

# West Michigan Hispanic Chamber of Commerce - HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

Project Number: 2024-010.00

Issued For: Bid Set

OWNER

WEST MICHIGAN HISPANIC CHAMBER OF COMMERCE

2007 Division Ave S Grand Rapids, MI 49507 T: 616-706-8368 CONTACT: Brad Laackman, Owner Representative

GENERAL CONTRACTOR:

Erhardt Construction

660 Fulton St East Ada, MI 49301 T: 616-676-1222 CONTACT: Kevin Osbeck

ROSSETTI

160 WEST FORT

T: 616-531-3660 CONTACT: John Male

160 WEST FORT
SUITE 400
DETROIT, MI 48226
T: 313.463.5151
CONTACT: William Smith, Associate
W: www.rossetti.com

CIVIL ENGINEER:

Exxel Engineering Inc

5252 Clyde Park Ave SW
Grand Rapids, MI 49509

STRUCTURAL ENGINEER:

Resurget Engineering

28 W Adams Ave, Suite 1710 Detroit, MI 28226 T: 313-315-3290 CONTACT: Marc Steinhobel

MEP ENGINEER:

MA Engineering

180 High Oak Rd
Bloomfield Hills, MI 48304

T: 248-258-1610

CONTACT: John Richards

GENERAL
"R" REVISED DRAWING, "N" NEW

"R" REVISED DRAWING, "N" NEW DRAWING DELETED DRAWINGS: NONE

	DWG#	DRAWING NAME	ISSUED FOR	DATE
	G-000	Cover Sheet	Bid Set	02/07/202
	G-001	General Information Sheet	Bid Set	02/07/202
	G-003	Code Analysis & Life Safety Plan	Bid Set	02/07/202
	G-005	Products and Specs	Bid Set	02/07/202
	G-006	Products and Specs	Bid Set	02/07/202
	G-007	LEED Specifications	Bid Set	02/07/202
D	RAWINGS	: 6		

CIVIL
"R" REVISED DRAWING, "N" NEW DRAWING
DELETED DRAWINGS: NONE

DWG#	DRAWING NAME	ISSUED FOR	DATE
C-100	Existing Conditions/Demolition Plan	Bid Set	02/07/2025
C-200	Site Development Plan	Bid Set	02/07/2025
C-201	Site Utility Plan	Bid Set	02/07/2025
C-202	Site Grading Plan	Bid Set	02/07/2025

ARCH
"R" REVISED DRAWING. "N" NEW DRAW

"R" REVISED DRAWING, "N" NEW DRAWING
DELETED DRAWINGS: NONE

	DWG#	DRAWING NAME	ISSUED FOR	DATE
	A-001	Architectural Site Plan	Bid Set	02/07/2025
	A-101	Floor Plan - Level 1	Bid Set	02/07/2025
	A-102	Floor Plan - Level 2	Bid Set	02/07/2025
	A-103	Roof Plan	Bid Set	02/07/2025
	A-201	Elevations - East and South	Bid Set	02/07/2025
	A-202	Elevations - West and North	Bid Set	02/07/2025
	A-301	Building Sections	Bid Set	02/07/2025
	A-303	Details		
	A-304	Details	Bid Set	02/07/2025
	A-401	Stairs & Elevator - Enlarged Plans and Sections	Bid Set	02/07/2025
	A-402	Typical Stair & Elevator Details	Bid Set	02/07/2025
	A-403	Interior Elevations	Bid Set	02/07/2025
	A-501	Roof Details	Bid Set	02/07/2025
	A-601	Door Schedule and Finish Legend	Bid Set	02/07/2025
	A-602	Typical Partition Details	Bid Set	02/07/2025
	A-603	Top of Partition Details	Bid Set	02/07/2025
	A-604	Partition Schedule, Legend, and Details	Bid Set	02/07/2025
	A-701	Reflected Ceiling Plan - Level 1	Bid Set	02/07/2025
	A-702	Reflected Ceiling Plan - Level 2	Bid Set	02/07/2025
DR/	WINGS:	19		

"R" REVISED DRAWING, "N" NEW DRAWING
DELETED DRAWINGS: NONE

	DWG#	DRAWING NAME	ISSUED FOR	DATE
	S.001	ABBREVIATIONS AND SYMBOLS	Bid Set	02/07/2025
	S.002	GENERAL NOTES	Bid Set	02/07/2025
	S.003	SPECIAL INSPECTIONS	Bid Set	02/07/2025
	S.101	FRAMING PLANS	Bid Set	02/07/2025
	S.200	BUILDING ELEVATIONS	Bid Set	02/07/2025
	S.201	WALL ELEVATIONS	Bid Set	02/07/2025
	S.301	TYPICAL CONCRETE DETAILS	Bid Set	02/07/2025
	S.302	FOUNDATION DETAILS	Bid Set	02/07/2025
	S.303	FOUNDATION SECTIONS	Bid Set	02/07/2025
	S.501	STEEL SECTIONS AND DETAILS	Bid Set	02/07/2025
	S.502	STEEL SECTIONS AND DETAILS	Bid Set	02/07/2025
	S.503	STEEL SECTIONS AND DETAILS	Bid Set	02/07/2025
	S.700	SECTIONS AND DETAILS	Bid Set	02/07/2025
	S.701	SECTIONS AND DETAILS	Bid Set	02/07/2025
חםו	VV/INICe.	1./		

MECHANICAL

"R" REVISED DRAWING, "N" NEW DRAWING DELETED DRAWINGS: NONE

DWG#	DRAWING NAME	ISSUED FOR	DATE
M-111	HVAC Floor Plan - Level 1	Bid Set	01/24/202
M-121	HVAC Floor Plan - Level 2	Bid Set	01/24/202
MP-001	Mechanical Symbols List, Index and Notes	Bid Set	01/24/202
MP-002	Mechanical Specifications	Bid Set	01/24/202
MP-131	Mechanical Roof Plan	Bid Set	01/24/202
MP-401	Mechanical Schedules	Bid Set	01/24/202
MP-501	Mechanical Details	Bid Set	01/24/202
MP-502	Mechanical Details	Bid Set	01/24/202
MP-601	Temperature Controls	Bid Set	01/24/202

PLUMBING
"R" REVISED DRAWING, "N" NEW DRAWING
DELETED DRAWINGS: NONE

DWG#	DRAWING NAME	ISSUED FOR	DATE
P-101	Underground Plumbing Plan	Bid Set	01/24/2025
P-111	Plumbing Floor Plan - Level 1	Bid Set	01/24/2025
P-121	Plumbing Floor Plan - Level 2	Bid Set	01/24/2025

I FCTRICAL

"R" REVISED DRAWING, "N" NEW DRAWING

DELETED DRAWINGS: NONE

	DWG#	DRAWING NAME	ISSUED FOR	DATE
	E-000	ELECTRICAL LEGEND, SHEET INDEX, AND GENERAL NOTES	Bid Set	02/07/2025
	E-010	ELECTRICAL ONE-LINE DIAGRAM	Bid Set	02/07/2025
	E-020	WIRE AND LIGHTING FIXTURE SCHEDULES AND CONTROL MATRIX	Bid Set	02/07/2025
	E-030	ELECTRICAL PANEL SCHEDULES	Bid Set	02/07/2025
	E-031	ELECTRICAL PANEL SCHEDULES	Bid Set	02/07/2025
	E-100	SITE PLAN - ELECTRICAL	Bid Set	02/07/2025
	E-210	FLOOR PLAN - LEVEL 1 - LIGHTING	Bid Set	02/07/2025
	E-220	FLOOR PLAN - LEVEL 2 - LIGHTING	Bid Set	02/07/2025
	E-310	FLOOR PLAN - LEVEL 1 - POWER	Bid Set	02/07/2025
	E-320	FLOOR PLAN - LEVEL 2 - POWER	Bid Set	02/07/2025
	E-330	ROOF PLAN - POWER	Bid Set	02/07/2025
	E-400	ENLARGED KITCHEN PLAN - POWER	Bid Set	02/07/2025
	E-500	ELECTRICAL DETAILS	Bid Set	02/07/2025
DR/	WINGS:	13		

FOOD SERVICE AND EQUPMENT

"R" REVISED DRAWING, "N" NEW DRAWING

DELETED DRAWINGS: NONE

 DWG #
 DRAWING NAME
 ISSUED FOR
 DATE

 FS-1
 Floor Plan
 Bid Set
 02/07/2025

 FS-2
 Detail Plan
 Bid Set
 02/07/2025



LOCATION MAP NOT TO SCALE

Range Front Control of the Control o

ROSSETTI

© 2021 ROSSETTI

SHEET TITLE

Cover Sheet

PROJECT #

2024-010.00

G-000

#### **ABBREVIATIONS** LABORATORY SOUTH EAST **ANGLE** LAVATORY SOLID CORE LAV FACH LINOLEUM FLOORING SCD SEAT COVER DISPENSER **EXPOSED CONSTRUCTION** CENTERLINE LKR LOCKER SCHED SCHEDULE **EXPOSED CONSTRUCTION** LIGHT SOAP DISPENSER PAINTED SECT LVT LUXURY VINYL TILE SECTION **EXPANSION JOINT ELEVATION** DIAMETER MAX MAXIMUM **SHOWER** ELEC. **ELECTRICAL** POUND OR NUMBER MECH SHEET MECHANICA ELEV. ELEVATOR **EXISTING** MEMB. MEMBRANE SIMII AR EMER. EMERGENC\ MTL METAL SFM STATE FIRE MARSHAL **ENCLOSURE** ENCL **MANUFACTURE** SPEC **SPECIFICATIONS** MFR. E.O.S./EOS EDGE OF SLAB **MANHOLE SQUARE** E.O.D./EOD EDGE OF DECK MINIMUM STAINLESS STEE ACCES. ACCESSORY **ELECTRICAL PANEI MIRROR** S. SK. SERVICE SINK ACCESS. ACCESSIBILITY EPX **EPOXY** MISC. MISCELLANEOUS SOLID SURFACE ACOUS. ACOUSTICAL EQUAL STANDARD (CAR ACOUSTICAL CEILING TILE MLAM METAL LAMINATI **EQUIPMENT** EQPM M.O. MASONRY OPENING AREA DRAIN **ELECTRIC WATER COOLER** MOUNTED STA STATION **ADJUSTABLE** EXIST./EX EXISTING STD MUL. STANDARD MULLION AGGR. **AGGREGATE** EXTERIOR ALUMINUM STOR STORAGE APPROX **APPROXIMAT** FIRE ALARM NOT IN CONTRACT STRU STRUCTURAL ARCH. ARCHITECTURA FLAT BAR SUSP NUMBER SUSPENDED ASB. ASBESTOS FLOOR DRAIN SYM NOM NOMINAL SYMMETRICAL ASPH. ASPHAL<sup>\*</sup> FOUNDATION NTS NOT TO SCALE FIRE EXTINGUISHER **TREAD** BAF FIRE EXTINGUISHER CABINET TOP OF CURB FIRE HOSE CABINET **OVERALL** TRAFFIC ELASTOMERIC BITUM BITUMINOUS FIN OBSCURE OBS COATING BLDG. **BUILDING** FLOOR ON CENTER *TELEPHONE* BLOCKING FLASH **FLASHING** OUTSIDE DIAMETER TONGUE AND GROOVE BEAM **FLUORESCENT** FLUOR OPCI OWNER PROVIDED THK BOT. BOTTOM FACE OF CONCRETE FOC TOP OF PARAPET CONTRACTOR INSTALLED BRICK FACE OF FINISH OFC OFFICE TOILET ACCESSORY FOS FACE OF STUDS OPNG OPENING CAB. CABINET FPRF **OPPOSITE CATCH BASIN** FRP FIBERGLASS REINFORCED PANEL OPOI T.O.W. OWNER PROVIDED TOP OF WALL CEM. CEMENT FULL SIZE TOS/ T.O.S. TOP OF STEEL OWNER INSTALLED CER. **CERAMIC** FOOT OR FEET CAST IRON FTG. **FOOTING** TERRAZZO FLOORING **CONTROL JOINT** FURRING PRCST PRECAS<sup>7</sup> CEILING FUT. **FUTURE** PI ATE UPH UPHOLSTERY CLKG. CAULKING PLAM PLASTIC LAMINATE UNF UNFINISHED CLO. CLOSET GAUGE PNT UNLESS NOTED OTHERWISE CLR. CLEAR GALV. GALVANIZED POINT CASED OPENING G.B. GRAB BAR PLAS PLASTER COLUMN **GLASS FIBER REINFORCED** VCT PLYWD VINYL COMPOSITION TILE CONC. PLYWOOD CONCRETE CONCRETE VERT. VERTICAL CONN. CONNECTION GLASS VINYL ASBESTOS TILI **CONSTR** CONSTRUCTION GND GROUND **ROOF DRAIN** VEST VESTIBULE **CONTINUOUS** CONT **GRADE** REFLECTED CEILING PLAN VINYL FLOORING CORR. CORRIDOR GYP. **GYPSUM** RUBBER FLOORING CARPET RESIN PANE CTSK. COUNTER SUNK HOSE BIBB RESINOUS FLOORING WITH **HOLLOW CORE** RQD WALL BASE REQUIRED DOUBLE HDWD HARDWOOD W.C. WATER CLOSET DEPARTMENT HDWE **HARDWARE** WALLCOVERING DRINKING FOUNTAIN HOLLOW METAL WOOD DET. DETAIL HORIZ. HORIZONTAL WITHOUT W/O DIAMETER WATER RESISTANT DIM. **DIMENSION** HGT **HEIGHT** WSCT. WAINSCO DISP DISPENSER WT. WEIGHT DEPT. OF STATE ARCHITECT **INSIDE DIAMETER** INSUL INSULATION D.O. DOOR OPENING INTER, INTERIOR DRAWFR **JANITOR DOWN SPOUT** JANITOR'S CLOSET

**KEYNOTE SYSTEM** 

051200.B 

KEYED NOTE TAG

SECTIONS ARE SIMILARLY IDENTIFIED.

1. CERTAIN MATERIALS, COMPONENTS OR ASSEMBLIES ARE IDENTIFIED

AND/OR DESCRIBED ON SOME DRAWINGS USING AN ALPHANUMERIC

REFERENCE-IDENTIFICATION. OR KEYNOTE SYSTEM. THIS KEYNOTE

EACH KEYNOTE ITEM. (SHOULD THE LEGEND ON THE DRAWING NOT

INFORMATION ONLY, AS AN EXPRESSION OF GENERAL INTENT. THE

COMPONENTS OR ASSEMBLIES ARE SIMILARLY IDENTIFIED, OR EVEN THE

SAME MATERIAL, COMPONENT OR ASSEMBLY IN DIFFERENT DETAILS OR

INFORMATION ADJACENT TO THE KEYNOTE. SHOULD SIMILAR CONDITIONS

HAVE DIFFERENT ADDITIONAL INFORMATION, OR ONE NOT HAVE ANY, THE

CONTAIN THAT ITEM, REFER TO LEGENDS ON OTHER DRAWINGS).

2. THE KEYNOTE SYSTEM IS USED FOR CONVEINIENCE AND GENERAL

ARCHITECT SPECIFICALLY DOES NOT WARRANT ALL MATERIALS.

3. SOME MATERIALS, COMPONENTS OR ASSEMBLIES HAVE ADDITIONAL

HIGHER QUALITY SHALL TAKE PRECEDENCE UNLESS OTHERWISE

SYSTEM CONSISTS OF A 6-DIGIT NUMBERFOLLOWED BY A PERIOD AND A

LETTER SUFFIX. WHERE KEYNOTES ARE USED ON A DRAWING, REFER TO

THE LEGEND ON THAT DRAWING FOR IDENTIFICATION WHICH RELATES TO

# D.S. DRY STAND PIPE DWG. DRAWING MATERIAL LEGEND **ENGINEERED FILL POROUS FILL GRAVEL FILL** CAST IN PLACE CONCRETE PRECAST CONCRETE CONCRETE MASONRY **GROUT** MORTAR **ALUMINUM** STAINLESS STEEL STRUCTURAL STEEL MISCELLANEOUS STEEL HARDWOOD WOOD, ENDGRAIN PLYWOOD CONTINUOUS BLOCKING

ENGINEERED WOOD

RIGID INSULATION

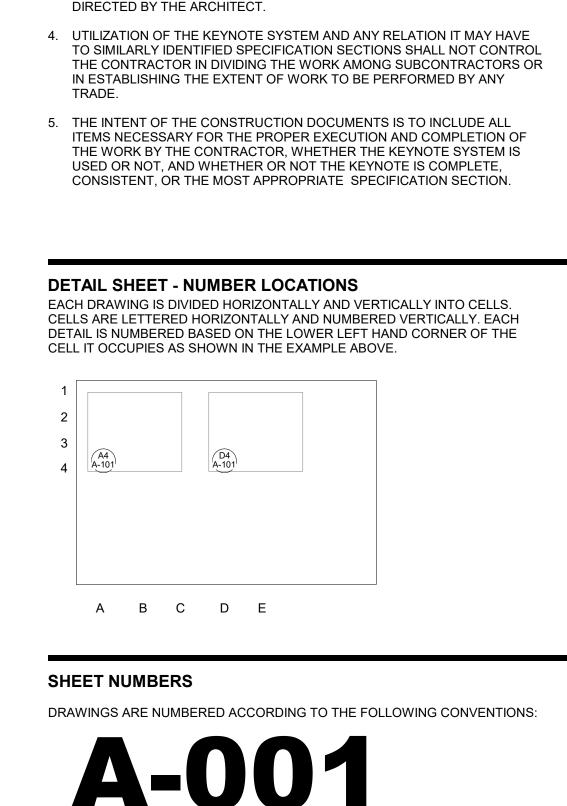
BATT INSULATION

**GYPSUM BOARD** 

CEMENT BOARD

SEALANT WITH BACKER ROD

SPRAY ON FIREPROOFING



2 ELEVATIONS

4 LARGE SCALE VIEWS

(PLANS & SECTIONS)

6 SCHEDULES & DIAGRAMS

7 REFLECTED CEILING PLANS

3 SECTIONS

5 DETAILS

C CIVIL

LANDSCAPE

S STRUCTURAL

P PLUMBING

M MECHANICAL

E ELECTRICAL

FA FIRE ALARM

SC SECURITY FS FOOD SERVICE

DT DATA

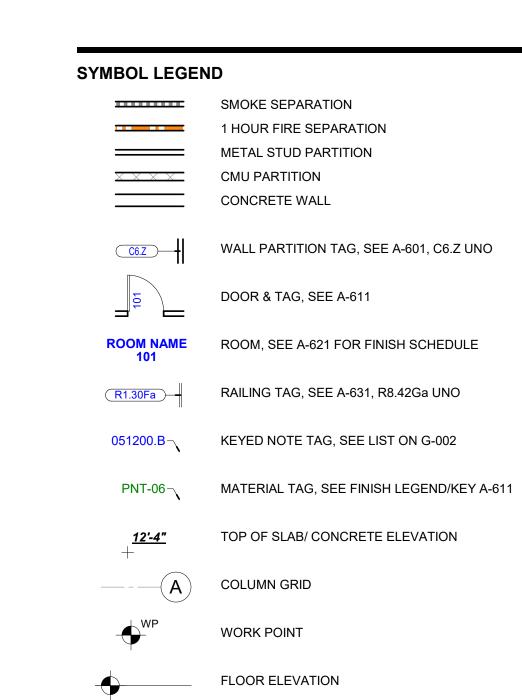
AV AUDIO VISUAL

A ARCHITECTURAL

FP FIRE PROTECTION

#### **VIEW LEGEND** -DETAIL NUMBER -DRAWING NUMBER **ELEVATIONS** EXTERIOR ELEVATION [COARSE] PARTIAL ELEVATION [MEDIUM] INTERIOR ELEVATION [FINE] <u>SECTIONS</u> BUILDING SECTION [COARSE] PARTIAL SECTION [MEDIUM] WALL PROFILE OR DETAIL [FINE] DRAWING SEQUENCE NUMBER -DETAIL NUMBER DISCIPLINE DESIGNATOR DRAWING TYPE DESIGNATOR G GENERAL 0 GENERAL, LEGENDS LS LIFE SAFETY l PLANS **Ao** Drawing Title

#### MATERIAL TAG SYSTEM PNT-07 MATERIAL TAG 1. CERTAIN MATERIALS ARE IDENTIFIED AND/OR DESCRIBED ON SOME DRAWINGS USING A KEY. WHERE MATERIAL TAGS ARE USED ON A DRAWING, REFER TO THE LEGEND/KEY ON A-611 FOR IDENTIFICATION WHICH RELATES TO EACH MATERIAL ITEM. (SHOULD THE LEGEND ON THE DRAWING NOT CONTAIN THAT ITEM, REFER TO THE ROOM FINISH SCHEDULE ON A-611). 2. THE MATERIAL TAG SYSTEM IS USED FOR CONVEINIENCE AND GENERAL INFORMATION ONLY, AS AN EXPRESSION OF GENERAL INTENT THE ROOM FINISH SCHEDULE SHALL TAKEN PRECEDENCE.



PARTITIONS.

A. GRAB BARS

. STAIR RAILS

. TOILET ACCESSORIES

F. UNDER PRE-FAB. CURB FOR ALL

ROOF-MOUNTEDEQUIPMENT

SKETCHES FOR SIGNAGE LOCATIONS.

MECHANICAL AND ELECTRICAL OPENINGS-

MECHANICAL AND ELECTRICAL TRADES.

<u>ROOF EQUIPMENT AND OPENINGS</u>

UNLESS NOTED OTHERWISE.

MECHANICAL AND ELECTRICAL EQUIPMENT PADS

<u>SIGNAGE BACKING PANELS ALL AREAS INDICATED ON THE DRAWINGS-</u>

PROVIDE 18 GA (MINIMUM) STEEL BACKING PANELS AT SIGNAGE LOCATIONS

THREE METAL STUDS (MINIMUM) HORIZONTALLY. REFER TO SIGNAGE ISSUE

SIZE AND LOCATION OF ALL FLOOR OPENINGS, ROOF OPENINGS, AND WALL

EQUIPMENT, ETC. SHALL BE COORDINATED AND VERIFIED WITH MECHANICAL

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATION OF ALL

EXHAUST FANS, VENTS, MECHANICAL OR ELECTRICAL EQUIPMENT, ETC.

PROVIDE 2A-10B:C TYPE FIRE EXTINGUISHERS AT ALL TYPICAL LOCATIONS

OPENINGS REQUIRED TO ACCOMMODATE DUCT PENETRATIONS,

PROVIDE CONCRETE PADS FOR ALL MECHANICAL AND ELECTRICAL

EQUIPMENT AS REQUIRED. REFER TO MECHANICAL AND ELECTRICAL

DRAWINGS FOR LOCATION OF ALL EQUIPMENT AND VERIFY SIZE WITH

(WHERE ATTACHMENT TO GYPSUM BOARD IS REQUIRED). SPAN PANELS

E. TOILET PARTITIONS

AND ELECTRICAL TRADES.

B. MIRRORS

G. DOOR BUMPERS

I. CLOSET POLES

K. MILLWORK COUNTERS

L. MILLWORK CABINETS

J. COAT HOOKS

M. TV BLOCKING

H. SHELVING

**GENERAL NOTES** [ENTIRE PROJECT] CONCRETE FOUNDATION WAL 033000.B THE PROJECT SHALL CONFORM TO UNDERWRITERS LABORATORY FIRE 033000.C CONCRETE SLAB-ON-GRADE RESISTANCE DIRECTORY AND BUILDING MATERIALS DIRECTORY. 033000.D CONCRETE SUSPENDED SLAB REFER TO SPECIFICATION SECTION 078100, AS APPLICABLE, FOR SPRAY-ON 033000.L VAPOR RETARDER FIREPROOFING REQUIREMENTS. ANY MATERIAL SUBSTITUTIONS TO A LISTED 033000.N EXPANSION/ISOLATION JOINT FILLER STRIP U.L. DESIGN NUMBER SHALL BE COORDINATED BY THE RELATED PRIME 033000.P CONCRETE FILL CONTRACTOR, SUBCONTRACTOR AND/OR MATERIAL SUPPLIER FOR 033000.Q WATER-STOP COMPLIANCE.THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL APPROVALS 034100.A PLANT-PRECAST CONCRETE STADIA FOR ANY MATERIAL SUBSTITUTIONS IN THE MECHANICAL AND ELECTRICAL U.L. DESIGN ASSEMBLY - BY THE FIRE MARSHALL AND BUILDING INSPECTOR HAVING 034500.A ARCHITECTURAL PRECAST CONCRETE UNIT JURISDICTION PRIOR TO ACCEPTANCE. 042000.A CONCRETE MASONRY UNIT 042000.W MASONRY LINTEL, GROUT SOLID FOR ANY CHANGE OF U.L. DESIGN NUMBER, OR AY CHANGE IN MATERIAL(S) IN A 042000.X MASONRY BOND BEAM, GROUT SOLID U.L. DESIGN ASSEMBLY. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR 051200.A STRUCTURAL STEEL FRAMING TO COORDINATE ALL OTHER RELATED MATERIALS OR ASSEMBLIES AFFECTED 051200.C STEEL BEAM BY THE CHANGE. 051200.J STEEL BENT PLATE PROVIDE COMPLETE U.L. APPROVED THROUGH-PENETRATION FIRESTOP 051200.K STEEL ANGLE SYSTEMS AT ALL RATED WALL PENETRATIONS. REFERENCE SPECIFICATION 051200.L STEEL HOLLOW STRUCTURAL SECTION (HSS) SECTION 078413. 051200.M BOLT CONNECTION 053100.A TREATMENT OF EXISTING SURFACES STEEL DECKING PATCH AND REPAIR ALL EXISTING WALL SURFACES ADJACENT TO NEW WORK 053100.B STEEL ROOF DECK AS REQUIRED TO ACHIEVE AN UNINTERRUPTED SURFACE APPEARANCE. 053100.C STEEL FLOOR DECK 053100.H END CLOSURE PATCH AND REPAIR CONCRETE FLOORS TO ACHIEVE A CONTINUOUS, SMOOTH 054000.A COLD FORMED METAL FRAMING SYSTEM AND FLUSH FLOOR SURFACE. 054000.B STEEL STUD **DIMENSIONING CRITERIA** 055000.E ELEVATOR DOOR SILL SUPPORT ANGLE 055000.J ANCHOR BOLT DIMENSIONS FOR LOCATING PARTITIONS AND OPENINGS ARE GENERALLY 055000.P STEEL ANGLE ESTABLISHED BY CRITERIA. ONLY EXCEPTIONS TO THESE CRITERIA WILL BE 055100.B METAL STAIR PAN DIMENSIONED. TYPICAL DIMENSIONING CRITERIA ARE OUTLINED BELOW. 055100.C STEEL STRINGER FOR OPENINGS IN PARTITIONS OR WALLS: 055100.D STEEL STAIR SUPPORT 055100.F ANCHOR BOLT (A) WHEN AN OPENING OCCURS AT A COLUMN OR GRID LINE, NO DIMENSIONS 055100.G STEEL ANGLE SUPPORT WILL BE SHOWN ON THE PLANS. THE OPENING WIDTH WILL BE 055100.H ABRASIVE NOSING ESTABLISHED BY EITHER CRITERIA OR SCHEDULES. 055100.J STEEL POST (B) WHEN NEITHER THE JAMB OF A DOOR OR OPENING OCCURS AT A COLUMN 055100.K BENT STEEL PLATE OR GRID LINE, OR ADJACENT TO A PARTITION AT A RIGHT ANGLE 055213.A STEEL PIPE RAILING SYSTEM ONE JAMB WILL BE LOCATED DIMENSIONALLY. 055213.C STEEL PIPE/TUBE RAIL 055213.D STEEL PIPE/TUBE SUPPORT (C) WHEN ONE JAMB IS LOCATED BY A PARTITION AT A RIGHT ANGLE, THE 055213.E STEEL PICKET FOLLOWING DIAGRAMS APPLY: STEEL PIPE SLEEVE 055213.F 055213.H HANDRAIL BRACKET- 1" x 3/16" BENT STEEL BAR 061000.B FIRE-RETARDANT-TREATED WOOD BLOCKING -DOOR AS -PARTITIONS 061000.C PRESERVATIVE-TREATED WOOD BLOCKING SCHEDULED AT RIGHT 061600.A GLASS-MAT GYPSUM SHEATHING TYP. ANGLE, TYP. 071326.A MODIFIED BITUMINUS SHEET WATERPROOFING 072100.B GLASS-FIBER BATT INSULATION FULLY ADHERED TPO ROOFING MEMBRANE 073300.B 073300.C ROOF INSULATION 073300.E DRAINAGE BOARD TO ADJACENT WALL OR NOT DIMENSIONED NOT DIMENSIONED NEAREST CMU JOINT ON FLOOR PLANS ON FLOOR PLANS 073300.T PROTECTION BOARD 073300.X PLAZA PAVER 073300.Y ADJUSTABLE PAVER SUPPORT PEDESTAI WALL ADJ. **METAL STUD** CMU WALLS 074214.C **TO COLUMNS WALLS** 075323.B TPO ROOFING MEMBRANE 075323.C SHEET FLASHING 075323.D VAPOR RETARDER DIMENSIONS ON PLANS ARE SHOWN TO THE FACE OF MASONRY UNIT, FACE 075323.F LAP SEALANT OF CONCRETE, AND THE FACE OF THE GYPSUM WALLBOARD OF METAL STUD METAL TERMINATION BARS 075323.H 075323.J **FASTENERS** 075323.M ROOF INSULATION 075323.T COVER BOARD REFLECTED CEILING PLANS 075423.B 075423.S ITEMS SHOWN ON THE ARCHITECTURAL DRAWINGS ARE TO BE LOCATED PER 076200.A FLASHING THE ARCHITECTURAL DRAWINGS. NOT ALL ITEMS ARE SHOWN ON THE 076200.B COUNTER FLASHING ARCHITECTURAL DRAWINGS. COORDINATE WITH MECHANICAL & ELECTRICAL DRAWINGS FOR LOCATION, MOUNTING CONDITIONS, QUANTITIES AND TYPES 077200.A ROOF CURB OF ALL LIGHTS, GRILLES, DIFFUSERS, EXIT SIGNS, AND ALL MISCELLANEOUS 077200.C **ROOF HATCH** 078413.A THROUGH-PENETRATION FIRESTOP SYSTEM 078443 WOOD BLOCKING REQUIREMENTS 079200.A JOINT SEALANT PROVIDE FIRE RETARDANT TREATED WOOD BLOCKING AS SPECIFIED IN 079200.C SEALANT AND BACKER ROD SPECIFICATIONS 081113.B HOLLOW METAL DOOR FRAME SECTION 061000 - ROUGH CARPENTRY - FOR THE FOLLOWING ITEMS (UNLESS 084423.A STRUCTURAL-SEALANT-GLAZED CURTAIN WALL ASSEMBLY ANOTHER BACKING 088000.G MATERIAL IS NOTED): 092216.B STEEL STUD

092900.A TYPE X GYPSUM BOARD (U.N.O.) 142100.F ELEVATOR DOOR FRAME 142100.H **ELEVATOR SILL** 142100.S SHEET METAL DEFLECTOR/DUST COVER ELEVATOR ACCESS DOOR 142400.F 142400.H **ELEVATOR DOOR** 220000.B **ROOF DRAIN** 310000.C DRAINAGE FILL TA-01 SOAP DISH TA-02 SURFACE MOUNTED SOAP DISPENSER TA-04B TA-05 SURFACE MOUNTED JUMBO-ROLL TOILET TISSUE DISPENSER TA-07 36" GRAB BAR - REAR TA-07A 42" GRAB BAR - SIDE TA-07C 18" GRAB BAR - VERTICAL TA-11 MOP STRIP AND SHELF TA-12 SURFACE MOUNTED SEAT COVER DISPENSER DIAPER CHANGING STATION

#### **GENERAL NOTES [PROJECT SPECIFIC]**

A. GENERAL NOTES APPLY TO ALL SHEETS. B. THE CONTRACTOR SHALL VISIT THE PROJECT SITE AND BECOME KNOWLEDGEABLE OF CONDITIONS IN THE VICINITY OF THE PROJECT. HE SHALL INVESTIGATE, VERIFY, AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE ARCHITECT OF ANY CONDITION INCONSISTENT WITH THE CONTRACT DOCUMENTS BEFORE PROCEEDING WITH THAT AREA OF WORK

C. THE CONTRACTOR SHALL NOTIFY THE OWNER REPRESENTATIVE OF ANY AND ALL UTILITIES IDENTIFIED ON THE PROJECT SITE (NOT IDENTIFIED FOR REMOVAL OR RELOCATION) DURING THE COURSE OF CONSTRUCTION TO BE IN CONFLICT WITH WORK INDICATED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL REMOVE OR RELOCATE SUCH UTILITIES ONLY AFTER RECEIVING DIRECTION TO PROCEED FROM THE OWNER

REPRESENTATIVE. D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE REVIEW OF ALL CONTRACT DOCUMENTS. NO EXTRAS WILL BE PERMITTED FOR ANY ITEM WHICH IS INCLUDED OR IMPLIED BT THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ARCHITECT OF ANY AMBIGUITY OR INCONSISTENCY, OR ERROR WHICH THEY DISCOVER UPON EXAMINATION. E. THE CONTRACTOR SHALL PROVIDE LABOR, MATERIALS AND ASSEMBLIES

NECESSARY TO COMPLETE THE PROJECT AS DESCRIBED BY THESE CONTRACT DOCUMENTS. F. ALL CONSTRUCTION MEANS AND METHODS ARE THE RESPONSIBILITY OF THE CONTRACTOR. G. DURING AND AT THE COMPLETION OF THE DAILY WORK, THE CONTRACTOR

SHALL BE RESPONSIBLE FOR CLEANING UP AND REMOVING ALL RUBBISH AND DEBRIS BEFORE LEAVING THE PROJECT SITE. H. THE CONTRACTOR SHALL PREVENT ALL UNAUTHORIZED PERSONNEL FROM ENTERING THE PROJECT SITE DURING WORK HOURS, AND IS RESPONSIBLE FOR SECURING THE PROJECT SITE DURING NON-WORK

I. NUMERICAL DIMENSIONS SHOWN ON THE PLANS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. ALL DIMENSIONS WHETHER GIVEN OR SCALED SHALL BE VERIFIED IN THE FIELD. J. ALL DIMENSIONS ARE TO BE CONSIDERED NOMINAL UNLESS NOTED

OTHERWISE. ALL DIMENSIONS ARE TO FINISHED WALL SURFACES UNLESS OTHERWISE NOTED. K. DETAILS NOT INDICATED ARE SIMILAR IN CHARACTER TO THOSE SHOWN. WHERE SPECIFIC DIMENSIONS, DETAILS OR DESIGN INTENT CAN NOT BE DETERMINED, NOTIFY THE ARCHITECT FOR CLARIFICATION.

FLOOR SPOT FLEVATIONS ARE SHOWN THUS XXX'-X" M. PROVISIONS SHALL BE MADE AT FULL HEIGHT NONBEARING WALLS FOR 1-INCH VERTICAL MOVEMENT OF BUILDING STRUCTURE WITHOUT TRANSFER OF COMPRESSIVE LOADS TO WALL. FILL IRREGULARITIES BETWEEN TOP OF WALL AND DECK ABOVE WITH FIRE SAFING INSULATION OR FIRE STOPPING MATERIALS AS REQUIRED TO MEET FIRE RATING OF RESPECTIVE WALLS.

N. SEAL PENETRATIONS THROUGH FIRE-RESISTANCE-RATED CONSTRUCTIONS WITH THROUGH- PENETRATION FIRESTOP MATERIAL AS REQUIRED TO ACHIEVE RESPECTIVE FIRE-RESISTIVE RATING AND SMOKE STOPPAGE. SEE DETAILS ON SHEET LS-001. O. SEE STRUCTURAL DRAWINGS FOR BRACING OF NONLOAD BEARING

MASONRY WALLS. P. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN STEEL STUD PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS; I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES.

MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS,

Q. GYPSUM BOARD AND PLASTER SURFACES SHALL BE ISOLATED WITH

CONTROL JOINTS WERE INDICATED ON DRAWINGS AND/OR AS DESCRIBED IN THE SPECIFICATIONS. R. MASONRY CONTROL JOINTS (CJ) AND CONTROL JOINTS ABOVE (CJA) SHALL BE LOCATED AS INDICATED ON FLOOR PLANS AND BUILDING ELEVATIONS, AND WHERE LARGE PLUMBING VENTS OR RISERS OCCUR IN SINGLE WYTHE MASONRY WALLS, AND WHERE MASONRY WALLS BEARING ON CONCRETE FLOOR SLABS ABUT MASONRY WALLS BEARING ON CONCRETE FOOTINGS OR AS INDICATED ON DRAWINGS. S. INCLUDE OWNER-FURNISHED AND INSTALLED ITEMS AND OWNER

FURNISHED AND CONTRACTOR INSTALLED ITEMS IN THE CONSTRUCTION SCHEDULE, AND COORDINATE WITH OWNER TO ACCOMMODATE THESE

T. COORDINATE MECHANICAL CHASE SIZES WITH MECHANICAL

CONTRACTOR. U. COORDINATE WITH MECHANICAL AND ELECTRICAL CONTRACTORS SIZE AND LOCATION OF EQUIPMENT PADS INDICATED ON FLOOR PLANS.

V ARCHITECTURAL FINISH FLOOR ELEVATION 100'-0" EQUALS ACTUAL SITE REFERENCE ELEVATION OF FINISH FLOOR 615 FEET W. EXTEND FURRING CHANNELS AND GYPSUM BOARD UP MINIMUM 4 INCHES ABOVE FINISHED CEILING ON CONCRETE WALLS.

X. SCRIBE GYPSUM BOARD OF WALL AND PARTITIONS TO IRREGULARITIES OF DECK ABOVE. SEAL TIGHTLY AROUND PENETRATIONS.

> SHEET TITLE **General Information Sheet**

ROSSETTI

160 WEST FORT, SUITE 400

DETROIT, MICHIGAN 48226

**ROSSETTI.COM** 313.463.5151

West Michigan

Hispanic

**Chamber of** 

Commerce -

1111 Godfrey Ave. SW

**CONSULTANT** 

**PROFESSIONAL SEAL** 

© 2025 ROSSETTI

**# DESCRIPTION** 

DATE

02/07/2025

Grand Rapids, MI 49507

**PROJECT** 

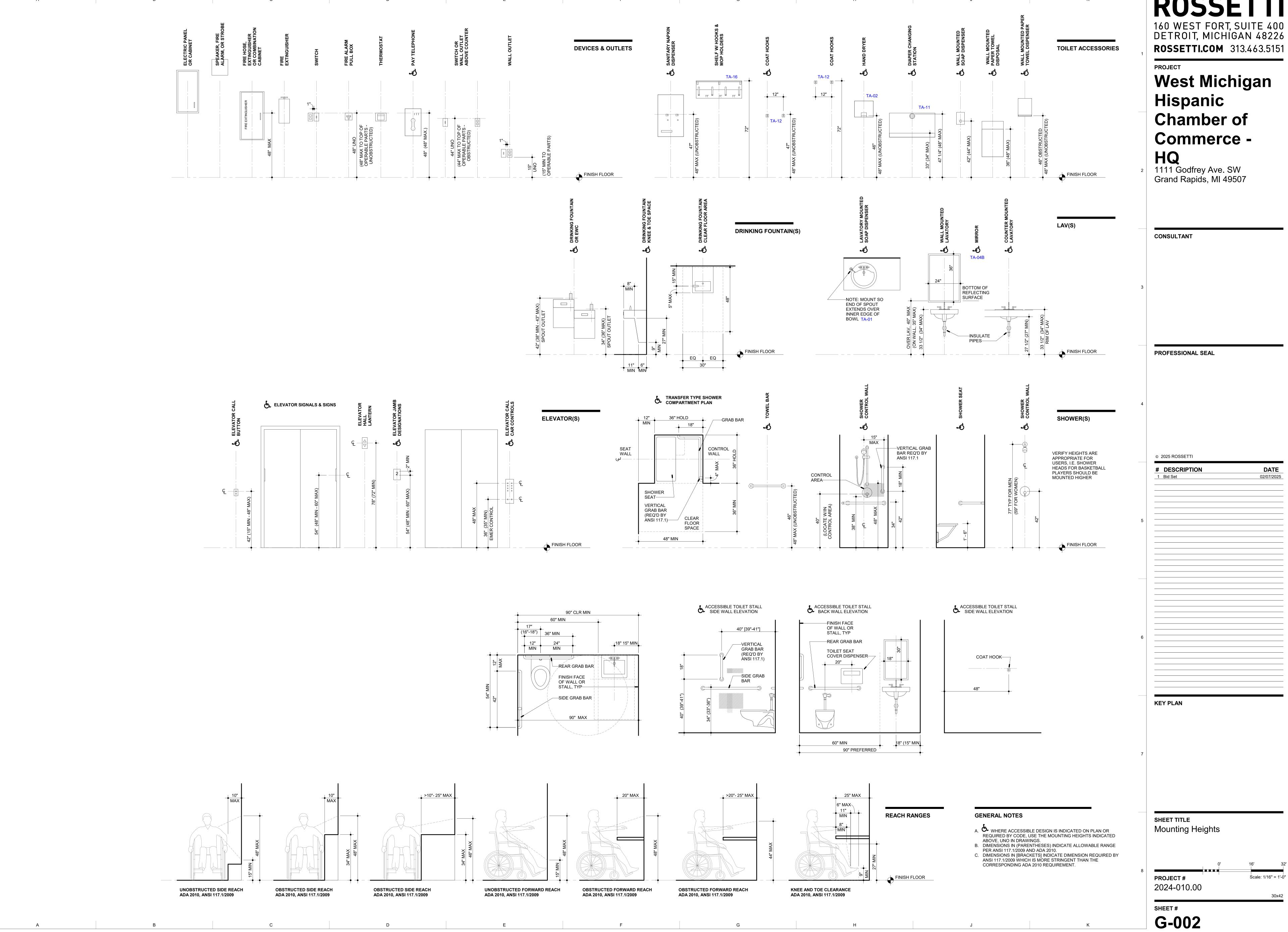
Scale: 1/16" = 1'-0" PROJECT # 2024-010.00

**KEY PLAN** 

SHEET# G-001

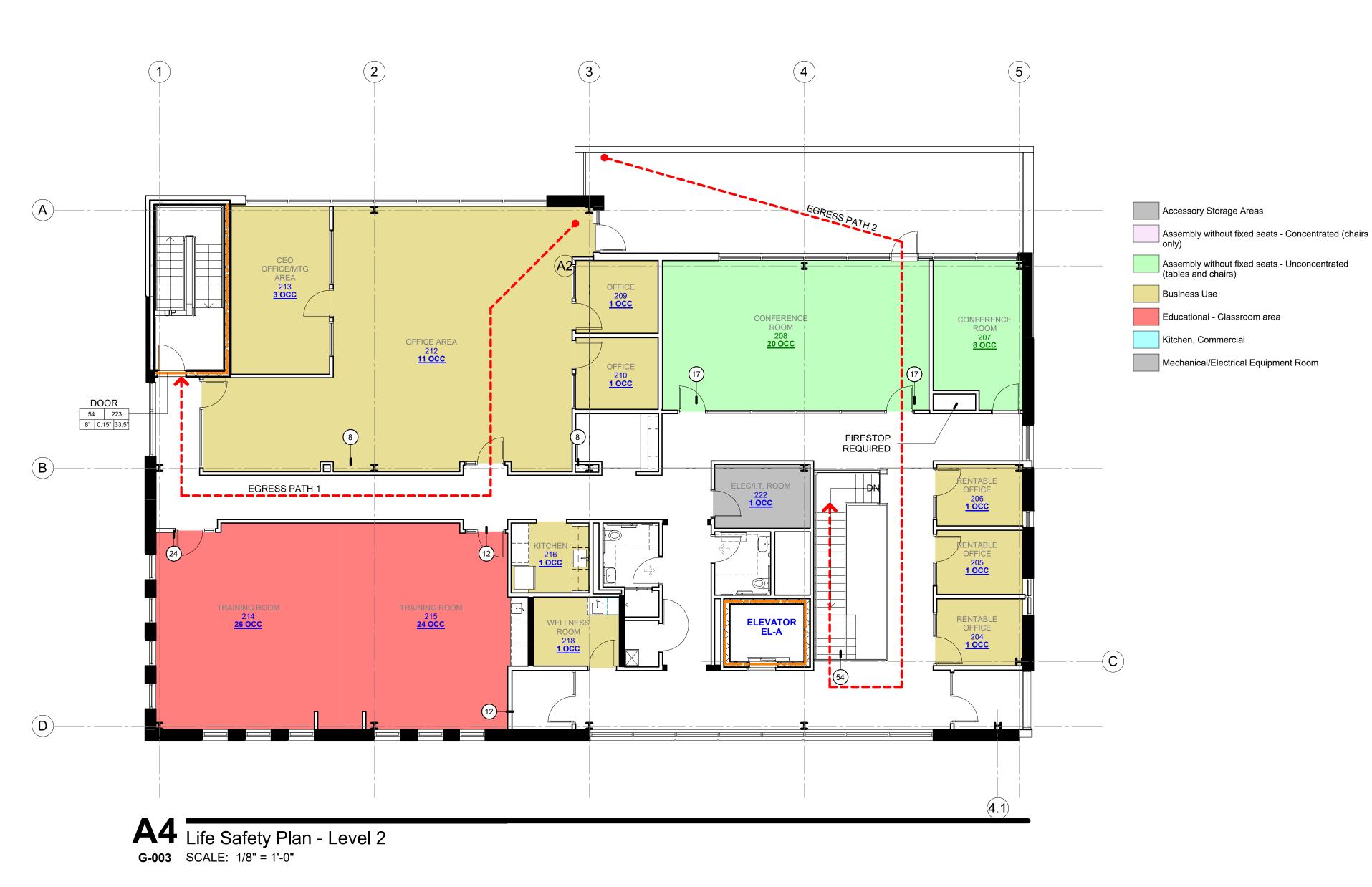
**A-101** SCALE: 1/8" = 1'-0" REF: G-100

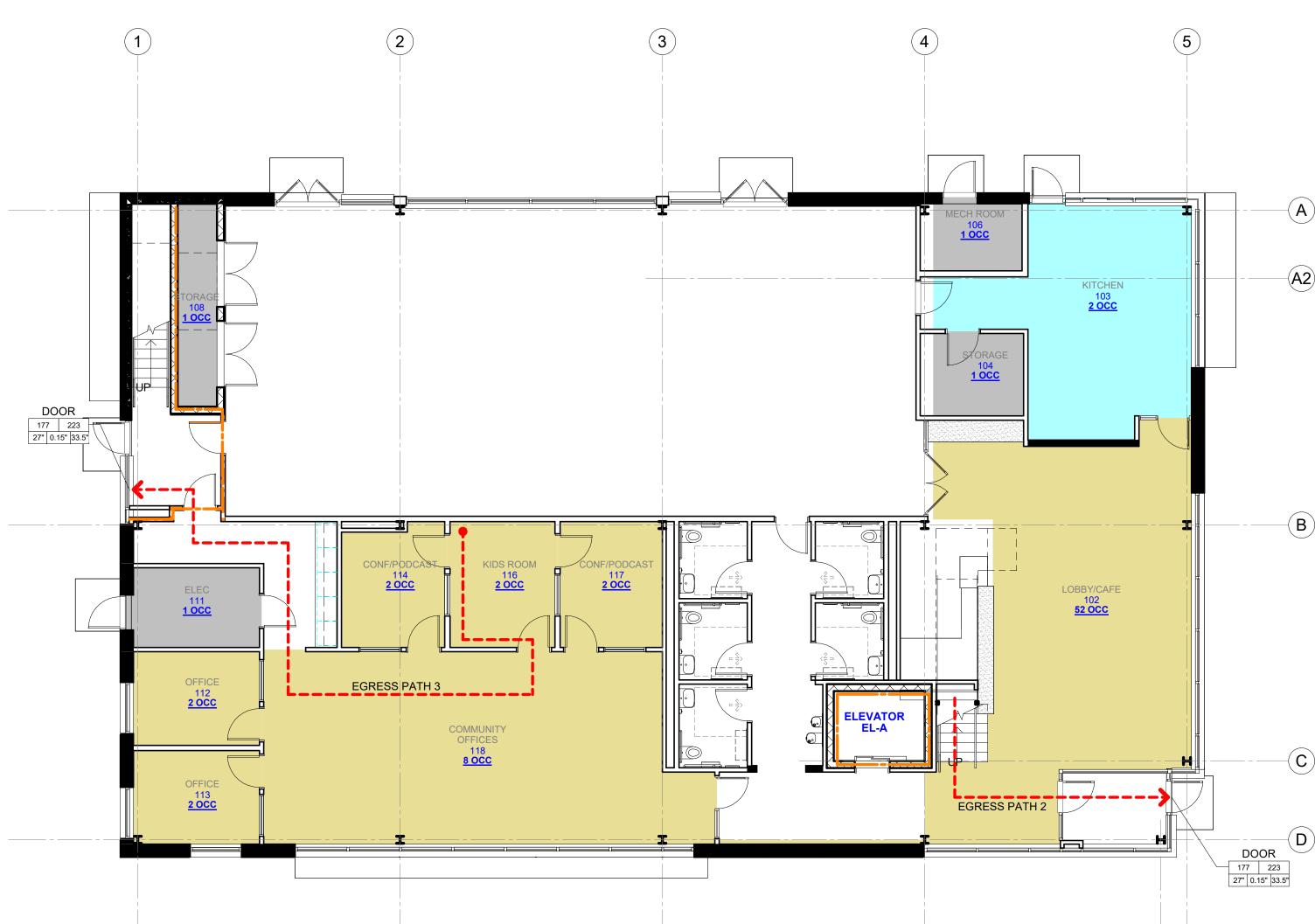
-SHEET WHERE DRAWN DRAWING WHERE REFERENCED



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

Scale: 1/16" = 1'-0"





Life Safety Plan - Level 1
G-003 SCALE: 1/8" = 1'-0"

G

#### OCCUPANCY LOAD SCHEDULE

\* Shaded Occupant Loads indicate actual occupant count is used instead of SF/occupant calculation- see seating table above.

			LOAD	
RM#	ROOM NAME	AREA	FACTOR	OCC LOA
101	VESTIBULE	68 SF		0
102	LOBBY/CAFE	772 SF	100	8
103	KITCHEN	384 SF	200	2
104	STORAGE	68 SF	300	1
106	MECH ROOM	54 SF	300	1
107	EVENT ROOM	1,956 SF		0
108	STORAGE	73 SF	300	1
109	HALLWAY	70 SF		0
111	ELEC	91 SF	300	1
112	OFFICE	107 SF	100	2
113	OFFICE	107 SF	100	2
114	CONF/PODCAST	112 SF	100	2
116	KIDS ROOM	120 SF	100	2
117	CONF/PODCAST	117 SF	100	2
118	COMMUNITY OFFICES	732 SF	100	8
119	HALLWAY	139 SF		0
120	TOILET	52 SF		0
121	TOILET	48 SF		0
122	TOILET	48 SF		0
123	TOILET	48 SF		0
124	TOILET	48 SF		0
125	HALLWAY	142 SF		0
126	HALLWAY	122 SF		0
127	RECEPTION	83 SF		0
201	HALLWAY	93 SF		0
202	HALLWAY	1,107 SF		0
203	PHONE BOOTH	53 SF		0
204	RENTABLE OFFICE	78 SF	100	1
205	RENTABLE OFFICE	75 SF	100	1
206	RENTABLE OFFICE	72 SF	100	1
207	CONFERENCE ROOM	169 SF	15	8
208	CONFERENCE ROOM	545 SF	15	20
209	OFFICE	81 SF	100	1
210	OFFICE	80 SF	100	1
211	WORK ROOM	62 SF		0
212	OFFICE AREA	1,028 SF	100	11
213	CEO OFFICE/MTG AREA	224 SF	100	3
214	TRAINING ROOM	507 SF		0
215	TRAINING ROOM	478 SF		0
216	KITCHEN	74 SF	100	1
217	TOILET	62 SF		0
218	WELLNESS ROOM	80 SF	100	1
219	JANITOR	22 SF		0
220	PHONE BOOTH	48 SF		0
221	TOILET	48 SF		0
222	ELEC/I.T. ROOM	83 SF	300	1
EL-A	ELEVATOR	58 SF		0
ST-A	STAIR A	31 SF		0
QT D	STAID B	(varios)		0

#### **GENERAL NOTES**

- a. One (1) Barrier-free of each fixture type (min) per toilet room; one (1) ambulatory stall shall be provided in any toilet room where six (6) or greater stalls are provided.
- b. One (1) family toilet (min) shall be provided
- c. Family restrooms used to supplement required men/women fixtures.
- d. Restrooms avaiable to all occupants on each floor.

#### **CODE ANALYSIS**

PROJECT SCOPE

New 2-story building, with a total of approximately 12,160 SF

2017 ICC A117.1

APPLICABLE CODES
2015 Michigan Building Code (MBC) 2021 Michigan Mechanical Code (MMC) 2021 Michigan Plumbing Code (MPC) 2015 Michigan Energy Code (MEC) 2013 ANSI/ASHRA/IES 90.1 2023 National Electrical Code (NEC)

CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION NON-SEPARATED MIXED-USE: B and A3, fully sprinklered

## CHAPTER 5 - GENERAL BUILDING HEIGHTS AND AREAS (A-3 is controlling occupancy) Allowable Area: 28,500 SF

Actual Area: 12,164 SF total 6,100 SF - First Floor 6,064 SF - Second Floor + Balcony Allowable Stories (Height): 2 (40'-0")

#### CHAPTER 6 - TYPES OF CONSTRUCTION Type: IIB

Actual Stories (Height): 2 (30'-0")

-Structural Frame: 0 hour -Bearing Walls: 0 hour -Exterior Non-Bearing Walls: 0 Hour -Interior Non-Bearing Walls: 0 Hours -Opening Protectives at Exterior Wall: 0 Hours -Floor Construction and Secondary Framing: 0 hour -Roof Construction and Secondary Framing: 0 hour

#### CHAPTER 9 - FIRE PROTECTION SYSTEMS Automatic Sprinkler Systems: YES

CHAPTER 10 - MEANS OF EGRESS TABLE 1004.1.2 SEE OCCUPANCY LOAD SCHEDULE Total Occupants: 462

Fire Alarm and Detection Systems: YES

1011.12.2 - A permanent ladder with roof hatch is used for access to non-occupiable roof

1103.2.7 Limited Access Spaces: Nonoccupiable spaces accessed only by ladders are not required to be accessible.

WC/Male WC/Female DFs Service sink Assembly A-3 1 per 125 1 per 65 Business B 1 per 25 for the first 50 1 per 40 for the first 80 and 1 per 50 for the and 1 per 80 for the remainder exceeding 50 remainder exceeding 80

#### Refer to MPC Chapter 29 and Table 403.1 "MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES" for specifics, exceptions, and footnotes. OCCUPANCY: ASSEMBLY - A-3 OCCUPANTS: 180 Auditoriums without WATER CLOSET LAVATORIES BATHTUBS OR DRINKING permanent seating, art galleries, exhibition halls, museums lecture halls, museums lecture halls \_museums, lecture halls,\_ libraries, arcades and 1 1 1 1 1 Service Sink

#### PLUMBING FIXTURE CALCULATIONS

Refer to MPC Chapter 29 and Ta	able 403.1	"MINIMUM N	IUMBER O	F REQUIRE	D PLUMBING FIXTUR	ES" for specifics, e	xceptions, and footnotes.	
OCCUPANCY: Busin	ess - E	3	OCCUP	PANTS: 12	7	(64 MALE / 64	FEMALE)	
Buildings for the transaction of business, professional	WATER	CLOSET	LAVA	TORIES	BATHTUBS OR	DRINKING		
services, light industrial and similar uses	MALE	FEMALE	MALE FEMALE		SHOWERS	FOUNTAINS	OTHER	
REQUIRED:	3	3	2	2		2	1 Service Sink	

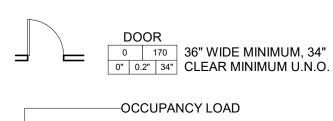
#### **EGRESS PATH DISTANCES**

Max Common Path of Travel (C): 50' Max Exit Access Travel Distance (E): 200'

GRESS PATH	TRAVEL DISTANCE
Egress Path1	63' - 7"
Egress Path3	79' - 3"
Foress Path 2	168' - 10"

#### LIFE SAFETY LEGEND

SMOKE BARRIER PER 2020 FFPC SECTION 8.5 1 HOUR FIRE BARRIER 2 HOUR FIRE WALL



DOOR — TYPE OF EGRESS COMPONENT

0 170 **—** EGRESS CAPACITY 0" 0.2" 34" — ACTUAL EGRESS WIDTH EGRESS CAPACITY FACTOR CALCULATED EGRESS WIDTH NAME AND NUMBER **XXX OCC** FIXED/MAX NUMBER OF OCCUPANTS

NAME - ROOM NAME AND NUMBER **XXX OCC** - NUMBER OF OCCUPANTS - GRESS LOAD AT THAT LOCATION (ADDITIVE ALONG PATH OF TRAVEL)

■—EGRESS LOAD IN OUTLINED AREA **COMMON PATH OF TRAVEL EXIT ACCESS TRAVEL** 

OCCUPANCY USE GROUP OCCUPANT LOAD FOR A GIVEN AREA. TOTAL OF ALL EQUALS TOTAL FLOOR OCCUPANTS.

FIRE EXTINQUISHER GREASE FIRE EXTINQUISHER

FIRE EXTINQUISHER CABINET AREA OF SMOKE PROTECTED SPACES PER 1024.6.3 (OUTDOOR)

ROOMS TO BE SPRINKLERED SPACES PER 903.2.1.5

SHEET#

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

**ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce -HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT

PROFESSIONAL SEAL

© 2025 ROSSETTI **# DESCRIPTION** DATE 02/07/2025

**KEY PLAN** 

SHEET TITLE

Code Analysis & Life Safety Plan

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

G-003

All products provided by ownership, submit product data for ownership approval to ensure the accuracy and quality of the project:

- Trash compactor - Writing Board (See arch elevations for blocking locations if req'd)

Repair damages occured during construction.

Submittal and RFI Procedure

Submit copy of submittal schedule concurrently with project commencement. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates.

Submit RFI log showing status of RFIs and responses, and continuously update address status of RFIs regularly at scheduled project management meetings.

Use ROSSETTI transmittal/cover sheet, provided by the Architect.

Substitution Request

Substitution Request Form: Use ROSSETTI's Substitution Request Form provided by the Project Architect. Show compliance with requirements for substitutions and reason for the request.

Architect will not review submittals that do not bear Contractor's approval stamp and will return them without action.

Submittal Response Time: Allow 10 working days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination. Submittals received after 3:00 pm local time will be logged as RECEIVED the next working day.

RFI Response Time: Architect will review each RFI, determine action required, and respond. Allow 5 working days for Architect's response. If in the opinion of Architect more than 5 working days is required to prepare a response to an RFI, Contractor will be notified in writing. RFI's received after 3:00 pm local time, will be logged as RECEIVED the next working day.

#### Closeout Procedures

Before requesting inspection for determining date of Substantial Completion, confirm with ownership on inspection procedures, warranties, storing of extra materials and tools, insurance changeover requirement, and final cleaning of the site.

Submit Project Record Documents, operation and maintenance manuals, and test/balance records.

#### 0174139 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL 018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

SEE G-007 LEED SPECIFICATIONS FOR MORE INFORMATION

#### 033950 - SEALING CONCRETE FLOORS

Manufacturer's Certification: Provide letter of certification from applied finishes manufacturer stating that installer is certified applicator of special concrete finishes and is familiar with proper procedures

and installation requirements required by the manufacturer. Warranty: Provide manufacturer's warranty that a structurally sound concrete surface prepared and treated according to the manufacturer's directions will remain permanently dustproof, hardened and water repellent. If after the specified sealing period the treated surface does not remain dustproof,

defective areas. Product data for all products required for proper installation Manufacturers' system. All products must be approved by System manufacturer.

hardened and water repellent, provide, at manufacturer's expense, sufficient material to reseal

Mock-ups: Build mock-up approximately 50 square feet showing standard of workmanship. Obtain from the Architect or Owner Representative approval of mock-ups before starting construction.

Seal-Hadrener: Water-based chemically-reactive penetrating sealer and hardener, that seals by densifying concrete so that water molecules cannot pass through but air and water vapor can, while allowing concrete to achieve full compressive strength, minimizing surface crazing, and eliminating

> Colorless, transparent, odorless, non-toxic, non-flammable. Containing no solvents or volatile organic compounds.

USDA approved. Allowing traffic on floors within 2 to 3 hours, with chemical process complete within 3 months. No change to surface appearance except a sheen developed due to traffic and cleaning.

Water: Clean, potable.

Repair any defects and do no damage adjacent work. Protect finished work in accordance with manufacturer's recommendations.

SECTION 054000 - COLD-FORMED METAL FRAMING General
This is delegated design. Refer to Structural drawings and specs.

connection details, and attachment to adjoining work.

Product Data: For each type of cold-formed metal framing product and accessory indicated. Shop Drawings: Show layout, spacings, sizes, thicknesses, and types of cold-formed metal framing; fabrication; and fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories,

For all cold-formed metal framing comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation in the jurisdiction where the project is located.

#### 064023 INTERIOR ARCHITECTURAL WOODWORK

General
This section includes counters, solid surface countertops, hardware, accessories and shop finishing of interior

Quality Assurance: Comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior

Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

architectural woodwork for construction, finishes, installation, and other requirements. Fabricator: Company specializing in fabricating the products specified in this section with minimum three years of

documented experience. Environmental Limitations: Do not deliver or install woodwork until building wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder

Fire-retardant- treated wood: Provide when used in walls for support. Comply with performance requirements of AWPAC20 (lumber) and AWPA C27 (plywood).

<u>Submittals</u> Submit product data, samples, and shop drawings

of the construction period.

Products
Countertops: Refer to Finish Legend for finish

Counter Supports: Counter supports, SpeedBrace Work Surface Bracket as manufactured by Hafele America Co., Weight capacity 500lbs/pair, or equal as approved by Architect.

Lavatory supports: Front Mounting Brackets, as manufactured by Hafele America Co., size as required per detail, or equal as approved by Architect.

#### 074216 - METAL WALL PANELS

<u>General</u>

This Section includes Metal Composite Material Wall Panels.

Submit product data and sample indicated in Architectural Finish Legend. Submit shop drawings showing layouts and details. Distinguish between factory, shop, and field-assembled work.

Coordination

Submit Installer Qualifications.

Coordinate metal wall panel assemblies with rain drainage work, flashing, trim, and construction of girts, studs, soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

Preinstallation Conference: Conduct conference at Project site.

MTL-01: Alucobond EasyFix, Color to match exterior trim (selection to be provided by architect)

Panel Thickness: .157 inch. R-Value: R8 per inch, Min. Panel Modules: 36 inches. Orientation: Vertical. Reveal Width: 3/8 inches

Fasteners: Concealed. Perimeter Trim: Extruded trim with gaskets.

Utilize Manufacturer recommended wall panel accessories. Provide components required for a complete metal wall panel assembly including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels unless otherwise indicated.

**Execution** General: Install metal wall panels according to manufacturer's written instructions in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts and subgirts unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and

structural movement. Apply continuous ribbon of sealant to panel joint on concealed side of insulated-core metal wall panels as vapor seal; apply sealant to panel joint on exposed side of panels for weather seal.

Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.

Replace metal wall panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

#### 075400 - THERMOPLASTIC MEMBRANE ROOFING

G<u>eneral</u>

This section includes Adhered membrane roofing system.

<u>Submittals</u>

Submit product data, shop drawings (include base flashings and membrane terminations, tapered insulation and insulation fastening patterns), and samples with UL assembly reference numbers Manufacturer and Installer Certificates Inspection Report

Roofing Installer's Warranty - Manufacturer's standard form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period. Failure includes roof leaks. 1.Special warranty includes roofing membrane, base flashings, roofing accessories, roof insulation, fasteners, walkway products and other components of membrane

Warranty Period: Fifteen (15) years from date of Substantial Completion.

Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering Work of this Section, including all components of membrane roofing system such as roofing membrane, base flashing, roof insulation, fasteners, and walkway products, two (2) years from date of Substantial Completion.

#### Performance Requirements

Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.

for LEED compliance: Roofing shall have an aged SRI equal to or greater than 64. If aged SRI is not available, roofing shall have an initial SRI equal to or greater than 82. TPO (Thermoplastic Polyolefin) Roofing Membrane: Complying with ASTM D6878/D6878M, sheet contains <u>Productsig</u> fabrics or scrims. Thickness: 60 mil, 0.060 inch. minimum.

TPO (Thermoplastic Polyolefin) Roofing Membrane: Complying with ASTM D6878/D6878M, sheet contains reinforcing fabrics or scrims. Thickness: 60 mil, 0.060 inch. minimum. Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane One ply membrane, fully adjhered, over insulation. OC limits of Authorities Having Jurisdiction (AHJ).

Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing. Liquid-type auxiliary materials shall meet VOC limits of Authorities Having Jurisdiction (AHJ).

Substrate Board: Glass-mat faced gypsum panels complying with ASTM C 1177/C1177M, 1/2", fire-resistant and Vapor Retarder: Polyethylene laminate, two layers, reinforced with cord grid, with maximum permeance rating of Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, aluminum foil facer on both major surfaces. compatible with the specified substrate and meet the required roofing system warranty. Vapor Retarder: Polyethylene laminate, two layers, reinforced with cord grid, with maximum permeance rating of 0.06 perm (3.5 ng/Pa x s x sq. m). The roofing manufacturer shall define the required vapor retarder in order to be compatible with the specified substrate and meet the required roofing system warranty. Asphalt Primer: ASTM D 41.

Roofing Asphalt: ASTM D 312, Type III or IV. Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway Asphalt Primer: ASTM D 41.1brane roofing system manufacturer. Recycled rubber, 30" x 30" x 1/4".

Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads, and acceptable to membrane roofing system manufacturer. Recycled rubber, 30" x 30" x 1/4".

#### SECTION 083113 - ACCESS DOORS AND FRAMES

General
This Section includes access doors and frames for walls and ceilings

Submittals: Product data and Shop Drawings.

<u>Products</u>

Recessed Access Door for Drywall Surfaces:

Model RDW manufactured by Karp Associates, Inc. or equal as approved by Architect Frame: 16 gage steel. Flange of frame shall be one-piece construction, 1.00" wide, beaded to receive drywall

Door: 16 gage steel. Hinge: Concealed pivoting rod type. Locks: Flush and screwdriver operated with steel can and studs. Finish: Prime coat of rust inhibitive electrostatic powder, baked white enamel. Finish inset material to match adjacent surface finishes.

Install doors flush with adjacent finish surfaces or recessed to receive finish material.

Adjust doors and hardware after installation for proper operation. Remove and replace doors and frames that are warped, bowed, or otherwise damaged.

076200 - SHEET METAL FLASHING AND TRIM

General
This Section includes sheet metal flashing,trim, and accessories.

Submit product data, shop drawings, and samples.

with 3-coat fluoropolymer coating.

Pre-Finished Galvanized Steel: ASTM A 653/A 653M, with G90/Z275 zinc coating; core steel, shop pre-coated

Provide materials and types of fasteners, solder, welding rods, protective coatings, separators, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation.

087100 - DOOR HARDWARE

Hardware sets to be issued via Addendum

Products
Door Hardware:

S<u>ubmittals</u>
Submit product Data, Door Hardware, and Keying Schedule.

Performance Requirements Install sheet metal flashing and trim to withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failing, rattling, leaking, and fastener disengagement.

<u>Fabrication</u> Custom fabricate sheet metal flashing and trim to comply with recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated. Shop fabricate items where practicable. Obtain field measurements for accurate fit before shop fabrication. Form sections true to shape, accurate in size, square, and free from distortion or defects

Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

High-Performance Organic Coating Finish, selected from Manufacturers full range of color options. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturer's written instructions.

#### 081113 - HOLLOW METAL DOORS AND FRAMES

SECTION 081113 – HOLLOW METAL DOORS AND FRAMES

<u>General</u>

Provide Steel Doors and Frames - Interior doors and frames.

Submit product data, shop drawings, and schedule.

Steel Interior Doors: Standard seamless steel doors with hollow or composite construction. Comply with ANSI/SDI-250.8, Level 3 and ANSI/SDI-250.8, physical performance Level A, minimum 0.053 faces inch cold-rolled sheet steel.

Door thickness: 1-3/4 inches thick.

Finish: Factory primed and field painted. Refer to Finish Legend for colors.

Steel Interior Frames: Comply with ANSI/SDI-250.8. Fabricate frames as full profile welded, minimum 0.053 inch cold-rolled sheet steel, with mitered or coped corners.

Finish: Factory primed and field painted. Refer to Finish Legend for colors.

Frame anchors, stops and moldings: Comply with ANSI/SDI-250.8.

Comply with ANSI/SDI A250.11.

#### 084113 - ALUMINUM-FRAMED ENTRANCES, STOREFRONTS AND WINDOWS

Submit product data, samples, shop drawings, product test reports, performance reports, field quality - control

reports, and warranties. Delegated Design: Design aluminum storefront systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

ASTM E331.

Kawneer North American: Trifab VersaGlaze 451/451T Framing System or Approved Equal. Glass Vent UT - Operable Window System basis of design

Finish: Classic Bronze Permafluor Performance Requirements:

Structural-Test Performance: Provide test result when tested according to ASTM E 330. The design

Water Penetration under Dynamic Pressure: Provide test result when tested according to AAMA 501 and to

pressures are based on the Ohio Building Code, 2017 Edition. Air Infiltration: Provide aluminum-framed systems tested according to ASTM E 283.

Condensation Resistance: Provide test result when tested according to AAMA 1503.

Thermal Conductance: Provide test result when tested according to AAMA 1503 Maximum U-Factor: 0.42 Btu/(hr x sq ft x deg F).

#### 081216 - ALUMINUM FRAMES

Maximum Solar Heat Gain Coefficient: 0.40.

Submit product data, samples, shop drawings, product test reports, performance reports, field quality - control

Delegated Design: Design aluminum storefront systems, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.

RACO Solutions

Wilson Series 2400 Frameworks - Type II Flush Trim Frame System

Approved Equal. Finish: Dark Bronze (Factory Painted Finish, match color of exterior aluminum strorefront)

Performance Requirements: Structural-Test Performance: Provide test result when tested according to ASTM E 330. The design pressures are based on the Ohio Building Code, 2017 Edition.

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce -1111 Godfrey Ave. SW

Grand Rapids, MI 49507

**CONSULTANT** 

**PROFESSIONAL SEAL** 

© 2025 ROSSETTI

# DESCRIPTION DATE 02/07/2025

**KEY PLAN** 

SHEET TITLE

Products and Specs

Scale: 1/16" = 1'-0" PROJECT#

2024-010.00

```
Insulated Glass Units: Double pane with polyisobutylene primary and secondary silicone sealant edge
                                                                                                                         WOOD PRIMERS
                                                                                                                             Interior Lacquer Sanding Sealer: MPI #24.
       Primary Glass Products: Clear float and tinted float glass: Comply ASTM C1036, Standard Specification
                                                                                                                         WATER-BASED PAINTS
        for Flat Glass.
                                                                                                                             Interior Latex (Flat): MPI #53 (Gloss Level 1).
                                                                                                                                Basis-of-Design Product: SW; ProMar 200 Zero VOC Interior Latex Flat, B30 Series.
        Heat-Treated Glass Products: Heat-strengthened, tempered, coated, and spandrel glass: Comply with
        ASTM C1048, Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
                                                                                                                             Interior Latex (Eggshell): MPI #52, #139 (Gloss Level 3).
                                                                                                                                Basis-of-Design Product: SW; ProMar 200 Zero VOC Interior Latex Eg-Shel, B20 Series.
        Contractor shall provide safety glazing as required by Code, for applicable glazing types indicated.
                                                                                                                             Interior Epoxy (Eggshell): MPI #151 (Gloss Level 3).
                                                                                                                                 Basis-of-Design Products: SW; Pro Industrial Pre-Catalyzed Waterbased Epoxy, K45 Series.
<u>Installation</u>
Comply with FGMA Glazing Manual and manufacturer's recommendations.
                                                                                                                             Interior Epoxy (Semi-gloss): MPI #153 (Gloss Level 5).
                                                                                                                                Basis-of-Design Products: SW; Pro Industrial Pre-Catalyzed Waterbased Semi-gloss Epoxy.
                                                                                                                     PAINT SCHEDULE
                                                                                                                        Interior Ferrous Metal Substrates: (2) coat system.
                                                                                                                             Latex Over Primer System:
                                                                                                                                 Prime Coat: Primer, alkyd, quick dry.
                                                                                                                                 Topcoat: Interior latex.
                                                                                                                                 Colors and Finish: Refer to Finish Legend.
                                                                                                                             Eggshell Pre-Catalyzed Epoxy System: Use at exposed steel columns.
 092900 - GYPSUM BOARD ASSEMBLIES
                                                                                                                                 Prime Coat: Primer, rust inhibitive, water based.
                                                                                                                                 Intermediate Coat: Interior pre-catalyzed epoxy (eggshell) matching topcoat.
 General
This section includes gypsum board and non-structural metal framing
                                                                                                                                 Topcoat: Interior pre-catalyzed epoxy (eggshell) matching topcoat.
                                                                                                                                 Color: Refer to Finish Legend.
                                                                                                                             Interior Metal Doors and Frames Substrates: (3) coat system.
 Non-structural metal framing complying with ASTM C645:
                                                                                                                                 Semi-gloss Epoxy System:
                                                                                                                                 Prime Coat: Primer, rust inhibitive, water based.
                                                                                                                                 Intermediate Coat: Interior pre-catalyzed epoxy (Semi-gloss) matching topcoat.
         Gypsum wallboard: ASTM C1396/1396M, Type "X", 5/8 inch thick.
                                                                                                                                 Topcoat: Interior pre-catalyzed epoxy (Semi-gloss) matching topcoat.
                                                                                                                                 Color: Match color of wall in which door is located.
         Mold/Moisture resistant gypsum panels: ASTM C1396/1396M, Type "X", 5/8 inch thick.
                 Locations: Toilet Rooms (except at tiled walls) and Kitchen.
                                                                                                                             Interior Pipe Lines Substrates: (2) coat system.
                                                                                                                                 Prime Coat: Primer, rust inhibitive, water based.
         Glass-Mat Tile Backerboard: ASTM C1178, 5/8 inch thick.
                                                                                                                                 Topcoat: Interior acrylic matching primer.
                                                                                                                                 Colors and Finish: Refer to Finish Legend.
                 Locations: Behind tile finishes, refer to room schedule for locations.
                                                                                                                         Interior Gypsum Board Substrates: (3) coat system.
         Impact Resistant Gypsum Wallboard: ASTM C1629/1629M, Type "X", 5/8 inch thick.
                                                                                                                            Flat Latex System:
                                                                                                                                 Prime Coat: Interior latex primer.
                 Impact Rating: Level 3 for Soft and Hard Body Impact Resistance
                                                                                                                                 Intermediate Coat: Interior latex (flat) matching topcoat.
                                                                                                                                 Topcoat: Interior latex (flat).
 All accessories to comply with Manufacturer's recommendations.
                                                                                                                                 Colors: Refer to Finish Legend.
                                                                                                                             Eggshell Latex System:
 Install all products as indicated in Manufacturer's written instructions and comply with ASTM C 840 and
                                                                                                                                 Prime Coat: Interior latex primer.
                                                                                                                                 Intermediate Coat: Interior latex (eggshel) matching topcoat.
                                                                                                                                 Topcoat: Interior latex (eggshel).
          Control Joints: Provide control joints at 30 feet minimum or as otherwise noted on construction
                                                                                                                                 Colors: Refer to Finish Legend.
                                                                                                                             Eggshell Epoxy System: Use in commercial kitchen and toilet rooms.
         Level of gypsum board finish: provide the following levels of gypsum board finish per GA-214.
                                                                                                                                 Prime Coat: Interior latex primer.
                 Level 1 for ceiling plenum areas, concealed areas, and where indicated, unless a higher
                                                                                                                                 Intermediate Coat: Interior pre-catalyzed epoxy (eggshell) matching topcoat.
                 level of finish is required for sound-rated assemblies.
```

**088000 - GLAZING** 

<u>Products</u>
As indicated on Architectural drawings.

<u>Submittals</u>
Submit product data, samples, shop drawings, warranty, maintenance data for each product.

Outdoor Lite: 1/4 inch clear, Low-E coating on #2 surface.

Minimum Visible Light Transmittance: 68 percent.

Maximum U-Factor: 0.30 Btu/(hr x sq ft x deg F).

Maximum Solar Heat Gain Coefficient: 0.38

Outdoor Visible Reflectance: 11 percent.

Basis of Design Product: Guardian SunGuard SN68 on Clear or Approved Equal.

Level 2 where water-resistant gypsum backing board panels form substrates for tile, and

Level 4 for gypsum board surfaces unless otherwise indicated.

Elastomeric Sealants:One-part mildew-resistant silicone sealant for non-traffic areas. Multi-part pourable

Organic adhesive or water-cleanable epoxy adhesive; TCA F116.

Grout: Polymer-modified tile grout or water-cleanable epoxy grout.

urethane sealant for traffic areas. Chemical-resistant sealant at chemical-resistant flooring.

Latex-portland cement mortar (thin set); TCA F113.

Grout: Polymer-modified tile grout or water-cleanable epoxy grout.

Latex-portland cement mortar (thin set); TCA W244.

Organic adhesive or water-cleanable epoxy adhesive.

Tile Installation: Interior wall installation over backer units.

Tile Type: Ceramic wall tile.

<u>Submittals</u> Submit product data, shop drawings, and samples of tiles and all accessories.

Refer to finish schedule for tile manufacturers, models, colors and sizes.

Membrane, sealants to be manufacturer's standard product.

where indicated.

093013 TILING SPECIFICATION

FLOOR TILE INSTALLATION SCHEDULE

Tile Type: Ceramic floor tile.

WALL TILE INSTALLATION SCHEDULE

Setting Materials:

Tile Installation: Interior floor installation on concrete.

Setting Materials:

GT-01 (Exterior Envelope): Low-E, 1" thick Insulating Glass.

Interspace: 1/2 inch airspace

Indoor Lite: 1/4 inch clear.

Performance Requirements:

099123 PAINTING SPECIFICATION

Interior Latex Primer/Sealer: MPI #50.

Alkyd Metal Primer: MPI #76.

Galvanized-Metal Primer: MPI #26.

PRODUCTS

PRIMERS/SEALERS

METAL PRIMERS

Submittals
Product data including confirmation of MPI numbers and samples.

Primer, Rust-Inhibitive, Water Based: MPI #107.

Basis-of-Design Product: SW; ProMar 200 Zero VOC Interior Latex Primer, B28 Series.

Basis-of-Design Product: SW; Pro Industrial Pro-Cryl Universal Primer, B66 Series.

Basis-of-Design Product: SW; Kem Bond HS Universal Alkyd Primer, B50 Series.

Basis-of-Design Product: SW; Pro Industrial Pro-Cryl Universal Primer, B66 Series.

Topcoat: Interior pre-catalyzed epoxy (eggshell) matching topcoat.

Colors: Refer to Finish Legend.

#### SECTION 102800 - TOILET AND BATH ACCESSORIES This Section includes the following: Public-use washroom accessories. Under-lavatory guards. Product Data, Setting Drawings for all trades for cutouts, Quality Assurance and Warranty covering Fifteen (15) years for mirrors from date of Substantial Completion. <u>Products</u> Toilet Accessories - Refer to G-003 for types of accessories required. Manufacturer: Bradley (Basis-of-Design). Trap Wrap for Lavatories: Provide P-trap insulation for all lavatories; insulation kit with insulation for offset grid drain, white, Model C500R by Brocar Products Inc., Cincinnati, Ohio or equal as approved by Architect. Keys: Provide universal keys for access to toilet accessory units requiring internal access for servicing. Provide minimum of six (6) keys to Owner's representative. **Execution** Installation Install all accessories in accordance with manufacturer's printed instructions and as required to provide a firm and secure anchorage for each item. Fabricate concealed mounting devices and fasteners for all accessories from the same materials as the accessories or galvanized steel. Finish exposed mounting devices and fasteners to match the accessories. Install grab bars to withstand a downward load of at least 250 lbf (1112 N), complying with ASTM F 446. Cleaning And Final Adjustments Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary 104413 FIRE PROTECTION SPECIALITIES SPECIFICATION <u>General</u> This section includes portable fire extinguishers and fire extinguister cabinets. Submittals: Submit product data, shop drawings, and maintenance Data. Multi-Purpose Dry Chemical Type Extinguisher: UL-rated, 2A:10B:C in enameled steel container, for Class A, Class B and Class C fires. Product: Model No. MP10 by Larsen or equal as approved by Architect. Wet-Chemical Type: UL-rated, stainless-steel container; with pressure-indicating gage, 1.5 gal (6 liters), for Class Product: Model No. WC-6L by Larsen or equal as approved by Architect. Mounting Brackets: Manufacturer's standard steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or black baked-enamel finish. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as indicated by Architect. Identify bracket-mounted fire extinguishers with the words "FIRE EXTINGUISHER" in red letter decals applied to mounting surface. Fire Extinguisher Cabinets: Fully-recessed type; Larsen's Architectural Series Vertical Duo Door; stainless steel # 4 finish; 5/16 inch (8 mm) flat trim; Model SS-2409-R2 or Model FS-SS-2409-R2 at fire rated walls or equal as approved by Architect. Adjust fire protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly. Clean all surfaces as recommended by manufacturer. Touch up marred finishes, or replace products that cannot be restored to factory-finished appearance.

108200 - EQUIPMENT METAL SCREEN WALL

<u>Products</u> Horizontal Blade Louvered Equipment Screen:

Concealed frame.

4" Deep, sight-proof blade configuration.

General
This section includes fixed, extruded-aluminum louvered screen for equipment.

Submit product data, finish samples, shop drawings, and quality/performance reports.

Mitered outside corners and hidden mullion joints at section breaks.

Architectural Louvers Co. (Harray, LLC); Model V4YH or Approved Equal.

Finish: Kynar 500 organic coating. Custom color to match lower band of adjacent dome fabric.

# **PROJECT** CONSULTANT PROFESSIONAL SEAL © 2025 ROSSETTI # DESCRIPTION

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

West Michigan Hispanic **Chamber of** Commerce -1111 Godfrey Ave. SW

Grand Rapids, MI 49507

DATE 02/07/2025

**KEY PLAN** 

SHEET TITLE **Products and Specs** 

PROJECT# 2024-010.00

SHEET#

G-006

#### 0174139 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL 1.1 SUMMARY

1.3 ACTION SUBMITTALS

Total quantity of waste in tons.

A. Section includes administrative and procedural requirements for the following: 1. Recycling nonhazardous demolition and construction waste. Disposing of nonhazardous demolition and construction waste.

removal of above- and below-grade improvements.

 Related Requirements Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections. 1. Section 04 2000 "Unit Masonry" for disposal requirements for masonry waste. 2. Section 31 1000 "Site Clearing" for disposition of waste resulting from site clearing and

1.2 DEFINITIONS Retain terms that remain after this Section has been edited for a project. A. Construction Waste: Building, structure, and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes B. Demolition Waste: Building, structure, and site improvement materials resulting from demolition

 Disposal: Removal of demolition or construction waste and subsequent salvage, sale, recycling, or deposit in landfill, incinerator acceptable to authorities having jurisdiction, or designated spoil areas on Owner's property D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation

A. Waste Management Plan: Submit plan within 7 days of date established for the Notice to 1.4 INFORMATIONAL SUBMITTALS See Evaluations for examples of progress reports. A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit

report. Include the following information: Material category. Generation point of waste.

Quantity of waste recycled, both estimated and actual in tons.

individuals and organizations. Indicate whether organization is tax exempt.

Total quantity of waste recovered (salvaged plus recycled) in tons. 6. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste. . Waste Reduction Calculations: Before request for Substantial Completion, submit calculated endof-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the c. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to

D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste

by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices. F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and

Retain "LEED Submittal" Paragraph below if Contractor rather than Architect or Owner is required to G. LEED Submittal: Submit documentation to USGBC, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met. Respond to questions and requests from USGBC regarding construction waste management and disposal until the USGBC has made its determination on the Project's LEED certification application. Document correspondence with USGBC as informational submittals.

Some Contractors may use waste management coordination services of an outside waste

A. Waste Management Coordinator Qualifications: Experienced firm, or individual employed and assigned by General Contractor, with a record of successful waste management coordination of projects with similar requirements. Retain one of or both subparagraphs below if acceptable.

1. Firm employs a LEED-Accredited Professional, certified by the USGBC, as waste 2. Waste management coordinator may also serve as LEED coordinator.

B. Waste Management Conference(s): Conduct conference(s) at Project site to comply with equirements in Section 01 3100 "Project Management and Coordination." 1.6 WASTE MANAGEMENT PLAN Retain option in "General" Paragraph below if Project requires selective demolition or building

A. General: Develop a waste management plan according to requirements in this Section. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Distinguish between demolition and construction waste. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan. B. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates. c. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures. If applicable, list local charitable organizations (such as Habitat for Humanity) in "Salvaged Materials for Donation" Subparagraph below.

1. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers. 2. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.

3. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location where materials separation will be performed. PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total nonhazardous solid waste generated by the Work for at least four distinct material steams. Facilitate recycling and salvage of materials.

B. Calculations must exclude excavated soil and land-clearing debris. Calculations must include materials destined for alternative daily cover (ADC) in the calculations as waste (not Recycled Materials). Retain subparagraph below with last option in "General" Paragraph above to suit Project. Verify

capabilities of local recycling facilities. PART 3 - EXECUTION 3.1 PLAN IMPLEMENTATION A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the

entire duration of the Contract. Retain option in "Waste Management Coordinator" Paragraph below when Project size and complexity of waste management justifies full-time, on-site waste management coordinator. B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. . Training: Train workers, subcontractors, and suppliers on proper waste management procedures,

as appropriate for the Work. 1. Distribute waste management plan to everyone concerned within three days of submittal 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used 1. Designate and label specific areas on Project site necessary for separating materials that are

to be salvaged and recycled. 2. Comply with Section 015000 "Temporary Facilities and Controls" for controlling dust and dirt, environmental protection, and noise control. Retain "Waste Management in Historic Zones or Areas" Paragraph below when construction wastehandling operations take place in historic area; revise to suit Project.

3.2 RECYCLING DEMOLITION AND CONSTRUCTIONWASTE, GENERAL General: Recycle paper and beverage containers used by on-site workers. B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall be shared equally by Owner and Contractor. . Preparation of Waste: Prepare and maintain recyclable waste materials according to recycling or reuse facility requirements. Maintain materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to the recycling process. Procedures in "Procedures" Paragraph below describe the "source-separated" method for handling recyclable waste. If space at Project site is limited, consider revising below to allow "co-mingled" method, which takes less space because it permits all recyclable waste to be placed in a single

container that is separated later at the recycling facility. D. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical according to approved

construction waste management plan. 1. Provide appropriately marked containers or bins for controlling recyclable waste until removed from Project site. Include list of acceptable and unacceptable materials at each

a. Inspect containers and bins for contamination and remove contaminated materials if 2. Stockpile processed materials on-site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust. . Stockpile materials away from construction area. Do not store within drip line of remaining

4. Store components off the ground and protect from the weather. 5. Remove recyclable waste from Owner's property and transport to recycling receiver or processor as often as required to prevent overfilling bins.

#### 0174139 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

Submittal (continued)

3.4 RECYCLING CONSTRUCTION WASTE Paragraphs in this article are examples of items that are common to normal construction operations; retain or insert other specific disposal, cleanup, or removal requirements to suit Project or recycling

> Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a Polystyrene Packaging: Separate and bag materials. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood. Crates: Break down crates into component wood pieces and comply with

Wood Materials: Clean Cut-Offs of Lumber: Grind or chip into small pieces. Clean Sawdust: Bag sawdust that does not contain painted or treated wood. Gypsum Board: Stack large clean pieces on wood pallets or in container and store in a dry

Retain "Clean Gypsum Board" Subparagraph below if gypsum board will be chipped on-site; delete if gypsum board to be processed off-site. Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile

chipper or hammer mill. Screen out paper after grinding. Paint: Seal containers and store by type. 3.5 DISPOSAL OF WASTE

of accumulate on-site.

requirements for recycling wood.

Insert other specific disposal, cleanup, or removal requirements to suit Project. General: Except for items or materials to be salvaged or recycled, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction. Except as otherwise specified, do not allow waste materials that are to be disposed

Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas General: Except for items or materials to be salvaged or recycled, remove waste materials, and legally dispose of at designated spoil areas on Owner's property. Retain one of two "Burning" paragraphs below; burning is usually not permitted.

Burning: Do not burn waste materials. Attach forms that will be issued with this Section either before or after end of Section according to office preference. END OF SECTION 01 7419

#### 018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

<u>Submittal</u>

PART 1 -GENERAL 1.1 SUMMARY

A. Section includes general requirements and procedures for compliance with USGBC's LEED prerequisites and credits needed for Project to obtain LEED Silver certification based on "LEED Version 4 for Building Design and Construction" (hereafter, LEED v4 BD+C). Specific requirements for LEED are also included in other Sections.

Other LEED prerequisites and credits needed to obtain LEED certification depend on product selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests. If retaining subparagraph below, attach a copy of the LEED checklist to end of this Section as information for Contractor.

3. A copy of LEED Project checklist is attached at end of this Section for information

Some LEED prerequisites and credits needed to obtain indicated LEED certification depend on Architect's design and other aspects of Project that are not part of the Work of the Contract. 1.2 DEFINITIONS

Retain terms that remain after this Section has been edited for a project. A. LEED: USGBC's "LEED Version 4 for Building Design and Construction." Definitions that are part of this document apply to this Section. 1.3 PREINSTALLATION MEETINGS A. Preinstallation Conference: Conduct conference at Project site. Review LEED requirements

and action plans for compliance with requirements. 1.4 ADMINISTRATIVE REQUIREMENTS Retain one of two paragraphs in this article. Retain first if Architect or Owner submits LEED

documentation to USGBC; retain second if Contractor does. A. Respond to questions and requests from Architect about USGBC's LEED prerequisites and credits that are Contractor's responsibility, that depend on product selection or product qualities, or that depend on Contractor's procedures, until USGBC has made its determination on Project's LEED

B. Submit documentation to Architect's LEED Consultant and respond to guestions and requests from Architect's LEED Consultant about LEED prerequisites and credits that are Contractor's responsibility, that depend on product selection or product qualities, or that depend on Contractor's procedures, until USGBC has made its determination on Project's LEED certification application. 1.5 ACTION SUBMITTALS

Requirements in this article assume that Product Data and cost information are submitted to Architect, who then either fills out the LEED online forms or forwards the submittals to Owner or Sustainability Consultant to fill out the forms. Submittals include documentation needed to verify compliance with LEED requirements, so that Architect, Owner, or Sustainability Consultant can be assured, when filling out the online forms, that requirements have been met. Although USGBC's LEED reference guides do not specifically identify who can certify compliance, submittals could be deleted if requirements in this Section are revised to require Contractor to fill out the online forms and to notify Architect or Owner when completed. Submittals in "Sustainable Design Documentation Submittals" Paragraph below may be necessary to verify compliance with indicated USGBC LEED prerequisites and credits. Additional submittals may be required in other Sections.

