ADDITION TO:

CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

ITB - 4650

SCHEDULE OF ALTERNATES:

ADD ALTERNATE NO 1:

- BASE BID: FURNISH AND INSTALL ROOFING AS INDICATED FOR NEW ADDITION ONLY.
- ALTERNATE 1: DEMOLISH AND REMOVE EXISTING ASPHALT SHINGLES & UNDERLAYMENT (ALL) DOWN TO WOOD SHEATHING. FINISH AND INSTALL NEW ASPHALT SHINGLES OVER UNDERLAYMENT & ICE GUARD. REFER TO PROJECT MANUAL FOR ROOF SPECIFICATIONS.

CONTACTS:

OFFICE OF THE ENGINEER:

WILLIAM A. KIBBE & ASSOCIATES
1475 S WASHINGTON STREET
SAGINAW, MICHIGAN 48601
PHONE: (989) 752-5000

STATE OF MICHIGAN
JAY C. WHEELER
License No. 6201043280
LICENSED PROFESSIONAL ENGINEER

OFFICE OF THE ARCHITECT:

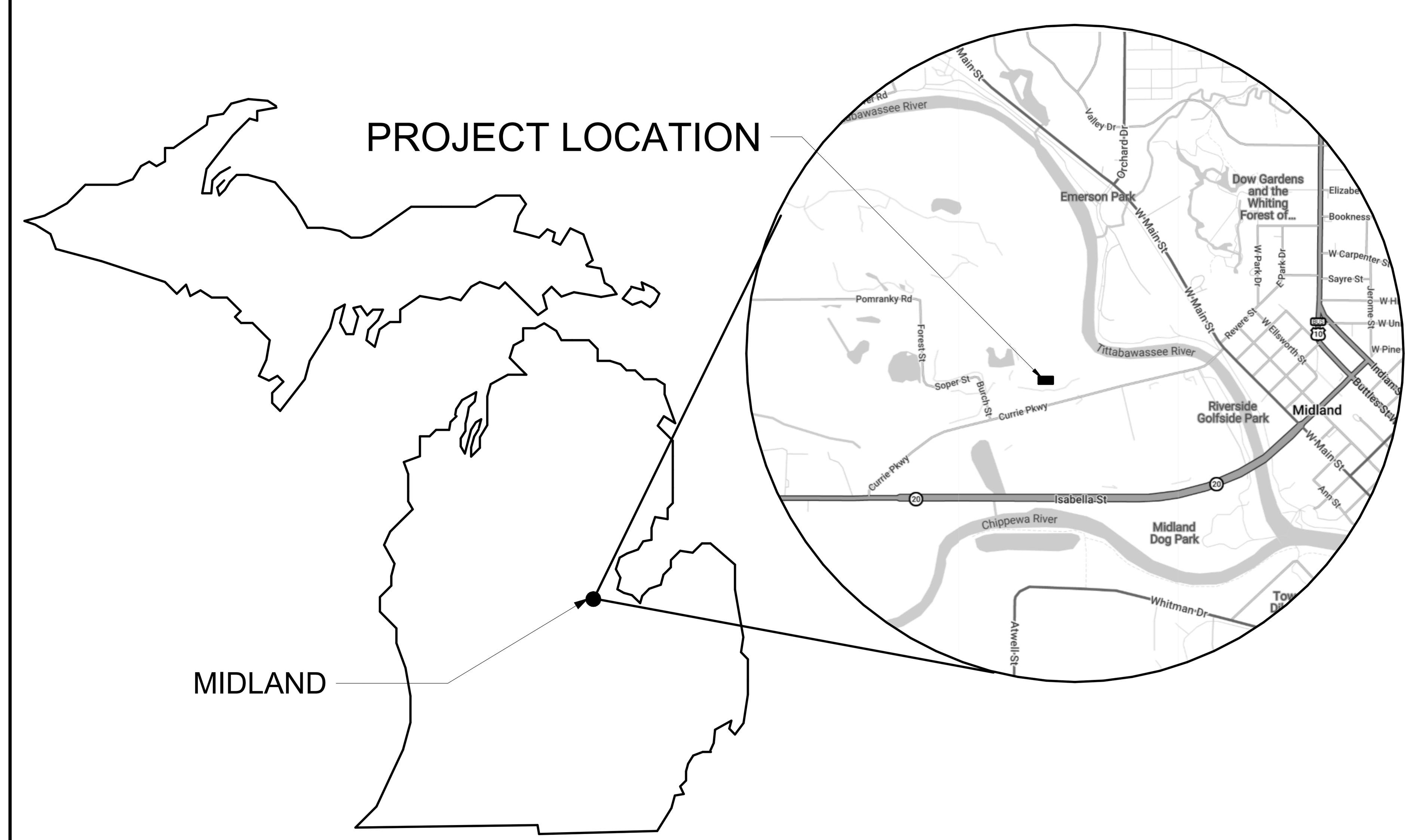
WTA ARCHITECTS
100 S. JEFFERSON AVENUE, SUITE 601
SAGINAW, MICHIGAN 48607
PHONE: (989) 752-8107
EMAIL: DESIGN@WTAARCH.COM

PROJECT LOCATION:

CURRIE GOLF COURSE
1300 CURRIE PKWY
MIDLAND, MI 48640
PHONE: (989) 839-9600

STATE OF MICHIGAN
PAUL ANDREW HASELHUHN
ARCHITECT
No. 1301050648
LICENSED ARCHITECT

INDEX OF DRAWINGS:



REGIONAL MAP
NOT TO SCALE

LOCAL MAP
NOT TO SCALE

PROJECT LOCATION

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

WILLIAM A. KIBBE & ASSOCIATES, INC.
ENGINEERS | ARCHITECTS | SURVEYORS

WTAARCH.COM

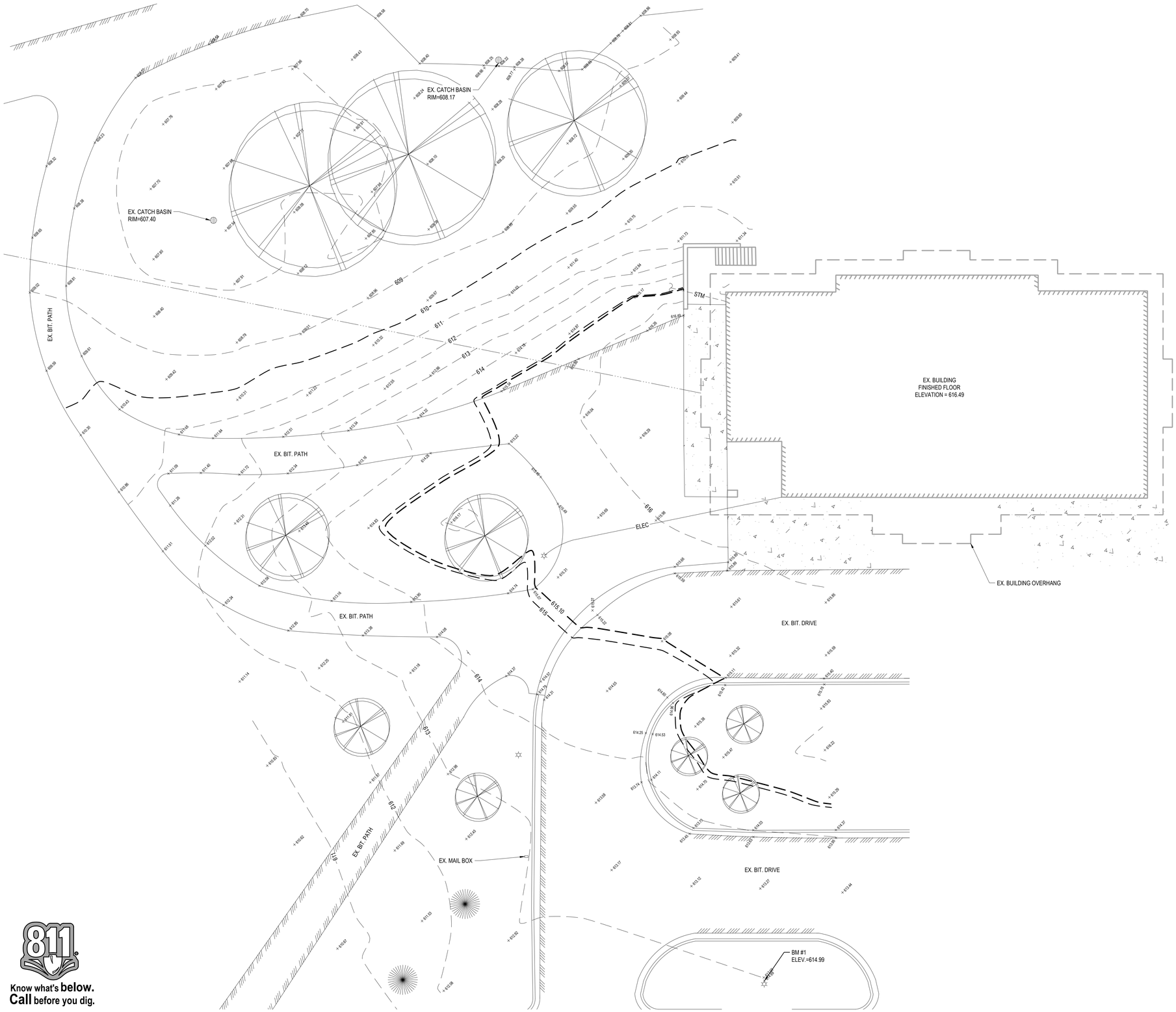
WTA ARCHITECTS
100 S Jefferson Ave, Suite 601
Saginaw, Michigan 48607
989 752 8107

ITB - 4650

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
TITLE SHEET

PROJECT NUMBER	SHEET NUMBER
2025104	TS
PROJECT DATE: 2026	
CHECKED BY: S.S.C.	



TOPOGRAPHIC SURVEY AND EXISTING SITE LAYOUT

SCALE: 1"=10'

Know what's **below.**
Call before you dig.

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10 ft.

LEGEND

- 781.36 — EX. SPOT GRADE
- 601 — EX. MINOR CONTOUR
- 600 — EX. MAJOR CONTOUR
- 600.00 — EX.100 YEAR FLOODPLAIN CONTOUR
- STM — EX. STORM SEWER
- EX. OVERHEAD UTILITY WIRES
- ELEC — EX. ELECTRIC LINES
- EX. BUILDINGS
- EX. BITUMINOUS PAVEMENT
- EX. CONCRETE PAVEMENT
- EX. SIGN WITH POST
- EX. STORM CATCH BASIN/MANHOLE
- EX. LIGHT POLE
- EX. MAILBOX

OWNER
CITY OF MIDLAND
333 WEST ELLSWORTH ST
MIDLAND, MI 48640

BENCHMARK
NO.1 - NORTH SIDE OF LIGHT POLE BASE IN NORTHWESTERLY ISLAND OF PARKING LOT
ELEVATION = 614.99 (NAVD 88 DATUM)

UTILITY NOTE
THE UTILITY LOCATIONS AS HEREIN SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE SIZE, LOCATION, DEPTH, PRESSURE, OR ANY OTHER CHARACTERISTICS OF UNDERGROUND UTILITIES, TANKS OR SEPTIC FIELDS WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OF COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREIN SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" AT (811) A MINIMUM OF THREE WORKING DAYS PRIOR TO ANY EXCAVATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THESE LOCATIONS PRIOR TO CONSTRUCTION AND MAKE EVERY EFFORT TO PROTECT AND/OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF DESIGN AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND.

FLOODPLAIN
THE SITE LIES WITHIN ZONE "AE" (AREAS OF THE 100 YEAR FLOODPLAIN) PER FEMA MAP 26111C0257E, EFFECTIVE MAY 4, 2009

UTILITY CONTACTS

TELEPHONE SERVICES
AT&T
JEFF SHUSTER
TEL. (231) 510-1381

GAS
CONSUMERS ENERGY
1100 WASHINGTON STREET
MIDLAND, MI 48640

PUBLIC UTILITIES
CITY OF MIDLAND
ENGINEERING DEPT.
333 W ELLSWORTH STREET
MIDLAND, MI 48640
TEL. (989) 837-3348

ZONING
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PLANNING DEPT.
333 W ELLSWORTH STREET
MIDLAND, MI 48640
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DESIGN DEVELOPMENT NOT FOR CONSTRUCTION

NO.	REVISION	DATE
	ISSUED FOR BID	05-12-2026
	FINAL OWNER REVIEW	04-30-2026

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ENGINEERS | ARCHITECTS | SURVEYORS

WTAARCH.COM
WTA ARCHITECTS
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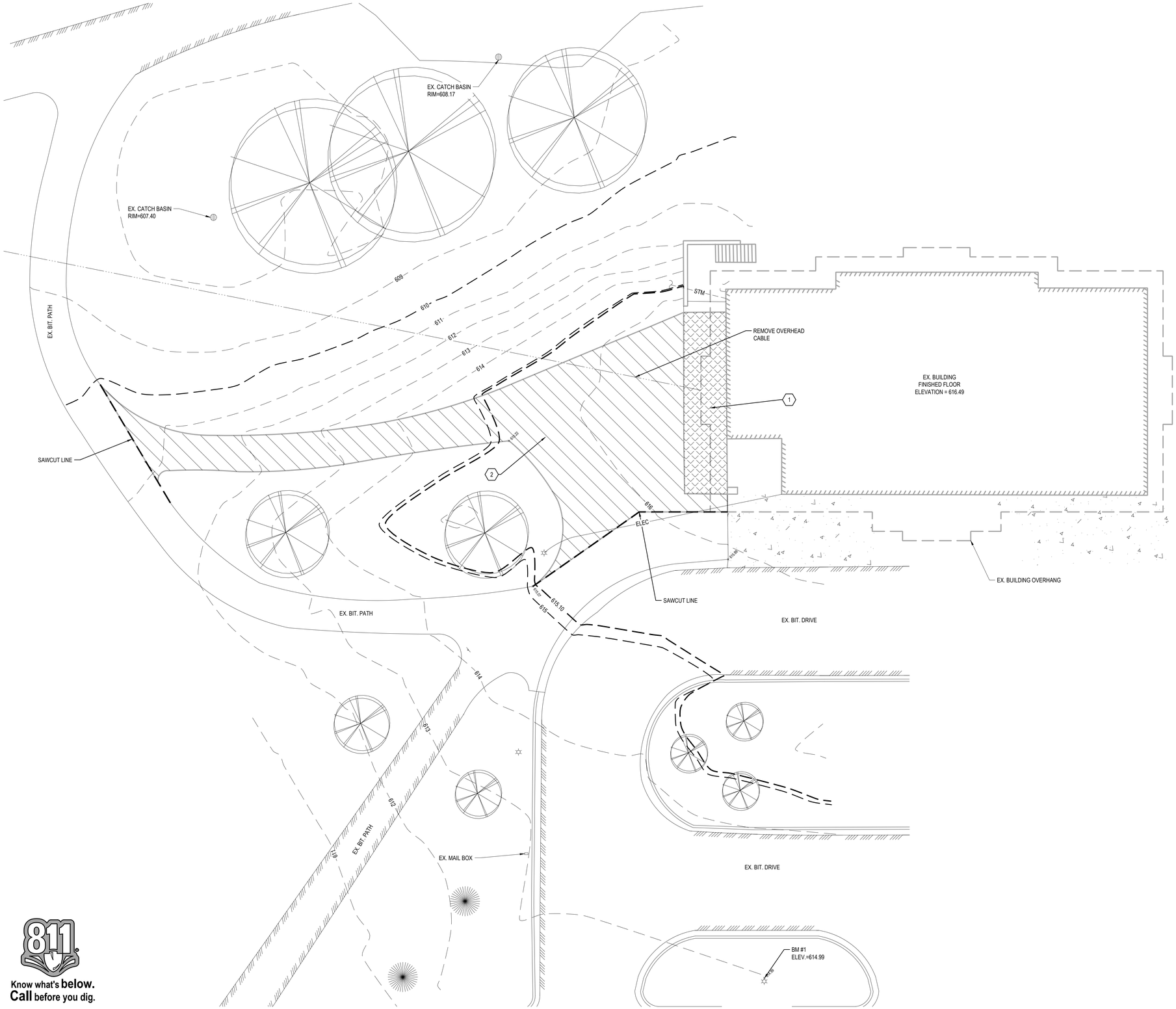
989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
TOPOGRAPHIC SURVEY AND EXISTING SITE LAYOUT

PROJECT NUMBER	SHEET NUMBER
25-0456-0295	C1.0
PROJECT DATE: 2026	
CHECKED BY: J. WHEELER	



SITE DEMOLITION PLAN
SCALE: 1"=10'

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OWNER
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THE SITE LIES WITHIN ZONE "AE" (AREAS OF THE 100 YEAR FLOODPLAIN) PER FEMA MAP 26111C0257E, EFFECTIVE MAY 4, 2009

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MIDLAND, MI 48640

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DEMOLITION KEYED NOTES:

1. REMOVE EXISTING CONCRETE SURFACES. SAWCUT PER PLAN OR TO NEAREST JOINT. SEE NOTE 3 THIS SHEET.
   AREA REPRESENTED BY:
2. REMOVE EXISTING BITUMINOUS, SURFACES. SAWCUT PER PLAN OR TO NEAREST JOINT. SEE NOTE 3 THIS SHEET.
   AREA REPRESENTED BY:

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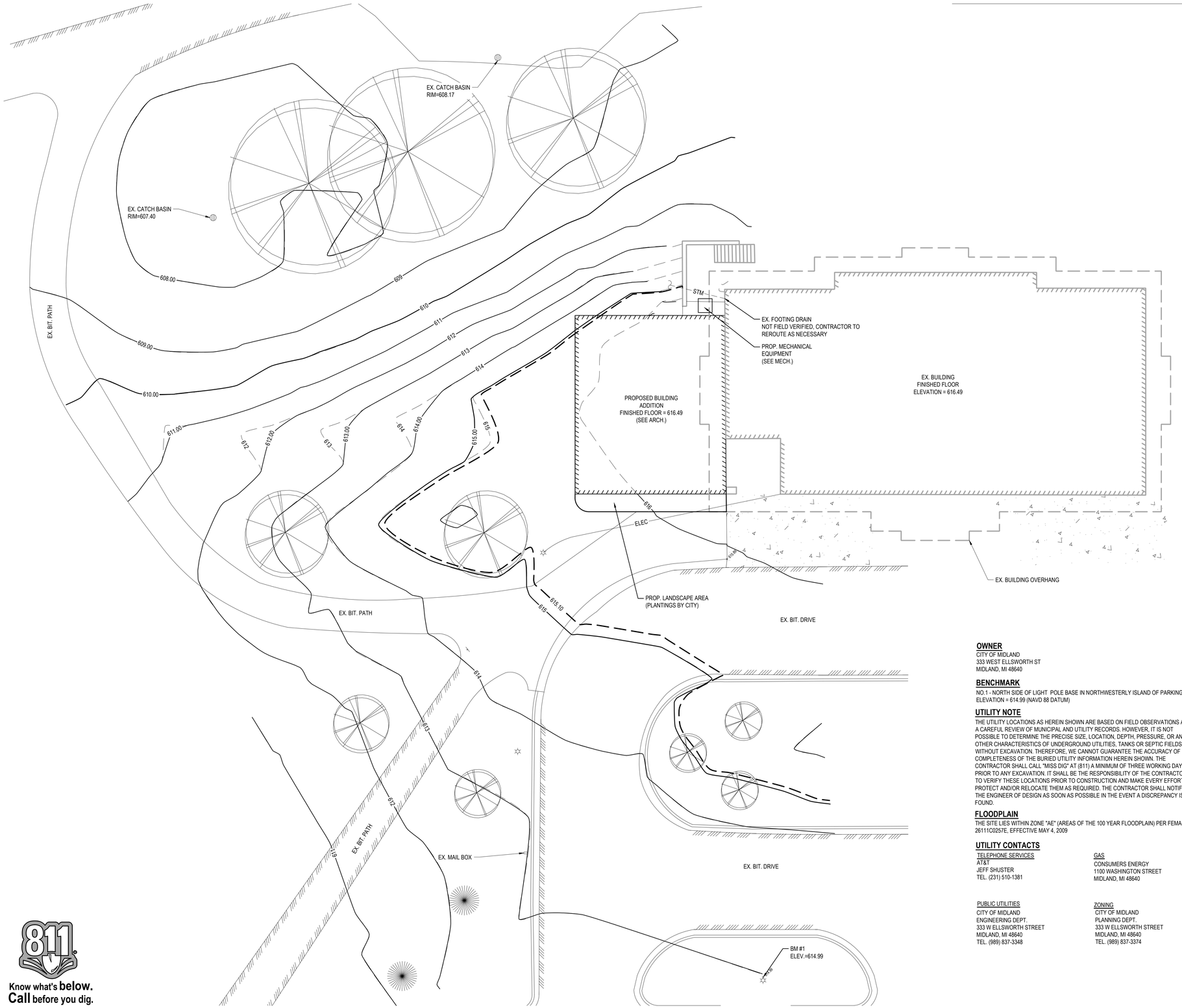
989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
SITE DEMOLITION PLAN

PROJECT NUMBER	SHEET NUMBER
25-0456-0295	C2.0
PROJECT DATE: 2026	
CHECKED BY: J. WHEELER	



PROPOSED SITE PLAN

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- EX. CONCRETE PAVEMENT
- EX. SIGN WITH POST
- EX. STORM CATCH BASIN/MANHOLE
- EX. LIGHT POLE
- EX. MAILBOX
- PROP. BUILDING
- 700 — PROP. GRADE CONTOUR (MAJR)
- 702 — PROP. GRADE CONTOUR (MINR)

GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL CALL "MISS DIG", 811, A MINIMUM OF 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DRAWN IN ACCORDANCE TO THE INFORMATION PROVIDED. ALL UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO CROSSING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL CONFORM TO ACT No. 451, PUBLIC ACTS OF 1994, RELATIVE TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
4. CLEANUP SHALL INCLUDE DEBRIS REMOVAL, ROUGH GRADING, MINIMUM 4" TOPSOIL PLACEMENT, SEEDING, AND FERTILIZING OVER ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS.
5. CONTRACTOR TO SUPPLY ALL MATERIALS AND EQUIPMENT NECESSARY TO COMPLETE THE WORK.
6. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ALL COSTS FOR LOCATING, REMOVING, REPLACING OR RELOCATING THESE UTILITIES SHALL BE INCIDENTAL TO CONSTRUCTION. ALL UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH LIKE MATERIAL AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL NOTIFY PROPER GOVERNMENTAL INSPECTION AGENCY AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
8. THE CONTRACTOR SHALL BE REQUIRED TO COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP CONSTRUCTION FOR EXTENDED PERIODS ONCE CONSTRUCTION HAS BEGUN.
9. THE CONTRACTOR SHALL MAINTAIN IN SERVICE, ALL EXISTING SANITARY SEWER, WATER OR STORM SEWER SERVICE CONNECTIONS WHENEVER POSSIBLE. COORDINATE WITH LOCAL UTILITY COMPANY AND OWNER BEFORE ANY UTILITIES TO BE OUT OF SERVICE FOR A PERIOD OF TIME.
10. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
11. SEE GRADING AND UTILITY PLAN FOR PAVEMENT GRADES AND UTILITY NOTES.
12. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING LAYOUTS, DIMENSIONS AND DETAILS PERTAINING TO BUILDING.
13. SEE LANDSCAPING PLAN FOR LAYOUT AND NOTES.

OWNER
CITY OF MIDLAND
333 WEST ELLSWORTH ST
MIDLAND, MI 48640

BENCHMARK
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FLOODPLAIN
THE SITE LIES WITHIN ZONE "AE" (AREAS OF THE 100 YEAR FLOODPLAIN) PER FEMA MAP 26111C0257E, EFFECTIVE MAY 4, 2009

UTILITY CONTACTS

TELEPHONE SERVICES
AT&T
JEFF SHUSTER
TEL. (231) 510-1381

GAS
CONSUMERS ENERGY
1100 WASHINGTON STREET
MIDLAND, MI 48640

PUBLIC UTILITIES
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DESIGN DEVELOPMENT NOT FOR CONSTRUCTION

NO.	REVISION	DATE
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	FINAL OWNER REVIEW	04-30-2026

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ENGINEERS | ARCHITECTS | SURVEYORS

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WTA ARCHITECTS
100 S Jefferson Ave, Suite 601
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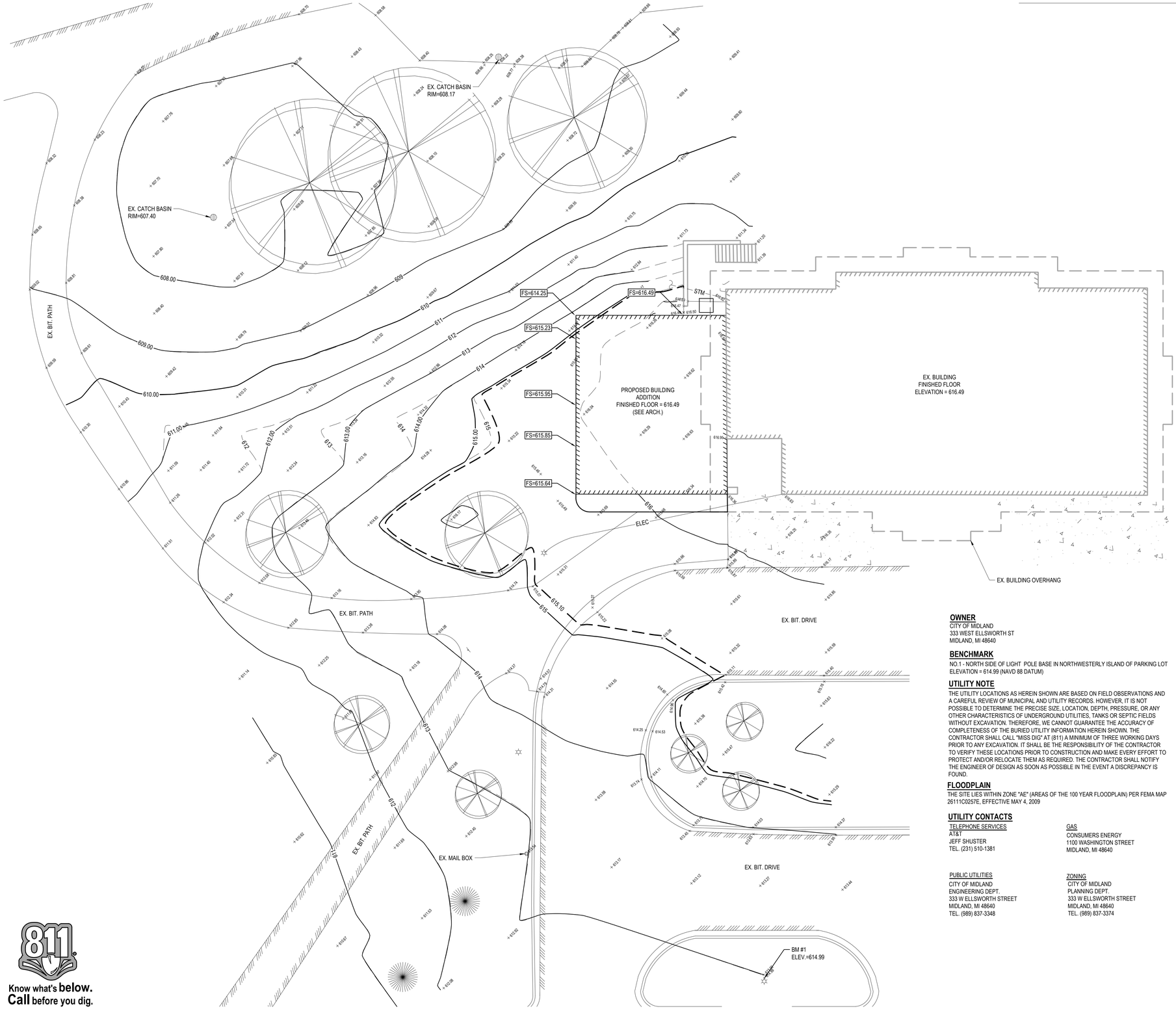
989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
PROPOSED SITE PLAN

PROJECT NUMBER	SHEET NUMBER
25-0456-0295	C3.0
PROJECT DATE: 2026	
CHECKED BY: J. WHEELER	



PROPOSED SITE GRADING PLAN

SCALE: 1"=10'

Know what's **below.**
Call before you dig.

GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
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LEGEND

- EX. SPOT GRADE
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- EX. BUILDINGS
- EX. BITUMINOUS PAVEMENT
- EX. CONCRETE PAVEMENT
- EX. SIGN WITH POST
- EX. STORM CATCH BASIN/MANHOLE
- EX. LIGHT POLE
- EX. MAILBOX
- PROP. BUILDING
- PROP. GRADE CONTOUR (MAJR)
- PROP. GRADE CONTOUR (MINR)
- PROP. DRAINAGE FLOW
- FS FINISH SURFACE
- TC TOP OF CURB
- TW TOP OF WALK
- TC =000.00 PROP. SPOT ELEVATION

GENERAL GRADING NOTES:

1. THE CONTRACTOR SHALL CALL "MISS DIG", 811, A MINIMUM OF 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. THE EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN DRAWN IN ACCORDANCE TO THE INFORMATION PROVIDED. ALL UTILITIES SHALL BE FIELD LOCATED BY THE CONTRACTOR PRIOR TO CROSSING. ANY CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. DURING THE LIFE OF THE PROJECT, THE CONTRACTOR SHALL CONFORM TO ACT No. 451, PUBLIC ACTS OF 1994, RELATIVE TO THE SOIL EROSION AND SEDIMENTATION CONTROL ACT.
4. MATCH EXISTING BIT. PAVEMENT ALONG NEW WALKS AND PROPOSED NEW BIT. PAVEMENT AREAS WHERE APPLICABLE.
5. ALL UTILITY WORK SHALL CONFORM TO THE LATEST LOCAL MUNICIPALITY'S STANDARD SPECIFICATIONS AND DETAILS.
6. SAND FILL UNDER FLOOR SLABS SHALL BE MDOT CL.II GRANULAR BACKFILL. SAND SHALL BE SPREAD IN UNIFORM LAYERS NOT TO EXCEED 6" THICK BEFORE COMPACTION. EACH LAYER SHALL BE THOROUGHLY COMPACTED WITH A VIBRATING COMPACTOR AFTER EACH LAYER IS PLACED. FILL SAND SHALL NOT HAVE A MOISTURE CONTENT GREATER THAN 15%. COMPACTION SHALL MEET 95% OF MAXIMUM UNIT WEIGHT AS DETERMINED BY THE MODIFIED PROCTOR TEST.
7. THE SITE EXCAVATION CONTRACTOR SHALL VERIFY THE EXISTING SANITARY SEWER LEAD DEPTH PRIOR TO ANY FOOTING EXCAVATION.
8. REMOVE EXISTING TOP SOIL FROM AREAS TO BE PAVED AND REPLACE WITH SUITABLE COMPACTED FILL. FILL MATERIAL SHALL BE COMPACTED SAND BACKFILL CLASS II GRANULAR.
9. BACKFILL ALL TRENCHES UNDER SLABS, WALKS AND PAVED AREAS WITH COMPACTED SAND BACKFILL MDOT CL II. COMPACTION SHALL BE 95% MAXIMUM UNIT WEIGHT AS DETERMINED BY MODIFIED PROCTOR.
10. ALL ON SITE WATER SERVICES SHALL MEET THE REQUIREMENTS OF THE STANDARD DETAILS OF THE LOCAL MUNICIPALITY HAVING JURISDICTION.
11. THE CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL REGULATIONS FOR WORK AT THE SITE. THIS SHALL INCLUDE MIOSHA REGULATIONS.
12. THE CONTRACTOR/DEVELOPER SHALL PAY FOR AND OBTAIN ALL BUILDING PERMITS, LOCAL PERMITS AND PAY ALL CHARGES FOR ANY INSPECTION AND TESTING.
13. THE CONTRACTOR SHALL CONTROL NOISE, CARRY OUT A PROGRAM OF DUST CONTROL AND SHALL ALLOW NO ON-SITE BURNING.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE PREMISES AND UPON COMPLETION OF THE PROJECT LEAVE THE SITE IN AN ACCEPTABLE CONDITION AS DETERMINED BY THE ENGINEER OR THE OWNER.

OWNER
CITY OF MIDLAND
333 WEST ELLSWORTH ST
MIDLAND, MI 48640

BENCHMARK
NO.1 - NORTH SIDE OF LIGHT POLE BASE IN NORTHWESTERLY ISLAND OF PARKING LOT
ELEVATION = 614.99 (NAVD 88 DATUM)

UTILITY NOTE
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FLOODPLAIN
THE SITE LIES WITHIN ZONE "AE" (AREAS OF THE 100 YEAR FLOODPLAIN) PER FEMA MAP 26111C0257E, EFFECTIVE MAY 4, 2009

UTILITY CONTACTS

TELEPHONE SERVICES
AT&T
JEFF SHUSTER
TEL. (231) 510-1381

GAS
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1100 WASHINGTON STREET
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PROJECT TITLE
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PROPOSED SITE GRADING PLAN

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25-0456-0295	C4.0
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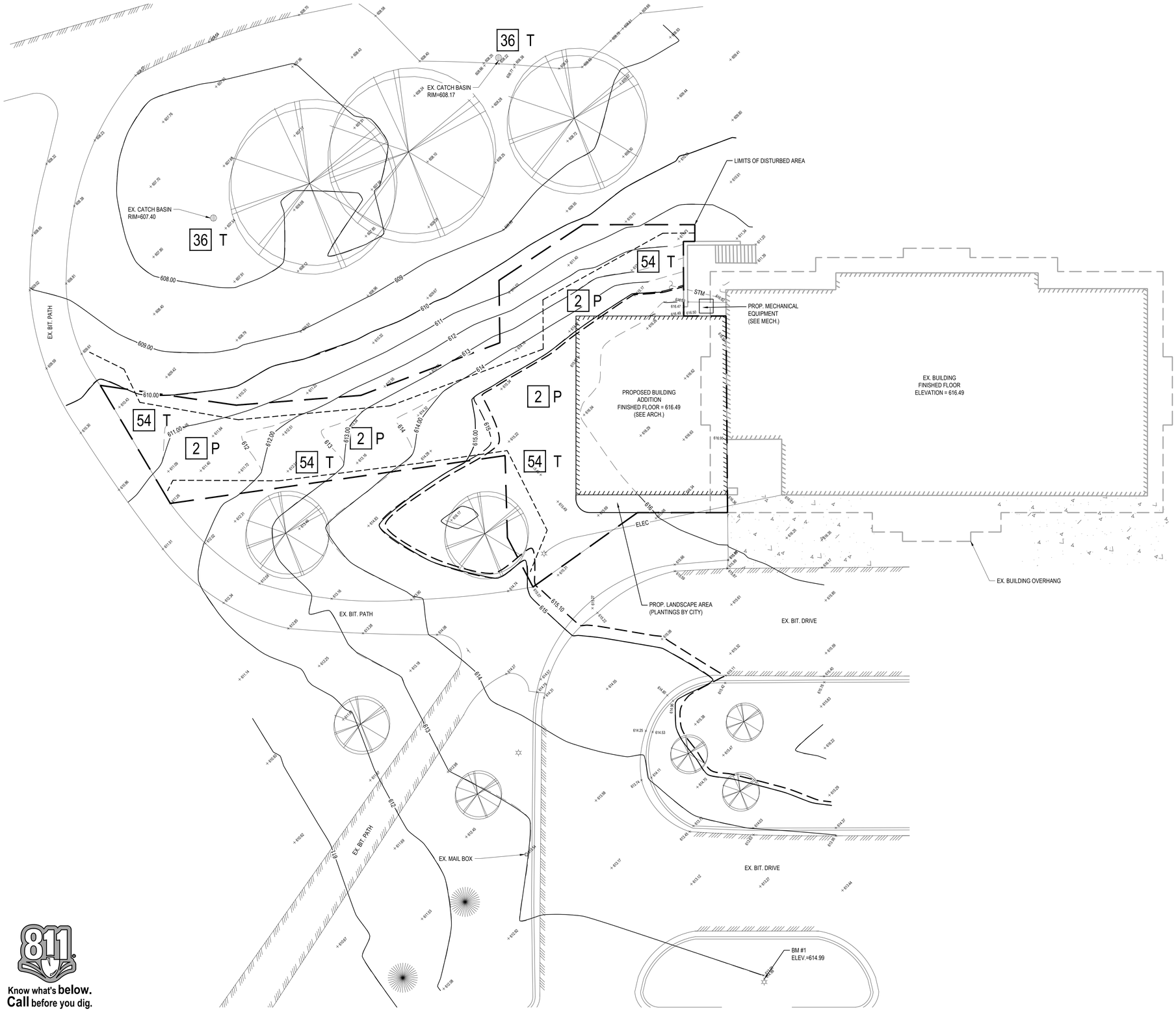

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

SCALE: 1"=10'

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- EX. CONCRETE PAVEMENT
- EX. SIGN WITH POST
- EX. STORM CATCH BASIN/MANHOLE
- EX. LIGHT POLE
- EX. MAILBOX
- PROP. BUILDING
- SILT FENCE

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CONSTRUCTION SEQUENCE:

1. EXCAVATION AND STOCKPILING OF SOIL.

2. IMPLEMENTATION OF TEMPORARY EROSION CONTROL MEASURES; SELECTIVE GRADING, DIVERSIONS AS REQUIRED IN FIELD, PROTECTION OF STORM SEWER FACILITIES.

3. PERIODIC MAINTENANCE OF AFFECTED EROSION CONTROL MEASURES.

4. PERMANENT MEASURES; FINAL GRADING, SEEDING AND MULCHING.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

1. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.

2. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.

3. CLEANUP WILL BE DONE IN A MANNER TO INSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.

4. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS.

5. TEMPORARY EROSION CONTROL MEASURES SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR UPON ESTABLISHMENT OF PERMANENT CONTROL MEASURES.

KEYED DETAILS

2	SELECTIVE GRADING/SHAPING	WATER CAN BE DIVERTED TO MINIMIZE EROSION. FLATTER SLOPES EASE EROSION PROBLEMS
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF. USE "SILT SAK" FOR EASY MAINTENANCE.
54	SILT FENCE	FILTERS AND DETAINS RUNOFF.

