEL.
1. MINIMUM THICKNESS: 0.052 OR 0.138 INCH (1.3 OR 3.5 MM) THICK, AS INDICATED, AND OF LENGTH TO SUIT APPLICATION.
2. EXCEPTION: OMIT SLEEVE WHERE DAMPER-FRAME WIDTH PERMITS DIRECT ATTACHMENT OF PERIMETER MOUNTING ANGLES ON EACH SIDE OF WALL OR FLOOR; THICKNESS OF DAMPER FRAME MUST COMPLY WITH SLEEVE REQUIREMENTS.
G. MOUNTING ORIENTATION: VERTICAL OR HORIZONTAL AS INDICATED.
H. BLADES: ROLL-FORMED, INTERLOCKING, 0.034-INCH- (0.85-MM-) THICK, GALVANIZED SHEET STEEL. IN PLACE OF INTERLOCKING BLADES, USE FULL-LENGTH, 0.034-INCH- (0.85-MM-) THICK, GALVANIZED-STEEL BLADE CONNECTORS.
I. HORIZONTAL DAMPERS: INCLUDE BLADE LOCK AND STAINLESS-STEEL CLOSURE SPRING.
J. HEAT-RESPONSIVE DEVICE: REPLACEABLE, 165 DEG F (74 DEG C) RATED, FUSIBLE LINKS.
K. HEAT-RESPONSIVE DEVICE: ELECTRIC RESETTABLE LINK AND SWITCH PACKAGE, FACTORY INSTALLED, 165 DEG F (74 DEG C) RATED.

DUCT INSULATION:

DUCTWORK SHALL BE THERMALLY INSULATED:
- 15' AWAY FROM THE ROOF TOP UNIT.

ALL DUCT INSULATION SHALL HAVE A FLAME SPREAD CLASSIFICATION OF 25 OR LESS, A FUEL CONTRIBUTED RATING OF 35 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS, AS RATED BY UNDERWRITERS' LABORATORIES
BLANKET TYPE (UP TO 1-1/2 LB./CU. FT. INSULATION):
INSULATION WITH ATTACHED FACING SHALL BE SECURED TO THE DUCTS WITH ADHESIVE APPLIED IN 6" BRUSH WIDTHS EVERY 12". THE ADHESIVE SHALL BE RIDGED SLIGHTLY BY USING A SERRATED TROWEL. INSULATION WITHOUT ATTACHED FACING (PLAIN) SHALL BE SECURED TOT HE DUCTS THE SAME AS ABOVE THEN BIND WITH TYING CORD, SPIRAL WRAPPED OR HALF HITCHED.
DUCT FITTINGS SHALL BE INSULATED BY WRAPPING WITH A GLASS FIBER BLANKET. BLANKETS SHALL BE SECURED TOT HE DUCT FITTINGS BY INSULATION STAPLES OR JUTE TWINE. THE BLANKET SHALL BE COVERED WITH AN OPEN MESH CLOTH OR GLASS FIBER HEAVILY COATED WITH VAPOR BARRIER ADHESIVE. THE INSULATION THICKNESS SHALL BE EQUAL TO THE THICKNESS OF THE INSULATION ON THE ADJOINING DUCTWORK.

TESTING AND BALANCING:

TEST AND ADJUST ALL NEW PIPING SYSTEMS INSTALLED IN THIS PROJECT. PROVIDE ALL TESTING INSTRUMENTS, GAUGES, PUMPS AND OTHER EQUIPMENT REQUIRED OR NECESSARY FOR TEST. REPAIR ALL DEFECTS DISCLOSED BY TESTS WITHOUT ADDITIONAL COST TO THE OWNER. REPEAT TESTS AFTER ANY DEFECTS DISCLOSED ARE REPAIRED OR REPLACED, UNLESS WAIVED BY ARCHITECT. ARRANGE AND PAY THE COST OF ALL UTILITIES USED ON TESTS. COMPLETE ALL TESTS BEFORE COVERING IS APPLIED. ISOLATE ALL PIPING SYSTEM COMPONENTS NOT CONSTRUCTED TO WITHSTAND TEST PRESSURES.

WATER SYSTEMS TEST:
TEST AT 150 PSIG FOR EIGHT (8) HOURS WITH ZERO LOSS IN PRESSURE. CHECK JOINTS AND FITTINGS FOR LEAKS WITH LIQUID SOAP SOLUTION.

DRAINAGE SYSTEM:
THE DRAINAGE SYSTEM SHALL BE TESTED IN ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS AND IN THE PRESENCE OF THE PROPER INSPECTOR. AIR TEST SHALL BE 5 PSIG AND SHALL REMAIN IN OPERATION FOR A PERIOD OF 15 MINUTES.

NATURAL GAS SYSTEM:
ALL GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH RULES AND REGULATIONS OF THE COMPANY OR UTILITY SERVING THE PROJECT, AND IN ANY CASE SHALL NOT BE LESS THAN THE FOLLOWING:
THE PIPING SYSTEM OR PORTIONS OF THE PIPING SYSTEM TO BE TESTED SHALL BE SUBJECTED TO AN AIR PRESSURE, USING OIL-FREE COMPRESSOR AIR, OF NOT LESS THAN 100 POUNDS PER SQUARE INCH, EQUAL 204" OF MERCURY. THE PRESSURE SHALL BE APPLIED WITH A FORCE PUMP AND SHALL BE MAINTAINED FOR NOT LESS THAN 30 MINUTES WITHOUT LEAKAGE. A MERCURY COLUMN GAUGE SHALL BE USED IN MAKING THE TESTS. TESTS SHALL BE SCHEDULED WITH LOCAL AUTHORITY FOR PRESENCE OF PROPER INSPECTOR. THE CONTRACTOR INSTALLING THESE PIPING SYSTEMS SHALL BE HELD RESPONSIBLE FOR THE TEST AND SHALL CERTIFY THE APPLICATION AND SHALL CERTIFY THE APPLICATION AND SUCCESS OF THE TEST.
NATURAL GAS LINES SHALL BE BLOWN OUT WITH DRY, OIL-FREE COMPRESSED

AIR BALANCING:
BALANCE ALL OUTLETS AND TERMINAL BOXES TO WITHIN 10% OF RATED C.F.M IN ACCORDANCE WITH AABC AND NEBB.
SUBMIT BALANCING REPORT TO ARCHITECT / OWNER.
CONTRACTOR TO FURNISH LABOR, TOOLS, TESTING EQUIPMENT AND SUPERVISION FOR AIR TESTING AND BALANCING.

PIPE IDENTIFICATION:

IDENTIFY ALL NEW PIPING INSTALLED IN THIS PROJECT IN ACCORDANCE WITH ANSI A13.1 1981, OSHA, AND OWNER'S STANDARDS.

H:\ACAD\FILES\86\86460-wsu football locker renovation\CAD\MECH\86460-M000-COVER.dwg Tue, 04 Mar 2025 - 11:16am

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

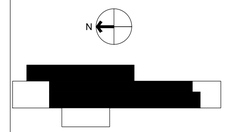
MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : MS
Checked by : SS
Sheet Title : MECHANICAL SPECIFICATIONS

Project No. : 2023.175

Sheet No. : M001

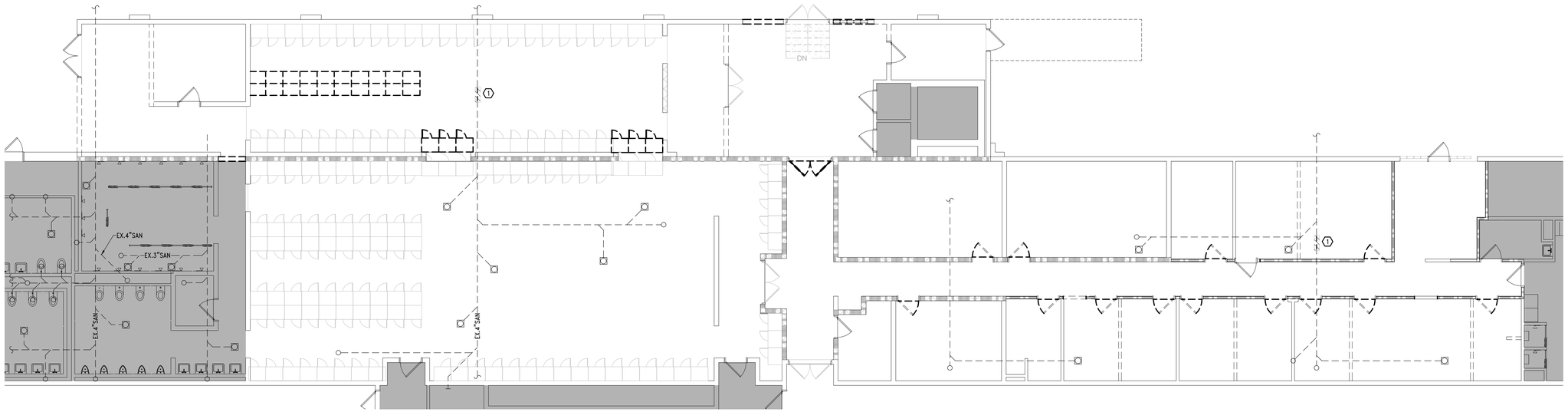
DEMOLITION KEY NOTES:

1. REMOVE AND DISCARD SECTION OF PIPE TO PROVIDE A NEW SANITARY CONNECTION FOR NEW PLUMBING FIXTURE.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.

B. SAW-CUT SLAB WHERE NECESSARY TO MAKE UNDERGROUND SANITARY CONNECTIONS TO EXISTING MAIN.



1 MD100 FIRST LEVEL SANITARY PLUMBING DEMOLITION PLAN
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No: 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :
WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

N

[redacted]

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
FIRST LEVEL SANITARY PLUMBING DEMOLITION PLAN

Project No. :
2023.175

Sheet No. :
MD100

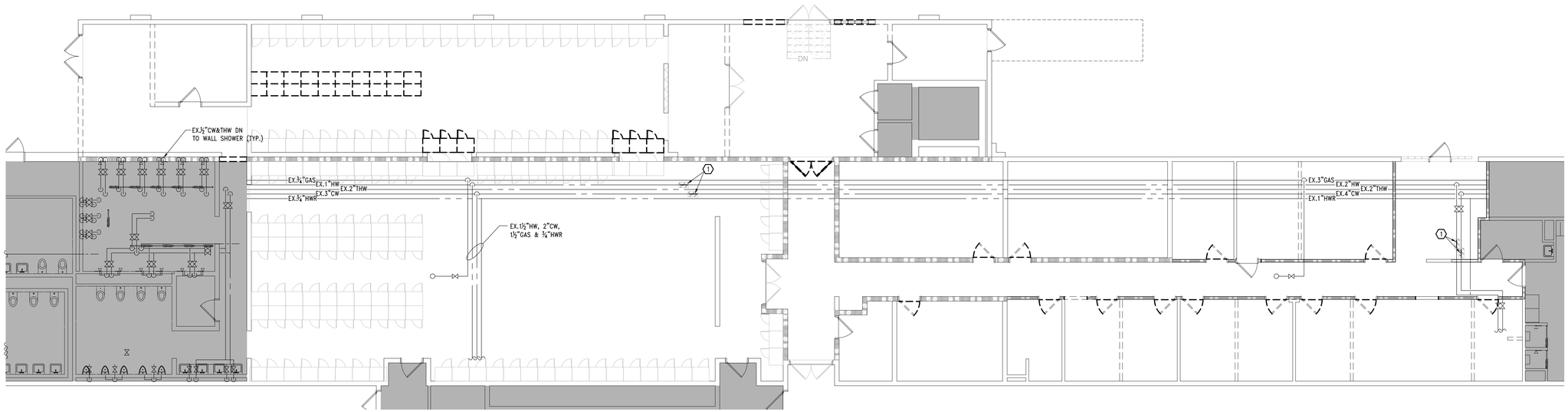
H:\ACAD\FILES\8686460-wsu football locker renovation\CAD\MECH\8686460-MD100-PLUMB DEMO.dwg Tue, 04 Mar 2025 - 11:16am

DEMOLITION KEY NOTES:

1 REMOVE AND DISCARD SECTION OF PIPE TO PROVIDE A COLD & HOT WATER CONNECTION TO NEW FIXTURE.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.



1 / MD101 FIRST LEVEL DOMESTIC PLUMBING DEMOLITION PLAN

1/8" = 1'-0"

SVA

STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

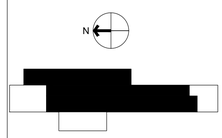
STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No: 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
FIRST LEVEL DOMESTIC PLUMBING DEMOLITION PLAN

Project No. :
2023.175

Sheet No. :
MD101

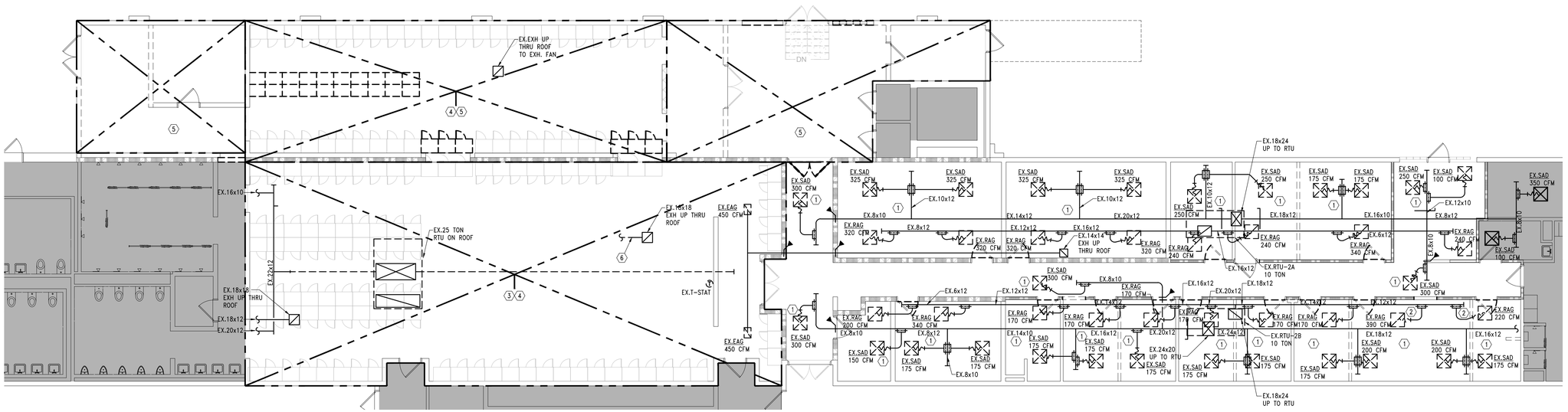
H:\ACAD\FILES\8686460-wsu football locker renovation\CAD\MECH\86460-MD100-PLUMB DEMO.dwg Tue, 04 Mar 2025 - 11:16am

DEMOLITION KEY NOTES:

1. REMOVE AND DISCARD EXISTING SUPPLY DIFFUSERS, RETURN GRILLES, AND EXHAUST GRILLES. PREPARE DUCTWORK TO ACCEPT NEW DIFFUSER OR GRILLE.
2. REMOVE AND DISCARD EXISTING DUCTWORK BACK TO MAIN. REMOVE PORTION OF DUCTWORK IF NECESSARY AND PREPARE DUCTWORK TO ACCEPT NEW NECK SIZE.
3. REMOVE AND DISCARD EXISTING SUPPLY DIFFUSERS, RETURN GRILLES AND ASSOCIATED DUCTWORK BACK TO RTU PENETRATION. PREPARE FOR NEW DUCT MAIN CONNECTIONS TO SUPPLY AND RETURN DUCTWORK BELOW THE CEILING.
4. REMOVE AND DISCARD EXISTING EXHAUST GRILLES AND DUCTWORK BACK TO ROOF PENETRATION.
5. REMOVE AND DISCARD EXISTING SUPPLY DIFFUSERS, RETURN GRILLES, AND ASSOCIATED DUCTWORK BRANCH IN THIS SPACE. PREPARE FOR DUCTWORK TO ACCEPT NEW DIFFUSERS AND GRILLES IN-PLACE, UNLESS NOTED OTHERWISE.
6. REMOVE AND DISCARD EXISTING EXHAUST DUCKWORK TO EXISTING EXHAUST FAN ROOF PENETRATION AND CAP DUCTWORK AT LOCATION INDICATED.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.



1 MD200 FIRST LEVEL HVAC DEMOLITION PLAN
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No.
6201034939
LICENSED PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

[redacted]

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
FIRST LEVEL HVAC DEMOLITION PLAN

Project No. :
2023.175

Sheet No. :
MD200

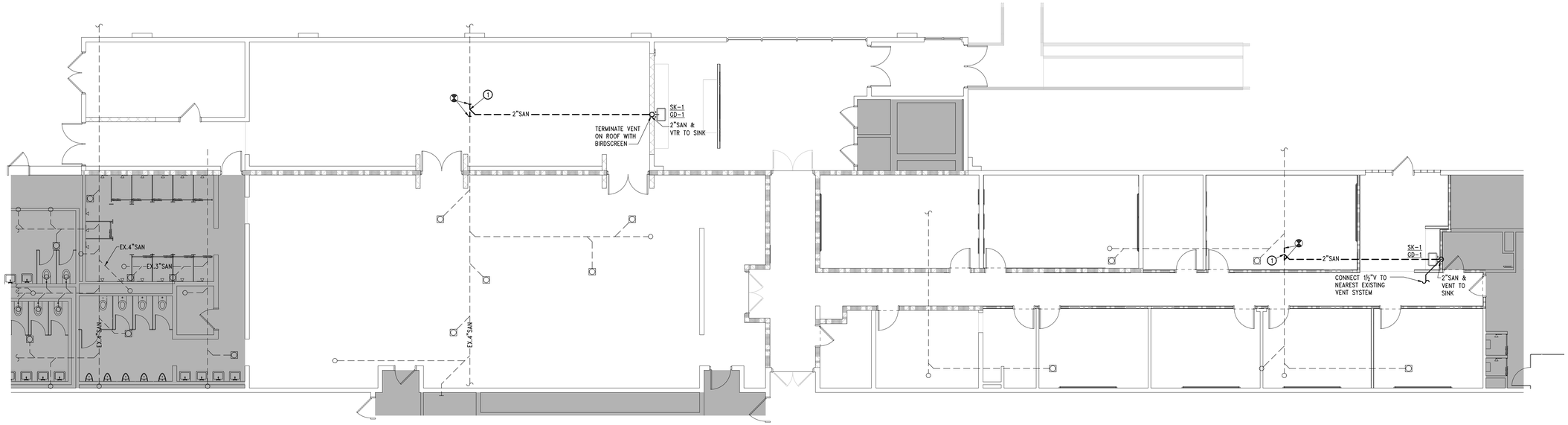
H:\ACAD\FILES\86\86460-wsu football locker renovation\CAD\MECH\86460-MD200-HVAC Demo.dwg Tue, 04 Mar 2025 - 11:16am

NEW WORK KEY NOTES:

1. CONNECT TO EXISTING 4" SANITARY LINES. FIELD VERIFY SIZE, LOCATION, AND INVERT ELEVATION PRIOR TO START ANY CONSTRUCTION.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.