Sustainable Design Documentation Submittals: Documentation for luminaires indicating lumens emitted and vertical illuminance

Documentation for compliant paving materials indicating the SRI, SR, and permeability Documentation for compliant roofing materials indicating the SRI. Product Data and certification for WaterSense-labeled water fixtures.

Product Data for plumbing fixtures indicating flush or flow rate. Documentation complying with Section 01 9113 "General Commissioning Requirements," Section 01 9119.43 "Exterior Enclosure Commissioning," Section 21 0800 "Commissioning of Fire Suppression," Section 22 0800 "Commissioning of Plumbing," Section 23 0800 "Commissioning of HVAC," and Section 26 0800 "Commissioning of

Documentation complying with Building-Level Energy Metering and Submetering: Product data for meters, sensors, and data collection system used to provide continuous metering of building energy-consumption performance.

Environmental Product Declarations (EPDs) and Health Product Declarations (HPDs) complying with LEED requirements. Sustainability reports for products that comply with LEED requirements for raw material and source extraction reporting. 10. Documentation for products that comply with LEED requirements for leadership extraction practices and for multi-attribute optimization. Include the following:

Product Data and certification letter from product manufacturers, indicating participation in an extended producer responsibility program and statement of costs Product Data and certification for bio-based materials, indicating that they comply with requirements. Include statement of costs. Receipts for salvaged and refurbished materials used for Project, indicating sources and costs. Product Data and certification letter from product manufacturers, indicating percentages by weight of postconsumer and preconsumer recycled content for products having recycled content. Include statement of costs. Documentation for regional materials, indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material and costs of regional materials

Documentation complying with Section 01 7419 "Construction Waste Management First five subparagraphs below are based on requiring all materials in a category to comply with minimum requirements. An alternative is the budget method. If the budget method is used, add a

submittal showing calculations. Product Data for adhesives and sealants used inside weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-emitting materials. Product Data for paints and coatings used inside weatherproofing system, indicating VOC content and laboratory test reports showing compliance with requirements for low-

14. Laboratory test reports for flooring, indicating compliance with requirements for lowemitting materials. Laboratory test reports for products containing composite wood or agrifiber products or wood glues, indicating compliance with requirements for low-emitting materials. Laboratory test reports for ceilings, walls, and thermal insulation, indicating compliance with requirements for low-emitting materials.

Construction Indoor-Air-Quality (IAQ) Management: Construction IAQ management plan. Product Data for temporary filtration media.

Retain subparagraph below if using Contractor-engaged IAQ testing.

Product Data for filtration media used during occupancy. Construction Documentation: Six photographs at three different times during construction period, along with brief description of SMACNA approach employed, documenting implementation of the IAQ management measures, such as protection of ducts and on-site stored or installed absorptive materials. Delete "IAQ Assessment" Subparagraph below if using Owner-engaged IAQ testing.

18. IAQ Assessment: Retain first two subparagraphs below if using building air flush-out procedures. a. Signed statement describing the building air flush-out procedures, including dates when flush-out was begun and completed and statement that filtration media was replaced after flush-out. b. Product Data for filtration media used during flush-out and occupancy.

018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

Submittal (cont)

INFORMATIONAL SUBMITTALS

Qualification Data: For Sustainability Consultant Project Materials Cost Data: Provide statement indicating total cost for materials used for Project. Costs exclude labor, overhead, and profit. Include breakout of costs for all material and products used on the project with the exception of the following categories of items:

Plumbing. Mechanical. Electrical.

product that meet at least one of the following:

conflicting requirements in those Sections.

Specialty items, such as elevators and equipment.

"Sustainable Design Action Plans" Paragraph below requires Contractor to make early submittals indicating how certain LEED requirements will be met. This action can provide reassurance that Contractor understands LEED requirements and can help to clear up misunderstandings before they Sustainable Design Action Plans: Provide preliminary submittals within 30 days of date

established for the Notice to Proceed, indicating how the following requirements will be met: Waste management plan complying with Section 01 7419 "Construction Waste Management and Disposal." Construction IAQ management plan.

Sustainable Design Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with sustainable design action plans. Requiring that Contractor engage a LEED AP to coordinate LEED requirements may help avoid inadvertent errors that could jeopardize Project's LEED certification if Contractors' personnel have

A. Sustainability Consultant: Engage an experienced LEED Accredited Professional to coordinate LEED requirements. Sustainability Consultant may also serve as waste management coordinator. PART 2 - PRODUCTS

2.1 MATERIALS Usually retain first paragraph below when requirements for salvaged and refurbished materials, recycled content, bio-based materials, or certified wood are included in other Sections. This action will help ensure that credit requirements are met if costs differ from Architect's estimates. A. Provide products and procedures necessary to obtain LEED credits indicated as Contractor's responsibility. Although other Sections may specify some requirements that contribute to these LEED credits, Contractor shall provide additional materials and procedures necessary to obtain LEED

credits indicated. B. At least 20 different products from at least five different manufacturers shall have EPDs that comply with LEED requirements. Industry-wide (generic) EPDs shall be valued as one-half of a C. At least 15%, by cost, of the total value of permanently installed building products in the

Extended Producer Responsibility Program: Building materials shall be manufactured by a participant in an extended producer responsibility program. "Recycled Content" Paragraph below is an alternative to requiring recycled content in Sections where such products are specified. Recycled Content: Building materials shall have recycled content such that

postconsumer recycled content plus one-half of preconsumer recycled content for Project. a. Cost of postconsumer recycled content plus one-half of preconsumer recycled content of an item shall be determined by dividing weight of postconsumer recycled content plus one-half of preconsumer recycled content in the item by total weight of the item and multiplying by cost of the item. Bio-Based Materials: Building materials, other than wood, shall meet ASTM Test Method D6866.

Do not include plumbing, mechanical, and electrical components, and specialty items, such as elevators and equipment, in the calculation. At least 20 different products from at least five different manufacturers shall comply with LEED requirements for material ingredient reporting. Retain first paragraph below and delete remaining paragraphs in this article if Contractor is responsible for complying with credit requirements for leadership extraction practices. Retain one or more of "Extended Producer Responsibility Program," "Recycled Content," and "Certified Wood" paragraphs below, and possibly supplement by requirements in other Sections, for bio-based materials to comply with credit requirements for leadership extraction practices. "Certified Wood" Paragraph below is an alternative to requiring certified wood in Sections where wood

products are specified 2.2 LOW-EMITTING MATERIALS A. Provide products and procedures necessary to obtain LEED credits indicated as Contractor's responsibility. Although other Sections may specify some requirements that contribute to these LEED credits, Contractor shall provide additional materials and procedures necessary to obtain LEED credits indicated. This article contains requirements applicable to Credit EQ "Low-Emitting Materials," Option 1. If retaining this article, coordinate with Sections where relevant products are specified to avoid

B. Paints and Coatings: For field applications that are inside weatherproofing system, paints and coatings shall comply with VOC content limits of authorities having jurisdiction and the following Categories in subparagraphs below are taken from USGBC's LEED Rating Systems and the standards referenced by them; if clarification is required, see those documents or LEED reference

Flat Paints and Coatings: 50 g/L. Nonflat Paints and Coatings: 50 g/L. Dry-Fog Coatings: 150 g/L. Primers, Sealers, and Undercoaters: 100 g/L. Rust-Preventive Coatings: 100 g/L. Zinc-Rich Industrial Maintenance Primers: 100 g/L. Pretreatment Wash Primers: 420 g/L. Clear Wood Finishes, Varnishes: 275 g/L Clear Wood Finishes, Lacquers: 275 g/L. Floor Coatings: 50 g/L. Shellacs, Clear: 730 g/L

Shellacs, Pigmented: 550 g/L. Stains: 100 g/L. Paints and Coatings: For field applications that are inside weatherproofing system, 90 percent of paints and coatings shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Adhesives and sealants are required in many Sections where, without being specifically mentioned, they may be specified only by requirement to install products according to manufacturer's written instructions. For this reason, it is probably best to retain both "Adhesives and Sealants" paragraphs below if this credit is required. Adhesives and Sealants: For field applications that are inside weatherproofing system, adhesives and sealants shall comply with VOC content limits of authorities having jurisdiction and the Categories in subparagraphs below are taken from USGBC's LEED Rating Systems and the

standards referenced by them; if clarification is required, see those documents or LEED reference

Wood Glues: 30 g/L. Metal-to-Metal Adhesives: 30 g/L. Adhesives for Porous Materials (except Wood): 50 g/L. Subfloor Adhesives: 50 g/L. Plastic Foam Adhesives: 50 g/L Carpet Adhesives: 50 g/L. Carpet Pad Adhesives: 50 g/L. VCT and Asphalt Tile Adhesives: 50 g/L. Cove Base Adhesives: 50 g/L. Gypsum Board and Panel Adhesives: 50 g/L. Rubber Floor Adhesives: 60 g/L. Ceramic Tile Adhesives: 65 g/L. Multipurpose Construction Adhesives: 70 g/L. Fiberglass Adhesives: 80 g/L. Contact Adhesives: 80 g/L. Structural Glazing Adhesives: 100 g/L Wood Flooring Adhesives: 100 g/L. Structural Wood Member Adhesives: 140 g/L Single-Ply Roof Membrane Adhesives: 250 g/L. Special-Purpose Contact Adhesives (That Are Used to Bond Melamine-Covered Board, Metal, Unsupported Vinyl, Rubber, or Wood Veneer 1/16 Inch or Less in Thickness to Any Surface): 250 g/L. Top and Trim Adhesives: 250 g/L. Plastic Cement Welding Compounds: 250 g/L. ABS Welding Compounds: 325 g/L. CPVC Welding Compounds: 490 g/L

PVC Welding Compounds: 510 g/L. Adhesive Primer for Plastic: 550 g/L. Sheet-Applied Rubber Lining Adhesives: 850 g/L Aerosol Adhesive, General-Purpose Mist Spray: 65 percent by weight. Aerosol Adhesive, General-Purpose Web Spray: 55 percent by weight. Special-Purpose Aerosol Adhesives (All Types): 70 percent by weight. Other Adhesives: 250 g/L. Architectural Sealants: 250 g/L. Nonmembrane Roof Sealants: 300 g/L. Single-Ply Roof Membrane Sealants: 450 g/L. Other Sealants: 420 g/L.

Sealant Primers for Nonporous Substrates: 250 g/L. Sealant Primers for Porous Substrates: 775 g/L. Modified Bituminous Sealant Primers: 500 g/L. Other Sealant Primers: 750 g/L. Adhesives and Sealants: For field applications that are inside weatherproofing system, 90 percent of adhesives and sealants shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions

rom Indoor Sources Using Environmental Chambers. F. Flooring: Flooring shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." If retaining "Composite Wood, Agrifiber Products, and Adhesives" Paragraph below, coordinate with Sections where composite wood products are specified to avoid conflicting requirements in those G. Composite Wood, Agrifiber Products, and Adhesives: Shall be made using ultra-low-emitting

formaldehyde resins as defined in California Air Resources Board's "Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products" or shall be made with no added formaldehyde. H. Ceilings, Walls, and Thermal Insulation: Shall comply with requirements of California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic

Chemical Emissions from Indoor Sources Using Environmental Chambers."

#### 018113.14 - SUSTAINABLE DESIGN REQUIREMENTS - LEED v4 BD+C: NEW CONSTRUCTION

Submittal (cont)

NONSMOKING BUILDING Smoking is not permitted within the building or within 25 ft. of entrances, operable windows, or outdoor-air intakes 3.2 CONSTRUCTION INDOOR-AIR-QUALITY (IAQ) MANAGEMENT

Coordinate first subparagraph below with Section 015000 "Temporary Facilities and Controls." Identify air handlers and associated return-air inlets authorized by Owner for use during construction

Comply with SMACNA's "SMACNA IAQ Guideline for Occupied Buildings under

If Owner authorizes use of permanent heating, cooling, and ventilating systems during construction period as specified in Section 01 5000 "Temporary Facilities and Controls," install MERV 8 filter media at each return-air inlet for the air-handling system used Replace air filters immediately prior to occupancy with new filters specified in Section 23 4100 "Particulate Air Filtration.

INDOOR-AIR-QUALITY (IAQ) ASSESSMENT Air-Quality Testing: Engage testing agency to perform the following: The EPA standard referenced in first subparagraph below is available from NTIS; (800) 553-6847 with PB90200288 ordering number. Conduct baseline indoor-air-quality testing, after construction ends and prior to occupancy, using testing protocols consistent with the EPA's "Compendium of Methods for

the Determination of Air Pollutants in Indoor Air," and as additionally detailed in USGBC's

"Green Building Design and Construction Reference Guide." Demonstrate that the contaminant maximum concentrations listed below are not exceeded: Formaldehyde: 27 ppb. Particulates (PM10): 50 mcg/cu. m. Ozone: 0.075 ppm, according to ASTM D5149 Total Volatile Organic Compounds (TVOC): 500 mcg/cu. m. Carbon Monoxide: 9 ppm and no greater than 2 ppm above

Target Chemicals in California Department of Public Health

"Standard Method for the Testing and Evaluations of Volatile

Organic Chemical Emissions from Indoor Sources Using

Environmental Chambers," Table 4-1 (except formaldehyde) For each sampling point where the maximum concentration limits are exceeded, conduct additional flush-out with outside air and retest the specific parameter(s) exceeded to indicate the requirements are achieved. Repeat procedure until all requirements have been met. When retesting noncomplying building areas, take samples from same locations as in

the first test. 4. Air-sample testing shall be conducted as follows: All measurements shall be conducted prior to occupancy but during normal occupied hours, and with building ventilation system starting at the normal daily start time and operated at the minimum outside airflow rate for the occupied mode throughout the duration of the air testing. 8. All interior finishes, such as millwork, doors, paint, carpet, acoustic tiles, and movable furnishings (e.g., workstations, partitions), must be installed, and major VOC punch list items must be finished. 9. The number of sampling locations varies depending on the size of building and number of ventilation systems. Identify at least one location per ventilation system; at least one location per floor of the building; and at least one location per space type. To determine a sampling protocol, identify and group spaces (or floors) that are very similar in their construction, finishes, configuration, size, and HVAC systems. Randomly select one out of every seven identical spaces to include in the testing. In addition, for buildings with a large number of identical spaces (more than 21 spaces in a sample group), test a minimum of three spaces in the sample group.

> 10. Air samples shall be collected between 3 and 6 feet (0.9 and 1.8 m) from the floor to represent the breathing zone of occupants and for a duration lasting a minimum of 65 minutes.

Project's mechanical engineer of record should verify that HVAC system design and equipment indicated are capable of delivering flush-out indicated. Provide HVAC system and equipment operating information necessary to achieve credit. If Project HVAC systems and equipment cannot suit requirement, consider requiring temporary systems and equipment. 1. After construction ends, prior to occupancy and with all interior finishes installed,

perform a building flush-out by supplying a total volume of 14,000 cu. ft. of outdoor air per sq. ft. of floor area while maintaining an internal temperature of at least 60 deg F and a relative humidity no higher than 60 percent. In first subparagraph below, indicate operating procedure for each HVAC system and piece of

END OF SECTION 01 8113.14

equipment and the operating duration required for flush-out. 2. If occupancy is desired prior to flush-out completion, the space may be occupied following delivery of a minimum of 3500 cu. ft. of outdoor air per sq. ft. of floor area to the space. Once a space is occupied, it shall be ventilated at a minimum rate of 0.30 cfm per sq. ft. of outside air or the design minimum outside air rate, whichever is greater. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions shall be maintained until a total of 14,000 cu. ft./sq. ft. of outside air has been delivered to the space. In subparagraph below, indicate operating procedure for each HVAC system and piece of equipment and the operating duration required for flush-out.

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

**ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce -1111 Godfrey Ave. SW

Grand Rapids, MI 49507

**CONSULTANT** 

PROFESSIONAL SEAL

© 2025 ROSSETTI

# DESCRIPTION

DATE

02/07/2025

**KEY PLAN** 

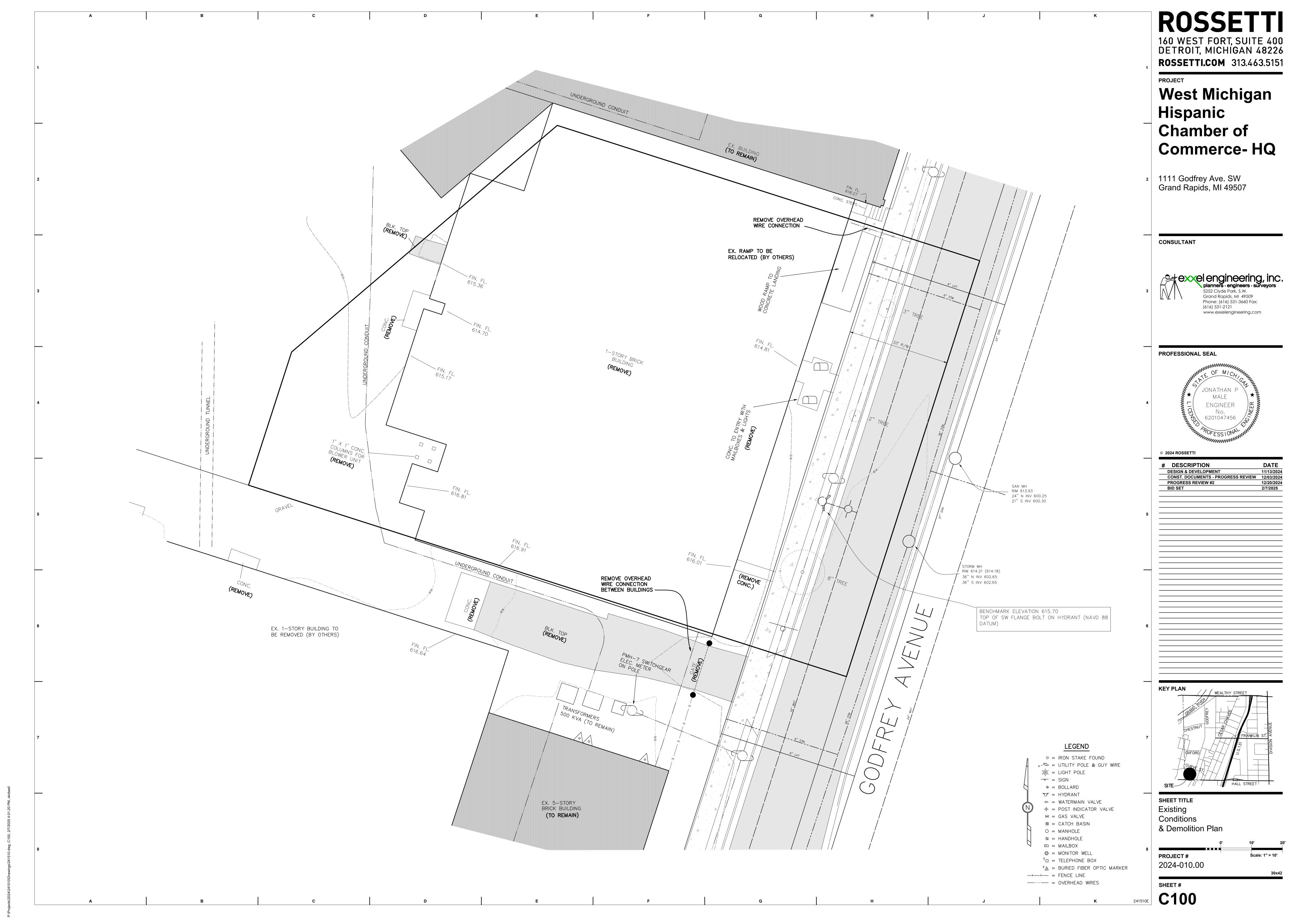
SHEET TITLE

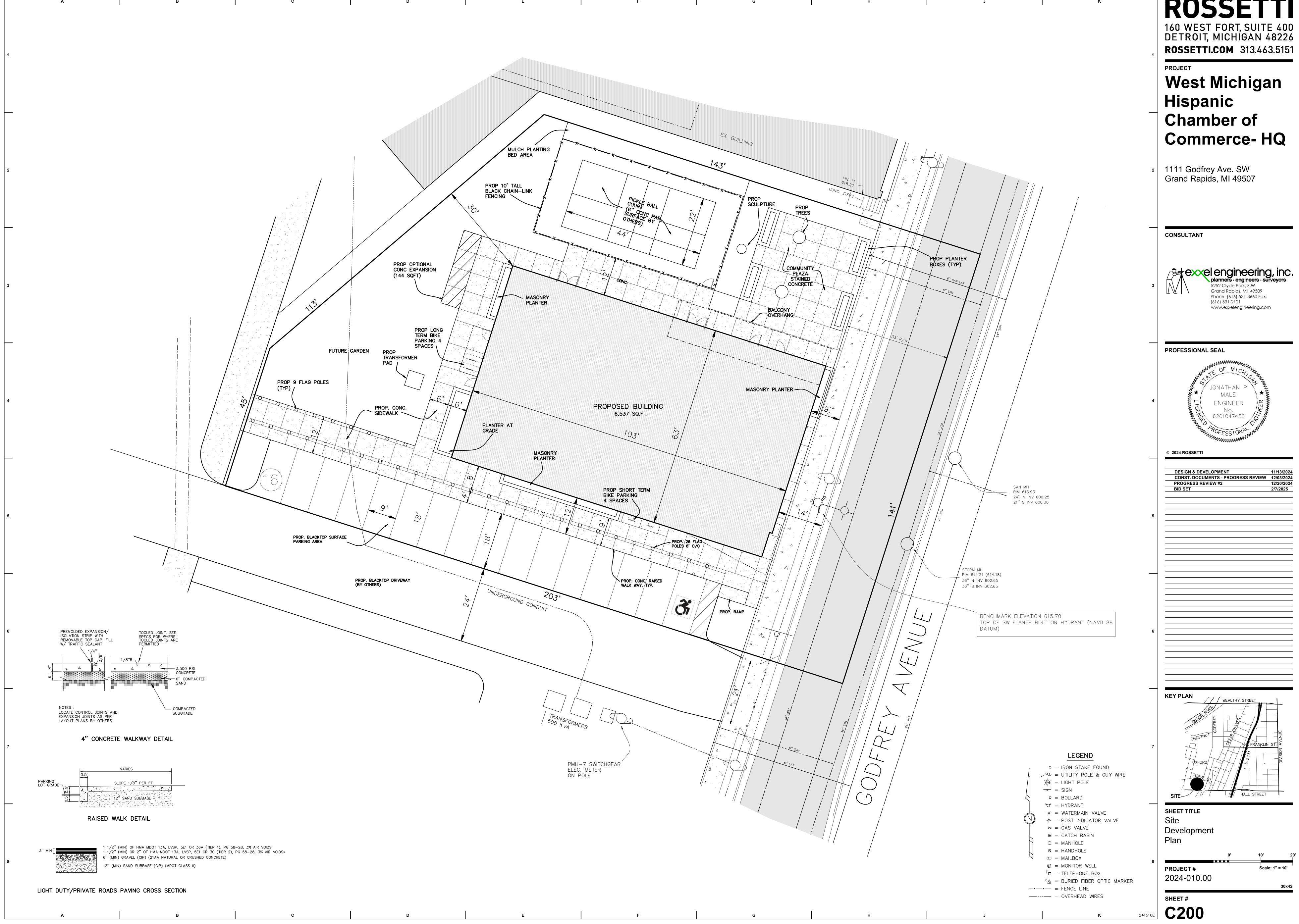
**LEED Specifications** 

PROJECT# 2024-010.00

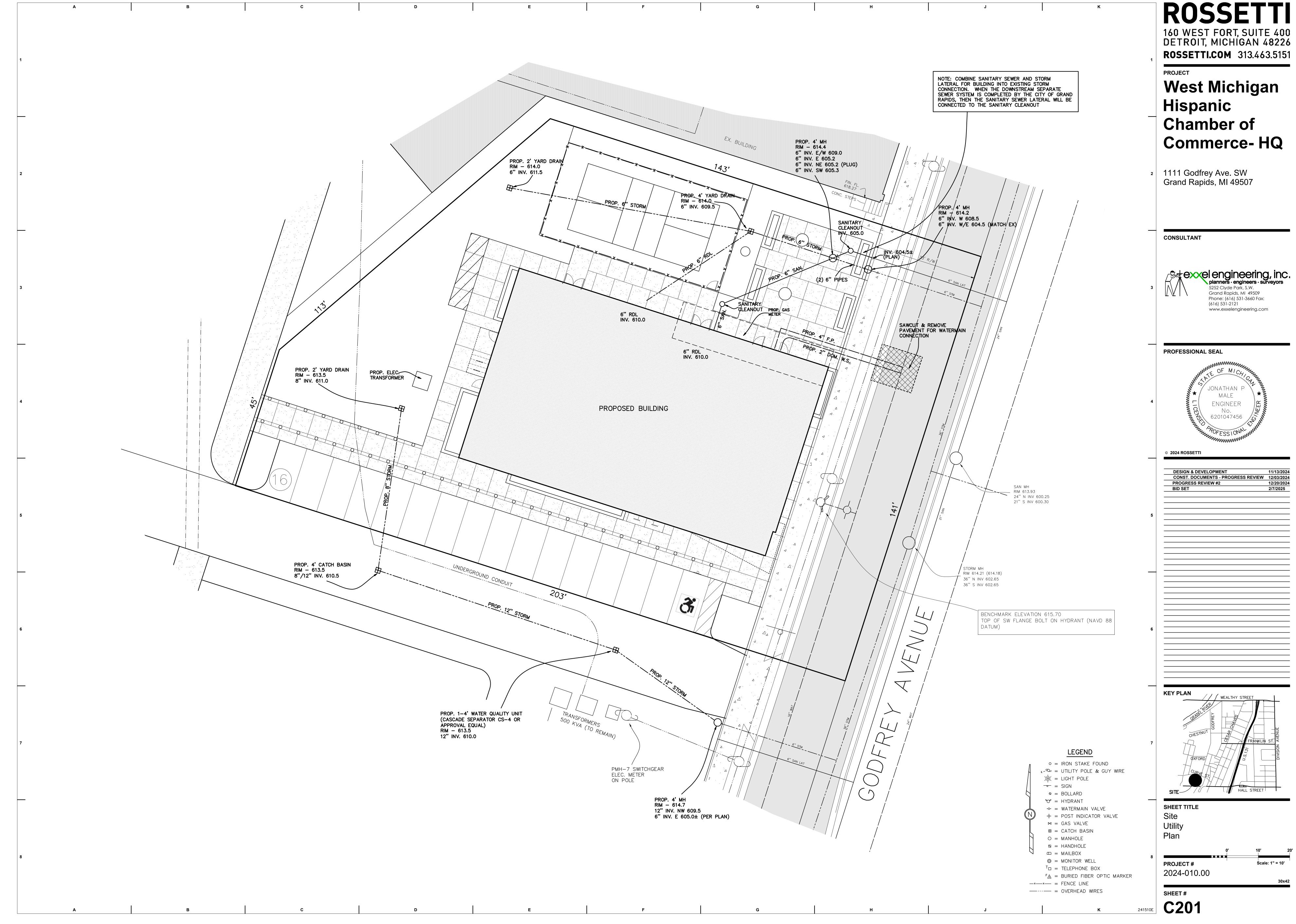
SHEET#

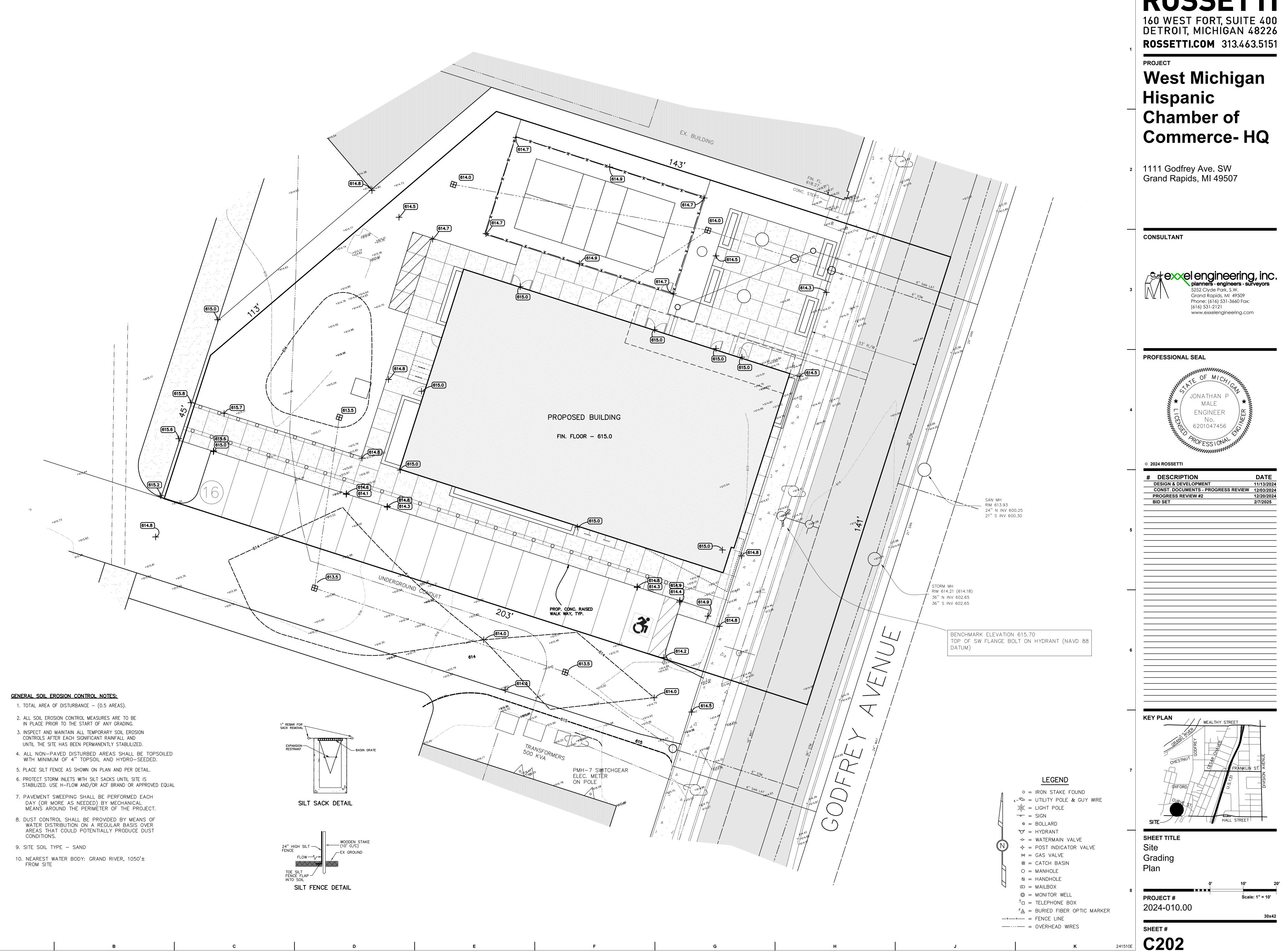
Scale: 1/16" = 1'-0"





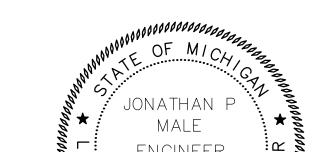
CONST. DOCUMENTS - PROGRESS REVIEW 12/03/2024 PROGRESS REVIEW #2 12/20/2024





**ROSSETTI.COM** 313.463.5151

West Michigan Commerce- HQ



CONST. DOCUMENTS - PROGRESS REVIEW 12/03/2024

SITE HALL STREET

Scale: 1" = 10'

**EXISTING BUILDING** PROPERTY — LINE FUTURE — PICKLE BALL COURT COMMUNITY
PLAZA
STAINED
CONCRETE GRAY HATCH —— DENOTES FROST SLAB - TYP. - CONCRETE -BALCONY -SIDEWALK ROOM MASONRY PLANTER PLANTER CANOPY LONG-TERM BIKE ——PARKING (4 SPACES) PROPOSED BUILDING 6537 SF TRANSFORMER-PAD (VERIFY SIZE AND LOCATION) 6' - 0" 6' - 0" CONCRETE -SIDEWALK MASONRY PLANTER SHORT-TERM BIKE --CANOPY---DARKING (4 SPACES) - ASPHALT PARKING (16 SPACES) LANDSCAPE

**A8** Site Plan **A-001** SCALE: 1" = 10'-0"

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce -**HQ** 1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT

PROFESSIONAL SEAL

© 2025 ROSSETTI

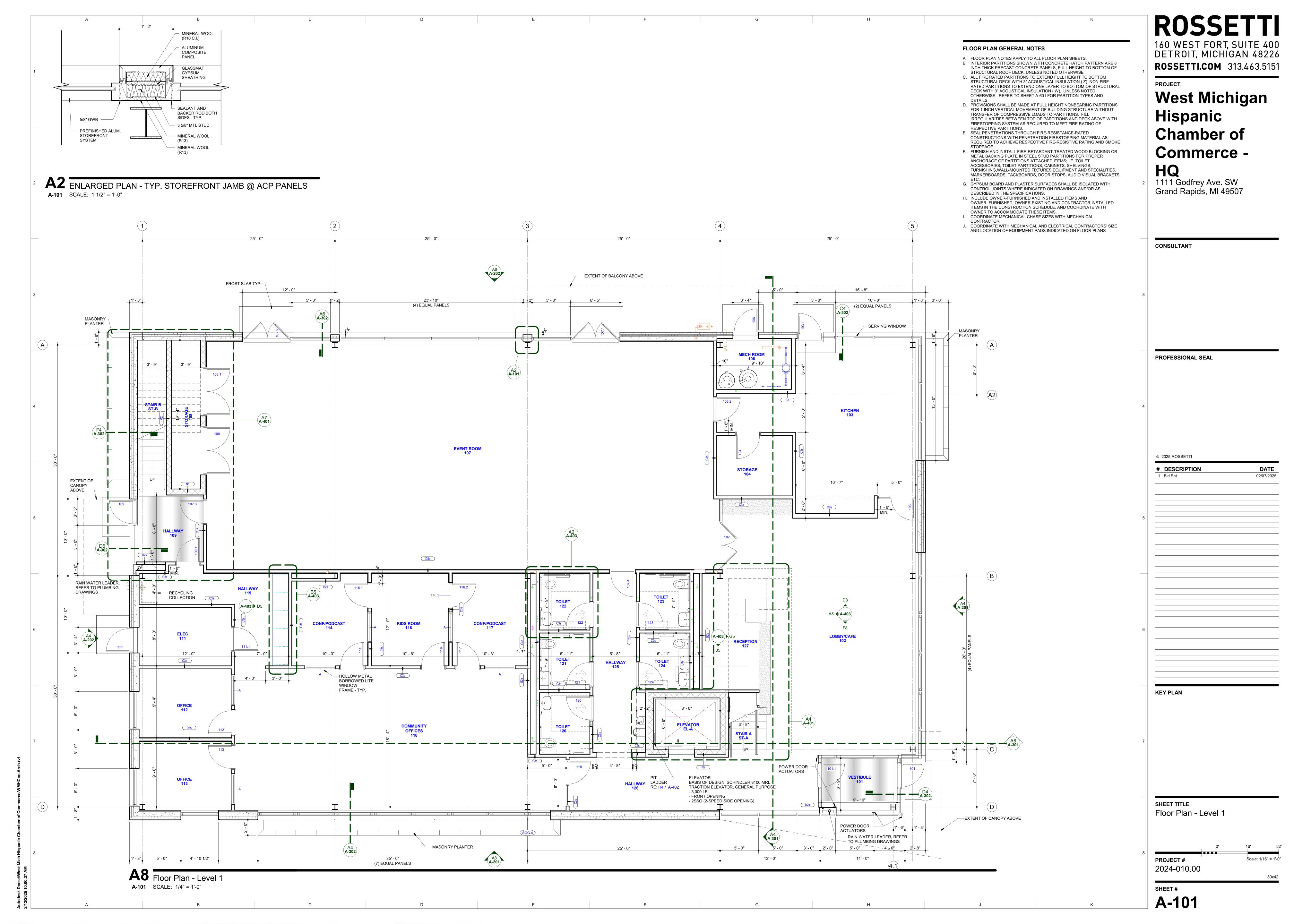
DATE # DESCRIPTION 02/07/2025

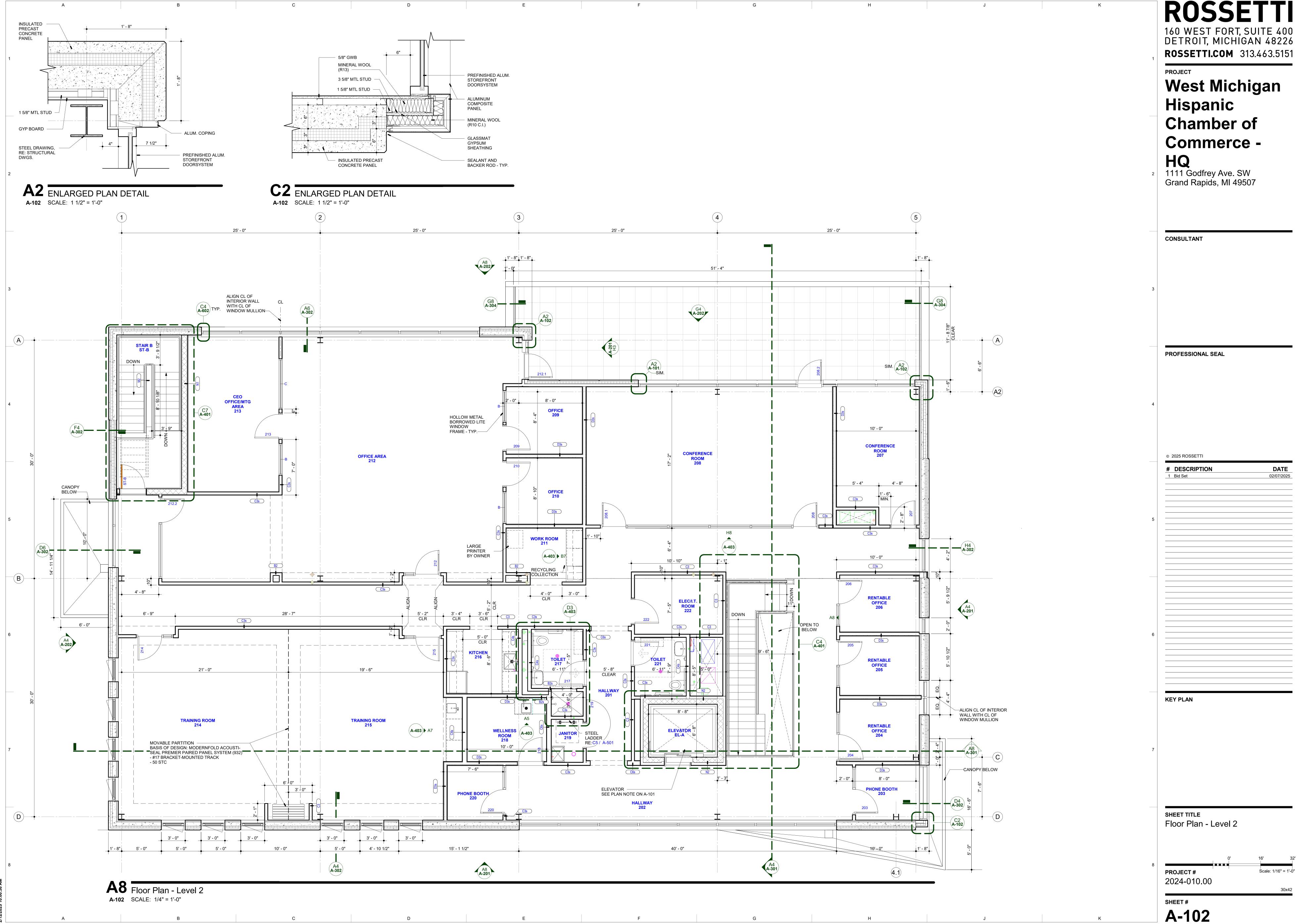
**KEY PLAN** 

SHEET TITLE Architectural Site Plan

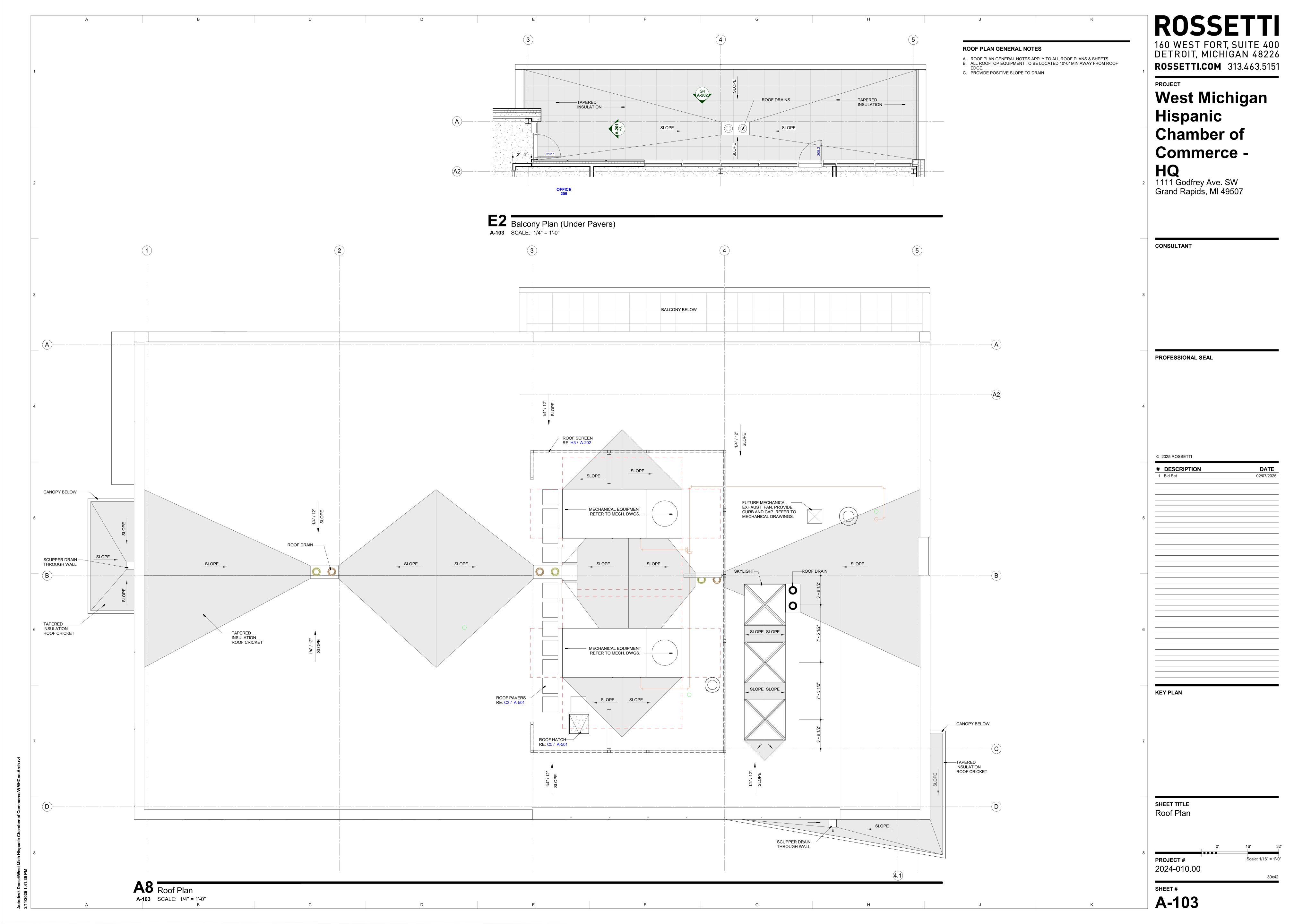
PROJECT# 2024-010.00

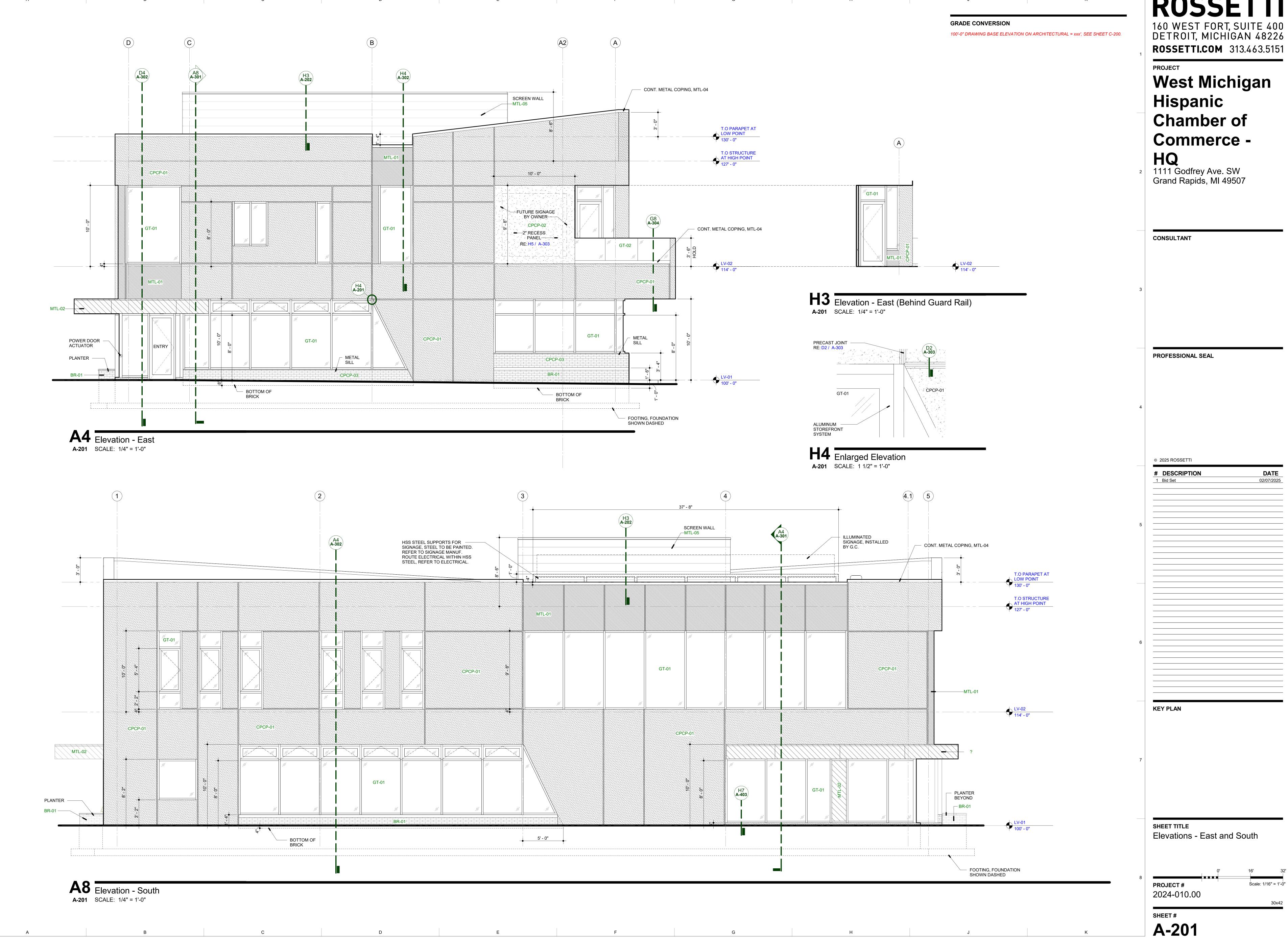
SHEET#





160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

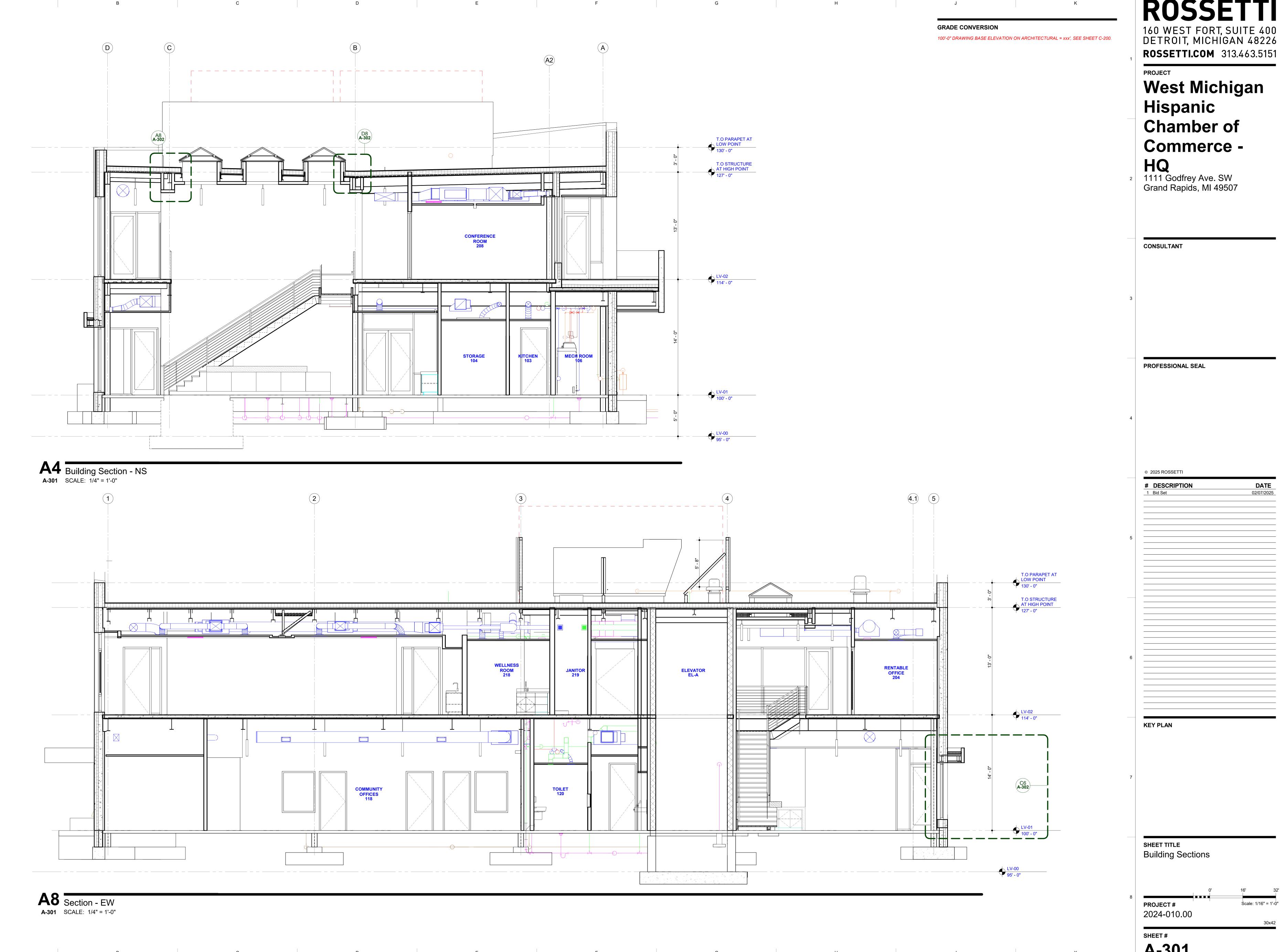




160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

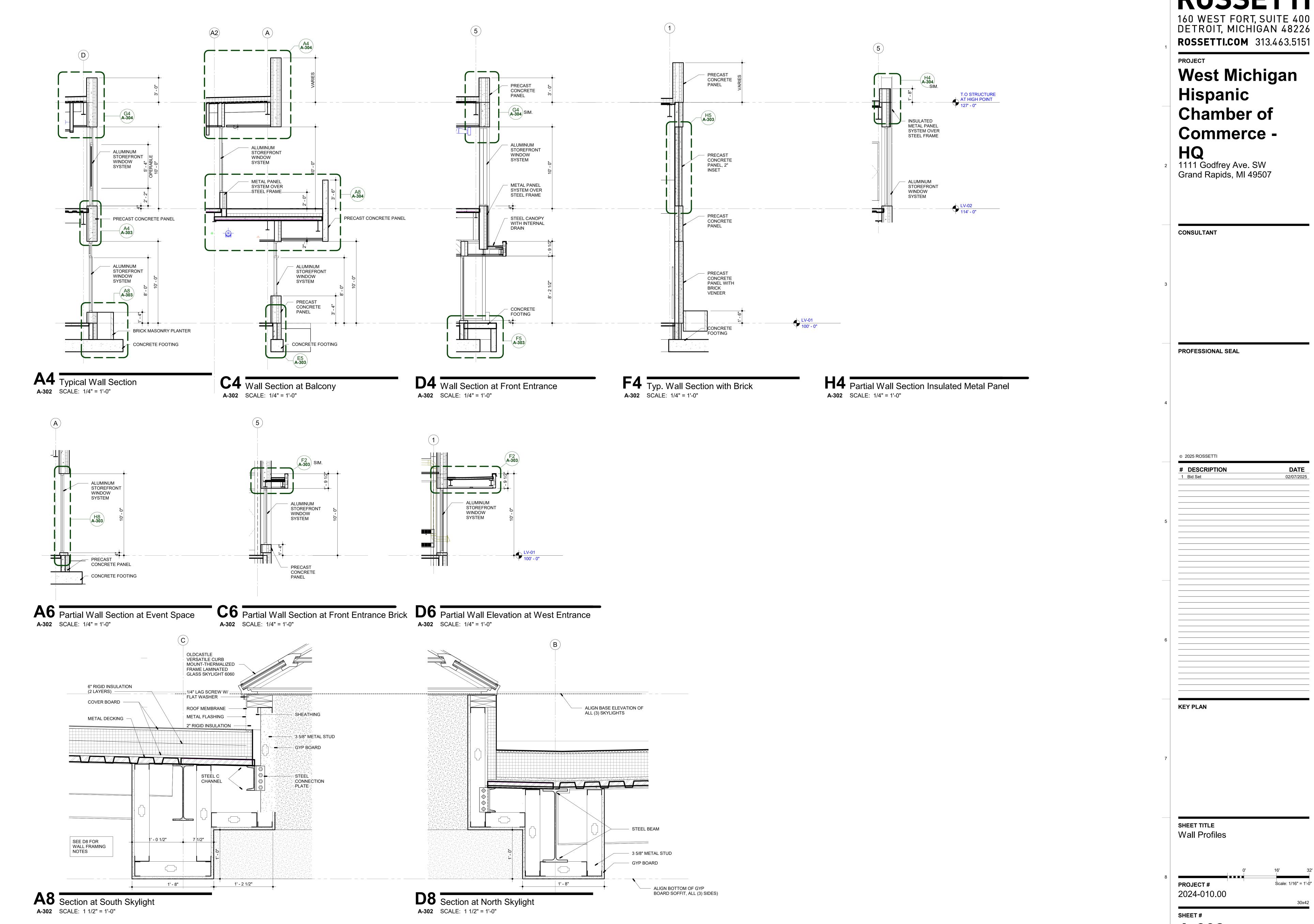
02/07/2025





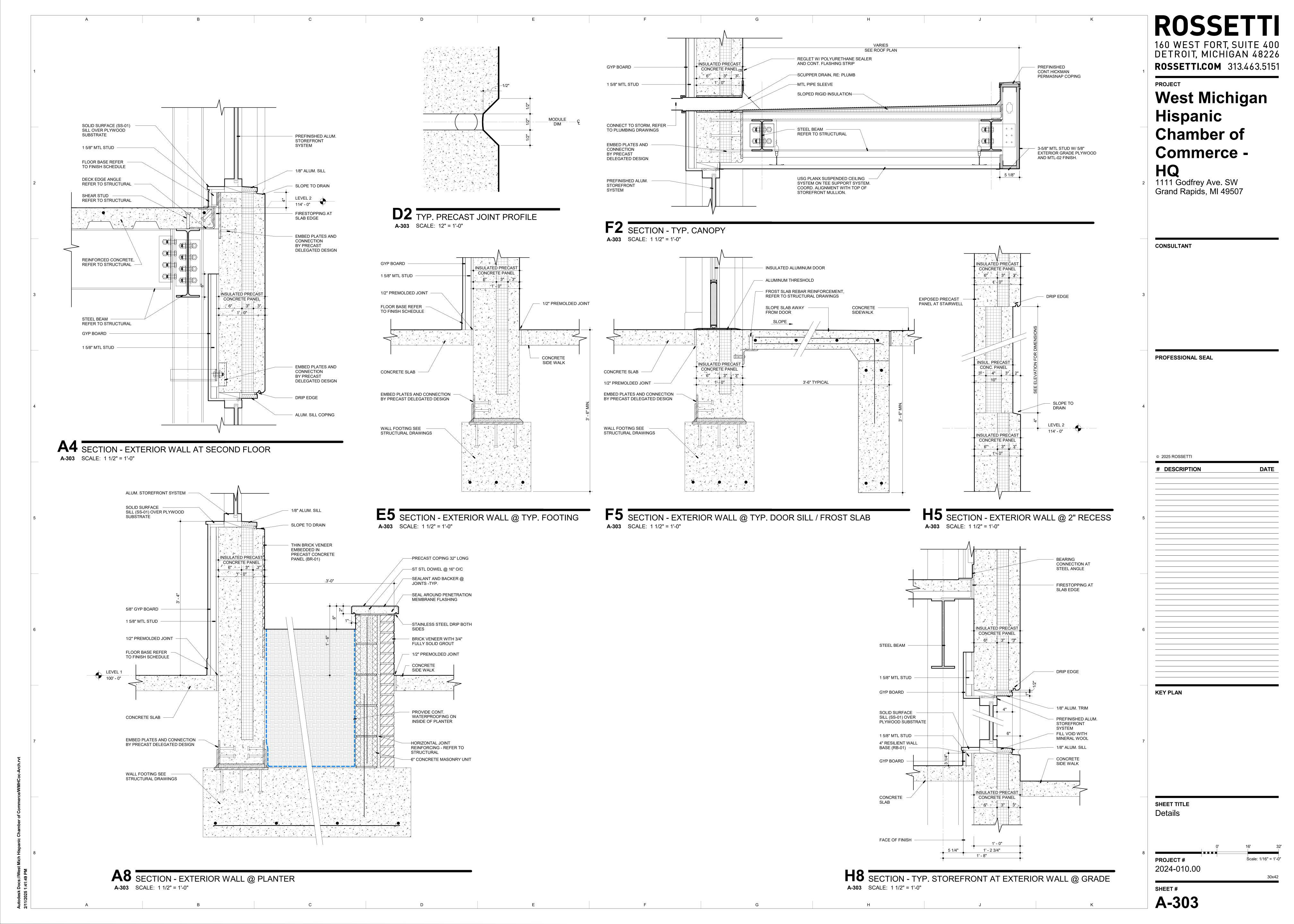
160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

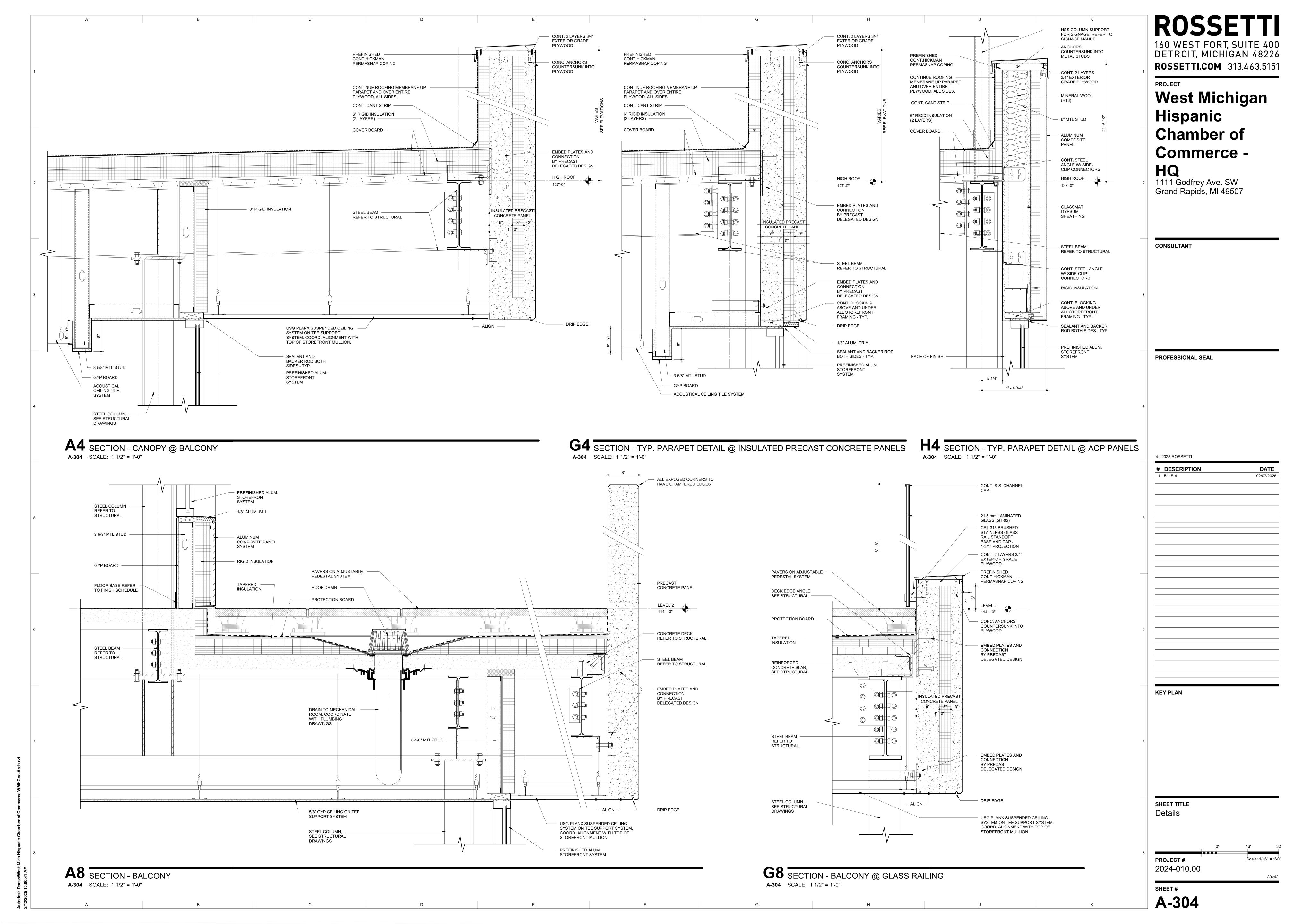
Scale: 1/16" = 1'-0"

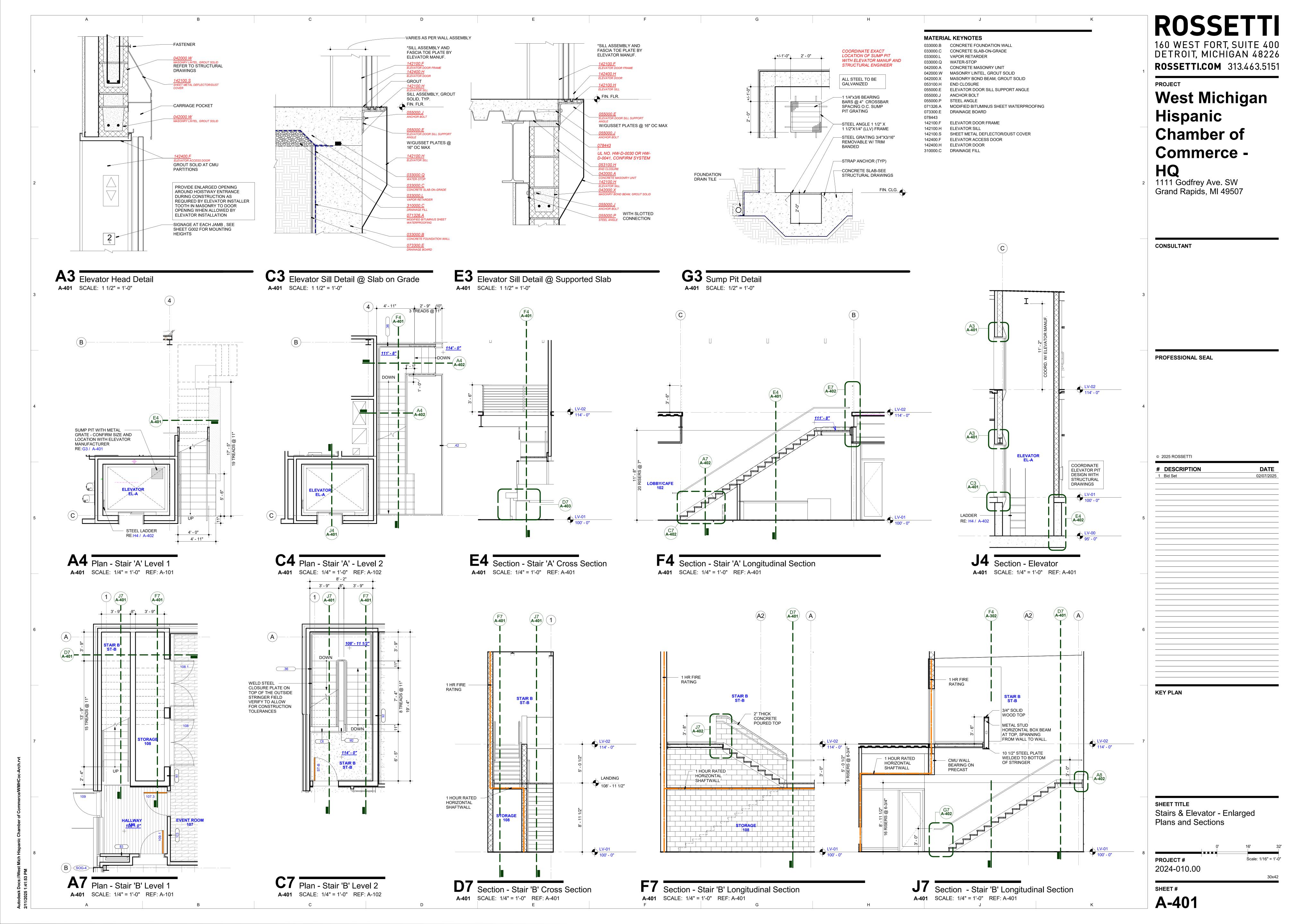


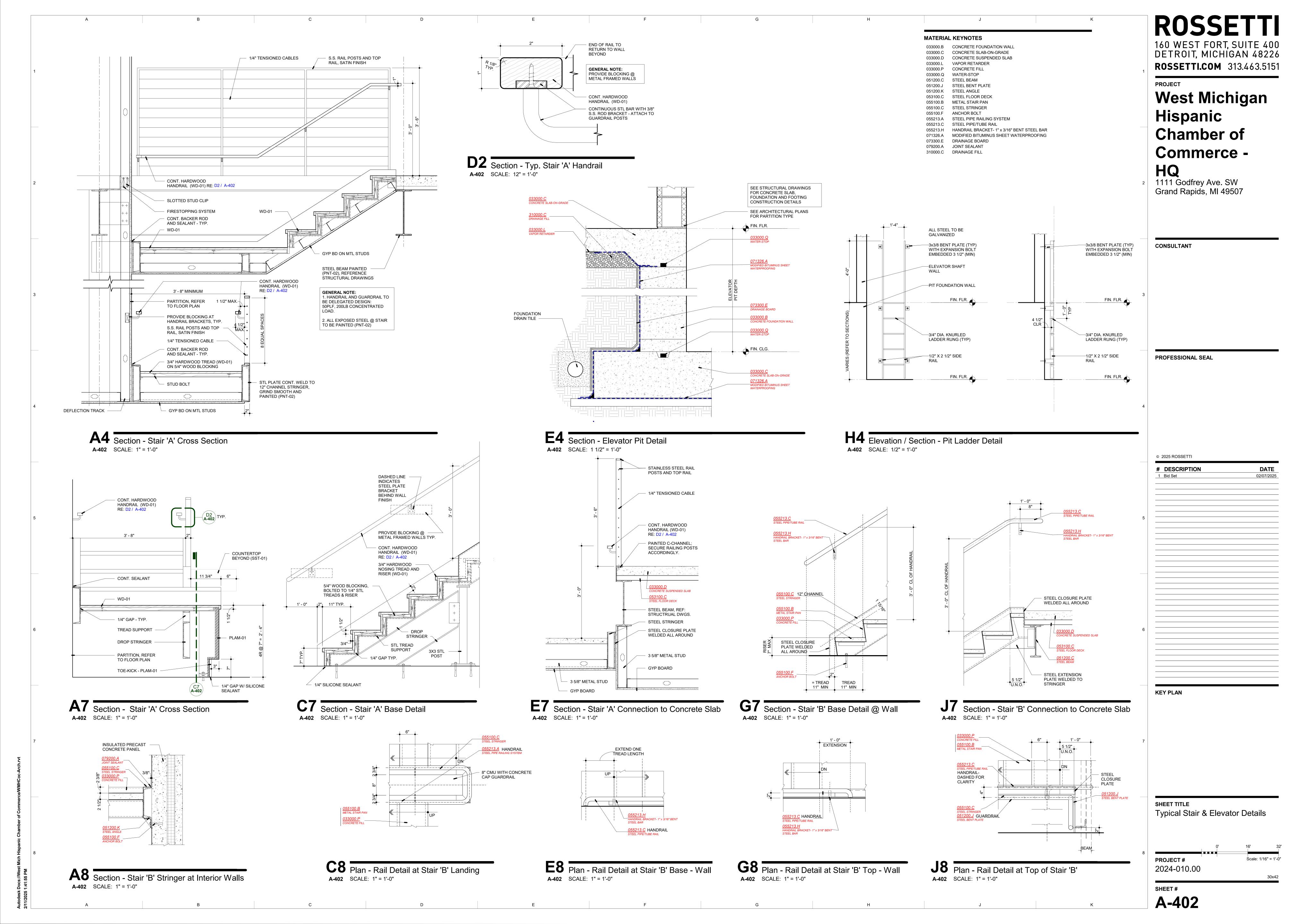
DETROIT, MICHÍGAN 48226

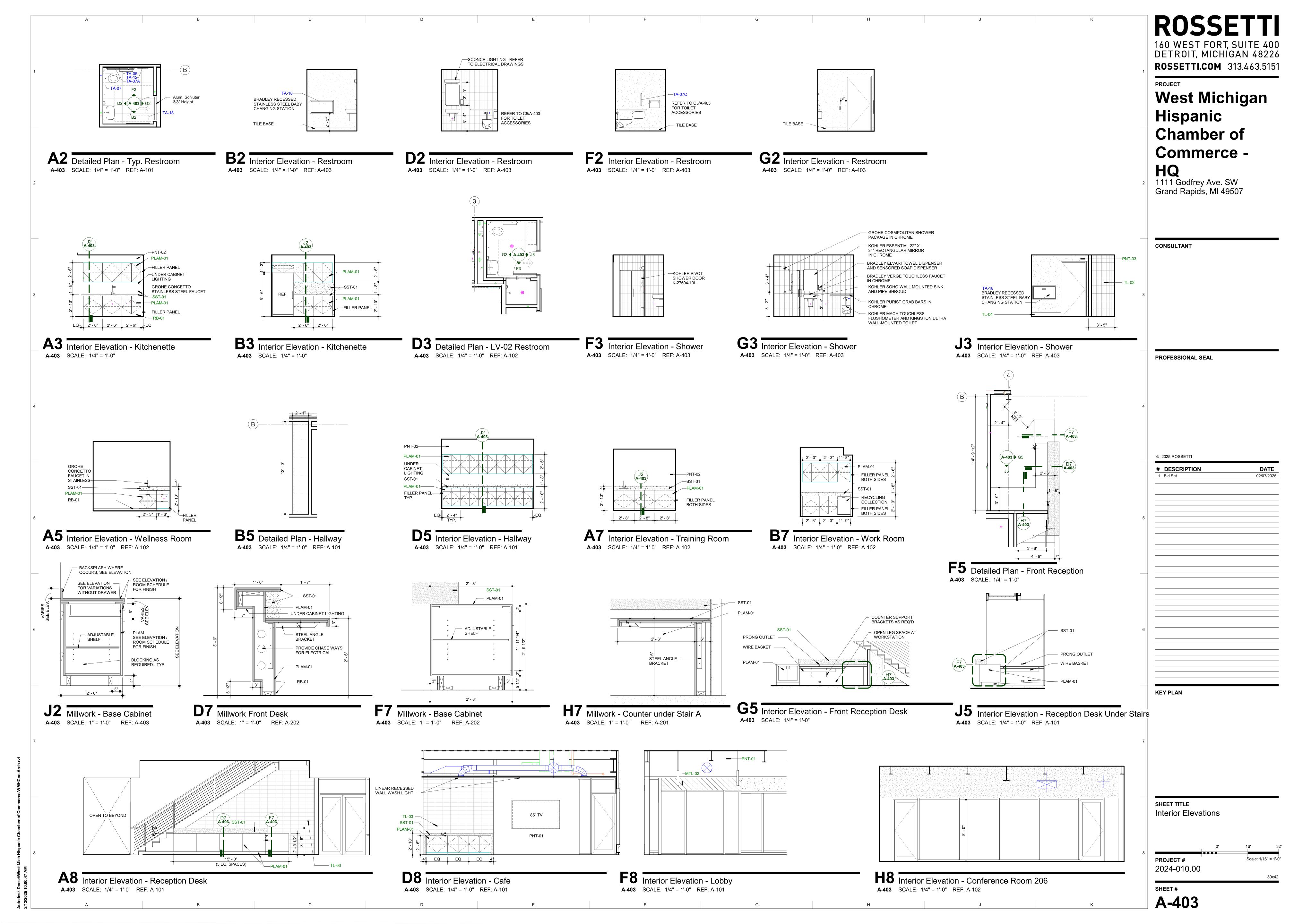
Scale: 1/16" = 1'-0"

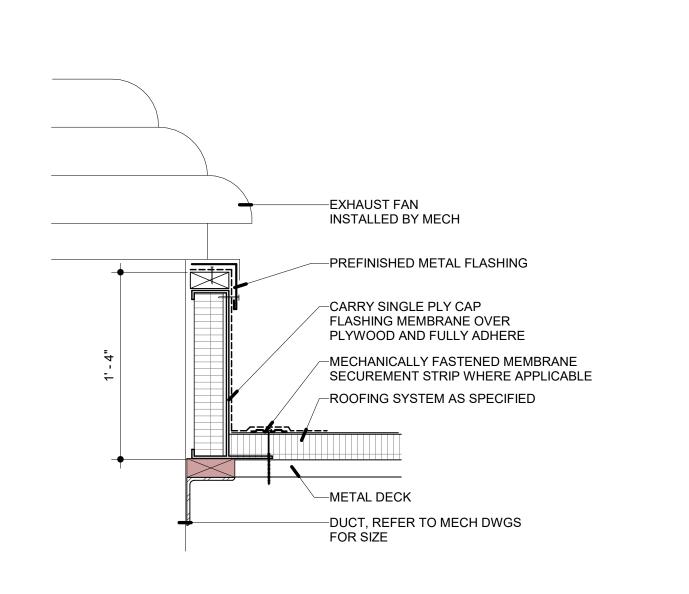




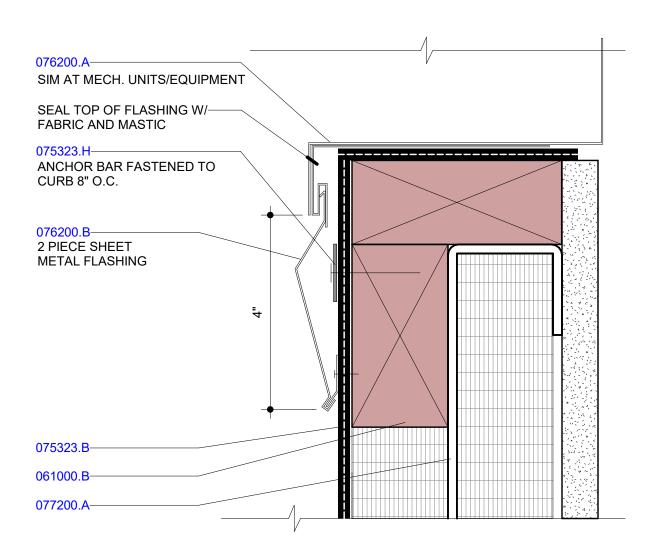




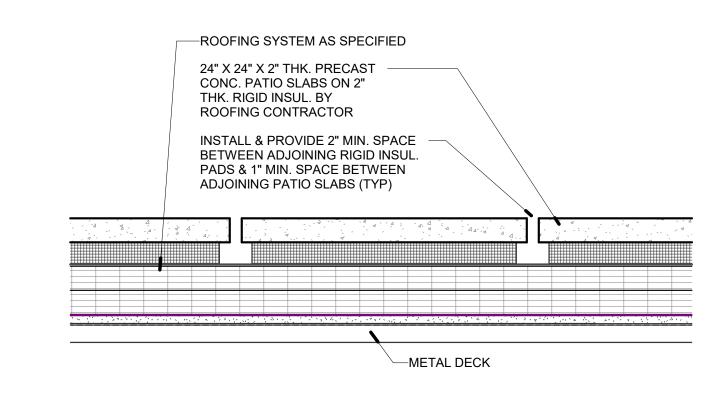




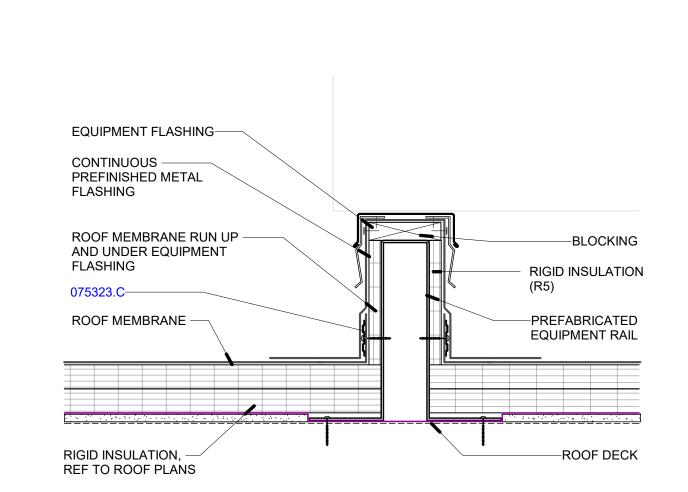
A3 EXHAUST FAN CURB **A-501** SCALE: 1 1/2" = 1'-0"



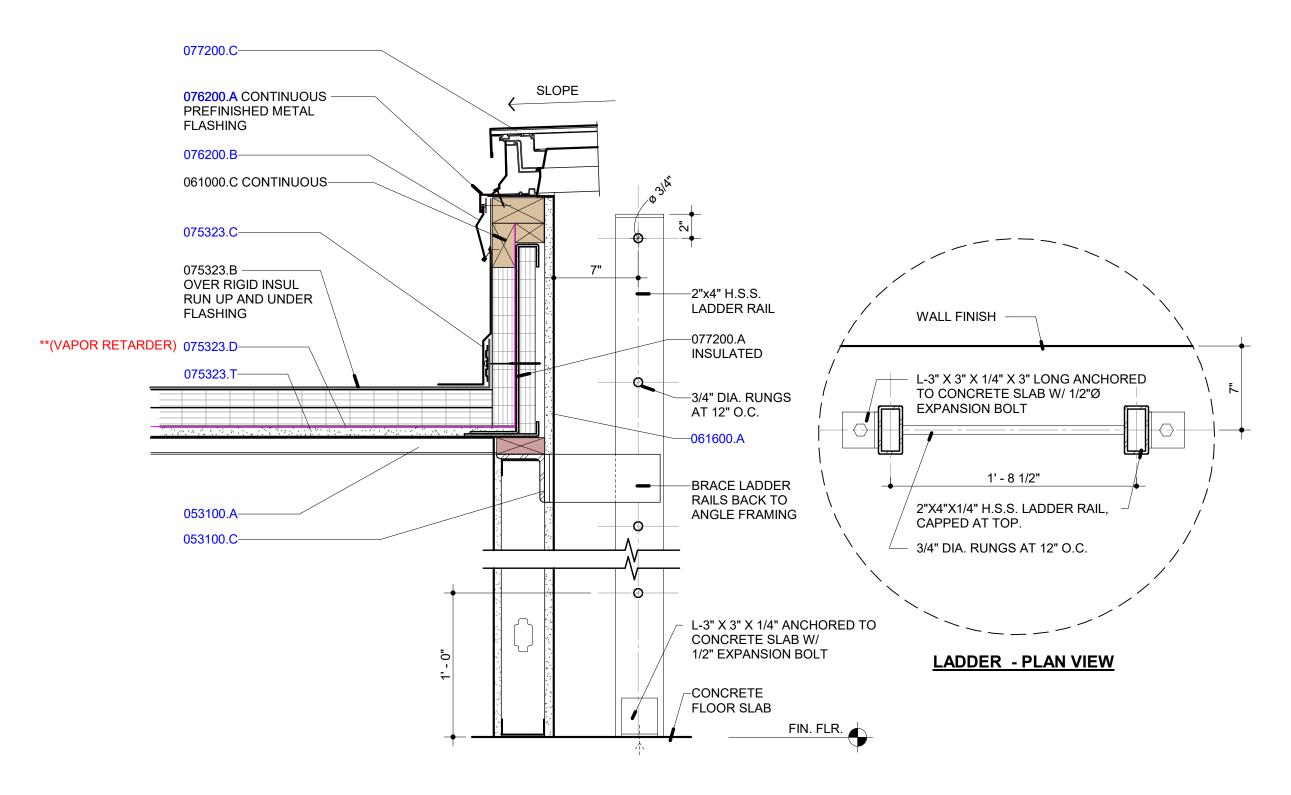
A5 TYP ROOF CURB ENLARGED DETAIL **A-501** SCALE: 6" = 1'-0"



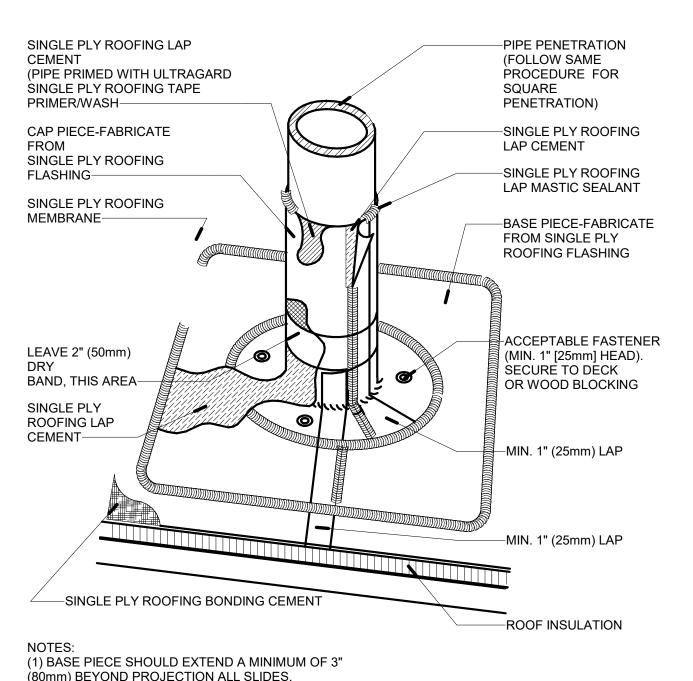
C3 TYP. ROOF PAVER DETAIL **A-501** SCALE: 1 1/2" = 1'-0"



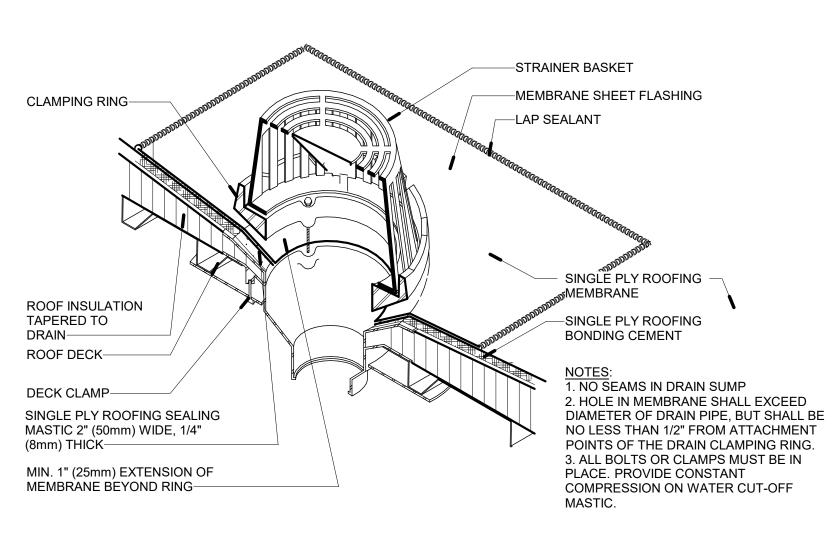
TYP ROOF EQUIPMENT RAIL DETAIL **A-501** SCALE: 1 1/2" = 1'-0"



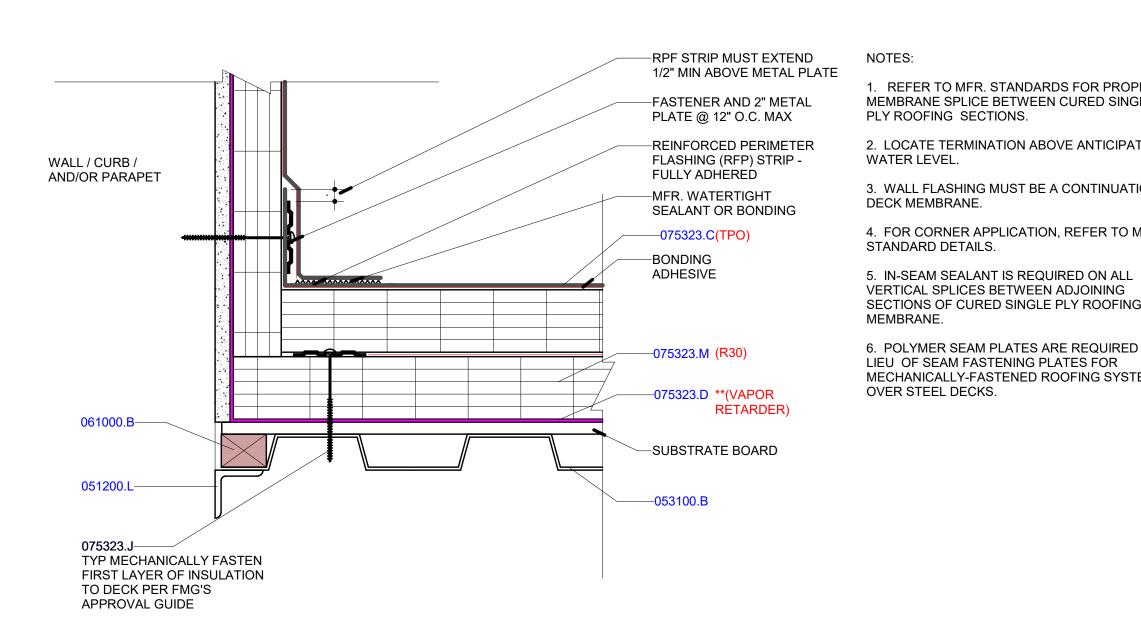
C5 ROOF HATCH & LADDER DETAIL **A-501** SCALE: 1 1/2" = 1'-0"



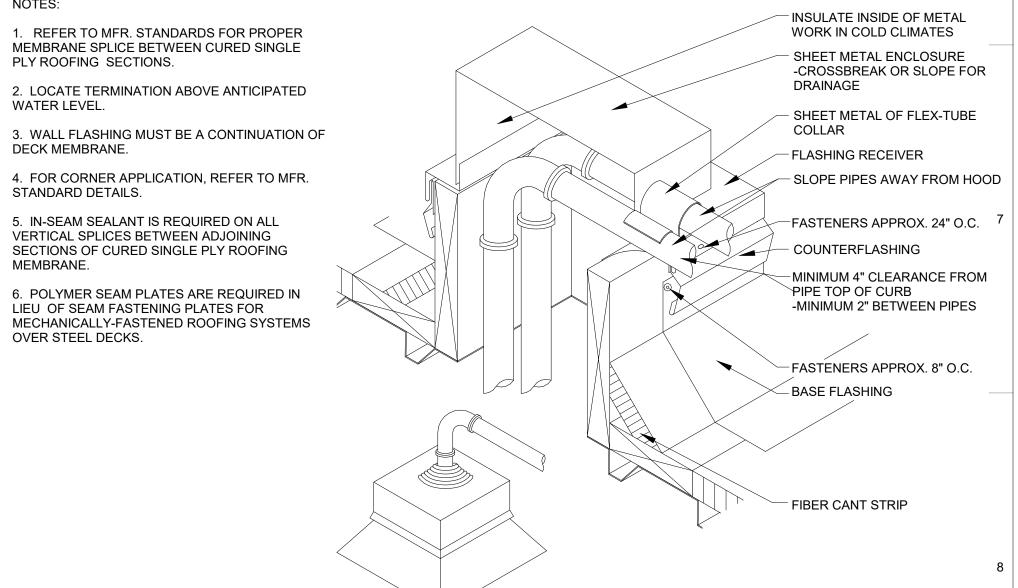
Ab roofing Piping Pentration Detail **A-501** SCALE: 1 1/2" = 1'-0"



ROOF DRAIN DETAIL (TPO) **A-501** SCALE: 1 1/2" = 1'-0"



