2550 Ventura Avenue
Santa Rosa, CA 95403

p: (707) 565-1900
f: (707) 565-1017

Scott Orr
Director

Michelle Arellano
Administration

Nathan Quarles
Engineering and Construction

Cecily Condon
Planning

Steve Mosiurchak
Fire Marshal

September 22, 2026

To: Interested Agencies

The following application has been filed with the Sonoma County Permit and Resource Management Department.

File Number:	**DRH26-0010**
Applicant Name:	**Russell, Gallaway Associates**
Owner Name:	**MACARTHUR STREET PROPERTIES**
Site Address:	**1205, 1209, & 1201 E MacArthur St., Sonoma**
APN:	**128-121-038**
Zoning:	**M3, VOH**

Project Description: Design Review with Hearing for new 24,000 sq. ft. industrial structure located on an 11.80 acre parcel. The structure will be constructed as a shell and will house an existing metal working/welding use on site and eventually future tenants.

We are submitting the above application for your review and recommendation. Additional information is on file in this office.

Responses to referrals should include a combination of any or all of the following details:

(1) Statement of any environmental concerns or uncertainties your agency may have with the project.
(2) Comments you wish to make regarding the merits of the project.
(3) Identification of any missing information or application submittals that will preclude you from providing conditions and mitigations for this project in the future.
(4) Your proposed conditions of approval and/or mitigations for this project.

After reviewing this application, please respond to the planner with your *marked* response below:

[ ] Conditions will be provided and no further information is necessary.
[ ] Conditions will be provided and additional information is necessary.
[ ] Comments and/or concerns.
[ ] No comments or conditions.

Responsible agencies under CEQA are requested to indicate whether permits will be required for this project.

Your comments will be appreciated by October 6, 2026, and should be sent to the attention of:

DRH26-0006, Ken Compton (Ken.Compton@sonomacounty.gov). The Project Planner can also be reached at (707) 565-2829. **If no response is received by October 6, 2026, it will be assumed that no comments or conditions will be provided.**

Please send a copy of your comments to the applicant(s) or their representatives as indicated on the attached Planning Application.

[X] Building Inspection
[X] Code Enforcement
[X] Fire Prevention
[X] Health Specialist
[X] Grading and Storm Water
[X] Management Group
[X] Natural Resources
[X] Well & Septic
[X] Dist. 1 Director and Commissioners
[X] Environmental Health
[X] Regional Parks Dept
[X] SPI (DTPW), Land Development
[X] Trans Authority/RCPA
[X] Transit/BPAC

[X] Sonoma Valley CAC
[X] Valley of the Moon Alliance
[X] Kenwood Press
[X] NW Information Center, S.S.U.
[X] Local Fire District – Schell-Vista FPD
[X] Recology Sonoma Marin (Disposal)
[X] State Dept of Fish and Wildlife
[X] Regional Water QCB: SF Bay
[X] U.S. Army Corps of Engineers
[X] Sonoma MOAG
[X] Tribal Notification
[X] Sonoma County Water Agency
[X] Chamber of Commerce, Sonoma Valley
[X] Sonoma City Water Division
[X] Groundwater Sustainability Agency – Sonoma Valley

Planning Application

PJR-001

Application Type(s):

File # _____

- ☐ Admin Cert. Compliance
- ☐ Ag. or Timber Preserve/Contract
- ☐ Conditional Cert. of Compliance
- ☐ Cert. of Modification
- ☐ Coastal Permit
- ☐ Zoning Permit for: _____
- ☐ Design Review Admin.
- ☒ Design Review Full
- ☐ General Plan Amendment
- ☐ Lot Line Adjustment
- ☐ Major Subdivision
- ☐ Minor Subdivision
- ☐ Voluntary Merger
- ☐ Ordinance Interpretation
- ☐ Second Unit Permit
- ☐ Specific/Area Plan Amendment
- ☐ Use Permit
- ☐ Variance
- ☐ Zone Change
- ☐ Other: _____

By placing my contact information (name, address, phone number, email address, etc.) on this application form and submitting it to Sonoma County PRMD, I understand and authorize PRMD to post this application to the internet for public information purposes, including my contact information.

PRINT CLEARLY

APPLICANT			**OWNER (IF OTHER THAN APPLICANT)**		
Name Russell, Gallaway Associates, Inc.			Name MacArthur Street Properties, Inc. - Giuseppe Mezzetta, Mngr		
Mailing Address 115 Meyers St. Suite 110			Mailing Address 1201 E MacArthur St, Ste 2		
City Chico	State CA	Zip 95928	City Sonoma	State CA	Zip 95476
Day Ph (530)342-0302	Email clint@rgachico.com		Day Ph (541)944 9296	Email admin@mspsonoma.com	
Signature Clint Peterson	Date 12/16/25		Signature	Date 12/16/25	

Billing Responsible Party (At-Cost Only) ☐ **Applicant** ☒ **Owner** ☐ **Other:** _____

OTHER PERSONS TO RECEIVE CORRESPONDENCE					
Name/Title			Name/Title		
Mailing Address			Mailing Address		
City	State	Zip	City	State	Zip
Day Ph ( )	Email		Day Ph ( )	Email	

PROJECT INFORMATION

Address(es) 1201 East MacArthur Street	City Sonoma
Assessor's Parcel Number(s) 128-121-038	
Project Description Erecting a metal building shell with interior demising walls. Associated site paving, landscaping and improvements. Associated electrical, plumbing and underground utilities.	
Acreage	Number of new lots proposed
Site Served by Public Water? ☐ Yes ☐ No	Site Served by Public Sewer? ☐ Yes ☐ No

TO BE COMPLETED BY PRMD STAFF

Planning Area	Supervisorial District	☐ Critical Habitat	☐ Urban Service	Groundwater Availability	☐ 1 / 2 ☐ 3 / 4
Current Zoning		☐ NPDES	☐ Williamson Act		
		Specific/Area Plan		Subject to CEQA	☐ EX ☐ YES
General Plan Land Use		Parcel Specific Policy			
Application resolve planning violation? ☐ Yes ☐ No		Violation? ☐ Yes ☐ No		File No.	
Previous Files		Penalty application? ☐ Yes ☐ No			
Application accepted by		Date			
Approved by		Date			

NEW WAREHOUSE BUILDING

MacArthur St. Properties

1201 East MacArthur St.
SONOMA, CA 95476

APN: 128-121-038

CIVIL ENGINEER
ADOBE ASSOCIATES, INC.
CONTACT: TIM SCHRAM
1220 N. DUTTON AVENUE
SANTA ROSA, CA 95401
PHONE: 707-541-2300
EMAIL: tschram@adobeinc.com

GEOTECHNICAL
RGH CONSULTANTS
CONTACT: TRAVIS WHITTED
1041 JEFFERSON ST. SUITE 4
NAPA, CA 94559
PHONE: 707-252-8105

DESIGN PROFESSIONAL
RUSSELL, GALLAWAY ASSOC.
CONTACT: MATT GALLAWAY
115 MEYERS STREET, SUITE 110
CHICO, CA 95928
PHONE: 530-342-0302
EMAIL: matt@rgachico.com

METAL BUILDING
VARCO PRUDEN
CONTACT: DALILA BRYAN
7440 DOE AVENUE
VISALIA, CA 93291
PHONE: 559-651-5300

ELECTRICAL
ENGINEERING ENTERPRISES
CONTACT: MIKE JOHNSON
613 4TH STREET, SUITE 206b
SANTA ROSA, CA 95404
PHONE: 707-544.7775
EMAIL: mike@ engineering-enterprises.com

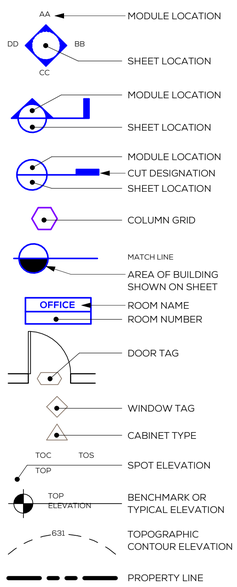
ENGINEER
RUSSELL, GALLAWAY ASSOC.
CONTACT: CLINT PETERSEN
115 MEYERS STREET, SUITE 110
CHICO, CA 95928
PHONE: 530-342-0302
EMAIL: clint@rgachico.com

CONTRACTOR
SEEGERT CONSTRUCTION
CONTACT: GIUSEPPE MEZZETTA
3098 INDUSTRIAL BLVD.
WEST SACRAMENTO, CA 95691
PHONE: 916-599-1782
EMAIL: gmezzetta@seegertconstruction.com

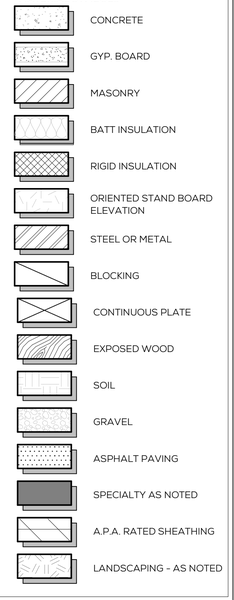
&	AND	DR	DOOR	LT	LIGHT	SD	SOAP DISPENSER
@	AT	D.S.	DOWN SPOUT	MAS	MASONRY	SECT	SECTION
AB	ANCHOR BOLT	DWG	DRAWING	MAX	MAXIMUM	SH	SHELF, SHELVING
A.C.	ASPHALT CONCRETE	(E)	EXISTING	MECH	MECHANICAL	SHT	SHEET
A/C	AIR CONDITIONER	EA	EACH	MFR	MANUFACTURER	SHTG	SHEATHING
A.D.	AREA DRAIN	E.J	EXPANSION JOINT	MIN	MINIMUM	SIM	SIMILAR
ACOUST	ACOUSTICAL	ELECT	ELECTRIC(AL)	MISC	MISCELLANEOUS	S.O.G.	SLAB ON GRADE
ADJ	ADJACENT	ELEV	ELEVATION	MTD	MOUNTED	SND	SANITARY NAPKIN DISPENSER
A.F.F.	ABOVE FINISHED FLOOR	EMBED	EMBEDMENT	MTL	METAL	SNR	SANITARY NAPKIN RECEPTACLE
AGG	AGGREGATE	EQ	EQUAL	MTP	METAL TOILET PARTITION	SPECS	SPECIFICATIONS
ALUM	ALUMINUM	EQUIP	EQUIPMENT	NIC	NOT IN CONTRACT	SQ	SQUARE
APPROX	APPROXIMATE	EXH	EXHAUST	NTS	NOT TO SCALE	SS	STAINLESS STEEL
ARCH	ARCHITECURAL	EXP	EXPANSION	O	DIAMETER	STD	STANDARD
ASSY.	ASSEMBLY	EXT	EXTERIOR	O/	OVER	STL	STEEL
ASPH	ASPHALT	FBGL	FIBERGLASS	OC	ON CENTER	STOR	STORAGE
BD	BOARD	FE/FEC	FIRE EXTINGUISHER/ CABINET	OD	OUTSIDE DIAMETER	STRL	STRUCTURAL
BLDG	BUILDING	FD	FLOOR DRAIN	OPG	OPENING	SUSP	SUSPENDED
BLK(G)	BLOCKING	FHWS	FLAT HEAD WOOD SCREW	OPP	OPPOSITE	SYM	SYMMETRICAL
BM	BEAM	FIN	FINISH	PB	PIPE BOLLARD	SYS	SYSTEM
BOT	BOTTOM	FLR	FLOOR(ING)	PERIM	PERIMETER	T	TREAD
CAB'T	CABINET	FOC	FACE OF CONCRETE	PERPEND	PERPENDICULAR	TB	TACKBOARD
C.B.	CATCH BASIN	FOS	FACE OF STUD	PFB	PREFABRICATED	TBG	TONGUE & GROOVE
C.B.C.	UNIFORM BUILDING CODE W/ CALIFORNIA AMENDMENTS	FRAMG	FRAMING	PL	PROPERTY LINE	TEL	TELEPHONE
		FTG	FOOTING	PLAM	PLASTIC LAMINATE	TEMP	TEMPERED
CEM	CEMENT	FURN	FURNISHED	PLAS	PLASTER	THK	THICK(NESS)
CER	CERAMIC	GA	GAUGE	PLYWD	PLYWOOD	TOB	TOP OF BLOCK
C.I	CAST IRON	GALV	GALVANIZED	PR	PAIR	TOM	TOP OF MASONRY
CJ	CONTROL JOINT	GB	GRAB BAR	PT	POINT	TOP	TOP OF PLATE
CL	CENTER LINE	G.I.	GALVANIZED IRON	PTD	PAPER TOWEL DISPENSER	TOS	TOP OF SLAB
CLG	CEILING	GLB	GLUE LAMINATED BEAM	PTD/R	PTD AND RECEPTACLE	TOW	TOP OF WALL
CLR	CLEAR	GLU-LAM	GLUE LAMINATED	PVC	POLYVINYL CHLORIDE	TPD	TOILET PAPER DISPENSER
CMU	CONCRETE MASONRY UNIT	GYP BD	GYPSUM BOARD	R	RISER OR RADIUS	TS	TUBULAR STEEL
COL	COLUMN	H.B.	HOSE BIB	RB	RUBBER BASE	TYP	TYPICAL
CONC	CONCRETE	HDR	HEADER	RD	ROOF DRAIN	UON	UNLESS OTHERWISE NOTED
CONN	CONNECTION	HM	HOLLOW METAL	REF	REFRIGERATOR	UR	URINAL
CONST	CONSTRUCTION	HORIZ	HORIZONTAL	REINF	REINFORCE(D)	VERT	VERTICAL
CONT	CONTINUOUS	HT	HEIGHT	REQD	REQUIRED	V.C.T.	VINYL COMPOSITION TILE
CW	COLD WATER	ID	INSIDE DIAMETER	REV	REVERSED	VWC	VINYL WALL COVERING
DBL	DOUBLE	INSUL	INSULATION	RHWS	ROUND HEAD WOOD SCREW	W/	WITH
DET	DETAIL	INT	INTERIOR	RM	ROOM	WAIN	WAINSCOT
DF	DRINKING FOUNTAIN/ DOUG FIR	JAN	JANITOR	RO	ROUGH OPENING	WC	WATER CLOSET
DIA	DIAMETER	JT	JOINT	RWD	REDWOOD	WD	WOOD
DIM	DIMENSION	LAM	LAMINATE	SC	SOLID CORE	WH	WATER HEATER
DN	DOWN	LAV	LAVATORY	SCD	SEAT COVER DISPENSER	WP	WATERPROOF-(ING)
				SCHED	SCHEDULE		

KK - ABBREVIATIONS

PLAN SYMBOLS



MATERIAL SYMBOLS



JJ - PLAN SYMBOLS AND GRAPHIC LEGEND

DRAWING RELATED ITEMS

A. GENERAL DISCLAIMER ALL DESIGNS, ELEVATIONS, PLANS AND OTHER ART DISPLAYED ON THIS DRAWING SET ARE DISCLOSED FOR THE EXCLUSIVE USE FOR WHICH THEY WERE DELIVERED TO THE OWNER. THEY MAY NOT BE REPRODUCED WITHOUT EXPRESSED WRITTEN CONSENT OF RUSSELL, GALLAWAY AND ASSOCIATES (R.G.A.) OR THE OWNER. ADDITIONALLY THE OWNER HOLDS RIGHTS TO THE DRAWINGS, BUT SHALL INDEMNIFY R.G.A. FROM USES NOT CONTAINED WITHIN THE DRAWINGS.

B. CODE REQUIREMENTS ALL COMPONENTS OF THIS PROJECT ARE INTENDED TO COMPLY WITH THE CODES AS LISTED IN THE PROJECT INFORMATION SECTION OF THIS SHEET. ANY DEVIANCE FROM THE WRITTEN REQUIREMENTS OR UNCERTAINTY WHICH MAY REQUIRE INTERPRETATION SHALL BE CONFIRMED IN WRITING BY THE JURISDICTION'S BUILDING OFFICIAL.

C. VERBAL DEFINITIONS "ACCESSIBLE" REFERS SPECIFICALLY TO COMPLIANCE WITH THE PROVISIONS FOR DISABLED PERSONS AS PRESCRIBED IN THE AMERICAN'S WITH DISABILITIES ACT (A.D.A.) AND CHAPTER 11 OF THE C.B.C.
"ALIGN" MEANS THAT SIMILAR CONSTRUCTION ITEMS, (FOR EXAMPLE: WALLS, WINDOWS, JAMB, ETC.) LINE UP ACROSS VOIDS OR DISCONTINUITIES.
"TYPICAL" MEANS IDENTICAL FOR ALL SAME CONDITIONS UNLESS OTHERWISE NOTED.
"SIMILAR" MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITIONS NOTED.

D. DETAILS ARE INTENDED TO THE END RESULT OF WORK. MINOR MODIFICATIONS NECESSARY TO ACCOMMODATE SPECIFIC JOB CONDITIONS SHALL BE INCLUDED AS PART OF THE WORK SUBJECT TO APPROVAL OF R.G.A.

E. NOTED DIMENSIONS TAKE PRECEDENCE OVER THE APPARENT SCALE OF A DRAWING COMPONENT. DO NOT SCALE DRAWINGS. CONTRACTOR SHALL VERIFY ALL DIMENSIONS. IF DISCREPANCIES ARE FOUND, A REQUEST SHALL BE MADE TO R.G.A. FOR VERBAL OR WRITTEN CLARIFICATION.

F. ALL DIMENSIONS ARE TO EDGE OF SLAB, FACE OF STUD, OR CENTER LINE OF COLUMN, UNLESS OTHERWISE NOTED ON DRAWINGS. VERTICAL DIMENSIONS ARE TO TOP OF CONCRETE, TOP OF PLATES, OR TOP OF SHEATHING UNLESS OTHERWISE NOTED IN DRAWINGS.

G. DEPENDING UPON THE SCALE OF THE PROJECT, MECHANICAL, ELECTRICAL AND PLUMBING (M.E.P.) DRAWINGS MAY OR MAY NOT BE INCLUDED IN THE DRAWING SET. THE DRAWING INDEX VERIFIES WHICH SHEETS SHOULD BE INCLUDED. IF NO M.E.P. DRAWINGS ARE INCLUDED ON A SMALLER DRAWING SET, IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SUBCONTRACTORS TO INSURE THAT ALL WORK IS PERFORMED IN COMPLIANCE WITH THE APPLICABLE CODES (SEE ITEM 'B' ABOVE). IF M.E.P. DRAWINGS ARE INCLUDED SUCH DRAWINGS ARE SUPPLEMENTAL TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS. ANY DISCREPANCIES SHALL BE BOUGHT TO THE ATTENTION OF R.G.A. FOR CLARIFICATION.

H. ASSEMBLIES WITHIN RATED CONSTRUCTION REQUIRE A UL ASSEMBLY NUMBER RECOGNIZED BY THE C.B.C., C.F.C. OR FIRE MARSHAL. WHEN SUCH NUMBERS ARE PRESENTED ON THE DRAWINGS, IT IS CRITICAL THAT THE ASSOCIATED ASSEMBLY MEETS THE REQUIREMENTS THEREOF AND THAT PRODUCT LITERATURE RELATED TO THE COMPONENTS OF THAT ASSEMBLY BE RETAINED ON SITE FOR INSPECTION.

I. EXPOSED INSULATION SYSTEMS, INCLUDING THOSE APPLIED TO THE EXTERIOR SURFACES OF DUCTS, SHALL MEET THE FLAME SPREAD REQUIREMENTS OF THE C.F.C. AND C.B.C. CHAPTER 7.

J. PLEASE REFER TO THE DOOR SCHEDULE FOR THE REQUIREMENTS OF DOORS AND DOOR SIGNAGE.

K. PLEASE REFER TO THE ENERGY COMPLIANCE SHEETS (IF NECESSARY IN THIS SUBMITTAL) FOR THE REQUIREMENTS ASSOCIATED WITH CALIFORNIA TITLE 24 ENERGY REQUIREMENTS.

L. PLEASE REFER TO THE STRUCTURAL COVER SHEET FOR ADDITIONAL INFORMATION REGARDING THE GENERAL REQUIREMENTS FOR STRUCTURAL RELATED ISSUES.

M. FACILITIES WHICH ARE OPEN TO THE GENERAL PUBLIC ARE REQUIRED TO BE ACCESSIBLE. FOR ADDITIONAL INFORMATION REGARDING ACCESSIBILITY SEE INTERIOR AND EXTERIOR ACCESSIBILITY SHEETS.

CONTRACTOR RELATED ITEMS

1. CONTRACTOR TO PROVIDE COPIES OF BROCHURES, SHOP DRAWINGS AND/OR FINISH MATERIAL SAMPLES TO R.G.A. FOR REVIEW PRIOR TO PROCEEDING WITH THE INSTALLATION OR WORK.

2. PRIOR TO COMMENCING ANY WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF ANY EXISTING OR NEW WORK AND SHALL BE RESPONSIBLE FOR THEIR ACCURACY. ANY CHANGES FROM THE CONTRACT DOCUMENTS SHALL BE SUBMITTED TO R.G.A. FOR CONSIDERATION BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL ALSO VERIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING WORK.

3. EACH TRADE WILL BE HELD RESPONSIBLE FOR KNOWLEDGE OF GENERAL NOTES AND BUILDING CODE COMPLIANCE LISTED OR IMPLIED HEREIN. CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACTS AND OMISSIONS OF ALL HIS EMPLOYEES AND SUBCONTRACTORS AND SHALL SUPERVISE THE WORK AND COORDINATE ALL PORTIONS THEREOF.

4. THE CONTRACTOR IS EXPECTED TO HAVE STUDIED THE DRAWINGS, TO HAVE VISITED THE SITE, AND TO HAVE REVIEWED ALL CONDITIONS UNDER WHICH HE WILL BE OBLIGED TO OPERATE. SUCH CONDITIONS SHOULD BE REFLECTED AND QUALIFIED IN THE FINAL BID.

5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF EXISTING AND NEW WORK. ANY WORK DAMAGED FOR ANY REASON SHALL BE REPLACED AT NO COST TO THE OWNER.

6. SUBSTITUTIONS, REVISIONS OR CHANGES MAY BE ALLOWED ONLY IF ITEMS ARE SUBMITTED TO R.G.A. IN A TIMELY MANNER IN WRITING AND SUBSEQUENTLY APPROVED BY R.G.A. WITH RESPECT TO DESIGN AND PERFORMANCE. THE CONTRACTOR IS LIABLE FOR REPLACEMENT, REPAIR AND DELAYS WHICH ARE THE RESULT OF ANY SUBSTITUTIONS. ADEQUATE SPECIFICATIONS AND DRAWINGS ARE REQUIRED IN ORDER TO REVIEW ALTERNATIVE ITEMS. R.G.A. RESERVES THE RIGHT TO REJECT A SUBSTITUTION FOR ANY REASON. CHANGES MUST ADDITIONALLY BE APPROVED BY THE GOVERNING AGENCY.

7. ALL MATERIALS AND EQUIPMENT INCORPORATED IN THE WORK SHALL BE NEW AND ALL WORK SHALL BE OF GOOD QUALITY, FREE FROM FAULTS AND IN CONFORMANCE WITH THE PLANS.

8. THE GENERAL CONTRACTOR SHALL COORDINATE ANY DISRUPTIONS TO EXISTING SERVICES INCLUDING POWER, WATER, OR OTHER UTILITIES, WITH THE PROPER BUILDING PERSONNEL. SUCH DISRUPTIONS MAY INCLUDE CONCRETE CUTTING OR SIMILAR DEMOLITION WHICH MIGHT CREATE A DISTRACTION TO NORMAL FACILITY OPERATIONS.

9. THE CONTRACTOR & ALL SUBCONTRACTORS SHALL PURCHASE & MAINTAIN CERTIFICATIONS OF INSURANCE WITH RESPECT TO WORKMAN'S COMPENSATION, PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE LIMITS AS REQUIRED BY LAW. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS IN CONNECTION WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENFORCEMENT OF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS AND REGULATIONS.

10. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING THE PREMISES CLEAN AND VOID OF THE ACCUMULATION OF WASTE MATERIALS OR RUBBISH CAUSED BY HIS OPERATIONS AT ALL TIMES. AT THE COMPLETION OF THE WORK, HE SHALL PERFORM A FINAL CLEAN-UP, CLEAN ALL GLASS, AND PLASTIC LAMINATE SURFACES AND LEAVE THE WORK IN A VACUUM-CLEAN CONDITION.

11. THE CONTRACTOR SHALL GUARANTEE FOR ONE (1) YEAR THAT ALL OF THE WORK PERFORMED UNDER THE CONTRACT DOES NOT CONTAIN FAULTY MATERIALS, AND IS WATERTIGHT AND LEAK-PROOF IN EVERY PARTICULAR AND FREE FROM IMPROPER WORKMANSHIP.

12. CONTRACTOR SHALL SUBMIT CONFIRMATIONS WITH DELIVERY DATE ON ORDERS OF MATERIALS AND EQUIPMENT OF ANY LONG LEAD TIME ITEMS. THE GENERAL CONTRACTOR, ALL SUBCONTRACTORS AND ALL WORKMEN SHALL COORDINATE IN ADVANCE, THEIR INDIVIDUAL WORK WITH ALL OTHER TRADES. RESPONSIBILITY FOR LACK OF COORDINATION AND PROBLEMS CAUSED BY THIS LACK OF COORDINATION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL TRADES INVOLVED.

GG - GENERAL NOTES

EMERGENCY RESPONDER RADIO COVERAGE
AN OPERATIONAL PERMIT IS REQUIRED FOR BUILDINGS AND/OR FACILIES WITH EMERGENCY RESPONDER RADIO COVERAGE SYSTEMS AND RELATED EQUIPMENT. (CITY ORD. A2-15)

OPERATIONAL PERMITS REQUIRED
HAZARDOUS MATERIALS (CFC 105.6.21)
HIGH-PILED COMBUSTABLE STORAGE (CFC 105.6.23)

CONSTRUCTION PERMITS REQUIRED
EMERGENCY RESPONDER RADIO COVERAGE (CFC 105.7.5)
HAZARDOUS MATERIALS (CFC 105.7.10)
AUTOMATIC FIRE EXTINGUISHING SYSTEMS (CFC 105.7.1)
FIRE ALARM SYSTEMS (CFC 105.7.6)
FIRE PUMP, IF REQUIRED (CFC 105.7.7)
GATES ACROSS FIRE APPARATUS ACCESS ROADS (CFC 105.7.9)
FIRE APPARATUS ACCESS ROADS (CFC 105.7.19(1)
VEHICLE GATES (CFC 105.7.19(3)
PRIVATE FIRE HYDRANTS (CFC 105.7.13)

DEFERRED SUBMITTALS
CIVIL PLANS ARE SUBMITTED UNDER A SEPARATE GRADING PERMIT.
MECHANICAL AND H.V.A.C. SYSTEMS.
HIGH-PILED COMBUSTIBLE CONSTRUCTION (CFC CHAPTER 32).
WATER SUPPLY TEST (CFC 507.4).
NFPA 13 AUTOMATIC SPRINKLER SYSTEM (CFC 903).
NFPA 20 FIRE PUMP, IF REQUIRED (CFC 913).
FIRE DEPT. CONNECTION AND FDC SIGNAGE (CFC 912.5).
NFPA 72 FIRE ALARM SYSTEM (CFC 907).
COMPLEX DIRECTORY (CFC 505.1.3).
POWERED INDUSTRIAL TRUCKS (CFC 309).
NFPA 704 PLACARDS (CFC 407.3 & 5003.5).

FF - APPROVALS / DEFERRALS

SCOPE OF WORK:
WORK CONSISTS OF ERECTING A NEW METAL BUILDING SHELL WITH INTERIOR DEMISING WALLS. WORK INCLUDES ASSOCIATED SITE PAVING AND IMPROVEMENTS ALONG WITH UNDERGROUND UTILITIES. NEW ELECTRICAL AND PLUMBING SHALL ALSO BE INSTALLED IN THE BUILDING.

GOVERNING CODES:
- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC)
- 2022 CALIFORNIA BUILDING CODE (CBC)
- 2022 CALIFORNIA ELECTRICAL CODE (CEC)
- 2022 MECHANICAL CODE (CMC)
- 2022 CALIFORNIA PLUMBING CODE (CPC)
- 2022 CALIFORNIA FIRE CODE (CFC)
- 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC)
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

A.P. NUMBER AND ZONING:
ASSESSOR'S PARCEL NUMBER: 128-121-038
ZONED: M3,VOH

OCCUPANCY:
POTENTIAL MIXED USE OF S-1, S-2, F-1 AND F-2

C.B.C. CONSTRUCTION TYPE:
TYPE IIB (FULLY SPRINKLERED)

NUMBER OF STORIES: ONE

ALLOWABLE AREAS:
62,000 S.F. - PER CBC TABLE 506.2 (MOST RESTRICTIVE F-1 OCCUPANCY)

PROPOSED AREA AND DESCRIPTION:
24,000 S.F. (UNKNOWN TENANTS)
TOTAL NEW SQUARE FOOTAGE = 24,000 S.F.

OCCUPANT LOAD:
SUITE 1 (INDUSTRIAL): 12,000 / 150 = 120 OCCUPANTS
SUITE 2 (INDUSTRIAL): 8,000 / 150 = 80 OCCUPANTS
SUITE 3 (INDUSTRIAL): 4,000 / 150 = 40 OCCUPANTS
TOTAL OCCUPANTS = 120

PER CPC 422.1 (TABLE A), GROUP F OCCUPANT LOAD REGARDING PLUMBING FIXTURES = 1 / 2,000 (24,000 S.F. / 2,000 = 12 OCCUPANTS)

EXITING:
SUITE 1: 2 EXITS REQUIRED (4 EXITS PROVIDED)
SUITE 2: 2 EXITS REQUIRED (2 EXITS PROVIDED)
SUITE 3: 1 EXIT REQUIRED (1 EXITS PROVIDED)

ACCESSIBILITY:
ALL WORK SHALL BE COMPLIANT WITH C.B.C. CHAPER 11-B

DD - CODE SUMMARY



CC - VICINITY MAP — TRUE NORTH

SHEET	CONTENTS	REVISION	DATE
1 - GENERAL			
G0.1	COVER SHEET		
G0.2	EGRESS PLAN		
2 - ARCHITECTURAL			
A0.1	SITE PLAN		
A0.2	PARTIAL SITE PLAN		
A0.3	SITE FIRE ACCESS		
A1.1	SCHEDULES		
A2.1	FLOOR PLAN		
A2.2	ENLARGED PLANS		
A2.3	ROOF PLAN		
A3.1	EXTERIOR ELEVATIONS		
A3.2	EXTERIOR ELEVATIONS		
A4.1	BUILDING SECTIONS		
A4.2	BUILDING SECTIONS		
A5.1	ACCESSIBILITY DETAILS		
A6.1	DETAILS		
3 - STRUCTURAL			
S1.1	STRUCTURAL NOTES		
S2.1	FOUNDATION PLAN		
S4.1	FOUNDATION DETAILS		
S4.2	FOUNDATION DETAILS		
S5.1	METAL STUD FRAMING		
4 - ELECTRICAL			
E0.1	COVER SHEET		
E1.0	SITE PLAN		
E2.0	LIGHTING PLAN		
E3.0	POWER PLAN		
E4.0	ONE LINE DIAGRAM		
E5.0	PANEL SCHEDULES - 480V		
E6.0	PANEL SCHEDULES - 208V		
E7.0	TRENCH DETAILS		
E8.0	ELECTRICAL SPECIFICATIONS		
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P2.1	PLUMBING PLAN		
6 - CALGREEN			
CG.1	CALGREEN STANDARDS		
CG.2	CALGREEN STANDARDS		
CG.3	CALGREEN STANDARDS		
CG.4	CALGREEN STANDARDS		
7 - ENERGY COMPLIANCE			
EC-1	ENERGY COMPLIANCE SHEET		
EC-2	ENERGY COMPLIANCE SHEET		
EC-3	ENERGY COMPLIANCE SHEET		
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AA - SHEET INDEX

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530 342 0302

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New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St.
SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

REGISTERED ARCHITECT
MATTHEW J. GALLAWAY
REN. 02/28/2027
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

COVER SHEET

G0.1

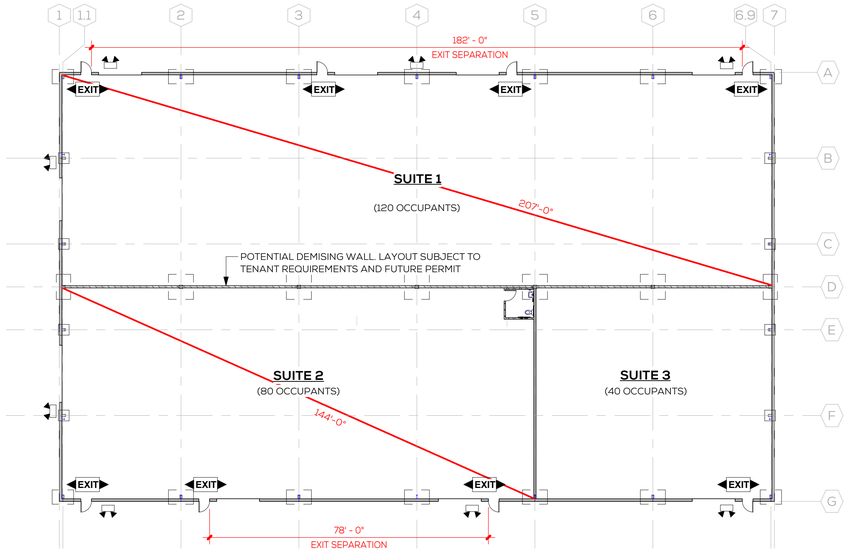
NOTES:

1. EXIT DOORS MUST BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR SPECIAL KNOWLEGE.
2. EXIT DOORS MUST SWING OUTWARD IN THE DIRECTION OF TRAVEL.
3. REQUIRED EXITS MUST HAVE A 5'x5' LEVEL LANDING THAT SLOPES NO MORE THAN 2% IN ANY DIRECTION.
4. EXIT ROUTES MUST BE 44" WIDE MINUMUM AND BE FREE FROM CLUTTER.
5. ADEQUATE LIGHTING (INCLUDING EMERGENCY LIGHTING) MUST ILLUMINATE ALL EXIT ROUTES.
6. EACH EXIT MUST BE CLEARLY VISIBLE AND MARKED BY A SIGN READING "EXIT".
7. ANY DOORS OR PASSAGES THAT COULD BE MISTAKEN FOR AN EXIT SHOULD BE CLEARLY MARKED "NOT AN EXIT" OR FOR ITS ACTUAL USE.
8. EXIT SIGNS MUST BE ILLUMINATED TO A SURFACE VALUE OF AT LEAST FIVE FOOT-CANDLES (54 LUX).

LEGEND

EXIT NEW EXIT SIGN W/ EMERGENCY EGRESS ILLUMINATION,EGRESS LIGHTING AT EXTERIOR LANDINGS WHERE APPLICABLE, AND EMERGENCY BATTERY BACKUP.

EMERGENCY EGRESS ILLUMINATION WITH BATTERY BACKUP.



PROJECT

AA - EGRESS PLAN

SCALE : 1" = 20'-0"

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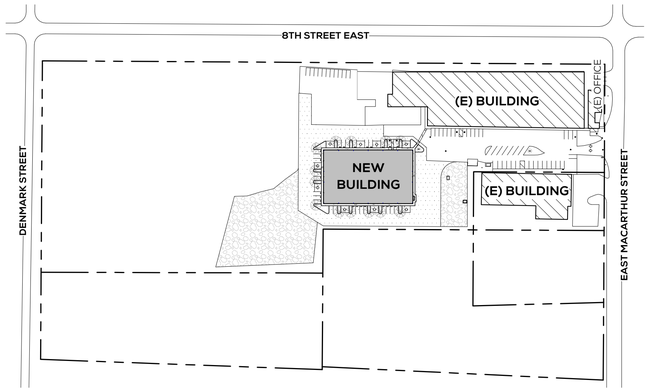
ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
SCOTT B. GALLAWAY
REN. 02/28/2027
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
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STATUS DATE	2025.12.23

EGRESS PLAN

G0.2



CC OVERALL SITE PLAN
1" = 160'-0"

PATH OF TRAVEL NOTES

"PATH OF TRAVEL" (P.O.T.), AS INDICATED, IS A COMMON BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE. THE PATH SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. PASSING SPACES (11B-403.5.3) AT LEAST 60" X 60" ARE LOCATED NOT MORE THAN 200' APART. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL AND IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (P.O.T.) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-307.2).

NOTE:
SEE CIVIL DRAWINGS FOR HARDSCAPE, PARKING AND ACCESSIBLE SITE DETAILS

SITE TOTAL PARKING CALCULATIONS

S-1 STORAGE: 22,400 SF @ 1 /2,500 = 8.96
F-1 FACTORY: 49,752 SF @ 1 / 1,000 = 49.752
B OFFICE: 2,156 SF @ 1 / 150 = 14.37
= 74 TOTAL PARKING STALLS
74 STALLS REQUIRED: (49 EXISTING + 25 NEW = 74)
3 ACCESSIBLE (1 OF THOSE VAN)

ELECTRIC VEHICLE PARKING FOR NEW BUILDING

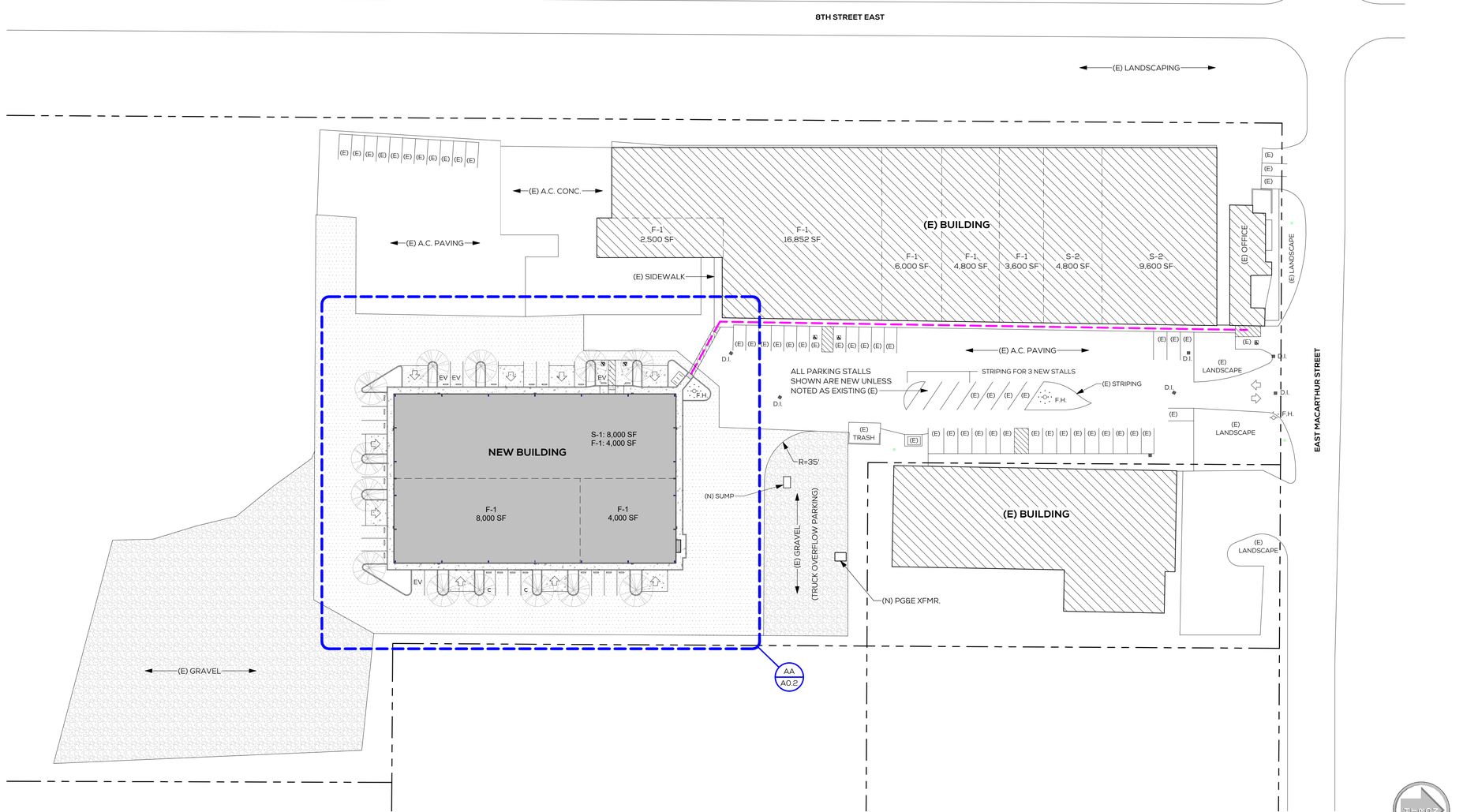
NEW S-1 STORAGE: 12,000 SF @ 1/2,500 = 4.8
NEW F-1 FACTORY: 12,000 SF @ 1/1,000 = 12
=17 TOTAL NEW STALLS
REQUIRES 4 NEW EV CAPABLE STALLS
(4 PROVIDED)

BICYCLE PARKING FOR NEW BUILDING
1 FOR EA. 5,000 S.F. = 5 REQ'D.

BB NOTES AND LEGEND
1" = 40'-0"

ACCESSIBLE PATH OF TRAVEL
PROJECT AREA PROPERTY LINE
UTILITY EASEMENT
FENCE
ROAD BOUNDARY
PAVED WALK WAY
NEW TREES
(50% SHADING REQ'D @ NEW PARKING)
EXISTING DRAIN INLETS
EXISTING FIRE HYDRANTS
D.I.
F.H.

NEW CONCRETE
NEW LANDSCAPING
(E) GRAVEL
(E) ASPHALT PAVING
NEW ASPHALT PAVING
EV ELEC. VEHICLE CAPABLE
(STALL MARKINGS PER DETAIL JJ/A0.3)



AA SITE PLAN
1" = 40'-0"

PROJECT NORTH

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LICENSED ARCHITECT
Matt Gallaway
REN. 02/26
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

SITE PLAN

A0.1

PATH OF TRAVEL NOTES

"PATH OF TRAVEL" (P.O.T.), AS INDICATED, IS A COMMON BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE, EXCEPT THAT LEVEL CHANGES DO NOT EXCEED 1/4" VERTICAL AND IS AT LEAST 48" WIDE. THE PATH SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. PASSING SPACES (11B-403.5.3) AT LEAST 60" X 60" ARE LOCATED NOT MORE THAN 200' APART. THE CROSS-SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL AND IS LESS THAN 5% UNLESS OTHERWISE INDICATED. (P.O.T.) SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM (11B-307.4) AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80" (11B-307.2).

NOTE:
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S-1 STORAGE: 22,400 SF @ 1 /2,500 = 8.96
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B OFFICE: 2,156 SF @ 1 / 150 = 14.37
= 74 TOTAL PARKING STALLS
74 STALLS REQUIRED: (49 EXISTING + 25 NEW = 74)
3 ACCESSIBLE (1 OF THOSE VAN)

ELECTRIC VEHICLE PARKING FOR NEW BUILDING

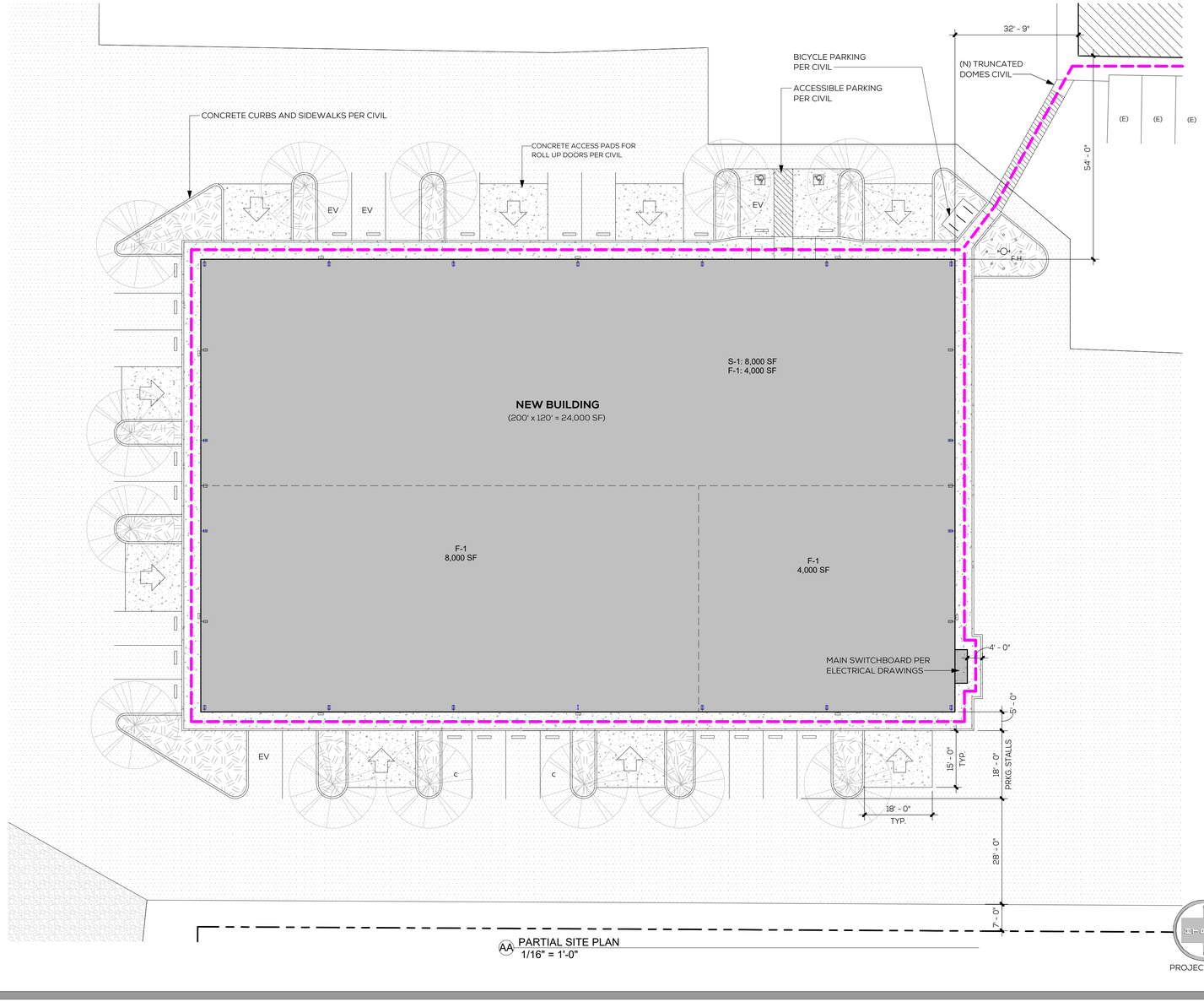
NEW S-1 STORAGE: 12,000 SF @ 1/2,500 = 4.8
NEW F-1 FACTORY: 12,000 SF @ 1/1,000 = 12
= 17 TOTAL NEW STALLS
REQUIRES 4 NEW EV CAPABLE STALLS
(4 PROVIDED)

BICYCLE PARKING FOR NEW BUILDING
1 FOR EA. 5,000 S.F. = 5 REQ'D.

ACCESSIBLE PATH OF TRAVEL
PROJECT AREA PROPERTY LINE
UTILITY EASEMENT
FENCE
ROAD BOUNDARY
PAVED WALK WAY
NEW TREES
(50% SHADING REQ'D @ NEW PARKING)
D.I. EXISTING DRAIN INLETS
F.H. EXISTING FIRE HYDRANTS

NEW CONCRETE
NEW LANDSCAPING
(E) GRAVEL
(E) ASPHALT PAVING
NEW ASPHALT PAVING
EV ELEC. VEHICLE CAPABLE (STALL MARKINGS PER DETAIL JJ/A0.3)

BB NOTES AND LEGEND
1" = 40'-0"



AA PARTIAL SITE PLAN
1/16" = 1'-0"

PROJECT NORTH

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LICENSED ARCHITECT
MATTHEW B. GALLAWAY
Matt Gallaway
REN. 02/26
STATE OF CALIFORNIA

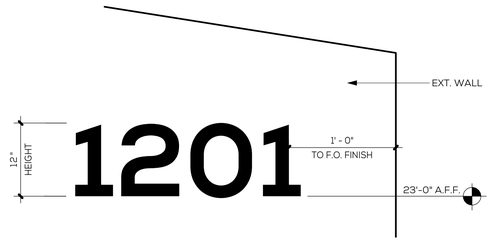
RGA PROJECT #	24-459
DRAWN	SANNAR
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PARTIAL SITE PLAN

A0.2

ADDRESS IDENTIFICATION REQUIREMENTS

1. NUMBERS SHALL BE FLAT CUT SHAPES. 1/4" ALUMINUM, BLACK ANODIZED FINISH, BY GEMINI SIGN PRODUCTS OR APPROVED EQUAL.
2. PROVIDE STANDOFF STUDS PER MFR. SPECIFICATIONS.
3. ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET AND DRIVEWAY TO THE BUILDING.
4. ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND.
5. ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT.
6. EACH CHARACTER SHALL BE A MINIMUM OF 12 INCHES HIGH WITH A MINIMUM STROKE WIDTH OF 1 INCH.
7. AS REQUIRED BY THE FIRE CODE, ADDRESS IDENTIFICATION SIGNAGE SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE.
8. ADDRESS IDENTIFICATION SHALL BE MAINTAINED.
9. VERIFY FINAL SIGN COPY, MOUNTING AND PLACEMENT WITH ARCHITECT PRIOR TO FABRICATION OR INSTALLATION.



FF - BUILDING ADDRESS SIGNAGE

SCALE : NONE

FIRE FLOW ANALYSIS

REQUIRED FLOW FOR 24,000 S.F. TYPE IIB
BUILDING = 3,250 GPM WITH A 75% REDUCTION
FOR FIRE SPRINKLERS

FIRE HYDRANT COVERAGE

3,250 x .25 = 812.5 GPM
1 HYDRANT PROVIDES 1,750 GPM PER C.F.C.
TABLE C102.1

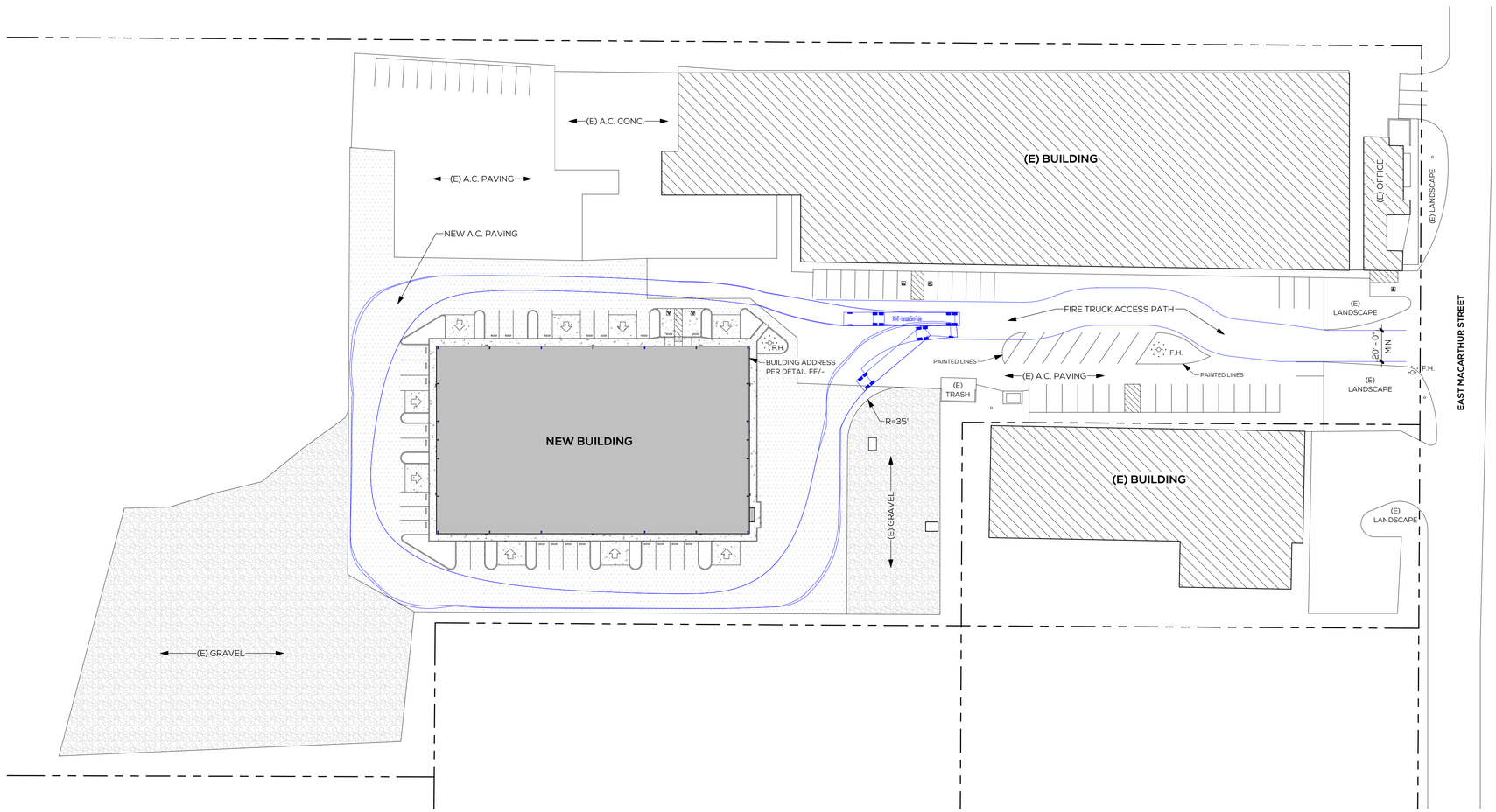
LEGEND

REQ'D. FIRE TRUCK TURNING BOUNDARIES.
FIRE LANE MUST BE 20'-0" WIDE MINIMUM.

F.H. EXISTING FIRE HYDRANTS

CC - NOTES AND LEGEND

SCALE : NONE



AA - SITE FIRE ACCESS

SCALE : 1" = 40'-0"

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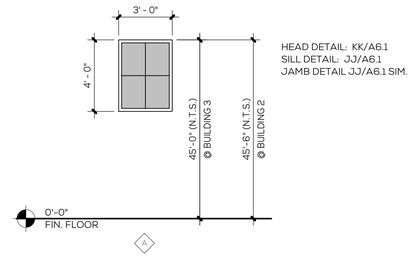
REGISTERED ARCHITECT
M. B. GALLAWAY
REN. 02/28/2027
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

SITE FIRE ACCESS

A0.3

WINDOW INFORMATION
QUANTITY: 16
MFR. & MODEL: MILGARD, TUSCANY
FRAME: VINYL (TAN COLOR)
GLAZING: 1 INCH THK., INSULATED, CLEAR
U-FACTOR: 0.36
VLT: 0.42
SHGC: 0.25
TRIM: GALV. J-TRIM (COLOR TO MATCH GUTTER)

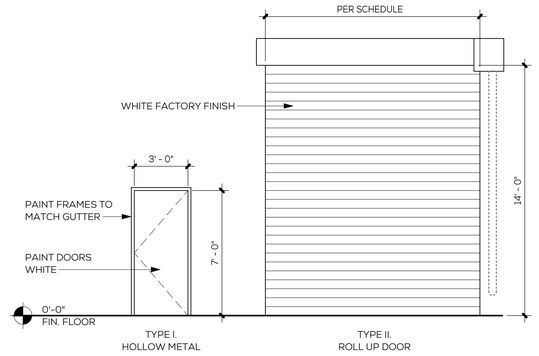


HEAD DETAIL: KK/A6.1
SILL DETAIL: JJ/A6.1
JAMB DETAIL JJ/A6.1 SIM.