T=TEMPORARY MEASURE
P=PERMANENT MEASURE
TOTAL DISTURBED AREA = 0.10 ACRES

DESIGN DEVELOPMENT NOT FOR CONSTRUCTION

NO.	REVISION	DATE
	ISSUED FOR BID	05-12-2026
	FINAL OWNER REVIEW	04-30-2026

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989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
SOIL EROSION AND SEDIMENTATION CONTROL PLAN

PROJECT NUMBER 25-0456-0295	SHEET NUMBER C4.1
PROJECT DATE 2026	
CHECKED BY J. WHEELER	

ARCHITECTURAL MATERIAL LEGEND

- CONCRETE MASONRY (SECTION & PLAN)
- CONCRETE MASONRY (SECTION & PLAN)
- BRICK MASONRY (SECTION & PLAN)
- CAST STONE (SECTION & PLAN)
- STUD WALL (PLAN)
- BATT INSULATION
- SOUND ATTENUATION BLANKETS/SPRAYED INSUL.
- RIGID INSULATION & RIGID INSULATION BOARD
- DIMENSIONAL LUMBER
- FINISH LUMBER
- STEEL (SECTION)
- SUSPENDED CEILING TILE
- TILE ON MORTAR BED
- CEMENT BOARD (SECTION)
- GROUT
- GYPSUM BOARD (CEILING/ELEVATION)
- GYPSUM BOARD (SECTION)
- BACKER BOARD
- PARTICLE BOARD & PLYWOOD
- SOLID SURFACE
- CONCRETE
- CONCRETE WALK (PLAN)
- GRAVEL OR STONE AS INDICATED
- COMPACTED SAND FILL
- ENGINEERED FILL
- MORTAR NET

LEGEND OF ABBREVIATIONS

ABBV.	ABBREVIATIONS	F.R.P./FRP	FIBER REINFORCED POLYESTER	RAD.	RADIUS
A.F.F.	ABOVE FINISHED FLOOR			REFRG.	REFRIGERATOR
AC.	ACOUSTICAL)	GA.	GAUGE	REINF.	REINFORCE(MENT)
A.C.P.	ACOUSTIC CEILING PANEL	G. TILE/GT	GLASS TILE	REQ'D	REQUIRED
A.C.T.	ACOUSTIC CEILING TILE	GL.	GLAZING	R.W.B./RWB	RESILIENT WALL BASE
A.R.P.	ACRYLIC RESIN PANEL	G.B.	GRAB BAR	R.S.F./RSF	RESILIENT SHEET FLOORING
ADD'L	ADDITIONAL	GYP. BD.	GYPSUM BOARD	R.T.F./RTF	RESILIENT TILE FLOORING
ADJ.	ADJUSTABLE			R.O.	ROUGH OPENING
ALT.	ALTERNATE	HWD.	HARDWOOD		
ALUM.	ALUMINUM	H.P.	HIGH POINT	S.A.T.	SUSPENDED ACOUSTICAL TILE
ANOD.	ANODIZED	H.M./HM	HOLLOW METAL	SF. GL.	SAFETY GLAZING
APPROX.	APPROXIMATE	HORIZ.	HORIZONTAL	S.N.DR.	SANITARY NAPKIN DISPENSER
ARCH.	ARCHITECTURAL	H.B.	HOSE BIB	S.N.DL.	SANITARY NAPKIN DISPOSAL
				S.O.	SASH OPENING
BKR. BD.	BACKER BOARD	I.DIA./I.D.	INSIDE DIAMETER	SCHED.	SCHEDULE
BRG	BEARING	I.F.BL.	INSIDE FACE OF BLOCK	SN'T.	SEALANT
BIT.	BITUMINOUS	I.F.BR.	INSIDE FACE OF BRICK	SH'T.	SHEET
BLK('G)	BLOCK(ING)	INSUL.	INSULATE(D)	SIM.	SIMILAR
BD.	BOARD	INT.	INTERIOR	SM.F.	SMOOTH FACE
BTM.	BOTTOM			SPEC.	SPECIFICATION(S)
B.O.C.	BOTTOM OF CURB	JT.	JOINT	SP.F.	SPLIT FACE
B.O.F.	BOTTOM OF FOOTING			SQ.FT.	SQUARE FEET
BRK.	BRICK	LAM./LAM.	LAMINATE(D)	S.STL./SS	STAINLESS STEEL
BLDG.	BUILDING	LAV.	LAVATORY (SINK)	STD.	STANDARD
		L.S.F./LSF	LINOLEUM SHEET FLOORING	STO./STOR.	STORAGE
CPT.	CARPET	L.T.F./LTF	LINOLEUM TILE FLOORING	STRT.	STRAIGHT
C.B.	CATCH BASIN	L.P.	LOW POINT	STRUC.	STRUCTURE
CLG.	CEILING	L.V.T./LVT	LUXURY VINYL TILE	SUSP.	SUSPENDED
C.M.TILE/CMT	CERAMIC MOSAIC TILE				
CT	CERAMIC TILE	MFR.	MANUFACTURE(R)	T.B.	TACKBOARD
CHBD.	CHALKBOARD	M.B.	MARKERBOARD	TEL.	TELEPHONE
CLR.	CLEAR	MAS.	MASONRY	T.V.	TELEVISION
COL.	COLUMN	M.O.	MASONRY OPENING	TEMP.	TEMPER(ED)
CONC.	CONCRETE	MAT'L	MATERIAL	THK.	THICK
C.M.U./CMU	CONCRETE MASONRY UNIT	MAX.	MAXIMUM	T.P.D.	TOILET PAPER DISPENSER
CONT.	CONTINUOUS	MECH.	MECHANICAL	T.O.M.	TOP OF MASONRY
C.J.	CONTINUOUS JOINT	MTL.	METAL	TYP.	TYPICAL
CTOP.	COUNTER TOP	M.P./MP	METAL PANEL	U.N.O.	UNLESS NOTED OTHERWISE
COV'RG.	COVERING	M.D.O.T.	MICHIGAN DEPARTMENT OF TRANSPORTATION	UR.	URINAL
DEPT.	DEPARTMENT				
DIA.	DIAMETER	MIN.	MINIMUM	V.B.	VAPOR BARRIER
D.O.	DOOR OPENING	MIR.	MIRROR	V.I.F.	VERIFY IN FIELD
DBL.	DOUBLE	MISC.	MISCELLANEOUS	VERT.	VERTICAL
DN.	DOWN			V.T.R.	VENT THROUGH ROOF
D.T.	DRAIN TILE	NOM.	NOMINAL	VNL./VNL	VINYL
DW'G.	DRAWING	N.I.C.	NOT IN CONTRACT	V.C.T./VCT	VINYL COMPOSITION TILE
D.F.	DRINKING FOUNTAIN	N.T.S.	NOT TO SCALE		
		NO.	NUMBER	W.C.	WATER CLOSET
EA.	EACH			W.MAT/WOM	WALK-OFF MAT
E.W.	EACH WAY	O.C.	ON CENTER	W.W.F.	WELDED WIRE FABRIC
ELEC.	ELECTRIC(AL)	OPP.	OPPOSITE (HAND)	W.W.M.	WELDED WIRE MESH
E.H.D.	ELECTRIC HAND DRYER	O.S.B.	ORIENTED STRAND BOARD	W.O.	WINDOW OPENING
E.W.C.	ELECTRIC WATER COOLER	O.DIA./O.D.	OUTSIDE DIAMETER	w/	WITH
EL.	ELEVATION	O.F.BL.	OUTSIDE FACE OF BLOCK	WD.	WOOD
ELEV.	ELEVATOR	O.F.BR.	OUTSIDE FACE OF BRICK		
EQ.	EQUAL	O.F.C.	OUTSIDE FACE OF CONCRETE		
E.F.	EXHAUST FAN	O.F.M.	OUTSIDE FACE OF MASONRY		
EXIST./(E)	EXISTING	O.F.S.	OUTSIDE FACE OF STUDS		
EXP.	EXPOSED				
EXT.	EXTERIOR	PT./P	PAINT(ED)		
		PR.	PAIR		
FT.	FEET	P.T.D.	PAPER TOWEL DISPENSER		
F.F.	FINISHED FACE	PART. BD.	PARTICLE BOARD		
FIN.	FINISHED	PTN.	PARTITION		
F.O.	FINISHED OPENING	P.H.	PHYSICALLY HANDICAPPED		
F.E.	FIRE EXTINGUISHER	PLAS.	PLASTER		
F.E.C.	FIRE EXTINGUISHER CABINET	P.LAM./PL	PLASTIC LAMINATE		
F.R.	FIRE RATED	PLYWD.	PLYWOOD		
F.RT.	FIRE RETARDANT	P.O.N.C.	POINT OF NEW CONNECTION		
F.R.L./FRL	FIBER REINFORCED LAMINATE	P.TILE/PT	PORCELAIN TILE		
FIXT.	FIXTURE	PWR.	POWER		
F.S.F./FSF	FLOCKED SHEET FLOORING	P.CONC.	PRECAST CONCRETE		
F.T.F./FTF	FLOCKED TILE FLOORING	P.C./PC	POLISHED CONCRETE		
FLR.	FLOOR				
F.D.	FLOOR DRAIN	Q.TILE/QT	QUARRY TILE		
FTG.	FOOTING	QTZ./QTZ	QUARTZ		

ARCHITECTURAL SYMBOL LEGEND

ROOM IDENTIFIER:

ROOM NAME
A100A
- OPTIONAL LETTER
- ROOM NUMBER
- GRADE CLUSTER
- UNIT LETTER

DOOR IDENTIFIER:

A100.1
- DOOR NUMBER
- ROOM NUMBER
- GRADE CLUSTER
- UNIT LETTER

KEYED NOTES:

- 1 — MATERIAL KEYNOTE (HEXAGON w/ NUMBER)
- 1 — PLAN KEYNOTE (SQUARE w/ NUMBER)
- R1 — ROOF PLAN KEYNOTE (SQUARE w/ "R" AND NUMBER)
- 2 — PLAN DEMOLITION KEYNOTE (TRIANGLE w/ NUMBER)

DEMOLITION IDENTIFIER:

ITEM TO BE REMOVED

ALTERATION CLOUD:

INDICATES A CHANGE TO THE CONSTRUCTION DOCUMENTS VIA ADDENDUM, BULLETIN, AND CHANGE ORDER

MATCH LINE:

MATCH LINE

REFERENCE BUBBLES:

- 1 / A1.01 — LOCATION NUMBER / SHEET NUMBER
- 7 / A7.07 — DETAIL MARK
- 5 / A5.05 — BUILDING SECTION
- 2 / A2.02 — ENLARGED DETAIL OR PLAN

ADDITIONAL IDENTIFIERS:

- F2 — DOOR FRAME TYPE (OVAL w/ "F" AND NUMBER)
- D2 — DOOR TYPE (OVAL w/ "D" AND NUMBER)
- W2 — WINDOW TYPE (OVAL w/ "W" AND NUMBER)
- 2.1 — WALL TYPE (DIAMOND w/ NUMBER)
- # — ADDENDUM IDENTIFIER (RHOMBUS w/ NUMBER)
- # — BULLETIN IDENTIFIER (RHOMBUS w/ NUMBER)
- # — CHANGE ORDER IDENTIFIER (RHOMBUS w/ NUMBER)

INTERIOR ELEVATION IDENTIFIER:

8/A8.08
- SHEET NUMBER
- LOCATION NUMBER

ALTERATION IDENTIFIER:

ALTERNATE NO. 2

ROOM FINISH TAG:

ROOM NAME

NO.	BASE
WALL	FLOOR
	REMARK

NO. = ROOM NUMBER
BASE = BASE MAT'L
FLOOR = FLOOR MATL
REMARK = REFER TO SCHEDULE OF REMARKS

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

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989 752 8107

ITB - 4650

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

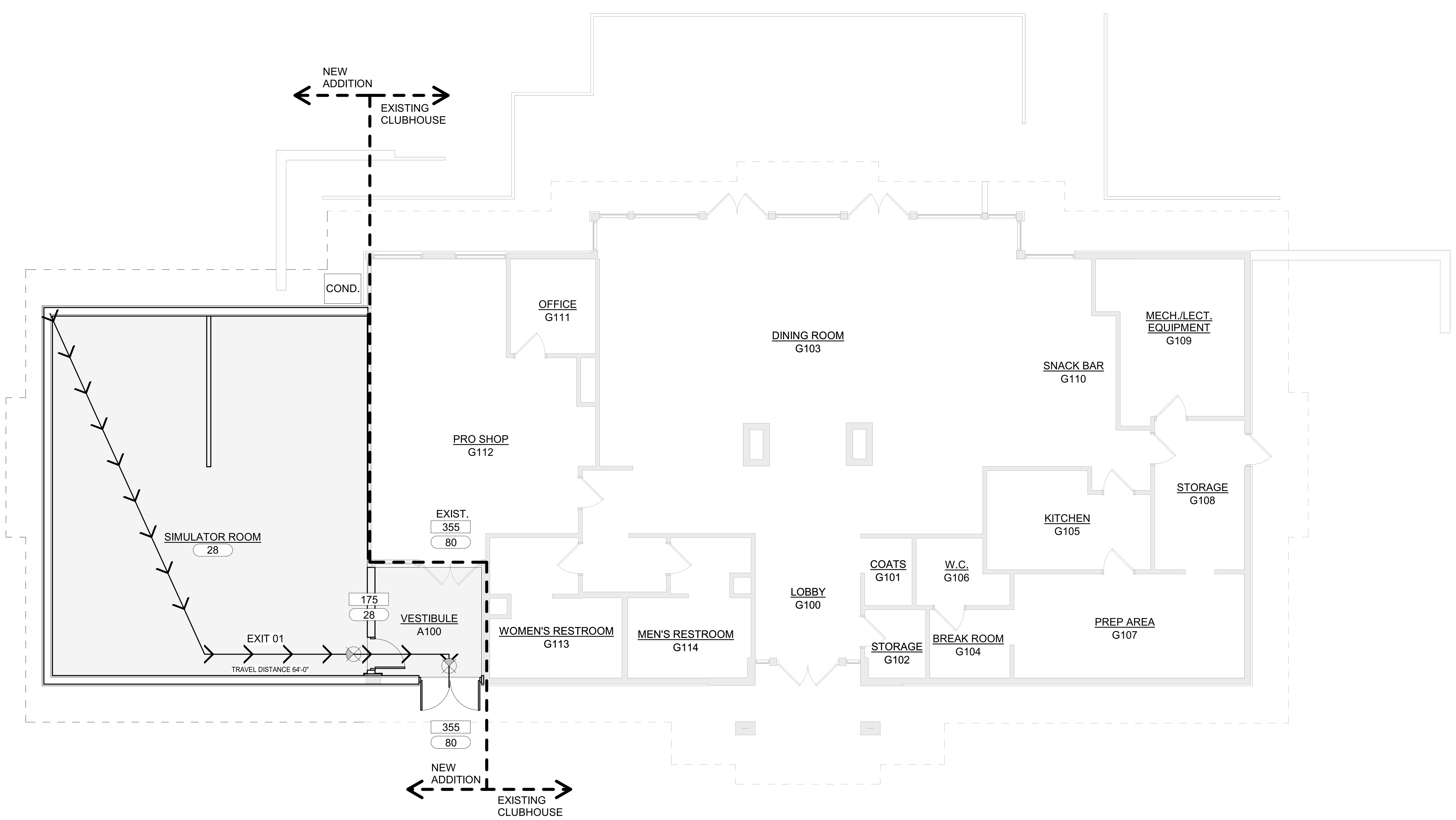
SHEET TITLE
PROJECT INFORMATION

PROJECT NUMBER 2025104	SHEET NUMBER A0.01
PROJECT DATE 2026	
CHECKED BY Checker	

CODE REVIEW

2021 MICHIGAN BUILDING CODE
2021 MICHIGAN PLUMBING CODE
2021 MICHIGAN MECHANICAL CODE
2023 NATIONAL ELECTRICAL CODE w/ MICHIGAN PART 8 RULES
2017 AMERICAN NATIONAL STANDARD ICC A117.1
2024 INTERNATIONAL FIRE CODE

CODE TITLE	REFERENCE / LOCATION	CODE	RESPONSE / EXCEPTION
ASSEMBLY GROUP A-2	MBC 303.3	RESTAURANT / BAR	
ALLOWABLE HEIGHT ABOVE GRADE	MBC T504.3	OCCUPANCY CLASSIFICATION A2, NON SPRINKLED, TYPE VB = 40'	EXISTING BUILDING +27'-0" NEW ADDITION = +16'-6"
ALLOWABLE NUMBR OF STORIES ABOVE GRACE	MBC T504.4	OCCUPANCY CLASSIFICATION A2, NON SPRINKLED, TYPE VB = 1 STORY	EXISTING CONSTRUCTION = 1 STORY NEW ADDITON = 1 STORY
ALLOWABLE AREA	MBC T506.2	OCCUPANCY CLASSIFICATION A2, NON SPRINKLED, TYPE VB MAXIMUM - 6,000 S.F.	EXSITING BUILDING: 3,971 S.F. NEW ADDITION: 1,556 S.F. TOTAL: 5,527 S.F.
CONSTRUCTION TYPE	MBC T601	TYPE VB:	
INTERIOR WALL AND CEILING FINISH REQUIMENTS	MBC T803.13	GROUP A2, NON SPRINKLED: CORRIDORS = A ROOMS AND SPACES = B	



FIRST FLOOR MASTER LIFE SAFETY PLAN
SCALE: 1/8" = 1'-0"

CODE LEGEND

EXIT 1

- TRAVEL DISTANCE
- XXX — EXIT CAPACITY
- XXX — OCCUPANT LOAD
- SUITE = 1,318 S.F.
- FEC — FIRE EXTINGUISHER CABINET (SEMI-RECESSED)
- EXIT SIGN

CODE PLAN EGRESS PATH LENGTH

PATH ID	LENGTH
EXIT 01	66'

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

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ITB - 4650

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

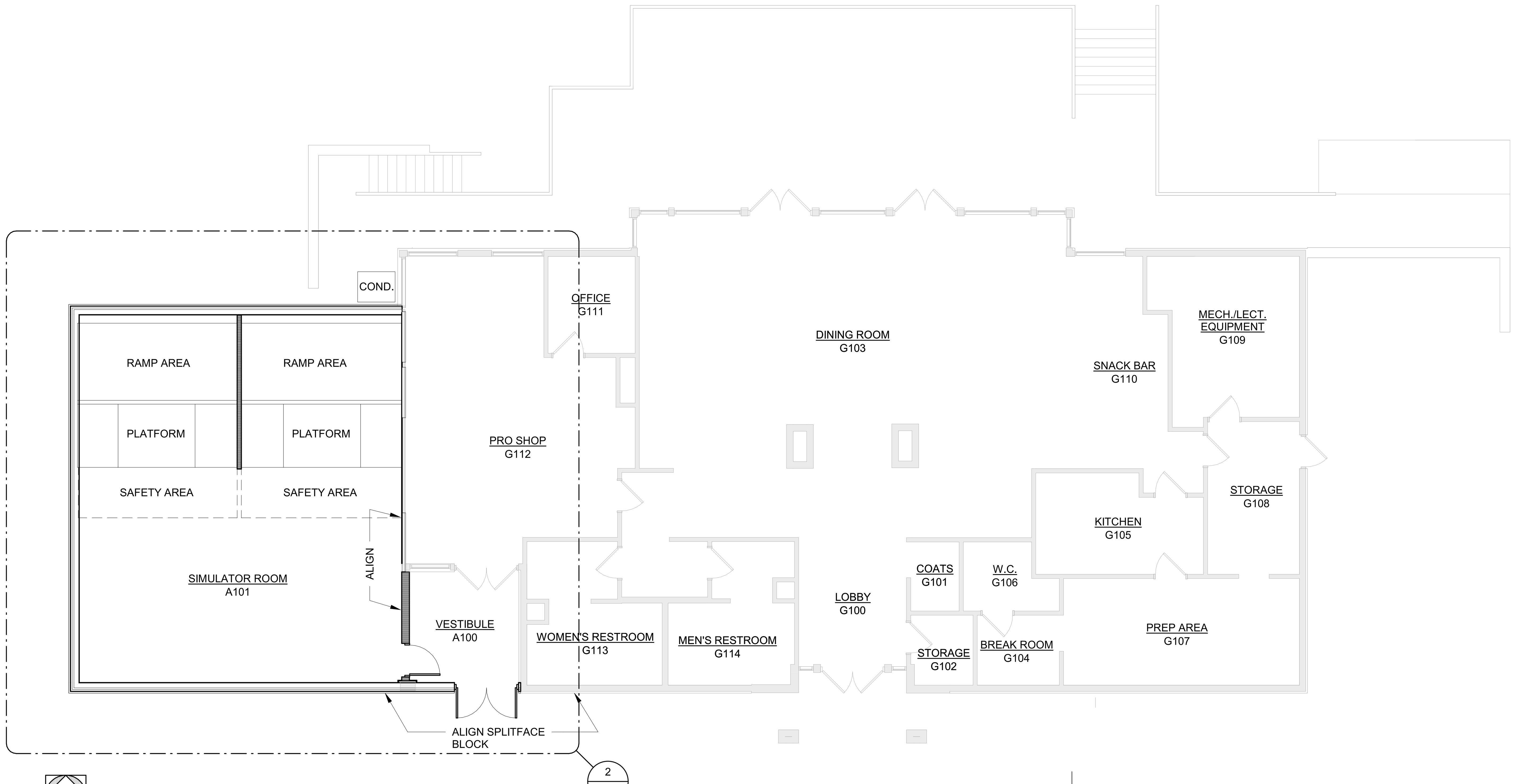
SHEET TITLE
FIRST FLOOR MASTER PLAN AND CODE INFORMATION

PROJECT NUMBER
2025104

PROJECT DATE
2026

CHECKED BY
Checker

SHEET NUMBER
A2.01



NORTH **FIRST FLOOR MASTER CONSTRUCTION PLAN**
SCALE: 1/8" = 1'-0"

WALL TYPES:

1.0 INTERIOR WALL
5/8" TYPE "X" GYPSUM BOARD ON BOTH SIDES OF 2X4 STAGGERED WOOD STUDS 16" O.C. w/ THERAMAL BATTS. EXTEND FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE ABOVE
9 1/4". 5" NOM.

2.0 INTERIOR WALL
5/8" TYPE "X" GYPSUM BOARD ON EXISTING 2X4 WOOD STUDS @ 16" O.C. w/ SOUND ATTENTUATION BLANKETS. EXTEND FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.
EXIST. 5/8" (1" NOM.)

3.0 INTERIOR WALL
5/8" TYPE "X" GYPSUM BOARD ON BOTH SIDES OF NEW 2X4 WOOD STUDS @ 16" O.C. w/ SOUND ATTENTUATION BLANKETS. EXTEND FROM FINISH FLOOR TO UNDERSIDE OF STRUCTURE ABOVE.
5". 5" NOM.

DEMOLITION KEYNOTES

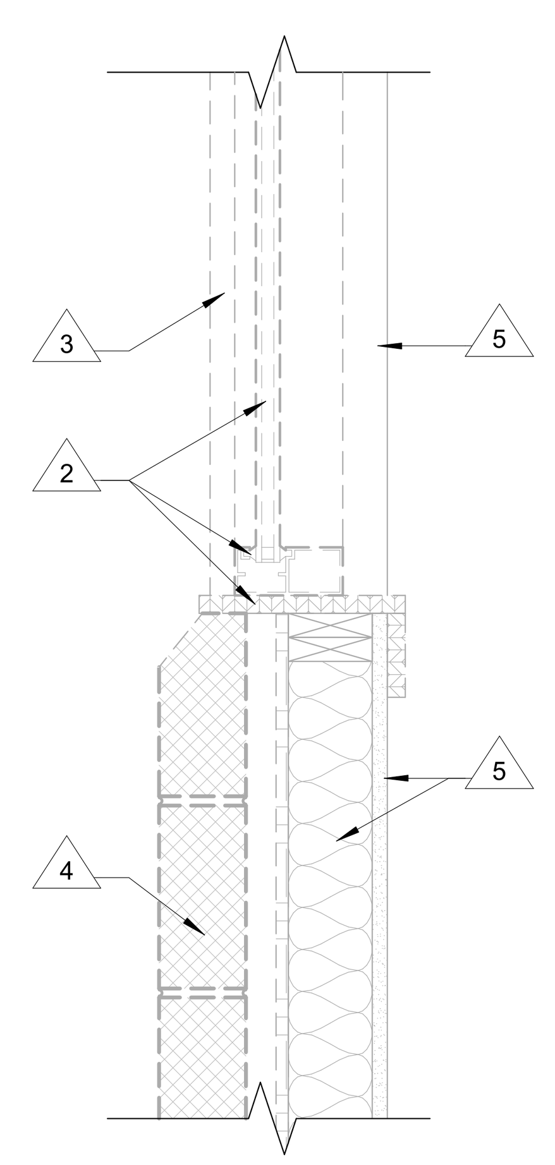
1. REMOVE EXISTING WALL CONSTRUCTION COMPLETELY - FULL HEIGHT
2. REMOVE EXISTING WINDOW, FRAME, AND SILL COMPLETELY
3. REMOVE EXISTING WOOD SIDING, TRIM, OSB LAYER AND RIGID INSULATION COMPLETELY
4. REMOVE EXISTING C.M.U. SPLITFACE BLOCK COMPLETELY
5. EXISTING WOOD STUD, BATT INSULATION, AND GYP. BOARD TO REMAIN
6. REMOVE EXISTING ROUGH SAWN CEDAR

PLAN KEYNOTES

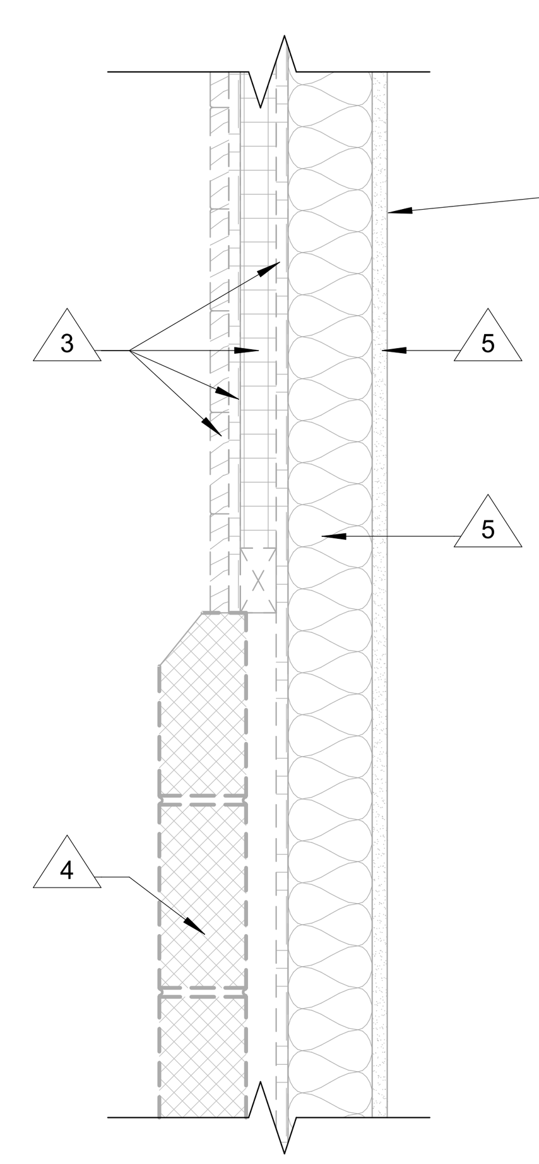
1. EXISTING TO REMAIN

CONSTRUCTION GENERAL NOTES:

1. WALL TYPES ARE INDICATED AS A DIAMOND WITH A NUMBER. REFER TO THIS SHEET FOR DESCRIPTION OF WALL TYPES.
2. PLAN DIMENSIONS DO NOT INCLUDE WALL THICKNESS (REFER TO WALL TYPES).
3. WINDOW TYPES ARE INDICATED AS AN OVAL WITH "W" AND A NUMBER. REFER TO SHEET A3.11 FOR WINDOW ELEVATIONS.
4. DOOR FRAMES ARE TO BE LOCATED 4" FROM THE PERPENDICULAR WALL ON THE HINGE SIDE OF THE DOOR AT GYPSUM WALL LOCATIONS AND 8" AT MASONRY WALLS UNLESS NOTED OTHERWISE.
5. PROVIDE BLOCKING AT ALL WALL AND CEILING MOUNTED ITEMS INCLUDING BUT NOT LIMITED TO: PLUMBING ACCESSORIES, MONITORS, MEDICAL EQUIPMENT, ETC.
6. ALL AREAS DAMAGED BY DEMOLITION WORK ARE TO BE PATCHED AND REPAIRED OR REPLACED TO MATCH ADJACENT SURFACES.
7. PATCH AND REPAIR REMAINING WALLS; AT ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DEMOLITION POINTS WITH SIMILAR MATERIALS IN SIZE, COLOR AND TEXTURE.
8. REMOVE ALL NAILS, FASTENERS AND MISCELLANEOUS ITEMS ATTACHED TO WALLS. PREPARE ALL EXISTING SURFACES AS NEEDED TO RECEIVE NEW FINISHES.
9. PATCH AND REPAIR ALL EXISTING FLOORS AS REQUIRED WHERE EXISTING WALLS HAVE BEEN REMOVED.
10. FURNITURE OR EQUIPMENT TO BE BUILT AND/OR INSTALLED BY CONTRACTOR IS SPECIFICALLY NOTED, DIMENSIONED OR DETAILED. ALL OTHER FURNITURE OR EQUIPMENT WILL BE PROVIDED AND INSTALLED BY OWNER.

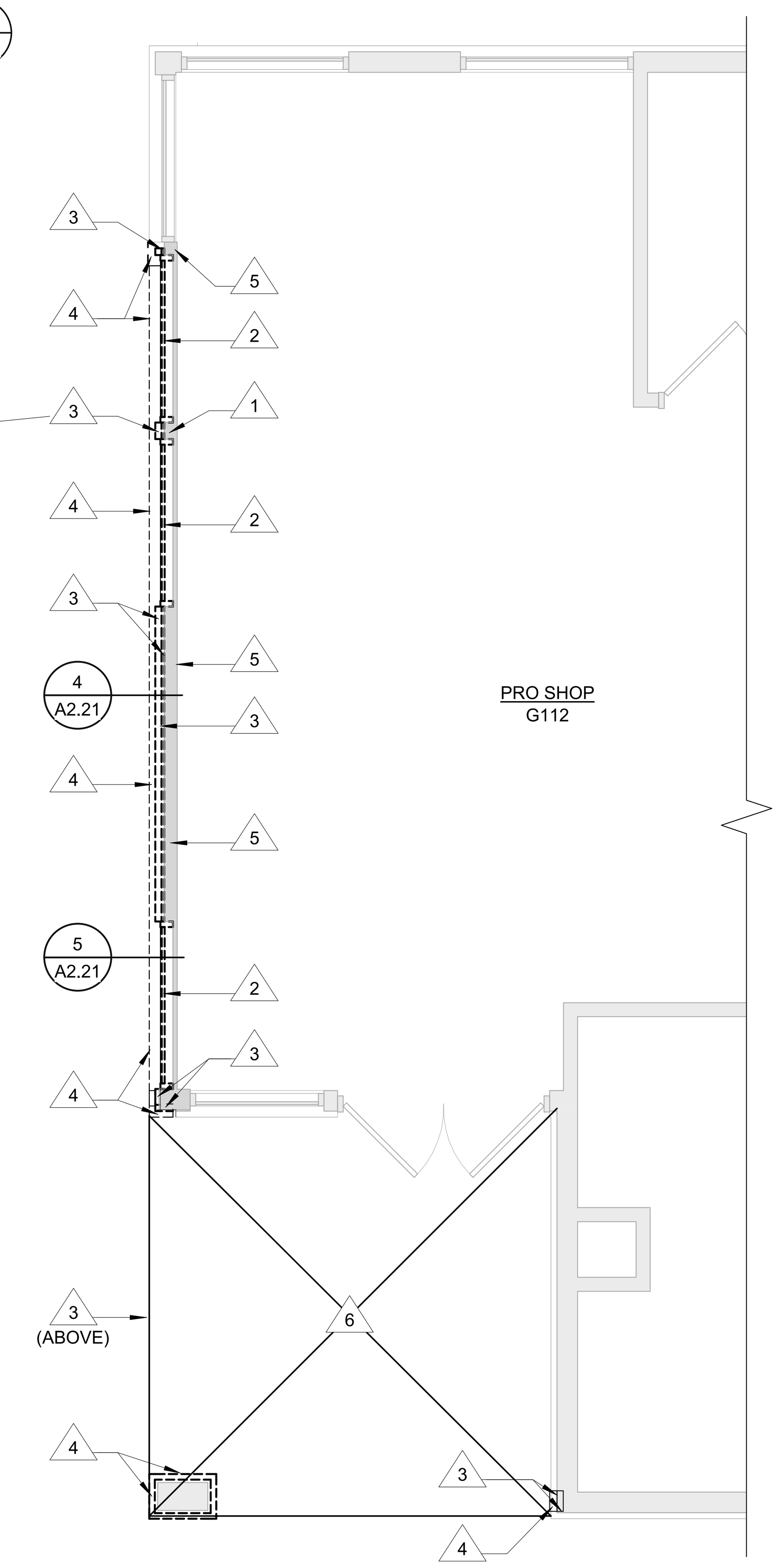


4 A2.21 **DEMO DETAIL**
SCALE: 1 1/2" = 1'-0"



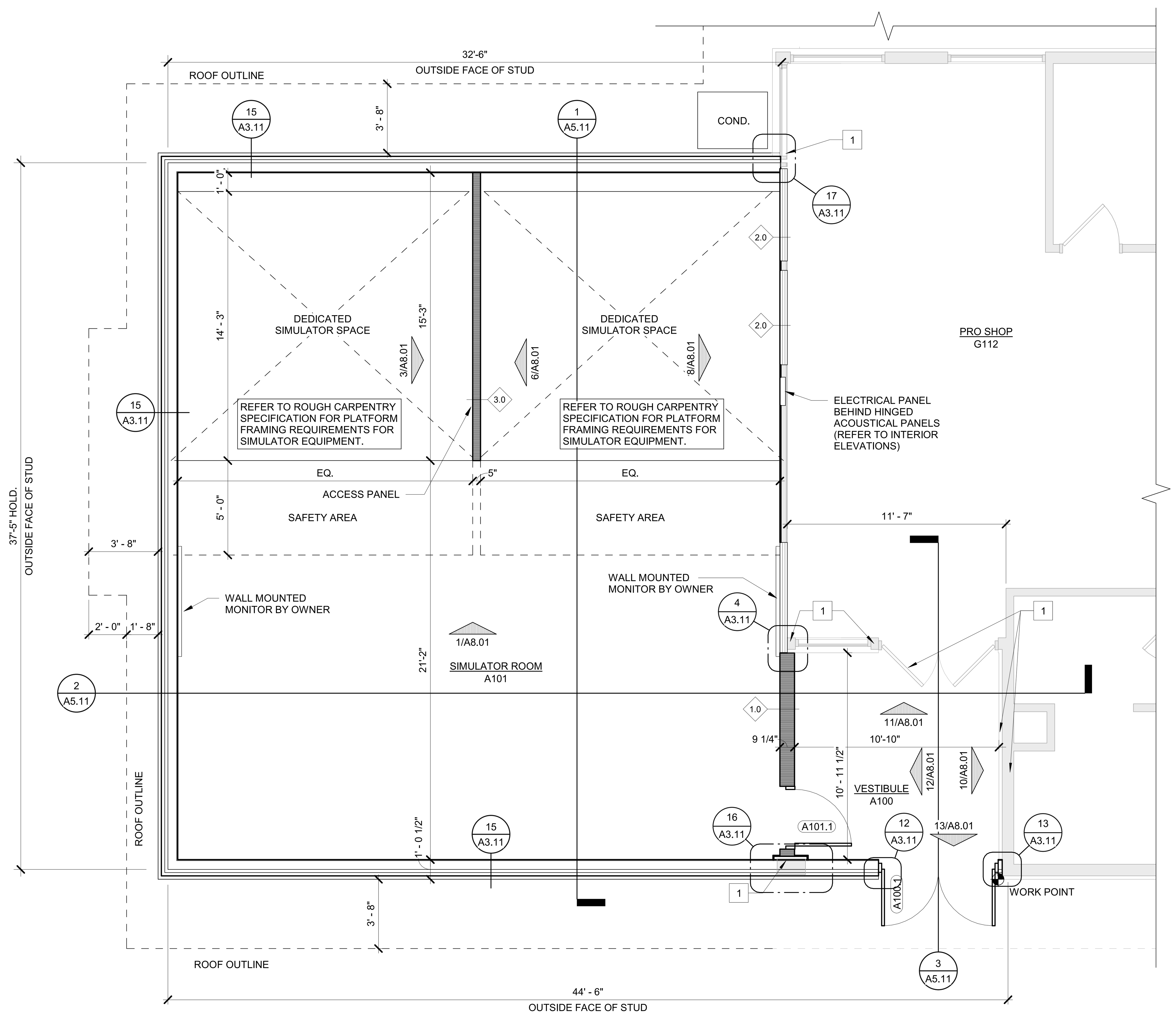
5 A2.21 **DEMO DETAIL**
SCALE: 1 1/2" = 1'-0"

INTENT OF DEMOLITION IS TO REMOVE EXISTING EXTERIOR WALL CONSTRUCTION DOWN TO EXISTING STUDS ON THE WEST FACING EXTERIOR WALL. VERIFY EXTENT OF DEMOLITION WITH NEW CONSTRUCTION DIMENSIONS, SEE FIRST FLOOR PARTIAL CONSTRUCTION PLAN



INTENT OF DEMOLITION IS TO REMOVE EXISTING EXTERIOR WALL CONSTRUCTION DOWN TO EXISTING STUDS ON THE WEST FACING EXTERIOR WALL. VERIFY EXTENT OF DEMOLITION WITH NEW CONSTRUCTION DIMENSIONS, SEE FIRST FLOOR PARTIAL CONSTRUCTION PLAN

NORTH **FIRST FLOOR DEMOLITION PLAN**
SCALE: 1/4" = 1'-0"



2 A2.21 **FIRST FLOOR PARTIAL CONSTRUCTION PLAN**
SCALE: 1/4" = 1'-0"

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

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ITB - 4650

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

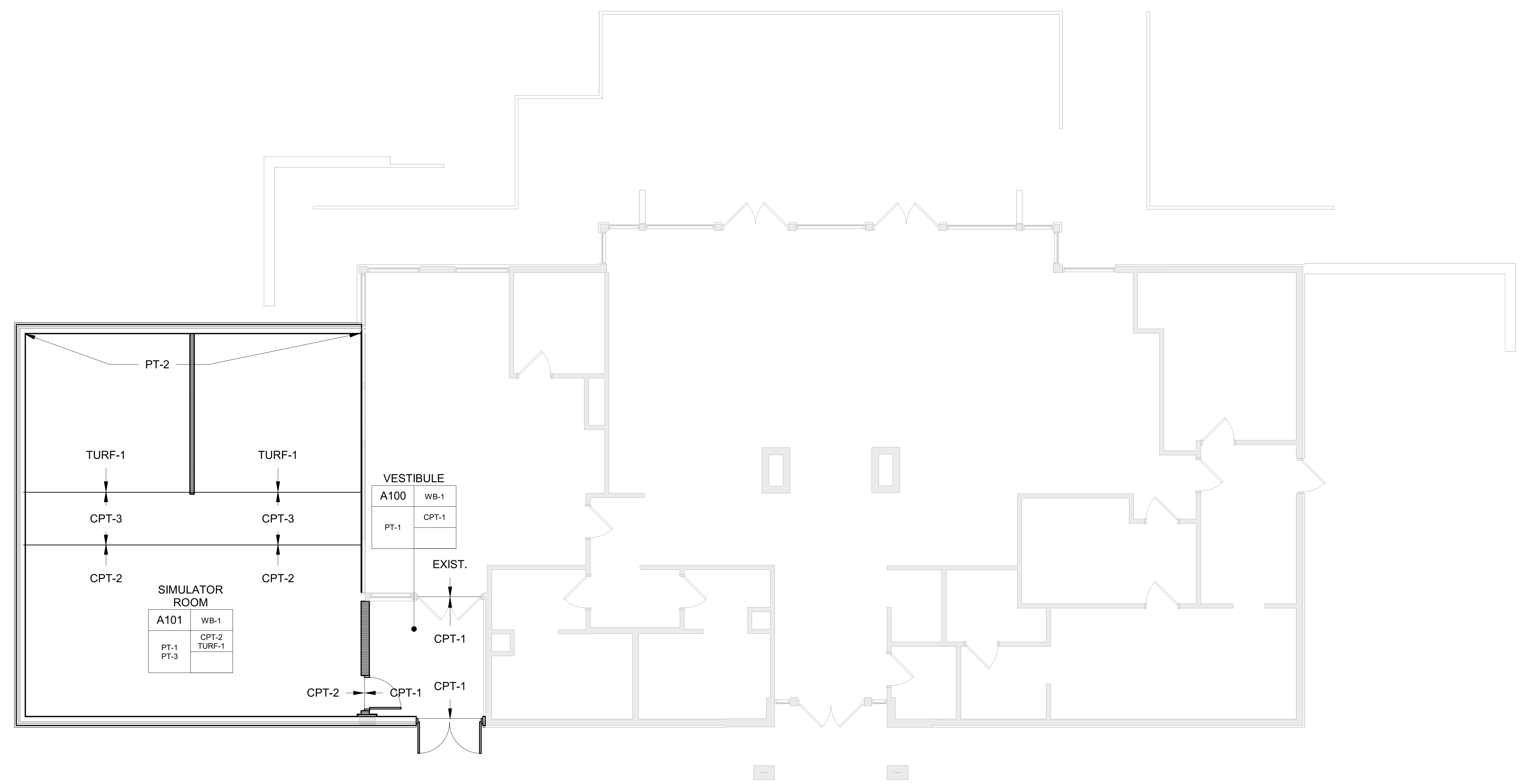
MIDLAND, MICHIGAN

SHEET TITLE
FIRST FLOOR MASTER, DEMOLITION & PARTIAL CONSTRUCTION PLAN

PROJECT NUMBER 2025104
PROJECT DATE 2026
CHECKED BY Checker
SHEET NUMBER A2.21

MATERIAL SCHEDULE

SN	MANUFACTURER	STYLE	COLOR	SIZE	REMARKS
ACOUSTICAL PANEL					
AP-1	FOAMITE	HIGH DENSITY, FIRM FOAM PANEL	BLACK	24"X24"X2"	SMOOTH WITH BEVEL EDGES
CARPET					
CPT-1	MANNINGTON	FORCE	TBD	20"X20"	
CPT-2	MANNINGTON	SCRIPT	METRO	24"X24"	INSTALL AS VERTICAL ASHLAR
CPT-3	INTERFACE	UR103 URBAN RENEWAL	100641 GRASS		
PAINT					
PT-1	SHERWIN WILLIAMS	TBD	TBD		WALL PAINT
PT-2	SHERWIN WILLIAMS	TBD	TBD		WALL PAINT
PT-3	SHERWIN WILLIAMS	TBD	TBD		ACCENT PAINT
PT-4	SHERWIN WILLIAMS	TBD	TBD		CEILING PAINT
TURF					
TURF-1	CENTUAR FLOOR SYSTEMS	INTERVAL TURF	GREEN	6' WIDE	12mm TURF + 5mm VCR
WOOD BASE					
WB-1	SEE SPEC.	FINISH AND COLOR TO MATCH ADJACENT CONSTRUCTION	MATCH EXIST.		



NORTH

FIRST FLOOR MASTER FINISH PLAN

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

INTERIOR GENERAL NOTES:

1. -

SCHEDULE OF REMARKS:

A. DOOR AND ROOM FINISH SCHEUDLE REMARKS ARE LOCATED HERE.

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

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ITB - 4650

PROJECT TITLE

ADDITION TO:

CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE

FIRST FLOOR MASTER FINISH PLAN

PROJECT NUMBER
2025104

PROJECT DATE
2026

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SHEET NUMBER
A3.01

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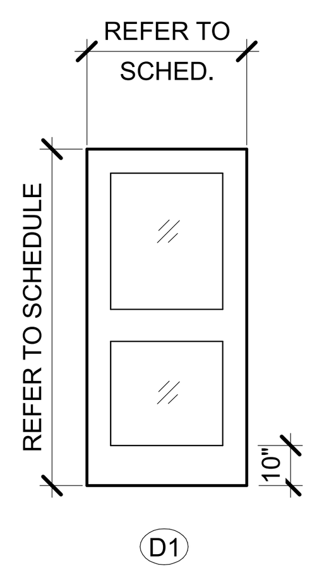
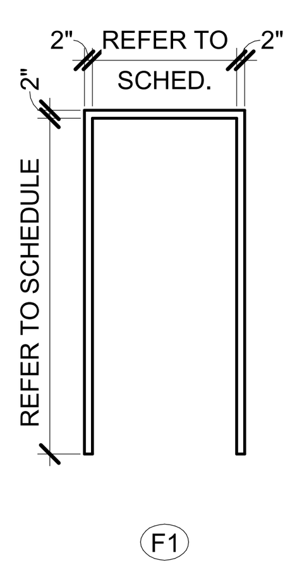
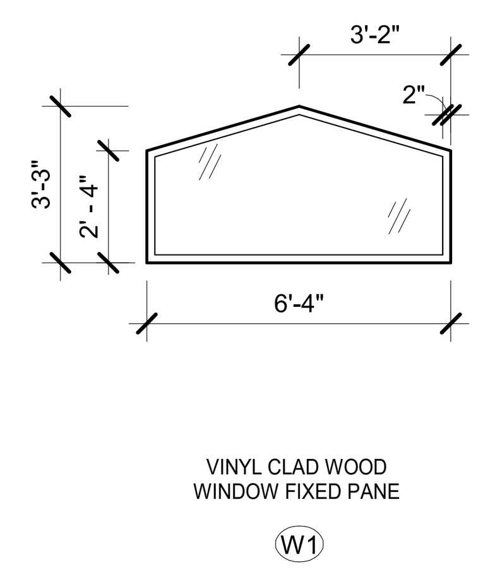


DOOR TYPES
1/4" = 1'-0"

DOOR SCHEDULE														
DOOR			DOOR PANEL			DOOR FRAME			DETAILS *=SIM.				HW
NUMBER	WIDTH	HEIGHT	TYPE	MAT.	FINISH	TYPE	MAT.	FINISH	HEAD	JAMB	SILL	REMARKS	SET
A100.1	(2) 3' - 0"	8' - 0"	D1	ALUM.		F1	ALUM.		10/A3.11	11,12/A3.11	ALUM.		01
A101.1	3' - 0"	8' - 0"	D1	ALUM.		F1	ALUM.		8/A3.11	9/A3.11			02



FRAME TYPES
1/4" = 1'-0"



WDW TYPES
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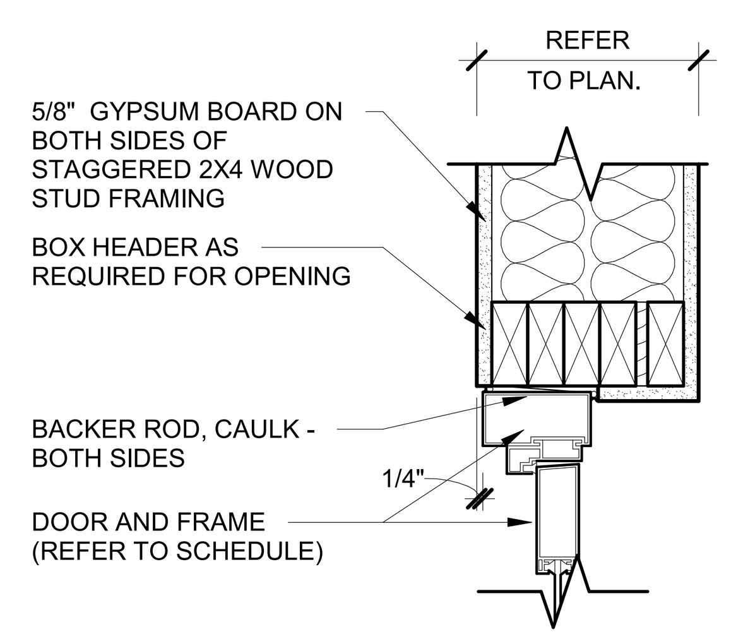
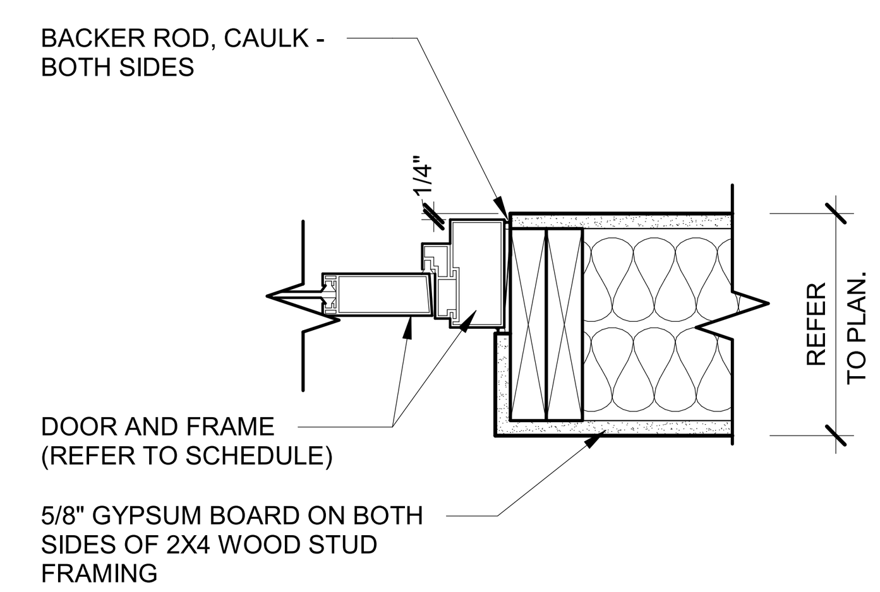
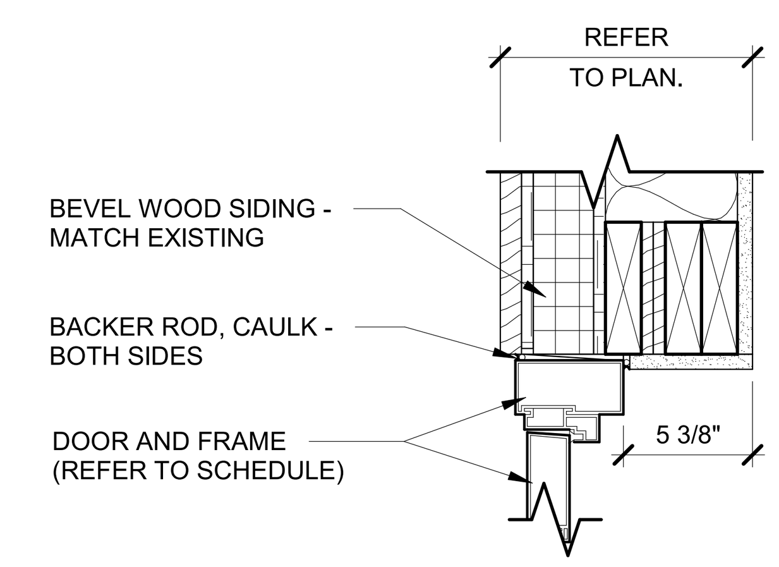