RS-1 BASE TIE-IN SINGLE PLY ROOF FLASHING DETAIL **A-501** SCALE: 3" = 1'-0"



MATERIAL KEYNOTES

053100.B STEEL ROOF DECK 053100.C STEEL FLOOR DECK

053100.A

075323.C

075323.D

075323.J

075323.M

075323.T

076200.A FLASHING

077200.A ROOF CURB 077200.C ROOF HATCH

STEEL DECKING

061600.A GLASS-MAT GYPSUM SHEATHING TPO ROOFING MEMBRANE

METAL TERMINATION BARS

SHEET FLASHING

VAPOR RETARDER

ROOF INSULATION

COVER BOARD

**FASTENERS** 

076200.B COUNTER FLASHING

STEEL HOLLOW STRUCTURAL SECTION (HSS)

061000.B FIRE-RETARDANT-TREATED WOOD BLOCKING

Jo Piping/Conduit through roof deck detail **A-501** SCALE: 1 1/2" = 1'-0"

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce -HQ

1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT

PROFESSIONAL SEAL

© 2025 ROSSETTI # DESCRIPTION DATE

02/07/2025

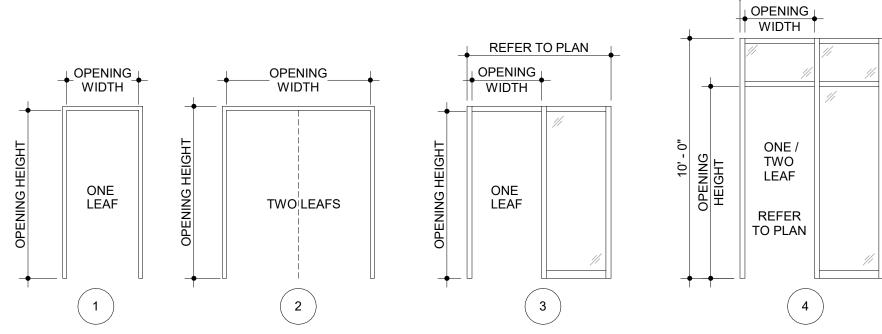
**KEY PLAN** 

SHEET TITLE **Roof Details** 

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

SHEET#

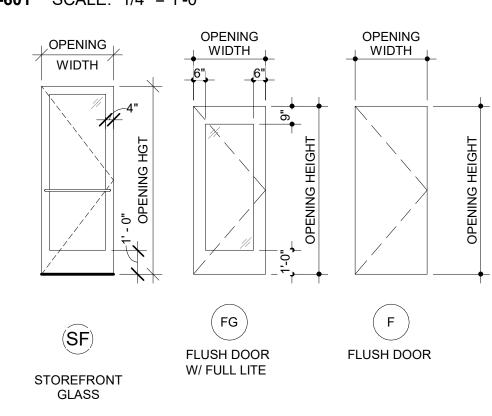
INISH LEGEN	ND/KEY ROSv3.4				
KEY	DESCRIPTION	MANUFACTURER	MODEL	MATERIAL ATTRIBUTES	REMARKS
ACT-01		Armstrong	Ultima	Color: White Thickness: 3/4" Size: 24" x 24" Beveled Tegular Installation15/16" Prelude Grid	
BR-01	Smooth Brick	Belden Brick	481-483 Smooth, Mortar MC58	Product#: Modular Color: 481-483 Smooth Height: 2 1/4" Thickness: 3 5/8" Contact: Gary Tenney gary@beldenbricksales.com (586-404-8195)	full width at planters
CONC-01	Concrete Slab Flooring			Texture: Fine Aggregate, Polished	Exposed concrete floor surfaces, as noted
CONC-02	Concrete Slab Flooring	Cabaan Dragget	C" Drocost Come   2" Digid Inquistion   2"	Texture: Fine Aggregate, Flat	Mechanical and Electrical
CPCP-01	Composite Precast Concrete Panel		Precast Conc	Color: Autumn (4%) pigment concrete panels Texture: Terracotta	Exterior Facade
CPCP-02	Composite Precast Concrete Panel		3" Precast Conc + 4" Rigid Insulation + 3" Precast Conc		Exterior Facade
CPCP-03	Composite Precast Concrete Panel	Fabcon Precast, Belden Brick	1/2" Brick + 3" Precast Conc + 3" Rigid Insulation + 6" Precast Conc	Product#: Modular 5/8 Flat back Color: 481-483 Smooth Height: 2 1/4" Thickness: 5/8"	Exterior Facade
CPT-01	Carpet Tile	Interface	Etched Earth EE712	Color: 103454 Fossil Size: 19.69" x 19.69" InstallationMonolithic Contact: Cara Bogosian cara.bogosian@interface.com 248.214.2707	Offices and Conference Rooms
CPT-02	Walk-Off Mat	Construction Specialties	M1 No Frame, Recessed	Color: Anodized Mill, Black Heavy Duty Carpet Inserts	Vestibule
EC-02	Acoustic Spray	International Cellulose	K-13 Thermal Insulation	Color: Light Grey Thickness: 1.5" Contact: Brien Straw bstraw@spray-on.com (713-433-6701)	
GL-01		Any qualified manufacturer	1/4" clear float glass	Color: Clear	Interior Storefront, provide safety glass where required by code
GT-01	Insulating Glass, 1/4" Clear, 1/2" Air Space, 1/4" Clear, Low E on #2 Surface	See specification	See specification	Color: Clear	Exterior glass, provide safety glass where required by code
LVT-01	Luxury Vinyl Tile	Interface	Natural Wood Grains	Color: C01103 Oak Satin Thickness: 3mm Size: 9.85" x 39.38" InstallationGlue Down, Ashlar Contact: Cara Bogosian cara.bogosian@interface.com 248.214.2707	Event Space and Kitchenette
MTL-01	Metal Panels	Alucobond	EasyFix	Product#: AB434 Color: Dark Bronze Anodized	
MTL-02		Zahner	Solanum Steel	Color: Pre-Oxidized Weathering Steel	Exterior Canopy, 14 guage thickness
MTL-03	Metal Planks	USG	Planx Linear Metal Ceiling System, Butt Joint between each panel	Color: S-25 Natural Ovang Saranté Size: 6" x 8' 6"	Soffit and Vestibule
MTL-04	Metal Coping	Hickman	PermaSnap Sloped Version	Color: MFR color chart to match precast panels	
MTL-05	Metal Roof Screen	RoofScreen	Flush Panel	Color: Dark Bronze	
PLAM-01	Plastic Laminate	Formica	Fenix	Product#: J0032 Thickness: .7mm Size: 4' x 8' sheet Contact: Vickey Bowers vickey.bowers@formica.com 586.267.8922	
PNT-01	Latex Paint	Sherwin Williams		Color: SW 7064 Passive Texture: Eggshell	
PNT-02		Sherwin Williams		Color: SW 7064 Passive Texture: Semi-Gloss	All exposed structure and all exposed mechanical
PNT-03	Epoxy Paint	Sherwin Williams		Color: SW 7064 Passive	Kitchen and Toilet Rooms
PNT-04	Paint	Sherwin Williams	Interior Storefront Paint		Door and Door Frame
PNT-05	Kynar Finish	Kawneer	provided by mfr.		
PREF-01	Prefinished	Kawner		Color: Dark Bronze	
PREF-02	Prefinished			Color: MFR color chart to match precast panels	
PREF-03	Prefinished			Color: MFR color to match Exterior Aluminum Storefront	
PREF-04	Prefinished			Color: Wood stain selected by architect, clear finish	
RB-01	Resilient Wall Base	Johnsonite	Traditional TightLock Resilient	Color: 21 Platinum CG Height: 4.375"	
RS-01	Resinous Flooring	RES-TEK	•	Color: CF Blend 9	Kitchen
SS-01	Solid Surface	Corian	Solid Surface	Color: Deep Espresso	Interior window sills
SST-01	Synthetic Stone	Wilsonart	Quartz	Color: Lazio Q1018 Texture: Polished Thickness: 3cm Size: 65" x 130" slab Contact: Brittany Dewar brittany.dewar@wilsonart.com 734.404.4830	
TL-01	Porcelain Tile	Tile Bar	Kobe Flakes	Color: Smoke Gray Grout: Mapei 47 Charcoal, 3/16" Grout Joints Thickness: 3/8" Size: 24" x 24" Contact: Megan Erickson merickson@tilebar.com 240.644.6700	Restroom Floors
TL-02	Ceramic Tile	Daltile	Stencil Linear Wall Tile	Color: White SC32 Grout: Mapei 27 Silver, 3/16" Grout Joints Thickness: 5/16" Size: 4" x 12" InstallationVertical Stack Bond Contact: Taylor Sheppard taylor.sheppard@daltile.com 224.374.4180	Restroom Walls
TL-03	Ceramic Tile	Tile Bar	Curve Fluted Tile	Color: Gray Thickness: 8mm (.31") Size: 6" x 12" InstallationHorizontal Running Bond	
TL-04	Tile Cove Base	Daltile	Color Wheel	Color: Arctic White Matte Grout: Mapei 27 Silver, 3/16" Grout Joints Size: 6" x 12" Contact: Taylor Sheppard taylor.sheppard@daltile.com 224.374.4180	Restrooms
WD-01	Wood		Quarter sawn white oak, appearance grade B	Color: Stain color to be provided by architect	Stair A risers and treads, stained with polyurethane finish



REFER TO PLAN

E2 Door Frame Types **A-601** SCALE: 1/4"-=0"1'-0" 6" TYP. 6' - 4" ADJACENT DOOR FRAME, REFER TO PLAN AND DOOR SCHEDULE —FINISH FLOOR -HOLLOW METAL -HOLLOW METAL FRAME, PAINTED FRAME, PAINTED

G2 Hollow Metal Borrowed Lite Window Frame **A-601** SCALE: 1/4" = 1'-0"



Door Types

A-601 SCALE: 1/4" = 1'-0"

#### DOOR SCHEDULE ROSv3.4

"R" REVISED DOOR, "N" NEW DOOR DELETED DOOR(S): NONE

STAIR B LV-02: 23 TOTAL DOORS: 54

ROOM NAME	OPNG#	OPENIN WIDTH	IG SIZE HEIGHT	TVDE	MATERIAL	DOOR FINISH	GLASS	_ THRESHOLD	HEAD	JAMB	SILL	FIRE RATING	TVDE	MATERIAL	FRAME FINISH	GLASS	HDWE CARD SET READER	REMARKS	Construct
ESTIBULE		3' - 0"	8' - 0"	SF		PREF-01	GLASS GT-01		E8/A602	C4/A602		No Rating	IYPE		PREF-01	GLASS GT-01		Self-Closing Device, Panic Bar,	Туре
ESTIDULE	101	3-0	0 - 0	OF .	ALUM	PREF-UI	GI-01	ALUM	E0/A002	C4/A002	1	No Railing	3	ALUM	PREF-UI	G1-01	Yes	Automatic Operator	
/ESTIBULE	101.1	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GL-01	ALUM	A6/A602	C6/A602	N	No Rating	3	ALUM	PREF-01	GL-01	Yes	Self-Closing Device, Panic Bar,	
							0_0.	7.20	7 1077 1002					7.20		J_ 0_ 0.		Automatic Operator	
ITCHEN	103	3' - 0"	8' - 0"	SF	ALUM	PREF-03	GL-01	No Threshold	A6/A602	C6/A602	N	No Rating	4	ALUM	PREF-03	GL-01	Yes		
ITCHEN	103.1	2' - 11 1/2"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	E8/A602	C4/A602	N	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
ITCHEN	103.2	3' - 0"	8' - 0"	F	WD	PREF-04	None	ALUM	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-05	1
TORAGE	104	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-05	1
MECH ROOM	106	3' - 0"	8' - 0"	F	ALUM	PREF-02	None	ALUM	A4/A602	B4/A602	N	No Rating	1	ALUM	PREF-02	None	Yes	Self-Closing Device	1
VENT ROOM	107	5' - 11 7/16"	8' - 0"	SF	ALUM	PREF-03	GL-01	No Threshold	A6/A602	C6/A602	N	No Rating	4	ALUM	PREF-03	GL-01	Yes		
VENT ROOM	107.1	6' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	E8/A602	C4/A602	N	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
VENT ROOM	107.2	6' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	E8/A602	C4/A602	١	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
VENT ROOM	107.3	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		60 MIN	1	H.M.	PNT-04	None	Yes	PNT-05, Self-Closing Device, Panic	1
																		Bar	
VENT ROOM	107.4	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
TORAGE	108	6' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	A2/A602	C2/A602	l N	No Rating	2	H.M.	PNT-04	None	No	PNT-04	1
TORAGE	108.1	6' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	A2/A602	C2/A602	N	No Rating	2	H.M.	PNT-04	None	No	PNT-04	1
ALLWAY	109	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	E8/A602	C4/A602		No Rating	3	ALUM	PREF-01	GT-01	Yes	Self-Closing Device, Panic Bar	
LLWAY	109.1	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		60 MIN	1	H.M.	PNT-04	None	Yes	PNT-04, Self-Closing Device, Panic Bar	1
LEC	111	3' - 0"	8' - 0"	F	ALUM	PREF-02	None	ALUM	A4/A602	B4/A602	N	No Rating	1	ALUM	PREF-02	None	Yes		1
LEC	111.1	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	ALUM	PNT-04	None	Yes	PNT-04	1
FFICE	112	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
FFICE	113	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
ONF/PODCAST	114	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
DS ROOM	116	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
IDS ROOM	116.1	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
DS ROOM	116.2	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
ONF/PODCAST	117	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes	PNT-04	1
OMMUNITY OFFICES	118	3' - 0"	8' - 0"	SF	ALUM	PREF-03	GL-01	No Threshold	A6/A602	C6/A602	N	No Rating	4	ALUM	PREF-03	GL-01	Yes		
DILET	120	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	No		1
ILET	121	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	No		1
DILET	122	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	No		1
DILET	123	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	No		1
OILET	124	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	١	No Rating	1	H.M.	PNT-04	None	No		1
1: 31																			
PHONE BOOTH	203	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602	N	No Rating	3	ALUM	PREF-03	GL-01	Yes		
ENTABLE OFFICE	204	3' - 1 7/8"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
ENTABLE OFFICE	205	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
ENTABLE OFFICE	206	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
ONFERENCE ROOM	207	3' - 0"	7' - 0"	F	WD	PREF-04	GL-01	No Threshold			N	No Rating	1	ALUM	PREF-03	None	Yes		1
ONFERENCE ROOM	208	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602	N	No Rating	3	ALUM	PREF-03	GL-01	Yes		
ONFERENCE ROOM	208.1	3' - 0"	8' - 0"	SF	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602	N	No Rating	3	ALUM	PREF-03	GL-01	Yes		
ONFERENCE ROOM	208.2	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	E8/A602	C4/A602	N	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device	
FFICE	209	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		No Rating	1	H.M.	PNT-04	None	Yes		1
FFICE	210	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602	N	No Rating	1	H.M.	PNT-04	None	Yes		1
FFICE AREA	212	3' - 0"	8' - 0"	FG	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602	١	No Rating	3	ALUM	PREF-03	GL-01	Yes		
FFICE AREA	212.1	3' - 0"	8' - 0"	SF	ALUM	PREF-01	GT-01	ALUM	E8/A602	C4/A602	N	No Rating	4	ALUM	PREF-01	GT-01	Yes	Self-Closing Device	
FFICE AREA	212.2	3' - 0"	8' - 0"	FG	WD	PREF-04	GL-01	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
EO OFFICE/MTG AREA	213	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		No Rating	1	H.M.	PNT-04	None	Yes		1
RAINING ROOM	214	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
RAINING ROOM	215	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
DILET	217	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		No Rating	1	H.M.	PNT-04	None	No		1
ELLNESS ROOM	218	3' - 0"	8' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		No Rating	1	H.M.	PNT-04	None	No		1
NITOR	219	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		No Rating	1	H.M.	PNT-04	None	Yes	Self-Closing Device	1
HONE BOOTH	220	3' - 0"	8' - 0"	SF	ALUM	PREF-04	GL-01	No Threshold	A6/A602	C6/A602		No Rating	3	ALUM	PREF-03	GL-01	Yes		
OILET	221	3' - 0"	7' - 0"	F	WD	PREF-04	None	No Threshold	F4/A602	H4/A602		No Rating	1	H.M.	PNT-04	None	No		1
FIFC/LT ROOM		3' - 0"	7' <b>-</b> 0"	F	WD	PRFF-04	None	No Threshold				No Rating	1	нм	PNT-04	None	Yes	Self-Closing Device	1

#### **ROOM FINISH SCHEDULE ROSv3.4**

"R" REVISED ROOM, "N" NEW ROOM "-" REFER TO ELEVATIONS AND/OR FINISH PLAN

#### DELETED ROOM(S): NONE

	ROOM NAME		SH BASE FINISH	WALL FINISH	REMARKS
222	HALLWAY	CONC-01	RB-01,	PNT-01,	
223	HALLWAY	CONC-01	RB-01,	PNT-01,	
225	BALCONY	CONC 01	DD 04	DNT 04	EXTERIOR SPACE - SEE DRAWINGS
226	HALLWAY	CONC-01	RB-01,	PNT-01,	
227 Placed	HALLWAY · 5	CONC-01	RB-01,	PNT-01,	
laceu	. 5				
101	VESTIBULE	CPT-02	RB-01,-	PNT-01,	
102	LOBBY/CAFE	CONC-01	RB-01,	PNT-01,	
103	KITCHEN	RS-01	RB-01,	PNT-03,	
104	STORAGE	RS-01	RB-01,	PNT-03,	
106	MECH ROOM	CONC-02	RB-01,	PNT-01,	
107	EVENT ROOM	LVT-01	RB-01,	PNT-01,	
108	STORAGE	LVT-01	RB-01,	PNT-01,	
109	HALLWAY	CPT-02	RB-01,	PNT-01,	
111	ELEC	CONC-02	RB-01,	PNT-01,	
112	OFFICE	CPT-01	RB-01,	PNT-01,	
113	OFFICE	CPT-01	RB-01,	PNT-01,	
114	CONF/PODCAST	CPT-01	RB-01,	PNT-01,	
116	KIDS ROOM	CPT-01	RB-01,	PNT-01,	
117	CONF/PODCAST	CPT-01	RB-01,	PNT-01,	
118	COMMUNITY OFFICES		RB-01,	PNT-01,	
119	HALLWAY	CPT-01	RB-01,	PNT-01,	
120	TOILET	TL-01	TL-04,	TL-02,PNT-03	
121	TOILET	TL-01	TL-04,	TL-02,PNT-03	
122	TOILET	TL-01	TL-04,	TL-02,PNT-03	
123	TOILET	TL-01	TL-04,	TL-02,PNT-03	
124	TOILET	TL-01	TL-04,	TL-02,PNT-03	
125	HALLWAY	CONC-01	RB-01,	PNT-01,	
126	HALLWAY	CONC-01	RB-01,	PNT-01,	
127	RECEPTION	CONC-01	RB-01,	PNT-01,	
EL-A	ELEVATOR	CONC-02		1 141-01,	
ST-A	STAIR A	WD-01	-,		
ST-B	STAIR B	CONC-02	RB-01,		
1: 27	OTAIICE	00110 02	IND 01,		
1. 21					
201	HALLWAY	CONC-01	RB-01,	PNT-01,	
202	HALLWAY	CONC-01	RB-01,	PNT-01,	
203	PHONE BOOTH	CPT-01	RB-01,	PNT-01,	
204	RENTABLE OFFICE	CPT-01	RB-01,	PNT-01,	
205	RENTABLE OFFICE	CPT-01	RB-01,	PNT-01,	
206	RENTABLE OFFICE	CPT-01	RB-01,	PNT-01,	
207	CONFERENCE ROOM	CPT-01	RB-01,	PNT-01,	
208	CONFERENCE ROOM	CPT-01	RB-01,	PNT-01,	
209	OFFICE	CPT-01	RB-01,	PNT-01,	
210	OFFICE	CPT-01	RB-01,	PNT-01,	
211	WORK ROOM	CONC-01	RB-01,	PNT-01,	
212	OFFICE AREA	CPT-01	RB-01,	PNT-01,	
213	CEO OFFICE/MTG	CPT-01	RB-01,	PNT-01,	
210	AREA	01 1-01	110-01,	1 141-01,	
214	TRAINING ROOM	CPT-01	RB-01,	PNT-01,	
215	TRAINING ROOM	CPT-01	RB-01,	PNT-01,	
216	KITCHEN	LVT-01	RB-01,	PNT-01,	
217	TOILET	TL-01	TL-04,	TL-02,PNT-03	
218	WELLNESS ROOM	CPT-01	RB-01,	PNT-01,	
219	JANITOR	CONC-02	RB-01,	PNT-03,	
220	PHONE BOOTH	CPT-01	RB-01,	PNT-01,	
221	TOILET	TL-01	TL-04,	TL-02,PNT-03	
222	ELEC/I.T. ROOM	CONC-02	RB-01,	PNT-01,	
EL-A	ELEVATOR	JUINU-02	RB-01,	1 INI -UI,	
ST-B	STAIR B	CONC-01	RB-01,		
v2 I −D	I STAIR D	TOONO-UT	ND-UI,		

#### DOOR SCHEDULE NOTES

#### **GENERAL NOTES**

- A. ALL HOLLOW METAL FRAMES IN MASONRY SHALL BE GROUTED SOLID.
   B. INSTALL EXTERIOR FRAMES WITH 1/4 INCH SHIM AND JOINT SEALANT AROUND PERIMETER OF FRAME.
- C. MASONRY LINTELS AND STEEL LINTELS ARE INDICATED ON STRUCTURAL D. GLASS TYPES FOR DOORS ARE INDICATED IN NOTES COLUMNS OF DOOR AND FRAME SCHEDULE OR IN SPECIFICATIONS. GLASS TYPES FOR FRAMES ARE INDICATED ON FRAME ELEVATIONS OR IN SPECIFICATIONS.
- E. EXTERIOR WINDOW FRAME TYPES ARE INDICATED ON FLOOR PLAN WITH HEXAGON SYMBOL. F. FRAME MANUFACTURER SHALL COORDINATE LOCATIONS OF CONCEALED CONDUIT AND J-BOXES REQUIRED FOR SECURITY SYSTEM HARDWARE PRIOR TO MANUFACTURING OF HOLLOW METAL FRAMES AND COORDINATE
- WITH SECURITY HARDWARE AND DEVICES. G. PROVIDE HEAD RECEIVERS AT ALUMINUM STOREFRONTS AND CURTAINWALLS AS REQUIRED FOR FRAME AND STRUCTURAL DEFLECTION.
- H. SEE SPECIFICATIONS 087100 HARDWARE FOR HARDWARE SET NOTED IN DOOR SCHEDULE.
- I. MAX AIR LEAKAGE RATE FOR DOORS TO BE 0.2 CFM/SF J. REFER TO FLOOR PLANS FOR PARTITION TYPES.
- K. ALL DOORS TO BE 1 3/4" THICK UNLESS NOTED OTHERWISE. L. DOOR OPENING SIZES ARE INSIDE FRAME DIMENSIONS. M. ALL HOLLOW METAL FRAMES TO BE 2" THICK UNLESS NOTED OTHERWISE.

#### TYPICAL REMARKS

- ADD "ADA" PUSH BUTTON TO DOOR REFER TO PLAN FOR LOCATION.
   DOOR SIZE TO ALIGN WITH EXTERIOR MULLIONS/GLAZING. COORDINATE FINAL SIZE.

  3. INSULATED EXTERIOR DOOR.
- **ABBREVIATIONS**

#### ALUM ALUMINUM

- GL INTERIOR GLAZING TYPE (SEE ROOM FINISH LEGEND)
  GT EXTERIOR GLAZING TYPE (SEE 088000)
  HM HOLLOW METAL
  TR THRESHOLD/TRANSITION
- WD WOOD

**ROSSETTI.COM** 313.463.5151 **PROJECT** 

West Michigan Hispanic **Chamber of** Commerce -

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

HQ 1111 Godfrey Ave. SW Grand Rapids, MI 49507

CONSULTANT

PROFESSIONAL SEAL

© 2025 ROSSETTI

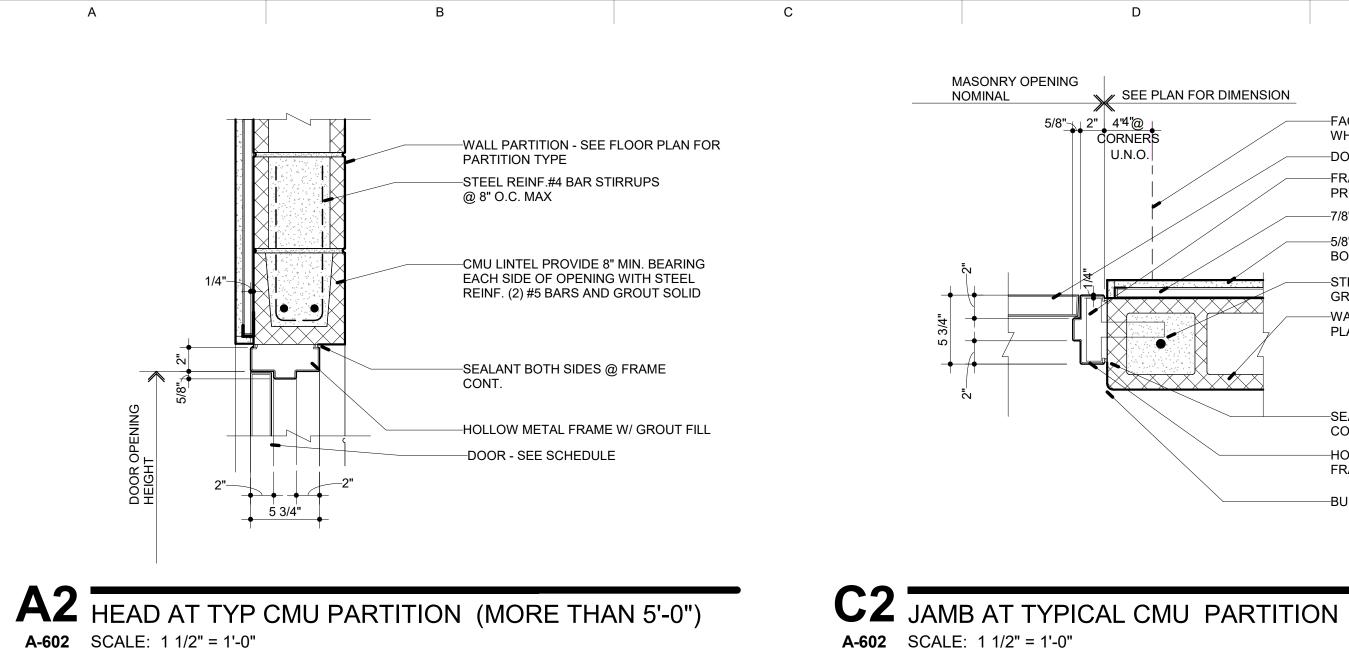
DATE # DESCRIPTION 02/07/2025

SHEET TITLE Door Schedule and Finish Legend

PROJECT# 2024-010.00

SHEET#

**KEY PLAN** 



MASONRY OPENING SEE PLAN FOR DIMENSION NOMINAL -FACE OF WALL PARTITION WHERE APPLICABLE -DOOR - SEE SCHEDULE FRAME ANCHORS PROVIDE (3) PER JAMB MIN. -7/8" METAL FURRING -5/8" TYPE 'X' GYPSUM BOARD U.N.O. —STEEL REINF. #5 BAR W/ GROUT FULL HEIGHT @ OPENING -WALL PARTITION - SEE FLOOR PLAN FOR PARTITION TYPE —SEALANT BOTH SIDES @ FRAME CONT. -HOLLOW METAL FRAME W/GROUT FILL -BULLNOSE VERTICAL EDGE (TYP.)

-WALL PARTITION - SEE FLOOR PLAN FOR PARTITION TYPE -METAL STUD RUNNER, SECURED TO DOUBLE STUDS @ EACH END -STEEL STUD FRAMING (TWO 6" DEEP) SECURED TO RUNNER ABOVE AND BRACED W/ CONT. 20 GA. METAL SHEET BELOW - SECURE TO STUDS EACH END -SEALANT BOTH SIDES @ FRAME -H.M. BORROWED LIGHT GLAZING FRAME -LOOSE STOP -GLAZING IN TAPE & SETTING BLOCKS - SEE DOOR SCHEDULE FOR GLAZING TYPE & THICKNESS **EXTERIOR SIDE ROOM SIDE** OF GLAZING OF GLAZING

1 7/8" SEE DOOR SCHEDULE FOR GLAZING TYPE & THICKNESS -H.M. BORROWED LIGHT FRAME -WOOD SHIM AS REQUIRED FOR SUPPORT AND LEVELING -METAL STUD RUNNER, SECURED TO DOUBLE STUDS @ EACH END -WALL PARTITION - SEE FLOOR PLAN FOR PARTITION TYPE ROOM SIDE EXTERIOR SIDE OF GLAZING OF GLAZING

HEAD AT BORROWED LIGHT IN STUD PARTITION **A-602** SCALE: 1 1/2" = 1'-0"

H2 SILL AT BORROWED LIGHT IN STUD PARTITION **A-602** SCALE: 1 1/2" = 1'-0"

SEE PLAN FOR DIMENSION

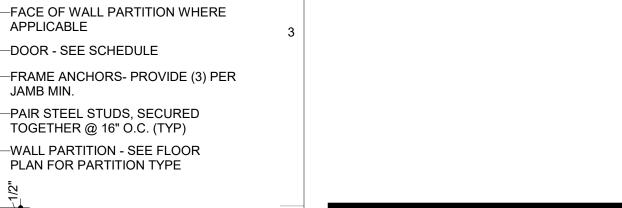
DOOR OPENING



—SEALANT BOTH SIDES @ FRAME CONT.

-HOLLOW METAL FRAME

CONSULTANT



PROFESSIONAL SEAL

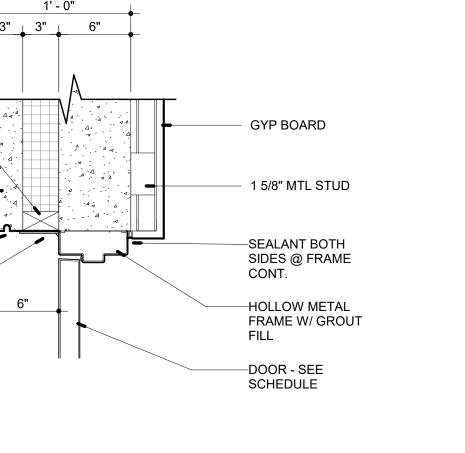
© 2025 ROSSETTI

# DESCRIPTION

DATE 02/07/2025

ROSSETTI

160 WEST FORT, SUITE 400



PROVIDE INTEGRAL **BLOCKING IN PRECAST** 

**INSULATED PRECAST** 

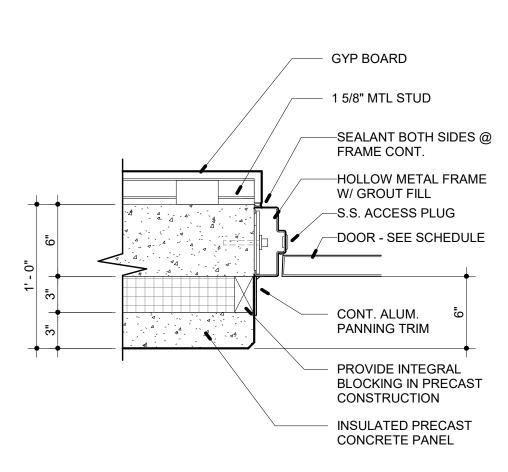
CONCRETE PANEL

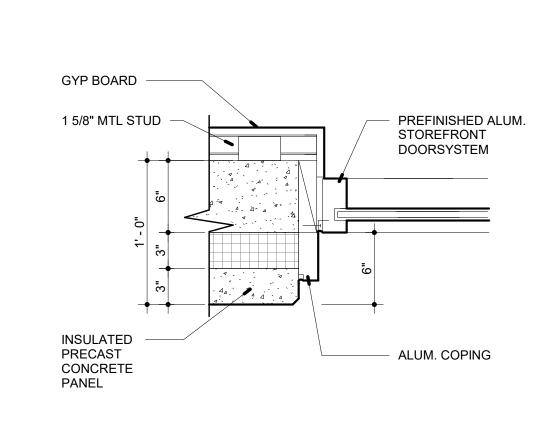
DRIP EDGE

CONT. ALUM.

PANNING TRIM

CONSTRUCTION







-WALL PARTITION - SEE FLOOR

DOUBLE STUDS @ EACH END

DEEP) SECURED TO RUNNER

TOO STUDS AT EACH END

-SEALANT BOTH SIDES

@ FRAME CONT.

-HOLLOW METAL

-DOOR - SEE SCHEDULE

-STEEL STUD FRAMING (TWO 6"

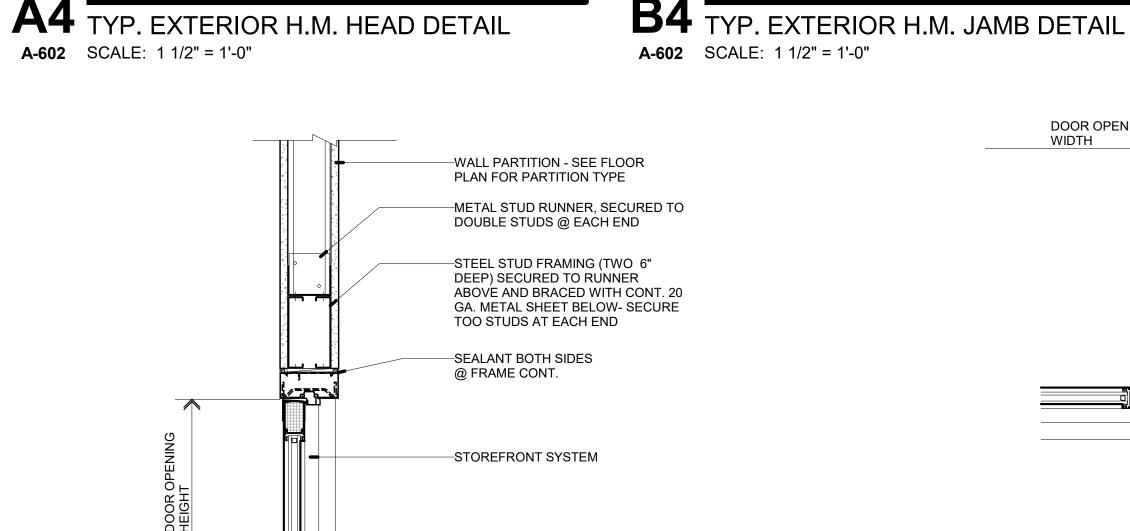
-METAL STUD RUNNER, SECURED TO

ABOVE AND BRACED WITH CONT. 20

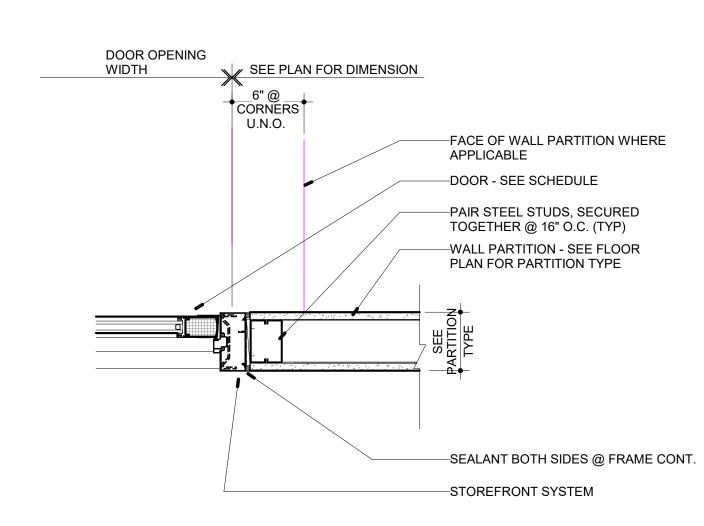
GA. METAL SHEET BELOW- SECURE

PLAN FOR PARTITION TYPE

H4 JAMB AT TYPICAL STUD PARTITION **A-602** SCALE: 1 1/2" = 1'-0"

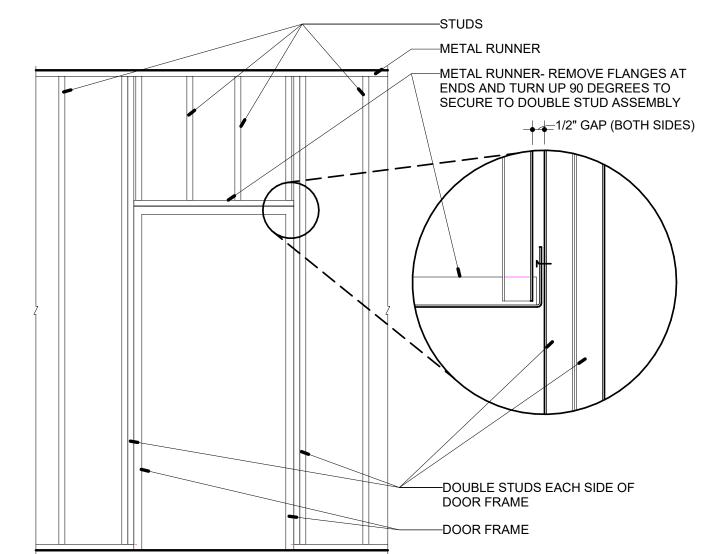


A6 HEAD AT TYP STUD PARTITION @ STOREFRONT SYSTEM **A-602** SCALE: 1 1/2" = 1'-0"



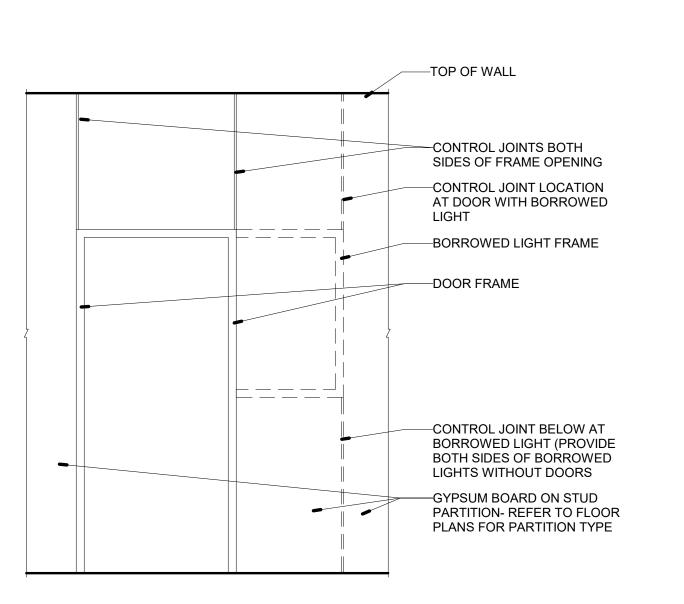
**A-602** SCALE: 1 1/2" = 1'-0"

C6 JAMB AT TYP STUD PARTITION @ STOREFRONT SYSTEM **A-602** SCALE: 1 1/2" = 1'-0"

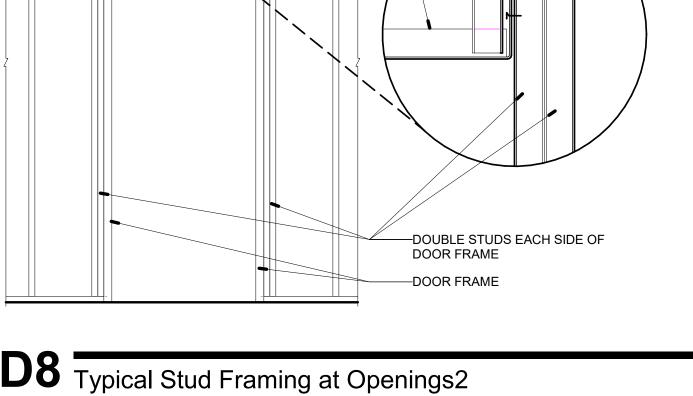


Typical Stud Framing at Openings2

A-602 SCALE: 1/2" = 1'-0"



A8 Control Joint Locations at Op'gs in Gyp Bd Partitions1 **A-602** SCALE: 1/2" = 1'-0"

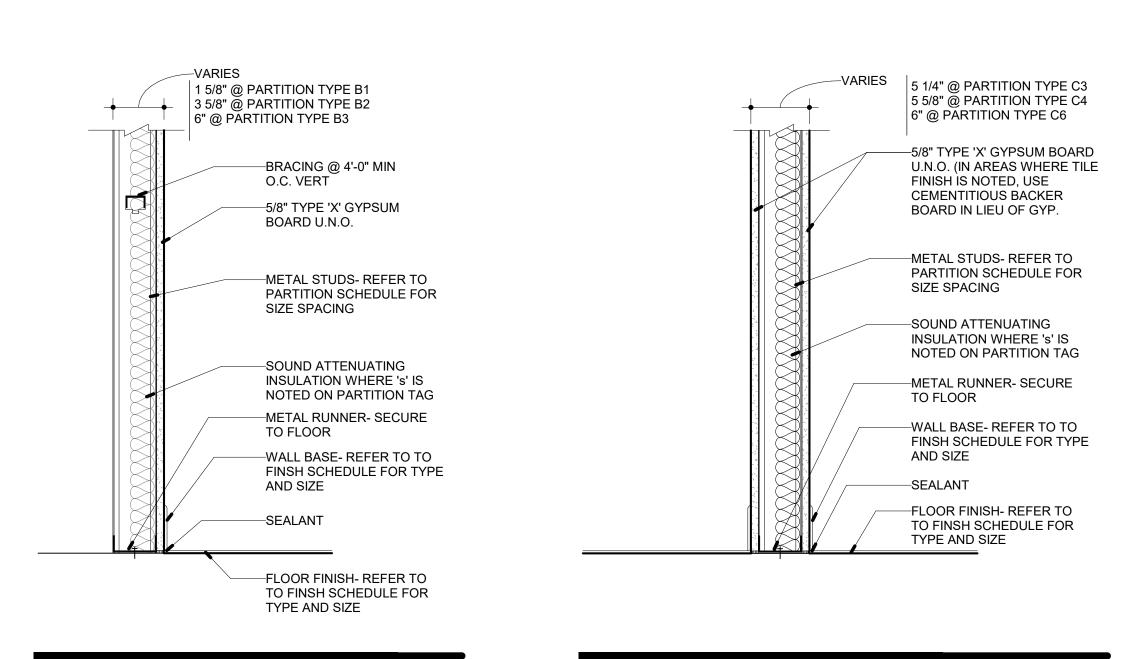


SHEET TITLE Typical Partition Details

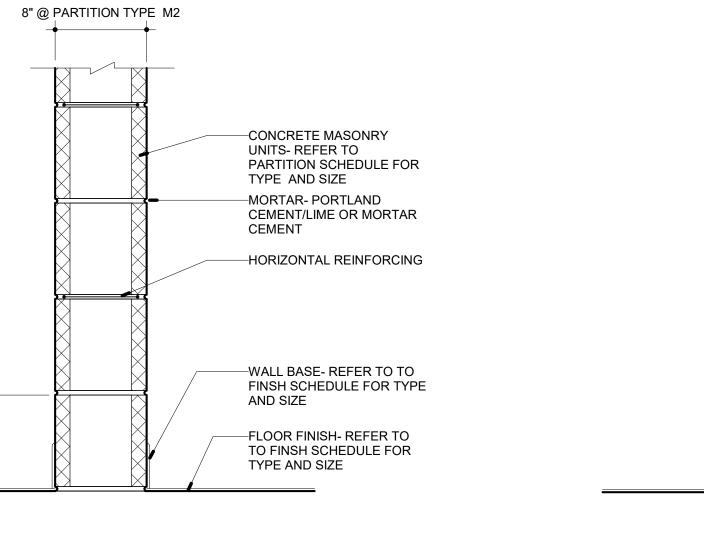
PROJECT# Scale Varies 2024-010.00

SHEET#

**KEY PLAN** 



6 1/2" @ PARTITION TYPE D3 —1/2" RESILIENT CHANNEL -5/8" TYPE 'X' GYPSUM BOARD U.N.O. (2 LAYERS) -METAL STUDS- REFER TO PARTITION SCHEDULE FOR SIZE SPACING —5/8" TYPE 'X' GYPSUM BOARD U.N.O. (1 LAYER) -SOUND ATTENUATING INSULATION WHERE 's' IS NOTED ON PARTITION TAG -METAL RUNNER- SECURE TO FLOOR -WALL BASE- REFER TO TO FINSH SCHEDULE FOR TYPE —SEALANT -FLOOR FINISH- REFER TO TO FINSH SCHEDULE FOR TYPE AND SIZE



Partition Type M

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

9 1/8" @ PARTITION TYPE N1 1'-0 1/4" @ PARTITION TYPE N2 -CONCRETE MASONRY UNITS- REFER TO PARTITION SCHEDULE FOR TYPE AND SIZE -7/8" METAL FURRING (3 5/8 FURRING FOR N2) -5/8" TYPE 'X' GYPSUM BOARD U.N.O. -HORIZONTAL REINFORCING -METAL FURRING AT PERIMETER -WALL BASE- REFER TO TO FINSH SCHEDULE FOR TYPE AND SIZE FLOOR FINISH- REFER TO TO FINSH SCHEDULE FOR TYPE AND SIZE

Partition Type N SCALE: 1 1/2" = 1'-0"

Partition Type B SCALE: 1 1/2" = 1'-0"

Partition Type C SCALE: 1 1/2" = 1'-0"

Partition Type D (STC +/-55) SCALE: 1 1/2" = 1'-0"

#### INTERIOR PARTITION SCHEDULE ROSv3.4

"R" REVISED PARTITION, "N" NEW PARTITION

DELETED WALL GROUP(S): NONE

		WIE	OTH			STUD		MAX H	IEIGHT		UL DESIGN		ST	C*	
TYPE	DESCRIPTION	MODEL	ACTUAL	DETAIL	DEPTH	THICK	SPACING	(.X or .Y)	(.Z)	1Hr	2Hr	Other	W/O	W/	REMARKS
B1	1 GYP, 1 SIDE ON 1 5/8" METAL STUDS	2 1/4"	4 1/4"	A-601	3 5/8"	30 MIL	16"	13' - 7"	13' - 7"				29	34	
B2	1 GYP, 1 SIDE ON 3 5/8" METAL STUDS	<varies></varies>	4 1/4"	A-601	3 5/8"	30 MIL	16"	13' - 7"	13' - 7"				29	34	
B3	1 GYP, 1 SIDE ON 6" METAL STUDS	6 3/4"	6 5/8"	A-601	6"	30 MIL	16"	20' - 3"	20' - 3"					37	
C3	1 GYP, BOTH SIDES ON 3 5/8" METAL STUDS	<varies></varies>	4 7/8"	A-601	3 5/8"	30 MIL	16"	13' - 6"	14' - 10"	U419			42	44	
C4	1 GYP, ONE SIDE ON 6" METAL STUDS	5 5/8"	5 1/4"	A-601	4"	30 MIL	16"	14' - 7"	15' - 5"				42	44	
C6	1 GYP, BOTH SIDES ON 6" METAL STUDS	7 1/4"	7 1/4"	A-601	6"	30 MIL	16"	20' - 0"	21' - 6"	U419			42	44	
D3	2 GYP, ONE SIDES ON 3 5/8" METAL STUDS, 1 GYP ONE SIDE, 1 RC ONE SIDE	6"	6 1/8"	A-601	3 5/8"	30 MIL	16"	14' - 7"	15' - 5"		U419		48	56	
M2	8" CMU (NORMAL WEIGHT)	8"	7 5/8"	A-601				16' - 0"	16' - 0"		U905		45	51	
N1	8" CMU, 7/8" STEEL FURRING + 1 GYP, ON 1 SIDE	9 1/2"	9 1/8"	A-601	7/8"	18 MIL	16"	24' - 0"	24' - 0"		U905				
N2	8" CMU, 3 5/8" STEEL FURRING + 1 GYP, ON 1 SIDE	1' - 0 1/2"	9 1/8"	A-601	7/8"	18 MIL	16"	24' - 0"	24' - 0"		U905				

#### PARTITION GENERAL NOTES

- A. PARTITION TYPES ARE LOCATED ON THE PLANS UNLESS NOTED
- B. WHERE PARTITION TYPES ARE INDICATED, THE PARTITION TYPE IS CONTINUOUS UNTIL THE PARTITION CHANGES DIRECTIONS, OR A
- DIFFERENT PARTITION TYPE IS NOTED. C. PARTITIONS ARE TYPICALLY DIMENSIONED FROM THE FACE OF THE
- PARTITION TO FACE OF PARTITION OR COLUMN CENTERLINE UNLESS
- D. ALL GYPSUM BOARD SHALL BE 5/8" TYPE 'X' UNLESS OTHERWISE NOTED. SEE SPECIFICATIONS AND DRAWINGS.
- E. ALL INTERIOR STEEL STUDS TO BE NOT LESS THAN 30 MIL THICK AND SPACED AT 1'-4" O.C. UNLESS NOTED OTHERWISE F. PROVIDE DOUBLE STUDS AT EACH SIDE OF ALL OPENINGS FROM FLOOR
- G. TAPE AND SEAL ALL JOINTS IN GYPSUM BOARD ABOVE CEILINGS. H. FIRE RESISTANCE RATINGS ARE NOTED ON THE LIFE SAFETY PLAN
- I. AT ALL FIRE RESISTANCE RATED CONSTRUCTION, SEAL PARTITIONS AT STRUCTURE, FLOOR AND AT ALL PENETRATIONS WITH UL RATED
- J. PROVIDE UL RATED ASSEMBLIES AT ALL FIRE RESISTENCE RATED K. MAINTAIN CONTINUITY OF FIRE RATED PARTITIONS AT INTERSECTIONS
- OF NON-RATED OR LESSER RATED PARTITIONS. L. WHEN INSULATION IS INDICATED ON PARTITION OR PARTITION TYPE (WITH .s SUFFIX), CONSTRUCT A FULL HEIGHT ACOUSTICAL PARTITION WITH THE STC RATING INDICATED. IF NO STC IS INDICATED, PROVIDE 3" ACOUSTICAL BATT INSULATION. PROVIDE INSULATION FOR THE FULL
- PENETRATIONS WITH ACOUSTICAL SEALANT. M. AT ALL ACOUSTICAL PARTITIONS, SEAL PARTITIONS WITH ACOUSTIC
- SEALANT AT ALL ADJACENT CONSTRUCTION AND AT ALL PENETRATIONS N. FINISHES ON PARTITIONS SYSTEMS TO EXTEND TO PLASTER/GYPSUM BOARD CEILING SYSTEMS UNLESS NOTED OTHERWISE.FINISHES ON

DEPTH, WIDTH AND HEIGHT OF CAVITY AND SEAL PERIMETER AND ALL

- PARTITION SYSTEMS TO EXTEND 4" ABOVE ACOUSTICAL CEILING SYSTEM UNLESS NOTED OTHEWISE.
- O. FINISHES ON PARTITION SYSTEMS TO EXTEND 4" ABOVE ACOUSTICAL CEILING SYSTEM UNLESS NOTED OTHEWISE.
- P. REFER TO ROOM FINISH SCHEDULE FOR ALL INTERIOR FINISHES. Q. \* STC RATINGS ARE FROM THE FOLLOWING SOURCES: USG ACOUSTICAL ASSEMBLIES, GYPSUM ASSOCIATION 2003 FIRE RESISTANCE DESIGN MANUAL, NATIONAL GYPSUM THE SOUND BOOK, CALIFORNIA DEPARTMENT OF HEALTH SERVICES CATALOG OF STC AND IIC RATINGS FOR WALL AND FLOOR/CEILING ASSEMBLIES.

#### INTERIOR WALL PARTITION KEY

#### **PARTITION GROUPS**

- B = ONE LAYER OF GYPSUM BOARD ON ONE SIDE OF METAL STUDS. C = ONE LAYER OF GYPSUM BOARD ON BOTH SIDES OF METAL STUDS.
- D = TWO LAYERS OF GYPSUM BOARD ON BOTH SIDES OF METAL STUDS. M = MASONRY WALL.
- N = MASONRY WALL WITH ONE LAYER OF GYPSUM BOARD ON METAL FURRING ON ONE SIDE OF MASONRY.

TYPICAL ABBREVIATIONS GYP GYPSUM BOARD CMU CONCRETE MASONRY UNIT

PROFESSIONAL SEAL

ROSSETTI

160 WEST FORT, SUITE 400

DETROIT, MICHÍGAN 48226

**ROSSETTI.COM** 313.463.5151

West Michigan

Hispanic

**Chamber of** 

Commerce -

1111 Godfrey Ave. SW Grand Rapids, MI 49507

**PROJECT** 

HQ

CONSULTANT

© 2025 ROSSETTI

# DESCRIPTION

1 Bid Set	02/07/2025

DATE

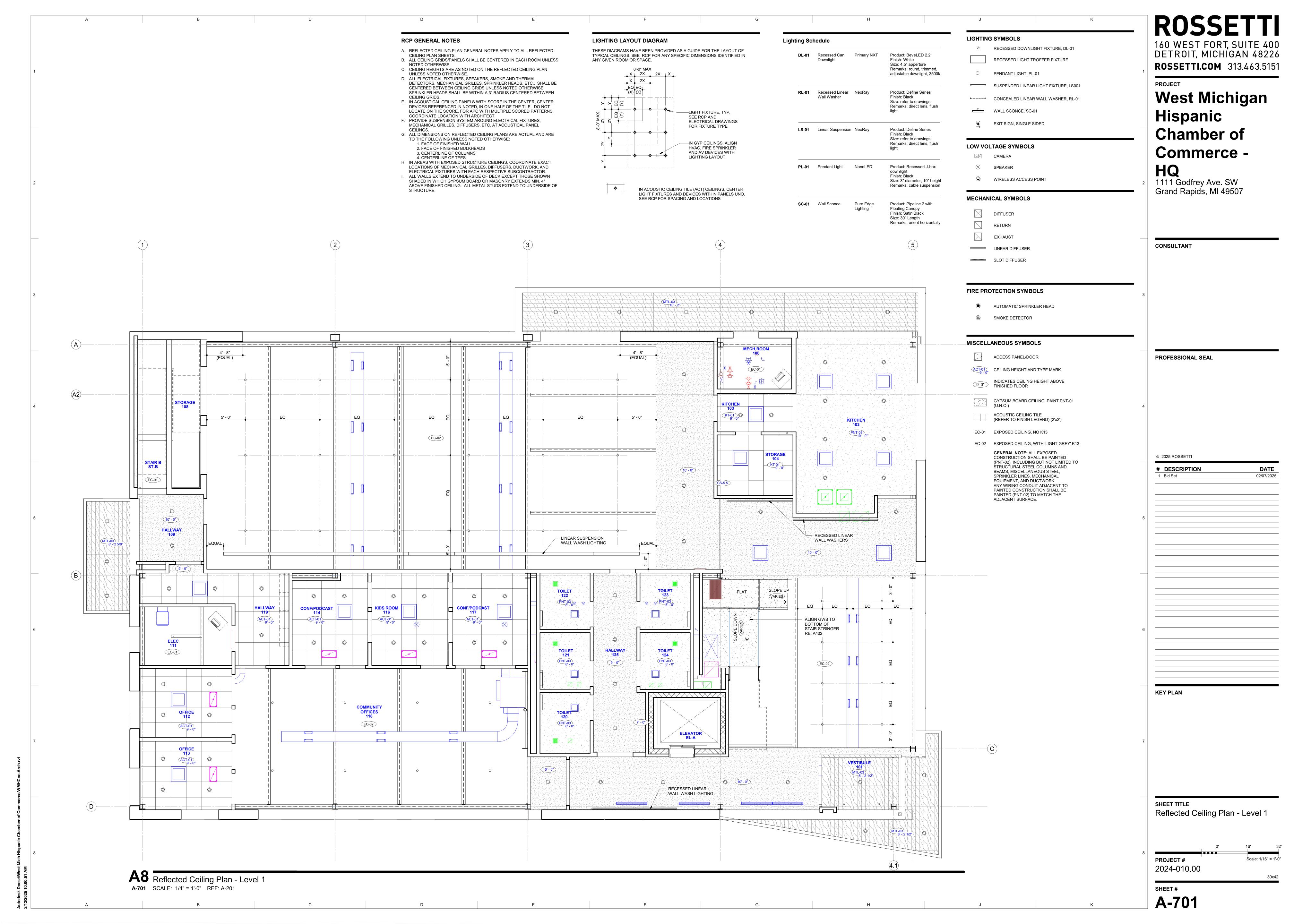
**KEY PLAN** 

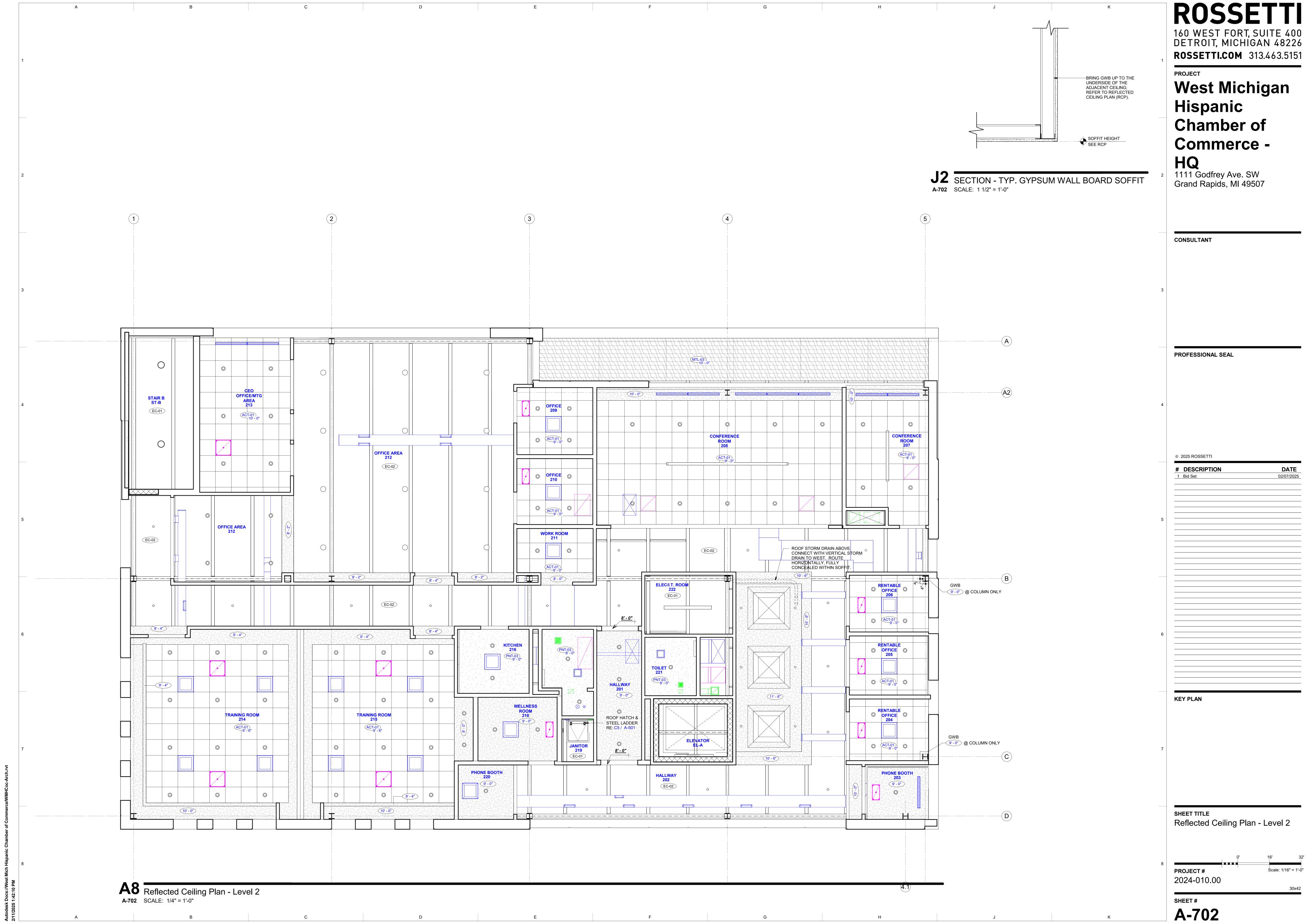
SHEET TITLE Partition Schedule, Legend, and Details

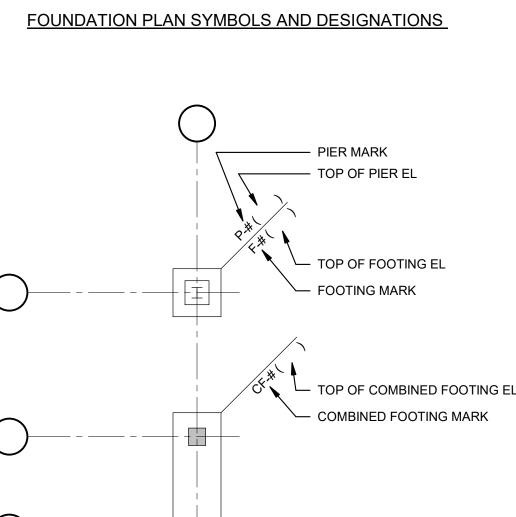
Scale: 1/16" = 1'-0"

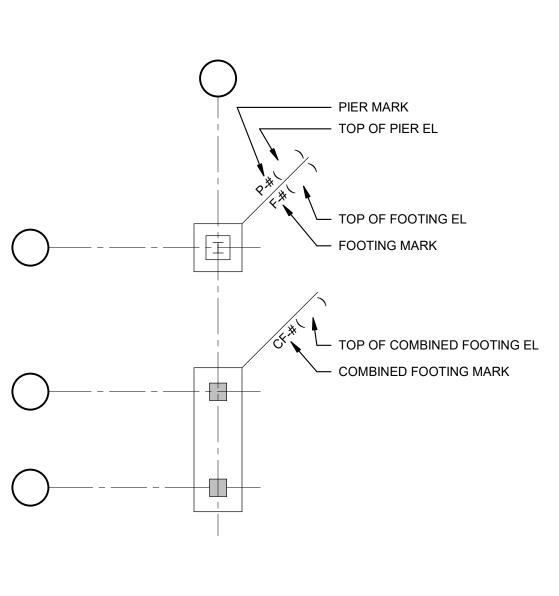
PROJECT# 2024-010.00

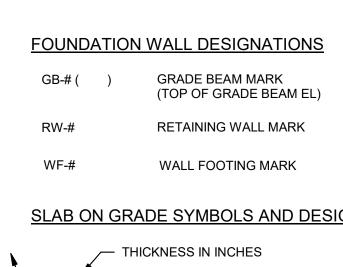
SHEET#











SLAB ON GRADE SYMBOLS AND DESIGNATIONS SLAB ON GRADE MARK (SOG-6)

MISCELLANEOUS SYMBOLS SOIL BORING MARK TEST BORING MARK WATERSTOP (DUMBBELL, PVC UON) (SELF-EXPANDING WATERSTOP)

**ELEVATION SYMBOLS** ELEVATION AT TOP OF CONCRETE FROM PROJECT DATUM ELEVATION WITH RESPECT TO FLOOR DATUM IF SHOWN IN PARENTHESIS ELEVATION FROM ESTABLISHED ELEVATION CHANGE IN ELEVATION (SLAB STEP)

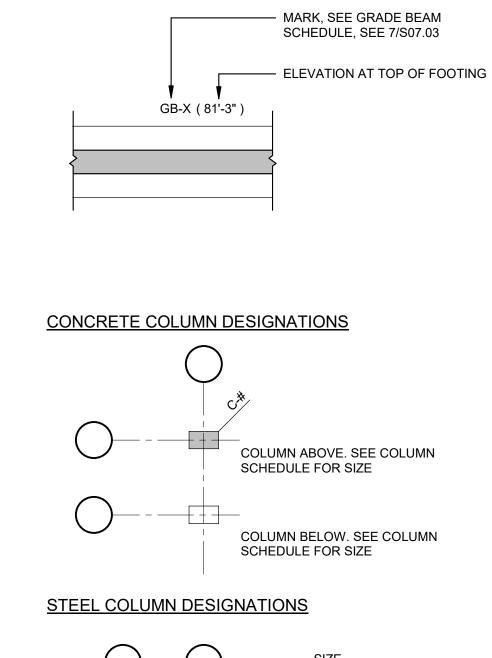
CHANGE IN SLAB THICKNESS SLOPING TOP CONCRETE

DOUBLE CHANGE IN ELEVATION

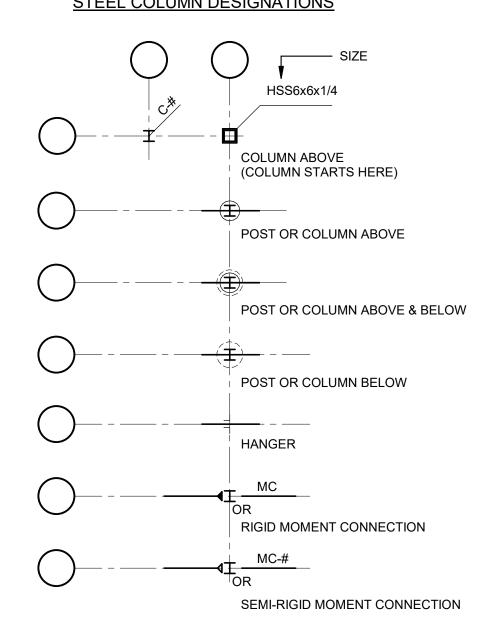
(DOUBLE STEP) CHANGE IN ELEVATION WITH

STEPPED FOUNDATION

SLAB TRENCH SLAB CURB



**GRADE BEAM/CONT FOOTING DESIGNATIONS** 



#### STEEL BEAM DESIGNATIONS STEEL MEMBER SIZE ----- NUMBER OF 3/4"Ø HEADED STUDS EQUALLY SPACED ALONG SPAN BEAM WEB PENETRATION -MARK (SEE SCHEDULE) - DENOTES BRACED FRAME (SEE BRACED FRAME ELEVATIONS) MOMENT -- REQUIRED CAMBER CONNECTION (NONE IF OMITTED) W18x40 [30] C=1"

COLLECTOR CONNECTION

- DEVIATION FROM TYPICAL

TOS ELEVATION

FACTORED BEAM DESIGN HORIZONTAL FORCE (KIPS)

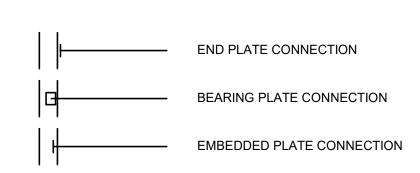
FACTORED BEAM DESIGN END MOMENT (FOOT-KIPS) FACTORED BEAM DESIGN SHEAR (KIPS) (SEE SCHEDULE IF OMITTED)

FACTORED BEAM DESIGN AXIAL (KIPS)

SEE PLAN

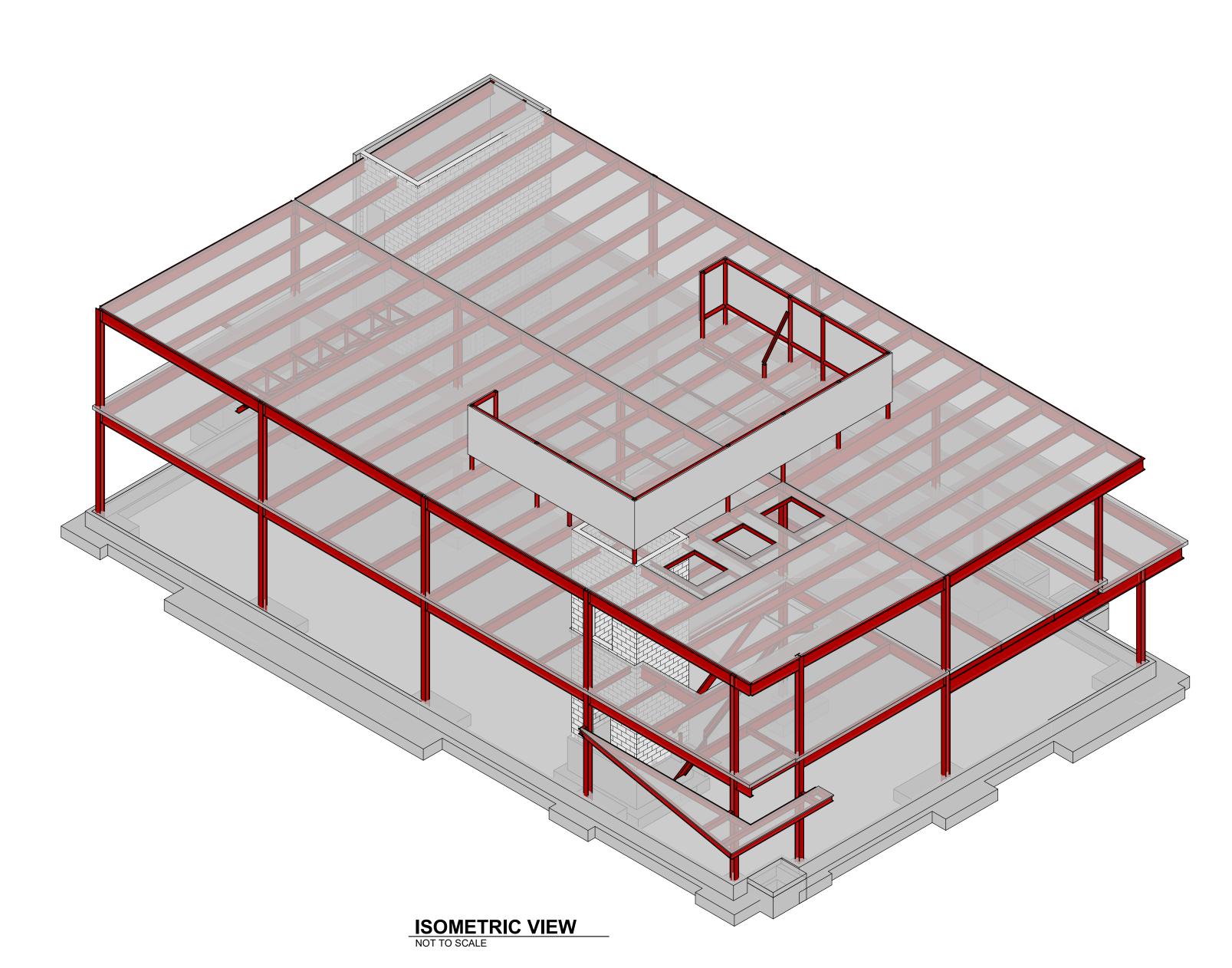
FACTORED BEAM DESIGN TORSIONAL MOMENT (FOOT-KIPS)

FACTORED AXIAL FORCE TRANSFERRED THROUGH THE CONNECTION JOINT (KIPS)



#### DECK AND SLAB SYMBOLS

RD-# THICKNESS IN INCHES ROOF DECK MARK SPAN DIRECTION COMPOSITE SLAB MARK SPAN DIRECTION FS-# THICKNESS IN INCHES SLAB ON FORMED DECK MARK ONE-WAY CONCRETE SLAB MARK



#### **ABBREVIATIONS**

ADD APPROX ADDITIONAL APPROXIMATE ARCH ARCHITECTURAL BRACED FRAME **BOTTOM OF FOOTING** BOS **BOTTOM OF STEEL BEARING PLATE** BEARING CANT CANTILEVERED CFMF

COLD FORMED METAL FRAMING CAST IN PLACE CONTROL OR CONSTRUCTION JOINT CONCRETE MASONRY UNIT COLUMN

CONTRACTOR COORD COORDINATE DIAMETER DIAG DIAGONAL **DIMENSIONS** 

DRAWING EACH FACE ELEVATION EQUAL **EACH WAY EXISTING EXPANSION** 

EXTERIOR FINISH FLOOR FOUNDATION FTG GALV GB FOOTING GALVANIZED **GRADE BEAM** 

HORIZ HORIZONTAL INTERIOR LONG LEGS BACK TO BACK LONG SIDE HORIZONTAL LONG SIDE VERTICAL

MECHANICAL MINIMUM MASONRY PIER **NOT IN CONTRACT** 

OH OPNG PC PERIM OPPOSITE HAND OPENING PRECAST

POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH

REFERENCE REINF REINFORCING REQD REQUIRED **ROOF TOP UNIT** 

SIMILAR SHORT LEG BACK TO BACK SOG SLAB ON GRADE SPACING

TOC TOF TOP OF FOOTING **TOSLAB** TOP OF SLAB TOP OF STEEL

UON VERT VERTICAL **VERIFY IN FIELD** WITHOUT WELDED WIRE FABRIC

CONCRETE

CMU COL CONC CONN CONT CONTR CONNECTION CONTINUOUS OR CONTINUATION

MAX MAXIMUM

ON CENTER OVERFLOW ROOF DRAIN

PERIMETER

**ROOF DECK** 

TOP OF CONCRETE

TOS TYP **TYPICAL** UNLESS OTHERWISE NOTED

> © 2025 ROSSETTI # DESCRIPTION

ROSSETTI

160 WEST FORT, SUITE 400

DETROIT, MICHÍGAN 48226

**ROSSETTI.COM** 313.463.5151

West Michigan

Commerce- HQ

Hispanic

**Chamber of** 

1111 Godfrey Ave, SW Grand Rapids, MI 49507

RESURGET

ENGINEERING

DETROIT - SAN FRANCISCO

CONSULTING STRUCTURAL ENGINEERS

WWW.RESURGET.ENGINEERING

MARC 7

\* STEINHOBEL \*

201 SPEAR ST

SAN FRANCISCO, CA

(415) 523-3548

**SUITE 1100** 

CONSULTANT

28 W ADAMS AVE

**SUITE 1710** 

48226

DETROIT, MI

(313) 315-3290

PROFESSIONAL SEAL

**PROJECT** 

DATE 02/07/2025

**KEY PLAN** 

DRAWING LIST

ABBREVIATIONS AND SYMBOLS

TYPICAL CONCRETE DETAILS

STEEL SECTIONS AND DETAILS STEEL SECTIONS AND DETAILS

STEEL SECTIONS AND DETAILS

GENERAL NOTES

WALL ELEVATIONS

FOUNDATION DETAILS

FOUNDATION SECTIONS

SECTIONS AND DETAILS

SECTIONS AND DETAILS

SPECIAL INSPECTIONS FRAMING PLANS BUILDING ELEVATIONS

SHEET TITLE

SHEET#

S.001

S.002

S.201

S.301 S.302

S.303

S.700 S.701

SHEET TITLE **ABBREVIATIONS AND** SYMBOLS

PROJECT# 24094

SHEET#

**S.001** 

The component designer shall be responsible for that component's conformance to the Code and all design criteria indicated in the construction documents and all necessary connections not specifically show in the structural and architectural drawings Prior to submittal to the Building Official, all deferred submittal items shall be 3.

submitted to the design team for review of general conformance with design 4. criteria. Submittals to design team shall be stamped and signed by a licensed engineer and shall include the following: A. Drawing which indicate the magnitude, direction, and location of all loads

imposed on the primary structure. B. Connection details that show how the component is connected to the primary structure. C. Design calculation demonstrating conformance with code requirements

and design criteria. Calculations shall clearly indicated a complete load path for both the vertical and lateral loads to the primary structure. Deferred Structural Submittal Components include, but are not limited to the 3.

A. Exterior cladding (including curtain wall and exterior metal studs) B. Interior Metal Stud Systems

#### **DESIGN BUILD METAL STAIRS AND RAILINGS**

1. Steel stairs in buildings shall be contractor design-build Design build stair and railing structural calculations and drawings shall be stamped and signed by a registered Professional Engineer, licensed in the state of the Project. Design build stair design shall clearly indicate a complete load path for both lateral and vertical loads to the primary structural elements shown in these drawings. The calculations and drawings shall show the magnitude, location and direction of all design loads imposed by the stair

structural elements onto the primary structure. Design build stairs shall be designed to meet all relevant Code requirements. This includes all Code mandated vertical and lateral loads, and deformation compatibility. The stair framing elements and their connections shall be designed and detailed to be adequate to maintain support of the design dead plus live loads during the expected lateral deformations of the primary structure in a seismic event. Design stairs to accommodate the seismic story

displacements given in DESIGN CRITERIA Shop drawings and calculations of stairs and railings shall be approved by the Engineer prior to start of fabrication.

#### **COLD FORMED METAL FRAMING**

 Cold Formed Metal Framing (CFMF) members to be designed manufactured, detailed and erected in accordance with AISI "Specification for Design of Cold Formed Steel Structural Members". CFMF members shall conform to ASTM A13 with minimum yield strength of

33ksi for 18ga and thinner or 50ksi for 16ga and thicker. CFMF shall be galvanized per ASTM A653 - G60. Welds shall be in accordance with AWS D1.3 "Structural Welding Code –

Sheet Metal" and AWS D19.0 "Welding Zinc Coated Steel". 5. CFMF design and detailing is a delegated design responsibility. CFMF contractor to submit signed and sealed calculations for CFMF members and

CFMF supporting exterior finishes shall be a minimum of 18ga and 16ga for studs backing up brick veneer. Deflection of studs backing up brick veneer shall be limited to span/600 under 10 year wind pressure. Studs shall have bridging lines installed at a maximum spacing of 4'-0" o.c.

#### PRECAST CONCRETE PANELS

1. Precast concrete panel sizes and profiles are indicated on the Architectural drawings. Precast concrete panel piece sizes may be modified by the Manufacturer as approved by the Architect. 2. Connection steel shall conform to AISC requirements. All steel anchors,

shapes and plates shall be galvanized. Provide connections complying with ACI 318 Chapter 16 and PCI recommendations. Design connections for a minimum erection tolerance of

one inch in any direction. Consider eccentricity of loads on connection. Provide miscellaneous steel shelf angles, hangers, anchors, ties and cramps | 6. Refer to architectural drawings for fireproofing requirements. connecting to the structure to adequately support the precast concrete panels | 7. for the loads and considerations indicated above. Provide weld plates in precast concrete panels and building slabs for bearing,

roof and foundation connections. Provide weld plates in precast concrete

ASCE 7 COMPONENT & CLADDING WIND

**DESIGN PRESSURES ZONES** 

panels where bearing is on steel, otherwise bearing shall be on a bearing pad unless detailed for a welded connection. Provide shims for bearing and foundation connections. Contractor shall verify all existing conditions and site restrictions. Refer to Architectural drawings for wall dimensions and wall support details.

#### STRUCTURAL STEEL BOLTING

High strength bolts shall conform to Group A (ASTM A325/F1852) and Group 1 B (ASTM A490/F2280) where specified. See details and schedules for bolt diameters and bolt types. Bolt tensioning requirement shall be as follows,

A. Bolts in moment connections or braced frames with oversized, long slotted or short slots parallel to force connections – Slip critical (Type

B. Bolts to shear connections with long slotted holes – Snug Tight (Type X) wit plate washers per AISC UON C. All other bolted connections – Snug Tight (Type X) UON Machine bolts shall conform to ASTM A307, grade A.

All bolt holes shall be standard size holes (1/16" larger than bolt), UON Anchor bolts for non-frame columns shall be ASTM F1554, grade 36. Anchor bolts for all brace frame and moment frame columns shall be ASTM F1554 grade 55. Anchor bolts for ledgers to concrete or CMU wall shall be ASTM A307 or A36.

#### STRUCTURAL STEEL WELDING

. All welding shall be done by AWS certified welders in accordance with AWS D1.1 structural welding code, latest edition.

Structural steel shop drawings shall show all welding with AWS A2.4 All welds shall be made using low-hydrogen electrodes with minimum tensile strength of 70ksi. See specifications for further requirements. Welds that have been defined by the contract documents as "Demand Critical Welds" (DCW) require higher standards for welding, testing, and

inspection per AISC 341-05 section 7.3. 5. The contractor is responsible for the following, but not limited to: A. Joint preparations and welding procedures including, but not limited to: welding procedures, required root openings, root face dimensions, groove angles, backing bars, copes, surface roughness values, and

welding tapers of unequal parts. Sequencing and procedures of welding to minimize the effect of shrinkage, residual stresses, and to maintain erection tolerances. welds on the project shall be submitted for review and acceptance prior to starting fabrication or erection. These shall be submitted to owner's Testing

Lab for review and acceptance prior to being submitted to the architect. Fillet weld sizes shown on the drawings are minimum sizes. Increase weld size to AWS minimum sizes, based on plate thicknesses. The minimum size | POST-INSTALLED ANCHORS IN CONCRETE weld shall be 3/16". Fillet weld lengths shown on the drawings are the net effective length

required. Where length of weld is not shown it shall be full length of joint. 9. All groove and butt welds shall be complete joint penetration (CJP) welds, UON. Joint configuration for all CJP welds is steel fabricator option. All partial penetration groove weld sizes shown on the drawings refer to effective throat thickness.

10. All steel exposed to the weather shall have additional seal welding to protect

the members (pipes, tubes, built-ups) and the connections from moisture infiltration. These additional seal welds shall be shown on the shop drawings | 2 for review by the architect. Welds shown on the drawings may be shop or field welds at the contractor's option unless specifically noted to be field or shop weld.

IREPROOFING STRUCTURAL STEEL Refer to the architectural drawings for minimum hourly values of steel fire protection for determining the thickness of spray applied fireproofing. The structural steel frame consists of all structural steel members sized, identified, or indicated on the structural drawings. All structural steel beams and columns shown on the structural drawings shall be considered primary members UON. Braces in brace frames shall be | SHEAR STUDS AND DEFORMED BAR ANCHORS

#### All structural framing shall be considered as restrained.

considered secondary members.

1. Steel deck types shall be the products shown in the deck schedule or approved equal. All steel decking must have a current ICC or IAPMO certification

Steel deck shall be fabricated and erected in accordance with Steel Deck Institute – SDI specifications Deck manufacturer shall be a certified member of SDI. 4. Material for steel deck and accessories shall be ASTM A653 - SS

designation, grade 33, minimum yield 38 ksi, with zinc coating in accordance with ASTM A653, G60 for floor deck and G90 for roof deck, UON 5. Touch-up damaged galvanized surfaces after erection with zinc rich paint. Submit the following prior for review and acceptance prior to fabrication:

A. Deck shop drawings showing deck gage, layout, fastening, closures, shoring requirements, beam shear stud layouts, etc.

B. ICC or IAPMO report for decking Written verification of structural conformance.

D. Deck units shall be connected to steel supports per schedule on Deck subcontractor shall indicate on the shop drawings whether deck shoring is required for all deck conditions. This includes slab edge

conditions. These shoring requirements shall be reviewed and approved by the general contractor prior to submittal to the architect and engineer. 9. All welding shall be per AWS D1.3. 10. Minimum bearing of decking on supports shall be 2-inch, parallel or perpendicular to span. Provide 2-inch bearing and required fastening for each unit at shared supports.

11. Units shall be continuous over three or more spans, except where framing does not permit, in these locations deck supplier shall span capacity. 12 No loads are permitted to be hung from roof deck 13. Design and provide edge forms, flashing, closure plates, and incidental support at wall ends for all deck units, around columns, and at all perimeter locations requiring closure. Coordinate all closures with elevator, stair and other architectural details.

#### **CONCRETE BLOCK MASONRY**

Masonry construction shall be in accordance with ACI 530. Compressive strength of grouted CMU construction f'm shall be 2000 psi. All hollow concrete masonry units shall conform to ASTM C90, moisture controlled block; lightweight classification, compression strength of block

shall be 2150 psi to achieve f'm of 2000 psi; 13% maximum absorption for exposed to weather units. Use open ended bond beam units where possible Compressive strength of the grout shall be 2000 psi. Maximum size of aggregate in grout shall be per CODE. shall include the following: Mortar shall conform to CODE with strength of 2500 psi.

F'm shall be justified by preconstruction prism tests and prism tests during construction as specified in CODE. In addition to prism testing, material testing shall be conducted on the block, grout, and mortar to check for compliance with minimum specified strength. All cells with vertical reinforcement or as noted on drawings shall be grouted

9. Lay all units in running bond with fully mortared head joints 10. Horizontal joint reinforcing shall be "ladder type" with W1.7 diameter

longitudinal bars. Provide 3/16 diameter longitudinal bars at walls be brick 1. Provide minimum #5 vertical bars at 48" o.c. and horizontal joint reinforcing at 16" o.c. unless indicated otherwise on drawings.

12. Provided minimum (2)#5 vertical bars additional at each side of openings or control joint UON Bond beam reinforcing shall be continuous unless noted otherwise. 14. Provide minimum lap and splice lengths per ACI 530.

15. Reinforcing shall be held in place with approved spacing system embed in 16. Provide control joints in wall at a maximum spacing of 25' feet on center per

detail provided on the drawings. See structural drawings for control joint

. Pipes and conduits shall not be embedded in any masonry unless approved by architect and structural engineer. 18. Grouting of cores shall be in accordance with "low lift grouting" per ACI530. 19. Grout lifts shall be keyed 4" into lower masonry course. Project specific welding procedure specifications (WPS) for all field and shop | 20. High lift grouting shall be in conformance with the CODE. Contractor shall submit a high lift grout procedure for review and approval by the architect/engineer and Testing Lab.

Grout masonry below grade solid.

Expansion anchors A. Expansion Anchors shall be per CODE requirements

B. Expansion Anchors shall be: Kwik-Bolt TZ (ESR-1917) by Hilti, Power-Stud+ SD2 (ESR-2502) by Power Fasteners, Strong Bolt (ESR-1771) by Simpson, TruBolt+ (ESR-2427) by ITW Red Head or approved equal. For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors

Tension test 50% of all expansion anchors to test load provided by manufacture Adhesive anchors Comply with CODE requirements.

SD (ESR-2732) by Hilti, Set-XP (ESR-2508) by Simpson, or approved For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors D. Tension test 50% of all expansion anchors to test load provided by

#### Shear studs shall be AWS D1.1 "type B" headed studs per ASTM A108.

Provide granular flux-filled Nelson shear connector S3L or Nelson headed concrete anchor H4L, or approved equal. Threaded studs shall be AWS D1.1 "type A" threaded studs per ASTM A108 Provide Nelson partially threaded stud CPL or approved equal. Deformed bar anchors (DBA) shall be stud type per ASTM A496, cold finished low-carbon steel, minimum tensile strength of 80,000 psi. Provide

nelson deformed bar concrete anchors D2L or equal. . All shear stud and deformed bar anchors shown on drawings shall be welded to steel members attached to per manufacturer's requirements to obtain full

STRUCTURAL STEEL Structural steel design fabrication and erection shall be in accordance with American Institute of Steel Construction, AISC 360 – Specification for Structural Steel Building and Steel Construction Manual, UON

All structural steel shall conform to the following: A. Structural steel rolled shapes: ASTM A992, Fy= 50 ksi, Typical UON;

 B. Structural steel channels and angles ASTM A36, Fy= 36 ksi, UON

C. Structural steel plates and bars: ASTM A572 Grade 50, Fy= 50 ksi, UON

Square or rectangular steel tubes: ASTM A500, Grade C, Fy=50ksi. E. Round steel tubes: ASTM A500, Grade C, Fy=46ksi.

Structural Steel Fabricator shall be AISC Certified or have a AISC equivalent Quality Assurance program verified by a qualified independent testing agency. Non-Certified Fabricators shall comply with additional Special Inspection requirements per CODE. Detailing of connections and framing shall be performed using rational engineering principles in accordance with Contract Documents. Typical

details shown do not indicate the correct number of bolts, weld or plate sizes unless specifically noted. Connections shall be designed by a Professional Engineer registered in the State in which the project is Constructed, for connections not specifically detailed on drawings. Submit signed and sealed calculations for review. Shop drawings detailing fabrication and field erection details shall be

submitted and reviewed by the architect/engineer prior to fabrication. The contractor shall be responsible for the following: A. Coordination of selection of optional details shown on the structural B. All erection aids, including but not limited to: erection angles, lift holes,

and other aids. Steel connections shall be detailed on the shop drawings in conformance with the details shown on the structural drawings. Shear connections shall be AISC approved connections and capable of end

10. Non-composite beams shall be designed to support minimum of 50% of the Maximum Total Uniform Load per AISC Steel Construction Manual unless noted otherwise on drawings.

1. All structural and architectural steel exposed to weather shall be painted per specifications. Dimensional tolerances for built up members shall be per AWS D1.1. 13. Steel beams are equally spaced between dimensioned points, UON

14. Where AESS is indicated on drawings, detail and finish steel in conformance with the "AESS" section of the general notes and specifications. 15. Fabrication and erection tolerance of brick frames shall conform to AISC 303, Section 10 – Architecturally Exposed Structural Steel. Reference Architectural and MEP drawings for miscellaneous members and plates not shown on Structural Drawings.

. Beams shall be fabricated with natural camber up. Provide additional camber as noted on drawings. 18. Field verify all existing condition before submitting shop drawing for review. 19. Thoroughly clean existing steel surfaces to review weld.

20. Comply with the following cleaning and painting requirements, UON: A. SSPC-SP3 and one coat of shop primer for all interior steel. Omit paint at | 8. Chamfer exposed concrete corners per the architectural drawings. concrete and on top flange of beams with shear connectors. B. SSPC-SP6 and hot dipped Galvanized G90 for exterior steel exposed to

exterior conditions C. SSPC-SP6 and one coat of shop primer minimum for AESS. . Anchor rods, base plates and bearing plates shall be pre-set prior to concrete or grout placement 22. Provide adjustable channel slots for masonry anchors at steel columns and lintels at 24" o.c. when encased in masonry.

23. The contractor shall provide minimum 4" concrete cover around all steel members or components adjacent to and exposed to soil. Minimum reinforcement in concrete cover shall be #3 at 12" o.c. 24. Non-shrink grout shall meet the requirements of ASTM Standard C1107, and shall attain a minimum 28 day compressive strength of 8000 psi.

25. Provide temporary bracing and/or shoring as required to stabilized framing until lateral load system in complete. Account for temperature differentials in erection procedures.

#### ARCHITECTURALLY EXPOSED STEEL (AESS) . Steel defined as AESS on project shall be fabricated and constructed in

accordance with the AESS requirement of Specification Section 05 12 00. See Architectural drawing for miscellaneous steel to be AESS.

. Elevator machine beams, hoist beams, rails, sills, door supports and connections to the primary structure and design-build components to be designed by the Elevator Manufacturer. Refer to the Section "Deferred Structural Submittals" for Deferred Submittal requirements. In addition, the following shall apply:

A. The Contractor shall be shall be responsible for providing additional framing necessary for any penetrations through the machine room floor not shown on the structural drawings.