FF - WINDOW TYPES
SCALE : 1/4" = 1'-0"

A.F.F.	=	ABOVE FINISHED FLOOR	
AR	=	ADAMS RITE OR APPROVED EQUAL	
BN	=	BULL NOSE	
CONC	=	CONCRETE (INTEGRAL COLOR) WITH CONCRETE SEALER	
CPT	=	CARPET	
CPTT	=	CARPET TILES	
CT	=	CERAMIC TILE	
CTR	=	COUNTER	
DC	=	DECORATIVE CONCRETE (EXPOSED)	
EP	=	EPOXY PAINT	
EPOXY	=	EPOXY FLOORING	
EX	=	EXPOSED STEEL TRUSSES	
FC	=	FURRING CHANNEL	
FD	=	FLOOR DRAIN	
FR	=	FURRED WALL	
FRP	=	FIBERGLASS REINFORCED PANEL	
GB	=	GYPSUM BOARD	
GT	=	GROUT	
GYP.	=	GYPSUM BOARD	
HD	=	HAND DRYER	
HG	=	HAGER	
INT	=	INTEGRAL COLOR	
I.S.A.	=	INTERNATIONAL SYMBOL OF ACCESSIBILITY	
K	=	KAWNEER OR APPROVED EQUAL	
LVT	=	LUXURY VINYL TILE	
MD	=	METAL DECK	
MR	=	MOISTURE RESISTANT	
P	=	PAINT	
PC	=	POWDER COAT	
P-LAM	=	PLASTIC LAMINATE	
PLK	=	CONCRETE PLANK CEILING	
PLY	=	PLYWOOD	
PS	=	PLASTER SYSTEM	
PTRN	=	PARTITION	
PVCY	=	PRIVACY	
RB	=	RUBBER BASE	
RF	=	RESILIENT FLOORING	
S.A.	=	SUSPENDED ACOUSTICAL	
SC	=	SCHLUTER	
SCH	=	SCHLAGE OR APPROVED EQUAL	
SDT	=	STATIC DISSIPATIVE TILE	
SF	=	STOREFRONT	
ST	=	STANLEY	
STSL	=	STAINLESS STEEL	
SS	=	SOLID SURFACING MATERIAL	
SUBS	=	SUBSTRATE	
SVF	=	SHEET VINYL FLOORING	
SW	=	SOUND WALL	
T	=	TIMELY	
TB	=	SILICONIZED GYPSUM TILE BACKER BOARD	
TBD	=	TO BE DETERMINED	
TR	=	TRIMCO	
VCT	=	VINYL COMPOSITION TILE	
WAIN	=	WAINSCOT	
WMF	=	WELDED METAL FRAME	

CC - ABBREVIATIONS
SCALE: NONE



EE - DOOR TYPES
SCALE : 1/4" = 1'-0"

DOOR INFORMATION							FRAME			LISTING	HARDWARE/SIGNAGE									DETAILS			NOTES
MARK	TYPE	SIZE			STYLE/MODEL /OPTIONS	MATERIAL/ FINISH	MATERIAL	FINISH	THICKNESS		HINGES	# OF HINGES	CONTROLS	LOCKS	CLOSER	THRESHOLD	SEALS	STOPS	REQ. SIGNS	HEAD	SILL	JAMB	
		WIDTH	HEIGHT	THICKNESS																			
301	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
302	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
303	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
304	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
305	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
306	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
307	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
308	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
309	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
310	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
311	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
312	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
313	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	
314	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	PRIVACY	NONE	NONE	NONE	T-1270	RESTRM.	HH/A6.1	JJ/A6.1	II/A6.1	
315	II	12' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.	NONE	N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	HH/A6.1	EE/A6.1	II/A6.1	
316	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
317	I	3' - 0"	7' - 0"	0' - 1 3/4"	SLAB / STEELCRAFT SL	18 GA. STL. / PAINT	16 GA H.M.	PAINT	2"	NONE	HAGER 1191	3	SCHLAGE ND	ENTRY	LCN 4040	P-1716A	P-S88	NONE	EXIT	BB/A6.1	AA/A6.1	CC/A6.1	
318	II	16' - 0"	14' - 0"	0' - 0 3/4"	ROLL-UP, CHAIN DRIVE	STEEL / FACTORY	STEEL	GALV.	PER MFR.		N/A	N/A	BY MFR.	BY MFR.	NONE	NONE	BOTTOM 'T' BULB	NONE	NONE	FF/A6.1	EE/A6.1	GG/A6.1	

DD - DOOR SCHEDULE
SCALE : NONE

AA - DOOR NOTES
SCALE: NONE

GENERAL NOTES: CBC SECTION 11B-404

ALL DOORS REQUIRE A SMOOTH, UNINTERRUPTED SURFACE FOR THE BOTTOM 10" OF THE DOOR.

WHEN DOOR CLOSERS ARE USED, MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS.

EXIT SIGNS: CBC SECTION 1013.1

EXITS AND EXIT ACCESS DOORS SHALL BE MARKED BY AN APPROVED EXIT SIGN READILY VISIBLE FROM ANY DIRECTION OF EGRESS TRAVEL. ACCESS TO EXITS SHALL BE MARKED BY READILY VISIBLE EXIT SIGNS IN CASES WHERE THE EXIT OR THE PATH OF EGRESS TRAVEL IS NOT IMMEDIATELY VISIBLE TO THE OCCUPANTS.

DOOR SWING: CBC SECTION 1010.1.2

EGRESS DOORS SHALL BE SIDE-HINGED SWINGING. DOORS SHALL HAVE SWING IN THE DIRECTION OF THE EGRESS TRAVEL WHERE SERVING AN OCCUPANT LOAD OF 50 OR MORE PERSONS ON A GROUP H OCCUPANCY. THE OPENING FORCE FOR THE INTERIOR SIDE-SWINGING DOORS WITHOUT CLOSERS SHALL NOT EXCEED 5-POUND FORCE. FOR OTHER SIDE SWINGING, SLIDING AND FOLDING DOORS, THE DOOR LATCH SHALL RELEASE WHEN SUBJECTED TO A 15-POUND FORCE. THE DOOR SHALL BE SET IN MOTION WHEN SUBJECTED TO 30-POUND FORCE. THE DOOR SHALL SWING TO A FULL-OPEN POSITION WHEN SUBJECTED TO A 15-POUND FORCE. FORCES SHALL BE APPLIED TO THE LATCH SIDE.

DOOR OPERATION: CBC SECTION 1010.1.9

EXCEPT AS SPECIFICALLY PERMITTED BY THIS SECTION, EGRESS DOORS SHALL BE READILY OPEN FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.

LOCKS AND LATCHES: CBC SECTION 1010.1.9.3

LOCKS AND LATCHES SHALL BE PERMITTED TO PREVENT OPERATION OF DOORS WHERE ANY OF THE FOLLOWING EXISTS:

1. PLACES OF DETENTION OR RESTRAINT.
2. IN BUILDINGS IN OCCUPANCY GROUP A HAVING A OCCUPANCY LOAD OF 300 OR LESS, GROUPS B, F, M AND S, AND IN PLACES OF RELIGIOUS WORSHIP, THE MAIN EXTERIOR DOOR OR DOORS ARE PERMITTED TO BE EQUIPPED WITH KEY-OPERATED LOCKING DEVICES FROM EGRESS SIDE PROVIDED:
   A. THE LOCKING DEVICE IS READILY DISTINGUISHABLE AS LOCKED.
   B. READILY VISIBLE DURABLE SIGN IS POSTED ON THE EGRESS SIDE ON OR ADJACENT TO THE DOOR STATING: "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED". THE SIGN SHALL BE IN LETTERS 1 INCH HIGH ON A CONTRASTING BACKGROUND.
   C. THE USE OF THE KEY-OPERATED LOCKING DEVICE IS REVOCABLE BY THE BUILDING OFFICIAL FOR DUE CAUSE.
3. WHERE EGRESS DOORS ARE USED IN PAIRS, APPROVED AUTOMATIC FLUSH BOLTS SHALL BE PERMITTED TO BE USED, PROVIDED THAT THE DOOR LEAF HAVING THE AUTOMATIC FLUSH BOLTS HAS NO DOORKNOB OR SURFACE-MOUNTED HARDWARE.
4. DOORS FROM INDIVIDUAL DWELLINGS OR SLEEPING UNITS OF GROUP R OCCUPANCIES HAVING AN OCCUPANT LOAD OF 10 OR LESS ARE PERMITTED TO BE EQUIPPED WITH A NIGHT LATCH, DEAD BOLT OR SECURITY CHAIN, PROVIDED SUCH DEVICES ARE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR TOOL.
5. FIRE DOORS AFTER THE MINIMUM ELEVATED TEMPERATURE HAS DISABLED THE UNLATCHING MECHANISM IN ACCORDANCE WITH LISTED FIRE DOOR TEST PROCEDURES.

DOOR ASSEMBLIES IN CORRIDORS AND SMOKE BARRIERS: CBC SECTION 716.5.3

FIRE DOOR ASSEMBLIES REQUIRED TO HAVE A MINIMUM FIRE PROTECTION RATING OF 20 MINUTES WHERE LOCATED IN CORRIDOR WALLS OR SMOKE BARRIER WALLS HAVING A FIRE-RESISTANT RATING IN ACCORDANCE WITH TABLE 716.5 SHALL BE TESTED IN ACCORDANCE WITH NFPA 252 OR UL 10C WITHOUT THE HOSE STREAM TEST. FIRE DOOR ASSEMBLIES SHALL BE LABELED BY AN APPROVED AGENCY. THE LABELS SHALL COMPLY WITH NFPA 80, AND SHALL BE PERMANENTLY AFFIXED TO THE DOOR OR FRAME. DOORS SHALL BE MAINTAINED SELF-CLOSING OR SHALL BE AUTOMATIC CLOSING BY ACTUATION OF A SMOKE DETECTOR IN ACCORDANCE WITH SECTION 716.5.3.1 SMOKE AND DRAFT CONTROL-FIRE DOOR ASSEMBLIES SHALL MEET THE REQUIREMENTS FOR A SMOKE AND DRAFT CONTROL DOOR ASSEMBLY TESTED IN ACCORDANCE WITH UL 1784. LOUVERS SHALL BE PROHIBITED. INSTALLATION OF SMOKE DOORS SHALL BE IN ACCORDANCE WITH NFPA 105.

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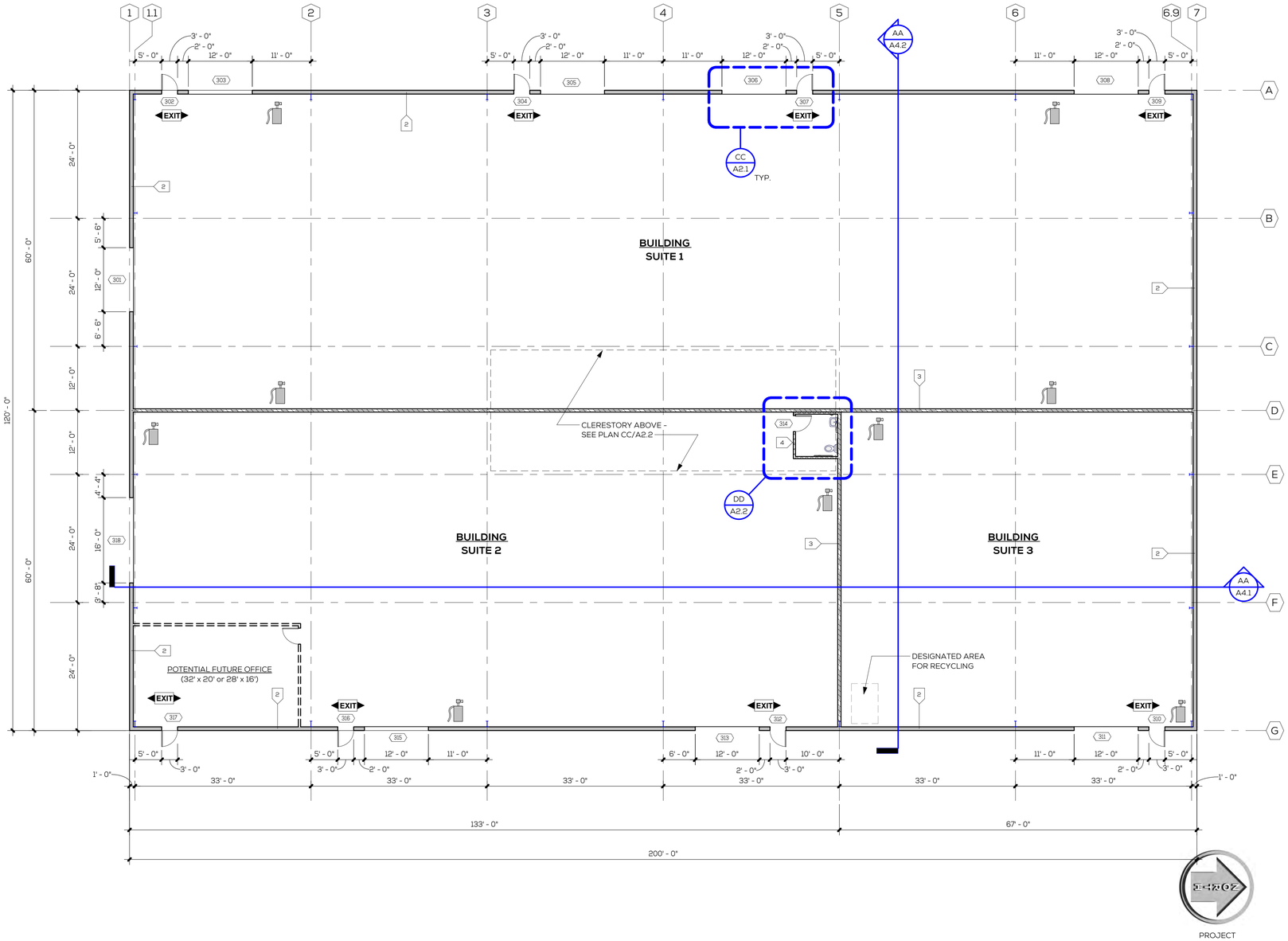
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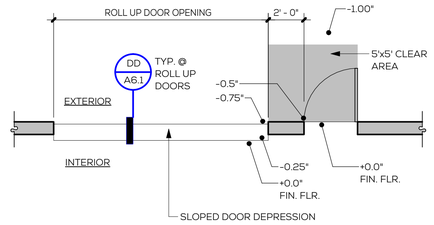
SCHEDULES

A1.1



DD - FLOOR PLAN

SCALE : 3/32" = 1'-0"



CC - ENLARGED FLOOR PLAN

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

FIRE EXTINGUISHERS:

AT EACH LOCATION AS INDICATED ON THE PLAN WITH THIS SYMBOL IS A PORTABLE FIRE EXTINGUISHER. PORTABLE FIRE EXTINGUISHERS SHALL BE LOCATED IN A CONSPICUOUS LOCATION WHERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE. THESE LOCATIONS SHALL BE ALONG NORMAL PATHS OF TRAVEL. FIRE EXTINGUISHERS HAVING A GROSS WEIGHT NOT EXCEEDING 40 LBS SHALL BE INSTALLED SO THAT ITS TOP IS NOT MORE THAN 5'-0" ABOVE THE FLOOR. HAND-HELD FIRE EXTINGUISHERS EXCEEDING 40 LBS SHALL BE INSTALLED SO THAT ITS TOP IS NOT MORE THAN 3'-6" ABOVE THE FLOOR. CLEARANCE BETWEEN THE FLOOR AND THE BOTTOM OF INSTALLED HAND-HELD EXTINGUISHERS SHALL NOT BE LESS THAN 4 INCHES. REFER TO CFC 906 FOR ADDITIONAL REQUIREMENTS. CLASS-A, TYPE 2-A10BC STREAM LOADED FIRE EXTINGUISHER. LOCATE SUCH THAT THE TRAVEL DISTANCE TO THE APPARATUS DOES NOT EXCEED 75 FEET MIN. ONE EXTINGUISHER EA. 3,000 SQ. FT.

NOTES:

ALL DOORS SHALL BE LOCATED 6" AWAY FROM NEAREST PERPENDICULAR WALL. THIS ALLOWS FOR TYPICAL CASING INSTALLATION TO A KING STUD AND TRIMMER FRAMING CONDITION TYP. U.O.N. ON THIS DRAWING

ALL WALL FRAMING SHALL HAVE SOUND BATT INSULATION.

"LEVEL" INDICATES A SLOPE NOT TO EXCEED 2% AS DEFINED BY THE C.B.C. TO ALLOW FOR DRAINAGE. 2% EQUATES TO 1/4" FALL IN 12" RUN.

INSTALL 3/4" HOSE BIBB NEAR EACH AND EVERY EXTERIOR ROLL-UP DOOR. CONNECT BIBBS TO EXISTING DOMESTIC WATER LINE.

AT ELECTRICAL ROOMS, PROVIDE CROSS-HATCHED STRIPING WITH "KEEP CLEAR" VERBIAGE ON THE FLOOR DESIGNATING THE REQUIRED WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT IN COMPLIANCE WITH C.E.C. SECTION 110.26.

LEGEND:

1	EXISTING WALL TO REMAIN
2	EXTERIOR WALL - PER METAL BUILDING MANUFACTURER. HORIZONTAL 'Z' PURLINS W/ METAL EXTERIOR SIDING.
3	INTERIOR 1 HR. RATED WALL - 8" x 16 GA. METAL STUDS @ 24" O.C. TO UNDERSIDE OF METAL DECKING. USE SOUND BATT INSULATION AND 5/8" TYPE 'X' GYPSUM BOARD ON EACH SIDE. FINISH W/ SMOOTH TEXTURE. SEE DETAILS KK/A6.1 AND LL/A6.1
4	INTERIOR WALL - 3 5/8" x 18 GA. METAL STUDS @ 16" O.C. w/ SOUND BATT INSULATION AND 5/8" M.R. GYPSUM BOARD EACH SIDE. FINISH SMOOTH TEXTURE w/ EPOXY PAINT.
101	INDICATES DOOR - SEE DOOR SCHEDULE
A	INDICATES WINDOW - SEE WINDOW SCHEDULE
P1	INDICATES PLUMBING FIXTURE - SEE SCHEDULE CC/A2.3
EXIT	EXIT SIGN w/ EMERGENCY EGRESS ILLUMINATION, EGRESS LIGHTING @ EXTERIOR LANDINGS WHERE APPLICABLE, AND EMERGENCY BATTERY BACKUP.

AA - NOTES & LEGEND

SCALE : NONE

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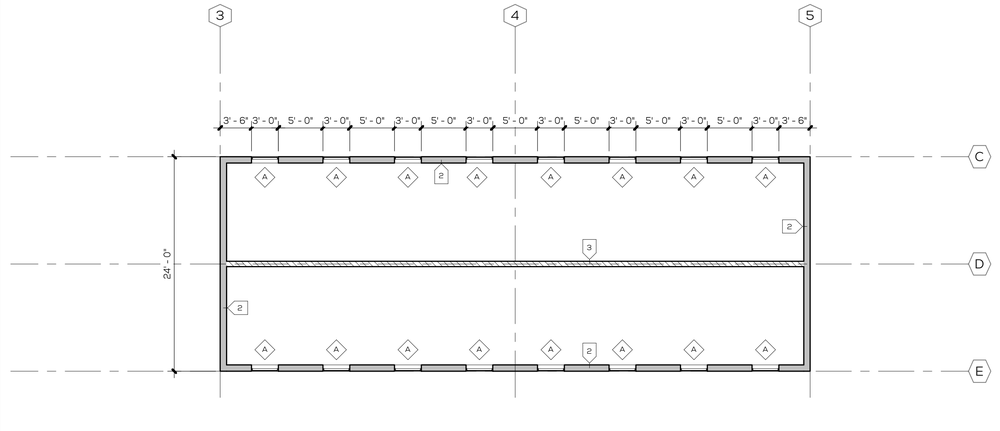
FLOOR PLAN

A2.1

SYMBOL	DESCRIPTION	MODEL
PTD	PAPER TOWEL DISPENSER	MODEL B-262
TP	TOILET PAPER DISPENSER RECESSED	SEMI-RECESSED MODEL B-4388
SNR	SANITARY NAPKIN RECEPTACLE	MODEL B-4353
SD	SOAP DISPENSER	MODEL B-4112
TSCP	TOILET SEAT COVER DISPENSER	MODEL B-221
NONE	MIRRORS	MODEL B-290 2436
NONE	GRAB BARS (1 EACH)	MODEL B-6206 X 36" MODEL B-2606 X 42"

II - TOILET ACCESSORY SCHEDULE

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



CC - CLERESTORY PLAN

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

NOTES:

- FOR LIGHTING SEE ELECTRICAL DRAWINGS
- ALL NOTED ELEVATIONS ARE FROM FINISHED FLOOR
- HVAC REGISTERS UNDER DEFERRED MECHANICAL SUBMITTAL

LEGEND

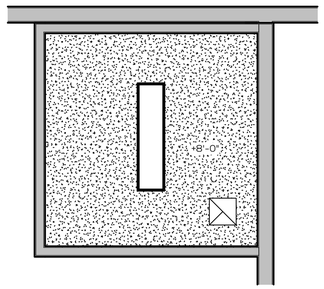
5/8" M.R. GYPSUM BOARD CEILING O/ 20 GA. x 6" MTL. STUDS @ 24" O.C.

1' x 4" L.E.D. LINEAR BOX LIGHT FIXTURE

EXHAUST FAN ILLUSTRATED FOR GENERAL COMPLIANCE

HH - RCP NOTES & LEGEND

SCALE : NONE



EE - RESTROOM REFLECTED CEILING PLAN

SCALE : 3/8" = 1'-0"

FIRE EXTINGUISHERS:

AT EACH LOCATION AS INDICATED ON THE PLAN WITH THIS SYMBOL IS A PORTABLE FIRE EXTINGUISHER. PORTABLE FIRE EXTINGUISHERS SHALL BE LOCATED IN A CONSPICUOUS LOCATION WHERE THEY WILL BE READILY ACCESSIBLE AND IMMEDIATELY AVAILABLE FOR USE. THESE LOCATIONS SHALL BE ALONG NORMAL PATHS OF TRAVEL. FIRE EXTINGUISHERS HAVING A GROSS WEIGHT NOT EXCEEDING 40 LBS SHALL BE INSTALLED SO THAT ITS TOP IS NOT MORE THAN 5'-0" ABOVE THE FLOOR. HAND-HELD FIRE EXTINGUISHERS EXCEEDING 40 LBS SHALL BE INSTALLED SO THAT ITS TOP IS NOT MORE THAN 3'-6" ABOVE THE FLOOR. CLEARANCE BETWEEN THE FLOOR AND THE BOTTOM OF INSTALLED HAND-HELD EXTINGUISHERS SHALL NOT BE LESS THAN 4 INCHES. REFER TO CFC 906 FOR ADDITIONAL REQUIREMENTS. CLASS-A, TYPE 2-A10BC STREAM LOADED FIRE EXTINGUISHER. LOCATE SUCH THAT THE TRAVEL DISTANCE TO THE APPARATUS DOES NOT EXCEED 75 FEET MIN. ONE EXTINGUISHER EA. 3,000 SQ. FT.

NOTES:

ALL DOORS SHALL BE LOCATED 6" AWAY FROM NEAREST PERPENDICULAR WALL. THIS ALLOWS FOR TYPICAL CASING INSTALLATION TO A KING STUD AND TRIMMER FRAMING CONDITION TYP. U.O.N. ON THIS DRAWING

ALL WALL FRAMING SHALL HAVE SOUND BATT INSULATION.

"LEVEL" INDICATES A SLOPE NOT TO EXCEED 2% AS DEFINED BY THE C.B.C. TO ALLOW FOR DRAINAGE. 2% EQUATES TO 1/4" FALL IN 12" RUN.

AT ELECTRICAL ROOMS, PROVIDE CROSS-HATCHED STRIPING WITH "KEEP CLEAR" VERBIAGE ON THE FLOOR DESIGNATING THE REQUIRED WORKING SPACE IN FRONT OF ELECTRICAL EQUIPMENT IN COMPLIANCE WITH C.E.C. SECTION 110.26.

LEGEND:

1 - EXISTING WALL TO REMAIN

2 - EXTERIOR WALL - PER METAL BUILDING MANUFACTURER. HORIZONTAL 'Z' PURLINS W/ METAL EXTERIOR SIDING.

3 - INTERIOR 1 HR. RATED WALL - 6" x 18 GA. METAL STUDS @ 16" O.C. USE SOUND BATT INSULATION AND 5/8" TYPE 'X' GYPSUM BOARD ON EACH SIDE. FINISH W/ SMOOTH TEXTURE. SEE DETAIL XX/X.X

4 - INTERIOR WALL - 3 5/8" x 18 GA. METAL STUDS @ 16" O.C. w/ SOUND BATT INSULATION AND 5/8" M.R. GYPSUM BOARD EACH SIDE. FINISH SMOOTH TEXTURE w/ EPOXY PAINT.

101 - INDICATES DOOR - SEE DOOR SCHEDULE

A - INDICATES WINDOW - SEE WINDOW SCHEDULE

P1 - INDICATES PLUMBING FIXTURE - SEE SCHEDULE CC/A2.3

EXIT - EXIT SIGN w/ EMERGENCY EGRESS ILLUMINATION, EGRESS LIGHTING @ EXTERIOR LANDINGS WHERE APPLICABLE, AND EMERGENCY BATTERY BACKUP.

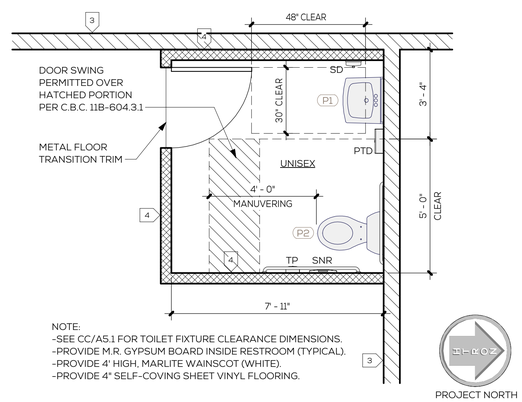
AA - NOTES & LEGEND

SCALE : NONE

MARK	DESCRIPTION	FLOW RATE	UTILITIES CONNECTION SIZE				
			CW	HW	DRAIN	VENT	GAS
P1	LAVATORY - GREENWICH BY KOHLER ADA, WHITE W/ CORALAIS FAUCET MODEL #K-15199 WITH AERATOR	0.50 GPM	1/2"	1/2"	2"	1 1/2"	-
P2	K-4325 ADA - COMFORT HEIGHT, WHITE W/ BEMIS 1955 SS/C WHITE SEAT	1.28 GPF	1/2"	-	3"	2"	-

GG - PLUMBING FIXTURE SCHEDULE

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



DD - RESTROOM FLOOR PLAN

SCALE : 3/8" = 1'-0"

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TEN. 02/28/2025

RGA PROJECT #	24-459
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ENLARGED PLANS

A2.2

PROJECT NORTH

DD - ROOF PLAN

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

ROOF DRAINAGE CALCULATIONS:

TOTAL ROOF AREA: 24,000 SQ. FT.

RAIN TOTAL AMOUNTS C.P.C. APPENDIX 'D' (CHICO) 1.5" PER HOUR

GUTTER:
5" GUTTERS AT 1:16 SLOPE AT 1.5" RAINFALL = 1,250 SQ. FT.
ALLOWED PER GUTTER PER C.P.C TABLE 1106.3

DOWNSPOUT:
4" DIAMETER DRAIN ALLOWS 6,440 SQ. FT. PER C.P.C. TABLE 1101.11

D.S. #1 DRAINS 6,001 SQ. FT. = O.K.

D.S. #2 DRAINS 6,001 SQ. FT. = O.K.

D.S. #3 DRAINS 6,001 SQ. FT. = O.K.

D.S. #4 DRAINS 6,001 SQ. FT. = O.K.

BB - ROOF DRAINAGE CALCULATIONS

SCALE : NONE

NOTES:

ALL ROOF DRAINS TO BE SURFACE DISCHARGE - DRAIN TO SURROUNDING GRADE AND WATER FEATURE WHERE APPLICABLE

ALL ROOF AREAS SHALL MAINTAIN A POSITIVE SLOPE TO ROOF DRAINS. THIS SHALL BE ACCOMPLISHED BY SLOPED STRUCTURE. THE INSTALLING CONTRACTOR SHALL NOTIFY THE ARCHITECT OF POTENTIAL CONFLICT OR UNDOCUMENTED CONDITIONS WHICH MAY OBSTRUCT SUCH SLOPE.

D.S. — INDICATES 5" x 24 GA. BOX GUTTER W/ 4 INCH DOWNSPOUTS.

AA - NOTES & LEGEND

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

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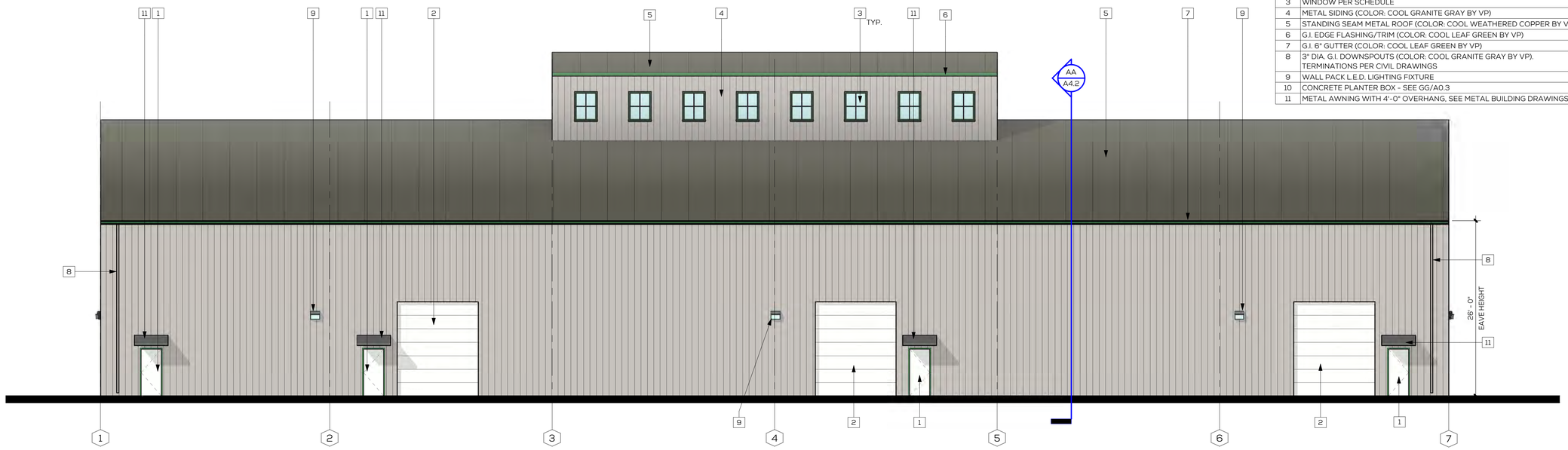
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ROOF PLAN

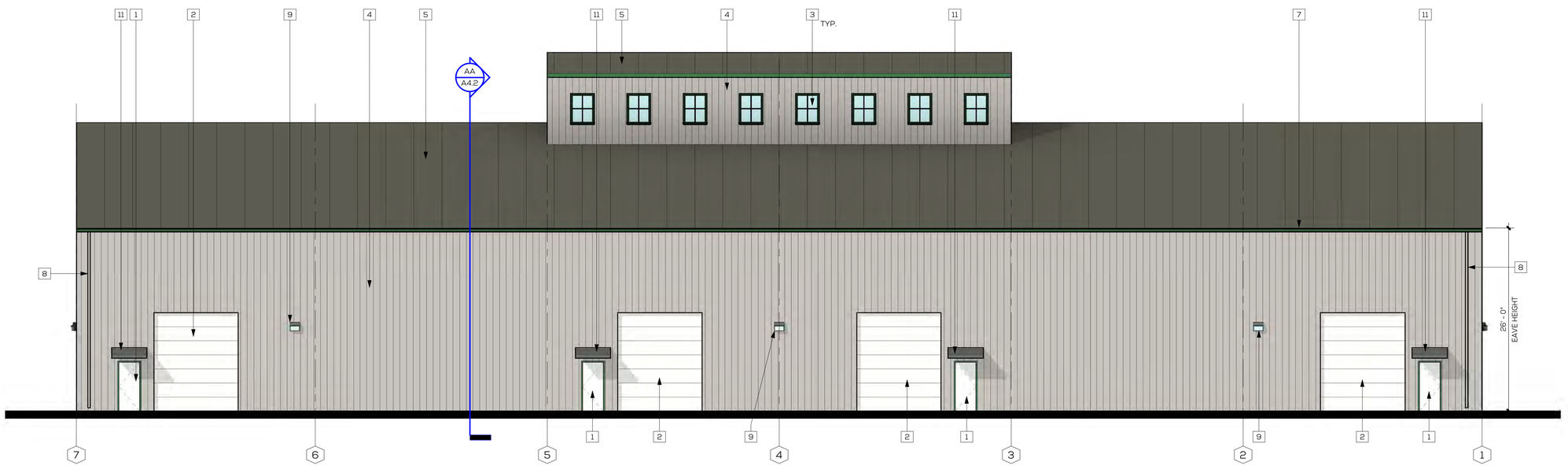
A2.3

Keynote Legend	
KEY	DESCRIPTION
1	MAN DOOR PER SCHEDULE
2	ROLL UP DOOR PER SCHEDULE
3	WINDOW PER SCHEDULE
4	METAL SIDING (COLOR: COOL GRANITE GRAY BY VP)
5	STANDING SEAM METAL ROOF (COLOR: COOL WEATHERED COPPER BY VP)
6	G.I. EDGE FLASHING/TRIM (COLOR: COOL LEAF GREEN BY VP)
7	G.I. 6" GUTTER (COLOR: COOL LEAF GREEN BY VP)
8	3" DIA. G.I. DOWNSPOUTS (COLOR: COOL GRANITE GRAY BY VP). TERMINATIONS PER CIVIL DRAWINGS
9	WALL PACK L.E.D. LIGHTING FIXTURE
10	CONCRETE PLANTER BOX - SEE GG/A0.3
11	METAL AWNING WITH 4'-0" OVERHANG, SEE METAL BUILDING DRAWINGS



BB - EAST ELEVATION

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



AA - WEST ELEVATION

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

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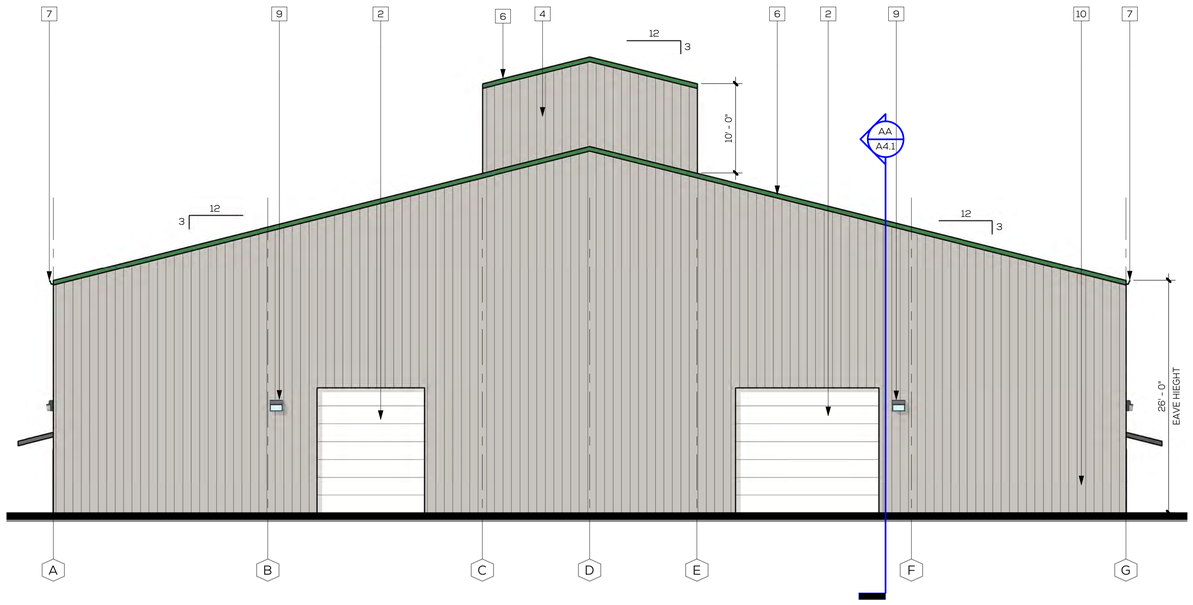
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No. C-35
REN. 02/28/2027
STATE OF CALIFORNIA

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EXTERIOR ELEVATIONS

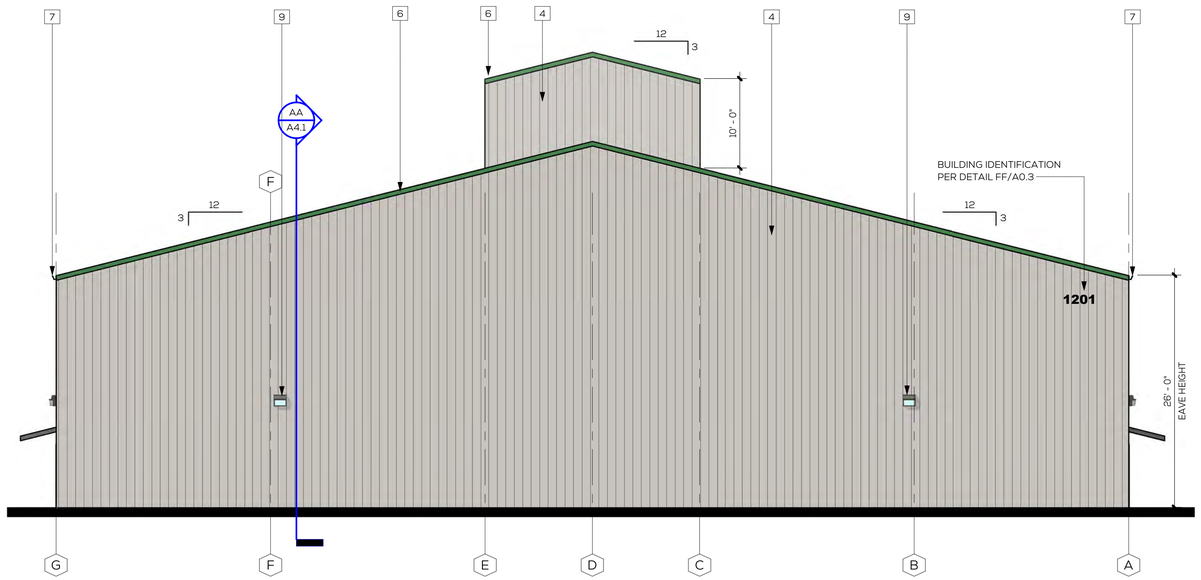
A3.1

Keynote Legend	
KEY	DESCRIPTION
1	MAN DOOR PER SCHEDULE
2	ROLL UP DOOR PER SCHEDULE
3	WINDOW PER SCHEDULE
4	METAL SIDING (COLOR: COOL GRANITE GRAY BY VP)
5	STANDING SEAM METAL ROOF (COLOR: COOL WEATHERED COPPER BY VP)
6	G.I. EDGE FLASHING/TRIM (COLOR: COOL LEAF GREEN BY VP)
7	G.I. 6" GUTTER (COLOR: COOL LEAF GREEN BY VP)
8	3" DIA. G.I. DOWNSPOUTS (COLOR: COOL GRANITE GRAY BY VP). TERMINATIONS PER CIVIL DRAWINGS
9	WALL PACK L.E.D. LIGHTING FIXTURE
10	CONCRETE PLANTER BOX - SEE GG/A0.3
11	METAL AWNING WITH 4'-0" OVERHANG, SEE METAL BUILDING DRAWINGS



BB - SOUTH ELEVATION

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



AA - NORTH ELEVATION

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

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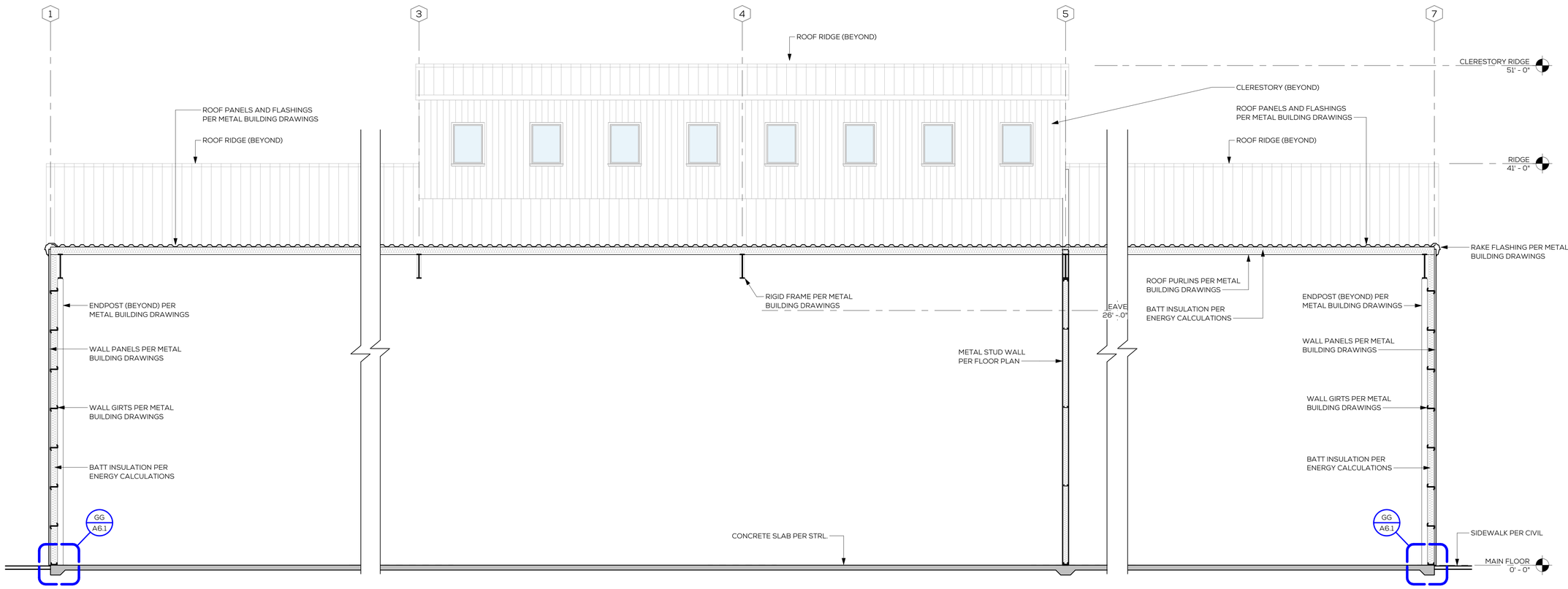
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EXTERIOR ELEVATIONS

A3.2



AA - BUILDING SECTION (NORTH-SOUTH)

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

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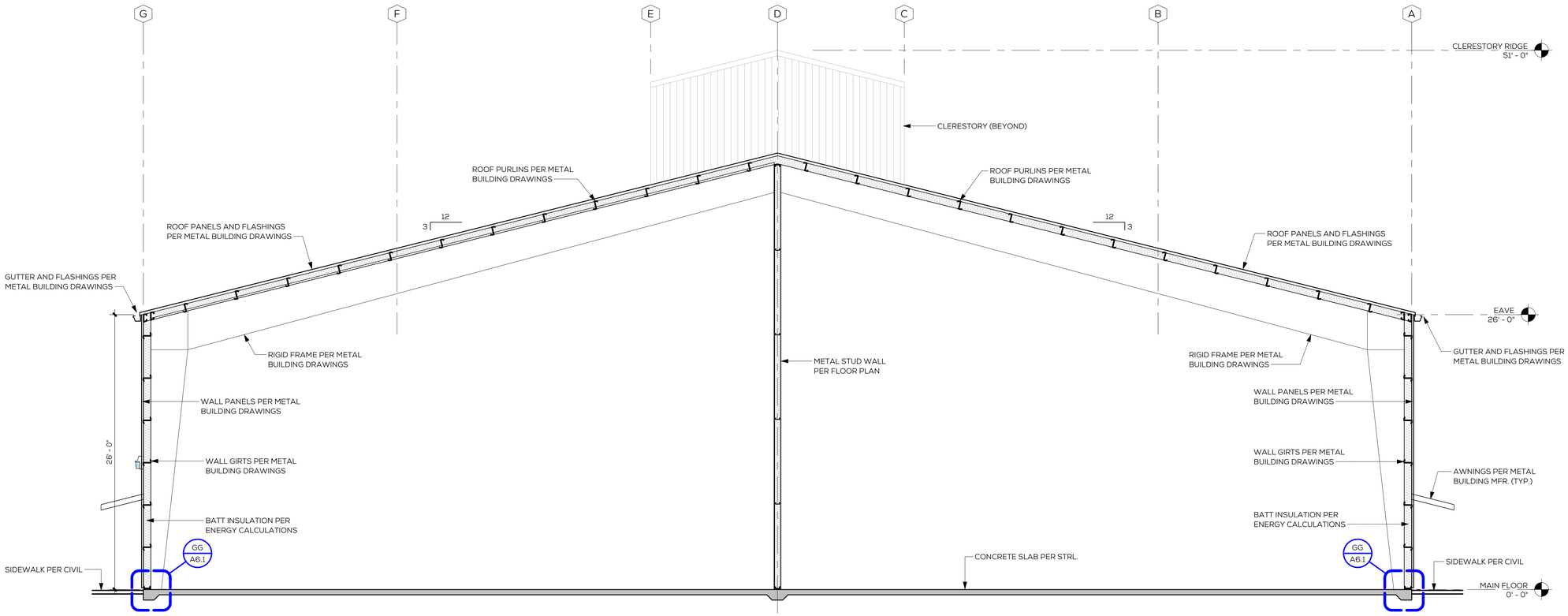
ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
SCOTT B. GALLAWAY
REN. 02/26
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

BUILDING SECTIONS

A4.1



AA - BUILDING SECTION (EAST-WEST)

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

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RUSSELL, GALLAWAY ASSOCIATES inc.

115 MEYERS STREET
SUITE 110
CHICO, CA 95928
530 342 0302

www.rgachico.com

New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

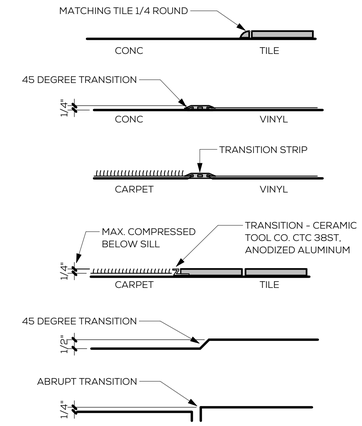
ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
Matt Gallaway
REN. 02/26
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

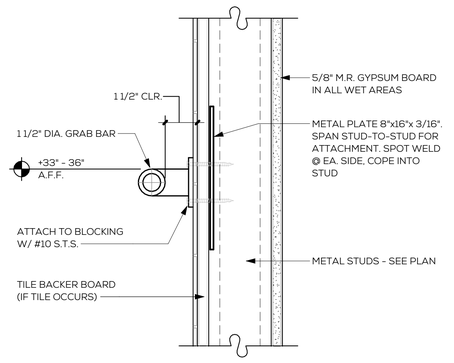
BUILDING SECTIONS

A4.2



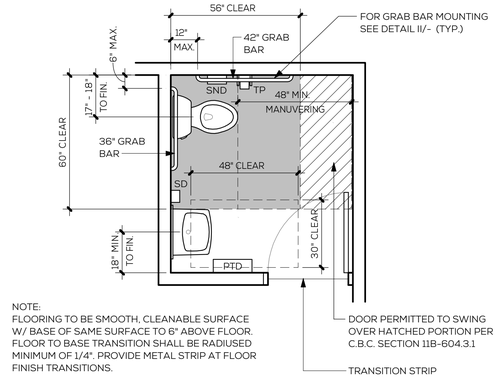
JJ - FLOOR TRANSITIONS

SCALE : 3" = 1'-0"



FF - GRAB BAR ATTACHMENT

SCALE : 3" = 1'-0"



CC - RESTROOM CLEARANCES (TYP. U.O.N.)

SCALE : 3/8" = 1'-0"

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New Warehouse Shell Building

OWNER
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1201 East MacArthur St. SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

*PER C.B.C. SECTION 11B-606

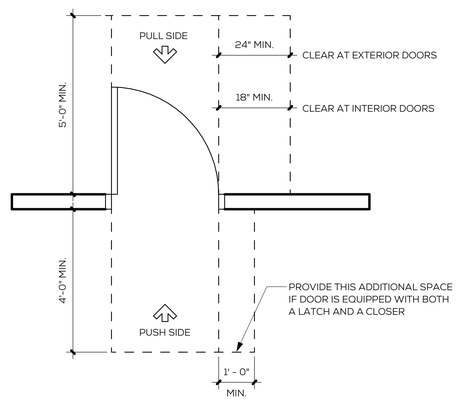
EE - ACCESSIBLE LAVATORY HEIGHTS

SCALE : 3/8" = 1'-0"

1. MINIMUM 30" X 48" CLEAR FLOOR OR GROUND SPACE IS PROVIDED TO ALLOW FORWARD OR PARALLEL APPROACH TO ACCESSORIES.
2. ONE FULL UNOBSTRUCTED SIDE OF THE CLEAR FLOOR OR GROUND SPACE ADJOINS OR OVERLAPS AN ACCESSIBLE ROUTE OR ADJOINS ANOTHER WHEELCHAIR CLEAR SPACE.
3. MIRROR IS MOUNTED WITH THE BOTTOM EDGE OF REFLECTIVE SURFACE NO HIGHER THAN 40" FROM THE FLOOR.
4. OPERABLE PARTS (INCLUDING COIN SLOTS) OF ALL FIXTURES OR ACCESSORIES ARE LOCATED A MAXIMUM OF 40" ABOVE THE FLOOR (I.E. SOAP DISPENSERS, TOWELS, TOILET SEAT COVERS, AUTO DRYERS, SANITARY NAPKIN DISPENSERS, WASTE RECEPTACLES, ETC.)
5. CONTROLS AND OPERATING MECHANISMS ARE OPERATED BY ONE HAND AND DO NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST.
6. THE FORCE REQUIRED TO ACTIVATE CONTROLS IS 5 LBS. MAXIMUM.
7. COAT HOOKS AND SHELVING ARE LOCATED WITHIN APPROPRIATE REACH RANGES (48" MAX. ABOVE FLOOR RECOMMENDED).
8. IF MEDICINE CABINETS ARE PROVIDED, AT LEAST ONE HAS A USABLE SHELF NO HIGHER THAN 44" ABOVE THE FLOOR.

BB - ACCESSORY MOUNTING HEIGHTS

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



KK - TYPICAL DOOR CLEARANCE

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

INTERNATIONAL SYMBOL OF ACCESSIBILITY (I.S.A.):

AT THE FOLLOWING LOCATIONS:

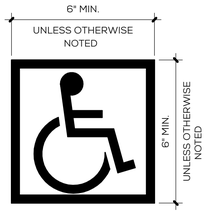
MAIN ENTRY DOOR(S)
MOUNT 60" ABOVE DATUM TO CENTER OF SIGN. SIGN SHALL BE BLUE IN COLOR IN COMPLIANCE WITH I.B.C. 117B.5. ALTERNATE COLORS MUST BE APPROVED BY THE BUILDING OFFICIAL.

ACCESSIBLE PARKING SPACES (36"X36")

ACCESSIBLE PASSENGER LOADING ZONES

ACCESSIBLE ENTRANCES

ACCESSIBLE TOILET AND BATHING FACILITIES



TACTILE EXIT SIGNS: CBC SECTION 1011.4

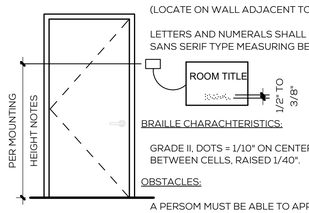
AT THE FOLLOWING LOCATIONS:

1. EACH GRADE-LEVEL EXTERIOR EXIT DOOR SHALL BE IDENTIFIED BY A TACTILE EXIT WITH THE WORD "EXIT".
2. EACH EXIT DOOR THAT LEADS DIRECTLY TO A GRADE-LEVEL EXTERIOR EXIT BY MEANS OF A STAIRWAY OR RAMP SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE FOLLOWING WORDS AS APPROPRIATE:
   A. "EXIT STAIR DOWN"
   B. "EXIT RAMP DOWN"
   C. "EXIT STAIR UP"
   D. "EXIT RAMP UP"
3. EACH EXIT DOOR THAT LEADS DIRECTLY TO A GRADE-LEVEL EXTERIOR EXIT BY MEANS OF AN EXIT ENCLOSURE OR AN EXIT PASSAGEWAY SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS, "EXIT ROUTE".
4. EACH EXIT ACCESS DOOR FROM AN INTERIOR ROOM OR AREA TO A CORRIDOR OR HALLWAY THAT IS REQUIRED TO HAVE VISUAL EXIT SIGN, SHALL BE IDENTIFIED BY A TACTILE EXIT SIGN WITH THE WORDS, "EXIT ROUTE".
5. EACH EXIT DOOR THROUGH A HORIZONTAL EXIT SHALL BE IDENTIFIED BY A SIGN WITH THE WORDS "TO EXIT".

PERMANENT SIGNAGE:

(LOCATE ON WALL ADJACENT TO DOOR LATCH AT ALL ROOMS)

LETTERS AND NUMERALS SHALL BE RAISED 1/32", UPPER CASE, SANS SERIF TYPE MEASURING BETWEEN 5/8" AND 2" HIGH.



BRAILLE CHARACHTERISTICS:

GRADE II, DOTS = 1/10" ON CENTER IN EACH CELL WITH 2/10" SPACE BETWEEN CELLS, RAISED 1/40".

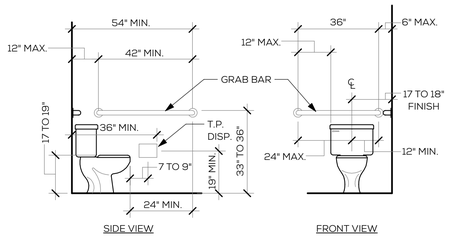
OBSTACLES:

A PERSOM MUST BE ABLE TO APPROACH WITHIN 3" OF SIGNAGE WITHOUT ENCOUNTERING PROTRUDING OBJECTS OR STANDING (SITTING) WITHIN SWING OF DOOR.

MOUNTING HEIGHT NOTES:
TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48 INCHES MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE, MEASURED FROM THE BASELINE OF THE HIGHEST BASELINE OF RAISED CHARACTERS.