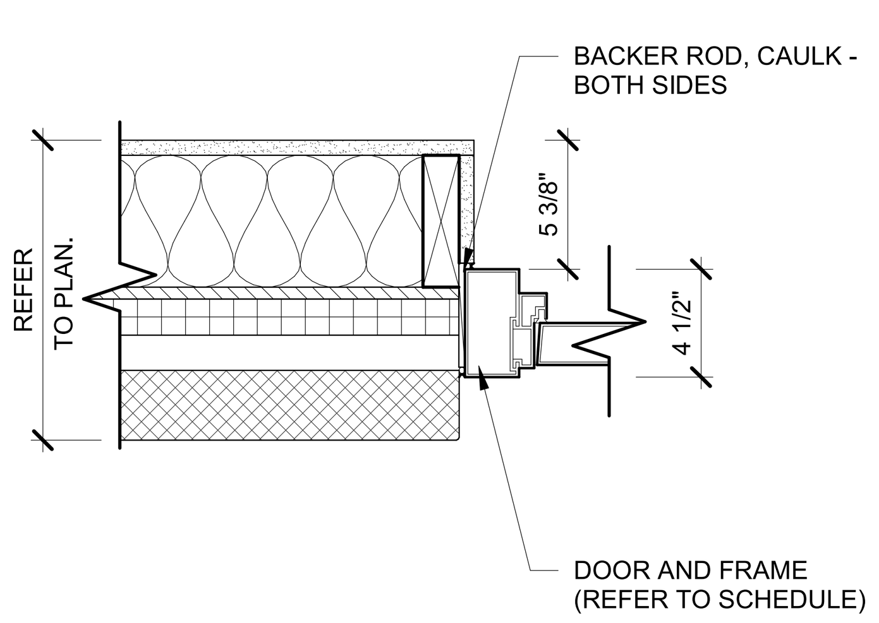
8 / A3.11 **DOOR HEAD DETAIL**
SCALE: 1 1/2" = 1'-0"



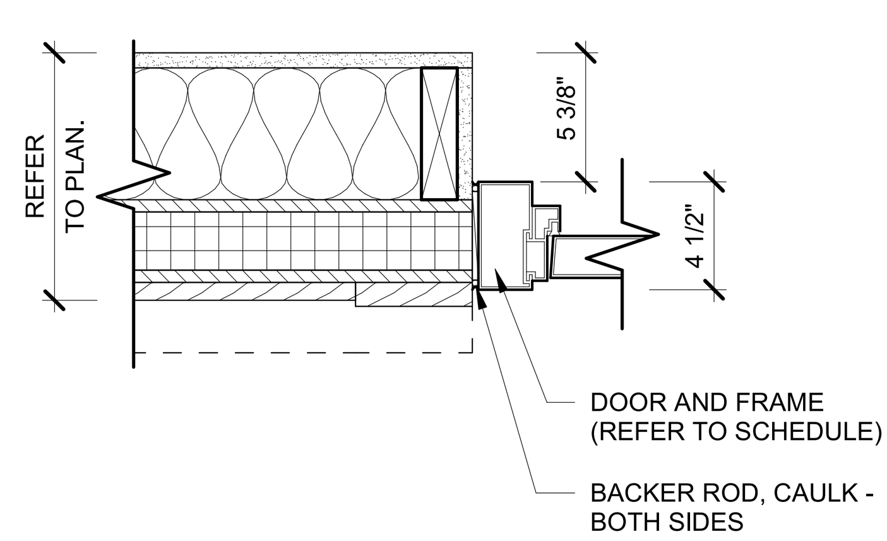
9 / A3.11 **DOOR JAMB DETAIL**
SCALE: 1 1/2" = 1'-0"



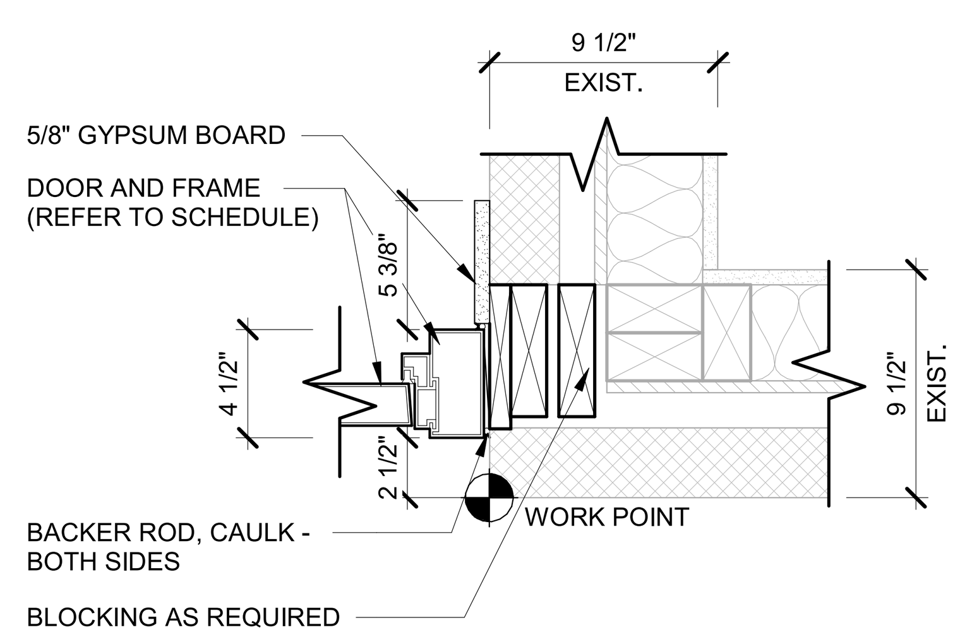
10 / A3.11 **DOOR HEAD DETAIL**
SCALE: 1 1/2" = 1'-0"



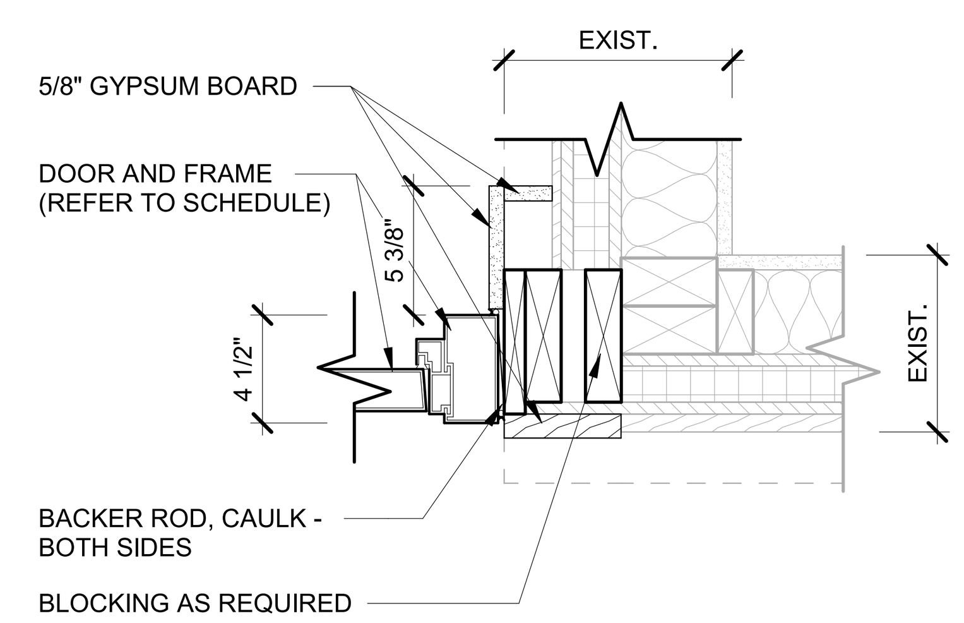
11 / A3.11 **DOOR JAMB DETAIL**
SCALE: 1 1/2" = 1'-0"



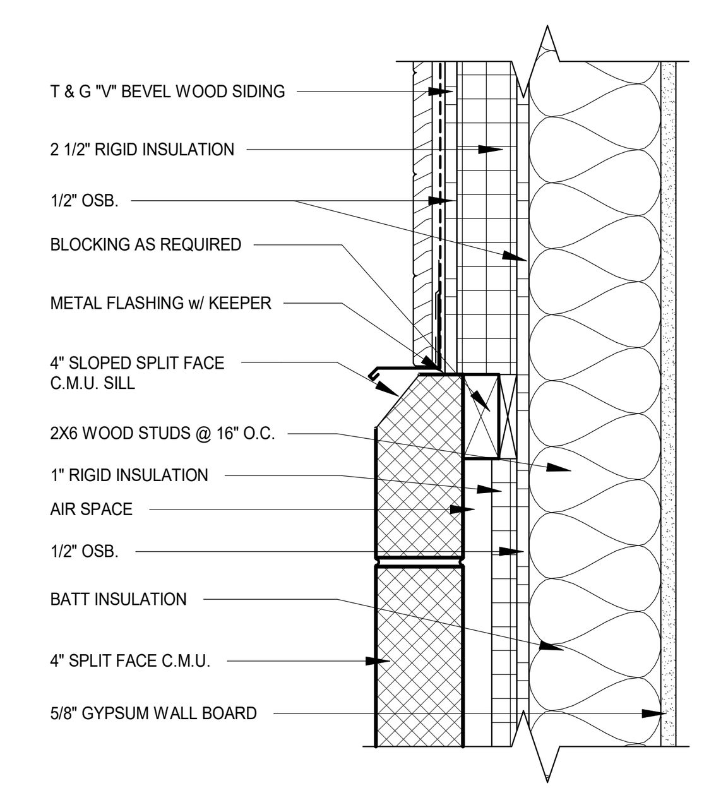
12 / A3.11 **DOOR JAMB DETAIL**
SCALE: 1 1/2" = 1'-0"



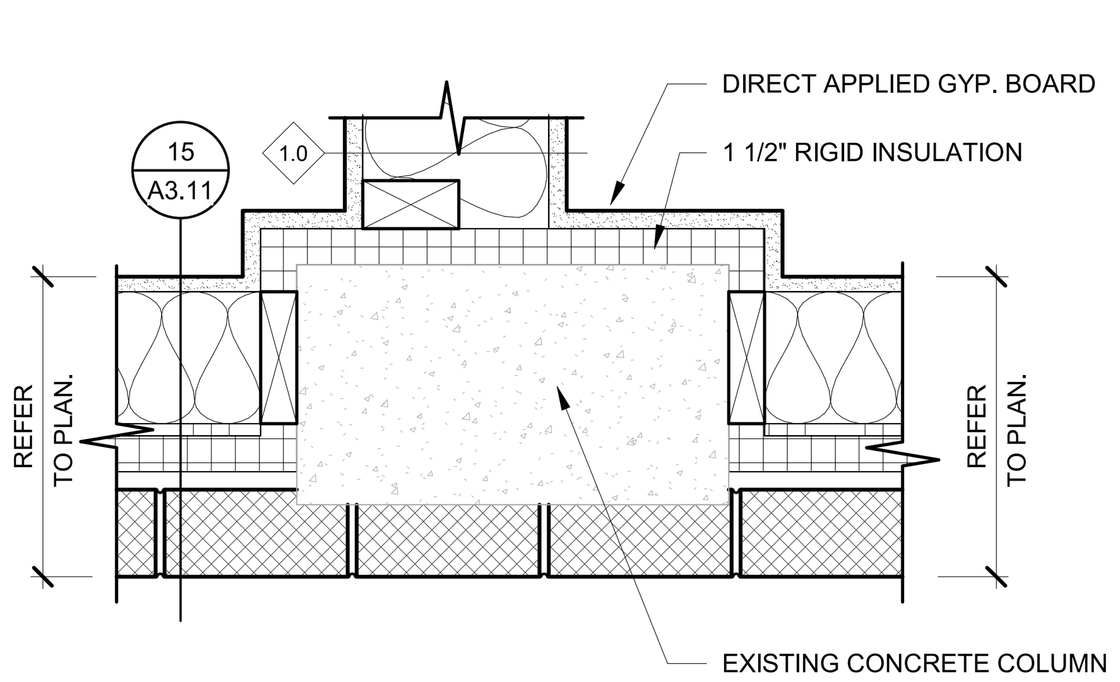
13 / A3.11 **DOOR JAMB DETAIL**
SCALE: 1 1/2" = 1'-0"



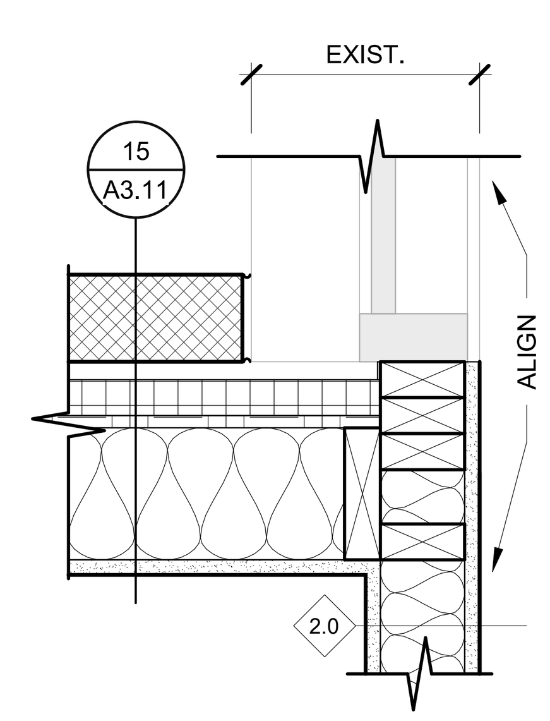
14 / A3.11 **DOOR JAMB DETAIL**
SCALE: 1 1/2" = 1'-0"



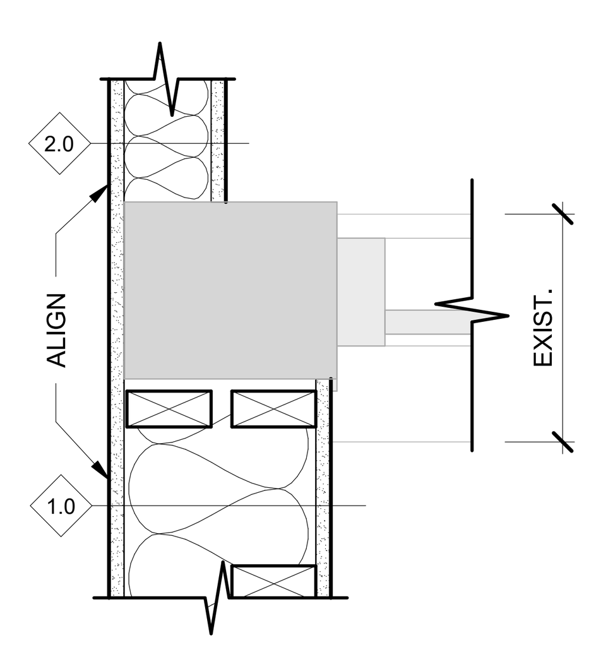
15 / A3.11 **EXTERIOR WALL DETAIL**
SCALE: 1 1/2" = 1'-0"



16 / A3.11 **PLAN DETAIL**
SCALE: 1 1/2" = 1'-0"



17 / A3.11 **PLAN DETAIL**
SCALE: 1 1/2" = 1'-0"



4 / A3.11 **PLAN DETAIL**
SCALE: 1 1/2" = 1'-0"

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	ISSUED FOR BID	05/12/26

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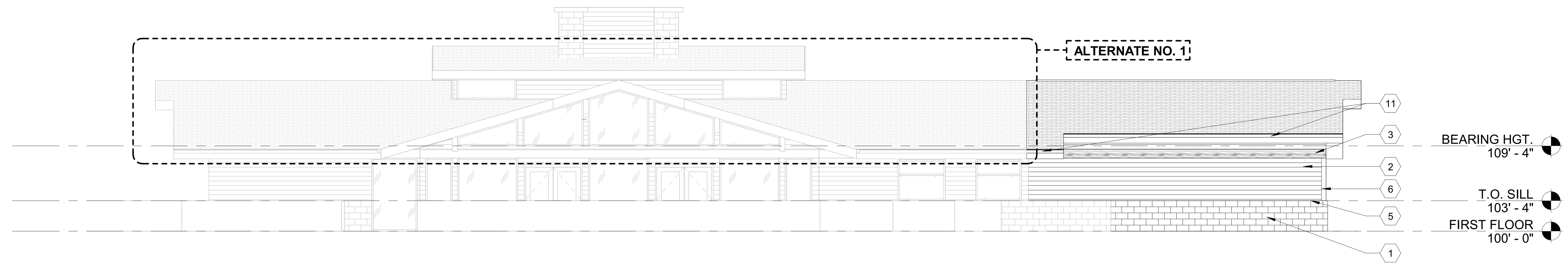
ITB - 4650

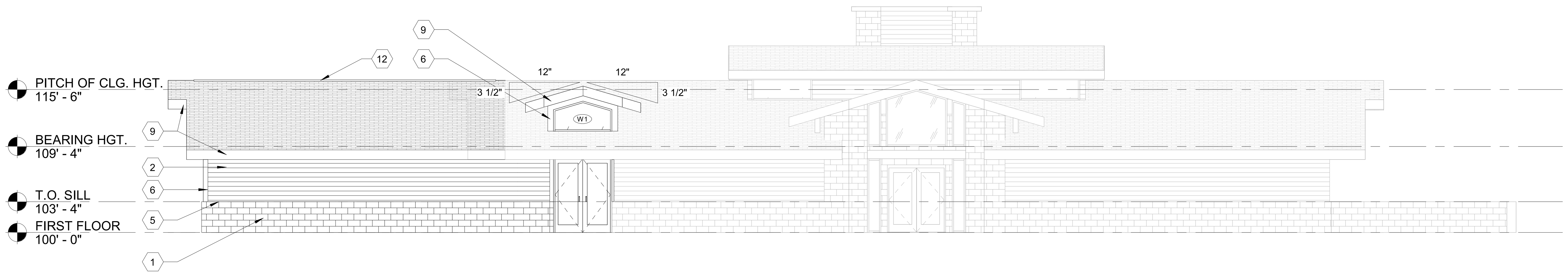
PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
DOOR & FRAME SCHEDULE, TYPES AND DETAILS

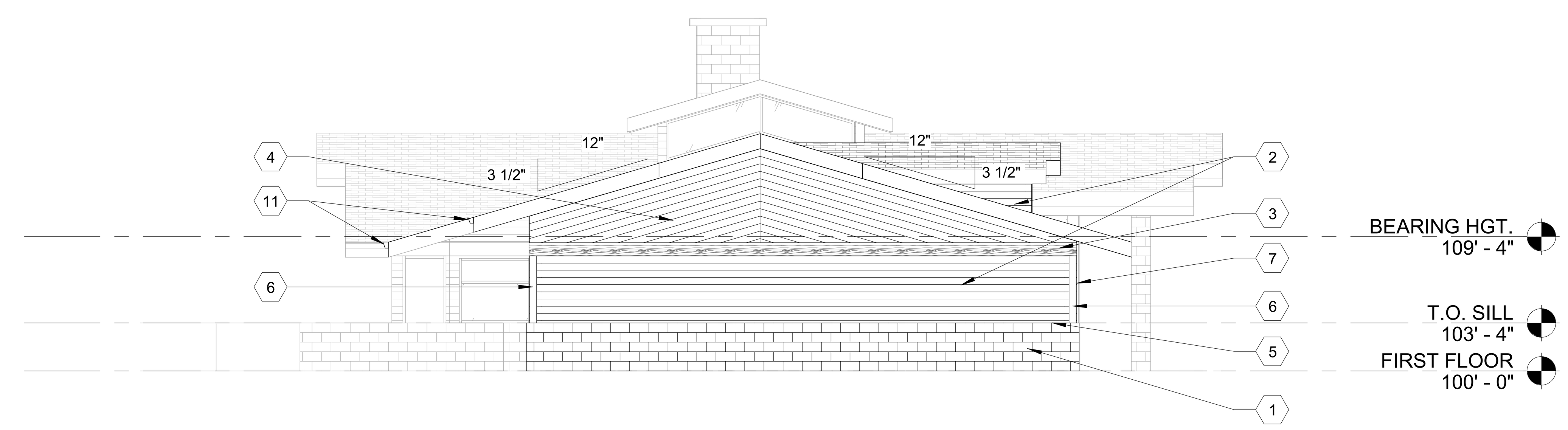
PROJECT NUMBER
2025104
PROJECT DATE
2026
CHECKED BY
Checker
SHEET NUMBER
A3.11



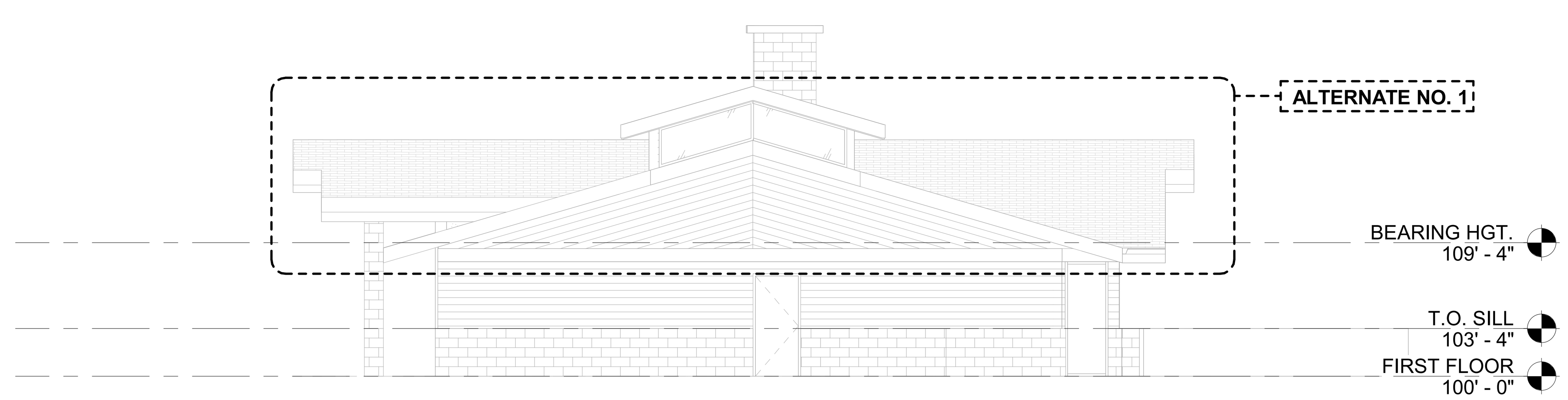
NORTH ELEVATION
1/A5.01 SCALE: 1/8" = 1'-0"



SOUTH ELEVATION
4/A5.01 SCALE: 1/8" = 1'-0"



WEST ELEVATION
2/A5.01 SCALE: 1/8" = 1'-0"



EAST ELEVATION SHOWN FOR REFERENCE ONLY

EAST ELEVATION
3/A5.01 SCALE: 1/8" = 1'-0"

MATERIAL KEYNOTES

#	Keynote
1	4" SPLITFACE C.M.U. BLOCK TO MATCH ADJOINING CONSTRUCTION
2	HORIZONTAL WOOD T & G "V" GROOVE SIDING OVER WEATHER BARRIER, OVER 1/2 SHEATHING - PROFILE AND FINISH TO MATCH EXISTING CONSTRUCTION
3	WOOD TRIM STAIN, SIZING & COLOR TO MATCH ADJOINING
4	DIAGONAL WOOD T & G "V" GROOVE SIDING STAIN, SIZING & COLOR TO MATCH ADJOINING
5	4" C.M.U. SPLITFACE SILL
6	1X6 WOOD TRIM STAIN, SIZING & COLOR TO MATCH ADJOINING
7	REINFORCED CONCRETE FOOTING; SEE STRUCTURAL
9	1X12 FACIA BOARD STAIN, COLOR & SIZING TO MATCH ADJOINING
10	ASPHALT ROOF SHINGLES OVER 20lB ROOFING FELT ON 19/32" APA RATED SHEATHING - PROVIDE ICE AND WEATHER WATER SHEILD MIN OF 24" INSIDE FACE OF BUILDING LINE, VALLEYS & ANY PENETRATIONS
11	ROOF GUTTER
12	RIDGE VENT
13	PRE-ENGINEERED WOOD TRUSSES (REFER TO STRUCTURAL)
14	REINFORCED CONCRETE SLAB OVER VAPOR BARRIER OVER FILL; SEE STRUCTURAL
15	3" RIGID INSULATION (R15 MN.)
16	1" RIGID INSULATION - (MIN R-3.8)
17	THERMAL BATT INSULATION (MIN. R-49)
18	5/8" GYSPUM BOARD, PAINT
19	WOOD BASE - PROFILE TO MATCH EXISTING BUILDING (1x6)
20	LAMINATED BEAM SEE STRUCTURAL DRAWINGS
21	CONTINUOUS LINEAR VENT W/SCREEN, STYLE TO MATCH EXISTING
22	ROOF TO WALL VENT
23	THRU WALL BASE FLASHING
24	CAVITY FILL MORTAR NET
25	BRICK WEEPS 24" O.C.

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
EXTERIOR ELEVATIONS

PROJECT NUMBER
2025104

PROJECT DATE
2026

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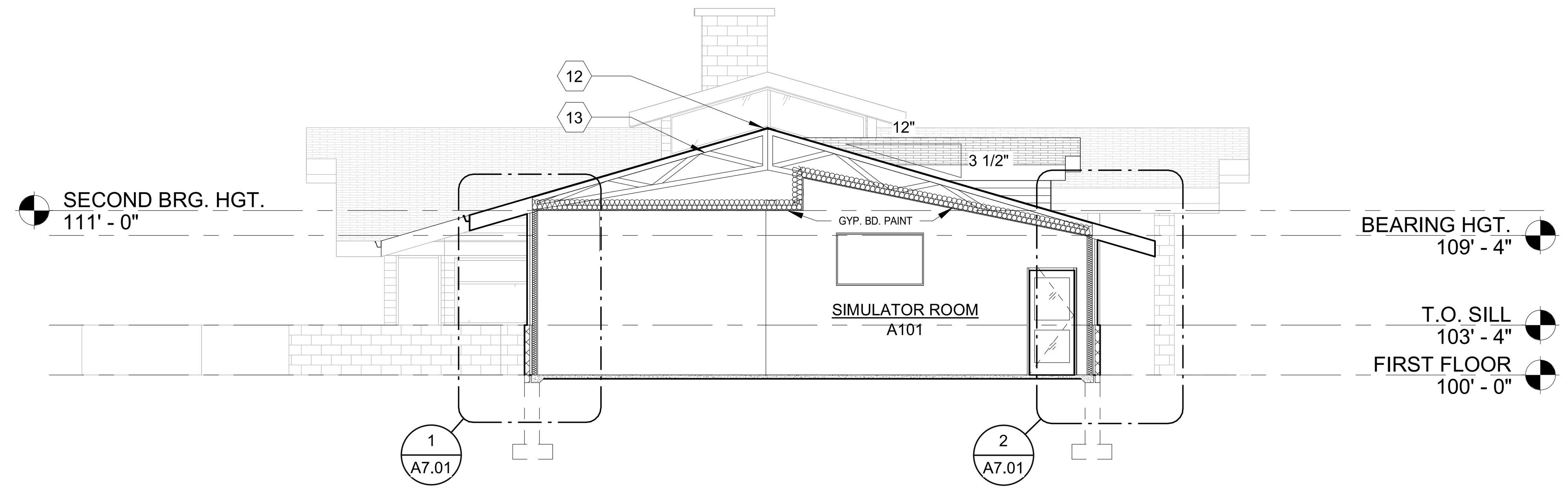
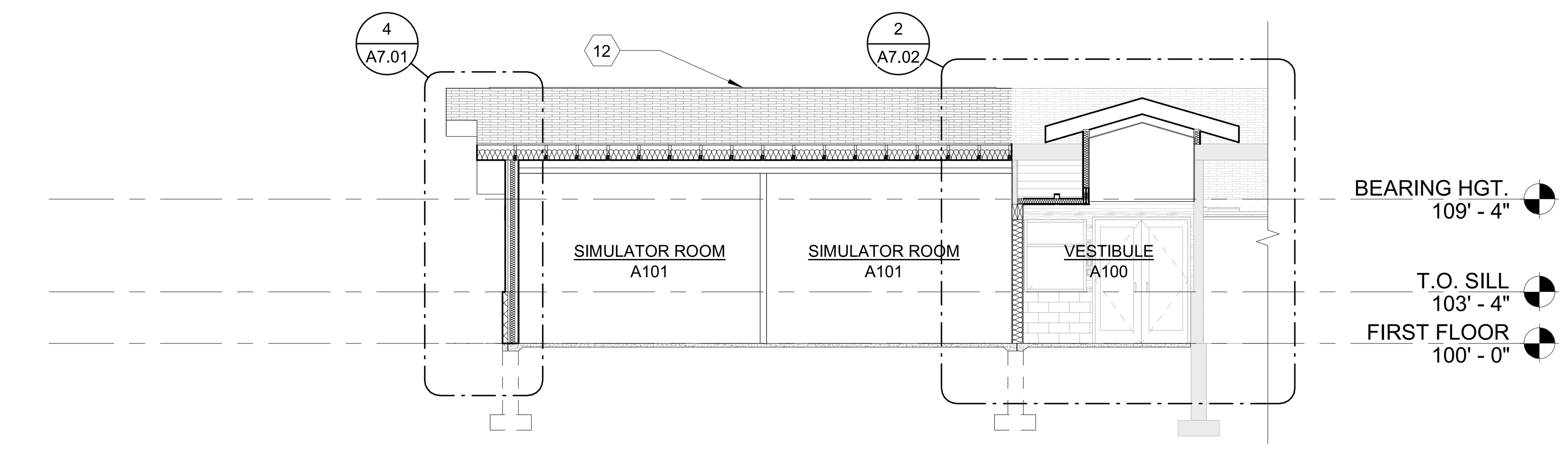
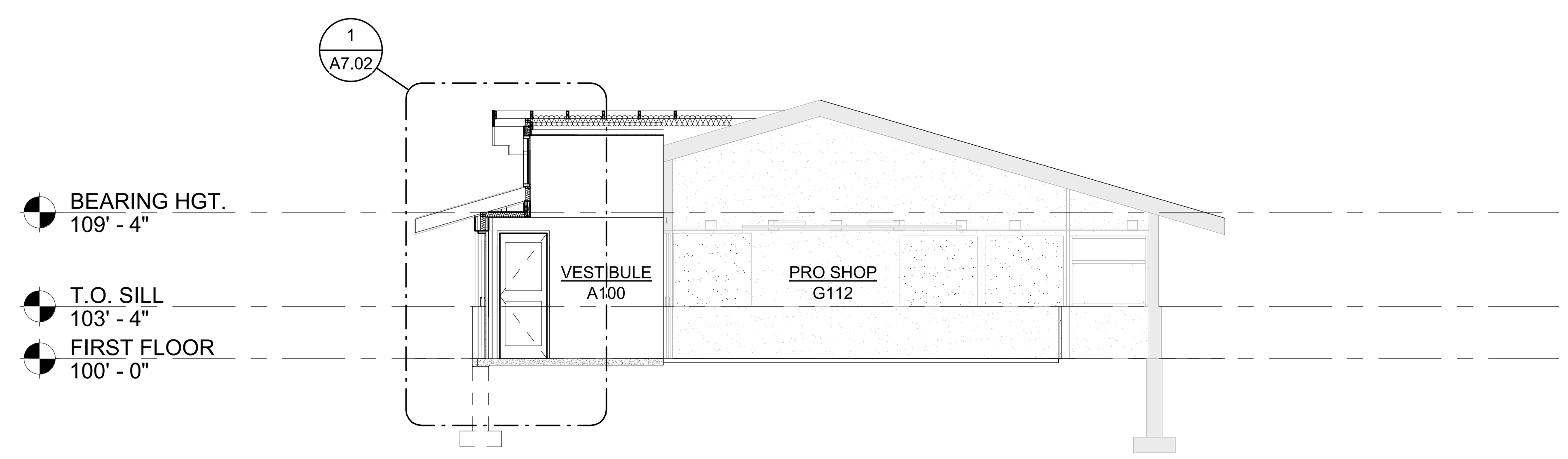
SHEET NUMBER
A5.01



1 / A5.11 BUILDING SECTION - WEST
SCALE: 1/8" = 1'-0"



2 / A5.11 BUILDING SECTION - SOUTH
SCALE: 1/8" = 1'-0"



3 / A5.11 BUILDING SECTION - EAST
SCALE: 1/8" = 1'-0"

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
BUILDING SECTIONS

PROJECT NUMBER
2025104

PROJECT DATE
2026

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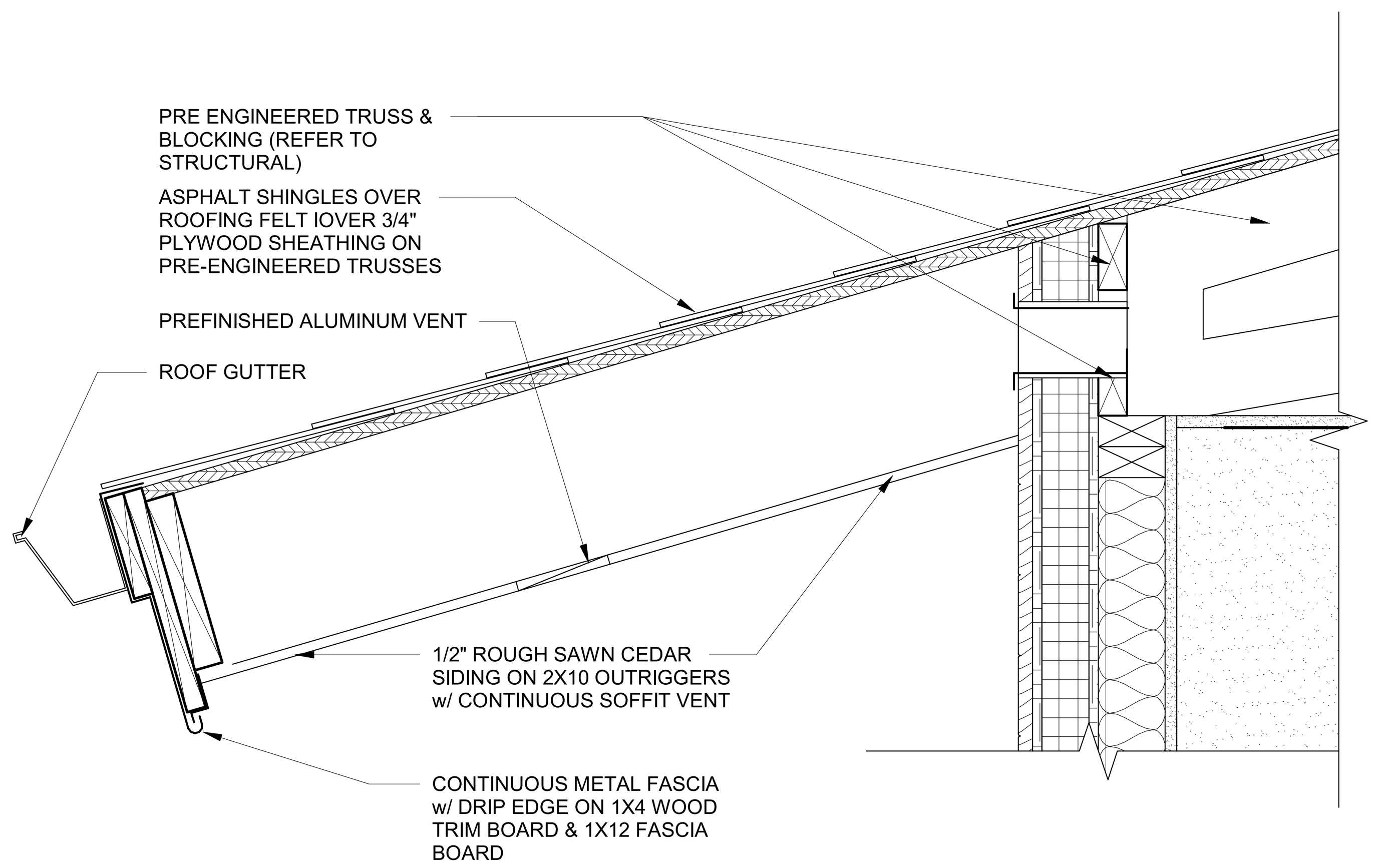
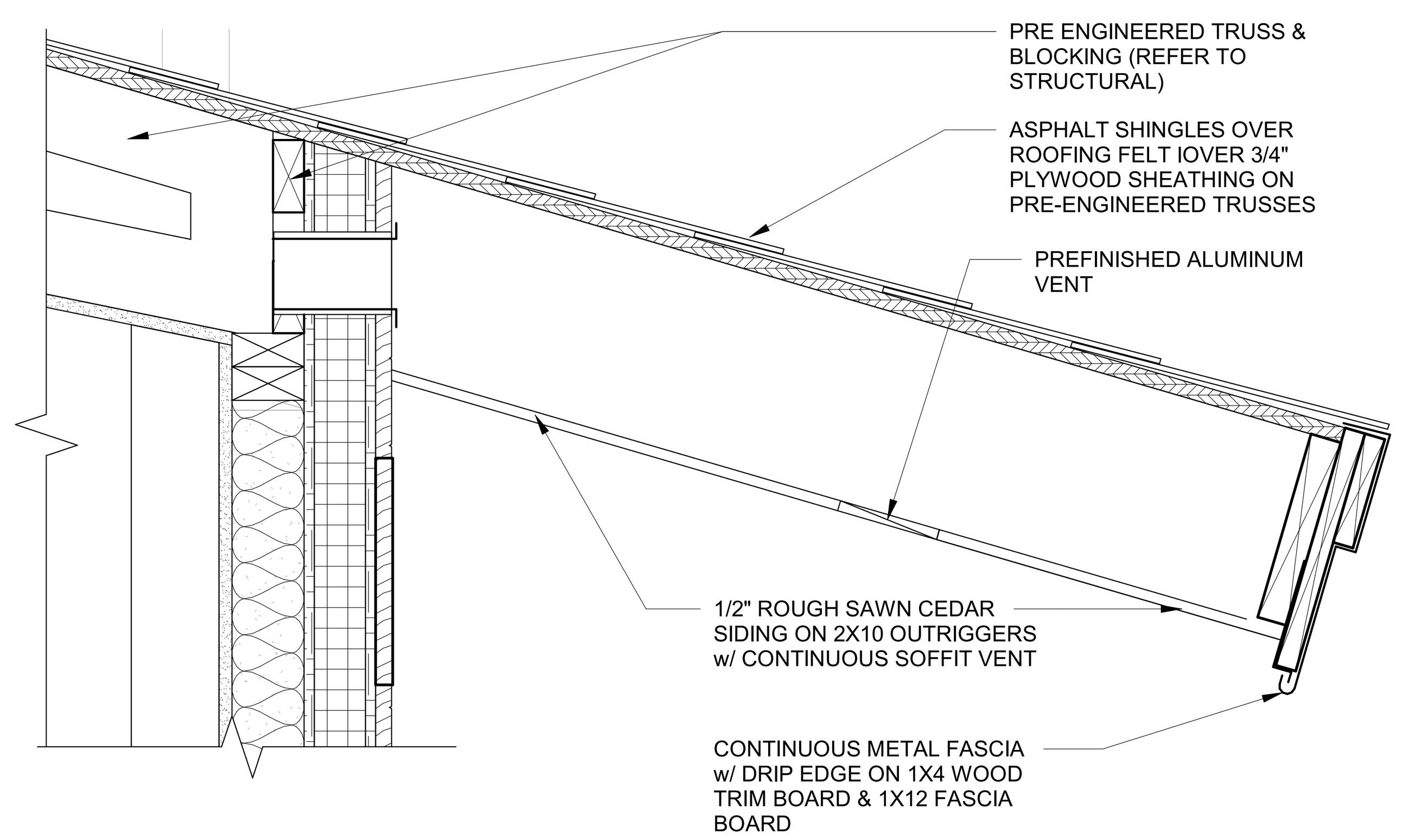
Checker

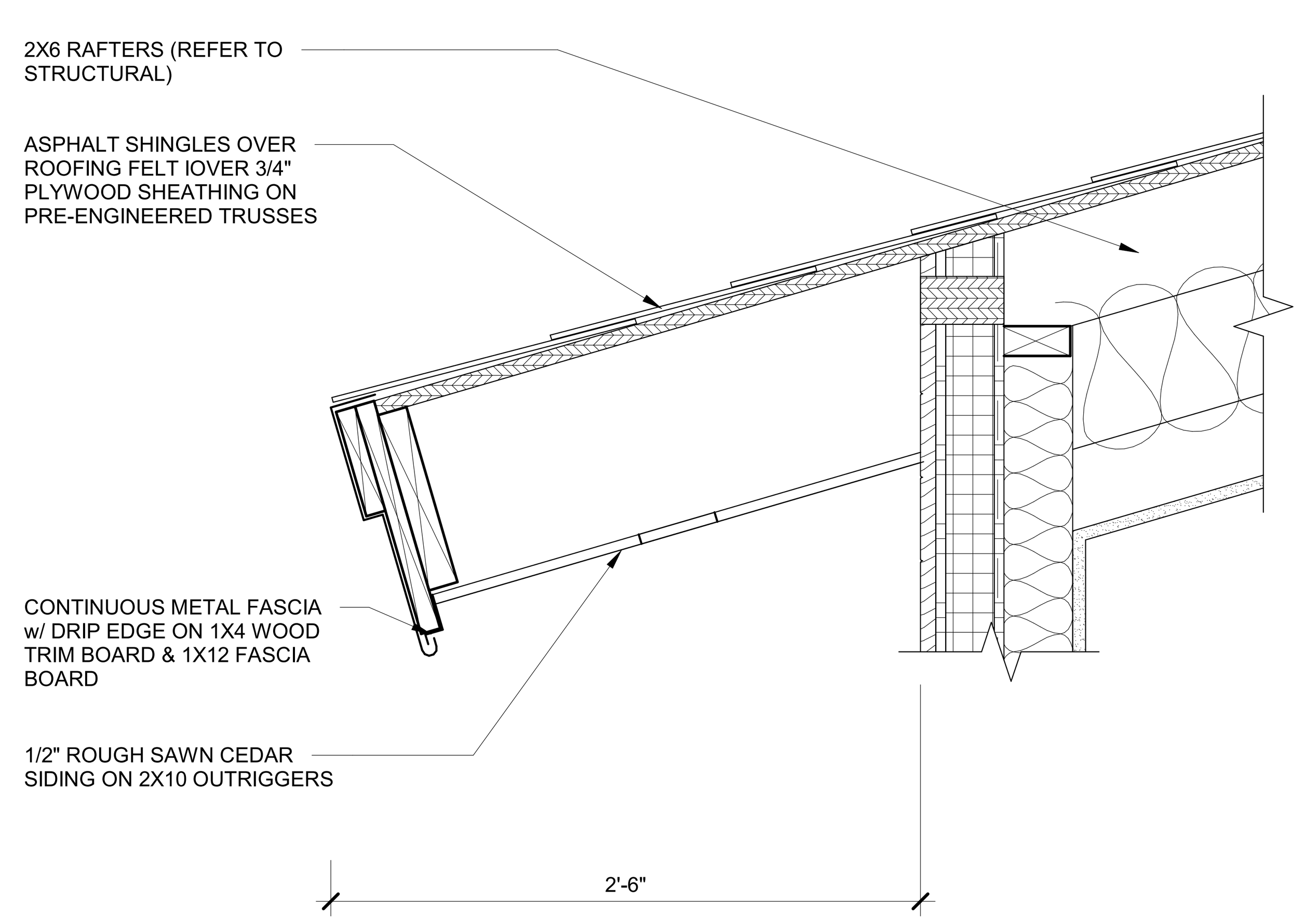
SHEET NUMBER
A5.11



1 A6.01 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



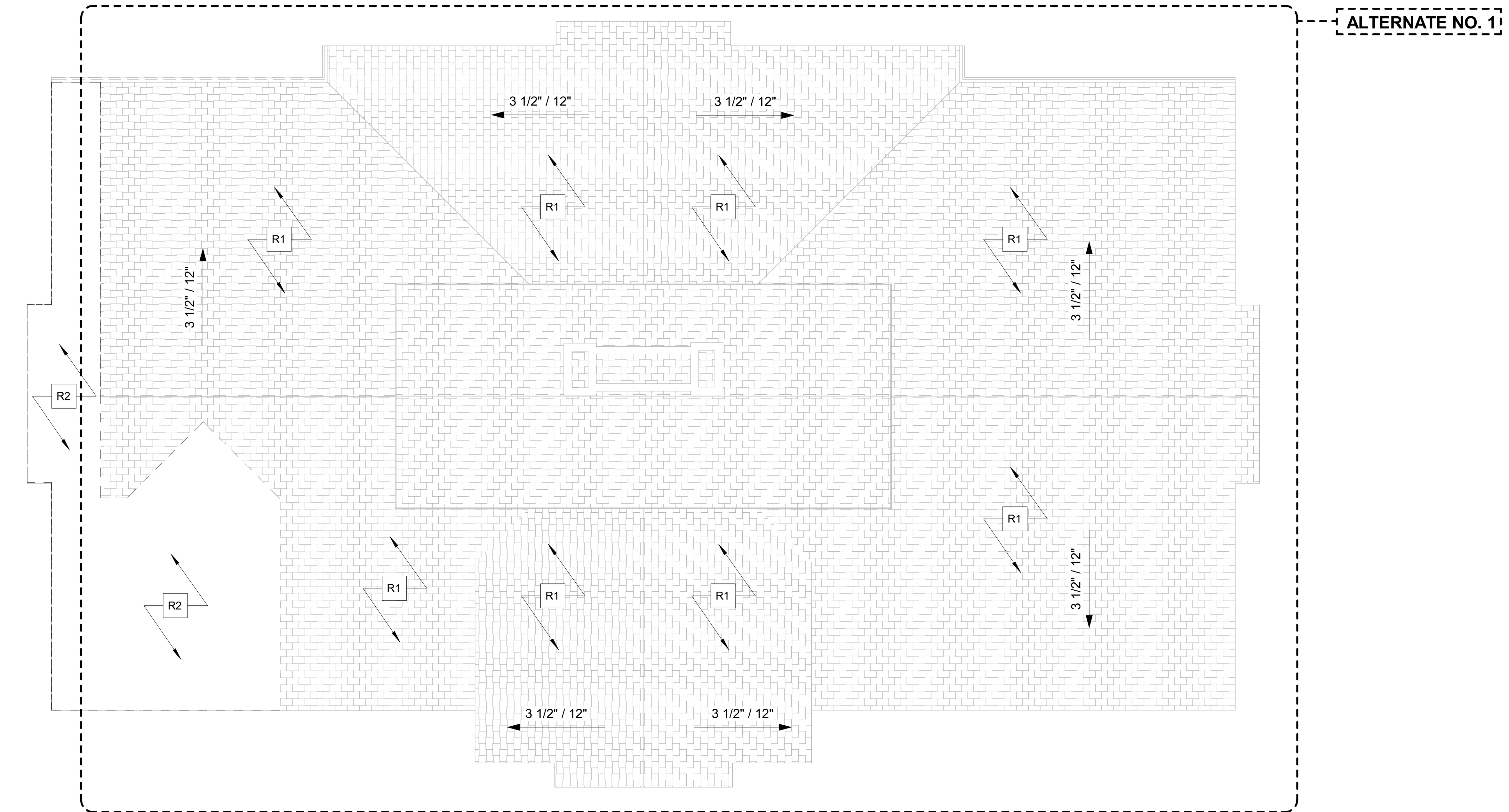
2 A6.01 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