1 / M100 FIRST LEVEL SANITARY PLUMBING NEW WORK PLAN

1/8" = 1'-0"

SVA

STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

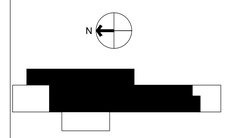
STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No: 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
FIRST LEVEL SANITARY PLUMBING NEW WORK PLAN

Project No. :
2023.175

Sheet No. :
M100

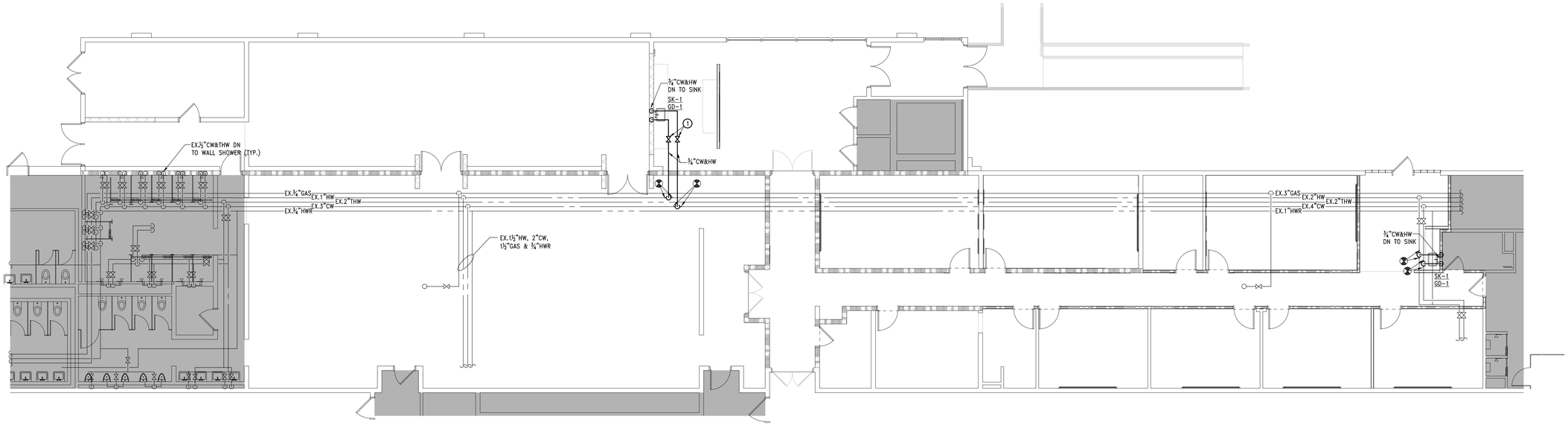
H:\ACAD\FILES\86\86460-wsu football locker renovation\CAD\MECH\86460-M100-PLUMB NEW.dwg Tue, 04 Mar 2025 - 11:16am

NEW WORK KEY NOTES:

1. PROVIDE ISOLATION VALVES IN ACCESSIBLE LOCATION.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.



1 M100 FIRST LEVEL DOMESTIC PLUMBING NEW WORK PLAN

1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

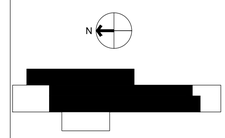
STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No. 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

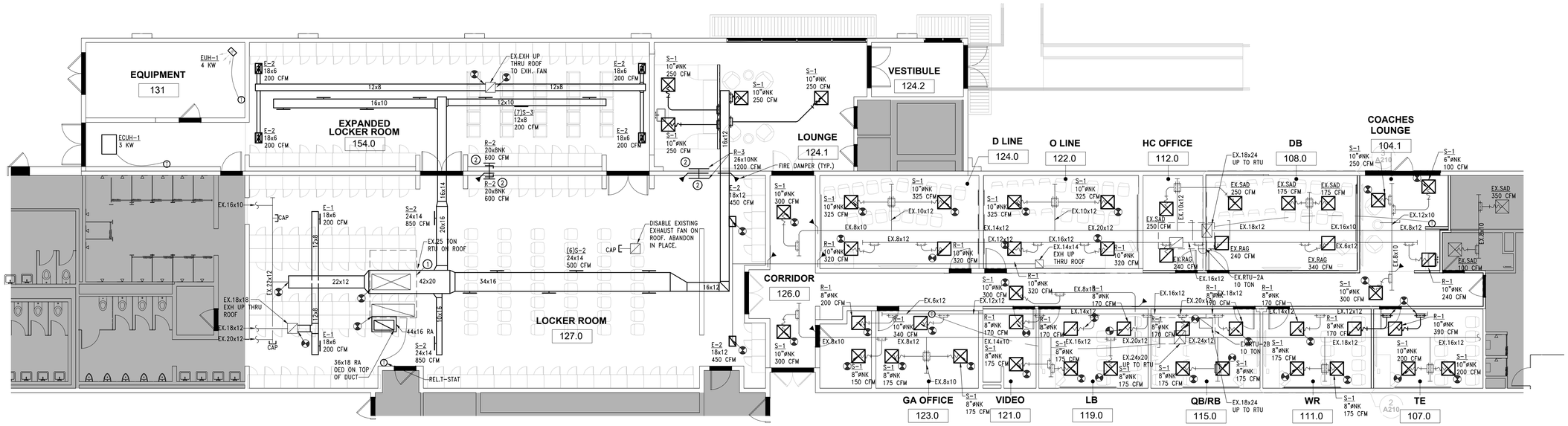
Drawn by :
MS

Checked by :
SS

Sheet Title :
FIRST LEVEL DOMESTIC PLUMBING NEW WORK PLAN

Project No. :
2023.175

Sheet No. :
M101



1 M200 FIRST LEVEL HVAC NEW WORK PLAN

1/8" = 1'-0"

NEW WORK KEY NOTES:

1. REBALANCE EXISTING ROOFTOP UNIT TO ACCOMMODATE 2400 CFM OF OUTDOOR AIR.
2. MOUNT RETURN GRILLE AS HIGH AS POSSIBLE BELOW CEILING IN SPACE.

GENERAL NOTES:

A. COORDINATE ALL WORK WITH OTHER TRADES.

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No. 6201034939
PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
FIRST LEVEL HVAC
NEW WORK PLAN

Project No. :
2023.175

Sheet No. :
M200

H:\ACAD\FILES\86\86460-wsu football locker renovation\CAD\MECH\86460-M200-HVAC NEW.dwg Tue, 04 Mar 2025 - 11:16am

GRILLE, REGISTER AND DIFFUSER SCHEDULE

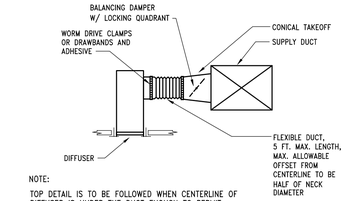
TAG	MANUFACTURER & MODEL NO.	SERVICE	MOUNTING	OVERALL SIZE	NECK SIZE	CONSTRUCTION	NOTES/ACCESSORIES
S-1	TITUS PCS	SAD	CEILING LAY-IN	24x24	SEE PLAN	STEEL	A E
S-2	TITUS 300RL	SAG	DUCT MOUNTED	24x14	SEE PLAN	STEEL	A D E
S-3	TITUS 300RL	SAG	DUCT MOUNTED	12x8	SEE PLAN	STEEL	A D E
S-4	TITUS PCS	SAD	CEILING	24x24	SEE PLAN	STEEL	A E
R-1	TITUS 50F	RAG	CEILING	24x24	SEE PLAN	STEEL	A
R-2	TITUS 350RL	RAG	CEILING	22x10	20x8	STEEL	A
R-3	TITUS 350RL	RAG	CEILING	36x12	26x10	STEEL	A
E-1	TITUS 350RL	EAG	DUCT MOUNT	18x6	SEE PLAN	ALUMINUM	A
E-2	TITUS 350RL	EAG	CEILING	18x12	SEE PLAN	ALUMINUM	A

KEY:

SAD – CEILING OR WALL SUPPLY DIFFUSER
SAG – CEILING OR WALL SUPPLY GRILLE
TAG – WALL TRANSFER GRILLE
RAR – CEILING OR WALL RETURN REGISTER
RAG – CEILING OR WALL RETURN GRILLE
EAG – CEILING OR WALL EXHAUST GRILLE

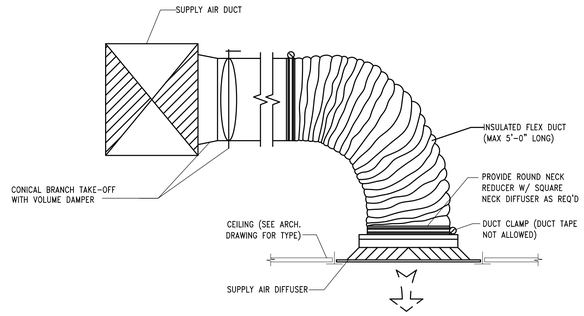
NOTES AND ACCESSORIES DESIGNATION

A	WHITE	C	CABLE OPERATED DAMPERS	E	NECK SIZE: 6"ø: 0-110 CFM 8"ø: 111-240 CFM 10"ø: 241-350 CFM 12"ø: 351-475 CFM
B	BLADE PARALLEL TO SHORT DIMENSION	D	MANUAL GRILLE MOUNTED VOLUME DAMPERS		



NOTE:
TOP DETAIL IS TO BE FOLLOWED WHEN CENTERLINE OF DIFFUSER IS UNDER THE DUCT ENOUGH TO PERMIT A BOTTOM TAKEOFF WITH A FLEXIBLE DUCT OFFSET OF LESS THAN HALF THE NECK DIAMETER. BOTTOM DETAIL TO BE USED IN ALL OTHER CASES.

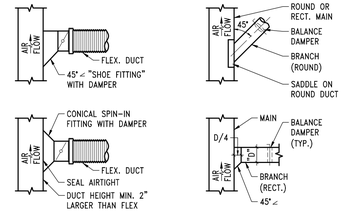
CEILING DIFFUSER RUNOUT DETAIL
SCALE: NONE



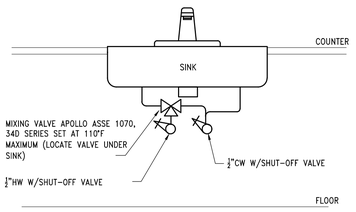
SUPPLY AIR DIFFUSER W/ FLEX DUCT DETAIL
SCALE: NONE

PLUMBING CONNECTION SCHEDULE

ITEM #	DESCRIPTION	MANUFACTURER & MODEL NO.	WASTE	TRAP	VENT	COLD WATER	HOT WATER	FURNISHED BY	INSTALLED BY	FINAL CONNECTION	NOTES/ACCESSORIES
P-1	COUNTER TOP DROP-IN STAINLESS STEEL 22"x22"x5-1/2" SINGLE BOWL ADA SINK, 18 GAUGE 304 STAINLESS STEEL, BRUSHED SATIN FINISH, REAR CENTER DRAIN PLACEMENT	ELKAY "LUSTERTONE" MODEL LRAD222255	1-1/2"	1-1/2"	1-1/2"	1/2"	1/2"	PLUMBING CONTRACTOR	PLUMBING CONTRACTOR	PLUMBING CONTRACTOR	SUPPLIES: 1/2" X 3/8", ANGLE SUPPLIES WITH WHEEL STOPS, FLEXIBLE RISERS AND CP ESCUTCHEON PLATES. TRAP: CP 1-1/2" BENT TUBE, ADJUSTABLE "P" TRAP WITH CLEANOUT, CP TUBING TO WALL AND CP ESCUTCHEON PLATE. FAUCET: DECK MOUNTED, VANDAL RESISTANT, ZURN MODEL Z81284-XL, CHROME PLATED BRASS BODY, 4" VANDAL RESISTANT COLOR CODED WRIST BLADE HANDLES, CERAMIC DISC CARTIDGE, 4"ON CENTER TWO HANDLE, RIGID GOOSENECK SPOUT 5-3/8" SPOUT REACH, AERATOR 2.2 GPM MAXIMUM FLOW RESTRICTOR. ELKAY 2"DRAIN FITTING TYPE 304 STAINLESS STEEL BODY MODEL LK8, GRID DRAIN, ALL EXPOSED SURFACES HEAVILY CHROME PLATED. PROVIDE MIXING VALVE. SEE DETAIL ON DRAWINGS. ALSO, INSULATE EXPOSED DRAIN LINES AND HOT AND COLD WATER SUPPLY LINES BELOW PHYSICALLY HANDICAPPED LAVATORIES PER PHYSICALLY HANDICAPPED CODE REQUIREMENTS. VERIFY LOCATION OF PHYSICALLY HANDICAPPED LAVATORIES WITH ARCHITECTURAL TRADES.
GD-1	GARBAGE DISPOSAL	INSINKERATOR BADGER 1	--	--	--	--	--	PLUMBING CONTRACTOR	PLUMBING CONTRACTOR	PLUMBING CONTRACTOR	FOOD WASTE DISPOSER, CONTINUOUS FEED, WITH 1/3 H.P. MOTOR, CORD, GALVANIZED STEEL GRINDING ELEMENTS WITH TWO STAINLESS STEEL 360° SWIVEL LUGS. EXCLUSIVE SELF-SERVICE WRENCH



TYPICAL DUCT TAP DETAILS
SCALE: NONE



MIXING VALVE PIPING DETAIL
SCALE: NONE

ELECTRIC CABINET UNIT HEATER SCHEDULE

TAG	MANUFACTURER & MODEL NO.	LOCATION	TYPE	ELECTRICAL		NOTES/ACCESSORIES
				CAPACITY (KW)	VOLTS/PHASE	
ECUH-1	QMARK CU935	CORRIDOR	RECESSED CEILING MOUNT	3.0	208/1	A B C

NOTES AND ACCESSORIES DESIGNATION

A	PROVIDE UNIT WITH REMOTE THERMOSTAT.	D	--
B	PROVIDE UNIT WITH DISCONNECT SWITCH	E	--
C	PROVIDE WITH MOUNTING ACCESSORIES	F	--

ELECTRIC UNIT HEATER SCHEDULE

TAG	MANUFACTURER & MODEL NO.	LOCATION	TYPE	AIRFLOW (CFM)	ELECTRICAL		NOTES/ACCESSORIES
					CAPACITY (KW)	VOLTS/PHASE	
EUH-1	MARLEY HUHAA548	EQUIPMENT STORAGE	CEILING SUSPENDED	350	4.0	277/1	A B C

NOTES AND ACCESSORIES DESIGNATION

A	PROVIDE UNIT WITH REMOTE THERMOSTAT.	D	--
B	PROVIDE UNIT WITH DISCONNECT SWITCH	E	--
C	PROVIDE WITH MOUNTING ACCESSORIES	F	--

STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

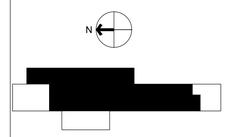
MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan
48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
MS

Checked by :
SS

Sheet Title :
MECHANICAL SCHEDULES AND DETAILS

Project No. :
2023.175

Sheet No. :
M300

480V., THREE PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET																							
		NO.12	NO.10	NO.8	NO.6	NO.4	NO.2	NO.1	1/0	2/0	3/0	4/0	250	350	500	2-3/0	2-4/0	2-250	2-350	2-500	3-300	3-400	4-350	4-500	5-500	6-500
20	16	253	403	642	1019	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
30	24	–	269	428	679	1079	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
40	32	–	–	321	509	809	1293	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
50	40	–	–	–	408	648	1034	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
60	48	–	–	–	–	540	862	1083	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
70	56	–	–	–	–	–	739	928	1169	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
80	64	–	–	–	–	–	646	812	1023	1286	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
90	72	–	–	–	–	–	574	722	909	1143	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
100	80	–	–	–	–	–	–	650	818	1029	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
125	100	–	–	–	–	–	–	–	655	823	1043	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
150	120	–	–	–	–	–	–	–	546	689	869	1107	–	–	–	–	–	–	–	–	–	–	–	–	–	–
175	140	–	–	–	–	–	–	–	–	588	745	949	1110	–	–	–	–	–	–	–	–	–	–	–	–	–
200	160	–	–	–	–	–	–	–	–	–	652	830	971	1360	–	–	–	–	–	–	–	–	–	–	–	–
225	180	–	–	–	–	–	–	–	–	–	–	738	863	1209	1743	–	–	–	–	–	–	–	–	–	–	–
250	200	–	–	–	–	–	–	–	–	–	–	–	777	1088	1569	1043	–	–	–	–	–	–	–	–	–	–
300	240	–	–	–	–	–	–	–	–	–	–	–	–	907	1307	869	1107	–	–	–	–	–	–	–	–	–
350	280	–	–	–	–	–	–	–	–	–	–	–	–	–	1120	745	949	1110	–	–	–	–	–	–	–	–
400	320	–	–	–	–	–	–	–	–	–	–	–	–	–	980	652	830	971	1360	–	–	–	–	–	–	–
450	360	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	738	863	1209	–	–	–	–	–	–	–
500	400	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	777	1088	1569	–	–	–	–	–	–
600	480	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	907	1307	1165	–	–	–	–	–
700	560	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1120	999	1346	–	–	–	–
800	640	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	874	1177	1360	–	–	–
1000	800	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	942	1088	1569	–	–
1200	960	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	785	907	1307	–	–
1600	1200	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	980	1226	1307
1800	1440	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1089	1177
2000	1600	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	980	1137