GG - ACCESSIBLE ROOM SIGNAGE

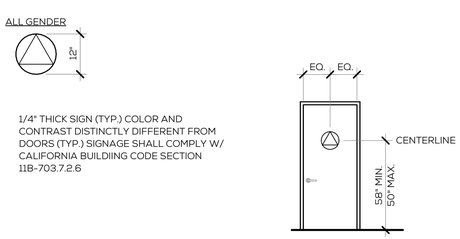
SCALE : 3/8" = 1'-0"



*PER C.B.C. SECTION 604

DD - ACCESSIBLE TOILET HEIGHTS

SCALE : 3/8" = 1'-0"



AA - ACCESSIBLE RESTROOM SIGNAGE

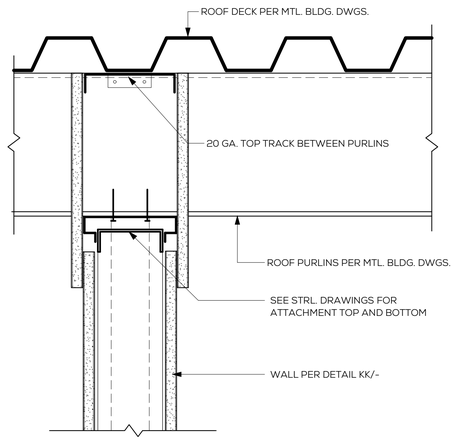
SCALE : 1/4" = 1'-0"



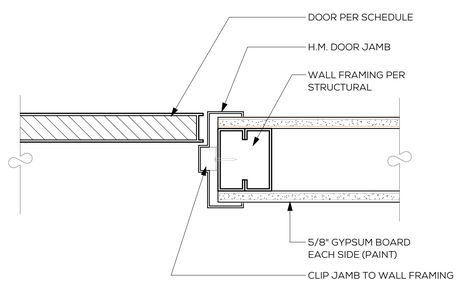
RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

ACCESSIBILITY DETAILS

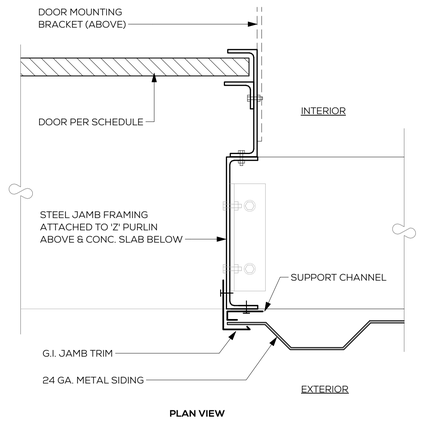
A5.1



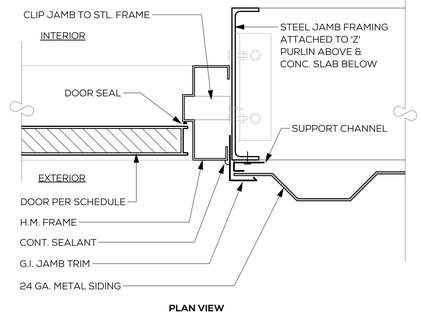
LL - TOP OF DEMISING WALL
SCALE : 3" = 1'-0"



II - INTERIOR DOOR JAMB
SCALE : 3" = 1'-0"



FF - ROLL UP DOOR JAMB
SCALE : 3" = 1'-0"



CC - EXTERIOR DOOR JAMB
SCALE : 3" = 1'-0"

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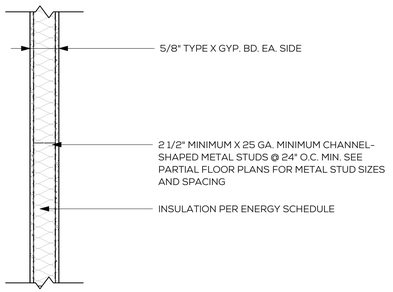
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CHICO, CA 95928
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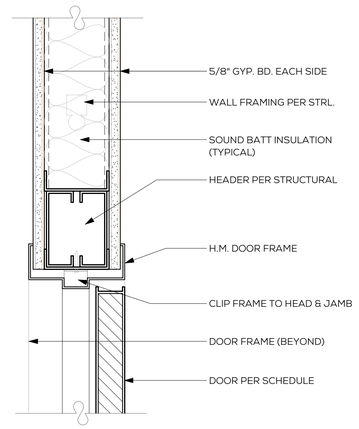
1 HOUR FIRE RATED ASSEMBLY (MEETS THE CBC 420.2 REQUIREMENT FOR 30 MINUTE ASSEMBLY)

PER CBC TABLE 721.1 (2) ITEM 13-1.1

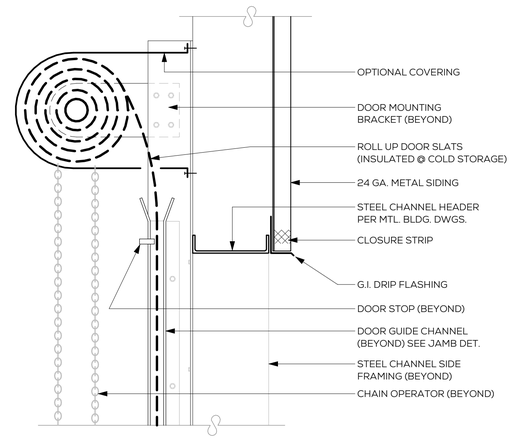
0.018" (NO. 25 CARBON SHEET STEEL GAGE) CHANNEL-SHAPED STUDS @ 24" O.C. WITH ONE FULL LENGTH LAYER OF 5/8" TYPE X GYPSUM WALLBOARD APPLIED VERTICALLY ATTACHED WITH 1" LONG NO. 6 DRYWALL SCREWS TO EACH STUD. SCREWS ARE 8" ON CENTER AROUND THE PERIMETER AND 12" ON CENTER ON THE INTERMEDIATE STUD. THE WALLBOARD MAY BE APPLIED HORIZONTALLY WHEN ATTACHED TO 3 5/8" STUDS AND THE HORIZONTAL JOINTS ARE STAGGERED WITH THOSE ON THE OPPOSITE SIDE. SCREWS FOR THE HORIZONTAL APPLICATION SHALL BE 8" ON CENTER AT VERTICAL EDGES AND 12" ON CENTER AT INTERMEDIATE STUDS.



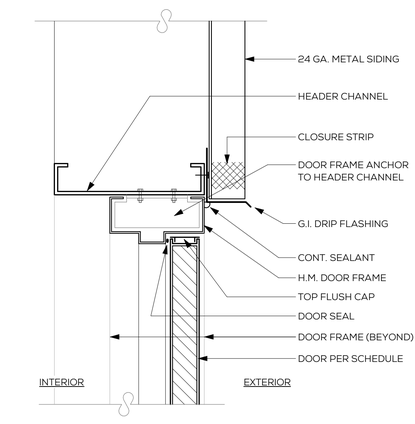
KK - FIRE RATED ASSEMBLY - FIRE PARTITION
SCALE : 1" = 1'-0"



HH - INTERIOR DOOR HEAD
SCALE : 3" = 1'-0"



EE - ROLL UP DOOR HEAD
SCALE : 1 1/2" = 1'-0"



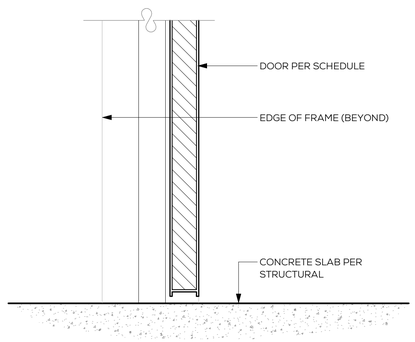
BB - EXTERIOR DOOR HEAD
SCALE : 3" = 1'-0"

New Warehouse Shell Building

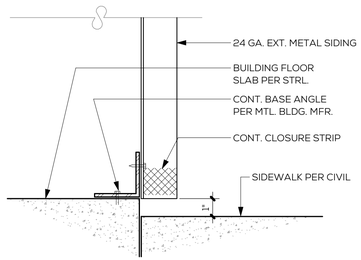
OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

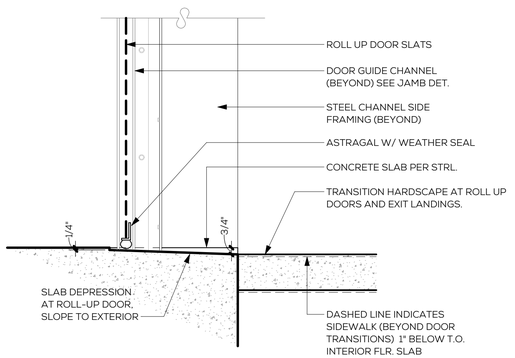
ASSESSORS PARCEL NUMBER
128-121-038



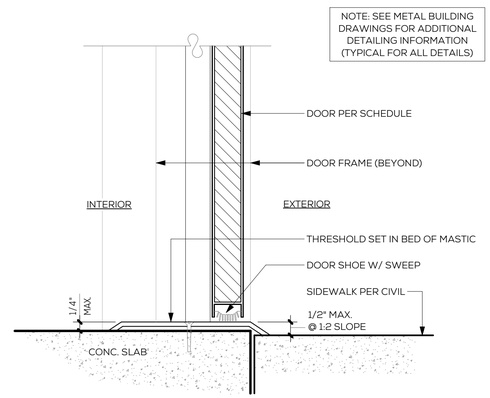
JJ - INTERIOR DOOR SILL
SCALE : 3" = 1'-0"



GG - EXTERIOR DOOR HEAD
SCALE : 3" = 1'-0"



DD - ROLL UP DOOR SILL
SCALE : 1 1/2" = 1'-0"



AA - EXTERIOR DOOR SILL
SCALE : 3" = 1'-0"



RGA PROJECT #	24-459
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STATUS DATE	2025.12.23

DETAILS

A6.1

ABBREVIATIONS

AB	ANCHOR BOLTS
&	AND
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASSY	ASSEMBLY
@	AT
BM	BEAM
BR'G	BEARING
BTWN	BETWEEN
BLK	BLOCK
BLK'G	BLOCKING
BOT	BOTTOM
BN	BOUNDARY NAIL
X	BY
CBC	CALIFORNIA BUILDING CODE
℄	CENTERLINE
CLR	CLEAR
COL	COLUMN
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CJ	CONTROL JOINT
CNTSK	COUNTERSINK
DP	DEEP
DIAG	DIAGONAL
DIA. ⌀	DIAMETER
DIM	DIMENSION
DBL D.F.	DOUBLE DOUGLAS FIR
DO	REPEAT
DRWG	DRAWING
EA	EACH
EF	EACH FACE
EW	EACH WAY
EN	EDGE NAIL
EOS	EDGE OF SLAB
ELEV	ELEVATION
ENG	ENGINEER
=	EQUALS
EXT	EXTERIOR
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FLR	FLOOR
FN	FIELD NAIL
FIN	FINISH
FRM'G	FRAMING
FT	FOOT
FTG	FOOTING
GA	GAGE
GALV	GALVANIZED
G/N	GANG-NAIL TRUSS
GLULAM	GLUE-LAMINATED
HDR	HEADER
HT	HEIGHT
HSB	HIGH STRENGTH BOLTS
HD	HOLDOWN
HORIZ	HORIZONTAL
N	INCH
ID	INSIDE DIAMETER
IF	INSIDE FACE
INT	INTERIOR
JT	JOINT
JST	JOIST
JH	JOIST HANGER
LT	LIGHT
LTWT	LIGHT WEIGHT
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MB	MACHINE BOLT
MFG'R	MANUFACTURER
MATL	MATERIAL
MAX	MAXIMUM
MECH.	MECHANICAL
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
NSA	NELSON STUD ANCHOR
NTS	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMTER
O.F.	OUTSIDE FACE
OPN'G	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
PEN	PENETRATION
▱	PLATE
PLY	PLYWOOD
P/T	POST TENSIONING
#	POUNDS, NUMBER
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PTDF	PRESSURE TREATED DOUGLAS FIR
R	RADIUS
REINF	REINFORCING
REQ'D	REQUIRED
REQ'T	REQUIREMENTS
REV	REVISION
RM	ROOM
SAD	SEE ARCHITECTURAL DRAWING
SCHED	SCHEDULE
SECT	SECTION
SMD	SEE MECHANICAL DRAWING
STS	SELF-TAPPING SCREW
SHT	SHEET
SIM	SIMILAR
SOG	SLAB ON GRADE
SB	SOLID BLOCKING
SPEC	SPECIFICATION
SQ	SQUARE
STD	STANDARD
STL	STEEL
STIFF	STIFFENER
STRUC	STRUCTURAL
SYM	SYMMETRICAL
THK	THICK
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TN	TOE NAIL
TOS	TOP OF STEEL
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UON	UNLESS OTHERWISE NOTED
VERT	VERTCAL
WP	WATERPROOF
WWF	WELDED WIRE FABRIC
w/	WITH
w/o	WITHOUT
&	AND
@	AT
x	BY
℄	CENTERLINE
⌀	DIAMETER
=	EQUALS
#	POUNDS, NUMBER
▱	PLATE

GENERAL CONDITIONS

1. ALL CONSTRUCTION AND METHODS SHALL CONFORM TO THE APPLICABLE PROVISIONS OF THE CALIFORNIA BUILDING CODE, 2022 EDITION, AS WELL AS ANY APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS AND EXISTING CONDITIONS AT THE JOB SITE PRIOR TO COMMENCING WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES FOUND.
3. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISH STRUCTURE, AND, UNLESS SPECIFICALLY NOTED OTHERWISE, THEY DO NOT SPECIFY METHODS OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR THE METHOD OF CONSTRUCTION AND SHALL TAKE ALL NECESSARY STEPS AND PRECAUTIONS TO MAINTAIN THE STABILITY OF THE STRUCTURE AND PROTECT WORKERS, THE PUBLIC, AND OTHER PERSONS DURING CONSTRUCTION. SPECIFIC ITEMS TO BE CONSIDERED SHALL INCLUDE, BUT NOT LIMITED TO, FORMING, SCAFFOLDING, AND BRACING.
4. ALL WORK IS SUBJECT TO THE APPROVAL OF THE LOCAL JURISDICTIONS FIELD INSPECTOR.
5. ALL ASTM SPECIFICATIONS AND CBC STANDARDS REFERENCED IN THESE DRAWINGS SHALL BE OF THE LATEST REVISION.
6. CERTAIN TYPES OF WORK ARE REQUIRED TO HAVE SPECIAL INSPECTION PER CHAPTER 18 OF THE CBC. WORK REQUIRING SPECIAL INSPECTION ON THIS PROJECT IS LISTED UNDER THE SPECIAL INSPECTION SECTION. A SPECIAL INSPECTION QUALIFIED TO PERFORM SUCH INSPECTIONS AND HIRED BY THE OWNER SHALL COPY REPORTS TO THE ENGINEER.
7. IN THE EVENT THAT CERTAIN FEATURES OF CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS OR CALLED FOR IN THE NOTES OR SPECIFICATIONS, THEIR CONSTRUCTION SHALL BE SIMILAR TO CONDITIONS THAT ARE SHOWN AND SHALL BE REVIEWED BY THE ENGINEER.
8. THE ENGINEER IS RESPONSIBLE FOR THE STRUCTURAL ITEMS IN THESE PLANS ONLY. ANY CHANGES MADE TO THE PLANS OR CALCULATIONS SHALL BE APPROVED BY THE ENGINEER. IF ANY CHANGES ARE MADE WITHOUT THE ENGINEERS APPROVAL. THE ENGINEER WILL ASSUME NO RESPONSIBILITY FOR ANY ELEMENT OF SYSTEM OF THE STRUCTURE.
9. ALL WATERPROOFING AND FLASHING IS THE RESPONSIBILITY OF THE ARCHITECT, CONTRACTOR, AND OWNER.
10. SEISMIC & WIND LOADS USED IN THE DESIGN OF THIS STRUCTURE ARE BASED ON THE FOLLOWING CRITERIA:

SEISMIC:		WIND:
SITE CLASS = D	CATEGORY II	EXPOSURE "C"
Sds = 1.275	Ss = 1.597g	92 MPH
Sd1 = 0.600	S1 = 0.600g	I = 1.00
R = 3.5 (OSMF)	R = 3.25 (OSCBF)	

S1.1 - STRUCTURAL DRAWING INDEX

SHEET	CONTENTS	REVISION	DATE
S1.1	STRUCTURAL NOTES		
S2.1	FOUNDATION PLAN		
S4.1	FOUNDATION DETAILS		
S4.2	FOUNDATION DETAILS		
S5.1	METAL STUD FRAMING		

FOUNDATION

1. THE FOUNDATION DESIGN IS BASED ON SOILS INVESTIGATION BY:
   RGH CONSULTANTS
   1041 JEFFERSON STREET, SUITE 4
   NPA, CALIFORNIA 94559
   JOB NO. 3565.01.04.1 DATED: AUGUST 30, 2017
2. ALLOWABLE SOIL BEARING: 2000 PSF (DEAD LOAD), 3000 PSF (DEAD + LIVE LOAD), 4000 (TOTAL LOAD INCLUDING WIND & SEISMIC)
3. ALL SITE WORK AND GRADING SHALL BE DONE IN COMPLIANCE WITH THE GEOTECHNICAL INVESTIGATION REPORT.
4. THE GEOTECHNICAL ENGINEER SHALL REVIEW ALL SITE WORK AND FOOTING EXCAVATIONS BEFORE ANY CONCRETE IS CAST, SUBMIT A LETTER OF COMPLIANCE TO THE ARCHITECT.
5. THE GEOTECHNICAL ENGINEER SHALL REVIEW ALL BACKFILL MATERIALS PRIOR TO PLACEMENT AND OBSERVE BACKFILL OPERATIONS. A LETTER OF COMPLIANCE SHALL BE SUBMITTED TO THE ARCHITECT STATING THAT FILLS HAVE BEEN CONSTRUCTED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
6. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL THE ANCHOR BOLTS, STRAPS, HOLDOWN ANCHORS AND EMBEDMENTS PRIOR TO PLACEMENT OF CONCRETE ANCHORS SHALL BE WIRE-TIED IN PLACE PRIOR TO POURING CONCRETE.
7. MINIMUM SILL ANCHOR REQUIREMENTS ARE 1/2" DIA. X 7" EMBED AT 48" ON CENTER. USE 5/8" DIAMETER ANCHOR BOLTS AS INDICATED IN THE SHEAR WALL SCHEDULE. BOLTS SHALL BE PLACED A MINIMUM OF 10" FROM SILL PLATE ENDS AND SPLICES. USE A MINIMUM OF 2 ANCHOR BOLTS PER PLATE. ALL ANCHOR BOLTS SHALL HAVE A 3"X3"X0.229" SQUARE WASHER AND NUT. WASHER EDGE SHALL BE NO MORE THAN 1/2" AWAY FROM SHEATHED EDGE. TITEN HD's MAY SUBSTITUTE FOR ANCHOR BOLTS PROVIDED THE HAVE A 3-1/2" MINIMUM EMBEDMENT INTO CONCRETE AND MATCH THE DIAMETER OF THE SHEAR WALL SCHEDULE.
8. FINISHED GRADE SHALL SLOPE AWAY FROM ALL FOUNDATIONS AT 5% SLOPE MINIMUM FOR A MINIMUM OF 10 FEET. IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2% AWAY FROM THE BUILDING.
9. THE BASE OF ALL SHALLOW FOUNDATIONS SHALL BEAR ON FIRM COMPETENT NON-EXPANSIVE NATIVE SOILS. FOOTING EXCAVATIONS SHALL BE LEVEL, CLEANED OF ALL DEBRIS, LOOSE OR SOFT SOIL, AND WATER. WATER SHOULD NOT BE ALLOWED TO POND IN THE BOTTOM OF THE EXCAVATIONS.
10. ALL PIPES, CONDUITS, AND OTHER PENETRATIONS SHALL NOT PASS THROUGH FOOTINGS.
11. NOTIFY ENGINEER AT LEAST 48 HOURS PRIOR TO POURING FOUNDATIONS.

CONCRETE

1. ALL CONCRETE SHALL BE LOW SHRINKAGE, CONTAIN 5 TO 6 SACKS OF CONCRETE PER CUBIC YARD WITH A MAXIMUM SLUMP OF 4" AND A MAXIMUM WATER/CEMENT RATIO OF 0.45%. CEMENT SHALL CONFORM TO ASTM C-150 AND BE TYPE II OR TYPE II-LOW ALKALI.
2. AGGREGATE SHALL CONFORM TO ASTM C-33. THE MAXIMUM AGGREGATE SIZE FOR FOUNDATIONS AND MASS CONCRETE SHALL BE 1 1/2". USE 3/4" MAXIMUM AGGREGATE FOR ALL OTHER CONCRETE.
3. ALL CONCRETE WITH A SPECIFIED DESIGN STRENGTH OF 3000 PSI OR HIGHER SHALL BE DESIGNED BY A RECOGNIZED TESTING LABORATORY AND COPIES OF DESIGN SHALL BE SENT TO THE ENGINEER FOR REVIEW.
4. FLY ASH SHALL CONFORM TO ASTM C618, CLASS F. FLY ASH SHALL NOT EXCEED 15% OF CEMENT BY WEIGHT.
5. MINIMUM ULTIMATE COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS AT 28 DAYS:
   FOOTINGS---------- 3000 PSI *
   SLABS-ON-GRADE---------- 3000 PSI *
   FILL OVER METAL DECK---------- 3000 PSI
   TILT-UP & C.I.P. WALLS---------- 3000 PSI
   LEAN CONCRETE FILL---------- 1000 PSI
   ALL OTHER CONCRETE, U.O.N. ON PLANS------ 2500 PSI
   * THE STRUCTURAL DESIGN IS BASED ON A COMPRESSIVE STRENGTH OF 2,500 PSI THEREFORE SPECIAL INSPECTION IS NOT REQUIRED PER THE EXCEPTION OF CBC SECTION 1705.3
6. CONCRETE SHRINKAGE AT 28 DAYS SHALL NOT EXCEED 0.055% FOR DRY CURING.
7. PROJECTING CORNERS OF ALL CONCRETE MEMBERS SHALL BE FORMED WITH 3/4" CHAMFER UNLESS SPECIFICALLY DETAILED OTHERWISE.
8. CURING COMPOUND SHALL BE SPRAYED ON ALL EXPOSED CONCRETE SURFACES IMMEDIATELY AFTER FINAL TROWELING.
9. CRACK CONTROL JOINTING FOR CONCRETE SLABS SHALL BE DESIGNED BY THE CONTRACTOR. JOINTS SHALL OCCUR A MAXIMUM OF 10 FEET ON CENTER. CONSTRUCTION JOINTS SHALL BE CLEAN AND WET PRIOR TO SECOND POUR.
10. VIBRATE CONCRETE AROUND ALL REBAR, ANCHOR BOLTS AND SURFACES.
11. STEEL REBAR OR WIRE MESH IN SLABS SHALL BE LOCATED AND AT SLAB CENTERLINE.
12. NON-SHRINK GROUT SHALL BE NON-METALLIC AND MEET THE ARMY CORPS OF ENGINEERS SPECIFICATION CRD-C621, WITH NO SHRINKAGE AFTER PLACEMENT OR EXPANSION AFTER SET, TESTED IN ACCORDANCE WITH ASTM C827. MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 3000 PSI AFTER 24 HOURS AND 5000 PSI AT 28 DAYS.
    ACCEPTABLE PRODUCTS INCLUDE:
    A. BURKE NON-FERROUS, NON-SHRINK GROUT BY THE BURKE COMPANY, SAN MATEO, CA
    B. MASTERFLOW 928 GROUT BY MASTER BUILDERS, CLEVELAND, OHIO
    C. EUCO NS GROUT BY THE EUCLID CHEMICAL COMPANY, CLEVELAND, OHIO
13. PRIOR TO APPLYING CONSTRUCTION LOADS, ALL EXPOSED CONCRETE SLAB ON GRADE FLOORS SHALL BE MOIST CURED FOR A MINIMUM OF 7 DAYS FOLLOWING PLACEMENT OF THE CONCRETE. IF CONCRETE IS PLACED DURING DRY WINDY DAYS OR THE HOT SUMMER MONTHS WHEN THE AMBIENT AIR TEMPERATURES MAY BE AS LOW AS 50 TO 60 DEGREES FAHRENHEIT (F) IN THE EARLY MORNING AND IN EXCESS OF 90 DEGREES (F) IN THE AFTERNOON, THEN THE CONTRACTOR MAY NEED TO IMPLEMENT SPECIAL CURING MEASURES TO REDUCE THE DEVELOPMENT OF SHRINKAGE CRACKS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE APPROPRIATE CURING PROCESS TO BE APPLIED TO THE SLAB ON GRADE FLOOR. USE OF SHRINKAGE REDUCING ADMIXTURES SUCH AS MASTERLIFE SRA 035 (OR EQUAL) AND EVAPORATION REDUCERS SUCH AS MASTERKURE ER50 (OR EQUAL) ARE RECOMMENDED.

REINFORCING STEEL

1. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 40 FOR #3 BARS AND SMALLER AND GRADE 60 FOR LARGER BARS. REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706, WELDED PER AWS D1.4, LATEST EDITION.
2. REINFORCING STEEL COVER SHALL BE AS FOLLOWS:
   CONCRETE CAST AGAINST AND EXPOSED TO SOIL----------3"
   STRUCTURAL SLABS, TOP AND BOTTOM----------3/4"
   FORMED CONCRETE EXPOSED TO EARTH OR WEATHER
   #5 BAR AND SMALLER----------1 1/2"
   #6 BAR OR LARGER---------- 2"
   CONCRETE WITHOUT SOILS OR WEATHER EXPOSURE---------- 3/4"
   CONCRETE TILT-UP PANELS
   #8 BAR AND SMALLER----------1"
3. ALL REINFORCING BAR BENDS SHALL BE MADE COLD. #5 AND LARGER BARS SHALL NOT BE RE-BENT.
4. REINFORCING BARS SHALL BE SPLICED AS SHOWN ON DRAWINGS.
5. ALL REINFORCING BARS SHALL BE ACCURATELY SECURED IN PLACE PRIOR TO POURING CONCRETE.

STRUCTURAL STEEL

1. STRUCTURAL STEEL FABRICATION AND ERECTION SHALL CONFORM TO AISC SPECIFICATIONS AND CODE OF STANDARD PRACTICE.
2. STRUCTURAL STEEL SHALL CONFORM TO ASTM A36/A572 Fy = 50 KSI FOR W-SHAPES, M-SHAPES, HP-SHAPES, CHANNELS, AND STRUCTURAL TEES. Fy = 36 KSI FOR PLATES AND ANGLES, UNLESS NOTED OTHERWISE. PIPE COLUMNS SHALL CONFORM TO ASTM A53, TYPE "B", GRADE "S", AND TUBE STEEL SHALL CONFORM TO ASTM A500, GRADE "B".
3. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A-325 AND MACHINE BOLTS SHALL CONFORM TO ASTM A-307, GRADE "A".
4. THE STRUCTURAL STEEL FABRICATOR SHALL FURNISH SHOP AND ERECTION DRAWINGS OF ALL STEEL FOR THE ENGINEERS REVIEW PRIOR TO FABRICATION.
5. ALL WELDING SHALL BE DONE BY CERTIFIED WELDERS PER THE AMERICAN WELDING SOCIETY STRUCTURAL D1.1, LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX OR SHIELDED WIRES WITH Fy > 70 KSI.
6. ALL STRUCTURAL STEEL EXCEPT WHERE ENCASED IN CONCRETE, SHALL BE PAINTED, UNLESS OTHERWISE NOTED.

STRUCTURAL STEEL STUDS

1. ALL STUDS TRACKS, AND BRIDGING SHALL BE MANUFACTURED BY DIETRICH INDUSTRIES, OR EQUIVALENT, AND BE OF THE TYPE, SIZE AND GAGE AS SHOWN ON THE STRUCTURAL DRAWINGS. MATERIALS USED TO FABRICATE THE STUDS, TRACKS AND BRIDGING SHALL BE AS SPECIFIED BY DIETRICH INDUSTRIES, INC. IF NOT SHOWN, SHALL SATISFY THE RECOMMENDATION OF THE STEEL STUD MANUFACTURER. TRACKS (WHERE NOT SHOWN) SHALL BE 20 GAGE DEEP LEG TRACK.
2. STEEL STUD FASTENERS SHALL BE POWER BULL OR EQUAL, SELF-DRILLING TAPPING SCREWS COMPLYING WITH SAE STANDARD J78 NO. 12 (0.216 IN. DIA.), NO. 10 (0.190 IN. DIA.), NO. 8 (0.164 IN. DIA.)

SECTION PROPERTIES FOR METAL STUDS, JOISTS AND TRACKS:

THICKNESS (gauge)	(mils)	Fy (ksi)	SIZE	TYPE	Ag (in^2)	Ix (in^4)	Sx (in^3)	rx (in)	Iy (in^4)	ry (in)
20	33	33	2-1/2"	STUD	0.197	0.203	0.163	1.020	0.052	0.515
				TRACK	0.173	0.192	0.145	1.050	0.027	0.397
			3-5/8"	STUD	0.264	0.557	0.307	1.453	0.100	0.617
				TRACK	0.210	0.420	0.228	1.415	0.030	0.378
			6"	STUD	0.346	1.808	0.603	2.286	0.118	0.583
				TRACK	0.292	1.393	0.459	2.183	0.032	0.340
18	43	33	3-5/8"	STUD	0.340	0.710	0.392	1.446	0.127	0.611
				TRACK	0.272	0.546	0.294	1.416	0.039	0.376
			6"	STUD	0.447	2.316	0.772	2.277	0.148	0.557
				TRACK	0.379	1.808	0.594	2.183	0.043	0.338
16	54	50	3-5/8"	STUD	0.442	0.873	0.482	1.438	0.154	0.604
				TRACK	0.341	0.685	0.367	1.417	0.048	0.374
			6"	STUD	0.557	2.862	0.954	2.268	0.181	0.570
				TRACK	0.476	2.267	0.742	2.183	0.054	0.336
			8"	STUD	0.670	5.740	1.435	2.927	0.195	0.539
				TRACK	0589	4.625	1.140	2.802	0.057	0.310

NOTES:
1. DIETRICH INDUSTRIES, INC., BASED ON I.C.B.O. REPORT #4874P
2. "STUD" INDICATES CSJ- SECTION, STUDS SHALL HAVE 1 5/8" FLANGE AND 1/2" LIP, U.N.O.
3. "TRACK" INDICATES TSB - INDICATES STRUCTURAL TRACK SECTION WITH 1-1/4" FLANGE.

METAL CHANNEL FRAMING SYSTEM

1. STEEL CHANNELS & FITTINGS SHALL BE AS MANUFACTURED BY UNISTRUT OR EQUIVALENT.
2. ALL CHANNEL MEMBERS SHALL BE FABRICATED FROM STRUCTURAL GRADE STEEL CONFORMING TO ONE OF THE FOLLOWING ASTM SPECIFICATIONS: A1011 SS GR 33, A653 GR 33.
3. FITTINGS, UNLESS NOTED OTHERWISE, ARE PUNCH-PRESS MADE FROM HOT ROLLED, PICKLED AND OILED STEEL PLATES, STRIP OR COIL AND CONFORM TO ASTM SPECIFICATIONS A575, A576, A635 OR A36. THE FITTING STEEL ALSO MEETS THE PHYSICAL REQUIREMENT OF ASTM A1011 SS GR 33.
4. ALL BOLTS AND NUTS HAVE UNIFIED COARSE SCREW THREADS. THE STANDARD FRAMING NUT IS 1/2" AND CONFORMS TO ASTM SPECIFICATION A1011 SS GR 33 (MATERIAL ONLY). SCREWS CONFORM TO SAE J429 GR 2.

INSTALLATION REQUIRMENTS FOR SIMPSON TITEN-HD IN CONCRETE

diameter (in)	min. nominal embed (in)	max. installation torque (ft-lbf)	max. impact wrench torque rating (ft-lbf)
1/4	1 5/8	24	125
3/8	2 1/2	50	150
1/2	3 1/4	65	340
5/8	4	100	340
3/4	4	150	385

(BASED ON ESR REPORT #2713)

The special inspector must make periodic inspections during anchor installation to verify anchor type, anchor dimensions, hole cleaning procedure, embedment depth, concrete type, concrete compressive strength, concrete member thickness, hole dimensions, anchor spacing, edge distance, installation torque, maximum impact wrench torque rating, and adherence to the manufacturer's published installation instructions.

PULL TEST REQUIREMENTS FOR SIMPSON AT-3G EPOXY IN CONCRETE

diameter (in)	embed (in)	tension test (pounds)
3/8	1 3/4	1665
	3 3/8	3181
1/2	2 1/4	3123
	4 1/2	5655
5/8	2 7/8	4275
	5 5/8	8836
3/4	3 3/8	6085
	6 3/4	12723
7/8	4	11100
	9	22619

(BASED ON ESR REPORT #5026)

INSTALLATION REQUIRMENTS FOR SIMPSON SET-3G EPOXY IN CONCRETE

diameter (in)	max. (ft-lbf) installation torque	min. embed depth (in)	min. spacing (in)	min. edge distance (in)
3/8	15	2 3/8	3	1 3/4
1/2	30	2 3/4	3	1 3/4
5/8	60	3 1/8	3	1 3/4
3/4	100	3 1/2	3	1 3/4

(BASED ON ESR REPORT #4057)

INSTALLATION REQUIRMENTS FOR SIMPSON AT-3G EPOXY IN CONCRETE

diameter (in)	max. (ft-lbf) installation torque	min. embed depth (in)	min. spacing (in)	min. edge distance (in)
3/8	15	2 3/8	1 7/8	1 5/8
1/2	30	2 3/4	2 1/2	1 3/4
5/8	44	3 1/8	3	2
3/4	66	3 1/2	3 5/8	2 3/8

(BASED ON ESR REPORT #5026)

PRE-ENGINEERED METAL BUILDINGS

1. RUSSELL, GALLAWAY AND ASSOCIATES (R.G.A.) ACTS AS THE FOUNDATION ENGINEER OF RECORD ONLY AND ASSUMES NO RESPONSIBILITY FOR THE DESIGN, FABRICATION, OR ERECTION OF PRE-ENGINEERED METAL BUILDINGS.
2. THE FOUNDATION DESIGN IS BASED ON COLUMNS REACTIONS AS SUPPLIED BY THE PRE-ENGINEERED METAL BUILDING SUPPLIER. THE PRE-ENGINEERED METAL BUILDING SUPPLIER SHALL SUBMITTED ERECTION DRAWINGS, ANCHOR BOLT PLACEMENT PLANS & COLUMN REACTIONS TO THE FOUNDATION ENGINEER FOR REVIEW PRIOR TO FABRICATION.
3. PRE-ENGINEERED METAL BUILDINGS SHALL BE DESIGNED IN ACCORDANCE WITH APPLICABLE CODES, ASTM STANDARDS & SPECIFICATIONS & THE METAL BUILDING SYSTEMS PERFORMANCE GUIDE SPECIFICATION AS PUBLISHED BY THE METAL BUILDING MANUFACTURERS ASSOCIATION (MBMA).
4. THE BUILDING SHALL BE DESIGNED BY THE MANUFACTURER AS A COMPLETE SYSTEM. ALL COMPONENTS OF THE SYSTEM SHALL BE SUPPLIED OR SPECIFIED BY THE SAME MANUFACTURER. ALL MANUFACTURER DRAWINGS SHALL BEAR THE PROFESSIONAL SEAL AND SIGNATURE OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA (NOT PROVIDED BY R.G.A.).
5. DEFLECTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE AISC STEEL DESIGN GUIDE SERIES 3 - SERVICEABILITY DESIGN CONSIDERATIONS FOR STEEL BUILDINGS.
6. METAL BUILDING DESIGNER SHALL USE DESIGN LOADS AS APPLICABLE TO ASCE7-16 WITH AN ADDITIONAL MINIMUM COLLATERAL GRAVITY LOAD OF 5.0 PSF AND COLLATERAL UPLIFT LOAD OF 0.0 PSF.
7. ALL COLUMN BASES SHALL BE DESIGNED AS PIN-BASE COLUMNS. FIXED-BASE FRAME COLUMNS ARE NOT PERMITTED WITHOUT PRIOR WRITTEN CONSENT FROM THE FOUNDATION ENGINEER OF RECORD.
8. SPECIAL INSPECTION AND GENERAL STRUCTURAL NOTES OF THE PRE-ENGINEERED METAL BUILDING SHALL BE SPECIFIED IN THE ERECTION DRAWINGS (NOT PROVIDED BY R.G.A.).
9. THE FOUNDATION ENGINEER OF RECORD ASSUMES THE RIGHT TO REVISE THE FOUNDATION DESIGN BASED UPON AN OWNER / CONTRACTOR SELECTION OF AN ALTERNATE METAL BUILDING SUPPLIER REGARDLESS IF THE BUILDING IS IDENTICAL IN LOADING AND CONFIGURATION.
10. CONTRACTOR SHALL VERIFY ALL FOUNDATION DIMENSIONS WITH METAL BUILDING ERECTION DRAWINGS PRIOR TO CONSTRUCTION & NOTIFY ENGINEER OF RECORD OF ANY DISCREPANCIES.
11. AT COMPLETION OF FABRICATION, METAL BUILDING FABRICATOR SHALL PROVIDE A CERTIFICATE OF COMPLIANCE FOR SUBMITTAL TO THE BUILDING DEPARTMENT PER SECTION C.B.C. 1704.5, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DRAWINGS.

SPECIAL INSPECTION REQUIREMENTS

	INSPECTION SECTIONS
	1. CONCRETE
☑	2. BOLTS INSTALLED IN CONCRETE
	3. DUCTILE MOMENT-RESISTING CONCRETE FRAME
	4. REINFORCING STEEL AND PRE-STRESSING STEEL
☑	5. WELDING
☑	6. HIGH-STRENGTH BOLTING
	7. STRUCTURAL BOLTING
	8. REINFORCED GYPSUM CONCRETE
	9. INSULATED CONCRETE FILL
	10. SPRAY-APPLIED FIRE PROOFING
	11. PILING, DRILLED PIERS AND CAISSONS
	12. SHOTCRETE
	13. SPECIAL GRADING, EXCAVATION AND FILLING
	14. SEISMIC RESISTANCE
☑	15. POST INSTALLED ANCHORS IN CONCRETE

SPECIAL INSPECTION

1. GENERAL
   A. SPECIAL INSPECTION SHALL BE PERFORMED BY A QUALIFIED FIRM UNDER CONTRACT WITH THE OWNER.
   B. SPECIAL INSPECTOR APPLICATIONS SHALL BE REVIEWED AND APPROVED BY THE BUILDING DIVISION PRIOR TO THE ISSUANCE OF A PERMIT.
   C. INSPECTORS REPORTS NOTING DISCREPANCIES, IF ANY, ARE TO BE FILED WITH THE CITY OF UKIAH BUILDING DIVISION WEEKLY DURING CONSTRUCTION, WHETHER CORRECTED OR NOT.
   D. ALL INSPECTORS DAILY LOGS ARE TO BE MAINTAINED ON SITE FOR REVIEW BY THE CITY INSPECTORS.
2. CONCRETE WITH A SPECIFIED ULTIMATE COMPRESSIVE STRENGTH GREATER THAN 2500 PSI SHALL BE INSPECTED AS FOLLOWS:
   A. VERIFY PLACEMENT OF REINFORCING STEEL PRIOR TO POUR. RECORD TRANSIT MIXED CONCRETE DELIVERY TICKETS AND MAKE SLUMP TESTS IN ACCORDANCE WITH ASTM STANDARDS. MAKE TEST CYLINDERS AND OBSERVE PLACEMENT OF CONCRETE.

   EXCEPTIONS:
   1. ISOLATED SPREAD CONCRETE FOOTINGS OF BUILDINGS THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK.
   2. CONTINUOUS CONCRETE FOOTINGS SUPPORTING WALLS OF BUILDING THREE STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION OR THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON A SPECIFIED COMPRESSIVE STRENGTH, f'c, NOT MORE THAN 2,500 PSI, REGARDLESS OF THE COMPRESSIVE STRENGTH SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS OR USED IN THE FOOTING CONSTRUCTION.
3. STRUCTURAL STEEL SHALL BE INSPECTED AS FOLLOWS:
   A. OBSERVE ALL STRUCTURAL WELDING PER THE REQUIREMENTS OF ANSI/AWS D.1.1-84, PUBLISHED BY THE AMERICAN WELDING SOCIETY.

   EXCEPTIONS:
   1. SINGLE PASS FILLET WELDS, ROOF AND FLOOR DECK WELDS, AND WELDED STUDS USED FOR COMPOSITE FLOOR SYSTEMS MAY HAVE PERIODIC INSPECTIONS. PERIODIC INSPECTIONS SHALL CONSIST OF CHECKING WELDERS QUALIFICATION PRIOR TO START OF WORK AND VISUAL INSPECTION OF WELDS FOR COMPLIANCE PRIOR TO COMPLETION OF WORK.
4. SPEICAL INSPECTOR SHALL VERIFY THAT PROPER MATERIALS AND PROCEDURES ARE USED IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTHECHNICAL REPORT.
5. DRILLED EPOXY AND EXPANSION ANCHORS SHALL BE INSPECTED AS FOLLOWS:
   A. VERIFY PLACEMENT PROCEDURE IS PER MANUFACTURE'S RECOMMENDATIONS.
   B. PULL TEST ALL ANCHORS SUBJECT TO TENSION. (CONTACT E.O.R. FOR LOAD).

GG - GENERAL CONDITIONS
SCALE : NONE

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RUSSELL, GALLAWAY ASSOCIATES inc.
115 MEYERS STREET
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530 342 0302
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New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

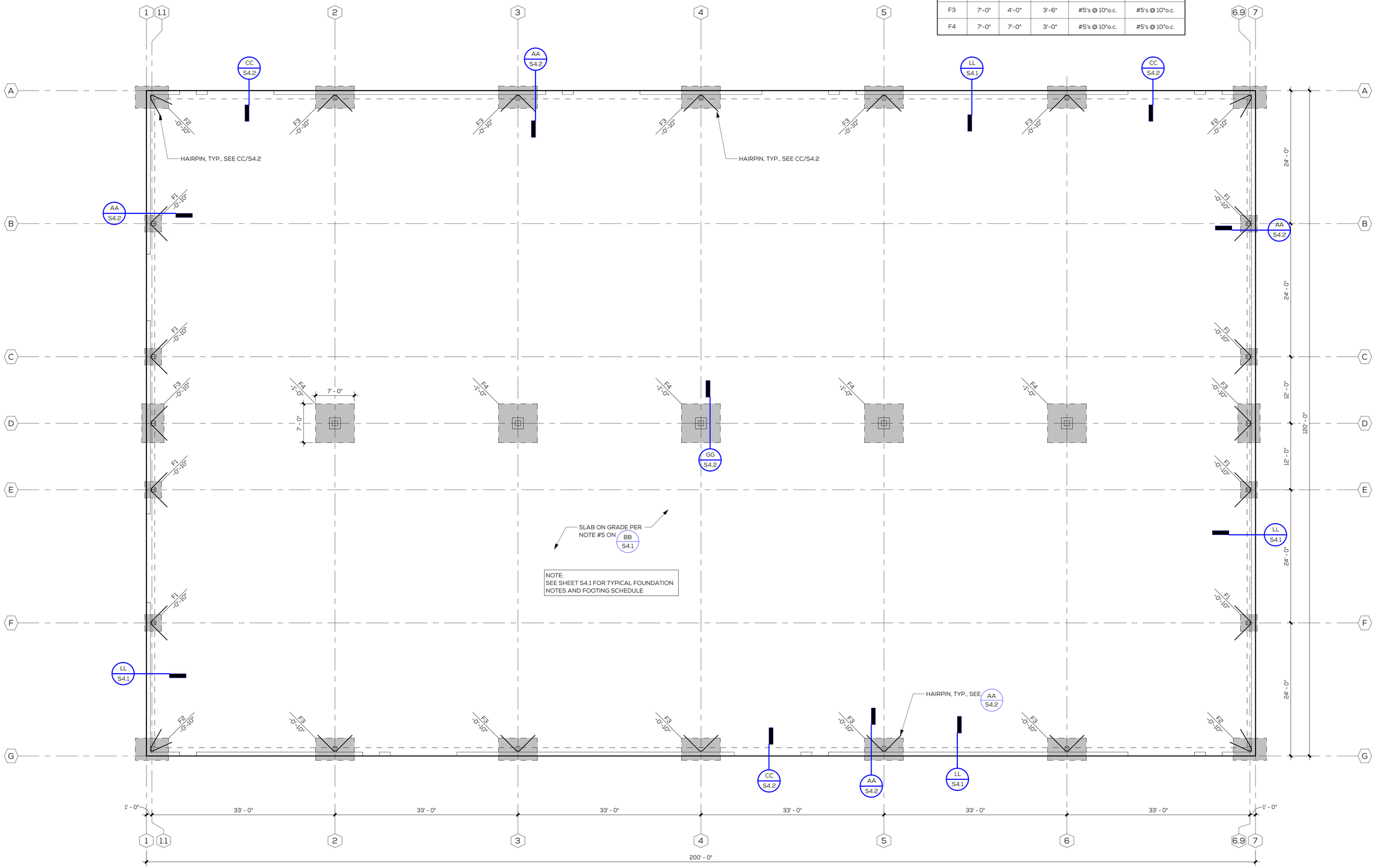
REGISTERED PROFESSIONAL ENGINEER
DONALD G. RUSSELL III
No. 58120
EXP. 06-30-24
CIVIL
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

STRUCTURAL NOTES

S1.1

FOOTING SCHEDULE					
SEE FOUNDATION NOTES, SHEET S4.1					
MARK	PLAN DIMENSION		DEPTH	LONG. REINF. TOP & BOT.	TRANS. REINF. TOP & BOT.
	LENGTH	WIDTH			
F1	3'-0"	3'-0"	3'-0"	#5's @ 10"o.c.	#5's @ 10"o.c.
F2	6'-0"	4'-0"	3'-0"	#5's @ 10"o.c.	#5's @ 10"o.c.
F3	7'-0"	4'-0"	3'-6"	#5's @ 10"o.c.	#5's @ 10"o.c.
F4	7'-0"	7'-0"	3'-0"	#5's @ 10"o.c.	#5's @ 10"o.c.



NOTE:
SEE SHEET S4.1 FOR TYPICAL FOUNDATION NOTES AND FOOTING SCHEDULE

AA - FOUNDATION PLAN

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

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RUSSELL, GALLAWAY ASSOCIATES inc.

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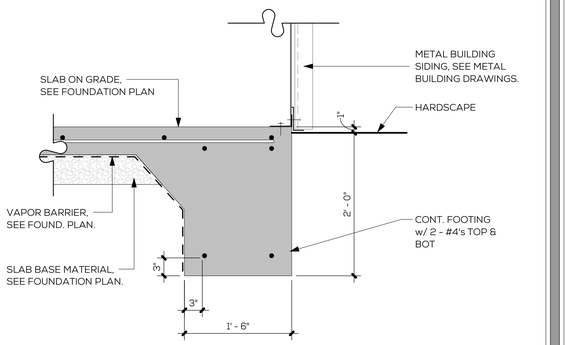
ASSESSORS PARCEL NUMBER
128-121-038

REGISTERED PROFESSIONAL ENGINEER
DONALD G. RUSSELL
No. 58104
EXP. 06-30-24
CIVIL
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

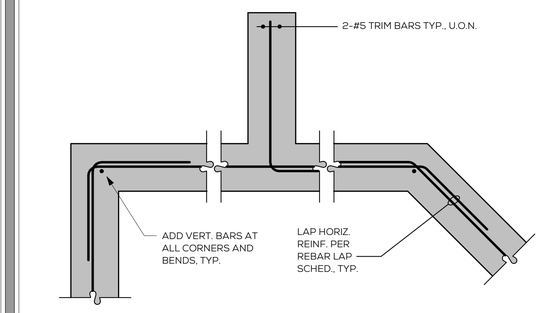
FOUNDATION PLAN

S2.1



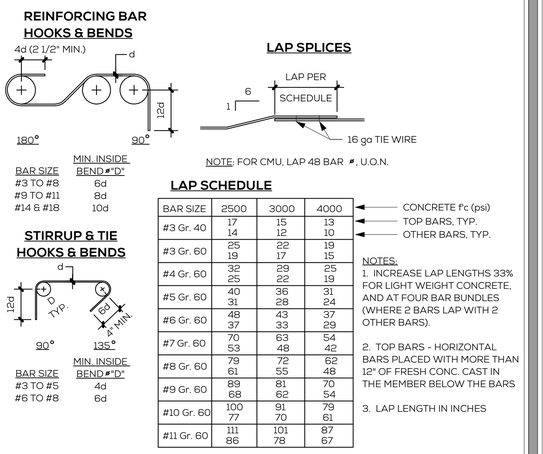
LL - EXTERIOR CONTINUOUS FOOTING

SCALE : 1" = 1'-0"



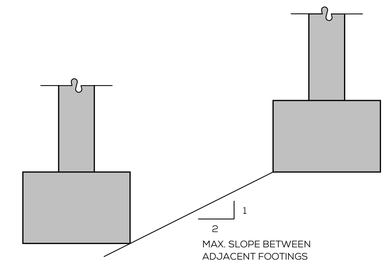
II - HORIZONTAL REBAR

SCALE : NONE



FF - REBAR, LAPS & HOOKS

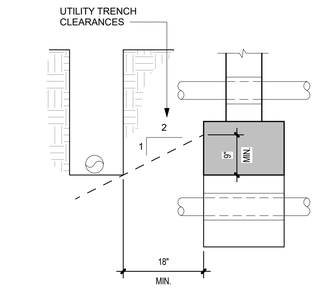
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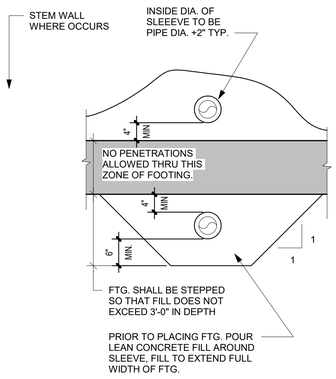
NOTES:
1. SEE PLAN AND GENERAL NOTES FOR EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS.

KK - ADJACENT FOOTING

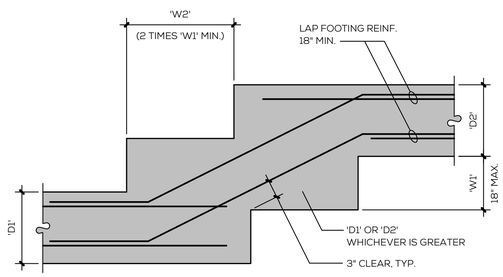
SCALE : NONE



FOOTING SECTION



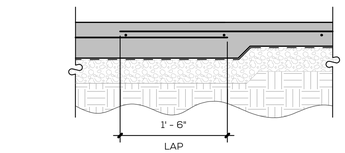
FOOTING ELEVATION



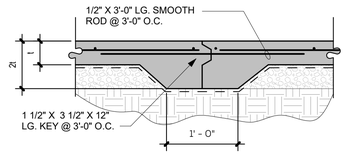
JJ - TYPICAL STEPPED FOOTING

SCALE : NONE

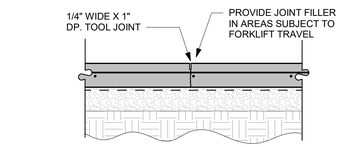
NOTES:
1. SLAB ON GRADE SHALL BE PLACED ON PREPARED SUBGRADE PER SOILS REPORT & GENERAL NOTES ON SHEET S1
2. CONSTRUCTION OR CONTROL JOINTS SHALL BE PLACED 12'-0" O.C. MAX.
3. — — — INDICATES VAPOR BARRIER LOCATION



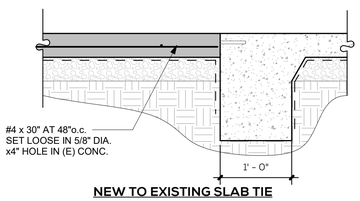
SLAB THICKNESS TRANSITION



CONSTRUCTION JOINT DETAIL



CONTROL JOINT DETAIL



NEW TO EXISTING SLAB TIE

DD - SLAB ON GRADE DETAILS

SCALE : 1" = 1'-0"

FOUNDATION NOTES

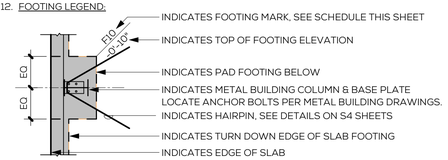
1. SEE SHEET S1.1 FOR GENERAL STRUCTURAL NOTES.
2. ALL DIMENSIONS ARE TO FACE OF WALL OR CENTERLINE OF COLUMN U.O.N.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS SHOWN WITH ARCHITECTURAL.
4. SEE S4 SHEETS FOR TYPICAL FOUNDATION DETAILS. SEE ARCHITECTURAL & CIVIL SHEETS FOR SLOPES AND DRAINAGE.
5. TYPICAL SLAB ON GRADE TO BE 6" THICK MIN. (U.O.N.) 3,000 PSI CONCRETE REINFORCED WITH #4's AT 18"o.c. EA. WAY SUPPORTED WITH DOBIES AT CENTERLINE OF SLAB, OVER VAPOR BARRIER HAVING THE FOLLOWING QUALITIES:
   a. 0.0.1 PERMS AS TESTED BY ASTM E96
   b. ASTM E 1745 CLASS A
   c. INSTALLED PER MFR'R. INSTRUCTIONS AND ASTM E 1643-04
   d. STEGO OR EQUIVALENT.

   OVER 4" CLEAN CRUSHED ROCK LAYER GRADED SUCH THAT 100 PERCENT PASSES THE 1-INCH SIEVE AND LESS THAN 5% PASSES THE #4 SIEVE. ROCK LAYER SHALL BE COMPACTED TO THE EXTENT POSSIBLE WITH LIGHT VIBRATORY EQUIPMENT.

   OVER SUBGRADE PREPARED PER THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEERING REPORT FOR NATIVE SOIL AND/OR ENGINEERED FILL. SOIL SHALL BE COMPACTED TO ACHIEVE A MINIMUM RELATIVE COMPACTION OF 90 PERCENT OF THE ASTM D 1557 MAXIMUM DRY UNIT DENSITY.

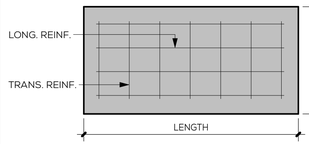
   (E) FILL MATERIAL SHALL BE REMOVED AND RECOMPACTED PER THE GEOTECHNICAL REPORT.
6. IN AREAS WITHOUT MOISTURE SENSITIVE FLOOR FINISHES, A VAPOR RETARDER HAVING THE FOLLOWING QUALITIES;
   a. 10-MIL. THICK
   b. ASTM E 1745 CLASS A, B, OR C
   c. INSTALLED PER MFR'R. INSTRUCTIONS AND ASTM E 1643-04
   d. GRIFFOLYN VAPOR GUARD OR EQUIVALENT.

   MAY BE USED IN LIEU OF A VAPOR BARRIER.
7. VAPOR RETARDER/BARRIER MAY BE OMITTED AT EXTERIOR SLABS.
8. THE BASE OF ALL SHALLOW FOUNDATIONS SHALL BEAR ON FIRM COMPETENT NON-EXPANSIVE NATIVE SOILS OR NON-EXPANSIVE ENGINEERED FILL. THE GEOTECHNICAL ENGINEER SHALL REVIEW ALL ENGINEERED FILL PRIOR TO PLACEMENT OF FOUNDATIONS. FOOTING EXCAVATIONS SHALL BE CLEANED OF ALL DEBRIS, LOOSE OR SOFT SOIL AND WATER. WATER SHOULD NOT BE ALLOWED TO POND IN THE BOTTOM OF THE EXCAVATIONS.
9. UTILITY TRENCHES SHALL NOT BE WITHIN 18" MIN. OF ALL ISOLATED SPREAD COLUMN FOOTINGS. SEE DETAIL GG/S4.1 FOR ADDITIONAL TRENCH LEARANCE CRITERIA & ALLOWABLE PENETRATIONS THRU CONTINUOUS FOOTINGS.
10. TOP OF FOOTING ELEVATION = -0'-10" U.O.N.
11. PROVIDE CONTROL JOINTS PER DETAIL DD/S4.1
12. FOOTING LEGEND:



BB - TYPICAL FOUNDATION NOTES

SCALE : NONE



NOTES:
1. ALL TOP OF FOOTINGS, (T.O.F.) TO BE -1'-0" BELOW TOP OF SLAB TYPICAL UNLESS OTHERWISE NOTED.
2. ALL FOOTINGS ℄ SHALL ALIGN WITH WALL ℄'s U.O.N.
3. T.&B. = TOP & BOTTOM REINFORCING
4. SEE DETAIL BB/S1.2 FOR TYPICAL FOUNDATION NOTES.

FOOTING SCHEDULE

SEE FOUNDATION NOTES, SHEET S4.1

MARK	PLAN DIMENSION LENGTH	PLAN DIMENSION WIDTH	DEPTH	LONG. REINF. TOP & BOT.	TRANS. REINF. TOP & BOT.
F1	3'-0"	3'-0"	3'-0"	#5's @ 10"o.c.	#5's @ 10"o.c.
F2	6'-0"	4'-0"	3'-0"	#5's @ 10"o.c.	#5's @ 10"o.c.
F3	7'-0"	4'-0"	3'-6"	#5's @ 10"o.c.	#5's @ 10"o.c.
F4	7'-0"	7'-0"	3'-0"	#5's @ 10"o.c.	#5's @ 10"o.c.