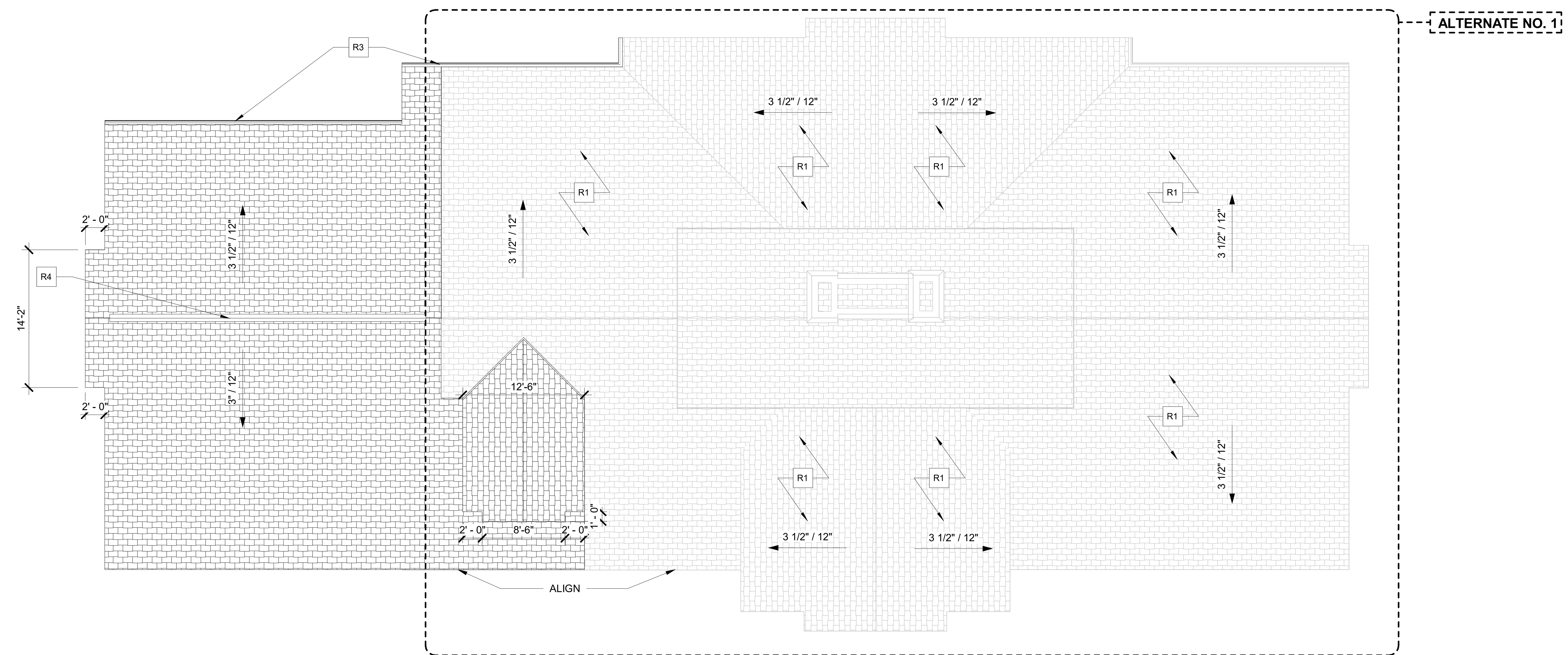
3 A6.01 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"

R# ROOF PLAN KEYNOTES

1. EXISTING TO REMAIN
2. REMOVE EXISTING ROOF CONSTRUCTION COMPLETE
3. ROOF GUTTER
4. RIDGE VENT



ROOF MASTER DEMOLITION PLAN
NORTH SCALE: 1/8" = 1'-0"



ROOF MASTER CONSTRUCTION PLAN
NORTH SCALE: 1/8" = 1'-0"

ROOF PLAN GENERAL NOTES:

1. GENERAL NOTE TEXT IS LOCATED HERE.

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
MASTER DEMOLITION & CONSTRUCTION ROOF PLAN

PROJECT NUMBER
2025104
PROJECT DATE
2026
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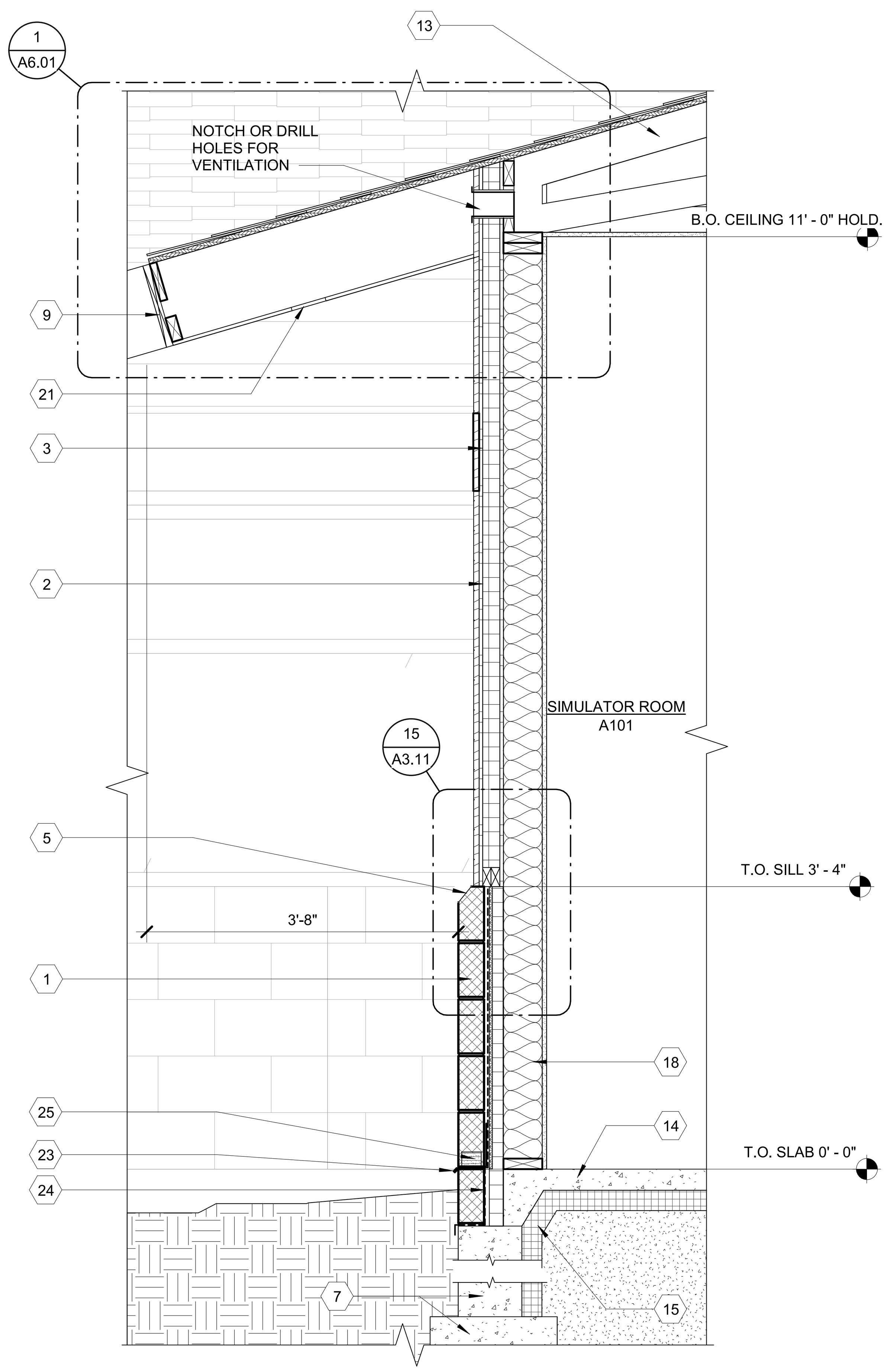
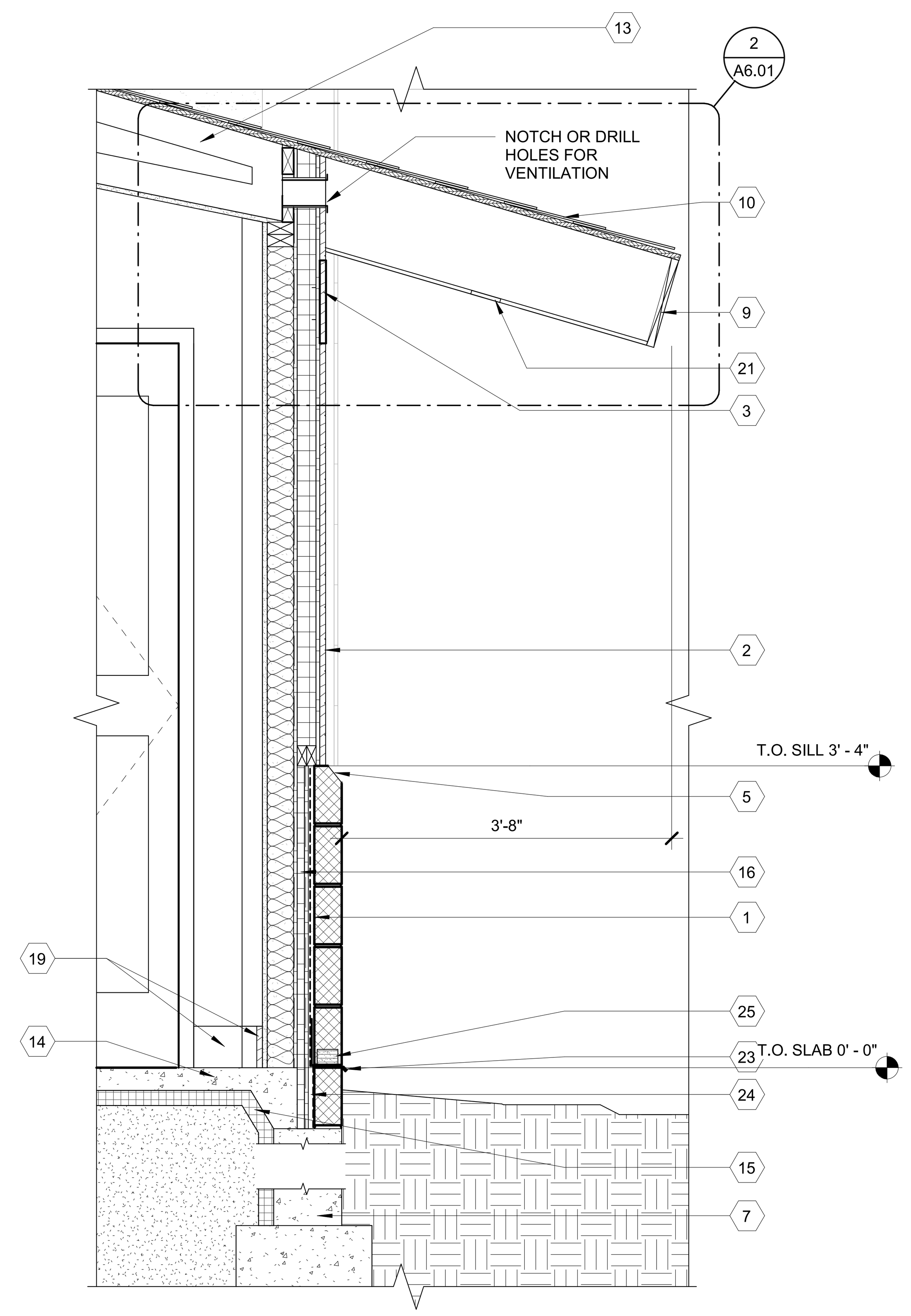
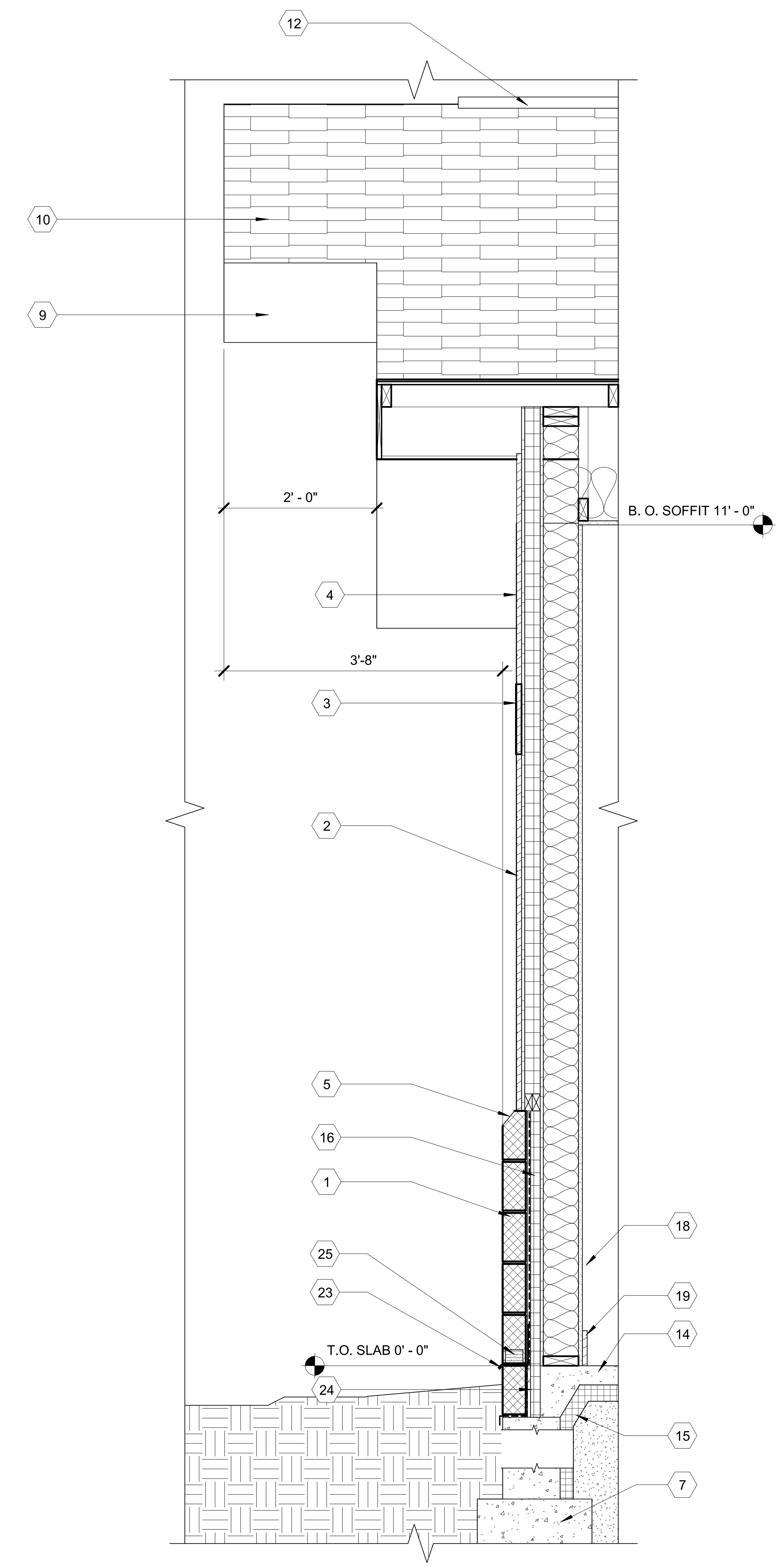
Checker
SHEET NUMBER
A6.01



1
A7.01
WALL SECTION
SCALE: 3/4" = 1'-0"



2
A7.01
WALL SECTION
SCALE: 3/4" = 1'-0"



4
A7.01
WALL SECTION
SCALE: 3/4" = 1'-0"

MATERIAL KEYNOTES

1 4" SPLITFACE C.M.U. BLOCK TO MATCH ADJOINING CONSTRUCTION
2 HORIZONTAL WOOD T & G "V" GROOVE SIDING OVER WEATHER BARRIER, OVER 1/2 SHEATHING - PROFILE AND FINISH TO MATCH EXISTING CONSTRUCTION
3 WOOD TRIM STAIN, SIZING & COLOR TO MATCH ADJOINING
4 DIAGONAL WOOD T & G "V" GROOVE SIDING STAIN, SIZING & COLOR TO MATCH ADJOINING
5 4" C.M.U. SPLITFACE SILL
6 1X6 WOOD TRIM STAIN, SIZING & COLOR TO MATCH ADJOINING
7 REINFORCED CONCRETE FOOTING; SEE STRUCTURAL
9 1X12 FACIA BOARD STAIN, COLOR & SIZING TO MATCH ADJOINING
10 ASPHALT ROOF SHINGLES OVER 20IB ROOFING FELT ON 19/32" APA RATED SHEATHING - PROVIDE ICE AND WEATHER WATER SHEILD MIN OF 24" INSIDE FACE OF BUILDING LINE, VALLEYS & ANY PENETRATIONS
11 ROOF GUTTER
12 RIDGE VENT
13 PRE-ENGINEERED WOOD TRUSSES (REFER TO STRUCTURAL)
14 REINFORCED CONCRETE SLAB OVER VAPOR BARRIER OVER FILL; SEE STRUCTURAL
15 3" RIGID INSULATION (R15 MN.)
16 1" RIGID INSULATION - (MIN R-3.8)
17 THERMAL BATT INSULATION (MIN. R-49)
18 5/8" GYSPUM BOARD, PAINT
19 WOOD BASE - PROFILE TO MATCH EXISTING BUILDING (1x6)
20 LAMINATED BEAM SEE STRUCTURAL DRAWINGS
21 CONTINUOUS LINEAR VENT W/SCREEN, STYLE TO MATCH EXISTING
22 ROOF TO WALL VENT
23 THRU WALL BASE FLASHING
24 CAVITY FILL MORTAR NET
25 BRICK WEEPS 24" O.C.

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
2025104

PROJECT DATE
2026

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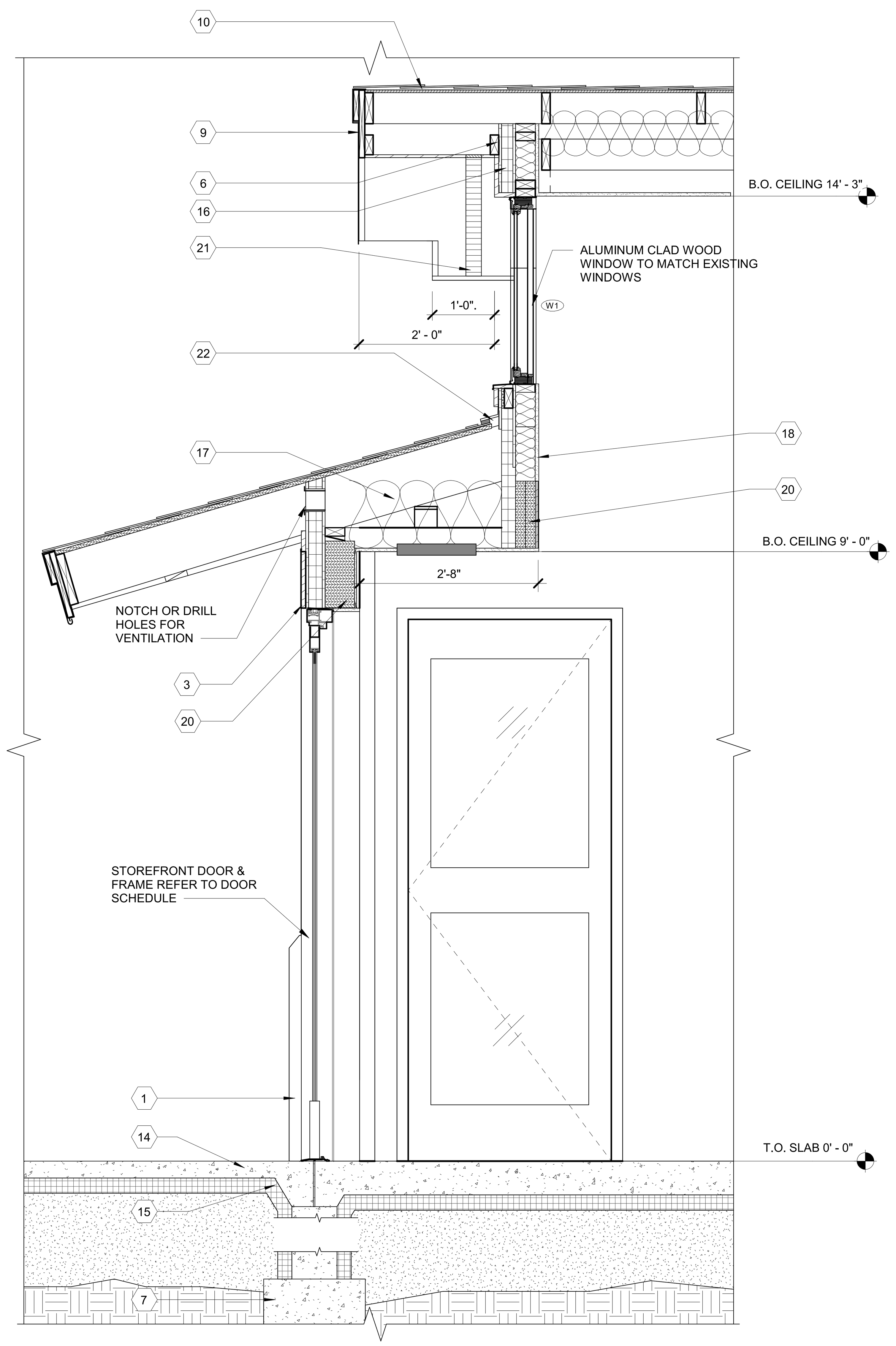
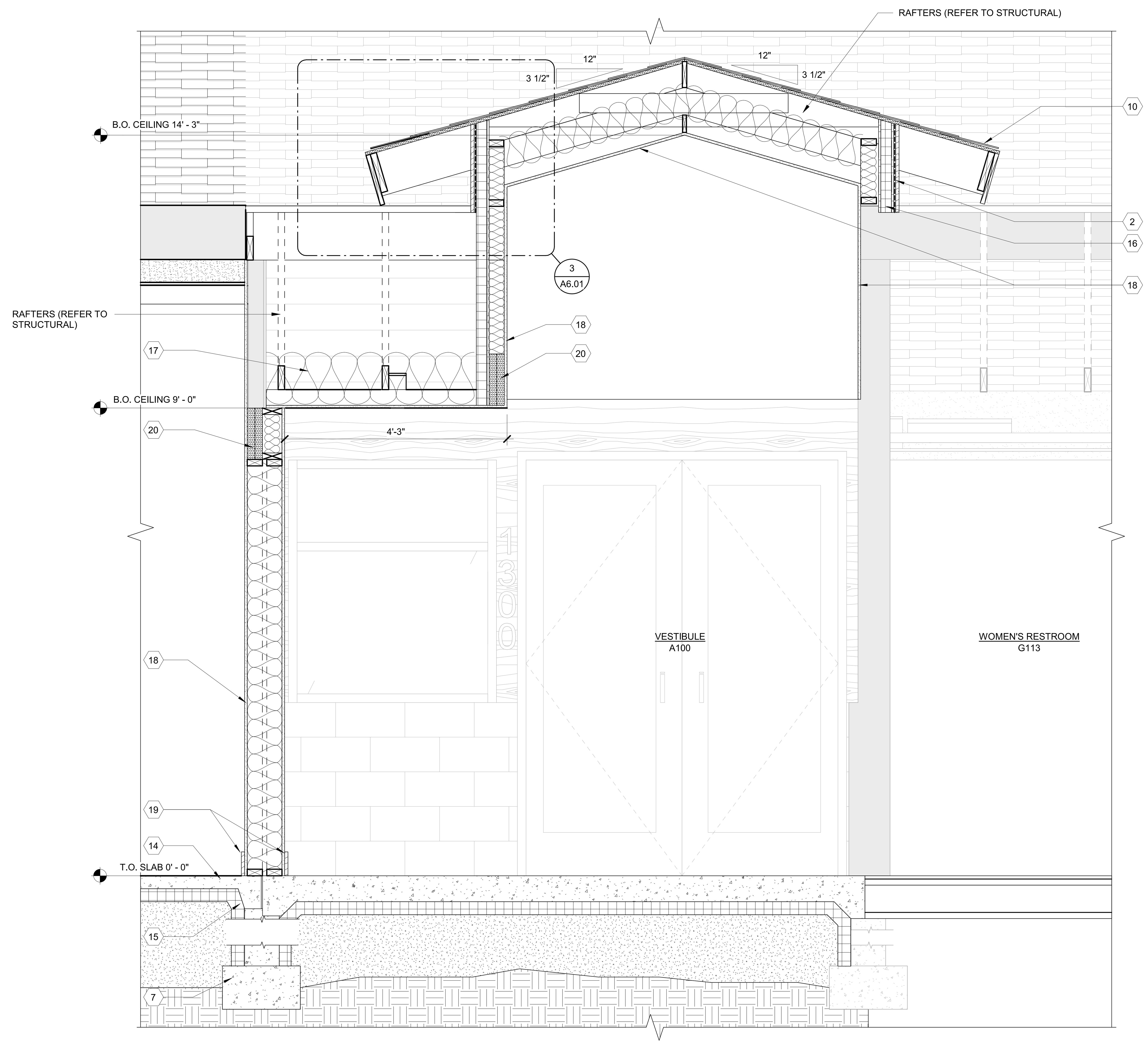
Checker

SHEET NUMBER
A7.01



1 A7.02 **WALL SECTION**
SCALE: 3/4" = 1'-0"



2 A7.02 **WALL SECTION**
SCALE: 3/4" = 1'-0"

MATERIAL KEYNOTES

1 4" SPLITFACE C.M.U. BLOCK TO MATCH ADJOINING CONSTRUCTION
2 HORIZONTAL WOOD T & G "V" GROOVE SIDING OVER WEATHER BARRIER, OVER 1/2 SHEATHING - PROFILE AND FINISH TO MATCH EXISTING CONSTRUCTION
3 WOOD TRIM STAIN, SIZING & COLOR TO MATCH ADJOINING
4 DIAGONAL WOOD T & G "V" GROOVE SIDING STAIN, SIZING & COLOR TO MATCH ADJOINING
5 4" C.M.U. SPLITFACE SILL
6 1X6 WOOD TRIM STAIN, SIZING & COLOR TO MATCH ADJOINING
7 REINFORCED CONCRETE FOOTING; SEE STRUCTURAL
9 1X12 FACIA BOARD STAIN, COLOR & SIZING TO MATCH ADJOINING
10 ASPHALT ROOF SHINGLES OVER 20IB ROOFING FELT ON 19/32" APA RATED SHEATHING - PROVIDE ICE AND WEATHER WATER SHEILD MIN OF 24" INSIDE FACE OF BUILDING LINE, VALLEYS & ANY PENETRATIONS
11 ROOF GUTTER
12 RIDGE VENT
13 PRE-ENGINEERED WOOD TRUSSES (REFER TO STRUCTURAL)
14 REINFORCED CONCRETE SLAB OVER VAPOR BARRIER OVER FILL; SEE STRUCTURAL
15 3" RIGID INSULATION (R15 MN.)
16 1" RIGID INSULATION - (MIN R-3.8)
17 THERMAL BATT INSULATION (MIN. R-49)
18 5/8" GYSPUM BOARD, PAINT
19 WOOD BASE - PROFILE TO MATCH EXISTING BUILDING (1x6)
20 LAMINATED BEAM SEE STRUCTURAL DRAWINGS
21 CONTINUOUS LINEAR VENT W/SCREEN, STYLE TO MATCH EXISTING
22 ROOF TO WALL VENT
23 THRU WALL BASE FLASHING
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25 BRICK WEEPS 24" O.C.

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
WALL SECTIONS

PROJECT NUMBER
2025104

PROJECT DATE
2026

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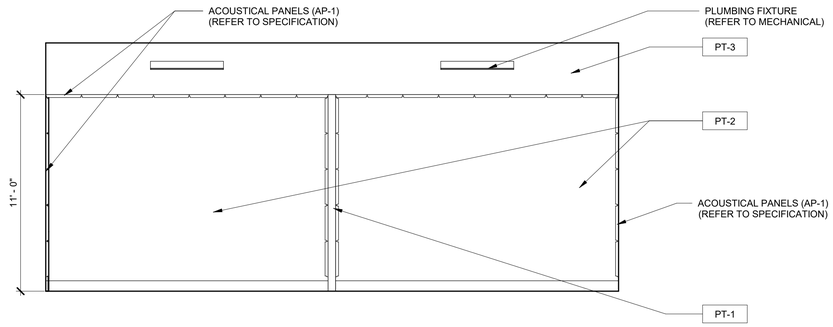
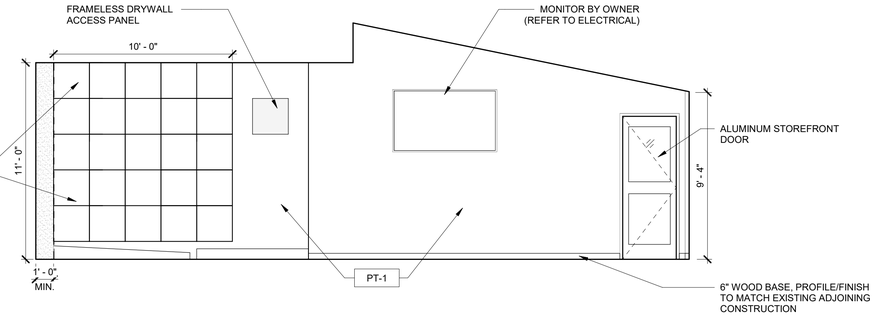
SHEET NUMBER
A7.02



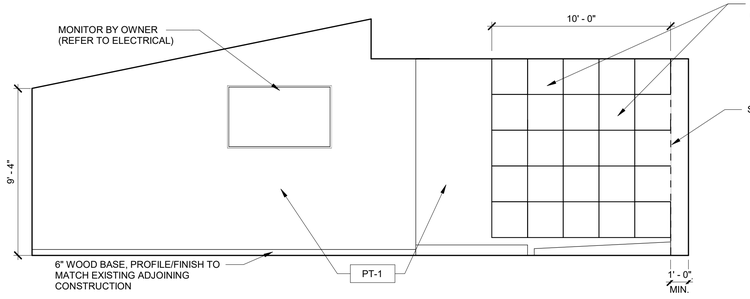
SIMULATOR ROOM A101 - NORTH

1/A8.01 SCALE: 1/4" = 1'-0"



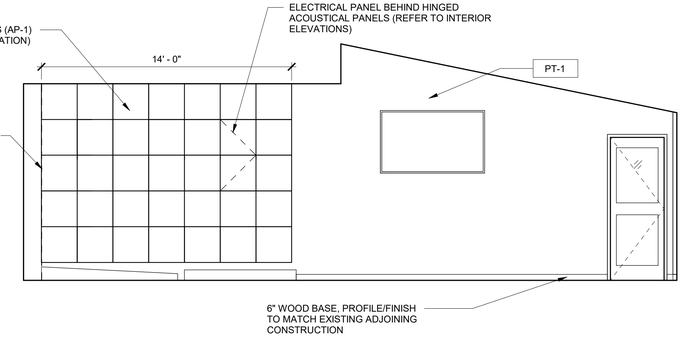
SIMULATOR ROOM A101 - EAST

3/A8.01 SCALE: 1/4" = 1'-0"



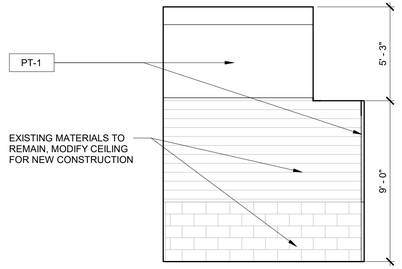
SIMULATOR ROOM A101 - WEST

6/A8.01 SCALE: 1/4" = 1'-0"



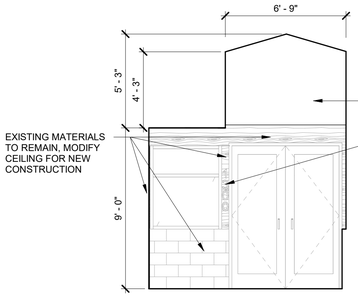
SIMULATOR ROOM A101 - EAST

8/A8.01 SCALE: 1/4" = 1'-0"



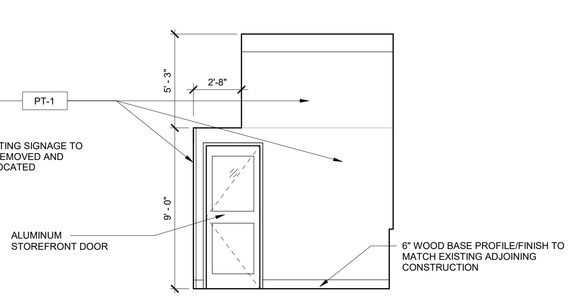
VESTIBULE A100 - EAST

10/A8.01 SCALE: 1/4" = 1'-0"



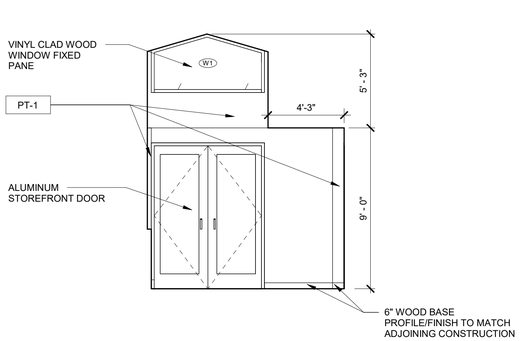
VESTIBULE A100 - NORTH

11/A8.01 SCALE: 1/4" = 1'-0"



VESTIBULE A100 - WEST

12/A8.01 SCALE: 1/4" = 1'-0"



VESTIBULE A100 - SOUTH

13/A8.01 SCALE: 1/4" = 1'-0"

INTERIOR GENERAL NOTES:

1. -

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26

WILLIAM A. KIBBE & ASSOCIATES, INC.
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WTA ARCHITECTS
100 S Jefferson Ave, Suite 601
Saginaw, Michigan 48607
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ITB - 4650

PROJECT TITLE

ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE

INTERIOR ELEVATIONS

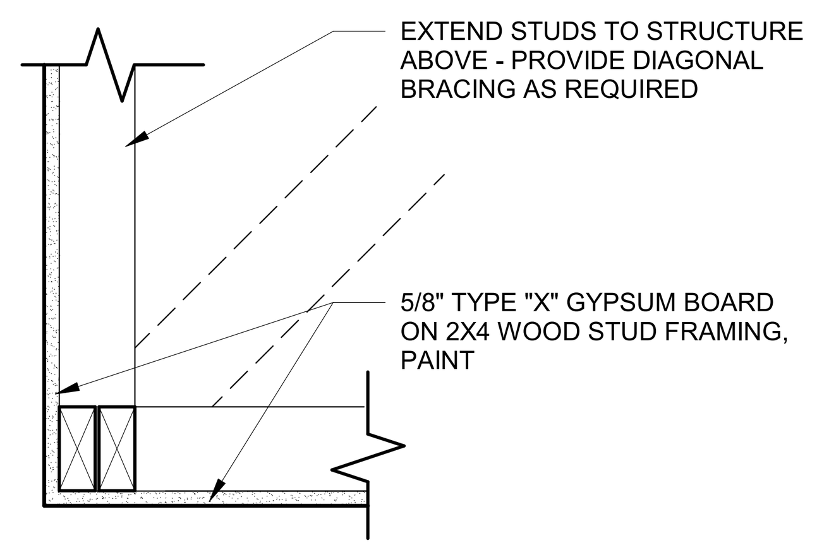
PROJECT NUMBER	SHEET NUMBER
2025104	A8.01
PROJECT DATE: 2026	
CHECKED BY: Checker	

CEILING PLAN GENERAL NOTES:

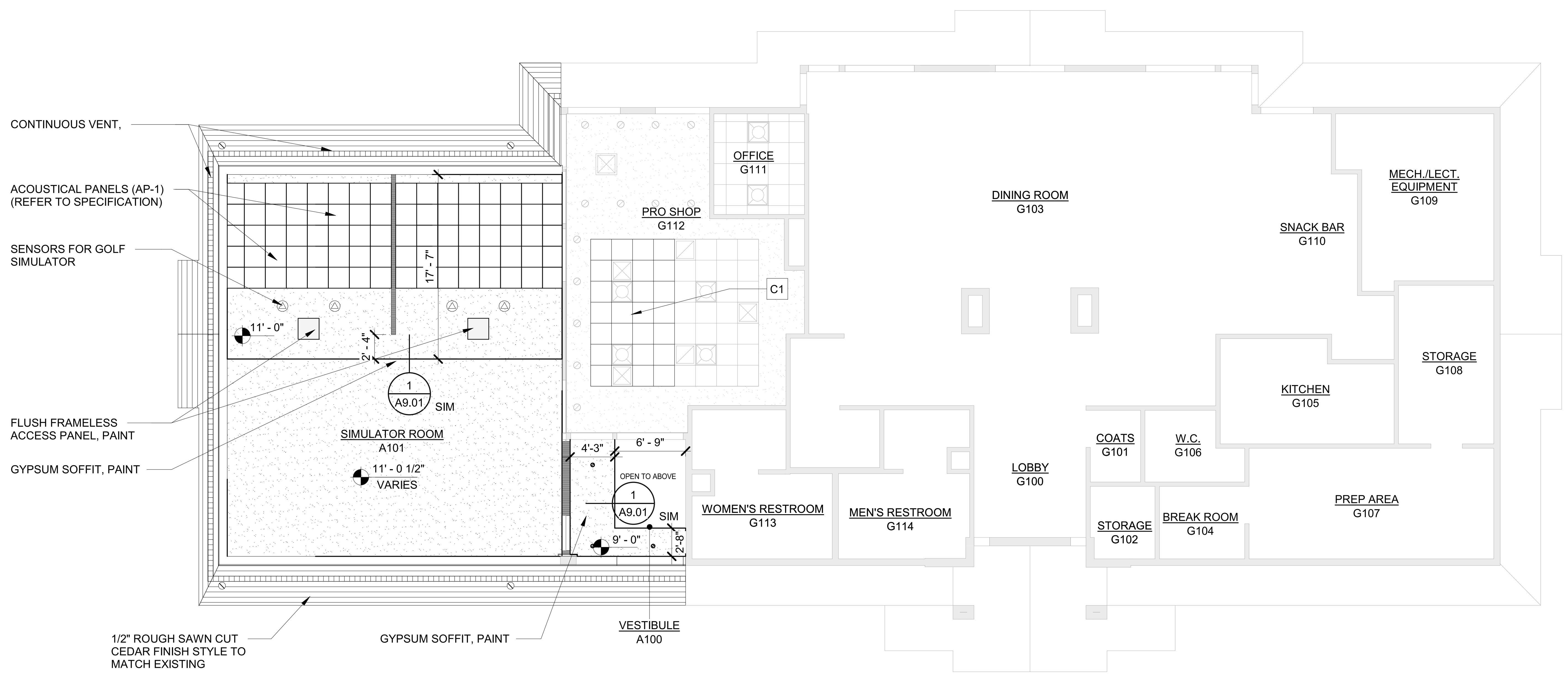
1. GENERAL NOTE TEXT IS LOCATED HERE.

CEILING KEYNOTES

1 REMOVE AND REINSTALL EXISTING CEILING CONSTRUCTION FOR NEW MECHANICAL



1 A9.01 SOFFIT DETAIL
SCALE: 1 1/2" = 1'-0"



NORTH

FIRST FLOOR REFLECTED CEILING PLAN
SCALE: 1/8" = 1'-0"

REFLECTED CEILING LEGEND:

- 2' x 2' SUSPENDED ACOUSTICAL TILE
- GYPSUM BOARD CEILING; PAINT (PT-4)
- CHAIN HUNG OR RECESSED LIGHT FIXTURES. REFER TO ELECTRICAL DRAWINGS.
- WALL-MOUNTED LIGHT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
- SUPPLY AIR GIRLLE. REFER TO MECHANICAL DRAWINGS.
- RETURN AIR GIRLLE. REFER TO MECHANICAL DRAWINGS.
- CEILING SUSPENDED CABINET HEATER
- EXIT FIXTURE. REFER TO ELECTRICAL DRAWINGS.
- FIRE ALARM AND STROBE LIGHT. REFER TO ELECTRICAL DRAWINGS.

NO.	REVISION	DATE
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ITB - 4650

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
FIRST FLOOR MASTER REFLECTED CEILING PLAN

PROJECT NUMBER
2025104

PROJECT DATE
2026

CHECKED BY
Checker

SHEET NUMBER
A9.01

STRUCTURAL GENERAL NOTES

GENERAL

1. THIS BUILDING HAS BEEN DESIGNED AND SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE, 2021 EDITION.

2. THE OWNER WILL EMPLOY QUALIFIED SPECIAL INSPECTORS TO PERFORM INSPECTIONS IN ACCORDANCE WITH CHAPTER 17 OF THE MICHIGAN BUILDING CODE, EXCEPT AS NOTED BELOW. SPECIAL INSPECTIONS WILL BE PERFORMED FOR THE FOLLOWING:

   A. SOILS.
   B. CONCRETE.
   C. MASONRY.
      I. MASONRY SPECIAL INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH TMS 402 & TMS 602 AND SHALL BE LEVEL B QUALITY ASSURANCE.
   D. STEEL.
      I. STEEL SPECIAL INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH AISC 360.
   E. WOOD.

3. WHEN "PROFESSIONAL ENGINEER" IS REFERRED TO IN THE FOLLOWING NOTES, IT DENOTES A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN, QUALIFIED TO PERFORM THE WORK.

4. THE CONTRACTOR SHALL VISIT THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS, THE OWNERS REQUIREMENTS FOR ACCESS TO THE SITE AND CONTINUED OPERATIONS DURING CONSTRUCTION.

5. THE PLAN, DETAIL DIMENSIONS & ELEVATIONS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM AVAILABLE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY SUCH DIMENSIONS, ELEVATIONS & DETAILS AS NECESSARY AND MAKE APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIAL.

6. THE CONTRACTOR SHALL SUBMIT CONCRETE REINFORCING, STRUCTURAL STEEL, AND WOOD TRUSS SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL ALSO SUBMIT MATERIAL REQUIREMENTS AND CONCRETE MIX DESIGNS. ALLOW (2) WEEKS FOR ENGINEER REVIEW.