208V. SINGLE PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	380	605	964	–	–
	8	190	302	482	765	–
	12	127	202	321	510	810
	16	95	151	241	382	607
30	24	–	101	161	255	405
40	32	–	–	121	191	304
50	40	–	–	–	153	243
60	48	–	–	–	–	202

120V. SINGLE PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	220	349	556	882	–
	8	110	174	278	441	701
	12	73	116	185	294	467
	16	55	87	139	221	350
30	24	–	58	93	147	234
40	32	–	–	70	110	175
50	40	–	–	–	88	140
60	48	–	–	–	–	117

208V. THREE PHASE CIRCUIT LENGTH TABLE

BREAKER AMPACITY (AMPS)	MAX. CIRCUIT LOAD (AMPS)	MAXIMUM LENGTH IN FEET				
		NO.12	NO.10	NO.8	NO.6	NO.4
20	4	439	698	1113	–	–
	8	220	349	557	883	–
	12	127	233	371	589	935
	16	95	175	278	442	701
30	24	–	116	186	294	468
40	32	–	–	139	221	351
50	40	–	–	–	177	281
60	48	–	–	–	–	234

FEEDER & BRANCH CIRCUIT SIZING SCHEDULE - NONLINEAR LOADS

OVERCURRENT DEVICE RATING (AMPERES)	WIRE SIZE - AWG OR KCMIL		CONDUIT SIZE			NOTE
	PHASE & NEUTRAL	E.G.	4 WIRE+G (3PH & 2N)	5 WIRE+G (NOTE-7)	6 WIRE+G (3PH & 3N)	
15-20	12	12	3/4"	3/4"	3/4"	
25-30	10	10	3/4"	3/4"	3/4"	
35-40	8	10	3/4"	1"	1"	
45-50	8(6)	10	3/4"(1")	1"	1"(1 1/4")	
60	6(4)	10	1"(1 1/4")	1"(1 1/4")	1 1/4"	
70	6(4)	8	1"(1 1/4")	1"(1 1/4")	1 1/4"	
80-90	4(2)	8	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")	
100	3(2)	8	1 1/4"	1 1/2"	1 1/2"	
110	2(1)	6	1 1/2"	2"	2"	
125	1(1/0)	6	1 1/2"(2")	2"	2"	
150	1/0	6	2"	2"	2"	
175	2/0	6	2"	2"	2 1/2"	
200	3/0	6	2"	2 1/2"	2 1/2"	
225	4/0	4	2 1/2"	2 1/2"	3"	
250	250	4	3"	3"	3"	
300	350	4	3"	3 1/2"	3 1/2"	
350	500	3	3 1/2"	4"	4"	
400	500	3	3 1/2 "	4"	4"	
450	2-4/0	2-2	2-2 1/2"	2-2 1/2"	2-3"	
500	2-250	2-2	2-3"	2-3"	2-3"	
600	2-350	2-1	2-3"	2-3 1/2"	2-3 1/2"	
700	2-500	2-1/0	2-3 1/2"	2-4"	2-4"	
800	2-500	2-1/0	2-3 1/2"	2-4"	2-4"	
1000	3-400	3-2/0	3-3"	3-3 1/2"	3-4"	
1200	4-350	4-3/0	4-3"	4-3 1/2"	4-3 1/2"	
1600	5-400	5-4/0	5-3"	5-3 1/2"	5-4"	
2000	6-400	6-250	6-3"	6-3 1/2"	6-4"	

FEEDER & BRANCH CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE

OVERCURRENT DEVICE RATING (AMPERES)	WIRE SIZE - AWG OR KCMIL		CONDUIT SIZE			NOTE
	PHASE & NEUTRAL	E.G.	2 WIRE+G	3 WIRE+G	4 WIRE+G (3PH & 1N)	
15-20	12	12	3/4"	3/4"	3/4"	
25-30	10	10	3/4"	3/4"	3/4"	
35-40	8	10	3/4"	3/4"	3/4"	
45-50	8(6)	10	3/4"	3/4"	3/4"(1")	
60	6(4)	10	3/4"(1")	3/4"(1")	1"(1 1/4")	
70	6(4)	8	3/4"(1")	3/4"(1")	1"(1 1/4")	
80-90	4(2)	8	1"	1"(1 1/4")	1 1/4"	
100	3(2)	8	1"(1 1/4")	1 1/4"	1 1/4"	
110	2(1)	6	1 1/4"	1 1/4"(1 1/2")	1 1/4"(1 1/2")	
125	1(1/0)	6	1 1/4"	1 1/2"	1 1/2"(2")	
150	1/0	6	1 1/4"	1 1/2"	2"	
175	2/0	6	1 1/2"	2"	2"	
200	3/0	6	1 1/2"	2"	2"	
225	4/0	4	2"	2"	2 1/2"	
250	250	4	2"	2 1/2"	2 1/2"	
300	350	4	2 1/2"	3"	3"	
350	500	3	3"	3"	3 1/2"	
400	500	3	3"	3"	3 1/2 "	
450	2-4/0	2-2	2-2"	2-2"	2-2 1/2"	
500	2-250	2-2	2-2"	2-2 1/2"	2-2 1/2"	
600	2-350	2-1	2-2 1/2"	2-3"	2-3"	
700	2-500	2-1/0	2-3"	2-3"	2-3 1/2"	
800	2-500	2-1/0	2-3"	2-3"	3-3 1/2"	
1000	3-400	3-2/0	3-2 1/2"	3-3"	3-3"	
1200	4-350	4-3/0	4-2 1/2"	4-3"	4-3"	
1600	5-400	5-4/0	5-2 1/2"	5-3"	5-3"	
2000	6-400	6-250	6-2 1/2"	6-3"	6-3"	

TRANSFORMER CIRCUIT SIZING SCHEDULE - GENERAL PURPOSE TYPE (NOTE 6)

TRANSF. KVA	PRIMARY CIRCUIT		SECONDARY CIRCUIT	
	SWITCH/FUSE OR CIRCUIT BREAKER	PRIMARY FEEDER	SWITCH/FUSE OR CIRCUIT BREAKER	SECONDARY FEEDER
9	30/20A.	20A., 3W.	30/30A.	30A., 4W.
15	30/25A.	25A., 3W.	60/60A.	60A., 4W.
30	60/45A.	45A., 3W.	100/100A.	100A., 4W.
45	100/70A.	70A., 3W.	200/175A.	175A., 4W.
75	200/125A.	125A., 3W.	400/300A.	300A., 4W.
112 1/2	200/175A.	175A., 3W.	400/400A.	400A., 4W.
150	400/225A.	225A., 3W.	600/600A.	600A., 4W.
225	400/350A.	350A., 3W.	800/800A.	800A., 4W.
300	600/500A.	500A., 3W.	1200/1000A.	1000A., 4W.

TRANSFORMER CIRCUIT SIZING SCHEDULE - NONLINEAR LOAD TYPE (NOTE 6)

TRANSF. KVA	PRIMARY CIRCUIT		SECONDARY CIRCUIT	
	SWITCH/FUSE OR CIRCUIT BREAKER	PRIMARY FEEDER	SWITCH/FUSE OR CIRCUIT BREAKER	SECONDARY FEEDER
9	30/20A.	20A., 3W.	30/30A.	30A., 5W.-NL
15	30/25A.	25A., 3W.	60/60A.	60A., 5W.-NL
30	60/45A.	45A., 3W.	100/100A.	100A., 5W.-NL
45	100/70A.	70A., 3W.	200/175A.	175A., 5W.-NL
75	200/125A.	125A., 3W.	400/300A.	300A., 5W.-NL
112 1/2	200/175A.	175A., 3W.	400/400A.	400A., 5W.-NL
150	400/225A.	225A., 3W.	600/600A.	600A., 5W.-NL
225	400/350A.	350A., 3W.	800/800A.	800A., 5W.-NL

MOUNTING HEIGHTS

EQUIPMENT OR OUTLETS	ELEVATIONS
WALL SWITCHES	4'-0" AFF
RECEPTACLES	1'-6" AFF
TELECOMMUNICATIONS OUTLETS	1'-6" AFF
TELECOMMUNICATIONS OUTLETS – WALL PHONE	4'-6" AFF
CLOCK OUTLETS	7'-6" AFF
TV OUTLETS	5'-0" AFF
FIRE ALARM – PULL STATIONS	4'-0" AFF
FIRE ALARM – SPEAKERS, VISUAL UNITS, HORNS	7'-0" AFF
PUSHBUTTONS	4'-0" AFF
DISCONNECT SWITCHES	5'-6" AFF
MOTOR STARTERS	5'-6" AFF
PANELS & CABINETS	6'-0" TO TOP
VOLUME CONTROLS	4'-0" AFF
NURSE CALL STATIONS	4'-0" AFF
DIMMERS	4'-0" AFF
INDIVIDUAL CIRCUIT BREAKERS	5'-6" TO TOP
ACCESS CONTROL DEVICES	4'-0" AFF

MOUNTING HEIGHT NOTES:

1. ALL ELEVATIONS ARE TO CENTER LINE OF DEVICE, UNLESS OTHERWISE NOTED.
2. REFER TO ARCHITECTURAL ELEVATION DRAWINGS FOR COORDINATION WITH CASEWORK.

CIRCUIT MAXIMUM DISTANCE TABLES

NOTES:

1. CIRCUIT MAXIMUM DISTANCE IS BASED ON NEC CHAPTER 9, TABLE 8 CONDUCTOR PROPERTIES FOR COATED COPPER CONDUCTORS AT 75 DEGREES CELSIUS.
2. MAXIMUM CIRCUIT LOAD FOR DISTANCE IS BASED ON NEC 220-10(b)
3. FOR 208V, THREE PHASE MAXIMUM DISTANCE MULTIPLY 480V DISTANCE IN TABLE ABOVE BY 0.43; AND FOR 240V, THREE PHASE MULTIPLY 480V DISTANCE IN TABLE ABOVE BY 0.5.

CIRCUIT SIZING SCHEDULES NOTES:

1. BASED ON THHN/THWN, 90°., 600V., INSULATED, COPPER WIRE APPLIED AT 75° FOR TERMINATIONS RATED AT 60°C/75°C AND 75°C. FOR TERMINATIONS RATED AT 60°C PROVIDE WIRE AND CONDUIT SIZES INDICATED IN PARENTHESIS.
2. BASED ON WIRE OUTSIDE DIAMETERS AND RIGID METALLIC CONDUIT INSIDE DIAMETERS AS PROVIDED IN THE NEC. DO NOT REDUCE CONDUIT SIZE FOR NON-RIGID METALLIC APPLICATION. REFER TO NEC FOR CONDUIT TYPES MORE RESTRICTIVE THAN RIGID METALLIC.
3. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC.
4. BASED ON MOTOR RUNNING OVERLOAD PROTECTION PROVIDED BY THERMAL OVERLOAD RELAYS.
5. MOTOR STARTING TYPE BASED ON 460V., 3 PHASE, FULL VOLTAGE NON- REVERSING EXCEPT FOR MOTORS SIZED 75HP OR GREATER WHICH ARE BASED ON 460V., 3 PHASE, PART WINDING REDUCED VOLTAGE STARTING.
6. TRANSFORMER CIRCUITS BASED ON 480V TO 208/120V., 3 PHASE, 4 WIRE, DRY TYPE.
7. PROVIDE THREE PHASE WIRES AND ONE DOUBLE AMPACITY NEUTRAL FOR 110 AMPACITY CIRCUITS AND LESS. PROVIDE THREE PHASE WIRES AND TWO NEUTRAL WIRES, SIZES AS INDICATED FOR 125 AMPACITY CIRCUITS AND GREATER.
8. FOR ALL CONDUITS AND WIRES INSTALLED EXPOSED IN DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS, APPLY THE CORRECTION FACTORS PER NEC 208 TABLE 310.15(B)(2)(c) FOR AMBIENT TEMPERATURE ADJUSTMENTS.

MOTOR CIRCUIT SIZING SCHEDULE
(FOR 460V., 3 PHASE MOTORS) (NOTES 3,4,5)

MOTOR HP	SWITCH/FUSE	CIRCUIT BREAKER	STARTER SIZE/TYPE	CONDUIT & WIRE		
				PHASE	E.G.	CONDUIT
1/2	30/3A.	3A	1	12	12	3/4"
3/4	30/3A.	6A	1	12	12	3/4"
1	30/6A.	6A	1	12	12	3/4"
1 1/2	30/6A.	10A	1	12	12	3/4"
2	30/6A.	10A	1	12	12	3/4"
3	30/10A.	15A	1	12	12	3/4"
5	30/15A.	20A	1	12	12	3/4"
7 1/2	30/20A.	30A	1	12	10	3/4"
10	30/25A.	35A	1	12	10	3/4"
15	30/30A.	50A	2	10	10	3/4"
20	60/40A.	60A	2	8	10	3/4"
25	60/50A.	75A	2	6	10	1"
30	60/60A.	100A	3	6	10	1"
40	100/80A.	125A	3	4	8	1 1/2"
50	100/100A.	150A	3	3	8	1 1/2"
60	200/125A.	175A	4	1	6	1 1/2"
75	200/150A.	200A	4	1/0	6	1 1/2"
100	200/200A.	225A	4	2/0	6	2"
125	200/200A.	225A	5	3/0	6	2"
150	400/250A.	300A	5	4/0	4	2 1/2"
200	400/350A.	400A	5	350	4	3"

GENERAL NOTES: (APPLY TO ALL ELECTRICAL DRAWINGS)

1. ALUMINUM CONDUCTORS NOT TO BE USED FOR FEEDERS RATED SMALLER THAN 100A. FEEDER SIZES NOTED ON THE RISER DIAGRAM ARE FOR ALUMINUM AND COPPER. PANEL SCHEDULES INDICATE COPPER WIRE SIZES.
2. REFER TO ARCHITECTURAL SPECIFICATIONS FOR SCHEDULE OF ALTERNATES, COORDINATE ALL DEDUCT AND ADD ALTERNATE WORK REQUIREMENTS WITH ARCHITECT AND OTHER TRADES PRIOR TO BID.
3. COORDINATE WORK WITH ARCHITECTURAL, MECHANICAL, CIVIL, STRUCTURAL AND INTERIOR DESIGN DOCUMENT.
4. COORDINATE ELECTRICAL WORK REQUIREMENTS WITH OTHER TRADES, TENANT AND LANDLORD PRIOR TO BID.
5. SERVICES TO PORTIONS OF THE BUILDING OUTSIDE THE AREA OF WORK SHALL BE MAINTAINED AT ALL TIMES.
6. COORDINATE SERVICES AND SCHEDULE SHUTDOWNS WITH THE LANDLORD.
7. UL LISTED FIRESTOPPING TO BE PROVIDED FOR ALL RATED PENETRATIONS TO MAINTAIN THE RATING OF THE ASSEMBLY FOR ALL ELECTRICAL PENETRATIONS OF FIRE RATED WALLS, FLOORS AND CEILING ASSEMBLIES AS APPLICABLE.
8. ELECTRICAL WORK SHALL COMPLY WITH ALL LOCAL AND STATE ELECTRICAL CODES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION (AHJ).

ELECTRICAL LEGEND

- POLE MOUNTED LIGHTING FIXTURE
- "A" FIXTURE TYPE
- LED OR FLUORESCENT STRIP LIGHTING FIXTURE
- LED OR FLUORESCENT LIGHTING FIXTURE
- HALF SHADED LIGHTING FIXTURES WITH BUILT-IN EMERGENCY BATTERY – TYPICAL FOR ALL HALF SHADED LIGHTING SYMBOLS
- LED LIGHTING FIXTURE (DOWNLIGHTS)
- WALL MOUNTED LIGHTING FIXTURE
- EXIT LIGHTING FIXTURE
- EMERGENCY LIGHTING UNIT
- S SINGLE POLE LIGHT SWITCH
- S_2 DOUBLE POLE LIGHT SWITCH
- S_3 THREE WAY LIGHT SWITCH
- S_4 FOUR WAY LIGHT SWITCH
- S_K KEY SWITCH
- S_P SWITCH WITH PILOT LIGHT
- DUPLEX RECEPTACLE
- QUAD RECEPTACLE
- GFR DUPLEX RECEPTACLE (FOR KITCHEN PLANS SYMBOL SEE SHEET)
- J JUNCTION BOX
- DATA/TELEPHONE OUTLET
- ∇_{WT} OTHER DEVICES/WIRELESS TRANSMITTER (JACK ABOVE CEILING IN AUDITORIUMS AND PROMENADE)
- ∇_{POS} THEATRE POS NETWORK
- ∇_{WAP} WIRELESS ACCESS POINT
- ∇_{AD} THEATRE ADVERTISING CONTROL
- ∇_{PM} THEATRE PROJECTOR MANAGEMENT
- ∇_{PD} THEATRE PROJECTOR MEDIA DISTRIBUTION
- ∇_{CN} COBRANET AUDIO DISTRIBUTION
- FLUSH FLOOR TWO-GANG BOX WITH 2 DUPLEX OUTLETS WALKER #880CS2-1 FLOOR BOX
- FLUSH FLOOR THREE-GANG BOX WITH 2 DUPLEX OUTLETS – NORMAL OR EMERGENCY AND VOICE AND DATA, WALKER #880CS3-1 OR SIMILAR WITH FLANGE AS REQUIRED
- FLUSH FLOOR SINGLE-GANG BOX WITH 1 DUPLEX OUTLET – NORMAL OR EMERGENCY WALKER #880CS1-1 FLOOR BOX WITH OR SIMILAR WITH FLANGE AS REQUIRED
- F1 MULTI-SERVICE STAMPED STEEL FLUSH FLOOR BOX – TYPE F1 – WITH (2)-20A DUPLEX RECEPTACLES & (2)-DATA COMPARTMENT, WIREMOLD #RFB4 SERIES OR APPROVED EQUAL BY HUBBELL.
- TV TELEVISION OUTLET
- AV AUDIO/VIDEO OUTLET, 2-GANG BACK BOX WITH 1 1/4"C TO ABOVE ACCESIBLE CEILING, TERMINATE CONDUIT WITH INSULATING BUSHING, PROVIDE PULL STRING
- DATA TV AV CEILING MOUNTED DUPLEX RECEPTACLE, DATA/PHONE AND AV OUTLET
- CR CEILING MOUNTED DUPLEX RECEPTACLE
- TIME CLOCK, SINGLE GANG BOX, 48"AFF, 3/4"C. TO BOX FROM ABOVE SUSPENDED CEILING, REQUIRES DUPLEX OUTLET NEARBY FOR POWER
- MANUAL SINGLE PHASE MOTOR STARTER
- THREE PHASE COMBINATION MAGNETIC FUSIBLE MOTOR STARTER
- FUSIBLE DISCONNECT SWITCH
- NON-FUSIBLE DISCONNECT SWITCH
- MOTOR – SINGLE PHASE
- MOTOR – THREE PHASE
- LIGHTING AND/OR RECEPTACLE PANEL
- HOMERUN TO LIGHTING PANEL
- T TRANSFORMER
- C CONTACTOR
- CR CONTROL PANEL
- TS TIME SWITCH
- IC INTERCOM UNIT, PBX-STYLE, FLUSH MOUNTED, PROVIDE 3/4"CONDUIT FROM ACCESSIBLE CEILING AREA TO 4"X4" DEEP BACK BOX.
- TV TV OUTLET
- MUSHROOM TYPE EMERGENCY SHUT-OFF PUSHBUTTON
- SD SMOKE DETECTOR
- HD HEAT DETECTOR
- DSD DUCT SMOKE DETECTOR
- DH MAGNETIC DOOR HOLDER
- F FIRE ALARM PULL STATION
- F FIRE ALARM STROBE
- F FIRE ALARM HORN-STROBE
- F FIRE ALARM HORN/STROBE – CEILING OR PENDANT MOUNTED
- TS TAMPER SWITCH (REFER TO MECHANICAL FOR QUANTITIES)
- FS FLOW SWITCH (REFER TO MECHANICAL FOR QUANTITIES)
- A/V AUDIO/VISUAL ALARM
- FACP FIRE ALARM CONTROL PANEL – FLUSH
- FAAP FIRE ALARM ANNUNCIATOR PANEL – FLUSH
- SECURITY CAMERA
- HANDICAP DOOR ACTIVATOR
- PUSH BUTTON STATION
- PANIC ALARM PUSH BUTTON, TIED TO ALERTING SYSTEM (NURSE CALL AND/OR SECURITY) TO SUMMON HELP
- B DOORBELL
- OS OCCUPANCY SENSOR MULTI-TECHNOLOGY CEILING MOUNTED
- OS OCCUPANCY SENSOR MULTI-TECHNOLOGY WALL MOUNTED WITH LIGHT SWITCH
- OCCUPANCY SENSOR POWER PACK
- X KEY NOTE