FOOTING SCHEDULE

SCALE : NONE

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New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

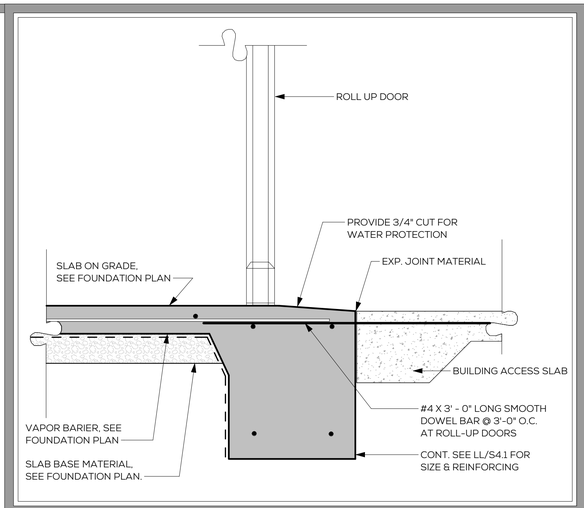
ASSESSORS PARCEL NUMBER
128-121-038

REGISTERED PROFESSIONAL ENGINEER
DONALD G. RUSSELL
No. 58701
EXP. 06-30-24
CIVIL
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

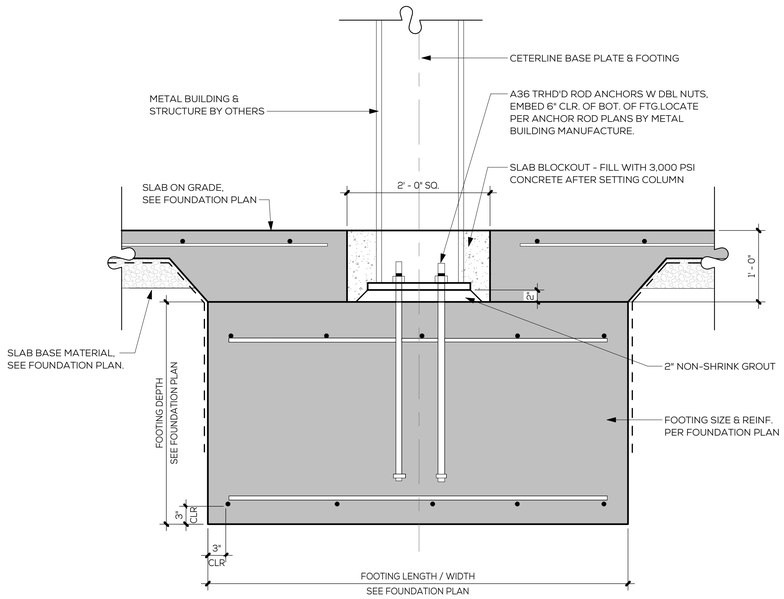
FOUNDATION DETAILS

S4.1



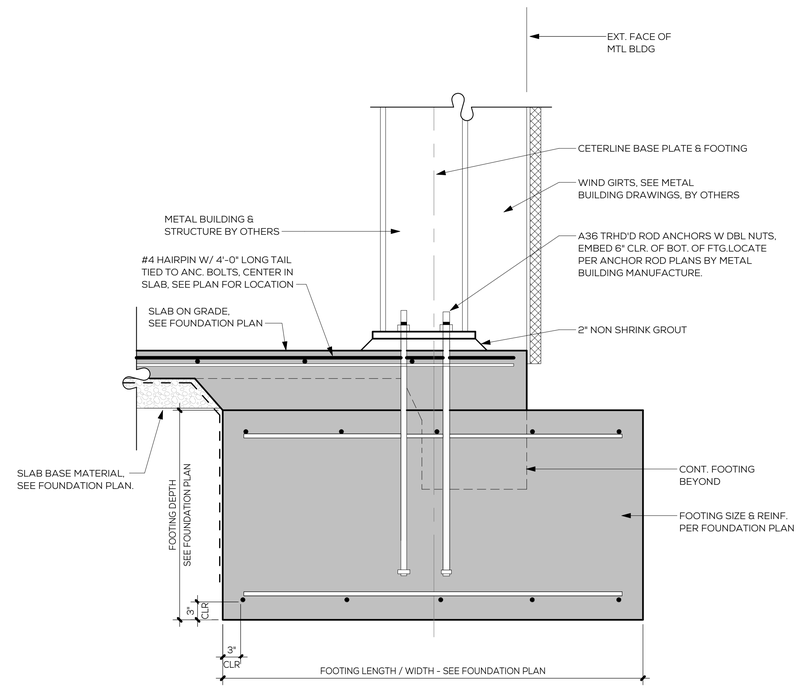
CC - FOOTING SECTION @ ROLL UP DOOR

SCALE : 12" = 1'-0"



GG - INTERIOR COLUMN FOOTING

SCALE : 1" = 1'-0"



AA - EXTERIOR COLUMN FOOTING

SCALE : 1" = 1'-0"

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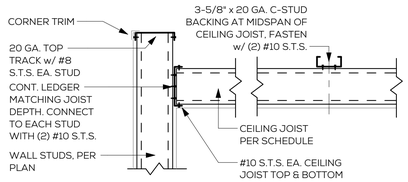
ASSESSORS PARCEL NUMBER
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REGISTERED PROFESSIONAL ENGINEER
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STATE OF CALIFORNIA

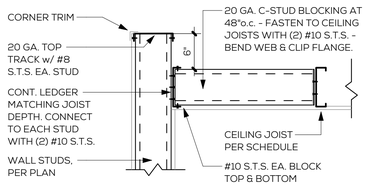
RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

FOUNDATION DETAILS

S4.2



WALL PERPENDICULAR TO JOIST SPAN

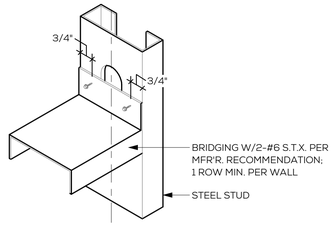


WALL PERPENDICULAR TO JOIST SPAN

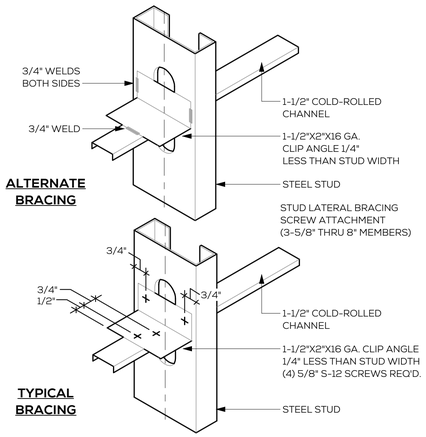
GYP. BOARD CEILING JOIST SCHEDULE

CEILING JOIST SIZE & SPACING		CLEAR SPAN BETWEEN WALLS	
SPACING	SIZE	WITHOUT MID-SPAN SUPPORT	WITH MID-SPAN SUPPORT
24"o.c.	3-5/8" x 20 GA.	10'-11"	12'-7"
	3-5/8" x 18 GA.	11'-11"	13'-9"
	6" x 20 GA.	12'-8"	18'-5"
	6" x 18 GA.	13'-8"	19'-9"
16"o.c.	3-5/8" x 20 GA.	12'-2"	14'-5"
	3-5/8" x 18 GA.	13'-4"	15'-9"
	6" x 20 GA.	14'-1"	20'-5"
	6" x 18 GA.	15'-3"	21'-11"
12"o.c.	3-5/8" x 20 GA.	13'-2"	15'-11"
	3-5/8" x 18 GA.	14'-5"	17'-3"
	6" x 20 GA.	15'-2"	22'-0"
	6" x 18 GA.	16'-6"	23'-8"

LL - CEILING FRAMING
SCALE : NONE



FF - BLOCKING DETAIL
SCALE : NONE



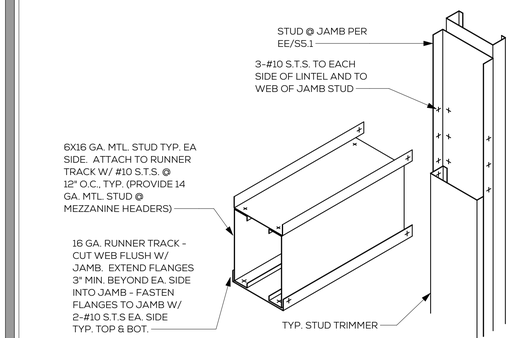
CC - BRACING DETAIL
SCALE : NONE

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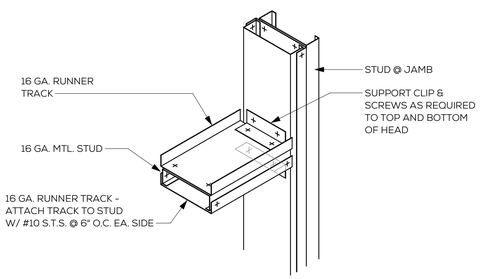
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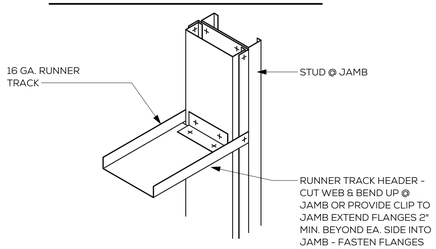


HEAD OVER 12'-0" CLEAR (INTERIOR)

TYPICAL HEAD (EXTERIOR)

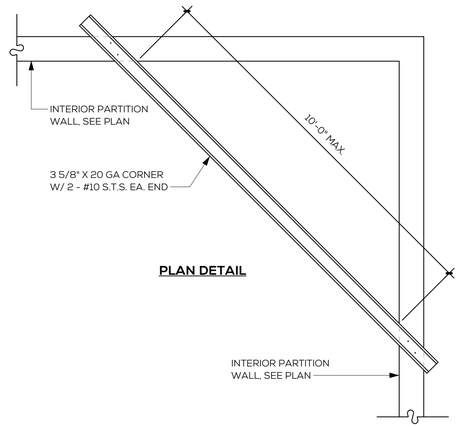


HEAD UP TO 12'-0" CLEAR (INTERIOR)



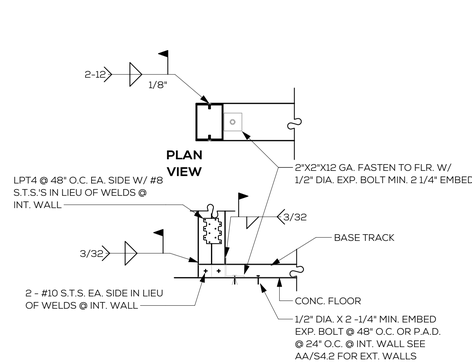
INTERIOR - HEAD UP TO 4'-0"

JJ - HEADER DETAIL
SCALE : NONE

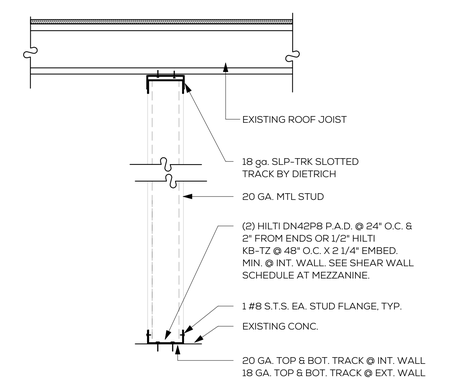


PLAN DETAIL

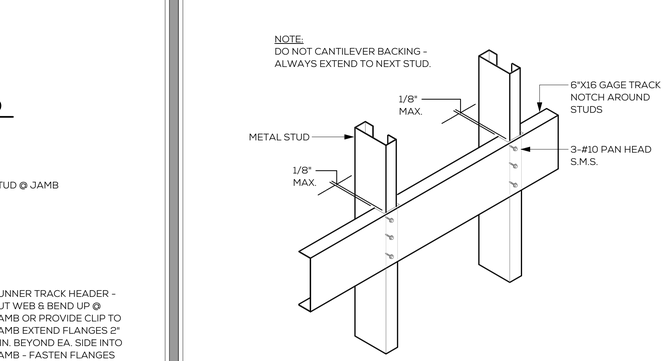
HH - WALL CORNER BRACING DETAIL
SCALE : NONE



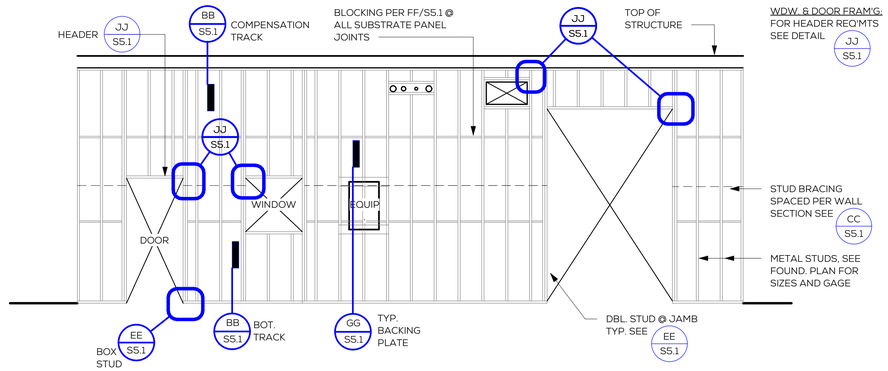
EE - CORNER DETAIL
SCALE : NONE



BB - INTERIOR WALL DETAIL
SCALE : NONE



GG - BACKING DETAIL
SCALE : NONE



ALL METAL STUDS SHALL HAVE 1-5/8" WIDE FLANGES

AA - TYPICAL FRAMING ELEVATION
SCALE : NONE

New Warehouse Shell Building

OWNER
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PROJECT ADDRESS
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REGISTERED PROFESSIONAL ENGINEER
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RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
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METAL STUD FRAMING

S5.1

ELECTRICAL LEGEND

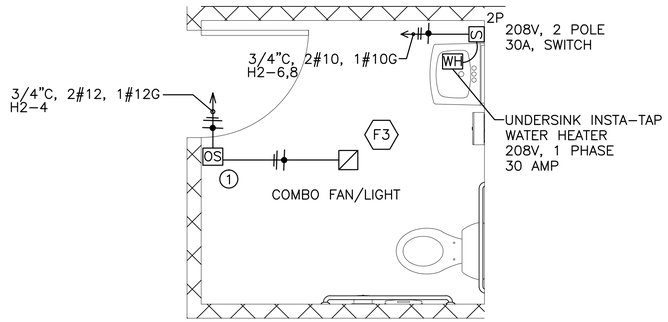
A.F.F.	ABOVE FINISHED FLOOR
(E)	EXISTING
(N)	NEW
U.O.N.	UNLESS OTHERWISE NOTED
A	AMPS
C	CONDUIT
G	GROUND
V	VOLTS
WP	WEATHER PROOF

- DUPLEX RECEPTACLE 125V, 20A, 3PG, +18" A.F.F. U.O.N.
- GFCI DUPLEX GFCI RECEPTACLE 125V, 20A, 3PG, +18" A.F.F. U.O.N.
- QUADPLEX RECEPTACLE 125V, 20A, 3PG, +18" A.F.F. U.O.N.
- TELEPHONE OUTLET FLUSH 1–GANG J–BOX EXTRA DEEP +18" A.F.F. U.O.N. WITH 1"C, PULL LINE TO MAIN TELEPHONE TERMINAL BOARD
- TC TIME CLOCK
- OS OCCUPANCY SENSOR
- OS 120V OCCUPANCY SENSOR WALL MOUNT +48" A.F.F. TO TOP OF BOX
- S 277V, 20A, TOGGLE SWITCH +48" A.F.F. TO TOP OF BOX
- S 2P 208V, 30A, 2 POLE, TOGGLE SWITCH
- J J 4–11/16" SQUARE TYPE JUNCTION BOX WITH BLANK COVER
- SURFACE MOUNTED ELECTRICAL PANEL 6'–6" TO TOP
- RECESSED DOWNLIGHT LED
- OS HIGH BAY LIGHT FIXTURE WITH MOTION SENSOR
- F1 LIGHTING FIXTURE TAG – SEE FIXTURE SCHEDULE
- EXIT COMBO EXIT/EMERGENCY LIGHT 277V WITH 90 MINUTE EMERGENCY BACK UP
- ABOVEGROUND CONDUIT
- UNDERGROUND CONDUIT
- CONDUIT HOMERUN TO PANELBOARD
- NEUTRAL / HOT / GROUND WIRING IDENTIFICATION
- F 1 MECHANICAL EQUIPMENT TAG– SEE MECHANICAL DRAWINGS
- WH 1 PLUMBING EQUIPMENT TAG– SEE PLUMBING DRAWINGS
- F FUSED SAFETY SWITCH GENERAL DUTY GENERAL DUTY. TYPE AS SHOWN ON PLANS
- NON–FUSED SAFETY SWITCH GENERAL DUTY SIZE AND TYPE AS SHOWN ON PLANS
- S T 120V MOTOR RATED TOGGLE SWITCH
- S PL 120V, 15A, 1P SWITCH WITH PILOT LIGHT
- EXHAUST FAN– CEILING MOUNT

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMP(S)	QUANTITY	WATTS PER FIXTURE	VOLTAGE
F1	HIGH BAY LED WITH FIELD INSTALLED MOTION SENSOR	PLT LEVITON	PLT–12686 OSFHU	LED 5000K 23,325 LUMENS	60	165	277V
F2	EXTERIOR SCONCE WALL MOUNT W/BI–LEVEL MOTION SENSOR	LITHONIA	WEDGE4 LED P1 40K 70CRI R3 MVOLT SRM PIRH DDBXD	LED 4000K 11,884 LUMENS	18	77	277V
F3	COMBO FAN/LIGHT CEILING MOUNT	PANASONIC WHISPERCEILING	FV–0511VQL1	LED	1	20	120V
EXIT	EXIT/EMERGENCY LIGHT LED LIGHT WITH 90 MINUTE BATTERY BACK–UP 277V RED LETTERS	LITHONIA OR EQUAL	LHQM LED R			3	277V

SEE LIGHTING PLAN SHEET E2.0

1 LIGHTING FIXTURE SCHEDULE



SEE SHEET E2.0 AND E3.0 FOR LOCATION OF RESTROOM.

NUMBERED NOTES:

1. WALL MOUNTED VACANCY SENSOR WATTSTOPPER PW–301.

2 RESTROOM ELECTRICAL PLAN-SUITE 2

1/2" = 1'-0"

ELECTRICAL DRAWING LIST

E0.1 COVER SHEET, FIXTURE SCHEDULE, AND DETAILS

E1.0 ELECTRICAL SITE PLAN

E2.0 LIGHTING PLAN

E3.0 POWER PLAN

E4.0 ONE LINE DIAGRAM

E5.0 PANEL SCHEDULES– 480V

E6.0 PANEL SCHEDULES– 208V

E7.0 TRENCH DETAILS

E8.0 ELECTRICAL SPECIFICATIONS

GENERAL NOTES:

1. ALL DEVICES AND EQUIPMENT SHOWN ARE NEW UNLESS OTHERWISE NOTED.
2. DRAWINGS INDICATES THE LOCATION OF DEVICES & EQUIPMENT. IT ALSO INDICATES THE CIRCUIT NUMBER AND PANEL DESIGNATION WHICH SUPPLIES THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY CONNECTING ALL ELECTRICAL DEVICES TO THE CIRCUITS INDICATED ON DRAWING. CONTRACTOR SHALL PROVIDE A COMPLETELY CONCEALED CONDUIT SYSTEM U.O.N. ALL DEVICES SHALL BE MOUNTED FLUSH U.O.N.
3. CONTRACTOR SHALL PROVIDE & INSTALL A #12 AWG GREEN COPPER THHN GROUNDING CONDUCTOR IN ALL POWER CIRCUITS, BRANCH CIRCUITS & HOMERUNS (UNLESS OTHERWISE NOTED).
4. ALL PLUG HEIGHTS SHALL BE 18" A.F.F. UNLESS OTHERWISE NOTED. ALL DIMENSIONS GIVEN ON DRAWING ARE TO BE TO THE CENTER OF THE DEVICE, DISCONNECT OR J–BOX. CONTRACTOR SHALL COORDINATE WITH ANY OTHER APPROPRIATE TRADES PRIOR TO INSTALLATION OF ANY BOXES OR CONDUIT IN ORDER TO AVOID ANY CONFLICTING INSTALLATIONS.
5. CONDUIT ROUTING SHOWN IS APPROXIMATE EXACT ROUTING TO BE DETERMINED IN FIELD.
6. ALL NEW CABLES SHALL BE THHN/THWN COPPER.
7. ALL WORK SHALL COMPLY TO CBC 2022, CEC 2022, AND NEC 2022.
8. CBC 11B–308.1.1 ELECTRICAL SWITCHES. CONTROLS AND SWITCHES INTENDED TO BE USED BY OCCUPANT OF A ROOM OR AREA TO CONTROL LIGHTING AND RECEPTACLE OUTLETS, APPLIANACES OR COOLING, HEATING AND VENTILATION EQUIPMENT, SHALL COMPLY WITH SECTION 11B–308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.
9. CBC 11B–308.1.2 ELECTRICAL RECEPTACLE OUTLETS ON BRANCH CIRCUITS OF 30 AMPERES OR LESS AND COMMUNICATION SYSTEM RECEPTACLES SHALL COMPLY WITH SECTION 11B–308 EXCEPT THE LOW REACH SHALL BE MEASURED TO THE BOTTOM OF THE OUTLET BOX AND THE HIGH REACH SHALL BE MEASURED TO THE TOP OF THE OUTLET BOX.

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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER
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MICHAEL JOHNSTON
NO. E 15586
EXP. 12-31-27
STATE OF CALIFORNIA

1201 MACARTHUR STREET
SONOMA, CA, 95476
A.P. # 128-121-038

REVISIONS:

DATE:	12/18/25
DRAWN BY:	MAJ
CHECKED BY:	MAJ

SHEET NAME

ELECTRICAL COVER SHEET AND LIGHTING FIXTURE SCHEDULE

SHEET NUMBER

E0.1

8TH STREET EAST

(E) LANDSCAPING

(E) A.C. CONC.

(E) A.C. PAVING

(E) SIDEWALK

F-1
2,500 SF

F-1
16,852 SF

(E) BUILDING

F-1
6,000 SF

F-1
4,800 SF

F-1
3,600 SF

S-2
4,800 SF

S-2
9,600 SF

(E) OFFICE

(E) LANDSCAPE

EV CAPABLE PARKING SPACE

EV CAPABLE PARKING SPACES

D.I.

F.H.

ALL PARKING STALLS SHOWN ARE NEW UNLESS NOTED AS EXISTING (E)

STRIPING FOR 3 NEW STALLS

(E) STRIPING

(E) PG&E UTILITY POLE

(E) TRASH

(E) LANDSCAPE

S-1: 8,000 SF
F-1: 4,000 SF

NEW BUILDING

'T5' 'L5' 'H5' 'T4' 'L4' 'H4' 'L3' 'T3' 'H3' 'L2' 'H2' 'T2' 'L1' 'H1' 'T1'

F-1
8,000 SF

F-1
4,000 SF

'LH' 'TH' 'HH'

MTTB

R=35'

(N) SUMP

(5) 4"C, PULL LINE SECONDARY

4'-0"

4"C, PULL LINE TELEPHONE

4"C, PULL LINE PRIMARY

(E) BUILDING

(E) GRAVEL (TRUCK OVERFLOW PARKING)

(N) PG&E XFMR
(N) 90" X 106" CONCRETE PAD (2)

(N) 24" X 36" TELEPHONE UTILITY PULLBOX

4"C, PULL LINE TELEPHONE

EV CAPABLE PARKING SPACE

(N) MAIN SWITCHBOARD 'MSB' 480Y/277V, 1600A, 3 PHASE, 4 WIRE, NEMA 3R

(E) GRAVEL

EAST MACARTHUR STREET

ELECTRICAL SITE PLAN

1" = 30'-0"

NORTH

NUMBERED NOTES	
1	1"C, PULL LINE.
2	CHRISTY N9 PULLBOX
3	PROVIDE (N) CONCRETE PAD WITH BARRIER POSTS PER PG&E STANDARDS.
4	CONCRETE PAD DESIGN AND CALCULATIONS BY STRUCTURAL ENGINEER. DEFERRED SUBMITTAL BY STRUCTURAL ENGINEER.

GENERAL NOTES

1. PRIOR TO STARTING WORK OBTAIN COPY OF PG&E CONSTRUCTION DOCUMENT TO VERIFY SCOPE OF WORK FOR NEW ELECTRICAL SERVICES.
2. PROVIDE SUBMITTAL ON MAIN SWITCHBORD TO PG&E AND ENGINEER FOR APPROVAL PRIOR TO PURCHASE.
3. REFER TO PG&E CONSTRUCTION DOCUMENT TO CONFIRM UTILITY TRENCH DETAILS.
4. CALL UNDERGROUND SERVICE ALERT AT 1-800-227-2600 TO HAVE THEM LOCATE AND MARK EXISTING UNDERGROUND UTILITY LINES PRIOR TO TRENCHING. CALL PG&E TO REQUEST AN INSPECTION.

ENGINEERING ENTERPRISES INC.
Electrical Engineering and Designs
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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER
12.19.25
MICHAEL JOHNSTON
NO. E 15586
EXP. 12-31-27
ELECTRICAL
STATE OF CALIFORNIA

1201 MACARTHUR STREET
SONOMA, CA, 95476

A.P. # 128-121-038

REVISIONS:

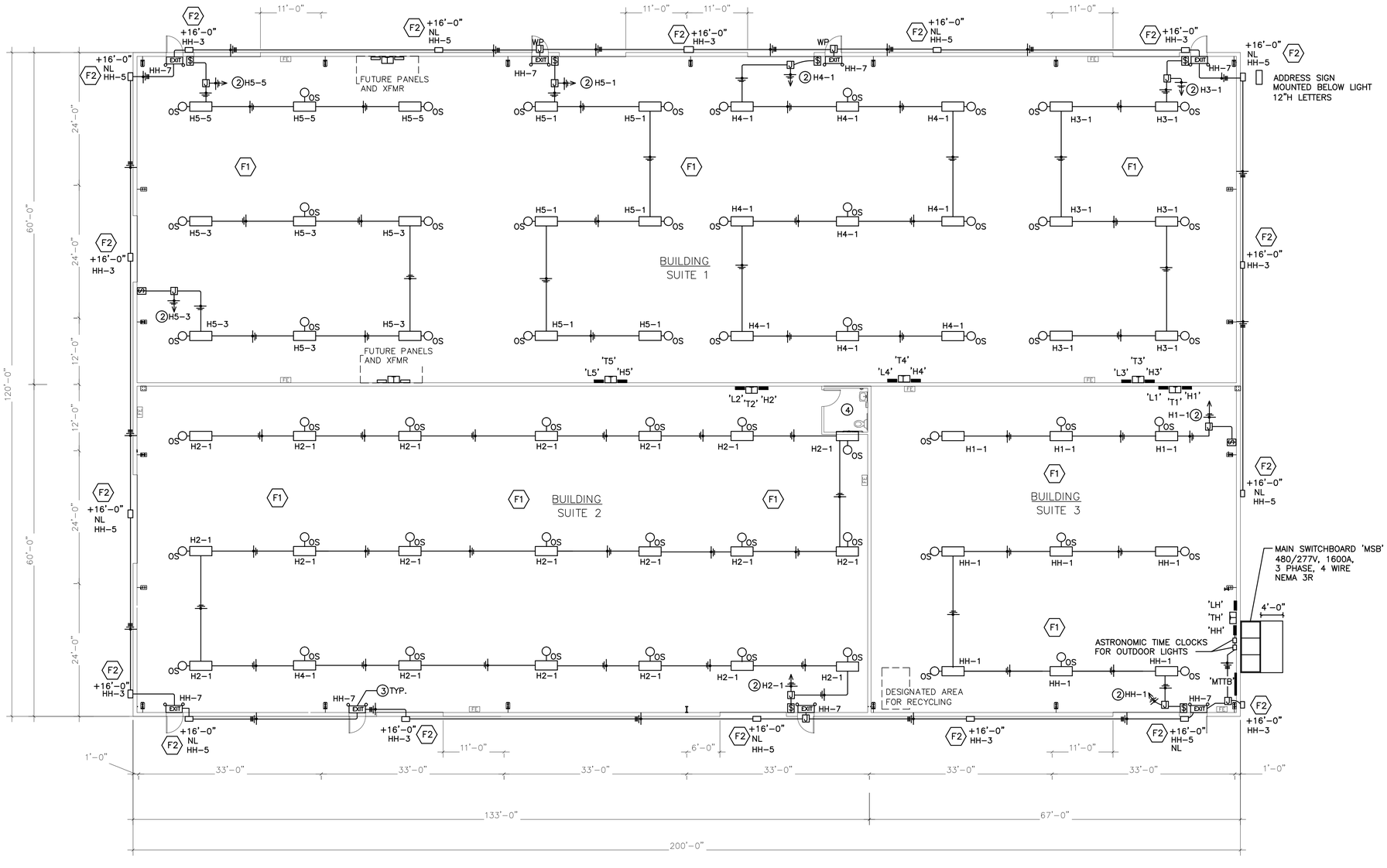
DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME

ELECTRICAL SITE PLAN

SHEET NUMBER

E1.0



NUMBERED NOTES
(1) (2) WATTSTOPPER RT-200-W ASTRONOMICAL TIME CLOCKS +48" A.F.F. TO TOP OF BOX. PROGRAM (1) ATC TO TURN ON AT DUSK AND TURN OFF AT 10:00 PM (HH-3). PROGRAM (1) ATC TO TURN ON AT DUSK AND TURN OFF AT DAWN. (HH-5) NIGHT LIGHT
(2) 3/4"C, 2#12 & 1#12G.
(3) CONNECT EXIT AND EMERGENCY LIGHT TO UNSWITCHED LIGHTING CIRCUIT.
(4) REFER TO SHEET E0.1 DETAIL 2 FOR RESTROOM ELECTRICAL PLAN.

LIGHTING PLAN

1/8" = 1'-0"

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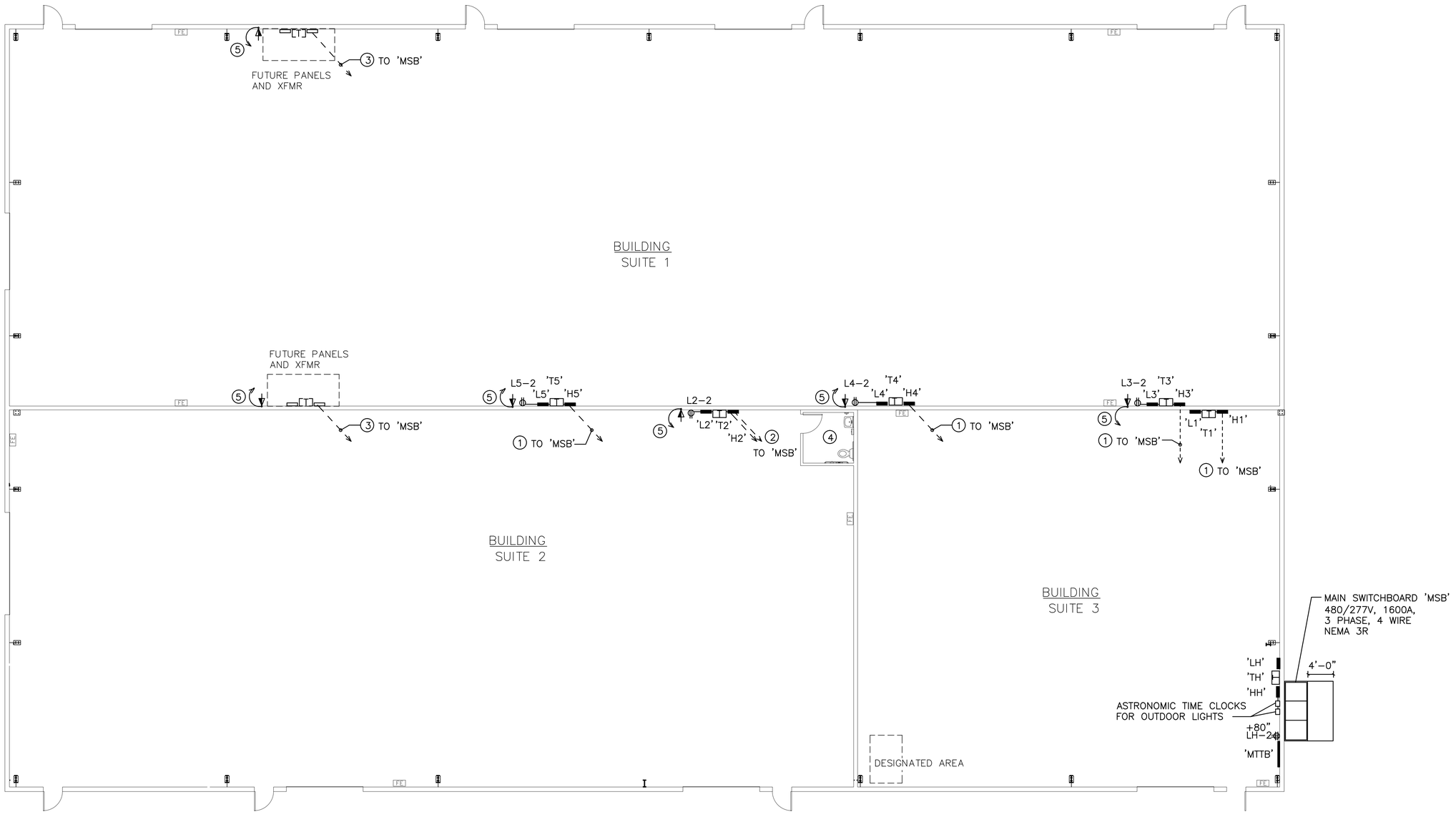
DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME

LIGHTING PLAN

SHEET NUMBER

E2.0



NUMBERED NOTES
(1) 2"C, 4#3/0, 1#6G
(2) (2) 2"C, 4#3/0, 1#3G
(3) 2"C, PULL LINE. STUB CONDUIT 6" ABOVE FINISHED FLOOR AND CAP.
(4) REFER TO SHEET E0.1 DETAIL 2 FOR RESTROOM ELECTRICAL PLAN.
(5) 1"C, PULL LINE TO 'MTTB'

POWER PLAN

1/8" = 1'-0"

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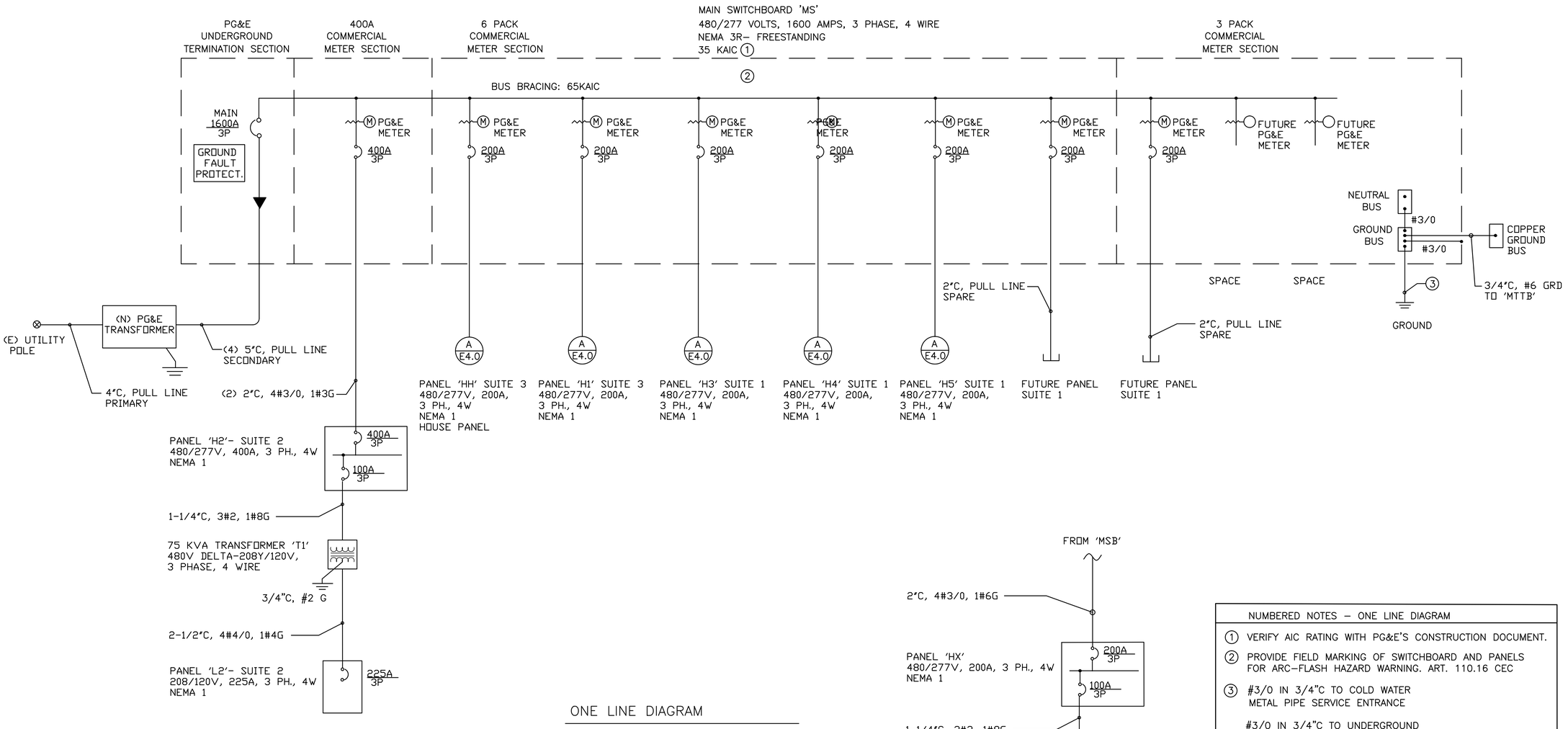
DATE:	12/18/25
DRAWN BY:	MAJ
CHECKED BY:	MAJ

SHEET NAME

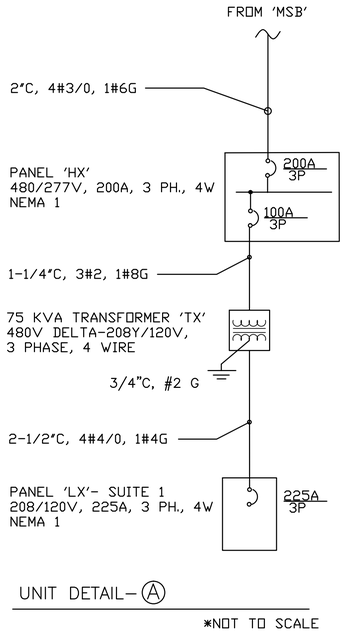
POWER PLAN

SHEET NUMBER

E3.0



ONE LINE DIAGRAM



UNIT DETAIL- (A)

*NOT TO SCALE

NUMBERED NOTES – ONE LINE DIAGRAM
(1) VERIFY AIC RATING WITH PG&E'S CONSTRUCTION DOCUMENT.
(2) PROVIDE FIELD MARKING OF SWITCHBOARD AND PANELS FOR ARC-FLASH HAZARD WARNING. ART. 110.16 CEC
(3) #3/0 IN 3/4"C TO COLD WATER METAL PIPE SERVICE ENTRANCE
#3/0 IN 3/4"C TO UNDERGROUND METAL GAS PIPE SERVICE ENTRANCE
#3/0 IN 3/4"C TO 5/8" X 10' GROUND ROD IN GROUND BOX WITH COVER
#3/0 IN 3/4"C TO BUILDING STEEL
#4 IN 3/4"C TO UFER GROUND CONCRETE ENCASED
#6 IN 3/4"C TO MAIN TELEPHONE TERMINAL BOARD

GENERAL NOTES
1. CABLES SHALL BE THHN/THWN COPPER U.O.N.
2. FEEDERS SHALL BE CONTINUOUS AND UNSPLICED.

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REVISIONS:

DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME

ONE LINE DIAGRAM

SHEET NUMBER

E4.0

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

PANEL 'HH'
480/277V, 200A BUS, 3Ø, 4 WIRE
SUITE 3

MAIN : 200 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 25K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	AØ BØ CØ	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
LIGHTS–HIGH BAY	990	—	—	15A	1		2			—	—	SPACE
LIGHTS–OUTDOOR	—	700	—	15A	3		4		—		—	SPACE
LIGHTS–OUTDOOR NIGHT LIGHT	—	—	700	15A	5		6		—	—		SPACE
EXIT AND EMERGENCY LIGHTS	100	—	—	15A	7		8			—	—	SPACE
SPACE	—		—		9		10		—		—	
	—	—			11		12		—	—		
SPACE		—	—		13		14			—	—	SPACE
	—		—		15		16		—		—	
	—	—			17		18		—	—		
SPACE		—	—		19		20			—	—	SPACE
	—		—		21		22		—		—	
	—	—			23		24		—	—		
XFMR TH TO PANEL LH	360	—	—	100A 3P	25		26			—	—	SPACE
	—		—		27		28		—		—	
	—	—			29		30		—	—		
SUB–TOTAL	1450	700	700			200A 3P						

TOTAL CONNECTED LOAD

PHASE A 1410 VA
PHASE B 700 VA
PHASE C 700 VA
TOTAL VA 2810 VA
MAX AMPS 480V 3 PHASE 4 AMPS

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

PANEL 'H1'
480/277V, 200A BUS, 3Ø, 4 WIRE
SUITE 3

MAIN : 200 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 25K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	AØ BØ CØ	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
LIGHTS–HIGH BAY	495	—	—	15A	1		2			—	—	SPACE
SPACE	—		—		3		4		—		—	SPACE
SPACE	—	—			5		6		—	—		SPACE
SPACE		—	—		7		8			—	—	SPACE
	—		—		9		10		—		—	
	—	—			11		12		—	—		
SPACE		—	—		13		14			—	—	SPACE
	—		—		15		16		—		—	
	—	—			17		18		—	—		
SPACE		—	—		19		20			—	—	SPACE
	—		—		21		22		—		—	
	—	—			23		24		—	—		
XFMR T3 TO PANEL L1	180	—	—	100A 3P	25		26			—	—	SPACE
	—		—		27		28		—		—	
	—	—			29		30		—	—		
SUB–TOTAL	675					200A 3P						

TOTAL CONNECTED LOAD

PHASE A 675 VA
PHASE B
PHASE C
TOTAL VA 675 VA
MAX AMPS 480V 3 PHASE 1 AMPS

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

PANEL 'H2'
480/277V, 400A BUS, 3Ø, 4 WIRE
SUITE 2

MAIN : 400 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 25K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	AØ BØ CØ	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
LIGHTS–HIGH BAY	495	—	—	15A	1		2			—	—	SPACE
SPACE	—		—		3		4		—		—	SPACE
SPACE	—	—			5		6		—	—		SPACE
SPACE		—	—		7		8			—	—	SPACE
	—		—		9		10		—		—	
	—	—			11		12		—	—		
SPACE		—	—		13		14			—	—	SPACE
	—		—		15		16		—		—	
	—	—			17		18		—	—		
SPACE		—	—		19		20			—	—	SPACE
	—		—		21		22		—		—	
	—	—			23		24		—	—		
XFMR T2 TO PANEL L2	180	—	—	100A 3P	25		26			—	—	SPACE
	—		—		27		28		—		—	
	—	—			29		30		—	—		
SUB–TOTAL	675					400A 3P						

TOTAL CONNECTED LOAD

PHASE A 675 VA
PHASE B
PHASE C
TOTAL VA 675 VA
MAX AMPS 480V 3 PHASE 1 AMPS

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

PANEL 'H3'
480/277V, 200A BUS, 3Ø, 4 WIRE
SUITE 1

MAIN : 200 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 25K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	AØ BØ CØ	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
LIGHTS–HIGH BAY	990	—	—	15A	1		2			—	—	SPACE
SPACE	—		—		3		4		—		—	SPACE
SPACE	—	—			5		6		—	—		SPACE
SPACE		—	—		7		8			—	—	SPACE
	—		—		9		10		—		—	
	—	—			11		12		—	—		
SPACE		—	—		13		14			—	—	SPACE
	—		—		15		16		—		—	
	—	—			17		18		—	—		
SPACE		—	—		19		20			—	—	SPACE
	—		—		21		22		—		—	
	—	—			23		24		—	—		
SPACE		—	—		25		26	100A 3P	180	—	—	XFMR T3 TO PANEL L3
	—		—		27		28		—		—	
	—	—			29		30		—	—		
SUB–TOTAL	990					200A 3P			180			

TOTAL CONNECTED LOAD

PHASE A 1175 VA
PHASE B
PHASE C
TOTAL VA 1175 VA
MAX AMPS 480V 3 PHASE 2 AMPS

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

PANEL 'H4'
480/277V, 200A BUS, 3Ø, 4 WIRE
SUITE 1

MAIN : 200 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 25K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	AØ BØ CØ	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
LIGHTS–HIGH BAY	1485	—	—	15A	1		2			—	—	SPACE
SPACE	—		—		3		4		—		—	SPACE
SPACE	—	—			5		6		—	—		SPACE
SPACE		—	—		7		8			—	—	SPACE
	—		—		9		10		—		—	
	—	—			11		12		—	—		
SPACE		—	—		13		14			—	—	SPACE
	—		—		15		16		—		—	
	—	—			17		18		—	—		
SPACE		—	—		19		20			—	—	SPACE
	—		—		21		22		—		—	
	—	—			23		24		—	—		
SPACE		—	—		25		26	100A 3P	180	—	—	XFMR T4 TO PANEL L4
	—		—		27		28		—		—	
	—	—			29		30		—	—		
SUB–TOTAL	1485					200A 3P			180			

TOTAL CONNECTED LOAD

PHASE A 1665 VA
PHASE B
PHASE C
TOTAL VA 1665 VA
MAX AMPS 480V 3 PHASE 2 AMPS

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

PANEL 'H5'
480/277V, 200A BUS, 3Ø, 4 WIRE
SUITE 1

MAIN : 200 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 25K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	AØ BØ CØ	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
LIGHTS–HIGH BAY	990	—	—	15A	1		2			—	—	SPACE
LIGHTS–HIGH BAY	—	990	—	15A	3		4		—		—	SPACE
LIGHTS–HIGH BAY	—	—	495	15A	5		6		—	—		SPACE
SPACE		—	—		7		8			—	—	SPACE
	—		—		9		10		—		—	
	—	—			11		12		—	—		
SPACE		—	—		13		14			—	—	SPACE
	—		—		15		16		—		—	
	—	—			17		18		—	—		
SPACE		—	—		19		20			—	—	SPACE
	—		—		21		22		—		—	
	—	—			23		24		—	—		
SPACE		—	—		25		26	100A 3P	180	—	—	XFMR T5 TO PANEL L5
	—		—		27		28		—		—	
	—	—			29		30		—	—		
SUB–TOTAL	990	990	495			200A 3P			180			

TOTAL CONNECTED LOAD

PHASE A 1170 VA
PHASE B 990 VA
PHASE C 495 VA
TOTAL VA 2655 VA
MAX AMPS 480V 3 PHASE 3 AMPS

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REVISIONS:

DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME

PANEL SCHEDULES 480V

SHEET NUMBER

E5.0

PANEL 'LH'
208/120V, 225A BUS, 3Ø, 4 WIRE
SUITE 3

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

MAIN : 225 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 10K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
SPACE		—	—		1	2	20A	360	—	—	PLUGS– MTTB
SPACE	—		—		3	4	20A	—		—	SPARE
SPACE	—	—			5	6	20A	—	—		SPARE
SPACE		—	—		7	8			—	—	SPACE
SPACE	—		—		9	10		—		—	
SPACE	—	—			11	12		—	—		
SPACE		—	—		13	14			—	—	SPACE
	—		—		15	16		—		—	
	—	—			17	18		—	—		
SPACE			—		19	20			—	—	SPACE
	—		—		21	22		—		—	
	—	—			23	24		—	—		
SPACE			—		25	26			—	—	SPACE
	—		—		27	28		—		—	
	—	—			29	30		—	—		
SPACE					31	32			—	—	SPACE
					33	34		—		—	
					35	36		—	—		
SPACE					37	38			—	—	SPACE
					39	40		—		—	
					41	42		—	—		
SUB–TOTAL								360			

AØ BØ CØ — 225A 3P

TOTAL CONNECTED LOAD
PHASE A 360
PHASE B
PHASE C
TOTAL VA 360
MAX AMPS 208V 3 PHASE 1

PANEL 'L1'
208/120V, 225A BUS, 3Ø, 4 WIRE
SUITE 3

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

MAIN : 225 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 10K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
SPACE		—	—		1	2	20A	180	—	—	PLUG
SPACE	—		—		3	4	20A	—		—	SPARE
SPACE	—	—			5	6	20A	—	—		SPARE
SPACE		—	—		7	8			—	—	SPACE
SPACE	—		—		9	10		—		—	
SPACE	—	—			11	12		—	—		
SPACE		—	—		13	14			—	—	SPACE
	—		—		15	16		—		—	
	—	—			17	18		—	—		
SPACE			—		19	20			—	—	SPACE
	—		—		21	22		—		—	
	—	—			23	24		—	—		
SPACE			—		25	26			—	—	SPACE
	—		—		27	28		—		—	
	—	—			29	30		—	—		
SPACE					31	32			—	—	SPACE
					33	34		—		—	
					35	36		—	—		
SPACE					37	38			—	—	SPACE
					39	40		—		—	
					41	42		—	—		
SUB–TOTAL								180			

AØ BØ CØ — 225A 3P

TOTAL CONNECTED LOAD
PHASE A 180
PHASE B
PHASE C
TOTAL VA 180
MAX AMPS 208V 3 PHASE 1

PANEL 'L2'
208/120V, 225A BUS, 3Ø, 4 WIRE
SUITE 2

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

MAIN : 225 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 10K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
SPACE		—	—		1	2	20A	180	—	—	PLUG
SPACE	—		—		3	4	15A	—	20	—	BATHROOM LIGHT/FAN
SPACE	—	—			5	6	30A 2P	—	—	1500	INSTA–TAP WATER HEATER BATHROOM
SPACE		—	—		7	8			1500	—	
SPACE	—		—		9	10	20A	—		—	SPARE
SPACE	—	—			11	12	20A	—	—		SPARE
SPACE		—	—		13	14			—	—	SPACE
	—		—		15	16		—		—	
	—	—			17	18		—	—		
SPACE			—		19	20			—	—	SPACE
	—		—		21	22		—		—	
	—	—			23	24		—	—		
SPACE			—		25	26			—	—	SPACE
	—		—		27	28		—		—	
	—	—			29	30		—	—		
SPACE					31	32			—	—	SPACE
					33	34		—		—	
					35	36		—	—		
SPACE					37	38			—	—	SPACE
					39	40	40A 2P	—		—	FUTURE EVC
					41	42		—	—		
SUB–TOTAL								1680	20	1500	

AØ BØ CØ — 225A 3P

TOTAL CONNECTED LOAD
PHASE A 1680
PHASE B 20
PHASE C 1500
TOTAL VA 3200
MAX AMPS 208V 3 PHASE 9

PANEL 'L3'
208/120V, 225A BUS, 3Ø, 4 WIRE
SUITE 1

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

MAIN : 225 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 10K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
SPACE		—	—		1	2	20A	180	—	—	PLUG
SPACE	—		—		3	4	20A	—		—	SPARE
SPACE	—	—			5	6	20A	—	—		SPARE
SPACE		—	—		7	8			—	—	SPACE
SPACE	—		—		9	10		—		—	
SPACE	—	—			11	12		—	—		
SPACE		—	—		13	14			—	—	SPACE
	—		—		15	16		—		—	
	—	—			17	18		—	—		
SPACE			—		19	20			—	—	SPACE
	—		—		21	22		—		—	
	—	—			23	24		—	—		
SPACE			—		25	26			—	—	SPACE
	—		—		27	28		—		—	
	—	—			29	30		—	—		
SPACE					31	32			—	—	SPACE
					33	34		—		—	
					35	36		—	—		
SPACE					37	38			—	—	SPACE
					39	40	40A 2P	—		—	FUTURE EVC
					41	42		—	—		
SUB–TOTAL								180			

AØ BØ CØ — 225A 3P

TOTAL CONNECTED LOAD
PHASE A 180
PHASE B
PHASE C
TOTAL VA 180
MAX AMPS 208V 3 PHASE 1

PANEL 'L4'
208/120V, 225A BUS, 3Ø, 4 WIRE
SUITE 1

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

MAIN : 225 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 10K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
SPACE		—	—		1	2	20A	180	—	—	PLUG
SPACE	—		—		3	4	20A	—		—	SPARE
SPACE	—	—			5	6	20A	—	—		SPARE
SPACE		—	—		7	8			—	—	SPACE
SPACE	—		—		9	10		—		—	
SPACE	—	—			11	12		—	—		
SPACE		—	—		13	14			—	—	SPACE
	—		—		15	16		—		—	
	—	—			17	18		—	—		
SPACE			—		19	20			—	—	SPACE
	—		—		21	22		—		—	
	—	—			23	24		—	—		
SPACE			—		25	26			—	—	SPACE
	—		—		27	28		—		—	
	—	—			29	30		—	—		
SPACE					31	32			—	—	SPACE
					33	34		—		—	
					35	36		—	—		
SPACE					37	38			—	—	SPACE
					39	40	40A 2P	—		—	FUTURE EVC
					41	42		—	—		
SUB–TOTAL								180			

AØ BØ CØ — 225A 3P

TOTAL CONNECTED LOAD
PHASE A 180
PHASE B
PHASE C
TOTAL VA 180
MAX AMPS 208V 3 PHASE 1

PANEL 'L5'
208/120V, 225A BUS, 3Ø, 4 WIRE
SUITE 1

BUS: COPPER
NEUTRAL BUS: COPPER
GROUND BUS: COPPER
BOLT ON TYPE CIRCUIT BREAKERS

MAIN : 225 AMP
MOUNTING: SURFACE
ENCLOSURE: NEMA 1
FEED: BOTTOM
AIC RATING: 10K AIC

SERVICE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	BKR. SIZE	CKT. NO.	CKT. NO.	BKR. SIZE	LOAD VA AØ	LOAD VA BØ	LOAD VA CØ	SERVICE
SPACE		—	—		1	2	20A	180	—	—	PLUG
SPACE	—		—		3	4	20A	—		—	SPARE
SPACE	—	—			5	6	20A	—	—		SPARE
SPACE		—	—		7	8			—	—	SPACE
SPACE	—		—		9	10		—		—	
SPACE	—	—			11	12		—	—		
SPACE		—	—		13	14			—	—	SPACE
	—		—		15	16		—		—	
	—	—			17	18		—	—		
SPACE			—		19	20			—	—	SPACE
	—		—		21	22		—		—	
	—	—			23	24		—	—		
SPACE			—		25	26			—	—	SPACE
	—		—		27	28		—		—	
	—	—			29	30		—	—		
SPACE					31	32			—	—	SPACE
					33	34		—		—	
					35	36		—	—		
SPACE					37	38			—	—	SPACE
					39	40	40A 2P	—		—	FUTURE EVC
					41	42		—	—		
SUB–TOTAL								180			

AØ BØ CØ — 225A 3P

TOTAL CONNECTED LOAD
PHASE A 180
PHASE B
PHASE C
TOTAL VA 180
MAX AMPS 208V 3 PHASE 1

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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER
12.19.25
MICHAEL JOHNSTON
NO. E 15586
EXP. 12-31-27
ELECTRICAL
STATE OF CALIFORNIA

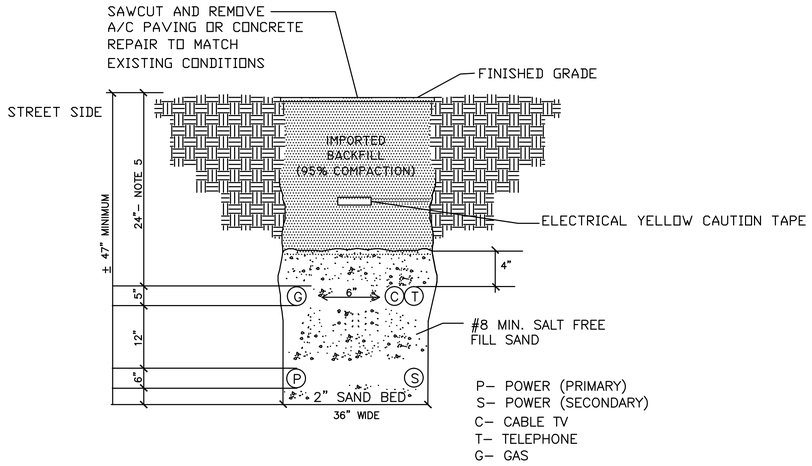
1201 MACARTHUR STREET
SONOMA, CA, 95476
A.P. # 128-121-038

REVISIONS:

DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME
PANEL SCHEDULES 208V

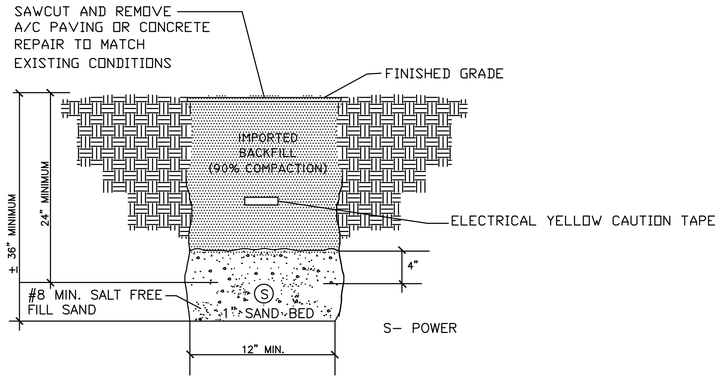
SHEET NUMBER
E6.0



NOTES:

1. ELECTRIC CONDUIT (UL APPROVED P&C) USE DB120 MINIMUM.
2. UTILIITY SERVICE CONDUITS REQUIRE A 3/4" POLYESTER PULL TAPE (NEPTCO CATALOG NO. WP2500P.
3. PRIOR TO CABLE INSTALLATION CONDUITS SHALL BE PROVEN FREE AND CLEAR BY MEANS OF MANDREL OR WIRE BRUSH.
4. AT LEAST 2 WORKING DAYS BEFORE YOU TRENCH CALL UNDERGROUND SERVICE ALERT 1-800-227-2600 TO HAVE THEM LOCATE AND MARK UNDERGROUND UTILITY LINES AND CALL PG&E TO REQUEST AN INSPECTION.
5. 30" MINIMUM COVER IS REQUIRED IN STREET AREAS.