7. THE STRUCTURE SHALL BE CONSIDERED TO BE IN AN UNSTABLE CONDITION UNTIL ALL FLOOR, WALL AND ROOF STRUCTURES ARE COMPLETED. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR STABILITY AND TO RESIST LATERAL LOADS DURING ERECTION.

8. ALL NON LOAD BEARING WALLS, EXCEPT INDICATED SHEAR WALLS, SHALL BE CONSTRUCTED TO ALLOW FOR VERTICAL DEFLECTION OF THE STRUCTURE ABOVE.

DIVISION 2 - DEMOLITION/SHORING

1. CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING WHERE REQUIRED DURING CONSTRUCTION. SHORING SHALL BE DESIGNED & DETAILED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER. SHORING PROCEDURES, DESIGNS AND DETAILS SHALL BE SUBMITTED FOR REVIEW PRIOR TO COMMENCEMENT OF WORK, ALLOW (2) WEEKS FOR ENGINEER TO REVIEW.

2. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING ERECTION PROCEDURE AND SEQUENCING AND TO SUBMIT WRITTEN PROCEDURES TO ENSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENTS DURING ERECTION.

3. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO DEMOLITION. IF CONDITIONS EXIST THAT ARE DIFFERENT FROM WHAT IS INDICATED ON THE DRAWINGS, NOTIFY ARCHITECT FOR DIRECTION BEFORE PROCEEDING.

4. DUE CARE MUST BE TAKEN NOT TO UNDERMINE OR DISTURB EXISTING SOIL AND FOUNDATIONS WHEN EXCAVATING ADJACENT TO EXISTING FOUNDATIONS. FIELD VERIFY THE DEPTH AND WIDTH OF ANY EXISTING FOOTINGS & NOTIFY ARCHITECT OF ANY INTERFERENCE'S WITH NEW WORK.

DIVISION 3 - CONCRETE

1. THE LATEST REVISION OF THE FOLLOWING CODES GOVERN THE DESIGN, DETAILING, FABRICATION AND CONSTRUCTION OF ALL REINFORCED CONCRETE:

   A. AMERICAN CONCRETE INSTITUTE (ACI) ACI 318, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
   B. ACI 315, DETAILS & DETAILING OF CONCRETE REINFORCEMENT.

2. REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING ASTM MATERIAL SPECIFICATIONS.

   A. DEFORMED BAR REINFORCING: ASTM A615 GRADE 60.
   B. WELDED WIRE REINFORCEMENT: A1064 (FLAT SHEETS ONLY).

3. ALL EXTERIOR CONCRETE (INCLUDING FOUNDATION WALLS, PIERS & FOOTINGS) SHALL BE AS FOLLOWS:

   A. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c) = 4500 PSI.
   B. SLUMP = 3" TO 5".
   C. WATER/CEMENTITIOUS RATIO = 0.45.
   D. AIR ENTRAINMENT = 6% ± 1%.
   E. EXPOSURE CLASSES = F3, S0, W1, & C2.

4. ALL INTERIOR CONCRETE SHALL BE AS FOLLOWS:

   A. MINIMUM 28-DAY COMPRESSIVE STRENGTH (f'c) = 4000 PSI.
   B. SLUMP = 3" TO 5".
   C. WATER/CEMENTITIOUS RATIO = 0.50.
   D. EXPOSURE CLASSES = F0, S0, W1, & C1.

5. SPLICES FOR DEFORMED BARS SHALL BE CLASS B WITH APPLICABLE INCREASES FOR BAR SPACING, COVER, TOP BAR EFFECT ETC. PER ACI 318.

6. BEFORE PLACING CONCRETE REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS OF PIPE SLEEVES, EMBEDDED ITEMS, OPENINGS, EQUIPMENT PADS, ELECTRICAL CONDUITS, RECESSES, DRAINS, ETC. ALL OPENINGS FOR PIPE, CONDUITS, ETC. SHALL BE SLEEVED. MINIMUM SLEEVE SPACING SHALL BE 3 SLEEVE DIAMETERS.

7. SUGGESTED CONSTRUCTION AND CONTROL JOINT LOCATIONS ARE INDICATED ON THE DRAWINGS. THE CONTRACTOR MAY DEVIATE FROM SUGGESTED JOINT LOCATIONS WITH PRIOR APPROVAL OF THE ARCHITECT.

8. CONCRETE CONTROL JOINTS SHALL BE CUT AS SOON AS CONCRETE HAS HARDENED SUFFICIENTLY TO PREVENT DISLODGMENT OF AGGREGATES. SAW A CONTINUOUS SLOT TO A DEPTH OF 1/4 THE THICKNESS OF THE SLAB BUT NOT LESS THAN 1". COMPLETE SAWING WITHIN 12 HOURS AFTER PLACEMENT.

9. PROVIDE A RECESS IN THE TOP OF FOUNDATION WALLS AT DOOR OPENINGS FOR SUPPORT OF THICKENED FLOOR SLABS AND TO RECEIVE DOOR JAMBS. DEPTH OF RECESS TO BE 2" GREATER THAN THICKNESS OF THE FLOOR SLABS, UNLESS NOTED OTHERWISE.

10. PROVIDE BENT CORNER BARS IN ALL WALLS AND FOOTINGS OF THE SAME SIZE AND NUMBER AS THE CONTINUOUS REINFORCEMENT.

11. CONCRETE SHALL BE TESTED BY AN INDEPENDENT TESTING AGENCY. A SET OF (3) CONCRETE TEST CYLINDERS SHALL BE MADE AND TESTED FOR COMPRESSION STRENGTH AT 7 AND 28 DAYS OR EVERY 50 CUBIC YARDS OF CONCRETE CAST (MINIMUM OF (1) SET PER DAY OF CASTING). ALSO SLUMP AND UNIT WEIGHT TESTS SHALL BE PERFORMED EVERY OTHER TRUCK LOAD. CONTRACTOR MADE CONCRETE TEST CYLINDERS ARE NOT ACCEPTABLE.

DIVISION 4 - MASONRY

1. THE LATEST REVISION OF THE FOLLOWING CODES GOVERN THE DESIGN, DETAILING AND CONSTRUCTION OF ALL MASONRY:

   A. THE MASONRY SOCIETY (TMS) TMS 402, BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES.
   B. TMS 602, SPECIFICATIONS FOR MASONRY STRUCTURES.

2. ALL MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF F'm = 2000 PSI.

3. ALL MORTAR SHALL BE TYPE S, PROPORTIONED BY VOLUME ACCORDING TO ASTM C270.

4. ALL GROUT SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 2000 PSI AND SHALL BE PROPORTIONED BY VOLUME ACCORDING TO ASTM C476.

5. ALL CONCRETE MASONRY UNITS SHALL BE MEDIUM OR HEAVY WEIGHT ASTM C90, GRADE N, UNITS UNLESS NOTED OTHERWISE. UNITS SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 2800 PSI.

6. ALL MASONRY WALLS SHALL HAVE HORIZONTAL JOINT REINFORCEMENT (9 GA, HOT DIPPED GALVANIZED) AT 16" O.C. PROVIDE PREFABRICATED CORNER PIECES AT ALL CORNERS AND INTERSECTIONS OF WALLS.

7. ALL DEFORMED BAR REINFORCING SHALL BE ASTM A615, GRADE 60. AT LOCATIONS WHERE REINFORCING IS TO BE WELDED, THE DEFORMED BAR REINFORCING SHALL BE ASTM A706, GRADE 60.

8. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TEMPORARY WALL BRACING ADEQUATE TO RESIST LATERAL LOADS.

9. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF WALL CONTROL JOINTS AND EXPANSION JOINTS.

10. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR TYPE, SIZE, LOCATION AND ATTACHMENT REQUIREMENTS FOR MASONRY VENEER AND OTHER CLADDING.

DIVISION 6 - WOOD FRAMING

1. THE LATEST REVISION OF THE FOLLOWING CODES & STANDARDS GOVERN THE DESIGN, MANUFACTURING AND CONSTRUCTION OF WOOD FRAMING:

   A. AMERICAN WOOD COUNCIL (AWC) NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, ANSI/AWC NDS.
   B. IBC CHAPTER 20, WOOD.
   C. AWC WCD1, DETAILS FOR CONVENTIONAL WOOD FRAMED CONSTRUCTION.
   D. AMERICAN PLYWOOD ASSOCIATION (APA) PANEL DESIGN SPECIFICATION.

2. WOOD FRAMING SIZES, FIRESTOPS, ANCHORAGE, AND CONNECTORS NOT SHOWN ON THE DOCUMENTS SHALL BE PER THE MINIMUM REQUIREMENTS IDENTIFIED IN IBC CHAPTER 23, WOOD.

3. ROOF SHEATHING SHALL BE 5/8" THICK, APA RATED SHEATHING, EXPOSURE 1, PANEL INDEX 32/16 AND STAMPED WITH DFPA GRADE-TRADEMARK.

   A. ROOF SHEATHING PANELS SHALL BE NAILED TO SUPPORTS WITH 8d COMMON NAILS.
   B. ROOF SHEATHING NAIL SPACING SHALL BE AS FOLLOWS:
      I. GABLE OVERHANGS AND ALL SHEATHING WITHIN 4 FEET OF THE GABLE WALL SHALL HAVE ALL PANEL EDGES NAILED AT 4" O.C. AND INTERMEDIATE SUPPORTS NAILED AT 6" O.C.
      II. STANDARD EAVE OVERHANG AND ALL SHEATHING WITHIN 4 FEET OF THE SUPPORTING WALL SHALL HAVE ALL PANEL EDGES NAILED AT 6" O.C. AND INTERMEDIATE SUPPORTS NAILED AT 6" O.C.
      III. ALL SHEATHING WITHIN 4 FEET OF THE RIDGE SHALL HAVE ALL PANEL EDGES NAILED AT 6" O.C. AND INTERMEDIATE SUPPORTS NAILED AT 6" O.C.
      IV. THE REMAINDER OF THE ROOF SHALL HAVE ALL PANELS EDGES NAILED AT 6" O.C. AND INTERMEDIATE SUPPORTS NAILED AT 12" O.C.

4. WALL SHEATHING SHALL BE 5/8" THICK, APA RATED SHEATHING, EXPOSURE 1, PANEL INDEX 32/16 AND STAMPED WITH DFPA GRADE-TRADEMARK.

   A. STANDARD WALL SHEATHING PANELS SHALL BE NAILED TO SUPPORTS WITH 10d COMMON NAILS.
   B. NAIL SPACING SHALL BE 3" O.C. AT PANEL EDGES AND 12" O.C. AT INTERMEDIATE SUPPORTS.

5. ALL STRUCTURAL LUMBER SHALL BE OF THE FOLLOWING MINIMUM GRADES AND ALLOWABLE STRESSES OR EQUIVALENT AS PER NDS. MOISTURE CONTENT IS TO BE 19% MAX.

   A. STUDS — HEM FIR STRUCTURAL GRADE NO. 2 OR BETTER
   B. BEAMS 2"-4" THICK — HEM FIR STRUCTURAL GRADE NO. 2 OR BETTER
   C. POSTS — SAME AS STUDS
   D. PLATE STOCK — SAME AS STUDS

6. ALL ENGINEERED WOOD PRODUCTS SHALL BE MANUFACTURED BY TRUS JOIST A WEYERHAEUSER COMPANY (OR APPROVED EQUAL) AS FOLLOWS:

   A. LAMINATED VERTICAL LUMBER (LVL), MINIMUM PROPERTIES:
      I. E = 1,900,000 PSI
      II. Fb = 2600 PSI
      III. Fv = 285 PSI
      1. PARALLEL STAND LUMBER (PSL), MINIMUM PROPERTIES:
         I. E = 2,000,000 PSI
         II. Fb = 2900 PSI
         III. Fv = 290 PSI

7. ALL LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED TESTING AGENCY.

8. ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY OR EXPOSED TO WEATHER SHALL BE TREATED LUMBER.

9. FRAMED OPENING: DOUBLE STUD FOR OPENINGS LESS THAN 4' WIDE, TRIPLE STUD FOR OPENINGS 4' WIDE OR MORE.

10. THE NUMBER OF WALL STUDS AT BEARING POINTS OF 2X MEMBER BEAMS SHALL EXCEED THE NUMBER OF MEMBERS IN THE BEAM BY ONE. THE CENTERLINE OF THE BEAM SHALL BE THE CENTERLINE OF THE SUPPORTING WALL STUDS (UNLESS NOTED OTHERWISE ON PLAN). ALL MICRO-LAM BEAMS SHALL HAVE 3 STUDS (MINIMUM). CONTINUE THESE STUDS TO THE FOUNDATION WITH INTERMEDIATE SUPPORTS THROUGH FLOOR, BETWEEN LOWER WALL TOP PLATE AND UPPER WALL BOTTOM PLATE.

11. ALL FLUSH BEAMS SHALL BE SUPPORTED BY APPROVED HANGER.

12. WHERE NOTED ON DETAILS, CONTRACTOR SHALL PROVIDE CONNECTORS FOR WOOD CONSTRUCTION AS MANUFACTURED BY SIMPSON STRONG TIE CONNECTORS. CONTRACTOR SHALL VERIFY TYPE INDICATED ON DRAWINGS. ANY SUBSTITUTION SHALL BE APPROVED BY THE ENGINEER. WHERE A TYPE IS NOT INDICATED OR TO BE PROVIDED BY THE TRUSS MANUFACTURER, THE CONTRACTOR SHALL SUBMIT PROPOSED CONNECTOR FOR APPROVAL.

13. ALL NAILS FOR NAILING OF STRUCTURAL LUMBER SHALL BE COMMON NAILS. ALL NAILING SHALL COMPLY WITH THE RECOMMENDED FASTENING SCHEDULE (MBC TABLE 2304.10.1) UNLESS NOTED OTHERWISE.

14. ROOF FRAMING LAYOUTS ARE PROVIDED TO ILLUSTRATE CONDITIONS OF CONSTRUCTION AND DO NOT NECESSARILY INDICATE SPECIFIC QUANTITIES OF MATERIALS OR COMPONENTS REQUIRED FOR CONSTRUCTION.

15. CONSTRUCTION BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO MAINTAIN THE BUILDING PLUMB AND TRUE. THIS BRACING SHALL REMAIN UNTIL THE SPECIFIED SHEAR WALLS ARE TOTALLY INSTALLED.

DIVISION 6 - PREFABRICATED WOOD TRUSSES

1. THE LATEST REVISION OF THE FOLLOWING CODES & STANDARDS GOVERN THE DESIGN, MANUFACTURING AND CONSTRUCTION OF PREFABRICATED WOOD TRUSSES:

   A. AMERICAN WOOD COUNCIL (AWC) NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION, ANSI/AWC NDS.
   B. IBC CHAPTER 23, WOOD.
   C. AMERICAN NATIONAL STANDARD (ANSI) & TRUSS PLATE INSTITUTE (TPI) ANSI/TPI 1, NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION.
   D. BUILDING COMPONENT SAFETY INFORMATION (BCSI). BCSI-B1 GUIDE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF TRUSSES.
   E. BCSI-B2 TRUSS INSTALLATION & TEMPORARY RESTRAINT/BRACING.
   F. BCSI-B3 PERMANENT RESTRAINT/BRACING OF CHORDS & WEB MEMBERS.

2. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SUBMITTALS:

   A. SHOP DRAWINGS SHOWING SIZES, DESIGN VALUES, LOADS, MATERIALS, PERMANENT & TEMPORARY BRACING AND DIMENSIONAL RELATIONSHIPS OF COMPONENTS, AND BEARING & ANCHOR DETAILS. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER.
   B. DESIGN CALCULATIONS PREPARED BY A PROFESSIONAL ENGINEER.

3. ALL ROOF TRUSSES SHALL BE DESIGNED FOR THE LOADS INDICATED ON THIS SHEET PLUS THE FOLLOWING:

   A. ROOF TRUSSES WITHIN 5 FOOT OF THE END WALL: NET UPLIFT = 10 PSF.
   B. REMAINING ROOF TRUSSES: NET UPLIFT = 5 PSF.

4. THE EXTENT OF ROOF TRUSSES SHOWN ON THE PLANS IS FOR REFERENCE ONLY. THE FABRICATOR SHALL VERIFY ALL DIMENSIONS, TRUSS LAYOUT, CONFIGURATION, NUMBER OF EACH TYPE OF TRUSS REQUIRED, LOADING AND DETAILS.

5. DEFLECTION OF TRUSSES SHALL BE LIMITED TO A MAXIMUM LIVE LOAD DEFLECTION OF SPAN/360 AND A MAXIMUM TOTAL LOAD DEFLECTION OF SPAN/240 (SPAN IS IN INCHES).

6. AT ROOF TRUSS BEARING, AS A MINIMUM: INSTALL (1) SIMPSON H2.5T HURRICANE TIE AND (3) 16D COMMON TOE NAILS.

7. ALL TEMPORARY BRACING IS THE RESPONSIBILITY OF AND IS TO BE DESIGNED BY THE TRUSS MANUFACTURER. AS A MINIMUM TRUSSES SHALL BE BRACED DURING ERECTION PER BCSI-B1 & BCSI-B2. THIS BRACING SHALL REMAIN AS PERMANENT BRACING.

8. THE FABRICATOR SHALL CLEARLY INDICATE ON TRUSS DRAWINGS AND DIAGRAMS ALL REQUIRED PERMANENT BRACING REQUIRED TO BRACE ANY TRUSS CHORD OR WEB MEMBERS. SUCH BRACING MAY BE INCORPORATED WITH OTHER PERMANENT BRACING BY THE CONTRACTOR. ALL SUCH BRACING SHALL RUN TO AND TERMINATE AT BEARING WALLS. WHERE CONFIGURATION OF TRUSSES CHANGE, AFFECTING SUPPORT OF THIS BRACING, ADDITIONAL FRAMING FASTENED TO THE TRUSSES SHALL BE INSTALLED TO SUPPORT THE BRACING. BRACING IS TO BE DESIGNED PER BCSI-B3.

9. THE BOTTOM CHORD OF WOOD TRUSSES SHALL BE DESIGNED AS UNBRACED FOR LENGTH EQUAL TO THE SPACING BETWEEN BOTTOM CHORD BRACES UNLESS SHEATHED WITH CONTINUOUS SHEATHING (PLYWOOD, OSB OR GYPSUM BOARD). BOTTOM CHORD BRACES SHALL BE SPACED AT 10'-0" MAXIMUM AND SHALL BE SUPPLIED BY THE TRUSS MANUFACTURER.

10. THE TOP CHORD OF ROOF TRUSSES SHALL BE CONSIDERED THE BE CONTINUOUSLY BRACED BY THE ROOF DECKING.

11. TRUSS BRACING SHOWN OR DESCRIBED SHALL BE A MINIMUM A 2X4 WITH (2) 16D NAILS IN EVERY TRUSS IT CROSSES.

DIVISION 31 - FOUNDATIONS/BACKFILL

1. CONTRACTOR SHALL REVIEW A COPY OF THE GEOTECHNICAL REPORT PREPARED FOR THIS PROJECT.

2. FOUNDATIONS ARE DESIGNED FOR A MAXIMUM ALLOWABLE BEARING CAPACITY OF 3500 PSF. FOUNDATIONS SHALL BEAR ON NATURAL UNDISTURBED SOILS OR ON ENGINEERED FILL.

3. THE OWNER WILL RETAIN THE SERVICES OF A GEOTECHNICAL ENGINEER TO MONITOR THE FOUNDATION WORK AND DETERMINE THE QUALITY OF THE SOIL AT ALL FOOTING LOCATIONS. IF UNSUITABLE MATERIALS ARE ENCOUNTERED AT THE FOOTING LOCATIONS, THE UNSUITABLE SHALL BE REMOVED AND REPLACED OR THE FOOTINGS LOWERED AT THE DIRECTION OF THE ENGINEER.

4. THE CONTRACTOR SHALL BE AWARE OF AND VERIFY LOCATION OF ALL UNDERGROUND UTILITIES, TANKS, ETC. DUE CARE SHALL BE EXERCISED DURING EXCAVATION SUCH THAT EXISTING UTILITIES ARE NOT DAMAGED.

5. ALL EXCAVATED MATERIAL SHALL BE TRANSPORTED TO A DISPOSAL AREA DESIGNATED BY THE OWNER ALL EXCAVATIONS SHALL CONFORM TO MI-OSHA REQUIREMENTS. ANY PERCHED GROUNDWATER ENTERING THE EXCAVATION SHALL BE PUMPED PRIOR TO PLACING CONCRETE.

6. ALL BACKFILL MATERIALS SHALL CONFORM TO MDOT CLASS II MATERIAL. ALL BACKFILL SHALL BE PLACED IN 9" LOOSE LIFTS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY DETERMINED IN ACCORDANCE WITH ASTM D-1557 (MODIFIED PROCTOR). FIELD DENSITY TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM D-2922 OR D-1556 WITH A MINIMUM OF 1 TEST PER 1500 SQ FEET OF AREA PER 9" LIFT (MINIMUM OF (3) TEST PER LIFT).

DESIGN CRITERIA

MICHIGAN BUILDING CODE 2021 (ASCE 7-16)
RISK CATEGORY II.

ROOF DEAD LOADS

• ASPHALT SHINGLES	4 PSF
• 3/4" PLYWOOD SHEATHING	2 PSF
• WOOD TRUSSES	4 PSF
• CEILING 5/8" GYPSUM	3 PSF
• MECHANICAL AND ELECTRICAL	4 PSF
• MISCELLANEOUS	2 PSF
• 22" CELLULOSE INSULATION	3 PSF
TOTAL	**22 PSF**

ROOF LIVE LOADS

• MINIMUM LOAD	20 PSF

SNOW LOADS

• IMPORTANCE FACTOR	I_s = 1.0
• GROUND SNOW LOAD	P_g = 35 PSF
• SNOW EXPOSURE FACTOR	C_e = 1.0
• THERMAL FACTOR	C_t = 1.1
• FLAT USE SNOW	P_f = 27 PSF (TYPICAL ROOF)
• SNOW DRIFT PER ASCE 7	

WIND LOADS

• BASIC WIND SPEED	106 MPH (3 SEC GUST)
• EXPOSURE CATEGORY	B
• COMPONENTS AND CLADDING PER ASCE 7	

SEISMIC DESIGN DATA

• SITE CLASS	D
• RESPONSE COEFFICIENTS	SD_S = 0.07
	SD_1 = 0.062
• SEISMIC DESIGN CATEGORY	A

ABBREVIATIONS

@	AT
ADD'L	ADDITIONAL
B.C.	BOTTOM CHORD
B.O.	BOTTOM OF
B.O.F.	BOTTOM OF FOOTING
B.O.S.	BOTTOM OF STEEL
B.O.T.	BOTTOM OF TRUSS
B.S.	BOTH SIDES
BM	BEAM
BOTT	BOTTOM
C.L.	CENTER LINE
CJ	CONTROL JOINT
COL	COLUMN
CONC	CONCRETE
CONT	CONTINUOUS
CSJ	CONSTRUCTION JOINT
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DL	DEAD LOAD
DWG	DRAWING
EA	EACH
EQ	EQUAL
EX	EXISTING
F.S.	FAR SIDE
F.V.	FIELD VERIFY
FIN	FINISH
FLG	FLANGE
FLR	FLOOR
FDN	FOUNDATION
FT	FOOT
FTG	FOOTING
GA	GAGE
G.L.	GIRT LINE
H.P.	HIGH POINT
HORIZ	HORIZONTAL
k	KIPS
L.P.	LOW POINT
LL	LIVE LOAD
LN	LINE
MAX	MAXIMUM
MIN	MINIMUM
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
NO	NUMBER
O.C.	ON CENTER
PC	PIECE
PL	PLATE
PLCS	PLACES
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
SECT	SECTION
SIM	SIMILAR
SPA	SPACES
STD	STANDARD
T.O.	TOP OF
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.M.	TOP OF MASONRY
T.O.S.	TOP OF STEEL
TYP	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W.P.	WORK POINT
W/	WITH
WWR	WELDED WIRE REINFORCMENT

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26
	FINAL OWNER REVIEW	04/30/26

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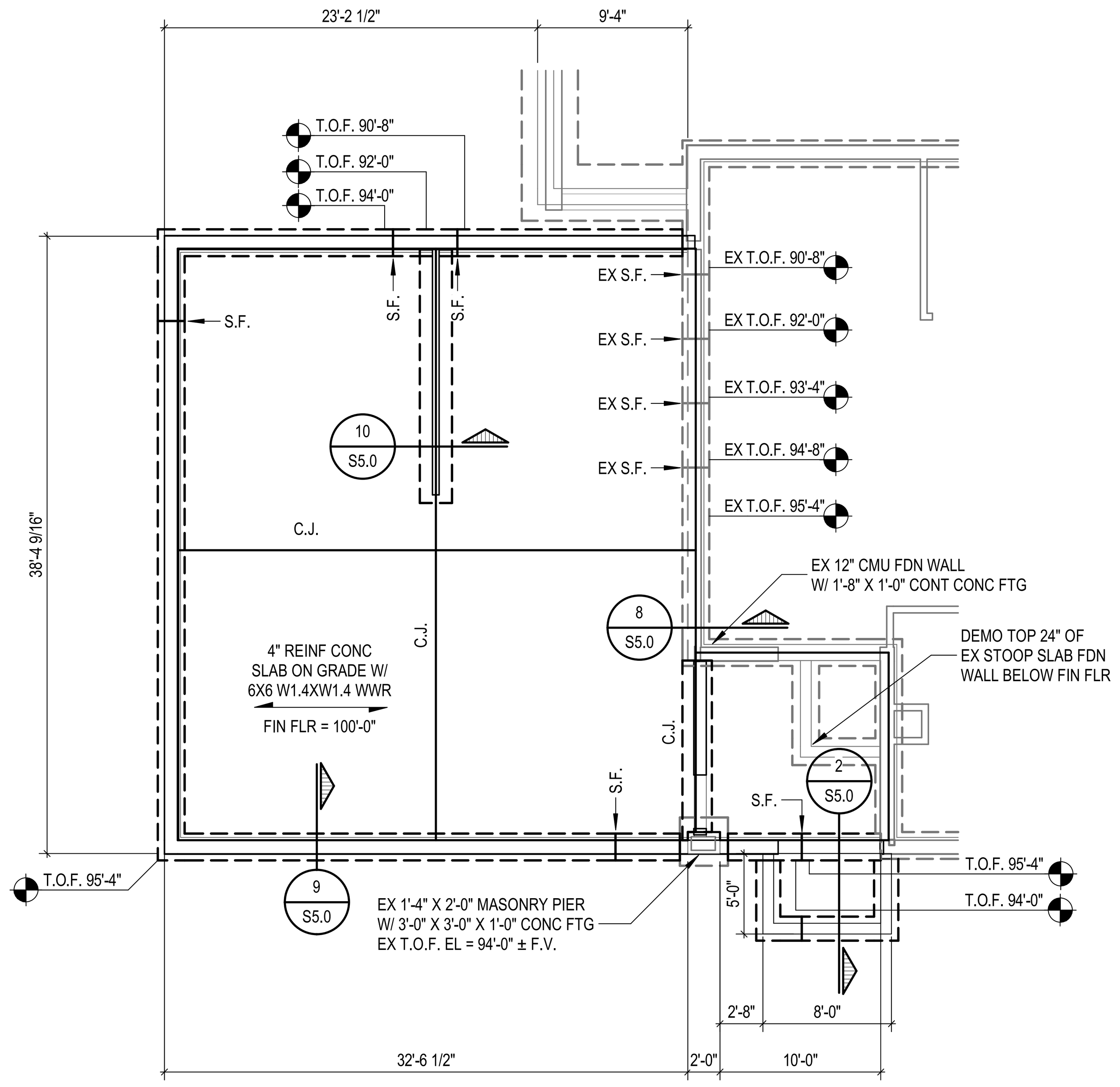
PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

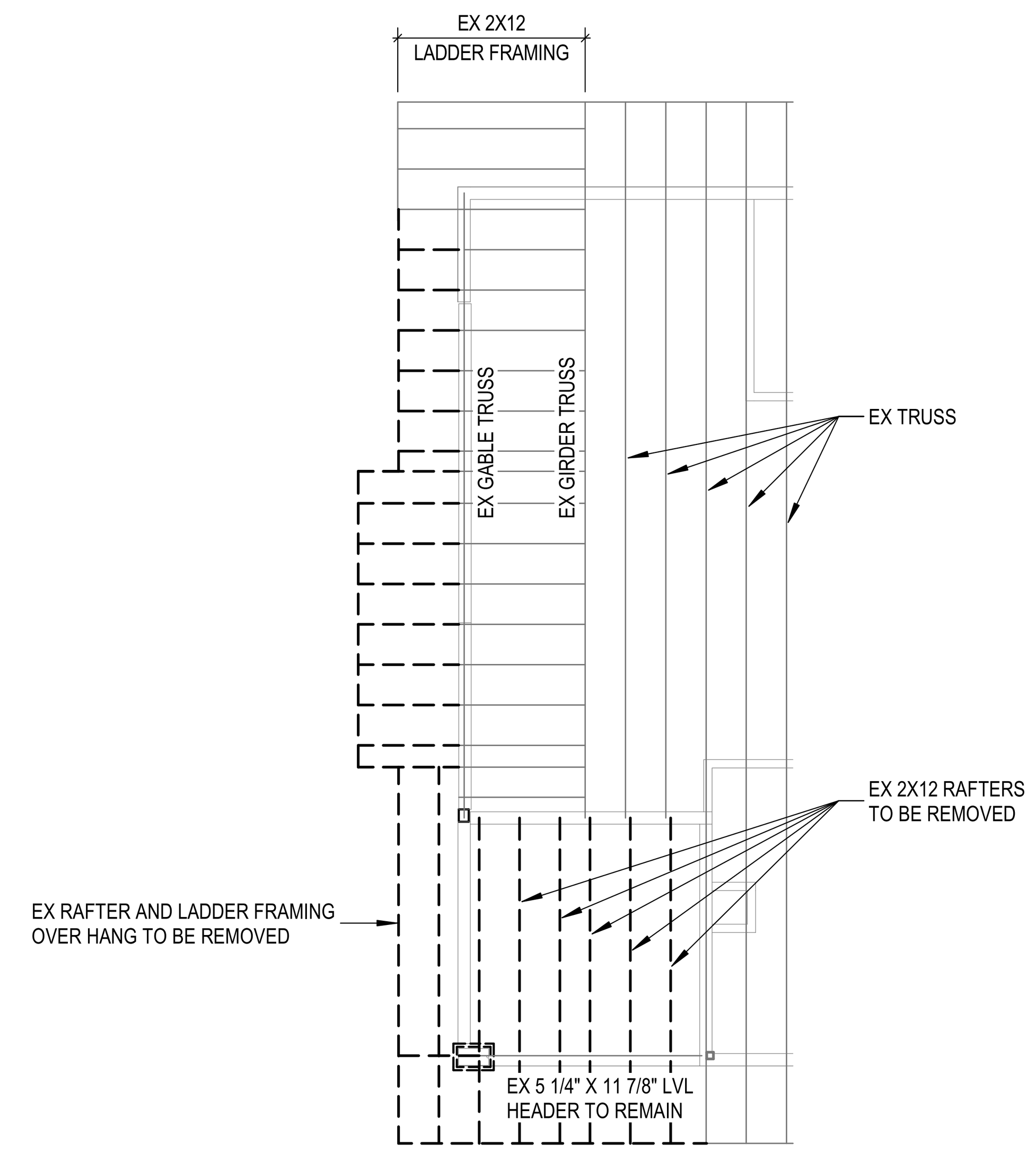
SHEET TITLE
STRUCTURAL GENERAL NOTES

PROJECT NUMBER 25-0546-0295
PROJECT DATE 05/12/26
CHECKED BY C. VASQUEZ
SHEET NUMBER S0.0



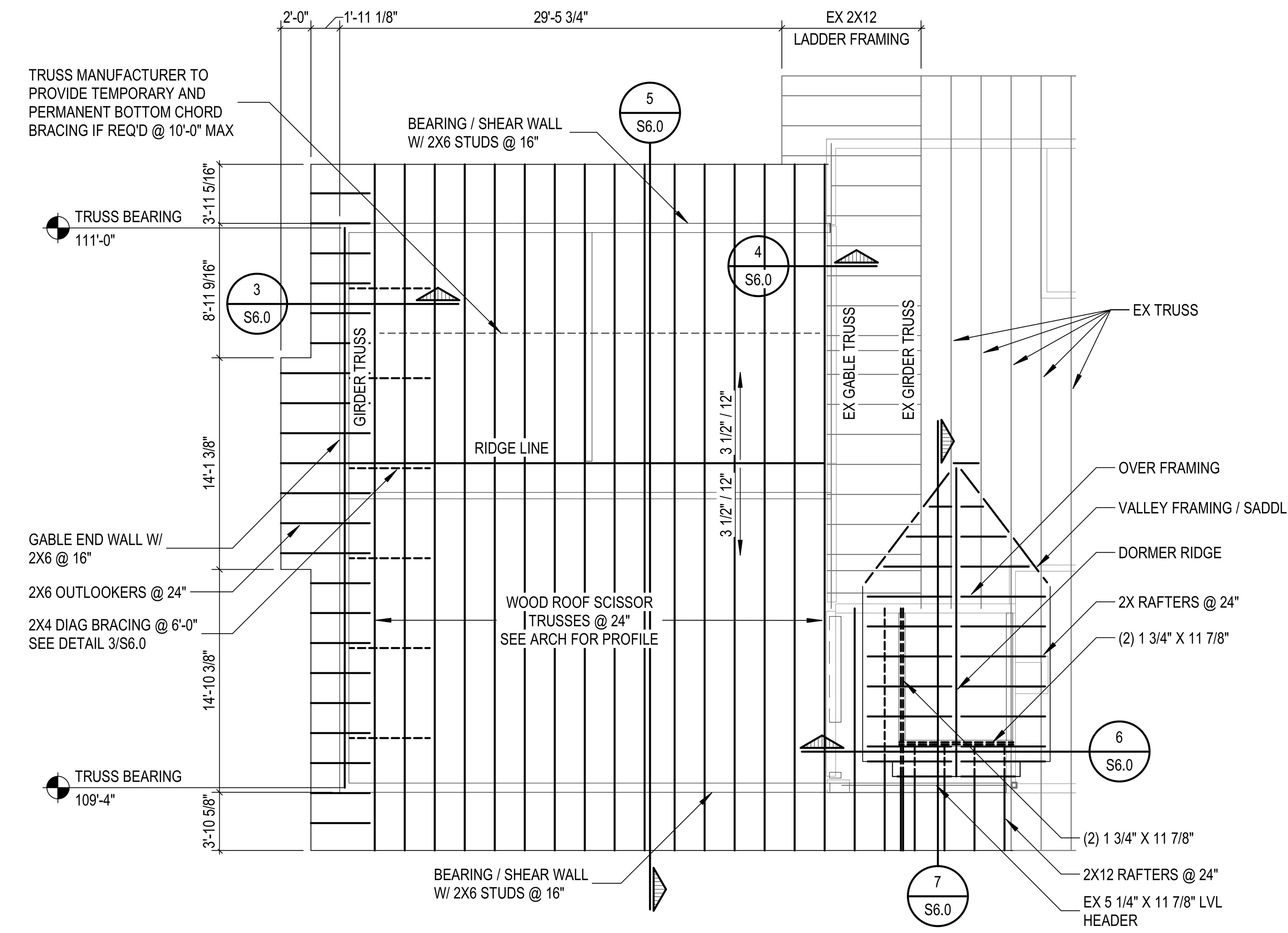
PARTIAL FOUNDATION PLAN

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



PARTIAL ROOF DEMO PLAN

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



PARTIAL ROOF FRAMING PLAN

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

NOTE:
SCISSOR TRUSS DESIGN TO BE PIN AND ROLLER.

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

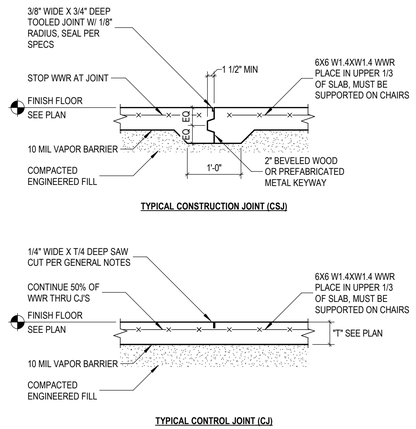
SHEET TITLE
STRUCTURAL PLANS

PROJECT NUMBER
25-0546-0295

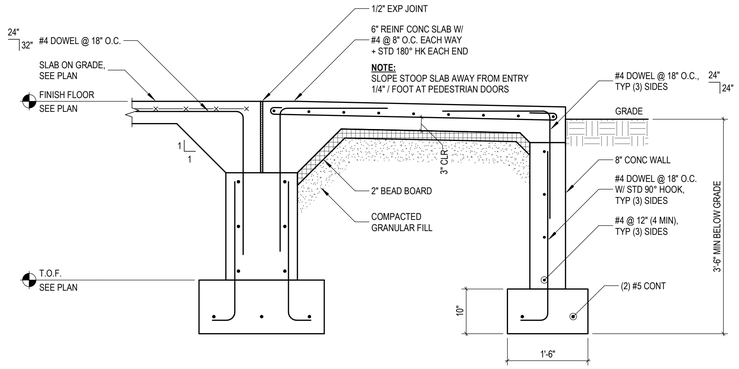
PROJECT DATE
05/12/26

CHECKED BY
C. VASQUEZ

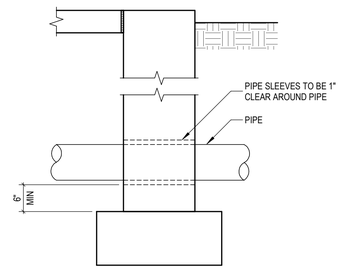
SHEET NUMBER
S2.0



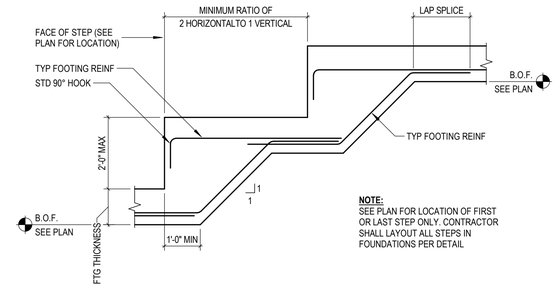
1 S5.0 TYPICAL SLAB ON GRADE DETAILS
NOT TO SCALE



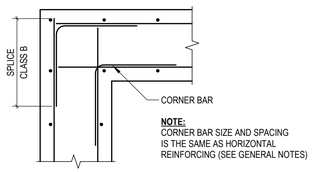
2 S5.0 TYPICAL STOOP SECTION
NOT TO SCALE



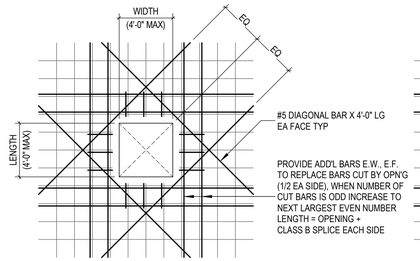
3 S5.0 TYP FOUNDATION DETAIL AT UTILITY
NOT TO SCALE

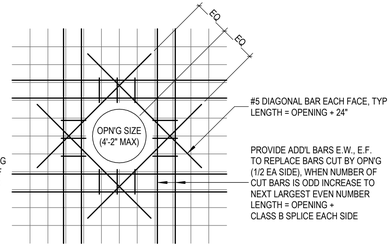


4 S5.0 TYPICAL STEP FOOTING DETAIL
NOT TO SCALE

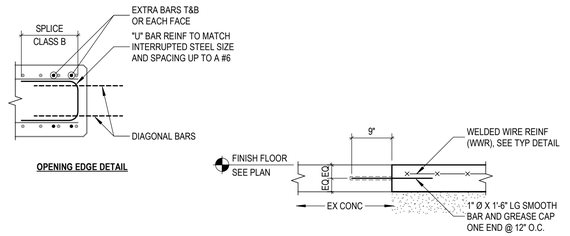


5 S5.0 TYP WALL & FTG CORNER DETAIL
NOT TO SCALE

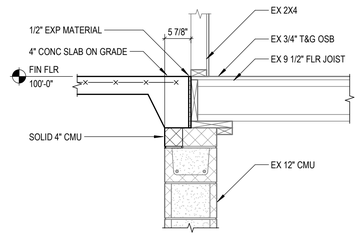




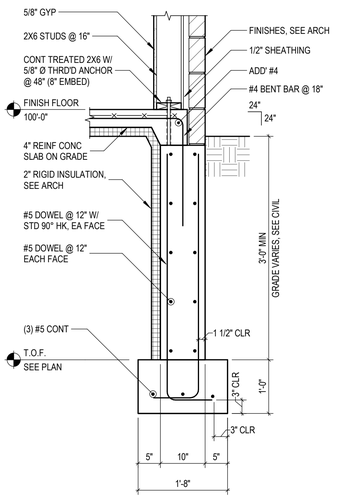
6 S5.0 TYPICAL SLAB AND WALL OPENINGS
NOT TO SCALE



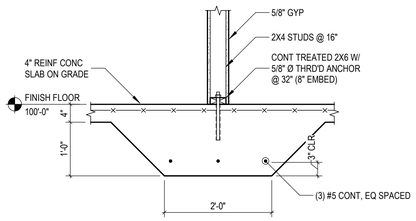
7 S5.0 TYP SLAB ON GRADE REPLACEMENT
NOT TO SCALE



8 S5.0 DETAIL
SCALE: 3/4" = 1'-0"



9 S5.0 FOUNDATION WALL
SCALE: 3/4" = 1'-0"



10 S5.0 THICKENED SLAB DETAIL
SCALE: 3/4" = 1'-0"

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SHEET TITLE
FOUNDATION SECTIONS AND DETAILS

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PROJECT DATE 05/12/26
CHECKED BY C. VASQUEZ
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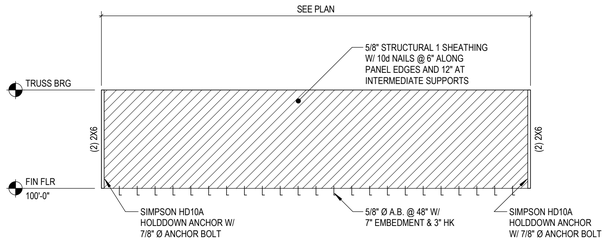
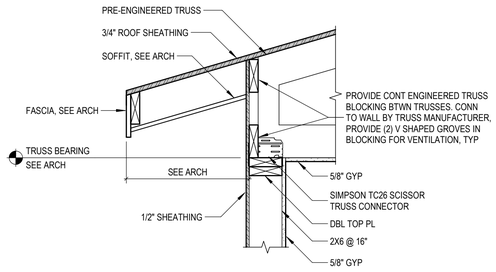
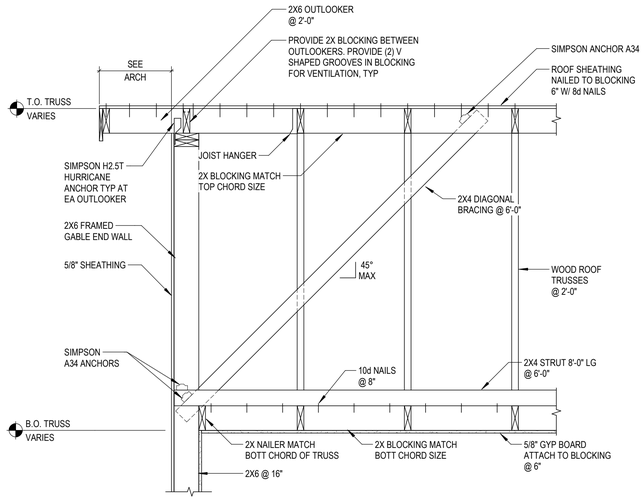


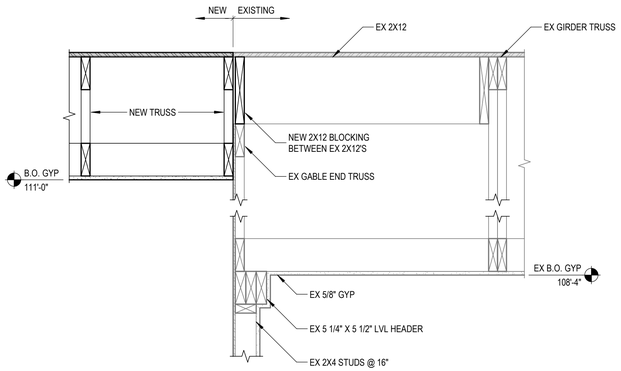
1 S6.0 **TYPICAL SHEAR WALL**
NOT TO SCALE