ELECTRICAL LEGEND CONTINUED

- S S SPEAKER (WALL, CEILING)
- SB SB BASS SPEAKER (WALL, CEILING)
- SW SUBWOOFER
- PS POWER SUPPLY

HOA	HAND-OFF-AUTOMATIC
UH	UNIT HEATER
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
AFF	ABOVE FINISHED FLOOR
WP	WEATHERPROOF
NEC	NATIONAL ELECTRIC CODE
SD	SERVICE DISCONNECT
GFR	GROUND FAULT CIRCUIT INTERRUPTER
MW	MICROWAVE
GD	GARBAGE DISPOSAL
REF.	REFRIGERATOR
DW	DISHWASHER
H	MOUNTED HORIZONTALLY

LEGEND NOTES:

1. ALL OCCUPANCY SENSORS SHALL HAVE ISOLATED AUXILIARY CONTACTS FOR USE BY MECHANICAL TRADES TO CONTROL MECHANICAL EQUIPMENT.
2. THIS IS STANDARD SYMBOL LIST – SOME OF THESE SYMBOL MAY NOT APPEAR ON DRAWINGS.

ELECTRICAL DRAWING LIST

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road t | 248 | 258 | 1610
Bloomfield Hills, Michigan 48304 f | 248 | 258 | 9538

Seal:

STATE OF MICHIGAN
SALIM M. SESSINE
ENGINEER
No. 6201034939
REGISTERED PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
NH

Checked by :
WZ

Sheet Title :
ELECTRICAL LEGEND, SHEET INDEX, TABLES AND GENERAL NOTES

Project No. :
2023.175

Sheet No. :
E001

H:\ACAD\FILES\9808\8460-WSU Football Locker Renovation\CAD\ELEC\8460-E001.dwg Tue, 04 Mar 2025 - 11:51am

PROJECT:	WSU Locker Room			225A	MLO	CLASS:	120/208V,3PH,4W+G.	PANEL:	
PROJ NO:	86460	DATE:	02/25/25			MOUNTING:	FLUSH		EX.GEN-RP

BRANCH CIRC.			WATTS			CODE			REMARKS	
NO.	POLES	BKR.	BUS A	BUS B	BUS C	L	R	E		
1	3		4320		20			E		EX
3				4320				E	ELEVATOR	EX
5		60			4320			E		EX
7	2		1040					E	ELEVATOR SHAFT/SUPPLY FAN	EX
9		20		1040				E		EX
11	2								SPARE	EX
13		20								EX
15	1	20							SPARE	EX
17	1	20			400	L			ELEV. CAB LIGHTS	EX
19	1	20	400					E	ELEV. AUX. CONTROL	EX
21	1	20		400			R		HST. WAY ROOF GFI	EX
23	1	20			1000	L			SKID CKT.	EX
25	1	20	200				R		GEN. GFI	EX
27	3		4320							EX
29				4320				E	HST. WAY UNIT HEATER	EX
31		60			4320					EX
33	1	20							SPARE	EX
35	1	20							SPARE	EX
37	1	20							SPARE	EX
39	1	20							SPARE	EX
41	1	20							SPARE	EX
2	3		1440					E		EX
4				1440				E	EF-1	EX
6		20			1440			E		EX
8	2								SPARE	EX
10		20								EX
12	2								SPARE	EX
14		30								EX
16	1	20		200		L			SHAFT RECP. LIGHTS	EX
18	1	20			200	L			CNTL. RM. RECP. LIGHT	EX
20	1	20	400					E	FACP	EX
22	1	20		600				E	TWO WAY COMM.	EX
24	1	20			800			E	ELEV. SUMP	EX
26	2		3744					E	GENERATOR/120V PNL	EX
28		60		3744				E		EX
30	1	20			**600**			**E**	**SPARE**	**REF. NEW**
32	1	20	**600**					**E**	**SPARE**	**REF. NEW**
34	1	20		**800**				**E**	**SPARE**	**PROJECTOR RM 154.0 NEW**
36	1	20							SPARE	EX
38	1	20							SPARE	EX
40	1	20							SPARE	EX
42	1	20							SPARE	EX

LIGHTING LOAD		200	1,600		1800 VA	NEC 220.42	= 1800 VA
RECEPTACLE LOAD	200	400			600 VA	NEC 220.44	= 600 VA
EQUIPMENT LOAD	11,944	16,264	7,160		35368 VA	80%	= 28294 VA
TOTAL LOAD	12,144	16,864	8,760		37768 VA		= 30694 VA
* PROVIDE NEW BREAKER IN EXISTING SPACE FOR NEW ITEM					105 A		85 A
					CONNECTED LOAD		**DEMAND LOAD**

PROJECT:	WSU Locker Room			70A	MCB	CLASS:	120/208V,3PH,4W+G.	PANEL:	
PROJ NO:	86460	DATE:	02/25/25			MOUNTING:	SURFACE		EX.LP-C

BRANCH CIRC.			WATTS			CODE			REMARKS	
NO.	POLES	BKR.	BUS A	BUS B	BUS C	L	R	E		
1	1	20	200				R		SOUTH RESTROOM PLUGS	EX
3	1	20		400			R		LOCKER ROOM PLUGS	EX
5	1	15			400		R		PHONE ROOM AND ALARM PLUGS	EX
7	1	20	200				R		SOUTH RESTROOM ROOFTOP EXHAUST FANS	EX
9	1	20		400			R		SOUTH ROOFTOP SERVICE PLUG	EX
11	1	20			400		R		SOUTH ROOFTOP EXHAUST FANS	EX
13	1	20	800					E	LOCKER ROOM PROJECTION PLUG	EX
15	1	20		200			R		SOUTH ROOFTOP EXHAUST FAN	EX
17	1	20							SPARE	EX
19	1	20	600					E	JACUZZI	EX
21	2			1872				E	ICE MAKER	EX
23		30			1872			E		EX
25	1	30	1920					E	PLUG BEHIND ICE MAKER	EX
27	1	20		400				E	PLUG BEHIND ICE MAKER	EX
29	1	20			600		R		TAPE COUNTER PLUGS	EX
31	1	20	200				R		ROOF L.V. BOX GFI	EX
33	1	20		400			R		RECP. ELEV. LOBBY CLOSET	EX
35	1	20			400		R		SUMP PUMP CLOSET	EX
37	2		1872					E	FTR-25 BRIDGE	EX
39		30		1872						EX
41	1	20			800			E	BRIDGE HEAT TAPE	EX
2	1	20	400				R		ROOM #123 PLUGS	EX
4	1	20		600				E	HALL WATER COOLER	EX
6	1	20			400		R		ROOM #121 PLUGS	EX
8	1	20	600				R		ROOM #121 PLUG MOUNT	EX
10	1	20		600					SPACE	EX
12	1	20			400			E	DAKTRONIC XFORMER	EX
14	2		832					E	IT ROOM/PHONE ROOM POWER RACKS	EX
16		20		832						EX
18	**1**	**20**			**800**			**E**	**SPARE REC. RM 124.1**	**NEW**
20	**1**	**20**	**800**					**E**	**SPARE REC. RM 124.1**	**NEW**
22	**2**			**1500**				**E**	**SPARE ECUH-1**	**NEW**
24		**20**			**1500**			**E**		**NEW**
26	1	20	600				R		TRAINING ROOM PLUGS	EX
28	1	20		400			R		TRAINING ROOM PLUGS	EX
30	1	20			1000		R		WATER HEATER	EX
32	1	20	800					E	DRYER	EX
34	1	20		400			R		EQUIPMENT ROOM PLUGS	EX
36	1	20			400			E	EQUIPMENT ROOM ROOFTOP EXHAUST FAN	EX
38	3		2160					E		EX
40				2160				E	WASHER	EX
42		30			2160			E		EX

LIGHTING LOAD						NEC 220.42	=
RECEPTACLE LOAD	2,200	2,200	3,200		7600 VA	NEC 220.44	= 7600 VA
EQUIPMENT LOAD	9,784	6,532	7,932		24248 VA	65%	= 15761 VA
TOTAL LOAD	11,984	8,732	11,132		31848 VA		= 23361 VA
* PROVIDE NEW BREAKER IN EXISTING SPACE FOR NEW ITEM					88 A		65 A
					CONNECTED LOAD		**DEMAND LOAD**

PROJECT:	WSU Locker Room			70A	MCB	CLASS:	120/208V,3PH,4W+G.	PANEL:	
PROJ NO:	86460	DATE:	02/25/25			MOUNTING:	SURFACE		EX.LP-B

BRANCH CIRC.			WATTS			CODE			REMARKS	
NO.	POLES	BKR.	BUS A	BUS B	BUS C	L	R	E		
1	1	20	600				R		ROOM #124 PLUGS	EX
3	1	20		600			R		ROOM #124,122 EXHAUST PLUGS	EX
5	1	15			**900**		**R**		**ROOM #124,122 PLUGS REC. RM 104.1**	**NEW**
7	1	20	600				R		ROOM #122,112,110 PLUGS	EX
9	1	20		600			R		ROOM #110,108 PLUGS	EX
11	1	20			600		R		ROOM #108,103 PLUGS	EX
13	1	20	200					E	NORTH ROOF TOP EXHAUST FANS	EX
15	1	20		600			R		NORTH ROOF TOP SERVICE DUPLEX	EX
17	1	20			600		R		WEST SPARE	EX
19	1	30	600					E	ROOM I/VIDEO ROOM	EX
21	1	20		720			R		RECEPTACLES SOUTH	EX
23	1	20			720		R		RECEPTACLES SOUTH	EX
25	1	20	400				R		RECEPTACLES SOUTH	EX
27	1	20		400			R		RECEPTACLES SOUTH	EX
29	1	20			600		R		RECEPTACLES SOUTH	EX
2	1	20	900				R		**ROOM #121,118 PLUGS REC. RM 107.0**	**NEW**
4	1	20		900			R		**ROOM #119,117,115 PLUGS REC. RM 111.0**	**NEW**
6	1	20			900		R		**ROOM #113,111 PLUGS REC. RM 115.0**	**NEW**
8	1	20	1080				R		**ROOM #109 PLUGS REC. RM 119.0.**	**NEW**
10	1	20		600			R		**ROOM #107 PLUGS REC. RM 123.0**	**NEW**
12	1	20			400		E		ROOM #106 EXHAUST FANS	EX
14	1	20	200				R		NORTH RESTROOM PLUGS	EX
16	1	20		600				E	**ROOM #106 HEAT.FAN DED. RM 123.0**	**NEW**
18	1	20			600			E	**EAST SPARE DED. RM 121.0**	**NEW**
20	1	20	600					E	**CONTROL CIR. DED. RM 121.0**	**NEW**
22	1	20		600			R		GFI SOUTH BLEACHERS GENERAL PLUG	EX
24	1	20			600		E		GFI SOUTH BLEACHERS COMCAST BOX	EX
26	1	20	600				R		GFI SOUTH BLEACHERS GENERAL PLUG	EX
28	1	20		600			R		GFI SOUTH BLEACHERS GENERAL PLUG	EX
30	1	20			600		R		GFI SOUTH BLEACHERS GENERAL PLUG	EX

LIGHTING LOAD						NEC 220.42	=
RECEPTACLE LOAD	4,380	5,620	4,920		14920 VA	NEC 220.44	= 12460 VA
EQUIPMENT LOAD	1,400	600	1,600		3600 VA	80%	= 2880 VA
TOTAL LOAD	5,780	6,220	6,520		18520 VA		= 15340 VA
* PROVIDE NEW BREAKER IN EXISTING SPACE FOR NEW ITEM					51 A		43 A
					CONNECTED LOAD		**DEMAND LOAD**

PROJECT:	WSU Locker Room			80A	MLO	CLASS:	277/480V,3PH,4W+G.	PANEL:	
PROJ NO:	86460	DATE:	02/24/25			MOUNTING:	SURF.		EX.LP-A

BRANCH CIRC.			WATTS			CODE			REMARKS	
NO.	POLES	BKR.	BUS A	BUS B	BUS C	L	R	E		
1	1	20	1170			L			**NORTH OFFICE LIGHTING CORR. LGT VIA RLP**	**NEW**
3	1	20		1320		L			**EMG. LIGHTS HALL LIGHTING LIGHTING**	**NEW**
5	1	20			732	L			EXTERIOR LIGHTING	EX
7	1	20	800			L			EQUIPMENT ROOM LIGHTING	EX
9	1	20		1770		L			**EAST SPARE LIGHTING**	**NEW**
11	1	20			600	L			NORTH RESTROOM LIGHTING	EX
13	3		5760					E		
15				5760				E	TRANSFORMER	EX
17		60			5760			E		
2	1	20	800			L			LIGHTING UNDER STADIUM BLEACHERS	EX
4	1	20		2190		L			LOCKER ROOM EM LGHTS/SHOWER LIGHTS	EX
6	1	20			1700	L			**SPARE LIGHTING**	**NEW**
8	1	20	**4000**					**E**	**SPARE EUH-1**	**NEW**
10	2			2496				E	SOFT BALL PRESS BY	EX
12		40			2496			E		
14	1	20	800			L			LIGHTING SOUTH	EX.
16	1	20		800		L			LIGHTING SOUTH	EX.
18	1	20			2060	L			**LIGHTING SOUTH LIGHTING**	**NEW**

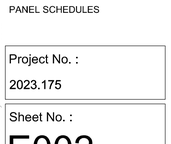
LIGHTING LOAD	3,570	6,080	5,092		14742 VA	NEC 220.42	= 14742 VA
RECEPTACLE LOAD						NEC 220.44	=
EQUIPMENT LOAD	9,760	8,256	8,256		26272 VA	85%	= 22331 VA
							=
TOTAL LOAD	13,330	14,336	13,348		41014 VA		= 37073 VA
					49 A		45 A
					CONNECTED LOAD		**DEMAND LOAD**

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road t | 248 | 258 | 1610
Bloomfield Hills, Michigan 48304 f | 248 | 258 | 9538

Seal:



Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
NH

Checked by :
WZ

Sheet Title :
PANEL SCHEDULES

Project No. :
2023.175

Sheet No. :
E002

DEMOLITION GENERAL NOTES

A. REFER TO SHEET E001 FOR ELECTRICAL LEGEND.

B. THESE DEMOLITION NOTES AND PLAN DO NOT FULLY REPRESENT ALL DEMOLITION WORK REQUIRED TO INSTALL NEW WORK IN ACCORDANCE WITH CONTRACT DOCUMENTS, BUT ARE INTENDED TO SERVE AS GENERAL DEMOLITION GUIDELINES. REFER TO ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF INCIDENTAL DEMOLITION WORK NOT INDICATED ON THIS PLAN. NOT ALL ELECTRICAL DEVICES, LIGHTING, EQUIPMENT, ETC. ARE INDICATED ON THESE PLANS, FIELD VERIFY EXISTING CONDITIONS.

C. ALL ITEMS INDICATED ON THESE DEMOLITION PLANS ARE TO BE DISCONNECTED AND REMOVED (ALL CROSS HATCHED AND DOTTED LINE ITEMS ARE TO BE DISCONNECTED AND REMOVED); ALL DOTTED LINE ITEMS INDICATED WITH EX. TO BE DISCONNECTED AND RELOCATED; EX. – INDICATES EXISTING ITEM TO REMAIN.