1 JOINT UTILITY TRENCH DETAIL- TYPICAL
SCALE: NONE



NOTES:

1. ELECTRIC CONDUIT (UL APPROVED) PVC SCHEDULE 40.
2. USE PVC SCHEDULE 80 AT EXPOSED ABOVEGROUND 90 DEGREE STUB-UP LOCATIONS.
3. MAINTAIN 6" CLEARANCE FROM POWER AND SECURITY CONDUITS

2 GENERAL SITE TRENCH DETAIL
SCALE: NONE

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A.P. # 128-121-038

REVISIONS:

DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME

TRENCH
DETAILS

SHEET NUMBER

E7.0

SECTION 26-2700
BASIC ELECTRICAL MATERIALS AND METHODS

PART 1 - GENERAL

1.01 SUMMARY

A. Work included in this Section: All materials, labor, equipment, services, and incidentals necessary to install the electrical work as shown on the drawings and as specified hereinafter, including but not limited to the work listed below:
1. Raceways, feeders, branch circuit wiring, wiring devices, safety switches and connections to all equipment requiring electric service.

B. Any other electrical work as might reasonably be implied as required, even though not specifically mentioned herein or shown on the drawings.

C. All work shall comply with Section 26 05 00.

1.02 RELATED WORK

A. Division 1 – General Requirements

1.03 SUBMITTALS

A. Comply with the provisions of Section 26 05 00.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Refer to Section 26 05 00, Basic Electrical Requirements, Part 2 - Products.

B. List of Equipment Manufacturers:
1. Conduit and Conduit Fittings
Allied Tube and Conduit
Western Tube and Conduit
LTV Steel Tubular
National Electric Products
AFC
Republic Steel Corporation
Rome Cable Corporation
United States Steel Corporation
Killark Electric Manufacturing Company
Raco
VAW Aluminum Company
Bridgeport
Steel City
Thomas & Betts
Carlon
O.Z. Gedney
Appleton
Regal

2. Wire and Cable (600V)
American Wire Company

General Wire and Cable Corporation
Okonite Company
Rome Cable Corporation
Cerrowire
American Insulated Wire
AFC Cable Systems
Essex
Simplex Wire and Cable Company

3. Solderless Lugs and Grounding Connections
Burndy Engineering Company, Inc.
O.Z. Gedney Company, Inc.
Penn Union Electric Corporation
Thomas and Betts Company, Inc.

4. Pull Boxes, Gutters, Special Cabinets
Square D Company
Columbia Electric Manufacturing Company
General Electric Company
Westinghouse Electric Corporation
Circle Awalt

5. Outlet Boxes
Appleton Electric Company
Killark Electric Manufacturing Company
Lew Electric Fittings Company
National Electric Products Corporation
Raco
Steel City Electric Company
Carlon
Bowers

6. Floor Boxes
Steel City Electric Company
Harvey Hubbell, Inc.
RCI
Walker

7. Wiring Devices
Leviton
Arrow-Hart
Harvey Hubbell, Inc.
Lutron
Bryant

8. Conduit Racks, Hangers
General Electric Company
Killark Electric Manufacturing Company
Caddy
National Electric Products Corporation
Republic Steel Corporation
Rome Cable Corporation
United States Steel Corporation
VAW Aluminum Company
Superstrut
B-Line

9. Safety Switches (Disconnect and Fusible)
Square D Company
Cutler Hammer, Inc.
General Electric Company
Westinghouse Electric Corporation

10. Fuses
Buseman Manufacturing Company
Chase-Shawmut Company

11. Firestopping
3M
Nelson

2.02 MATERIALS

A. Raceways: Only the raceways specified below shall be utilized on this project. Substitutions shall be pre-approved in writing. All bare conduit ends (stub-ups or stub-outs) shall be provided with bushed ends or manufactured insulated throat connectors:
1. Rigid Type - hot dip galvanized or sherardized steel, use on all exterior locations, below deck, below grade or in concrete slab, and to 18" on either side of structural expansion joints in floor slabs (see item 15 below), with completely watertight, threaded fittings throughout.
a. All rigid steel conduit couplings and elbows in soil or concrete or under membrane to be ½ lap wrapped with Scotch #50 tape and threaded ends coated with T&B #S.C.40 rust inhibitor prior to installation of couplings.
b. ½ lap wrap all rigid steel conduit stub-ups from slab or grade to 6" above finished grade level with Scotch #50 tape.
2. In lieu of rigid steel conduit for power and control raceways and branch circuit conduits in soil or concrete slabs, "Schedule 40" PVC with Schedule 80 PVC conduit elbows and stub-ups may be used with code size (minimum No. 12) ground wire. A "stub-up" is considered to terminate 6" above the finished surface.
a. Schedule 80 PVC conduit shall be used in all concrete footings or foundations and to 18" of either side of footings or foundation walls.
b. Schedule 80 PVC conduit shall be used in all concrete masonry unit (CMU) walls or columns.
c. All conduit runs in concrete floor slabs (where allowed) shall be installed to comply with all applicable UBC and structural codes to maintain the structural integrity of the floor slab. Where conflicts occur, alternate routing shall be provided at no additional cost to the Owner.
3. Intermediate metal conduit shall be used in all exposed interior locations, except that electrical metallic tubing may be used in some locations as noted below. Utilize steel compression type fittings for all exposed conduit runs, unless otherwise noted. Cast fittings are unacceptable.
4. Electrical metallic tubing may be used exposed in electrical and mechanical rooms and in unfinished spaces and in concealed and furred spaces, made up with steel watertight or steel set screw type fittings and couplings. Set screws shall have hardened points. Cast fittings are unacceptable.
5. Use flexible conduit for all motor, transformer and recessed fixture connections (minimum ½"); "Seal-tite" type used outdoors, and in all wet locations, provide with code size (minimum No. 12) bare ground wire in all flexible conduit.
6. Conceal conduit in ceiling, or walls of all areas where possible, all exposed conduits installed parallel to building members.
7. Fasten conduits securely to boxes with locknuts and bushings to provide good electrical continuity.
8. Provide chrome escutcheon plates at all exposed wall, ceiling and floor conduit penetrations.
9. Support individual suspended conduits with heavy malleable strap or rod hangers; supports for ½ inch or 3/4 inch conduit placed on maximum 7-foot centers; maximum 10-foot centers on conduits 1 inch or larger.
10. Support multiple conduit runs from Kindorf B907 channels with C-105 and C-106 straps.
11. Conduit bends - long radius.

12. Flash conduits through roof, using approved roof jack; coordinate with General Contractor.
13. To facilitate pulling of feeder conductors, install junction boxes as shown or required.
14. All empty conduits on the project shall be provided with a nylon pull rope to allow pulling of future conductors intended for the specific raceway. Provide plastic wire-tie style nameplate tags on each end of pull rope with printed identification of conduit use and the location of the opposite end of the rope.
15. Where conduits pass through structural expansion joints in floor slab, rigid galvanized conduit shall be used 18" on either side of joint, complete with Appleton expansion couplings and bonding jumpers, or equal. All above grade expansion joint crossings shall also utilize expansion joint couplings or flex conduit transitions as required for each particular installation. No solid conduits shall be allowed to cross expansion joints without proper provisions for building and seismic movement.
16. Minimum cover of conduits in ground outside of building - 24 inches, unless otherwise noted.
17. Provide and install exterior wall conduit seals and cable seals in the locations listed below. Coordinate installation and scheduling with other trades:
a. Conduit seals through exterior wall or slab (below grade): O.Z. Gedney series "FSK" in new cast in concrete locations, series "CSM" in cored locations.
b. Conduit seals through exterior wall or slab (above grade): O.Z. Gedney series "CSMI."
c. Cable seals at first interior conduit termination after entry through exterior wall or slab: O.Z. Gedney series "CSBI." Coordinate quantity of conductors at each location.

B. Outlet Boxes and Junction Boxes:
1. One piece steel knockout type drawn boxes, unless otherwise noted, sized as required for conditions at each outlet or as noted.
2. Flush-mounted boxes equipped with galvanized steel raised covers for device mounting flush with finished surface. Provide extension rings as required on all acoustical or additional wall treatment areas to bring top of cover flush with finished surface (coordinate with architectural drawings). Devices shall be capable of being tightly mounted to boxes without distorting or bending device or mounting hardware.
3. Boxes for fixture outlets: 4-inch octagon or larger as required, or as noted.
4. Outlet and switch boxes for wet locations, cast aluminum FS or FD type with cast aluminum gasketed spring lid cover. Weatherproof "Bell" type boxes are not acceptable.
5. All connectors from conduit to junction or outlet boxes shall have insulated throats. Connectors shall be manufactured with insulated throats as integral part. Insertable insulated throats are unacceptable.
6. Conduit Bodies: Malleable iron type, with lubricated spring steel clips over edge of conduit body, O-Z/Gedney type EW, or equal.

C. Wire and Cable:
1. 600-volt class, insulation color coded, minimum No. 12 awg for branch circuits, No. 14 for control circuits.
2. All conductors shall be copper.
3. Insulation type:
a. Standard locations: #12 to #1 AWG: THWN for wet locations and THHN for dry locations. #1/0 through #4/0 AWG: XHHW (55 Mils). 250MCM and larger: XHHW (65 Mils). All wire sizes used shall be based on a 75

degree insulation rating, unless specifically used with 90 degree rated breakers and devices.
b. High temperature and non-standard locations: Provide wire type and insulation category suitable for area of use as defined in NEC table 310-13.
4. Conductors No. 8 and larger and as otherwise noted on drawings shall be stranded. Conductors No. 10 and smaller shall be solid.
5. Install all wiring (low voltage and line voltage) in conduit unless noted otherwise in the drawings, but do not pull into conduit until plastering and taping have been completed and conduits and outlets have been thoroughly cleaned and swabbed as necessary to remove water and debris.
6. Approximately balance branch circuits about the neutral conductors.
7. Connections to devices from "thru-feed" branch circuit conductors to be made with pigtails, with no interruption of the branch circuit conductors.
8. Neutral conductor identified by white outer braid, with different tracers of "EZ" numbering tags used where more than one neutral conductor is contained in a single raceway.
9. Neatly arrange and "marlin" wires in panels and distribution panelboards with "T and B Tv-rap" or approved equal plastic type strapping.
10. All wire and cable shall bear the Underwriters' Label, brought to the job in unbroken packages; wire color-coded as follows:

Voltage	Phasing	A	B	C	N
120/208	3PH4W	Black	Red	Blue	White
208	3PH3W	Black	Red	Blue	--
277/480	3PH4W	Brown	Orange	Yellow	White
480	3PH3W	Brown	Orange	Yellow	--
120/240	3PH4W	Black	Red	Blue	White
240	3PH3W	Black	Red	Blue	--

11. The equipment grounding conductor shall be insulated copper; where it is insulated, the insulation shall be colored green.
12. Label each wire of each electrical system in each pull box, junction box, outlet box, terminal cabinet, and panelboard in which it appears with "EZ" numbering tags indicating the connected circuit numbers.
13. Install feeder cables in one continuous section unless splices are approved by Architect. Exercise care in pulling to avoid damage or disarrangement of conductors, using approved grips. No cable shall be bent to smaller radius than the spool on which it was delivered from the manufacturer. Color code feeder cables at terminals. Provide identifying linen tags in each pullbox.

D. Lugs and Connectors: Thomas and Betts "lock-tite", for No. 4 and larger wire; "Scotchlock" fixed spring type with insulator for No. 6 and smaller wire.
1. All splices made up with wire nut connectors shall be solidly twisted together with electricians pliers before connector is installed to ensure a proper connection in the event of wire nut failure. No exceptions.
2. Connectors listed or labeled for "no wire twisting required" are not an acceptable substitute for actual wire twisting.
3. Utilize porcelain type connectors in all high temperature environments (above 105 degrees Celsius).

E. Splice Insulation: "Scotch" electrical tape with vinyl plastic backing or rubber tape with protective friction tape for interior work.
1. Provide watertight cast splices for all conductors in site pullboxes or wet locations.

F. Identification: Refer to Section 26 05 00.

G. Firestopping: as manufactured by 3M Fire Protection Products or equal.
1. Fire-rated and smoke barrier construction: Maintain barrier and structural floor fire and smoke resistance ratings including resistance to cold smoke at all penetrations, connections with other surfaces or types of construction, at separations required to permit building movement and sound vibration absorption, an at other construction gaps.
2. Systems or devices listed in the UL Fire Resistance Directory under categories XHCR and XHEZ may be used, providing that it conforms to the construction type, penetration type, annular space requirements and fire rating involved in each separate instance, and that the system be symmetrical for wall penetrations. Systems or devices must be asbestos free.

PART 3 - EXECUTION

3.01 Refer to Basic Electrical Requirements - Section 26 05 00 for work under this Section.

3.02 TESTS

A. Testing and Inspection: See Section 26 08 00 - Testing.

- END OF SECTION -

SECTION 260800 -TESTING

PART 1 - GENERAL

1.01 SUMMARY

A. Work Included in This Section: All materials, labor, equipment, services and incidentals necessary to perform the testing of the electrical work, including but not limited to the following:
1. Grounding System.
2. Distribution System.
3. Lighting and Controls
4. Branch Circuits

PART 2 - EXECUTION

2.01 GENERAL

A. Final test and inspection to be conducted in presence of Architect and Owner: The Contractor shall conduct at the expense of and Test at a mutually agreed time. Submit written test reports.

B. The electrical installation shall be inspected and tested to ensure safety to building occupants, operating personnel, conformity to code authorities and Contract Documents.

2.02 INSPECTIONS AND TESTS

A, Field tests shall be performed and reports submitted to owner and engineer.

1. Final Inspection Certificates: Prior to final payment approval, deliver to the Owner, with a copy to the Engineer signed certificates of final inspection by the appropriate local authority having jurisdiction.

B. Grounding System:

1. All ground connections shall be checked and the entire system shall be checked for continuity.
2. Ground tests shall meet the requirements of the National Electric Code.

C. Power Distribution System:

1. Perform megger tests of all distribution system feeders.

D. Lighting and Controls:

1. Test Lighting and Controls. Provide required Title 24 Documentation for Interior and exterior lighting to permit department and owner after work is complete.

E. Branch Circuits

1. Test all circuits for continuity. Check for proper voltage.

END OF SECTION-

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STATE OF CALIFORNIA

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SONOMA, CA, 95476
A.P. # 128-121-038

REVISIONS:

DATE: 12/18/25
DRAWN BY: MAJ
CHECKED BY: MAJ

SHEET NAME

ELECTRICAL SPECIFICATIONS

SHEET NUMBER

E8.0

r · g · a
architecture + engineering

RUSSELL, GALLAWAY ASSOCIATES inc.

115 MEYERS STREET
SUITE 110
CHICO, CA 95928
530 342 0302

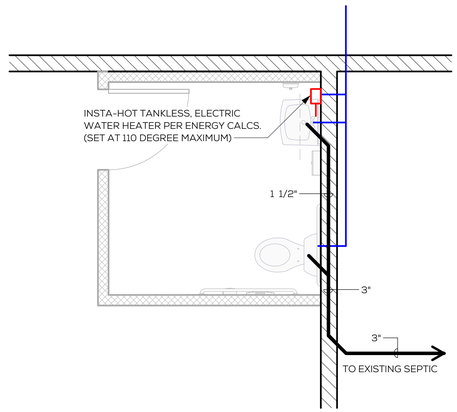
www.rgachico.com

New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038



DD - BUILDING 3 RESTROOM PLUMBING PLAN
SCALE : 3/8" = 1'-0"

NOTES:

1. ALL PLUMBING INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2016 CALIFORNIA PLUMBING CODE.
2. SLOPE WASTE PIPING UNDER FLOOR SLAB AT 1/4" PER FOOT TO THE POINT OF CONNECTION.
3. VENTS THROUGH ROOF (V.T.R.) SHALL BE COMBINED TO MINIMIZE ROOF PENETRATIONS. SAID PENETRATIONS SHALL BE WITH APPROPRIATE JACKET AND SEALED FROM LEAKAGE. GROSS CUMULATIVE AREA OF VENTS SHALL EQUAL AREA OF BUILDING SEWER.
4. CONTRACTOR SHALL VERIFY SIZE AND LOCATION OF ALL EXISTING WASTE LINES.
5. DOMESTIC WATER RAN IN TYPE 'M' COPPER.
6. DWV WASTE AND VENT RAN IN BLACK IRON.
7. INSTALL 3/4" HOSE BIBB NEAR EACH AND EVERY EXTERIOR ROLL-UP DOOR. CONNECT BIBBS TO EXISTING DOMESTIC WATER LINE.

LEGEND

- NEW SANITARY SEWER LINE (TIE INTO EXISTING)
- EXISTING SANITATY SEWER LINE (FIELD VERIFY LOCATION)
- NEW COLD WATER LINE
- NEW HOT WATER LINE

AA - NOTES & LEGEND
SCALE : NONE

LICENSED ARCHITECT — STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	SANNAR
CHECKED	CP
STATUS DATE	2025.12.23

PLUMBING PLAN

P2.1

AIA California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES, SHEET 1 (July 2024 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

Y | N/A | RESPON. PARTY

CHAPTER 3
GREEN BUILDING

SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.3 NONRESIDENTIAL ADDITIONS AND ALTERATIONS. [BSC-CG] The provisions of individual sections of Chapter 5 apply to newly constructed buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of $200,000 or above (for occupancies within the authority of California Building Standards Commission). Code sections relevant to additions and alterations shall only apply to the portions of the building being added or altered within the scope of the permitted work.

A code section will be designated by a banner to indicate where the code section only applies to newly constructed buildings [N] or to additions and/or alterations [A]. When the code section applies to both, no banner will be used.

301.3.1 Nonresidential additions and alterations that cause updates to plumbing fixtures only:

Note: On and after January 1, 2014, certain commercial real property, as defined in Civil Code Section 1101.3, shall have its noncompliant plumbing fixtures replaced with appropriate water-conserving plumbing fixtures under specific circumstances. See Civil Code Section 1101.1 *et seq.* for definitions, types of commercial real property affected, effective dates, circumstances necessitating replacement of noncompliant plumbing fixtures, and duties and responsibilities for ensuring compliance.

301.3.2 Waste Diversion. The requirements of Section 5.408 shall be required for additions and alterations whenever a permit is required for work.

301.4 PUBLIC SCHOOLS AND COMMUNITY COLLEGES. (see GBSC)
301.5 HEALTH FACILITIES. (see GBSC)

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

SECTION 303 PHASED PROJECTS

303.1 PHASED PROJECTS. For shell buildings and others constructed for future tenant improvements, only those code measures relevant to the building components and systems considered to be new construction (or newly constructed) shall apply.

303.1.1 Initial Tenant improvements. The provisions of this code shall apply only to the initial tenant improvements to a project. Subsequent tenant improvements shall comply with the scoping provisions in Section 301.3 non-residential additions and alterations.

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 5
NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.1 PLANNING AND DESIGN

SECTION 5.101 GENERAL

5.101.1 SCOPE
The provisions of this chapter outline planning, design and development methods that include environmentally responsible site selection, building design, building siting and development to protect, restore and enhance the environmental quality of the site and respect the integrity of adjacent properties.

SECTION 5.102 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

CUTOFF LUMINAIRES. Luminaires whose light distribution is such that the candela per 1000 lamp lumens does not numerically exceed 25 (2.5 percent) at an angle of 90 degrees above nadir, and 100 (10 percent) at a vertical angle of 80 degrees above nadir. This applies to all lateral angles around the luminaire.

ELECTRIC VEHICLE (EV), **[BSC-CG, HCD]** An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the California Electrical Code, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats and the like, are not included.

ELECTRIC VEHICLE (EV) CAPABLE SPACE. [BSC-CG, DSA-SS and HCD] A vehicle space with electrical panel space and load capacity to support a branch circuit and necessary raceways, both underground and/or surface mounted, to support EV charging.

ELECTRIC VEHICLE (EV) CHARGER. [BSC-CG, HCD] Off-board charging equipment used to charge an electric vehicle.

ELECTRIC VEHICLE CHARGING SPACE (EV SPACE). [HCD] A space intended for future installation of EV charging equipment and charging of electric vehicles.

ELECTRIC VEHICLE CHARGING STATION (EVCS). [BSC-CG, DSA-SS, HCD] One or more electric vehicle charging spaces served by EVSE or receptacle(s).

ELECTRIC VEHICLE (EV) READY SPACE. [HCD] A vehicle space which is provided with a branch circuit; any necessary raceways, both underground and/or surface mounted; to accommodate EV charging, terminating in a receptacle or a charger.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).[BSC-CG, DSA-SS and HCD] The conductors, including the ungrounded, grounded and equipment grounding conductors and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

SECTION 5.105 DECONSTRUCTION AND REUSE OF EXISTING STRUCTURES

5.105.1 Scope. [BSC-CG] Effective July 1, 2024, alteration(s) to existing building(s) where the combined altered floor area is 100,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 100,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3. Effective January 1, 2026, the combined floor area shall be 50,000 square feet or greater.

[DSA-SS] Alteration(s) to existing building(s) where the combined altered floor area is 50,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 50,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3.

Exception [BSC-CG, DSA-SS]: Combined addition(s) to existing building(s) of two times the area or more of the existing building(s) is not eligible to meet compliance with Section 5.105.2.

5.105.2 Reuse of existing building. An alteration or addition to an existing building shall maintain at a minimum 45 percent combined of the existing building's primary structural elements (foundations; columns, beams, walls, and floors; and lateral elements) and existing building enclosure (roof framing, wall framing and exterior finishes). Window assemblies, insulation, portions of buildings deemed structurally unsound or hazardous, and hazardous materials that are remediated as part of the project shall not be included in the calculation.

5.105.2.1 Verification of compliance. Documentation shall be provided in the construction documents to demonstrate compliance with Section 5.105.2.

Note: Sample Worksheet WS-3 in Chapter 8 may be used to assist in documenting compliance with this section.

5.105.3 Deconstruction (Reserved).

Y | N/A | RESPON. PARTY

SECTION 5.106 SITE DEVELOPMENT

5.106.1 STORM WATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB LESS THAN ONE ACRE OF LAND. Newly constructed projects and additions which disturb less than one acre of land, and are not part of a larger common plan of development or sale, shall prevent the pollution of storm water runoff from the construction activities through one or more of the following measures:

5.106.1.1 Local ordinance. Comply with a lawfully enacted storm water management and/or erosion control ordinance.

5.106.1.2 Best Management Practices (BMPs). Prevent the loss of soil through wind or water erosion by implementing an effective combination of erosion and sediment control and good housekeeping BMPs.

1. Soil loss BMPs that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Scheduling construction activity during dry weather, when possible.
   b. Preservation of natural features, vegetation, soil, and buffers around surface waters.
   c. Drainage swales or lined ditches to control stormwater flow.
   d. Mulching or hydroseeding to stabilize disturbed soils.
   e. Erosion control to protect slopes.
   f. Protection of storm drain inlets (gravel bags or catch basin inserts).
   g. Perimeter sediment control (perimeter silt fence, fiber rolls).
   h. Sediment trap or sediment basin to retain sediment on site.
   i. Stabilized construction exits.
   j. Wind erosion control.
   k. Other soil loss BMPs acceptable to the enforcing agency.
2. Good housekeeping BMPs to manage construction equipment, materials, non-stormwater discharges and wastes that should be considered for implementation as appropriate for each project include, but are not limited to, the following:
   a. Dewatering activities.
   b. Material handling and waste management.
   c. Building materials stockpile management.
   d. Management of washout areas (concrete, paints, stucco, etc.).
   e. Control of vehicle/equipment fueling to contractor's staging area.
   f. Vehicle and equipment cleaning performed off site.
   g Spill prevention and control.
   h. Other housekeeping BMPs acceptable to the enforcing agency.

5.106.2 STORMWATER POLLUTION PREVENTION FOR PROJECTS THAT DISTURB ONE OR MORE ACRES OF LAND. Comply with all lawfully enacted stormwater discharge regulations for projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of a larger common plan of development sale.

Note: Projects that (1) disturb one acre or more of land, or (2) disturb less than one acre of land but are part of the larger common plan of development or sale must comply with the post-construction requirements detailed in the applicable National Pollutant Discharge Elimination System (NPDES) General permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities issued by the State Water Resources Control Board or the Lahontan Regional Water Quality Control Board (for projects in the Lake Tahoe Hydrologic Unit).

The NPDES permits require postconstruction runoff (post-project hydrology) to match the preconstruction runoff (pre-project hydrology) with the installation of postconstruction stormwater management measures. The NPDES permits emphasize runoff reduction through on-site stormwater use, interception, evapotranspiration, and infiltration through nonstructural controls, such as Low Impact Development (LID) practices, and conversation design measures. Stormwater volume that cannot be addressed using nonstructural practices is required to be captured in structural practices and be approved by the enforcing agency.

Refer to the current applicable permits on the State Water Resources Control Board website at: www.waterboards.ca.gov/constructionstormwater. Consideration to the stormwater runoff management measures should be given during the initial design process for appropriate integration into site development.

5.106.4 BICYCLE PARKING. For buildings within the authority of California Building Standards Commission as specified in Section 103, comply with Section 5.106.4.1. For buildings within the authority of the Division of the State Architect pursuant to Section 105, comply with Section 5.106.4.2

5.106.4.1 Bicycle parking. [BSC-CG] Comply with Sections 5.106.4.1.1 and 5.106.4.1.2; or meet the applicable local ordinance, whichever is stricter.

5.106.4.1.1 Short-term bicycle parking. If the new project or an addition or alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5% of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack.
Exception: Additions or alterations which add nine or less visitor vehicular parking spaces.

5.106.4.1.2 Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.3 For additions or alterations that add 10 or more tenant-occupant vehicular parking spaces, provide secure bicycle parking for 5 percent of the tenant vehicular parking spaces being added, with a minimum of one bicycle parking facility.

5.106.4.1.4 For new shell buildings in phased projects provide secure bicycle parking for 5 percent of the anticipated tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility.

5.106.4.1.5 Acceptable bicycle parking facility for Sections 5.106.4.1.2, 5.106.4.1.3, and 5.106.4.1.4 shall be convenient from the street and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

Note: Additional information on recommended bicycle accommodations may be obtained from Sacramento Area Bicycle Advocates.

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2

5.106.4.2.1 Student bicycle parking. Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.
5.106.4.2.2 Staff bicycle parking. Provide permanent, secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable bicycle parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

5.106.5.3 Electric vehicle (EV) charging. [N] [BSC-CG] Construction to provide electric vehicle infrastructure and facilitate electric vehicle charging shall comply with Section 5.106.5.3.1 EV capable spaces. Section 5.106.5.3.2 Electric vehicle charging stations and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 Electric vehicle charging stations (EVCS)—Power allocation method and associated Table 5.106.5.3.6 and shall be provided in accordance with regulations in the *California Building Code* and the *California Electrical Code*.

Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcement agency substantiating the local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with this code section.

5.106.5.3.1 EV capable spaces. [N] EV capable spaces shall be provided in accordance with Table 5.106.5.3.1 and the following requirements:
1. Raceways complying with the California Electrical Code and no less that 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the EV capable and into a suitable listed cabinet, box,enclosure or equivalent. A common raceway may be used to serve multiple EV charging spaces.
2. A service panel or subpanel (s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.
3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.
4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective devices space(s) as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

Note: A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by an enforcement agency. See vehicle Code Section 22511.2 for further details.

Y | N/A | RESPON. PARTY

TABLE 5.106.5.3.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF EVCS (EV CAPABLE SPACES PROVIDED WITH EVSE)[A][2]
0-9	0	0
10-25	2	0
26-50	8	2
51-75	13	3
76-100	17	4
101-150	25	6
151-200	35	9
201 AND OVER	20 percent of actual parking spaces[1]	25 percent of EV capable spaces[1]

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. The number of required EVCS (EV capable spaces provided with EVSE) in column 3 count toward the total number of required EV capable spaces shown in column 2.
3. At least one Level 2 EVSE shall be provided.

5.106.5.3.2 Electric vehicle charging stations (EVCS) EV capable spaces shall be provided with electric vehicle supply equipment (EVSE) to create EVCS in the number indicated in Table 5.106.5.3.1. The EVCS required by Table 5.106.5.3.1 shall be provided with Level 2 EVSE or DCFC as permitted in Section 5.106.5.3.2.1. At least one Level 2 EVSE shall be provided.

One EV charger with multiple connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required by Section 5.106.5.3.1 for each EV capable space is accumulatively supplied to the EV charger.

The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces without EVSE by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

5.106.5.3.2.1 The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces without EVSE or EVCS with Level 2 EVSE by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

5.106.5.3.2.2 The installation of two low power Level 2 EV charging receptacles shall be permitted to reduce the minimum number of required EV capable spaces without EVSE in Table 5.106.5.3.1 by one.

5.106.5.3.3 Use of automatic load management systems (ALMS).
ALMS shall be permitted for EVCS. When ALMS is installed, the required electrical load capacity specified in Section
5.106.5.3.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs.

5.106.5.3.4 Accessible EVCS.
When EVSE is installed, accessible EVSC shall be provided in accordance with the *California Building Code*, Chapter 11B, Section 11B-228.3.

Note: For EVCS signs, refer to Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

5.106.5.3.4 Accessible electric vehicle charging station (EVCS). When EVSE is installed, accessible EVCS shall be provided in accordance with the *California Building Code*, Chapter 11B, Section 11B-228.3.

5.106.5.3.5 Electric vehicle charging station signage. Electric vehicle charging stations shall be identified by signage or pavement markings in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

Power allocation method shall include the following:
1. Use any kVA combination of EV capable spaces, low power Level 2, Level 2 or DCFC EVSEs.
2. At least one Level 2 EVSE shall be provided.

5.106.5.3.6 Electric vehicle charging stations (EVCS)—power allocation method. The power allocation method may be used as an alternative to the requirements in Section 5.106.5.3.1, Section 5.106.5.3.2 and associated Table 5.106.5.3.1. Use Table 5.106.5.3.6 to determine the total power in kVA required based on the total number of actual parking spaces.

TABLE 5.106.5.3.6

TOTAL NUMBER OF ACTUAL PARKING SPACES	MINIMUM TOTAL kVA @ 6.6 kVA	TOTAL kVA REQUIRED IN ANY COMBINATION OF EV CAPABLE,3,4 LOW POWER LEVEL 2, LEVEL 2, 1, 2 OR DCFC
0-9	0	0
10-25	26.4	26.4
26-50	52.8	52.8
51-75	85.8	85.8
76-100	112.2	112.2
101-150	165	165
151-200	231	231
201 AND OVER	20 percent of actual parking spaces x 6.6	Total required kVA = P × .20 × 6.6 Where P = Parking spaces in facility

1. Level 2 EVSE @ 6.6 kVA minimum.
2. At least one Level 2 EVSE shall be provided.
3. Maximum allowed kVA to be utilized for EV capable spaces is 75 percent.
4. If EV capable spaces are utilized, they shall meet the requirements of Section 5.106.5.3.1 EV capable spaces.

5.106.5.4 Additions or alterations to existing buildings or parking facilities [A]. [BSC-CG] Existing buildings or parking facilities being modified by one of the following shall comply with Section 5.106.5.4.1 or 5.106.5.4.2. When EVSE is installed, accessible EVCS shall be provided in accordance with the *California Building Code*, Chapter 11B, Section 11B-228.3.

1. When the scope of construction work includes an increase in power supply to an electric service panel as part of a parking facility addition or alteration.
2. When a new photovoltaic system is installed covering existing parking spaces.
3. When additions or alterations to existing buildings are triggered pursuant to code Section 301.3 and the scope of work includes an increase in power supply to an electric service panel.

Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply.
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcement agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.
   d. Where demonstrated as impracticable excluding local utility service or utility infrastructure issues.
2. Remote parking facilities that do not have access to the building service panel.
3. Parking area lighting upgrades where no trenching is part of the scope of work.
4. Emergency repairs, including but not limited to water line break in parking facilities, natural disaster repairs, etc.

5.106.5.4.1 Existing buildings or parking areas without previously installed EV capable infrastructure [A]. When EV capable infrastructure does not exist at an existing parking facility or building, and the parking facility or building undergoes an addition or alteration listed in Section 5.106.5.4, construction shall include electric vehicle charging in compliance with either Section 5.106.5.3 and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 and associated Table 5.106.5.3.6 for the total number of actual parking spaces being added or altered.

5.106.5.4.2 Existing buildings or parking areas with previously installed EV capable infrastructure [A]. When EV capable infrastructure is available at an existing parking facility or building, and the parking facility or building is undergoing an addition or alteration listed in Section 5.106.5.4, construction shall include electric vehicle charging in compliance with either Section 5.106.5.3 and associated Table 5.106.5.3.1, or Section 5.106.5.3.6 and associated Table 5.106.5.3.6 utilizing the existing EV capable allocated power and infrastructure for the total number of actual parking spaces being added or altered. If the area being added or altered exceeds the existing EV capable capacity, allocated power and infrastructure, provide additional EV charging as needed to comply with this section.

Y | N/A | RESPON. PARTY

5.106.5.5 Electric vehicle (EV) charging: medium-duty and heavy-duty. [N] [BSC-CG] Construction shall comply with Section 5.106.5.5.1 to facilitate future installation of electric vehicle supply equipment (EVSE). Construction for warehouses, grocery stores and retail stores, office buildings, and manufacturing facilities with planned off-street loading spaces shall also comply with Section 5.106.5.5.1 for future installation of medium- and heavy-duty EVSE.

Exceptions:
1. On a case-by-case basis where the local enforcing agency has determined compliance with this section is not feasible based upon one of the following conditions:
   a. Where there is no local utility power supply.
   b. Where the local utility is unable to supply adequate power.
   c. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

When EVSE(s) is/are installed, it shall be in accordance with the *California Building Code*, the *California Electrical Code* and as follows:

5.106.5.5.1 Electric vehicle charging readiness requirements for warehouses, grocery stores, office buildings, and manufacturing facilities and retail stores with planned off-street loading spaces. [N]

In order to avoid future demolition when adding EV supply and distribution equipment, spare raceway(s) or busway(s) and adequate capacity for transformer(s), service panel(s) or subpanel(s) shall be installed at the time of construction in accordance with the *California Electrical Code*. Construction plans and specifications shall include, but are not limited to, the following:

1. The transformer, main service equipment and subpanels shall meet the minimum power requirement in Table 5.106.5.5.1 to accommodate the dedicated branch circuits for the future installation of EVSE.

2. The construction documents shall indicate one or more location(s) convenient to the planned off-street loading space(s) reserved for medium- and heavy-duty ZEV charging cabinets and charging dispensers, and a pathway reserved for routing of conduit from the termination of the raceway(s) or busway(s) to the charging cabinet(s) and dispenser(s), as shown in Table 5.106.5.5.1.

3. Raceway(s) or busway(s) originating at a main service panel or a subpanel(s) serving the area where potential future medium- and heavy-duty EVSE will be located and shall terminate in close proximity to the potential future location of the charging equipment for medium- and heavy-duty vehicles.

4. The raceway(s) or busway(s) shall be of sufficient size to carry the minimum additional system load to the future location of the charging for medium- and heavy-duty ZEVs as shown in Table 5.106.5.5.1.

TABLE 5.106.5.5.1 RACEWAY CONDUIT AND PANEL POWER REQUIREMENTS FOR MEDIUM- AND HEAVY-DUTY EVSE [N]

BUILDING TYPE	BUILDING SIZE (SQ. FT.)	NUMBER OF OFF-STREET LOADING SPACES	ADDITIONAL CAPACITY REQUIRED (KVA) FOR RACEWAY & BUSWAY AND TRANSFORMER & PANEL
Grocery	10,000 to 90,000	1 or 2	200
		3 or Greater	400
	Greater than 90,000	1 or Greater	400
Manufacturing Facilities	10,000 to 50,000	1 or 2	200
	10,000 to 50,000	3 or Greater	400
	Greater than 50,000	1 or Greater	400
Office Buildings	10,000 to 135,000	1 or 2	200
	10,000 to 135,000	3 or Greater	400
	Greater than 135,000	1 or Greater	400
Retail	10,000 to 135,000	1 or 2	200
		3 or Greater	400
	Greater than 135,000	1 or Greater	400
Warehouse	20,000 to 256,000	1 or 2	200
		3 or Greater	400
	Greater than 256,000	1 or Greater	400

5.106.5.6 Electric vehicle (EV) charging at public schools and community colleges. [DSA-SS] Electric vehicle infrastructure and electric vehicle charging stations shall comply with Section 5.106.5.6 and shall be provided in accordance with regulations in the California Building Code and the California Electrical Code.

Exceptions:
1. On a case-by-case basis where compliance with this section has been demonstrated to be not feasible based upon one of the following conditions,and with concurrence by the Division of the State Architect (DSA), compliance with Section 5.106.5.6 shall not be required.
   a. Where there is no local utility power supply.
   b. Where the local utility is unable to supply adequate power.
   c. The installation of EVCS is impracticable.
2. Parking spaces accessible only by automated mechanical car parking systems are not required to comply with Section 5.106.5.6.

5.106.5.6.1 EV capable spaces. EV capable spaces shall be provided in accordance with Table 5.106.5.6.1 and the following requirements:

1. Raceways complying with the California Electrical Code and no less than 1-inch (25 mm) diameter shall be provided and shall originate at a service panel or a subpanel(s) serving the area and shall terminate in close proximity to the proposed location of the EV capable space and into a suitable listed cabinet, box, enclosure or equivalent. A common raceway may be used to serve multiple EV capable spaces.

2. A service panel or subpanel(s) shall be provided with panel space and electrical load capacity for a dedicated 208/240 volt, 40-ampere minimum branch circuit for each EV capable space, with delivery of 30-ampere minimum to an installed EVSE at each EVCS.

3. The electrical system and any on-site distribution transformers shall have sufficient capacity to supply full rated amperage at each EV capable space.

4. The service panel or subpanel circuit directory shall identify the reserved overcurrent protective device space(s) as "EV CAPABLE." The raceway termination location shall be permanently and visibly marked as "EV CAPABLE."

TABLE 5.106.5.6.1

TOTAL NUMBER OF ACTUAL PARKING SPACES	NUMBER OF REQUIRED EV CAPABLE SPACES	NUMBER OF REQUIRED EVCS[2]
0-9	0	0
10-25	4	1
26-50	8	2
51-75	13	3
76-100	17	4
101-150	25	6
151-200	35	9
201 AND OVER	20 percent of total spaces[1]	25 percent of EV capable spaces[1]

1. Calculation for spaces shall be rounded up to the nearest whole number.
2. Each EVCS shall reduce the number of required EV capable spaces by the same number.

5.106.5.6.2 Electric vehicle charging stations (EVCS). EV capable spaces shall be provided with EVSE to create EVCS in the number indicated in Table 5.106.5.6.1 and shall comply with Section 5.106.5.6.2. EVCS shall be serviced by Level 2 or Direct Current Fast Charging (DCFC) EVSE, or with EVSE in any combination of Level 2 and DCFC. Accessible EVCS shall be provided in accordance with *California Building Code* Chapter 11B.

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
M. BRADLEY GALLAWAY
REN. 02/27/2026
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	-
CHECKED	-
STATUS DATE	2025.12.23

CALGREEN STANDARDS

CG.1

AIA California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES, SHEET 2 (July 2024 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

5.106.5.6.2.1 Reduced number of EV capable spaces. The installation of each DCFC EVSE shall be permitted to reduce the minimum number of required EV capable spaces indicated in Table 5.106.5.6.1 by five and reduce proportionally the required electrical load capacity to the service panel or subpanel.

5.106.5.6.2.2 Multiple connectors. EVSE with multiple vehicle connectors capable of charging multiple EVs simultaneously shall be permitted if the electrical load capacity required by Section 5.106.5.6.1 for each EV capable space is accumulatively supplied to the EVSE.

5.106.5.6.2.3 Use of automatic load management systems (ALMS). ALMS shall be permitted for EVCS installed in accordance with Section 5.105.5.6.2. When ALMS is installed, the required electrical load capacity specified in Section 5.106.5.6.1 for each EVCS may be reduced when serviced by an EVSE controlled by an ALMS. Each EVSE controlled by an ALMS shall deliver a minimum 30 amperes to an EV when charging one vehicle and shall deliver a minimum 3.3 kW while simultaneously charging multiple EVs.

5.106.5.6.3 EVCS alternative compliance. In lieu of compliance with Section 5.106.5.6.2, EVCS shall be provided with Level 1, low power Level 2, or Level 2, or any combination of Level 1, low power Level 2 or Level 2 EVSE such that the total power supplied by the combination of EVSE meets the minimum power indicated in Table 5.106.5.6.3, based on the total number of actual parking spaces in each parking facility.

TABLE 5.106.5.6.3

NUMBER OF PARKING SPACES IN A PARKING FACILITY	MINIMUM TOTAL POWER (KVA) REQUIRED FOR EVCS
0-9	0
10-25	7
26-50	14
51-75	20
76-100	27
101-150	40
151-200	60
201 AND OVER	Total required KVA = P × .05 × 6.6 Where P = Parking spaces in facility

5.106.5.6.4 EVCS for alterations of or additions to parking facilities. Alterations of or additions to parking facilities shall provide EVCS in compliance with Section 5.106.5.6.4. The installation of infrastructure for EV capable spaces required to be provided without EVSE shall not be required.

5.106.5.6.4.1 Alterations of and additions to parking facilities. EVCS shall be provided in accordance with the number indicated in Table 5.106.5.6.1 or minimum power indicated in Table 5.106.5.6.3 when the scope of work includes an increase in power supply to an electric panel serving light fixtures illuminating the parking area or when area containing parking spaces is added to a parking facility. The number of required EVCS shall be based on the total number of existing and new parking spaces in the parking facility.

5.106.5.6.4.2 Alterations consisting of the installation of photovoltaic systems. EVCS shall be provided in accordance with the number indicated in Table 5.106.5.6.1 or maximum power indicated in Table 5.106.5.6.3 when a new photovoltaic system is installed in an existing parking facility.

5.106.5.6.5 Requirement to install EVSE. Level 2 EVSE shall be provided in all existing EV capable spaces to create EVCS when a project is required by California Administrative Code Section 4-309 to be submitted for plan approval to the Division of the State Architect. When EVSE is installed in existing EV capable spaces, accessible EVCS shall be provided in accordance with *California Building Code* Chapter 11B.

Exception: Projects in which improvements in parking areas consist only of accessibility improvements are not required to comply with Section 5.106.5.6.5.

5.106.8 LIGHT POLLUTION REDUCTION. [N]. Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the California Energy Code for Lighting Zones 0-4 as defined in Chapter 10, Section 10-114 of the California Administrative Code; and
2. Backlight (B) ratings as defined in IES TM-15-11 (shown in Table A-1 in Chapter 8);
3. Uplight and Glare ratings as defined in California Energy Code (shown in Tables 130.2-A and 130.2-B in Chapter 8) and
4. Allowable BUG ratings not exceeding those shown in Table 5.106.8, [N] or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify as exceptions in Sections 130.2 (b) and 140.7 of the California Energy Code.
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the California Energy Code, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.
5. Luminaires with less than 6,200 initial luminaire lumens.

TABLE 5.106.8 [N] MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT AND GLARE (BUG) RATINGS 1,2

ALLOWABLE RATING	LIGHTING ZONE LZ0	LIGHTING ZONE LZ1	LIGHTING ZONE LZ2	LIGHTING ZONE LZ3	LIGHTING ZONE LZ4
MAXIMUM ALLOWABLE BACKLIGHT RATING 3					
Luminaire greater than 2 mounting heights (MH) from property line	N/A	No Limit	No Limit	No Limit	No Limit
Luminaire back hemisphere is 1-2 MH from property line	N/A	B2	B3	B4	B4
Luminaire back hemisphere is 0.5-1 MH from property line	N/A	B1	B2	B3	B3
Luminaire back hemisphere is less than 0.5 MH from property line	N/A	B0	B0	B1	B2
MAXIMUM ALLOWABLE UPLIGHT RATING (U)					
For area lighting 3	N/A	U0	U0	U0	U0
For all other outdoor lighting,including decorative luminaires	N/A	U1	U2	U3	UR
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**					
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G1	G2	G3	G4
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G0	G1	G1	G2
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G0	G0	G1	G1
MAXIMUM ALLOWABLE GLARE RATING 3 **(G)**	N/A	G0	G0	G0	G1

1. IESNA Lighting Zones 0 and 5 are not applicable; refer to Lighting Zones as defined in the *California Energy Code* and Chapter 10 of the *California Administrative Code*.

2. For property lines that abut public walkways, bikeways, plazas and parking lots, the property line may be considered to be 5 feet beyond the actual property line for purpose of determining compliance with this section. For property lines that abut public roadways and public transit corridors, the property line may be considered to be the centerline of the public roadway or public transit corridor for the purpose of determining compliance with this section.

3. General lighting luminaires in areas such as outdoor parking, sales or storage lots shall meet these reduced ratings. Decorative luminaries located in these areas shall meet *U*-value limits for "all other outdoor lighting"

5.106.8.1 Facing- Backlight
Luminaries within 2MH of a property line shall be oriented so that the nearest property line is behind the fixture, and shall comply with the backlight rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point of that property line.

Exception: Corners. If two property lines (or two segments of the same property line) have equidistant point to the luminaire, then the luminaire may be oriented so that the intersection of the two lines (the corner) is directly behind the luminaire. The luminaire shall still use the distance to the nearest points(s) on the property lines to determine the required backlight rating.

5.106.8.2 Facing-Glare.
For luminaires covered by 5.106.8.1, if a property line also exists within or extends into the front hemisphere within 2MH of the luminaire then the luminaire shall comply with the more stringent glare rating specified in Table 5.106.8 based on the lighting zone and distance to the nearest point on the nearest property line within the front hemisphere.

Note: [N]
1.See also *California Building Code*, Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.
2.Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for IES TM-15-11 Table A-1, *California Energy Code* Tables 130.2-A and 130.2-B.
3. Refer to the *California Building Code* for requirements for additions and alterations.

5.106.10 GRADING AND PAVING. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.
   Exception: Additions and alterations not altering the drainage path.

5.106.12 SHADE TREES [DSA-SS]. Shade Trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.

5.106.12.1 Surface parking areas. Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50 percent of the parking area within 15 years.

Exceptions: Surface parking area covered by solar photovoltaic shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.

5.106.12.2 Landscape areas. Shade tress plantings, minimum #10 container size or equal shall be installed to provide shade of 20% of the landscape area within 15 years.

Exceptions: Playfields for organized sport activity are not included in the total area calculation.

5.106.12.3. Hardscape areas. Shade tree plantings, minimum #10 container size or equal shall be installed to provide shade over 20 percent of the hardscape area within 15 years.

Exceptions:
1. Walks, hardscape areas covered by solar photovoltaic shade structures or shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5 shall be permitted in whole or in part in lieu of shade tree planting.
2. Designated and marked play areas of organized sport activity are not included in the total area calculation.

DIVISION 5.2 ENERGY EFFICIENCY

SECTION 5.201 GENERAL

5.201.1 Scope [BSC-CG]. ***California Energy Code [DSA-SS].*** For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory building standards.

DIVISION 5.3 WATER EFFICIENCY AND CONSERVATION

SECTION 5.301 GENERAL

5.301.1 Scope. The provisions of this chapter shall establish the means of conserving water use indoors, outdoors and in wastewater conveyance.

SECTION 5.302 DEFINITIONS

5.302.1 Definitions. The following terms are defined in Chapter 2 *(and are included here for reference)*

EVAPOTRANSPIRATION ADJUSTMENT FACTOR (ETAF) [DSA-SS]. An adjustment factor when applied to reference evapotranspiration that adjusts for plant factors and irrigation efficiency, which ae two major influences on the amount of water that needs to be applied to the landscape.

FOOTPRINT AREA [DSA-SS]. The total area of the furthest exterior wall of the structure projected to natural grade, not including exterior areas such as stairs, covered walkways, patios and decks.

METERING FAUCET. A self-closing faucet that dispenses a specific volume of water for each actuation cycle. The volume or cycle duration can be fixed or adjustable.

GRAYWATER. Pursuant to Health and Safety Code Section 17922.12, "graywater" means untreated wastewater that has not been contaminated by any toilet discharge, has not been affected by infectious, contaminated, or unhealthy bodily wastes, and does not present a threat from contamination by unhealthful processing, manufacturing, or operating wastes. "Graywater" includes, but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines and laundry tubs, but does not include waste water from kitchen sinks or dishwashers.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). The California ordinance regulating landscape design, installation and maintenance practices that will ensure commercial, multifamily and other developer installed landscapes greater than 2500 square feet meet an irrigation water budget developed based on landscaped area and climatological parameters.

MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO). [HCD] The California model ordinance (California Code of Regulations, Title 23, Division 2, Chapter 2.7), regulating landscape design, installation and maintenance practices. Local agencies are required to adopt the updated MWELO, or adopt a local ordinance at least as effective as the MWELO.

POTABLE WATER. Water that is drinkable and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards. See definition in the California Plumbing Code, Part 5.

POTABLE WATER. [HCD] Water that is satisfactory for drinking, culinary, and domestic purposes, and meets the U.S. Environmental Protection Agency (EPA) Drinking Water Standards and the requirements of the Health Authority Having Jurisdiction.

RECYCLED WATER. Water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur [Water Code Section 13050 (n)]. Simply put, recycled water is water treated to remove waste matter attaining a quality that is suitable to use the water again.

SUBMETER. [HCD 1] A secondary device beyond a meter that measures water consumption of an individual rental unit within a multiunit residential structure or mixed-use residential and commercial structure. (See Civic Code Section 1954.202 (g) and Water code Section 517 for additional details.)

WATER BUDGET. Is the estimated total landscape irrigation water use which shall not exceed the maximum applied water allowance calculated in accordance with the Department of Water Resources Model Efficient Landscape Ordinance (MWELO).

SECTION 5.303 INDOOR WATER USE

5.303.1 METERS. Separate submeters or metering devices shall be installed for the uses described in Sections 503.1.1 and 503.1.2.

5.303.1.1 Buildings in excess of 50,000 square feet. Separate submeters shall be installed as follows:

1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day (380 L/day), including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:
   a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s).
   b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s).
   c. Steam and hot water boilers with energy input more than 500,000 Btu/h (147 kW).

5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or within an addition that is projected to consume more than 1,000 gal/day.

5.303.3 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

5.303.3.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals.
5.303.3.2.1 Wall-mounted Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.

5.303.3.2.2 Floor-mounted Urinals. The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads. [BSC-CG]
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
Note: A hand-held shower shall be considered a showerhead.

5.303.3.3 Showerheads. [BSC-CG]
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.
5.303.3.4.1 Nonresidential Lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than1.8 gallons per minute/20 [rim space (inches) at 60 psi].

5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle.

5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per minute/20 [rim space (inches) at 60 psi].

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

5.303.3.4.6 Pre-rinse spray value
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7), and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

5.303.4 COMMERCIAL KITCHEN EQUIPMENT.

5.303.4.1 Food Waste Disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water.
Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.

5.303.5 AREAS OF ADDITION OR ALTERATION. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alteration to the building.

5.303.6 STANDARDS FOR PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code* and in Chapter 6 of this code.

SECTION 5.304 OUTDOOR WATER USE

5.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

Notes:
1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code of Regulations, Title 23, Chapter 2.7, Division 2.
2. MWELO and supporting documents, including a water budget calculator, are available at: https://www.water.ca.gov/.

5.304.6 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, *California Code of Regulations*, except that the evapotranspiration adjustment factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.

Exception: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWELO.

5.304.6.1 Newly constructed landscapes. New construction projects with an aggregate landscape area equal to or greater than 500 square feet.

5.304.6.2 Rehabilitated landscapes. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

DIVISION 5.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.401 GENERAL

5.401.1 SCOPE. The provisions of this chapter specify the requirements of achieving material conservation, resource efficiency, and greenhouse gas (GHG) emission reduction through protection of buildings from exterior moisture, construction waste diversion, employment of techniques to reduce pollution through recycling of materials, the installation of products with lower GHG emissions and building commissioning or testing and adjusting.

SECTION 5.402 DEFINITIONS

5.402.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ADJUST. To regulate fluid flow rate and air patterns at the terminal equipment, such as to reduce fan speed or adjust a damper.

BALANCE. To proportion flows within the distribution system, including sub-mains, branches and terminals, according to design quantities.

BUILDING COMMISSIONING. A systematic quality assurance process that spans the entire design and construction process, including verifying and documenting that building systems and components are planned, designed, installed, tested, operated and maintained to meet the owner's project requirements.

BUY CLEAN CALIFORNIA ACT (BCCA). The Buy Clean California Act (BCCA) (Public Contract Code Sections 3500-3505) targets carbon emissions associated with the production of structural steel (hot-rolled sections, hollow structural sections, and plate), concrete reinforcing steel, flat glass, and mineral wool board insulation. The maximum acceptable global warming potential (GWP) limits are established by the Department of General Services (DGS), in consultation with the California Air Resources Board (CARB).

CRADLE-TO-GRAVE. Activities associated with a product or building's life cycle from the extraction stage through disposal stage, and covering modules A1 through C4 in accordance with ISO Standards 14025 and 21930.

ORGANIC WASTE. Food waste, green waste, landscape and pruning wste, nonhazardous wood waste, and food soiled paper waste that is mixed in with food waste.

REFERENCE STUDY PERIOD. The period of use for the building, in years, that will be assumed for life cycle assessment.

TEST. A procedure to determine quantitative performance of a system or equipment

TYPE III ENVIRONMENTAL PRODUCT DECLARATION (EPD). A third-party verified report that summarizes how a product impacts the environment. Type III EPDs can be either product-specific, factory-specific, or industry-wide EPDs. See "Cradle-to-Gate."

FACTORY-SPECIFIC EPD. A product-specific Type III EPD in which the environmental impacts can be attributed to a single manufacturer and manufacturing facility.