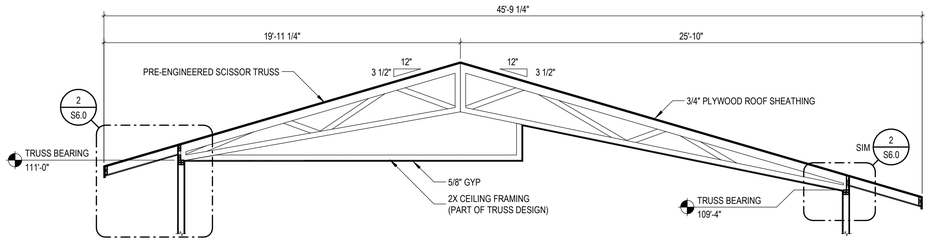
2 S6.0 **DETAIL**
NOT TO SCALE



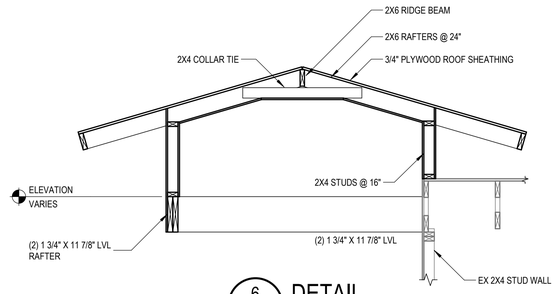
3 S6.0 **SECTION**
NOT TO SCALE



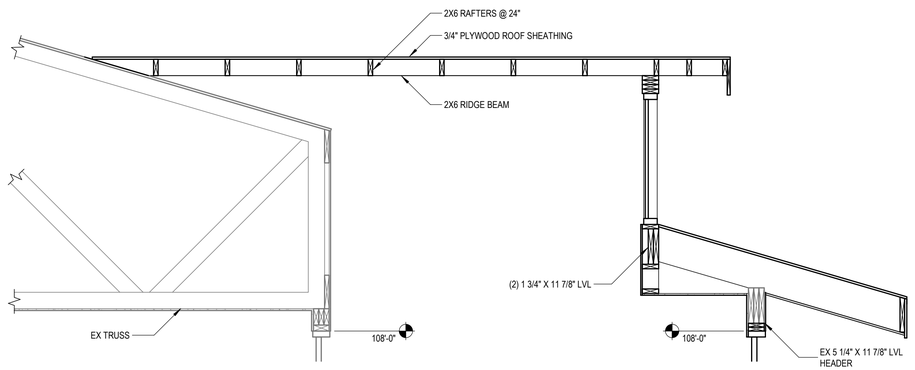
4 S6.0 **DETAIL**
SCALE: 1" = 1'-0"



5 S6.0 **DETAIL**
SCALE: 1/4" = 1'-0"



6 S6.0 **DETAIL**
SCALE: 1/2" = 1'-0"



7 S6.0 **DETAIL**
SCALE: 1/2" = 1'-0"

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25-0546-0295	S6.0
PROJECT DATE 05/12/26	
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ABBREVIATIONS

ACS	AUTOMATIC CONTROL SYSTEM	HTG	HEATING
A.F.F.	ABOVE FINISHED FLOOR	HTR	HEATER
AFMS	AIR FLOW MEASURING STATION	HV	HOSE VALVE
AG	AIR GAP FITTING	HVAC	HEATING, VENTILATION AND AIR CONDITIONING
AHU	AIR HANDLING UNIT	ID	INSIDE DIAMETER/ DIMENSION
ALT	ALTERNATE	IN	INCH(ES)
AP	ACCESS PANEL(S)	INSUL	INSULATION
APD	AIR PRESSURE DROP	INV	INVERT
ARCH	ARCHITECT(URAL)	LBS/HR	POUNDS PER HOUR
ATU	AIR TERMINAL UNIT	LF	LINEAL FOOT, FEET
BHP	BRAKE HORSE POWER	LVR	LOUVER
BLDG	BUILDING	MAX	MAXIMUM
BSMT	BASEMENT	MBH	1000 BTUH
BTUH	BRITISH THERMAL UNIT PER HOUR	MCC	MOTOR CONTROL CENTER
BWV	BACK WATER VALVE	MECH	MECHANICAL(LY)
CFH	CUBIC FOOR PER HOUR	MEZZ	MEZZANINE
CFM	CUBIC FOOT PER MINUTE	MFR	MANUFACTURER
CIP	CAST IRON PIPE	MIN	MINIMUM
CLG	CEILING	MIN	MINUTE
CONC	CONCRETE	MISC	MISCELLANEOUS
COND	CONDENS(ATE) (ER)	N.I.C.	NOT IN CONTRACT
CONN	CONNECTIONS	NO	NUMBER
CONT	CONTINU(E) (OUS) (ATION)	N.T.S.	NOT TO SCALE
CONTR	CONTRACTOR	OA	OUTSIDE AIR
CORR	CORRIDOR	OD	OUTSIDE DIAMETER/ DIMENSION
DA	DIALYSIS ACID	PD	PRESSURE DROP
DDC	DIRECT DIGITAL CONTROL (PANEL)	PLBG	PLUMBING
DEG	DEGREE(S)	PRES	PRESSURE
DET	DETAIL	PSI	POUNDS PER SQUARE INCH
DI	DEIONIZED WATER	PVC	POLYVINYL CHLORIDE
DIFF	DIFFUSER	R	RADIUS
DMPR	DAMPER	RA	RETURN AIR
DN	DOWN	REG	REGISTER
DW	DIALYSIS WATER	REQD	REQUIRED
DWG(S)	DRAWING(S)	RH	RELATIVE HUMIDITY
EA	EACH	RM	ROOM
EA	EXHAUST AIR	RO	REVERSE OSMOSIS
ELEC	ELECTRIC(AL)	RPM	REVOLUTIONS PER MINUTE
EMER	EMERGENCY	RPZ	REDUCED PRESSURE BACKFLOW PREVENTER
EX	EXISTING	RTU	ROOFTOP UNIT
EXH	EXHAUST	SA	SUPPLY AIR
EJ	EXPANSION JOINT	SHT	SHEET
EXT	EXTERIOR	SP	STATIC PRESSURE
F	FAHRENHEIT	SPEC(S)	SPECIFICATION(S)
FDV	FIRE DEPARTMENT VALVE	SQ	SQUARE
FFD	FUNNEL FLOOR DRAIN	S.S.	STAINLESS STEEL
FFE	FINISHED FLOOR ELEVATION	STR	STRUCTUR(E) (AL)
FLR	FLOOR	T	THERMOSTAT
FLEX	FLEXIBLE	TEMP	TEMPERATURE
FPM	FEET PER MINUTE	TMV	THERMOSTATIC MIXING VALVE
F&T	FLOAT AND THERMOSTATIC (TRAP)	TYP	TYPICAL
FT	FOOT, FEET	VAV	VARIABLE AIR VOLUME
FTG	FOOTING	VENT	VENTILATION OR VENTILATOR
FTR	FINNED TUBE RADIATION	VERT	VERTICAL
GA	GAUGE	VIB SOL	VIBRATION ISOLATION
GAL	GALLON	VOL	VOLUME
GALV	GALVANIZED	VS	VENT STACK
GEN	GENERATOR	VSD	VARIABLE SPEED DRIVE (MOTOR CONTROLLER)
GENL	GENERAL	VTR	VENT THROUGH ROOF
GPH	GALLON(S) PER HOUR	V.I.F.	VERIFY IN FIELD
GPM	GALLON(S) PER MINUTE	W	WASTE
GRL	GRILLE	W/	WITH
HB	HOSE BIB	W/O	WITHOUT
HP	HIGH PRESSURE	WH	WALL HYDRANT
HP	HORSE POWER	WS	WASTE STACK
		WTR	WATER

MECHANICAL SPECIFICATIONS

REFERENCE
INSTRUCTIONS TO BIDDERS, CONDITIONS OF THE CONTRACT, DIVISION 1, AND THIS SECTION SHALL APPLY TO THIS DIVISION.

CODES, PERMITS & INSPECTIONS
CONTRACTOR SHALL SECURE PERMITS, INSPECTIONS AND TESTS, PAY ALL FEES, DEPOSITS, AND COSTS FOR ALL MECHANICAL UTILITIES AND SERVICES INVOLVED AND PRESENT THE OWNER A CERTIFICATE OF INSPECTION AND APPROVAL FROM THE DEPARTMENT HAVING JURISDICTION OVER HIS WORK. SHOULD ANY CHANGE IN THE DRAWINGS AND SPECIFICATIONS BE REQUIRED TO COMPLY WITH ALL APPLICABLE CODES, RULES, REGULATIONS, ETC., CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE SUBMITTING BID. AFTER ENTERING INTO CONTRACT, ALL WORK NECESSARY TO MEET THE REQUIREMENTS SHALL BE COMPLETED WITHOUT ADDITION TO THE CONTRACT AMOUNT. WHERE WORK INDICATED IS MORE THAN REQUIRED BY CODES, ETC., SUCH WORK SHALL BE AS INDICATED.

JOB OBSERVATIONS
NOTWITHSTANDING ANY REFERENCE TO ANY CODE, RULE OR REGULATION, ENGINEER SHALL HAVE NO RESPONSIBILITY FOR SAFETY ON THE JOB SITE, SHALL HAVE NO RIGHT TO CHANGE OR STOP THE WORK, SHALL NOT CONTROL THE MEANS OF THE WORK, AND SHALL NOT HAVE ANY DUTY TO PROVIDE SUPERVISION OF MEANS, METHODS, PROCESSES OR PROCEDURES OF CONSTRUCTION.

FIRST CLASS WORKABLE SYSTEMS
FIRST CLASS WORKABLE SYSTEMS SHALL BE PROVIDED BY THE CONTRACTOR. IF, IN THE OPINION OF THE CONTRACTOR, CHANGES IN THE DRAWINGS OR SPECIFICATIONS ARE REQUIRED TO PRODUCE FIRST-CLASS WORKABLE SYSTEMS, CONTRACTOR SHALL REQUEST AN INTERPRETATION FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK. IF THE CONTRACTOR FAILS TO MAKE SUCH A REQUEST, NO EXCUSE WILL THEREAFTER BE ENTERTAINED FOR FAILURE TO PROVIDE FIRST-CLASS WORKABLE SYSTEMS.

DRAWINGS
DRAWINGS ARE INTENDED TO SHOW THE GENERAL ARRANGEMENT, DESIGN, AND EXTENT OF THE WORK AND ARE PARTLY DIAGRAMMATIC. THEY ARE NOT INTENDED TO BE SCALED FOR ROUGH-IN MEASUREMENTS NOR TO SERVE AS SHOP DRAWINGS. THE ENGINEERS AND OWNER RESERVE THE RIGHT TO MAKE MINOR CHANGES IN THE LOCATION OF EQUIPMENT, DUCTWORK, PIPING, ETC. AT THE TIME OF ROUGH-IN WITHOUT ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, LOCATIONS, ETC. FOR ACCURACY AND POSSIBILITY OF INTERFERENCES DUE TO FIELD CONDITIONS AND ACTUAL BUILDING STRUCTURE. FAILURE TO CHECK WILL BE NO REASON FOR ADDITIONAL COMPENSATION.

SHOP DRAWINGS
SUBMIT COMPLETE PDF ELECTRONIC COPY FOR ALL MECHANICAL EQUIPMENT AND MATERIALS TO THE ENGINEER FOR APPROVAL BEFORE FABRICATION OF WORK OR ORDERING OF EQUIPMENT. DRAWINGS MUST BE APPROVED BY THE ENGINEER BEFORE ORDERING EQUIPMENT. ALL SHOP DRAWINGS NOT APPROVED SHALL BE CORRECTED AND RESUBMITTED TO THE ENGINEER BEFORE ORDERING.

STANDARDS OF INDUSTRY
STANDARDS OF INDUSTRY SHALL BE FOLLOWED WHEN APPLICABLE.

GUARANTEE
CONTRACTOR SHALL GUARANTEE EQUIPMENT, MATERIALS AND WORKMANSHIP IN HIS CONTRACT AND SHALL MAKE GOOD AT HIS OWN EXPENSE ANY DEFECTS WHICH MAY DEVELOP WITHIN ONE YEAR AFTER START-UP OF EACH PIECE OF EQUIPMENT, OCCUPANCY BY OWNER, OR FINAL ACCEPTANCE OF THE JOB, WHICHEVER OCCURS FIRST.

CONTRACTOR'S RECORD/ AS-BUILT DRAWINGS
CONTRACTOR SHALL MAINTAIN AND KEEP AN UP-TO-DATE SET OF DRAWINGS REFLECTING "AS-BUILT" CONDITIONS OF THEIR WORK AS IS REQUIRED BY CODE. CONTRACTOR SHALL INDICATE EXACT DIMENSIONS AND ELEVATIONS FOR ALL UNDERGROUND WORK. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER THE AS-BUILT DRAWINGS.

LOCAL CONDITIONS
BEFORE SUBMITTING BIDS AND/OR PROCEEDING WITH THE PROJECT, THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS, SPECIFICATIONS AND ADDENDA ISSUED FOR THE PROJECT AND SHALL EXAMINE THE PROJECT SITE. THE CONTRACTOR SHALL THOROUGHLY INVESTIGATE THE PROJECT SITE AND BECOME FULLY INFORMED AS TO THE EXTENT OF HIS WORK AND COORDINATION OF THIS WORK WITH ALL OTHER TRADES AND INCLUDE ALL COST TO PERFORM AND COMPLETE WORK FOR THIS PROJECT PER DRAWINGS AND SPECIFICATION AND ALL CODES.

OPERATION AND MAINTENANCE MANUALS
CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER TWO (2) COPIES OF THREE RING BINDER BOOKS WITH TABS FOR SECTIONS COVERING EACH ITEM OF EQUIPMENT. NOTEBOOKS SHALL INCLUDE SHOP DRAWINGS, MAINTENANCE MANUALS, OPERATING MANUALS AND PARTS LIST AS NECESSARY TO INSTRUCT OWNER ON PROPER OPERATION AND MAINTENANCE OF EQUIPMENT FOR THIS PROJECT. THESE MANUALS SHOULD BE HARD BOUND IN BEST QUALITY BINDERS AND TURNED OVER TO THE ARCHITECT/ENGINEER FOR APPROVAL AT COMPLETION OF PROJECT.

START-UP SERVICE
CONTRACTOR SHALL ARRANGE WITH EQUIPMENT MANUFACTURERS FOR PROVIDING COMPLETE START-UP SERVICE FOR ALL EQUIPMENT ON THIS PROJECT. ALL START-UP SERVICES SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER AND/OR ENGINEER. A WRITTEN REPORT SHALL BE SUBMITTED TO THE ENGINEER STATING DATE OF START-UP, MANUFACTURER APPROVAL OF SYSTEM OPERATION AND INSTALLATION.

CUTTING AND PATCHING
CUTTING AND PATCHING SHALL BE BY TRADES REGULARLY ENGAGED IN THIS TYPE OF WORK, EXCEPT DRILLING OF HOLES SHALL BE DONE BY THE TRADES REQUIRING SAME. STRUCTURAL MEMBERS SHALL NOT BE CUT OR DRILLED.

SALVAGEABLE MATERIAL
SALVAGEABLE MATERIAL SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE STORED AT LOCATIONS AS DIRECTED BY THE OWNER, EXCEPT THE OWNER RESERVES THE RIGHT TO DESIGNATE CERTAIN ITEMS OF SALVAGEABLE MATERIAL TO BE REMOVED FROM THE PROJECT SITE.

NATURAL GAS AND PIPING ABOVE GRADE
NATURAL GAS PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 BLACK CARBON STEEL ASTM A53, SEAMLESS WITH BLACK MALLEABLE IRON FITTINGS, 150 PSIG SCREWED ASA B16.1951.

FURNISH LUBRICATED PLUG SHUT-OFF VALVES ON MAIN BRANCHES AND AT DOMESTIC PRESSURE REGULATORS. LOCATE WRENCH NEAR METER. STOP VALVES AT EQUIPMENT AND OUTLETS SHALL BE BALL VALVES WHERE 2" AND SMALLER. GAS PIPING SHALL HAVE DRIPS AT BOTTOM OF RISERS WITH BRANCHES TAKEN FROM TOP OR SIDE OF HORIZONTAL PIPE. CAP ALL GAS PIPE OUTLETS UNTIL CONNECTED TO GAS EQUIPMENT. ALL GAS PIPING SHALL BE RUN IN SPACES WHICH ARE ACCESSIBLE FOR INSPECTION AND SERVICE.

VALVES
VALVES SHALL BE JENKINS, CRANE, LUNKENHEIMER, HAMMOND, FAIRBANKS OR NIBCO-SCOTT (PRESSURE RATED) AND SIMILAR TO THE FOLLOWING JENKINS VALVES.

GATE VALVES - FOR STEEL PIPE #474 UP TO 2-1/2".

BALL VALVES - #901A OR 902A FOR SIZES THROUGH 2".

UNIONS
UNIONS OR FLANGES SHALL BE USED AT EQUIPMENT CONNECTIONS. CONNECTIONS BETWEEN COPPER AND IRON OR STEEL PIPE SHALL BE MADE WITH INSULATING UNIONS OR INSULATING FLANGES WITH GASKETS AND BUSHINGS SELECTED FOR THE INTENDED SERVICE.

PLATES AND SLEEVES
PROVIDE AND INSTALL PIPE SLEEVES FOR ALL PIPING AND DUCTS PASSING THROUGH WALLS, FLOORS AND CEILINGS. SLEEVES THROUGH WALLS BELOW GRADE AND AT ALL FLOORS SHALL BE BLACK STEEL. SLEEVES THROUGH WALLS AND CEILINGS MAY BE 20 GAUGE GALVANIZED SHEET METAL. WHERE PIPES ARE INSULATED, SLEEVES SHALL BE LARGE ENOUGH TO PASS THE INSULATION.

HANGERS AND SADDLES
SHALL BE MODERN HANGER CORP., GRINNEL/ELCEN, AUTO GRIP OR M-CO. FOR COPPER PIPE WITH STEEL HANGERS, CLEAN AND WRAP PIPE WITH TWO LAYERS OF PLASTIC INSULATING TAPE AT POINTS OF CONTACT. HANGERS FOR PIPING WITH VAPOR BARRIER SEALED INSULATION SHALL BE MULTIPURPOSE PIPE SADDLES FITTING OVER THE INSULATION. WIRE OR PERFORATED STRAP IRON WILL NOT BE PERMITTED FOR PIPE SUPPORTS. HANGERS SHALL BE CLEVIS OR SPLIT RING TYPE WITH VERTICAL ADJUSTMENT WITH MAXIMUM SPACING AS FOLLOWS:

PIPE SIZE	STEEL PIPE	ROD SIZE
1/2" TO 3/4"	5 FEET	3/8"
1" TO 1-1/4"	7 FEET	3/8"
1-1/2" TO 2"	9 FEET	1/2"

TESTING FLUSHING AND CLEANING OF PIPING SYSTEMS
NATURAL GAS PIPING SHALL BE TESTED AS RECOMMENDED BY THE LOCAL UTILITY COMPANY.

PIPE INSULATION
PIPE INSULATION SHALL BE AS MANUFACTURED BY ARMSTRONG, CERTAINTEED, KNAUF, MANSVILLE OR OWENS-CORNING. OWENS-CORNING NUMBERS ARE GIVEN TO ESTABLISH TYPES. ALL INSULATIONS, COVERINGS, VAPOR BARRIERS, ADHESIVES, ETC. SHALL BE CLASS A, MAXIMUM OF 25 FLAME SPREAD, 35 FUEL CONTRIBUTED AND 50 OR LESS DEVELOPED SMOKE RATING. INSULATION SHALL HAVE VAPOR BARRIER AND BE UL RATED. INSULATION SHALL BE OWENS-CORNING FIBERGLAS ASJ-SSL II PIPE COVERING WITH FACTORY APPLIED DOUBLE PRESSURE SENSITIVE ADHESIVE SYSTEM TO PROVIDE POSITIVE CLOSURES AND VAPOR BARRIER INTEGRITY.

ALL LONGITUDINAL JOINTS SHALL BE SECURED WITH SELF SEALING LAPS. ALL TRANSVERSE JOINTS SHALL BE SECURED WITH SELF-SEALING BUTT STRIPS. BUTT STRIPS SHALL BE MINIMUM 3" WIDE. APPLY INSULATION TO PIPE WITH ALL JOINTS BUTTED TIGHTLY TOGETHER. FITTINGS, INCLUDING VALVES, FLANGES, UNIONS, ETC. SHALL BE INSULATED WITH THE SAME THICKNESS AS THE REQUIRED PIPE INSULATION AND COVERED WITH ZESTON OR SPEEDLINE PVC FITTING COVER.

REFRIGERANT PIPING, CONDENSATE DRAIN PIPING AND/OR UNDERGROUND DOMESTIC WATER PIPING SHALL BE COVERED WITH TYPE AP ARMAFLEX INSULATION, 3/4" THICK, CLOSED CELL WITH A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE RATING OF 50 OR LESS. USE ARMSTRONG #520 ADHESIVE. ARMAFLEX INSULATION LOCATED OUTDOORS SHALL BE PAINTED WITH (2) COATS OF WHITE ARMSTRONG PAINT.

CLEAN ALL SURFACES BEFORE APPLYING COVERING. INSULATION SHALL BE CONTINUOUS THROUGH WALLS, FLOORS, CEILINGS, ETC. TERMINATE AND SEAL INSULATION AT BOTH ENDS OF UNINSULATED UNIONS AND FLANGES BY A NEAT 45 DEGREE BEVEL. INSTALL ALL INSULATION IN ACCORDANCE WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

PIPE IDENTIFICATION
ALL PIPING SHALL BE IDENTIFIED PER ANSI/OSHA OR OWNER 'S STANDARDS WITH COLOR PIPE BANDS, IDENTIFICATION LABELS AND FLOW ARROWS. PIPES SHALL BE BANDED AND LABELED ON 10'-0" CENTERS ON CONTINUOUS LINES, AT EQUIPMENT CONNECTIONS, AT BOTH SIDES OF A WALL THROUGH WHICH PIPE PASSES AT EVERY BRANCH CONNECTION, ON PIPING WITHIN SIGHT OF AN ACCESS DOOR OR PANEL. SHOW SLOPE DIRECTIONAL ARROWS AT EACH IDEN-TIFICATION POINT. LABELS, FLOW ARROWS AND STENCIL AND PAINT SHALL BE 1" HIGH ON PIPING UP TO 2 1/2". BANDS SHALL BE 1 1/2" WIDE. LABELS SHALL BE AS MANUFACTURED BY SETON OR W.H. BRADY COMPANY OR EQUAL. VERIFY TYPE, SIZE AND COLORS OF PIPE IDENTIFICATION WITH OWNER.

GENERAL PIPING NOTES
WHERE DISSIMILAR MATERIAL PIPING ARE JOINED, DIELECTRIC NIPPLES SHALL BE UTILIZED AND SHALL BE NON-CONDUCTING FOR CONNECTION OF DISSIMILAR MATERIALS. DIELETRIC NIPPLES SHALL BE SIMILAR TO VICTAULIC STYLE 47. A BRASS ADAPTOR DIELECTRIC UNION IS NOT ACCEPTABLE.

DUCTWORK
DUCTS, CASINGS, HOUSINGS, ETC. SHALL BE FABRICATED FROM, PRIME QUALITY, HOT DIP GALVANIZED STEEL SHEET AS RECOMMENDED IN THE LATEST ISSUES OF ASHRAE GUIDE AND SMACNA DUCT MANUALS IN VARIABLE AIR VOLUME SYSTEMS, WHEN USED. FOR ALL SUPPLY AIR DUCTWORK AND EXHAUST AIR, RETURN AIR, OUTSIDE AIR INTAKE AND RELIEF AIR DUCTS, DUCT CONSTRUCTION AND INSTALLATION SHALL MEET SMACNA STANDARDS FOR 2" W.C.

RECTANGULAR DUCTS SHALL HAVE TEES, ELBOWS AND BENDS WITH A MINIMUM THROAT RADIUS OF 1 TIMES THE DUCT WIDTH AND BE OF THE SAME GAUGE AND MATERIAL AS THE STRAIGHT DUCT. INCREASE DUCT SIZES GRADUALLY, NOT EXCEEDING 15 DEGREES DIVERGENCE IF POSSIBLE; MAXIMUM 30 DEGREES DIVERGENCE UPSTREAM OF EQUIPMENT AND 45 DEGREES CONVERGENCE DOWNSTREAM. WHERE VOLUME BOXES ARE CONNECTED TO DUCT MAIN OR WHERE DIFFUSERS ARE CONNECTED TO DUCT BRANCHES BY ROUND FLEX DUCT, INSTALL DUCT SPIN-IN FITTINGS SUCH AS FLEXMASTER USA, INC. MODEL #FLD WITH DAMPER AND POSITIVE LOCKING WING NUT. SEAL ALL EDGES WITH FIRE RETARDANT DUCT SEALER. FLEXIBLE INSULATED DUCTS (CONNECTIONS FROM MAIN DUCT TO VOLUME BOX AND/OR FROM DUCT BRANCH TO DIFFUSERS) SHALL BE FLEXMASTER USA, INC. TYPE #3. USE MAXIMUM LENGTH OF 5'-0" TO EACH CONNECTION. INSTALL FLEXIBLE DUCT WITH MINIMUM OF BENDS USING LONG RADIUS BENDS ONLY.

DUCT SEALANT
ALL DUCTWORK INCLUDING SUPPLY AIR, OUTSIDE AIR, RETURN AIR, EXHAUST AIR AND RELIEF AIR DUCT SYSTEMS SHALL HAVE ALL JOINTS SEALED. DUCTWORK DESIGNED AT SMACNA 2" PRESSURE SHALL MEET SMACNA CLASS "B" SEAL REQUIREMENTS.

DUCT HANGERS
HORIZONTAL STEEL DUCTWORK SHALL BE SUPPORTED BY MEANS OF TRAPEZE BARS AND ROUND STEEL ROD OF SIZES LISTED BELOW. ROUND STEEL RODS SHALL BE ELECTRO-GALVANIZED ALL-THREAD ROD. HANGERS SHALL BE PROVIDED AT BOTH SIDES OF FLAT SIDED DUCTWORK FOR THE FULL HEIGHT OF DUCT. ROUND DUCTWORK SHALL BE PROVIDED WITH A BAND OF THE SAME SIZE AS THE HANGER TO COMPLETELY ENCIRCLE THE DUCT. BAND SHALL BE SECURED TO THE HANGER BY MEANS OF A MINIMUM 3/16" BOLT. MINIMUM DUCT HANGER SIZES SHALL BE AS LISTED BELOW

DUCT SIZE	MIN UPPER ATTCHMT RATING	STL ROD	SPACING	MAX HANGERS	MIN TRAPEZE SHELF ANGLE
UP TO 16"	750 LBS.	3/8"	10'	2	1-1/2"x1-1/2"x3/16"
19" TO 36"	1000 LBS.	3/8"	10'	2	1-1/2"x1-1/2"x3/16"

DUCT INSULATION
DUCTWORK LOCATED IN CONCEALED AREAS (CONCEALED AREAS SHALL INCLUDE DUCT SHAFTS, SPACES ABOVE DROPPED CEILINGS, SPACES BETWEEN WALLS, ETC.) SHALL BE WRAPPED EXTERNALLY WITH OWENS-CORNING, KNAUF, MANSVILLE, OR EQUAL, FIBERGLAS ALL-SERVICE DUCT WRAP, LIGHT DENSITY GLASS FIBER INSULATION FACED WITH A REINFORCED FOIL/KRAFT LAMINATE MEETING THE REQUIREMENTS OF ASTM C553, 1.0 LBS. PER CUBIC FOOT DENSITY, 1-1/2" THICK. WHERE DUCTS ARE 24" IN WIDTH OR GREATER, MECHANICAL FASTENERS SPACED AT 18" (APPROX.) CENTERS ARE REQUIRED ON THE BOTTOM OF THE DUCT TO PREVENT THE INSULATION FROM SAGGING. ALL SEAMS, TEARS, PUNCTURES, AND OTHER PENETRATIONS SHALL BE CLOSED WITH 3" PRESSURE SENSITIVE, VAPOR BARRIER MASTIC REINFORCED GLASS SCRIM TAPE.

INTERNAL ACOUSTIC DUCT LINER
WHERE CALLED FOR, LINE DUCT WITH 1 " THICK FIBERGLASS AEROFLEX ACOUSTICAL INTERNAL DUCT LINER, IN LIEU OF EXTERNAL DUCT INSULATION. INSULATION SHALL BE 1.5 LB. DENSITY, WITH A FIRE RESISTANT COATING TO BOND FIBERS OF THE AIR STREAM SIDE SURFACE, INSTALLED AS RECOMMENDED BY MANUFACTURER.

TESTING AND BALANCING
TESTING AND BALANCING SHALL BE PERFORMED BY AN INDEPENDENT CERTIFIED AGENCY IN ACCORDANCE WITH NEBB AND SMACNA STANDARDS. FURNISH 5 SETS OF REPORTS OF WATER BALANCE REPORTS TO THE ENGINEER INDICATING DESIGN AND ACTUAL QUANTITIES, NAMEPLATE DATA, ETC.

AIR SYSTEMS ADJUST AIR HANDLING, DISTRIBUTION SYSTEMS, AIR INLETS AND OUTLETS, ETC. TO PROVIDE SUPPLY, RETURN, EXHAUST, OUTSIDE AIR AND RELIEF AIR QUANTITIES TO WITHIN 10% OF REQUIRED OR DESIGNED AIR QUANTITIES. VERIFY THAT SYSTEMS ARE COMPLETE AND OPERABLE BEFORE COMMENCING WORK. VERIFY SYSTEMS ARE STARTED AND OPERATING AT A SAFE AND NORMAL OPERATION, TEMPERATURE CONTROL SYSTEMS ARE INSTALLED COMPLETE AND OPERABLE, PROPER THERMAL OVERLOAD PROTECTION IS IN PLACE FOR ELECTRICAL EQUIPMENT, FINAL FILTERS ARE CLEAN AND IN PLACE, DUCT SYSTEMS ARE CLEAN OF DEBRIS, FANS ARE ROTATING CORRECTLY, FIRE AND VOLUME DAMPERS ARE IN PLACE AND IN OPEN POSITIONS, AIR COIL FINS ARE CLEANED AND COMBED, ACCESS DOORS ARE CLOSED AND DUCT END CAPS ARE IN PLACE, AIR OUTLETS ARE INSTALLED AND CONNECTED, DUCT SYSTEM LEAKAGE IS MINIMIZED, ETC. MEASURE AND RECORD ALL AIR MOVING EQUIPMENT, AIR INLETS AND OUTLETS STATIC PRESSURES, RPM'S, ETC.

GENERAL NOTES

1. IF COMPLIANCE WITH TWO OR MORE DIFFERING STANDARDS, REQUIREMENTS, DRAWINGS OR SPECIFICATIONS, OR ANY COMBINATION THEREOF, IS SPECIFIED AND THESE ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, COMPLY WITH THE MOST STRINGENT REQUIREMENT. THE MOST STRINGENT REQUIREMENT WILL BE THE BETTER QUALITY OR GREATER QUANTITY OF WORK, AND WILL TYPICALLY BE THE MORE EXPENSIVE OPTION. REFER UNCERTAINTIES AND REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, TO ENGINEER FOR A DECISION BEFORE PROCEEDING.
2. THE QUANTITY OR QUALITY LEVEL SHOWN OR SPECIFIED SHALL BE THE MINIMUM PROVIDED OR PERFORMED. THE ACTUAL INSTALLATION MAY COMPLY EXACTLY WITH THE MINIMUM QUANTITY OR QUALITY SPECIFIED, OR IT MAY EXCEED THE MINIMUM WITHIN REASONABLE LIMITS. TO COMPLY WITH THESE REQUIREMENTS, INDICATED NUMERIC VALUES ARE MINIMUM OR MAXIMUM, AS APPROPRIATE, FOR THE CONTEXT OF REQUIREMENTS. REFER UNCERTAINTIES TO ENGINEER FOR A DECISION BEFORE PROCEEDING.
3. DESIGN DOCUMENTS MUST BE REPRODUCED IN THEIR ENTIRETY, INCLUDING ALL PLANS, SPECIFICATIONS, AND FRONT END DOCUMENTS.
4. ONLY COMPLETE DOCUMENT SETS ARE TO BE DISTRIBUTED TO SUBCONTRACTORS AND SUPPLIERS OF THE CONTRACTOR DURING BIDDING OR CONSTRUCTION.
5. FAILURE TO REVIEW AND COMPLY WITH A FULL SET OF CONTRACT DOCUMENTS WILL NOT BE ACCEPTED AS A VALID REASON FOR FAILURE TO MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
6. ALL MECHANICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH VA HVAC DESIGN MANUAL, LOCAL ORDINANCES, AND LAWS AND SHALL BE OF SIMILAR QUALITY, MATERIAL, AND INSTALLATION METHODOLOGY AS SIMILAR WORK IN EXISTING FACILITY. FOR PURPOSES OF THIS DESIGN, THE CODES FOR THE STATE OF **???** WERE USED AS THE BASIS.
7. ALL MECHANICAL WORK SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES, ORDINANCES, AND LAWS AND SHALL BE OF SIMILAR QUALITY, MATERIAL, AND INSTALLATION METHODOLOGY AS SIMILAR WORK IN EXISTING FACILITY.
8. ALL INSULATION SHALL BE PRESUMED ASBESTOS CONTAINING MATERIAL (PACM) UNLESS OTHERWISE INDICATED OR LABELED. THE CONTRACTOR SHALL ABATE ALL ASBESTOS BY APPROVED METHODS. CONSULT WITH THE OWNER'S REPRESENTATIVE REGARDING LOCATION AND EXTEND OF PACM PRIOR TO THE WORK.
9. HAZARDOUS MATERIALS ARE PRESENT IN CONSTRUCTION TO BE SELECTIVELY DEMOLISHED. A REPORT ON THE PRESENCE OF HAZARDOUS MATERIALS IS ON FILE FOR REVIEW AND USE. EXAMINE REPORT TO BECOME AWARE OF LOCATIONS WHERE HAZARDOUS MATERIALS ARE PRESENT.
   A. HAZARDOUS MATERIAL REMEDIATION IS SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.
   B. DO NOT DISTURB HAZARDOUS MATERIALS OR ITEMS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS EXCEPT UNDER PROCEDURES SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS.
   C. IF THE CONTRACTOR OR ANY SUBCONTRACTORS SUSPECT UNANTICIPATED HAZARDOUS MATERIALS ARE PRESENT, THE CONTRACTOR IS TO STOP ALL WORK AFFECTING SAID MATERIALS AND NOTIFY THE ENGINEER.
10. ALL ABOVE CEILING SYSTEMS AND COMPONENTS (INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, ETC.) SHALL BE COORDINATED SUCH THAT THE SYSTEMS ARE PROPERLY INTEGRATED IN THE SPACE PROVIDED ABOVE CEILING AT THE CEILING HEIGHTS NOTED. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO COORDINATE PATHWAYS WITHIN THE SPACE PROVIDED. CEILING HEIGHTS WILL NOT BE MODIFIED.
11. COORDINATE LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL AND ELECTRICAL PRIOR TO ROUGH-IN. ALL CONFLICTS WITH FINISHES, ADJACENT CONSTRUCTION, AND CONSTRUCTION DOCUMENTS ARE TO GENERATE AN RFI FROM THE MECHANICAL CONTRACTOR TO THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING AND COMPLETION OF WORK.
12. CEILING CONTRACTOR SHALL FURNISH AND INSTALL HINGED STEEL ACCESS PANELS FOR ALL ABOVE CEILING DAMPERS, VAV BOXES, FILTERS, BALANCING VALVES, AND ISOLATION VALVES IN GYPSUM CEILINGS. PANELS SHALL BE KEYED FOR ACCESS BY MAINTENANCE STAFF ONLY, AND FINISHED WITH WHITE BAKED-ON ENAMEL. MECHANICAL CONTRACTOR SHALL CONSOLIDATE ABOVE CEILING ACCESS REQUIREMENTS TO LIMIT PANELS TO NO MORE THAN 25'. MECHANICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY ACCESS PANELS AS A RESULT FROM PLAN DEVIATION/ALTERATION. COORDINATE QUANTITY AND LOCATION OF ADDITIONAL ACCESS PANELS WITH CEILING CONTRACTOR.
13. CONTRACTOR SHALL FURNISH AND INSTALL BEVELED OR TAPERED TAKEOFFS AT ALL CONNECTIONS OF DUCT RUNOUTS TO TRUNKS. ALL FITTINGS SHALL BE IN ACCORDANCE WITH SMACNA.
14. CONTRACTOR SHALL FURNISH AND INSTALL MANUAL BALANCING DAMPERS AT ALL SUPPLY, RETURN, AND EXHAUST TRUNK BRANCHES AND RUNOUTS.
15. CONTRACTOR SHALL FURNISH AND INSTALL TEMPERATURE SENSOR IN SPACE RETURN DUCT. CONTRACTOR SHALL PLACE SENSORS TO ALLOW FOR ACCESS WITHIN 2' VIA RETURN GRILLE REMOVAL OR CEILING ACCESS PANELS.
16. CONTRACTOR SHALL FURNISH AND INSTALL TEMPERATURE SENSORS FOR EQUIPMENT AWAY FROM HEAT PRODUCING EQUIPMENT U.N.O.
17. CONTRACTOR SHALL FURNISH AND INSTALL ISOLATION AND BALANCING VALVES AT ALL VAV BOXES, AND BALANCING VALVES AT EACH FLOOR'S DISTRIBUTION LOOP. CONTRACTOR SHALL LOCATE VALVES TO ALLOW FOR ACCESS WITHIN 3' AFTER CONSTRUCTION IS COMPLETE.
18. MECHANICAL CONTRACTOR SHALL COORDINATE EQUIPMENT INSTALLATION WITH ROOFING CONTRACTOR OR ROOFING MANUFACTURER TO AVOID DAMAGE TO ROOFING SYSTEM.
19. COORDINATE LOCATIONS OF ALL DEVICES WITH ARCHITECTURAL, STRUCTURAL, CIVIL, INTERIORS, AND ELECTRICAL PRIOR TO ROUGH-IN. ALL CONFLICTS WITH FINISHES, ADJACENT CONSTRUCTION AND CONSTRUCTION DOCUMENTS ARE TO GENERATE AN RFI FROM THE MECHANICAL CONTRACTOR TO THE ENGINEER PRIOR TO PROCEEDING AND COMPLETION OF WORK.
20. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIRESTOPPING ALL NEW MECHANICAL PENETRATIONS THROUGH RATED ASSEMBLIES.
21. MECHANICAL CONTRACTOR SHALL PROVIDE WATER PROOF SHEET METAL CAP, INSULATED (EQUIVALENT TO ROOF) FOR ALL DEMOLISHED ROOF PENETRATIONS.
22. A 'TAB' IS REQUIRED FOR THE WORK. EQUIPMENT SHOP DRAWINGS WILL NOT BE REVIEWED PRIOR TO RECEIPT OF THE EXISTING SYSTEM 'TAB'.
23. MECHANICAL CONTRACTOR SHALL MEASURE SYSTEM FLOWS BEFORE SYSTEM ALTERATIONS AND ADJUST SYSTEM TO ACHIEVE PRE-CONSTRUCTION VALUES. VALUES BEFORE AND AFTER THE WORK SHALL BE RECORDED AND SUPPLIED TO THE OWNER'S REPRESENTATIVE.
24. ALL MECHANICAL EQUIPMENT SHALL BE PROVIDED WITH MOTOR STARTERS COMPATIBLE WITH CONTROLS SYSTEM. COORDINATE WITH CONTROLS AND ELECTRICAL CONTRACTORS.
25. UNLESS OTHERWISE INDICATED, ROOF OPENINGS MADE IN EXISTING ROOF STRUCTURE SHALL BE SUPPORTED ON ALL EDGES BY L4X4X1/4 FOR SPANS OF 5'-0 OR LESS; AND BY C8X11.5 FOR SPANS BETWEEN 5 '-0" AND 10'-0". SPANS EXCEEDING 10'-0" SHALL REQUIRE SECTIONS APPROVED BY THE ENGINEER. CONNECTIONS SHALL BE WELDED IN ACCORDANCE WITH AWS D1.1 AND AISC, OR MINIMUM 2-BOLT CONNECTIONS ACCORDING TO AISC.