Submitted documents shall include the location, direction, and magnitude of all loads imposed by the elevator system to the primary structure.

CONCRETE l. Mixing, batching, transporting, and placing of all concrete and selection of

concrete materials shall conform to ACI 301 specification for structural concrete for buildings, UON. Each mix design listed below shall be submitted, with current supporting data, and be approved by architect/structural engineer and the testing laboratory prior to use. Concrete mix designs shall be stamped and signed by a civil or structural engineer licensed in the state of Michigan. Submittal

A. Cement type and source B. Cement cube strength. Course and fine aggregate source and grading. Admixture data sheets.

Use of calcium chloride, chloride ions or other salts in concrete mix is The schedule below indicates the minimum concrete design mix

requirements. Some design mix properties may need to exceed minimum requirements in order to make other properties meet minimum requirements. A. Type A – Foundation: Footings and grade beams Normal weight concrete (150 pcf)

• Strength - f'c = 4000 psi (at 28 days) Flyash / cement ratio = 50 percent max B. Type B- Slab-on-grade (including curbs and pads)

Normal weight concrete (150 pcf) Strength - f'c = 4000 psi (at 28 days) Max w/c ratio = 0.40 Flyash / cement ratio = 50 percent max

Shrinkage limit = 0.040% Type C – Concrete on Metal Deck Normal weight concrete (150 pcf) • Strength - f'c = 350 psi (at 28 days) Max w/c ratio = 0.50

 Shrinkage limit = 0.040% Type D- Precast Panels Normal weight concrete (150 pcf) Strength - f'c =5000 psi (at 28 days)

Flyash / cement ratio = 50 percent may

A. Concrete on Steel Deck – 1" clear from top of slab

 Max w/c ratio = 0.40 Shrinkage limit = 0.040% 5. Concrete exposed to freeze/thaw cycles including foundation walls shall be air-entrained 6% +/- 1%. Minimum concrete cover over reinforcing steel shall be as follows (UON):

B. Slabs and Walls Interior Faces – 3/4" (#11 and smaller) Exposed to Weather – 1.5" (#5 and smaller) and 2" (#6 and larger)

 Exposed to earth – 2 Footings or Grade Beams Not exposed to Earth – 2<sup>3</sup>

 Exposed to Earth – 2" Cast Against Earth – 3" D. Slab on Grade – 2" from bottom

The contractor shall provide minimum 4" reinforced concrete cover around all | STRUCTURAL OBSERVATIONS Adhesive anchors shall be: HIT-HY 200 (ESR-3187) by Hilti, HIT-RE 500 steel members or components (WF, TS, plates, bolts, etc.) adjacent to and exposed to soil. Do not place conduits or other elements exceeding 25% of the depth of the concrete slab or wall. No conduit is allowed in columns or beams unless reviewed and approved by Structural Engineer

Anchor rods, leveling plates, bearing plates and other structural steel embeds shall be secured in place within a 1/8" tolerance in any direction prior to placing concrete

0. Aluminum products are prohibited embed or directly attached to concrete. 1. Slab on grade to be placed on min 15mil class A vapor retarder with lapped and taped joints. Coordinate vapor retarder requirements with selected floor

#### REINFORCING STEEL Steel reinforcement shall be as follows:

A. ASTM A615 grade 60 UON ASTM A706 Gr 60 for bars to be welded, coupled and where noted on

3. Mechanical splices, if used at contractor's option, shall be ICC approved and be capable of developing 125% of specified minimum yield strength of bar in 3 tension or compression . Welded wire fabric shall conform to ASTM A185. 5. Welded wire fabric shall be lap spliced 8" or one full mesh spacing plus 2", whichever is greater

Welding of reinforcing steel shall be in accordance with AWS D1.4. Weld reinforcing bars only where noted on the drawings. Tack welding or welding of bars to plates, templates, etc, is prohibited, unless specifically shown on the drawings.

Submit rebar shop drawings in accordance with ACI 315 for review and acceptance by architect/engineer prior to fabrication. The shop drawings shall include: A. Reinforcing size, lengths and bends.

 Location, spacing and number of bars. Methods and details of support to maintain specified cover. D. Locations of construction joints. Location and length of all splices.

Contractor shall investigate and coordinate reinforcing steel placement in congested areas and provide templates, reinforcing bar coupling, or bar welding where necessary to maintain bar placement. Bars shall not be bent or twisted in the field, unless specifically detailed on the structural drawings 0. Securely tie all reinforcing in-place with iron wire. Support all reinforcing in

place with acceptable chairs. CONCRETE FORMWORK AND JOINTS

Design and construction of formwork is the responsibility of the contractor and shall be in conformance with ACI 301. The contractor shall determine the need for shoring and re-shoring. Design and construction of shoring / reshoring, including analysis of the structure, is the responsibility of the contractor. Submit proposed shoring and reshoring plans. conforming to ACI 301, to the engineer for record only. All construction joints shall be constructed in accordance with the typical construction joint details shown on the structural drawings. All construction joints shall be coordinated and constructed in accordance with architectural

finishes and treatments. The maximum length of pours shall be as follows:

A. Slab-on-grade and topping slabs: 120 feet Suspended concrete slab: 120 feet Concrete fill in metal deck: 120 feet Architectural Topping Slabs: 120 feet

Walls: 80 feet The contractor shall submit the proposed locations of construction joints to the architect/engineer and receive approval prior to fabrication of formwork. 6. Clean and roughen to ¼" amplitude, all horizontal construction joint surfaces against which concrete is to be placed. All construction joints shall be wetted and standing water removed immediately before new concrete is placed. For existing concrete, mechanically roughen to 1/4" amplitude, clean and degrease existing concrete before placing concrete adjacent to existing concrete. Apply bonding agent prior to placing concrete. Bonding agent shall

holes for slip critical connections, steel to be fire-proofed, encased in 9. Provide water-stops in all construction joints in elements exposed to weather, soil or liquid on one side. Refer to architectural drawings and specifications | 13. Thoroughly clean and roughen construction joints between foundations and | Acc for waterproofing and damp-proofing requirements. 10. Joints shall be prepared and sealed with joint sealant.

be cementitious or epoxy-based bonding agent approved by Structural

11. Provide pockets in concrete as required for structural steel columns, beams. Coordinate size and locations with steel shop drawings. Fill pockets with concrete after steel erection.

#### SHORING AND BRACING

support is in place.

work by the Testing Agency.

the Owner and Architect/Structural Engineer.

Contractor shall provide temporary shoring and bracing of existing construction, new construction and underground utilities as follows: Where shown or noted on the Drawings Where existing construction is to be altered or disturbed until permanent

Where existing construction is not undergoing alteration and is to remain undisturbed but is disturbed as a result of the work of this contract. D. As required for safe erection, installation of new construction, equipment, E. When needed for Contractor's "means and methods" of construction,

and other safety related issues. Shoring and bracing shown on the Drawings is conceptual. Contractor shall be responsible for verifying existing conditions, shoring and bracing calculations, methods of installation, transfer of loads through to final load support, and work sequence phasing with new construction. Shoring and bracing shall be performed by a Contractor with minimum 5 years demonstrated experience in similar size and scope of shoring and

bracing projects. Shoring and bracing shall be designed by a Professional Engineer registered in the State of the Project with minimum 5 years demonstrated experience in similar size and scope of shoring and bracing projects. Design loads and methods shall conform to applicable codes. Soil and material strengths shall be verified by tests, unless conservative estimates that do not affect deflections and deformations are approved by the Architect/Structural

Contractor shall submit drawings and calculations sealed and signed by the Contractor's Professional Engineer showing complete design including temporary conditions, final conditions and sequence of work. Before starting work. Contractor shall perform condition survey of the existing building structure, exterior façade and interior finishes, including photographic documentation and submit survey to the Owner for record. During the shoring and bracing operations, Contractor shall:

A. Keep the existing and new construction in a safe condition.

B. Monitor existing and new construction to detect any signs of distress or deformation. C. Take immediate steps to prevent distress, deformation or damage. 8. Contractor shall continuously monitor the shoring and bracing system. Contractor shall review and ascertain that all field connections are completed according to the Contractor's design and issue approval for inspection of the

. After completion of shoring and bracing and completion of work requiring shoring and bracing, Contractor shall repair any damage to the existing and new construction, without any cost to the Owner, and to the satisfaction of

ARCHITECTURAL SLAB PLANS . See Architectural Slab Plans that show the following information:

A. Locations of the edge of slab at perimeter and interior openings Slab elevations 2. Slab depressions (elevations and locations of depression)

D. Slab slopes E. Concrete curbs (width, height, location)

#### SPECIAL INSPECTIONS

Special inspections shall be provided by the Owner's Testing Lab in according to the code and the project specifications. The special inspector shall observe the work for conformance with the construction documents. The special inspector shall send reports to the inspector of record, architect, engineer, contractor and Owner. All discrepancies shall be brought to the attention of the contractor for correction. When work is done to the satisfaction of the inspector, then the special inspector shall submit a final signed report stating that, to the best of their knowledge, the work was competed in conformance with the plans, specifications, and the applicable workmanship provisions of the CODE.

Refer to Special Inspection tables and notes for specific requirements. EXISTING CONSTRUCTION

 Before submitting a proposal for work, and/or preparing shop drawings for this work each Bidder, Contractor and Sub-Contractor shall visit the site and become fully acquainted with the existing conditions, temporary construction required, type of equipment required to perform the work. Field verify all existing dimensions, conditions, members sizes and elevations with the information provided on the drawings. Information provided on drawings is based on limited field observations and available existing drawings which may not reflect actual conditions. Discrepancies to be noted and immediately brought to the attention of the Structural Engineer. Provide temporary shoring and bracing as required before, during and after

construction as required until all materials have reached the required strength Existing construction not undergoing alteration is to remain undisturbed. Where such construction is disturbed as a result of the operations of this contract, Contractor shall repair or replace as required and to the satisfaction of the Architect/Structural Engineer and Owner's Representative.

Verify the existence, location and elevation of existing utilities, sewers, drains, etc. in demolition areas and adjacent to new work before proceeding with the work. All discrepancies shall be documented and reported, do not proceed with work until discrepancies have been resolved. Provide fire safety precautions during field cutting and welding operations, meeting the Owner's requirements. Provide temporary protection of existing equipment during execution of work,

satisfying the Owner's requirements. Provide temporary protection to prevent damage from the weather and Coordinate work with the Owner's personnel to avoid any interference in their

10. Refer to "SHORING AND BRACING" notes for additional requirements.

Resurget Engineering shall provide Structural Observation of the structural systems for general conformance to the drawings and specifications at significant stages of construction and at completion of the primary structural system as defined in Code Structural Observation does not include or waive any of the responsibilities of the Special Inspector as required per the Section "Special Inspections". At the conclusion of work included in permit, the structural observer will submit to the building official a written statement that the structural observations have been completed and that to the best of their knowledge

Structural Observation on this project shall be conducted on the following

the work is in conformation with the construction documents

structural elements: A. Spread Footings B. Concrete Slabs

others" on shop drawings.

 Structural steel erection D. CMU Bearing/Shear Walls

Reinforcing bars shall be lap spliced per the lap splice schedule. Lap splices | 1. Verify all existing dimension before submitting shop drawings for review. are to be securely tied at all side and end laps. Splice reinforcing where

2. Review all shop drawings for accuracy and compliance with shop drawing pefore submitting for review. Review of shop drawings does not relieve the Contractor of any responsibility or errors and omissions. Use of 2D Drawing or 3D REVIT model does not relieve the Contractor of any responsibility specified in the contract documents. Allow a minimum of 10 working days for review by Structural Engineer of each set of submitted contract drawing. Submit shop drawings in reasonable quantities with at least 10 working days between submittals. Review time stated is for Structural Engineer only, add additional time to schedule as required for review by other disciplines. Contractor shall coordinate work between multiple trades before submitting shop drawings. Dimensions and elevations specific to equipment installation shall be provided and coordinated prior to submittal for review. Failure to provide these dimensions shall result in return of shop drawings without Structural Engineer is not responsible for coordination of work marked as "by Ultin

> FOUNDATIONS Foundations have been designed using the findings, recommendations, and criteria provided in the geotechnical reference documents listed in the "DESIGN CRITERIA". Refer to these documents, and subsequent addenda, for information on generalized subsurface profiles, soil properties, existing site features, and conditions affecting foundation installation. See the geotechnical report for site preparation and elevation of suitable insitu soils to obtain minimum allowable bearing capacity used for design. In addition to the removal of unsuitable soils and replacement with Engineered fill is an option in lieu of extending the bottom of foundation elevations to

bearing elevation. See the geotechnical report for over excavation requirements below structural foundations. All excavations shall be inspected and approved by the geotechnical engineer before placing concrete. Geotechnical Engineer or testing agency under their review shall inspect and test all subgrades, fills and backfills to meet requirements of Contract

Foundation bearing elevations shown on drawings are minimums. Foundation bearing elevation shall be below minimum local frost depth requirements, bearing on undisturbed natural soils or engineered fill having a minimum allowable bearing as indicated. Any temporary shoring needed for excavation shall be designed by licensed engineer working for the contractor. Temporary shoring designs shall be submitted to Architect for record only (not for review or approval). Earth forms: Side forms for foundations may be omitted and concrete placed A against soil if it can be shown that the soil excavations are suitable for such use and will not cave prior to or during the concrete pour. If the vertical excavated soil surfaces are deemed to be unsatisfactory for use as a foundation side form, then the contractor shall provide standard concrete side forms at no extra cost to the owner. Exterior sides of elevation shall be smooth and vertical from grade elevation to minimum frost depth.

Extend all footing and grade beam reinforcing continuous through intersecting footings and grade beams. The contractor shall adjust the concrete cover at reinforcing bars to avoid interference. Pad foundation area are centered on columns unless noted otherwise. 10. Do not place concrete on or adjacent to saturated sub-grade, sub-grade with standing water, sub-grade with organic content, frost or ice. Contractor responsible for de-watering of site and excavations as required. 12. Do not undermine existing foundation without approved underpinning design. |

walls and columns per "CONCRETE FORMWORK AND JOINTS".

4. Balance backfill adjacent to foundation walls to eliminate excessive lateral 5. Backfill and engineered fill shall consist of clean, well graded soils, free of organic material, silt or clay or meet the requirements of the project specification manual. 16. Backfill shall be compacted to 95% of maximum density, as determined by the Modified Proctor Method (ASTM D1557), in maximum lifts of 6".

. The drawings indicate the structure in its final condition. The contractor is fully responsible for all temporary measures necessary for erection prior to the structure's final condition The contractor is responsible for means and methods, scheduling, sequencing of construction or compliance with OSHA provisions. The contractor shall coordinate with other trades in determining the erection sequence so that the erection sequence and associated site conditions will not adversely impact or damage work by other trades or previously erected

Deflection and movement of structure A. Floor beams, trusses, transfer girders, and cantilevers will continue to deflect as additional loads are applied during construction. Although camber may be shown to account for the theoretical dead load deflection, this may not occur until all dead load is on the member. B. The contractor shall coordinate the attachment of any items to the

structure so that typical lateral movements of adjacent floors in any

direction are accommodated by the attachments. The lateral movement Lateral Equivalent

**GENERAL NOTES** 

1. Governing Design Code: 2015 Michigan Building Code with local jurisdiction amendments (hereafter referred to as "CODE") 2. All construction shall be in accordance with the following:

B. Drawings and Specifications 3. The structural drawing notes are intended to work together and be complementary with the project specifications. Consult the specifications for additional requirements in each section. Information provided on structural drawings shall take precedence over the specifications. Information shown on specific details shall take precedence over typical details and structural

Typical details and general notes shall apply, UON. . The structural drawings shall be used in conjunction with the architectural drawings. See architectural drawings for information not shown, including

but not limited to the following: A. Setting out dimensions and angles of all grid lines B. Setting out dimensions of concrete walls and wall openings that are not

Slab geometry that includes the following: · Edge of slab locations at building perimeter Edge of slab location at interior openings Location and geometry of slab depressions and slopes (depression and slopes in structural slabs that are not shown diagrammatically

on the structural drawings shall be reviewed by SEOR) Concrete curb locations, height and width Interior partitions and ceilings including Interior metal stud partitions (size, location and detailing) Interior glazed walls (location and detailing)

shown on the structural drawings.

Exterior metal studs (size, location, and detailing) Curtain wall and louver details Aluminum trellises (sizes and detailing) Anchorage and bracing of building contents

Interior CMU partition (locations and openings)

Exterior non-bearing wall construction. This includes:

G. Concrete chamfers, grooves, inserts, embedments, etc. H. Architectural (non-structural) topping slabs – location and detailing Concrete finishes Dimensions not shown on the structural drawings

All fireproofing requirements including fireproofing requirements for

Misc steel required for support of architectural elements M. Waterproofing system and details 6. See the mechanical, electrical and plumbing drawings for information not shown, including but not limited to:

structural steel elements

A. Wall and slab openings for services, pipe sleeves, hangers, trenches except as shown Electrical conduit runs, boxes, outlets in walls and slabs Concrete inserts for electrical, mechanical, or plumbing D. Size and location of equipment pads and equipment anchor bolts (typical

(typical steel penetrations are provided on the Structural Drawings) Contractor is responsible for the coordinating all equipment pad sizes and locations with the actual layout provided in the shop drawings. Drawing scales noted on structural drawings are for reference only. Do NOT scale drawings. The contractor shall verify dimensions not provided with the

concrete pad detail are provided on the Structural Drawings)

E. Locations for beam penetrations for pipes and ducts, except as shown

	proceeding with work.	not provided with the
	DESIGN CRITERIA	
Design is	in accordance with CODE	CODE REFEREN
Risk Category	II	IBC Table 1604. ASCE Table 1.5-
FLO	OR LIVE LOADS	CODE REFEREN
OFFICE	50 PSF + PARTITIONS	ASCE Table 4-1
BALCONY	75 PSF	ASCE Table 4-1
ROOF	20 PSF	ASCE Table 4-1
PARTITIONS	15 PSF	ASCE Table 4-
S	NOW LOADS	CODE REFEREN
Ground Snow Load	Pg = 35 PSF	ASCE Figure 7-
Flat Roof Snow Load	Pf = 25 PSF	ASCE Section 7.
Exposure Factor	Ce = 1.0	ASCE Table 7-2
Importance Factor	I = 1.0	ASCE Table 1.5-
Thermal Factor	Ct = 1.1	ASCE Table 7-3
	o vertical projections, on lower roofs adjased for the effects of drifting.	acent to high roofs,
V	VIND LOADS	CODE REFEREN

now loads adjacent oped roofs are incre				acent to high roofs, or
1	WIND LOA	ADS		CODE REFERENCE
timate Design ind Speed sec. gust)	V(ULT	IMATE)= 115	MPH	ASCE Figure 26.5-1/
erviceability Limit ate Wind Speed		RVICE) = 89 50-Year MRI)		ASCE Appendix C
cposure Category		В		ASCE Section 26.7.3
ternal Pressure pefficient	± (	0.18 (Enclose	d)	ASCE Section 26.11-1
	COMPONEN	TS AND CLAI	DDING ROOF	=
	Zone 1	Zone 2	Zone 3	CODE REFERENCE
upport Beam > 100 SF)	-23 PSF	-27 PSF	-27 PSF	ASCE Table 30.7-2
oof Sheathing . = 50 SF)	-24 PSF	-32 PSF	-38 PSF	ASCE Table 30.7-2
eck Fasteners < 10 SF)	-25 PSF	-42 PSF	-63 PSF	ASCE Table 30.7-2
(	COMPONENT	S AND CLAD	DING WALL	S
	Zone 4	Zone 5		CODE REFERENCE
= 100 SF	18/-19 PSF	18/-19 PSF		ASCE Table 30.7-2
= 50 SF	21/-23 PSF	21/-26 PSF		ASCE Table 30.7-2
= 10 SF	23/-25 PSF	23/-31 PSF		ASCE Table 30.7-2
uilding design splacements	Wind drift a	t Serviceabilit	y Limit State	Wind Speed = h/400
SI	EISMIC LO	DADS		CODE REFERENCE
eismic Importance actor		le = 1.0		ASCE Table 1.5-2
nort Period Spectral esponse cceleration		SS = 0.110 g		ASCE Section 11.4.
0 sec. Period pectral Response peceleration		S1 = 0.052 g		ASCE Section 11.4.1
te Class		D		ASCE Section 11.4.2
esign Short pectral Response poeleration	5	SDS = 0.092 g	J	ASCE Section 11.4.4
esign Short Period pectral Response peceleration	\$	SD1 = 0.075 g	I	ASCE Section 11.4.4
eismic Design ategory		В		ASCE Section 11.6
eismic Force esisting System	Ordinary	Precast Shea	ar Walls	ASCE Table 12.2-1
eismic Response pefficient		CS = 0.03		ASCE Section 12.8.1.1
esponse odification Factor		R = 3.0		ASCE Table 12.2-1
nalysis Procedure	Equiv	alent Lateral I	Force	ASCE Section 12.8
uilding design splacements	Seis	mic Inelastic S	Story Drift (De	elta m) = 2.0%

FOUNDATION DESIGN

1. Refer to Geotechnical Report by SME dated August 21st, 2024 for additional

SUPERIMPOSED DEAD LOAD

2. Lateral earth pressure is based upon drained soil. Refer to drawings for

Allowable Soil

Bearing Capacity

foundation drainage.

Typical Floors and

40 PCF (Walls Unbraced at Top)

5 PSF (MEP)

2500 PSF

# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

### West Michigan Hispanic **Chamber of** Commerce- HQ

2 1111 Godfrey Ave, SW Grand Rapids, MI 49507

### RESURGET

ENGINEERING

DETROIT - SAN FRANCISCO 28 W ADAMS AVE 201 SPEAR ST **SUITE 1100** 

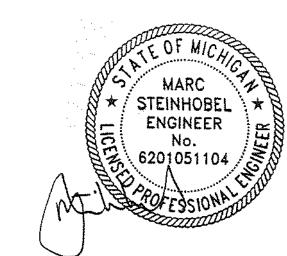
SAN FRANCISCO, CA

(415) 523-3548 CONSULTING STRUCTURAL ENGINEERS

WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL

**DETROIT, MI** 



**# DESCRIPTION** 02/07/2025

**KEY PLAN** 

**GENERAL NOTES** 

24094

PROJECT#

SHEET#

**S.002** 

SHEET TITLE

			INSPECTIO	N FREQUENCY	<b>DE</b>		
		INSPECTION TASK	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE	RESPONSIB AGENT
		N OF STEEL FABRICATED ITEMS SHALL BE PERFORMED ON PREMISES	CONTINUOUS	X			
۸. ۱	EXCEF	BRICATION. PTIONS: SPECIAL INSPECTIONS DURING FABRICATION NOT REQUIRED THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORANCE WITH			AISC QUALITY CERTIFICATION	1704.2.5	SI
;	SECTION	ON 1704.2.5.1. SPECTION AND NONDESTRUCTIVE TESTING OF STRUCTURAL STEEL			AIO OUALITY		
CCO	RDAN	IN BUILDINGS, STRUCTUREA AND PORTIONS THEREOF SHALL BE IN CE WITH THE QUALITY ASSURANCE INSPECTION REQUIREMENTS OF AISC	X	X	AISC QUALITY CERTIFICATION	1705.2.1	SI
ı	ELEME	AL INSPECTION OF RAILING SYSTEMS COMPOSED OF STRUCTURAL STEEL ENTS SHALL BE LIMITED TO WELDING INSPECTION OF WELDS AT THE BASE NTILEVERED RAIL POSTS.		X	AISC QUALITY CERTIFICATION	1705.2.1	SI
		INSPECTION TASK	INSPEC	TION TYPE	REFERENCED	IBC REFERENCE	RESPONSIB
DECT	ION OF		QC	QA	STANDARD		AGENT
		F BOLTING CTION TASKS PRIOR TO BOLTING:					
	Α.	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER	0	Р			
I	В.	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS.	0	0			
	C.	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE).	0	0			
	D.	PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL.	0	0	AISC 360, SECTION N5,	1705.2	SI/TA
	E.	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS.	0	0	TABLE N5.6-1		
Ī	F.	PRE-INSTASLLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED.	Р	0			
	G.	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS.	0	0	-		
<u> </u>	INSPE	ECTION TASKS DURING BOLTING:					
	Α.	FASTENER ASSMEBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES	0	0			
	<u></u> В.	AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED.  JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE	-				
		PRETENSIONING OPERATION.	0	0	AISC 360, SECTION N5,	1705.2	SI/TA
	C.	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTING FROM ROTATING.	0	0	TABLE N5.6-2		
I	D.	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES.	0	0			
3.	INSPE	CTION TASKS AFTER BOLTING:			AISC 360, SECTION N5,	1705.2	SI/TA
	Α.	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS.	Р	Р	TABLE N5.6-3	1700.2	OW 171
		WELDING:					
	_	CTION TASKS PRIOR TO WELDING:  WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE.	P	P			
-	A.	MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES		•			SI/TA
-	B.	AVAILABLE.	Р	P			
-	C. D.	MATERIAL IDENTIFICATION (TYPE/GRADE).  WELDER IDENTIFICATION SYSTEM.	0	0			
	<u>.                                    </u>	FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY):	0	0	AISC 360,		
		<ul> <li>- JOINT PREPARATION.</li> <li>- DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL).</li> <li>- CLEANLINESS (CONDITION OF STEEL SURFACES).</li> <li>- TACKING (TACK WELD QUALITY AND LOCATION).</li> <li>- BACKING TYPE AND FIT (IF AVAILABLE).</li> </ul>	0	0	SECTION N5, TABLE N5.4-1	1705.2	
Ī	F.	CONFIGURATION OF FINISH AND ACCESS HOLES.	0	0			
(	G.	FIT-UP OF FILLET WELDS: - DIMENSIONS (ALIGNMENT, GAPS AT ROOT).	0				
		- CLEANLINESS (CONDITION OF STEEL SURFACES) TACKING (TACK WELD QUALITY AND LOCATION).	0	0			
	Н.	CHECK WELDING EQUIPMENT.	0	<u>-</u>			
2.	INSPE	ECTION TASKS DURING WELDING:					
4	Α.	USE OF QUALIFIED WELDERS.	0	0			
I	В.	CONTROL AND HANDLING OF WELDING CONSUMABLES: - PACKAGING EXPOSURE CONTROL.	0	0			
	C.	NO WELDING OVER CRACKED TACK WELDS.	0	0	-		
	D.	WPS FOLLOWED:	-	-	-		
		- SETTINGS ON WELDING EQUIPMENT TRAVEL SPEED.			AISC 360, SECTION N5,	1705.2	SI/TA
		- SELECTED WELDING MATERIALS. - SHIELDING GAS TYPE/FLOW RATE.	0	0	TABLE N5.4-2		
		- PREHEAT APPLIED. - INTERPASS TEMPERATURE MAINTAINED (MIN./MAX.).					
		- PROPER POSITION (F, V, H, OH).					
I	E.	WELDING TECHNIQUES: - INTERPASS AND FINAL CLEANING.			1		
		- INTERPASS AND FINAL CLEANING EACH PASS WITHIN PROFILE LIMITATIONS EACH PASS MEETS QUALITY REQUIREMENTS.	0	0			
3.	INSPE	CTION TASKS AFTER WELDING:					
	Α.	WELDS CLEANED.	0	0	1		
I	В.	SIZE, LENGTH AND LOCATION OF WELDS.	Р	Р			
•	C.	WELDS MEET VISUAL ACCEPTANCE CRITERIA:					
		- CRACK PROHIBITION WELD/BASE-METAL FUSION.					
		- CRATER CROSS SECTION. - WELD PROFILES.	Р	Р	AISC 360,		
		- WELD SIZE. - UNDERCUT.			SECTION N5, TABLE N5.4-3	1705.2	SI/TA
		- POROSITY.			INSEL NO.T-0		
Ī	D.	ARC STRIKES.	Р	Р			
L.	E.	K-AREA.	Р	Р			
-		+					
ļ	F. G.	BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED). REPAIR ACTIVITY.	P P	P P			

QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.

QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, APPLICABLE BUILDING CODE, PURCHASER, OWNER, OR ENGINEER OF RECORD.

O: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. P: PERFORM THESE TASKS FOR EACH STEEL ELEMENT.

	STATEMENT OF SPE	CIAL INSPECTION	IS - CONCRETE (	CONSTRUCTION		
	TANK	INSPECTION	FREQUENCY	REFERENCED	MD0 DEFEDENCE	RESPONSIBLE
	TASK	CONTINUOUS	PERIODIC	STANDARD	MBC REFERENCE	AGENT
1.	INSPECT REINFORCEMENT, INCLUDING POST-TENSIONED CABLES, AND VERIFY PLACEMENT.	-	Х	ACI 318: Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4	SI
2.	REINFORCING BAR WELDING:					
	A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	-	X	AWS D1.4		SI
	B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	-	Х	ACI 318: 26.6.4	-	Si
	C. INSPECT ALL OTHER WELDS	X	-			
3.	INSPECT ANCHORS CAST IN CONCRETE.	-	X	ACI 318: 17.8.2	-	SI / TA
4.	INSPECT ANCHORS POST-INSTALLED IN HARDENED MEMBERS.					SI / TA
	A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	Х		ACI 318: 17.8.2.4		
	B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.A.		X	ACI318: 17.8.2		
5.	VERIFY USE OF REQUIRED DESIGN MIX.	-	Х	ACI 318: Ch. 19, 26.4.3, 26.4.4 1	904.1, 1904.2, 1908.2, 1908.3	SI / TA
6.	PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	Х	-	ASTM C172 ASTM C31 ACI 318: 26.4, 26.12	1908.10	SI / TA
7.	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	-	Х	ACI 318: 26.5.3-26.5.5	1908.9	SI
8.	INSPECT FORMWORK FOR SHAPE, LOCATION, AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	-	Х	ACI 318: 26.11.1.2(b)	-	SI/SE/TA

TASK	INSPECTION I	INSPECTION FREQUENCY		IDO DEFEDENCE	RESPONSIBLE
IASK	CONTINUOUS	PERIODIC	STANDARD	IBC REFERENCE	AGENT
. SPRAYED FIRE RESISTANT MATERIALS:					
A. SURFACE CONDITIONS	X	-	MANUFACTURER'S REQUIREMENTS	1705.13.2	
B. APPLICATION	-	Х	MANUFACTURER'S REQUIREMENTS	1705.13.3	SI/TA
C. THICKNESS	X	-	ASTM E605	1705.13.4	
D. DENSITY	-	X	ASTM E605	1705.13.5	
E. BOND STRENGTH	-	Х	ASTM E736	1705.13.6	
. MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS.	-	Х	AWCI 12-B	1705.14	SI/TA

SPECIAL INSPECTION REQUIR	REMENTS - OPEN-	WEB STEEL JOI	STS AND JOIST GIRDERS			
TAOK	INSPECTION	FREQUENCY	REFERENCED	IDO DEFEDENCE	RESPONSIBLE	
TASK	CONTINUOUS	PERIODIC	STANDARD	IBC REFERENCE	AGENT	
INSTALLATION OF OPEN-WEB STEEL JOISTS AND JOIST GIRDERS:				-		
A. END CONNECTIONS - WELDED OR BOLTED.	-	Х	SJI SPECIFICATIONS LISTED IN SECTION 2207.1	1705.2.3		
B. BRIDGING - HORIZONTAL OR DIAGONAL.	-	Х	-	-	SI / TA	
1. STANDARD BRIDGING.	-	Х	SJI SPECIFICATIONS LISTED IN SECTION 2207.1	1705.2.3		
2. BRIDGING THAT DIFFERS FROM SJI SPECIFICATIONS LISTED IN SECTION	X	-				

TASK	INSPECTION FREQUENCY		REFERENCED	MDO DEFEDENCE	RESPONSIBLE	
TASK	CONTINUOUS	PERIODIC	STANDARD	MBC REFERENCE	AGENT	
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE	
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE/TA	
VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	Х	-	GEOTECHNICAL REPORT	1705.6	SI/GE/TA	
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	-	Х	GEOTECHNICAL REPORT	1705.6	SI/GE/TA	

		MINIMUM T	ESTS					
	VERIFICATION OF SLUMP FLOW A IN ACCORDANCE WITH SPE	AND VISUAL STABILITY CIFICATION ARTICLE 1	INDEX (VSI) AS DEL 5 B.1.b.3 FOR SELF	IVERED TO THE PRO- CONSOLIDATING GR	JECT SITE OUT.			
	VERIFICATION OF I'M IN ACCORDANCE WITH SPECIFICATION ARTICLE 1.4 B PRIOR TO CONSTRUCTION.							
MINIMUM SPECIAL INSPECTION								
		INSPECTION F	CTION FREQUENCY		REFERENCE CRITERIA			
	TASK	CONTINUOUS	PERIODIC	MBC SECTION	TMS 402	TMS 602	RESPONSIBLE AGENT	
1.	VERIFY COMPLIANCE WITH THE APPROVED SUBMITTALS.	-	X	-	-	ART. 1.5	SI	
2.	AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPL	LIANCE:						
	A. PROPORTIONS OF SITE-PREPARED MORTAR.	-	Х	-	-	ART. 2.1, 2.6A	01	
	B. CONSTRUCTION OF MORTAR JOINTS.	-	Х	-	-	ART. 3.3B	SI	
	C. LOCATION OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES.	-	Х	-	-	ART. 3.4, 3.6A		
3. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:								
	A. GROUT SPACE.	-	Х	-	-	ART. 3.2D, 3.2F	SI/TA	
	B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR RODS, AND ANCHORS.	-	Х	-	SEC. 6.1	ART. 2.4, 3.4		
	C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHORS.	-	Х	-	SEC. 6.1, 6.2.1, 6.2.6, 6.2.7	ART. 3.2E, 3.4, 3.6A		
	D. PROPORTIONS OF SITE-PREPARED GROUT	-	Х	-	-	ART. 2.6 B, 2.4 B.1.b		
	E. CONSTRUCTION OF MORTAR JOINTS.	-	Х	-	-	ART. 3.3B		
4.	VERIFY DURING CONSTRUCTION:							
	A. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	-	Х	-	-	ART. 3.3F	SI/TA	
	B. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION.	-	Х	-	SEC. 1.2.1(e), 6.1.4.3, 6.2.1	-		
	C. WELDING OF REINFORCEMENT.	Х	-	-	SEC. 8.1.6.7.2, 9.3.3.4(c),11.3.3.4(b)	-		
	D. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	-	×	-	-	ART. 1.8C, 1.8D		
	E. PLACEMENT OF GROUT	X	-	-	-	ART. 3.5, 3.6 C		
5.	OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/OR PRISMS.	-	Х	-	-	ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, 1.4 B.4	SI/TA	

STATMENT OF SPECIAL INSPECTIONS - STEEL ELEMENTS OF COMPOSITE CONSTRUCTION						
INCRECTION TACK	INSPECT	TION TYPE	REFERENCED	RESPONSIBLE AGENT		
INSPECTION TASK	QC	QA	STANDARD			
RIOR TO CONCRETE PLACEMENT						
PLACEMENT AND INSTALLATION OF STEEL DECK	Р	Р	AISC 360, SECTION N6, TABLE N6.1	SI/TA		
2. PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS	Р	Р				
3. DOCUMENT ACCEPTANCE OR REJECTION OF STEEL ELEMENTS	Р	Р				

MBC REFERENCE SECTION 1705.1 AND TABLE 3.1.2 TMS 402/ACI 530/ASCE 5

QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR AND ERECTOR.

QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, APPLICABLE BUILDING CODE, PURCHASER, OWNER, OR ENGINEER OF RECORD.

O: OBSERVE THESE ITEMS ON A RANDOM BASIS. OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. P: PERFORM THESE TASKS FOR EACH STEEL ELEMENT.

#### SPECIAL INSPECTIONS

- PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH THE 2015 MICHIGAN (INTERNATIONAL) BUILDING CODE CHAPTER 17 AND AS MODIFIED IN THE MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION.

  DESGINATION OF RESPONSIBLE AGENT AND THEIR QUALIFICATIONS
- SI SPECIAL INSPECTOR QUALIFIED WITH DEMONSTRATED COMPETENCE DOCUMENTED BY CERTIFICATIONS FROM RECOGNIZED AGENCIES SUCH AS AWS, ACI, MASONRY INSTITUTE OF MICHIGAN (MIM), ETC., AS SUBMITTED AND APPROVED BY THE BUILDING OFFICIAL. SPECIAL INSPECTOR MAY BE A FIRM WITH MULTIPLE SPECIALISTS AND A PROJECT MANAGER PROVIDING REPORTS.

  TA TESTING AGENCY QUALIFIED TO TEST AND INSPECT MATERIALS AND ASSEMBLIES. TESTING AGENCY SHALL BE UNDER THE SUPERVISION OF THE SPECIAL INSPECTOR.
- GE GEOTECHNICAL ENGINEER WHO PROVIDED THE ORIGINAL PROJECT GEOTECHNICAL SOILS INVESTIGATION REPORT.

  SE SPECIALTY ENGINEER RESPONSIBLE FOR DESIGNING ASSEMBLIES SUCH AS PRECAST CONCRETE, STEEL JOISTS, COLD FORMED FRAMING ASSEMBLIES, ETC. SPECIALTY ENGINEER SHALL PROVIDE
- OBSERVATION OF FABRICATED AND INSTALLED ITEMS OF THEIR DESIGN IN ADDITION TO THE SPECIAL INSPECTION.

  TA, GE AND SE SHALL SUBMIT RECORDS OF THE INSPECTION RESULTS TO THE SI. THE SI SHALL COMPILE AND SUBMIT INSPECTION RECORDS TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. RECORDS SHALL INCLUDE STATEMENTS OF TESTS, WHETHER INSTALLED/FABRICATED ITEM COMPLIES WITH CONTRACT DOCUMENTS, REMEDIAL WORK PERFORMED, RETESTS.
- SI SHALL PROVIDE A DAILY REPORT OF ANY DISCREPANCIES FROM THE CONTRACT DOCUMENTS FOUND ON THE SAME DAY OF THE INSPECTION TO THE ENGINEER OF RECORD. FORMAL REPORTS OF COMPLIANCE CAN FOLLOW BY A MAXIMUM OF 2 WEEKS. SI SHALL PROVIDE AND SIGN FINAL REPORT WITH A SUMMARY OF ALL TESTS PERFORMED AND RESULTS TO THE ENGINEER OF RECORD AND
- BUILDING OFFICIAL, IN ACCORDANCE WITH SECTION 1704.2.4.
  SI, TA & GE SHALL BE PAID BY THE OWNER IN COMPLIANCE WITH THE MICHIGAN (INTERNATIONAL) BUILDING CODE.
- WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION. SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND THE GOVERNING BUILDING CODE. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTION OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1.
- REFER TO MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL QUALITY CONTROL TESTING AND INSPECTIONS.

# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

PROJECT

# West Michigan Hispanic Chamber of Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

# RESURGET

ENGINEERING

DETROIT - SAN FRANCISCO

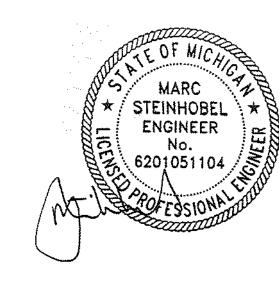
28 W ADAMS AVE
SUITE 1710
DETROIT, MI
SAN FRANCISCO, CA

(415) 523-3548

02/07/2025

CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING

#### PROFESSIONAL SEAL



© 2025 ROSSETTI

# DESCRIPTION

5	
6	

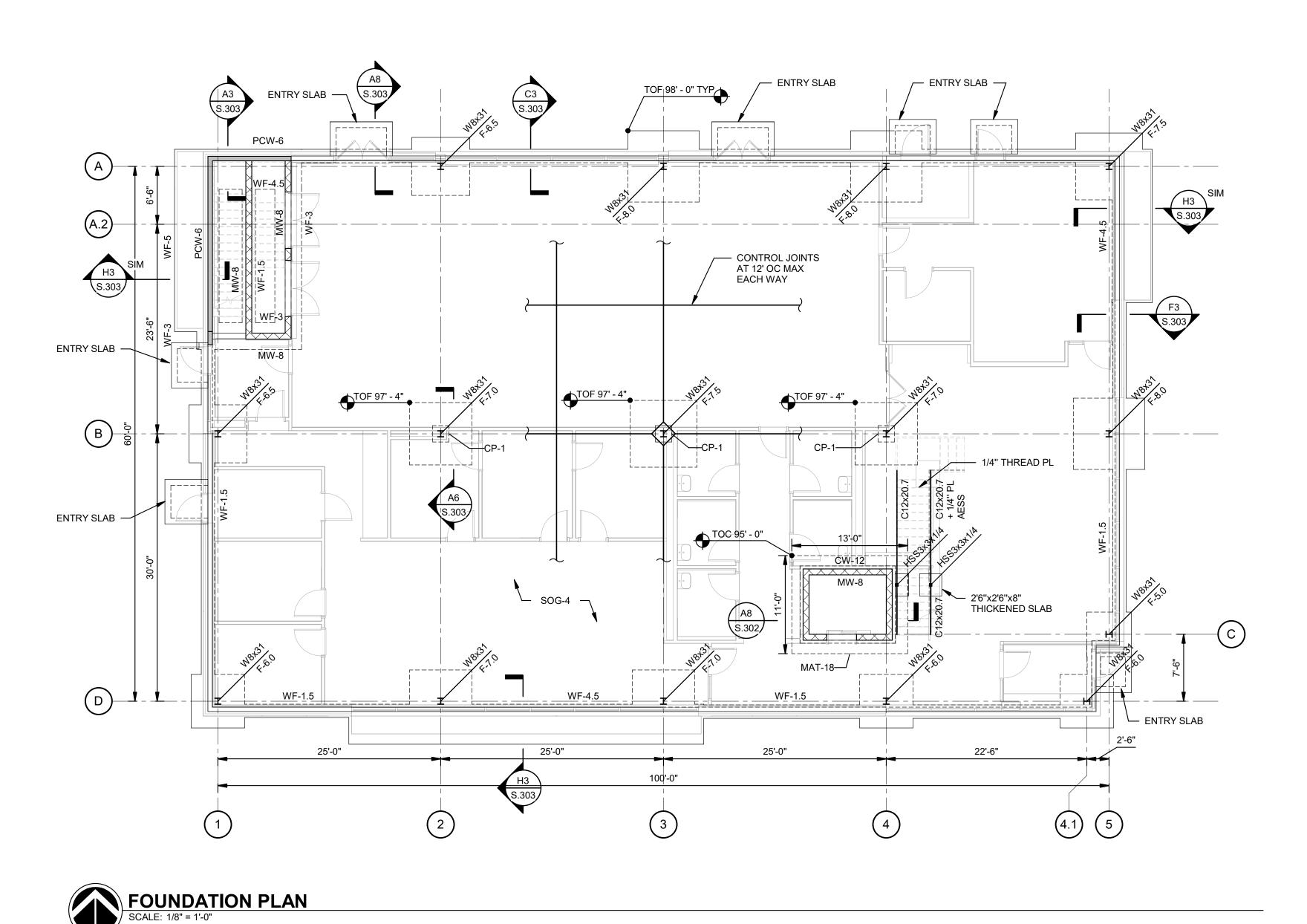
KEY PLAN

SHEET TITLE
SPECIAL INSPECTIONS

8		0'	16'
	PROJECT#		   Scale: 1/16" = 1
	24094		

HEET#

5.003



#### **FOUNDATION/SLAB ON GRADE NOTES:**

- . REFERENCE ELEVATION 100'-0" ESTABLISHED ELEVATIONS: FINISH FIRST FLOOR EL 100'-0" UON. TOP OF FOOTING EL 98'-0" UON.
- . SLAB ON GRADE TYPES: SOG-4: 4" CONCRETE SLAB ON GRADE WITH 4x4-W2.9.xW2.9 WWF PLACED 2" FROM TOP, VAPOR RETARDER ON 6" COMPACTED GRANULAR FILL.
- 3. REFER TO THE FOLLOWING FOR ADDITIONAL INFORMATION: S.002 FOR GENERAL NOTES S.301 FOR CONCRETE DETAILS
- S.302 FOR FOUNDATION SCHEDULES AND TYPES S.401 FOR MASONRY SECTIONS AND DETAILS S.50X STEEL SECTIONS AND DETAILS
- 4. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PADS SHALL BE VERIFIED W/APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.
- 5. DIMENSIONS INDICATED THUS (V) SHALL BE VERIFIED W/ APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS
- PRIOR TO FABRICATION. 6. FOUNDATION DRAINAGE PIPE DIAMETER TO BE NOMINAL 6" UNLESS OTHERWISE NOTED.
- 7. FIELD LOCATE EXISTING UNDERGROUND UTILITIES, PIPING, etc. PRIOR TO PLACEMENT OF FOUNDATIONS. NOTIFY ENGINEER OF ANY INTERFERENCE WHICH MIGHT REQUIRE RELOCATION AND/OR MODIFICATION OF FOUNDATIONS.
- 8. WALLS: PCW-8: 8" CONCRETE PRECAST WALL PCW-6: 6" CONCRETE PRECAST WALL
- 9. MAT-18: 18" THICK CONCRETE WITH #5@12" OC TOP AND BOTTOM BARS EACH WAY

- SECOND FLOOR FRAMING NOTES:
- 1. REFERENCE ELEVATION 100'-0" ESTABLISHED ELEVATIONS: FINISH SECOND FLOOR EL 114'-0" UON. SECOND FLOOR TOP OF STEEL EL 113'-6 1/2" UON.
- 2. SLAB TYPES: CS-5.5: 3 1/2" NORMAL WEIGHT CONCRETE ON 2", 20 GA GALVANIZED COMPOSITE METAL DECK (MIN 3 SPAN CONT) REINFORCED WITH 6x6-W2.1xW2.1 WWF PLACED 1" FROM TOP, TOTAL THICKNESS = 5 1/2".
- 3. [X] INDICATES MINIMUM NUMBER OF 3/4"Øx4 1/2" LONG HEADED SHEAR STUDS WELDED TO TOP OF BEAMS AND GIRDERS AS REQUIRED BY AISC.
- 4. REFER TO THE FOLLOWING FOR ADDITIONAL INFORMATION: S.002 FOR GENERAL NOTES. S.40X FOR MASONRY SECTIONS AND DETAILS
- S.50X FOR STEEL FRAMING SECTIONS AND DETAILS. 5. BEAMS SHALL BE EQUALLY SPACED WITHIN A BAY UNLESS OTHERWISE NOTED.
- 6. AT FLOOR OPENINGS THE DIMENSION FROM THE EDGE OF SLAB TO THE CENTERLINE TO ADJACENT BEAM SHALL BE 6" UNLESS OTHERWISE NOTED.
- 7. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR HOUSEKEEPING AND/OR EQUIPMENT PADS, CURB SIZES AND LOCATIONS. SIZES AND LOCATIONS OF PADS SHALL BE VERIFIED W/ APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.

L4x3 1/2x1/4 LLV TYP SEE DETAIL

25'-0"

8. DIMENSIONS INDICATED THUS (V) SHALL BE VERIFIED W/APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.

RD-1.5

#### **ROOF FRAMING NOTES:**

- 1. REFERENCE ELEVATION 100'-0" ESTABLISHED ELEVATIONS: UNDERSIDE OF DECK EL 127'-0" AT HIGH SIDES (A AND D LINES) AND 126'-4" AT VALLEY ALONG B LINE UON.
- 2. METAL ROOF DECK TYPES: RD-1.5: 1.5", 20GA MINIMUM WIDE RIB GALVANIZED METAL
- ROOF DECK (MIN 3 SPAN CONTINUOUS). 3. REFER TO THE FOLLOWING FOR ADDITIONAL INFORMATION: S.002 FOR GENERAL NOTES. S.201 FOR SHEAR WALL ELEVATIONS.
- 4. STEEL JOISTS OR BEAMS IN BAY SHALL BE EQUALLY SPACED WITHIN A BAY UNLESS OTHERWISE NOTED.

S.50X FOR STEEL FRAMING SECTIONS AND DETAILS

- 5. AT ROOF OPENINGS THE DIMENSION FROM THE EDGE OF DECK TO THE BACK OF ANGLE AND THE DIMENSION FROM THE EDGE OF DECK TO THE EDGE OF THE TOP FLANGE OF ADJACENT BEAM SHALL BE 0" UNLESS OTHERWISE NOTED
- 6. DIMENSIONS INDICATED THUS (V) SHALL BE VERIFIED W/ APPROVED MANUFACTURERS EQUIPMENT SHOP DRAWINGS PRIOR TO FABRICATION.
- 7. IN CASES WHERE MECHANICAL OR ELECTRICAL EQUIPMENT LOADING ON APPROVED SHOP DRAWINGS EXCEED THE DESIGN LOAD INDICATED ON THE DESIGN DRAWING, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO COMMENCING WITH THE WORK.
- 8. BEAMS SUPPORTING STEEL JOISTS ARE TO BE DROPPED 2" FROM TOP OF STEEL ELEVATION

SEE DETAIL

22'-6"

ADD SHEAR CONNECTION
TO TIE BEAM ENDS
TOGETHER V=10K
TYP

4.1 5

West Michigan Hispanic **Chamber of** Commerce- HQ

ROSSETTI

160 WEST FORT, SUITE 400

DETROIT, MICHÍGAN 48226

**ROSSETTI.COM** 313.463.5151

1111 Godfrey Ave, SW Grand Rapids, MI 49507

**CONSULTANT** 

**PROJECT** 

RESURGET ENGINEERING

DETROIT - SAN FRANCISCO

28 W ADAMS AVE **SUITE 1100 SUITE 1710** DETROIT, MI SAN FRANCISCO, CA

(313) 315-3290 (415) 523-3548

CONSULTING STRUCTURAL ENGINEERS

WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL



# DESCRIPTION

**KEY PLAN** 

SHEET TITLE

FRAMING PLANS

**S.101** 

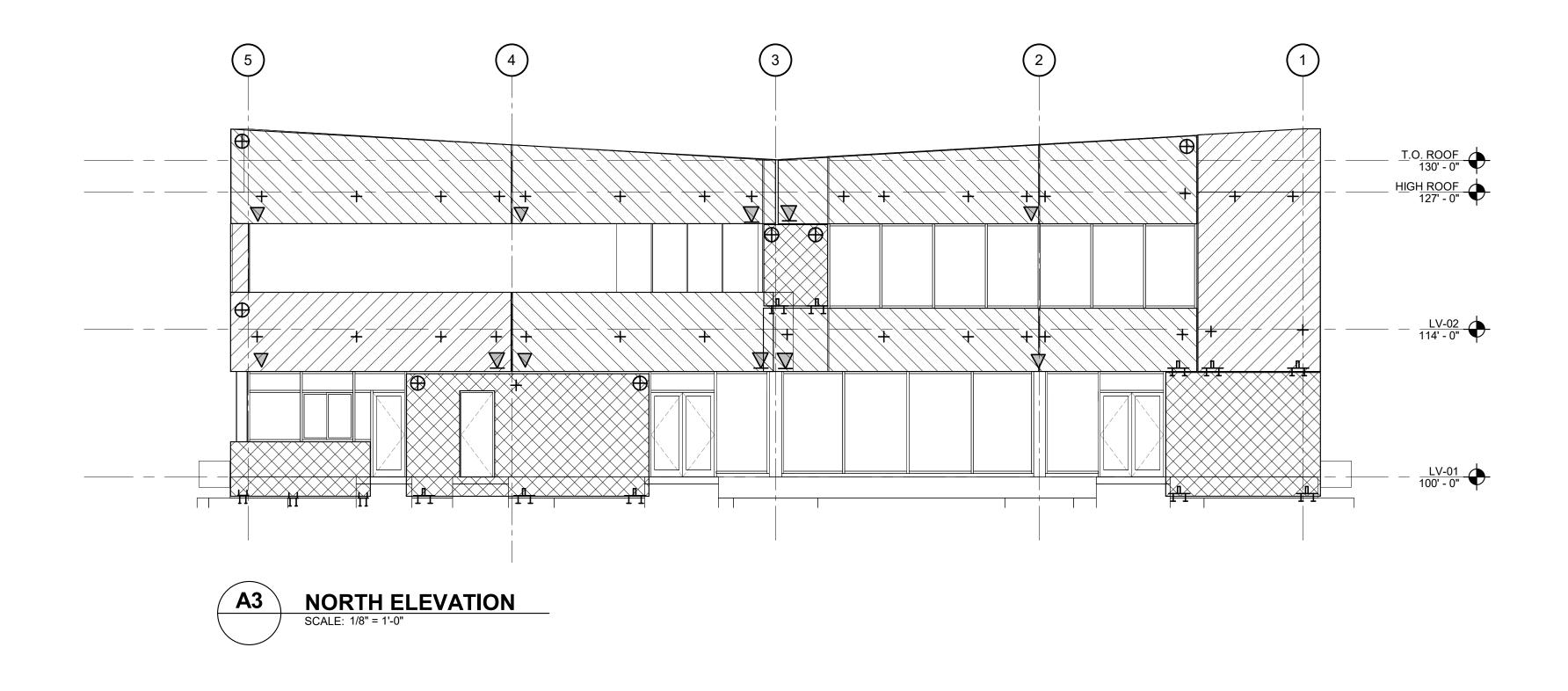
PROJECT#

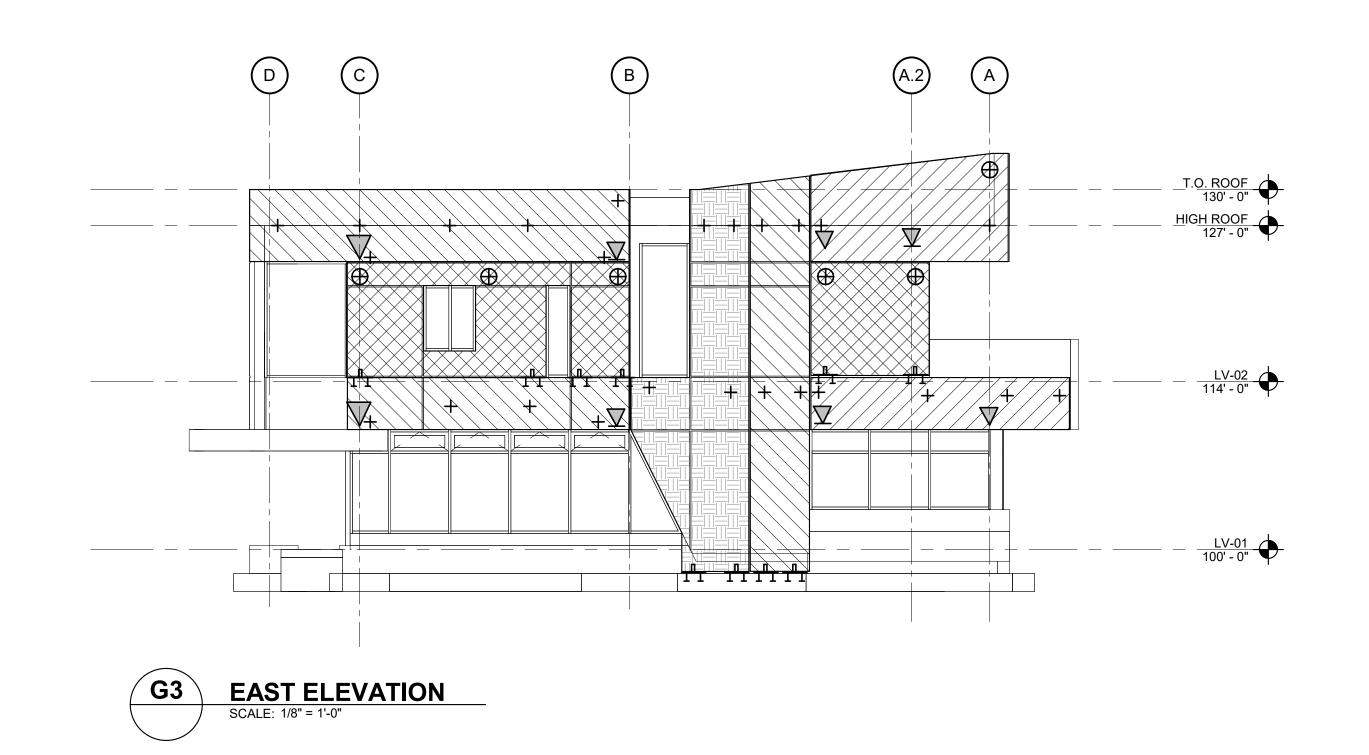
24094 SHEET#

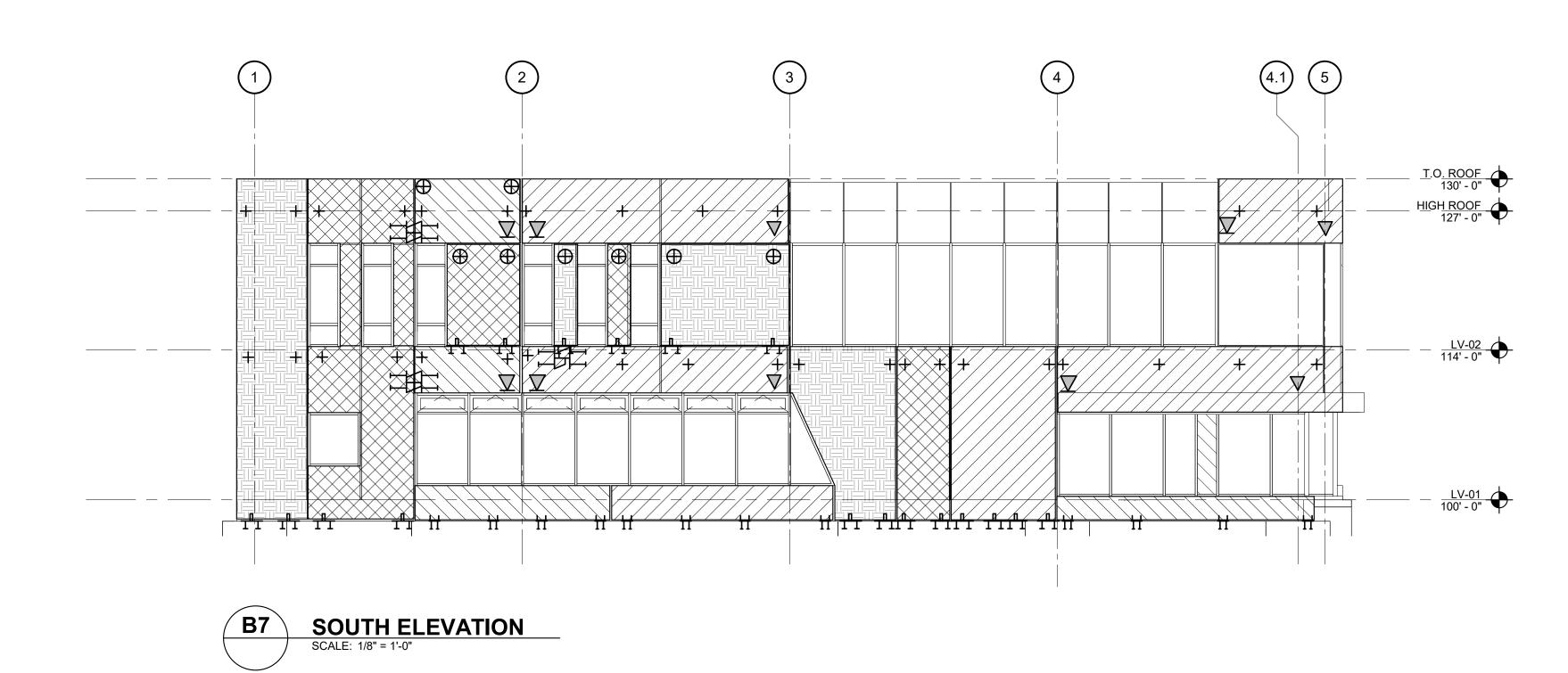
ROOF FRAMING PLAN

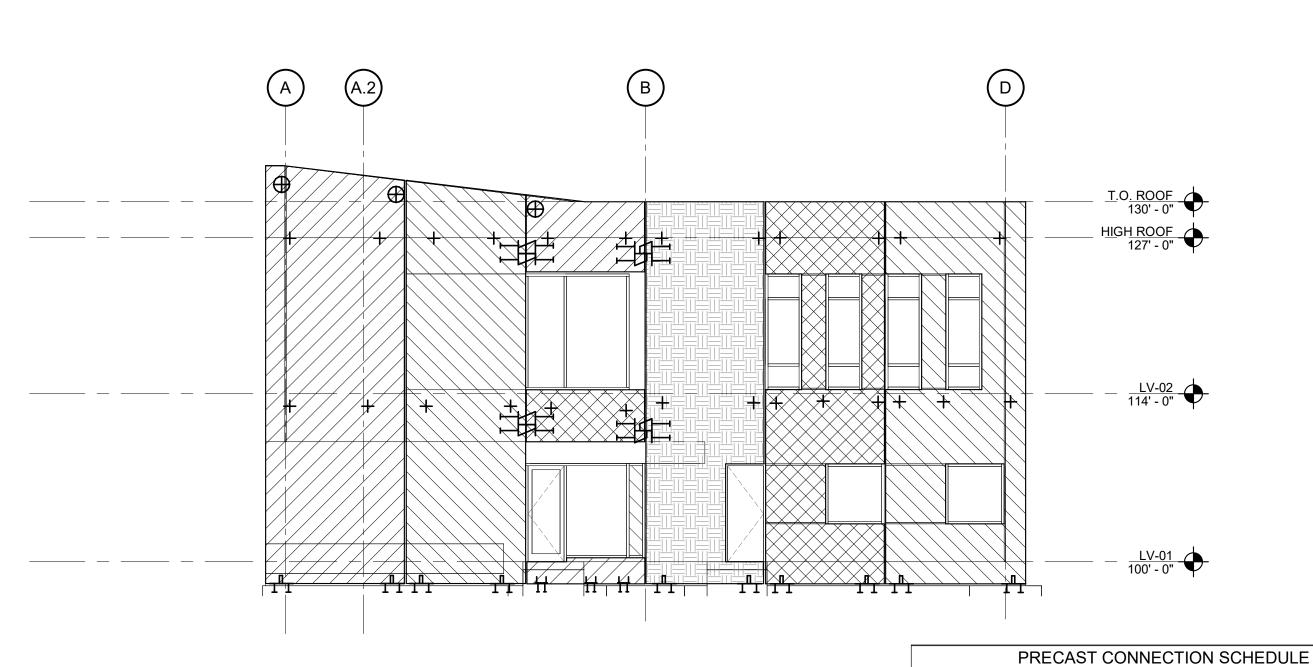


2ND LEVEL FRAMING PLAN









G7 WEST ELEVATION

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

LATERAL CONNECTION, PRECAST TO STEEL, FOR OUT OF PLAIN WIND/SEISMIC LOADS. NO RESTAINT IN VERTICAL OR HORIZONTAL DIRECTIONS. GRAVITY SUPPORT, PRECAST TO STEEL. SUPPORT IN VERTICAL AND HORIZONTAL DIRECTION. GRAVITY SUPPORT, PRECAST TO STEEL. SUPPORT IN VERTICAL DIRECTION ONLY. GRAVITY SUPPORT AT BASE. SUPPORTS VERTICAL, HORIZONTAL AND LATERAL LOADS GRAVITY SUPPORT BETWEEN PANELS. SUPPORT IN VERTICAL AND HORIZONTAL DIRECTION GRAVITY SUPPORT BETWEEN PANEL. SUPPORT IN VERTICAL DIRECTION ONLY LATERAL SUPPORT BETWEEN PANEL. SUPPORT FOR OUT OF PLANE WIND/SEISMIC LOADS. GRAVITY SUPPORT AT BASE WITH MOMENT RESTRAINT. SUPPORTS VERTICAL, HORIZONTAL, SHEAR AND MOMENT A DUE TO LATERAL LOADS

CONNECTION TYPE

# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

PROJECT

# West Michigan Hispanic Chamber of Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT

# RESURGET

ENGINEERING

DETROIT - SAN FRANCISCO

DETROIT, MI SAN FRANCISCO, CA 48226 94105 (313) 315-3290 (415) 523-3548

**SUITE 1100** 

CONSULTING STRUCTURAL ENGINEERS
WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL

**SUITE 1710** 



© 2025 ROSSETTI

**KEY PLAN** 

# DESCRIPTION

5 Bid Set 02/07/2025

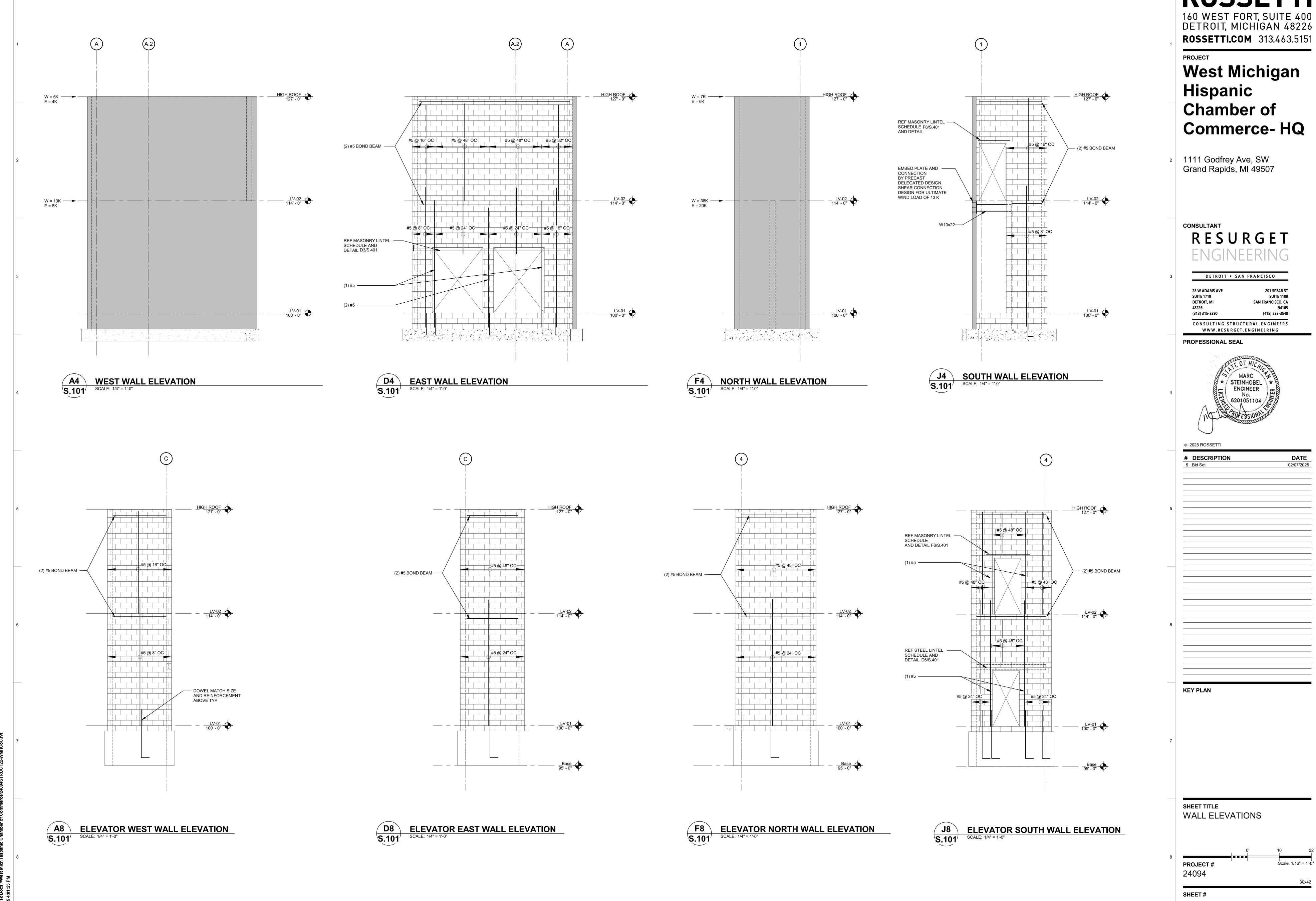
SHEET TITLE
BUILDING ELEVATIONS

PROJECT # Scale: 1/16" = 1'-0"

24094

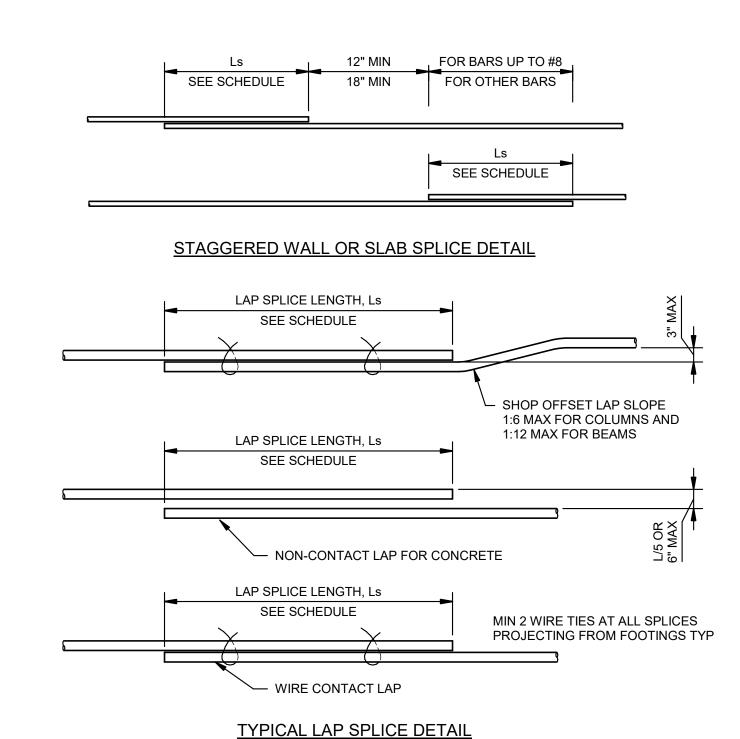
SHEET#

S.200



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

**S.201** 



# A4 TYPICAL LAP SPLICE SCALE: NTS

TEN	SION DE\	/ELOPN	MENT LEN	IGTHS,	L <sub>d</sub> (IN)			TENS	ION LAP S	SPLICE LI	ENGTHS,	L <sub>s</sub> (IN)	
BA	R SIZE		$f_c = 40$	000 PSI									
DESIG	GNATION	CA	SE 1	CA	SE 2		BAR SIZE		LAP	0.4.6	$f_c = 40$		05.0
	METRIC	TOP	OTHER	TOP	OTHER	-	DESIC	DESIGNATION			SE 1	-	SE 2
		BARS	BARS	BARS	BARS			METRIC	CLASS	TOP BARS	OTHER BARS	TOP BARS	OTHER
#3	(#10)	20	15	29	22	H	#3	(#10)	В	26	20	38	29
#4	(#13)	26	20	38	29	H	#3 #4	·	В	34	26	50	38
#5	(#16)	33	25	47	36	-		(#13)					
#6	(#19)	38	29	56	43		#5	(#16)	В	43	33	61	47
#7	(#22)	55	42	82	63		#6	(#19)	В	50	38	73	56
	` '						#7	(#22)	В	71	55	107	82
#8	(#25)	62	48	94	72		#8	(#25)	В	82	63	122	94
#9	(#29)	70	54	105	81	ŀ	#9	(#29)	В	92	71	137	106
#10	(#32)	79	61	118	91	H	#10	(#32)	В	104	80	154	119
#11	(#36)	87	67	131	101	-		<u> </u>					
#14	(#43)	105	81	157	121	L	#11	(#36)	В	114	88	171	132
#18	(#57)	140	108	209	161								

NOTES: 1. DETERMINE DEVELOPMENT LENGTH ( $L_d$ ) OR LAP SPLICE LENGTH ( $L_s$ ) BASED ON BAR POSITION AS DEFINED:

CASE 1: BEAMS AND COLUMNS:

COATED REBAR:

CONCRETE COVER >= d<sub>b</sub>
 CENTER TO CENTER BAR SPACING >= 2 d<sub>b</sub>

 STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN CODE MINIMUM OTHER MEMBERS:
 CONCRETE COVER >= d<sub>b</sub>

• CENTER TO CENTER BAR SPACING >= 3 db
CASE 2:

CASE 2:
BEAMS AND COLUMNS:
CONCRETE COVER < d₀

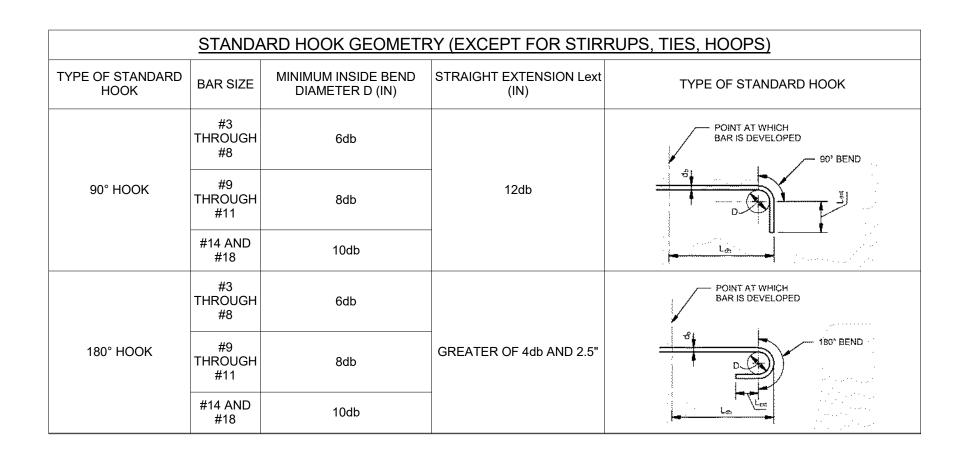
CENTER TO CENTER BAR SPACING < 2 db
 OTHER MEMBERS:

CONCRETE COVER < db</li>
 CENTER TO CENTER BAR SPACING < 3 db</li>

- 2. "TOP BARS" ARE DEFINED AS HORIZONTAL BARS WITH MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE REINFORCEMENT.
- 3. ALL DETAILING SHALL COMPLY WITH THIS SCHEDULE UNLESS SPECIFICALLY DETAILED OTHERWISE ON THE
- 4. THE BAR DEVELOPMENT LENGTHS AND LAP LENGTHS SHOWN ARE FOR CLASS "B" LAP SPLICES. FOR CLASS "A" SPLICE, DIVIDE THE SPECIFIED CLASS "B" LAP LENGTH BY 1.3.
- THE BAR DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS APPLY TO NORMAL WEIGHT CONCRETE. MULTIPLY THE SPECIFIED LAP LENGTHS BY 1.3 FOR LIGHTWEIGHT CONCRETE.
   THE BAR DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS APPLY TO UNCOATED REINFORCEMENT. FOR EPOXY-
- A. CONCRETE COVER <  $3d_b$  OR CLEAR SPACING <  $6d_b$ , MULTIPLY ALL LENGTHS BY 1.5. B. CONCRETE COVER >=  $3d_b$  AND CLEAR SPACING >=  $6d_b$ , MULTIPLY ALL LENGTHS BY 1.2.
- A STANDARD HOOK SHALL BE PROVIDED WHERE Ld IS UNATTAINABLE DUE TO SPACE RESTRICTIONS (REFER TO SCHEDULE FOR HOOKED BAR DEVELOPMENT LENGTH Ldh)
   SEE DRAWINGS FOR LAP SPLICE CLASSIFICATION. IF NO LAP SPLICE CLASSIFICATION IS SHOWN PROVIDE CLASS "B"
- 9. STAGGER ALL SPLICES WHEREVER POSSIBLE. WHERE CLASS "A" SPLICE IS CALLED FOR ON DRAWING, STAGGER AT LEAST 50% OF THE BARS. ELSE PROVIDE CLASS "B" SPLICE.
- 10. WHEN SPLICING BARS OF DIFFERENT SIZE, THE LAP LENGTH SHALL BE BASED ON THE LARGER OF:
  A. THE SPLICE LENGTH OF THE SMALLER BAR.
- B. THE DEVELOPMENT LENGTH OF THE LARGER BAR
  11. LAP SPLICES FOR #14 AND #18 BARS ARE NOT PERMITTED. PROVIDE TYPE 2 MECHANICAL SPLICE UON.
  12. CONCRETE WALLS:

  A. LAP SPLICES IN HORIZONTAL REINFORCEMENT SHALL BE STAGGERED 12" MIN
- B. WITH TWO CURTAINS OF REINFORCEMENT, SPLICES SHALL BE STAGGERED 12" MIN APART AT ALTERNATING BARS, 50% AT THE HIGHER LOCATION AND 50% AT THE LOWER LOCATION.
- 13. BUNDLED BAR SPLICES:

  A. ENTIRE BUNDLED BARS SHALL NOT BE LAP SPLICED. STAGGER INDIVIDUAL BAR SPLICES.
- B. INDIVIDUAL BAR SPLICES WITHIN THE BUNDLE SHALL NOT OVERLAP EACH OTHER.C. MULTIPLY LAP LENGTH BY 1.2 AT THREE BAR BUNDLES
- D. MULTIPLY LAP LENGTH BY 1.33 AT FOUR BAR BUNDLES 14. THE TABLE APPLIES FOR 60 KSI REBAR. FOR 80 KSI REBAR MULTIPLY ALL LENGTHS BY 1.33.
- BAR DEVELOPMENT (Ld) AND LAP SPLICE (Ls) LENGTH



	ST	ANDARD HOOK GEO	METRY FOR STIRRUPS	S, TIES, HOOPS	
YPE OF STANDARD HOOK	BAR SIZE	MINIMUM INSIDE BEND DIAMETER D (IN)	STRAIGHT EXTENSION Lext (IN)	TYPE OF STANDARD HOOK	
00% HOOK	#3 THROUGH #5	4db	GREATER OF 6db AND 3"	DETAILING DIMENSION 90° BEND	
90° HOOK	#6 THROUGH 6db #8		12db		
435° UOOV	#3 THROUGH 4db #5		GREATER OF 6db AND 3"	DETAILING DIMENSION 135° BEND	
135° HOOK	#6 THROUGH #8	6db	GREATER OF OUD AIND 3	Lox	
190° ∐OOK	#3 THROUGH #5	4db	GREATER OF 4db AND 2.5"	DETAILING DIMENSION 180° BEND	
180° HOOK	#6 THROUGH #8	6db	GREATER OF 400 AND 2.5		

HEAD	ED BAR DE' LENGTHS	VELOPMENT S (IN)	
	SIZE NATION	f'c = 4000 PSI	
	METRIC		2" MIN
#3	(#10)	6	Ldt
#4	(#13)	8	
#5	(#16)	10	
#6	(#19)	12	HEADED BAR REFER TO SCHEDU
#7	(#22)	14	TELLIN TO SOFIEDO
#8	(#25)	16	
#9	(#29)	18	
#10	(#32)	20	<b>"</b>
#11	(#36)	22	

- HEADED BAR DEVELOPMENT NOTES:

  1. HEADED BAR DEVELOPMENT LENGTHS APPLY TO 60 KSI REBAR ONLY
- 2. HEADED BAR DEVELOPMENT LENGTHS APPLY TO NORMAL WEIGHT CONCRETE. HEADED BARS SHALL NOT BE USED IN LIGHT WEIGHT CONCRETE
- NET BEARING AREA OF HEAD SHALL NOT BE LESS THAN 4 TIMES BAR AREA
   CLEAR SPACING BETWEEN BARS SHALL NOT BE LESS THAN 4 TIMES BAR DIAMETER
   SMALLER DEVELOPMENT LENGTHS MAY BE SUBMITTED FOR REVIEW BY SEOR IF
- JUSTIFIED BY TESTING AND AN ICBO TEST REPORT IS PROVIDED

  6. FOR EPOXY-COATED REBAR, MULTIPLY ALL LENGTHS BY 1.2
- D6 HEADED BAR DEVELOPMENT LENGTHS

				٦				HOOK WHERE SPECIFIED
	EPOXY REBAR	DOWEL SCHEDULE		_				
REBAR	EMBEDMENT DEPTH (INCH) UON		TEST	Į.	뿐			
SIZE	HILTI HIT RE 500 (ICC ESR-6010)	SIMPSON SET-XP (ICC ESR-2508)	LOAD (KIPS)	LENGTH	SSPECIFIED			DOWEL SIZE SPECIFIED
#3	3 1/4	4	5.9		AS			1
#4	4 1/2	6	10.8		<b>4</b>	A A A A A A A A A A A A A A A A A A A	A	
#5	5 3/4	9	16.7	BEC		4 2 4 4		
#6	6 1/4	10	23.8	MIN EMBED	SCHEDULE	4		
#7	7 1/4	12	32.4		PER 9	4 4 4	4- 4- 4	<b>&gt;</b> ]
#8	9 1/4	14	42.7	_	<u> </u>	44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		
#9	11 1/4	16	54.0			4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	A A	
#10	14	18	68.6				* A	
#11	16 1/2	20	84.2			MIN EDGE DISTANCE		
				_		PER SCHEDULE	ı	

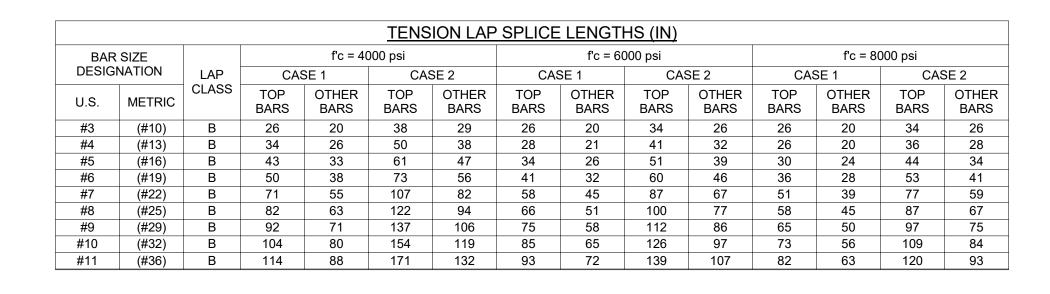
NOTES:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND ICC REPORT

2. MINIMUM EDGE DISTANCE SHALL BE 1.5 x EMBEDMENT

3. DETAIL TO BE USED ONLY WHERE APPROVED BY SEOR

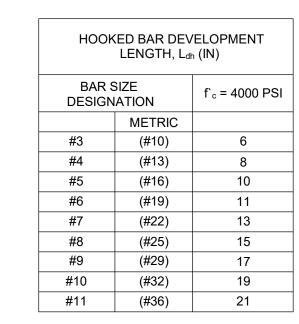


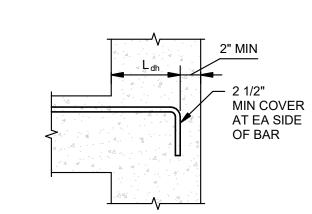


				TEN	ISION DE	EVELOP	MENT LE	ENGTHS	(IN)				
BAR SIZE DESIGNATION			f'c = 40	000 psi			f'c = 6000 psi				f'c = 80	000 psi	
		CASE 1 CASE 2		SE 2	CAS	SE 1	CAS	SE 2	CAS	SE 1	CAS	SE 2	
U.S.	METRIC	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	(#10)	20	15	29	22	20	15	26	20	20	15	26	20
#4	(#13)	26	20	38	29	21	16	31	24	20	15	27	21
#5	(#16)	33	25	47	36	26	20	39	30	23	18	34	26
#6	(#19)	38	29	56	43	31	24	46	35	27	21	40	31
#7	(#22)	55	42	82	63	44	34	66	51	39	30	59	45
#8	(#25)	62	48	94	72	51	39	77	59	44	34	66	51
#9	(#29)	70	54	105	81	57	44	86	66	49	38	74	57
#10	(#32)	79	61	118	91	65	50	96	74	56	43	83	64
#11	(#36)	87	67	131	101	72	55	107	82	62	48	92	71
#14	(#43)	105	81	157	121	86	66	129	99	74	57	112	86
#18	(#57)	140	108	209	161	114	88	172	132	99	76	148	114

Α	STM STANE	ARD REINI	FORCING BA	ARS				
BAR	SIZE	NOMINAL DIMENSIONS						
DESIG	DESIGNATION		AREA WEIGHT D					
	METRIC	IN <sup>2</sup>	LB/FT	IN				
#3	(#10)	0.11	0.376	0.375				
#4	(#13)	0.20	0.668	0.500				
#5	(#16)	0.31	1.043	0.625				
#6	(#19)	0.44	1.502	0.750				
#7	(#22)	0.60	2.044	0.875				
#8	(#25)	0.79	2.670	1.000				
#9	(#29)	1.00	3.400	1.128				
#10	(#32)	1.27	4.303	1.270				
#11	(#36)	1.56	5.313	1.410				
#14	(#43)	2.25	7.650	1.693				
#18	(#57)	4.00	13.600	2.257				

G6 ASTM STANDARD REINFORCING BARS





#### HOOKED BAR DEVELOPMENT NOTES:

- 1. THE HOOKED BAR DEVELOPMENT LENGTHS APPLY TO NORMAL WEIGHT CONCRETE. FOR LIGHTWEIGHT CONCRETE Ldh SHALL NOT BE LESS THAN 10 db, 7 1/2", AND 1.3 TIMES THE
- SPECIFIED LENGTH.
  2. HOOKED BAR DEVELOPMENT LENGTHS APPLY TO MEMBERS WITH:

5. FOR EPOXY-COATED REBAR, MULTIPLY ALL LENGTHS BY 1.2.

- A. SIDE COVER >= 2 1/2 INCHES
   B. END CONCRETE COVER (90° HOOKS) >= 2 INCHES
   FOR 180° HOOKS AT RIGHT ANGLES TO EXPOSED SURFACE, PROVIDE 2 INCHES MINIMUM
- COVER TO TAIL.