INDUSTRY-WIDE EPD (IW-EPD). A Type III EPD in which the environmental impacts are an average of the typical manufacturing impacts for a range of products within the same product category for a group of manufacturers.

PRODUCT-SPECIFIC EPD. A Type III EPD in which the environmental impacts can be attributed to a product design and manufacturer across multiple facilities.

SECTION 5.407 WATER RESISTANCE AND MOISTURE MANAGEMENT

5.407.1 WEATHER PROTECTION. Provide a weather-resistant exterior wall and foundation envelope as required by California Building Code Section 1402.2 (Weather Protection), manufacturer's installation instructions or local ordinance, whichever is more stringent.

5.407.2 MOISTURE CONTROL. Employ moisture control measures by the following methods.

5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:

1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.

SECTION 5.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65% of the non-hazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

5.408.1.1 Construction waste management plan. Where a local jurisdiction does not have a construction and demolition waste management ordinance, submit a construction waste management plan that:

1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.
2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

5.408.1.2 Waste Management Company. Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

5.408.1.3 Waste stream reduction alternative. The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65% minimum requirement as approved by the enforcing agency.

5.408.1.4 Documentation. Documentation shall be provided to the enforcing agency which demonstrates compliance with Sections 5.408.1.1, through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

5.408.2 UNIVERSAL WASTE. [A] Additions and alterations to a building or tenant space that meet the scoping provisions in Section 301.3 for nonresidential additions and alterations, shall require verification that Universal Waste items such as fluorescent lamps and ballast and mercury containing thermostats as well as other California prohibited Universal Waste materials are disposed of properly and are diverted from landfills. A list of prohibited Universal Waste materials shall be included in the construction documents.

Note: Refer to the Universal Waste Rule link at: http://www.dtsc.ca.gov/universalwaste/

5.408.3 EXCAVATED SOIL AND LAND CLEARING DEBRIS. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed.

Exception: Reuse, either on or off-site, of vegetation or soil contaminated by disease or pest infestation.

Notes:

1. If contamination by disease or pest infestation is suspected, contact the County Agricultural Commissioner and follow its direction for recycling or disposal of the material.
2. For a map of know pest and/or disease quarantine zones, consult with the California Department of Food and Agriculture. (www.cdfa.ca.gov)

SECTION 5.409 LIFE CYCLE ASSESSMENT

5.409.1 SCOPE. [BSC-CG] Effective July 1, 2024, projects consisting of newly constructed building(s) with a combined floor area of 100,000 square feet or greater shall comply with either Section 5.409.2 or Section 5.409.3. Alteration(s) to existing building(s) where the combined altered floor area is 100,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 100,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3. Effective January 1, 2026, the combined floor area shall be 50,000 square feet or greater.

[DSA-SS] Projects consisting of newly constructed building(s) with a combined floor area of 50,000 square feet or greater shall comply with either Section 5.409.2 or Section 5.409.3. Alteration(s) to existing building(s) where the combined altered floor area is 50,000 square feet or greater shall comply with either Section 5.105.2, 5.409.2, or 5.409.3. Addition(s) to existing building(s) where the total floor area combined with the existing building(s) is 50,000 square feet or greater shall comply with either Section 5.105.2, Section 5.409.2, or Section 5.409.3.

DISCLAIMER:*THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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New Warehouse Shell Building

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MacArthur St. Properties

PROJECT ADDRESS
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ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
MATTHEW B. GALLAWAY
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REN. 02/28/25
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	-
CHECKED	-
STATUS DATE	2025.12.23

CALGREEN STANDARDS

CG.2

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
NONRESIDENTIAL MANDATORY MEASURES, SHEET 3 (July 2024 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

5.409.2 Whole building life cycle assessment. Projects shall conduct a cradle-to-grave whole building life cycle assessment performed in accordance with ISO 14040 and ISO 14044, excluding operating energy, and demonstrating a minimum 10-percent reduction in global warming potential (GWP) as compared to a reference baseline building of similar size, function, complexity, type of construction, material specification, and location that meets the requirements of the California Energy Code currently in effect. Software used to conduct the whole building life cycle assessment, including reference baseline building, shall have a data set compliant with ISO 14044, and ISO 21930 or EN 15804, and the software shall conform to ISO 21931 and/or EN 15978. The software tools and data sets shall be the same for evaluation of both the baseline building and the proposed building.

Notes:
1. Software for calculating whole building life cycle assessment is available for free at Athena Sustainable Materials Institute (https://calculatelca.com/software/impact-estimator/) and OneClick LCA-Planetary (www.oneclicklca.com/planetary). Paid versions include, but are not limited to, Sphera GaBi Solutions (gabi.sphera.com), SimaPro (simapro.com), One-Click LCA (www.oneclicklca.com) and Tally for Revit (apps.autodesk.com).

2. ASTM E2921-22 "Standard Practice for Minimum Criteria for Comparing Whole Building Life Cycle Assessments for Use with Building Codes, Standards, and Rating Systems" may be consulted for the assessment.

3. In addition to the required documentation specified in Section 5.409.2.3, Worksheet WS-9 may be required by the enforcing entity to demonstrate compliance with the requirements.

5.409.2.1 Building components. Building enclosure components included in the assessment shall be limited to glazing assemblies, insulation, and exterior finishes. Primary and secondary structural members included in the assessment shall be limited to footings and foundations, and structural columns, beams, walls, roofs, and floors.

5.409.2.2 Reference study period. The reference study period of the proposed building shall be equal to the reference baseline building and shall be 60 years.

5.409.2.3 Verification of compliance. A summary of the GWP analysis produced by the software and Worksheet WS-4 signed by the design professional of record shall be provided in the construction documents as documentation of compliance. A copy of the whole building life cycle assessment which includes the GWP analysis produced by the software, in addition to maintenance and training information, shall be included in the operation and maintenance manual and shall be provided to the owner at the close of construction. The enforcing agency may require inspection and inspection reports in accordance with Sections 702.2 and 703.1 during and at completion of construction to demonstrate substantial conformance. Inspection shall be performed by the design professional of record or third party acceptable to the enforcing agency.

5.409.3 Product GWP compliance—prescriptive path. Each product that is permanently installed and listed in Table 5.409.3 shall have a Type III environmental product declaration (EPD), either product-specific or factory-specific.

TABLE 5.409.3
PRODUCT GWP LIMITS

BUY CLEAN CALIFORNIA MATERIALS PRODUCT CATEGORY[1]	MAXIMUM ACCEPTABLE GWP VALUE (unfabricated) ($GWP_{allowed}$)	UNIT OF MEASUREMENT
Hot-rolled structural steel sections	1.77	MT CO_2e/MT
Hollow structural sections	3.00	MT CO_2e/MT
Steel plate	2.61	MT CO_2e/MT
Concrete reinforcing steel	1.56	MT CO_2e/MT
Flat glass	2.50	MT CO_2e/MT [4]
Light-density mineral wool board insulation	5.83	kg CO_2e/MT
Heavy-density mineral wool board insulation	14.28	kg CO_2e/MT
Concrete, Ready-Mixed[2], [3]		
CONCRETE PRODUCT CATEGORY	**MAXIMUM GWP ALLOWED VALUE ($GWP_{allowed}$)**	**UNIT OF MEASUREMENT**
up to 2499 psi	450	kg CO_2e/m^3
2500~3499 psi	489	kg CO_2e/m^3
3500~4499 psi	566	kg CO_2e/m^3
4500~5499 psi	661	kg CO_2e/m^3
5500~6499 psi	701	kg CO_2e/m^3
6500 psi and greater	799	kg CO_2e/m^3
Concrete, Lightweight Ready-Mixed[2]		
CONCRETE PRODUCT CATEGORY	**MAXIMUM GWP ALLOWED VALUE ($GWP_{allowed}$)**	**UNIT OF MEASUREMENT**
up to 2499 psi	875	kg CO_2e/m^3
2500~3499 psi	956	kg CO_2e/m^3
3500~4499 psi	1039	kg CO_2e/m^3

1. The GWP values of the products listed in Table 5.409.3 are based on 175 percent of Buy Clean California Act (BCCA) GWP values, except for concrete products which are not included in the BCCA.
2. For concrete, 175 percent of the National Ready Mixed Concrete Association (NRMCA) 2022 version 3 Pacific Southwest regional benchmark values are used for the GWP allowed, except for High Early Strength.
3. Concrete High Early Strength ready-mixed shall be calculated at 130 percent of the ready-mixed concrete GWP allowed values for each product category**.**
4. The GWP unit for flat glass has been adjusted to correct an error in the express terms. With the revised unit (MT CO2e/MT), reported GWP values will align with industry data as published in the CLF North American Material Baselines (2023).

5.409.3.1 Products shall not exceed the maximum GWP value specified in Table 5.409.3.

Exception: Concrete may be considered one product category to meet compliance with this section. A weighted average of the maximum GWP for all concrete mixes installed in the project shall be less than the weighted average maximum GWP allowed per Table 5.409.3 using Exception Equation 5.409.3.1. Calculations shall be performed with consistent units of measurement for the material quantity and the GWP value.

For the purposes of this exception, industry-wide EPDs are acceptable.

Exception EQUATION 5.409.3.1

$GWP_n < GWP_{allowed}$
where
$GWP_n = \Sigma\ (GWP_n)(v_n)$
and
$GWP_{allowed} = \Sigma\ (GWP_{allowed})(v_n)$
and
$_n$ = each concrete mix installed in the project
GWP_n = the GWP for concrete mix $_n$ per concrete mix EPD, in kg CO2e/m3
$GWP_{allowed}$ = the GWP potential allowed for concrete mix $_n$ per Table 5.409.3
v_n = the volume of concrete mix $_n$ installed in the project, in m3

5.409.3.2 Verification of compliance. Calculations to demonstrate compliance, Type III EPDs for products required to comply, if included in the project, and Worksheet WS-5 signed by the design professional of record shall be provided on the construction documents. Updated EPDs for products used in construction shall be provided to the owner at the close of construction and to the enforcement entity upon request. The enforcing agency may require inspection and inspection reports in accordance with Sections 702.2 and 703.1 during and at completion of construction to demonstrate substantial conformance. Inspection shall be performed by the design professional of record or third party acceptable to the enforcing agency.

SECTION 5.410 BUILDING MAINTENANCE AND OPERATIONS

5.410.1 RECYCLING BY OCCUPANTS. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2)(A) et seq. shall also be exempt from the organic waste portion of this section.

5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30% or more in floor area, shall provide recycling areas on site.

Exception: Additions within a tenant space resulting in less than a 30% increase in the tenant space floor area.

5.410.1.2 Sample ordinance. Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code.* Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's web site.

5.410.2 COMMISSIONING. [N] New buildings 10,000 square feet and over. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements. Commissioning shall be performed in accordance with this section by trained personnel with experience on projects of comparable size and complexity. For I-occupancies that are not regulated by OSHPD or for I-occupancies and L-occupancies that are not regulated y the California Energy Code Section 100.0 Scope, all requirements in Sections 5.410.2 through 5.410.2.6 shall apply.

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting systems and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements

Commissioning requirements shall include:

1. Owner's or Owner representative's project requirements.
2. Basis of design.
3. Commissioning measures shown in the construction documents.
4. Commissioning plan.
5. Functional performance testing.
6. Documentation and training.
7. Commissioning report.

Exceptions:

1. Unconditioned warehouses of any size.
2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses.
3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1.
4. Open parking garages of any size, or open parking garage areas, of any size, within a structure.

Note: For the purposes of this section, unconditioned shall mean a building, area or room which does not provide heating and/or air conditioning.

Informational Notes:

1. . Functional performance testing for heating, ventilation, air conditioning systems and lighting controls must be performed in compliance with the *California Energy Code.*

5.410.2.1 Owner's or Owner Representative's Project Requirements (OPR). [N] The expectations and requirements of the building appropriate to its phase shall be documented before the design phase of the project begins. This documentation shall include the following:
1. Environmental and sustainability goals.
2. Building sustainable goals.
3. Indoor environmental quality requirements.
4. Project program, including facility functions and hours of operation, and need for after hours operation.
5. Equipment and systems expectations.
6. Building occupant and operation and maintenance (O&M) personnel expectations.

5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project. The Basis of Design document shall cover the following systems:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse system.

5.410.2.3 Commissioning plan. [N] Prior to permit issuance a commissioning plan shall be completed to document how the project will be commissioned. The commissioning plan shall include the following:
1. General project information.
2. Commissioning goals.
3. Systems to be commissioned. Plans to test systems and components shall include:
   a. An explanation of the original design intent.
   b. Equipment and systems to be tested, including the extent of tests.
   c. Functions to be tested.
   d. Conditions under which the test shall be performed.
   e. Measurable criteria for acceptable performance.
4. Commissioning team information.
5. Commissioning process activities, schedules and responsibilities. Plans for the completion of commissioning shall be included.

5.410.2.4 Functional performance testing. [N] Functional performance tests shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications. Functional performance testing reports shall contain information addressing each of the building components tested, the testing methods utilized, and include any readings and adjustments made.

5.410.2.5 Documentation and training. [N] A Systems Manual and Systems Operations Training are required, including Occupational Safety and Health Act (OSHA) requirements in *California Code of Regulations* (CCR), Title 8, Section 5142, and other related regulations.

5.410.2.5.1 Systems manual. [N] Documentation of the operational aspects of the building shall be completed within the systems manual and delivered to the building owner or representative. The systems manual shall include the following:
1. Site information, including facility description, history and current requirements.
2. Site contact information.
3. Basic operations and maintenance, including general site operating procedures, basic troubleshooting, recommended maintenance requirements, site events log.
4. Major systems.
5. Site equipment inventory and maintenance notes.
6. A copy of verifications required by the enforcing agency or this code.
7. Other resources and documentation, if applicable.

5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and documented in the commissioning report and shall include the following:
1. System/equipment overview (what it is, what it does and with what other systems and/or equipment it interfaces).
2. Review and demonstration of servicing/preventive maintenance.
3. Review of the information in the Systems Manual.
4. Review of the record drawings on the system/equipment.

5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.

5.410.4 TESTING AND ADJUSTING. New buildings less than 10,000 square feet. Testing and adjusting of systems shall be required for new buildings less than 10,000 square feet or new systems to serve an addition or alteration subject to Section 303.1.

5.410.4.2 (Reserved)

Note: For energy-related systems under the scope (Section 100) of the California Energy Code, including heating, ventilation, air conditioning (HVAC) systems and controls, indoor lighting system and controls, as well as water heating systems and controls, refer to California Energy Code Section 120.8 for commissioning requirements and Sections 120.5, 120.6, 130.4, and 140.9(b)3 for additional testing requirements of specific systems.

5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include at a minimum, as applicable to the project:

1. Renewable energy systems.
2. Landscape irrigation systems.
3. Water reuse systems.

5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with manufacturer's specifications and applicable standards on each system.

5.410.4.3.1 HVAC balancing. In addition to testing and adjusting, before a new space-conditioning system serving a building or space is operated for normal use, the system shall be balanced in accordance with the procedures defined by the Testing Adjusting and Balancing Bureau National Standards; the National Environmental Balancing Bureau Procedural Standards; Associated Air Balance Council National Standards or as approved by the enforcing agency.

5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.

5.410.4.5 Operation and maintenance (O & M) manual. Provide the building owner or representative with detailed operating and maintenance instructions and copies of guaranties/warranties for each system. O & M instructions shall be consistent with OSHA requirements in CCR, Title 8, Section 5142, and other related regulations.

5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.

DIVISION 5.5 ENVIRONMENTAL QUALITY

SECTION 5.501 GENERAL

5.501.1 SCOPE. The provisions of this chapter shall outline means of reducing the quantity of air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of a building's installers, occupants and neighbors.

SECTION 5.502 DEFINITIONS

5.502.1 DEFINITIONS. The following terms are defined in Chapter 2 *(and are included here for reference)*

ARTERIAL HIGHWAY. A general term denoting a highway primarily for through traffic usually on a continuous route.

A-WEIGHTED SOUND LEVEL (dBA). The sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made.

1 BTU/HOUR. British thermal units per hour, also referred to as Btu. The amount of heat required to raise one pound of water one degree Fahrenheit per hour, a common measure of heat transfer rate. A ton of refrigeration is 12,000 Btu, the amount of heat required to melt a ton (2,000 pounds) of ice at 32^0 Fahrenheit.

COMMUNITY NOISE EQUIVALENT LEVEL (CNEL). A metric similar to the day-night average sound level (Ldn), except that a 5 decibel adjustment is added to the equivalent continuous sound exposure level for evening hours (7pm to 10pm) in addition to the 10 dB nighttime adjustment used in the Ldn.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, timber, prefabricated wood I–joists or finger–jointed lumber, all as specified in California Code of Regulations (CCR), Title 17, Section 93120.1(a).

Note: See CCR, Title 17, Section 93120.1.

DAY-NIGHT AVERAGE SOUND LEVEL (Ldn). The A-weighted equivalent continuous sound exposure level for a 24-hour period with a 10 dB adjustment added to sound levels occurring during nighttime hours (10p.m. to 7 a.m.).

DECIBEL (db). A measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, sound intensity) with respect to a reference quantity.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, electric motorcycles, and the like, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are considered electric vehicles. For purposes of the *California Electrical Code*, off-road, self-propelled electric vehicles, such as industrial trucks, hoists, lifts, transports, golf carts, airline ground support equipment, tractors, boats, and the like, are not included.

ELECTRIC VEHICLE CHARGING STATION(S) (EVCS)). One or more spaces intended for charging electric vehicles.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). The conductors, including the ungrounded, grounded, and equipment grounding conductors and the electric vehicle connectors, attachment plugs, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

ENERGY EQUIVALENT (NOISE) LEVEL (Leq). The level of a steady noise which would have the same energy as the fluctuating noise level integrated over the time of period of interest.

EXPRESSWAY. An arterial highway for through traffic which may have partial control of access, but which may or may not be divided or have grade separations at intersections.

FREEWAY. A divided arterial highway with full control of access and with grade separations at intersections.

GLOBAL WARMING POTENTIAL (GWP). The radiative forcing impact of one mass-based unit of a given greenhouse gas relative to an equivalent unit of carbon dioxide over a given period of time. Carbon dioxide is the reference compound with a GWP of one.

GLOBAL WARMING POTENTIAL VALUE (GWP VALUE). A 100-year GWP value published by the Intergovernmental Panel on Climate Change (IPCC) in either its Second Assessment Report (SAR) (IPCC, 1995); or its Fourth Assessment A-3 Report (AR4) (IPCC, 2007). The SAR GWP values are found in column "SAR (100-yr)" of Table 2.14.; the AR4 GWP values are found in column "100 yr" of Table 2.14.

HIGH-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that is: (a) a chlorofluorocarbon, a hdrochlorofluorocarbon, a hydrofluorocarbon, a perfluorocarbon, or any compound or blend of compounds, with a GWP value equal to or greater than 150, or (B) any ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009)**.**

LONG RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.5 times the pipe diameter.

LOW-GWP REFRIGERANT. A compound used as a heat transfer fluid or gas that: (A) has a GWP value less than 150, and (B) is not an ozone depleting substance as defined in Title 40 of the Code of Federal Regulations, Part 82, sec.82.3 (as amended March 10, 2009).

MERV. Filter minimum efficiency reporting value, based on ASHRAE 52.2–1999.

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base REactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundreths of a gram (g O^3/g ROC).

PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging).

PSIG. Pounds per square inch, guage.

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to ozone formation in the troposphere.

SCHRADER ACCESS VALVES. Access fittings with a valve core installed.

SHORT RADIUS ELBOW. Pipe fitting installed between two lengths of pipe or tubing to allow a change of direction, with a radius 1.0 times the pipe diameter.

SUPERMARKET. For the purposes of Section 5.508.2, a supermarket is any retail food facility with 8,000 square feet or more conditioned area, and that utilizes either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units.

VOC. A volatile organic compound broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

Note: Where specific regulations are cited from different agencies such as SCAQMD, ARB, etc., the VOC definition included in that specific regulation is the one that prevails for the specific measure in question.

SECTION 5.503 FIREPLACES

5.503.1 FIREPLACES. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace, or a sealed woodstove or pellet stove, and refer to residential requirements in the California Energy Code, Title 24, Part 6, Subchapter 7, Section 150. Woodstoves, pellet stoves and fireplaces shall comply with applicable local ordinances.

5.503.1.1 Woodstoves. Woodstoves and pellet stoves shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits.

SECTION 5.504 POLLUTANT CONTROL

5.504.1 TEMPORARY VENTILATION. The permanent HVAC system shall only be used during construction if necessary to condition the building or areas of addition or alteration within the required temperature range for material and equipment installation. If the HVAC system is used during construction, use return air filters with a Minimum Efficiency Reporting Value (MERV) of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992 Replace all filters immediately prior to occupancy, or, if the building is occupied during alteration, at the conclusion of construction.

5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

5.504.4 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.

5.504.4.1 Adhesives, sealants and caulks. Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:
1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products as specified in subsection 2, below.

2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

TABLE 5.504.4.1 - ADHESIVE VOC LIMIT[1,2]

Less Water and Less Exempt Compounds in Grams per Liter

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
INDOOR CARPET ADHESIVES	50
CARPET PAD ADHESIVES	50
OUTDOOR CARPET ADHESIVES	150
WOOD FLOORING ADHESIVES	100
RUBBER FLOOR ADHESIVES	60
SUBFLOOR ADHESIVES	50
CERAMIC TILE ADHESIVES	65
VCT & ASPHALT TILE ADHESIVES	50
DRYWALL & PANEL ADHESIVES	50
COVE BASE ADHESIVES	50
MULTIPURPOSE CONSTRUCTION ADHESIVES	70
STRUCTURAL GLAZING ADHESIVES	100
SINGLE-PLY ROOF MEMBRANE ADHESIVES	250
OTHER ADHESIVES NOT SPECIFICALLY LISTED	50
SPECIALTY APPLICATIONS	
PVC WELDING	510
CPVC WELDING	490
ABS WELDING	325
PLASTIC CEMENT WELDING	250
ADHESIVE PRIMER FOR PLASTIC	550
CONTACT ADHESIVE	80
SPECIAL PURPOSE CONTACT ADHESIVE	250
STRUCTURAL WOOD MEMBER ADHESIVE	140
TOP & TRIM ADHESIVE	250
SUBSTRATE SPECIFIC APPLICATIONS	
METAL TO METAL	30
PLASTIC FOAMS	50
POROUS MATERIAL (EXCEPT WOOD)	50
WOOD	30
FIBERGLASS	80

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168, www.arb.ca.gov/DRDB/SC/CURHTML/R1168.PDF

TABLE 5.504.4.2 - SEALANT VOC LIMIT

Less Water and Less Exempt Compounds in Grams per Liter

SEALANTS	CURRENT VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NONPOROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

NOTE: FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THESE TABLES, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

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STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	-
CHECKED	-
STATUS DATE	2025.12.23

CALGREEN STANDARDS

CG.3

DISCLAIMER:*THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

NONRESIDENTIAL MANDATORY MEASURES, SHEET 4 (July 2024 Supplement)

Y = YES
N/A = NOT APPLICABLE
RESPON. PARTY = RESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, OWNER, CONTRACTOR, INSPECTOR ETC.)

5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

5.504.4.3.1 Aerosol Paints and coatings. Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

TABLE 5.504.4.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[2,3]

GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	CURRENT VOC LIMIT
FLAT COATINGS	50
NONFLAT COATINGS	100
NONFLAT HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
BITUMINOUS ROOF PRIMERS	350
BOND BREAKERS	350
CONCRETE CURING COMPOUNDS	350
CONCRETE/MASONRY SEALERS	100
DRIVEWAY SEALERS	50
DRY FOG COATINGS	150
FAUX FINISHING COATINGS	350
FIRE RESISTIVE COATINGS	350
FLOOR COATINGS	100
FORM-RELEASE COMPOUNDS	250
GRAPHIC ARTS COATINGS (SIGN PAINTS)	500
HIGH-TEMPERATURE COATINGS	420
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[1]	120
MAGNESITE CEMENT COATINGS	450
MASTIC TEXTURE COATINGS	100
METALLIC PIGMENTED COATINGS	500
MULTICOLOR COATINGS	250
PRETREATMENT WASH PRIMERS	420
PRIMERS, SEALERS, & UNDERCOATERS	100
REACTIVE PENETRATING SEALERS	350
RECYCLED COATINGS	250
ROOF COATINGS	50
RUST PREVENTATIVE COATINGS	250
SHELLACS:	
CLEAR	730
OPAQUE	550
SPECIALTY PRIMERS, SEALERS & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:
1. Manufacturer's product specification
2. Field verification of on-site product containers

5.504.4.4 Carpet Systems.
All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers." Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers,"Version 1.2, January 2017 (Emission testing method for California Specifications 01350).

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.

5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the buildings shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.). Those materials not exempted under the ATCM must meet the specified emission limits, as shown in Table 5.504.4.5.

5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:
1. Product certifications and specifications.
2. Chain of custody certifications.
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.
5. Other methods acceptable to the enforcing agency.

TABLE 5.504.4.5 - FORMALDEHYDE LIMITS[1]

MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, AIR TOXICS CONTROL MEASURE FOR COMPOSITE WOOD AS TESTED IN ACCORDANCE WITH ASTM E 1333. FOR ADDITIONAL INFORMATION, SEE CALIFORNIA CODE OF REGULATIONS, TITLE 17, SECTIONS 93120 THROUGH 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16 INCHES (8 MM).

5.504.4.6 Resilient flooring systems. Where resilient flooring is installed, at least 80 percent of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health,"Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specifications 01350)

See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.

5.504.4.7 Thermal insulation
Comply with the requirements of the California Department of Public Health, "Standard Method of the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, "Version 1.2, January 2017 (Emission testing method for California Specification 01350).
See California Department of Public Health's website for certification programs and testing labs.
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx#material

5.504.4.7.1 Verification of compliance.
Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.

5.504.4.8 Acoustical ceiling and wall panels.
Comply with the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, " Version 1.2, January 2017 (Emission testing method for California Specification 01350).
See California Department of Public Health's website for certification programs and testing labs.

5.504.4.8.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits.

5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

Exceptions: Existing mechanical equipment.

5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

5.504.7 ENVIRONMENTAL TOBACCO SMOKE (ETS) CONTROL. Where outdoor areas are provided for smoking, prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University, or campus of the University of California, whichever are more stringent. When ordinances, regulations or policies are not in place, post signage to inform building occupants of the prohibitions.

SECTION 5.505 INDOOR MOISTURE CONTROL

5.505.1 INDOOR MOISTURE CONTROL. Buildings shall meet or exceed the provisions of California Building Code, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures, see Section 5.407.2 of this code.

SECTION 5.506 INDOOR AIR QUALITY

5.506.1 OUTSIDE AIR DELIVERY. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements For Ventilation) of the *California Energy Code*, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

5.506.2 CARBON DIOXIDE (CO_2) MONITORING. For buildings or additions equipped with demand control ventilation, CO_2 sensors and ventilation controls shall be specified and installed in accordance with the requirements of the California Energy Code, Section 120(c)(4).

5.506.3 Carbon dioxide (CO2) monitoring in classrooms.
(DSA-SS) Each public K-12 school classroom, as listed in Table 120.1-A of the *California Energy Code*, shall be equipped with a carbon dioxide monitor or sensor that meets the following requirements:
1. The monitor or sensor shall be permanently affixed in a tamper-proof manner in each classroom between 3 and 6 feet (914 mm and 1829 mm) above the floor and at least 5 feet (1524 mm) away from door and operable windows.
2. When the monitor or sensor is not integral to an Energy Management Control System (EMCS), the monitor or sensor shall display the carbon dioxide readings on the device. When the sensor is integral to an EMCS, the carbon dioxide readings shall be available to and regularly monitored by facility personnel.
3. A monitor shall provide notification though a visual indicator on the monitor when the carbon dioxide levels in the classroom have exceeded 1,100ppm. A sensor integral to an EMCS shall provide notification to facility personnel through a visual and/or audible indicator when the carbon dioxide levels in the classroom have exceeded 1,100ppm.
4. The monitor or sensor shall measure carbon dioxide levels at minimum 15- minute intervals and shall maintain a record of previous carbon dioxide measurements of not less than 30 days duration.
5. The monitor or sensor used to measure carbon dioxide levels shall have the capacity to measure carbon dioxide levels with a range of 400ppm to 2000ppm or greater.
6. The monitor or sensor shall be certified by the manufacturer to be accurate within 75ppm at 1,000ppm carbon dioxide concentration and shall be certified by the manufacturer to require calibration no more frequently than once every 5 years.

SECTION 5.507 ENVIRONMENTAL COMFORT

5.507.4 ACOUSTICAL CONTROL. Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413, or Outdoor-Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

Exception: [DSA-SS] For public schools and community colleges, the requirements of this section and all subsections apply only to new construction.

5.507.4.1 Exterior noise transmission, prescriptive method. Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL noise contour of an airport.

Exceptions:

1. L_{dn} or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
2. L_{dn} or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

2. Within the 65 CNEL or L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

5.507.4.1.1. Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L_{eq} - 1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

5.507.4.2 Performance Method. For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (Leq-1Hr) of 50 dBA in occupied areas during any hour of operation.

5.507.4.2.1 Site Features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

5.507.4.2.2 Documentation of Compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Note: Examples of assemblies and their various STC ratings may be found at the California Office of Noise Control: www.toolbase.org/PDF/CaseStudies/stc_icc_ratings.pdf.

SECTION 5.508 OUTDOOR AIR QUALITY

5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

5.508.1.1 Chlorofluorocarbons (CFCs). Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

5.508.1.2 Halons. Install HVAC, refrigeration and fire suppression equipment that do not contain Halons.

5.508.2 Supermarket refrigerant leak reduction. New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities.

Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO_2), and potentially other refrigerants.

5.508.2.1 Refrigerant piping. Piping compliant with the California Mechanical Code shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below.

5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the compressor rack.

5.508.2.1.2 Copper pipe. Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less.

5.508.2.1.2.1 Anchorage. One-fouth-inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils.

5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil.

Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations.

5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows.

5.508.2.2 Valves. Valves Valves and fittings shall comply with the *California Mechanical Code* and as follows.

5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve.

5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve.

5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use.

5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic.

5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place.

5.508.2.2.2.2.1 Chain tethers. Chain tethers to fit ovr the stem are required for valves designed to have seal caps.

Exception: Valves with seal caps that are not removed from the valve during stem operation.

5.508.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances.

5.508.2.3.1 Coil coating. Consideration shall be given to the heat transfer efficiency of coil coating to maximize energy efficiency.

5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device tha indicates the level of refrigerant in the receiver.

5.508.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging.

5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum.

5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge.

5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge.

5.508.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging.

5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes.

5.508.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes.

5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and responsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems. Examples of acceptable HVAC training and certification programs include but are not limited to the following:

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

Notes:

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

[BSC-CG] When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition, the special inspector shall have a certification from a recognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency.

Note: Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.

703 VERIFICATIONS

703.1 DOCUMENTATION. Documentation used to show compliance with this code shall include but is not limited to, construction documents, plans, specifications, builder or installer certification, inspection reports, or other methods acceptable to the enforcing agency which demonstrate substantial conformance. When specific documentation or special inspection is necessary to verify compliance, that method of compliance will be specified in the appropriate section or identified applicable checklist.

r · g · a
architecture + engineering
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New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St.
SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
STATE OF CALIFORNIA
Matt Callaway
REN. 02/28/2025

RGA PROJECT #	24-459
DRAWN	-
CHECKED	-
STATUS DATE	2025.12.23

CALGREEN STANDARDS

CG.4

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitary and senior living facilities.	
Project Name: MacArthur St. Properties	**Report Page:** (Page 1 of 7)
Project Address:	**Date Prepared:** 2025-12-04T12:57:30-05:00

A. GENERAL INFORMATION

01	Project Location (city)	Sonoma	04	Total Conditioned Floor Area (ft²)	0
02	Climate Zone	2	05	Total Unconditioned Floor Area (ft²)	24,000
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1
● Warehouse					

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft²)	Calculation Method	Area (ft²)
☒ New Lighting System	N/A	0	Complete Building Method	24000
☐ New Lighting System - Parking Garage	N/A	0	N/A	0
Total Area of Work (ft²)			24000	

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 2 of 7)
	Date Prepared: 2025-12-04T12:57:30-05:00

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 /170.2(e)	Allowed Lighting Power per 140.6(b) /170.2(e) (Watts)						Adjusted Lighting Power per 140.6(a) /170.2(e) (Watts)				Compliance Results
	01	02	03	04	05		06	07	08		09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 /170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 /170.2(e)4B (+)	**Total Allowed** (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 /170.2(e)1B (-)	**Total Adjusted** (Watts) *Includes Adjustments		**05 must be >= 08 140.6 /170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)			(See Table F)	(See Table P)			
Conditioned					=	≥			=		
Unconditioned	14,400				= 14,400	≥	11,306		= 11306		COMPLIES
Controls Compliance (See Table H for Details)											COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)											

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 3 of 7)
	Date Prepared: 2025-12-04T12:57:30-05:00

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change [1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
F1	High Bay LED with field installed motion sensor	No	NA	165	Mfr. Spec	60	No	9,900	☐	☐
F3	Combo fan/light ceiling mount	No	NA	20	Mfr. Spec	1	No	20	☐	☐
Exit	Exit/ emergency light LED light with 90 minute battery back-up 277v red letters	No	NA	3	Mfr. Spec	7	Exempt	---	☐	☐
Total Designed Watts: UNCONDITIONED SPACES								11,306		

[1]*FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B /170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.*

[2]*Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) /160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.*

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 4 of 7)
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H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Field Inspector	
		Pass	Fail
NA < 4,000W subject to multilevel	See Area/Space Level Controls	☐	☐

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) /160.5(b)4A	Multi-Level Controls 130.1(b) /160.5(b)4B	Shut-Off Controls 130.1(c) //160.5(b)4C	Primary/Sky lit Daylighting 130.1(d) /160.5(b)4D	Secondary Daylighting 130.1(d) /160.5(b)4D	Interlocked Systems 140.6(a)1/170.2(e)2A	Field Inspector	
								Pass	Fail
Building	Industrial/Manufacturing Facility	Readily Accessible	NA: General Ltg <= 0.5W/SF	Occupancy Sensor	NA: Not daylit zone	NA: Not daylit zone	No	☐	☐
								13	
								Plan Sheet Showing Daylit Zones:	

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft²)	Area (ft²)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Building	Industrial/Manufacturing Facility	0.6	24,000	14,400	No	No

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 5 of 7)
	Date Prepared: 2025-12-04T12:57:30-05:00

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

TOTALS:	24,000	14,400	See Tables J, or P for detail

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 6 of 7)
	Date Prepared: 2025-12-04T12:57:30-05:00

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selections have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selections have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls.	Building

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE	NRCC-LTI-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 7 of 7)
Project Address:	**Date Prepared:** 2025-12-04T12:57:30-05:00

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Maria Davila	Documentation Author Signature:
Company: RGA	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Clint Petersen	Responsible Designer Signature:
Company: RGA	Date Signed:
Address:	License:
City/State/Zip:	Phone:

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RUSSELL, GALLAWAY ASSOCIATES inc.
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CHICO, CA 95928
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New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT · BRADLEY A. GALLAWAY · REN. 02/28/27 · STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

ENERGY COMPLIANCE SHEET

EC-1

Indoor Lighting Mandatory Measures:
110.9 LIGHTING CONTROLS AND COMPONENTS ALL LIGHTING CONTROL DEVICES AND SYSTEMS, AND ALL LIGHT SOURCES SHALL MEET THE APPLICABLE REQUIREMENTS OF 110.9.
NOTE: THE EXCEPTED SPACES DO NOT COUNT TOWARDS THE 10,000 FT2 THRESHOLD.
130.0 GENERAL LUMINAIRE REQUIREMENTS ALL LUMINAIRES SHALL BE FACTORY-LABELLED PER 130.0(c). ENERGY MANAGEMENT CONTROL SYSTEMS (EMCS) SHALL MEET REQUIREMENTS OF 130.0(e).
130.1(a) MANUAL AREA CONTROLS EACH ROOM OR AREA WITH FLOOR-TO-CEILING WALLS IN THIS BUILDING SHALL HAVE LIGHTING CONTROLS THAT ALLOW LIGHTING TO BE MANUALLY TURNED ON AND OFF MANUAL CONTROLS SHALL:
1. BE READILY ACCESSIBLE
2. BE LOCATED IN THE SAME ENCLOSED AREA WITH THE LIGHTING IT CONTROLS.
3. PROVIDE SEPARATE CONTROL OF GENERAL, FLOOR, WALL, WINDOW CASE DISPLAY, ORNAMENTAL AND SPECIAL EFFECTS LIGHTING SO EACH TYPE CAN BE TURNED ON AND OFF SEPARATELY WITHOUT AFFECTING OTHER LIGHTING OR EQUIPMENT.
130.1(c): SHUTOFF CONTROLS ALL INSTALLED INDOOR LIGHTING SHALL BE EQUIPPED WITH CONTROLS TO AUTOMATICALLY REDUCE LIGHTING POWER WHEN SPACE IS TYPICALLY UNOCCUPIED.
130.1(c)1: CONTROL REQUIREMENTS ALL INSTALLED INDOOR LIGHTING SHALL HAVE ALL OF THE FOLLOWING: A. CONTROL(S) CAPABLE OF AUTOMATICALLY SHUTTING OFF ALL LIGHTING IN THE SPACE WHEN TYPICALLY UNOCCUPIED (OCCUPANT SENSING CONTROL, AUTOMATIC TIME-SWITCH CONTROL, OR OTHER) B. SEPARATE CONTROLS FOR LIGHTING ON EACH FLOOR (OTHER THAN STAIRWELLS)
C. SEPARATE CONTROLS FOR A SPACE ENCLOSED BY CEILING HEIGHT PARTITIONS NOT EXCEEDING 5,000 FT2
130.1(c)6 PARTIAL OR FULL-OFF OCCUPANT SENSORS PROVIDE PARTIAL OR FULL-OFF OCCUPANT SENSORS, IN ADDITION TO SHUTOFF CONTROLS PER 130.1(c)1 AND 130.1(c)2, IN THE FOLLOWING SPACES: • AISLE WAYS AND OPEN AREAS IN WAREHOUSES • LIBRARY BOOK STACK AISLES • CORRIDORS AND STAIRWELLS • OFFICES GREATER THAN 250 SQ. FT.

Indoor Lighting Mandatory Measures:
130.1(f) CONTROL INTERACTIONS EACH LIGHTING CONTROL INSTALLED TO MEET 130.1 REQUIREMENTS SHALL INCORPORATE THE FUNCTIONS OF OTHER LIGHTING CONTROLS REQUIRED BY THIS SECTION.
1. FOR GENERAL LIGHTING, MANUAL AREA CONTROL SHALL PERMIT THE LEVEL OF LIGHT PROVIDED WHILE LIGHTING IS ON TO BE SET OR ADJUSTED BY CONTROLS SPECIFIED IN 130.1(b), (c), (d) and (e).
2. MANUAL AREA CONTROL SHALL PERMIT SHUTOFF CONTROL TO TURN THE LIGHTING DOWN OR OFF.
3. MULTILEVEL CONTROL SHALL PERMIT THE AUTOMATIC DAYLIGHTING CONTROL TO ADJUST ELECTRIC LIGHTING IN RESPONSE TO DAYLIGHT.
4. MULTILEVEL CONTROL SHALL PERMIT THE DEMAND RESPONSIVE (DR) CONTROL TO ADJUST LIGHTING DURING A DR EVENT THEN RETURN IT TO THE LEVEL SET BY THE CONTROL AFTER THE EVENT.
5 SHUTOFF CONTROL SHALL PERMIT THE MANUAL AREA CONTROL TO TURN THE LIGHTING ON.
6. AUTOMATIC DAYLIGHTING CONTROL SHALL PERMIT MULTILEVEL LIGHTING CONTROL TO ADJUST THE LIGHTING LEVEL.
7. FOR LIGHTING CONTROLLED BY MULTILEVEL LIGHTING CONTROLS AND OCCUPANT SENSING CONTROLS THAT PROVIDE AUTOMATIC-ON FUNCTION, CONTROLS SHALL PROVIDE A PARTIAL-ON FUNCTION THAT IS CAPABLE OF AUTOMATICALLY ACTIVATING BETWEEN 50-70% OF CONTROLLED LIGHTING POWER.
8. RESERVED
9. FOR SPACE CONDITIONING SYSTEM ZONES SERVING ONLY SPACES THAT ARE REQUIRED TO HAVE OCCUPANT SENSING CONTROLS SHALL BE CONTROLLED BY OCCUPANCY SENSING CONTROLS.

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ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
MATTHEW B. GALLAWAY
REN. 02/26
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

ENERGY COMPLIANCE SHEET

EC-2

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
This document is used to demonstrate compliance with requirements in 110.9, 130.0, 130.2, 140.7, and 141.0(b)2I for outdoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e)6, 180.1(a) and 180.2(b)4Bv for outdoor lighting scopes using the prescriptive path for multifamily and mixed-use occupancies. Multifamily includes dormitory and senior living facilities.	
Project Name: MacArthur St. Properties	**Report Page:** (Page 1 of 7)
Project Address:	**Date Prepared:** 2025-12-04T18:34:26-05:00

A. GENERAL INFORMATION

01	Project Location (city)	Sonoma	04	Total Illuminated Hardscape Area (ft²)	76800
02	Climate Zone	2			
03	Outdoor Lighting Zone per Title 24 Part 1 10.114 or as designated by Authority Having Jurisdiction (AHJ):				
☐	LZ-0: Very Low - Undeveloped Parkland	☐ LZ-2: Moderate - Urban Clusters		☐ LZ-4: High - Must be reviewed by CA Energy Commission for Approval	
☒	LZ-1: Low - Rural Areas	☐ LZ-3: Moderately High - Urban Areas			
05	Occupancy Types within Project				
• Warehouse					

B. PROJECT SCOPE

This table includes outdoor lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv for alterations.

My Project Consists of:

01	02		
☒ New Lighting System	Must Comply with Allowances from 140.7 / 170.2(e)6		
☐ Altered Lighting System	Is your alteration increasing the connected lighting load (Watts)?	○ Yes	○ No
03	04	05	
% of Existing Luminaires Being Altered[1]	Sum Total of Luminaires Being Added or Altered	Calculation Method	
☐ < 10% ☐ >= 10% and < 50% ☐ >= 50%			

Please proceed to Table F. Outdoor Lighting Fixture Schedule to define the project's luminaires.

[1] FOOTNOTES: % of Existing Luminaires Being Altered = (Sum Total of Luminaires Being Added or Altered / Existing Luminaires within the Scope of the Permit Application) x 100.

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 2 of 7)
	Date Prepared: 2025-12-04T18:34:26-05:00

C. COMPLIANCE RESULTS

Results in this table are automatically calculated from data input and calculations in Tables F through N. Note: If any cell on this table says "COMPLIES with Exceptional Conditions" refer to Table D. Exceptional Conditions for guidance or see applicable Table referenced below.

Calculations of Total Allowed Lighting Power (Watts) 140.7 / 170.2(e)6 or 141.0(b)2L / 180.2(b)4Bv | **Compliance Results**

01		02		03		04		05		06		07		08	09
General Hardscape Allowance 140.7(d)1 / 170.2(e)6 (See Table I)	+	Per Application 140.7(d)2 / 170.2(e)6 (See Table J)	+	Sales Frontage 140.7(d)2 (See Table K)	+	Ornamental 140.7(d)2 / 170.2(e)6 (See Table L)	+	Per Specific Area 140.7(d)2 / 170.2(e)6 (See Table M)	OR	Existing Power Allowance 141.0(b)2L / 180.2(b)4Bv (See Table N)	=	**Total Allowed** (Watts)	≥	**Total Actual** (Watts)	**07 must be >= 08**
1,462	+	---	+	---	+	---	+	---	OR	---	=	1,462	≥	1,386	COMPLIES
Shielding Compliance (See Table G for Details)															N/A
Controls Compliance (See Table H for Details)															COMPLIES

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 3 of 7)
	Date Prepared: 2025-12-04T18:34:26-05:00

F. OUTDOOR LIGHTING FIXTURE SCHEDULE

For new or altered lighting systems demonstrating compliance with 140.7 / 170.2(e)6 all new luminaires being installed and any existing luminaires remaining or being moved within the spaces covered by the permit application are included in the Table below. For altered lighting systems using the Existing Power method per 141.0(b)2L only new luminaires being installed and replacement luminaires being installed as part of the project scope are included (ie, existing luminaires remaining or existing luminaires being moved are not included). Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

Designed Wattage:

01	02		03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description		Watts per luminaire[1, 2]	How is Wattage determined	Total Number Luminaires [2]	Luminaire Status[3]	Excluded per 140.7(a) / 170.2(e)6A	Design Watts	Cutoff Req: > 6,200 initial lumen output 130.2(b) /160.5(c)1 [4]	Field Inspector	
										Pass	Fail
F2	Exterior sconce wall mount w/ bi-level motion sensor	☐ Linear	77	Mfr. Spec	18	New	☐	1,386	NA: Facade, monument, statue, bridge, public art	☐	☐
							Total Design Watts:	1386			

* NOTES: Selections with a * require a note in the space below explaining how compliance is achieved.
EX: Luminaire is lighting a statue; EXCEPTION 2 to 130.2(b)

[1] FOOTNOTES: Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b)
[2] For linear luminaires, wattage should be indicated as W/lf instead of Watts/luminaire. Total linear feet should be indicated in column 05 instead of number of luminaires.
[3] Select "New" for new luminaires in a new outdoor lighting project, or for added luminaires in an alteration. Select "Altered" for replacement luminaires in an alteration. Select "Existing to Remain" for existing luminaires within the project scope that are not being altered and are remaining. Select "Existing Reinstalled" for existing luminaires which are being removed and reinstalled as part of the project scope.
[4] Compliance with mandatory shielding requirements is required for luminaires with initial lumen output >= 6,200 unless exempted by 130.2(b)/ 160.5(c)

G. SHIELDING REQUIREMENTS (BUG)

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 4 of 7)
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H. OUTDOOR LIGHTING CONTROLS

This table demonstrates compliance with controls requirements for all new or altered luminaires installed as part of the permit application. For alteration projects, luminaires which are existing to remain (ie untouched) and luminaires which are removed and reinstalled (wiring only) do not need to be included in this table even if they are within the spaces covered by the permit application.
Outdoor lighting for nonresidential buildings, parking garages and common service areas in multifamily buildings must be documented separately from outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit

Mandatory Controls for Nonresidential Occupancies, Parking Garages & Common Areas in Multifamily Buildings

01	02	03	04	05	
Area Description	Shut-Off 130.2(c)1 / 160.5(c)	Auto-Schedule 130.2(c)2 / 160.5(c)	Motion Sensor 130.2(c)3 / 160.5(c)	Field Inspector	
				Pass	Fail
Hardscape: "F2"	Astronomical Timer	Provided	Provided	☐	☐

[1] FOOTNOTE: Text has been abbreviated, please refer to Table 160.5-A to confirm compliance with the specific light source technologies listed.
[2] Authority having jurisdiction may ask for cutsheets or other documentation to confirm compliance of light source.
[3] Recessed luminaires marked for use in fire-rated installations, and recessed luminaires installed in non-insulated ceilings are excepted from ii and iii.

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 5 of 7)
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I. LIGHTING POWER ALLOWANCE (per 140.7 /170.2(e))

This table includes areas using allowance calculations per 140.7 /170.2(e). General Hardscape Allowance is per Table 140.7-A/Table 170.2-R while "Use it or lose it" Allowances are per Table 140.7-B /Table 170.2-S. Indicate which allowances are being used to expand sections for user input. Luminaires that qualify for one of the "Use it or lose it" allowances shall not qualify for another "Use it or lose it" allowance.
Outdoor lighting attached to multifamily buildings and controlled from the inside of a dwelling unit are included in Table H. and are not included here. All other multifamily outdoor lighting is included here.

	01				
	"Use it or lose it" Allowance (select all that apply) (select all that apply)				
☒ General Hardscape Allowance Table I (below)	☐ Per Application Table J	☐ Sales Frontage Table K	☐ Ornamental Table L	☐ Per Specific Area Table M	

Calculated General Hardscape Lighting Power Allowance per Table 140.7-A for Nonresidential & Hotel/Motel

02	03	04	05	06	07	08	09
Area Description	Area Wattage Allowance (AWA)			Linear Wattage Allowance (LWA)			Total General AWA + LWA (Watts)
	Illuminated Area (ft²)	Allowed Density (W/ft²)	Area Allowance (Watts)	Perimeter Length (lf)	Allowed Density (W/lf)	Linear Allowance (Watts)	
Hardscape	76800	0.016	1228.8	640	0.13	83.2	1312
Initial Wattage Allowance for Entire Site (Watts):							150
Instances of Initial Wattage Allowance (LZ 0 only)[1]							
Total General Hardscape Allowance (Watts):							1462

J. LIGHTING ALLOWANCE: PER APPLICATION

This section does not apply to this project.

K. LIGHTING ALLOWANCE: SALES FRONTAGE

This section does not apply to this project.

L. LIGHTING ALLOWANCE: ORNAMENTAL

This section does not apply to this project.

CERTIFICATE OF COMPLIANCE	NRCC-LTO-E
Project Name: MacArthur St. Properties	**Report Page:** (Page 6 of 7)
	Date Prepared: 2025-12-04T18:34:26-05:00

M. LIGHTING ALLOWANCE: PER SPECIFIC AREA

This section does not apply to this project.

N. EXISTING CONDITIONS POWER ALLOWANCE (alterations only)

This section does not apply to this project.

O. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online

Form/Title
NRCI-LTO-E - Must be submitted for all buildings

P. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Selections have been made based on information provided in this document. If any selection has been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

Form/Title	Systems/Spaces To Be Field Verified
NRCA-LTO-02-A - Must be submitted for all outdoor lighting controls except for alterations where controls are added to <= 20 luminaires.	Hardscape: "F2"

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ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT — Matt Gallaway — RENEWAL 08/31/2027 — STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

ENERGY COMPLIANCE SHEET

EC-3

Outdoor Lighting Mandatory Measures:
110.9 OUTDOOR LIGHTING CONTROLS AND COMPONENTS ALL LIGHTING CONTROL DEVICES AND SYSTEMS, AND ALL LIGHT SOURCES SHALL MEET THE APPLICABLE REQUIREMENTS OF 110.9.
130.0 GENERAL LUMINAIRE REQUIREMENTS ALL LUMINAIRES SHALL BE FACTORY-LABELLED PER 130.0(c). ENERGY MANAGEMENT CONTROL SYSTEMS (EMCS) SHALL MEET REQUIREMENTS OF 130.0(e).
130.2(c) CONTROLS FOR OUTDOOR LIGHTING ALL OUTDOOR LIGHTING SHALL BE INDEPENDENTLY CONTROLLED FROM OTHER ELECTRICAL LOADS AND SHALL HAVE THE FOLLOWING FEATURES:
1. AUTOMATICALLY TURNS OFF OUTDOOR LIGHTING WHEN DAYLIGHT IS AVAILABLE
2. AUTOMATIC SCHEDULING CONTROLS A. AUTOMATIC SCHEDULING CONTROLS SHALL BE INSTALLED FOR ALL OUTDOOR LIGHTING. B. CAPABLE OF REDUCING LIGHTING POWER AT LEAST 50% AND NO MORE THAN 90% AND SEPARATELY CAPABLE OF TURNING LIGHTING OFF DURING UNOCCUPIED PERIODS C. THAT ALLOW SCHEDULING OF AT LEAST TWO NIGHTTIME PERIODS WITH INDEPENDENT LIGHTING LEVELS (MAY INCLUDE OVERRIDE FOR NO MORE THAN 2 HOURS)
3. MOTION SENSING CONTROLS A. SHALL BE INSTALLED FOR THE FOLLOWING AND MAY BE INSTALLED FOR OTHER OUTDOOR LIGHTING AND IN COMBINATION WITH OTHER OUTDOOR LIGHTING CONTROLS: (i) ORNAMENTAL HARDSCAPE, OUTDOOR DINING, OR OUTDOOR SALES FRONTAGE LIGHTING MOUNTED 24 FT ABOVE GRADE OR LOWER (ii)WALL MOUNTED LUMINAIRES INSTALLED FOR BUILDING FACADE, ORNAMENTAL HARDSCAPE, OUTDOOR DINING LIGHTING THAT HAVE A BILATERALLY SYMMETRIC DISTRIBUTION (AS DESCRIBED IN THE IES HANDBOOK) MOUNTED 24 FEET OR LESS ABOVE GRADE B. CAPABLE OF REDUCING LIGHTING POWER AT LEAST 50% AND NO MORE THAN 90% AND SEPARATELY CAPABLE OF TURNING LIGHTING OFF DURING UNOCCUPIED PERIODS C. CAPABLE OF DIMMING OR TURNING OFF LIGHTING NO LONGER THAN 15 MINUTES AFTER AREA IS VACATED AND TURNING LIGHTING ON WHEN AREA BECOMES OCCUPIED D. SINGLE SENSORS CAN CONTROL NO MORE THAN 1,500 WATTS OF LIGHTING POWER

r · g · a
architecture + engineering

RUSSELL, GALLAWAY ASSOCIATES inc.

115 MEYERS STREET
SUITE 110
CHICO, CA 95928
530 342 0302

www.rgachico.com

New Warehouse Shell Building

OWNER
MacArthur St. Properties

PROJECT ADDRESS
1201 East MacArthur St. SONOMA, CA 95476

ASSESSORS PARCEL NUMBER
128-121-038

LICENSED ARCHITECT
STATE OF CALIFORNIA

RGA PROJECT #	24-459
DRAWN	DR
CHECKED	RGA
STATUS DATE	2025.12.23

ENERGY COMPLIANCE SHEET

EC-4

VP BUILDINGS
VARCO PRUDEN

a division of BlueScope Buildings North America, Inc.