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26
	FINAL OWNER REVIEW	04/30/26

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989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
GENERAL NOTES

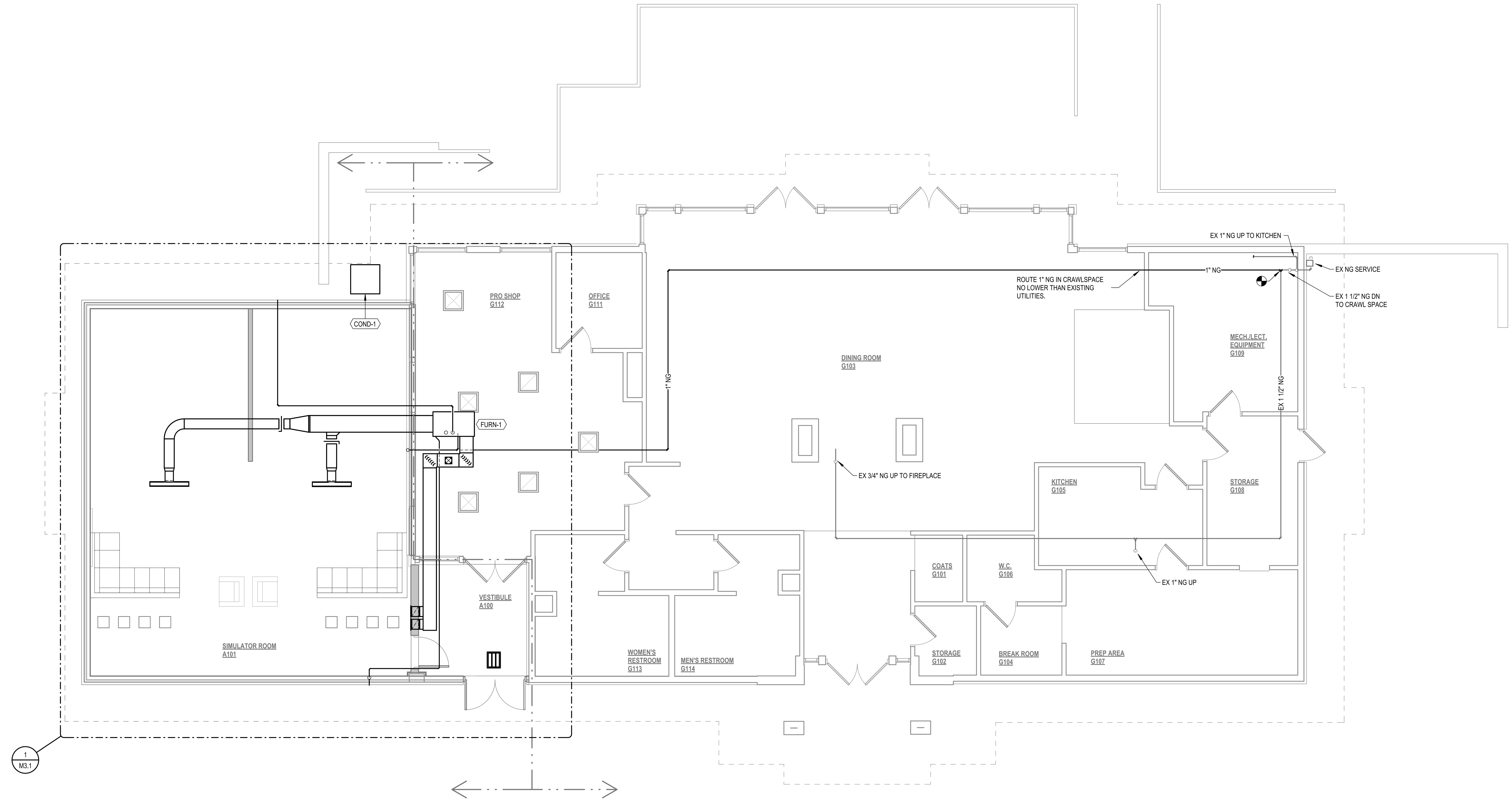
PROJECT NUMBER
25-0546-0295

PROJECT DATE
05/12/26

CHECKED BY
M. LAWRIN

SHEET NUMBER
M0.0

C. WILSON 5/11/2026 2:14:19 PM C:\Users\cwilson\Documents\2505460295_Currie West Clubhouse Expansion_SMEP_v26_cwilson2A9H9.rvt



OVERALL MECHANICAL PLAN

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

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SHEET TITLE

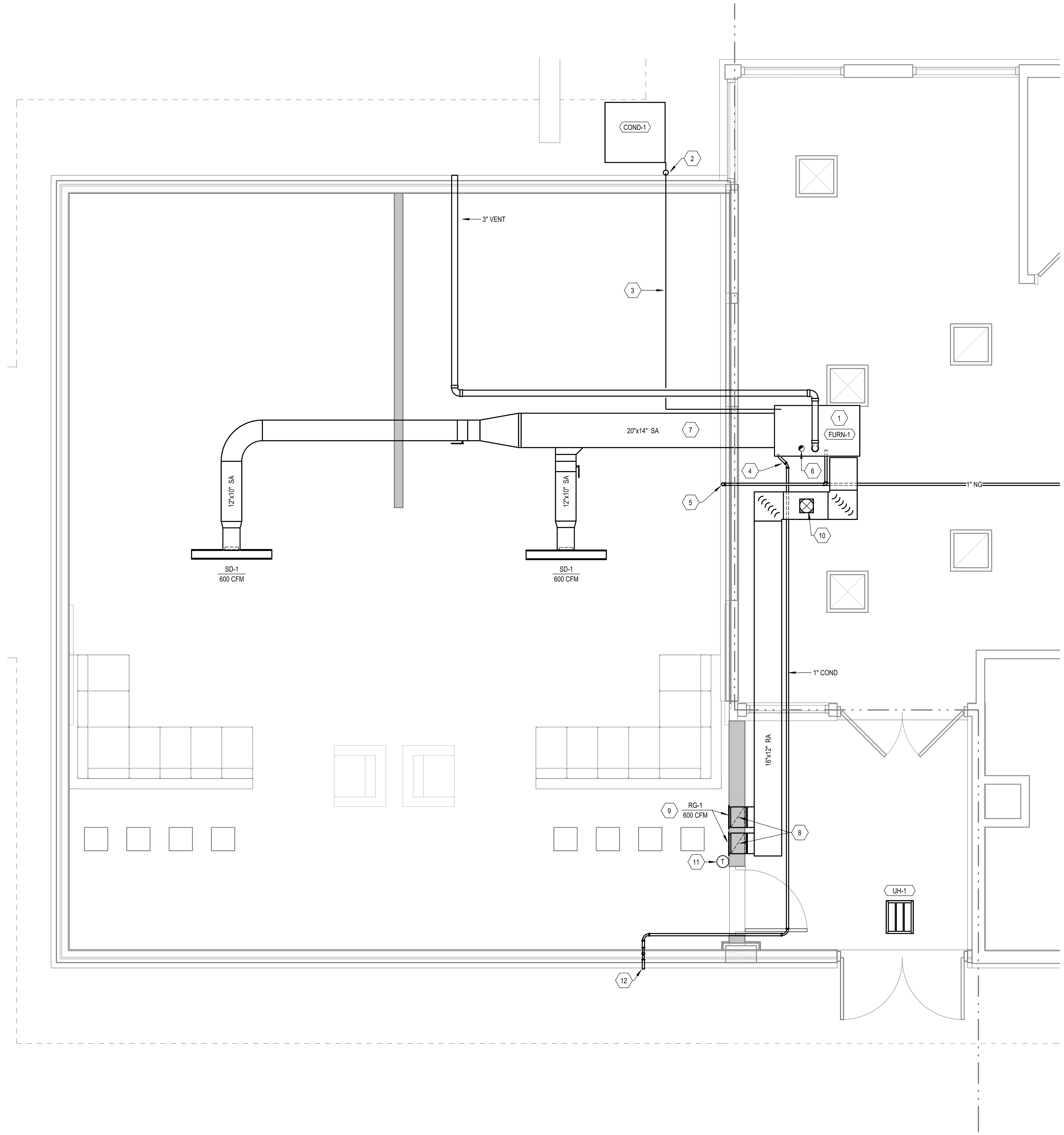
OVERALL MECHANICAL PLAN

PROJECT NUMBER
25-0546-0295

PROJECT DATE
05/12/26

CHECKED BY
M. LAWRIN

SHEET NUMBER
M3.0



1 ENLARGED HVAC PLAN
M3.1
SCALE: 3/8" = 1'-0"

N

CONSTRUCTION NOTES

SYMBOL	DESCRIPTION
1	FIELD LOCATE UNIT IN CEILING SPACE ABOVE PRO SHOP. AVOID EXISTING SYSTEMS.
2	PROVIDE PIPE COVER OVER EXPOSED REFRIGERANT LINES. COORDINATE WITH ARCH ON FINISH.
3	FIELD ROUTE REFRIGERANT LINE TO CONDENSER. MAINTAIN PROPER SLOPE AND SUPPORT PER MMC. PIPING TO BE CLEANED AND CAPPED
4	PROVIDE CONDENSATE DRAIN PAN AND TRAP. ROUTE CONDENSATE PIPE IN 1" COPPER TO SOUTH LANDSCAPE AREA.
5	ROUTE 3/4" NG FROM CRAWL SPACE IN WALL.
6	3" COMBUSTION AIR UP THRU ROOF.
7	ALL SUPPLY DUCT ABOVE CEILING INSULATION TO BE INSULATED.
8	(2) 12" X 8" RETURN AIR DUCTS IN WALL. STRADDLE STUD.
9	ALIGN BOTH RG-1 SQUARE TO FLOOR. INSTALL 2' A.F.F.
10	INSTALL 8" OUTDOOR AIR INTAKE. BALANCE DAMPER TO 315 CFM. TRANSITION FROM 8" ROUND TO 8" X 8" FOR DUCT HEATER.
11	THERMOSTAT LOCATION SERVING FURN-1
12	TERMINATE CONDENSATE LINE TO LANDSCAPE AREA. PROVIDE INSECT SCREEN.

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M. LAWRIN

SHEET NUMBER
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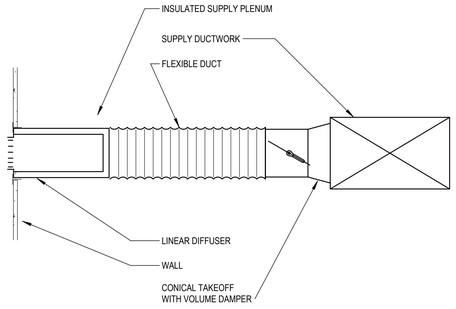
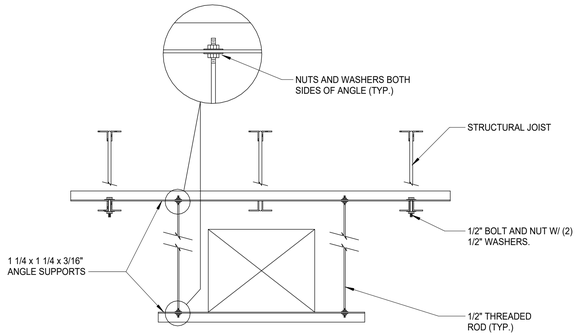


1 M7.0 LINEAR DIFFUSER DUCT CONNECTION
NOT TO SCALE



2 M7.0 DUCT HANGER
NOT TO SCALE

FURNACE SCHEDULE

MARK	MANUFACTURER	MODEL	SUPPLY FAN	COOLING		HEATING		ELECTRICAL			NOTES
			CFM	TOTAL MBH	SENSIBLE MBH	INPUT MBH	OUTPUT MBH	VOLTAGE	PHASE	AMPS	
FURN-1	CARRIER	59TP7A	1200	36.9	24	60	58	115	1	10.1	

NOTES:

1. INCLUDE OUTDOOR UNIT 26TPA
2. INCLUDE INDOOR COIL CVAM
3. INCLUDE 8" X 8" MARLEY HUA DUCT HEATER TO PREHEAT OUTDOOR AIR. MIXED AIR TEMPERATURE SENSOR TO BE SET TO 60°F. COORDINATE DUCT HEATER WITH ELECTRICAL: 3.2 KW HEATING LOAD (AT 0°F OUTDOOR AIR TEMPERATURE), 208 V, 1 PHASE.

ELECTRIC UNIT HEATER SCHEDULE

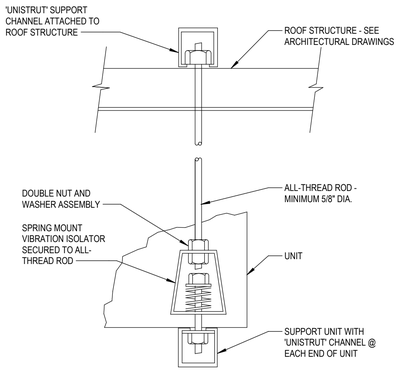
MARK	MANUFACTURER	MODEL	CFM	CAPACITY	ELECTRICAL		
					VOLTS	PHASE	MCA
UH-1	MARLEY ENGINEERED PRODUCTS	QFF	150 CFM	2 KW	208 V	1	9.8

NOTES:

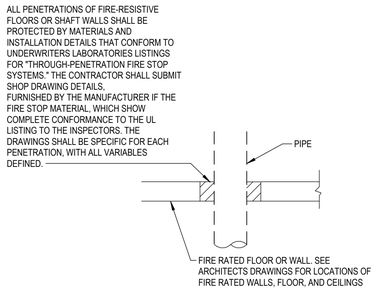
1. UNIT TEMP TO BE SET TO 50°F.
2. INCLUDE DISCONNECT.
3. WHITE FINISH.

GRILLE, REGISTER & DIFFUSER SCHEDULE

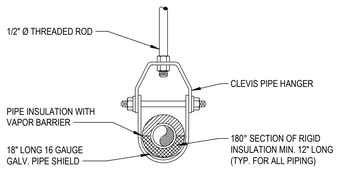
MARK	MANUFACTURER	MODEL	NECK SIZE	LENGTH	SLOTS	MOUNTING	MATERIAL	NOTES
RG-1	PRICE	535	12" X 8"	14"	-	SURFACE	STEEL	COORDINATE FINISH WITH ARCH
SD-1	PRICE	SDB150	10"	48"	4	SURFACE	STEEL	COORDINATE FINISH WITH ARCH



3 M7.0 UNIT MOUNTING DETAIL
NOT TO SCALE



4 M7.0 PIPE PENETRATION DETAIL
SCALE: 12" = 1'-0"



5 M7.0 PIPE SUPPORT DETAIL
SCALE: 12" = 1'-0"

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DETAILS & SCHEDULES

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CIRCUIT CONDUIT & CONDUCTOR SCHEDULE

FUSE/CIRCUIT BREAKER - AMP/POLE	PHASE/NEUTRAL (NOTE 3)	GROUND	CONDUIT
15A/1P & 20A/1P	2 - 12 AWG	1 - 12 AWG	3/4"
15A/2P & 20A/2P	2 OR 3 - 12 AWG	1 - 12 AWG	3/4"
15A/3P & 20A/3P	3 OR 4 - 12 AWG	1 - 12 AWG	3/4"
25A/1P & 30A/1P	2 - 10 AWG	1 - 10 AWG	3/4"
25A/2P & 30A/2P	2 OR 3 - 10 AWG	1 - 10 AWG	3/4"
25A/3P & 30A/3P	3 OR 4 - 10 AWG	1 - 10 AWG	3/4"
35A/1P & 40A/1P	2 - 8 AWG	1 - 10 AWG	3/4"
35A/2P & 40A/2P	2 OR 3 - 8 AWG	1 - 10 AWG	3/4"
35A/3P & 40A/3P	3 OR 4 - 8 AWG	1 - 10 AWG	3/4"
40A/1P & 45A/1P	2 - 8 AWG	1 - 10 AWG	3/4"
40A/2P & 45A/2P	2 OR 3 - 8 AWG	1 - 10 AWG	3/4"
40A/3P & 45A/3P	3 OR 4 - 8 AWG	1 - 10 AWG	3/4"
60A/1P	2 - 6 AWG	1 - 10 AWG	3/4"
60A/2P	2 OR 3 - 6 AWG	1 - 10 AWG	3/4"
60A/3P	3 OR 4 - 6 AWG	1 - 10 AWG	1"
70A/1P	2 - 4 AWG	1 - 8 AWG	1"
70A/2P	2 OR 3 - 4 AWG	1 - 8 AWG	1"
70A/3P	3 OR 4 - 4 AWG	1 - 8 AWG	1 1/4"
80A/2P	2 OR 3 - 4 AWG	1 - 8 AWG	1"
80A/3P	3 OR 4 - 4 AWG	1 - 8 AWG	1 1/4"
90A/2P	2 OR 3 - 3 AWG	1 - 8 AWG	1 1/4"
90A/3P	3 OR 4 - 3 AWG	1 - 8 AWG	1 1/4"
100A/2P	2 OR 3 - 3 AWG	1 - 8 AWG	1 1/4"
100A/3P	3 OR 4 - 3 AWG	1 - 8 AWG	1 1/4"
110A/2P	2 OR 3 - 2 AWG	1 - 6 AWG	1 1/4"
110A/3P	3 OR 4 - 2 AWG	1 - 6 AWG	1 1/4"
125A/2P	2 OR 3 - 1 AWG	1 - 6 AWG	1 1/4"
125A/3P	3 OR 4 - 1 AWG	1 - 6 AWG	1 1/2"
150A/2P	2 OR 3 - 1/0 AWG	1 - 6 AWG	1 1/2"
150A/3P	3 OR 4 - 1/0 AWG	1 - 6 AWG	2"
175A/2P	2 OR 3 - 2/0 AWG	1 - 6 AWG	2"
175A/3P	3 OR 4 - 2/0 AWG	1 - 6 AWG	2"
200A/2P	2 OR 3 - 3/0 AWG	1 - 6 AWG	2"
200A/3P	3 OR 4 - 3/0 AWG	1 - 6 AWG	2"
225A/2P	2 OR 3 - 4/0 AWG	1 - 4 AWG	2"
225A/3P	3 OR 4 - 4/0 AWG	1 - 4 AWG	2 1/2"
250A/2P	2 OR 3 - 250 MCM	1 - 4 AWG	2 1/2"
250A/3P	3 OR 4 - 250 MCM	1 - 4 AWG	3"
300A/2P	2 OR 3 - 350 MCM	1 - 4 AWG	3"
300A/3P	3 OR 4 - 350 MCM	1 - 3 AWG	3"
350A/2P	2 OR 3 - 500 MCM	1 - 3 AWG	3 1/2"
350A/3P	3 OR 4 - 500 MCM	1 - 3 AWG	3 1/2"
400A/2P	2 OR 3 - 500 MCM	1 - 3 AWG	3 1/2"
400A/3P	3 OR 4 - 500 MCM	1 - 3 AWG	3 1/2"

NOTES:

1. PROVIDE CIRCUIT CONDUCTOR AND CONDUIT SIZES INDICATED ABOVE UNLESS OTHERWISE NOTED.
2. CONDUCTOR SIZING BASED UPON 75C THWN INSULATED COPPER CONDUCTORS.
3. FOR TWO AND THREE POLE CIRCUITS PROVIDE NEUTRAL CONDUCTOR IF REQUIRED BY EQUIPMENT SERVED.

SYMBOL LEGEND

SYMBOL DESCRIPTION

- DUPLEX RECEPTACLE, 18" A.F.F. TO TOP
- GFI DUPLEX RECEPTACLE GFI, 18" A.F.F. TO TOP
- DUPLEX RECEPTACLE, CEILING MOUNTED
- GFI DUPLEX RECEPTACLE GFI, CEILING MOUNTED
- USB DUPLEX RECEPTACLE USB, 18" A.F.F. TO TOP
- DUPLEX RECEPTACLE, 6" ABOVE COUNTER
- GFI DUPLEX RECEPTACLE GFI, 6" ABOVE COUNTER
- DUPLEX RECEPTACLE, FLOOR MOUNTED
- GFI DUPLEX RECEPTACLE GFI , FLOOR MOUNTED
- SPECIALTY OUTLET, SEE DRAWINGS W/ MTG HT
- QUAD RECEPTACLE, 18" A.F.F. TO TOP
- GFI QUAD RECEPTACLE GFI, 18" A.F.F. TO TOP
- QUAD RECEPTACLE, CEILING MOUNTED
- GFI QUAD RECEPTACLE GFI, CEILING MOUNTED
- M MOTOR SWITCH
- OVERHEAD DOOR 3-BUTTON SWITCH, OPEN-CLOSE-STOP

- PP POWER POLE
- JB JUNCTION BOX
- FF FURNITURE FEED
- MOTOR
- NON-FUSED DISCONNECT
- COMBINATION MOTOR STARTER/ DISCONNECT
- FUSED DISCONNECT
- MANUAL MOTOR STARTER
- MOTOR STARTER
- SURFACE MOUNTED PANEL BOARD
- RECESSED PANEL BOARD

- SWITCH, SINGLE POLE, 48" A.F.F. TO TOP UNO
- 3 SWITCH, 3-POLE, 48" A.F.F. TO TOP UNO
- 4 SWITCH, 4-POLE, 48" A.F.F. TO TOP UNO
- D SWITCH, WALL BOX DIMMER, 48" A.F.F. TO TOP UNO
- LV SWITCH, LOW VOLTAGE, 48" A.F.F. TO TOP UNO (VERIFY W/ FIXTURE)
- LVD SWITCH, LOW VOLTAGE DIMMER, 48" A.F.F. TO TOP UNO (VERIFY W/ FIXTURE)
- F SWITCH, FUSED: 125V, SINGLE POLE, DUAL ELEMENT PLUG FUSE
- K SWITCH, KEYED, 48" A.F.F. TO TOP UNO
- P SWITCH, PILOT LIGHT, 48" A.F.F. TO TOP UNO
- T SWITCH, TIMER, 48" A.F.F. TO TOP
- OS SWITCH, MULTI-TECH OCCUPANCY SENSOR, WALL
- SWITCH, MULTI-TECH OCCUPANCY SENSOR, CEILING
- SWITCH, EXTERIOR PHOTOCELL
- PP POWER PACK FOR OCCUPANCY SENSORS

- S CONTROLS: SPEAKER (SEE SCHEDULE)
- DO CONTROLS: ADA DOOR CONTROL OPENER, COORDINATE WITH DOOR REQUIREMENTS
- ADA CONTROLS: ADA DOOR CONTROL OPENER, COORDINATE WITH SECURITY, AUTO AND MANUAL CONTROL
- SECURITY: PAN - TILT - ZOOM CAMERA
- SECURITY: PUSH BUTTON
- CR SECURITY: CARD READER
- DC SECURITY: DOOR CONTACT

- LUMINAIRE: TRACK LIGHT W/ TYPE, REFER TO SCHEDULE
- LUMINAIRE: RECESSED DOWNLIGHT OR PENDANT W/ TYPE, REFER TO SCHEDULE
- A LUMINAIRE: SURFACE OR RECESSED W/ TYPE, REFER TO SCHEDULE
- A LUMINAIRE: ON EMERGENCY, LIFE SAFETY, OR LOCAL LIGHTING CIRCUIT W/ TYPE, REFER TO SCHEDULE
- EXIT SIGN: CEILING MOUNTED W/ TYPE, SEE SCHEDULE
- EXIT SIGN: WALL MOUNTED W/ TYPE, SEE SCHEDULE
- EM LIGHTS: WALL MOUNTED UNO, REFER TO SCHEDULE
- REMOTE HEADS: WALL MOUNTED, REFER TO SCHEDULE

- TV CONNECTION: 96" TO TOP, COAX CONNECTION, UNO
- VOICE/ DATA OUTLET: 18" TO TOP, UNO
- VOICE/ DATA OUTLET: CEILING MOUNTED, UNO
- VOICE/ DATA/ TV OUTLET: FLOOR MOUNTED, UNO
- TELEPHONE: 18" TO TOP, UNO
- DATA/ TELEPHONE: 18" TO TOP, UNO

- P FIRE: MANUAL PULL STATION, WALL MOUNTED, 48" AFF TO TOP UNO
- #CD FIRE: AUDIBLE AND VISUAL ANNUNCIATION, WALL MOUNTED, 8'-0" AFF TO TOP UNO
- #CD FIRE: VISUAL ANNUNCIATION, WALL MOUNTED, 8'-0" AFF TO TOP UNO
- #CD FIRE: AUDIBLE ANNUNCIATION, WALL MOUNTED, 8'-0" AFF TO TOP UNO
- AV #CD FIRE: AUDIBLE AND VISUAL ANNUNCIATION, CEILING MOUNTED
- V #CD FIRE: VISUAL ANNUNCIATION, CEILING MOUNTED
- A FIRE: AUDIBLE ANNUNCIATION, CEILING MOUNTED
- SD FIRE: SMOKE DETECTOR, CEILING
- HD FIRE: HEAT DETECTOR, CEILING
- S/H FIRE: SMOKE AND HEAT DETECTOR
- DSD FIRE: DUCT SMOKE DETECTOR, CEILING, PROVIDED / INSTALLED BY EC, MOUNTED BY MC, UNO
- RT FIRE ALARM: REMOTE TEST STATION
- TS FIRE: TAMPER SWITCH
- FS FIRE: FLOW SWITCH
- DH FIRE: MAGNETIC DOOR HOLD
- FR FIRE: DOOR LOCK RELEASE
- PS FIRE: PRESSURE SWITCH

- HOME RUN W/ DIRECTION
- E ELECTRICAL CIRCUIT
- UG UNDERGROUND ELECTRICAL W/ INCDICATOR
- SITE: LIGHT, POLE, AND BASE
- XF TRANSFORMER W/ LABEL
- DEVICE OR EQUIPMENT CONNECTION

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
ALT	ALTERNATE
AL	ALUMINUM
AWG	AMERICAN WIRE GAUGE
AMP OR A	AMPERES
ATS	AUTOMATIC TRANSFER
BLDG	BUILDING
BMS	BUILDING MANAGEMENT SYSTEM
CKT	CIRCUIT
CB	CIRCUIT BREAKER
C	CONDUIT
CLG	CEILING
CP	CONTROL PANEL
CU	COPPER
D	DATA
DS	DISCONNECT SWITCH
DWG	DRAWING(S)
EA	EACH
EMT	ELECTRICAL METALLIC TUBING
EX	EXISTING
EXT	EXTERNAL
FIN. FLR.	FINISH FLOOR
FACP	FIRE ALARM CONTROL PANEL
FF	FURNITURE FEED
FT	FOOT, FEET
GRC	GALVANIZED RIGID CONDUIT
GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERUPPTER
GFI	GROUND FAULT PROTECTION
HH	HAND HOLE
HOA	HAND-OFF-AUTO SELECTOR SWITCH
IU	INDOOR UNIT
IMC	INTERMEDIATE METAL CONDUIT
JB	JUNCTION BOX
KVA	KILO VOLT-AMPERES
KVAR	KILO VOLT-AMPERES REACTIVE
LC	LIGHTING CONTRACTOR
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTOR PANEL
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCH BOARD
MH	MAN HOLE
MFR	MANUFACTURER'S
MCC	MOTOR CONTROL CENTER
MTD	MOUNTED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
N.L.	NIGHT LIGHT
NC	NORMALLY CLOSED CONTACT
NO	NORMALLY OPEN CONTACT
N.T.S.	NOT TO SCALE
OU	OUTDOOR UNIT
O.D.	OUTSIDE DIAMETER
OL	OVERLOADS-THERMAL
PNL	PANEL W/ INDICATION
Ø	PHASE
PH	PHASE
PC	PHOTO-SWITCH
P	POLE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PB	PULL BOX
PTT	PUSH-TO-TEST
RMC	RIGID METAL COUNT
SPEC	SPECIFICATION
SW	SWITCH
SWD	SWITCHING DUTY
TEL	TELEPHONE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
V	VOLT
W	WATT
WP	WEATHER PROOF
W	WIRE
W/	WITH
XF/ XFMR	TRANSFORMER
XXAF	XX AMPERE FUSE
XXAS	XX AMPERE SWITCH
XP	X POLES

GENERAL NOTES

1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST ACCEPTED EDITION OF THE NATIONAL ELECTRICAL CODE (NEC) AND ALL STATE AND LOCAL CODES.
2. COORDINATE THE INSTALLATION OF ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS WITH ARCHITECTURAL AND MECHANICAL PLANS, SPECIFICATIONS AND EQUIPMENT DRAWINGS. PROVIDE ALL NECESSARY EQUIPMENT POWER AND CONTROL CONNECTIONS NOT PROVIDED BY OTHERS WHETHER INDICATED ON THE DRAWINGS OR NOT.
3. UNLESS OTHERWISE NOTED, WHERE ELECTRICAL DEMOLITION WORK IS SHOWN, REMOVE ALL CONDUCTOR AND EXPOSED CONDUITS FROM EQUIPMENT OR OUTLET LOCATION BACK TO THE POWER SOURCE(S) FOR THE CIRCUIT.
4. SEAL ALL WALL AND FLOOR PENETRATIONS TO MAINTAIN RATING.
5. BACK-TO-BACK OR THROUGH THE WALL BOXES SHALL NOT BE USED.
6. ALL LOW VOLTAGE CONDUCTORS SHALL BE STRANDED COPPER.
7. SPLICE CABLES OR CONDUCTORS IN OUTLET BOXES, DEVICE BOXES, PULL BOXES, JUNCTION BOXES. DO NOT SPLICE CABLES OR CONDUCTORS IN CONDUIT BODIES.
8. RECEPTACLES INDICATED AS GROUND FAULT CIRCUIT INTERRUPTER (GFI) TYPE MUST BE GFI RECEPTACLE, NO FEED THROUGH.
9. BRANCH CIRCUITS FROM CIRCUIT BREAKER TYPE DISTRIBUTION EQUIPMENT WHICH SUPPLY MOTOR LOADS THAT ARE LESS THAN 6.0 AMP SHALL BE PROTECTED BY A 15 AMP CIRCUIT BREAKER.
10. FINAL CONNECTIONS TO ITEMS SUBJECT TO VIBRATION SHALL BE MADE WITH LIQUID TIGHT FLEXIBLE METAL CONDUIT. LIQUID TIGHT FLEXIBLE METAL CONDUIT SHALL NOT BE USED AS A GROUNDING CONDUCTOR. PROVIDE A SEPARATE GREEN GROUNDING CONDUCTOR.
11. IN THE EVENT OF CONFLICTS BETWEEN THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS OR WITHIN THE DRAWINGS OR SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT SHALL BE ASSUMED TO BE CORRECT. REFER UNCERTAINTIES IN REQUIREMENTS TO THE ENGINEER FOR CLARIFICATION.
12. ALL BELOW GRADE LOCATIONS WITHIN BUILDINGS ARE DAMP LOCATIONS UNLESS OTHERWISE NOTED.
13. 120V AC CONTROL WIRING ASSOCIATED WITH MOTOR CONTROL CIRCUITS MAY BE RUN IN THE SAME RACEWAY WITH MOTOR POWER WIRING FOR CONSTANT SPEED MOTORS LESS THAN 30HP. FOR MOTORS 30HP AND GREATER OR FOR MOTORS POWERED FROM VARIABLE FREQUENCY CONTROLLERS, SEPARATE RACEWAYS SHALL BE USED FOR POWER AND CONTROL CONDUCTORS.
14. 120/240V CIRCUIT WIRING FOR ANY ROOM OR AREA MAY BE GROUPED INTO RACEWAYS AS REQUIRED UNLESS SEPARATE RACEWAYS ARE REQUIRED BY THE NEC. COMPLY WITH NEC REQUIREMENTS FOR CONDUCTOR DERATING.
15. CONDUIT PENETRATIONS OF FLOORS, LOWER LEVEL EXTERIOR WALLS OR WETWELL WALLS SHALL BE SLEEVED AND SEALED WITH LINKSEAL. SEE DETAILS ON MECHANICAL DRAWINGS.
16. IF COMPLIANCE WITH TWO OR MORE DIFFERING STANDARDS, REQUIREMENTS, DRAWINGS OR SPECIFICATIONS, OR ANY COMBINATION THEREOF, IS SPECIFIED AND THESE ESTABLISH DIFFERENT OR CONFLICTING REQUIREMENTS FOR MINIMUM QUANTITIES OR QUALITY LEVELS, COMPLY WITH THE MOST STRINGENT REQUIREMENT. THE MOST STRINGENT REQUIREMENT WILL BE THE BETTER QUALITY OR GREATER QUANTITY OF WORK, AND WILL TYPICALLY BE THE MORE EXPENSIVE OPTION. REFER UNCERTAINTIES AND REQUIREMENTS THAT ARE DIFFERENT, BUT APPARENTLY EQUAL, TO ENGINEER FOR A DECISION BEFORE PROCEEDING.
17. THE QUANTITY OR QUALITY LEVEL SHOWN OR SPECIFIED SHALL BE THE MINIMUM PROVIDED OR PERFORMED. THE ACTUAL INSTALLATION MAY COMPLY EXACTLY WITH THE MINIMUM QUANTITY OR QUALITY SPECIFIED, OR IT MAY EXCEED THE MINIMUM WITHIN REASONABLE LIMITS. TO COMPLY WITH THESE REQUIREMENTS, INDICATED NUMERIC VALUES ARE MINIMUM OR MAXIMUM, AS APPROPRIATE, FOR THE CONTEXT OF REQUIREMENTS. REFER UNCERTAINTIES TO ENGINEER FOR A DECISION BEFORE PROCEEDING.
18. DESIGN DOCUMENTS MUST BE REPRODUCED IN THEIR ENTIRETY, INCLUDING ALL PLANS, SPECIFICATIONS, AND FRONT END DOCUMENTS.
19. ONLY COMPLETE DOCUMENT SETS ARE TO BE DISTRIBUTED TO SUBCONTRACTORS AND SUPPLIERS OF THE CONTRACTOR DURING BIDDING OR CONSTRUCTION.
20. FAILURE TO REVIEW AND COMPLY WITH A FULL SET OF CONTRACT DOCUMENTS WILL NOT BE ACCEPTED AS A VALID REASON FOR FAILURE TO MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.
21. ALL ABOVE CEILING SYSTEMS AND COMPONENTS (INCLUDING BUT NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION, ETC.) SHALL BE COORDINATED SUCH THAT THE SYSTEMS ARE PROPERLY INTEGRATED IN THE SPACE PROVIDED ABOVE CEILING AT THE CEILING HEIGHTS NOTED. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR TO COORDINATE PATHWAYS WITHIN THE SPACE PROVIDED. CEILING HEIGHTS WILL NOT BE MODIFIED.
22. EQUIPMENT SHALL BE MOUNTED 6'-0" AWAY FROM HEAT PRODUCING EQUIPMENT. U.N.O.

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26
	FINAL OWNER REVIEW	04/30/26

WILLIAM A. KIBBE & ASSOCIATES, INC.
ENGINEERS | ARCHITECTS | SURVEYORS

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
GENERAL NOTES

PROJECT NUMBER 25-0546-0295
PROJECT DATE 05/12/26
CHECKED BY R. KAIN
SHEET NUMBER E0.0

DIVISION 26000 - ELECTRICAL SPECIFICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
- A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

1.2 SUBMITTALS
- A. PRODUCT DATA FOR:
  1. WIRING DEVICES
  2. LIGHTING FIXTURES
  3. POWER DISTRIBUTION EQUIPMENT
  4. LIGHTING CONTROLS

1.3 QUALITY ASSURANCE
- A. ELECTRICAL COMPONENTS, DEVICES, AND ACCESSORIES: LISTED AND LABELED AS DEFINED IN NFPA 70, ARTICLE 100, BY A TESTING AGENCY ACCEPTABLE TO AUTHORITIES HAVING JURISDICTION, AND MARKED FOR INTENDED USE.
- B. COMPLY WITH UL 467 FOR GROUNDING AND BONDING MATERIALS AND EQUIPMENT.
- C. COMPLY WITH NFPA 70
- D. COMPLY WITH NECA 1, INCLUDING THE MOUNTING HEIGHTS LISTED IN THAT STANDARD, UNLESS OTHERWISE NOTED.
- E. COMPLY WITH APPLICABLE PORTIONS OF NECA1, NEMA PB 1.1, AND NEMA PB 2.1 FOR INSTALLATION OF ENCLOSED SWITCHES AND CIRCUIT BREAKERS.
- F. SOURCE LIMITATIONS: OBTAIN EACH TYPE OF PRODUCT, EQUIPMENT, AND WIRING DEVICES AND ASSOCIATED WALL PLATE THROUGH ONE SOURCE FROM A SINGLE MANUFACTURER. SO FAR AS THEY ARE AVAILABLE, OBTAIN ALL PRODUCTS, EQUIPMENT, AND WIRING DEVICES AND ASSOCIATED WALL PLATES FROM A SINGLE MANUFACTURER AND ONE SOURCE.

1.4 COORDINATION

- A. COORDINATE ARRANGEMENT, MOUNTING, AND SUPPORT OF ELECTRICAL EQUIPMENT:
  1. TO ALLOW MAXIMUM POSSIBLE HEADROOM UNLESS SPECIFIC MOUNTING HEIGHTS THAT REDUCE HEADROOM ARE INDICATED.
  2. TO PROVIDE FOR EASE OF DISCONNECTING THE EQUIPMENT WITH MINIMUM INTERFERENCE TO OTHER INSTALLATIONS.
  3. TO ALLOW RIGHT OF WAY FOR PIPING AND CONDUIT INSTALLED AT REQUIRED SLOPE.
  4. SO CONNECTING RACEWAYS, CABLES, WIREWAYS, CABLE TRAYS, AND BUSWAYS WILL BE CLEAR OF OBSTRUCTIONS AND OF THE WORKING AND ACCESS SPACE OF OTHER EQUIPMENT.
- B. COORDINATE IDENTIFICATION NAMES, ABBREVIATIONS, COLORS, AND OTHER FEATURES WITH REQUIREMENTS IN THE CONTRACT DOCUMENTS, SHOP DRAWINGS, MANUFACTURER'S WIRING DIAGRAMS, AND THE OPERATION AND MAINTENANCE MANUAL, AND WITH THOSE REQUIRED BY CODES, STANDARDS, AND 29 CFR 1910.145. USE CONSISTENT DESIGNATIONS THROUGHOUT PROJECT.
- C. RECEPTACLES FOR OWNER-FURNISHED EQUIPMENT: MATCH PLUG CONFIGURATIONS.

PART 2 - PRODUCTS

2.1 GROUNDING PRODUCTS
- A. BONDING CONDUCTOR: NO. 6 AWG INSULATED COPPER, STRANDED CONDUCTOR.
- B. WELDED CONNECTORS: EXOTHERMIC-WELDING KITS OF TYPES RECOMMENDED BY KIT MANUFACTURER FOR MATERIALS BEING JOINED AND INSTALLATION CONDITIONS.
- C. GROUND RODS: COPPER-CLAD STEEL 3/4 INCH BY 10 FEET.

2.2 RACEWAYS AND WIREWAYS
- A. RACEWAY MATERIALS:
  1. RIGID STEEL CONDUIT (RMC): ANSI C80.1.
  2. EMT: ANSI C80.3.
  3. LFMC: FLEXIBLE STEEL CONDUIT WITH PVC JACKET.
  4. FITTINGS FOR CONDUIT (INCLUDING ALL TYPES AND FLEXIBLE AND LIQUIDTIGHT), EMT, AND CABLE. NEMA FB 1: LISTED FOR TYPE AND SIZE RACEWAY WITH WHICH USED, AND FOR APPLICATION AND ENVIRONMENT IN WHICH INSTALLED.
  5. SURFACE RACEWAY: WIREMOLD SERIES 500/700 ONE PIECE RACEWAY
  6. METAL WIREWAYS DESCRIPTION: SHEET METAL SIZED AND SHAPED AS INDICATED, NEMA 250, TYPE 1 OR 3R, UNLESS OTHERWISE INDICATED. WIREWAY COVERS: SCREW-COVER TYPE OR AS INDICATED.
  7. SHEET METAL OUTLET AND DEVICE BOXES: NEMA OS 1.
  8. SMALL SHEET METAL PULL AND JUNCTION BOXES: NEMA OS 1.
  9. CABINETS:
     - A. NEMA 250, TYPE 1, GALVANIZED-STEEL BOX WITH REMOVABLE INTERIOR PANEL AND REMOVABLE.
     - B. HINGED DOOR IN FRONT COVER WITH FLUSH LATCH AND CONCEALED HINGE.
     - C. KEY LATCH TO MATCH PANELBOARDS.

2.3 CABLES AND WIRING MATERIALS
- A. CONDUCTOR INSULATION: COMPLY WITH NEMA WC 70 FOR TYPES THW AND THHN-THWN.
- B. MULTICONDUCTOR CABLE: COMPLY WITH NEMA WC 70 FOR METAL-CLAD CABLE, TYPE MC WITH GROUND WIRE.
- C. FEEDERS: COPPER, STRANDED
- D. BRANCH CIRCUITS: COPPER, STRANDED, MINIMUM 12 AWG.
- E. EXPOSED OR CONCEALED FEEDERS AND BRANCH CIRCUITS: TYPE THHN-THWN, SINGLE CONDUCTORS IN RACEWAY.
- F. CLASS 1 CONTROL CIRCUITS: TYPE THHN-THWN, IN RACEWAY.
- G. CLASS 2 CONTROL CIRCUITS: TYPE THHN-THWN, IN RACEWAY, OR POWER-LIMITED CABLE, CONCEALED IN BUILDING FINISHES.

2.4 IDENTIFICATION MATERIALS
- A. COLOR-CODING CONDUCTOR TAPE: COLORED, SELF-ADHESIVE VINYL-TAPE NOT LESS THAN 3 MILS THICK BY 1 TO 2 INCHES WIDE.
- B. MARKER TAPES: VINYL OR VINYL-CLOTH, SELF-ADHESIVE WRAPAROUND TYPE, WITH CIRCUIT IDENTIFICATION LEGEND MACHINE PRINTED BY THERMAL TRANSFER OR EQUIVALENT PROCESS.
- C. SELF-ADHESIVE, ENGRAVED, LAMINATED ACRYLIC OR MELAMINE LABEL. ADHESIVE BACKED, WITH WHITE LETTERS ON A DARK-GRAY BACKGROUND. MINIMUM LETTER HEIGHT SHALL BE 3/8 INCH.

2.5 WIRING DEVICES
- A. PROVIDE PRODUCTS BY ONE OF THE FOLLOWING MANUFACTURERS:
  1. COOPER WIRING DEVICES: A DIVISION OF COOPER INDUSTRIES, INC.
  2. HUBBELL INCORPORATED: WIRING DEVICE-KELLEMS.
  3. LEVITON MFG. COMPANY, INC.
  4. PASS & SEYMOUR/LEGRAND: WIRING DEVICES & ACCESSORIES.
- B. GFCI DUPLEX RECEPTACLES: STRAIGHT BLADE, FEED-THROUGH TYPE. COMPLY WITH NEMA WD 1, NEMA WD 6, UL 498, AND UL 943, CLASS A, AND INCLUDE INDICATOR LIGHT THAT IS LIGHTED WHEN DEVICE IS TRIPPED.
- C. SNAP SWITCHES: COMPLY WITH NEMA WD 1 AND UL 20, 120/277V, 20A.
- D. WALL PLATES: SINGLE AND COMBINATION TYPES TO MATCH CORRESPONDING WIRING DEVICES.
  1. PLATE-SECURING SCREWS: METAL WITH HEAD COLOR TO MATCH PLATE FINISH.
  2. MATERIAL: SMOOTH, HIGH-IMPACT THERMOPLASTIC.
  3. WET OR DAMP-LOCATION, WEATHERPROOF COVER PLATES: NEMA 250, COMPLYING WITH TYPE 3R WEATHER-RESISTANT, DIE-CAST ALUMINUM WITH LOCKABLE COVER.

2.6 POWER DISTRIBUTION EQUIPMENT
- A. PROVIDE PRODUCTS BY ONE OF THE FOLLOWING MANUFACTURERS:
  1. SQUARE-D/GROUP SCHNEIDER COMPANY
  2. EATON CORPORATION - CUTLER HAMMER
- B. FUSIBLE SWITCH, 600A AND SMALLER: NEMA KS 1, TYPE HD, WITH CLIPS OR BOLT PADS TO ACCOMMODATE SPECIFIED FUSES, LOCKABLE HANDLE WITH CAPABILITY TO ACCEPT TWO PADLOCKS, AND INTERLOCKED WITH COVER IN CLOSED POSITION.
- C. MANUAL MOTOR CONTROLLER: NEMA ICS 2, GENERAL PURPOSE, CLASS A, WITH "QUICK-MAKE, QUICK-BREAK" TOGGLE OR PUSHBUTTON ACTION, AND MARKED TO SHOW WHETHER UNIT IS "OFF", "ON", OR "TRIPPED."
  1. OVERLOAD RELAY: AMBIENT-COMPENSATED TYPE WITH INVERSE-TIME CURRENT CHARACTERISTICS AND NEMA ICS 2, CLASS 10 TRIPPING CHARACTERISTICS. RELAYS SHALL HAVE HEATERS AND SENSORS IN EACH PHASE, MATCHED TO NAMEPLATE, FULL-LOAD CURRENT OF SPECIFIC MOTOR TO WHICH THEY CONNECT AND SHALL HAVE APPROPRIATE ADJUSTMENT FOR DUTY CYCLE.
- D. PANELBOARDS:
  1. COMPLY WITH NEMA PB 1 AND NFPA 70
  2. RATED FOR ENVIRONMENTAL CONDITIONS AT INSTALLED LOCATION:
     - A. INDOOR DRY AND CLEAN LOCATIONS: NEMA 250, TYPE 1
     - B. OUTDOOR LOCATIONS: NEMA 250, TYPE 3R
     - C. WET OR DAMP INDOOR LOCATIONS: NEMA 250, TYPE 4
     - D. INDOOR LOCATIONS SUBJECT TO DUST, FALLING DIRT, AND DRIPPING NONCORROSIVE LIQUIDS: NEMA 250, TYPE 12
  3. INCOMING MAIN LOCATIONS: CONVERTIBLE BETWEEN TOP AND BOTTOM.
  4. PHASE, NEUTRAL, AND GROUND BUSES: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY.
  5. CONDUCTOR CONNECTORS: SUITABLE FOR USE WITH CONDUCTOR MATERIAL AND SIZES.
     - A. MATERIAL: HARD-DRAWN COPPER, 98 PERCENT CONDUCTIVITY.
     - B. MAIN AND NEUTRAL LUGS: MECHANICAL TYPE, WITH A LUG ON THE NEUTRAL BAR FOR EACH POLE IN THE PANELBOARD.
     - C. GROUND LUGS AND BUS-CONFIGURED TERMINATORS: MECHANICAL TYPE, WITH A LUG ON THE BAR FOR EACH POLE IN THE PANELBOARD.
     - D. FEED-THROUGH LUGS: MECHANICAL TYPE, SUITABLE FOR USE WITH CONDUCTOR MATERIAL. LOCATE AT OPPOSITE END OF BUS FROM INCOMING LUGS OR MAIN DEVICE.
     - E. SUBFEED (DOUBLE) LUGS: MECHANICAL TYPE SUITABLE FOR USE WITH CONDUCTOR MATERIAL. LOCATE AT SAME END OF BUS AS INCOMING LUGS OR MAIN DEVICE.
- E. TRANSFORMERS:
  1. COMPLY WITH 10 CFR 431 (DOE 2016) EFFICIENCY LEVELS.
  2. MARKED AS COMPLIANT WITH DOE 2016 EFFICIENCY LEVELS BY AN NRTL.
  3. COIL MATERIAL: COPPER.
  4. ENCLOSURE: VENTILATED, NEMA 250, TYPE 2: CORE AND COIL SHALL BE ENCAPSULATED WITHIN RESIN COMPOUND.
  5. TAPS FOR TRANSFORMERS: TWO 2.5 PERCENT TAPS ABOVE AND TWO 2.5 PERCENT TAPS BELOW NORMAL FULL CAPACITY.
  6. INSULATION CLASS: 220 DEG C, UL-COMPONENT-RECOGNIZED INSULATION SYSTEM WITH A MAXIMUM OF 115 DEG C RISE ABOVE 40 DEG C AMBIENT TEMPERATURE.
  7. GROUNDING: PROVIDE GROUND-BAR KIT OR A GROUND BAR INSTALLED ON THE INSIDE OF THE TRANSFORMER ENCLOSURE.

2.7 LIGHTING FIXTURES
- A. SEE LIGHTING FIXTURE SCHEDULE ON THE DRAWINGS FOR PRODUCT SPECIFICATIONS.

2.8 LIGHTING CONTROLS
- A. BASIS OF DESIGN IS WAVELINX PRO BY COOPER LIGHTING SOLUTIONS. ALTERNATES MUST BE REVIEWED FOR APPROVAL DURING BIDDING. SEE REQUIREMENTS OF THE DRAWINGS.

PART 3 - EXECUTION

3.1 COMMON REQUIREMENTS FOR ELECTRICAL INSTALLATION
- A. EQUIPMENT: INSTALL TO FACILITATE SERVICE, MAINTENANCE, AND REPAIR OR REPLACEMENT OF COMPONENTS OF BOTH ELECTRICAL EQUIPMENT AND OTHER NEARBY INSTALLATIONS. CONNECT IN SUCH A WAY AS TO FACILITATE FUTURE DISCONNECTING WITH MINIMUM INTERFERENCE WITH OTHER ITEMS IN THE VICINITY.
- B. RIGHT OF WAY: GIVE TO PIPING SYSTEMS INSTALLED AT A REQUIRED SLOPE.