  4. THE TABLE APPLIES FOR 60 KSI REBAR. FOR 80 KSI REBAR MULTIPLY ALL LENGTHS BY 1.33.
- G8 HOOKED BAR DEVELOPMENT LENGTH (Ldh) SCHEDULE

  SCALE: 1" = 1'-0"

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

PROJECT

West Michigan
Hispanic
Chamber of
Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT

RESURGET

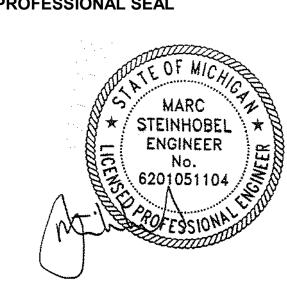
DETROIT - SAN FRANCISCO

DETROIT, MI SAN FRANCISCO, CA
48226 94105
(313) 315-3290 (415) 523-3548

CONSULTING STRUCTURAL ENGINEERS

WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL



© 2025 ROSSETTI

# DESCRIPTION DATE
5 Bid Set 02/07/2025

**KEY PLAN** 

SHEET TITLE
TYPICAL CONCRETE DETAILS

PROJECT # Scale: 1/16" = 1"

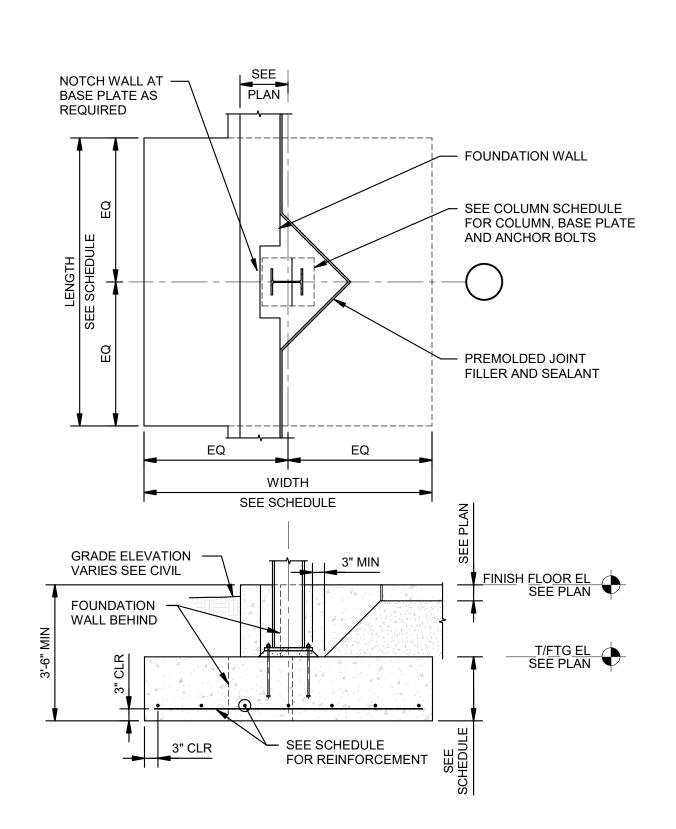
SHEET #

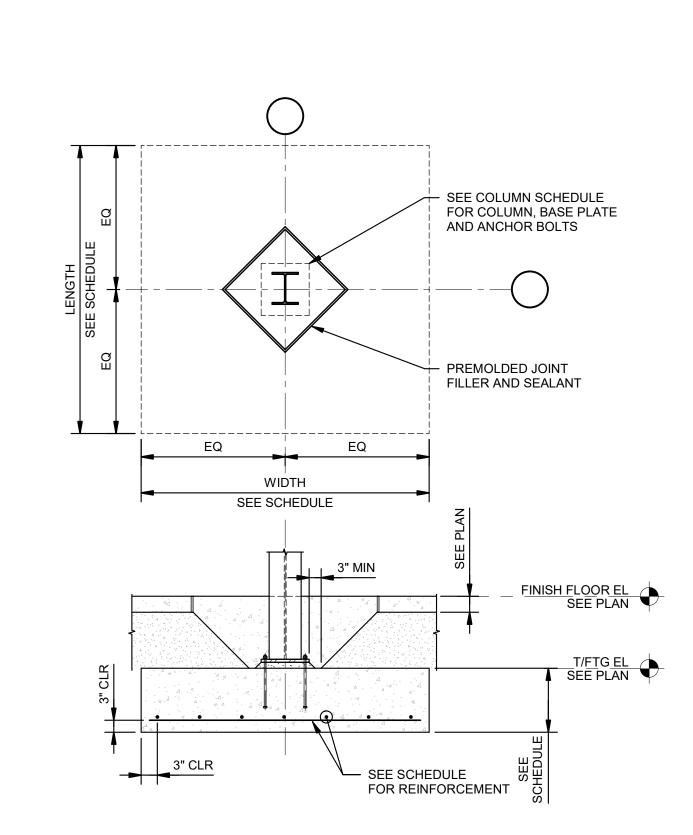
S.301

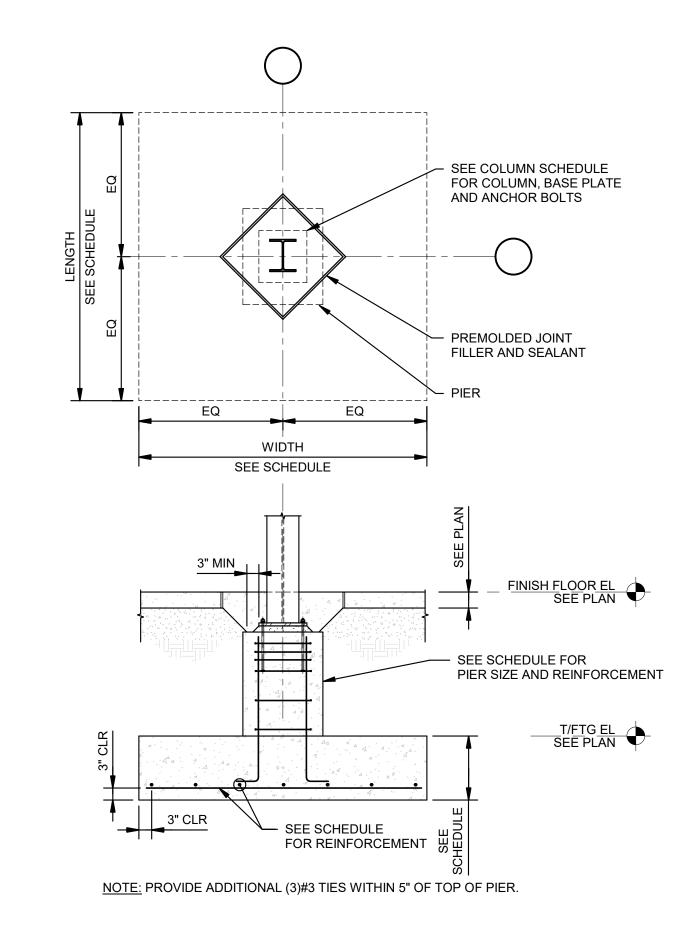
	FOOTING SCHEDULE									
MARK	LENGTH	WIDTH	THICKNESS	TOP	BOTTOM	COMMENTS				
F-5.0	5' - 0"	5' - 0"	1' - 6"		(5)#5					
F-6.0	6' - 0"	6' - 0"	1' - 6"		(6)#5					
F-6.5	6' - 6"	6' - 6"	1' - 6"		(5)#6					
F-7.0	7' - 0"	7' - 0"	1' - 6"		(9)#5					
F-7.5	7' - 6"	7' - 6"	1' - 6"		(7)#6					
F-8.0	8' - 0"	8' - 0"	1' - 6"		(8)#6					

	WALL FOOTING SCHEDULE									
	FOUNDATION REINFORCING									
MARK	WIDTH	THICKNESS	LONGITUDINAL BOTTOM	TRANSVERSE BOTTOM	COMMENTS					
WF-1.5	1' - 6"	1' - 6"	(2)#5							
WF-3	3' - 0"	1' - 6"	(3)#5							
WF-4.5	4' - 6"	1' - 6"	(4)#5	#4 @ 12" OC						
WF-5	5' - 0"	1' - 6"	(5)#5	#4 @ 12" OC						

	FORMED PIER SCHEDULE											
			F	REINFORCEMEN <sup>T</sup>								
MARK	LENGTH	WIDTH	TYPE	VERTICAL	TIES	COMMENTS						
CP-1	1' - 10"	1' - 10"	С	(8)#7	#3 @ 12							



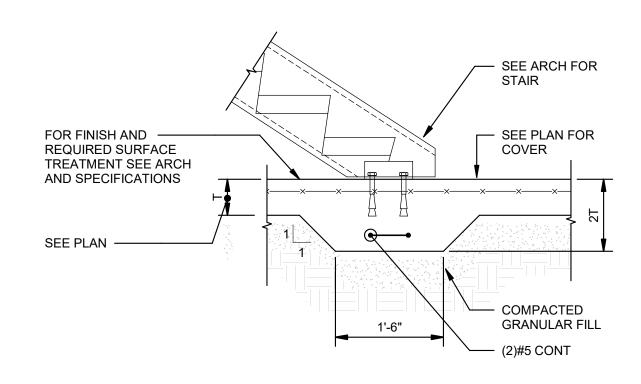


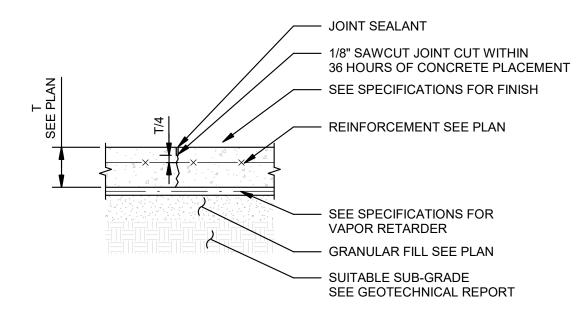


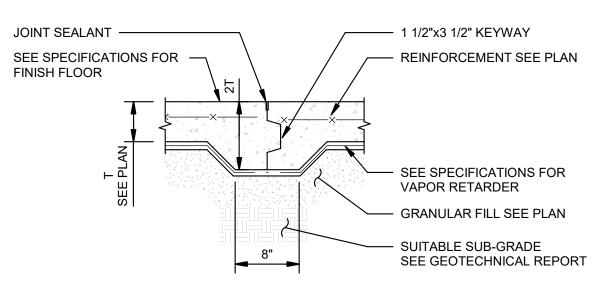


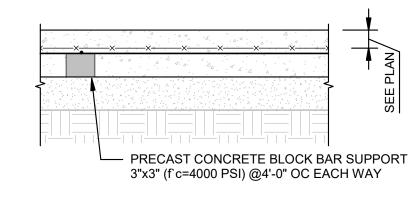












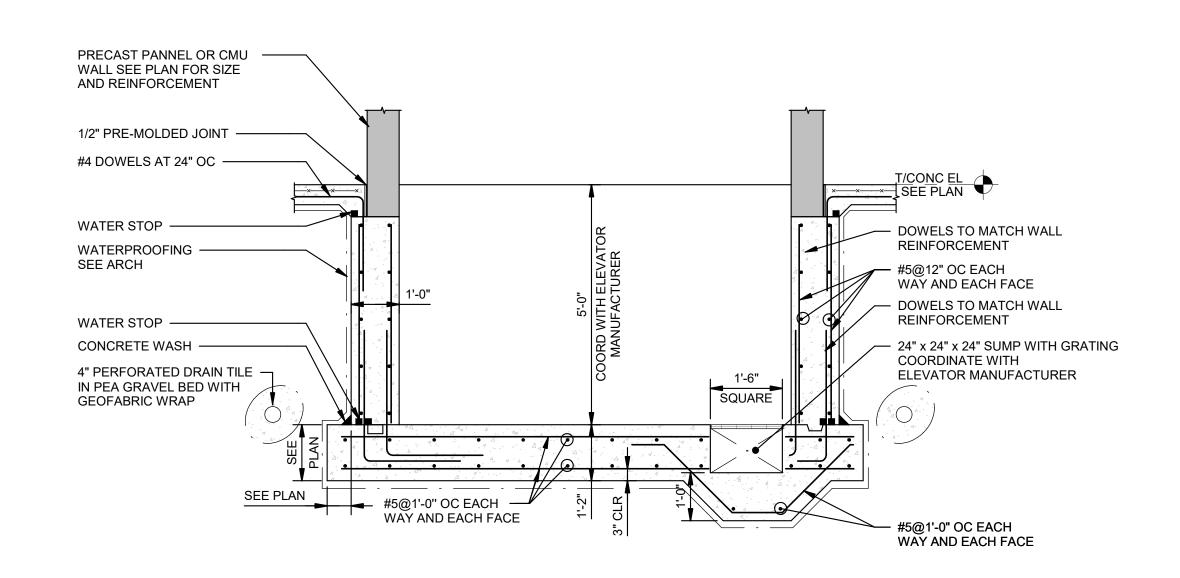
A6 TYPICAL THICKENED SLAB AT BASE OF STAIRS

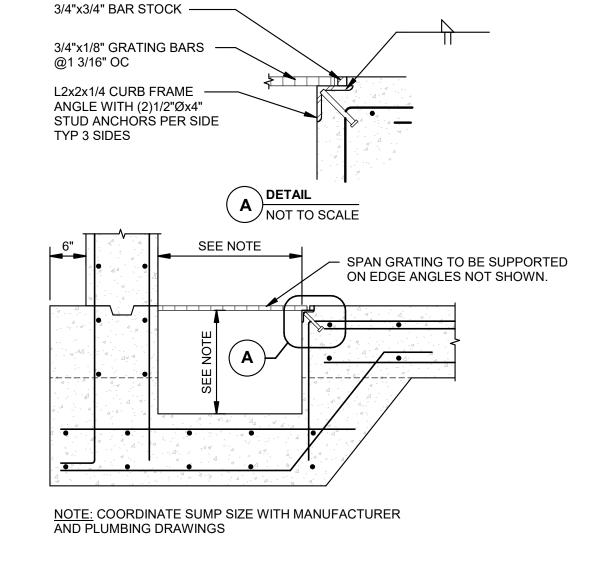
SCALE: 3/4" = 1'-0"

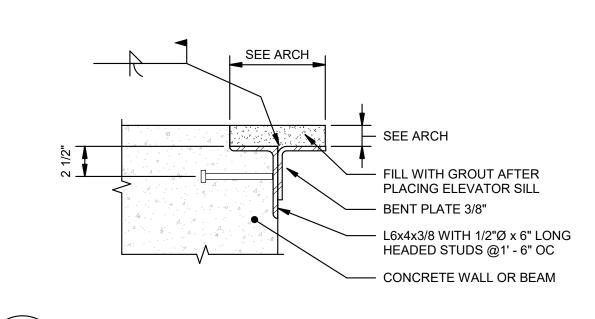


















# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

PROJECT

West Michigan
Hispanic
Chamber of
Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT

RESURGET

DETROIT - SAN FRANCISCO

(313) 315-3290 (415) 523-3548

CONSULTING STRUCTURAL ENGINEERS
WWW.RESURGET.ENGINEERING

**SUITE 1100** 

SAN FRANCISCO, CA

PROFESSIONAL SEAL

MARC

\* STEINHOBEL

ENGINEER

No.
6201051104

SOFFOSIONA TOTAL

© 2025 ROSSETTI

# DESCRIPTION DATE
5 Bid Set 02/07/2025

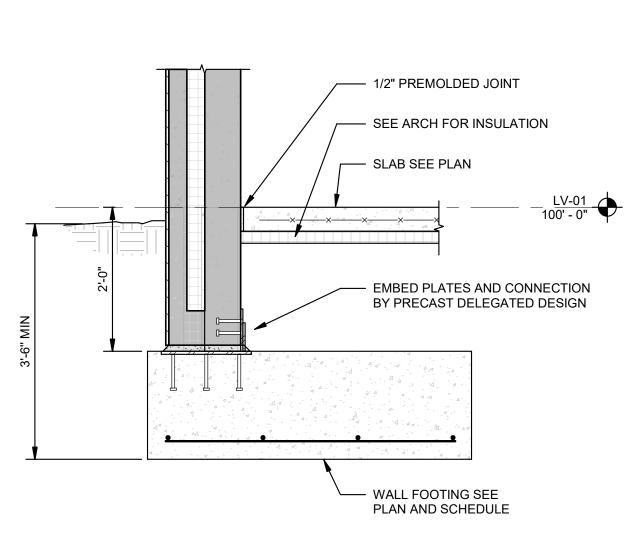
KEY PLAN

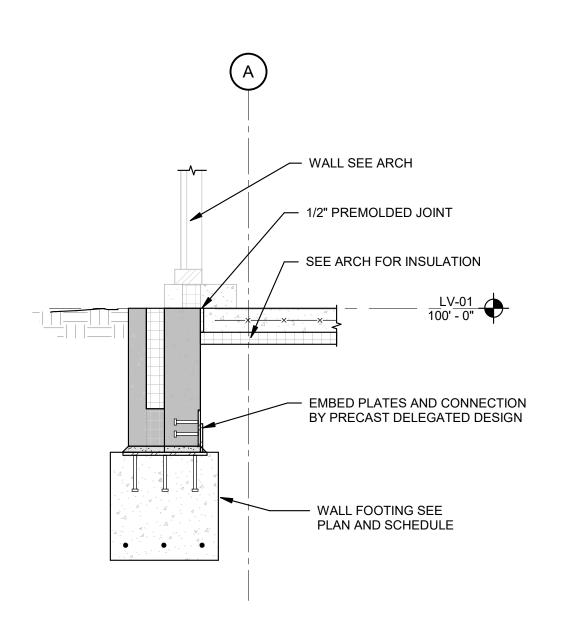
SHEET TITLE
FOUNDATION DETAILS

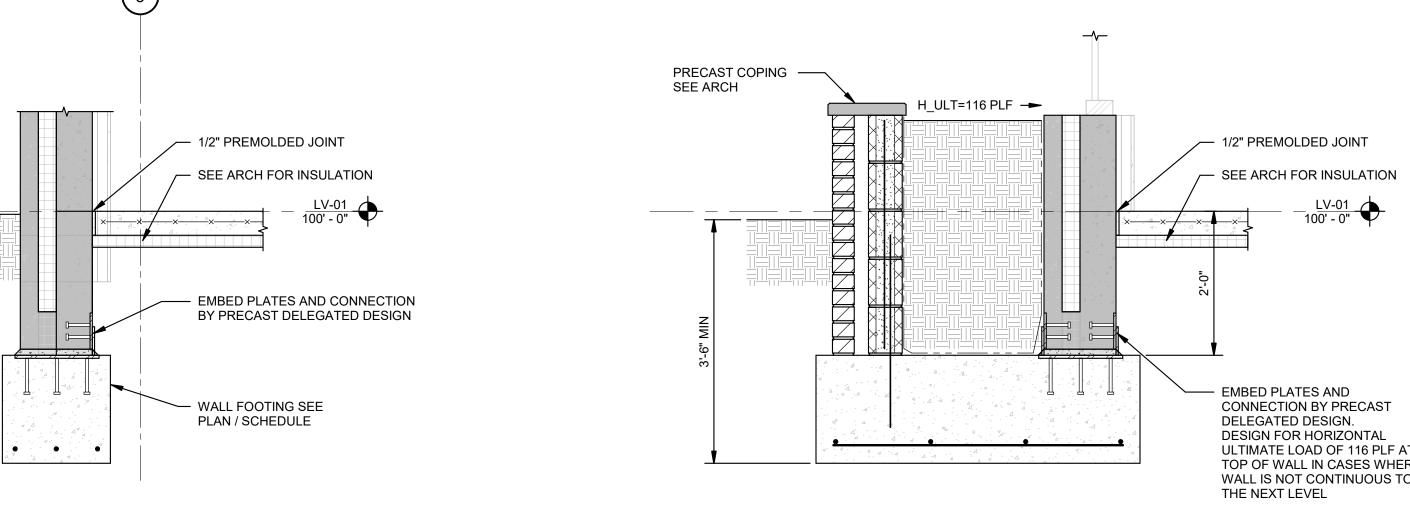
PROJECT # Scale: 1/16" = 1

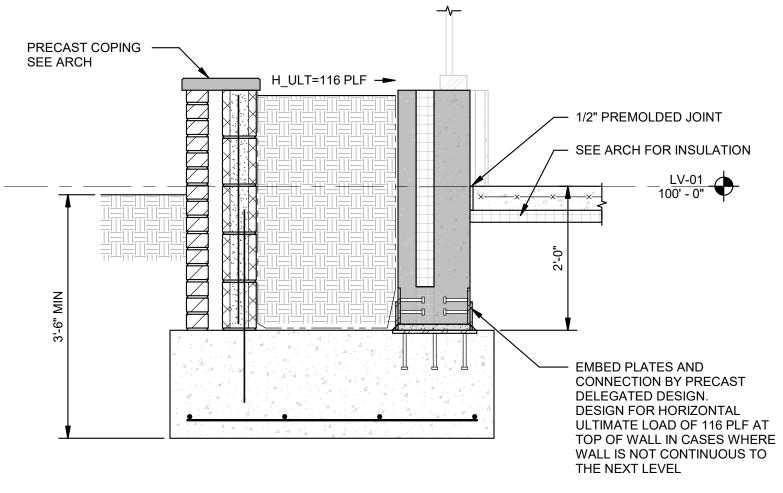
SHEET#

**S.302** 











WALL FOUNDATION AT EXTERIOR SECTION

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

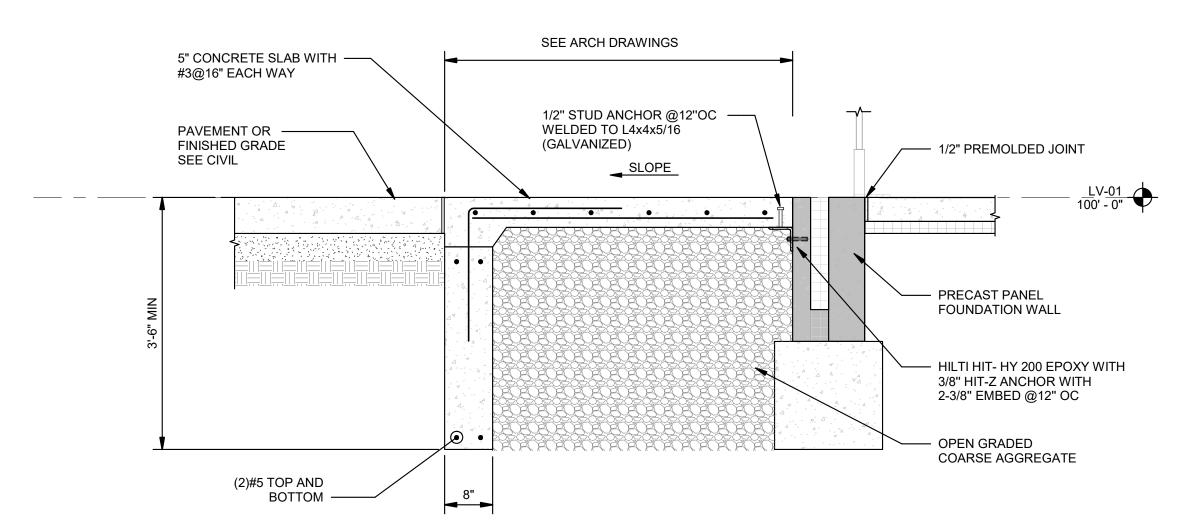
WALL FOUNDATION AT EXTERIOR SECTION
SCALE: 3/4" = 1'-0" F3 S.101

WALL FOUNDATION AT EXTERIOR SECTION

SCALE: 3/4" = 1'-0" H3 S.101

— 1/2" PREMOLDED JOINT SEE PIER SCHEDULE FOR SIZE AND REINFORCEMENT - SEE FOOTING SCHEDULE FOR SIZE AND REINFORCEMENT





NOTES:

1. WIDTH OF ENTRY SLAB TO EXTEND 1'-6" PAST DOOR SWING SIDE AND 6" PAST DOOR HINGE SIDE
2. COORDINATE WITH DOOR SUPPLIER

ENTRY SLAB SECTION

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

Chamber of Commerce- HQ 1111 Godfrey Ave, SW Grand Rapids, MI 49507 CONSULTANT RESURGET ENGINEERING DETROIT - SAN FRANCISCO 28 W ADAMS AVE **SUITE 1100 SUITE 1710** DETROIT, MI SAN FRANCISCO, CA (415) 523-3548 CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING PROFESSIONAL SEAL MARC MA 8 \* / STEINHOBEL \\* © 2025 ROSSETTI # DESCRIPTION DATE 02/07/2025 **KEY PLAN** SHEET TITLE FOUNDATION SECTIONS PROJECT# 24094 **S.303** 

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

**ROSSETTI.COM** 313.463.5151

West Michigan

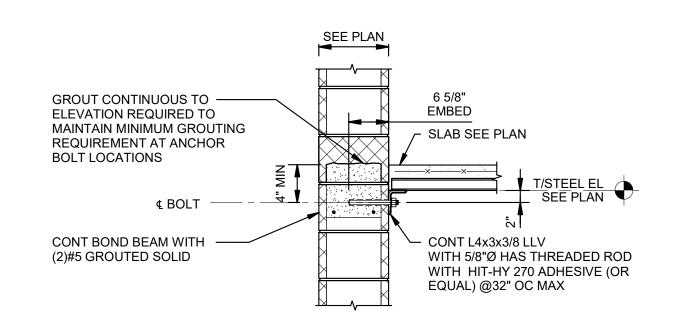
Hispanic

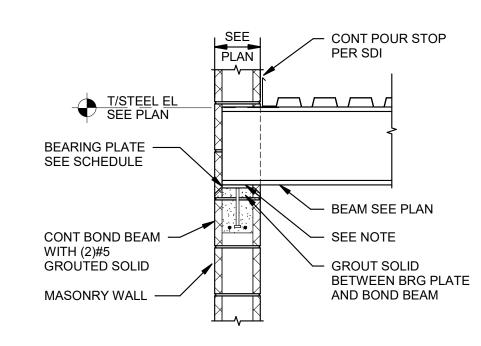
**PROJECT** 

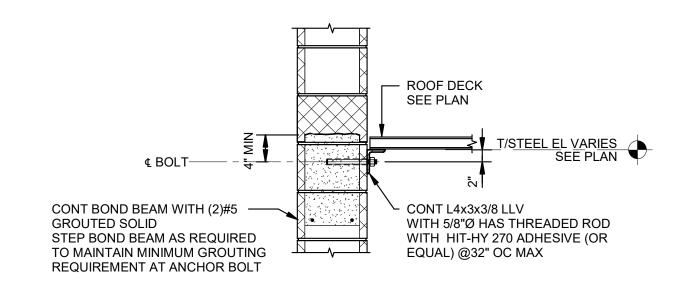
<u> </u>	BEARING PLATE SCHEDULE									
BEAM SIZE	SIZE	NO. OF 1/2"Ø x 6" LONG STUD ACHORS	REMARKS							
W8	1/4"x6"x6"	2	-							
W10-W12	3/8"x6"x6"	2	-							
W16-W18	3/8"x7"x7"	2	-							

	STEEL AND MASONRY LINTEL SCHEDULE									
MARK	SIZE	REMARKS								
SL-1	W8x21 + 3/8" PLATE									
ML-1	8" CMU WITH (2)#5	EXTEND REINF 12" EACH SIDE OF OPENING								
ML-2	16" CMU WITH (2)#5	EXTEND REINFORCEMENT FULL LENGTH OF WALL								

	CMU WALL REINFORCING SCHEDULE										
MARK	NOMINAL WALL	FLOOR	HORIZONTAL	VERTICAL REINFORCING							
WALKIX	THICKNESS	1 LOOK	REINFORCING	1 LAYER	END REINFORCING						
MW-8	8"	1ST-2ND	W1.7 LADDER JOINT @ 16" OC	#5 @ 24" OC	(1) # 5 BARS						
MW-8	8"	2ND-ROOF	W1.7 LADDER JOINT @ 16" OC	#5 @ 48" OC	(1) # 5 BARS						





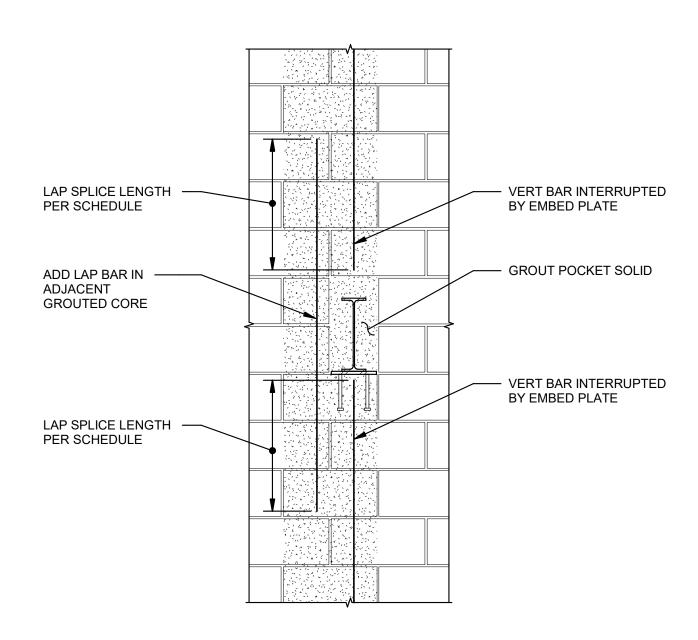


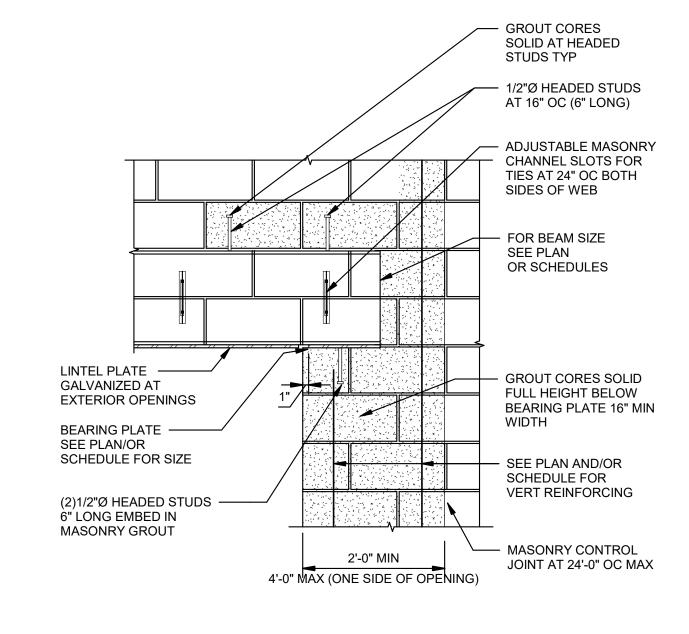


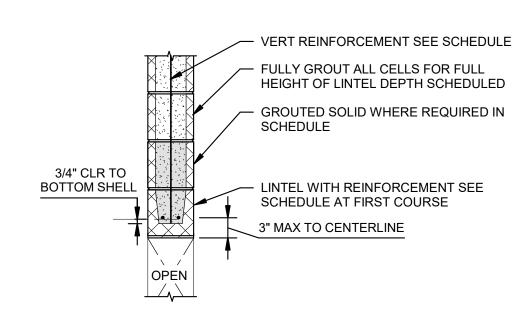
TYPICAL STEEL BEAM BEARING ON CMU WALL

NOTE: DO NOT FILL GAP BETWEEN UNDERSIDE OF BEAM AND BOTTOM OF PLATE WITH GROUT AT INSIDE OF WALL FACE

TYPICAL ROOF DECK BEARING **ANGLE ON CMU WALL DETAIL** 







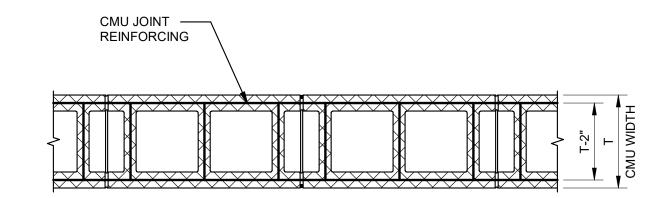
NOTES:

1. MASONRY LINTELS SHALL BE SHORED DURING CONSTRUCTION AND SHALL REMAIN SHORED UNTIL MASONRY HAS GAINED 100% OF FULL SPECIFIED STRENGTH (f'm).



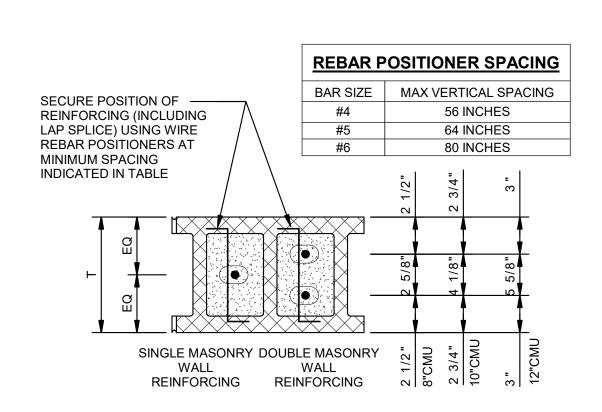




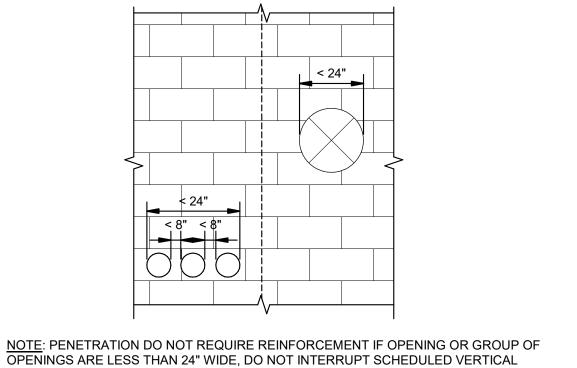


- NOTES:

  1. LAP SIDE RODS AT MIN 6" AT SPLICES. 2. PLACE REINFORCING DIRECTLY ON MASONRY AND PLACE MORTAR OVER
- WIRES TO FORM BED 3. RUN REINFORCING CONTINUOUS IN HORIZONTAL JOINTS AND SPACE 16" OC VERTICAL
- 4. PROVIDE CORNERS AND TEES AT INTERSECTIONS, SEE DETAIL FOR CORNERS AND TEES.
- 5. CUT BOTH HORIZONTAL RAILS AT CONTROL AND EXPANSION JOINTS
- **CMU JOINT REINFORCING**







REINFORCEMENT, AND ARE SPACED AT LEAST 8" CLEAR FROM AN ADJACENT OPENING. OPENINGS SPACED CLOSER THAN 8" MUST BE CONSIDERED AS ONE OPENING.

TYPICAL NON-LOAD BEARING CMU WALL PENETRATIONS (<24") SCALE: 1/2" = 1'-0"

# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT

RESURGET

DETROIT - SAN FRANCISCO

28 W ADAMS AVE **SUITE 1710 SUITE 1100** DETROIT, MI SAN FRANCISCO, CA (415) 523-3548 CONSULTING STRUCTURAL ENGINEERS

WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL



© 2025 ROSSETTI **# DESCRIPTION** DATE 02/07/2025

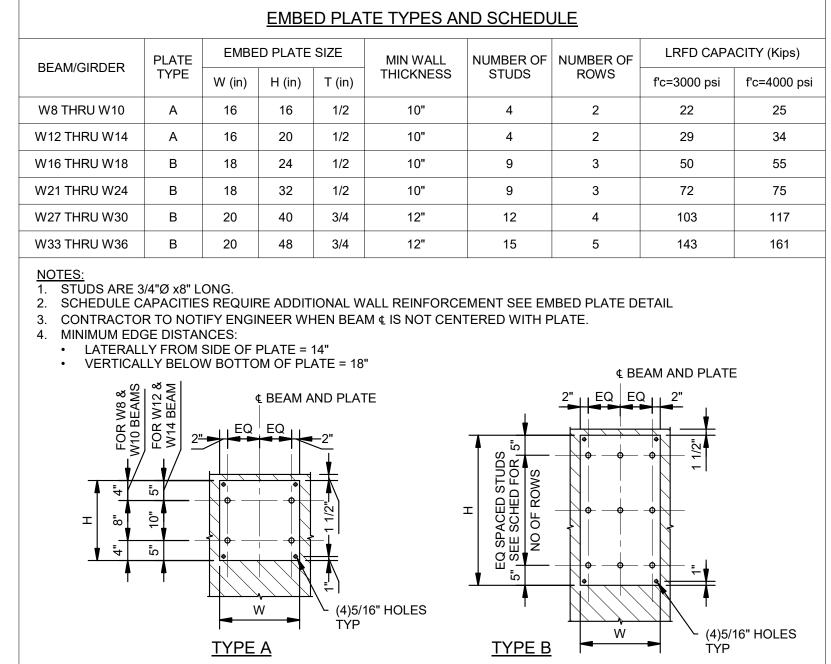
**KEY PLAN** 

SHEET TITLE MASONRY SECTIONS AND **DETAILS** 

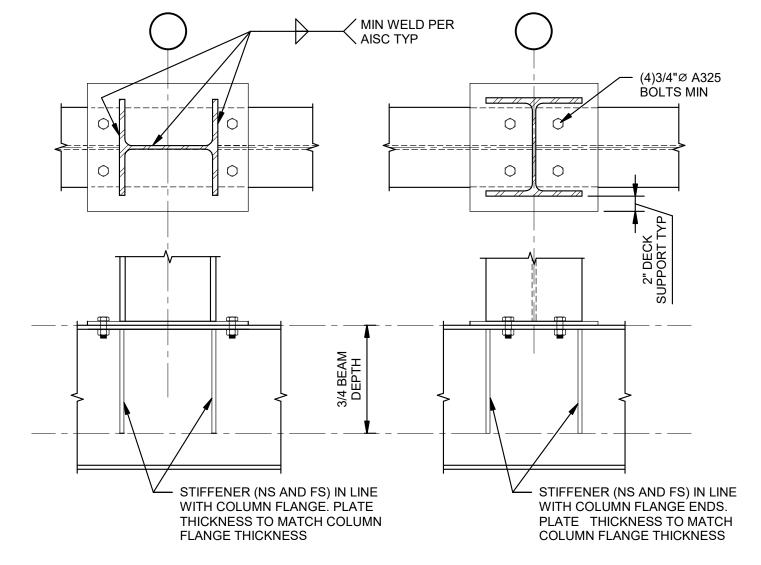
PROJECT# 24094

SHEET#

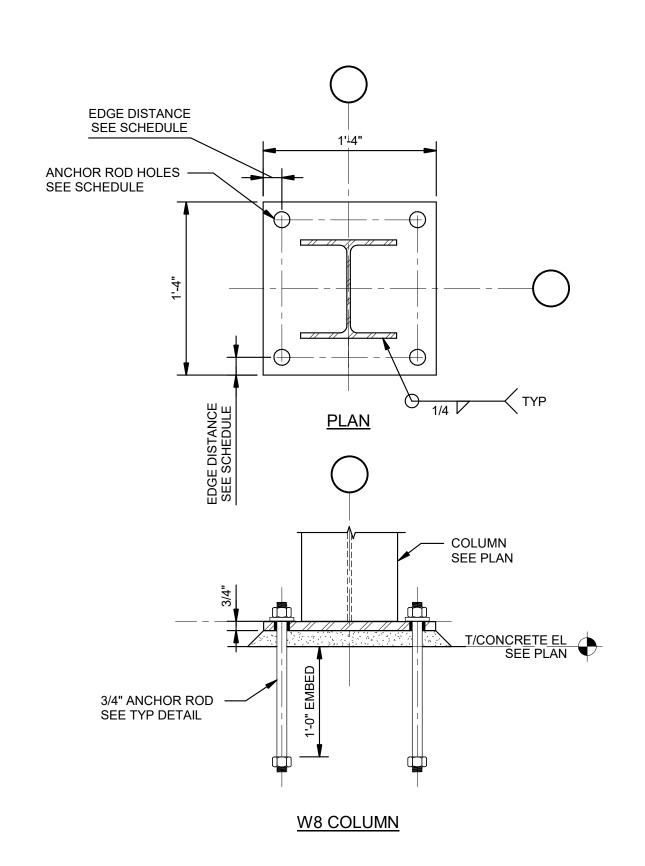
**S.401** 



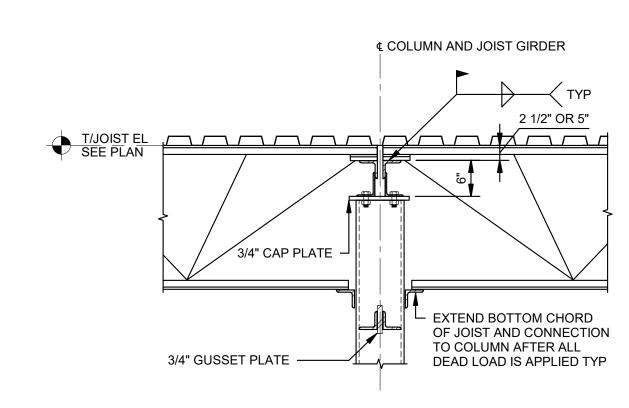




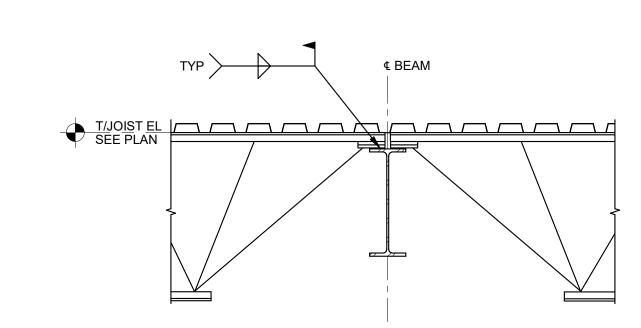
**BASE PLATE DETAIL TYPE - B** 



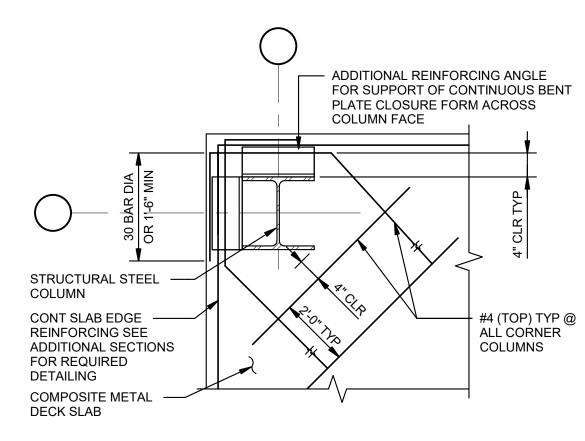
**BASE PLATE DETAIL TYPE - A** 



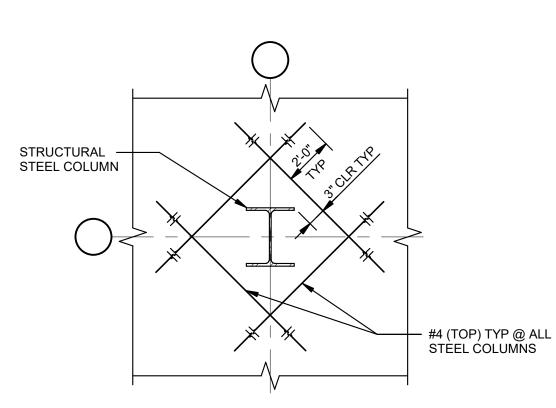
**TYPICAL JOIST/JOIST GIRDER** TO COLUMN CONNECTION



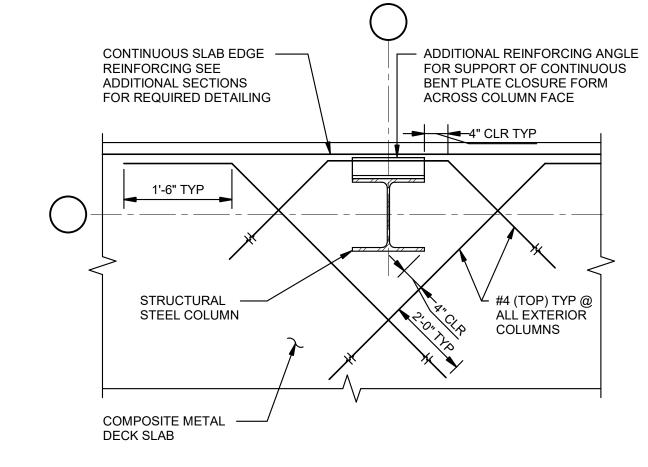
TYPICAL JOIST TO BEAM CONNECTION



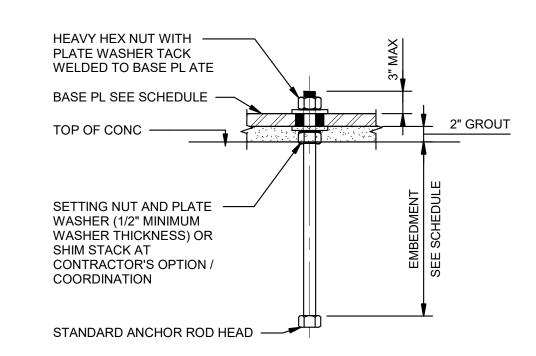
TYPICAL COMPOSITE SLAB CORNER COLUMN DETAIL



TYPICAL COMPOSITE SLAB COLUMN DETAIL



TYPICAL COMPOSITE SLAB EXTERIOR COLUMN DETAIL



TYPICAL ANCHOR ROD DETAIL

BASE F	BASE PLATE / ANCHOR ROD HOLE AND WASHER SCHEDULE												
ANCHOR ROD DIAMETER [IN]													
3/4	1 5/16	2	1/4	1 1/2									
1	1 13/16	3	3/8	1 1/2									

NOTE: CIRCULAR OR SQUARE WASHERS MEETING THE SIZE SHOWN ARE ACCEPTABLE

BASE PLATE ANCHOR ROD HOLES AND WASHER SCHEDULE

HIGH ROOF													HIGH ROOF LOW ROOF
127' - 9"									1				127' - 9"
LV-02 - T.O.STEEL							W8x24		W8x24				LV-02 - T.O.STEEL
113' - 6 1/2"							<u> </u>						113' - 6 1/2"
	W8x31										W8x31		
			75		31						>		
			W8x31		W8x31								
_V-01													LV-01
00' - 0"					_							_	100' - 0"
BP TYPE	 		A		,	4	В		В		А		
BP SIZE	16x16		16x16		16x1		10x16x3	/4	10x16x3/	4	16x16		
AR SIZE	(4)	3/4"	(4) 3	<b>'4</b> "	(4)	3/4"	(4) 3/4" A3	325	(4) 3/4" A3	25	(4) 3	/4"	
AR EMBED	1'-		1'-0		1'-		_		_		1'-0		
Column Locations													
	A-2, A-3, D-2, D-3, I	C-5, D-1, D-4, D-4.1	A-4	ŀ	А	-5	A.2-4		A.2-5		B-1, B-2, B-	B-3, B-4, -5	

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT

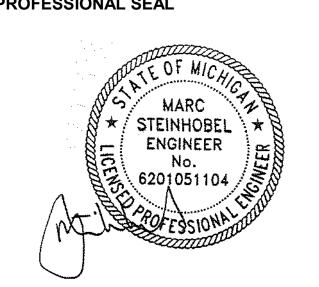
RESURGET

ENGINEERING DETROIT - SAN FRANCISCO

SAN FRANCISCO, CA (415) 523-3548

CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL



© 2025 ROSSETTI

# DESCRIPTION DATE 02/07/2025

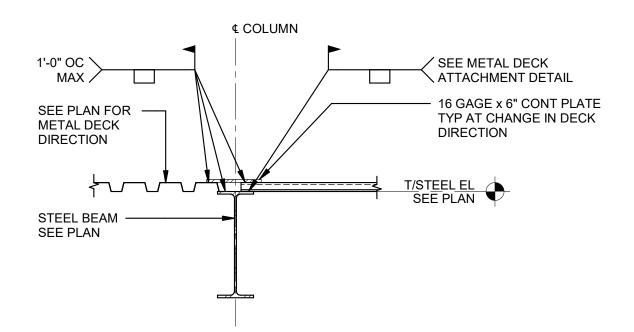
**KEY PLAN** 

SHEET TITLE STEEL SECTIONS AND **DETAILS** 

PROJECT# 24094

SHEET#

**S.501** 





EDGE PL THK PL 1/8 0"<'E'<6"

1/4 6"≤'E'<9"

DECK PERPENDICULAR TO BM

EDGE PL THK PL

COMPOSITE

SMALL FLANG

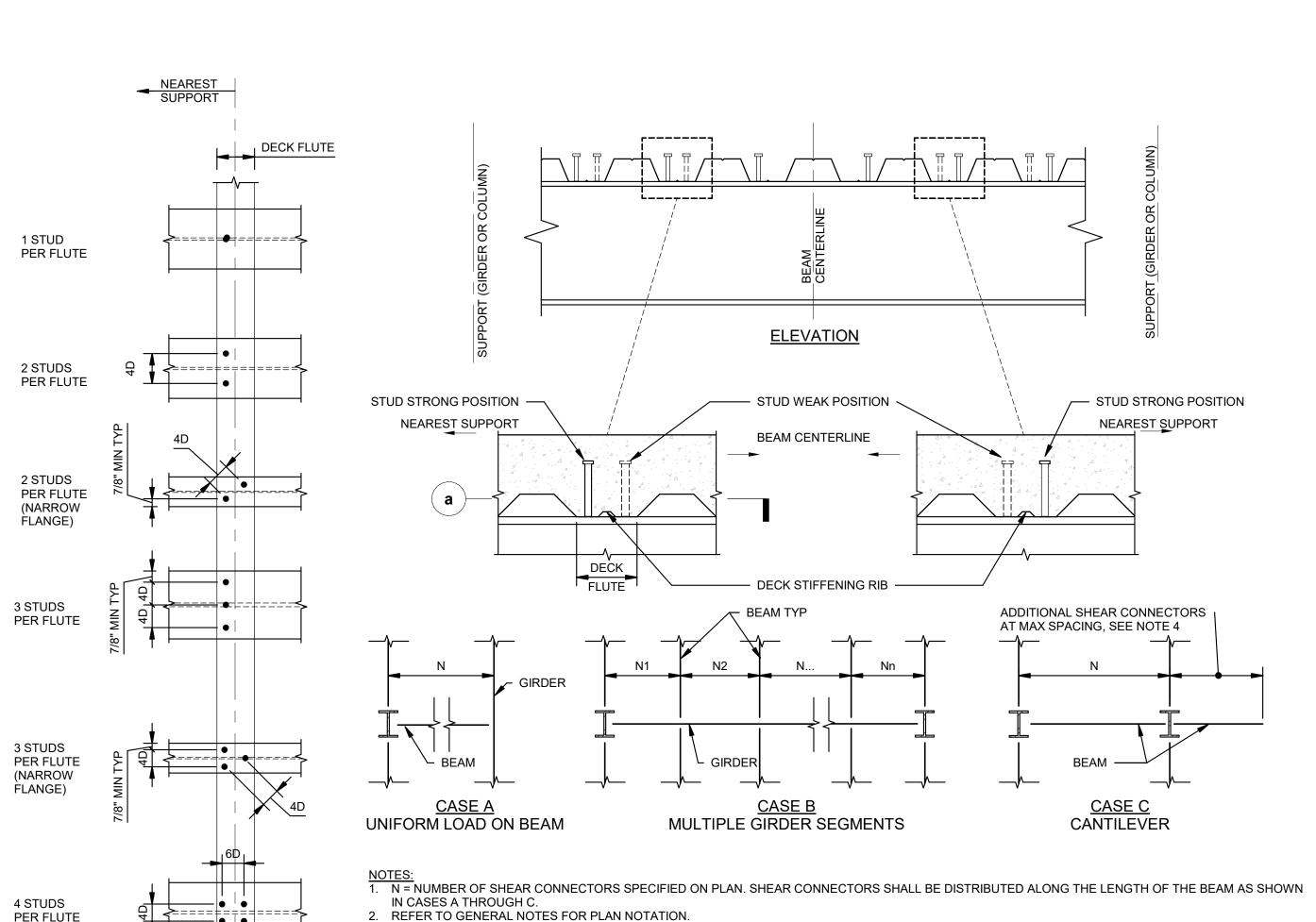
- CLOSURE

STRIP

5/16 9"≤'E'<12"

7/16 12"≤'E'<26"

**CONSTRUCTION DETAIL IN COMPOSITE SLAB DETAIL** 



REFER TO GENERAL NOTES FOR SHEAR CONNECTOR DIAMETER AND LENGTH.

7. EACH SHEAR CONNECTOR TO BE PLACED IN "STRONG" POSITION (FURTHEST FROM BEAM CENTERLINE).

WHERE THE SPECIFIED NUMBER OF SHEAR CONNECTORS IS LESS THAN THE BEAM SPAN LENGTH DIVIDED BY THE MAXIMUM SPACING (SEE NOTE 4).

WHERE STEEL DECK CORRUGATIONS DO NOT ALLOW FOR AN EVEN SPACING OF SHEAR CONNECTORS WITH ONE STUD IN EACH FLUTE, ADDITIONAL

SHEAR CONNECTORS MAY ONLY BE PLACED IN "WEAK" POSITION WHEN THERE ARE MULTIPLE STUDS PER FLUTE. REFER TO PLAN VIEW AT LEFT FOR

SHEAR CONNECTORS HAVE HIGHEST CAPACITIES WHEN PLACED AS SHOWN. IF STUDS ARE NOT PLACED PER THIS DETAIL, 25% MORE STUDS MUST BE

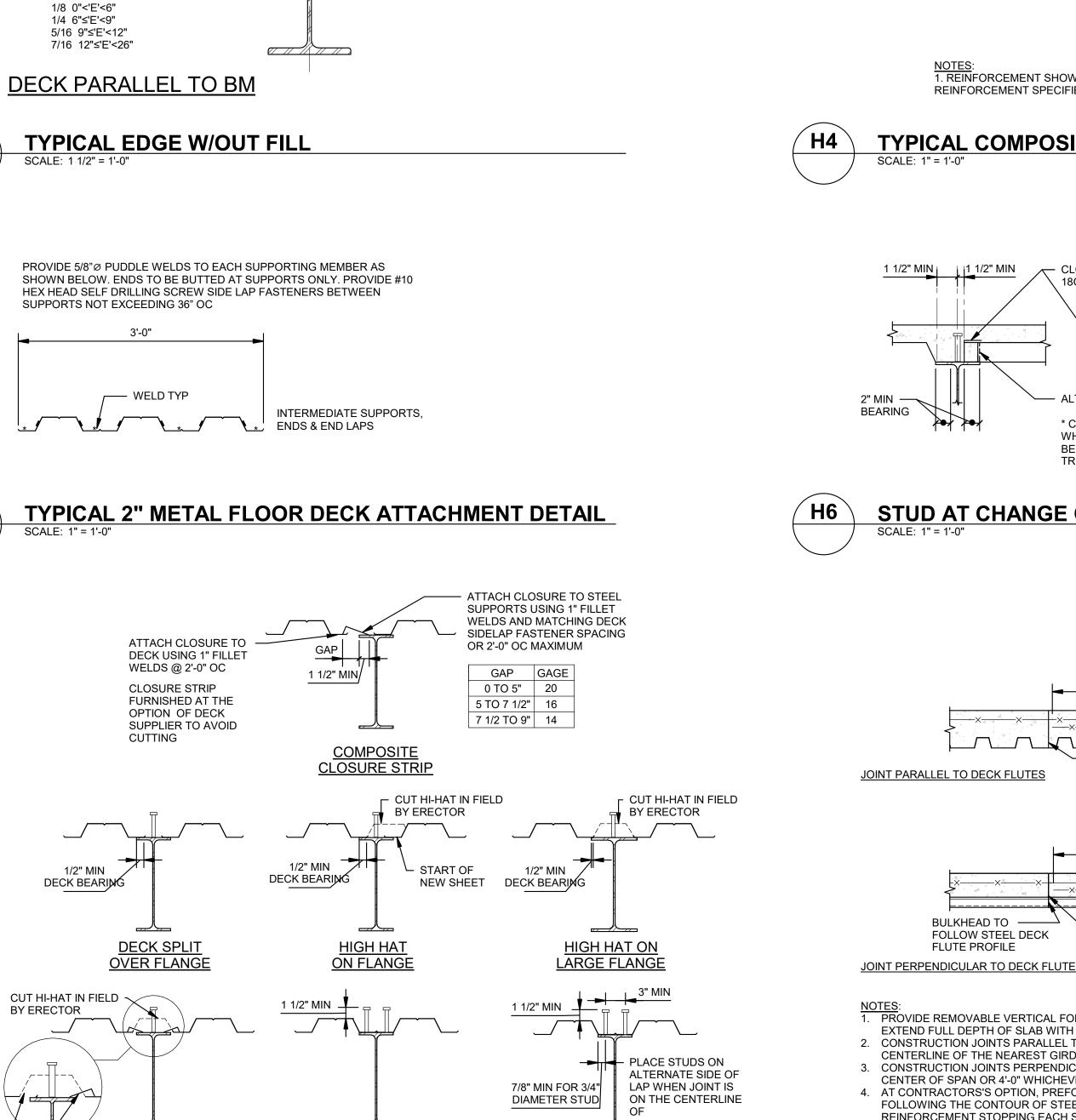
STUDS IN A SECOND ROW (OR THIRD ROW WHERE REQUIRED) SHALL BE PLACED SUCH THAT THE HIGHEST DENSITY OF SHEAR CONNECTORS OCCURS

ADDITIONAL SHEAR CONNECTORS SHALL BE PROVIDED SUCH THAT THE MAXIMUM SPACING IS NOT EXCEEDED AT ANY LOCATION IN THE SPAN.

MAXIMUM SPACING OF SHEAR CONNECTORS SHALL BE 24".

INSTALLED. EQUALLY SPACE ADDITIONAL STUDS ALONG THE BEAM.

10. STUD WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1.

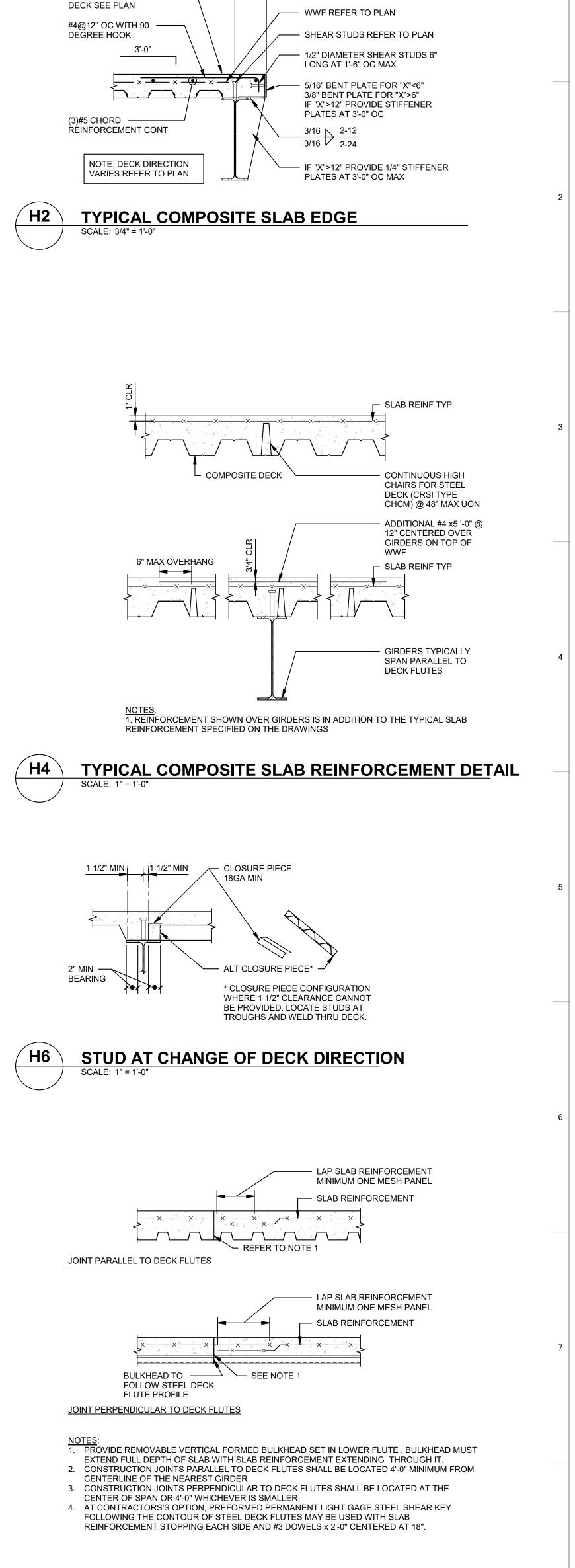


<u>FLANGE</u>

**DECK CONTINUOUS** 

**OVER FLANGE** 

TYPICAL COMPOSITE DECK DETAILS AT GIRDER



"X" REFER TO PLAN

1-6" MAX

CONCRETE ON METAL ——

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT RESURGET

DETROIT - SAN FRANCISCO 28 W ADAMS AVE **SUITE 1710 SUITE 1100** 

SAN FRANCISCO, CA

(415) 523-3548

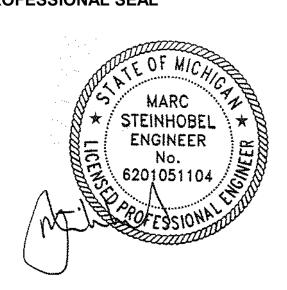
CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL

DETROIT, MI

(313) 315-3290

48226



© 2025 ROSSETTI

**# DESCRIPTION** DATE 02/07/2025

**KEY PLAN** 

SHEET TITLE STEEL SECTIONS AND

PROJECT# 24094

SHEET#

**DETAILS** 

**S.502** 

TYPICAL SHEAR CONNECTOR PLACEMENT DIAGRAMS - STUDS IN STRONG POSITION

NEAR THE BEAM SUPPORT.

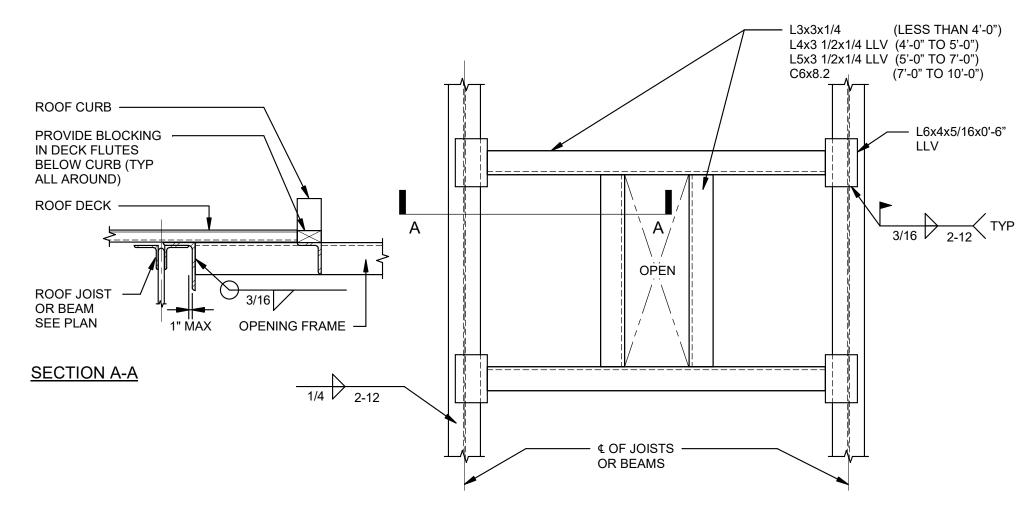
PERMISSIBLE CONFIGURATIONS.

D = STUD DIAMETER

 $(a)^{PLAN}$ 

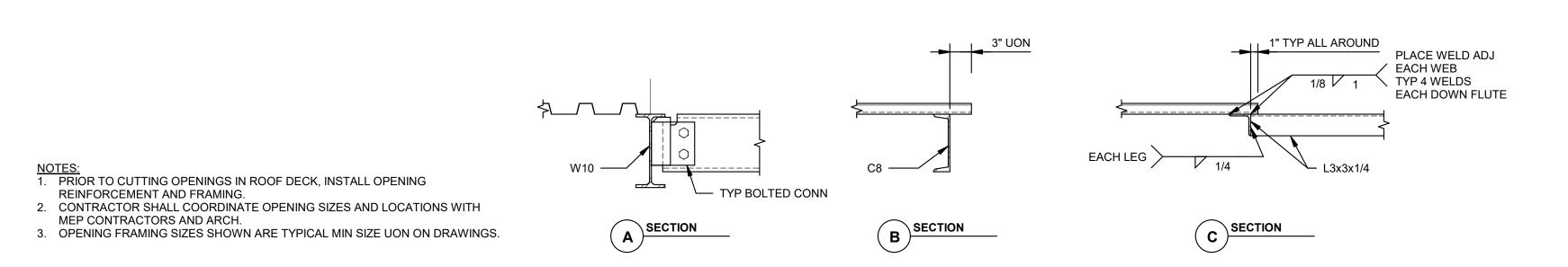
NOTE: COORDINATE UNIT SIZE AND LOCATION WITH APPROVED MECHANICAL EQUIPMENT

LIGHT WEIGHT MECHANICAL UNIT PRE-FAB CURB AT BEAM

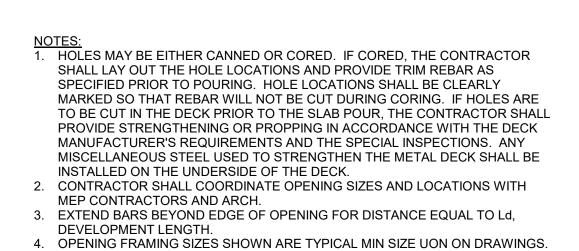


NOTES: 1. VERIFY NUMBER OF FRAMES, SIZE AND LOCATION WITH ARCHITECTURAL AND MECHANICAL DRAWINGS 2. SUPPORT FRAME TO BE USED WITH EQUIPMENT WEIGHING 2000 LBS OR LESS

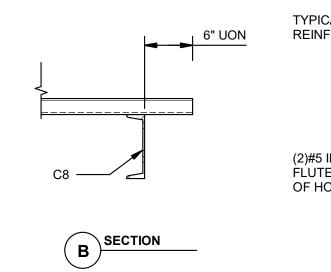
TYP ROOF OPENING AND RTU SUPPORT FRAME

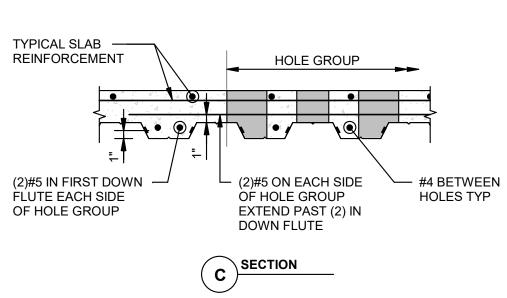


**OPENINGS IN METAL DECK** 

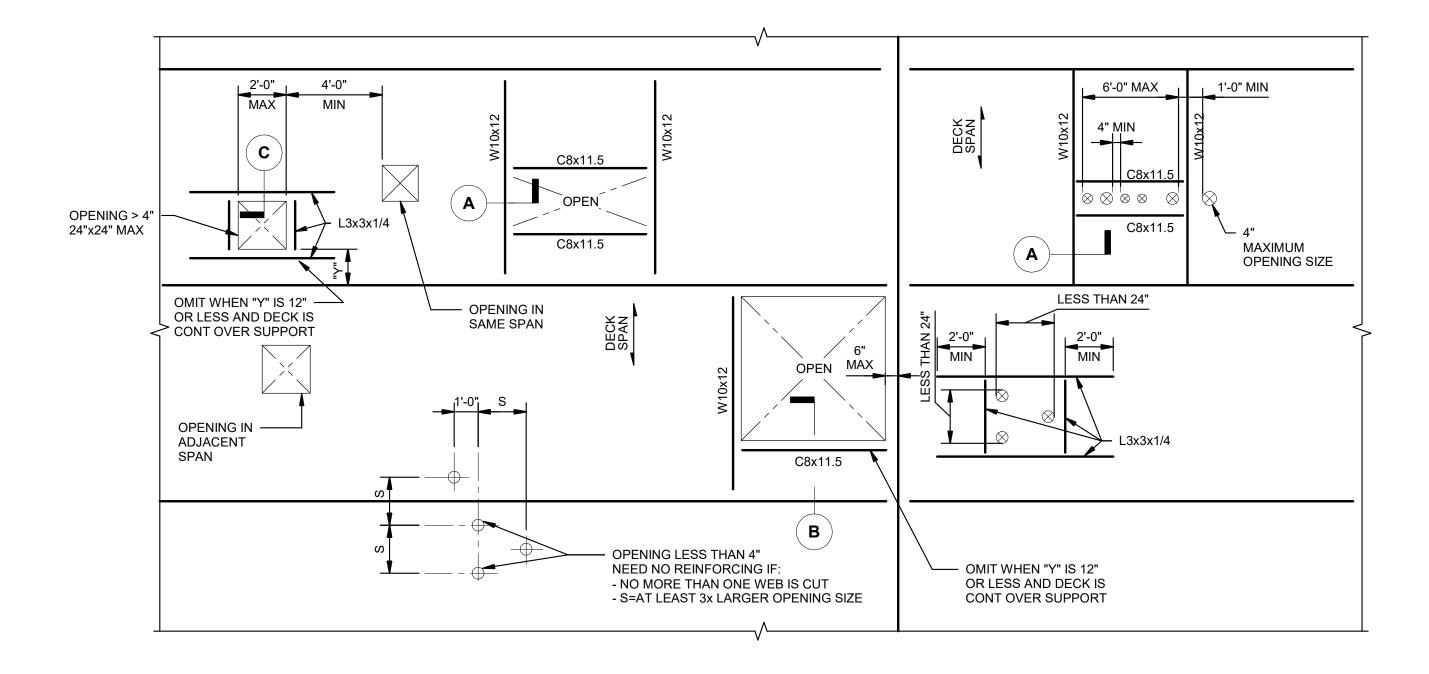


- TYP BOLTED CONN

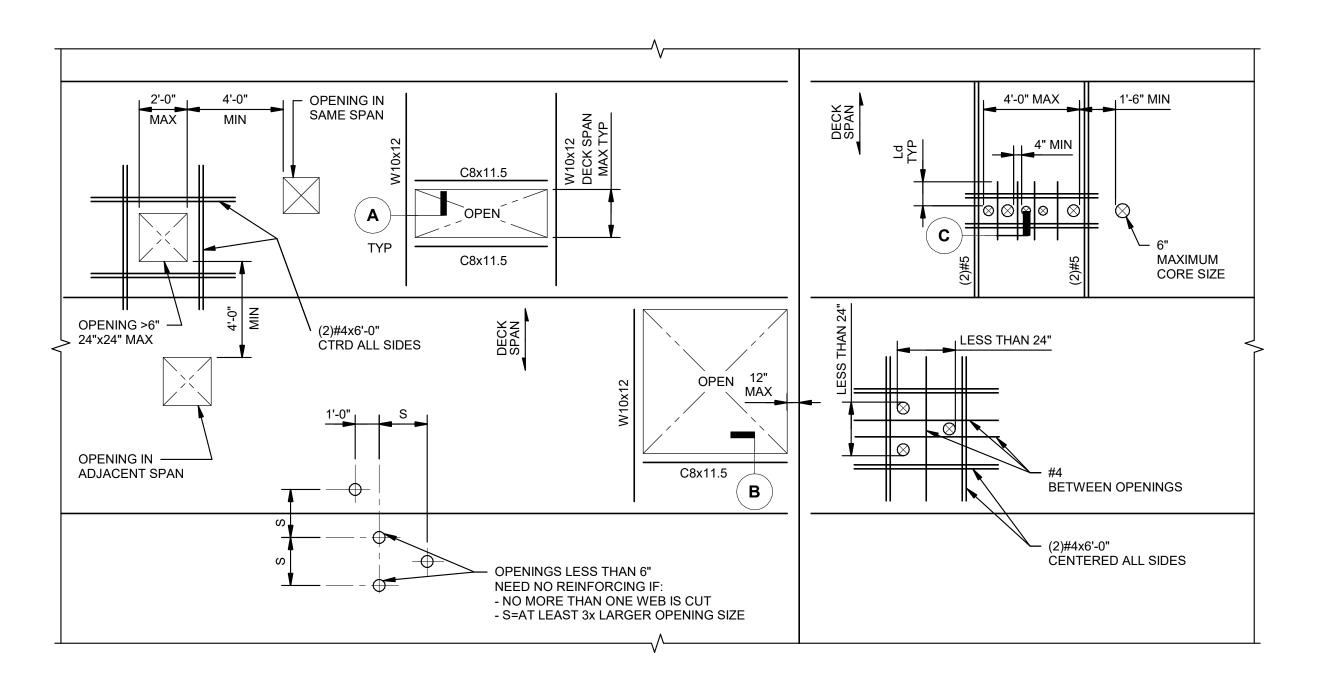




**OPENINGS IN CONCRETE FILLED METAL DECK** 



TYPICAL OPENING IN METAL DECK WITHOUT CONCRETE FILL



TYPICAL OPENING IN CONCRETE FILLED METAL DECK

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT

RESURGET

ENGINEERING DETROIT • SAN FRANCISCO

**SUITE 1710 SUITE 1100** DETROIT, MI SAN FRANCISCO, CA (415) 523-3548

CONSULTING STRUCTURAL ENGINEERS WWW.RESURGET.ENGINEERING

PROFESSIONAL SEAL

MARC 1 X \* / STEINHOBEL \\* ENGINEER

© 2025 ROSSETTI

**# DESCRIPTION** DATE 02/07/2025

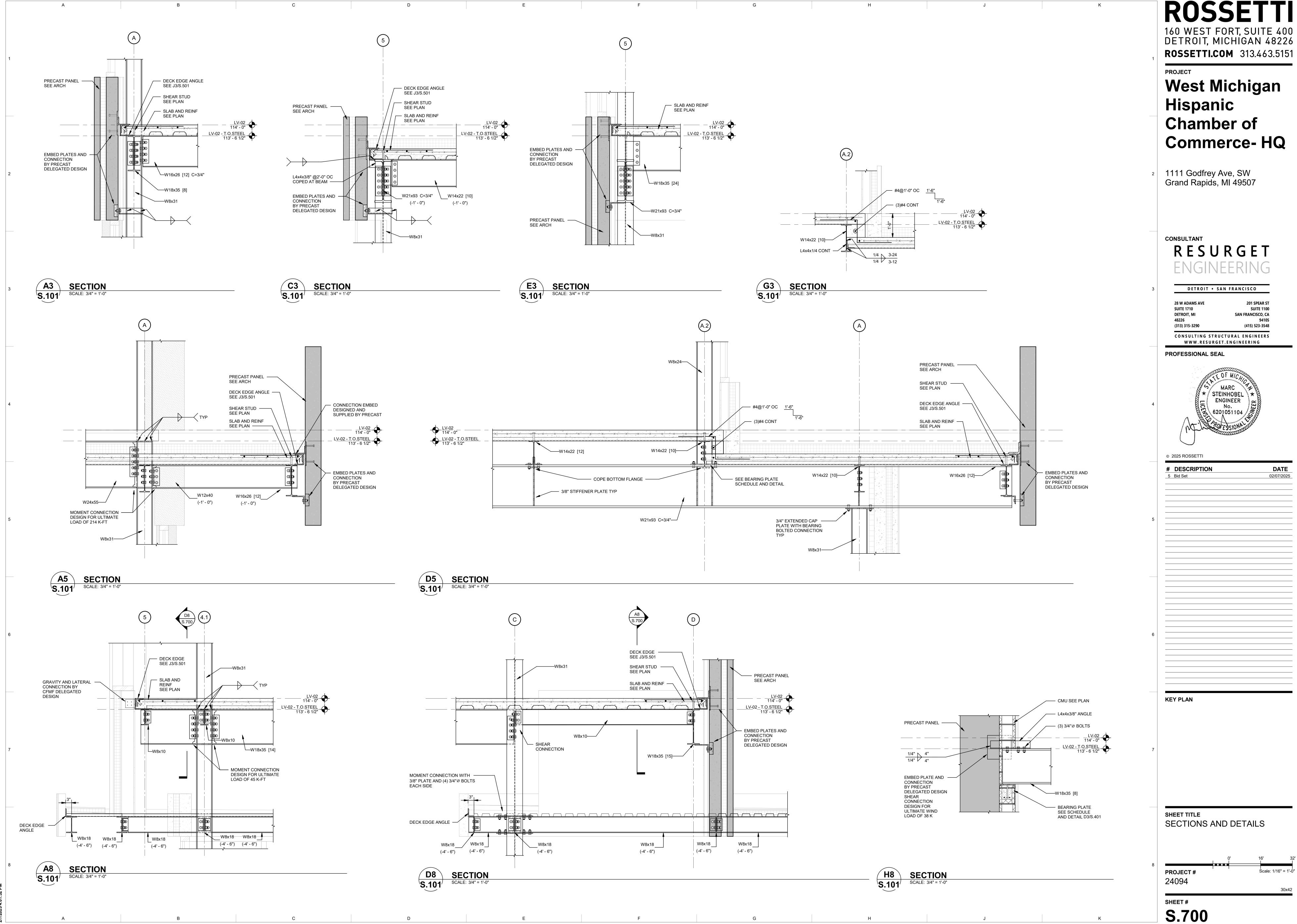
**KEY PLAN** 

SHEET TITLE STEEL SECTIONS AND **DETAILS** 

PROJECT#

SHEET#

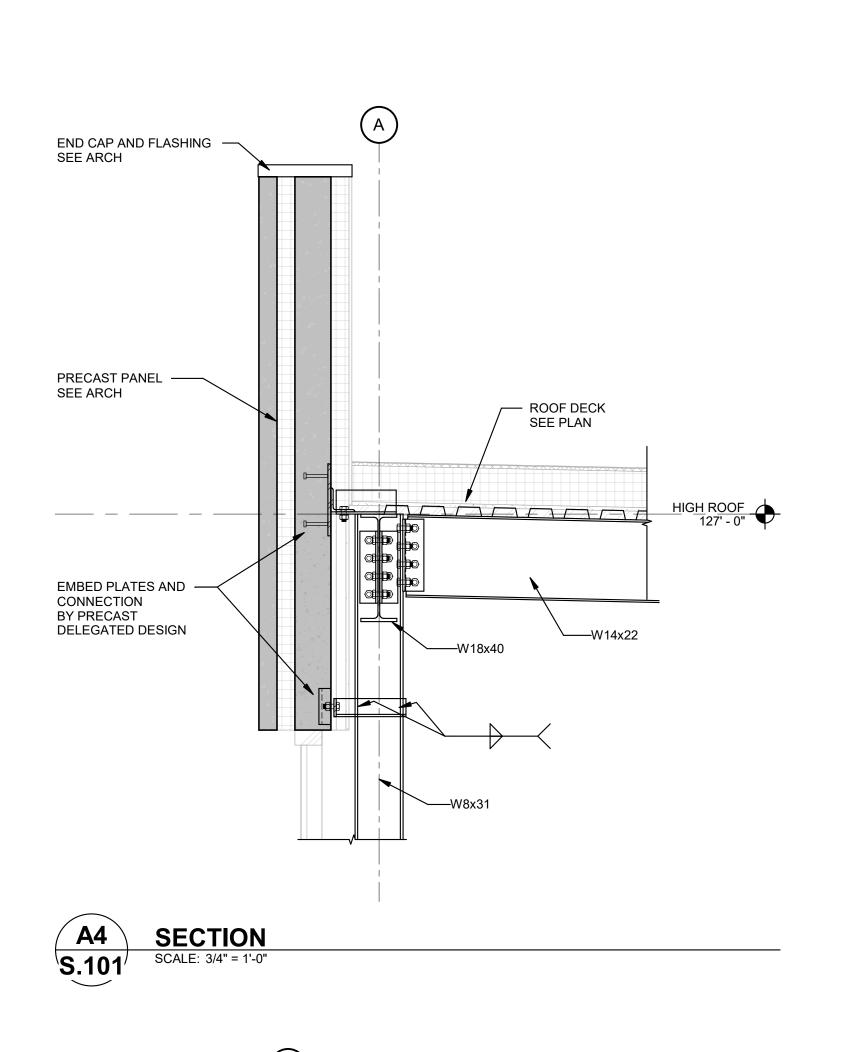
**S.503** 



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

> DATE 02/07/2025

Scale: 1/16" = 1'-0"



— L3x3x1/4 CONT FOR

— C12x20.7 STRINGER

**RAILING POST SUPPORT** 

DECK EDGE SEE ----

PLAN AND DETAIL

W18x35 [24]—

L4x4x3/8 HANGER -

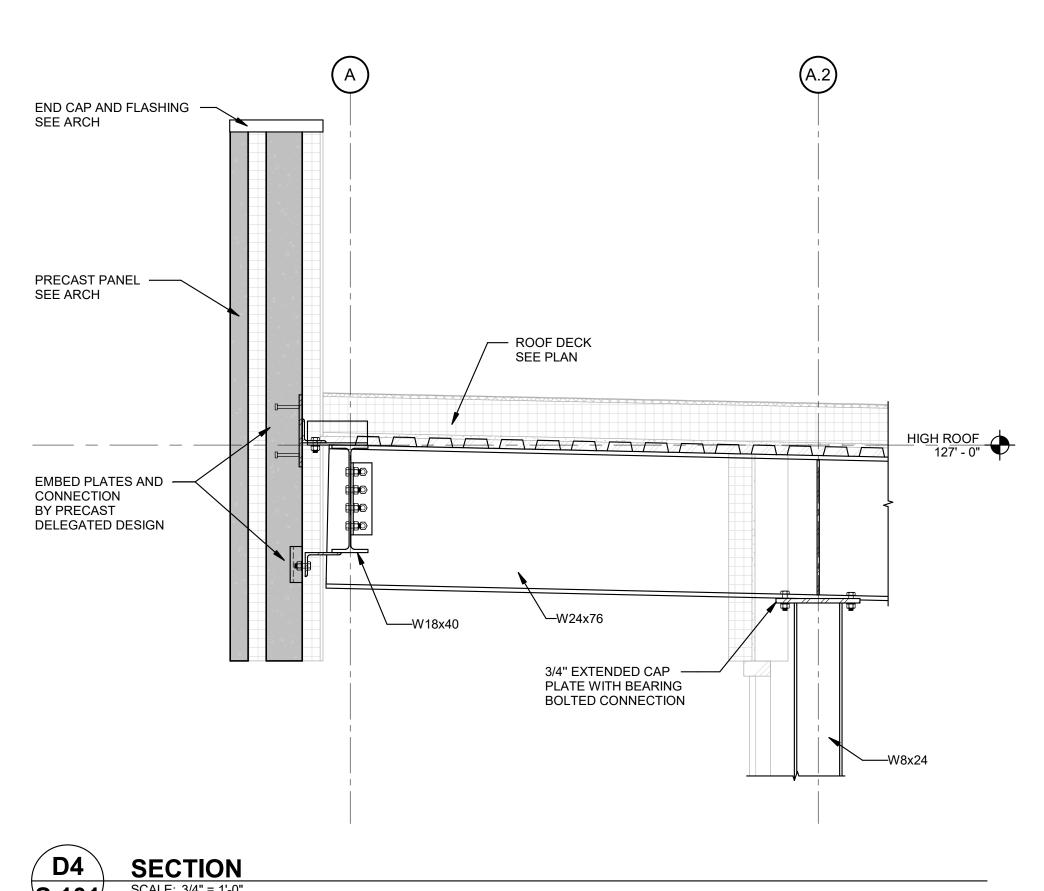
ANGLE WELDED TO

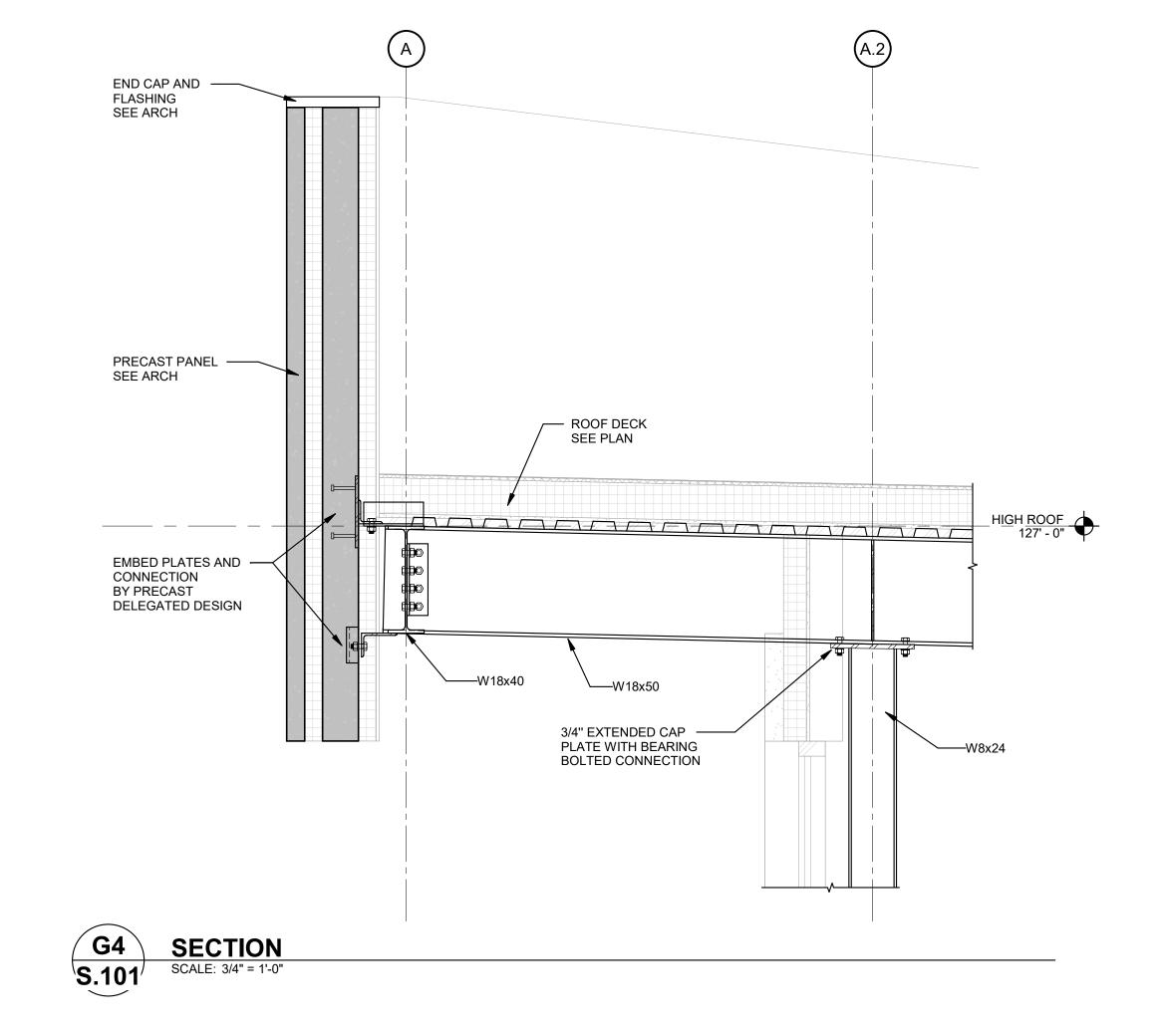
3/8" PLATE BOLTED TO

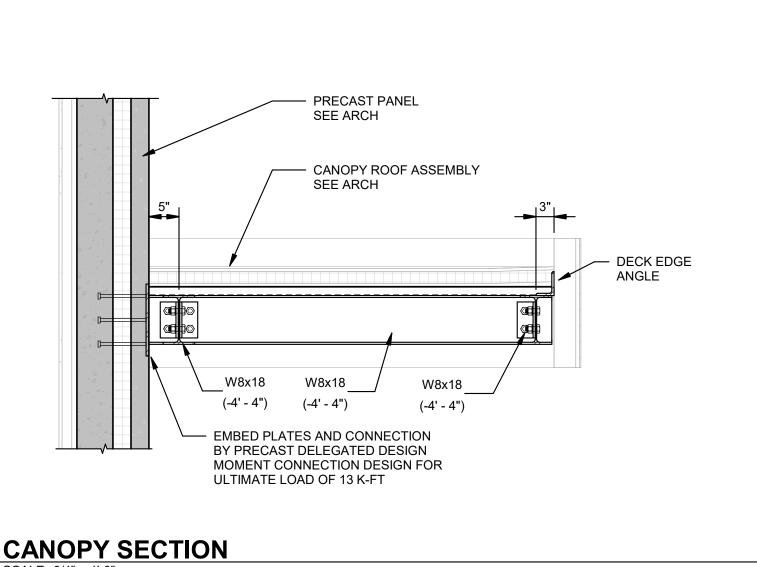
HANGER WITH (3) 3/4" BOLTS AND WELDED TO

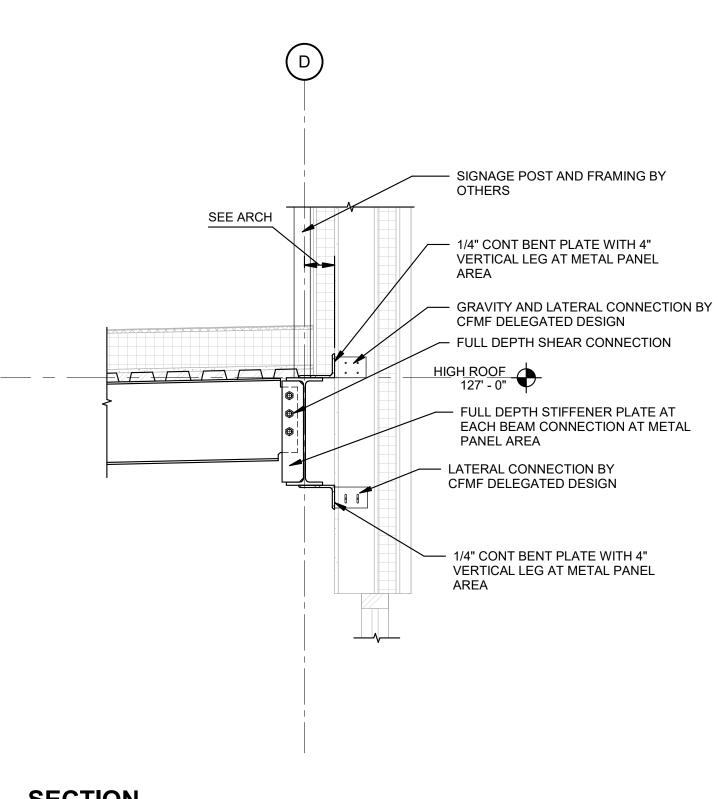
STRINGER

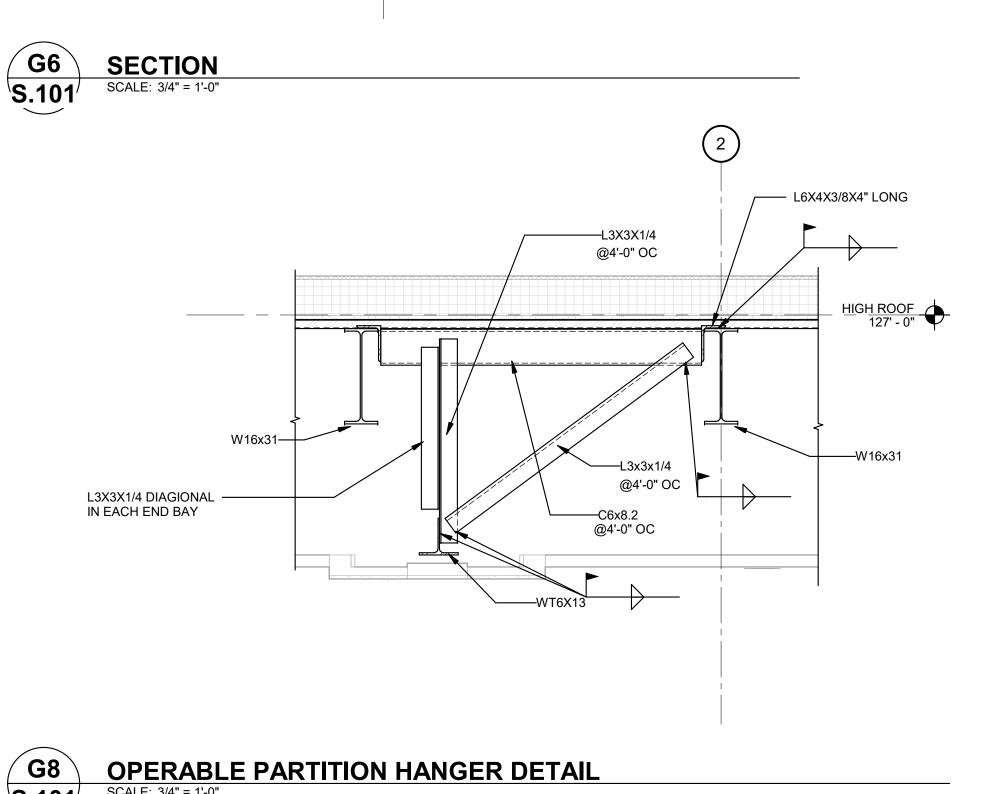
H2/S.502

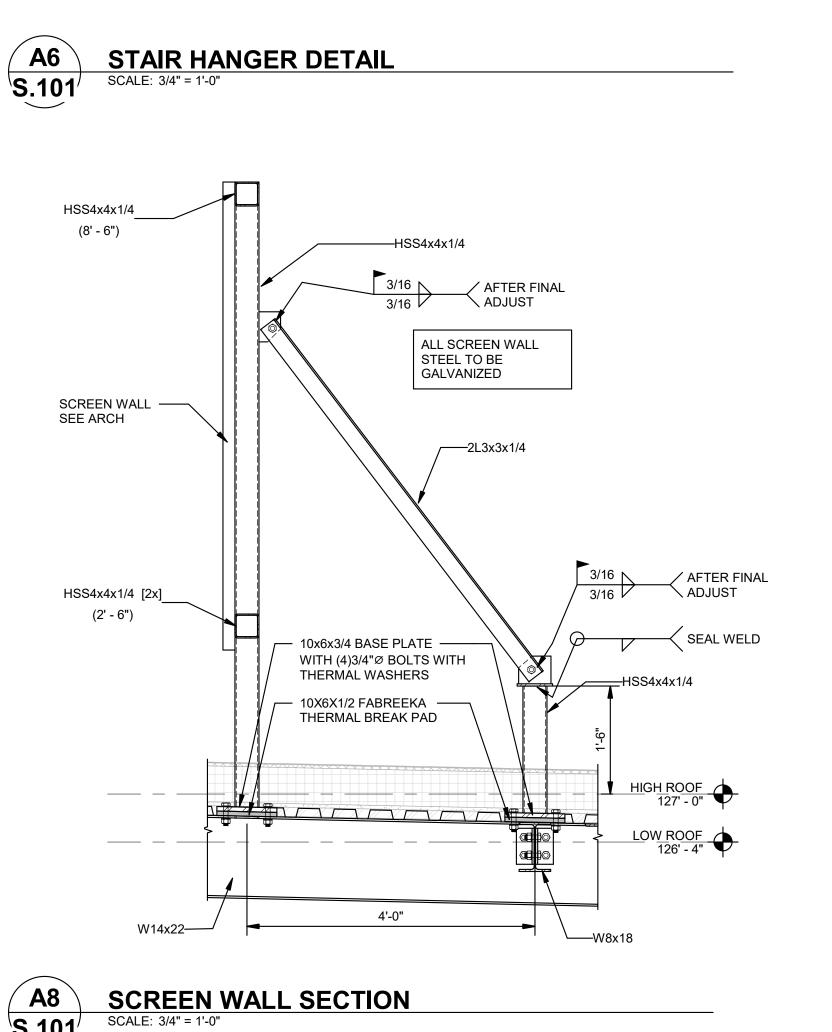


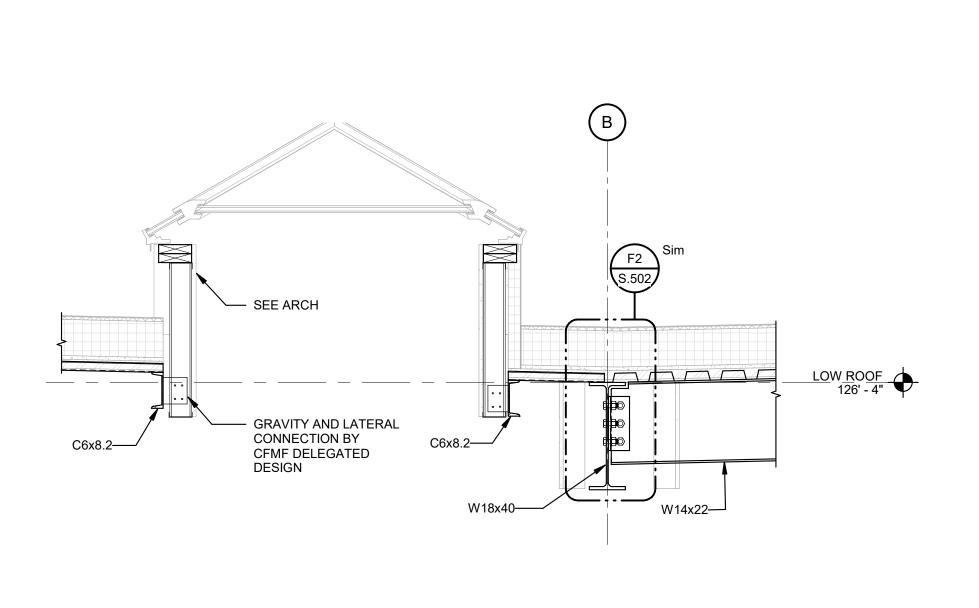












SKYLIGHT SECTION
SCALE: 3/4" = 1'-0"