D. MAINTAIN CIRCUIT CONTINUITY TO ALL EXISTING TO REMAIN ITEMS ON THE SAME CIRCUIT OUTSIDE OF RENOVATION AREA.

E. DISCONNECT AND REMOVE ALL ELECTRICAL EQUIPMENT AND DEVICES ON WALLS TO BE DEMOLISHED OR INTERFERING WITH THE NEW WORK. COORDINATE WITH ARCHITECT AND OWNER.

F. DEMOLITION WORK SHALL INCLUDE ALL ASSOCIATED AND ABANDONED BOXES, CONDUITS, WIRING, SURFACE RACEWAYS, ETC. REFER TO SPECIFICATIONS FOR ADDITIONAL DEMOLITION REQUIREMENTS.

G. PROVIDE NEW TYPEWRITTEN DIRECTORIES IN ALL PANELS DISTURBED DUE TO NEW WORK. ALL SPARE BREAKERS TO BE PLACED IN "OFF" POSITION. IDENTIFY ALL CIRCUITS: EXISTING, NEW OR SPARE, REFER TO SPECIFICATIONS FOR ADDITIONAL INFO.

H. PROVIDE COVERPLATES FOR ALL ABANDONED DEVICES, REFER TO SPECIFICATION.

I. COORDINATE WITH ARCHITECTURAL, INTERIOR DESIGNER, STRUCTURAL & MECHANICAL DRAWINGS FOR COMPLETE SCOPE OF DEMOLITION WORK.

J. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE AMOUNT OF DEMOLITION REQUIRED PRIOR TO BID SUBMITTAL.

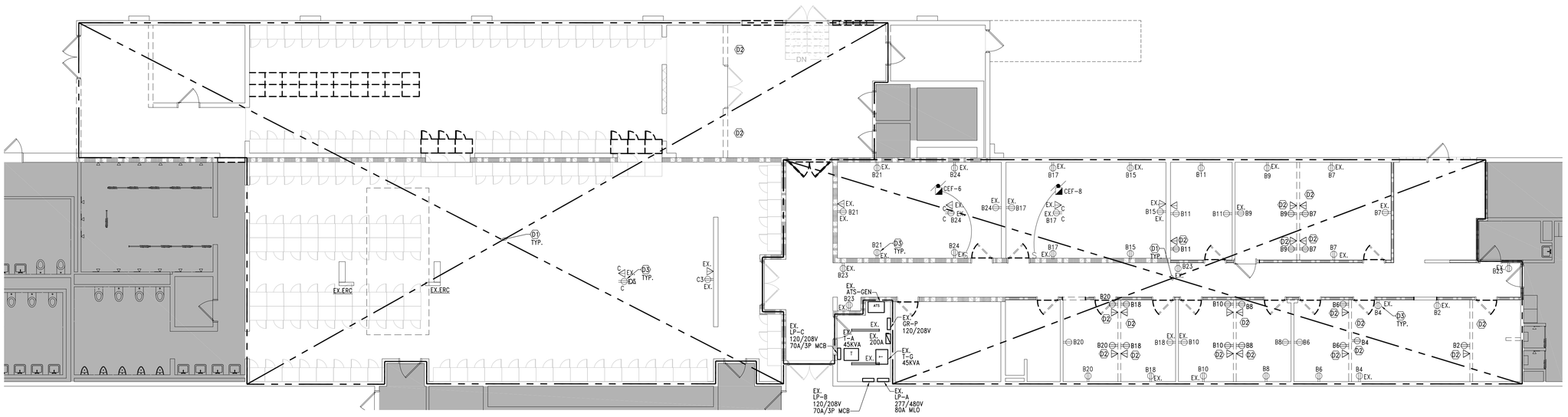
K. TRACE BACK TO PANELBOARDS ALL BRANCH CIRCUITS WITHIN THE RENOVATED AREAS, IDENTIFY ALL CIRCUITS THAT ARE TO REMAIN AND THE CIRCUITS THAT ARE TO BECOME AVAILABLE AFTER THE DEMOLITION WORK. EXISTING TO REMAIN BRANCH CIRCUITS TO BE PROTECTED DURING THE RENOVATION. THE BRANCH CIRCUITS THAT ARE BECOMING AVAILABLE TO BE RE-USED FOR THE NEW WORK. REFER TO GENERAL NOTE-G ABOVE.

KEYED DEMOLITION NOTES:

(D1) DISCONNECT AND REMOVE EXISTING LIGHTING FIXTURES WITHIN THE RENOVATED AREA, AND ASSOCIATED LIGHTING CONTROLS, UNLESS OTHERWISE NOTED, EX. INDICATES EXISTING ITEM TO REMAIN. NOT ALL ITEMS ARE INDICATED ON THESE PLANS, FIELD VERIFY EXISTING CONDITIONS AND COORDINATE WITH ARCHITECT/TENANT AND LANDLORD FOR ALL ITEMS TO REMAIN.

(D2) DISCONNECT AND REMOVE EXISTING ELECTRICAL AND TELECOMMUNICATION DEVICES LOCATED ON THE DEMOLISHED WALLS. RE-WORK BRANCH CIRCUIT WIRING TO MAINTAIN SERVICE TO EXISTING TO REMAIN OUTLETS AFFECTED BY THIS DEMO WORK.

(D3) ALL INFORMATION SHOWN INCLUDING CIRCUIT NUMBERS WERE OBTAINED FROM EXISTING DOCUMENTS PROVIDED BY THE ARCHITECT/OWNER AND MAY NOT REPRESENT ACTUAL BREAKER NUMBER, TRACE AND LABEL ACCORDINGLY.



1 ED100 DEMOLITION FLOOR PLAN - ELECTRICAL
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan 48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

STATE OF MICHIGAN
SALIM M SESSINE
ENGINEER
No. 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

[redacted]

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : NH
Checked by : WZ
Sheet Title : DEMOLITION FLOOR PLAN - ELECTRICAL

Project No. : 2023.175
Sheet No. : ED100

LIGHTING CONTROL MATRIX SCHEDULE

LIGHTING CONTROL TAG	ROOM/SPACE TYPE	CONTROLS	AUTOMATIC LIGHTING CONTROL	LOCAL CONTROL	MANUAL ON	PARTIAL AUTO ON	BI-LEVEL	DAYLIGHT		AUTOMATIC PARTIAL OFF (IN APPLIES)	AUTOMATIC FULL OFF	SCHEDULED FULL OFF	NOTES
BASED ON ASHRAE 90.1-2013 TABLE 9.6.1 – CONTROL FUNCTIONS				a	b	c	d	e	f	g	h	i	
LC1	CLASSROOM/ CONFERENCE ROOM/ BREAK ROOM	LOCAL/DIM/OS	OCCUPANCY SENSOR (OS)	YES	B OR C	B OR C	YES			NO	YES	NO	
LC2	LOBBY/VESTIBULE	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	NO	NO	NO			NO	H OR I	H OR I	
LC3	CORRIDOR	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	NO	NO	NO			YES	H OR I	H OR I	
LC4	OFFICE	LOCAL/DIM/OS	OCCUPANCY SENSOR (OS)	YES	B OR C	B OR C	YES			NO	H OR I	H OR I	
LC5	LOCKER	LOCAL/DIM/TS	RELAY PANEL TIMER (TIME CLOCK)	YES	NO	NO	NO			NO		YES	

LIGHTING CONTROL NOTES:

1. CONTRACTOR TO PROVIDE MOTION SENSORS, DAYLIGHT SENSORS, ROOM CONTROLLERS, AND ACCESSORIES AS REQUIRED FOR A FULLY OPERATIONAL INSTALLATION PER 2015 MICHIGAN ENERGY CODE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL ROOM CONTROLLERS/POWER PACKS AND ASSOCIATED WIRING FOR MULTIPLE SWITCH LEG LOCATIONS. SEE PLANS FOR EXACT SWITCH LEGS WITH-IN EACH AREA OR ROOM. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHTING CONTROL MANUFACTURER'S DEVICE LAYOUT AS PART OF SHOP DRAWINGS SUBMITTALS.
2. ELECTRICAL CONTRACTOR IS TO INCLUDE THE SCOPE OF A LIGHTING CONTROLS DESIGNER/INSTALLER AS SUBCONTRACTOR TO ELECTRICAL CONTRACTOR TO PROVIDE FINAL DESIGN, DOCUMENTATION, PROGRAMING, AND INSTALLATION OF THE LIGHTING CONTROLS. CONTRACT DOCUMENTS INCLUDE INTENDED FUNCTIONALITY ONLY.
3. TO PREVENT FALSE ACTIVATION, MOUNT CEILING MOUNT SENSORS AWAY FROM DIFFUSERS AND THE PATH OF STRONG AIR TURBULENCE A MINIMUM OF FOUR FEET FOR STANDARD SENSITIVITY AND SIX FEET FOR MAXIMUM SENSITIVITY.
4. LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE WITHIN THE RANGE OF COVERAGE(S) OF CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREA TO ACCOMMODATE ALL OCCUPANCY HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM(S).
5. PROVIDE THE QUANTITY OF ROOM CONTROLLERS AND POWER PACKS NEEDED TO CONTROL SWITCH LEGS AND VOLTAGES INDICATED.
6. UNLESS OTHERWISE INDICATED, ADJUST MOTION SENSOR TIME TO TURN OFF CONTROLLED LIGHTING AFTER 20 MINUTES.
7. INCLUDE TESTING BY AN INDEPENDENT THIRD PARTY TESTING AGENCY OR INDEPENDENT COMMISSIONING AGENT AS REQUIRED BY THE MICHIGAN ENERGY CODE (ASHRAE 90.1-2013). TEST, CERTIFY AND PROVIDE DOCUMENTATION OF LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANSI/ASHRAE/IES STANDARD 90.1-2013, SECTION 9.4.3 (FUNCTION TESTING).
8. PROVIDE DAY LIGHT SENSORS WHERE LIGHTING FIXTURES FALL WITHIN TOP/SIDE LIGHTED AREAS FOR BOTH PRIMARY AND SECONDARY ZONES AS DEFINED BY ASHRAE 90.1-2013, SECTION 9.4.1.1-e AND SECTION 9.4.1.1-f.
9. INTEGRATE CONTROLS FOR UNDERCABINET LIGHTING TO PROVIDE AS MANUAL ON/AUTOMATIC OFF BY SAME SENSOR(S) SERVING GENERAL LIGHTING IN SPACE/ROOM.
10. IN ROOMS WITH PARTIAL ON CONTROL, PROGRAM ASSOCIATED SWITCH FOR FULL ON AND MANUAL OFF IN ADDITION TO AUTOMATIC OFF VIA OCCUPANCY SENSOR.
11. FOR AUTOMATIC DAYLIGHT RESPONSIVE CONTROLS SET DAYLIGHT SENSOR TO MAINTAIN THE SAME LIGHTING LEVELS AS THE LEVELS OUTSIDE THE DAYLIGHT AREA.

LIGHTING FIXTURE SCHEDULE:

"A" LED RECESSED CONTINUOUS LINEAR LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS. EXTRUDED ALUMINUM HOUSING, FINISH TO BE SELECTED BY ARCHITECT/OWNER, 277V HPF ELECTRONIC DRIVER, DIMMING CONTROL, 9.3W/FT, 932LM/FT. FINELITE #HP-4-R-D-V-277-SC-FC OR APPROVED EQUAL.

"A1" SAME AS TYPE "A" EXPECT PENDANT DIRECT LIGHTING FIXTURE.

"B" LED RECESSED DOWNLIGHT, 6" APERTURE, CLEAR SPECULAR LOW IRIDESCENT ALZAK FINISH REFLECTOR, 120/277V, 0-10V DIMMING, 24W WITH MINIMUM 2000 LUMEN PACKAGE. ELITE #HH6 SERIES OR APPROVED EQUAL.

"C" LED COVE LIGHTING FIXTURE 12"/24" AS REQUIRED FOR CONTINUOUS MOUNTING IN COVE. LIGHT LEVEL 1. 120/277V HPF DRIVER & 765LM/FT, 8W/FT. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND MOUNTING REQUIREMENTS. AMETRIX #LC32-1-30K-1-D10-UNV-12 OR APPROVED EQUAL.

"D" LED SUSPENDED PENDANT LIGHTING FIXTURE SELECTED BY ARCHITECT/OWNER, 277V MAX. 25W. FIXTURE TO BE ALIGN WITH ADJACENT CEILING HEIGHT.

"EA" LED UNIVERSAL MOUNT SELF CONTAINED EMERGENCY BATTERY UNIT. WHITE FINISH. NI-CAD BATTERY WITH SELF-DIAGNOSTICS, NO AUDIO ALARM, UNIV. INPUT 120-277V & (2)-5.4W 12V LED HEADS. COMPASS #CU2HLHO SERIES OR APPROVED EQUAL.

"RE" WEATHERPROOF REMOTE EMERGENCY HEAD ASSEMBLED AS A SMALL WALL SCONCE SHAPE. NEMA 3R LISTED. DIE CAST ALUMINUM HOUSING. FULLY GASKETED COVER, POLYCARBONATE DIFFUSER WITH (2)-1W-3V LED LIGHTS, BLACK FINISH. COMPASS #COR SERIES OR APPROVED EQUAL.

"OA" OUTDOOR LED WALL-MOUNTED WET LOCATION RATED LIGHTING FIXTURE, DIE-CAST ALUMINUM HOUSING, FULL CUT-OFF, 2 MODULES, 10 LED'S, 700MA DRIVER, 4000K COLOR TEMPERATURE, PHOTO CONTROL, TYPE IV DISTRIBUTION, BUG RATING: B1-U0-G1, 120/277V HPF ELECTRONIC DRIVER & 2000LM, 47W. LITHONIA #WST-LED-2-10A700/40K-SR4-MVOLT OR APPROVED EQUAL.

"OB" LED OUTDOOR SURFACE MOUNTED LIGHTING FIXTURE, WET LOCATION WITH IP65 RATED, BLACK MATTE TEXTURED FINISHED, 4000K COLOR TEMPERATURE, 120/277V HPF ELECTRONIC DRIVER, 0-10V DIMMING & 5700LM AND 50W. BEACON #SRT2 SERIES OR APPROVED EQUAL.

"X" LED EXIT SIGN UNIVERSAL MOUNT, SINGLE OR DOUBLE FACE AND DIRECTIONAL ARROWS AS INDICATED, RED LETTERS, WHITE HOUSING, 120/277V. COMPASS #CE SERIES OR APPROVED EQUAL.

"X1" SAME AS "X" EXCEPT WITH (2)-SIDE MOUNTED HEADS AND 10W EXTRA REMOTE CAPACITY. COMPASS #CC SERIES OR APPROVED EQUAL.

LIGHTING FIXTURE SCHEDULE NOTES:

1. ALL LIGHTING FIXTURES COLOR TEMPERATURE TO BE 4100K. ALL TO BE VERIFIED WITH ARCHITECT/OWNER.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL LAMP AND DRIVER REQUIREMENTS.
3. COORDINATE MOUNTING OF ALL LIGHTING FIXTURES WITH THE ARCHITECTURAL PLANS, PROVIDE MOUNTING HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION FOR THE CEILING TYPES THE FIXTURES ARE BEING INSTALLED.
4. ALL FIXTURE FINISHES/COLORS/TRIMS TO BE COORDINATED WITH OWNER/ARCHITECT.
5. FOR ALL PENDANT MOUNTED LIGHTING FIXTURES PROVIDE CABLE SUSPENSION LENGTHS AS REQUIRED FOR THE MOUNTING HEIGHTS INDICATED ON THE ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS.
6. DIMMERS TO BE COMPATIBLE WITH THE DIMMING DRIVERS, PROVIDE TYPES AND RATINGS AS REQUIRED FOR THE LOADS CONTROLLED.

GENERAL LIGHTING NOTES:

A. ALL LIGHTING FIXTURES INDICATED ON THESE PLANS ARE TYPE "A" UNLESS OTHERWISE NOTED.

B. REFER TO SHEET E001 FOR ELECTRICAL LEGEND.

C. REFER TO SPECIFICATIONS FOR ADDITIONAL LAMP AND BALLAST REQUIREMENTS.

D. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS, ELEVATIONS AND SECTIONS FOR EXACT LOCATION OF ALL CEILING, PENDANT & WALL MOUNTED LIGHTING FIXTURES.

E. IN ADDITION TO THE LOCAL SWITCHES SHOWN FOR THE RENOVATED AREAS, PROVIDE A COMPLETE OCCUPANCY SENSOR, DAYLIGHT SENSORS AND RELAY PANEL BASED AUTOMATIC LIGHTING CONTROL SYSTEM NOT ALL DEVICES ARE NOT INDICATED ON THESE PLANS SYSTEM SHALL BE LAYED OUT ON A PERFORMANCE BASIS, TYPICAL FOR ALL ROOMS/AREAS AS SPECIFIED, REFER TO LIGHTING CONTROL MATRIX AND SPECIFICATIONS.

F. ALL WIRING SHALL BE SIZED PROPERLY FOR FULL COMPLIANCE WITH THE NEC REQUIREMENTS FOR AMPACITY AND MAXIMUM VOLTAGE DROP LIMITATIONS, REFER TO SHEET E001 FOR CIRCUIT LENGTH TABLES.