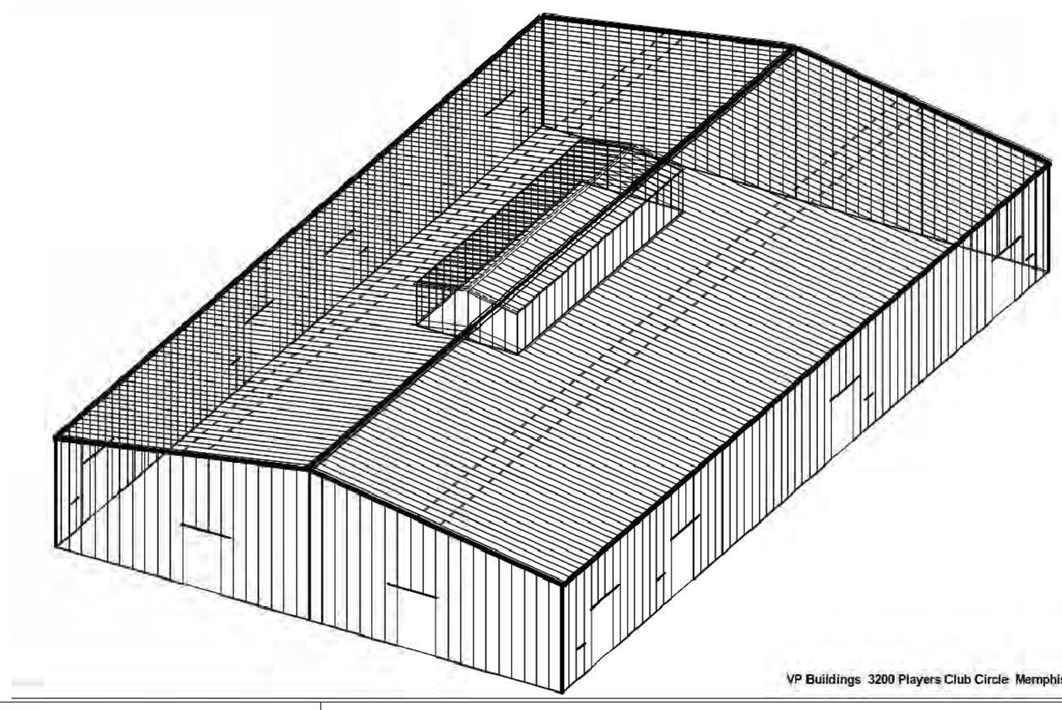
DRAWING INDEX	
DRAWING TITLE	PAGES
Cover Sheet	1
Codes and Loads	2
Notes	3
Anchor Rod Plan	4-5
Primary Structural	6-18
Secondary Structural	19-34
Covering	35-49
Special Drawings	-
Standard Erection Details	5,18,21-22,32-34 45-49
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DRAWING RELEASE HISTORY		
TYPE	DATE	DESCRIPTION
Permit Drawings	09/27/2019	PERMIT SET- For Building Dept. Approval
Anchor Rod Drawings Rev 0	09-30-2019	Anchor Rod Drawings For Construction
ERECTION DRAWINGS	10/18/2019	FOR CONSTRUCTION
ERECTION DRAWINGS Rev 1 (PAGES 41,42,43,44)	10/23/2019	FOR CONSTRUCTION

BASIC ERECTION GUIDE 4001

BASIC PANELS AND ACCESSORIES ERECTION GUIDE 4003

SSR ROOF PANEL ERECTION GUIDE 4005



VP Buildings 3200 Players Club Circle Memphis TN 38125

GENERAL NOTES

MATERIALS

	ASTM DESIGNATION	
3 PLATE WELDED SECTIONS	A529, A572, A1011, A1018	GRADE 55
COLD FORMED LIGHT GAGE SHAPES	A653, A1011	GRADE 60
BRACE RODS	A572, A510	GRADE 50
HOT ROLLED MILL SHAPES	A36, A529, A572, A588, A992	GRADE 36 OR 50
HOT ROLLED ANGLES	A529, A572, A588, A992	GRADE 50
HOLLOW STRUCTURAL SECTION (HSS)	A500	GRADE B
CLADDING	A653, A792	GRADE 50 OR GRADE 80

HIGH STRENGTH BOLT TIGHTENING REQUIREMENTS

IT IS THE RESPONSIBILITY OF THE ERECTOR TO ENSURE PROPER BOLT TIGHTNESS IN ACCORDANCE WITH APPLICABLE REGULATIONS. SEE RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH STRENGTH BOLTS FOR MORE INFORMATION. SEE ERECTION GUIDE FOR BOLT TIGHTENING INSTRUCTIONS. THE FOLLOWING CRITERIA MAY BE USED TO DETERMINE THE BOLT TIGHTNESS (I.E.-SNUG TIGHT OR PRE-TENSION) UNLESS REQUIRED OTHERWISE BY LOCAL JURISDICTION OR CONTRACT.

ALL A490 BOLTS SHALL BE "PRE-TENSIONED". A325 BOLTS IN PRIMARY FRAMING AND BRACING CONNECTIONS MAY BE "SNUG-TIGHT" EXCEPT AS FOLLOWS;

PRE-TENSION A325 BOLTS IF BUILDING SUPPORTS A CRANE GREATER THAN 5 TON CAPACITY.

PRE-TENSION A325 BOLTS IF BUILDING SUPPORTS MACHINERY THAT CREATES VIBRATION, IMPACT, OR STRESS REVERSALS ON CONNECTIONS.

PRE-TENSION A325 BOLTS IF LOCATED IN HIGH SEISMIC AREAS. FOR IBC BASED CODES; HIGH SEISMIC IS DESIGN CATEGORY D, E OR F. SEE CODES AND LOADS SECTION BELOW FOR DETAILS.

PRE-TENSION ANY CONNECTION WITH DESIGNATION A325-SC. SLIP CRITICAL (SC) CONNECTIONS MUST BE FREE OF PAINT, OIL OR OTHER MATERIALS THAT REDUCE FRICTION AT CONTACT SURFACES. GALVANIZED OR LIGHTLY RUSTED SURFACES ARE ACCEPTABLE.

IN CANADA, ALL A325 AND A490 BOLTS SHALL BE "PRE-TENSIONED", EXCEPT FOR SECONDARY MEMBERS AND FLANGE BRACES.

SECONDARY MEMBERS AND FLANGE BRACE CONNECTIONS ARE ALWAYS "SNUG TIGHT", UNLESS INDICATED OTHERWISE IN ERECTION DRAWING DETAILS.

INSPECTION AND TESTING

SPECIAL INSPECTIONS AND TESTING REQUIRED BY AUTHORITY HAVING JURISDICTION (AHJ) DURING CONSTRUCTION AND/OR STEEL FABRICATION IS THE RESPONSIBILITY OF THE OWNER OR OWNERS AUTHORIZED AGENT. WHEN REQUIRED, THE OWNER SHALL EMPLOY A QUALITY ASSURANCE AGENCY (QAA) APPROVED BY THE AHJ. THE BUILDER IS RESPONSIBLE TO COORDINATE BETWEEN THE QAA FIRM AND BBNA FABRICATION FACILITIES. THE TYPE AND EXTENT OF SPECIAL INSPECTIONS AND NDT WELD TESTING MUST BE SPECIFICALLY STIPULATED IN CONTRACT DOCUMENTS OR BBNA WILL ASSUME SPECIAL INSPECTIONS AND/OR NDT TESTING ARE WAIVED AS PERMITTED BY THE BUILDING CODE BASED ON BBNA FACILITIES IAS AC472 ACCREDITATION.

NOTE:
1. Collateral loads should be uniformly distributed on primary and secondary members. The recommended method of load attachment to a purlin's web or flange can be found on B-081465 Planograph.

2. Partition girts cannot be removed without approval from BSBNA engineering.

Approved 10.21.19
by Dalila Bryan
Pages 1-54

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C62080 CIVIL STATE OF CALIFORNIA

6/9/2025

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CAN/CSA A660 QUASAR Certified

IAS ACCREDITED AC 472

D

COVER SHEET

BUILDER	Seegert Construction		JOBNO 19-013032-01
CUSTOMER		VP BUILDINGS VARCO PRUDEN	DATE 6/9/2025
LOCATION	Sonoma, California		DRAWN / CHECK MS
PROJECT	Macarthur Street Properties Phase 1		PAGE 1
BUILDERS PO#		VPC VERSION: 2019.1a	
FILENAME	Macarthur Street Properties Phase 1 Preliminary Design-rb1_v_12		

Building Systems by BlueScope Buildings North America, Inc.

Codes and Loads
WHEN MULTIPLE BUILDINGS ARE INVOLVED, SPECIFIC LOAD FACTORS FOR DIFFERING OCCUPANCIES, BUILDING DIMENSIONS,
HEIGHTS, FRAMING SYSTEMS, ROOF SLOPES, ETC., MAY RESULT IN DIFFERENT LOAD APPLICATION FACTORS THAN
INDICATED BELOW. SEE CALCULATIONS FOR FURTHER DETAILS. WIND LOADS ARE APPLIED TO OVERALL BUILDING ENVELOPE.
COMMON WALLS BETWEEN CONNECTED SHAPES ARE NOT SUBJECT TO EXTERNAL WIND LOADS.
City: Sonoma County: Sonoma State: California Country: United States

Building Code
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 10AISC - ASD Rainfall: I: 4.00 inches per hour
Cold Form: 12AISI - ASD f'c: 3000.01 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf

Material Dead Weight
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):3.00 psf - USR

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph
The 'Envelope Procedure' is Used
Wind Exposure: C - Kz: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

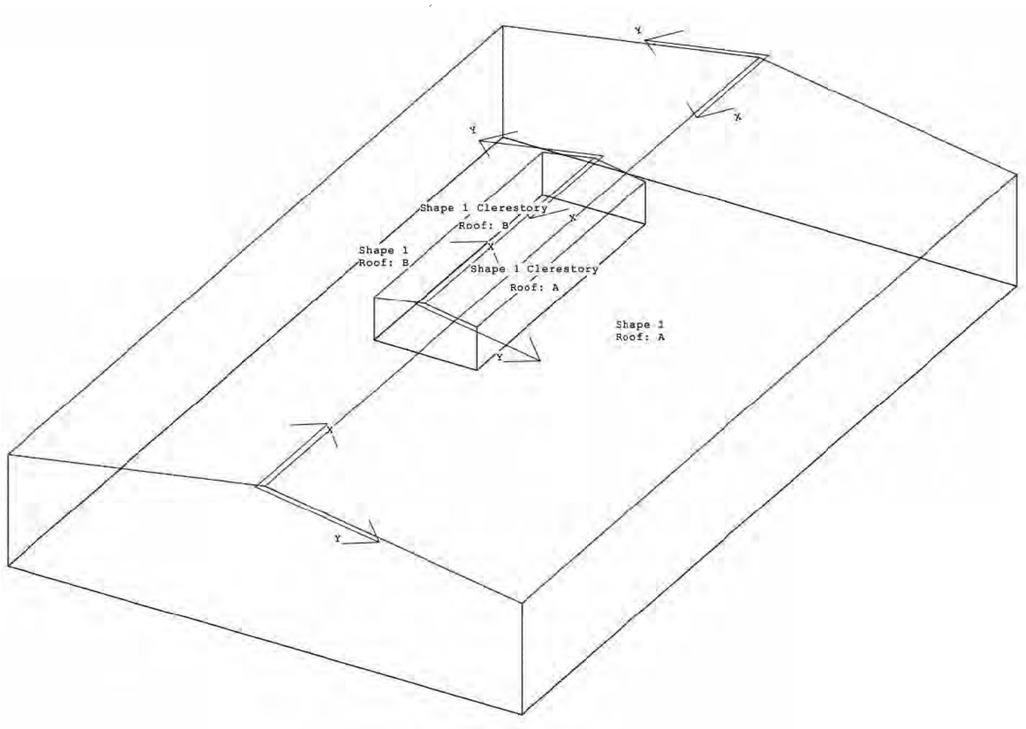
NOT Windborne Debris Region
Base Elevation: 0/0/0
Primary Zone Strip Width: 2a: 20/9/10
Parts / Portions Zone Strip Width: a: 12/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf
Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W



REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERGEN
No. C52080
CIVIL
STATE OF CALIFORNIA
6/9/2025

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

9/25/2019 17:12:38

CODES AND LOADS

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1_V_12

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-013032-01
DATE 6/9/2025
DRAWN/CHECK MS
PAGE 2

Autodesk Revit 2019 (Build: Autodesk Revit 2019.1 (Build:20180927_1515(x64)) - Build Info Only) - Autodesk, Inc.

BUILDER/CONTRACTOR RESPONSIBILITIES

VP Buildings follows the guidelines as outlined in the AISC and MBMA Codes of Standard Practice. VP Buildings standard product specifications, design, fabrication, quality criteria shall govern all work unless stipulated otherwise in the contract documents. In case of discrepancies between VP Buildings structural plans and plans for other trades, VP Buildings structural plans shall govern.

It is the responsibility of the Builder to obtain approvals and permits from all governing agencies and jurisdictions as required. Approval of VP Buildings drawings constitutes the builders acceptance of VP interpretation of the contract purchase order. Unless specific design criteria concerning interface design and details are furnished as part of the contract, VP Buildings design assumptions shall govern.

VP engineers are not Project Engineers or Engineer of Record for the overall project. VP engineering supply sealed engineering design data and drawings for VP supplied material as part of the overall project for use by others to obtain permits, approvals, and coordinate with other trades. All interface and/or compatibility of any materials not furnished by VP are to be considered and coordinated by the builder or A/E firm.

CONSTRUCTION & ERECTION RESPONSIBILITY

The Builder is responsible for construction in strict accordance with VP Buildings "FOR CONSTRUCTION" drawings and all applicable product installation guides. VP is not responsible for work done from any other VP drawings that are not marked "FOR CONSTRUCTION", nor any drawings prepared by others.

As erected field assemblies of members shall be as specified in MBMA Code of Standard Practice (in Canada - CSA S16), which require L/500 tolerance of installed members. Occasional field work including shimming, cutting, coping, and drilling for final fit-up are considered part of erection. Specified field work and field welding conditions indicated on these drawings shall also be included in the erectors scope of work. See Erection Guide for shimming procedure. For building with top riding bridge cranes see Crane Data drawing for column plumb tolerance.

The building erector shall be properly licensed and experienced in erecting metal building systems. The Builder is responsible for having knowledge of, and shall comply with, all OSHA requirements and all other governing site safety criteria. The builder is responsible for designing, supplying, locating and installing temporary supports and bracing during erection of the building. VP bracing is designed for code required loads after building completion and shall not be considered as adequate erection bracing. See Erection Guide.

EXISTING STRUCTURES

VP must be advised of any structure that is within 20 ft. of VP's building. Load effects from snow drifting, wind effects, and seismic separation must be considered for both the new and existing structures. VP has designed the new VP building for these effects. The owner/builder are responsible for employing a Professional Engineer to review and verify the existing structure for all load effects from the adjacent VP building.

BRACING

Tension brace rods work in pairs to balance forces caused by initial tensioning. Care must be taken while tightening brace rods so as not to cause accidental or misalignment of components. All rods must be installed loose and then tightened. Rods should not exhibit excessive sag. For long or heavy rods, or angles it may be necessary to support the rods at mid-bay by suspending them from secondary members.

Bracing for seismic or wind loading of objects or equipment that are not a part of the VP structure must be designed by a qualified professional to deliver lateral loads to primary frames and rod bracing struts. Equipment bracing and suspension connections must not impose torsion or minor axis loads, or cause local distortion in any VP components. VP accepts no responsibility for design or installation of bracing systems not furnished by VP.

FIELD WELDING

All field welding shall be done at the direction of a design professional, and done in accordance with governing requirements (AWS in USA, CWB in Canada) by welders qualified to perform the welding as directed by the applicable welding procedure specification (WPS). A WPS shall be prepared by the contractor for each welding variation specified. The contractor is responsible for any special welding inspection as required by local jurisdiction. Filler metal shall be 70 ksi (480 MPa) tensile strength. For welds in high seismic force resisting system (Seismic Cat D, E or F), minimum Charpy V-Notch toughness shall meet AISC-341 criteria (20 ft-lbs min @ 0Deg F). Interpass temperatures shall not exceed 550Deg F (300Deg C).

DELIVERIES

It is the responsibility of the builder to have adequate equipment available at the job site to unload trucks in a safe and timely manner. The Builder will be responsible for all retention charges from carriers as a result of job site unloading delays.

SIGNAGE

The Builder is responsible for furnishing signs as required by Code and the Building Department, including but not limited to, exits, occupancy limits, floor loading limits, and bulk storage limits. Floor loading signs shall clearly indicate maximum floor live load permitted.
Bulk storage facilities shall have signs clearly posted on all loaded walls indicating the type of commodity stored and the maximum storage height. Signs shall be clearly visible when building is fully loaded to design level. Overloading of floors or walls may result in failure.

Claims for damage or shorts MUST be noted on the Bill-of-Lading or delivery receipt and filed against the carrier by the consignee as per VP's Terms of Sales (F.O.B. Plant) under the Uniform Commercial Code. It is critical that damages or shorts be noted on the Bill-of-Lading or you have little recourse with the carrier. Immediately upon delivery of material, material quantities are verified by the Builder against quantities billed on the shipping document. Neither the Manufacturer nor the carrier is responsible for material shortages against quantities billed on the shipping document if such shortages are not noted on the shipping documents upon delivery of material and acknowledged by the carriers agent. For materials concealed in bundles, boxes, or crates, shortages must be reported immediately upon unpacking. Should products get wet, bundled and crated materials must be unpacked and unbundled immediately to provide drainage of trapped moisture. See Erection Guide for proper job site storage procedure.

SEALANTS

Sealants shall be applied in strict accordance with VP details or weather tightness will be compromised. Sealant must be applied in temperatures and weather conditions consistent with labeling.

INDEPENDENT MEZZANINES

Independent mezzanines must be designed by a professional engineer. The engineer must ensure that proper isolation from the VP building has been provided to avoid structural damage due to differential movements, or inadvertently apply loads to the VP structure. VP accepts no responsibility for the design of the independent mezzanine.

FIRE CODE COMPLIANCE

It is the responsibility of the project design professional and builder to comply with local fire code regulations including consideration of, but not limited to, building use and occupancy, all building construction materials, separation requirements, egress requirements, fire protection systems, etc. Builder shall advise VP of any special requirements to be furnished by VP.

FIELD MODIFICATIONS

Modifications to this building from details and instructions contained on these drawings must be approved in writing by VP Buildings engineers, or other licensed structural engineer. This includes, but is not limited to, removal of roof or wall cladding, removing or moving any flange braces or rod braces, cutting of openings for doors, windows or RTU's, correction of fabrication errors, etc. The owner shall not impose loads to this structure beyond what is specified for this building in the contract documents. VP Buildings accepts no responsibility for the consequences of any unauthorized additions, alterations, or added loads to this structure.

If the builder intends to invoice VP Buildings for modifications in excess of $1000, The builder must notify VP Buildings immediately, and obtain a Work Authorization from VP Buildings prior to proceeding. All final claims must be submitted to VP Buildings with all supporting documentation within 30 days of the building completion. Claims submitted without work authorizations, or after 30 days will not be accepted. Correction of minor misfits, shimming and plumbing, moderate amount of reaming, drilling, chipping / cutting and minor welding are considered by Code of Standard Practice to be part of erection are not subject to claim reimbursement.

CONCRETE/MASONRY/CONVENTIONAL STUD WALLS

The engineer responsible for the design of the wall system is responsible for coordinating with, or specifying to VP Buildings, any wall to steel compatibility issues such as drift and deflection compatibility, special base details, and wall to VP steel connections. All fasteners, sealant and counter flashing of wall systems are to be provided by contractor. The engineer responsible for the wall shall design the anchorage to VP supporting elements consistent with Code required forces.

PANELS

Oil canning is an inherent characteristic of cold formed steel panels. It is the result of several factors that include induced stresses in the raw material delivered to VP, fabrication methods, installation procedures, and post installation thermal forces. Thru fastened panels will exhibit some dimpling when installed, especially when insulation is installed between panels and secondary supports. Dimpling can be minimized by careful installation, taking care not to over drive fasteners.

Roof rumble is a phenomenon that is caused by wind gusts lifting up on the roof panels and then springing back into place. All panels experience this action to some degree, especially with concealed clip Standing Seam panels. Roof rumble noise may be minimized by providing a layer of blanket insulation between the panels and any hard support surface such as steel secondary members, substrates such as plywood, steel decking, or rigid board insulation. A minimum of 3 inch thick blanket is recommended over steel secondary members, or 2 inch over substrates.

Oil canning, dimpling, and roof rumble do not affect the structural integrity or weather tightness of the panels and is not grounds for rejection of panels.

The Standing Seam joint detail is designed with an interlocking feature for ease of installation. However, it is imperative that installed Standing Seam panels be secured to the secondary structural members and properly seamed prior to departure from the job site each day.

SKYLIGHTS

Local building departments may require added fall restraint due to conditions that may affect the skylight structural integrity. It is the responsibility of the builder to determine and provide any added fall restraint under the skylight as may be required by your building department.

RAIN WATER RUNOFF

Drainage systems must be designed by the project professional to comply with code requirements. VP is not responsible for drainage designs, overflow scuppers, down piping, etc. The project professional and contractor are responsible to ensure that primary drains and overflow devices such as scuppers and auxiliary drains are provided as required for the required rain intensity at the building perimeter and at valley conditions to prevent ponding.

STEEL SHOP COAT

The purpose of VP's shop coat is to provide protection for the steel members during transportation, during temporary job site storage and during erection. Standard shop formulation is not designed to perform as a finish coat when exposed to environmental conditions. Members shall be kept free of the ground and properly drained during job site storage. It is the Builder's responsibility to ensure that if a finish coat is being applied over VP shop coat that the painting contractor verifies compatibility between his finish coat and VP's shop coat.

VP BUILDINGS ACCREDITATIONS AND APPROVALS

Fabricator Approvals

IAS AC472 Approvals: (www.iasonline.org/Metal_Building_Systems/MB.html)
Listed under BlueScope Buildings North America, Inc.
City of Los Angeles, CA #FB00031; City of Houston, TX 767 & 429;
City of Phoenix, AZ C19-02008; Clark County, NV 43 & 833, San Bernardino County, CA 289
State of Utah, City of Richmond, CA.

Design Approvals

IAS AC472 Approvals: (www.iasonline.org/Metal_Building_Systems/MB.html)
Listed under Varco Pruden Buildings, a Division of BlueScope Buildings North America, Inc.

Canadian CSA A660 Certifications

(http:/eng.cwbgroup.org/Certification/Pages/CertifiedCompanySearch.aspx)
Listed under BlueScope Buildings North America, Inc.

Engineering Certifications of Authorization

USA--AR#576; FL#30427; ID#C-2470; IL#184-002649; KS#E-29; MS#E-0592;
MO#E-2010007736; NC#F-0998; OK#CA4170PE; SD#C-1787; TX#F4828; WV#C03059-00;
CAN--AB#P08900; NS#30123; ON#100148796; and YT#PP134

ICC Evaluation Reports (www.icc-es.org)

SSR Roof System - #ESR-2527

State of Florida Product Approvals (www.floridabuilding.org)

Approved Products Listed Under VP Buildings, Inc.

VP TextureClad - See Transamerican Structuroc, Inc.

Dade Co. Product Approval (www.miamidade.gov/buildingcode)

Approved Products Listed Under Varco Pruden Buildings, Inc.

VP TextureClad - See Transamerican Structuroc, Inc.

Underwriter's Laboratory Approvals (Available only when specified in contract)

SSR Roof-UL#TGKX-113; SSR Composite Roof Class 90-UL#TGKX-113A;

SSR Roof w/Super Block; Class 90-UL#TGKX-328;

Panel Rib Roof UL Class 60-UL#TGKX-60; Panel Rib Roof UL Class 90-UL#TGKX-64;

VP SLR II Roof Class 90-UL#TGKX-90, -180, -435, -435A, -176, -238, -238A, -238B

Factory Mutual Approved Assemblies (Available only when specified in contract)

SSR Roof Systems are approved in various type applications and listed in FM Approval Guide.

24 Ga SSR (0.0227" Nominal), is available in Class 1-60, 1-75, 1-90. 22Ga SSR (0.0277" Nominal), is available in Class 1-75, 1-90-, 1-120.

SLR II Roof Systems are approved in various type applications and listed in FM Approval Guide.

24 Ga SLR II (0.0227" Nominal), is available in Class 1-75 and 1-120.

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERGEN
No. CA 20080
CIVIL
STATE OF CALIFORNIA

6/9/2025

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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

9/25/2019 17:12:39

ERECTION NOTES

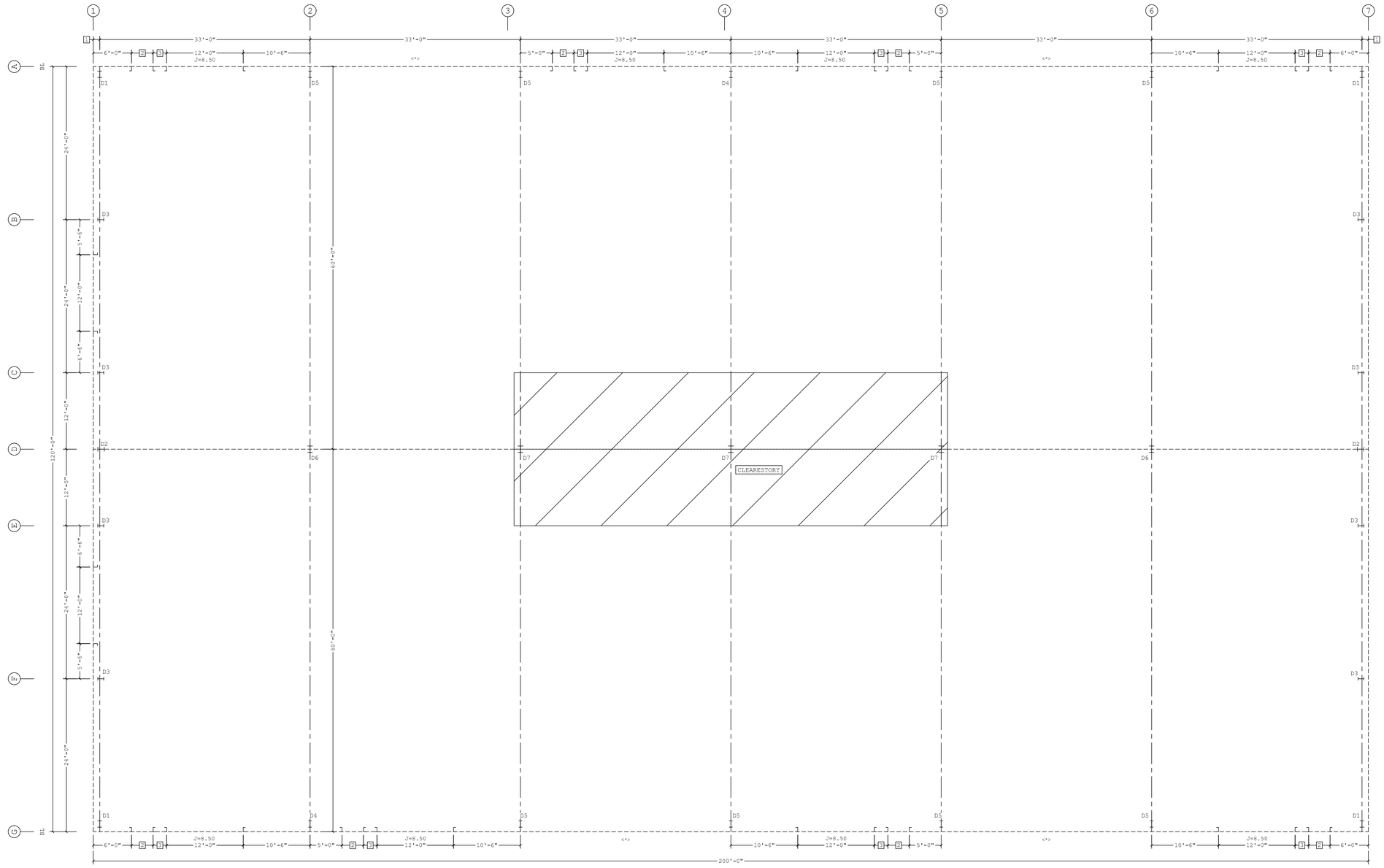
BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
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A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO	19-013032-01
DATE	6/9/2025
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PAGE	3

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design.rtd_1_12

Computer Generated Drawing by VP Buildings, Inc.



ANCHOR ROD PLAN

3 2'-1 1/2"
2 3'-4 1/2" J=8.50
1 1'-0"
☐ Dimension Key

Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGER No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

<*> THE BUILDING IS DESIGNED WITH BRACING DIAGONALS IN THE DESIGNATED BAYS. COLUMN BASE REACTIONS, BASE PLATES AND ANCHOR RODS ARE AFFECTED BY THIS BRACING AND DIAGONALS MAY NOT BE RELOCATED WITHOUT CONSULTING THE BUILDING SUPPLIERS ENGINEER.

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REV	DATE	BY	DESCRIPTION

NTS

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

ANCHOR ROD PLAN

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company

VPC VERSION: 2019.1a

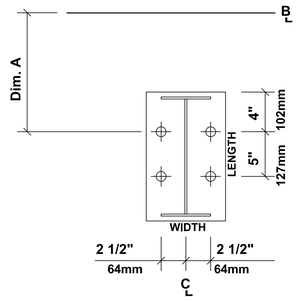
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DATE	6/9/2025
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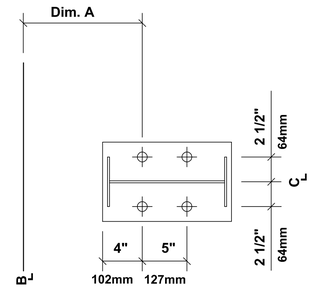
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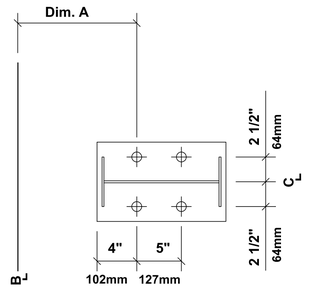
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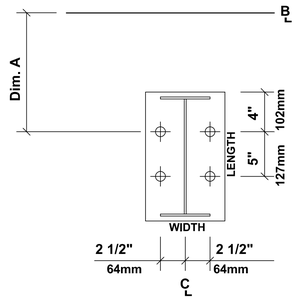
D1 (4)3/4" Dia. GR36 Anchor Rods
Plate W=9" L=1'-1"
Dim: A=1'-0"
Elev.=100'-2"



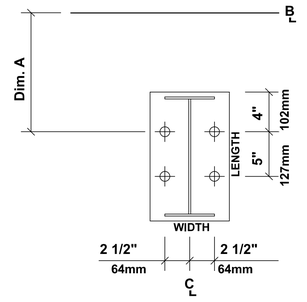
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Dim: A=1'-0"
Elev.=100'-2"



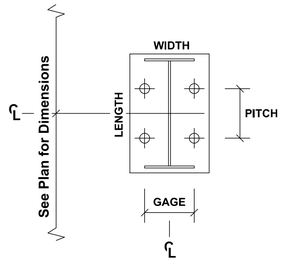
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Plate W=8" L=1'-0"
Dim: A=1'-0"
Elev.=100'-2"



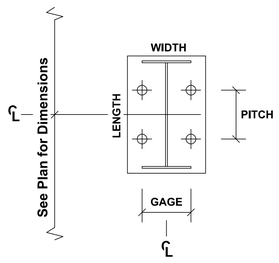
D4 (4)3/4" Dia. GR36 Anchor Rods
Plate W=8" L=1'-1"
Dim: A=1'-0"
Elev.=100'-2"



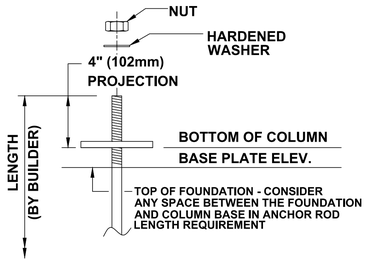
D5 (4)1 1/4" Dia. GR36 Anchor Rods
Plate W=9" L=1'-1"
Dim: A=1'-0"
Elev.=100'-2"



D6 (4)3/4" Dia. GR36 Anchor Rods
Plate W=10" L=1'-1"
Gage=5" Pitch=5"
Elev.=99'-2"



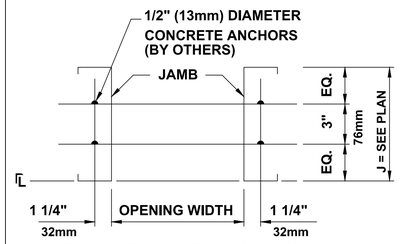
D7 (4)3/4" Dia. GR36 Anchor Rods
Plate W=1'-0" L=1'-1"
Gage=5" Pitch=5"
Elev.=99'-2"



THE 4" PROJECTION ABOVE THE BOTTOM OF THE BASE PLATE IS A SUGGESTED MINIMUM TO ENSURE ADEQUATE ANCHOR ROD LENGTH. A DIFFERENT PROJECTION MAY BE REQUIRED BY THE FOUNDATION DESIGNER.

THE ANCHOR ROD PROJECTION MAY NEED TO BE CUT OFF IF THERE IS INTERFERENCE WITH OTHER PARTS.

SUGGESTED ANCHOR ROD PROJECTION



NOTE: 1" (25mm) PROJECTION ABOVE BOTTOM OF JAMB CLIP

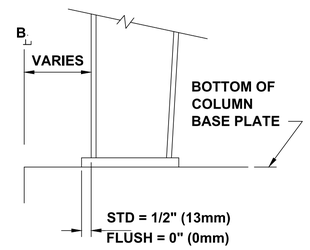
SEE PLAN FOR JAMB SIZES : J = SIZE

JAMB 'EQ.' VALUES:

7 EQ = 2" 51mm, 8.5 EQ = 2 3/4" 70mm

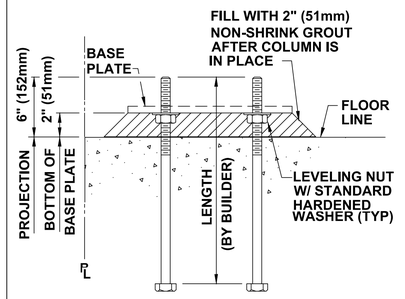
10 EQ = 3 1/2" 89mm, 11.5 EQ = 4 1/4" 108mm

FRAMED OPENING DETAIL



TYPICAL COLUMN BASE PLATE DETAIL

1. **ANCHOR RODS, NUTS, HARDENED WASHERS AND ANY OTHER EMBEDDED ITEMS ARE TO BE FURNISHED BY CONTRACTOR.**
2. **ANCHOR ROD DIAMETERS WERE DETERMINED BY ALLOWABLE SHEAR AND TENSION PER AISC SPECIFICATIONS (FY=36KSI). (ASTM F1554 GRADE 36) ANCHOR ROD LENGTH, EFFECTS OF EMBEDDED ANCHOR ROD EDGE DIMENSIONS AND METHOD OF TRANSFERRING FORCES FROM ANCHOR RODS TO FOOTINGS ARE TO BE DETERMINED BY OTHERS.**
3. **UNLESS OTHERWISE SPECIFIED, ANCHOR RODS ARE DESIGNED AND DETAILED AS "CAST-IN-PLACE" ANCHOR RODS WITH "SNUG TIGHT" CONNECTIONS.**
4. **FOUNDATION MUST BE LEVEL, SQUARE AND SMOOTH. ANCHOR RODS MUST BE ACCURATELY PLACED AS SHOWN ON THIS DRAWING OR STEEL WILL NOT FIT. THE BUILDER IS RESPONSIBLE FOR ACCURATE SETTING OF ANCHOR RODS PER AISC CODE OF STANDARD PRACTICE, SEC 7.5 VARIATIONS ARE SUMMARIZED BELOW;**
   - **a. CENTERS OF ANY TWO AR'S WITHIN A COLUMN BASE GROUP; +-1/8"**
   - **b. CENTERS OF ADJACENT AR GROUPS; +-1/4"**
   - **c. TOPS OF AR'S; +-1/2"**
   - **d. ACCUMULATED DIM BETWEEN CENTERS OF AR GROUPS ALONG COLUMN LINE; +-1/4" PER 100FT., NOT TO EXCEED 1" TOTAL.**
   - **e. DIM FROM CENTER OF ANY AR GROUP FROM COLUMN LINE; +-1/4"**
5. **DESIGN LOADS AND REACTIONS ARE FURNISHED IN THE REACTIONS REPORT.**



GROUTED BASE REQUIREMENT

FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGLUND No. C53080 CIVIL STATE OF CALIFORNIA

6/9/2025

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REV	DATE	BY	DESCRIPTION

NTS

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VP Buildings
3200 Players Club Circle Memphis TN 38125

ANCHOR ROD PLAN - DETAILS

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO	19-013032-01
DATE	6/9/2025
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Bracing Member Schedule

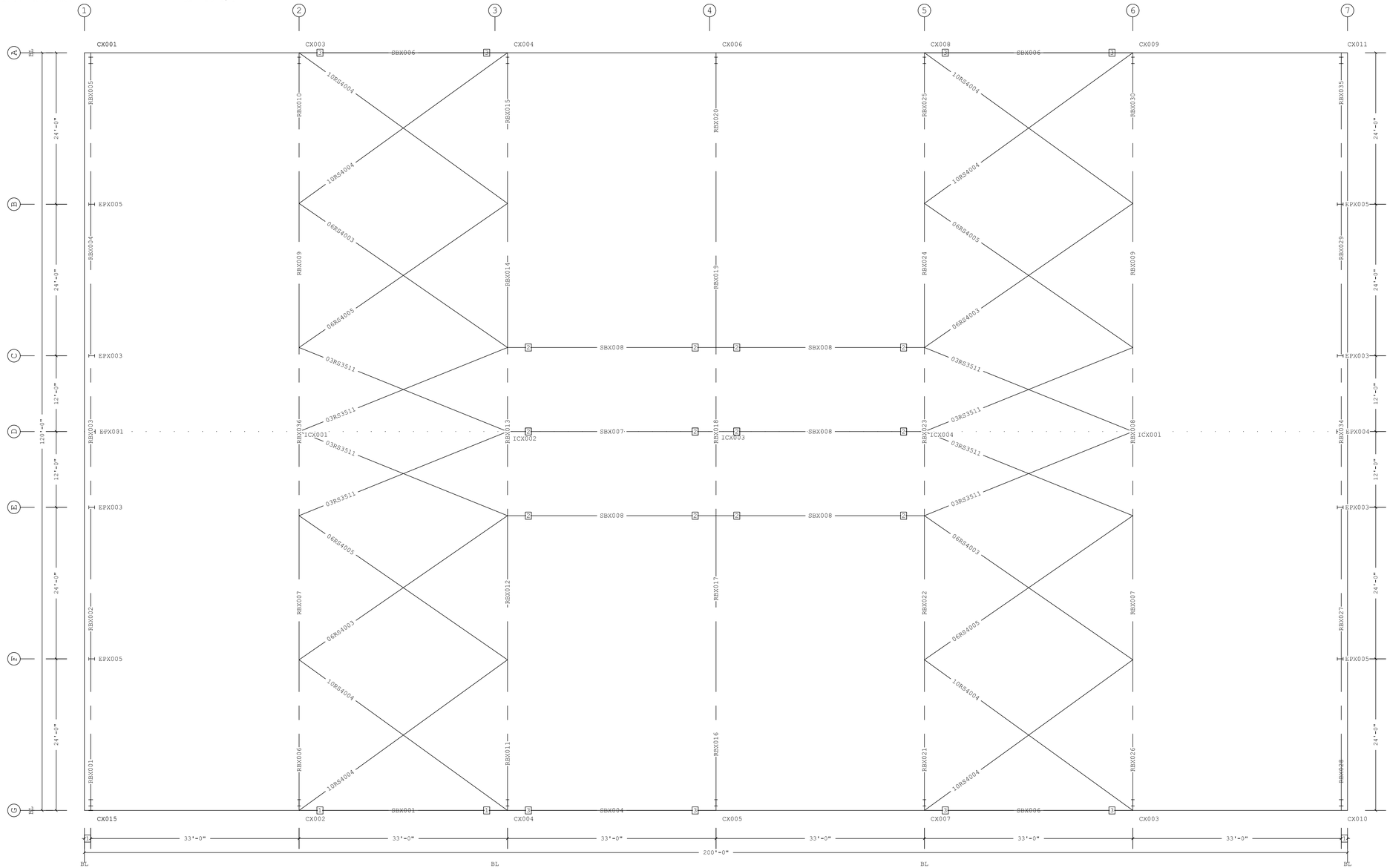
Id	Part	Description	Length	Vert. Clear
	SBX001	3P 9" x 3/8" flg - 3/16" x 9" web	32'-10 3/4"	
	SBX007	3P 8" x 1/4" flg - 0.1345" x 9" web	32'-10 3/4"	
	SBX008	3P 8" x 1/4" flg - 0.1345" x 9" web	32'-10 13/16"	
	SBX004	3P 10" x 3/8" flg - 3/16" x 12" web	32'-10 3/4"	
	SBX006	3P 9" x 3/8" flg - 3/16" x 12" web	32'-10 3/4"	
	SBX002	3P 8" x 1/4" flg - 0.1345" x 9" web	32'-10 5/16"	
	SBX005	3P 8" x 1/4" flg - 0.1345" x 9" web	32'-10 1/4"	

Bracing Part Schedule

Part	Qty	Length	Detail
03RS3511	8	35'-11"	BR01G2
06RS4005	4	40'-5"	BR01G2
06RS4003	4	40'-3"	BR01G2
10RS4004	8	40'-4"	BR01G2

Rod, Strut, and Misc. Connection Bolts

Id	Qty	Grade	Bolt Diam.	Bolt Length	PartNo
1	4	A325	3/4"	2 1/2"	0097284
2	2	A325	3/4"	2 1/2"	0097284
3	6	A325	3/4"	2 1/2"	0097284



PRIMARY AND ROOF BRACING PLAN

1 1'-0"
Dimension Key

Shape Name = Shape 1

FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
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VP Buildings
3200 Players Club Circle Memphis TN 38125

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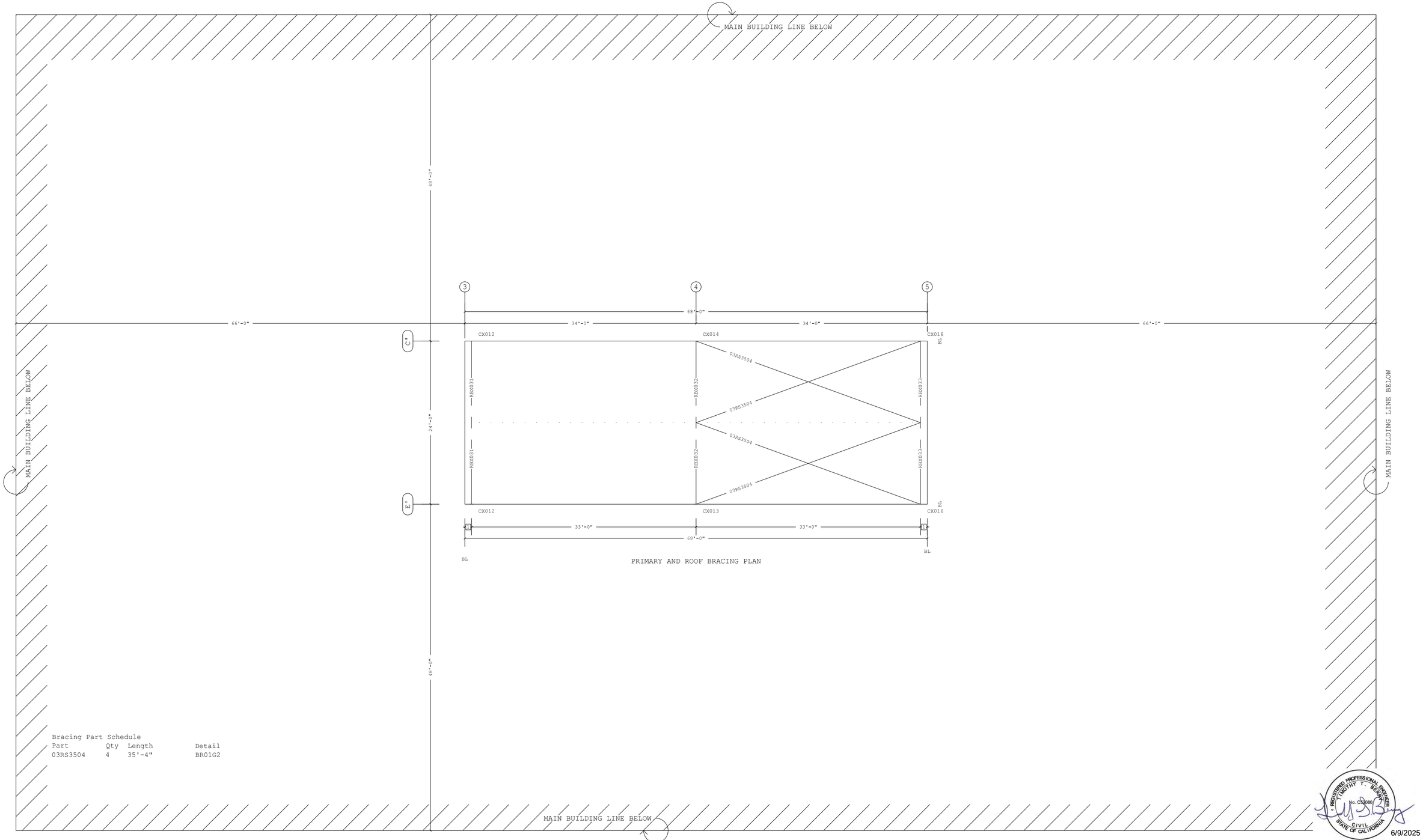
PRIMARY AND ROOF BRACING PLAN

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 6

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PRIMARY AND ROOF BRACING PLAN

Bracing Part Schedule

Part	Qty	Length	Detail
03RS3504	4	35'-4"	BR01G2

1 1'-0"

Dimension Key

Shape Name = Shape 1 Clerestory

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:47:08

CLERESTORY PRIMARY AND ROOF BRACING PLAN

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO	19-0130302-01
DATE	6/9/2025
DRAWN/CHECK	EA JLP
PAGE	7

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

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Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight	Detail	Cee Mark No
CX015	1	8.0000	.3750	.1644	1'-0"	1'-6 7/16"	25'-3 5/16"	864#		
	2	8.0000	.3750	.1875	1'-6 7/16"	1'-6"				
RBX001	3	8.0000	.2500	.1644	2'-6"	1'-7"	8'-10 15/16"	376#		
RBX002	4	8.0000	.2500	.1644	1'-7"	1'-7"	40'-6 1/2"	1042#		
RBX003	5	8.0000	.2500	.1875	1'-7"	3'-1"	19'-0"	669#		
	6	8.0000	.2500	.1875	3'-1"	1'-7"				
RBX004	7	8.0000	.2500	.1644	1'-7"	1'-7"	40'-6"	1074#		
RBX005	8	8.0000	.2500	.1644	1'-7"	2'-6"	8'-11 7/16"	410#		
CX001	9	8.0000	.3750	.1875	1'-6 7/16"	1'-6"	25'-1 1/4"	864#		
	10	8.0000	.3750	.1644	1'-0"	1'-6 7/16"				
EPX001	11	8.0000	.3750	.1644	1'-0"	1'-0"	31'-10 3/8"	693#		
EPX005	12	6.0000	.2500	.1644	11"	11"	27'-3 1/8"	296#	BR25BD	JCP053067
EPX003	13	6.0000	.2500	.1644	11"	11"	31'-3 1/8"	338#	BR25CA	
EPX003	14	6.0000	.2500	.1644	11"	11"	31'-3 1/8"	338#	BR25CA	
EPX005	15	6.0000	.2500	.1644	11"	11"	27'-3 1/8"	296#	BR25BD	JCP053067
BRSX001		5.0000	.1875	.1345	7"	7"	4'-9 1/8"	46#		

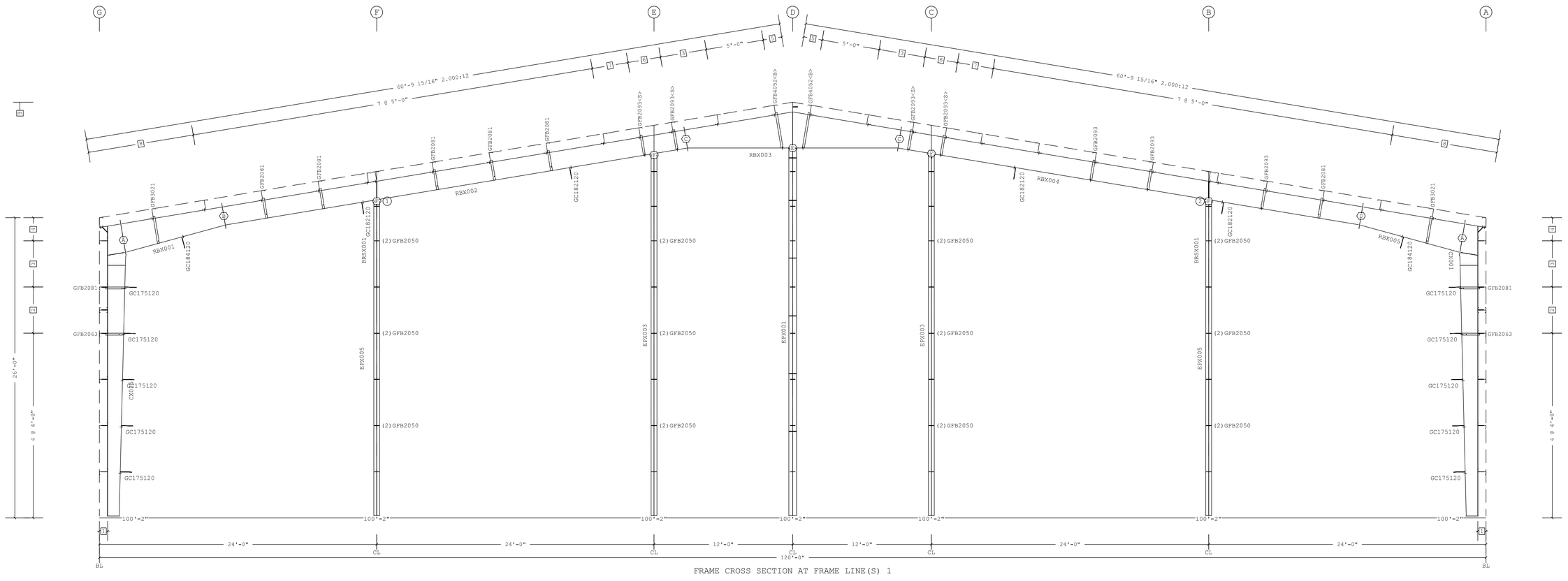
Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	12	F1852	1"	3 1/2"	1"	3	3	Yes	Yes	0097546
B	10	F1852	1"	2 1/2"	1/2"	2	3	Yes	Yes	0097543
C	8	F1852	3/4"	2 1/4"	1/2"	2	2	Yes	Yes	0097389
D	8	F1852	1"	3 1/2"	1"	2	2	Yes	Yes	0097546
E	4	A490	1"	2"	3/8"	1	1		Yes	49402
F	2	A490	1"	2"						49402

<B> - (2) Washers (095872) req'd at Flange Brace to Frame and Secondary.
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.

Frame Clearances
Horiz. Clearance between members 1(CX015) and 9(CX001): 115'-5 7/8"
Horiz. Clearance between members 1(CX015) and 10(CX001): 115'-6 1/8"
Horiz. Clearance between members 2(CX015) and 9(CX001): 115'-5 11/16"
Horiz. Clearance between members 2(CX015) and 10(CX001): 115'-5 7/8"
Vert. Clearance at member 2(CX015): 22'-7 7/8"
Vert. Clearance at member 9(CX001): 22'-7 7/8"
Vert. Clearance at member 11(EPX001): 32'-0 3/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.



FRAME CROSS SECTION AT FRAME LINE(S) 1

9 36'-0" Ridge Ht.
8 2 @ 4'-7 1/8"
7 3'-1 11/16"
6 2'-10 5/16"
5 1'-7 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0" 2 (1)JCP053067
1 8 1/2" 1 (1)JCP053067

☐ Dimension Key ◯ Part Key

Shape Name = Shape 1 Wall 4, Frame 1

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

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REV	DATE	BY	DESCRIPTION

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

NTS

10/3/2019 13:28:01

FRAME CROSS SECTION AT FRAME LINE(S) 1

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 8

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Frame Member Schedule

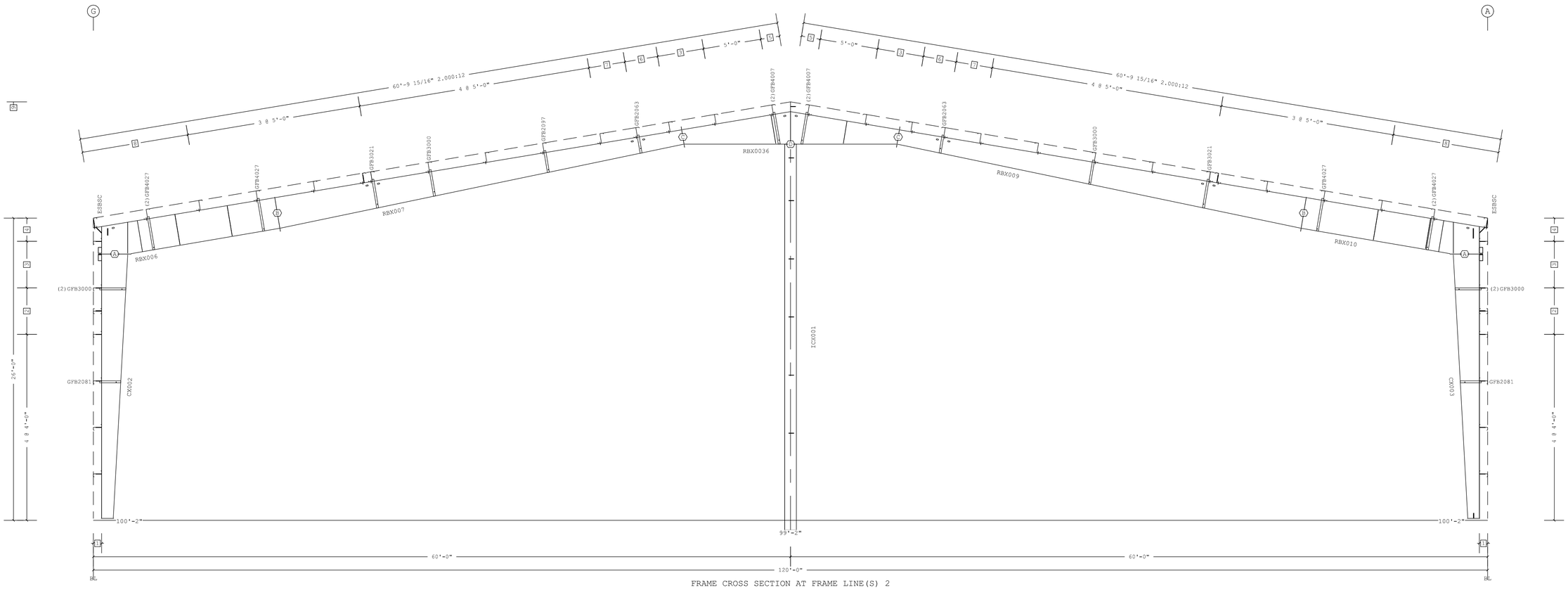
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX002	1	6.0000	.3750	.1644	1'-0"	2'-3"	22'-8 15/16"	666#
RBX006	2	6.0000	.3750	.2500	2'-8"	2'-8 9/16"	15'-9 5/8"	711#
	3	6.0000	.3750	.1644	2'-8 9/16"	2'-8"		
RBX007	4	6.0000	.3750	.1644	2'-8"	1'-3"	35'-6 1/16"	1058#
RBX036	5	6.0000	.3750	.1875	1'-3"	2'-9 1/16"	19'-0"	661#
	6	6.0000	.3750	.1875	2'-9 1/16"	1'-3"		
RBX009	7	6.0000	.3750	.1644	1'-3"	2'-8"	35'-6"	1057#
RBX010	8	6.0000	.3750	.1644	2'-8"	2'-8 9/16"	15'-9 3/4"	714#
	9	6.0000	.3750	.2500	2'-8 9/16"	2'-8"		
CX003	10	6.0000	.3750	.1644	1'-0"	2'-3"	22'-8 15/16"	674#
ICX001	11	9.0000	.3750	.1644	1'-0"	1'-0"	33'-2 5/16"	1005#

Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	16	F1852	7/8"	3"	3/4"	4	4	Yes	Yes	0097397
B	10	F1852	3/4"	2 1/4"	1/2"	2	3	Yes	Yes	0097389
C	10	F1852	3/4"	2 1/2"	5/8"	3	2	Yes	Yes	0097390
D	4	A490	1"	2 1/2"	3/8"	1	1		Yes	49404

Frame Clearances
Horiz. Clearance between members 1(CX002) and 10(CX003): 114'-1"
Vert. Clearance at member 1(CX002): 22'-10 15/16"
Vert. Clearance at member 10(CX003): 22'-10 15/16"
Vert. Clearance at member 11(ICX001): 32'-4 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.



FRAME CROSS SECTION AT FRAME LINE(S) 2

9 36'-0" Ridge Ht.
8 2 @ 4'-7 1/8"
7 3'-1 11/16"
6 2'-10 5/16"
5 1'-7 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Wall 4, Frame 2

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C62080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

THE VP ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF VP AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY VP. THE VP ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY VP EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY VP.