OPERABLE PARTITION HANGER DETAIL

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

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Ave, SW Grand Rapids, MI 49507

CONSULTANT RESURGET

ENGINEERING

DETROIT - SAN FRANCISCO (415) 523-3548

CONSULTING STRUCTURAL ENGINEERS

WWW.RESURGET.ENGINEERING PROFESSIONAL SEAL

MARC MA 8 \* STEINHOBEL \* ENGINEER

© 2025 ROSSETTI

# DESCRIPTION

02/07/2025

DATE

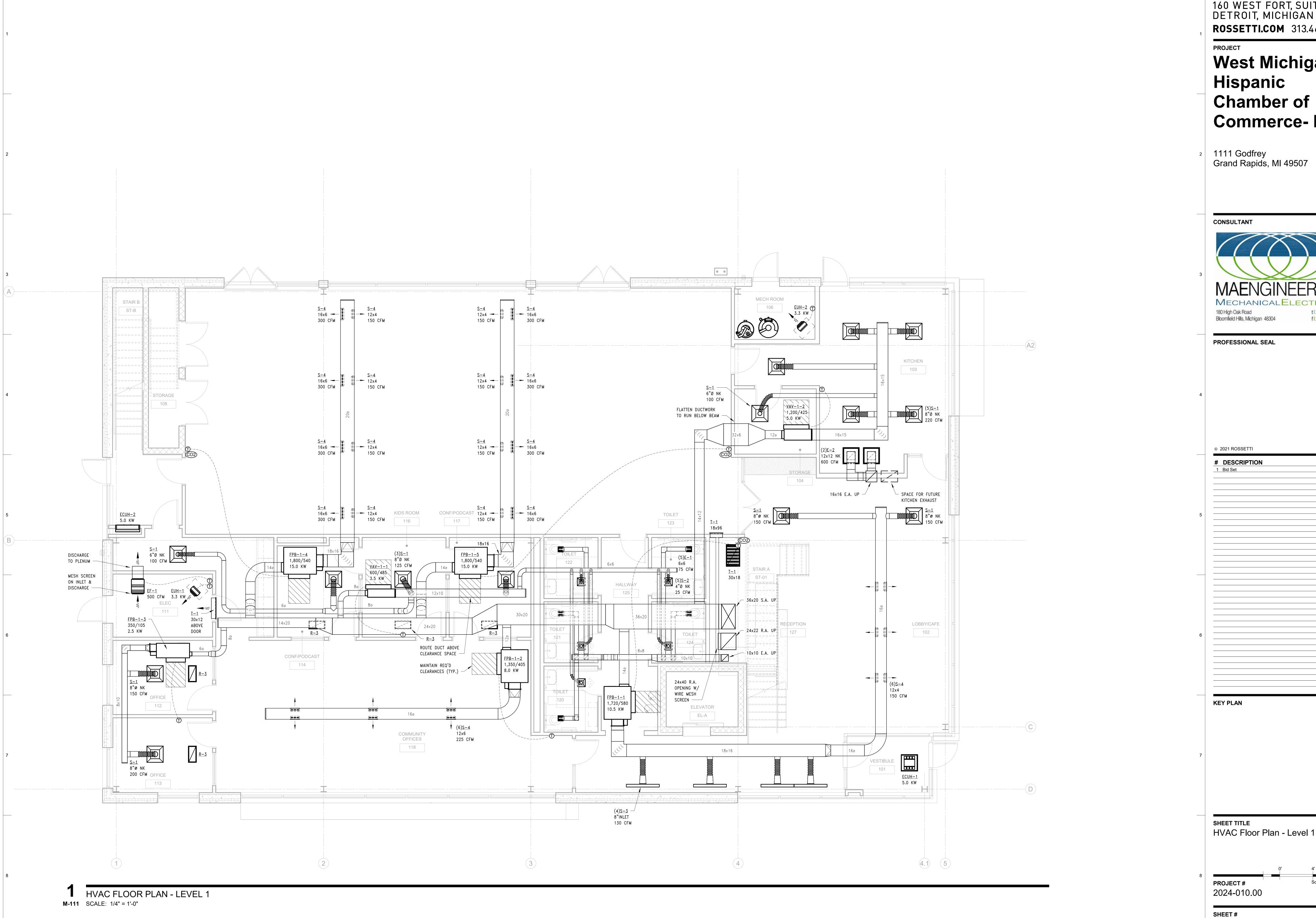
**KEY PLAN** 

SHEET TITLE **SECTIONS AND DETAILS** 

PROJECT# 24094

SHEET#

**S.701** 



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

West Michigan Chamber of Commerce- HQ



DATE 01/24/2025

Scale: 1/4" = 1'-0"

M-111

#### ┌ (2)<u>S-3</u> 10"INLET 215 CFM STAIR B ST-B / (5)<u>S-3</u> 10"INLET 210 CFM / (2)<u>S-3</u> 10"INLET 200 CFM 10x10 S=1 6"Ø NK 100 CFM CEO OFFICE/MTG <u>FPB-2-7</u> 1,050/570 7.5 KW 12x10 <u>FPB-2-8</u> 400/170 3.0 KW ROOM 204 MAINTAIN REQ'D CLEARANCES (TYP.) FLATTEN DUCT MAIN OFFICE AREA TO RUN BELOW BEAM -209 <u>FPB-2-2</u> 2,400/720 CONFERENCE ROOM 10.5 KW 206 32x24 R.A. UP THRU ROOF TO HALLWAY – 24x32 LINED RETURN THRU ROOF TO EF-3 227 ROOF TO RTU-2 FUTURE 70x20 R.A. OPENING W/ KITCHEN S-5 10x6 175 CFM WIRE MESH SCREEN 30x12 (2)<u>S−5</u> 10x6 <del>−</del> 180 CFM EXHAUST - 40x24 R.A. UP THRU ROOF TO RTU-1 - 42x20 R.A. OPENING W/ 8"Ø NK 115 CFM WIRE MESH SCREEN FLATTEN DUCT MAIN TO RUN BELOW BEAM -- 36x20 S.A. UP THRU OFFICE <u>E-1</u> — 8x8 ROOF TO RTU-1 ABOVE S 100 CFM ELEC/I.T. ROOM KITCHEN 20x14 RENTABLE OFFICE 202 (4)<u>S-1</u> 8"Ø NK 205 CFM (4)<u>S-1</u> 8"Ø NK 260 CFM (4)<u>S-5</u> 10x6 150 CFM ∠ 24x22 E.A. DN & 12x12 UP THRU ROOF VAV-2-1 1,200/425 5.5 KW TO EF-2 <u>S-1</u> 6"Ø NK 100 CFM 75 CFM OFFICE **ELEVATOR** TRAINING ROOM EL-A PHONE BOOTH <u>S-4</u> 12x6 HALLWAY <u>S-1</u> 6"Ø NK └─ (5)<u>S−4</u> 16x6 300 CFM

HVAC FLOOR PLAN - LEVEL 2

**M-121** SCALE: 1/4" = 1'-0"

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

PROJECT

West Michigan
Hispanic
Chamber of
Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

© 2021 ROSSETTI

# DESCRIPTION

1 Bid Set

01/24/2025

**KEY PLAN** 

SHEET TITLE
HVAC Floor Plan - Level 2

PROJECT # 2024-010.00

NUEET#

Scale: 1/4" = 1'-0"

SHEET#

M-121

#### **ABBREVIATIONS**

CU	AIR CONDITIONING CONDENSING UNIT	F	FAHRENHEIT	Р	PUMP
	ACCESS DOOR	FD	FLOOR DRAIN	PD	PRESSURE DROP (FEET OF WATER)
F	ABOVE FINISHED FLOOR	FLR	FLOOR	PSI	POUNDS PER SQUARE INCH
U	AIR HANDLING UNIT	FPM	FEET PER MINUTE	PRV	PRESSURE REDUCING VALVE
D	ACCESS PANEL AUTOMATIC SPRINKLER RISER	FPWH FSW	FREEZE PROOF WALL HYDRANT FLOW SWITCH	-	DETUDNIAID
R	AUTOMATIC SPRINKLER RISER			RA	RETURN AIR
		FS FT.	FLOOR SINK FEET	RD/SP	ROOF DRAIN/STAND PIPE
U	BRITISH THERMAL UNIT	FI.	FEE!	BAL.	BALANCE
		ODM	OALLONG BER MINUTE	RET	RETURN
;	COOLING COIL	GPM	GALLONS PER MINUTE	RF	RETURN FAN
	CENTRIFUGAL FAN			RH	REHEAT COIL
М	CUBIC FEET PER MINUTE	НВ	HOSE BIBB	Rh	RELATIVE HUMIDITY
	CAST IRON	НО	HUB OUTLET	RPM	REVOLUTIONS PER MINUTE
)	CLEAN OUT	HP	HORSEPOWER	RS	ROOF SUMP
, ND	CONDENSATE	HW	HOT WATER (POTABLE)	RC	RAIN CONDUCTOR
		HWR	HOT WATER RETURN (POTABLE)	REL	RELOCATED
NT 	CONTINUATION			REB	REBALANCE
IH	CABINET UNIT HEATER	IN	INCHES	SA	SUPPLY AIR
V	COLD WATER	INL	INLET	SAN	SANITARY WASTE
/S	CHILLED WATER SUPPLY	INV	INVERT	SD	SMOKE DETECTOR
/R	CHILLED WATER RETURN			SF	SUPPLY FAN
		LAT	LEAVING AIR TEMPERATURE		
	DRY BULB TEMPERATURE, °F	LAV	LAVATORY	SG	SPECIFIC GRAVITY
	DECIBELS	LBS/HR	POUNDS PER HOUR	SP	STATIC PRESSURE (INCHES OF WATER)
C	DIRECT DIGITAL CONTROL	LWT	LEAVING WATER TEMPERATURE	SP	STAND PIPE
T	DETAIL			SPR	SPRINKLER
4	DIAMETER	MAX.	MAXIMUM	SPR/STP	SPRINKLER STANDPIPE
l.	DOWN	MBH	1000 BTU/HR	SPS	STATIC PRESSURE SENSOR
	DOWNSPOUT	MECH	MECHANICAL	STK	STACK
VG.	DRAWING	MIN.	MINIMUM	-	
		MISC	MISCELLANEOUS	TP	TOTAL PRESSURE
	EXHAUST AIR			TYP	TYPICAL
UH	ELECTRIC CABINET UNIT HEATER	NC	NORMALLY CLOSED		
011	EXHAUST FAN	NIC	NOT IN CONTRACT	UH	UNIT HEATER
EV.	ELEVATION	NO	NORMALLY OPEN	UON	UNLESS OTHERWISE NOTED
P	EXTERNAL STATIC PRESSURE	NOM.	NOMINAL		
Н	ELECTRIC UNIT HEATER	NFWH	NON FREEZE WALL HYDRANT	V	VALVE
	EXISTING			VTR	VENT THRU ROOF
Н	EXHAUST	OA	OUTSIDE AIR		
IST	EXISTING	OF	OVERFLOW	W	WASTE
	2,001110	OFD	OVERFLOW DRAIN		
		3. 5		WG	WATER GAUGE

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

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

#### PLUMBING GENERAL NOTES:

1. FOR PIPE SIZES TO INDIVIDUAL PLUMBING FIXTURES AND VARIOUS PIECES OF EQUIPMENT REFER TO SPECIFICATIONS. 2. IN ALL WASTE DRAINAGE PIPING THE CONTRACTOR SHALL FURNISH AND INSTALL CLEANOUTS (IN ADDITION TO THE CLEANOUTS INDICATED ON

DRAWINGS AS REQUIRED BY THE GOVERNING PLUMBING CODE).

- REFER TO HVAC GENERAL NOTE-4
- 4. FOR ADDITION NOTES COMMON TO PLUMBING REFER TO HVAC NOTES.

	URAL GAS LOAD EDULE
EQUIPMENT	TOTAL INPUT CFH
RTU-1	600
RTU-2	600
GWH-1	76
GWH-2	199
TOTAL	1,475 CFH

LINEAR FT. AND 0.2" W.C. ALLOWABLE PRESSURE DROP.

HVAC LEGEND & SYMBOLS

PLUMBING, PIPING & FIRE PROTECTION

FS FS

\_\_\_\_\_I CO

ITEM TO BE REMOVED

EXISTING WORK

ISOLATION VALVE

WATER FLOW SWITCH

**EXPANSION JOINT - SLIDING** 

SPRINKLER HEAD ( PENDANT )

SPRINKLER HEAD ( UPRIGHT )

**NEW WORK** 

CHECK VALVE

VALVE IN RISER

STRAINER

UNION

CLEANOUT

PIPE ANCHOR

ALIGNMENT GUIDE

CLEANOUT FLOOR

CLEANOUT WALL

CLEANOUT GRADE FLOOR DRAIN (FD)

THERMOMETER

CAP OR PLUG

**ELBOW - TURNED DOWN** ELBOW - TURNED UP TEE OUTLET - DOWN TEE OUTLET - UP

DIRECTION OF FLOW BALANCING VALVE

TWO-WAY MODULATING CONTROL VALVE

THREE-WAY MODULATING CONTROL VALVE

REDUCER - CONCENTRIC

PRESSURE GAUGE WITH COCK

MANUAL AIR VENT

NEW CONNECTION

**COLD WATER PIPING** 

NPCW NON POTABLE COLD WATER

IRW IRRIGATION WATER

HOT WATER RETURN PIPING

SANITARY LINE (UNDERGROUND)

SANITARY LINE (ABOVE GROUND)

STORM OVERFLOW LINE

FIRE SPRINKLER PIPE (FS)

\_\_\_\_\_ HW \_\_\_\_\_

\_\_\_\_\_V\_\_\_\_

= = = = = =

===== SAN =====

\_\_\_\_\_ OF \_\_\_\_

\_\_\_\_COND \_\_\_\_

\_\_\_\_\_FP\_\_\_\_

TEST PLUG (PRESSURE/TEMPERATURE)

HIGH PRESSURE COLD WATER PIPING

18x6	INDICATES RECTANGULAR DUCT WITH DUCT SIZE 18 INCHES WIDE (IN SIZE PERTAINS TO THE ENTIRE RUN	PLANE OF DRAWING) AND 6 OF DUCT UNLESS OTHERWI	INCHES DEEP. SE NOTED.
22x14□	INDICATES FLAT OVAL DUCT WITH DUCT SIZE 22 INCHES WIDE (IN SIZE PERTAINS TO THE ENTIRE RUN	PLANE OF DRAWING) AND 1 OF DUCT UNLESS OTHERWI	4 INCHES DEEP. SE NOTED.
6"□	INDICATES ROUND DUCT WITH DUCT 6 INCHES IN DIAMETER. SIZE PERTAI (FROM DUCT ORIGIN AT TAP TO END	NS TO THE ENTIRE RUN OF D	
	VANE TURN ELBOW & AIR SPLIT TYPE	EDUCT TAKE-OFF	
RISE -	INCLINED RISE IN RESPECT TO AIR F	LOW	
DN. →	INCLINED DROP IN RESPECT TO AIR	FLOW	
	VANED ELBOW ( PROVIDE ALL SQUARWITH VANES )	RE OR RECTANGULAR ELBO	WS
	VANED ELBOW (SHORT RADIUS)		
$\sim$	INDICATES FLEXIBLE DUCT (RUNOUT SCHEDULED OR SHOWN. LENGTH SH	) OF SIZE AS IALL NOT EXCEED 5 FT.	
	DUCT TURNING UP		VOLUME CONTROL DAMPER (MANUAL)
	DUCT TURNING DOWN		FLEXIBLE CONNECTION OR FLEXIBLE DUCT CONNECTOR
	VERTICAL FIRE DAMPER	M	MOTORIZED DAMPER
	HORIZONTAL FIRE DAMPER	— M — F	MANUAL DAMPER FIRE DAMPER
•	POINT OF NEW CONNECTION		COMBINATION FIRE AND SMOKE DAN
(SD)	DUCT SMOKE DETECTOR	——————————————————————————————————————	RF SHEILDING DAMPER THERMOSTAT
	ITEM TO BE REMOVED	<u>()</u>	TEMPERATURE SENSOR
	SUPPLY AIR DIFFUSER		
	RETURN AIR GRILLE		

LINEAR SUPPLY AIR DIFFUSER

#### MECHANICAL SHEET INDEX Sheet Name Fire Protection Plan - Level 1 Fire Protection Plan - Level 2 Mechanical Symbols List, Index and Notes Mechanical Specifications

#### Sheet Number FP-121 MP-002 P-101 Underground Plumbing Plan Plumbing Floor Plan - Level 1 Plumbing Floor Plan - Level 2 HVAC Floor Plan - Level 1 M-121 HVAC Floor Plan - Level 2 Mechanical Roof Plan MP-401 Mechanical Schedules MP-501 Mechanical Details MP-502 Mechanical Details MP-601 Temperature Controls

# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

# West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

© 2021 ROSSETTI

**# DESCRIPTION** DATE 01/24/2025

**KEY PLAN** 

SHEET TITLE Mechanical Symbols List, Index and Notes

PROJECT# 2024-010.00

SHEET# **MP-001**  WORK INCLUDED:

FURNISH ALL LABOR AND MATERIAL APPLIANCES. EQUIPMENT AND SUPERVISION TO PUT IN PLACE A COMPLETE AND FUNCTIONING. MECHANICAL INSTALLATION READY FOR OPERATION, AS SPECIFIED HEREIN AND AS INDICATED ON THE DRAWINGS. SYSTEMS SHALL INCLUDE BUT NOT NECESSARILY LIMITED TO THE FOLLOWING MAJOR EQUIPMENT OR OPERATIONS:

2. HEATING, VENTILATION AND AIR CONDITIONING

INSULATION

 TEMPERATURE CONTROLS FIRE PROTECTION

<u>DEFINITIONS:</u>

"PROVIDE": TO FURNISH AND COMPLETELY INSTALL SPECIFIED PRODUCTS AND INCIDENTALS, WHETHER SPECIFICALLY INDICATED OR NOT, NECESSARY FOR A COMPLETE, FUNCTIONAL INSTALLATION. INCLUDES ALL GENERAL AND SPECIALIZED LABOR, EQUIPMENT AND TOOLS NECESSARY TO COMPLETE THE INSTALLATION.

"PIPING": A COMPLETE SYSTEM, INCLUDING PIPE, TUBING, FITTINGS, HANGERS, SUPPORTS, VALVES, AND ALL SPECIALTIES THAT COMPRISE A FULLY FUNCTIONAL PIPING SYSTEM, WHETHER SPECIFICALLY INDICATED OR NOT.

CODES, ORDINANCES, AND STANDARDS:

ALL WORK SHALL CONFORM IN ALL RESPECTS TO THE REQUIREMENTS OF THE MICHIGAN BUILDING CODES AND OTHER ADOPTED FEDERAL, STATE, AND LOCAL CODES, ORDINANCES, AND STANDARDS HAVING JURISDICTION OVER THE WORK. WHERE CONTRACT DOCUMENT REQUIREMENTS EXCEED THE REQUIREMENTS OF THE REFERENCED CODES, ORDINANCES, AND STANDARDS, THE CONTRACT DOCUMENT REQUIREMENTS SHALL BE TAKEN AS MINIMUM.

LABORATORIES (UL) "PACKAGE" LABEL.

SECURE ALL NECESSARY PERMITS, CONNECTION FEES, TAD FEES, LICENSES AND APPROVALS AND ARRANGE FOR ALL INSPECTIONS, INCLUDE ALL RELATED COSTS.

FURNISH CERTIFICATES OF FINAL INSPECTION AND APPROVAL UPON COMPLETION OF PROJECT.

ALL EQUIPMENT CONTAINING ELECTRICAL WIRING AND/OR ELECTRICAL COMPONENTS SHALL HAVE A UNDERWRITERS

PERMITS, FEES AND INSPECTIONS

**EXAMINATION OF SITE:** VISIT PROJECT SITE AND BECOME FULLY COGNIZANT OF ALL EXISTING ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL AND SITE CONDITIONS, OR EXISTING CODE VIOLATIONS WHICH MAY AFFECT THE WORK.

AFOREMENTIONED EXISTING CONDITIONS. NO "EXTRAS" TO CONTRACT PRICE WILL BE ALLOWED AFTER RECEIVING BID IN ORDER TO RECTIFY EXISTING CONDITIONS IN ORDER TO MEET THE DESIGN INTENT OF THE CONTRACT DOCUMENTS OR SATISFY CODE REQUIREMENTS.

NOTIFY ARCHITECT PRIOR TO SUBMITTING BID IF REVISIONS TO CONTRACT DOCUMENTS ARE NECESSARY TO RECTIFY ANY OF THE

COORDINATION WITH OTHER TRADES:

COORDINATE ALL WORK BEFORE AND DURING CONSTRUCTION WITH ALL OTHER AFFECTED TRADES.

WHERE INTERFERENCES DEVELOP, NOTIFY ARCHITECT FOR RESOLUTION OF CONFLICT.

RELOCATION OF CONFLICTING INSTALLED WORK, DUE TO LACK OF COORDINATION, OR POOR COORDINATION WILL NOT BE CONSIDERED EXTRA WORK.

APPROVED MANUFACTURERS:

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

FURNISHING OF MATERIALS AND MANUFACTURERS OTHER THAN THOSE INDICATED AS ACCEPTABLE IN THE CONTRACT DOCUMENTS WILL BE CONSIDERED VOLUNTARY SUBSTITUTES.

ACCEPTABLE, ARCHITECT WILL AUTHORIZE USE OF SUBSTITUTE IN WRITTEN FORM BY LETTER OR ADDENDUM TO CONTRACT

SUBMIT ALL VOLUNTARY SUBSTITUTES TO ARCHITECT FOR REVIEW NO LATER THAN FIFTEEN (15) DAYS PRIOR TO BID DUE DATE. IF

APPROVED VOLUNTARY SUBSTITUTES MUST ONLY BE INDICATED ON FORM OF PROPOSAL WITH APPROPRIATE "ADD" OR "DEDUCT" TO CONTRACT PRICE, DO NOT USE VOLUNTARY SUBSTITUTES FOR BASE BID.

SHOP DRAWINGS:

SUBMIT COMPLETE ELECTRONIC SHOP DRAWINGS FOR ALL MATERIALS AND EQUIPMENT INTENDED FOR USE ON THIS PROJECT. SHOP DRAWINGS SHALL CLEARLY INDICATE ALL PHYSICAL, PERFORMANCE AND ELECTRICAL CHARACTERISTICS FOR ALL MATERIALS AND EQUIPMENT.

SUBMIT ELECTRONIC COPIES OF ALL SHOP DRAWINGS FOR REVIEW BY ARCHITECT. NO WORK IS TO BE INSTALLED PRIOR TO RETURN OF ARCHITECT REVIEWED SHOP DRAWINGS.

OPERATION AND MAINTENANCE MANUALS:

UPON COMPLETION OF PROJECT, SUBMIT TWO (2) COMPLETE BOUND SETS OF OPERATING AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND SYSTEMS INSTALLED IN THIS PROJECT.

MANUALS SHALL INCLUDE GUARANTEE(S), COMPLETE OPERATING INSTRUCTIONS, REPAIR PARTS LIST, PREVENTATIVE MAINTENANCE SCHEDULE, BELT AND FILTER SCHEDULE, AND LIST OF ALL SUBCONTRACTORS ASSOCIATED WITH THE WORK, INCLUDING TELEPHONE NUMBER AND CONTACT PERSON.

OPERATING AND MAINTENANCE INSTRUCTIONS:

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

**CUTTING AND PATCHING:** 

ALL CUTTING AND PATCHING SHALL BE PROVIDED BY THE GENERAL TRADES UNDER THE DIRECTION OF THE MECHANICAL TRADES. COST WILL BE PAID BY THE MECHANICAL TRADE REQUESTING THE WORK.

RESTORED SURFACES SHALL BE OF SAME MATERIALS AND QUALITY AS ADJACENT SURFACES, AND SHALL MATCH SURROUNDING SURFACES, AND/OR BE RESTORED TO PRE-CONSTRUCTION CONDITION.

EXISTING, DAMAGED INACTIVE SERVICES AS DIRECTED BY ARCHITECT.

DURING CONSTRUCTION.

PROTECTION OF EXISTING SERVICES: PROTECT FROM ALL DAMAGE, EXISTING SERVICES (I.E., GAS, WATER, ELECTRICAL, ETC.), ENCOUNTERED IN THE WORK, NOT

SPECIFICALLY INDICATED TO BE DEMOLISHED. INCLUDE ALL RELATED COSTS. REPAIR AND/OR REPLACE EXISTING ACTIVE SERVICES INTENDED TO REMAIN IN SERVICE, BUT DAMAGED DURING THE COURSE OF CONSTRUCTION. ABSORB ALL RELATED COSTS. NO "EXTRAS" WILL BE PAID TO RESTORE EXISTING ACTIVE SERVICES DAMAGED

ARCHITECT WILL DETERMINE COURSE OF ACTION WHEN EXISTING INACTIVE SERVICES ARE DAMAGED DURING COURSE OF CONSTRUCTION. ABSORB ALL COSTS RELATIVE TO ADDITIONAL DEMOLITION, TERMINATION, RELOCATION AND/OR RESTORATION OF

**DEMOLITION**:

DEMOLITION DRAWINGS ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF THE WORK AND INDICATE GENERAL ARRANGEMENT OF EQUIPMENT, DUCTS, PIPING AND APPROXIMATE SIZES AND APPROXIMATE LOCATIONS. DO NOT SCALE DRAWINGS FOR EXACT MEASUREMENTS.

ALL MECHANICAL WORK SHOWN ON THE DEMOLITION DRAWINGS HAS BEEN TAKEN FROM THE OWNER'S RECORD DRAWINGS AND/OR CERTAIN FIELD OBSERVATIONS. EXACT SIZES, LOCATIONS, ARRANGEMENT AND ELEVATIONS OF ALL EXISTING MECHANICAL EQUIPMENT, EXISTING DUCTWORK, EXISTING PIPING AND EXISTING MECHANICAL DEVICES SHALL BE VERIFIED IN THE FIELD.

THE CONTRACTOR SHALL INCLUDE, IN HIS QUOTE, ALLOWANCES FOR REASONABLE DEVIATIONS BETWEEN WHAT IS SHOWN AND ACTUAL JOB CONDITIONS IN ORDER TO COMPLETE THE WORK IN THE SCOPE INDICATED.

REMOVE AND/OR REPLACE EXISTING EQUIPMENT, VALVES, CONTROLS, ETC., ONLY WHERE INDICATED IN THE CONTRACT DOCUMENTS. INTERRUPTION OF EXISTING ACTIVE PIPING: WHERE THE WORK MAKES TEMPORARY SHUT-DOWNS OF SERVICE UNAVOIDABLE, SHUT-DOWN AT TIME AS APPROVED BY THE OWNER, WHICH WILL CAUSE LEAST INTERFERENCES WITH ESTABLISHED OPERATING

ROUTINE. ARRANGE TO WORK CONTINUOUSLY, INCLUDING OVERTIME, IF REQUIRED TO MAKE NECESSARY CONNECTION TO EXISTING

REMOVE, RECONNECT, CAP, PLUG AND REPLACE EXISTING PIPING AND DUCTWORK ONLY WHERE INDICATED IN THE CONTRACT

UNLESS SPECIFICALLY NOTED TO THE CONTRARY. REMOVED MATERIALS SHALL NOT BE REUSED IN THE WORK. SALVAGE MATERIALS THAT ARE TO BE REUSED SHALL BE STORED SAFE AGAINST DAMAGE AND TURNED OVER TO THE APPROPRIATE TRADE FOR REUSE. SALVAGED MATERIALS OF VALUE THAT ARE NOT TO BE REUSED SHALL REMAIN THE PROPERTY OF THE OWNER UNLESS POSSESSION RIGHTS ARE WAIVED. THE MATERIALS ARE TO BE REMOVED FROM THE SYSTEMS BY THIS CONTRACTOR AND TURNED OVER TO THE OWNER IN THEIR ORIGINAL CONDITIONS. THE OWNER SHALL MOVE AND STORE THE MATERIALS. WHERE THE OWNER WAIVES POSSESSION RIGHTS, THESE MATERIALS SHALL BECOME THE PROPERTY OF THIS CONTRACTOR, WHO SHALL REMOVE AND LEGALLY

**ELECTRICAL WORK:** 

DISPOSE OF THE SAME, AWAY FROM THE PREMISES.

PROVIDE ALL ELECTRICAL WORK ASSOCIATED WITH, AND NECESSARY TO COMPLETE THIS PROJECT, WHICH IS NOT INCLUDED AS ELECTRICAL TRADES WORK.

PROVIDE ALL ELECTRICAL WORK, AS APPLICABLE, IN ACCORDANCE WITH DIVISION 16 REQUIREMENTS.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION (WITH ELECTRICAL TRADES) OF CORRECT VOLTAGES FOR ALL MECHANICAL EQUIPMENT IN CASE OF DISCREPANCY NOTIFY ENGINEER IMMEDIATELY AND PRIOR TO SHOP DRAWING SUBMITTALS FAILURE TO COMPLY WITH THIS REQUIREMENT HOLDS THE CONTRACTOR FULLY RESPONSIBLE FOR ANY SUBSEQUENT PROBLEMS.

CLEANING AND FINISHING:

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

**GUARANTEE:** 

REFER TO ARCHITECTURAL SPECIFICATIONS FOR GUARANTEES, IF NONE EXIST THE FOLLOWING MINIMUM GUARANTEES SHALL BE

PROVIDE A ONE (1) YEAR GUARANTEE COVERING ALL LABOR AND MATERIAL PROVIDED IN THIS PROJECT. FROM DATE OF OWNER ACCEPTANCE GUARANTEE SHALL INCLUDE ALL SHIPPING AND TRANSPORTATION CHARGES NECESSARY TO RETURN DEFECTIVE MATERIALS TO MANUFACTURER, AS WELL AS LABOR CHARGES NECESSARY TO REMOVE AND REPLACE DEFECTIVE MATERIALS. DEFECTIVE MATERIALS AND/OR EQUIPMENT MAY BE REPAIRED IN LIEU OF REPLACED WITH PRIOR APPROVAL OF ARCHITECT

SANITARY WASTE, VENT AND STORM PIPING:

BELOW GRADE AND/OR BELOW FLOOR SLABS WITHIN BUILDING WALLS AND EXTENDING 5'-0" OUTSIDE:

PIPE: ASTM D2665 SCHEDULE 40 PVC-DWV WITH SOLVENT WELDED JOINTS INSTALLED PER MANUFACTURER'S RECOMMENDATIONS FITTINGS: ASTM D1554 PVC SOLVENT CEMENTED. SOLVENT CEMENT: ASTM D2564. INSTALLATION: IN ACCORDANCE WITH ASTM D2321.

ABOVE GROUND PIPE AND FITTINGS:

CAST IRON HUBLESS SOIL PIPE AND FITTINGS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 310 AND LOCAL CODE REQUIREMENTS. HUBLESS COUPLING GASKETS SHALL CONFORM TO ASTM STANDARD C564. SCHEDULE 40 PVC IS ACCEPTABLE IN

UNDERGROUND SEWERS ON SITE EXTENDING BEYOND 5 FEET OUTSIDE OF BUILDING SHALL BE PROVIDED BY SITE UTILITIES CONTRACTOR

DOMESTIC WATER PIPING

ABOVE GROUND: PIPE:

2" AND SMALLER, ASTM B88, TYPE L, SEAMLESS HARD DRAWN RIGID COPPER WATER TUBE. FITTINGS: ANSI B16.22. WROUGHT COPPER. JOINTS: ASTM B32-95TA SOLDER JOINT 2" AND SMALLER; PRO-PRESS JOINTS ARE ALSO ACCEPTABLE.

ALL COMPONENTS OF DOMESTIC WATER SYSTEM SHALL BE LEAD FREE.

DOMESTIC WATER VALVES:

APOLLO 77C-140-01 FULL PORT, TWO PIECE WITH SCREWED ENDS, BRONZE BODY AND END PIECE, STAINLESS STEEL BALL, TEFLON SEAT RINGS, STAINLESS STEEL STEM, REINFORCED PTFE TEFLON PACKING WITH BRASS PACKING GLAND, ZINC PLATED STEEL HANDLE WITH PLASTIC GRIP SECURED BY ZINC PLATED STEEL HANDLE NUT, 150 PSI STEAM, 600 PSI WOG WORKING PRESSURE, NIBCO, JOSAM,

SWING CHECK VALVES 2" AND SMALLER: BRONZE BODY AND TRIM

NATURAL GAS PIPING:

ABOVE GROUND:

PIPE: 4" AND SMALLER, ASTM A-120, SCHEDULE 40, BLACK STEEL

FITTINGS: 2" AND SMALLER, MALLEABLE IRON, 150 LB. ASTM A 197; UNIONS, 250 LB. ASTM A 197; 2-1/2" AND LARGER, STANDARD WEIGHT, BUTT WELDED, BLACK STEEL, ASTM A 234 JOINTS: 2" AND SMALLER, ANSI B2.1 THREADS; 2-1/2" AND LARGER, ANSI B16.25 BUTTWELD.

PAINT ALL EXTERIOR GAS PIPING WITH TWO COATS OF RUST INHIBITING ENAMEL PAINT.

NATURAL GAS VALVES:

PIPING 2" AND SMALLER: MILWAUKEE VALVE CO., INC., MODEL #BB-1-100 "BUTTERBALL" OR APPROVED EQUAL AGA CERTIFIED AND UL LISTED QUARTER-TURN BUTTERFLY VALVE, BRONZE BODY, THREADED ENDS, STAINLESS STEEL STEM AND DISC, VITON SEAL WITH POSITIVE SHUT-OFF AND RATED FOR 175 LB. WORKING

PIPING 2-1/2" AND LARGER: MSS SP-78; 175 PSI, LUBRICATED PLUG TYPE, SEMI-STEEL BODY, SINGLE GLAND, WRENCH OPERATED, FLANGED ENDS.

VALVES GENERAL:

PROVIDE ALL VALVES NECESSARY FOR THE PROPER OPERATION AND DRAINAGE OF SYSTEMS. PROVIDE DRAIN VALVES AT ALL LOW

PROVIDE BALL VALVES AT EACH PIECE OF EQUIPMENT REQUIRING A WATER CONNECTION, IN RISERS AND MAIN BRANCHES AT POINTS OF TAKE-OFF FROM THEIR SUPPLY AND RETURN MAINS, ADJACENT TO CONTROL VALVES AND ALL EQUIPMENT REQUIRING

PROVIDE CHECK VALVES WHERE SHOWN OR NECESSARY TO PREVENT BACKFLOW. PROVIDE BALANCING VALVES IN LINES WHERE IT IS NECESSARY TO REGULATE THE QUANTITY OF WATER FLOWING IN A CIRCUIT.

ALL VALVES SHALL BE LINE SIZE UNLESS OTHERWISE INDICATED.

ALL PRODUCTS THAT CONSTITUTE A PART OF ANY VALVE ASSEMBLY SHALL BE ASBESTOS-FREE.

PIPING INSTALLATION:

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

DO NOT LOCATE PIPING ABOVE OR WITHIN 3 FEET HORIZONTALLY OF ELECTRICAL PANELS OR EQUIPMENT. FOR PIPING PASSING THROUGH WALLS, PACK VOID BETWEEN PIPE AND STRUCTURE WITH APPROVED, NON-COMBUSTIBLE MATERIAL. DO NOT ALLOW CONTACT BETWEEN PIPING AND MASONRY OF CONCRETE SURFACES.

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

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

PIPING INSULATION:

ALL PIPE SIZES: 1/2" THICK

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

DOMESTIC COLD WATER PIPING INSULATION:

FIBERGLASS INSULATION WITH FACTORY-APPLIED VAPOR BARRIER JACKET WITH SELF-SEALING LAPS. ASTM C547 CLASS 1 INSULATION, CONDUCTIVITY OF 0.26. VAPOR BARRIER JACKET: LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.2 PERMS, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAME SPREAD/ SMOKE DENSITY OF 25/50. APPLY INSULATION IN THICKNESS LISTED BELOW.

DOMESTIC HOT WATER & DOMESTIC HOT WATER RETURN PIPING INSULATION:

FIBERGLASS INSULATION WITH FACTORY-APPLIED VAPOR BARRIER JACKET WITH SELF-SEALING LAPS. ASTM C547 CLASS 1 INSULATION, CONDUCTIVITY OF 0.26. VAPOR BARRIER JACKET: LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.2 PERMS, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAME SPREAD/ SMOKE DENSITY OF 25/50. APPLY NSULATION IN THICKNESS LISTED BELOW.

PIPE 1" AND SMALLER: 1-1/2" THICK

PIPE 1-1/4" AND LARGER: 2" THICK STORM PIPING INSULATION (HORIZONTAL PIPING ONLY):

FIBERGLASS INSULATION WITH FACTORY-APPLIED VAPOR BARRIER JACKET WITH SELF-SEALING LAPS. ASTM C547 CLASS 1 INSULATION. CONDUCTIVITY OF 0.26. VAPOR BARRIER JACKET: LAMINATED WHITE KRAFT PAPER, ALUMINUM FOIL, GLASS FIBER REINFORCEMENT, PERMEANCE OF 0.2 PERMS, AND PUNCTURE RESISTANCE OF 50 UNITS. COMPOSITE FLAME SPREAD/ SMOKE DENSITY OF 25/50. APPLY INSULATION IN THICKNESS LISTED BELOW.

ALL PIPE SIZES: 1/2" THICK

PLUMBING/PIPING TESTING AND BALANCING:

TEST AND ADJUST ALL NEW PIPING SYSTEMS INSTALLED IN THIS PROJECT. PROVIDE ALL TESTING INSTRUMENTS, GAUGES, PUMPS AND OTHER EQUIPMENT REQUIRED OR NECESSARY FOR TEST. REPAIR ALL DEFECTS DISCLOSED BY TESTS WITHOUT ADDITIONAL COST TO THE OWNER REPEAT TESTS AETER ANY DEFECTS DISCLOSED ARE REPAIRED OR REPLACED. UNI ESS WAIVED BY ARCHITEC ARRANGE AND PAY THE COST OF ALL UTILITIES USED ON TESTS. COMPLETE ALL TESTS BEFORE COVERING IS APPLIED. ISOLATE ALL PIPING SYSTEM COMPONENTS NOT CONSTRUCTED TO WITHSTAND TEST PRESSURES. PURIFY WATER SYSTEM IN ACCORDANCE WITH STATE OF MICHIGAN AND AHJ REQUIREMENTS.

DRAINAGE SYSTEM:

WATER SYSTEM:

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

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

ALL GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH RULES AND REGULATIONS OF THE COMPANY OR UTILITY SERVING THE PROJECT, AND IN ANY CASE SHALL NOT BE LESS THAN THE FOLLOWING:

THE PIPING SYSTEM OR PORTIONS OF THE PIPING SYSTEM TO BE TESTED SHALL BE SUBJECTED TO AN AIR PRESSURE, USING OIL-FREE COMPRESSOR AIR, OF NOT LESS THAN 100 POUNDS PER SQUARE INCH, EQUAL 204" OF MERCURY. THE PRESSURE SHALL BE APPLIED WITH A FORCE PUMP AND SHALL BE MAINTAINED FOR NOT LESS THAN 30 MINUTES WITHOUT LEAKAGE. A MERCURY COLUMN GAUGE SHALL BE USED IN MAKING THE TESTS. TESTS SHALL BE SCHEDULED WITH LOCAL AUTHORITY FOR PRESENCE OF PROPER INSPECTOR. THE CONTRACTOR INSTALLING THESE PIPING SYSTEMS SHALL BE HELD RESPONSIBLE FOR THE TEST AND SHALL CERTIFY THE APPLICATION AND SHALL CERTIFY THE APPLICATION AND SUCCESS OF THE TEST.

NATURAL GAS LINES SHALL BE BLOWN OUT WITH DRY, OIL-FREE COMPRESSED AIR.

USING COILED PLASTIC MARKERS.

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

PLUMBING FIXTURE CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE WASTE WATER CLOSETS (FLUSH VALVE) WATER CLOSETS (FLUSH TANK) LAVATORY DRINKING FOUNTAINS ELECTRIC WATER COOLERS SERVICE SINKS SHOWERS WALL/ROOF HYDRANTS HOSE BIBS

CLEANOUTS AND ACCESS COVERS:

PROVIDE CLEANOUTS AT THE FOOT OR BASE OF EACH VERTICAL WASTE OR SOIL STACK, RAIN CONDUCTORS, IN DRAINAGE LINES AT ALL CHANGES IN DIRECTION AND AT 100'-0" INTERVALS.

CLEANOUTS SHALL BE READILY ACCESSIBLE, AND SHALL HAVE 18" CLEARANCE BEHIND THE PLUG FOR RIDDING, EXCEPT WHERE A REMOVABLE ACCESS COVER IS PROVIDED. CLEANOUTS SHALL BE SAME NOMINAL PIPE SIZE AS LINE SERVED, BUT NOT LARGER THAN

PROVIDE CLEANOUTS SPECIFICALLY DESIGNED FOR FLOOR TYPE.

FLOOR DRAINS:

ZURN 1400 SERIES, JAY R. SMITH, JOSAM, WADE.

MANUFACTURERS: CHICAGO, WATTS, KEWANNEE

UNLESS OTHERWISE NOTED, PROVIDE ROUND STRAINER/ GRATE, CAST IRON BODY, SEEPAGE FLANGE AND CLAMPING COLLAR. BOTTOM OUTLET SAME SIZE AS PIPE SERVED, WITH CAULKED, NO-HUB OR NEOPRENE GASKET CONNECTION. LOAD CLASSIFICATIONS PER ASME A112.21.1M. WATERPROOFING: 40 MILS SHEET MEMBRANE, CHLORINATED POLYETHYLENE, CHLORALOY

REFER TO PLUMBING FIXTURE SCHEDULE FOR FLOOR DRAIN TYPES.

VACUUM BREAKERS:

HOSE CONNECTION VACUUM BREAKERS SHALL CONFORM TO ASSE STANDARD 1011, WITH FINISH TO MATCH HOSE CONNECTION

BACKFLOW PREVENTERS:

REDUCED PRESSURE ZONE: INCLUDES DUAL CHECK VALVES, REDUCED PRESSURE RELIEF VALVE AND AIR VENT, SHUTOFF VALVES ON INLET AND OUTLET, STRAINER ON INLET, TEST PORTS WITH TEST COCKS, MANUFACTURER'S STANDARD MATERIALS. ASSE STANDARD 1013 CERTIFIED. MANUFACTURERS: WATTS 909 SERIES, CONBRACO, FEBCO

**DOUBLE CHECK VALVE ASSEMBLIES:** 

INCLUDES DOUBLE CHECK VALVES. SHUTOFF VALVES ON INLET AND OUTLET, STRAINER ON INLET, TEST PORTS WITH TEST COCKS. MANUFACTURER'S STANDARD MATERIALS. ASSE STANDARD 1015 CERTIFIED. MANUFACTURER: WATTS 709 SERIES, CONBRACO,

DUAL CHECK VALVE: INCLUDES TWO REMOVABLE CHECK VALVE ASSEMBLIES. MANUFACTURER'S STANDARD MATERIALS. ASSE STANDARD 1024 CERTIFIED. MANUFACTURERS: WATTS 7 SERIES, CONBRACO, FEBCO.

BACKFLOW PREVENTERS (AT APPLIANCE CONNECTIONS):

ATMOSPHERIC VACUUM BREAKERS: SINGLE FLOAT AND DISC WITH LARGE ATMOSPHERIC PORT. ANGLE PATTERN BRASS BODY, WITH CHROME PLATED FINISH, 1/2" INLET AND OUTLET UNLESS OTHERWISE NOTED. ASSE STANDARD 1001 CERTIFIED. MANUFACTURERS: WATTS 288A SERIES, CHICAGO

PRESSURE TYPE VACUUM BREAKERS

WATER SAVER MODEL L-102.

SPRING LOADED SINGLE FLOAT AND DISC WITH INDEPENDENT FIRST CHECK VALVE, MANUFACTURER'S STANDARD MATERIALS. WITH TEST COCKS AND BALL TYPE ISOLATION VALVES. ASSE STANDARD 1020 CERTIFIED. MANUFACTURERS: WATTS 800 SERIES,

WATER HAMMER ARRESTERS:

CONBRACO, FEBCO.

CERTIFIED PER PDI STANDARD WH-201, BELLOWS TYPE, WITH STAINLESS STEEL CASING AND BELLOWS, PRESSURE RATED FOR 250 PSI. PISTON TYPE, PRECHARGED TO 60 PSIG, SUITABLE FOR INSTALLATION IN ANY POSITION. PROVIDE ON ALL QUICK CLOSING VALVES IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS FOR PROPER OPERATION. MANUFACTURERS: (BELLOWS) ZURN SHOKTROL OR BY JAY R. SMITH, WADE; (PISTON) SIOUX CHIEF

SHEET METAL NOTES:

DEGREASE AND TREAT ALL EXPOSED DUCTWORK SO IT IS SUITABLE FOR PAINTING.

BLANK-OFF RETURN DUCTWORK IN AREAS OF WORK THAT CREATES DUST TO PREVENT DEBRIS FROM ENTERING MECHANICAL SYSTEM. PROTECT ALL DUCTWORK DURING CONSTRUCTION BY SEALING OPEN ENDS.

DUCTWORK: ALL DUCTWORK AND SHALL BE CONSTRUCTED AND SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST SMACNA'S ISSUE OF DUCT CONSTRUCTION STANDARDS. IN ADDITION, ALL CONCEALED JOINTS AND SEAMS SHALL BE SEALED WITH DLICT SEALANT FOLIAL TO FOSTER #32-14 APPROVED SEALANT MANUFACTURERS: 3M COMPANY BENJAMIN FOSTER COMPANY UNITED SHEET METAL, FLINTKOTE. ALL EXPOSED ROUND SPIRAL DUCTWORK SHALL BE MANUFACTURED BY EASTERN SHEET METAL, SEMCO, LYNDEN OR U.S. SHEET METAL. EXPOSED DUCTWORK SHALL HAVE SELF SEALING GASKETS WITH ALL MANUFACTURED FITTINGS. NO DUCT SEALANT ALLOWED ON EXPOSED DUCTWORK. ALL DUCTWORK SHALL BE DESIGNED FOR +/- 2" W.G. STATIC PRESSURE BUT NOT LESS THAN 26 GA. THICKNESS.

ALL ROUND TAKE-OFFS DOWNSTREAM OF TERMINAL UNITS SHALL BE MADE WITH CONICAL TAKE-OFF SPIN-IN FITTINGS TYPE SM-2DG. WITH FACTORY INSTALLED ADJUSTABLE DAMPER AS MANUFACTURED BY GENERAL ENVIRONMENT CORPORATION, GLENDALE,

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

VANES AND DEFLECTORS: ALL ELBOWS AND TURNS SHALL BE MADE WITH A RADIUS NOT LESS THE 1-1/2" TIMES THE DUCT DIAMETER

OR WIDTH. WHERE BUILDING CONSTRUCTION DOES NOT PERMIT A LONG RADIUS ELBOW OR TURN OR IF SHOWN ON THE CONTRACT DOCUMENTS. ACOUSTICAL TURNING VANES AND DEFLECTORS SHALL BE PROVIDED IN ALL ELBOWS. FLEXIBLE DUCTWORK: ALL LOW PRESSURE AND HIGH PRESSURE FLEXIBLE DUCT SHALL BE FLEXMASTER USA, INC., TYPE #1M INSULATED FLEXIBLE DUCT CONSISTING OF A FACTORY FABRICATED ASSEMBLY OF A TRILAMINATE ALUMINUM FOIL. FIBERGLASS AND POLYESTER. THE FLEXIBLE DUCT SHALL BE UL LISTED 181 CLASS 1 AIR DUCT AND COMPLY WITH NFPA 90A AND 90B AND HAVE A FLAME SPREAD OF NOT OVER 25 AND A SMOKE DEVELOPED OF NOT OVER 50. THE FLEXIBLE DUCT SHALL HAVE A MINIMUM PRESSURE

**DUCT INSULATION - GENERAL:** 

DUCTWORK SHALL BE THERMALLY INSULATED AS SPECIFIED.

RATING OF 12" WC THROUGH TEMPERATURE RANGE OF -20 DEGREES F. TO + 250 DEGREES F.

ALL DUCT INSULATION SHALL HAVE A FLAME SPREAD CLASSIFICATION OF 25 OR LESS, A FUEL CONTRIBUTED RATING OF 35 OR LESS AND SMOKE DEVELOPED RATING OF 50 OR LESS, AS RATED BY UNDERWRITERS' LABORATORIES. BLANKET TYPE (UP TO 1-1/2 LB./CU. FT. INSULATION):

INSULATION WITH ATTACHED FACING SHALL BE SECURED TO THE DUCTS WITH ADHESIVE APPLIED IN 6" BRUSH WIDTHS EVERY 12". THE ADHESIVE SHALL BE RIDGED SLIGHTLY BY USING A SERRATED TROWEL. INSULATION WITHOUT ATTACHED FACING (PLAIN) SHALL BE SECURED TO THE DUCTS THE SAME AS ABOVE THEN BIND WITH TYING CORD, SPIRAL WRAPPED OR HALF HITCHED. DUCT FITTINGS SHALL BE INSULATED BY WRAPPING WITH A GLASS FIBER BLANKET.

DUCT FITTINGS BY INSULATION STAPLES OR JUTE TWINE. THE BLANKET SHALL BE COVERED WITH AN OPEN MESH CLOTH OR GLASS FIBER HEAVILY COATED WITH VAPOR BARRIER ADHESIVE. THE INSULATION THICKNESS SHALL BE EQUAL TO THE THICKNESS OF THE INSULATION ON THE ADJOINING DUCTWORK.

**DUCT INSULATION APPLICATION:** 

THE FOLLOWING DUCTWORK SHALL BE INSULATED AS DESCRIBED HEREIN. REFER TO PREVIOUS PARAGRAPHS FOR RELATED INSULATION MATERIALS, DUCT INSULATION AND FINISH APPLICATIONS.

CONCEALED AIR CONDITIONING SUPPLY AIR DUCTWORK. CONCEALED OUTDOOR INTAKE DUCTWORK AND CONCEALED MIX PLENUMS: (THIS INCLUDES DUCTWORK IN CEILING SPACES USED AS RETURN AIR PLENUM, DUCTWORK IN UNVENTED ATTIC SPACES OR LINVENTED CEILINGS SPACES WITH ROOF INSULATION), OWENS-CORNING FIRERGLAS FACED DUCTWRAP COMMERCIAL GRADE TYPE 100 1-1/2" THICK. MINIMUM INSTALLED R VALUE 4.5. 1 LB./CU. FT. DENSITY WITH FACTORY "FRK" VAPOR BARRIER JACKET OR LAMINATED ALUMINUM FOIL, OPEN MESH GLASS FIBER REINFORCING MESH SCRIM AND FLAMEPROOF KRAFT PAPER.

HEATING AND AIR CONDITIONING SUPPLY AIR DUCTWORK, OUTDOOR AIR INTAKE DUCTWORK, RETURN AIR DUCTWORK AND MIXING

PLENUMS LOCATED IN CONCEALED SPACES VENTED TO THE OUTDOORS (THIS INCLUDES DUCTWORK IN VENTED CEILING SPACES OR

ATTICS) AND IN UNIVENTED ATTICS OR CEILINGS SPACES WITH INSULATED CEILINGS: OWENS-CORNING FIBERGLAS FACED DUCTWRAP COMMERCIAL GRADE TYPE 100 2" THICK MINIMUM INSTALLED R VALUE 6.0 1 LB./CU. FT. DENSITY WITH FACTORY "FRK" VAPOR BARRIER JACKET OR LAMINATED ALUMINUM FOIL, OPEN MESH GLASS FIBER REINFORCING MESH SCRIM AND FLAMEPROOF KRAFT PAPER. INSULATION IS NOT REQUIRED ON EXPOSED SUPPLY DUCTWORK, RETURN DUCTWORK AND EXHAUST DUCTWORK.

BALANCE ALL OUTLETS AND TERMINAL BOXES TO WITHIN 10% OF RATED C.F.M IN ACCORDANCE WITH AABC AND NEBB. SUBMIT BALANCING REPORT.

AIR TESTING AND BALANCING:

TEMPERATURE CONTROLS:

PROVIDE COMPLETE AND OPERABLE CONTROLS SYSTEM INCLUDING ALL WIRING, SENSORS, HARDWARE, SOFTWARE AND PROGRAMMING. TAKE POWER FROM SPARE 120V CIRCUIT OR EXTEND FROM EXISTING TRANSFORMER W/ SPARE CAPACITY. ALL WIRING SHALL BE IN ACCORDANCE WITH ELECTRICAL SPECIFICATIONS.

FIRE SUPPRESSION

1.01 SUBMITTALS:

A. SHOP DRAWINGS AND PRODUCT DATA: BEFORE ANY WORK IS COMMENCED, SUBMIT COMPLETE SETS OF THE FOLLOWING: SHOP DRAWINGS, SPRINKLER SYSTEM HYDRAULIC CALCULATIONS STANDPIPE SYSTEM HYDRAULIC CALCULATIONS. MATERIAL AND EQUIPMENT LISTS AND FULL DESCRIPTIVE DATA FOR EACH SYSTEM ALL IN ACCORDANCE WITH NFPA 13 FOR

a. INSURANCE CARRIER

b. LOCAL FIRE MARSHAL

d. ARCHITECT.

APPROVAL TO:

OBTAIN APPROVAL OF SHOP DRAWINGS. HYDRAULIC CALCULATIONS. AND PRODUCT DATA FROM THE FIR MARSHAL AND THE INSURANCE CARRIER PRIOR TO SUBMISSION TO THE OWNER AND THE ARCHITECT.

3. INCLUDE IN SHOP DRAWINGS REFLECTED CEILING PLANS SHOWING SPRINKLER HEAD LOCATIONS.

4. SUBMIT SPRINKLER DRAWINGS WHICH ARE LEGIBLE AND SHOW:

EXACT PIPING ARRANGEMENT AND SHOW ALL PIPE LENGTHS, VALVES, FITTINGS AND VALVES.

SECTION VIEWS AND SUFFICIENT NOTES TO PROVIDE FULL DESCRIPTIVE DATA FOR REVIEW, EXCEPT FOR FLOW-REQUIREMENTS WHICH SHALL BE SHOWN ON CALCULATION SHEETS.

COORDINATION WITH ALL DRAWINGS IS REQUIRED FOR BIDDING AND INSTALLATION. 6. SUBMIT MANUFACTURERS DATA SHEETS ON ALL SYSTEM

AND GREATER THAN SCHEDULE 10.

7. PROVIDE FIRE-HYDRANT FLOW TEST REPORT: PART 2 - PRODUCTS 2.01 MATERIALS: B. ABOVE GROUND PIPING:

STANDARD-WEIGHT STEEL PIPE: ASTM A53, ASTM A135, OR ASTM A795; SCHEDULE 40 IN NPS 6 (DN150) AND SMALLER AND SCHEDULE 30 IN NPS 8 (DN200) AND LARGER. SCHEDULE 30 STEEL PIPE: ASTM A135 OR ASTM A795, WITH WALL THICKNESS LESS THAN SCHEDULE 40 AND EQUAL

TO OR GREATER THAN SCHEDULE 30 OR ASTM A795 AND ASME B36.10M, SCHEDULE 30 WROUGHT-STEEL PIPE. THINWALL, THREADABLE STEEL PIPE: ASTM A135, OR ASTM A795, WITH WALL THICKNESS LESS THAN SCHEDULE 40

SCHEDULE 10 STEEL PIPE: ASTM A135 OR ASTM A795, SCHEDULE 10 IN NPS 5 (DN125) AND SMALLER AND NFPA 13 SPECIFIED WALL THICKNESS IN NPS 6 TO NPS 10 (DN150 TO DN250).

AS AN ALTERNATE TO SOLID PIPING OFFSETS IN SPRINKLER PIPING DROPS TO ATTAIN CENTER OF CEILING TILE

LOCATIONS, THE FOLLOWING FLEXIBLE SYSTEM IS ACCEPTABLE. PROVIDE SPRINKLER SYSTEM FINAL CONNECTIONS TO THE CENTER OF CEILING OF CEILING TILE BY MEANS OF AN FM APPROVED, BRAIDED, STAINLESS STEEL, ONE-PIECE, LEAK TESTED FLEXIBLE PIPE DROP INCLUDING A CEILING GRID MOUNTING BRACKET, AN ADJUSTABLE FLANGE AND AN FM/UL LISTED SPRINKLER HEAD AS SPECIFIED. PROVIDE UNITS AS MANUFACTURED BY FLEXHEAD INDUSTRIES OR AS

C. ABOVE GROUND FITTINGS:

APPROVED.

CAST-IRON THREADED FITTINGS: ASME B16.4 MALLEABLE-IRON THREADED FITTINGS: ASME B16.3. STEEL, THREADED COUPLINGS: ASTM A865. STEEL WELDING FITTINGS: ASTM A234/A234M, ASME B16.9, OR ASME B16.11.

D. ABOVE GROUND FIRE PROTECTION SERVICE VALVES:

STEEL FLANGES AND FLANGED FITTINGS: ASME B16.5.

GENERAL: UL LISTED AND FM APPROVED, WITH MINIMUM 175-PSIG (1200 KPA) NONSHOCK WORKING-PRESSURE RATING. VALVES FOR GROOVED-END PIPING MAY BE FURNISHED WITH GROOVED ENDS INSTEAD OF TYPE OF ENDS

STEEL, GROOVED-END FITTINGS: UL-LISTED AND FM-APPROVED, ASTM A47 (ASTM A47M), MALLEABLE IRON OR

ASTM A536, DUCTILE IRON; WITH DIMENSIONS MATCHING STEEL PIPE AND ENDS FACTORY GROOVED ACCORDING

2. GATE VALVES: NPS 2 (DN50) AND SMALLER: UL 262; CAST-BRONZE, THREADED ENDS; SOLID WEDGE; OS&Y, AND RISING STEM, VISUAL INDICATOR: WITH ELECTRICAL 115-V AC. PREWIRED TWO-CIRCUIT, SUPERVISORY SWITCH. GATE VALVES, NPS 2-1/2 (DN65) AND LARGER: UL 262, IRON BODY, BRONZE MOUNTED, TAPER WEDGE, OS&Y, AND RISING STEM. INCLUDE REPLACEABLE, BRONZE, WEDGE FACING RINGS AND FLANGED ENDS. VISUAL INDICATOR: WITH ELECTRICAL 115-V AC, PREWIRED, TWO-CIRCUIT, SUPERVISORY SWITCH

4. SWING CHECK VALVES, NPS 2 (DN50) AND SMALLER: UL 312 OR MSS SP-80, CLASS 150; BRONZE BODY WITH

SPLIT-CLAPPER CHECK VALVES, NPS 4 (DN100) AND LARGER: UL 312, CAST-IRON BODY WITH RUBBER SEAL,

SWING CHECK VALVES: NPS 2-1/2 (DN65) AND LARGER: UL 312, CAST-IRON BODY AND BOLTED CAP, WITH BRONZE DISC OR CAST-IRON DISC WITH BRONZE-DISC RING AND FLANGED ENDS.

BRONZE DISC AND THREADED ENDS.

DRAIN & TEST VALVES NEED NOT BE OS&Y

2.02 WATER FLOW SWITCHES:

PROVIDE UL-LISTED OR FM-APPROVED WATER FLOW TYPE SWITCHES AND/OR WATER PRESSURE TYPE FLOW SWITCHES

BRONZE-ALLOY DISCS, AND STAINLESS STEEL SPRING AND HINGE PAN.

OF THE VANE TYPE DESIGN AS SHOWN AND WHERE REQUIRED, COMPATIBLE WITH THE PIPE SIZE AND PIPE MATERIAL ON SYSTEMS WHERE PRESSURE FLUCTUATIONS COULD CAUSE FALSE WATER FLOW ALARMS, PROVIDE SWITCHES WITH

REQUIREMENTS OF THE FLOW SWITCHES TO ENSURE THEIR COMPATIBILITY WITH THE FIRE ALARM SYSTEM.

AN ADJUSTABLE RETARD FEATURE PROVIDE SWITCHES WITH SINGLE OR DOUBLE-POLE, DOUBLE THROW CONTACTS RATED AT 1.0 AMPS, 120 VOLTS, 60 HERTZ AC AND 0.25 AMPS, 24 VOLTS, DC. COORDINATE WITH SECTION 16800 TO DETERMINE THE EXACT ELECTRICAL

PROVIDE SWITCHES WITH A TAMPER SWITCH ON THE WIRING COMPARTMENT COVER PLATE. PROVIDE SWITCHES RATED FOR A MINIMUM OF 250 PSI WORKING PRESSURE

F. PROVIDE SWITCHES WITH AN ADDRESSABLE MODULE. G. WIRING OF SWITCHES INTO THE FIRE ALARM SYSTEM IS BY FAC.

H. PROVIDE SWITCHES AT THE FOLLOWING LOCATIONS: IN THE SPRINKLER/STANDPIPE RISER AS PART OF THE ALARM VALVE TRIM.

2.03 SUPERVISORY TAMPER SWITCHES:

A. PROVIDE UL LISTED AND FM APPROVED SUPERVISORY TAMPER SWITCHES ON ALL MANUALLY OPERATED VALVES WHOSE POSITION COULD IMPAIR ANY PART OF ALL OF SPRINKLER SYSTEM OPERATION. B. PROVIDE SWITCHES WITH R DOUBLE-POLE, DOUBLE-THROW CONTACTS RATED AT 1.0 AMPS, 120 VOLTS, 60 HERTZ. AC AND 0.25 AMPS, 24 VOLTS DC. COORDINATE WITH SECTION 16800 TO DETERMINE THE EXACT ELECTRICAL REQUIREMENTS

OF THE SUPERVISORY TAMPER SWITCHES TO ENSURE THEIR COMPATIBILITY WITH THE FIRE ALARM SYSTEM. C. PROVIDE SWITCHES WITH A GASKETED, WATERTIGHT WIRING COMPARTMENT COVERPLATE

ADJACENT TO EACH SPRINKLER ZONE CONTROL VALVE.

D. PROVIDE EXPLOSION-PROOF SWITCHES IN HAZARDOUS AREAS.

E. WIRING OF SWITCHES INTO THE FIRE ALARM SYSTEM IS SPECIFIED IN DIVISION 16. 2.04 ALARM VALVE:

A. PROVIDE A UL-LISTED AND FM-APPROVED ALARM CHECK VALVE, RATED AT A MINIMUM OF 300 PSIG WORKING PRESSURE CAPABLE OF BEING INSTALLED VERTICALLY OR HORIZONTALLY. PROVIDE VALVE BODY OF DUCTILE IRON WITH FLANGED OR GROOVED CONNECTIONS. PROVIDE VALVE WITH A BRASS SEAT, AND SINGLE HINGE PIN AND LATCH DESIGN. PROVIDE VARIABLE PRESSURE TRIM SET WITH RETARD CHAMBER, DRAIN CONNECTIONS, PRESSURE GAUGES AND CONNECTIONS FOR (ELECTRIC ALARM PRESSURE SWITCH) (WATER MOTOR GONG ALARM). DO NOT DISCHARGE THE DRIP CUP

ASSEMBLY INTO THE MAIN DRAIN PIPING. THE VIKING CORP. "MODELJ-1", OR AS APPROVED.

2.05 FIRE DEPARTMENT CONNECTIONS:

A. WALL, FIRE DEPARTMENT CONNECTIONS:

UL 405. CAST-BRASS BODY WITH BRASS. WALL. ESCUTCHEON PLATE: BRASS. LUGGED CAPS WITH GASKETS AND BRASS CHAINS; AND BRASS, LUGGED SWIVEL CONNECTIONS. INCLUDE INLETS WITH THREADS ACCORDING TO NFPA 1963 AND MATCHING LOCAL FIRE DEPARTMENT SIZES AND THREADS, OUTLET WITH PIPE THREADS, EXTENSION PIPE NIPPLES, CHECK DEVICES OR CLAPPERS FOR INLETS AND ESCUTCHEON PLATE WITH MARKING AUTO SPKR & STANDPIPE

POLISHED BRASS.

2.06 ACCESSORIES: A. HANGER AND SUPPORTS:

TYPE: FLUSH MOUNTING.

ESCUTCHEON PLATE: RECTANGULAR.

1. FURNISH HANGERS AND SUPPORTS IN ACCORDANCE WITH NFPA 13

ALARM DEVICE. PERMANENTLY AFFIX A DESIGN DATA NAMEPLATE TO THE RISER OF THE SYSTEM.

C. PRESSURE GAGES: PROVIDE PRESSURE GAGES ON THE SUCTION AND DISCHARGE SIDES OF THE FIRE PUMP.

ATTACH PROPERLY LETTERED, APPROVED IDENTIFICATION SIGNS CONFORMING TO NFPA 13 TO EACH VALVE AND

PROVIDE PRESSURE GAGES ON BOTH SIDES OF THE WET PIPE SPRINKLER SYSTEM ALARM VALVE AND AT THE TOP

PROVIDE A TEST VALVE, SIGHT GLASS, SPRINKLER ORIFICE EQUIVALENT AND PIPING TRIM TO THE COMMON

PROVIDE UL-LISTED SPRING PRESSURE GAGES WITH A 3-1/2-INCH DIAL AND BE DRAINABLE. PROVIDE ANY ADDITIONAL GAUGES REQUIRED BY NFPA 13, 14 AND 20, NOT SPECIFICALLY LISTED HERE.

DRAIN PIPING FOR SYSTEM TESTING.

OF EACH STANDPIPE RISER.

D. INSPECTORS TEST CONNECTION AND DRAINS:

PROVIDE AN INSPECTORS TEST CONNECTION AND DRAIN SYSTEM (RISER AND LOW POINT DRAIN) IN ACCORDANCE WITH NFPA 13 FOR EACH ZONE. PROVIDE A SECTIONAL DRAIN VALVE AND COMMON DRAIN PIPING TO THE NEAREST FLOOR DRAIN FOR DRAINAGE.

PART 3 - EXECUTION 3.01 PIPING APPLICATIONS:

A. INSTALL ALL PIPING SYSTEMS IN FULL ACCORDANCE WITH NFPA 13 AND THE AUTHORITY HAVING JURISDICTION.

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

West Michigan Hispanic Chamber of Commerce- HQ

1111 Godfrey Grand Rapids, MI 4950

**CONSULTANT** 



© 2021 ROSSETTI

PROFESSIONAL SEAL

**# DESCRIPTION** DATE 01/24/2025

**KEY PLAN** 

SHEET TITLE

Mechanical Specifications

PROJECT#

2024-010.00

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151 **PROJECT** West Michigan Hispanic **Chamber of** Commerce- HQ 1111 Godfrey Grand Rapids, MI 49507 CONSULTANT 180 High Oak Road Bloomfield Hills, Michigan 48304 PROFESSIONAL SEAL RTU-2 20-TON 600 CFH 3,896 LBS © 2021 ROSSETTI # DESCRIPTION 2-1/2"G DN THRU ROOF 4"<u>OFD-1</u> 2,480 SF | 4"<u>RD-1</u> 2,480 SF 4"<u>OFD-1</u> 2,480 SF 4"<u>RD-1</u> 2,480 SF 4"<u>RD-1</u> 1,585 SF 4"<u>OFD-1</u> 1,585 SF RTU-1 30-TON 600 CFH 3,984 LBS TRANSITION DUCTWORK
IN CURB TO SIZE
LISTED IN LEVEL 2
CEILING SPACE (TYP.) <u>EF-2</u> 625 CFM **KEY PLAN** SHEET TITLE Mechanical Roof Plan PROJECT# Scale: 1/4" = 1'-0" 2024-010.00 MECHANICAL ROOF PLAN **MP-131** SCALE: 1/4" = 1'-0" SHEET# **MP-131** 



			ELE(	CTRI	C (C	ABINE	T) & UN	IIT HE	ATER	SCHEDULE
TAG	MANUFACTURER	AREA	MOUNTING	CFM	MBH	F	ELECTRICAL DATA		NO OF	NOTES/ASSESSORIES
IAG	& MODEL No.	SERVED	MOONTING	OI W	William	WATTS	VOLTS / PHASE	AMPS	FANS	NOTES/ACCESSORIES
ECUH-1	BERKO FFCH558	VESTIBULE #101	RC	250	17.0	5000	208/3	24	1	ABC
ECUH-2	BERKO CUH935	STAIR B #ST-B	RW	250	17.0	5000	208/3	15	1	AC
EUH-1	MARKEL F2F5103N	ELEC #109	SUS	400	11.2	3300	208/3	9.17	1	ACDE
EUH-2	MARKEL F2F5103N	MECH ROOM #106	SUS	400	11.2	3300	208/3	9.17	1	ACDE
	SW RW SRW F SUS	- RECES				MOUNTIN	NG KEY		SRC - SE SWI - SU RWI - RE FI - FL	ECESSED CEILING EMI-RECESSED CEILING URFACE WALL INVERTED ECESSED WALL INVERTED LOOR INVERTED PEN CEILING
						NOTES AND AC	CCESSORIES DESIG	NATION		
А	INTERGRAL THERMOSTA	Т						E	WALL BRACKET	
В	CEILING MOUNTED									
С	UNIT MOUNTED DISCONN	NECT SWITCH								
D	MOUNTED UNIT AS HIGH	AS POSSIBLE								

			E	ELECTRICAL DA	TA	HEA	TING		COOLII	NG DATA @ 98	5°F OAT			SI	JPPLY FAN DAT	A			R	ELIEF FAN DAT	A			EFFICI	IENCY		
TAG	MANUFACTURER & MODEL NO.	AREA SERVED	VOLTS	UNIT MCA	MROPD	INPUT CFH	OUTPUT MBH	TOTAL MBH	SENSIBLE MBH	MIN. O.A. CFM	EAT db/wb	UNIT LAT AFTER FAN TEMP GAIN db/wb	CFM	ESP "WC	TSP "WC W/ LOADED FILTER	HP	RPM	CFM	ESP "WC	TSP "WC	HP	RPM	WEIGHT LBS	EER IEER	AFLUE %	REFRIGERANT	NOTES/ACCESSORIES
RTU-1	DAIKIN DPSC30B	FIRST FLOOR	208/3	179.5	225	600.0	486.0	340.3	237.9	4,200	82.5/67.4	56.9/54.7	9,000		4.4	10.0	1,738	1,200	0.5		1.5	900	3,984	10.4 16.7	80	R32	ABCDEFGHIJKLMNOPQ
RTU-2	DAIKIN DPSC20B	SECOND FLOOR	208/3	140.3	175	600.0	486.0	251.6	185.9	2,400	80.9/66.3	53.4/52.9	6,500		3.9	10.0	1,510	1,200	0.5		1.5	900	3,896	11.1 20.0	80	R32	ABCDEFGHIJKLMNOPQ
													NOTES AN	ID ACCESSORI	ES DESIGNATIO	N											
14"HIGH	ROOF CURB									Н во	TTOM DISCHA	RGE AND RETU	JRN									0	MOTORIZE	D DAMPERS			
ECONON	IZER - COMPARATIVE	ENTHALPY								I VS	DIGITAL COMF	PRESSOR										Р					SCREENING SYSTEM, ACRYLICAP ABS, HORIZON
POWER	EXHAUST - VARIABLE	SPEED - PRESSURE C	ONTROL							Ј МО	DULATING GA	S VALVE WITH	STAINLESS S	STEEL HEAT EX	CHANGER							Q	NOTE THAT	T LAT IS FROM	1 THE UNIT (NO	OT COIL)	
DISCON	IECT SWITCH									K DIR	ECT DRIVE FA	N WITH VFD OF	R ECM SUPPL	LY DUCT S.P. (	CONTROL												
GFI REC	EPTACLE - WIRED BY	ELECT.								L DO	UBLE WALL CO	ONSTRUCTION															
COMBO	RACK - 2" FILTERS - M	ERV-8 - BLANK 4" RACI								M TRI	JF VAV UNIT -	MAINTAIN CON	ISTANT DISCH	HARGE TEMP	AND STATIC PR	FSSURF											

				EXHAL	JST F	AN	SCH	HED	ULE				
TAG	MANUFACTURER	LOCATION	SERVICE	FAN	DRIVE		FAN			MOTOR		WEIGHT	NOTES/ACCESSORIES
TAG	& MODEL NO.	LOCATION	SERVICE	TYPE	TYPE	CFM	ESP IN. W.C.	RPM	VOLTAGE	HP	ВНР	(LBS.)	NOTES/ACCESSORIES
EF-1	LOREN COOK 120SQ10D	ELEC (111)	ELEC (111)	IN-LINE	BELT	500	0.25	796	120/1/60	1/6	0.049	105	AEF
EF-2	LOREN COOK 100 ACEB	ROOFTOP	TOILET ROOMS	DOWNBLAST CENTRIFUGAL	BELT	625	0.50	1,523	120/1/60	1/6	0.123	38	ABCD
EF-3	LOREN COOK 120 ACEB	ROOFTOP	KITCHEN GENERAL EXH.	DOWNBLAST CENTRIFUGAL	BELT	1,200	0.75	1,515	120/1/60	1/3	0.288	59	ABCD

D. BIRDSCREEN

E. VIBRATION ISOLATION HANGER MOUNTS
 F. PROVIDE TEMPERATURE CONTROLLER

INLET OUTLET MAX. AIRFLOW CFM CFM VOLTAGE KW MCA MOCP TITUS DESV RTU-1 SEE PLAN TITUS DESV RTU-1 VAV-1-2 SEE PLAN MULTIPLE, SEE PLAN VAV-2-1

VARIABLE AIR VOLUME BOX SCHEDULE

NOTES AND ACCESSORIES DESIGNATION

MANUFACTURER

& MODEL NO.

A. LYNERGY SCR HEATING COIL, 4-WIRE
B. ACCESS DOOR INTERLOCKED DISCONNECT SWITCH

		GA	AS V	VAT	ER HE	ATE	RSC	CHE	DUL	.E	
	MUNUFACTURER			GAS D	ATA		CAPAC	CITIES		ELECTRICAL	
TAG	& MODEL NO.	LOCATION	TYPE	INPUT (CFH)	THERMAL EFFICIENCY	RECO\	/ERY (GPH)	TR (°F)	STOR. (GAL)	VOLTS / PHASE	- NOTES / ACCESSORIES
GWH-1	A.O. SMITH BTX-80	MECH ROOM #106	NAT	76.0	96%		86	100	50	120/1	ABCD
GWH-2	A.O. SMITH BTH-199	MECH ROOM #106	NAT	199.0	96%		230	100	100	120/1	ABCD
				NO	OTES AND ACCESS	ORIES DES	IGNATION				
А	P&T RELIEF VALVE TO	FLOOR DRAIN				С	EXPANSIO	N TANK			
В	CONCENTRIC VENT KIT	(VERTICAL)				D	PROVIDE /	AUXILIARY	CONTACT I	FOR REMOTE BMS MO	DNITORING

			Р	UMF	PSC	HE	DUL	E.			
TAG	MUNUFACTURER	LOCATION	SYSTEM	TYPE	SIZE	CAPA	CITIES	N	MOTOR DAT	A	NOTES / ACCESSORIES
IAG	& MODEL NO.	LOCATION	SERVED	ITPE	SIZE	GPM	HEAD	HP	VOLTS	RPM	- NOTES / ACCESSORIES
CP-1	BELL&GOSSETT LR-15B	UTILITY #134	GWH-1	INLINE	3/4"	10	10	1/12	120/1	3150	А
			NOT	ES AND ACC	CESSORIES	S DESIGNA	TION				
А	SEE SPECIFICATION										

			SUN	/IP PUN	/IP S	SCHI	EDUL	E.			
TAG	MANUFACTURER	LOCATION	SERVICE	PUMP	GPM	HEAD		МОТ	OR		NOTES/ACCESSORIES
170	& MODEL NO.	LOCATION	OLIVIOL	TYPE	OI W	(FT)	VOLTAGE	HP	FLA	RPM	Noted/Addeddonied
SP-1	GOULDS WE0738H	SEE PLAN	ELEVATOR SUMP PUMP	SUBMERSIBLE EFFLUENT	50	20	208/3/60	3/4	6.2	3,500	ABCDEF

NOTES AND ACCESSORIES DESIGNATION

A. 2" INLET AND DISCHARGE B. PROVIDE CHECK VALVE ON DISCHARGE C. PACKAGED EQUIPMENT D. ALARM PANEL WITH 3 FLOAT CONTROL SYSTEM E. HIGH LEVEL ALARM TO DDC F. SINGLE POINT ELECTRICAL CONNECTION WITH FACTORY INSTALLED DISCONNECT

	GI	RILLE,	REGIS <sup>*</sup>	TER A	ND DIFF	FUSER	SCHE	DUL	E
TAG	MANUFACTURER & MODEL NO.	SERVICE	TYPE	MOUNTING	FINISH	NECK SIZE	OVERALL SIZE	MAX. NC	NOTES/ACCESSORIES
S-1	TITUS OMNI	SUPPLY	PLAQUE DIFFUSER	LAY-IN OR GYP CEILING	WHITE	SEE PLAN	24"x24"	25	A
S-2	TITUS OMNI	SUPPLY	PLAQUE DIFFUSER	LAY-IN OR GYP CEILING	WHITE	SEE PLAN	12"x12"	25	A
S-3	TITUS TBD-80	SUPPLY	LINEAR DIFFUSER	LAY-IN OR GYPCEILING	BLACK INTERIOR WHITE FRAME	NOTE D	4'-0" LENGTH	25	CD
S-4	TITUS S300FS	SUPPLY	GRILLE	ROUND DUCT	MATCH FINISH OF DUCTWORK	N/A	SEE PLAN	25	В
S-5	TITUS 272FS	SUPPLY	GRILLE	WALL OR RECT. DUCT	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25	
R-1	TITUS PXP	RETURN	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	N/A	24"x24"	25	A
R-2	TITUS PAR	RETURN	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	22"x22"	24"x24"	25	ΑE
R-3	TITUS PAR	RETURN	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	10"x22"	12"x24"	25	ΑE
E-1	TITUS 3FL	EXHAUST	GRILLE	WALL OR GYP CEILING	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25	
E-2	TITUS PAR	EXHAUST	PERFORATED GRILLE	LAY-IN OR GYP CEILING	WHITE	SEE PLAN	24"x24"	25	A
T-1	TITUS 3FL	TRANSFER AIR	GRILLE	WALL	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25	
T-2	TITUS 56FL	TRANSFER AIR	GRILLE	WALL	WHITE	SAME AS OVERALL SIZE	SEE PLAN	25	

NOTES AND ACCESSORIES DESIGNATION

C. MOTORIZED DAMPER

A. FACTORY MOUNTED AND WIRED DISCONNECT SWITCH

B. 18" INSULATED ROOF CURB FOR SLOPED ROOF

NOTES AND ACCESSORIES DESIGNATION

A. PROVIDE MATCHING TRIM FOR INSTALLATION IN HARD CEILING, REFER TO ARCH RCP B. AIR EXTRACTOR DAMPER

C. 2-SLOT, 1" SLOT WIDTH

D. SEE PLAN FOR OVAL INLET SIZE, ALL TAKE-OFF BRANCH DUCTS TO OVAL TRANSITION SHALL BE 8" DIA. ROUND F. PROVIDE MATCHING SIZE GRILLE SILENCER, RUSKIN MODEL GSV

E. PROVIDE ACOUSTICAL BOOT

	MANUFACTURER		AREA	UNIT	INLET	MAX. PRIMARY	MIN. PRIMARY	PRIMARY	DOWN	FAN				ATING COIL SOUND DATA		SOUND DATA N		SOUND DATA NC		IL SOUND DATA N		SOUND DATA NC		
TAG	& MODEL NO.	SYSTEM	SERVED	SIZE	SIZE (IN.)	AIRFLOW CFM	AIRFLOW CFM	INLET SP IN. W.C.	STREAM SP IN. W.C.	AIRFLOW CFM	FAN HP	VOLTAGE	KW	MCA	MOCP	RADIATED	DISCHARGE	NOTES/ACCESSORIES						
FPB-1-1	TITUS DTFS	RTU-1	LOBBY/CAFE (102)	SIZE D	14	1,720	580	1.00	0.25	1,720	1/2	208/3/60	10.5	42.7	45	40	34	ABC						
FPB-1-2	TITUS DTFS	RTU-1	COMMUNITY OFFICES (118)	SIZE D	12	1,350	405	1.00	0.25	1,350	1/2	208/3/60	8.0	34.0	35	37	28	ABC						
FPB-1-3	TITUS DTFS	RTU-1	MULTIPLE, SEE PLAN	SIZE A	6	350	105	1.00	0.25	350	1/3	208/3/60	2.5	12.8	15	36	25	ABC						
FPB-1-4	TITUS DTFS	RTU-1	EVENT ROOM (107)	SIZE E	14	1,800	540	1.00	0.25	1,800	3/4	208/3/60	15.0	61.9	65	42	38	BCD						
FPB-1-5	TITUS DTFS	RTU-1	EVENT ROOM (107)	SIZE E	14	1,800	540	1.00	0.25	1,800	3/4	208/3/60	15.0	61.9	65	42	38	BCD						
FPB-2-1	TITUS DTFS	RTU-2	MULTIPLE, SEE PLAN	SIZE C	10	770	230	1.00	0.25	770	1/3	208/3/60	5.0	21.5	25	32	25	ABC						
FPB-2-2	TITUS DTFS	RTU-2	MULTIPLE, SEE PLAN	SIZE G	16	2,400	720	1.00	0.25	2,400	1	208/3/60	10.5	62.7	75	43	28	ABC						
FPB-2-3	TITUS DTFS	RTU-2	TRAINING ROOM (211)	SIZE C	10	820	505	1.00	0.25	820	1/3	208/3/60	5.5	23.2	25	34	27	ABC						
FPB-2-4	TITUS DTFS	RTU-2	TRAINING ROOM (212)	SIZE D	12	1,050	505	1.00	0.25	1,050	1/2	208/3/60	7.5	32.3	35	34	23	ABC						
FPB-2-5	TITUS DTFS	RTU-2	CEO OFFICE/ MTG RM (210)	SIZE B	8	430	235	1.00	0.25	430	1/3	208/3/60	3.0	14.5	15	29	23	ABC						
FPB-2-6	TITUS DTFS	RTU-2	MULTIPLE, SEE PLAN	SIZE D	12	1,200	420	1.00	0.25	1,200	1/2	208/3/60	9.0	37.5	40	36	25	ABC						
FPB-2-7	TITUS DTFS	RTU-2	CONFERENCE ROOM (206)	SIZE D	12	1,050	570	1.00	0.25	1,050	1/2	208/3/60	7.5	32.3	35	34	23	ABC						
FPB-2-8	TITUS DTFS	RTU-2	CONFERENCE ROOM (204)	SIZE B	8	400	170	1.00	0.25	400	1/3	208/3/60	3.0	14.5	15	28	20	ABC						

NOTES AND ACCESSORIES DESIGNATION

A. LYNERGY SCR HEATING COIL, 4-WIRE
B. ACCESS DOOR INTERLOCKED DISCONNECT SWITCH

D. 3-STAGE HEATING COIL

ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

NOTES/ACCESSORIES

West Michigan Hispanic **Chamber of** Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507



t | 248 | 258 | 1610

f|248|258|9538

PROFESSIONAL SEAL

180 High Oak Road Bloomfield Hills, Michigan 48304

© 2021 ROSSETTI

# DESCRIPTION

1 Bid Set	01/24/202

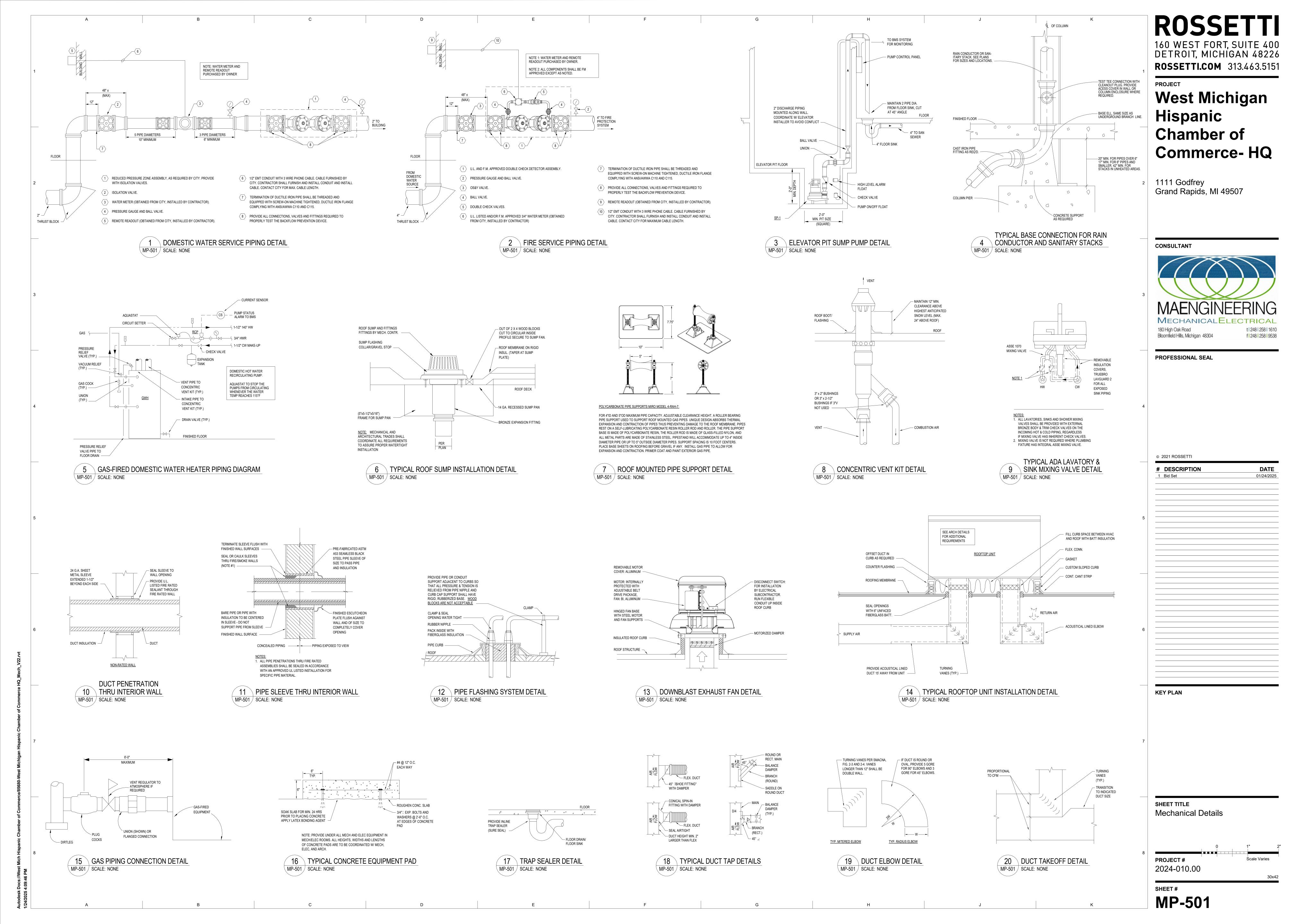
**KEY PLAN** 

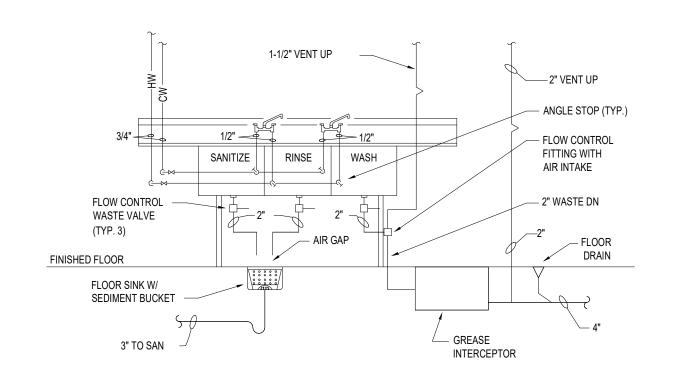
SHEET TITLE Mechanical Schedules

PROJECT# 2024-010.00

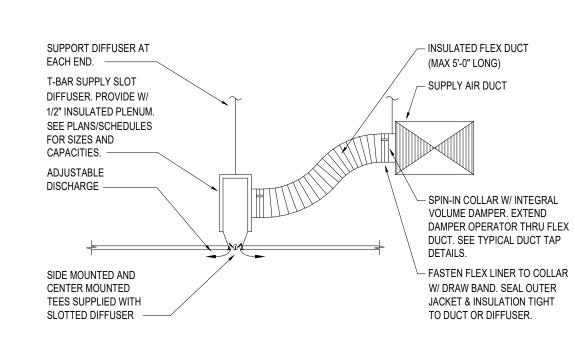
SHEET#

**MP-401** 

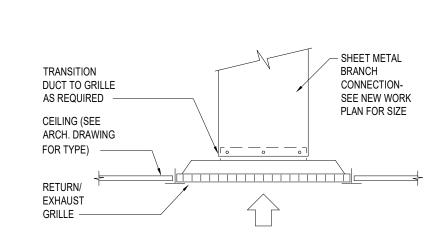




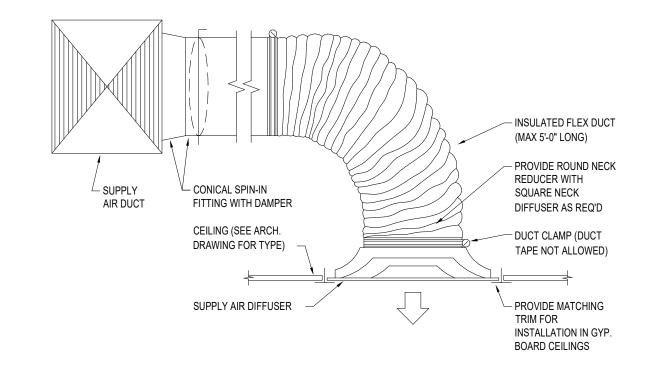
1 3-COMPARTMENT SINK DETAIL MP-502 SCALE: NONE



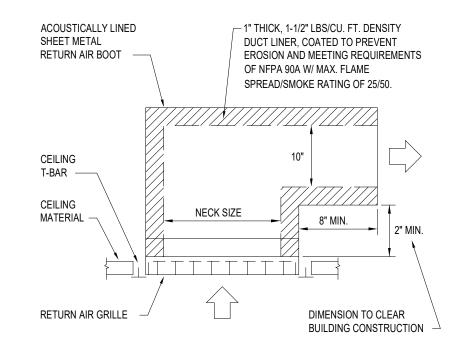
2 LINEAR SLOT DIFFUSER WITH FLEX DUCT DETAIL MP-502 SCALE: NONE



RETURN / EXHAUST AIR GRILLE DETAIL SCALE: NONE

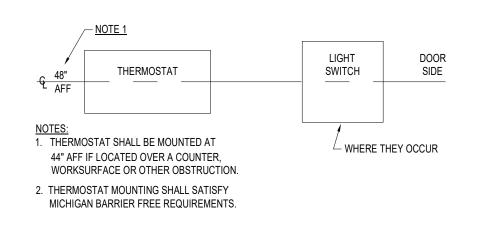


4 SUPPLY AIR DIFFUSER WITH FLEX DUCT DETAIL MP-502 SCALE: NONE

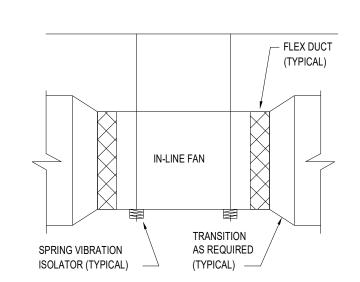


RETURN AIR GRILLE WITH ACOUSTICAL BOOT DETAIL

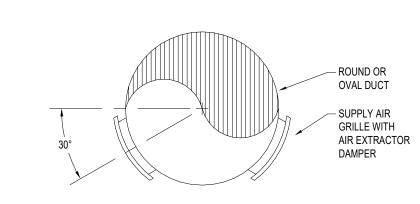
MP-502 SCALE: NONE



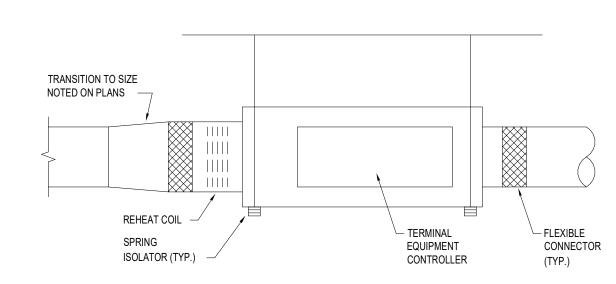
6 THERMOSTAT MOUNTING DETAIL
MP-502 SCALE: NONE



8 IN-LINE FAN INSTALLATION DETAIL
MP-502 SCALE: NONE

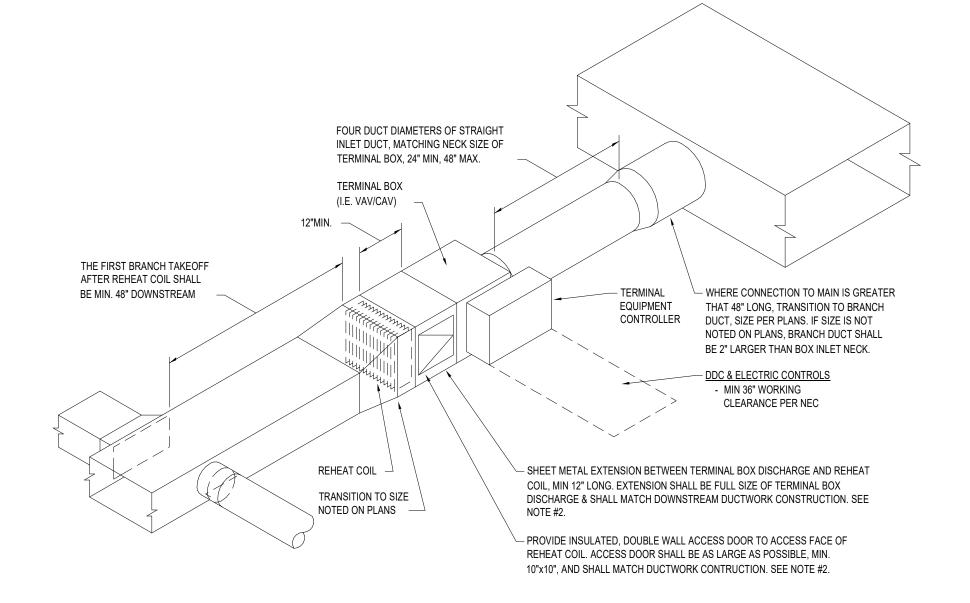


7 DUCT-MOUNTED SUPPLY GRILLE DETAIL
MP-502 SCALE: NONE



NOTE: REFER TO TYPICAL TERMINAL BOX INSTALLATION DETAIL FOR ADDITIONAL REQUIREMENTS.