G. COORDINATE LOCATION OF ALL SWITCHES WITH DOOR LOCATIONS SHOWN ON THE ARCHITECTURAL PLANS.

H. PROPOSED EQUAL LIGHTING FIXTURES TO BE SUBMITTED FOR ARCHITECT/OWNER REVIEW AND APPROVAL PRIOR TO BID.

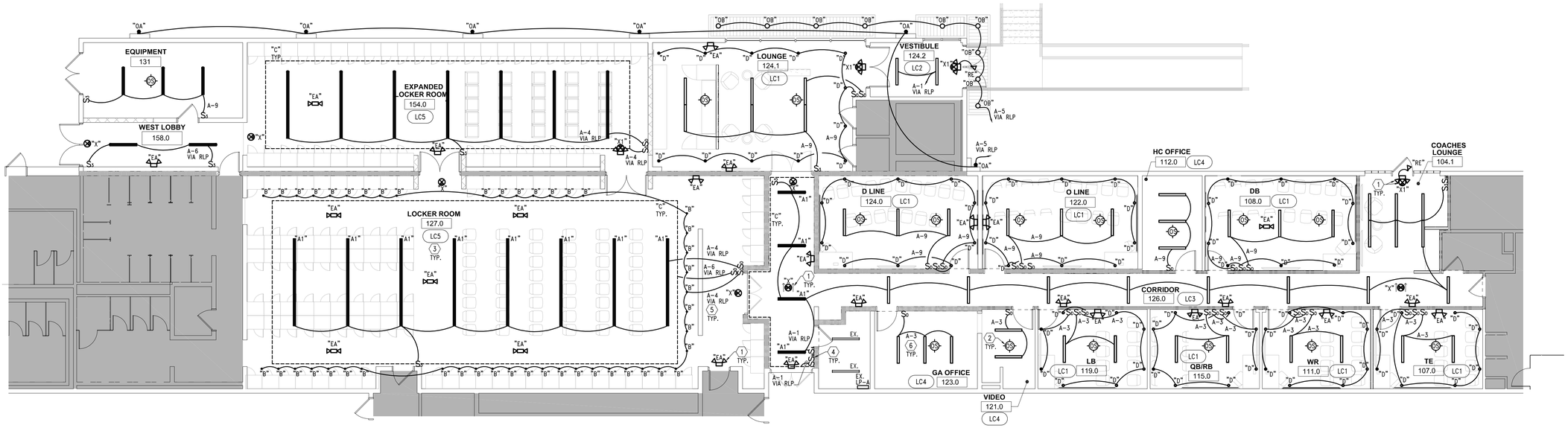
I. FOR ALL ROOMS WITH MECHANICAL EQUIPMENT (MECHANICAL ROOMS AND CLOSETS ETC.) EXACT LOCATIONS FOR LIGHTING FIXTURES TO BE COORDINATED WITH DUCTWORK AND PIPING TO AVOID INTERFERENCES.

J. ALL ELECTRICAL DEVICES SHALL BE LISTED FOR THE INTENDED USE.

K. MAINTAIN SERVICE CONTINUITY TO ALL EXISTING TO REMAIN ITEMS ON THE SAME BRANCH CIRCUITS OR CONNECT TO NEAREST AVAILABLE OR PROVIDE NEW AS REQUIRED. FIELD VERIFY EXISTING CONDITIONS, TRACE BACK TO SOURCE AND IDENTIFY ALL EXISTING BRANCH CIRCUITS SERVING THE AREA.

KEYED LIGHTING NOTES:

1. ALL EXIT LIGHTS, AND EMERGENCY BATTERY UNITS SHALL BE WIRED TO AREA/ROOM NORMAL BRANCH CIRCUIT AHEAD OF LOCAL AND AUTOMATIC LIGHTING CONTROL.
2. PROVIDE OCCUPANCY SENSORS AS REQUIRED, DEVICES INDICATED ARE FOR REFERENCE ONLY, REFER TO GENERAL NOTE-E AND SPECIFICATIONS.
3. LIGHTING CONTROL TAG. REFER TO LIGHTING CONTROL MATRIX FOR ADDITIONAL WORK/REQUIREMENTS.
4. PROVIDE LOW VOLTAGE MASTER OVERRIDE SWITCHES FOR THE RELAY PANEL TIMER OVERRIDE CONTROL OF ALL THE LIGHTING, EXTERIOR AND INTERIOR. EXACT LOCATIONS AND QUANTITIES TO BE COORDINATED WITH ARCHITECT/OWNER.
5. VIA RLP INDICATES LIGHTING FIXTURES ON AUTOMATIC TIMER CONTROL WITH PRE-SET SCHEDULE, REFER TO GENERAL LIGHTING NOTES THIS SHEET.
6. RE-USE EXISTING BRANCH CIRCUITS SALVAGED FROM DEMOLITION FOR NEW LOADS OR PROVIDE NEW BRANCH CIRCUITS AS INDICATED, BRANCH CIRCUIT NUMBERS INDICATED ARE FOR PANEL DESIGNATIONS ONLY, FIELD VERIFY EXISTING CONDITIONS. USE EXISTING SPARE BREAKERS IN NEAREST AVAILABLE PANELBOARDS AS REQUIRED, FIELD VERIFY EXISTING CONDITIONS.



1 E210 FLOOR PLAN - LIGHTING
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road t | 248 | 258 | 1610
Bloomfield Hills, Michigan 48304 f | 248 | 258 | 9538

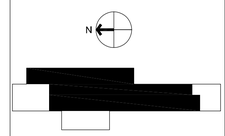
Seal:

STATE OF MICHIGAN
SALIM M. SESSINE
ENGINEER
No. 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : NH
Checked by : WZ
Sheet Title : FLOOR PLAN - LIGHTING

Project No. : 2023.175

Sheet No. : E210

H:\ACAD\FILES\08086460-WSU Football Locker Renovation\CAD\ELEC\086460-E210.dwg Tue, 04 Mar 2025 - 11:51am

KEYED POWER NOTES:

1. PROVIDE FIRE ALARM DEVICES AS REQUIRED, REFER TO GENERAL NOTE-B THIS SHEET.
2. ALL RECEPTACLES LOCATED WITHIN 6'-0" OF A WATER SOURCE AND ALL IN THE KITCHENS SHALL BE GFR TYPE. PROVIDE GFR RECEPTACLES REGARDLESS OF SYMBOL USED ON PLAN FOR THESE LOCATIONS.
3. RE-USE EXISTING BRANCH CIRCUITS SALVAGED FROM DEMOLITION FOR NEW LOADS OR PROVIDE NEW BRANCH CIRCUITS AS INDICATED. BRANCH CIRCUIT NUMBERS INDICATED ARE FOR PANEL DESIGNATIONS ONLY. FIELD VERIFY EXISTING CONDITIONS. USE EXISTING SPARE BREAKERS IN NEAREST AVAILABLE PANELBOARDS AS REQUIRED, FIELD VERIFY EXISTING CONDITIONS.
4. PROVIDE NEW DEVICES AND COVER PLATES FOR ALL EXISTING LOCATIONS TO MATCH NEW INSTALLATIONS, RE-WIRE DEVICES AS INDICATED.
5. REFER TO ARCHITECTURAL ELEVATIONS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL ELECTRICAL AND TELECOMMUNICATIONS DEVICES. MOUNTING HEIGHTS SHOWN ARE TYPICAL FOR ALL SIMILAR ROOMS PRESENT ON THIS FLOOR.
6. DUPLEX RECEPTACLES AND DATA OUTLETS FOR FLAT SCREEN TV SHALL BE MOUNTED AT 5'-6"AFF UNLESS OTHERWISE NOTED, COORDINATE WITH ARCHITECT/OWNER FOR EXACT QUANTITIES, LOCATIONS AND MOUNTING HEIGHTS.
7. WIRE TO EXISTING AREA RECEPTACLE BRANCH CIRCUIT, NOT TO EXCEED 16A ON THE 20A/1P BRANCH CIRCUIT, FIELD VERIFY EXISTING CONDITIONS.
8. CEILING MOUNTED WIRELESS ACCESS POINT. PROVIDED BY WSU C&IT, INSTALLED BY CONTRACTOR. COORDINATE MOUNTING WITH ANY PROJECTOR'S TO ENSURE NO DISRUPTION TO PROJECTOR FUNCTION.

GENERAL POWER NOTES:

A. REFER TO SHEET E001 FOR ELECTRICAL LEGEND AND GENERAL NOTES.

B. PROVIDE COMPLETE FIRE ALARM SYSTEM COVERAGE FOR THE RENOVATED AREAS AS AN EXTENSION OF THE EXISTING BUILDING FIRE ALARM SYSTEM. FIRE ALARM SYSTEM SHALL INCLUDE MONITORING, POWER SUPPLIES, INITIATING DEVICES, INDICATING APPLIANCES, CONTROL MODULES AND WIRING AS REQUIRED BY AUTHORITIES HAVING JURISDICTION. RELOCATE EXISTING DEVICES AND PROVIDE NEW AS REQUIRED. DEVICES ARE NOT SPECIFICALLY INDICATED ON PLANS AND ARE FOR REFERENCE ONLY. SYSTEM SHALL BE LAID OUT ON A PERFORMANCE BASIS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

C. EXACT LOCATIONS AND REQUIREMENTS FOR ALL EQUIPMENT AND OUTLETS FOR THE EQUIPMENT SHALL BE VERIFIED WITH OWNER, EQUIPMENT SUPPLIER AND ARCHITECT PRIOR TO INSTALLATION AND ALL EQUIPMENT SHALL BE PER MANUFACTURER'S INSTALLATION REQUIREMENTS.

D. COORDINATE ALL WORK AND REQUIREMENTS FOR COMPLETE INSTALLATIONS WITH OTHER SYSTEM PROVIDERS: FIRE ALARM, SECURITY, SOUND, TELECOMM, LIGHTING CONTROLS SYSTEM, ETC.

E. PROVIDE FIRE STOPPING SYSTEM WHERE REQUIRED TO MAINTAIN THE FIRE RESISTANCE RATING.

F. COORDINATE EXACT LOCATIONS, MOUNTING HEIGHTS & REQUIREMENTS FOR ALL DEVICES WITH LATEST ARCHITECTURAL AND INTERIOR DESIGN PLANS, FURNITURE PLANS & EQUIPMENT LAYOUTS & ELEVATIONS.

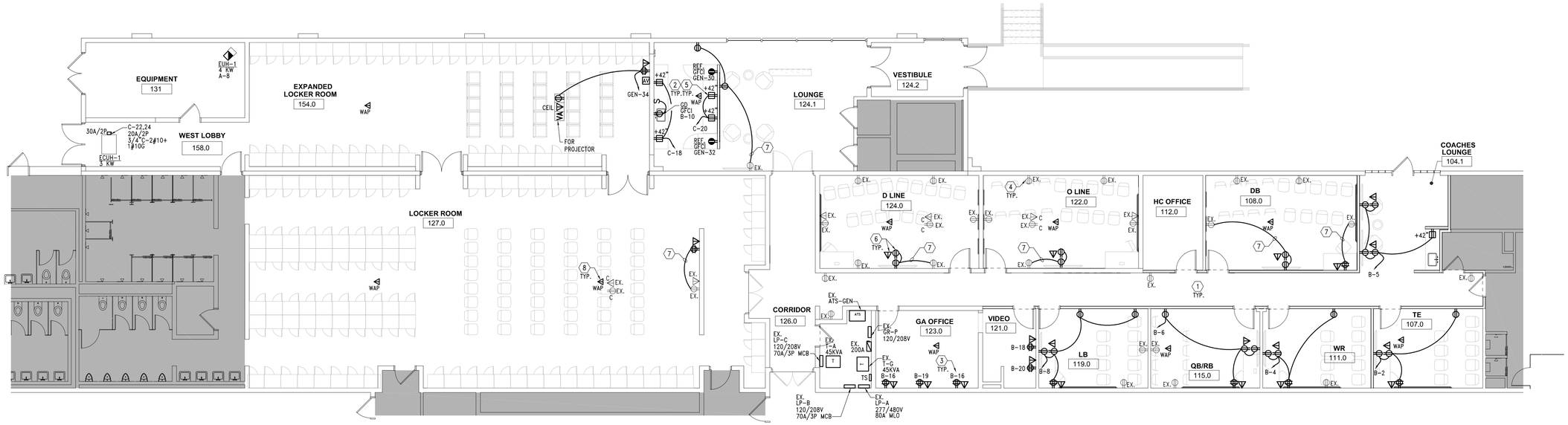
G. ALL DEVICES AT COUNTER LOCATIONS TO BE MOUNTED ABOVE THE COUNTER AT +42"AFF OR AS NOTED ON THESE PLANS. COORDINATE WITH ARCHITECT/OWNER, INTERIOR DESIGNER AND MILLWORK CONTRACTOR FOR EXACT LOCATIONS.

H. GROUND FAULT PROTECTION FOR DEVICES INSTALLED AT LOCATIONS NOT READILY ACCESSIBLE, PROVIDE GROUND FAULT BLANK FACE DEVICE AT ACCESSIBLE LOCATION OR PROVIDE GFCI BRANCH BREAKER IN PANELBOARD.

I. MAINTAIN SERVICE CONTINUITY TO ALL EXISTING TO REMAIN ITEMS ON THE SAME BRANCH CIRCUITS OR CONNECT TO NEAREST AVAILABLE OR PROVIDE NEW AS REQUIRED. FIELD VERIFY EXISTING CONDITIONS, TRACE BACK TO SOURCE AND IDENTIFY ALL EXISTING BRANCH CIRCUITS SERVING THE AREA.

J. PROVIDE NEW DEVICE AND COVER PLATE FOR ALL LOCATIONS WHERE EXISTING DEVICE IS REMAINING.

K. PROVIDE NEW TYPEWRITTEN DIRECTORIES IN ALL PANELS DISTURBED DUE TO NEW WORK. ALL SPARE BREAKERS TO BE PLACED IN "OFF" POSITION. IDENTIFY ALL CIRCUITS: EXISTING, NEW OR SPARE.



1 E310 FLOOR PLAN - POWER
1/8" = 1'-0"

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan 48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

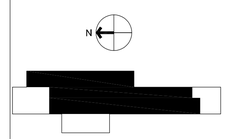
Seal:

STATE OF MICHIGAN
SALIM M. SESSINE
ENGINEER
No. 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :
WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:



Issued for

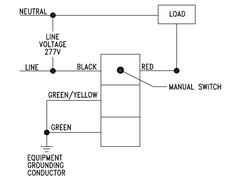
50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by : NH
Checked by : WZ
Sheet Title : FLOOR PLAN - POWER

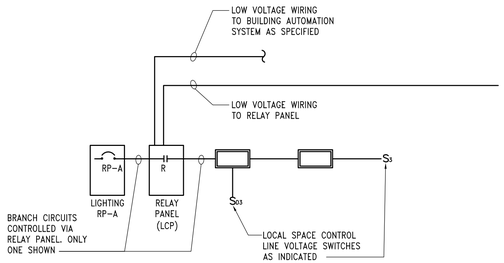
Project No. : 2023.175

Sheet No. : E310

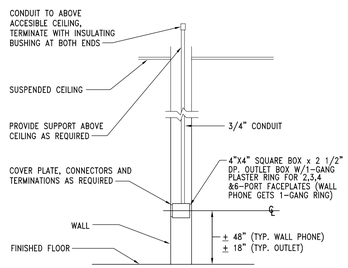
H:\ACAD\FILES\86\86460-WSU Football Locker Renovation\CAD\ELEC\86460-E310.dwg Tue, 04 Mar 2025 - 11:51am



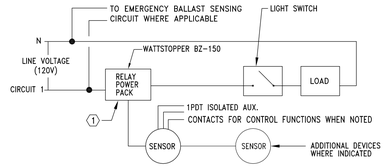
WALL MOUNTED SENSOR
No Scale



AUTOMATIC LIGHTING CONTROL OVERRIDE SCHEMATIC DIAGRAM
No Scale



TYPICAL TELECOMMUNICATION OUTLET DETAIL
No Scale



KEY NOTES:

1. OCCUPANCY SENSOR MODEL NUMBERS WIRING DIAGRAMS AND CONDUCTOR COLORS ARE BASED ON WATTSTOPPER. EQUAL EQUIPMENT ON THE WSU PREFERRED MANUFACTURERS LIST MAY BE USED. MODIFY DIAGRAMS ACCORDINGLY PER MANUFACTURERS INSTALLATION INSTRUCTIONS AND INDICATE ON AS-BUILT DOCUMENTS.

SCHEMATIC OCCUPANCY CONTROL DETAIL (CEILING MOUNTED SENSOR) 1
No Scale

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
180 High Oak Road
Bloomfield Hills, Michigan 48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

Project :

WSU FOOTBALL
LOCKER ROOM
RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
NH

Checked by :
WZ

Sheet Title :
ELECTRICAL DETAILS

Project No. :
2023.175

Sheet No. :
E510

ELECTRICAL SPECIFICATIONS

GENERAL REQUIREMENTS:

ALL WORK SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE, LATEST EDITION, AND ALL LOCAL AND STATE AUTHORITIES HAVING JURISDICTION THEREOF.

ALL EQUIPMENT SHALL BE SPECIFICATION GRADE AND SHALL HAVE U.L. LABEL FOR INTENDED USE.

ELECTRICAL SYSTEMS SHALL BE COMPLETE IN EVERY DETAIL, INCLUDING ALL INCIDENTAL ITEMS FOR A PROPER AND FUNCTIONING INSTALLATION SUBJECT TO FINAL APPROVAL OF ARCHITECT/ENGINEER.

ALL REQUIRED PERMIT AND INSPECTIONS SHALL BE OBTAINED BY CONTRACTOR AND SUCH COSTS SHALL BE INCLUDED IN BID PRICE FOR THIS WORK.

PROVIDE UL LISTED SYSTEM FOR FIRE STOPPING PENETRATIONS THROUGH FIRE RATED ASSEMBLIES. PROVIDE SYSTEM WITH EQUAL OR GREATER RATING THAN ASSEMBLY. REFER TO ARCHITECTURAL DOCUMENTS FOR RATINGS AND LOCATIONS OF ASSEMBLIES.

EXAMINATION OF SITE IS MANDATORY. CONTRACTOR IS HEREBY HELD TO HAVE EXAMINED THE SITE AND HAVE INCLUDED IN HIS BID PRICE ALL COSTS DUE TO SITE AND FIELD CONDITIONS.

COMPLETE IDENTIFICATION OF PROJECT ELECTRICAL COMPONENTS IS REQUIRED. IDENTIFY ALL PANELS, DISCONNECTS, CONTROL DEVICES, ETC., WITH THE NOMENCLATURE INDICATED ON THE DOCUMENTS AND WITH POWER SOURCE AND ELECTRICAL RATINGS USING PLASTIC LAMINATE NAMEPLATE. INSTALL TYPEWRITTEN DIRECTORIES OF ALL CIRCUITS ON INSIDE OF PANELS. IDENTIFY WIRING DEVICE COVERPLATES WITH PANELBOARD AND BRANCH CIRCUIT NUMBER SERVING DEVICE, E.G. "A-15". PROVIDE ¼" MACHINE-WRITTEN BLACK LETTERING ON CLEAR PLASTIC ADHESIVE TAPE. LOCATE ON BOTTOM FRONT OF COVERPLATE, CENTERED BELOW WIRING DEVICE(S). SUBMIT SAMPLE OF LABELED TAPE WITH WIRING DEVICE/COVERPLATE SUBMITTAL. SAMPLE MAY BE ADHERED TO PAPERWORK IN SUBMITTAL, RATHER THAN TO A COVERPLATE.