3.2 GROUNDING APPLICATIONS
- A. INSTALL INSULATED EQUIPMENT GROUNDING CONDUCTORS WITH ALL FEEDERS AND BRANCH CIRCUITS. INSULATION SHALL BE RATED AT 600V OR AS APPROVED BY AUTHORITY HAVING JURISDICTION.
- B. CONDUCTORS: INSTALL SOLID CONDUCTOR FOR NO. 10 AWG AND SMALLER, AND STRANDED CONDUCTORS FOR NO. 8 AWG AND LARGER, UNLESS OTHERWISE INDICATED.
- C. METAL POLES FOR SIGNS SUPPORTING OUTDOOR LIGHTING FIXTURES: INSTALL GROUNDING ELECTRODE AND A SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO GROUNDING CONDUCTOR INSTALLED WITH BRANCH-CIRCUIT CONDUCTORS.

3.3 APPLICATION OF IDENTIFICATION SYSTEMS
- A. BRANCH-CIRCUIT CONDUCTOR IDENTIFICATION: WHERE THERE ARE CONDUCTORS FOR MORE THAN THREE BRANCH CIRCUITS IN SAME JUNCTION OR PULL BOX, USE COLOR-CODING CONDUCTOR TAPE. IDENTIFY EACH UNDERGROUND CONDUCTOR ACCORDING TO SOURCE AND CIRCUIT NUMBER.
- B. EQUIPMENT IDENTIFICATION LABELS: ON EACH UNIT OF EQUIPMENT, INSTALL UNIQUE DESIGNATION LABEL THAT IS CONSISTENT WITH WIRING DIAGRAMS, SCHEDULES, AND OPERATION AND MAINTENANCE MANUAL. APPLY LABELS TO DISCONNECT SWITCHES AND PROTECTION EQUIPMENT, CENTRAL OR SYSTEM. SYSTEMS INCLUDE POWER, LIGHTING, CONTROL, COMMUNICATION, SIGNAL, MONITORING, AND ALARM SYSTEMS UNLESS EQUIPMENT IS PROVIDED WITH ITS OWN IDENTIFICATION.
  1. LABELING INSTRUCTIONS:
     - A. INDOOR EQUIPMENT: ADHESIVE FIELD LABEL. UNLESS OTHERWISE INDICATED, PROVIDE A SINGLE LINE OF TEXT WITH 1/2-INCH-HIGH LETTERS ON 1-1/2-INCH-HIGH LABEL. WHERE 2 LINES OF TEXT ARE REQUIRED, USE LABELS 2 INCHES HIGH.
  2. EQUIPMENT TO BE LABELED:
     - A. PANELBOARDS, ELECTRICAL CABINETS, AND ENCLOSURES.
     - B. ACCESS DOORS AND PANELS FOR CONCEALED ELECTRICAL ITEMS.
     - C. TRANSFORMERS.
     - D. DISCONNECT SWITCHES.
     - E. ENCLOSED CIRCUIT BREAKERS.
     - F. MOTOR STARTERS.
     - G. PUSH-BUTTON STATIONS.
     - H. CONTACTORS.
     - I. REMOTE-CONTROLLED SWITCHES, DIMMER MODULES, AND CONTROL DEVICES.
     - J. LIGHTING CONTROL EQUIPMENT.
- C. VERIFY IDENTITY OF EACH ITEM BEFORE INSTALLING IDENTIFICATION PRODUCTS.
- D. LOCATION: INSTALL IDENTIFICATION MATERIALS AND DEVICES AT LOCATIONS FOR MOST CONVENIENT VIEWING WITHOUT INTERFERENCE WITH OPERATION AND MAINTENANCE OF EQUIPMENT.
- E. APPLY IDENTIFICATION DEVICES TO SURFACES THAT REQUIRE FINISH AFTER COMPLETING FINISH WORK.
- F. SELF-ADHESIVE IDENTIFICATION PRODUCTS: CLEAN SURFACES BEFORE APPLICATION, USING MATERIALS AND METHODS RECOMMENDED BY MANUFACTURER OF IDENTIFICATION DEVICE.
- G. SYSTEM IDENTIFICATION COLOR BANDING FOR RACEWAYS AND CABLES: EACH COLOR BAND SHALL COMPLETELY ENCIRCLE CABLE OR CONDUIT. PLACE ADJACENT BANDS OF TWO-COLOR MARKINGS IN CONTACT, SIDE BY SIDE. LOCATE BANDS AT CHANGES IN DIRECTION, AT PENETRATIONS OF WALLS AND FLOORS, AT 50-FOOT MAXIMUM INTERVALS IN STRAIGHT RUNS, AND AT 25-FOOT MAXIMUM INTERVALS IN CONGESTED AREAS.
- H. COLOR-CODING FOR PHASE AND VOLTAGE LEVEL IDENTIFICATION, 600V AND LESS: USE THE COLORS LISTED BELOW FOR UNGROUNDED SERVICE, FEEDER, AND BRANCH-CIRCUIT CONDUCTORS.
  1. COLOR SHALL BE FIELD APPLIED FOR CONDUCTORS OVER NO. 10 AWG.
  2. COLORS FOR 480/277V CIRCUITS:
     - A. PHASE A: BROWN
     - B. PHASE B: ORANGE
     - C. PHASE C: YELLOW
  3. COLORS FOR 120/208V CIRCUITS:
     - A. PHASE A: BLACK
     - B. PHASE B: RED
     - C. PHASE C: BLUE
  4. COLORS FOR 120/240V CIRCUITS:
     - A. PHASE A: BLACK
     - B. PHASE B: RED
  5. FIELD-APPLIED, COLOR-CODING CONDUCTOR TAPE: APPLY IN HALF-LAPPED TURNS FOR A MINIMUM DISTANCE OF 6 INCHES FROM TERMINAL POINTS AND IN BOXES WHERE SPLICES OR TAPS ARE MADE. APPLY LAST TWO TURNS OF TAPE WITH NO TENSION TO PREVENT POSSIBLE UNWINDING. LOCATE BANDS TO AVOID OBSCURING FACTORY CABLE MARKINGS.

3.4 INSTALLATION OF POWER CONDUCTORS AND CABLES
- A. CONCEAL CABLES IN FINISHED WALLS, CEILINGS, AND FLOORS, UNLESS OTHERWISE INDICATED.
- B. USE MANUFACTURER-APPROVED PULLING COMPOUND OR LUBRICANT WHERE NECESSARY. COMPOUND USED MUST NOT DETERIORATE CONDUCTOR OR INSULATION. DO NOT EXCEED MANUFACTURER'S RECOMMENDED MAXIMUM PULLING TENSIONS AND SIDEWALL PRESSURE VALUES.
- C. USING PULLING MEANS, INCLUDING FISH TABLE, CABLE, ROPE, AND BASKET-WEAVE WIRE/CABLE GRIPS, THAT WILL NOT DAMAGE CABLES OR RACEWAY.
- D. WIRING AT OUTLETS: INSTALL CONDUCTOR AT EACH OUTLET, WITH AT LEAST 12 INCHES OF SLACK.

3.5 RACEWAY INSTALLATION AND APPLICATION
- A. COMPLY WITH NECA 1 FOR INSTALLATION REQUIREMENTS APPLICABLE TO PRODUCTS SPECIFIED IN PART 2 EXCEPT WHERE REQUIREMENTS ON DRAWINGS OR IN THIS ARTICLE ARE STRICTER.
- B. SUPPORT RACEWAYS PER NEC - NFPA-70.
- C. COMPLY WITH THE FOLLOWING INDOOR APPLICATIONS, UNLESS OTHERWISE INDICATED:
  1. EXPOSED ON ACOUSTICAL BLOCK: METAL WIREMOLD.
  2. EXPOSED, NOT SUBJECT TO PHYSICAL DAMAGE: EMT ABOVE 48".
  3. CONCEALED IN CEILINGS AND INTERIOR WALLS AND PARTITIONS: EMT.
  4. CONNECTION TO VIBRATING EQUIPMENT (INCLUDING TRANSFORMERS AND HYDRAULIC, PNEUMATIC, ELECTRIC SOLENOID, OR MOTOR-DRIVEN EQUIPMENT): LFMC.
  5. DAMP OR WET LOCATIONS: RIGID STEEL CONDUIT.
- D. MINIMUM RACEWAY SIZE: 3/4-INCH TRADE SIZE.
- E. RACEWAY FITTINGS: COMPATIBLE WITH RACEWAYS AND SUITABLE FOR USE AND LOCATION.
  1. RIGID AND INTERMEDIATE STEEL CONDUIT: USE THREADED RIGID STEEL CONDUIT FITTINGS, UNLESS OTHERWISE INDICATED.
- F. COMPLETE RACEWAY INSTALLATION BEFORE STARTING CONDUCTOR INSTALLATION.
- G. ARRANGE STUB-UPS SO CURVED PORTIONS OF BENDS ARE NOT VISIBLE ABOVE THE FINISHED SLAB.
- H. INSTALL NO MORE THAN THE EQUIVALENT OF THREE 90-DEGREE BENDS IN ANY CONDUIT RUN EXCEPT FOR COMMUNICATIONS CONDUITS, FOR WHICH FEWER BENDS ARE ALLOWED.
- I. CONCEAL CONDUIT AND EMT WITHIN FINISHED WALLS, CEILINGS, AND FLOORS, UNLESS OTHERWISE INDICATED.
- J. RACEWAYS EMBEDDED IN SLABS: NOT ALLOWED.
- K. THREADED CONDUIT JOINTS, EXPOSED TO WET, DAMP, CORROSIVE, OR OUTDOOR CONDITIONS: APPLY LISTED COMPOUND TO THREADS OF RACEWAY AND FITTINGS BEFORE MAKING UP JOINTS. FOLLOW COMPOUND MANUFACTURER'S WRITTEN INSTRUCTIONS.
- L. RACEWAY TERMINATIONS AT LOCATIONS SUBJECT TO MOISTURE OR VIBRATION: USE INSULATING BUSHINGS TO PROTECT CONDUCTORS, INCLUDING CONDUCTORS SMALLER THAN NO. 4 AWG.
- M. INSTALL PULL WIRES IN EMPTY RACEWAYS. USE POLYPROPYLENE OR MONOFILAMENT PLASTIC LINE WITH NOT LESS THAN 200-LB TENSILE STRENGTH. LEAVE AT LEAST 12 INCHES OF SLACK AT EACH END OF PULL WIRE.
- N. FLEXIBLE CONDUIT CONNECTIONS: USE MAXIMUM OF 72 INCHES OF FLEXIBLE CONDUIT FOR RECESSED AND SEMI-RECESSED LIGHTING FIXTURES, EQUIPMENT SUBJECT TO VIBRATION, NOISE TRANSMISSION, OR MOVEMENT; AND FOR TRANSFORMERS AND MOTORS.
  1. USE LFMC IN DAMP OR WET LOCATIONS SUBJECT TO SEVERE PHYSICAL DAMAGE.

3.6 WIRING DEVICE INSTALLATION
- A. REPLACE ALL DEVICES THAT HAVE BEEN IN TEMPORARY USE DURING CONSTRUCTION OR THAT SHOW SIGNS THAT THEY WERE INSTALLED BEFORE BUILDING FINISHING OPERATIONS WERE COMPLETE.
- B. KEEP EACH WIRING DEVICE IN ITS PACKAGE OR OTHERWISE PROTECTED UNTIL IT IS TIME TO CONNECT CONDUCTORS.
- C. DO NOT REMOVE SURFACE PROTECTION, SUCH AS PLASTIC FILM AND SMUDGE COVERS, UNTIL THE LAST POSSIBLE MOMENT.
- D. CONNECT DEVICES TO BRANCH CIRCUITS USING PIGTAILS THAT ARE NOT LESS THAN 6 INCHES IN LENGTH.
- E. WHEN THERE IS A CHOICE, USE SIDE WIRING WITH BINDING-HEAD SCREW TERMINALS. WRAP SOLID CONDUCTOR TIGHTLY CLOCKWISE, 2/3 TO 3/4 OF THE WAY AROUND TERMINAL SCREW.
- F. USE A TORQUE SCREWDRIVER WHEN A TORQUE IS RECOMMENDED OR REQUIRED BY THE MANUFACTURER.
- G. WHEN CONDUCTORS LARGER THAN NO. 12 AWG ARE INSTALLED ON 15-A OR 20-A CIRCUITS, SPLICE NO. 12 PIGTAILS FOR DEVICE CONNECTIONS.
- H. TIGHTEN UNUSED TERMINAL SCREWS ON THE DEVICE.
- I. WHEN MOUNTING INTO METAL BOXES, REMOVE THE FIBER OR PLASTIC WASHERS USED TO HOLD DEVICE MOUNTING SCREWS IN YOKES, ALLOWING METAL-TO-METAL CONTACT.
- J. RECEPTACLE ORIENTATION:
  1. INSTALL GROUND PIN OF VERTICALLY MOUNTED RECEPTACLES UP, AND ON HORIZONTALLY MOUNTED RECEPTACLES TO THE RIGHT.
- K. DEVICE PLATES: DO NOT USE OVERSIZED OR EXTRA-DEEP PLATES. REPAIR WALL FINISHES AND REMOUNT OUTLET BOXES WHEN STANDARD DEVICE PLATES DO NOT FIT FLUSH OR DO NOT COVER ROUGH WALL OPENING.
- L. ARRANGEMENT OF DEVICES: UNLESS OTHERWISE INDICATED, MOUNT FLUSH, WITH LONG DIMENSION VERTICAL AND WITH GROUNDING TERMINAL OF RECEPTACLES ON TOP. GROUP ADJACENT SWITCHES UNDER SINGLE, MULTIGANG WALL PLATES.

3.7 PANELBOARD INSTALLATION
- A. INSTALL PANELBOARDS AND ACCESSORIES ACCORDING TO NEMA PB 1.1.
- B. MOUNT TOP OF TRIM 74 INCHES ABOVE FINISHED FLOOR, UNLESS OTHERWISE INDICATED.
- C. MOUNT PLUMB AND RIGID WITHOUT DISTORTION OF BOX. MOUNT RECESSED PANELBOARDS WITH FRONTS UNIFORMLY FLUSH WITH WALL FINISH.
- D. INSTALL FILLER PLATES IN UNUSED SPACES.
- E. ARRANGE CONDUCTORS IN GUTTERS INTO GROUPS AND BUNDLE AND WRAP WITH WIRE TIES AFTER COMPLETING LOAD BALANCING.

3.8 LIGHTING CONTROLS
- A. CONDUCT PRE-INSTALLATION MEETING WITH THE SUPPLIER, PROGRAMMER, INSTALLER, AND OWNER TO REVIEW THE SYSTEM.
- B. PERFORM POST VISIT FOR PROGRAMMING

3.9 FIELD QUALITY CONTROL
- A. PREPARE FOR ACCEPTANCE TESTS AS FOLLOWS:
  1. TEST INSULATION RESISTANCE FOR EACH PANELBOARD BUS, COMPONENT, CONNECTING SUPPLY, FEEDER, AND CONTROL CIRCUIT.
  2. TEST CONTINUITY OF EACH CIRCUIT.
- B. PERFORM THE FOLLOWING FIELD TESTS AND INSPECTIONS AND PREPARE TEST REPORTS:
  1. CORRECT MALFUNCTIONING UNITS ON-SITE, WHERE POSSIBLE, AND RETEST TO DEMONSTRATE COMPLIANCE; OTHERWISE, REPLACE WITH NEW UNITS AND RETEST.
- C. PROVIDE OPERATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT. INCLUDE WARRANTY AND REPLACEMENT PART LIST.

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26
	FINAL OWNER REVIEW	04/30/26

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989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE
ELECTRICAL SPECIFICATIONS

PROJECT NUMBER 25-0546-0295
PROJECT DATE 05/12/26
CHECKED BY R. KAIN
SHEET NUMBER E0.1

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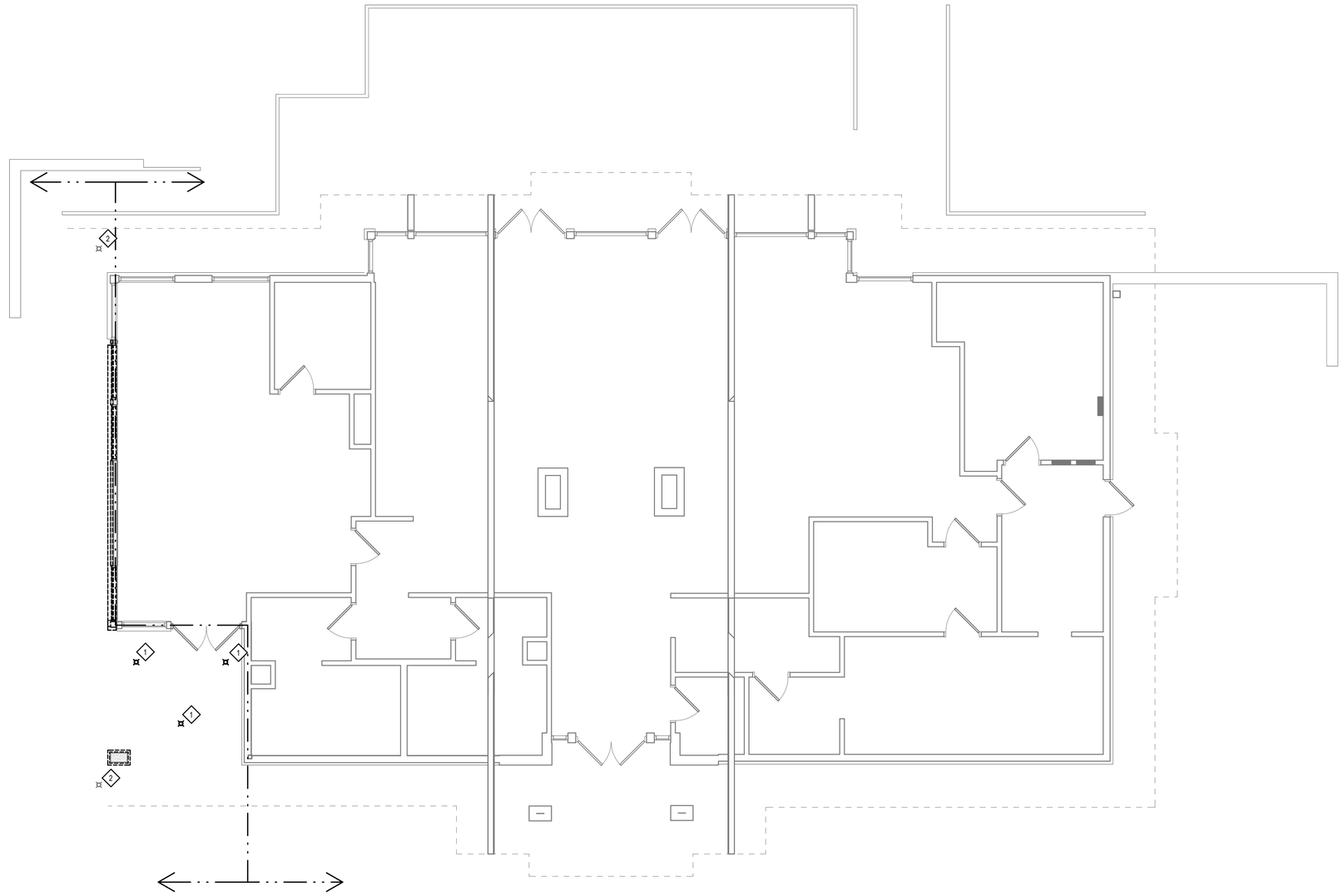
NUSHKOA

KEYED DEMOLITION NOTES

SYMBOL	DESCRIPTION
◇	
1	DISCONNECT AND REMOVE EXISTING LIGHTS. REMOVE CIRCUITS BACK TO NEAREST JUNCTION BOX CAP AND LABEL WIRES.
2	EXISTING SOFFIT LIGHT TO REMAIN.



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ELECTRICAL DEMOLITION PLAN

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

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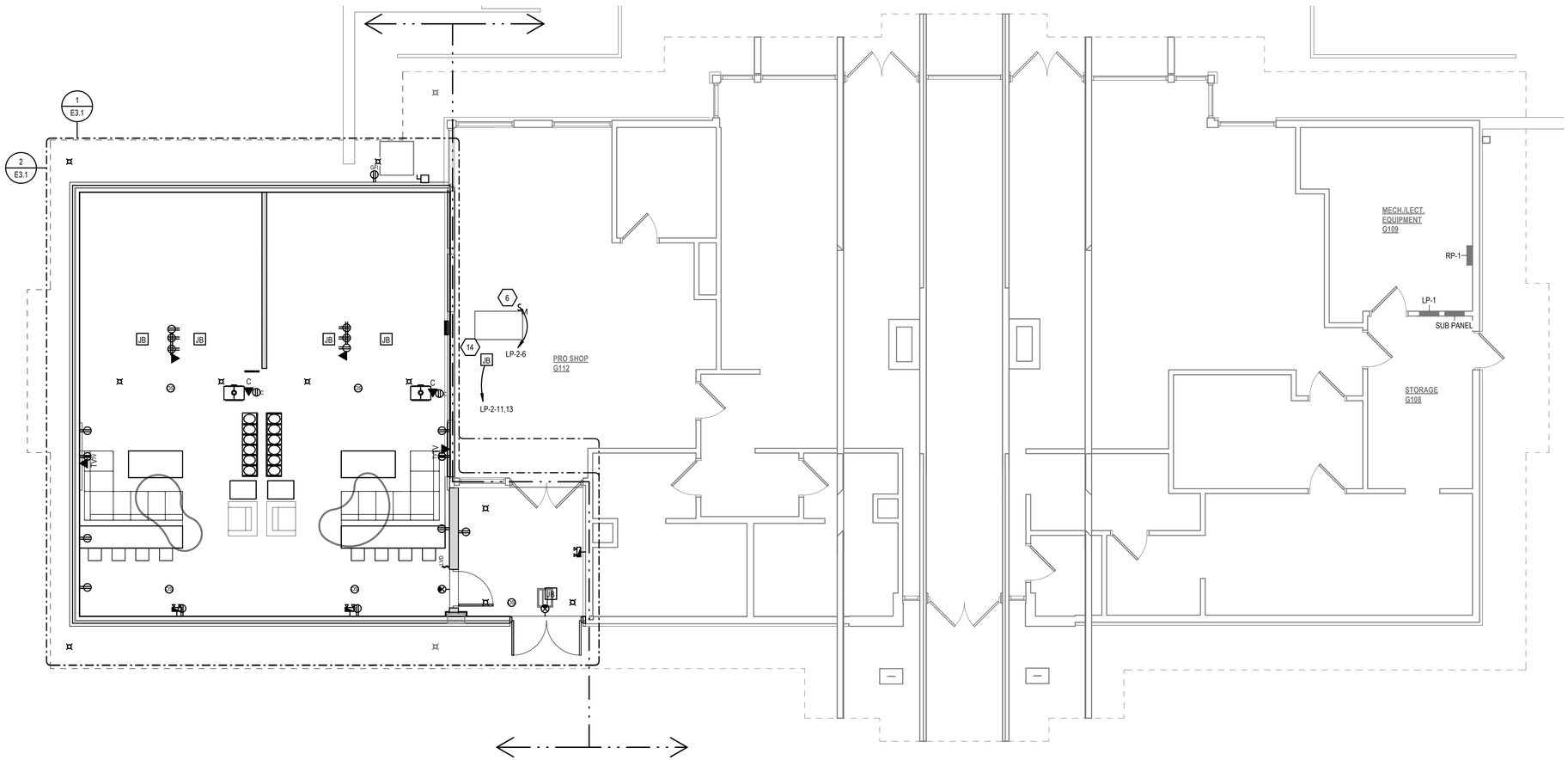

N

OVERALL FLOOR PLAN

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

KEYED CONSTRUCTION NOTES

SYMBOL	DESCRIPTION
1	PROVIDE (1) 2" CONDUIT TO EACH CEILING SENSOR FROM UNDER PLATFORM TO ABOVE CEILING WITH A PULL STRING. CONDUITS TO BE RUN IN CENTER WALL BETWEEN SIMULATORS. COORDINATE INSTALLATION WITH SIMULATOR PM.
2	PROVIDE (1) 2" CONDUIT TO THE PROJECTOR FROM UNDER PLATFORM TO ABOVE CEILING WITH A PULL STRING. CONDUITS TO BE RUN IN CENTER WALL BETWEEN SIMULATORS. COORDINATE INSTALLATION WITH SIMULATOR PM.
3	CONNECT NEW SOFFIT LIGHTS TO SOFFIT LIGHTS CIRCUIT IN EXISTING BUILDING.
4	EXISTING BUILDING SOFFIT LIGHT TO REMAIN. UTILIZE CIRCUIT FOR NEW SOFFIT LIGHTS.
5	PROVIDE RECEPTACLE AND LOW VOLTAGE CONNECTION FOR WALL MOUNTED TV. COORDINATE INSTALLATION WITH OTHERS. CONFIRM MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
6	PROVIDE LOCAL DISCONNECT SWITCH FOR FURNACE LOCATED IN CEILING ABOVE PRO SHOP. COORDINATE INSTALL AND LOCATION WITH OTHER TRADES.
7	PROVIDE 60A LOCAL DISCONNECT SWITCH FOR OUTDOOR CONDENSING UNIT. COORDINATE LOCATION AND INSTALL WITH OTHER TRADES
8	PROVIDE MAINTENANCE RECEPTACLE WITH WHEATHER PROOF WHILE IN USE COVER.
9	PROVIDE POWER CONNECTION TO UNIT HEATER IN CEILING. LOCAL DISCONNECT PROVIDED WITH UNIT. COORDINATE INSTALLATION WITH OTHER TRADES
10	RECEPTACLES TO BE LOCATED UNDERNEATH SIMULATOR ACCESS COVER PANEL FOR SIMULATOR POWER. COORDINATE LOCATION WITH SIMULATOR SUPPLIER.
11	CONNECT ALL EXIT AND EMERGENCY LIGHTING TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
12	CONTRACTOR TO RECESS NEW LP-2 IN SIMULATOR BAY WALL. COORDINATE INSTALLATION WITH OTHER TRADES. GENERAL CONTRACTOR TO PROVIDE A HINGED DOOR COVER MATCHING THE ACCOUSTICAL PANEL TO CONCEAL PANELBOARD COVER.
13	WORK WITH OWNER IT TO RUN ETHERNET CABLE FROM IT ROOM TO SIMULATOR PLATFORM. COORDINATE INSTALLATION WITH SIMULATOR PM.
14	PROVIDE POWER CONNECTION TO DUCT HEATER. LOCAL DISCONNECT PROVIDED WITH UNIT. COORDINATE WITH OTHER TRADES.

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PROJECT TITLE

ADDITION TO:

CURRIE GOLF COURSE - WEST CLUBHOUSE

MIDLAND, MICHIGAN

SHEET TITLE

OVERALL FLOOR PLAN

PROJECT NUMBER	SHEET NUMBER
25-0546-0295	E3.0
PROJECT DATE: 05/12/26	
CHECKED BY: R. KAIN	

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KUSHION

LIGHTING FIXTURE SCHEDULE

TYPE NAME	LAMP TYPE	LAMP VA	LAMP VOLT	DESCRIPTION	BASIS OF DESIGN MANUFACTURER	BASIS OF DESIGN CAT. NO.	COMMENTS
A	LED	98.4 VA	120 V	LED CURVILINEAR PENDANT, SHAPE B, 350 LUMENS PER FOOT, 3500K, 0-10V DIMMING	BETA-CALCO	PULP1P06-LPF035-CR80-CT A35-V1-DA01-FA02-CF01-CS1	HANG 9'-6" A.F.F.
B	LED	103.3 VA	120 V	LED CURVILINEAR PENDANT, SHAPE D, 350 LUMENS PER FOOT, 3500K, 0-10V DIMMING	BETA-CALCO	PULP1P12-LPF035-CR80-CT A35-V1-DA01-FA02-CF01-CS1	HANG 9'-6" A.F.F.
C	LED	15.8 VA	120 V	LED 4" RECESSED DOWNLIGHT, 1,500 LUMENS, 3500K, 0-10V DIMMING	PORTFOLIO	LDS4C159035D010-4LBSLI	
C1	LED	9.8 VA	120 V	LED 4" RECESSED DOWNLIGHT, 1,000 LUMENS, 3500K, 0-10V DIMMING	PORTFOLIO	LDS4C109035D010-4LBSLI	
EM	LED	5.0 VA	120 V	LED EMERGENCY LIGHT, LITHIUM-ION BATTERY, 90-MINUTE RUN-TIME, BLACK HOUSING	SURE-LITES	SEL30BKSD	MOUNT 7'-6" A.F.F.
X	LED	1.5 VA	120 V	LED EXIT SIGN, NICKEL CADMIUM BATTERY, BLACK HOUSING, 90-MINUTE RUN-TIME	SURE-LITES	APX7 RG BK	MOUNT ABOVE DOOR

LIGHTING NOTES AND CONTROL SEQUENCE

A. LIGHTING CONTROLS SHALL MEET THE 2021 MICHIGAN ENERGY CODE. FUNCTIONAL TESTING SHOULD BE COMPLETED PER C408.3 & A TESTING REPORT GENERATED PER C408.3.2.3. LIGHTING CONTROL PERFORMANCE CRITERIA TO BE VERIFIED BY A THIRD PARTY FOR PROPER OPERATION, CALIBRATION, ADJUSTMENT, PROGRAMMING, AND APPROVAL.
B. CONDUCT PRE-INSTALLATION MEETING WITH THE SUPPLIER, PROGRAMMER, INSTALLER, AND OWNER TO REVIEW THE SYSTEM.
C. PERFORM POST VISIT FOR PROGRAMMING.
D. PROVIDE 4 HOUR TRAINING SESSION FOR THE LIGHTING CONTROLS BY A MANUFACTURER AUTHORIZED PERSON. TRAINING AGENDA SHOULD BE PROVIDED BEFORE THE CLASS. TRAINING SHOULD INCLUDE:
   1. HOW TO OPERATE AND ADJUST THE SYSTEM.
   2. HOW TO MAINTAIN THE SYSTEM.
E. PROVIDE TWO FOLLOW UP VISITS TO REVIEW OPERATION OF THE SYSTEM AND MAKE ADJUSTMENTS FOR THE OWNER. SCHEDULE FOR 30 DAYS AND 6 MONTHS AFTER OCCUPANCY. SCHEDULE DATES WITH OWNER AT PROJECT CLOSEOUT.

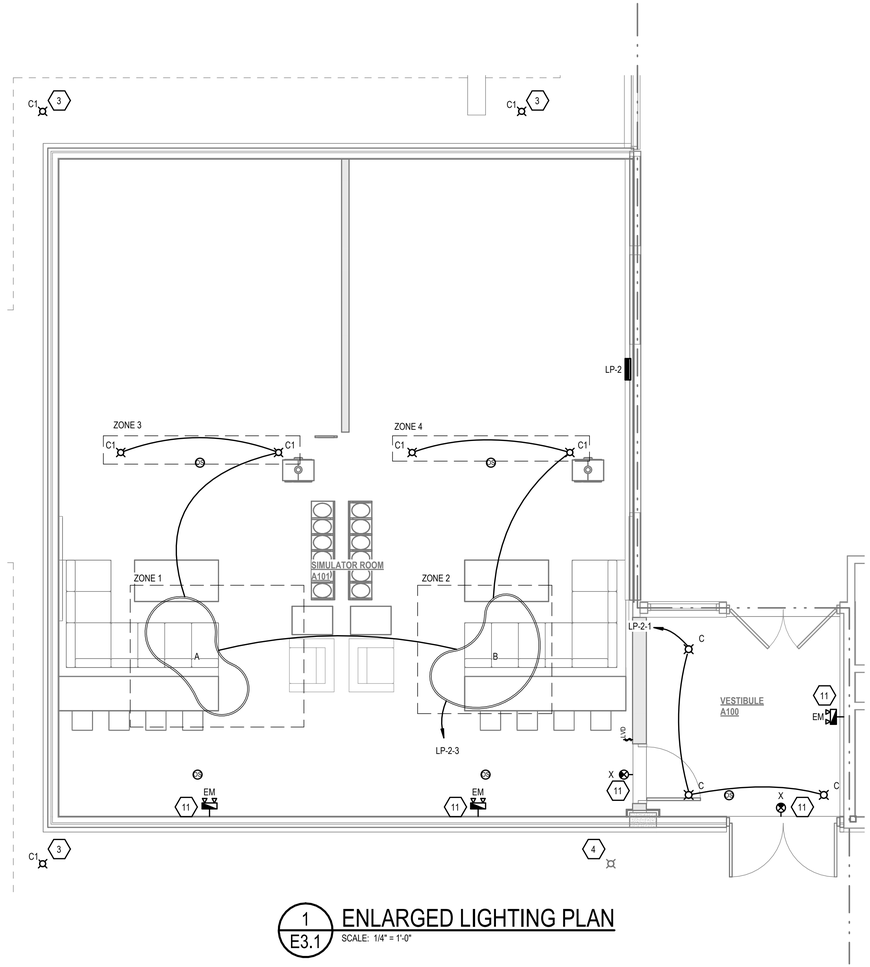
SEE THE FOLLOWING LIGHTING CONTROL SEQUENCE FOR PROPOSED SPACES:

VESTIBULE A100:
AUTO ON TO 100% LIGHT OUTPUT VIA OCCUPANCY SENSOR. AUTO OFF AFTER 20 MINUTE VACANCY.

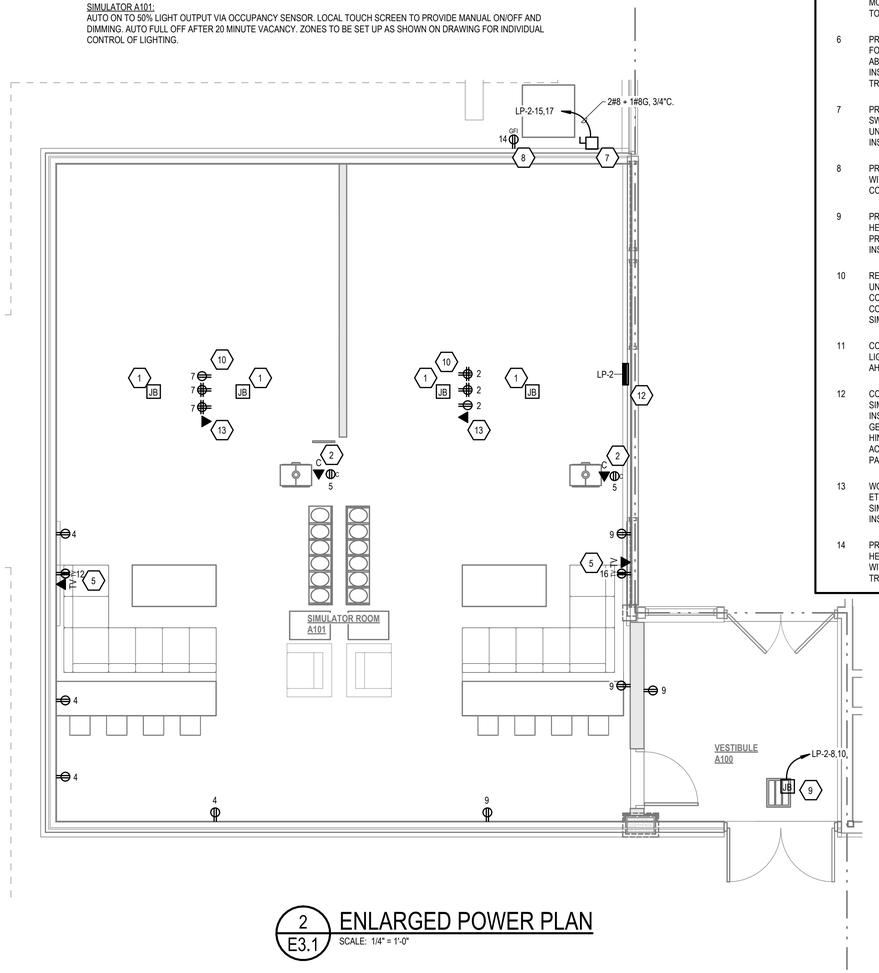
SIMULATOR A101:
AUTO ON TO 50% LIGHT OUTPUT VIA OCCUPANCY SENSOR. LOCAL TOUCH SCREEN TO PROVIDE MANUAL ON/OFF AND DIMMING. AUTO FULL OFF AFTER 20 MINUTE VACANCY. ZONES TO BE SET UP AS SHOWN ON DRAWING FOR INDIVIDUAL CONTROL OF LIGHTING.

KEYED CONSTRUCTION NOTES

SYMBOL	DESCRIPTION
⬡	
1	PROVIDE (1) 2" CONDUIT TO EACH CEILING SENSOR FROM UNDER PLATFORM TO ABOVE CEILING WITH A PULL STRING. CONDUITS TO BE RUN IN CENTER WALL BETWEEN SIMULATORS. COORDINATE INSTALLATION WITH SIMULATOR PM.
2	PROVIDE (1) 2" CONDUIT TO THE PROJECTOR FROM UNDER PLATFORM TO ABOVE CEILING WITH A PULL STRING. CONDUITS TO BE RUN IN CENTER WALL BETWEEN SIMULATORS. COORDINATE INSTALLATION WITH SIMULATOR PM.
3	CONNECT NEW SOFFIT LIGHTS TO SOFFIT LIGHTS CIRCUIT IN EXISTING BUILDING.
4	EXISTING BUILDING SOFFIT LIGHT TO REMAIN. UTILIZE CIRCUIT FOR NEW SOFFIT LIGHTS.
5	PROVIDE RECEPTACLE AND LOW VOLTAGE CONNECTION FOR WALL MOUNTED TV. COORDINATE INSTALLATION WITH OTHERS. CONFIRM MOUNTING HEIGHT WITH OWNER PRIOR TO ROUGH-IN.
6	PROVIDE LOCAL DISCONNECT SWITCH FOR FURNACE LOCATED IN CEILING ABOVE PRO SHOP. COORDINATE INSTALL AND LOCATION WITH OTHER TRADES.
7	PROVIDE 60A LOCAL DISCONNECT SWITCH FOR OUTDOOR CONDENSING UNIT. COORDINATE LOCATION AND INSTALL WITH OTHER TRADES
8	PROVIDE MAINTENANCE RECEPTACLE WITH WHEATHER PROOF WHILE IN USE COVER.
9	PROVIDE POWER CONNECTION TO UNIT HEATER IN CEILING. LOCAL DISCONNECT PROVIDED WITH UNIT. COORDINATE INSTALLATION WITH OTHER TRADES
10	RECEPTACLES TO BE LOCATED UNDERNEATH SIMULATOR ACCESS COVER PANEL FOR SIMULATOR POWER. COORDINATE LOCATION WITH SIMULATOR SUPPLIER.
11	CONNECT ALL EXIT AND EMERGENCY LIGHTING TO LOCAL LIGHTING CIRCUIT AHEAD OF ALL SWITCHING.
12	CONTRACTOR TO RECESS NEW LP-2 IN SIMULATOR BAY WALL. COORDINATE INSTALLATION WITH OTHER TRADES. GENERAL CONTRACTOR TO PROVIDE A HINGED DOOR COVER MATCHING THE ACCOUSTICAL PANEL TO CONCEAL PANELBOARD COVER.
13	WORK WITH OWNER IT TO RUN ETHERNET CABLE FROM IT ROOM TO SIMULATOR PLATFORM. COORDINATE INSTALLATION WITH SIMULATOR PM.
14	PROVIDE POWER CONNECTION TO DUCT HEATER. LOCAL DISCONNECT PROVIDED WITH UNIT. COORDINATE WITH OTHER TRADES.



1 E3.1 ENLARGED LIGHTING PLAN
SCALE: 1/4" = 1'-0"



2 E3.1 ENLARGED POWER PLAN
SCALE: 1/4" = 1'-0"

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PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
ENLARGED FLOOR PLANS

PROJECT NUMBER 25-0546-0295
PROJECT DATE 05/12/26
CHECKED BY R. KAIN
SHEET NUMBER E3.1

BRANCH PANEL: SUB PANEL

LOCATION: STORAGE G108
SUPPLY FROM: RP-1
MOUNTING: Surface
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING:
MAINS TYPE: MLO
MAINS RATING: 100 A

NOTES:
EXISTING PANEL, CIRCUITS IN BOLD ARE NEW

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	EXHAUST FAN	20 A	3	1200	1300					3	20 A	COOLER	2
3	--	--	--			1200	1300			--	--	--	4
5	--	--	--					1200	1300	--	--	--	6
7	**LP-2 (SIMULATOR ADDITION)**	**60 A**	**3**	5284	1400					3	20 A	FREEZER	8
9	**--**	**--**	**--**			5530	1400			--	--	--	10
11	**--**	**--**	**--**					5352	1400	--	--	--	12
13	SPACE	--	1	--	500					1	20 A	COOLER LIGHTS & PLUG	14
15	SPACE	--	1			--	--			1	--	SPACE	16
17	SPACE	--	1					--	--	1	--	SPACE	18
19	SPACE	--	1	--	--					1	--	SPACE	20
21	SPACE	--	1			--	--			1	--	SPACE	22
23	SPACE	--	1					--	--	1	--	SPACE	24
		Total Load:		9684.2 VA		9430.2 VA		9252.0 VA					
		Total Amps:		81 A		79 A		77 A					

LEGEND:

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	8236.0 VA	100.00%	8236.0 VA		
Lighting	293.3 VA	125.00%	366.6 VA	**TOTAL CONN LOAD:**	28366.4 VA
Receptacle	4140.0 VA	100.00%	4140.0 VA	**TOTAL EST DEMAND:**	28439.0 VA
Heating	3500.0 VA	100.00%	3500.0 VA	**TOTAL CONN CURRENT:**	79 A
				TOTAL EST DEMAND CURRENT:	79 A

NOTES:
PROVIDE AN UPDATED & TYPED DIRECTORY AT PROJECT CLOSEOUT

BRANCH PANEL: LP-2

LOCATION: SIMULATOR ROOM A101
SUPPLY FROM: SUB PANEL
MOUNTING: Recessed
ENCLOSURE: Type 1

VOLTS: 120/208 Wye
PHASES: 3
WIRES: 4

A.I.C. RATING: 22,000
MAINS TYPE: MLO
MAINS RATING: 100 A

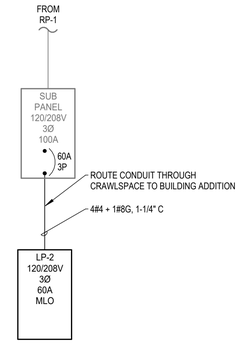
NOTES:
NEW 100A QO LOAD CENTER

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	VESTIBULE LTS	20 A	1	57	900					1	20 A	BOOTH #1 POWER	2
3	SIMULATOR ROOM LTS	20 A	1			237	720			1	20 A	GENERAL USE RECEP	4
5	PROJECTOR RECEPTACLES	20 A	1					360	888	1	15 A	FURNACE	6
7	BOOTH #2 POWER	20 A	1	900	1500					2	20 A	UH-1 VESTIBULE	8
9	GENERAL USE RECEP	20 A	1			720	1500			--	--	--	10
11	DUCT HEATER	25 A	2					1750	180	1	20 A	RECEP - WEST WALL TV	12
13	--	--	--	1750	180					1	20 A	OUTDOOR MAINTENANCE RECEP	14
15	OUTDOOR AC UNIT	35 A	2			2174	180			1	20 A	RECEP - EAST WALL TV	16
17	--	--	--					2174	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
		Total Load:		5284.2 VA		5530.3 VA		5352.0 VA					
		Total Amps:		44 A		46 A		45 A					

LEGEND:

LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	PANEL TOTALS	
HVAC	8236.0 VA	100.00%	8236.0 VA		
Lighting	293.3 VA	125.00%	366.6 VA	**TOTAL CONN LOAD:**	16166.4 VA
Receptacle	4140.0 VA	100.00%	4140.0 VA	**TOTAL EST DEMAND:**	16239.0 VA
Heating	3500.0 VA	100.00%	3500.0 VA	**TOTAL CONN CURRENT:**	45 A
				TOTAL EST DEMAND CURRENT:	45 A

NOTES:
PROVIDE AN UPDATED & TYPED DIRECTORY AT PROJECT CLOSEOUT



1 / E7.0 PARTIAL ONE-LINE DIAGRAM
NOT TO SCALE

NO.	REVISION	DATE
	ISSUED FOR BID	05/12/26
	FINAL OWNER REVIEW	04/30/26

WILLIAM A. KIBBE & ASSOCIATES, INC.
ENGINEERS | ARCHITECTS | SURVEYORS

WTAARCH.COM

WTA ARCHITECTS
100 S Jefferson Ave, Suite 601
Saginaw, Michigan 48607
989 752 8107

PROJECT TITLE
ADDITION TO:
CURRIE GOLF COURSE - WEST CLUBHOUSE
MIDLAND, MICHIGAN

SHEET TITLE
PANEL SCHEDULES & ONE-LINE DIAGRAM

PROJECT NUMBER 25-0546-0295
PROJECT DATE 05/12/26
CHECKED BY R. KAIN
SHEET NUMBER E7.0