### NOTES: 1. FLEX DUCT IS NOT ALLOWED UPSTREAM OR DOWNSTREAM OF TERMINAL BOXES, EXCEPT IN THE BRANCH CONNECTION DIRECTLY TO DIFFUSER/GRILLES.

- 2. TERMINAL BOX CONSTRUCTION THAT INCORPORATES A FACTORY PROVIDED ACCESS DOOR IN THE SIDE OF THE BOX CASING ARE ALLOWED TO MOUNT THE REHEAT COIL DIRECTLY TO THE TERMINAL BOX DISCHARGE OPENING AND FOREGO THE SHEET METAL EXTENSION BETWEEN BOX & COIL.
- 3. TERMINAL BOXES SHALL BE MOUNTED NO HIGHER THAN 2' ABOVE THE CEILING GRID & SHALL BE LOCATED SO AS TO ALLOW CLEAR VERTICAL LADDER ACCESS FOR MAINTENANCE.

10	TYPICAL TERMINAL UNIT INSTALLATION DETAIL
MP-502 /	SCALE: NONE

ROSSETTI

160 WEST FORT, SUITE 400
DETROIT, MICHIGAN 48226
ROSSETTI.COM 313.463.5151

PROJECT

West Michigan
Hispanic
Chamber of
Commerce- HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

© 2021 ROSSETTI

#	DESCRIPTION	DATE
_1	Bid Set	01/24/202

KEY PLAN

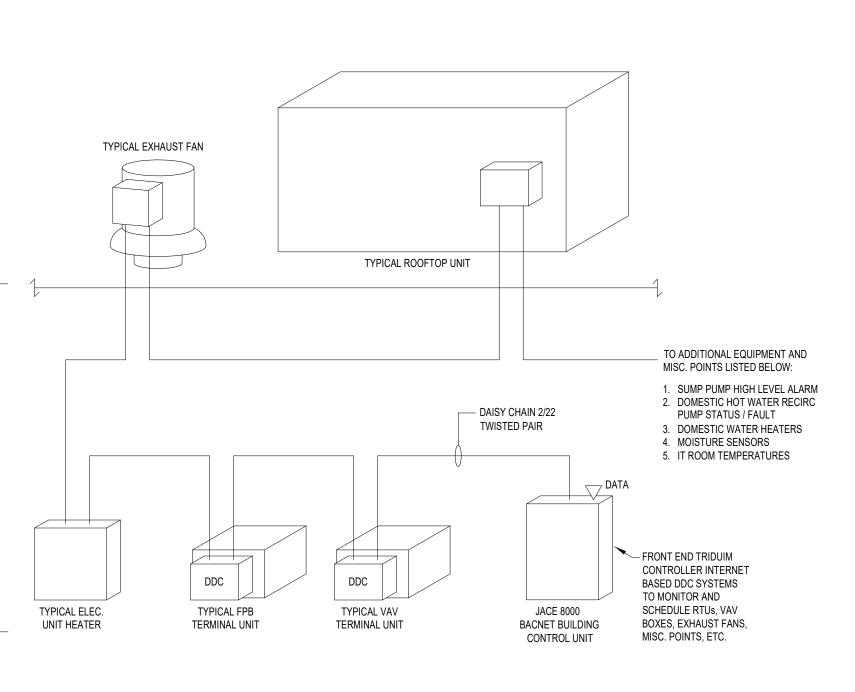
SHEET TITLE

Mechanical Details

PROJECT # 5 2024-010.00

SHEET#

MP-502



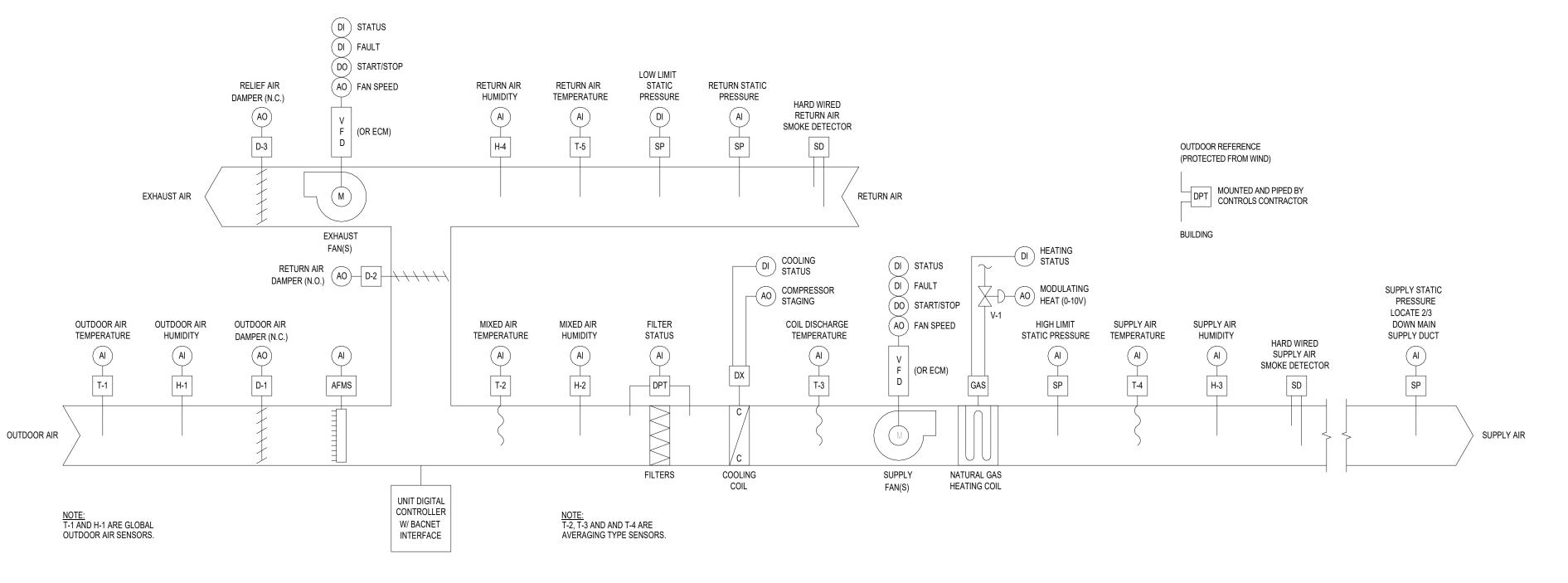
# TYPICAL COMMUNICATION ARCHITECTURE

#### **BUILDING CONTROLS**

- WORK BY THE MECHANICAL SYSTEMS CONTROLS CONTRACTOR SHALL INCLUDE, BUT NOT BE LIMITED TO:
- . PROVIDING A NATIVE BACNET-BASED (LATEST VERSION OF ANSI/ASHRAE 135) MCS CONSISTING OF PROGRAMMABLE AND APPLICATION SPECIFIC DDC CONTROLLERS, ELECTRONIC SENSORS, RELAYS, SWITCHES, CONTROL PANELS, POWER SUPPLIES, TWISTED SHIELDED PAIR (TSP) NETWORK CABLING AND ALL ASSOCIATED CONTROL WIRING (EXCLUDING ETHERNET NETWORK WIRING) AND LOW VOLTAGE CONDUIT SYSTEMS. PROVIDE ALL REQUIRED 120V WIRING PER ELECTRICAL SPECIFICATIONS, INCLUDING TRANSFORMERS REQUIRED, FROM DESIGNATED SPARE ELECTRICAL CIRCUITS.
- 2. SYSTEM CONTROLLERS SHALL BE NIAGARA TRIDIUM JACE 8000 SERIES WITH INITIAL CAPACITY FOR ALL EQUIPMENT IN PROJECT AND MISCELLANEOUS POINTS. CONTROLLERS SHALL BE EXPANDABLE FOR OTHER FUTURE GROWTH. CONTROLLERS SHALL RUN ON NIAGARA 4.2.
- 3. SYSTEM SHALL REPORT THROUGH IP ON OWNER'S LAN TO NIAGARA 4 SUPERVISOR SOFTWARE. PROVIDE NIAGARA 4 SOFTWARE, ALL REQUIRED FRONT END PROGRAMMING AND INTERACTIVE GRAPHICS
- 4. SYSTEM SHALL HAVE MULTIPLE PASSWORD PROTECTION LEVELS AND ALARM NOTIFICATION THROUGH
- 5. PROVIDE ALL REQUIRED SYSTEM LICENSES FOR A TWO YEAR PERIOD. AT A MINIMUM PROVIDE 5 USER
- 6. PROVIDE A ONE YEAR WARRANTY ON ALL PARTS, LABOR AND PROGRAMMING.
- 7. PROVIDE 24 HOUR SERVICE THAT WILL RESPOND WITHIN 3-HOURS OF NOTIFICATION. 8. PROVIDING CONTROL PANELS FOR ALL DDC CONTROLLERS AND AN AUXILIARY CONTROL PANEL FOR ALL ANCILLARY CONTROL DEVICES.
- 9. PROVIDE APPLICATION SPECIFIC NATIVE BACNET TERMINAL UNIT CONTROLLERS FOR TERMINAL UNITS (VAV, FAN COIL UNITS ETC.) INCLUDING ASSOCIATED ROOM TEMPERATURE SENSORS WITH LED DISPLAY, AND CO2 SENSORS. CONTROLLER SHALL CONFORM TO THE LATEST VERSION OF ANSI/ ASHRAE 135 BACNET APPLICATION SPECIFIC CONTROLLER. CONTROLLER SHALL BE A MICROPROCESSOR-BASED, 32 BIT, MULTI-TASKING, REAL-TIME DIGITAL CONTROL PROCESSOR CAPABLE OF STAND-ALONE OPERATION FOR
- 10. ENGINEERING, SUBMITTALS, AS-BUILT DRAWINGS, AND OPERATION AND MAINTENANCE MANUALS.

CONTROL OF MECHANICAL TERMINAL UNITS, I.E. VAV TERMINAL UNITS, FAN POWERED BOXES.

- 11. PROVIDE AND INSTALL ALL DDC PANEL AND DEVICE ENCLOSURES.
- 12. PROVIDE GAUGES, INDICATING DEVICES, CONTROL VALVES, ELECTRIC AND ELECTRONIC CONTROL ACCESSORIES, AND OTHER CONTROL SYSTEM DEVICES.
- 13. PROVIDE SETUP / PROGRAMMING, CALIBRATION AND START-UP SERVICES OF ALL DDC AND NON-DDC TEMPERATURE CONTROL SYSTEMS. PROVIDE COMPLETE FULL AUTOMATED GRAPHICS PROGRAMMING OF SYSTEM FRONT END UTILIZING BUILDING FLOOR PLAN AND AUTOMATED FULL COLOR GRAPHICS.
- 14. PROVIDE SITE SUPERVISION OF TEMPERATURE CONTROL WORK AND COORDINATION WITH RELATED ELECTRICAL, FIRE ALARM WORK AND PACKAGED CONTROLS.
- 15. PROVIDE ALL CONTROL WIRING AND ELECTRICAL COMPONENTS NECESSARY FOR EACH SYSTEM TO PERMIT AUTOMATIC OR INTERLOCKED OPERATION, SUCH AS: AIR COOLED CONDENSING UNITS, HIGH LEVEL ALARM CIRCUITS, DAMPER END SWITCHES.
- 16. ALL OTHER WORK AND COMPONENTS REQUIRED FOR COMPLETE AND OPERATIONAL TEMPERATURE CONTROL SYSTEMS, INCLUDING PROVISIONS FOR ALL WIRING, SOFTWARE, HARDWARE, REQUIRED
- ACCESSORIES, PROGRAMMING, GRAPHICS GENERATION, AND TRAINING. 17. START-UP, CALIBRATION, AND CHECKOUT OF SENSORS, TRANSDUCERS, THERMOSTATS, CONTROL VALVES, DAMPERS/DAMPER OPERATORS, METERS, AND ALL OTHER COMPONENTS PROVIDED.
- 18. TRAINING OF PERSONNEL TO FAMILIARIZE OPERATIONS STAFF WITH THE CONFIGURATION AND OPERATION OF THIS PROJECT'S INSTALLATIONS.



# MULTI-ZONE ROOFTOP UNIT CONTROL DIAGRAM (RTU-1 & 2)

#### ALL SETPOINTS ARE ADJUSTABLE THROUGH THE DDC

- 1. PROVIDE ALL CONTROLS AND DDC DEVICES REQUIRED FOR UNIT OPERATION AND MONITORING
- 2. THE ROOFTOP UNIT IS CONTROLLED BY A MICROPROCESSOR CONTROLLER WITH FULL BACNET MSTP INTERFACE PROVIDED WITH THE RTU. THE BMS CONTRACTOR SHALL WIRE AND MOUNT ALL REMOTE SENSORS PROVIDED WITH RTU. THE UNIT IS A VARIABLE AIR VOLUME UNIT. 3. THE UNIT ON-OFF-AUTO SWITCH IS NORMALLY IN THE AUTO POSITION.
- 4. IN THE OCCUPIED MODE, OUTDOOR AIR DAMPER GOES TO THE MINIMUM POSITION AND MAINTAINS THAT POSITION AS MEASURED BY THE AFMS. THE OUTDOOR AIR DAMPER POSITION IS ADJUSTED THROUGH THE DDC TO MAINTAIN CO2 LEVELS BELOW 950 PPM IN ALL SPACES WITH SENSORS. LOCAL ZONES FIRST OPEN VAV
- BOXES TO FULL OPEN AND THEN THE DDC SLOWLY OPENS THE OUTDOOR AIR DAMPER. 5. TEMPERATURE CONTROL: THE UNIT CYCLES STAGED DX COOLING, COMPARATIVE ENTHALPY ECONOMIZER AND MODULATING GAS HEAT TO MAINTAIN UNIT DISCHARGE AIR TEMPERATURE SETPOINT. THE DISCHARGE AIR TEMPERATURE (NORMALLY 55°F) IS AUTOMATICALLY RESET TO THE HIGHEST TEMPERATURE (MAX 70°F) TO MAINTAIN
- BOTH SPACE TEMPERATURE IN ALL ZONES AND RETURN AIR HUMIDITY OF 55% RH MAXIMUM. 6. THE UNIT CONTROLS MODULATE THE SUPPLY FAN MOTOR SPEED THROUGH THE UNIT PROVIDED VFD TO MAINTAIN THE SUPPLY DUCT STATIC PRESSURE SET POINT. THE BALANCING CONTRACTOR DETERMINES THE PRESSURE SETTINGS. THE MINIMUM FAN CFM SHALL BE PER MANUFACTURER'S RECOMMENDATION.
- SPEED OFFSET WILL BE DETERMINED BY THE BALANCER AND SET UP BY CONTROLS CONTRACTOR. 8. ALL ALARMS ARE SENT TO THE DDC SYSTEM THROUGH THE BACNET INTERFACE.
- 9. THE UNIT OCCUPANCY SCHEDULE IS PROGRAMMED THROUGH THE DDC. THE UNIT IS NORMALLY IN OCCUPIED MODE TO MAINTAIN PRESSURE RELATIONSHIPS. ITEMS 10, 11 AND 12 MAY BE DISABLED BUT THE OPTION TO INCORPORATE THEM IS AVAILABLE.
- 10. OPTIMUM START CONTROL (MAY BE ENABLED OR DISABLED THROUGH THE DDC): THE SYSTEM WILL BE ENABLED WHENEVER THE SUPPLY FAN IS ENERGIZED. THE SUPPLY FAN WILL OPERATE UNDER A 365 DAY TIME SCHEDULE ADJUSTED BY AN OPTIMUM START CALCULATION, SUBJECT TO A MANUALLY RESET HEATING LEAVING AIR TEMPERATURE SAFETY LOW LIMIT, A SIGNAL FROM THE FIRE ALARM SYSTEM, AND RETURN AIR DUCT SMOKE DETECTORS.
- 11. UNOCCUPIED MODE: THE OUTDOOR AIR AND RELIEF AIR DAMPERS ARE FULLY CLOSED AND THE RETURN AIR DAMPER IS OPEN. THE SUPPLY AND RELIEF FANS ARE OFF AND THE FLOW CONTROL SIGNALS ARE SET TO MINIMUM VALUE. THE UNIT CYCLES ON STARTING AT MINIMUM POSITION. TO MAINTAIN SPACE SETPOINTS.
- 12. MORNING WARMUP MODE (MAY BE ENABLED OR DISABLED THROUGH THE DDC): WHEN THE UNIT STARTS-UP AFTER THE UNOCCUPIED PERIOD AND THE RETURN AIR TEMPERATURE IS BELOW THE WARM-UP MODE SETPOINT, 65 DEGREES F. (ADJUSTABLE), THE WARM-UP MODE IS IN EFFECT. THE OUTDOOR AIR AND RELIEF AIR DAMPERS WILL CLOSE FULLY. THE WARM-UP MODE WILL REMAIN IN EFFECT UNTIL OCCUPANCY PERIOD. ALL THE VAV BOXES SHALL BE 100% OPEN UNTIL SPACE
- 13. START-UP CONTROL: UPON START-UP OF THE SYSTEM AFTER MORNING WARM UP MODE. THE HEATING AND COOLING MODES WILL INITIATE AND OUTDOOR AIR DAMPERS WILL GRADUALLY OPEN APPROPRIATELY AS THE SYSTEM RAMPS UP TO THE CONTROL SETPOINT. START-UP PARAMETERS WILL BE SET TO MINIMIZE OVERSHOOT AND UNDERSHOOT. VAV BOXES WILL CONTROL TO MAINTAIN SPACE TEMPERATURE.
- 1. LOW TEMPERATURE PROTECTION: IF THE LOW TEMPERATURE PROTECTION THERMOSTAT SENSES TEMPERATURES BELOW 40°F, THE UNIT OUTDOOR AIR DAMPER FULLY CLOSES AND THE RETURN AIR DAMPER FULLY OPENS AND AN ALARM IS SENT TO THE DDC. THE LOW LIMIT THERMOSTAT MUST BE MANUALLY RESET.
- 2. FIRE PROTECTION: DUCT SMOKE DETECTOR, PROVIDED BY THE FIRE ALARM CONTRACTOR, LOCATED IN THE RETURN DUCT WILL STOP THE UNIT VIA A HARDWIRED INTERLOCK IF SMOKE IS SENSED AND SEND A SIGNAL TO THE BUILDING FIRE ALARM SYSTEM. SMOKE DETECTORS MUST BE MANUALLY RESET.
- 3. ALARM MONITORING: FAN SYSTEM FAILURE ALARM: AN ALARM IS GENERATED WHENEVER THE SUPPLY OR RELIEF FAN FAILS TO RESPOND TO START-STOP COMMANDS AS DETERMINED BY THE ASSOCIATED CURRENT SENSOR. IF A FAN VFD HAS FAILED AND THE SYSTEM HAS BEEN STARTED IN A MANUAL MODE AN ALARM IS GENERATED AT THE DDC AND A GLOBAL COMMAND SHALL BE ISSUED THROUGH THE DDC SYSTEM TO SET THE FLOW RATE AT ALL ASSOCIATED VAV BOXES TO THEIR MAXIMUM CFM VALUES. THE DUCTWORK SHALL BE PROTECTED BY A HIGH LIMIT DUCT PRESSURE CONTROLLER THAT SHALL STOP THE ROOFTOP UNIT SHOULD THE HIGH-PRESSURE LIMIT BE EXCEEDED.
- 4. FILTER MONITORING: THE DIFFERENTIAL PRESSURE SENSOR ACROSS THE RESPECTIVE FILTER GENERATES A DIRTY FILTER ALARM IN THE DDC SYSTEM IF THE DIFFERENTIAL PRESSURE EXCEED THE FILTER MANUFACTURERS RECOMMENDED PRESSURE DROP.
- 5. AUTOMATIC SHUTDOWN/RESTART: WHEN THE UNIT IS SHUTDOWN ON POWER FAILURES AND THE POWER IS RESTARTED, IT SHALL BE AUTOMATICALLY RESTARTED THROUGH A SEQUENCE PROGRAM TO PREVENT OVERLOADING OF THE ELECTRICAL DISTRIBUTION SYSTEM. IF ANY SAFETY DEVICE SHUTS THE UNIT DOWN IT SHALL BE

#### SCR CONTROL ELECTRICAL REHEAT COIL SUPPLY PRIMARY AIR FROM RTU TO SPACE FAN POWERED BOX INDUCED AIR FROM PLENUM - DISCHARGE AIR TEMPERATURE TO DDC DDC SPACE TEMPERATURE SENSOR WITH SETPOINT ADJUSTMENT

#### TYPICAL SERIES FAN POWERED BOX WITH LECTRIC REHEAT COIL CONTROL DIAGRAM

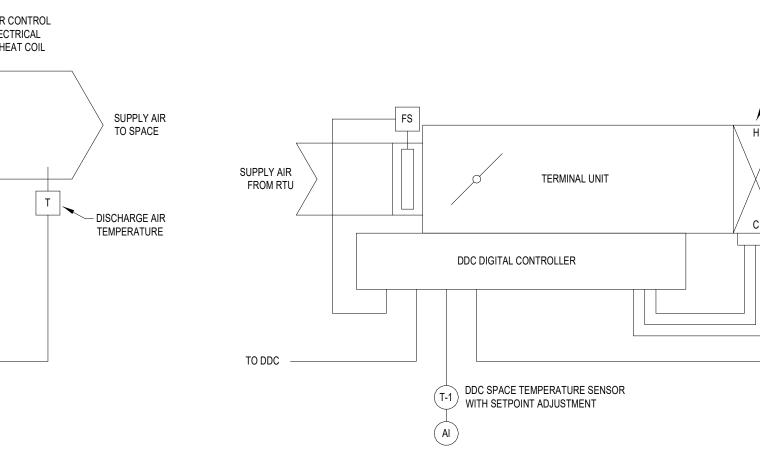
#### SEQUENCE OF OPERATION:

- 1. SPACE SENSOR T-1 SHALL, THROUGH THE DDC, MODULATE THE PRIMARY SUPPLY AIR DAMPER IN SEQUENCE WITH THE SCR ELECTRIC REHEAT COIL WITH SERIES FAN TO MAINTAIN THE DESIRED SPACE TEMPERATURE.
- 2. WHEN SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE BOX DDC CONTROLLER SHALL MODULATE THE PRIMARY SUPPLY AIRFLOW BETWEEN ITS MINIMUM AND MAXIMUM
- SETTING TO MAINTAIN SPACE TEMPERATURE. 3. WHEN THE SPACE TEMPERATURE FALLS BELOW SETPOINT, THE BOX DDC CONTROLLER
- SHALL REDUCE THE PRIMARY SUPPLY AIRFLOW TO ITS MINIMUM SETTING AND MODULATE THE SCR ELECTRIC REHEAT COIL TO MAINTAIN SPACE TEMPERATURE.
- 4. THE SCR ELECTRIC REHEAT COIL HIGH LIMIT AND AIR FLOW SAFETY CONTROLS PREVENT UNSAFE CONDITIONS. 5. THE BOX MINIMUM AND MAXIMUM AIRFLOW SETTINGS SHALL BE AS INDICATED ON THE FAN
- POWERED BOX SCHEDULE. 6. SPACE TEMPERATURE SETPOINTS SHALL BE AS FOLLOWS (ALL ADJUSTABLE):

#### HEATING OCCUPIED SETPOINT = 70°F HEATING UNOCCUPIED SETPOINT = 62°F COOLING OCCUPIED SETPOINT = 74°F

COOLING UNOCCUPIED SETPOINT = 80°F

- 7. THE BOX OCCUPIED/UNOCCUPIED SCHEDULE CAN BE PROGRAMMED THROUGH THE DDC. THE SERIES FAN RUNS CONTINUOUSLY WHEN THE BUILDING IS OCCUPIED. THE FAN IS CYCLED INTERMITTENTLY DURING THE UNOCCUPIED PERIOD TO MEET THE UNOCCUPIED SET POINT. WHEN THE FAN RUNS DURING THE UNOCCUPIED CYCLE, THE ELECTRIC HEATING COIL IS ACTIVATED AND DEACTIVATES ON FAN SHUTDOWN. THE PRIMARY AIR DAMPER IS
- IN THE CLOSED POSITION AND ONLY OPENS TO MAINTAIN SPACE SETBACK TEMPERATURE 8. THE BOX DDC CONTROLLER SHALL RECALIBRATE THE AIRFLOW SENSOR ONCE A WEEK MINIMUM. THE RECALIBRATION PROCESS SHALL BE STAGGERED AMONGST THE TERMINAL UNITS SO THE DUCT STATIC PRESSURE DOES NOT EXCEED LIMITS.
- 9. POSITION FEEDBACK (CONTROL SIGNAL) FOR FAN POWERED BOX DAMPER AND SCR ELECTRIC COIL POWER LEVEL SHALL BE DISPLAYED WITH SYSTEM GRAPHICS.
- 10. WHEN A SMOKE DETECTOR ON THE FLOOR IS ACTIVATED THE FAN IS SHUT DOWN THROUGH THE DDC AND FIRE ALARM SYSTEM.



AIR HANDLING UNIT

SUPPLY FAN

RELIEF FAN

SUPPLY AIR

RETURN AIR

OUTSIDE AIR

MIXED AIR

SPACE

MIXING DAMPERS

COOLING COIL VALVE

SUPPLY FAN STATUS

RETURN FAN STATUS

FREEZE STAT ALARM

NOTE: ALL SETPOINTS SHALL BE ADJUSTABLE.

DX COMP STAGE

GAS VALVE

#### TYPICAL VARIABLE AIR VOLUME BOX WITH ELECTRIC REHEAT COIL CONTROL DIAGRAM

OUTPUT

| DIGITAL | ANALOG | DIGITAL

INPUT

TYPICAL RTU POINTS LIST

SOFTWARE

•

— SCR CONTROL

ELECTRICAL REHEAT COIL

— DISCHARGE AIR

TEMPERATURE

#### SEQUENCE OF OPERATION:

DESIRED SPACE TEMPERATURE.

- 1. SPACE SENSOR T-1 SHALL, THROUGH THE DDC, MODULATE THE VARIABLE AIR VOLUME BOX DAMPER IN SEQUENCE WITH THE SCR ELECTRIC REHEAT COIL TO MAINTAIN THE
- 2. WHEN SPACE TEMPERATURE RISES ABOVE THE SETPOINT, THE BOX DDC CONTROLLER SHALL MODULATE THE SUPPLY AIRFLOW BETWEEN ITS MINIMUM AND MAXIMUM SETTING TO MAINTAIN SPACE TEMPERATURE.
- 3. WHEN THE SPACE TEMPERATURE FALLS BELOW SETPOINT, THE BOX DDC CONTROLLER
- SHALL REDUCE THE SUPPLY AIRFLOW TO ITS MINIMUM SETTING AND MODULATE THE SCR ELECTRIC REHEAT COIL TO MAINTAIN SPACE TEMPERATURE.
- 4. THE SCR ELECTRIC REHEAT COIL HIGH LIMIT AND AIR FLOW SAFETY CONTROLS PREVENT UNSAFE CONDITIONS.
- 5. THE BOX MINIMUM AND MAXIMUM AIRFLOW SETTINGS SHALL BE AS INDICATED ON THE VAV UNIT SCHEDULE.

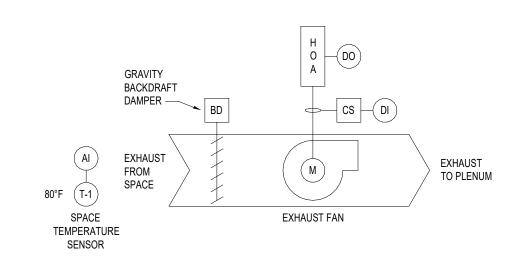
#### 6. SPACE TEMPERATURE SETPOINTS SHALL BE AS FOLLOWS (ALL ADJUSTABLE):

#### HEATING OCCUPIED SETPOINT = 70°F HEATING UNOCCUPIED SETPOINT = 62°F COOLING OCCUPIED SETPOINT = 74°F COOLING UNOCCUPIED SETPOINT = 80°F

- 7. THE BOX OCCUPIED/UNOCCUPIED SCHEDULE CAN BE PROGRAMMED THROUGH THE DDC. DURING THE UNOCCUPIED MODE THE BOX IS FULLY CLOSED AND ONLY OPENS TO MAINTAIN SPACE SETBACK TEMPERATURES.
- 8. THE BOX DDC CONTROLLER SHALL RECALIBRATE THE AIRFLOW SENSOR ONCE A WEEK MINIMUM. THE RECALIBRATION PROCESS SHALL BE STAGGERED AMONGST THE TERMINAL

UNITS SO THE DUCT STATIC PRESSURE DOES NOT EXCEED LIMITS.

9. POSITION FEEDBACK (CONTROL SIGNAL) FOR VAV BOX DAMPER AND SCR ELECTRIC COIL POWER LEVEL SHALL BE DISPLAYED WITH SYSTEM GRAPHICS.



#### TEMPERATURE CONTROLLED EXHAUST FAN CONTROL DIAGRAM MP-601 / SCALE: NONE

#### SEQUENCE OF OPERATION (EF-1)

- 1. THE FAN HAND OFF AUTO SWITCH IS NORMALLY IN THE AUTO POSITION
- 2. THE SPACE TEMPERATURE SENSOR (T-1) SHALL CYCLE THE FAN TO MAINTAIN THE SPACE AT 80°F (ADJUSTABLE).
- 3. FAN STATUS IS REPORTED TO THE DDC THROUGH A CURRENT SENSOR.

DETROIT, MICHÍGAN 48226 **ROSSETTI.COM** 313.463.5151 PROJECT West Michigan
Hispanic
Chamber of

ROSSETTI

160 WEST FORT, SUITE 400

Commerce- HQ

Grand Rapids, MI 49507

**CONSULTANT** 

1111 Godfrey



PROFESSIONAL SEAL

© 2021 ROSSETTI **# DESCRIPTION** DATE

01/24/2025

**KEY PLAN** 

SHEET TITLE

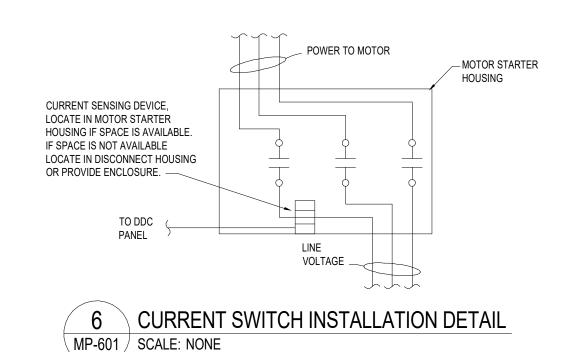
**Temperature Controls** 

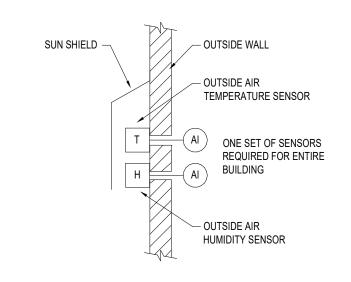
Scale Varies

PROJECT# 2024-010.00

SHEET#

**MP-601** 





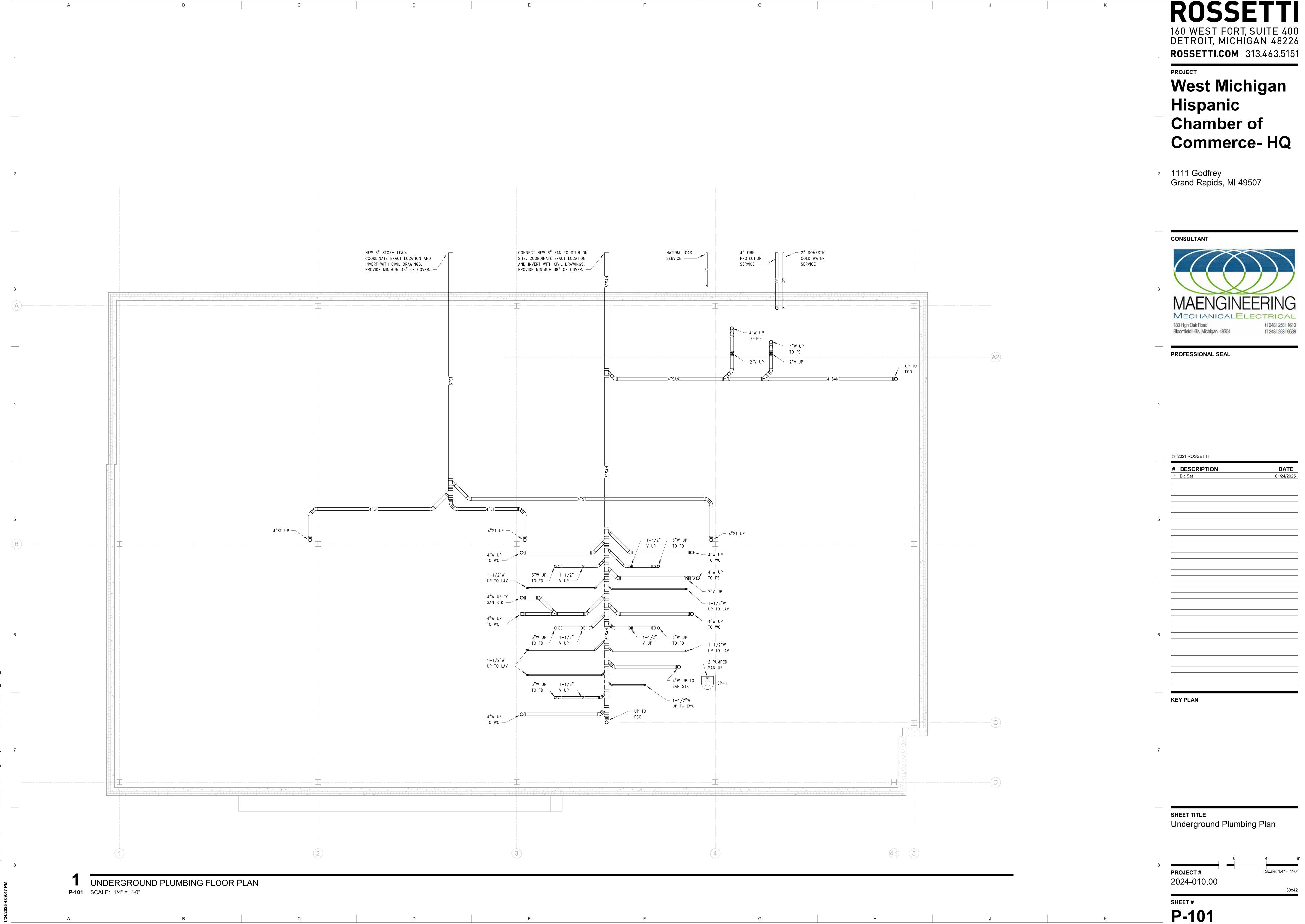
**OUTDOOR AIR SENSOR** NSTALLATION DETAIL MP-601 / SCALE: NONE

#### EXHAUST FAN TYPICAL EXHAUST FAN WITH SCHEDULED START / STOP CONTROL DIAGRAM

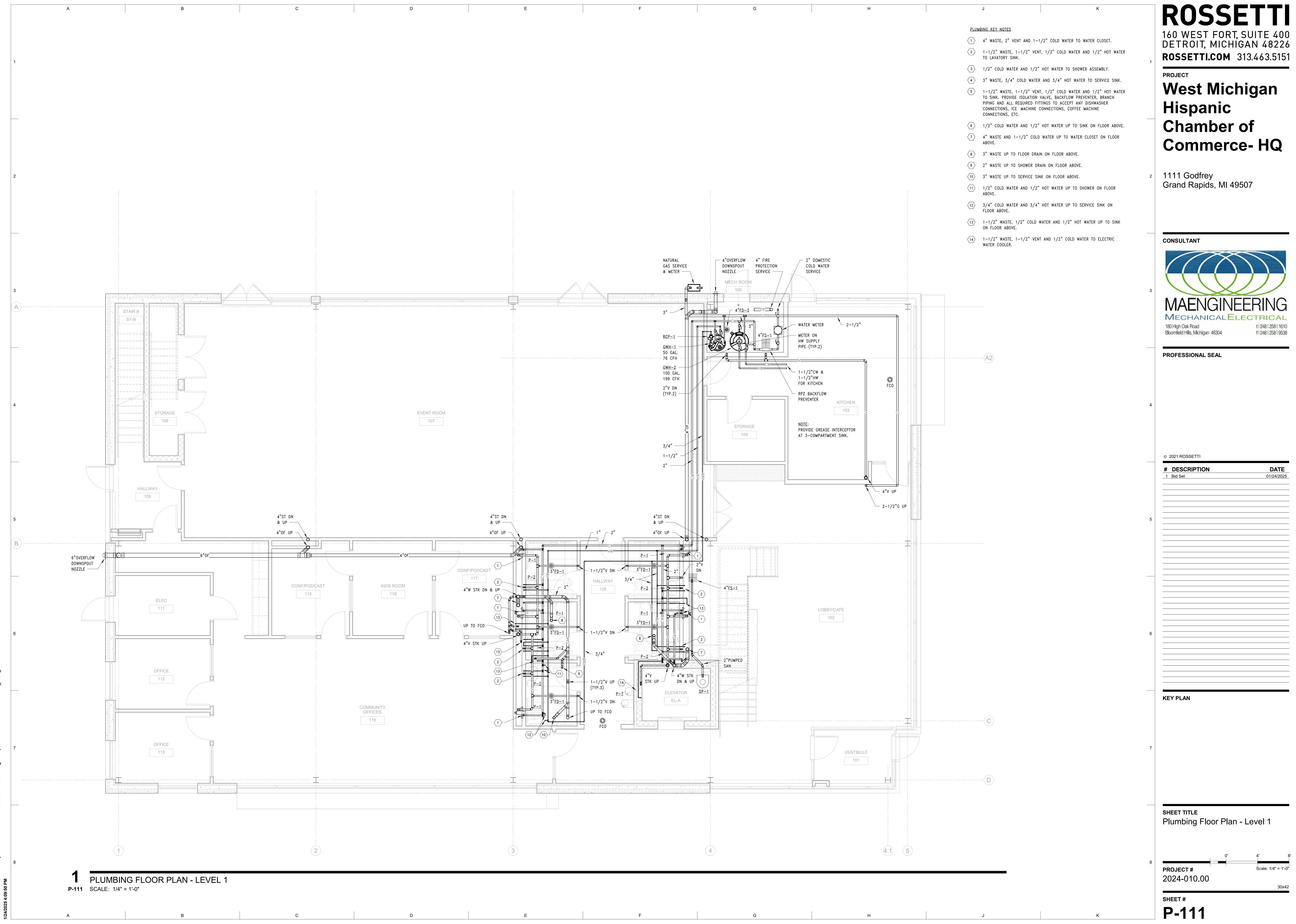
#### SEQUENCE OF OPERATION (EF-2 & 3)

MP-601 / SCALE: NONE

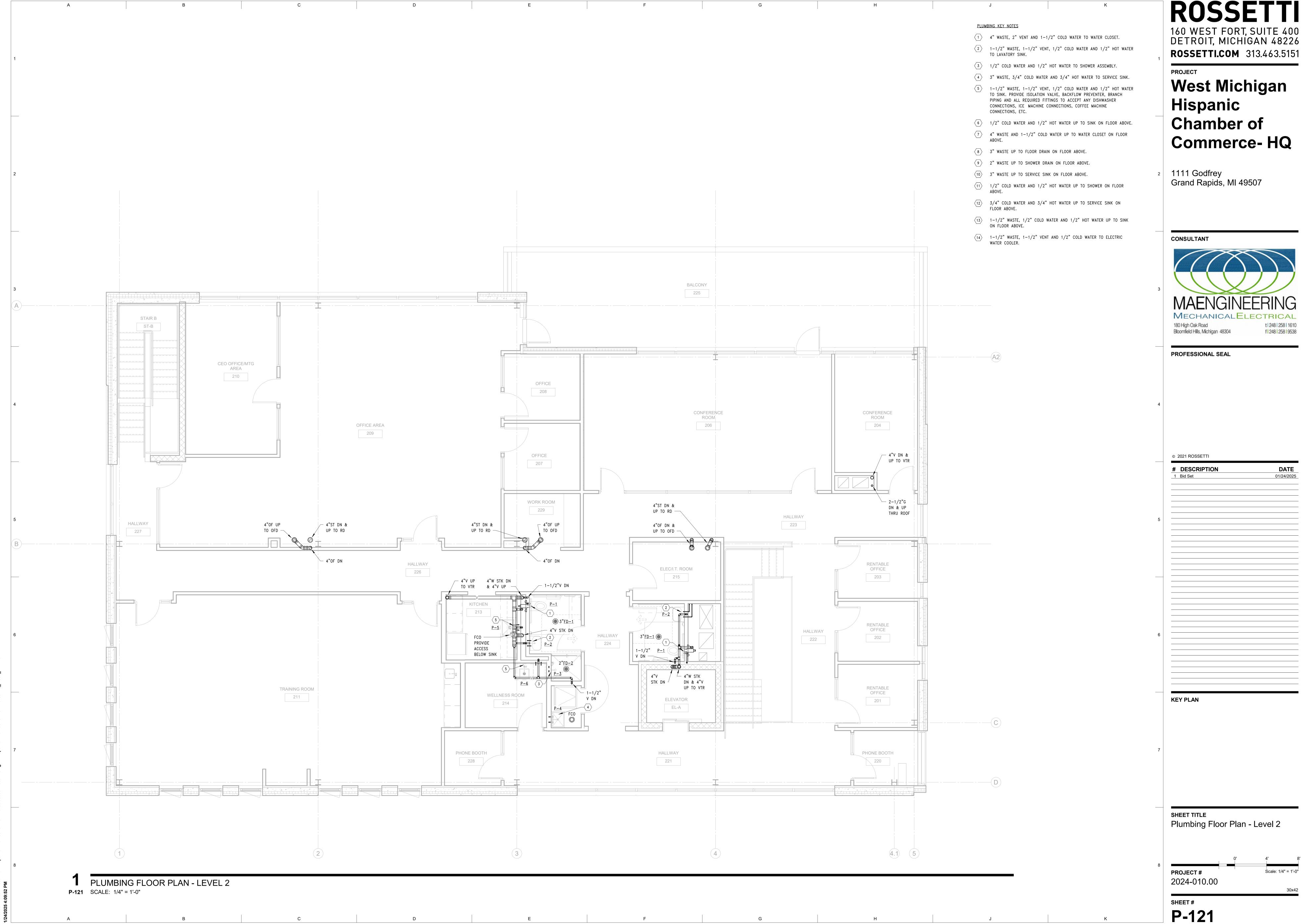
- 1. THE FAN HAND OFF AUTO SWITCH IS NORMALLY IN THE AUTO POSITION.
- 2. THE FAN IS SCHEDULED ON AND OFF THROUGH THE DDC AND IS NORMALLY ON WHEN THE BUILDING IS OCCUPIED.
- 3. WHEN THE FAN IS SWITCHED ON, INTERLOCKED MOTORIZED DAMPER IN THE FAN CURB
- 4. FAN STATUS IS REPORTED TO THE DDC THROUGH A CURRENT SENSOR.











160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226



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

208V.	SINGLE F	PHASE	CIRCUI	IT LEN	GTH TA	ABLE
BREAKER AMPACITY	MAX. CIRCUIT	MAXIMI	JM LENG	TH IN FI	EET	
(AMPS)	LOAD (AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4
20	4	380	605	964	-	-
	8	190	302	482	765	_
	12	127	202	321	510	810
	16	95	151	241	382	607
30	24	-	101	161	255	405
40	32	-	ı	121	191	304
50	40	1	ı	_	153	243
60	48	-	-	_	_	202

120V.	SINGLE F	PHASE	CIRCU	IT LEN	GTH T	ABLE
BREAKER AMPACITY	MAX. CIRCUIT	MAXIM	JM LENG	TH IN FI	EET	
(AMPS)	LOAD (AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4
20	4	220	349	556	882	_
	8	110	174	278	441	701
	12	73	116	185	294	467
	16	55	87	139	221	350
30	24	_	58	93	147	234
40	32	_	_	70	110	175
50	40	_	-	_	88	140
60	48	_	_	_	_	117

,	SINGLE F	PHASE	CIRCU	IT LEN	GTH T	ABLE	208V.	THREE P	HASE	CIRCUI	T LENG	GTH TA	BLE
Y.	MAX. CIRCUIT LOAD	MAXIM	UM LENG	TH IN FI	EET		BREAKER AMPACITY	MAX. CIRCUIT	MAXIM	UM LENG	TH IN FI	EET	
	(AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4	(AMPS)	LOAD (AMPS)	NO.12	NO.10	NO.8	NO.6	NO.4
	4	220	349	556	882	-	20	4	439	698	1113	-	-
	8	110	174	278	441	701		8	220	349	557	883	-
	12	73	116	185	294	467		12	127	233	371	589	935
	16	55	87	139	221	350		16	95	175	278	442	701
	24	_	58	93	147	234	30	24	ı	116	186	294	468
	32	_	-	70	110	175	40	32	ı	-	139	221	351
	40	_	_	_	88	140	50	40	-	_	_	177	281
	48	_	_	_	_	117	60	48	-	_	_	_	234

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

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

			T SIZING SCH OSE TYPE (NOT	
TRANSF. KVA	PRIMARY	CIRCUIT	SECONDAR	Y CIRCUIT
IKANSI. KVA	SWITCH/FUSE OR CIRCUIT BREAKER	PRIMARY FEEDER	SWITCH/FUSE OR CIRCUIT BREAKER	SECONDARY FEEDE
9	30/20A.	20A., 3W.	30/30A.	30A., 4W.
15	30/25A.	25A., 3W.	60/60A.	60A., 4W.
30	60/45A.	45A., 3W.	100/100A.	100A., 4W.
45	100/70A.	70A., 3W.	200/175A.	175A., 4W.
75	200/125A.	125A., 3W.	400/300A.	300A., 4W.
112 1/2	200/175A.	175A., 3W.	400/400A.	400A., 4W.
150	400/225A.	225A., 3W.	600/600A.	600A., 4W.
225	400/350A.	350A., 3W.	800/800A.	800A., 4W.
300	600/500A.	500A., 3W.	1200/1000A.	1000A., 4W.

			T SIZING SCH TYPE (NOTE				
TRANSF. KVA	PRIMARY	CIRCUIT	SECONDARY CIRCUIT				
IKANSI. KVA	SWITCH/FUSE OR CIRCUIT BREAKER	PRIMARY FEEDER	SWITCH/FUSE OR CIRCUIT BREAKER	SECONDARY FEEDE			
9	30/20A.	20A., 3W.	30/30A.	30A., 5WNL			
15	30/25A.	25A., 3W.	60/60A.	60A., 5WNL			
30	60/45A.	45A., 3W.	100/100A.	100A., 5WNL			
45	100/70A.	70A., 3W.	200/175A.	175A., 5WNL			
75	200/125A.	125A., 3W.	400/300A.	300A., 5WNL			
112 1/2	200/175A.	175A., 3W.	400/400A.	400A., 5WNL			
150	400/225A.	225A., 3W.	600/600A.	600A., 5WNL			
225	400/350A.	350A., 3W.	800/800A.	800A., 5WNL			

#### MOUNTING HEIGHTS

EQUIPMENT OR OUTLETS	ELEVATIONS
WALL SWITCHES	3'-9" AFF
RECEPTACLES	1'-6" AFF
TELECOMMUNICATIONS OUTLETS	1'-6" AFF
TELECOMMUNICATIONS OUTLETS - WALL PHONE	3'-9" AFF
CLOCK OUTLETS	7'-6" AFF
TV OUTLETS	1'-6" AFF
FIRE ALARM - PULL STATIONS	3'-9" AFF
FIRE ALARM - SPEAKERS, VISUAL UNITS, HORNS	7'-0" AFF
PUSHBUTTONS	3'-9" AFF
DISCONNECT SWITCHES	5'-6" AFF
MOTOR STARTERS	5'-6" AFF
PANELS & CABINETS	6'-0" TO TOP
VOLUME CONTROLS	3'-9" AFF
DIMMERS	3'-9" AFF
INDIVIDUAL CIRCUIT BREAKERS	5'-6" TO TOP
ACCESS CONTROL DEVICES	3'-9" AFF

#### MOUNTING HEIGHT NOTES: 1. ALL ELEVATIONS ARE TO CENTER LINE OF DEVICE, UNLESS

2. REFER TO ARCHITECTURAL ELEVATION DRAWINGS FOR COORDINATION WITH

#### CIRCUIT MAXIMUM DISTANCE TABLES

- 1. CIRCUIT MAXIMUM DISTANCE IS BASED ON NEC CHAPTER 9, TABLE 8
  CONDUCTOR PROPERTIES FOR COATED COPPER CONDUCTORS AT 75
  DEGREES CELSIUS.
- 2. MAXIMUM CIRCUIT LOAD FOR DISTANCE IS BASED ON NEC 220-10(b)
- <u>CIRCUIT SIZING SCHEDULES NOTES:</u> 1. BASED ON THHN/THWN, 90°., 600V., INSULATED, COPPER WIRE APPLIED AT 75° FOR TERMINATIONS RATED AT 60°C/75°C AND 75°C. FOR TERMINATIONS RATED AT 60°C PROVIDE WIRE AND CONDUIT SIZES INDICATED IN PARENTHESIS.
- 2. BASED ON WIRE OUTSIDE DIAMETERS AND RIGID METALLIC CONDUIT INSIDE DIAMETERS AS PROVIDED IN THE NEC. DO NOT REDUCE CONDUIT SIZE FOR NON-RIGID METALLIC APPLICATION. REFER TO NEC FOR CONDUIT TYPES MORE RESTRICTIVE THAN RIGID
- 3. BASED ON MOTOR FULL LOAD AMPERES AS PROVIDED BY THE NEC.
- 4. BASED ON MOTOR RUNNING OVERLOAD PROTECTION PROVIDED BY THERMAL OVERLOAD RELAYS.
- 5. MOTOR STARTING TYPE BASED ON 460V., 3 PHASE, FULL VOLTAGE NON- REVERSING EXCEPT FOR MOTORS SIZED 75HP OR GREATER WHICH ARE BASED ON 460V., 3 PHASE, PART WINDING REDUCED VOLTAGE STARTING.
- 6. TRANSFORMER CIRCUITS BASED ON 480V TO 208/120V., 3 PHASE, 4 WIRE, DRY TYPE. 7. PROVIDE THREE PHASE WIRES AND ONE DOUBLE AMPACITY NEUTRAL FOR
- 110 AMPACITY CIRCUITS AND LESS. PROVIDE THREE PHASE WIRES AND TWO NEUTRAL WIRES, SIZES AS INDICATED FOR 125 AMPACITY CIRCUITS AND GREATER.
- 8. FOR ALL CONDUITS AND WIRES INSTALLED EXPOSED IN DIRECT SUNLIGHT ON OR ABOVE ROOFTOPS, APPLY THE CORRECTION FACTORS PER NEC 208 TABLE 310.15(B)(2)(c) FOR AMBIENT

#### MOTOR CIRCUIT SIZING SCHEDULE (FOR 460V., 3 PHASE MOTORS) (NOTES 3,4,5) MOTOR HR SWITCH/FLISE CIRCUIT STARTER

MOTOR HR	I GWITCH/FIIGE	LINCOLL	JIANILN		ONDON & N	TINE
MOTOR HP	SWITCH/FUSE	BREAKER	SIZE/TYPE	PHASE	E.G.	CONDUIT
1/2	30/3A.	3A	1	12	12	3/4"
3/4	30/3A.	6A	1	12	12	3/4"
1	30/6A.	6A	1	12	12	3/4"
1 1/2	30/6A.	10A	1	12	12	3/4"
2	30/6A.	10A	1	12	12	3/4"
3	30/10A.	15A	1	12	12	3/4"
5	30/15A.	20A	1	12	12	3/4"
7 1/2	30/20A.	30A	1	12	10	3/4"
10	30/25A.	35A	1	12	10	3/4"
15	30/30A.	50A	2	10	10	3/4"
20	60/40A.	60A	2	8	10	3/4"
25	60/50A.	75A	2	6	10	1"
30	60/60A.	100A	3	6	10	1"
40	100/80A.	125A	3	4	8	1 1/2"
50	100/100A.	150A	3	3	8	1 1/2"
60	200/125A.	175A	4	1	6	1 1/2"
75	200/150A.	200A	4	1/0	6	1 1/2"
100	200/200A.	225A	4	2/0	6	2"
125	200/200A.	225A	5	3/0	6	2"
150	400/250A.	300A	5	4/0	4	2 1/2"
200	400/350A.	400A	5	350	4	3"
		•			•	•

#### GENERAL NOTES: (APPLY TO ALL ELECTRICAL DRAWINGS)

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

#### ELECTRICAL LEGEND

● POLE MOUNTED LIGHTING FIXTURE "A" FIXTURE TYPE



LED STRIP LIGHTING FIXTURE LED LIGHTING FIXTURE

HALF SHADED LIGHTING FIXTURES WITH BUILT—IN EMERGENCY BATTERIES TO OPERATE LIGHTING FIXTURE FOR 90 MIN. — TYPICAL FOR ALL HALF SHADED LIGHTING SYMBOLS FULLY SHADED LIGHTING FIXTURES BUILT—IN EMERGENCY BATTERIES TO OPERATE LIGHTING FIXTURE FOR 90 MIN. WITH NO LOCAL OR AUTOMATIC LIGHTING CONTROL — NIGHT LIGHTS — TYPICAL FOR ALL FULLY SHADED LIGHTING SYMBOLS LED LIGHTING FIXTURES

OH LED WALL MOUNTED LIGHTING FIXTURE

**⊗** EXIT LIGHTING FIXTURE S SINGLE POLE LIGHT SWITCH

Se Double Pole Light Switch S4 FOUR WAY LIGHT SWITCH

Sk KEY SWITCH SP SWITCH WITH PILOT LIGHT

SWITCH WITH TIMER WITH MIN. 1 HOUR SETTING DUPLEX RECEPTACLE

DUPLEX RECEPTACLE - CONNECTED TO GENERATOR QUAD RECEPTACLE

QUAD RECEPTACLE - CONNECTED TO GENERATOR

GFR DUPLEX RECEPTACLE GFR DUPLEX RECEPTACLE - CONNECTED TO GENERATOR

JUNCTION BOX

HOOD OUTLET

RANGE OUTLET, 50A/2P, 3W, 125/250V, WITH GROUND (COORDINATE WITH EQUIPMENT PURCHASED) DRYER OUTLET, 30A/2P, 3W, 125/250V, WITH GROUND, (COORDINATE WITH EQUIPMENT PURCHASED)

▼ COMBINATION DATA AND TELEPHONE OUTLET

▼ TELEPHONE OUTLET  $oldsymbol{
abla}_{\mathsf{WAP}}$  wireless access point

FLUSH FLOOR BOX - SINGLE-GANG BOX WITH 1 DUPLEX OUTLET - POKE THROUGH, WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH FLOOR BOX - SINGLE-GANG BOX WITH 1 DUPLEX OUTLET WALKER #880CS1-1 FLOOR BOX OR SIMILAR.

FLUSH FLOOR BOX — SINGLE-GANG BOX WITH 1 DUPLEX OUTLET — POKE THROUGH, CONNECTED TO GENERATOR — WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH FLOOR BOX - TWO-GANG BOX WITH 2 DUPLEX OUTLETS - POKE THROUGH, WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH FLOOR BOX — SINGLE—GANG BOX WITH 2 DUPLEX OUTLETS — POKE THROUGH, CONNECTED TO GENERATOR — WIREMOLD EVOLUTION SERIES OR APPROVED EQUAL. —

FLUSH FLOOR BOX - TYPE F2 - THREE-GANG BOX WITH 2 DUPLEX OUTLETS AND TELECOMM - POKE THROUGH, WIREMOLD EVOLUTION SERIES #6AT OR APPROVED EQUAL.

FLUSH FLOOR BOX — TYPE F4 — FURNITURE FEED POWER AND TELECOMM — POKE THROUGH, WIREMOLD EVOLUTION SERIES #8AT OR APPROVED EQUAL. FLUSH FLOOR BOX - TYPE F7 - THREE-GANG BOX WITH DUPLEX OUTLET AND TELECOMM - POKE THROUGH, WIREMOLD #RC7.

HR1 MULTI-SERVICE FLUSH FLOOR BOX FOR RAISED FLOOR - TYPE R1 - WITH (2)-20A DUPLEX RECEPTACLES, TELECOMM AND AV, WIREMOLD #EVOLUTION SERIES OR APPROVED EQUAL.

FLUSH MOUNTED FURNITURE FEED BOXES FOR RAISED FLOOR SYSTEM - TYPE R2 - FOR CONNECTION TO SYSTEMS FURNITURE POWER AND TELECOMM, WIREMOLD #EVOLUTION SERIES OR APPROVED EQUAL.

F1 FLUSH FLOOR BOX - TYPE F7 - THREE-GANG BOX WITH 2 DUPLEX OUTLETS AND TELECOMM - WIREMOLD RFB SERIES #RFB4 OR APPROVED EQUAL. F8 FLUSH FLOOR BOX - TYPE F8 - THREE-GANG BOX WITH 2 DUPLEX OUTLETS, TELECOMM AND AV - WIREMOLD RFB SERIES OR APPROVED EQUAL.

TELEVISION OUTLET 4-SQUARE BOX - SINGLE GANG, 60" AFF EXCEPT AS NOTED; 1"CONDUIT TO BOX FROM ABOVE SUSPENDED CEILING.

CEILING MOUNTED DUPLEX RECEPTACLE, DATA/PHONE AND AV OUTLET

CEILING MOUNTED DUPLEX RECEPTACLE TIME CLOCK, SINGLE GANG BOX, 48"AFF, 3/4"C. TO BOX FROM ABOVE SUSPENDED CEILING, REQUIRES DUPLEX OUTLET NEARBY FOR POWER

MANUAL SINGLE PHASE MOTOR STARTER THREE PHASE COMBINATION MAGNETIC FUSIBLE MOTOR STARTER

☐→ FUSIBLE DISCONNECT SWITCH NON-FUSIBLE DISCONNECT SWITCH CB CIRCUIT BREAKER DISCONNECT SWITCH

MOTOR - SINGLE PHASE MOTOR - THREE PHASE

LIGHTING AND/OR RECEPTACLE PANEL HOMERUN TO LIGHTING PANEL

C CONTACTOR CP CONTROL PANEL

INTERCOM UNIT, PBX-STYLE, FLUSH MOUNTED, PROVIDE 3/4"CONDUIT FROM ACCESSIBLE CEILING AREA TO 4"X4" DEEP BACK BOX.

MUSHROOM TYPE EMERGENCY SHUT-OFF PUSHBUTTON

TSC TOUCH SCREEN

SMOKE DETECTOR HEAT DETECTOR

DUCT SMOKE DETECTOR

EGRESS CARD READER

CARD READER

MAGNETIC DOOR HOLDER

DOOR CONTACTS DOOR STATUS SENSOR

KNOXBOX

F FIRE ALARM PULL STATION

FO FIRE ALARM STROBE

FIM FIRE ALARM HORN-STROBE (F)- FIRE ALARM HORN/STROBE - CEILING OR PENDANT MOUNTED

TAMPER SWITCH (REFER TO MECHANICAL FOR QUANTITIES) FS) FLOW SWITCH (REFER TO MECHANICAL FOR QUANTITIES)

AUDIO/VISUAL ALARM

FACP FIRE ALARM CONTROL PANEL - FLUSH

FAAP FIRE ALARM ANNUNCIATOR PANEL - FLUSH

☐ SECURITY CAMERA HANDICAP DOOR ACTIVATOR

PUSH BUTTON STATION PANIC ALARM PUSH BUTTON, TIED TO ALERTING SYSTEM (NURSE CALL AND/OR SECURITY) TO SUMMON HELP

SPEAKER

B DOORBELL PC PHOTOCELL

-CIS- OCCUPANCY SENSOR MULTI-TECHNOLOGY CEILING MOUNTED OS OCCUPANCY SENSOR MULTI-TECHNOLOGY WALL MOUNTED WITH LIGHT SWITCH

OCCUPANCY SENSOR POWER PACK

X KEY NOTE DC DOOR CONTACT

WIRELESS DOORBELL VIDEO ANALYTICS

HOA HAND-OFF-AUTOMATIC UNIT HEATER EXHAUST FAN

EWC ELECTRIC WATER COOLER ABOVE FINISHED FLOOR WP WEATHERPROOF NEC NATIONAL ELECTRIC CODE

SERVICE DISCONNECT

GFR GROUND FAULT CIRCUIT INTERRUPTER MW MICROWAVE GD GARBAGE DISPOSAL REF. REFRIGERATOR

DW DISHWASHER

**LEGEND NOTES:** ALL OCCUPANCY SENSORS SHALL HAVE ISOLATED AUXILIARY CONTACTS FOR USE BY MECHANICAL TRADES TO CONTROL MECHANICAL EQUIPMENT.

THIS IS STANDARD SYMBOL LIST — SOME OF THESE SYMBOL MAY NOT APPEAR ON DRAWINGS.

#### ELECTRICAL SHEET INDEX

E-000 | ELECTRICAL LEGEND, SHEET INDEX, AND GENERAL NOTES | ELECTRICAL ONE-LINE DIAGRAM

WIRE AND LIGHTING FIXTURE SCHEDULES AND CONTROL MATRIX E-030 | ELECTRICAL PANEL SCHEDULES

E-031 | ELECTRICAL PANEL SCHEDULES | SITE PLAN — ELECTRICAL

E-210 | FLOOR PLAN - LEVEL 1 - LIGHTING

E-220 | FLOOR PLAN - LEVEL 2 - LIGHTING E-310 | FLOOR PLAN - LEVEL 1 - POWER E-320 | FLOOR PLAN - LEVEL 2 - POWER

E-330 | ROOF PLAN - POWER E-400 | ENLARGED KITCHEN PLAN - POWER E-500 ELECTRICAL DETAILS

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

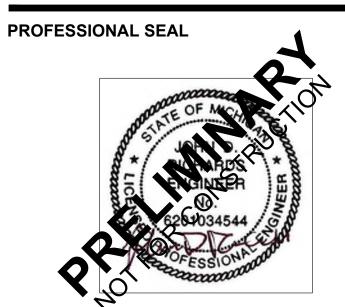
**PROJECT** 

## West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

**CONSULTANT** 





© 2021 ROSSETTI

**# DESCRIPTION** DATE 11/13/2024 1 Design Development

**KEY PLAN** 

SHEET TITLE Electrical Legend, Tables and

Scale: 1/16" = 1'-0"

PROJECT# 2024-010.00

**General Notes** 

SHEET#

#### GENERAL RISER NOTES:

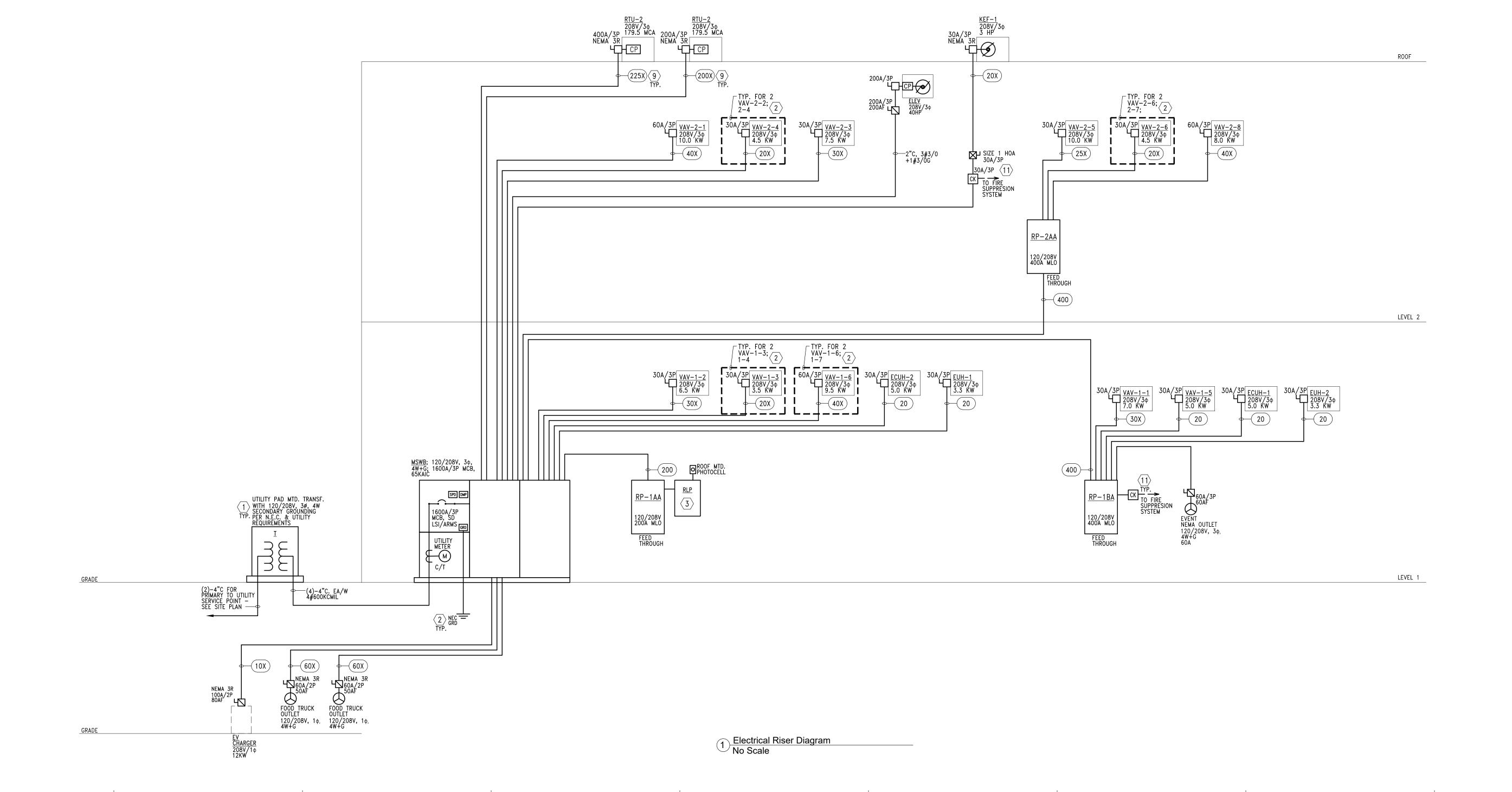
- A. REFER TO SHEET E000 FOR ELECTRICAL LEGEND AND GENERAL NOTES, SHEET E.020 FOR WIRE SCHEDULES AND SHEET E04X SERIES FOR PANEL SCHEDULES.
  - B. REFER TO VOLTAGE DROP SCHEDULE ON SHEET E001, MAXIMUM VOLTAGE DROP NOT TO EXCEED 3% FOR BRANCH CIRCUITS AND 2% FOR FEEDERS. ADJUST WIRE SIZES PER THE INSTALLATION LENGTHS TO MAINTAIN THE MAXIMUM VOLTAGE DROP LEVELS.
- H. NEW ELECTRICAL SERVICE REQUIREMENTS TO BE COORDINATED WITH DTE ENERGY.
- I. COORDINATE WITH MECHANICAL FOR DISCONNECTS, STARTERS, GFR RECEPTACLES PROVIDED WITH THE MECHANICAL EQUIPMENT, INSTALL AND WIRE. PROVIDE IF NOT INCLUDED WITH EQUIPMENT.
- J. ALL FLOOR AND GROUND MOUNTED EQUIPMENT (DISTRIBUTION PANELS, POWER PANELS, TRANSFORMERS, ETC.) TO BE PAD MOUNTED, PROVIDE CONCRETE PADS AS REQUIRED PER APPROVED EQUIPMENT SUBMITTAL AND VIBRATION ISOLATOR PADS, COORDINATE WITH ARCHITECT. K. RUN ALL UNDERGROUND CONDUITS MIN. 4" UNDER SLAB.
- L. ALL OUTDOOR AND ROOF MOUNTED EQUIPMENT TO BE NEMA 3R WEATHERPROOF RATED, INCLUDING STARTERS, DISCONNECTS, AND DEVICES AND ALL ASSOCIATED TO BE WET RESISTANT INCLUDING CONDUITS, BOXES, SUPPORTS, FITTINGS, ETC.
- M. FOR ALL ELECTRICAL EQUIPMENT AND EQUIPMENT DISCONNECTS MAINTAIN CODE REQUIRED DEDICATED EQUIPMENT SPACE AND WORKING CLEARANCES, COORDINATE WITH ALL TRADES PRIOR TO INSTALLATIONS.

N. PROVIDE VFD'S AND COMPLETE INSTALLATION UNLESS INCLUDED WITH EQUIPMENT, COORDINATE WITH MECHANICAL FOR ALL EQUIPMENT REQUIRING VFD'S, NOT ALL ARE IDENTIFIED ON THESE DOCUMENTS.

- O. PROVIDE FAULT CURRENT CALCULATIONS, COORDINATION AND ARC FLASH STUDY, REFER TO SPECIFICATION SECTION 260574. PROVIDE PANELBOARDS FULLY RATED FOR THE AVAILABLE FAULT CURRENTS PER THE STUDY RESULTS. SUBMIT STUDY PRIOR OR WITH THE EQUIPMENT SUBMITTALS TO CONFIRM ADEQUATE RATINGS FOR ALL EQUIPMENT SUBMITTED.

#### RISER KEY NOTES:

- COORDINATE WITH UTILITY COMPANY FOR NEW ELECTRICAL SERVICE EXACT REQUIREMENTS. PROVIDE GROUNDING AND BONDING PER NEC 250.
  BOND ALL NEW CONCRETE ENCASED ELECTRODES TO THE GROUNDING ELECTRODE SYSTEM. ONLY
  ONE IS SHOWN IN DETAIL. COORDINATE WITH CONCRETE INSTALLER TO PROVIDE ELECTRODES
  WHICH REMAIN ACCESSIBLE AFTER POUR FOR BONDING.
  BOND METAL WATER PIPING AND OTHER INTERIOR METAL PIPING THAT MAY BECOME ENERGIZED
  TO GROUNDING SYSTEM PER NEC. MAKE WATER PIPE CONNECTIONS AHEAD OF METER AND
  WITHIN 5'-0" OF BUILDING ENTRANCE.
  BOND GROUND BUS WITHIN EVERY METAL CABINET, PANEL, ETC. TO THE ENCLOSURE.
- PROVIDE ANY UNUSED VERTICAL POSITIONS FULLY BUSSED AS SPACE IN ALL EQUIPMENT: SWITCHBOARD/ DISTRIBUTION PANEL/PANELBOARDS.
- PROVIDE CONCRETE PAD FOR ALL FLOOR AND GRADE MOUNTED ELECTRICAL EQUIPMENT, REFER TO SPECIFICATIONS.
- 5 COORDINATE WITH APPROVED ELEVATOR SUBMITTALS FOR EXACT REQUIREMENTS AND PROVIDE SERVICES AS REQUIRED.
- PROVIDE LIGHTING CONTROL RELAY PANELS TO CONTROL ALL EXTERIOR AND INTERIOR HOUSE LIGHTING, BUILDING MOUNTED LIGHTING, PARKING LOT LIGHTING AND BUILDING AND MONUMENT SIGNS TO COMPLY WITH THE FLORIDA ENERGY CODE. COORDINATE EXACT REQUIREMENTS WITH LANDLORD.
- PROVIDE BREAKERS, FEEDERS, DISCONNECTS ETC. FOR MULTIPLE EQUIPMENT, INDICATED ONLY ONE FOR TYPICAL INSTALLATION, TOTAL NUMBER AS NOTED, REFER TO PLANS AND PANEL SCHEDULES AND VERIFY EXACT QUANTITIES.
- 8 VFD SUPPLIED WITH EQUIPMENT, PROVIDE COMPLETE INSTALLATION, COORDINATE WITH MECHANICAL FOR ALL REQUIREMENTS.
- FEEDER SIZES INDICATED TO BE ADJUSTED FOR OVERALL INSTALLED LENGTHS TO MAINTAIN MAXIMUM 3% VOLTAGE DROP FOR BRANCH CIRCUITS AND 2% FOR FEEDERS.
- PROVIDE CONTACTORS AND/OR SHUNT TRIP BREAKERS AS REQUIRED FOR INTERLOCKING WITH THE FIRE SUPPRESSION OF ALL THE EQUIPMENT AND DEVICES UNDER THE HOOD, INCLUDING MAU AND EF FOR KITCHEN HOOD. COORDINATE ALL REQUIREMENTS WITH MECHANICAL AND FIRE SUPPRESSION SYSTEM PROVIDER. REFER TO DETAILS ON SHEET E.500.
- EXACT TYPE, QUANTITIES AND LOCATIONS OF EV CHARGING STATIONS TO BE VERIFIED WITH OWNER PRIOR TO ROUGH IN. INFORMATION INDICATED ARE BASED ON REDECHARGE (2)—40A INPUT CURRENT AND (2)—50A BREAKERS FOR EACH STATION. SERVICES ARE SIZED FOR TOTAL 30 DUAL EV CHARGING STATIONS (60 CHARGERS) AT EACH WING: WEST, CENTER, EAST, OVERALL TOTAL 90 EV CHARGING STATIONS (180 CHARGERS). (20) DUAL EV CHARGING STATIONS TO BE INSTALLED AND (40) ARE FUTURE.



# ROSSETTI

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

# West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507





PROFESSIONAL SEAL



DATE

11/13/2024

# DESCRIPTION

1 Design Development

**KEY PLAN** 

SHEET TITLE Electrical Riser Diagram

Scale: 1/16" = 1'-0"

PROJECT# 2024-010.00

SHEET#

#### LIGHTING FIXTURE SCHEDULE:

- "A" LED 2'X4' RECESSED LAY-IN LIGHTING FIXTURE, ACRYLIC CURVED RIBBED DIFFUSER, 120/277V, HPF ELECTRONIC DRIVER, DIMMING CONTROL, 60W, 6000 LUMENS. LITHONIA #2BLT4-60L-ADP-LP832 OR APPROVED EQUAL.
- "AE" SAME AS TYPE "A" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "A1" SAME AS TYPE "A" EXCEPT RECESSED FLANGE MOUNTED LIGHTING FIXTURE.
- "A1E" SAME AS TYPE "A1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "A2" SAME AS TYPE "A" EXCEPT 2'X2' AND 5000LM.
- "A2E" SAME AS TYPE "A2" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "B" LED RECESSED LAY-IN 2'X4' FLAT PANEL LIGHTING FIXTURE, MATTE WHITE FINISH, WITH OPAL DIFFUSER, 120/277V ELECTRONIC HPF DRIVER, DIMMING CONTROL, 0-10V DIMMING, 60W, 6000LM.. LITHONIA # OR APPROVED EQUAL.
- "BE" SAME AS TYPE "B" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "B1" SAME AS TYPE "B" EXCEPT DAMP LOCATION RATED, WITH EXTRA LENS GASKETING.
- "B1E" SAME AS TYPE "B1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "C" LED PENDANT MOUNTED CONTINUOUS LINEAR DIRECT LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, EXTRUDED ALUMINUM CONSTRUCTION WITH ACRYLIC LENS, FINISH AND END CAP TO BE SELECTED BY ARCHITECT/OWNER, PROVIDE SEPARATE DIMMING CONTROL FOR THE DIRECT AND INDIRECT COMPONENTS, 120/277V, HPF ELECTRONIC DRIVER, DIMMING CONTROL, 10W/FT, 1000 LUMENS/FT. FOCAL POINT OR APPROVED EQUAL.
- "CE" SAME AS TYPE "C" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "C1" SAME AS TYPE "C" EXCEPT DIRECT/INDIRECT DISTRIBUTION, 30% UP/60% DOWN. "C1E" SAME AS TYPE "C1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "C2" SAME AS TYPE "C1" EXCEPT WITH ASYMMETRIC UPLIGHT AND WALL WASH DOWN DISTRIBUTION. "C3" SAME AS TYPE "C" EXCEPT RECESSED LIGHTING FIXTURE WALL WASH DISTRIBUTION.
- "D" LED SURFACE OR PENDANT MOUNTED STRIP LIGHTING FIXTURE, 4FT OR 8FT LENGTH AS INDICATED ON PLANS, COLD—ROLLED STEEL HOUSING, WIDE DIFFUSE LENS, 120/277V ELECTRONIC HPF DIMMING DRIVER, 32W, 5000 LUMENS.

  LITHONIA #CLX-L48-5000LM-SEF-WDL-MVOLT OR APPROVED EQUAL.
- "DE" SAME AS TYPE "D" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "E" NOT USED.
- "F" LED WALL-MOUNTED VAPORTIGHT ELEVATOR PIT LIGHTING FIXTURE, 4FT LONG, LOW PROFILE, CORROSION RESISTANT NEMA 4X, FIBERGLASS HOUSING, HIGH IMPACT INJECTION MOLDLED ACRYLIC LENS, 120–277V, ELECTRONIC HPF DRIVER & 4000LM 25W. LITHONIA #FEM-L48 SERIES OR APPROVED EQUAL.
- "G" LED RECESSED 4" DOWNLIGHT FIXTURE, GALVANIZED STEEL HOUSING, MEDIUM WIDE DISTRIBUTION, 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 3500 LUMENS, 40W. GOTHAM #EV04-/35-AR-MWD-LSS-MVOLT OR APPROVED EQUAL.
- "GE" SAME AS TYPE "G" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "G1" SAME AS TYPE "G" EXCEPT 3500LM AND WITH WET LOCATION RATED WITH EXTRA LENS GASKETING. "G1E" SAME AS TYPE "G1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "G2" SAME AS TYPE "G1" EXCEPT 5000LM AND WITH WET LOCATION AND LOW TEMPERATURE RATED.
- "G2E" SAME AS TYPE "G2" EXCEPT WITH BUILT-IN EMERGENCY BATTERY LOW TEMP RATED, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. "G3" SAME AS TYPE "G1" EXCEPTWITH SHOWER LENS.
- "H" LED PENDANT MOUNTED CYLINDER, 4" DIA, ALUMINUM HOUSING, SEMI-SPECULAR REFLECTOR, LENS, CLEAR TRIM, FINISH SELECTED BY ARCHITECT. MEDIUM DISTRIBUTION, 120-277V, ELECTRONIC HPF DRIVER & 7000LM 90W.
- GOTHAM #ICO CYL-/70-4AR-MWD-LSS-MVOLT OR APPROVED EQUAL. "HE" SAME AS TYPE "H" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "H1" SAME AS TYPE "H", EXCEPT 5000LM.
- "H1E" SAME AS TYPE "H1" EXCEPT WITH BUILT-IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES.
- "JE" LED WALL MOUNTED 4FT LONG STAIRWELL LIGHTING FIXTURE WITH OCCUPANCY SENSOR, FROSTED LENS, 120/277V HPF ELECTRONIC DRIVER, 50W, 6000LM LITHONIA OR APPROVED EQUAL.
- "K" LED DECORATIVE PENDANT MOUNTED CHANDELIER TO BE SELECTED BY ARCHITECT/DESIGNER. 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 10000 LUMENS, 150W.
- "L" LED SURFACE MOUNTED CONTINUOUS RGB TAPELIGHT LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, 120V, ELECTRONIC HPF DIMMING DRIVER, DIM TO 0.1%, DIMMING CONTROL, 5W/FT, PROVIDE 120V POWER SUPPLY PER MANUFACTURER SPECIFICATIONS FOR A COMPLETE INSTALLATION. GERMAN LIGHT PRODUCTS #50505RGB-60 OR APPROVED EQUAL.
- "L1" SAME AS TYPE "L" EXCEPT WHITE TAPELIGHT.
- "M" LED SURFACE MOUNTED UNDERCABINET CONTINUOUS LIGHTING FIXTURE, REFER TO PLANS FOR OVERALL RUN LENGTHS, 120V ELECTRONIC HPF DRIVER, DIMMING CONTROL, 0-10V DIMMING, MAX. 10W/FT. LITHONIA OR APPROVED EQUAL.
- "N" LED WALL MOUNTED VANITY LIGHTING FIXTURE TO BE SELECTED BY ARCHITECT/DESIGNER. 120/277V ELECTRONIC HPF DRIVER, DIM TO 0.1%, DIMMING CONTROL, 1500 LUMENS, 15W.
- "OA" OUTDOOR LED WALL MOUNTED WET LOCATION RATED LIGHTING FIXTURE, FINISH TO BE SELECTED BY ARCHITECT/LIGHTING DESIGNER, PHOTOCELL, 120-277V. HPF ELECTRONIC DIMMING DRIVER, 25W, 3500 LUMENS, 4000K. LOW TEMPERATURE, OUTDOOR RATED, BUILT-IN EMERGENCY BATTERY LITHONIA #WST-LED-P2-40K-VF-MYOLT-PE OR APPROVED EQUAL.
- "OAE" SAME AS TYPE "OA" EXCEPT WITH BUILT-IN EMERGENCY BATTERY
- "OB" OUTDOOR LED DECORATIVE WALL SCONCE TO BE SELECTED BY ARCHITECT/DESIGNER, WET LOCATION OUTDOOR RATED, LOW TEMPERATURE 120/277V ELECTRONIC HPF DRIVER, 8000 LUMENS, 80W.
- "OBE" SAME AS TYPE "OB" EXCEPT WITH BUILT—IN EMERGENCY BATTERY, 14W TO OPERATE LIGHTING FIXTURE FOR MIN. 90 MINUTES. PROVIDE REMOTE MINI—INVERTER IF SELECTED FIXTURE IS NOT AVAILABLE WITH BUILT—IN EMERGENCY BATTERY.
- "X" LED UNIVERSAL MOUNT SELF-CONTAINED, EDGE-LIT EXIT LIGHT, RED LETTERS, SINGLE OR DOUBLE FACE, AND DIRECTIONAL ARROWS AS INDICATED, FINISH OR AS SELECTED BY ARCHITECT, 120/277 INPUT AND NI-CAD BATTERY. LIGHTALARMS "GRANDE" SERIES OR APPROVED EQUAL.

#### LIGHTING FIXTURE SCHEDULE NOTES:

- ALL LIGHTING FIXTURES COLOR TEMPERATURE TO BE 2700K-3000K LED, AS DIRECTED BY ARCHITECT/OWNER.
- 2. REFER TO SPECIFICATIONS FOR ADDITIONAL LAMP AND DRIVER REQUIREMENTS. 3. COORDINATE MOUNTING OF ALL LIGHTING FIXTURES WITH THE ARCHITECTURAL PLANS, PROVIDE MOUNTING HARDWARE AS REQUIRED FOR A COMPLETE INSTALLATION FOR THE CEILING TYPES THE FIXTURES ARE BEING INSTALLED.
- 4. ALL FIXTURE FINISHES/COLORS TO BE COORDINATED WITH ARCHITECT.
- 5. FOR ALL LINEAR CONTINUOUS RUN LIGHTING FIXTURES REFER TO PLANS FOR OVERALL LENGTHS, PROVIDE SECTIONS AS REQUIRED. PROVIDE 4' SECTIONS WITHIN THE CONTINUOUS RUN WITH BUILT—IN EMERGENCY BATTERIES AT LOCATIONS INDICATED ON PLANS.
- 6. FOR ALL PENDANT MOUNTED LIGHTING FIXTURES PROVIDE CABLE SUSPENSION LENGTHS AS REQUIRED FOR THE MOUNTING HEIGHTS INDICATED ON THE ARCHITECTURAL REFLECTED CEILING PLANS AND ELEVATIONS. 7. DIMMERS TO BE COMPATIBLE WITH THE DIMMING DRIVERS, PROVIDE TYPES AND RATINGS AS REQUIRED FOR THE LOADS CONTROLLED.
- 8. DIMMING TO BE TO 1%, UNLESS OTHERWISE DIRECTED BY ARCHITECT/OWNER.