PROVIDE TEMPORARY POWER AND LIGHTING DURING CONSTRUCTION. REMOVE TEMPORARY WIRING UPON COMPLETION OF THE PROJECT. TEMPORARY SERVICES SHALL BE AS REQUIRED, BY N.E.C. AND OSHA.

GROUND CONTINUITY SHALL BE MAINTAINED THROUGHOUT THE ELECTRICAL SYSTEM. INSTALL EQUIPMENT GROUNDING CONDUCTOR WITH EVERY CIRCUIT.

COORDINATE SIZE AND LOCATION OF ANY REQUIRED ACCESS PANELS IN WALLS OR FINISHED CEILINGS WITH ARCHITECT PRIOR TO INSTALLATION.

WARRANTY:

UNLESS A LONGER PERIOD IS SPECIFIED IN INDIVIDUAL PARAGRAPHS, PROVIDE A MINIMUM OF A ONE YEAR WARRANTY ON ALL ELECTRICAL WORK BEGINNING THE DATE OF FINAL ACCEPTANCE OF THE PROJECT BY THE OWNER.

SUBMITTALS:

SUBMIT SHOP DRAWINGS FOR ALL MAJOR COMPONENTS OR SYSTEMS OF THE PROJECT. SUBMIT ADDITIONAL SHOP DRAWINGS IF REQUESTED BY ENGINEER.

NO APPARATUS OR EQUIPMENT SHALL BE SHIPPED FROM STOCK OR FABRICATED UNTIL SHOP DRAWINGS FOR SAME HAVE BEEN STAMPED "REVIEWED" OR "REVIEWED AS NOTED". SUBMIT DATA REQUIRED FOR TRANSFORMERS SUCH AS EFFICIENCY, REGULATION, CORE LOSS AND SOUND LEVELS. (SEE APPLICABLE SECTIONS).

SUBMIT SYSTEM COMPONENTS, PRODUCT DATA AND SHOP DRAWINGS COMPLETE FOR EACH SYSTEM UNDER ONE SUBMITTAL. DO NOT BREAK OUT EQUIPMENT FOR ONE SYSTEM BETWEEN MULTIPLE SUBMITTALS.

ALL SHOP DRAWINGS MUST BE CLEARLY MARKED TO SHOW EQUIPMENT SUBMITTED AND ANY DEVIATIONS FROM SPECIFICATIONS SHALL BE NOTED THEREON. DO NOT INCLUDE ONLY MODEL NUMBERS TO INDICATE SUBMITTED EQUIPMENT. STRIKE OUT ANY INFORMATION ON PRODUCT DATA THAT IS NOT PROJECT SPECIFIC, AND EDIT RELEVANT INFORMATION TO SHOW ACTUAL EQUIPMENT SUBMITTED. ELECTRICAL CONTRACTOR MUST SIGN AND APPROVED ALL SHOP DRAWINGS PRIOR TO SUBMITTAL.

UNIQUELY NUMBER EACH PAGE IN SUBMITTAL.

IF DIFFERENT SYSTEMS ARE INCLUDED IN ONE SUBMITTAL, CLEARLY SEPARATE INFORMATION AND PROVIDE DIFFERENT SUB-NUMBERING OF SYSTEMS. SHOP DRAWINGS THAT ARE INCOMPLETE, UNSIGNED AND NOT PLAINLY MARKED WILL NOT BE REVIEWED.

DEMOLITION AND RENOVATION WORK:

DISCONNECT, REMOVE, RELOCATE, REWIRE OR DISPOSE OF ANY EQUIPMENT INTERFERING WITH NEW CONSTRUCTION OR AFFECTED BY RENOVATION WORK.

ANY ELECTRICAL EQUIPMENT OR SYSTEMS WHICH ARE TO REMAIN, AND ARE AFFECTED BY THIS WORK, SHALL BE IMMEDIATELY RESTORED TO FULL OPERATING CONDITION AND AT NO ADDITIONAL COST TO THE CONTRACT.

EQUIPMENT REMOVED SHALL BE DISPOSED OF AS DIRECTED, EITHER TO STORAGE OR OFF THE PREMISES.

WHERE SERVICES OR CIRCUITS ARE DISCONNECTED OR DISCONTINUED, IT IS MANDATORY THAT ANY EXISTING UNUSED WIRING BE REMOVED TO THE SOURCE UNLESS SPECIFICALLY NOTED ON THE DRAWINGS. IT IS THE INTENT OF THIS ARTICLE TO PERMANENTLY DISCONNECT ALL UNUSED CIRCUITS AT THE MAIN SOURCE WHENEVER POSSIBLE. NO ENERGIZED CIRCUIT SHALL BE TAPED AND ABANDONED IN OUTLET BOXES UNLESS SO SPECIFIED ON DRAWINGS.

CIRCUIT TRACE EXISTING TO REMAIN CIRCUITS AS NECESSARY FOR PROPER IDENTIFICATION, AND AS REQUIRED TO PERFORM WORK.

REMODELING WORK INVOLVING EXISTING BRANCH CIRCUIT PANELBOARD SHALL BE SUCH THAT, WHEN ALL WORK IS COMPLETED EXISTING PANELS ARE PROVIDED WITH NEW AND UPDATED ACCURATE DIRECTORIES. ALL VACATED CIRCUITS SHALL BE MARKED SPARE. WHEN NEW BREAKERS ARE REQUIRED, THEY SHALL BE INSTALLED IN EXISTING SPACES AND SHALL MATCH THOSE THAT ARE EXISTING. IN THE EVENT THAT MORE BREAKERS ARE REQUIRED THAN THE SPACES AVAILABLE, CONTRACTOR SHALL CONSULT ENGINEER FOR DIRECTION.

CONTRACTOR MAY USE EXISTING CONDUITS AND OUTLET BOXES, PROVIDED THEY ARE IN GOOD ELECTRICAL CONDITION. RE-SUPPORT EXISTING TO REMAIN CONDUIT AND BOXES IN RENOVATION AREA IF INADEQUATELY SUPPORTED. PROVIDE SUPPORT AS REQUIRED TO COMPLY WITH NEC AND LOCAL AUTHORITY REQUIREMENTS.

IT IS THE INTENT OF THE OVERALL DESIGN TO CONCEAL ALL WORK EXCEPT IN UNFINISHED AREAS. IN CASES WHERE IT IS IMPOSSIBLE TO CONCEAL THE WORK, SHORT EXPOSED METAL RACEWAYS MAY BE USED SUBJECT TO APPROVAL OF ENGINEER.

ALL ELECTRICAL OPENINGS THAT ARE ABANDONED IN WALLS, CEILINGS OR FLOOR SHALL BE PROVIDED WITH SUITABLE BLANK COVER PLATES. ABANDONED FLOOR OUTLET SHALL BE PROVIDED WITH .040 BRASS PLATES.

CONDUITS AND OTHER PARTS OF ELECTRICAL SYSTEMS THAT BECOME EXPOSED AS A PART OF NEW WORK SHALL BE REMOVED AS REQUIRED TO A POINT WHERE THE ABANDONED PORTION IS TOTALLY CONCEALED.

ALL SURFACES DAMAGED BY THIS CONTRACTOR IN THE COURSE OF PERFORMING WORK SHALL BE RESTORED TO SATISFACTORY CONDITION, AS DIRECTED BY THE ARCHITECT AND ALL COSTS OF REPAIRS SHALL BE PAID FOR BY THE CONTRACTOR

REMOVE SERVICE TO MECHANICAL, ELECTRICAL AND BUILDING EQUIPMENT INDICATED AS REMOVED OR DISCONNECTED. MAINTAIN CIRCUITS TO EXISTING-TO-REMAIN EQUIPMENT. IDENTIFY UNUSED, REMOVED CIRCUITS ON PANEL SCHEDULE AS SPARE. COORDINATE WITH ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR EXISTING TO REMAIN EQUIPMENT AND FOR DEMOLITION WORK.

SERVICE SHUTDOWN AND POWER OUTAGES SHALL BE SCHEDULED WITH THE OWNER PRIOR TO PERFORMING ANY WORK ON EXISTING SERVICE. SCHEDULE SHALL BE IN WRITING AND SHALL SHOW A DETAILED DESCRIPTION OF THE PROPOSED WORK AND THE DURATION OF OUTAGE.

MICHIGAN UNIFORM ENERGY CODE:

THIS IS A PERFORMANCE BASED DESIGN-BUILD SPECIFICATION.

THE INTENT OF THIS SPECIFICATION ITEM IS FOR FULL COMPLIANCE WITH THE REQUIREMENTS OF THE MICHIGAN UNIFORM ENERGY CODE AND RELATED AMENDMENTS AS THEY APPLY TO THE ASHRAE 90.1-2013 STANDARD. AUTOMATIC CONTROL APPLIES TO NEW AND TO EXISTING TO REMAIN FIXTURES.

DESIGN AND PROVIDE A COMPLETE LIGHTING CONTROL SYSTEM PER MANUFACTURER'S RECOMMENDATION. INDICATE ALL COMPONENTS ON AS-BUILT DOCUMENTATION. COORDINATE WITH ARCHITECTURAL TRADES TO PROVIDE CEILING ACCESS PANELS WHERE REQUIRED.

PROVIDE OCCUPANCY SENSOR(S) IN EVERY ROOM OR SPACE (EXCEPT WHERE TIME SWITCHES/RELAY PANEL CONTROL IS INDICATED) TO AUTOMATICALLY SHUTOFF ALL NON-EMERGENCY LIGHTING WITHIN ITS SPACE WITH ADJUSTABLE TIME DELAY UP TO 30 MINUTES. WHERE INDICATED, CONTROL LIGHTING THROUGH TIME SWITCH WITH ASTRONOMICAL TIME CLOCK. PROVIDE LIGHTING CONTROLLED VIA CONTACTORS AND TIME SWITCH AS REQUIRED FOR QUANTITY OF CIRCUITS CONTROLLED. CONTROL EXTERIOR FIXTURES WITH TIME CLOCK, CONTACTOR AND PHOTOCELL.

OCCUPANCY SENSORS SHALL BE OF ULTRASONIC, INFRARED OR MULTI-TECHNOLOGY TYPE AS RECOMMENDED BY MANUFACTURER FOR EACH SPACE/APPLICATION CEILING MOUNTED.

OCCUPANCY SENSORS AND ACCESSORIES, TIME CLOCKS, AND CONTACTORS ARE NOT SPECIFICALLY INDICATED. CONTRACTOR TO DESIGN GROUPING OF BRANCH CIRCUITS AND QUANTITY OF TIME CLOCKS AND CONTACTORS REQUIRED AND PROVIDE ACCORDINGLY.

PROVIDE LOCAL WALL SWITCHES ON-OFF TYPE IN ADDITION TO OCCUPANCY AND TIME CLOCK/CONTACTOR CONTROL.

PROVIDE UNIVERSAL VOLTAGE POWER SWITCHES (RELAY) PACKS WITH LOAD CONTACT RATED 20A @ 120/277V FOR EACH SENSOR AS REQUIRED TO ACHIEVE THE LIGHTING CONTROL INTENDED. COORDINATE WITH SWITCH LEGS SHOWN ON PLANS. PROVIDE AUXILIARY CONTACT FOR CONTROL OF HVAC EQUIPMENT ON EACH RELAY PACK. MOUNT COMPONENTS CONCEALED ABOVE FINISHED CEILINGS WHEN PRESENT. PROVIDE ACCESS PANELS FOR NON-ACCESSIBLE CEILINGS. WHEN NO FINISHED CEILINGS ARE PRESENT, MOUNT COMPONENTS CONCEALED IN SHEET METAL ENCLOSURE WITH HINGED COVER. SIZE ENCLOSURE TO ACCOMMODATE COMPONENTS AND WIRING, AND COORDINATE LOCATION WITH ARCHITECT.

PROVIDE FIXTURES WITH TANDEM WIRED BALLASTS AS REQUIRED TO COMPLY WITH ASHRAE 90.1.

REFER TO THE LIGHTING DRAWINGS FOR COORDINATION WITH FIXTURES, CIRCUITING AND SWITCHING.

ELECTRICAL EQUIPMENT AND DEVICES:

RECEPTACLES SHALL BE SPECIFICATION GRADE, GROUNDING TYPE, 2-POLE, 3-WIRE, AND POLARIZED. RECEPTACLES IN GENERAL SHALL BE 15A, 125 V., HUBBELL #HBL5262 OR EQUAL MOUNTED 18" AFF EXCEPT AT COUNTERS WHERE THEY SHALL BE 6" ABOVE COUNTER AND IN TOILET ROOMS AT 48" AFF. RECEPTACLES ON SINGLE CIRCUIT SHALL BE 20 AMPERES, HUBBELL #HBL5362. HIGH AMPERE RATINGS AND VOLTAGES ARE INDICATED ON DRAWINGS.

ISOLATED GROUND RECEPTACLES SHALL BE HUBBELL #IG-5362 WITH A SEPARATE GROUND WIRE IN CIRCUIT CONDUIT. THE ONLY WIRING THAT CAN OCCUPY THIS CONDUIT IS OTHER ISOLATED GROUND CIRCUITS.

RECEPTACLES DESIGNATED "GFR" SHALL BE GROUND FAULT RECEPTACLES, SIMILAR TO HUBBELL #GF-5362. FOR OUTDOOR OR WET LOCATIONS, PROVIDE WEATHERPROOF BOX AND GASKETED COVER PLATE. WIRE "GFR" RECEPTACLES FOR SELF PROTECTION AND NOT DOWNSTREAM PROTECTION OF OTHER WIRING DEVICES.

HIGH AMPERE RATINGS AND VOLTAGES ARE INDICATED ON DRAWINGS. RECEPTACLES SHALL BE MOUNTED 16" AFF EXCEPT AT COUNTERS WHERE THEY SHALL BE 6" ABOVE COUNTER AND IN TOILET ROOMS AT 48" AFF.

RECEPTACLES DESIGNATED "GFR" SHALL BE GROUND FAULT RECEPTACLES AND TAMPER RESISTANT, HUBBELL #GFTR20W OR EQUAL FOR OUTDOOR OR WET LOCATIONS, PROVIDE WEATHERPROOF BOX AND GASKETED COVER PLATE.

SWITCHES SHALL BE SINGLE POLE, TWO POLE, OR THREE-WAY, AS INDICATED, TOGGLE TYPE, 20A, 120/277V., QUIET TYPE, HUBBELL #1221/1222/1223 OR EQUAL. PILOT TYPE SWITCHES HUBBELL #1251.

PROVIDE DIMMERS RATED FOR LOAD WATTAGE AND VOLTAGE CONTROLLED. CONTRACTOR TO COORDINATE RATING BASED ON APPROVED FIXTURE SUBMITTALS AND ACTUAL FIXTURE QUANTITIES. PROVIDE DIMMERS DESIGNED FOR CONTROLLED LOAD (INCANDESCENT, MAGNETIC LOW VOLTAGE, ELECTRONIC LOW VOLTAGE OR FLUORESCENT).

WIRING DEVICE COLORS SHALL BE AS SELECTED BY THE OWNER/ARCHITECT.

DEVICE COVER PLATES SHALL BE OF TYPE AND NUMBER OF GANGS FOR DEVICES INSTALLED, SMOOTH EDGED 302/304 GRADE BRUSHED STAINLESS STEEL. PROVIDE BRANCH CIRCUIT IDENTIFICATION ON ALL COVERPLATES AS SPECIFIED UNDER "GENERAL REQUIREMENTS". COVERPLATES FOR DEVICES CONNECTED TO THE EMERGENCY SYSTEM SHALL ALSO BE FACTORY LABELED WITH BLACK LETTERING TO READ "EMERGENCY".

PROVIDE TELEPHONE/DATA OUTLETS AND STUBS AS INDICATED. TELEPHONE/DATA OUTLETS SHALL CONSIST OF TWO GANG OUTLET BOX WITH PLASTER RING AND NO COVER PLATE. JACK AND COVER PLATE ARE SUPPLIED BY OTHERS. HEIGHT OF OUTLET FOR DESK PHONE IS 16" AFF AND FOR WALL PHONE 48" AFF.
TELEPHONE/DATA OUTLETS SHALL CONTAIN OF 3/4" CONDUIT FROM OUTLET TO AN ACCESSIBLE PORTION OF CEILING SPACE. TERMINATE WITH INSULATING BUSHING.

STANDARD TIME SWITCHES SHALL BE ELECTRONIC, PROGRAMMABLE, SEVEN DAY, 24 HOUR CARRYOVER, 365 DAY ASTRO DIAL, PILOT DUTY, INTERMATIC #ET816CR OR EQUAL.

TIME SWITCHES SHALL BE ELECTRONIC, PROGRAMMABLE, FOUR CHANNEL, FULL YEAR OR SEVEN DAY PROGRAMMING, NI-CAD BATTERY BACK-UP WITH CHARGER, 365 DAY ASTRO DIAL AND MOMENTARY FEATURE FOR ALL CIRCUITS, WITH AUTOMATIC DAYLIGHT SAVINGS AND LEAP YEAR ADJUSTMENT AND SEASONAL PROGRAMMING, TORK DZS-400A GENERAL PURPOSE.

LIGHTING CONTACTORS SHALL BE 600V, 120V COIL, ELECTRICALLY OPERATED, MECHANICALLY HELD AMPERE RATING AND NUMBER OF POLES AS INDICATED ON DRAWINGS OR 3-POLE IF NOT INDICATED. SQUARE D CLASS 8903 OR EQUAL.

LOCATE TIME SWITCHES AND CONTACTORS ADJACENT TO THE PANELS SERVING THEM, UNLESS OTHERWISE INDICATED.

GROUND BUS SHALL BE 8" LONG, 2" WIDE AND MINIMUM ¼" THICK WITH PRE-DRILLED HOLES FOR LUGGING CABLE. WALL MOUNT AS INDICATED. PROVIDE ALL HARDWARE FOR WALL MOUNTING.

CONDUCTORS:

ALL CONDUCTORS SHALL BE SOFT-DRAWN COPPER OF SIZES INDICATED ON THE DRAWINGS. ALL CONDUCTORS SHALL BE INSULATED FOR 600 VOLTS AND WITH 75 DEGREES (CENTIGRADE) CODE GRADE INSULATION.

CONDUCTORS SIZED #10 AND SMALLER SHALL BE SOLID. ALL CONDUCTORS LARGER THAN #10 SHALL BE MADE UP OF STRANDED SINGLE CONDUCTOR CABLE. CONDUCTORS SHALL HAVE THWN OR THHN INSULATION AS APPLICABLE. CONDUCTORS IN UNDERGROUND CONDUIT AND FOR SERVICE ENTRANCE CONDUCTOR SHALL HAVE XHHW OR THWN INSULATION.

#12 AWG SHALL BE THE MINIMUM WIRE SIZE ALLOWED EXCEPT #14 AWG MAY BE USED FOR CONTROL WIRING.

TYPICAL BRANCH CIRCUITS FROM 20A, 1-POLE BRANCH OVERRCURRENT DEVICES ARE 1/2"C, 2 #12 AND 1 # 12G.

MC CABLE SHALL BE PERMITTED FOR USE AS APPROVED BY N.E.C AND AUTHORITY HAVING JURISDICTION.

STARTERS, SAFETY SWITCHES, FUSES AND HEATERS:

MANUAL MOTOR STARTERS SHALL BE 600V TOGGLE TYPE WITH THERMAL OVERLOAD ELEMENT FOR MOTOR PROTECTION STAINLESS STEEL COVER PLATE AND PILOT LIGHT; FLUSH IN ALL AREAS EXCEPT IN UNFINISHED SPACES. CONTRACTOR TO COORDINATE AND PROVIDE QUANTITY OF POLES AS REQUIRED FOR BRANCH CIRCUIT AND LOAD SERVED. MANUAL MOTOR SWITCHES SHALL BE THE SAME AS MANUAL STARTERS EXCEPT WITHOUT OVERLOADS AND USED AS DISCONNECTING MEANS.

MAGNETIC MOTOR STARTERS SHALL BE 600 VOLT 3-PHASE WITH 3 THERMAL OVERLOAD ELEMENTS, HOA SWITCH AND RESET BUTTON IN COVER AND GREEN RUNNING PILOT LIGHT, NEMA ENCLOSURE AND SIZE AS INDICATED. COMBINATION STARTERS SHALL HAVE BUILT-IN FUSED DISCONNECT. PROVIDE START-STOP PUSH BUTTONS FOR USE IN HAND (MANUAL) MODE.

PROVIDE THERMAL ALLOY MELTING TYPE HEATER ELEMENTS FOR ALL MOTORS BASED ON MOTOR NAMEPLATE DATA.

SAFETY AND DISCONNECT SWITCHES SHALL BE 250 OR 600 VOLTS AS REQUIRED, HEAVY DUTY, TWO OR THREE POLE, "QUICK-MAKE", "QUICK-BREAK" SWITCH MECHANISM AND COVER INTERLOCK. SWITCHES SHALL BE FUSED OR UNFUSED AS INDICATED AND SHALL HAVE PAD LOCK PROVISIONS, WITH NEMA TYPE ENCLOSURE FOR LOCATION USED. SWITCHES SHALL BE SQUARE "D"CLASS 3110 OR APPROVED EQUAL.

PROVIDE ALL NECESSARY FUSES AND REPLACE ALL THOSE BLOWN DURING CONSTRUCTION. ALL FUSES SHALL BE TIME LAG, DUAL ELEMENT, BUSSMAN "LOW PEAK YELLOW" OR EQUAL.

INSTALLATION AND METHODS OF EXECUTION:

ALL WIRING SHALL BE IN CONDUIT, MINIMUM ½". FLEXIBLE METAL CONDUIT SHALL BE USED FOR SHORT CONNECTION TO MOTORS, FINAL CONNECTION TO RECESSED LIGHTING FIXTURES FROM RIGIDLY MOUNTED OUTLET BOX (NOT BETWEEN FIXTURES), VIBRATING EQUIPMENT, ETC., BUT NEVER LONGER THAN 6 FEET. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT FOR ALL APPLICATIONS EXPOSED TO WATER OR WEATHER. PROVIDE ANTI-SHORT BUSHINGS FOR ALL FLEXIBLE CONDUIT ARMOR TERMINATIONS. PROVIDE SEPARATE EQUIPMENT GROUND WIRE IN ALL CONDUIT RUNS.

CONDUIT CONCEALED IN CEILING, WALLS OR FURRED SPACES OR EXPOSED IN DRY LOCATIONS SHALL BE EMT, THIN WALL ELECTRIC METALLIC TUBING. CONDUIT EXPOSED TO WEATHER, IN CONTACT WITH CONCRETE, BURIED IN SLAB, OR IN HAZARDOUS AREAS, SHALL BE HEAVY WALL, RIGID. ALL CONDUITS SHALL BE HOT DIPPED GALVANIZED STEEL.

ALL WORK IN HAZARDOUS LOCATIONS SHALL BE DONE IN STRICT CONFORMANCE WITH NEC ARTICLE 500.

PLASTIC CONDUIT, PVC-40, SHALL BE USED ONLY AS INDICATED ON THE DRAWINGS. PLASTIC CONDUIT SHALL BE APPROVED FOR UNDERGROUND USE. PVC BURIAL DEPTH SHALL BE 36" MINIMUM BELOW FINISH GRADE. IN PVC CONDUIT SYSTEMS, RISERS ABOVEGROUND SHALL BE RIGID HEAVY WALL STEEL.

CONDUIT RUNS SHOWN ON DRAWINGS ARE DIAGRAMMATIC. EXACT ROUTING OF CONDUIT RUNS SHALL SUIT JOB CONDITIONS. EXPOSED CONDUIT SHALL BE RUN ONLY IN UNFINISHED AREAS SUBJECT TO FINAL APPROVAL OF ENGINEER AND SHALL RUN PARALLEL TO BUILDING LINES, NEVER DIAGONALLY.

CONNECTION TO EQUIPMENT SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S SHOP AND INSTALLATION DRAWINGS. REQUIREMENTS GENERALLY VARY FROM ONE MANUFACTURER TO ANOTHER AND CONTRACTOR IS BOUND TO COMPLY AND PROVIDE ALL WORK AS REQUIRED ALTHOUGH CERTAIN DISCREPANCIES MAY EXIST REGARDING THE REQUIREMENT FROM ONE MANUFACTURER TO ANOTHER.

PROVIDE POWER WIRING, DISCONNECTS, AND PROTECTION DEVICES TO ALL MECHANICAL EQUIPMENT AND MAKE FINAL CONNECTIONS, INCLUDING TESTING OF MOTORS FOR PROPER ROTATION.

OUTLET BOXES MAY-BE SURFACE MOUNTED ON EXISTING WALLS (CMU, BRICK OR CONCRETE) WITH SMALLEST SURFACE RACEWAY AS REQUIRED FOR WIRING INSTALLED. PROVIDE FLUSH OUTLET BOXES AND CONDUIT AT NEW CONSTRUCTION WALL AND AT EXISTING WALLS WHICH ARE NOT CMU BRICK OR CONCRETE CONSTRUCTION. CUT AND PATCH EXISTING WALLS AS REQUIRED FOR FLUSH INSTALLATION.

PROVIDE 4" TALL CONCRETE HOUSEKEEPING PADS FOR ALL FLOOR MOUNTED ELECTRICAL EQUIPMENT.

ALL WIRING LOCATED ABOVE THE SUSPENDED CEILING MUST BE SUPPORTED INDEPENDENTLY OF THE SUPPORT WIRES FOR THE SUSPENDED CEILING.

OUTLET BOXES ON OPPOSITE SIDES OF FIRE RESISTANT WALLS OR PARTITIONS SHALL BE SEPARATED BY A HORIZONTAL DISTANCE OF TWENTY FOUR (24) INCHES.

ELECTRICAL OPENINGS AROUND ELECTRICAL PENETRATIONS THROUGH FIRE RESISTANT RATED WALLS, PARTITIONS, FLOORS, OR CEILINGS SHALL BE FIRESTOPPED USING APPROVED METHODS TO MAINTAIN THE FIRE RESISTANCE RATING PER ARTICLE 300.21 2017 NEC.

PROVIDE PROPER WORKING CLEARANCES FOR ELECTRICAL EQUIPMENT AS REQUIRED PER NEC.

LIGHTING SPECIFICATIONS:

FLUORESCENT BALLASTS SHALL BE UNIVERSAL VOLTAGE 120V THROUGH 277V, PROGRAMMED RAPID START, MAXIMUM 10% THD. OSRAM SYLVANIA QTP SERIES, OR APPROVED EQUAL BY ADVANCE, GE, LUTRON OR MOTOROLA.

FLUORESCENT LAMPS SHALL BE MINIMUM 70 COLOR RENDERING INDEX, 3500K COLOR TEMPERATURE, LOW MERCURY TCLP-COMPLIANT TYPE.

FLUORESCENT DIMMING BALLASTS SHALL BE LUTRON 5% TO 100%. SUBMIT DIMMING BALLAST PRODUCT DATA AND COMPATIBLE DIMMER SWITCHES WITH LIGHTING SUBMITTAL.

LED LIGHTING FIXTURES SHALL HAVE 5 YEAR WARRANTY, A COLOR RENDERING INDEX OF 90 OR HIGHER, 3500K COLOR TEMPERATURE UNLESS OTHERWISE INDICATED ON DRAWINGS, LIFETIME: 50,000 HOURS OR GREATER AND MAINTAIN AT LEAST 70% OF INITIAL LUMEN OUTPUT. RATED FOR OUTDOOR USE AND WET LOCATION, IF IN OPEN FIXTURE.

SHALL POSSESS COLOR MANAGEMENT SYSTEM TO MAINTAIN COLOR CONSISTENCY OVER TIME AND TEMPERATURE OF NO GREATER THAN ±100K OVER LIFE.

REFER TO LIGHTING FIXTURE SCHEDULE FOR LED FIXTURES WITH DIMMING CONTROLS.

LED DRIVERS TO BE ELECTRONIC, HIGH POWER FACTOR, MIN. 0.9; UNIVERSAL VOLTAGE 120-277V; 5 YEAR WARRANTY, COMPATIBLE WITH THE LED LAMP OR MODULE USED.

EMERGENCY BATTERY BALLASTS INTEGRAL TO FIXTURES SHALL BE SELF-DIAGNOSTIC TYPE, WITH 5 YEAR WARRANTY AND TEST SWITCH INTEGRAL TO FIXTURE. BODINE B50ST OR APPROVED EQUAL. PROVIDE EXIT AND EMERGENCY BATTERY LIGHTING UNITS WITH SELF DIAGNOSTICS, MAINTENANCE-FREE NI-CAD BATTERY, AND WITH UNIVERSAL VOLTAGE INPUT - 120V THROUGH 277V. REQUIREMENTS SPECIFIED HERE TAKE PRECEDENCE OVER SCHEDULED INFORMATION.

PROVIDE FACTORY INSTALLED FUSING IN EACH FIXTURE.

FOR ALL ELECTRIC-DISCHARGE LIGHTING FIXTURES, PROVIDE A LUMINAIRE DISCONNECTING MEANS TO DISCONNECT PHASE AND NEUTRAL CONDUCTORS FROM THE BRANCH CIRCUIT TO THE BALLAST. LOCATE DISCONNECTING MEANS CONCEALED WITHIN THE FIXTURE. TYPICAL FOR NEW, REUSED AND RELOCATED FIXTURES. ASSUME ALL REUSED AND RELOCATED FIXTURES REQUIRE THE FIELD ADDITION OF THE DISCONNECTING MEANS AND INCLUDE WORK IN BID. PROVIDE ALL NEW FIXTURES WITH DISCONNECTING MEANS FACTORY-INSTALLED. PROVIDE THOMAS & BETTS STA-KON LUMINAIRE DISCONNECT OR EQUAL.

PROVIDE PHOTOMETRIC CALCULATIONS FOR ANY FIXTURE SUBSTITUTIONS PROPOSED, INCLUDING FIXTURES SUBMITTED AS EQUAL IF REQUESTED BY THE A/E.

SUBMIT LAMP AND BALLAST PRODUCT DATA WITH EACH FIXTURE TYPE.

MISCELLANEOUS SYSTEM:

INCLUDE AUDIO VISUAL, SECURITY, SOUND, NOISE CONTROL, ACCESS CONTROL AND TELECOMMUNICATIONS - SYSTEM EQUIPMENT, WIRING AND INSTALLATION WILL BE PROVIDED BY OTHERS.

PROVIDE RACEWAY SYSTEM, OUTLETS AND 120V RECEPTACLES AS REQUIRED. NOT ALL DEVICES/EQUIPMENT ARE INDICATED ON THESE PLANS.

COORDINATE WITH OWNER AND SYSTEM CONTRACTORS ABOVE PROVISION FOR A COMPLETE AND FUNCTIONING INSTALLATION PRIOR TO BID.
ALL WORK SHALL BE IN ACCORDANCE WITH APPLICABLE PARAGRAPHS OF THESE SPECIFICATIONS.

SVA
STUCKY VITALE ARCHITECTS
27172 WOODWARD AVENUE
ROYAL OAK, MI 48067-0925
P. 248.546.6700
F. 248.546.8454
WWW.STUCKYVITALE.COM

Consultants

MAENGINEERING
MECHANICAL ELECTRICAL
1801 High Oak Road
Bloomfield Hills, Michigan 48304
t | 248 | 258 | 1610
f | 248 | 258 | 9538

Seal:

STATE OF MICHIGAN
SALIM M. SESSINE
ENGINEER
No. 6201034939
LICENSED PROFESSIONAL ENGINEER

Project :

WSU FOOTBALL LOCKER ROOM RENOVATION

1401 Ford Pl
Detroit, MI 48208

Key Plan:

Issued for

50% CD	01.31.25
CONSTRUCTION	03.04.25

Drawn by :
NH

Checked by :
WZ

Sheet Title :
ELECTRICAL SPECIFICATIONS

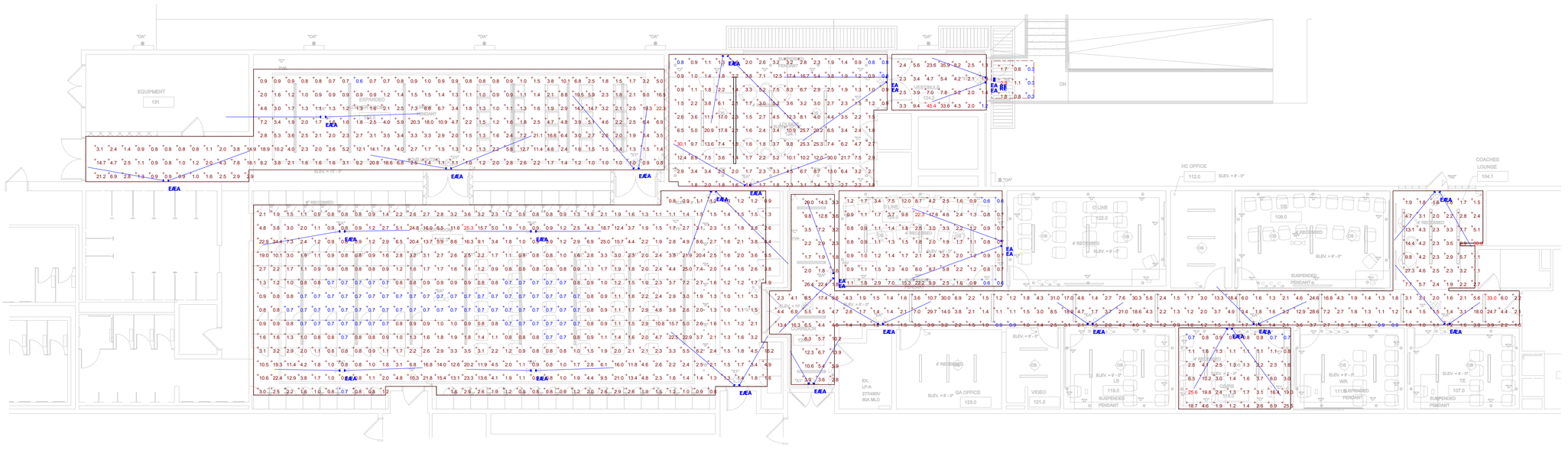
Project No. :
2023.175

Sheet No. :
E610

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Filename
○	EA	46	COMPASS PRODUCTS	CU2HLHO Series	Compass Emergency battery Unit	CU2HLHO	CU2HLHO.ies
□	RE	2	SECURITY LIGHTING	COR Series	Compass LED EMERGENCY LUMINAIRE	(12) WHITE LEDS EACH WITH CLEAR CYLINDRICAL INTEGRAL LENS WITH HEMISPHERICAL END	compass_led.ies

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
CORRIDOR 126	+	5.5 fc	33.2 fc	0.9 fc	36.9:1	6.1:1
LOCKER ROOM 127	+	3.1 fc	25.3 fc	0.7 fc	36.1:1	4.4:1
LOUNGE 124.1	+	5.2 fc	30.1 fc	0.8 fc	37.6:1	6.5:1
TYP. FOR BIG CONF. RMs	+	3.2 fc	22.3 fc	0.6 fc	37.2:1	5.3:1
TYP. FOR SMALL CONF. RMs	+	4.6 fc	25.6 fc	0.7 fc	36.6:1	6.6:1
TYP.SIDE DOOR	+	1.1 fc	2.9 fc	0.3 fc	9.7:1	3.7:1
VESTIBULE 124.2	+	8.3 fc	45.4 fc	1.2 fc	37.8:1	6.9:1
EXPANDED LOCKER ROOM	+	3.8 fc	22.3 fc	0.6 fc	37.2:1	6.3:1



Emergency Lighting
Photometric
Scale - 1" = 8ft

VISUAL

WSU FOOTBALL
LOCKER ROOM RENOVATION

Designer
NH
Date
04/04/2025
Scale
1/8" = 1'-0"
Drawing No.

Summary