#### LIGHTING CONTROL MATRIX SCHEDULE

													T
LIGHTING CONTROL TAG	ROOM/SPACE TYPE	CONTROLS	AUTOMATIC LIGHTING CONTROL	LOCAL CONTROL	MANUAL ON	PARTIAL AUTO ON	BI-LEVEL	SIDE LIGHT	<u>light</u>   Top Light	AUTOMATIC PARTIAL OFF (H APPLIES)	AUTOMATIC FULL OFF	SCHEDULED FULL OFF	NOTES
BASED ON ASHRAE 9	0.1-2013 TABLE 9.6.1 - CONTROL FUNCTIONS			a	b	С	d	е	f	g	h	i	
LC1	UTILITY ROOM	LOCAL		YES	YES								
LC2	RESTROOM	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES							YES	
LC3	CORRIDOR	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES			YES		YES	
LC4	OFFICE	LOCAL/DIM/OS	OCCUPANCY SENSOR (OS)	YES	YES		YES						
LC5	JANITOR/ STORAGE	LOCAL/OS	OCCUPANCY SENSOR (OS)	YES	YES						YES		
LC6	CONFERENCE ROOM/ LOCKER ROOM/ KITCHEN/ DINING/ FOOD PREP/ OPEN OFFICE/ GYM	LOCAL/DIM/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES					YES	
LC7	LOBBY	LOCAL/DIM/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES		YES					YES	
LC8	STAIRS	LOCAL/TS	RELAY PANEL TIMER (TIME SWITCH)	YES	YES					YES		YES	

#### LIGHTING CONTROL NOTES:

- CONTRACTOR TO PROVIDE MOTION SENSORS, DAYLIGHT SENSORS, ROOM CONTROLLERS, AND ACCESSORIES AS REQUIRED FOR A FULLY OPERATIONAL INSTALLATION PER 2015 MICHIGAN ENERGY CODE. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO REVIEW MANUFACTURER'S INSTALLATION INSTRUCTIONS PRIOR TO ROUGH-IN. PROVIDE ADDITIONAL ROOM CONTROLLERS/POWER PACKS AND ASSOCIATED WIRING FOR MULTIPLE SWITCH LEG LOCATIONS. SEE PLANS FOR EXACT SWITCH LEGS WITH-IN EACH AREA OR ROOM. ELECTRICAL CONTRACTOR SHALL PROVIDE LIGHTING CONTROL MANUFACTURER'S DEVICE LAYOUT AS PART OF SHOP DRAWINGS SUBMITTALS.
- ELECTRICAL CONTRACTOR IS TO INCLUDE THE SCOPE OF A LIGHTING CONTROLS DESIGNER/INSTALLER AS SUBCONTRACTOR TO ELECTRICAL CONTRACTOR TO PROVIDE FINAL DESIGN, DOCUMENTATION, PROGRAMMING, AND INSTALLATION OF THE LIGHTING CONTROLS. CONTRACT DOCUMENTS INCLUDE INTENDED FUNCTIONALITY ONLY.
- TO PREVENT FALSE ACTIVATION, MOUNT CEILING MOUNT SENSORS AWAY FROM DIFFUSERS AND THE PATH OF STRONG AIR TURBULENCE A MINIMUM OF FOUR FEET FOR STANDARD SENSITIVITY AND SIX FEET FOR MAXIMUM SENSITIVITY. LOCATE AND AIM SENSORS IN THE CORRECT LOCATION REQUIRED FOR COMPLETE AND PROPER VOLUMETRIC COVERAGE WITHIN THE RANGE OF COVERAGE(S) OF CONTROLLED AREAS PER THE MANUFACTURER'S RECOMMENDATIONS. ROOMS SHALL HAVE ONE HUNDRED (100%) PERCENT COVERAGE TO COMPLETELY COVER THE CONTROLLED AREA TO ACCOMMODATE ALL OCCUPANCY HABITS OF SINGLE OR MULTIPLE OCCUPANTS AT ANY LOCATION WITHIN THE ROOM(S). PROVIDE THE QUANTITY OF ROOM CONTROLLERS AND POWER PACKS NEEDED TO CONTROL SWITCH LEGS AND VOLTAGES INDICATED.
- UNLESS OTHERWISE INDICATED, ADJUST MOTION SENSOR TIME TO TURN OFF CONTROLLED LIGHTING AFTER 20 MINUTES. INCLUDE TESTING BY AN INDEPENDENT THIRD PARTY TESTING AGENCY OR INDEPENDENT COMMISSIONING AGENT AS REQUIRED BY THE MICHIGAN ENERGY CODE (ASHRAE 90.1-2013). TEST, CERTIFY AND PROVIDE DOCUMENTATION OF LIGHTING CONTROL DEVICES AND CONTROL SYSTEMS TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND ANSI/ASHRAE/IES STANDARD 90.1-2013, SECTION 9.4.3 FUNCTION TESTING).
- PROVIDE DAY LIGHT SENSORS WHERE LIGHTING FIXTURES FALL WITHIN TOP/SIDE LIGHTED AREAS FOR BOTH PRIMARY AND SECONDARY ZONES AS DEFINED BY ASHRAE 90.1-2013, SECTION 9.4.1.1-0 AND SECTION 9.4.1.1-1
- . INTEGRATE CONTROLS FOR UNDERCABINET LIGHTING TO PROVIDE AS MANUAL ON/AUTOMATIC OFF BY SAME SENSOR(S) SERVING GENERAL LIGHTING IN SPACE/ROOM.
- 10. IN ROOMS WITH PARTIAL ON CONTROL, PROGRAM ASSOCIATED SWITCH FOR FULL ON AND MANUAL OFF IN ADDITION TO AUTOMATIC OFF VIA OCCUPANCY SENSOR. 11. FOR AUTOMATIC DAYLIGHT RESPONSIVE CONTROLS SET DAYLIGHT SENSOR TO MAINTAIN THE SAME LIGHTING LEVELS AS THE LEVELS OUTSIDE THE DAYLIGHT AREA.

	CC	ONDUIT & WIRE SCH	EDULE (600	V & BELO	OW)
	3-WIRE	SYSTEM		4-WIRE	SYSTEM
WIRE TAG	CU/AL	CONDUIT & WIRE	WIRE TAG	CU/AL	CONDUIT & WIF
(20X)	CU	3/4"C. 3#12 + 1#12G.	20	CU	3/4"C. 4#12 + 1#12G.
(25X)	CU	3/4"C. 3#10 + 1#10G.	25	CU	3/4"C. 4#10 + 1#10G.
(30X)	CU	3/4"C. 3#10 + 1#10G.	30	CU	3/4"C. 4#10 + 1#10G.
35X)	CU	3/4°C. 3#8 + 1#10G.	35	CU	3/4"C. 4#8 + 1#10G.
(40X)	CU	3/4°C. 3#8 + 1#10G.	40	CU	3/4"C. 4#8 + 1#10G.
(50X)	CU	1"C. 3#6 + 1#10G.	50	CU	1"C. 4#6 + 1#10G.
(55X)	CU	1"C. 3#6 + 1#10G.	55	CU	1"C. 4#6 + 1#10G.
(60X)	CU	1 1/4"C. 3#4 + 1#10G.	60	CU	1 1/4"C. 4#4 + 1#10G.
(70X)	CU	1 1/4"C. 3#4 + 1#8G.	70	CU	1 1/4"C. 4#4 + 1#8G.
85X	CU	1 1/4"C. 3#3 + 1#8G.	85	CU	1 1/4"C. 4#3 + 1#8G.
(100)	CU	1 1/4"C. 3#2 + 1#8G.	(100)	CU	1 1/4"C. 4#2 + 1#8G.
(100X)	AL	2"C. 3#1/0 + 1#6G.	(100)	AL	2"C. 4#1/0 + 1#6G.
(110)	CU	1 1/2"C. 3#1 + 1#6G.	(110)	CU	1 1/2"C. 4#1 + 1#6G.
(110))	AL	2"C. 3#1/0 + 1#4G.	110	AL	2"C. 4#1/0 + 1#4G.
(105)V	CU	2"C. 3#1/0 + 1#6G.	(105)	CU	2"C. 4#1/0 + 1#6G.
(125X)	AL	2"C. 3#2/0 + 1#4G.	(125)	AL	2"C. 4#2/0 + 1#4G.
(150))	cu	2"C. 3#1/0 + 1#6G.	(150)	CU	2"C. 4#1/0 + 1#6G.
(150X)	AL	2"C. 3#3/0 + 1#4G.	(150)	AL	2"C. 4#3/0 + 1#4G.
(4.75 V)	CU	2"C. 3#2/0 + 1#6G.	(175)	CU	2"C. 4#2/0 + 1#6G.
(175X)	AL	2 1/2"C. 3#4/0 + 1#4G.	175	AL	2 1/2"C. 4#4/0 + 1#4G.
(000)	CU	2"C. 3#3/0 + 1#6G.	(000)	CU	2"C. 4#3/0 + 1#6G.
(200X)	AL	3"C. 3#250KCMIL + 1#4G.	(200)	AL	3"C. 4#250KCMIL + 1#4G.
(005V)	CU	2 1/2"C. 3#4/0 + 1#4G.	005	CU	2 1/2"C. 4#4/0 + 1#4G.
(225X)	AL	3"C. 3#300KCMIL + 1#2G.	(225)	AL	3"C. 4#300KCMIL + 1#2G.
(2.50)	CU	3"C. 3#250KCMIL + 1#4G.		CU	3"C. 4#250KCMIL + 1#4G.
(250X)	AL	3"C. 3#350KCMIL + 1#2G.	250)	AL	3"C. 4#350KCMIL + 1#2G.
(700)	CU	3"C. 3#350KCMIL + 1#4G.		CU	3"C. 4#350KCMIL + 1#4G.
(300X)	AL	4"C. 3#500KCMIL + 1#2G.	300)	AL	4"C. 4#500KCMIL + 1#2G.
	CU	4"C. 3#500KCMIL + 1#3G.		CU	4"C. 4#500KCMIL + 1#3G.
(350X)	AL	(2) 2 1/2"C. EA/W 3#4/0 + 1#1G.	350	AL	(2) 2 1/2"C. EA/W 4#4/0 + 1#1G.
	CU	4"C. 3#600KCMIL + 1#3G.		CU	4"C. 4#600KCMIL + 1#3G.
(400X)	AL	(2) 3"C. EA/W 3#250KCMIL	400)	AL	(2) 3"C. EA/W 4#250KCMIL
	CU	+ 1#1G. (2) 2 1/2°C. EA/W 3#4/0		CU	+ 1#1G. (2) 2 1/2"C. EA/W 4#4/0
(450X)	AL	+ 1#2G. (2) 3°C. EA/W 3#300KCMIL + 1#1/0G.	450)	AL	+ 1#2G. (2) 3"C. EA/W 4#300KCMIL + 1#1/0G.

GENERAL WIRING NOTES: . FOR 2-WIRE SYSTEMS USE Y AS SUFFIX, SIMILAR TO X FOR THE 3-WIRE SYSTEM. 2. THE USE OF ALUMINUM WIRES HAVE TO BE APPROVED BY THE ENGINEER AND OWNER PRIOR TO BID, NO ALUMINUM WIRES ALLOWED FOR 100A AND LESS.

(2) 3 C. EA/W 4#350KCMIL

+ 1#1G. (2) 4"C. EA/W 4#500KCMIL

+ 1#2/0G. (2) 4"C. EA/W 4#500KCMIL + 1#1/0G. (3) 3"C. EA/W 4#350KCMIL

+ 1#3/0G. (2) 4"C. EA/W 4#600KCMIL

+ 1#1/0G. (3) 4"C. EA/W 4#500KCMIL

+ 1#3/0G. (3) 3"C. EA/W 4#400KCMIL

+ 1#2/0G. (3) 4"C. EA/W 4#600KCMIL

+ 1#4/0G. (3) 4"C. EA/W 4#600KCMIL

+ 1#3/0G. (4) 4"C. EA/W 4#500KCMIL +

1#250KCMIL G. (4) 4"C. EA/W 4#600KCMIL

CU

(2) 3 C. EA/W 3#350KCMIL

+ 1#1G. (2) 4"C. EA/W 3#500KCMIL

+ 1#2/0G. (2) 4"C. EA/W 3#500KCMIL

+ 1#1/0G. (3) 4"C. EA/W 3#500KCMIL

+ 1#2/0G. (3) 4"C. EA/W 3#600KCMIL

+ 1#4/0G. (3) 4"C. EA/W 3#600KCMIL

+ 1#3/0G. (4) 4"C. EA/W 3#500KCMIL +

AL

AL

CU

CU

AL

CU

AL

CU

# ROSSETTI 160 WEST FORT, SUITE 400

DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

**PROJECT** 

## West Michigan Hispanic **Chamber of** Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

**CONSULTANT** 



PROFESSIONAL SEAL

© 2021 ROSSETTI

# DESCRIPTION DATE 11/13/2024 1 Design Development

**KEY PLAN** 

SHEET TITLE Wire and Lighting Fixture Schedule and Controls Matrix

PROJECT# 2024-010.00

SHEET#

	SWITCH	I/FUSE	Luciano	CONNECTED LOAD	DEMAND LOAD	FEEDER SIZE (COPPE
POSITION	SWITCH	FUSE	EQUIPMENT	(KVA)	(KVA)	(SEE RISER FOR AL)
01	1200A/3P	1200 A	MAIN SD LSI ARMS			
1	400A/3P	225 A	RTU-1 179.5 A	64.6	51.7	2 1/2°C, 3#4/0 & 1#4 0
2	400A/3P	400 A	RP-2AA	80.0	64.0	4°C, 4-600 kcmil & 1#3
3	200A/3P	175 A	RTU-2 140.3 A	50.5	40.4	2°C, 3#2/0 & 1#6 G
4	200A/3P	200 A	RP-1AA	50.0	40.0	2°C, 4#3/0 & 1#6 G
5	400A/3P	400 A	RP-1BA	80.0	64.0	4°C, 4-600 kcmil & 1#3
6	200A/3P	200 A	ELEVATOR	43.2	34.6	SEE RISER
7	200A/3P		SPARE			
8	200A/3P		SPARE			
9	100A/3P		SPARE			
10	100A/3P		SPARE			
11	60A/3P	40 A	VAV-1-6	10.5	4.2	3/4°C, 3#8 & 1#10 G
12	60A/3P	40 A	VAV-1-7	9.0	3.6	3/4°C, 3#8 & 1#10 G
13	60A/3P	40 A	VAV-2-1	11.0	4.4	3/4°C, 3#8 & 1#10 G
14	60A/3P	60 A	EVENT POWER	15.0	12.0	1 1/4°C, 4#4 & 1#10 G
15	60A/3P		SPARE			
16	30A/3P	20 A	KEF-1	4.0	3.2	3/4°C, 3#12 & 1#12 G
17	30A/3P	30 A	VAV-1-2	10.5	4.2	3/4°C, 3#10 & 1#10 G
18	30A/3P	20 A	VAV-1-3	10.5	4.2	3/4°C, 3#12 & 1#12 G
19	30A/3P	20 A	VAV-1-4	10.5	4.2	3/4°C, 3#12 & 1#12 G
20	30A/3P	20 A	VAV-2-2	10.5	4.2	3/4°C, 3#12 & 1#12 G
21	30A/3P	30 A	VAV-2-3	10.5	4.2	3/4°C, 3#10 & 1#10 G
22	30A/3P	20 A	VAV-2-4	10.5	4.2	3/4°C, 3#12 & 1#12 G
23	30A/3P	25 A	VAV-2-5	10.5	4.2	3/4°C, 3#10 & 1#10 G
24	30A/3P	20 A	ECUH-2	5.0	0.0	3/4°C, 3#12 & 1#12 G
25	30A/3P	20 A	EUH-1	5.0	0.0	3/4°C, 3#12 & 1#12 G
27	30A/3P		SPARE			
28	3P		SPACE			
29	3P		SPACE			
30	3P		SPACE			

# ROSSETT 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

ROSSETTI.COM 313.463.5151

PROJECT

# West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

OF MC

ELGINEER

©	2021 ROSSETTI	

# DESCRIPTION

1	Design Development	11/13/2024
_		
_		
_		
-		

KEY PLAN

SHEET TITLE
Electrical Panel Schedules

PROJECT # Scale 2024-010.00

SHEET#

	Branch Panel: 24  Location: ELEC		M 215			Volts:	120/208 V	Vye			А	.I.C. Rating:		
	Supply From:  Mounting: Surface Enclosure: Type					Phases: Wires:						Mains Type: MLO ains Rating: 400 A		
CKT	Circuit Description LIGHTING	Trip 20 A	Poles 1	700 VA	<b>A</b> 0 VA	В	3	С		Poles 1	Trip 20 A	Circui	t Description SPARE	<b>CK1</b>
3	LIGHTING	20 A	1	700 VA	UVA	600 VA	0 VA			1	20 A		SPARE	4
5	LIGHTING	20 A	1			000 VA	UVA	605 VA	0 VA	1	20 A		SPARE	6
7	LIGHTING	20 A	1	653 VA	0 VA			003 VA	0 1/4	1	20 A		SPARE	8
9	LIGHTING	20 A	1	000 171	0 17.	988 VA	0 VA			1	20 A		SPARE	10
11	LIGHTING	20 A	1					1000 VA	0 VA	1	20 A		SPARE	12
13	LIGHTING	20 A	1	1100 VA	0 VA					1	20 A		SPARE	14
15	LIGHTING	20 A	1			700 VA	0 VA			1	20 A		SPARE	16
17	LIGHTING	20 A	1					600 VA	0 VA	1	20 A		SPARE	18
19	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	20
21	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	22
23	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	24
25	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	26
27	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	28
29	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	30
31	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	32
33	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	34
35	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	36
37	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	38
39	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	40
41	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	42
43	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	44
45	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	46
47	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	48
49	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	50
51	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	52
53	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	54
55	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	56
57	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	58
59	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	60
61	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	62
63	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	64
65	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	66
67	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	68
69	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	70
71	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	72
73	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	74
75	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	76
77	SPARE	20 A	1					0 VA	0 VA	1	20 A		SPARE	78
79	SPARE	20 A	1	0 VA	0 VA					1	20 A		SPARE	80
81	SPARE	20 A	1			0 VA	0 VA			1	20 A		SPARE	82
83	SPARE	20 A						0 VA	0 VA	1	20 A		SPARE	84
			l Load: Amps:		3 VA 1 A	2288 19		2205 18						
ege	nd:													
oad	Classification		Con	nected Loa	d	Demand Fac	tor	Estimated	Demand			Panel	Totals	
ighti	ng			6642 VA		100.00%		6642	VA					
ther				305 VA		100.00%		305 \	/A			Total Conn. Load:	6947 VA	
												Total Est. Demand:	6947 VA	
												Total Conn.:		
_												Total Est. Demand:	19 A	

	Location: STI Supply From: Mounting: Sui Enclosure: Typ	rface				Volts: Phases: Wires:		/ye			N	I.C. Rating: Mains Type: MLO ains Rating: 400 A	
						_					_		
CKT 1	Circuit Description	Trip 20 A	Poles 1	600 VA	A 0 VA	E	3	C	:	Poles 1	Trip 20 A	Circui	t Description SP
	LIGHTING	20 A	1	000 VA	OVA	360 VA	0 VA			1	20 A		SP
	OTHER	20 A	1					500 VA	0 VA	1	20 A		SP
	LIGHTING	20 A	1	910 VA	0 VA					1	20 A		SF
9	LIGHTING	20 A	1			600 VA	0 VA			1	20 A		SF
11	LIGHTING	20 A	1					80 VA	0 VA	1	20 A		SP
13	SPARE	20 A	1	0 VA	0 VA					1	20 A		SP
15	SPARE	20 A	1			0 VA	0 VA			1	20 A		SP
17	SPARE	20 A	1					0 VA	0 VA	1	20 A		SP
19	SPARE	20 A	1	0 VA	0 VA					1	20 A		SP
	SPARE	20 A	1			0 VA	0 VA			1	20 A		SP
	SPARE	20 A	1					0 VA	0 VA	1	20 A		SP
	SPARE	20 A	1	0 VA	0 VA					1	20 A		SP
	SPARE	20 A	1			0 VA	0 VA			1	20 A		SP
	SPARE	20 A	1	6.11	21/1			0 VA	0 VA	1	20 A		SP
	SPARE	20 A	1	0 VA	0 VA	0.44				1	20 A		SP
	SPARE	20 A	1			0 VA	0 VA	0.144	0.1/4	1	20 A		SP
	SPARE	20 A	1	0.1/4	0.1/4			0 VA	0 VA	1	20 A		SP
	SPARE SPARE	20 A	1	0 VA	0 VA	0 VA	0 VA			1	20 A		SP SP
	SPARE	20 A 20 A	1			UVA	UVA	0 VA	0 VA	1	20 A		SP
	SPARE	20 A	1	0 VA	410 VA			UVA	UVA	1	20 A		LIGHT
	SPARE	20 A	1	OVA	410 VA	0 VA				1			SP
	SPARE	20 A	1			O V/A		0 VA		1			SP
	SPARE	20 A	1	0 VA						1			SP
	SPARE	20 A	1	0 171		0 VA				1			SP
	SPARE	20 A	1					0 VA		1			SP
55	SPARE	20 A	1	0 VA						1			SP
57	SPARE	20 A	1			0 VA				1			SP
59	SPARE	20 A	1					0 VA		1			SP
61	SPARE	20 A	1	0 VA	-					1			SP
63	SPARE	20 A	1			0 VA				1			SP
65	SPARE	20 A	1					0 VA		1			SP
67	SPARE	20 A	1	0 VA						1			SP
	SPARE	20 A	1			0 VA				1			SP
	SPARE	20 A	1					0 VA		1			SP
	SPARE	20 A	1	0 VA	-	6				1			SP
	SPARE	20 A	1			0 VA		0.1/2		1			SP
	SPARE	20 A	1	0.1/4				0 VA		1			SP
	SPARE SPARE	20 A 20 A	1	0 VA		0 VA				1			SP SP
	SPARE	20 A	1			UVA		0 VA		1			SP SP
55			Load:	102	20 VA	960	VA	580		+ '			- Sr
			Amps:		6 A	8.		5.		J			
Legend	d:		-										
	Classification			nected Loa	d	Demand Fac	tor	Estimated				Panel	Totals
Lighting	9			2910 VA		100.00%		2910		+		Tatal Commit	2460 \/A
Other				550 VA		100.00%		550 \	/A			Total Conn. Load: Total Est. Demand:	
												Total Est. Demand:	
												Total Est. Demand:	
										+		. Juli 25t. Delliailu.	
										+			
		I			1		1						

					Location: ELE Supply From: Mounting: Surf Enclosure: Type	ace				Volts: Phases: Wires:		/ye				LI.C. Rating: Mains Type: MLO lains Rating: 400 A		
•	скт		скт		Circuit Description		Poles		A		В	С		Poles	Trip	Circui	t Description	CŁ
SPARE	2			LIGHTING		20 A	1	200 VA	0 VA	4000344	0.144			1	20 A		SPARE	_
SPARE SPARE	6	H		LIGHTING		20 A 20 A	1			1000 VA	0 VA	1240 VA	0 VA	1	20 A 20 A		SPARE SPARE	_
SPARE	8			LIGHTING		20 A	1	600 VA	0 VA			1240 VA	0 77	1	20 A		SPARE	_
SPARE	10	<del> </del>		LIGHTING		20 A	1			600 VA	0 VA			1	20 A		SPARE	
SPARE	12	Ī	11	LIGHTING		20 A	1					760 VA	0 VA	1	20 A		SPARE	1
SPARE	14		13	LIGHTING		20 A	1	1080 VA	0 VA					1	20 A		SPARE	1
SPARE	16		15								0 VA			1	20 A		SPARE	1
SPARE	18		17										0 VA	1	20 A		SPARE	+
SPARE	20			LIGHTING		20 A	1	50 VA	0 VA					1	20 A		SPARE	_
SPARE	22			LIGHTING		20 A	1			250 VA	0 VA	000144	21/4	1	20 A		SPARE	_
SPARE SPARE	24 26			SPARE		20 A 20 A	1	0 VA	0 VA			800 VA	0 VA	1	20 A 20 A		SPARE SPARE	_
SPARE	28	H		SPARE		20 A	1	UVA	UVA	0 VA	0 VA			1	20 A		SPARE	+
SPARE	30	H		SPARE		20 A	1			OVA	OVA	0 VA	0 VA	1	20 A		SPARE	_
SPARE	32	- t		SPARE		20 A	1	0 VA	0 VA			0 171		1	20 A		SPARE	_
SPARE	34	T I		SPARE		20 A	1			0 VA	0 VA			1	20 A		SPARE	+
SPARE	36	Ī	35	SPARE		20 A	1					0 VA	0 VA	1	20 A		SPARE	3
SPARE	38	Γ	37	SPARE		20 A	1	0 VA	0 VA					1	20 A		SPARE	: 3
SPARE	40		39	SPARE		20 A	1			0 VA	0 VA			1	20 A		SPARE	4
SPARE	42			SPARE		20 A	1					0 VA	0 VA	1	20 A		SPARE	+
LIGHTING	44			SPARE		20 A	1	0 VA	0 VA					1	20 A		SPARE	_
SPACE	46			SPARE		20 A	1			0 VA	0 VA			1	20 A		SPARE	_
SPACE	48			SPARE		20 A	1	0 VA	0.1/4			0 VA	0 VA	1	20 A 20 A		SPARE	_
SPACE SPACE	50 52	H		SPARE SPARE		20 A 20 A	1	UVA	0 VA	0 VA	0 VA			1	20 A		SPARE SPARE	_
SPACE	54			SPARE		20 A	1			OVA	OVA	0 VA	0 VA	1	20 A		SPARE	-
SPACE	56			SPARE		20 A	1	0 VA	0 VA			0 171		1	20 A		SPARE	_
SPACE	58	T I		SPARE		20 A	1			0 VA	0 VA			1	20 A		SPARE	+
SPACE	60	Ī	59	SPARE		20 A	1					0 VA	0 VA	1	20 A		SPARE	: 6
SPACE	62		61	SPARE		20 A	1	0 VA	0 VA					1	20 A		SPARE	: 6
SPACE	64		63	SPARE		20 A	1			0 VA	0 VA			1	20 A		SPARE	: 6
SPACE	66			SPARE		20 A	1					0 VA	0 VA	1	20 A		SPARE	: 6
SPACE	68			SPARE		20 A	1	0 VA	0 VA					1	20 A		SPARE	_
SPACE	70			SPARE		20 A	1			0 VA	0 VA			1	20 A		SPARE	_
SPACE	72			SPARE		20 A	1	0.14	0.144			0 VA	0 VA	1	20 A		SPARE	+-
SPACE	74			SPARE		20 A	1	0 VA	0 VA	0.1/4	0.1/4			1	20 A		SPARE	_
SPACE SPACE	76 78	H		SPARE SPARE		20 A 20 A	1			0 VA	0 VA	0 VA	0 VA	1	20 A 20 A		SPARE SPARE	-
SPACE	80	⊢		SPARE		20 A	1	0 VA	0 VA			UVA	U VA	1	20 A		SPARE	_
SPACE	82	<b> </b>		SPARE		20 A	1	3 .71		0 VA	0 VA			1	20 A		SPARE	+-
SPACE		T I		SPARE		20 A	1					0 VA	0 VA	1	20 A		SPARE	-
		Ī				Total	Load:	193	0 VA	185	0 VA	2800	VA					
		Į.				Total	Amps:	1	6 A	15	5 A	23 .	A	•				
			Legend	1:														
		Ī	Load C	lassification			Conr	nected Loa	d	Demand Fa	ctor	Estimated [	Demand			Panel	Totals	
		ī	_ighting	J			(	6580 VA		100.00%		6580 \	/A					
4																Total Conn. Load:		
A		L														Total Est. Demand:		
														-		Total Conn.:		
																Total Est. Demand:	18 A	
		<b> </b>																_
														_				
		יון	Notes:															

160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 ROSSETTI.COM 313.463.5151

**PROJECT** 

# West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507

CONSULTANT



PROFESSIONAL SEAL

OF MACHINERA

6201034544

© 2021 ROSSETTI

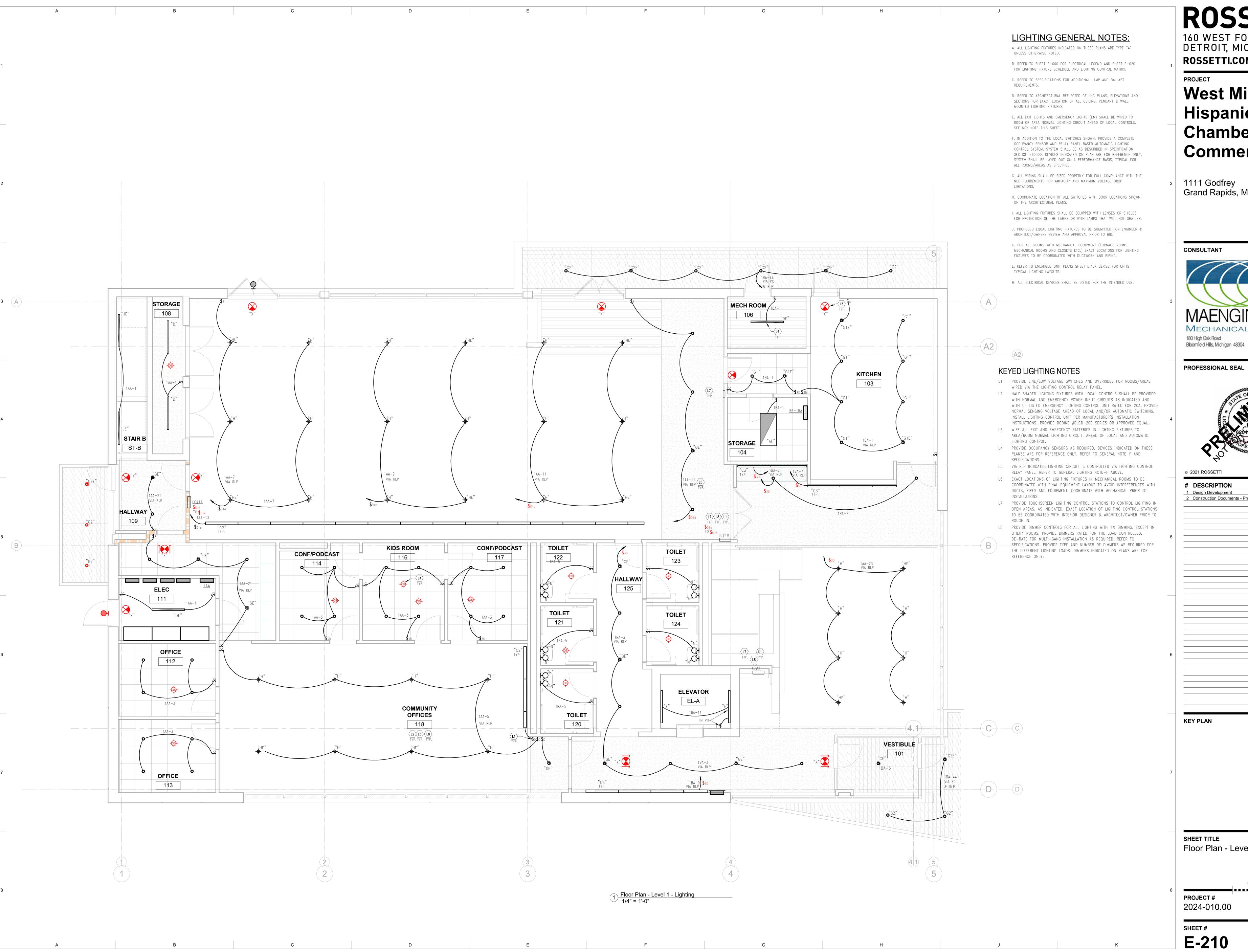
#	DESCRIPTION	DATE
1	Design Development	11/13/2024
2	Construction Documents - Progress Review	12/03/2024

KEY PLAN

sнеет тітье Electrical Panel Schedules

PROJECT # Scale: 1/16" = 1'-

SHEET#



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

# West Michigan Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507



f1248125819538

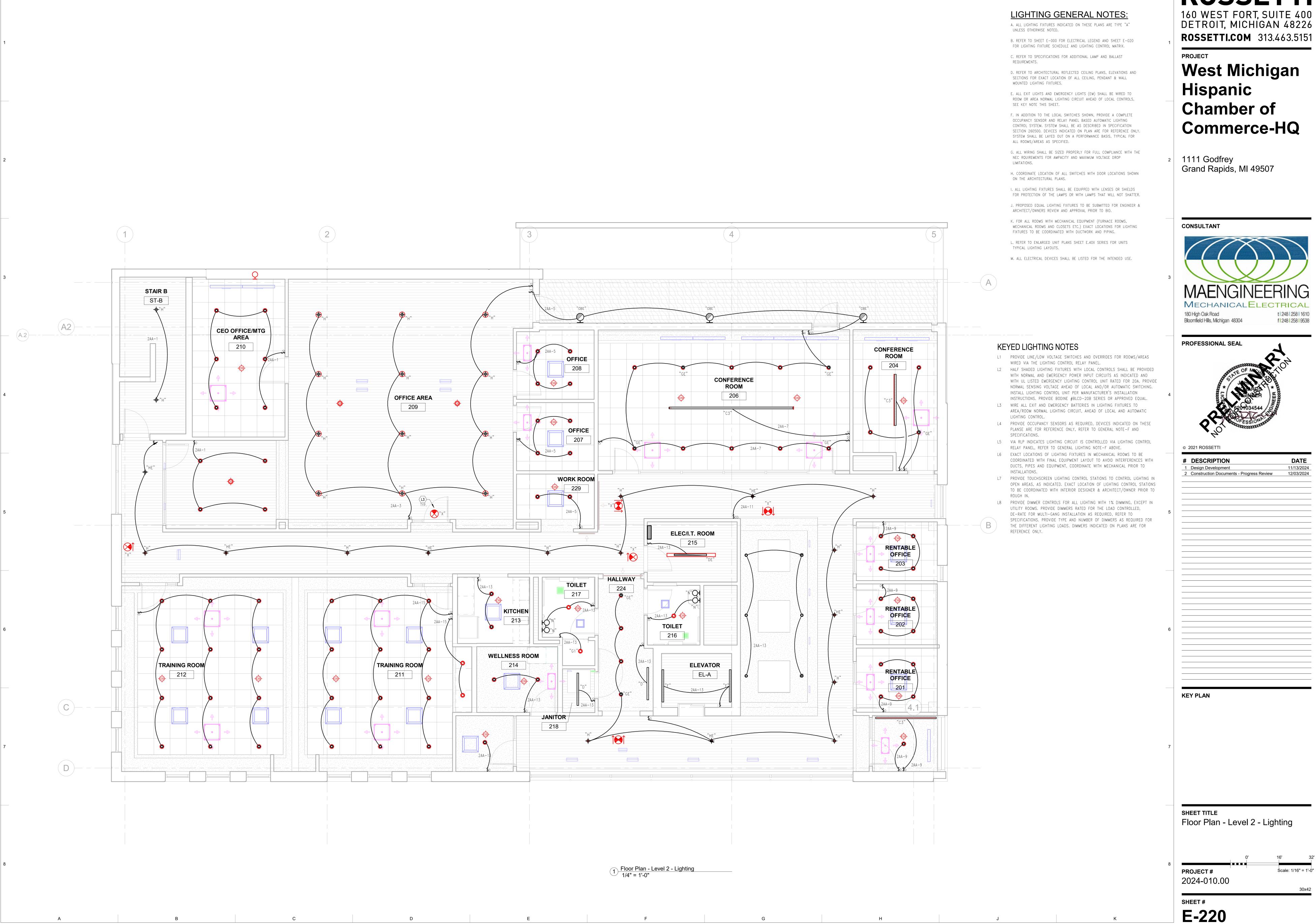
PROFESSIONAL SEAL

© 2021 ROSSETTI

ESCRIPTION	DATE
sign Development	11/13/2024
nstruction Documents - Progress Review	12/03/2024
<del>-</del>	

SHEET TITLE Floor Plan - Level 1 - Lighting

PROJECT# Scale: 1/16" = 1'-0" 2024-010.00



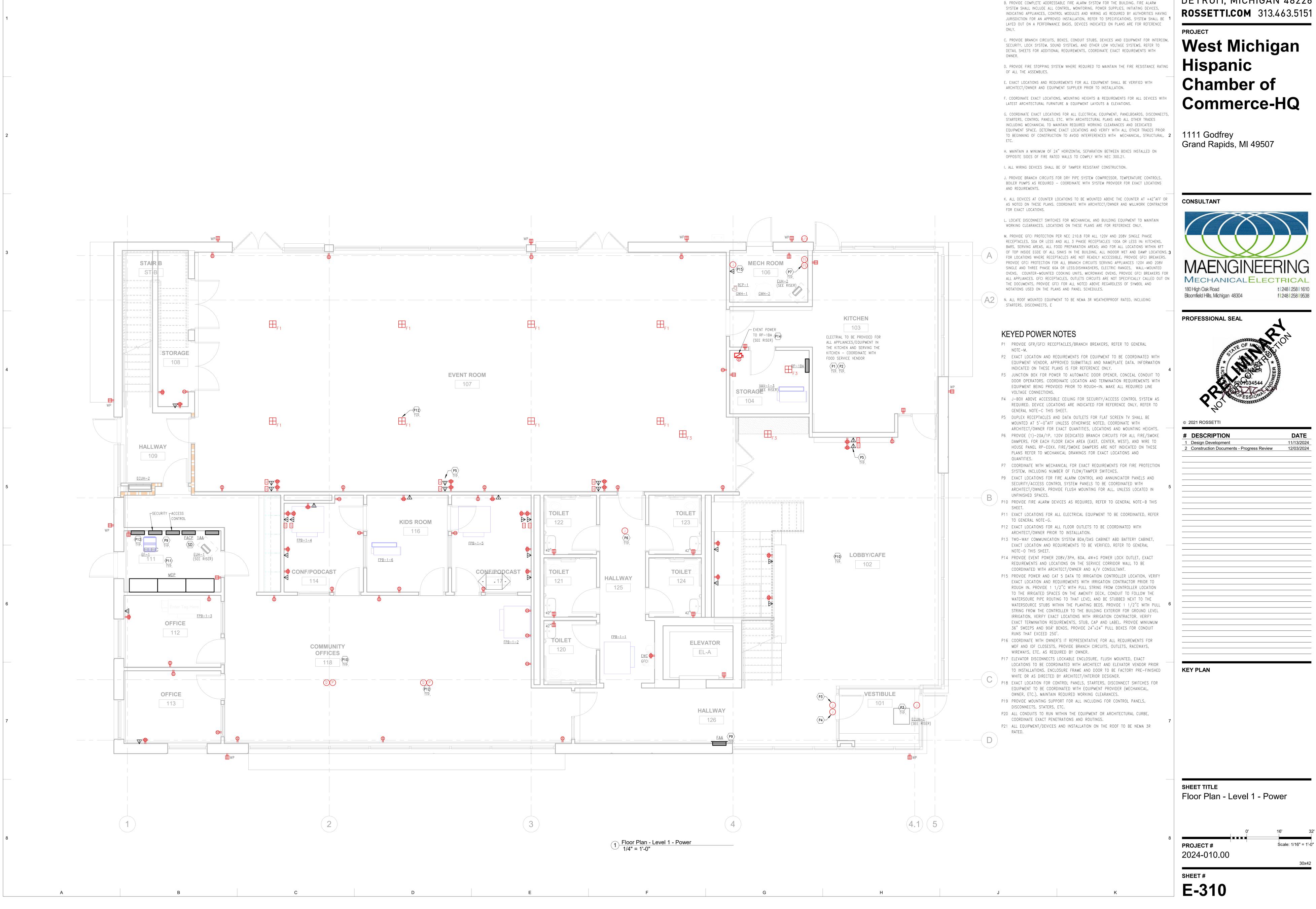
160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

# Chamber of



Floor Plan - Level 2 - Lighting

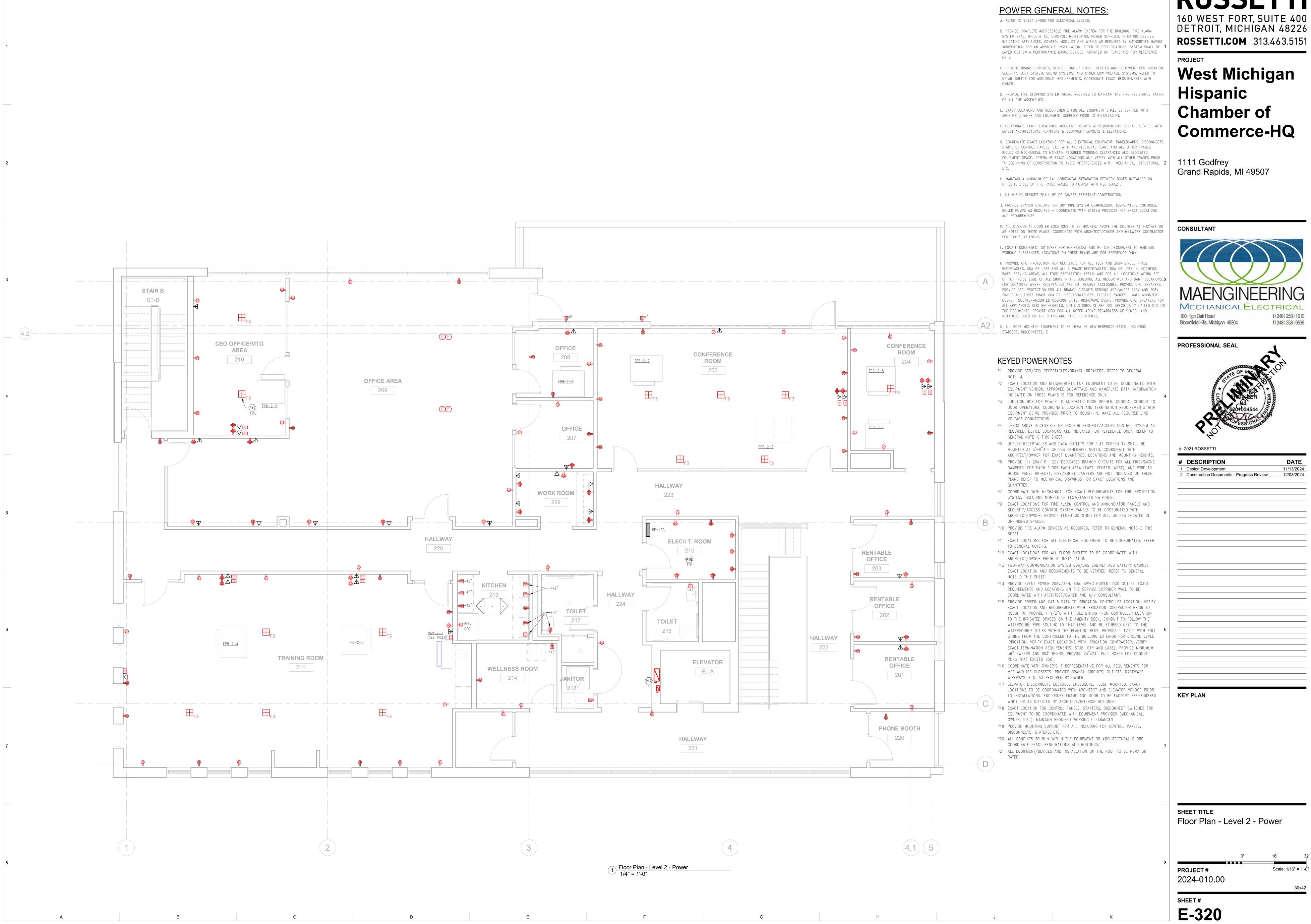
Scale: 1/16" = 1'-0"



160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

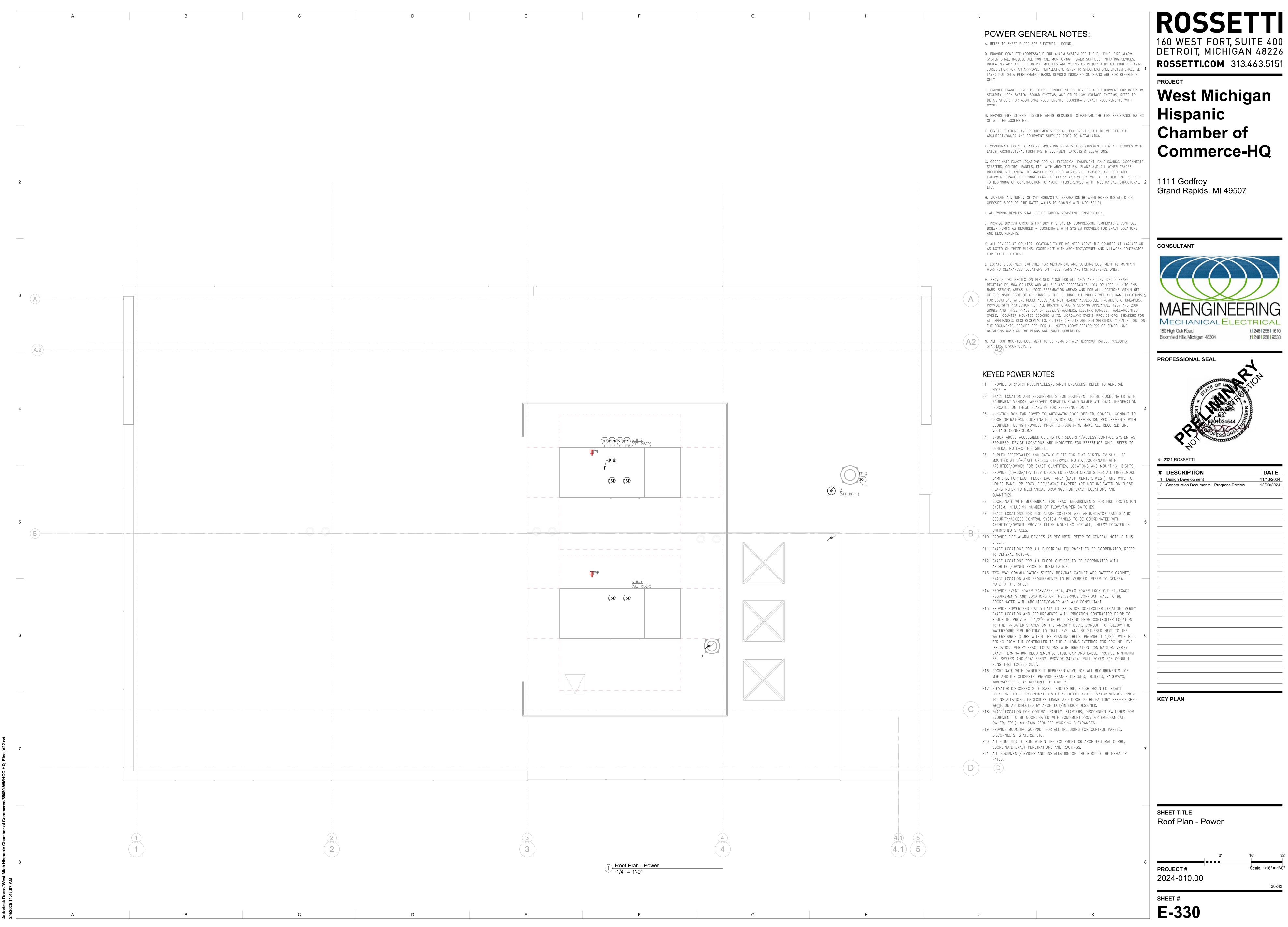
**POWER GENERAL NOTES:** 

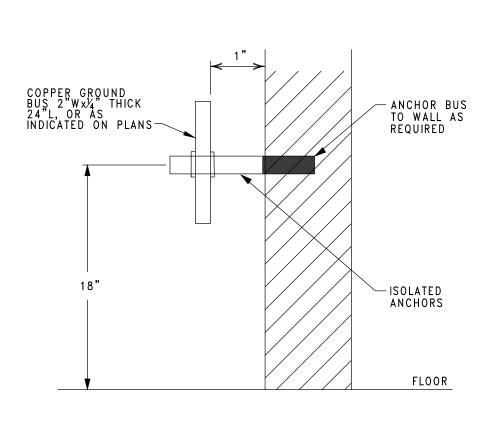
A. REFER TO SHEET E-000 FOR ELECTRICAL LEGEND.



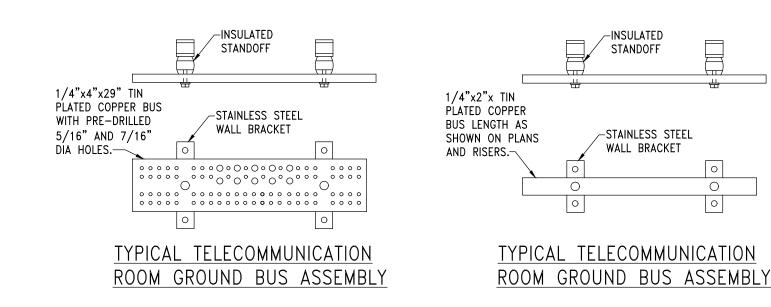
160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226

DESCRIPTION	DATE
Design Development	11/13/2024
Construction Documents - Progress Review	12/03/2024

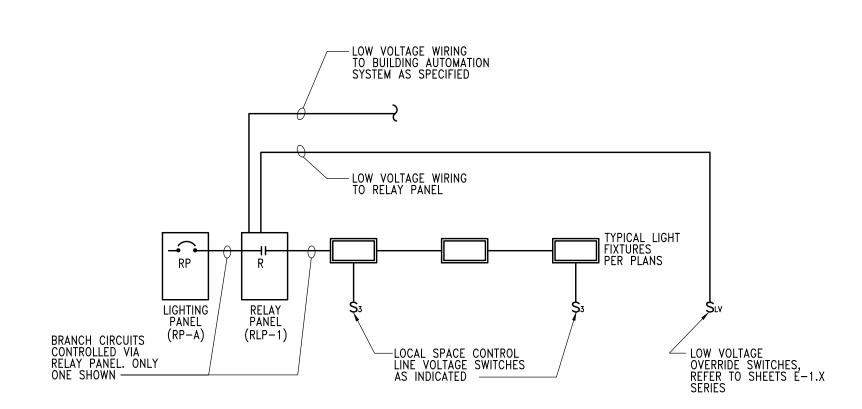




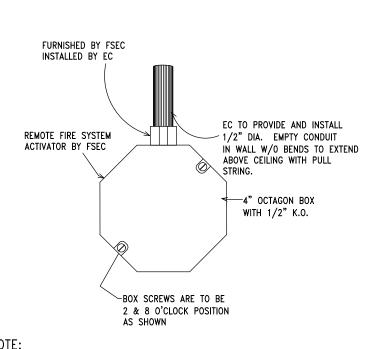
GROUND BUS DETAIL
SCALE: NTS



TYPICAL GROUND BUS ASSEMBLIES

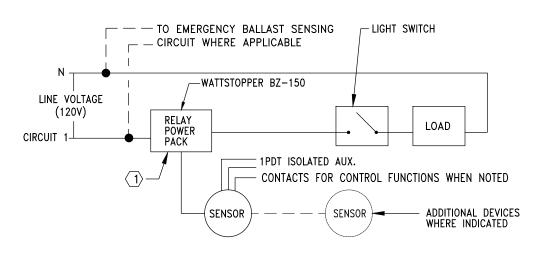


AUTOMATIC LIGHTING CONTROL OVERRIDE SCHEMATIC DIAGRAM No Scale



NOTE: VERIFY HEIGHT AND EXACT REQUIREMENT WITH LOCAL AUTHORITY. ADA REQUIREMENTS MAY APPLY.

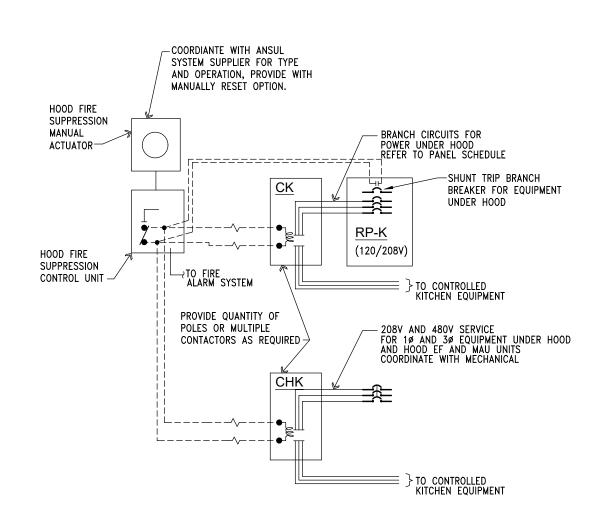
ANSUL FIRE SYSTEM REMOTE PULL STATION DETAIL



KEY NOTES: 1> OCCUPANCY SENSOR MODEL NUMBERS WIRING DIAGRAMS AND CONDUCTOR COLORS ARE BASED ON WATTSTOPPER. EQUAL EQUIPMENT ON THE WSU PREFERRED MANUFACTURERS LIST MAY BE USED. MODIFY DIAGRAMS ACCORDINGLY PER MANUFACTURERS INSTALLATION

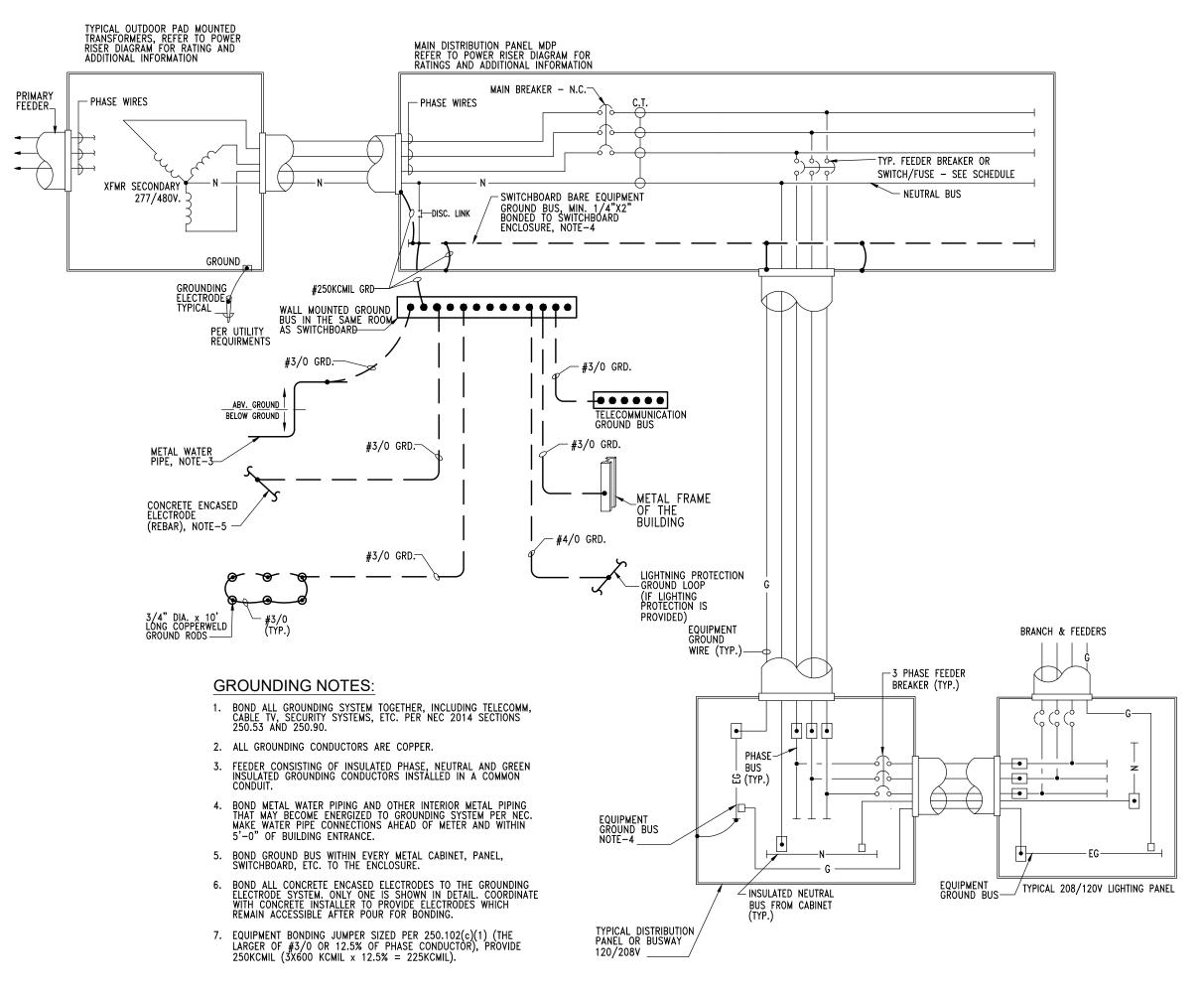
INSTRUCTIONS AND INDICATE ON AS-BUILT DOCUMENTS.

SCHEMATIC OCCUPANCY CONTROL DETAIL (CEILING MOUNTED SENSOR) ①

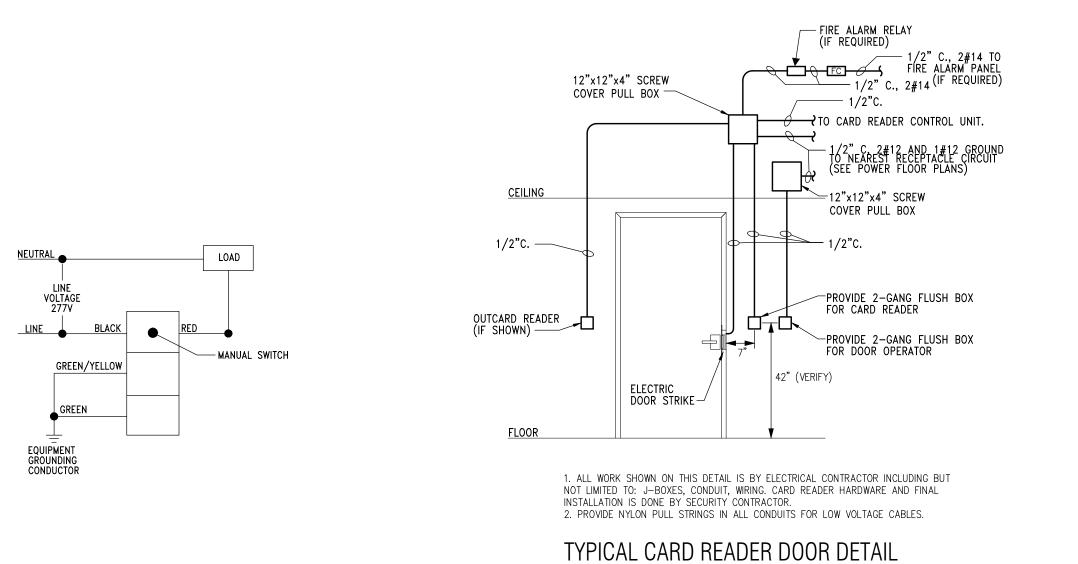


Schematic Only

WIRING SCHEMATIC FOR HOOD FIRE SUPPRESSION SYSTEM

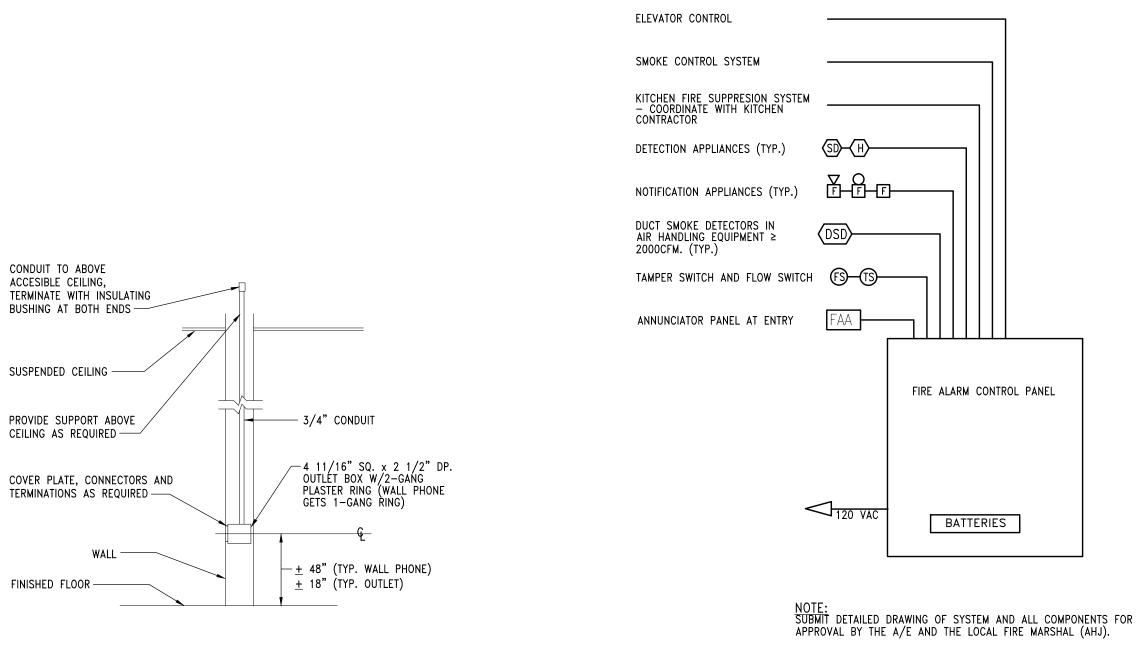


**ELECTRICAL SYSTEM GROUNDING SCHEME** Schematic Only



SCALE: NO SCALE

WALL MOUNTED SENSOR



TYPICAL TELECOMMUNICATION OUTLET DETAIL No Scale

FIRE ALARM SYSTEM RISER Schematic Only

ROSSETTI 160 WEST FORT, SUITE 400 DETROIT, MICHIGAN 48226 **ROSSETTI.COM** 313.463.5151

> **PROJECT** West Michigan

Hispanic Chamber of Commerce-HQ

1111 Godfrey Grand Rapids, MI 49507





PROFESSIONAL SEAL

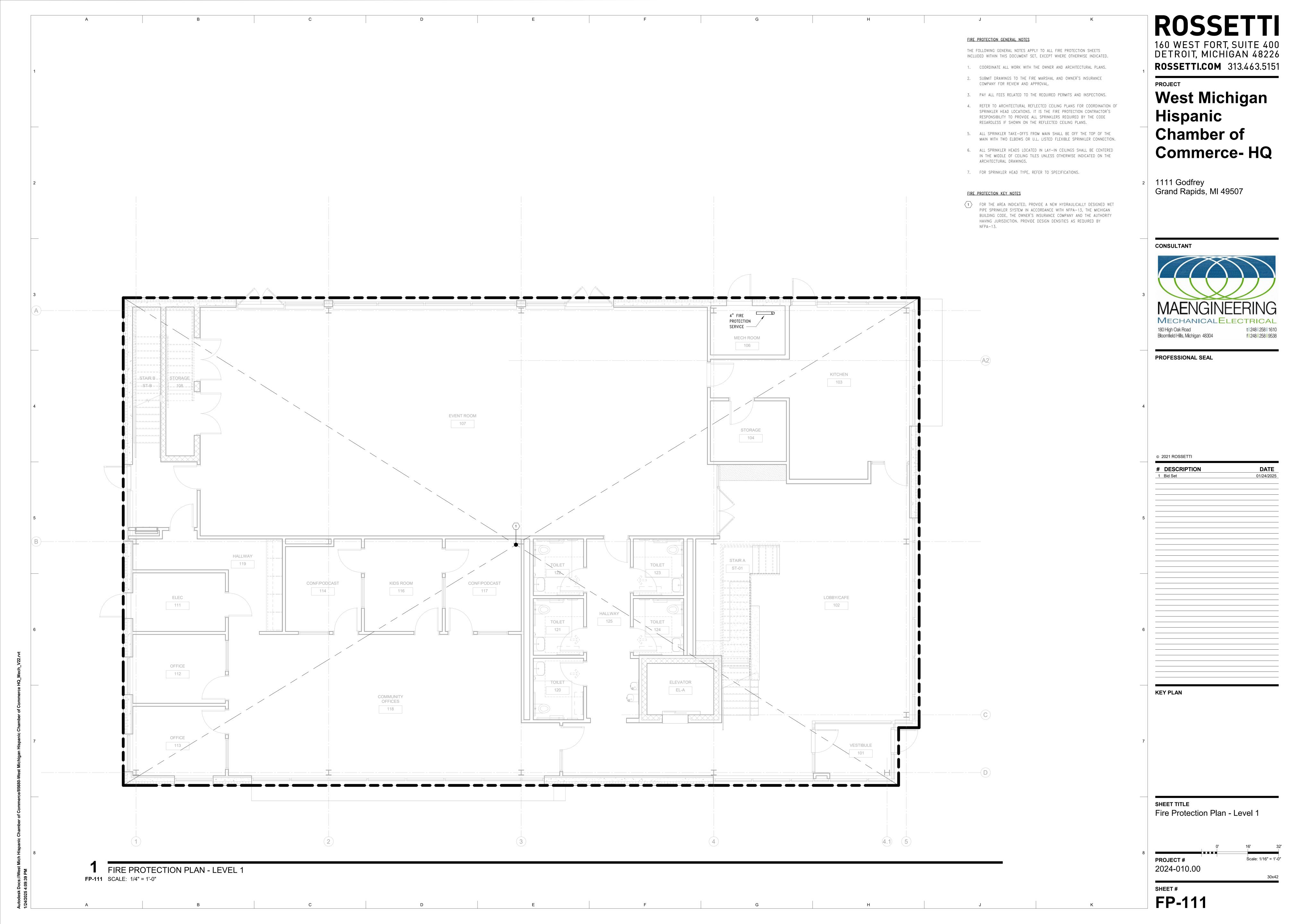
	GEN 620-1034544	and the second
©	2021 ROSSETTI	
#	DESCRIPTION	D/
1	Design Development	11/1:

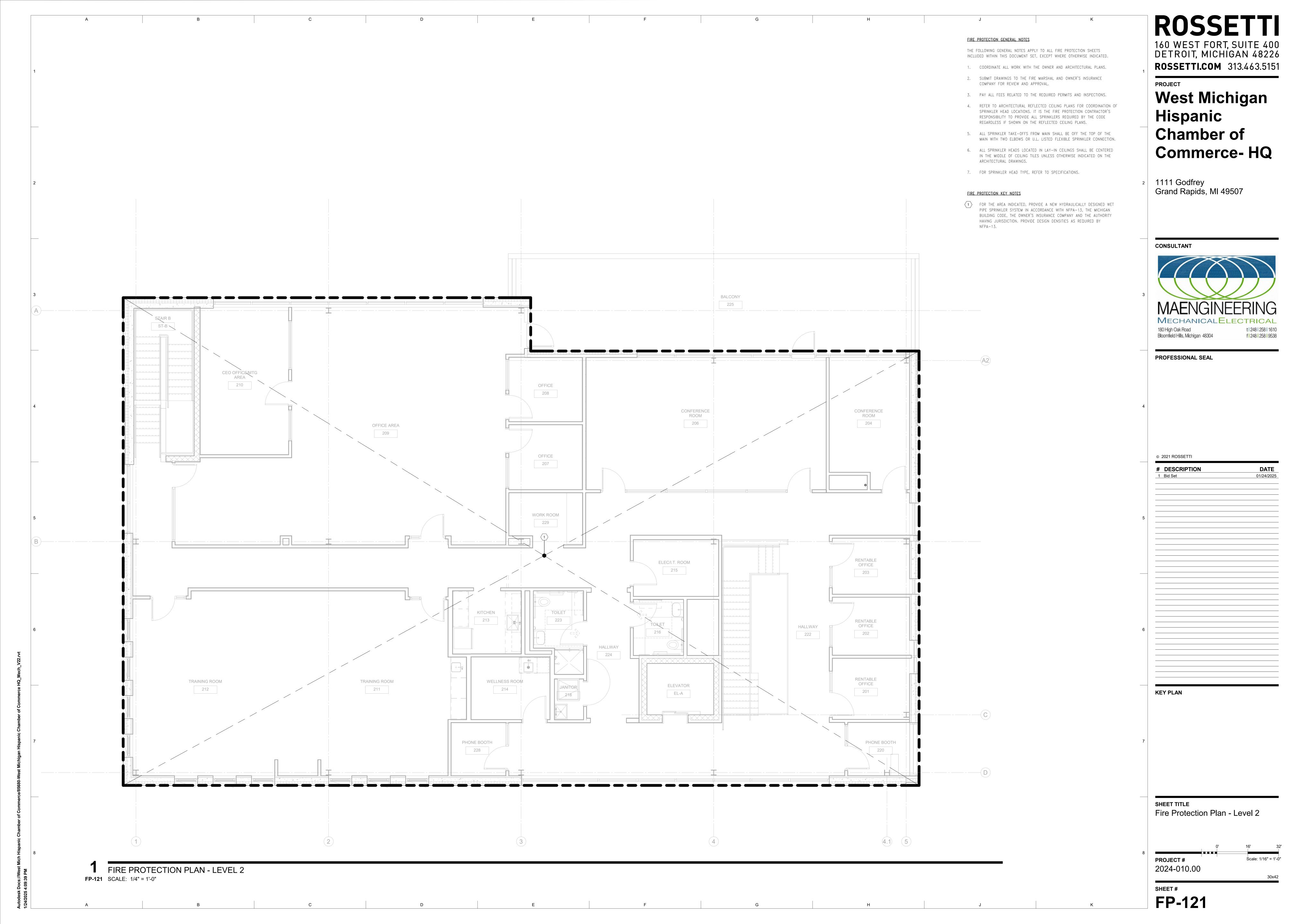
**KEY PLAN** 

SHEET TITLE **Electrical Details** 

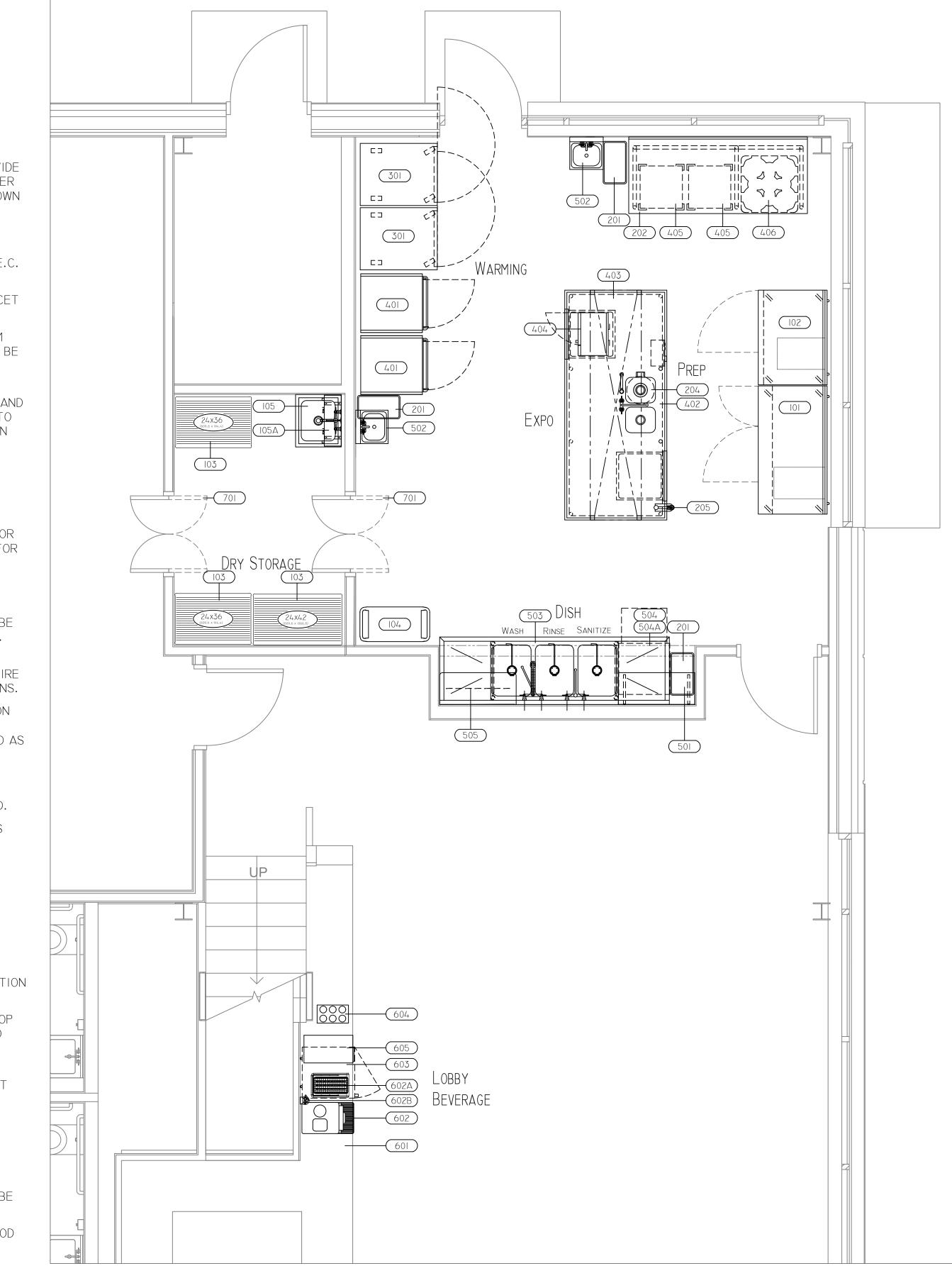
PROJECT# Scale: 1/16" = 1'-0" 2024-010.00

SHEET#

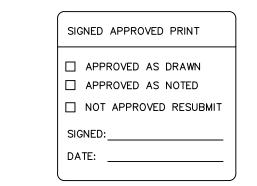




- I. KITCHEN EQUIPMENT SHALL BE DELIVERED AND ERECTED BY F.S.E.C. (FOODSERVICE EQUIPMENT CONTRACTOR).
- 2. TRADES SHALL MAKE ALL FINAL CONNECTIONS
  BETWEEN EQUIPMENT AND ROUGH-IN POINT AND
  FURNISH ALL WIRING, SWITCHES, CONTROLS,
  SERVICE VALVES, PIPING, ETC. AS REQUIRED.
- 3. ALL REQUIREMENTS SHOWN ON DRAWINGS ARE REQUIRED FOR THE PROPER FUNCTION OF FOODSERVICE EQUIPMENT. TRADES SHALL PROVIDE ALL ADDITIONAL ROUGH-INS REQUIRED FOR OWNER SUPPLIED OR RELOCATED EQUIPMENT OR AS SHOWN ON ARCHITECTURAL ENGINEERS DRAWINGS.
- 4. TRADES SHALL FURNISH AND INSTALL ALL ACCESSORIES (FAUCETS, DRAINS, SWITCHES, VALVES, GAS HOSES, ETC.) FURNISHED BY F.S.E.C.
- 5. MECHANICAL TRADES SHALL PROVIDE WATER HEATER AND JANITOR SINK WITH HOSE BIB FAUCET UNLESS NOTED IN ITEM SPECIFICATIONS.
- 6. SLOPES TO FD'S SHOULD BE HELD TO A MINIMUM DIMENSION. FLOOR SINKS OR FLOOR DRAINS TO BE OF ADEQUATE SIZE TO PREVENT OVERFLOW OF ADJACENT EQUIPMENT.
- 7. ALL "ROUGH-INS" SHOULD BE "UP-WITHIN" AND THEN "OUT-OF" WALLS WHEREVER POSSIBLE TO KEEP FLOORS AS CLEAN AS POSSIBLE. ROUGH-IN ARE SHOWN AT TERMINATION POINT TO ALLOW WIRING /PIPING TO FIXTURE BY TRADES.
- 8. TRADES TO ADVISE OF LOCATION OF UTILITY ACCESS HOLES IN EQUIPMENT WHICH SHALL BE PROVIDED BY F.S.E.C.
- 9. GENERAL TRADES SHALL PROVIDE WALL OR FLOOR OR FLOOR PENETRATIONS, AND FLOOR RECESS FOR FLOOR GRATES, WALK-INS, ETC.
- 10. PROVIDE MINIMUM OF 3'-0" DOOR OPENING FOR EQUIPMENT INSTALLATION.
- II. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE DISCONNECTED FROM UTILITIES BY THE TRADES.
- 12. GENERAL TRADES SHALL PROVIDE VENTILATION STRUCTURAL SUPPORT OF PENETRATIONS AND FIRE PROOFING UNLESS NOTED IN ITEM SPECIFICATIONS.
- I3. EXHAUST HOOD SHALL BE USED FOR VENTILATION OF COOKING EQUIPMENT ONLY, TRADES SHALL PROVIDE ROOM VENTILATION (A/C RECOMMENDED AS REQUIRED.
- 14. MECHANICAL TRADES SHALL PROVIDE ADEQUATE VENTILATION FOR ALL REFRIGERATION COMPRESSORS, WHETHER AIR OR WATER COOLED.
- I5. TRADES SHALL VERIFY ROUGH-IN REQUIREMENTS FOR FUTURE, PURVEYOR SUPPLIED, OWNERS RELOCATED EQUIPMENT, OWNERS SUPPLIED EQUIPMENT, ETC.
- 16. TRADES SHALL DISCONNECT, RELOCATE AND RECONNECT EXISTING EQUIPMENT AS REQUIRED.
- 17. HEIGHTS GIVEN FOR ELECTRICAL ROUGH-INS TO CENTER OF VERTICALLY MOUNTED BOX.
- 18. G.C. TO PROVIDE BACKING FOR WALL MOUNTED EQUIPMENT F.S.E.C. SHALL COORDINATE LOCATION OF BACKING WITH G.C.
- 19. TRADES SHALL REVIEW ALL ROUGH-IN'S AND SHOP DRAWINGS FROM F.S.E.C. AND ADVISE PRIOR TO ROUGHING IN IF ANY CHANGES ARE REQUIRED.
- 20. OWNER SHALL COORDINATE ROUGH-IN REQUIREMENTS FOR OWNER SUPPLIED EQUIPMENT WITH ALL TRADES.
- 21. TRADES TO USE EXISTING ROUGH-IN'S IF APPLICABLE.
- 22. EQUIPMENT NOT BEING RE-USED TO BE DISCONNECTED FROM UTILITIES BY TRADES.
- 23. EQUIPMENT DESIGNATED AS RELOCATED SHALL BE RECONNECTED BY THE TRADES.
- 24. TRADES TO VERIFY VENTILATION DATA WITH HOOD MFG. SHOP DRAWINGS.
- 25. WALL BEHIND EXHAUST HOOD TO BE NON COMBUSTABLE. SECTION 507.1 FROM MICHIGAN MECHANICAL CODE REFERS TO SECTION 4.2.1 FROM NFPA 96 2014 EDITION.







NOTICE

DRAWINGS - DESIGN - CONCEPTS
ARE THE PROPERTY OF:

MERCHANDISE EQUIPMENT & SUPPLY, INC.
2039 WALKER CT. NW
GRAND RAPIDS, MI 49544

DRAWINGS - DESIGNS - CONCEPTS
ARE NOT TO BE COPIED OR REPRODUCED
IN ANY WAY UNDER PENALTY OF LAW
JOB:
DATE:

Merchandise
P 616-791-1100 F 616-791-1148
2039 WALKER CT. NW GRAND RAPIDS, MI 4954

OMMERCE

 $\bigcirc$ 

AMB

 $\bigcirc$ 

ANIC

HISP,

Z V

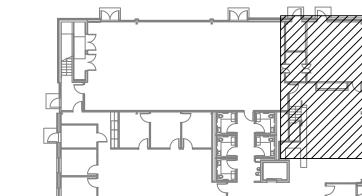
9

ME

	EQUIPMENT SCHEDULE						
ITEM No	QTY	EQUIPMENT CATEGORY	EQUIPMENT REMARKS				
101	ı	REFRIGERATOR, WORKTOP					
102		FREEZER, WORKTOP					
103	3	SHELVING, WIRE	4-TIER				
104	ı	CART, BUSSING					
105	ı	SINK, MOP					
105A	I	SINK, MOP ACCESSORY					
201	3	* BIN, TRASH	BY OWNER				
202		Table, Work,	OPEN BASE				
203		Spare Number					
204		Disposer, Garbage					
205	I	CAN OPENER					
301	2	OVEN, RETHERM AND HOLD					
401	2	Cabinet, Holding/Proofing					
402		Table, Work					
403		OVERSHELF, DOUBLE, TABLE MOUNT					
404		Oven, Microwave					
405	2	Dolly, Dishrack					
406	I	Dolly, Adjustable Plate					
501	I	SHELF, WALL MOUNT					
502	2	SINK, HAND, WALL MOUNT					
503		SINK, 3 COMPARTMENTS					
504		WAREWASHER, UNDERCOUNTER					
504A		Drain Water Tempering Kit					
505	I	POT RACK, WALL MOUNT					
601	l	* SERVICE COUNTER	By Millwork				
602		ESPRESSO MACHINES, AUTOMATIC					
602A		ESPRESSO MACHINES, ACCESSORY					
602B		FILTER SYSTEM, ESPRESSO MACHINE					
603		REFRIGERATOR, UNDERCOUNTER					
604		Bottle Organizer					
605	I	CUP DISPENSER					
701	2	KITCHEN SWING DOOR					

# FOR REFERENCE ONLY

#### Key Plan



#### NOTE FOR EQUIPMENT SCHEDULE

- \* NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED OR BY OTHERS.
- BY OTHERS. NOTE: ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE
- \* NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS. \* NOTE: DO NOT START WORK UNLESS ALL ITEMS BY OWNER
- OR OTHERS HAVE BEEN VERIFIED.

REVISIONS

NO. DATE DESCRIPTION

THESE PLANS AND THE
DESIGNS CONTAINED HEREIN
ARE THE PROPERTY OF
MERCHANDISE EQUIPMENT
AND SUPPLY AND MAY NOT
BE REPRODUCED OR USED
BY ANYONE, EITHER ALL OR
IN PART, WITHOUT FIRST
SECURING OUR WRITTEN

PERMISSION.

FLOOR PLAN
SCALE: 3/8"=1'
SHEET NO.
FS-1

PROJECT NO.:

DATE: 02/07/2025

DATE DESCRIPTION

DESIGNS CONTAINED HEREI MERCHANDISE EQUIPMENT AND SUPPLY AND MAY NO BY ANYONE, EITHER ALL (

SECURING OUR WRITTEN PERMISSION. Detail Plan CALE: 3/8"=1'

IN PART, WITHOUT FIRST

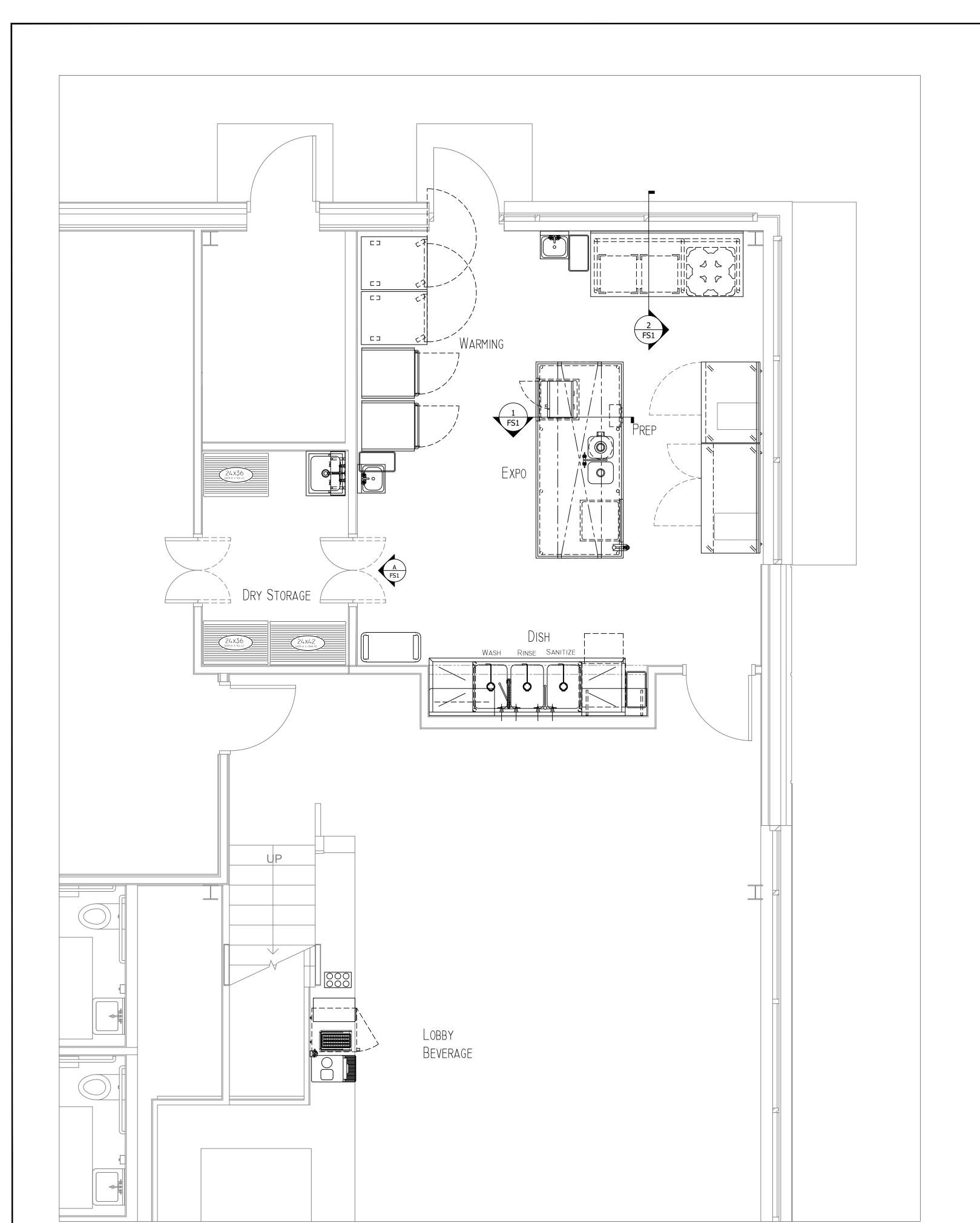
SHEET NO.

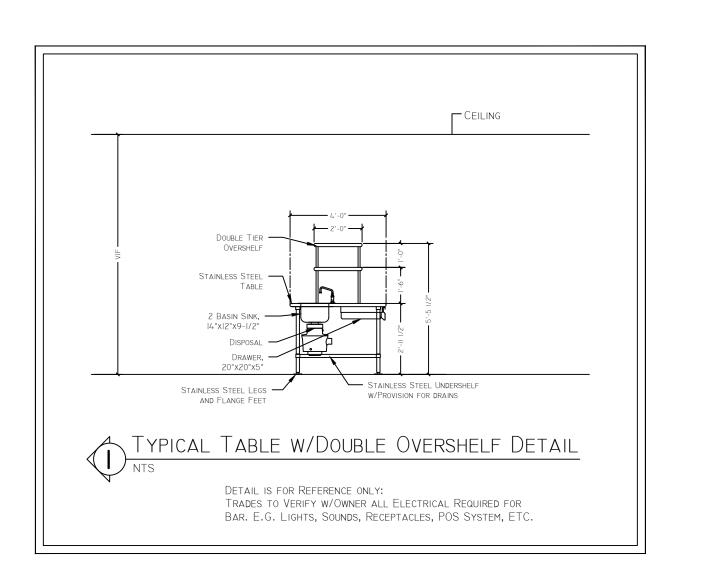
DATE: 02/07/2025

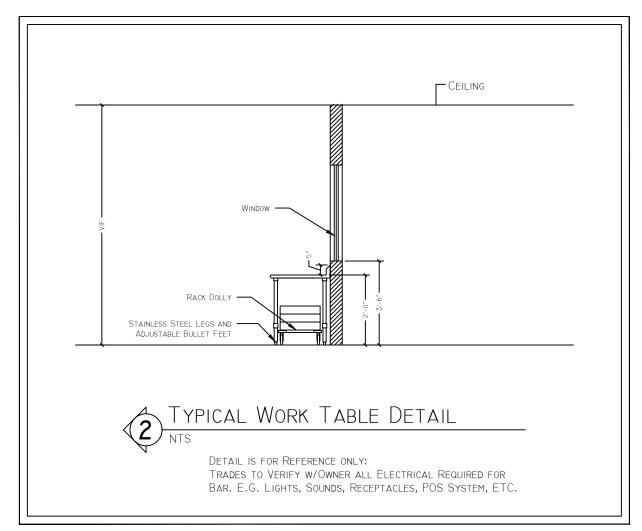
\* NOTE: ASTERISK ITEMS ARE (N.I.F.E.C.) NOT IN FOODSERVICE EQUIPMENT CONTRACT.

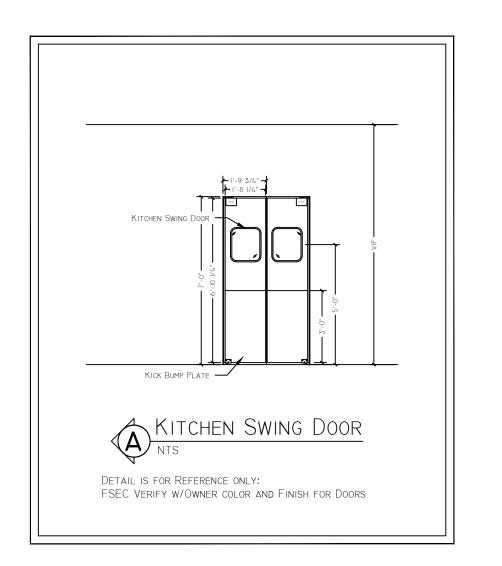
\* NOTE: ALL TRADES TO VERIFY EQUIPMENT UTILITY REQUIREMENTS FOR EQUIPMENT BY LESSEE, OR BY OTHERS.

\* NOTE: DO NOT START WORK UNLESS ALL ITEMS BY OWNER OR OTHERS HAVE BEEN VERIFIED.









# FOR REFERENCE ONLY

NOTE FOR EQUIPMENT SCHEDULE

- \* NOTE: DENOTES EXISTING EQUIPMENT TO BE RE-USED OR BY OTHERS.

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