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REV	DATE	BY	DESCRIPTION

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

NTS

10/3/2019 13:28:02

FRAME CROSS SECTION AT FRAME LINE(S) 2

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 9

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Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX004	1	6.0000	.3750	.1644	1'-0"	2'-8"	22'-10 13/16"	716#
RBX011	2	6.0000	.3750	.2500	2'-7"	2'-7 9/16"	17'-9 5/8"	768#
	3	6.0000	.3750	.1644	2'-7 9/16"	2'-7"		
RBX012	4	6.0000	.3750	.1644	2'-7"	1'-4"	35'-0"	1052#
RBX013	5	8.0000	.3750	.2500	1'-4"	2'-7 1/8"	16'-0 1/16"	728#
	6	8.0000	.3750	.2500	2'-7 1/8"	1'-4"		
RBX014	7	6.0000	.5000	.1875	1'-4"	2'-7"	35'-0"	1287#
RBX015	8	6.0000	.3750	.1644	2'-7"	2'-7 9/16"	17'-9 11/16"	762#
	9	6.0000	.3750	.2500	2'-7 9/16"	2'-7"		
CX004	10	6.0000	.3750	.1644	1'-0"	2'-8"	22'-10 13/16"	716#
ICX002	11	10.0000	.3750	.1644	1'-0"	1'-0"	33'-4 5/16"	1110#

Frame Member Schedule: Clerestory

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX012	12	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
RBX031	13	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
RBX031	14	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
CX012	15	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
SBX003	16	6.0000	.2500	.1644	9"	9"	6 1/2"	

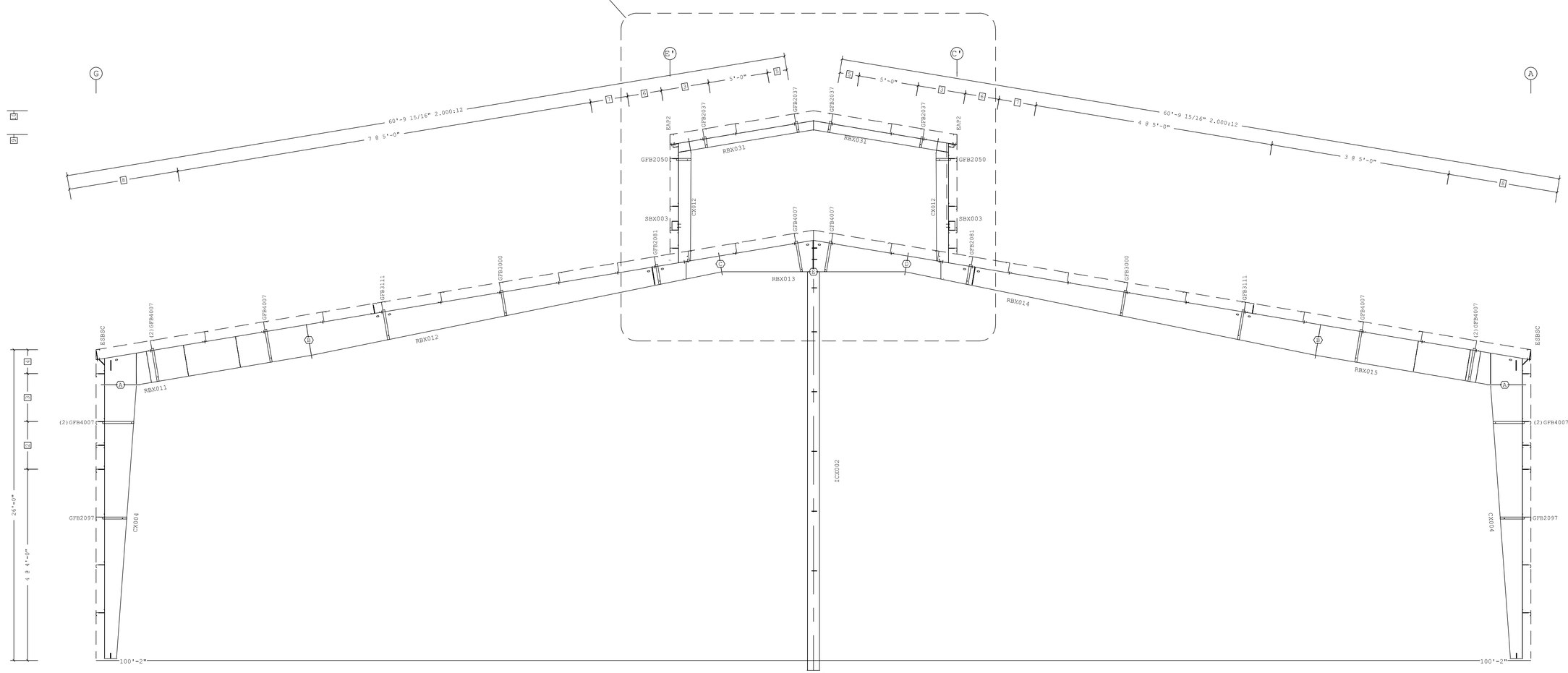
Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	16	F1852	7/8"	3"	3/4"	4	4	Yes	Yes	0097397
B	14	F1852	3/4"	2 1/4"	1/2"	3	4	Yes	Yes	0097389
C	8	F1852	3/4"	2 1/2"	5/8"	2	2	Yes	Yes	0097390
D	10	F1852	3/4"	2 1/2"	5/8"	3	2	Yes	Yes	0097390
E	4	A490	1"	2 1/2"	1/2"	1	1		Yes	49404

Frame Clearances
Horiz. Clearance between members 1(CX004) and 10(CX004): 113'-3"
Vert. Clearance at member 1(CX004): 23'-0 13/16"
Vert. Clearance at member 10(CX004): 23'-0 13/16"
Vert. Clearance at member 11(ICX002): 32'-6 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.

SEE PAGE 15 FOR CLERESTORY FRAME CROSS SECTION @ FRAME LINE 3



FRAME CROSS SECTION AT FRAME LINE(S) 3

10 46'-0" Ridge Ht.
9 44'-0" Low Eave ht.
8 2 @ 4'-7 1/8"
7 3'-1 11/16"
6 2'-10 5/16"
5 1'-7 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Wall 4, Frame 3

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA 6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:04

FRAME CROSS SECTION AT FRAME LINE(S) 3

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 10

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

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Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX005	1	6.0000	.3750	.1644	1'-0"	2'-8"	22'-10 13/16"	718#
RBX016	2	6.0000	.3750	.2500	2'-7"	2'-7 9/16"	20'-9 5/8"	856#
	3	6.0000	.3750	.1644	2'-7 9/16"	2'-7"		
RBX017	4	10.0000	.3750	.1875	2'-7"	2'-0"	30'-0"	1412#
RBX018	5	10.0000	.6250	.2500	2'-0"	3'-6 13/16"	20'-0 1/16"	1486#
	6	10.0000	.6250	.2500	3'-6 13/16"	2'-0"		
RBX019	7	10.0000	.3750	.1875	2'-0"	2'-7"	30'-0"	1401#
RBX020	8	6.0000	.3750	.1644	2'-7"	2'-7 9/16"	20'-9 11/16"	843#
	9	6.0000	.3750	.2500	2'-7 9/16"	2'-7"		
CX006	10	6.0000	.3750	.1644	1'-0"	2'-8"	22'-10 13/16"	708#
ICX003	11	10.0000	.3750	.1644	1'-0"	1'-0"	32'-4 7/16"	1079#

Frame Member Schedule: Clerestory

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX013	1	6.0000	.2500	.1345	1'-0"	1'-0 1/2"	10'-1 5/8"	197#
	2	6.0000	.2500	.1644	1'-0 1/2"	1'-0"		
RBX032	3	6.0000	.2500	.1345	9"	9"	10'-6 7/16"	179#
RBX032	4	6.0000	.2500	.1345	9"	9"	10'-6 7/16"	179#
CX014	5	6.0000	.2500	.1644	1'-0 1/2"	1'-0"	9'-11 15/16"	197#
	6	6.0000	.2500	.1345	1'-0"	1'-0 1/2"		
SBX003	7	6.0000	.2500	.1644	9"	9"	6 1/2"	

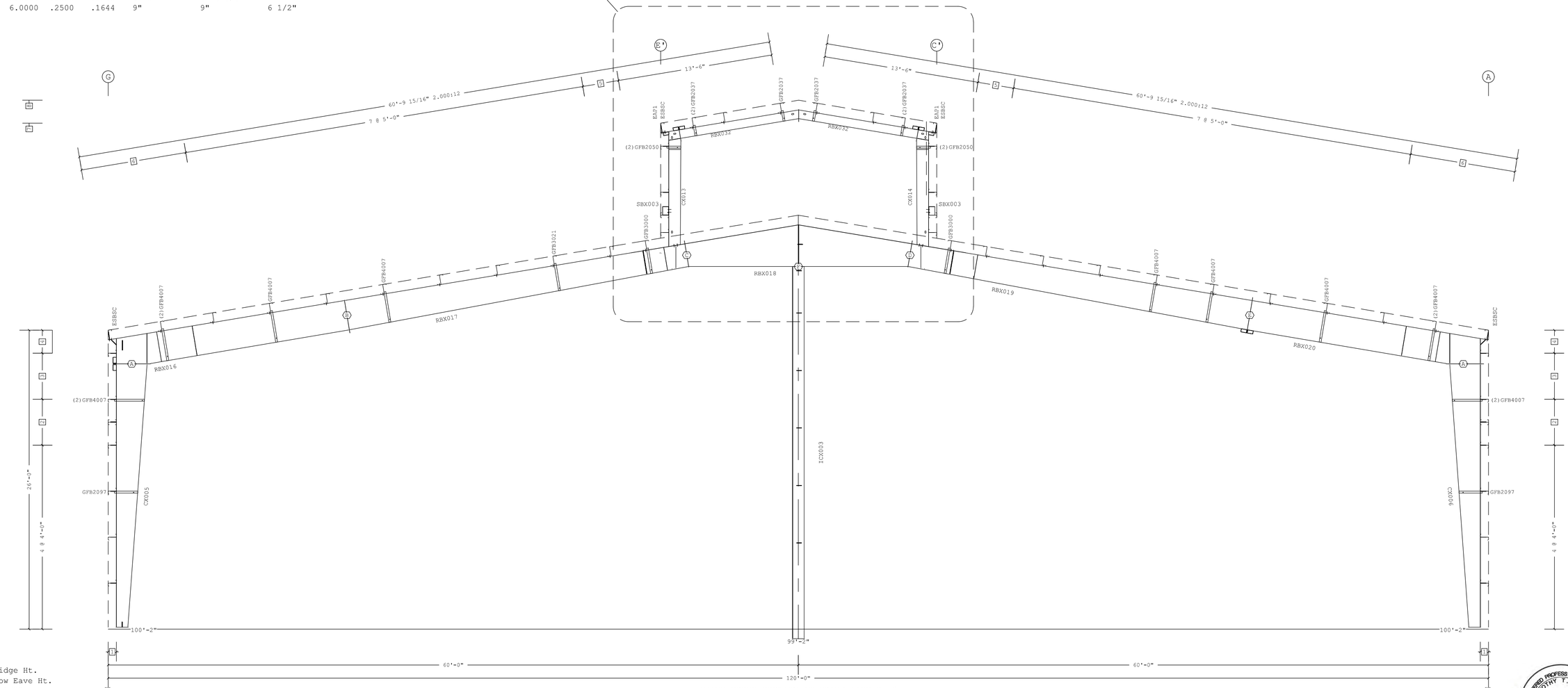
Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	16	F1852	7/8"	3"	3/4"	4	4	Yes	Yes	0097397
B	8	F1852	3/4"	2 1/2"	5/8"	2	2	Yes	Yes	0097390
C	6	F1852	3/4"	2 1/4"	1/2"	2	1	Yes	Yes	0097389
D	8	F1852	3/4"	2 1/4"	1/2"	2	2	Yes	Yes	0097389
E	10	F1852	3/4"	2 1/4"	1/2"	2	3	Yes	Yes	0097389
F	4	A490	1"	2 1/2"	1/2"	1	1		Yes	49404

Frame Clearances
Horiz. Clearance between members 1(CX005) and 10(CX006): 113'-3"
Vert. Clearance at member 1(CX005): 23'-0 13/16"
Vert. Clearance at member 10(CX006): 23'-0 13/16"
Vert. Clearance at member 11(ICX003): 31'-6 7/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.

SEE PAGE 16 FOR CLERESTORY FRAME CROSS SECTION @ FRAME LINE 4



FRAME CROSS SECTION AT FRAME LINE(S) 4

8 46'-0" Ridge Ht.
7 44'-0" Low Eave Ht.
6 2 @ 4'-7 1/8"
5 3'-1 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Wall 4, Frame 4

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGREN No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:05

FRAME CROSS SECTION AT FRAME LINE(S) 4

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 11

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design.ttb1

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Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX007	1	6.0000	.3750	.1644	1'-0"	2'-6"	22'-11 1/2"	703#
RBX021	2	6.0000	.3750	.2500	2'-6"	2'-6 9/16"	15'-9 5/8"	692#
	3	6.0000	.3750	.1644	2'-6 9/16"	2'-6"		
RBX022	4	6.0000	.3750	.1644	2'-6"	1'-4"	35'-6 1/16"	1058#
RBX023	5	6.0000	.3750	.1875	1'-4"	2'-10 1/16"	19'-0"	681#
	6	6.0000	.3750	.1875	2'-10 1/16"	1'-4"		
RBX024	7	6.0000	.3750	.1644	1'-4"	2'-6"	35'-6"	1058#
RBX025	8	6.0000	.3750	.1644	2'-6"	2'-6 9/16"	15'-9 3/4"	693#
	9	6.0000	.3750	.2500	2'-6 9/16"	2'-6"		
CX008	10	6.0000	.3750	.1644	1'-0"	2'-6"	22'-11 1/2"	703#
ICX004	11	10.0000	.3750	.1644	1'-0"	1'-0"	33'-1 5/16"	1102#

Frame Member Schedule: Clerestory

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX016	12	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
RBX033	13	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
RBX033	14	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
CX016	15	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
SBX003	16	6.0000	.2500	.1644	9"	9"	6 1/2"	

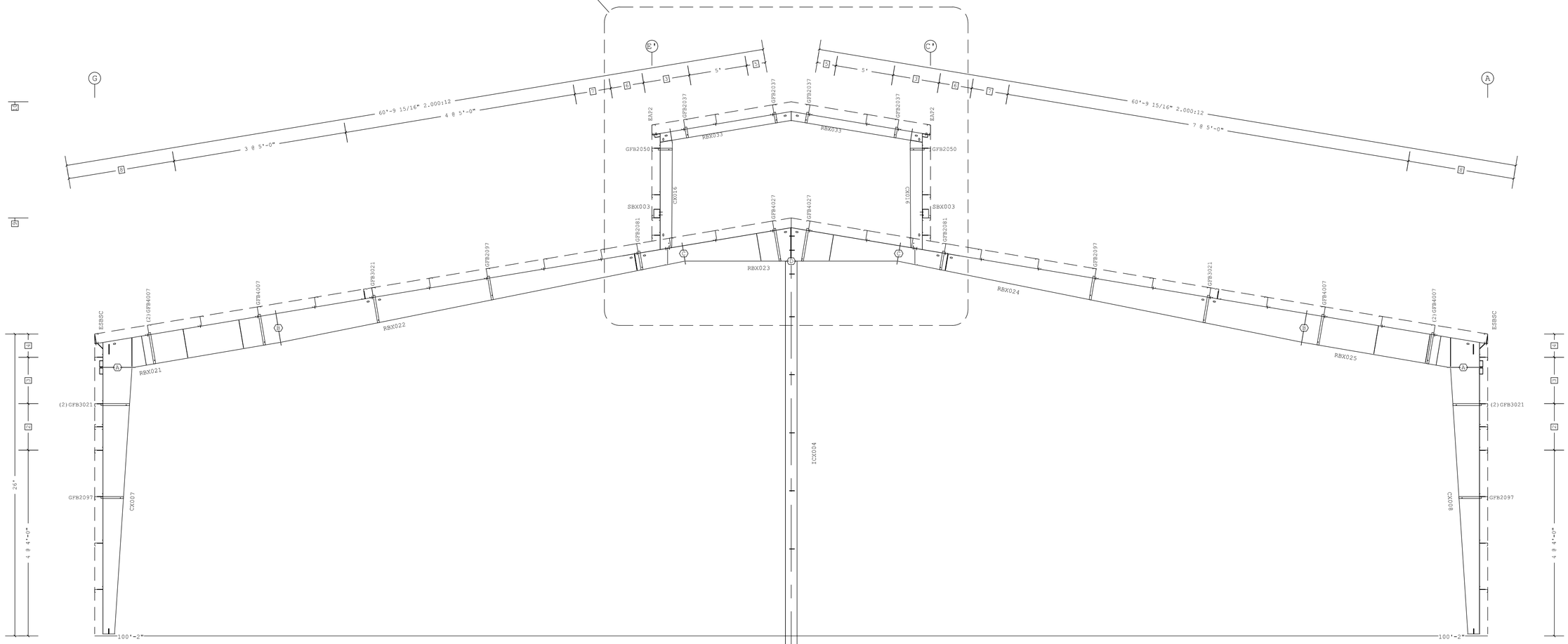
Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	16	F1852	7/8"	3"	3/4"	4	4	Yes	Yes	0097397
B	12	F1852	3/4"	2 1/4"	1/2"	2	4	Yes	Yes	0097389
C	8	F1852	3/4"	2 1/2"	5/8"	2	2	Yes	Yes	0097390
D	4	A490	1"	2 1/2"	1/2"	1	1		Yes	49404

Frame Clearances
Horiz. Clearance between members 1(CX007) and 10(CX008): 113'-7"
Vert. Clearance at member 1(CX007): 23'-1 1/2"
Vert. Clearance at member 10(CX008): 23'-1 1/2"
Vert. Clearance at member 11(ICX004): 32'-3 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.

SEE PAGE 17 FOR CLERESTORY FRAME CROSS SECTION @ FRAME LINE 5



FRAME CROSS SECTION AT FRAME LINE(S) 5

10 46'-0" Ridge Ht.
9 36'-0" Ridge Ht.
8 2 @ 4'-7 1/8"
7 3'-1 11/16"
6 2'-10 5/16"
5 1'-7 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0"
1 8 1/2"
☐ Dimension Key

Shape Name = Shape 1 Wall 4, Frame 5

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERTZ No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

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REV	DATE	BY	DESCRIPTION

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

NTS

10/3/2019 13:28:07

FRAME CROSS SECTION AT FRAME LINE(S) 5

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 12

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Frame Member Schedule

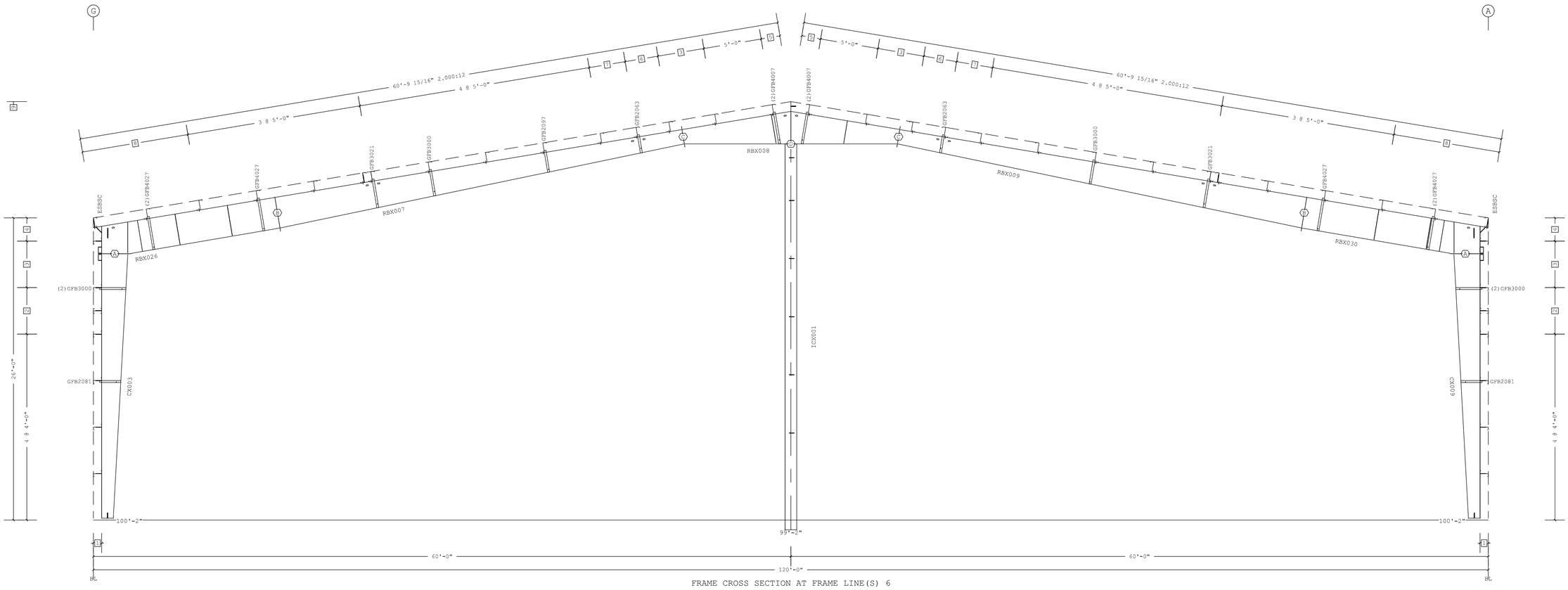
Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX003	1	6.0000	.3750	.1644	1'-0"	2'-3"	22'-8 15/16"	674#
RBX026	2	6.0000	.3750	.2500	2'-8"	2'-8 9/16"	15'-9 5/8"	713#
	3	6.0000	.3750	.1644	2'-8 9/16"	2'-8"		
RBX007	4	6.0000	.3750	.1644	2'-8"	1'-3"	35'-6 1/16"	1058#
RBX008	5	6.0000	.3750	.1875	1'-3"	2'-9 1/16"	18'-11 15/16"	661#
	6	6.0000	.3750	.1875	2'-9 1/16"	1'-3"		
RBX009	7	6.0000	.3750	.1644	1'-3"	2'-8"	35'-6"	1057#
RBX030	8	6.0000	.3750	.1644	2'-8"	2'-8 9/16"	15'-9 3/4"	714#
	9	6.0000	.3750	.2500	2'-8 9/16"	2'-8"		
CX009	10	6.0000	.3750	.1644	1'-0"	2'-3"	22'-8 15/16"	674#
ICX001	11	9.0000	.3750	.1644	1'-0"	1'-0"	33'-2 5/16"	1005#

Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	16	F1852	7/8"	3"	3/4"	4	4	Yes	Yes	0097397
B	10	F1852	3/4"	2 1/4"	1/2"	2	3	Yes	Yes	0097389
C	10	F1852	3/4"	2 1/2"	5/8"	3	2	Yes	Yes	0097390
D	4	A490	1"	2 1/2"	3/8"	1	1		Yes	49404

Frame Clearances
Horiz. Clearance between members 1(CX003) and 10(CX009): 114'-1"
Vert. Clearance at member 1(CX003): 22'-10 15/16"
Vert. Clearance at member 10(CX009): 22'-10 15/16"
Vert. Clearance at member 11(ICX005): 32'-4 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.



FRAME CROSS SECTION AT FRAME LINE(S) 6

9 36'-0" Ridge Ht.
8 2 @ 4'-7 1/8"
7 3'-1 11/16"
6 2'-10 5/16"
5 1'-7 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Wall 4, Frame 6

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

THE VP ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF VP AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY VP. THE VP ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY VP EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY VP.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:09

FRAME CROSS SECTION AT FRAME LINE(S) 6

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 13

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Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight	Detail	Cee Mark No
CX010	1	8.0000	.3750	.1644	1'-0"	1'-6 11/16"	25'-3 7/16"	881#		
RBX028	2	8.0000	.2500	.1644	2'-6"	1'-7"	8'-10 1/4"	375#		
RBX027	3	8.0000	.2500	.1644	1'-7"	1'-7"	40'-6 1/2"	1036#		
RBX034	4	8.0000	.2500	.1875	1'-7"	3'-1"	19'-0"	669#		
	5	8.0000	.2500	.1875	3'-1"	1'-7"				
RBX029	6	8.0000	.2500	.1644	1'-7"	1'-7"	40'-6"	1041#		
RBX035	7	8.0000	.2500	.1644	1'-7"	2'-6"	8'-11 7/16"	377#		
CX011	8	8.0000	.3750	.1644	1'-0"	1'-6"	25'-3 5/16"	871#		
EPX004	9	8.0000	.3750	.1644	1'-0"	1'-0"	31'-10 3/8"	692#		
EPX005	10	6.0000	.2500	.1644	11"	11"	27'-3 1/8"	296#	BR25BD	JCP053067
EPX003	11	6.0000	.2500	.1644	11"	11"	31'-3 1/8"	338#	BR25CA	
EPX003	12	6.0000	.2500	.1644	11"	11"	31'-3 1/8"	338#	BR25CA	
EPX005	13	6.0000	.2500	.1644	11"	11"	27'-3 1/8"	296#	BR25BD	JCP053067
BRSX001		5.000	.1875	.1345	7"	7"	4'9 1/8"	46#		

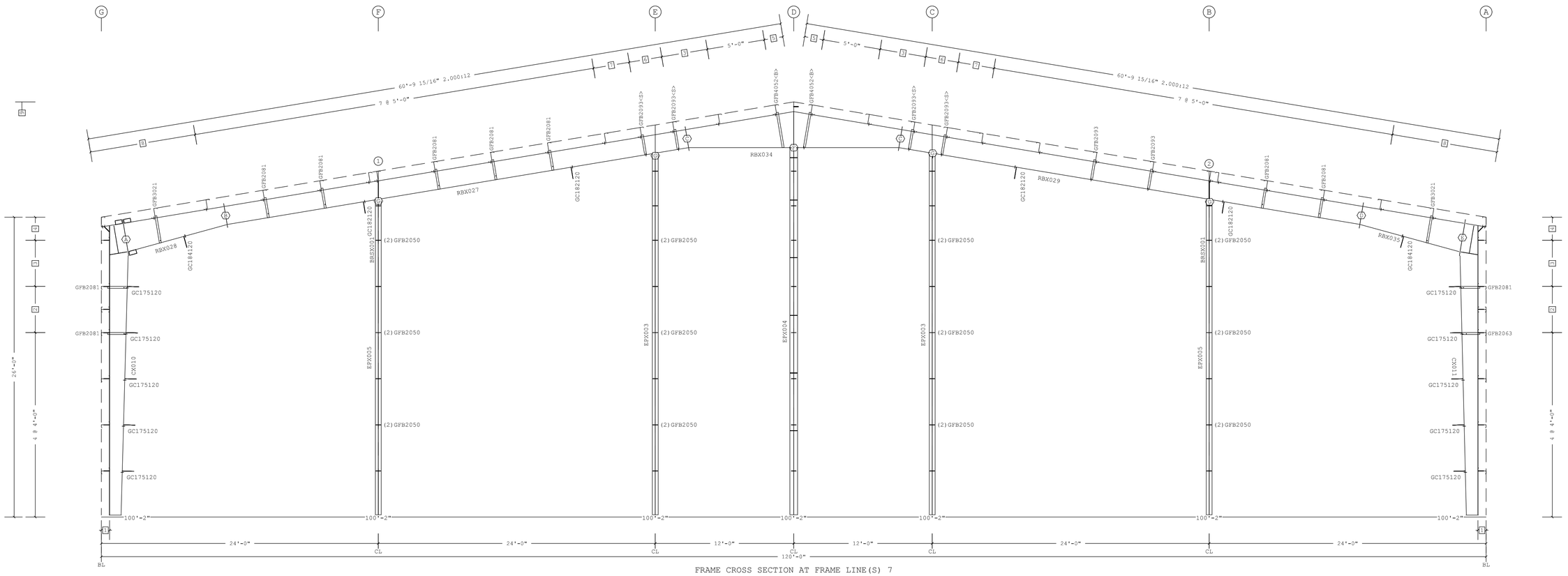
⬡ Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	10	F1852	1"	3 1/2"	1"	3	2	Yes	Yes	0097546
B	10	F1852	3/4"	2 1/4"	1/2"	2	3	Yes	Yes	0097389
C	8	F1852	3/4"	2 1/4"	1/2"	2	2	Yes	Yes	0097389
D	10	F1852	1"	2 1/2"	1/2"	2	3	Yes	Yes	0097543
E	12	F1852	1"	3 1/2"	1"	3	3	Yes	Yes	0097546
F	4	A490	1"	2"	3/8"	1	1		Yes	49402
G	2	A490	1"	2"	-	-	-			49402

<B> - (2) Washers (095872) req'd at Flange Brace to Frame and Secondary.
<S> - (2) Washers (095872) req'd at Flange Brace to Secondary.

Frame Clearances
Horiz. Clearance between members 1(CX010) and 8(CX011): 115'-5"
Vert. Clearance at member 1(CX010): 22'-8"
Vert. Clearance at member 8(CX011): 22'-7 15/16"
Vert. Clearance at member 9(EPX004): 32'-0 3/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Note: Partition girts cannot be removed without approval from BSBNA engineering.



FRAME CROSS SECTION AT FRAME LINE(S) 7

9 36'-0" Ridge Ht.
8 2 @ 4'-7 1/8"
7 3'-1 11/16"
6 2'-10 5/16"
5 1'-7 11/16"
4 2'-0"
3 4'-0"
2 2 @ 2'-0" 2 (1)JCP053067
1 8 1/2" 1 (1)JCP053067

☐ Dimension Key ◯ Part Key

Shape Name = Shape 1 Wall 4, Frame 7

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 10:45:50

FRAME CROSS SECTION AT FRAME LINE(S) 7

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
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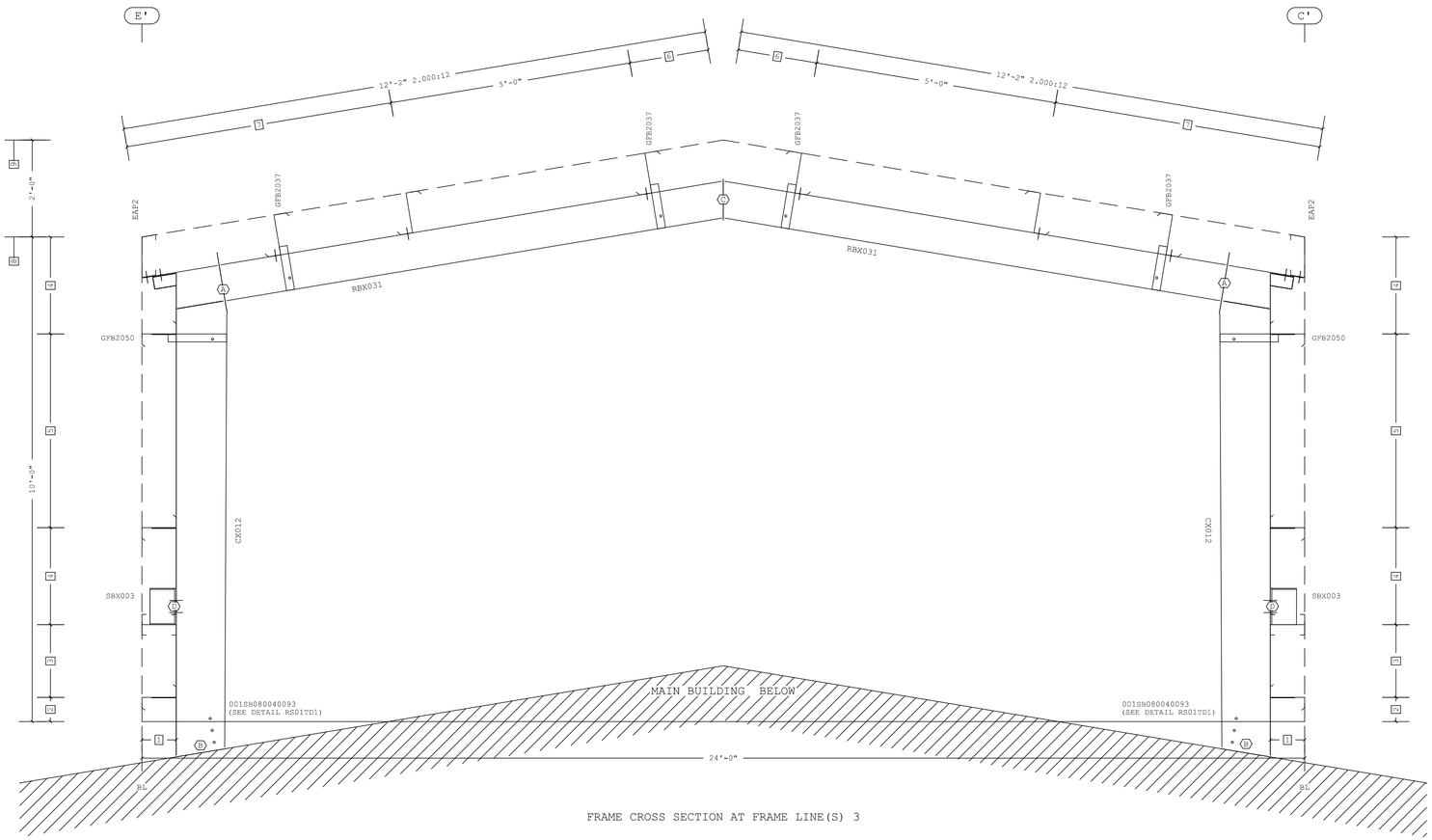
Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX012	1	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
RBX031	2	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
RBX031	3	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
CX012	4	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
SBX003	5	6.0000	.2500	.1644	9"	9"	6 1/2"	

Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	8	F1852	3/4"	2"	3/8"	2	2	Yes	Yes	0097388
B	4	A490	1"	2"	3/8"	1	1			49402
C	4	F1852	3/4"	2"	3/8"	1	1	Yes	Yes	0097388
D	4	A325	1/2"	1 1/2"	3/8"	1	1			49080

Frame Clearances
Horiz. Clearance between members 1(CX012) and 4(CX012): 20'-6"
Vert. Clearance at member 1(CX012): 8'-5 1/16"
Vert. Clearance at member 4(CX012): 8'-5 1/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



FRAME CROSS SECTION AT FRAME LINE(S) 3

9 46'-0" Ridge Ht.
8 44'-0" Low Eave Ht.
7 2 @ 2'-9 3/16"
6 1'-7 11/16"
5 4'-0"
4 2'-0 1/2"
3 1'-5"
2 6 1/2"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Clerestory Wall 4, Frame 1

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGER No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:12

FRAME CROSS SECTION AT FRAME LINE(S) 3

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 15

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

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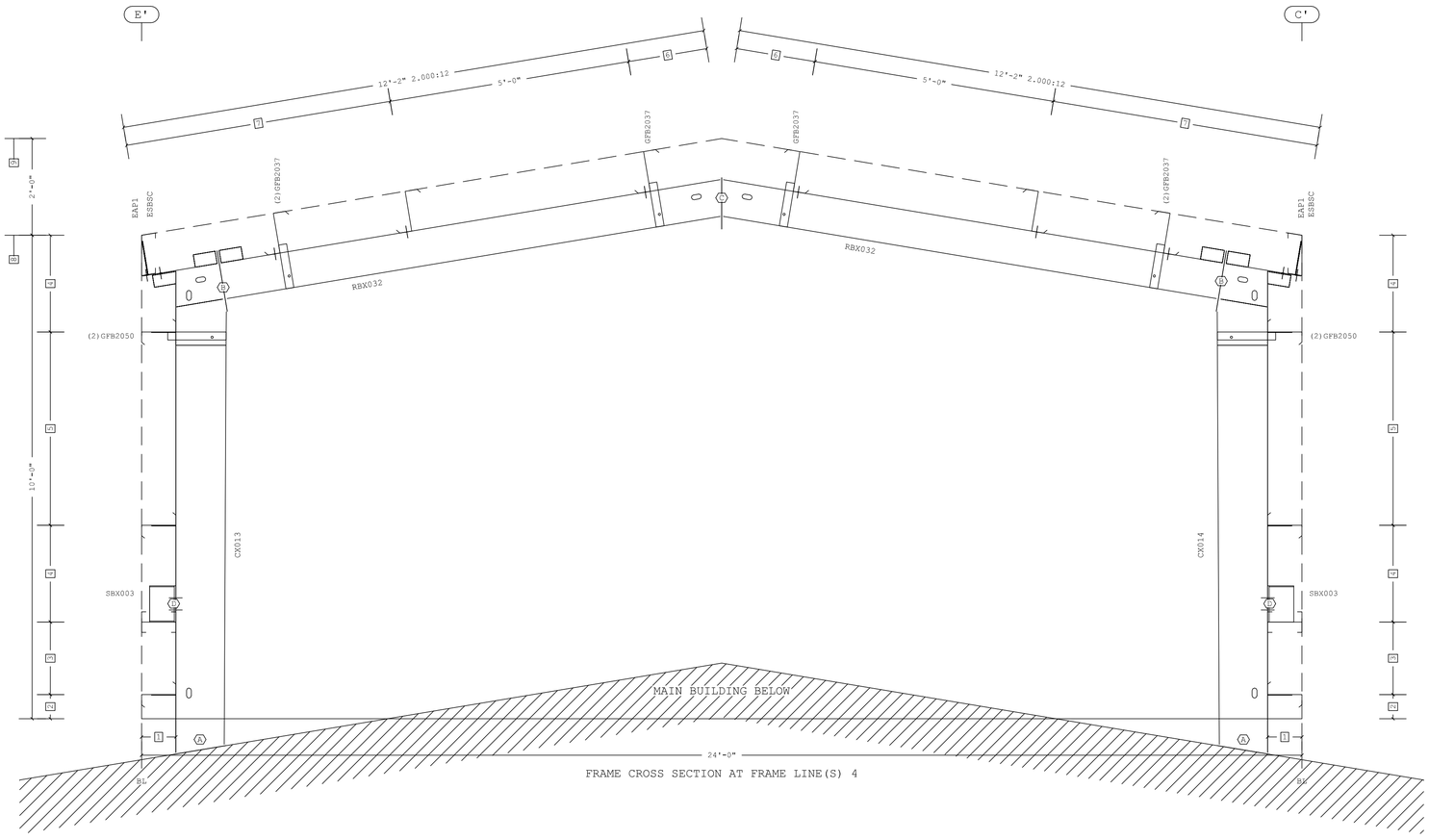
Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX013	1	6.0000	.2500	.1345	1'-0"	1'-0 1/2"	10'-1 5/8"	197#
	2	6.0000	.2500	.1644	1'-0 1/2"	1'-0"		
RBX032	3	6.0000	.2500	.1345	9"	9"	10'-6 7/16"	179#
RBX032	4	6.0000	.2500	.1345	9"	9"	10'-6 7/16"	179#
CX014	5	6.0000	.2500	.1644	1'-0 1/2"	1'-0"	9'-11 15/16"	197#
	6	6.0000	.2500	.1345	1'-0"	1'-0 1/2"		
SBX003	7	6.0000	.2500	.1644	9"	9"	6 1/2"	

Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	4	A490	1"	2"	3/8"	1	1			49402
B	8	F1852	3/4"	2 1/4"	1/2"	2	2	Yes	Yes	0097389
C	6	F1852	3/4"	2"	3/8"	1	2	Yes	Yes	0097388
D	4	A325	1/2"	1 1/2"	3/8"	1	1			49080

Frame Clearances
Horiz. Clearance between members 1(CX012) and 5(CX013): 20'-6"
Horiz. Clearance between members 1(CX012) and 6(CX013): 20'-6 1/16"
Horiz. Clearance between members 2(CX012) and 5(CX013): 20'-6"
Horiz. Clearance between members 2(CX012) and 6(CX013): 20'-6"
Vert. Clearance at member 2(CX012): 8'-5 1/16"
Vert. Clearance at member 5(CX013): 8'-5 1/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



9 46'-0" Ridge Ht.
8 44'-0" Low Eave Ht.
7 2 @ 2'-9 3/16"
6 1'-7 11/16"
5 4'-0"
4 2'-0 1/2"
3 1'-5"
2 6 1/2"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Clerestory Wall 4, Frame 2

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGREN No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:13

FRAME CROSS SECTION AT FRAME LINE(S) 4

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
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FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

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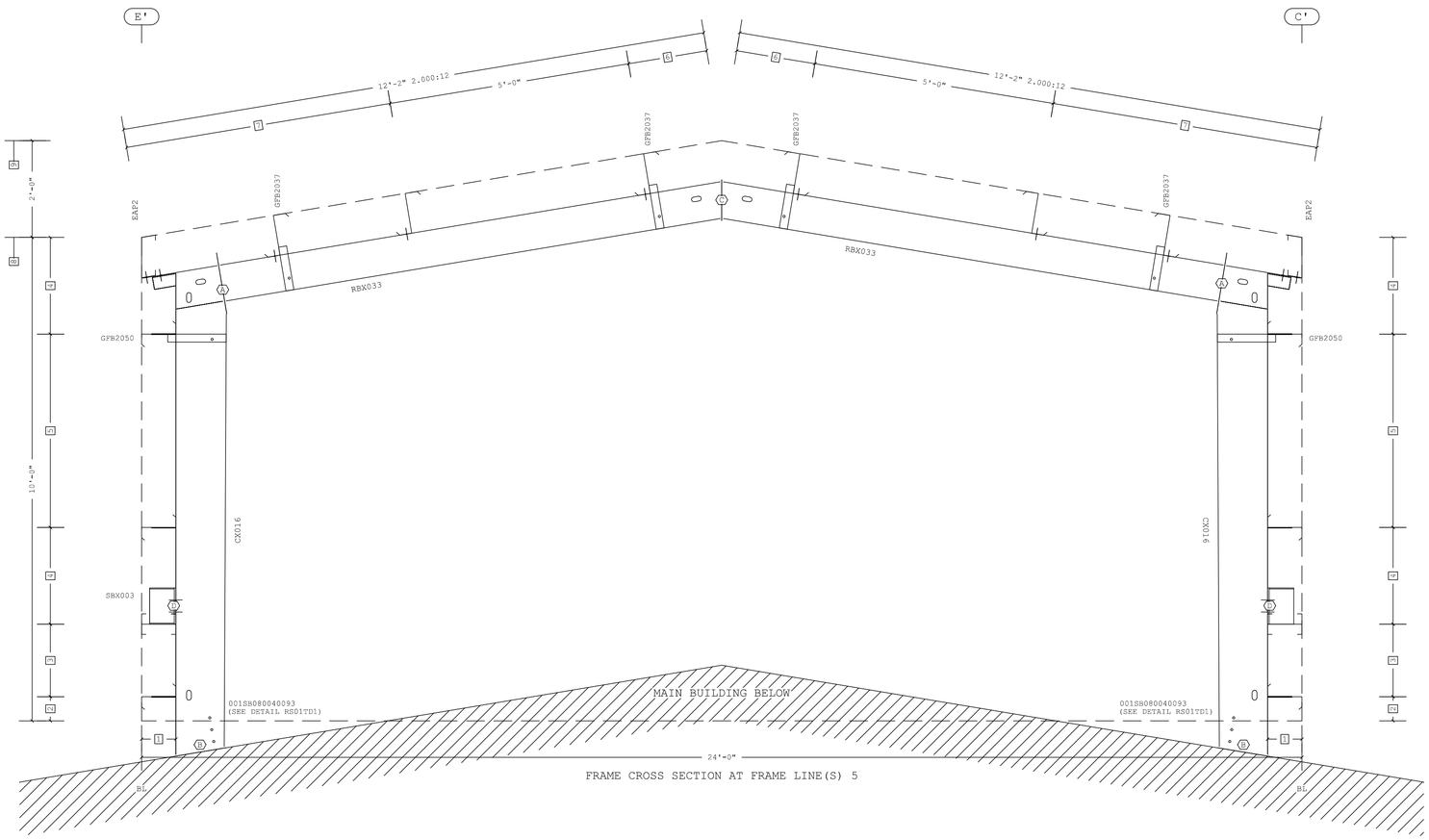
Frame Member Schedule

Part	Mem	Width	Thick	WebThk.	Depth1	Depth2	Approx.Lgth	Approx.Weight
CX016	1	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
RBX033	2	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
RBX033	3	6.0000	.2500	.1345	9"	9"	10'-6 9/16"	174#
CX016	4	6.0000	.2500	.1345	1'-0"	1'-0"	10'-1 5/8"	189#
SBX003	5	6.0000	.2500	.1644	9"	9"	6 1/2"	

Bolt Connection & Plate Schedule

Id	Qty	Grade	Bolt Dia.	Bolt Length	Plate Thick.	Rows Out	Rows In	Tension Bolt	Washer	PartNo
A	8	F1852	3/4"	2"	3/8"	2	2	Yes	Yes	0097388
B	4	A490	1"	2"	3/8"	1	1			49402
C	4	F1852	3/4"	2"	3/8"	1	1	Yes	Yes	0097388
D	4	A325	1/2"	1 1/2"	3/8"	1	1			49080

Frame Clearances
Horiz. Clearance between members 1(CX016) and 4(CX016): 20'-6"
Vert. Clearance at member 1(CX016): 8'-5 1/16"
Vert. Clearance at member 4(CX016): 8'-5 1/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)



FRAME CROSS SECTION AT FRAME LINE(S) 5

9 46'-0" Ridge Ht.
8 44'-0" Low Eave Ht.
7 2 @ 2'-9 3/16"
6 1'-7 11/16"
5 4'-0"
4 2'-0 1/2"
3 1'-5"
2 6 1/2"
1 8 1/2"
Dimension Key

Shape Name = Shape 1 Clerestory Wall 4, Frame 3

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRYMAN No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:15

FRAME CROSS SECTION AT FRAME LINE(S) 5

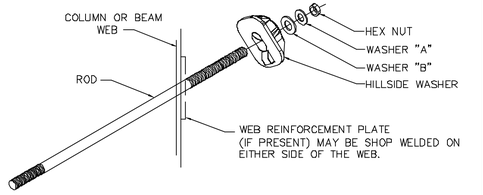
BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 17

Copyright © 2019 VP Buildings, America, Inc.

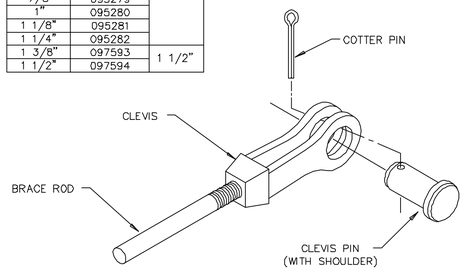
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1



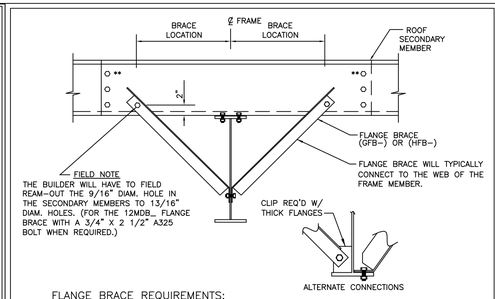
DESCRIPTION/PART NO				
ROD DIAM	NUT	HARD STEEL ROUND WASHER A	HARD STEEL WASHER B	HILLSIDE WASHER
3/8"	95321	3/8" FLAT WASHER (96408)	1/2" BEVEL SQUARE WASHER (46040)	543334
1/2"	95230	1/2" FLAT WASHER (95872)	3/4" FLAT ROUND WASHER (95946)	
5/8"	95233	5/8" FLAT WASHER (95945)		
3/4"	95235	3/4" FLAT WASHER (95946)	1" FLAT ROUND WASHER (95948)	543335
7/8"	95237	7/8" FLAT WASHER (95947)		
1"	95238	1" FLAT WASHER (95948)	1 1/8" FLAT ROUND WASHER (95949)	543336
1 1/8"	95239	1 1/8" FLAT WASHER (95949)		

REV. DATE:08/02/17 | REV. NO. 04
BR01G2
ROD BRACE
WEB SLOT ASSEMBLY

ROD DIA.	CLEVIS MARK NO.	CLEVIS PIN DIA.
3/8"	097572	1 1/4"
1/2"	097573	
5/8"	095277	
3/4"	095278	
7/8"	095279	
1"	095280	
1 1/8"	095281	
1 1/4"	095282	
1 3/8"	097593	1 1/2"
1 1/2"	097594	



REV. DATE:06/23/11 | REV. NO. 03
BR02K1
ROD BRACING
CLEVIS ASSEMBLY



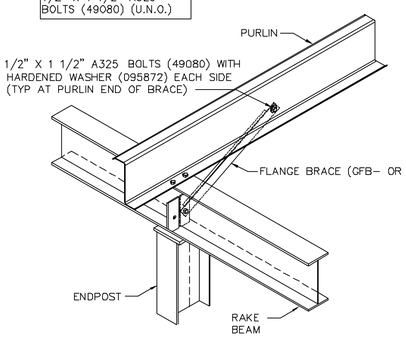
FLANGE BRACE REQUIREMENTS:

RULE#1– ALL FLANGE BRACES ON CROSS SECTIONS MUST BE INSTALLED.
RULE#2– SINGLE FLANGE BRACES ARE REQUIRED WHEN PART MARK ON CROSS SECTION IS NOT ACCOMPANIED BY (2).
RULE#3– FLANGE BRACES ARE REQUIRED BOTH SIDES OF THE FRAME WEB WHEN PART MARK IS ACCOMPANIED BY (2).
RULE#4– WHENEVER POSSIBLE, PLACE SINGLE BRACES TOWARD THE CENTER OF THE BUILDING.
RULE#5– WHENEVER POSSIBLE, PLACE ALL SINGLE BRACES ON THE SAME SIDE OF THE FRAME WEB.

** 10" & 11 1/2" PURLINS REQUIRE 3 BOLTS AT EACH END OF PURLIN LAP.

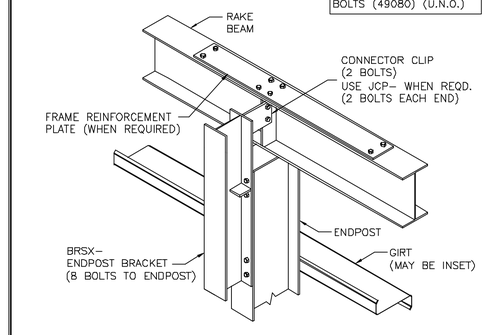
REV. DATE:05/08/18 | REV. NO. 02
BR06AE
TYPICAL FLANGE BRACE CONNECTIONS
CONT. PURLIN LAP SHOWN, CONT. GIRT & SIMPLE PURLIN

NOTE: ALL BOLTS TO BE 1/2" X 1 1/2" A325 BOLTS (49080) (U.N.O.)

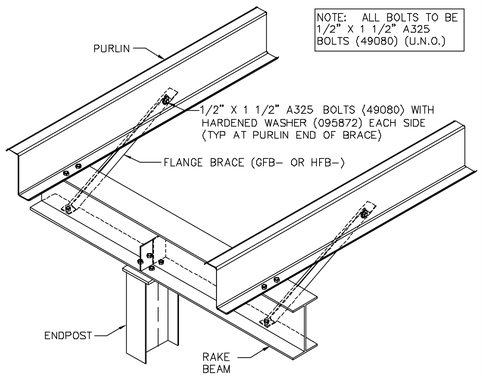


REV. DATE:06/24/11 | REV. NO. 01
BR25A3
ENDPOST TOP BRACING
ENDPOST WITHIN 6" (152mm) OF PURLIN

NOTE: ALL BOLTS TO BE 1/2" X 1 1/2" A325 BOLTS (49080) (U.N.O.)



REV. DATE:07/01/09 | REV NO 00
BR25BD
TOP OF ENDPOST
ENDPOST BRACKET TO RAKE BEAM



REV. DATE:11/16/15 | REV. NO. 03
BR25CA
ENDPOST TOP BETWEEN PURLINS
NO CAP CHANNEL – BRACED TO PURLINS ONLY

F = FEET G = GAGE
I = INCHES O = OPERATION
E = EIGHTHS C = FIN/COLOR

PANEL/COVERING
W 1 3 1 1 7 2 6 1 K T D
* F F I I E G G O C C C
LENGTH CODE

INSULATION
I B 1 3 0 1 0 3 6 0 3 0 W V
* * F F F I I I I I I E C C
LENGTH WIDTH THK CODE

SECONDARY (STANDARD)
0 8 Z 1 9 1 1 4 1 7 – – – – –
* * * F F I I E G G * * * * *
DEPTH LENGTH SHAPE GAGE ADJUST.CODES

SECONDARY (SPECIAL)
0 0 1 0 8 Z 1 9 1 1 4 1 7 – – –
* * * * * * F F I I E G G * * *
COUNTER DEPTH& SHAPE LENGTH GAGE ADJUST CODES

ROD BRACING
0 3 R S 2 5 1 0
I E * * F F I I
DIA LENGTH

CX*** = COLUMN (PLATE)
CGX*** = COLUMN (GAGE)
WCX*** = COLUMN (HOTROLL)

RBX*** = RAFTER (PLATE)
BGX*** = RAFTER (GAGE)
WRX*** = RAFTER (HOTROLL)
TRX*** = TRUSS RAFTER

ICX*** = INTERIOR COLUMN
PCX*** = PIPE COLUMN
TCX*** = TUBE COLUMN

EPX*** = ENDPOST (PLATE)
EGX*** = ENDPOST (GAGE)

CBX*** = CANOPY (PLATE)
CBX*** = PIGGYBACK CANOPY

DCC*** = 8 1/2" GAGE POST
DCE*** = 10" GAGE POST

RS = THREADS BOTH ENDS
RT = THREADS ONE END – CLEVIS ONE END
RU = CLEVIS BOTH ENDS
RP = THREAD BOTH ENDS – NO HILLSIDES

REV. DATE:08/29/12 | REV. NO. 01
EN50B1
MARK NUMBER KEY
COMMON GENERATED MARK NUMBERS

BASIC ERECTION GUIDE REQUIRED FOR THIS PROJECT:

REFER TO:

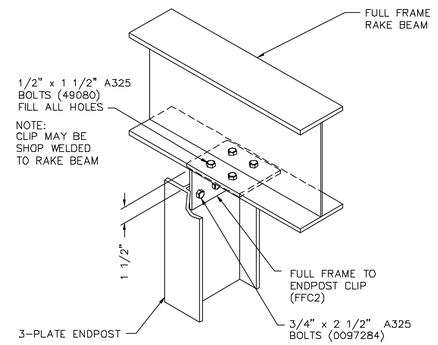
VARCO PRUDEN BUILDINGS

BASIC ERECTION GUIDE

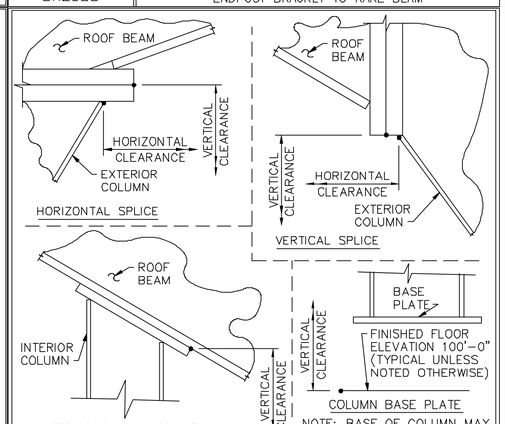
The Field Guide for correctly storing and erecting Varco Pruden Metal Building Systems

BACK COVER: 4001 BASIC ERECTION GUIDE

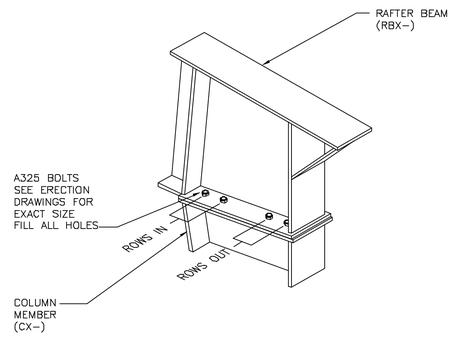
REV. DATE:01/30/14 | REV. NO. 00
ENV002
BASIC ERECTION GUIDE – STRUCTURAL



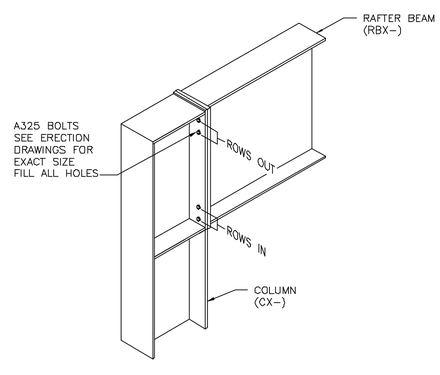
REV. DATE:06/21/11 | REV. NO. 01
PF10CA
3–PLATE ENDPOST TO FULL FRAME
FULL FRAME ENDWALL



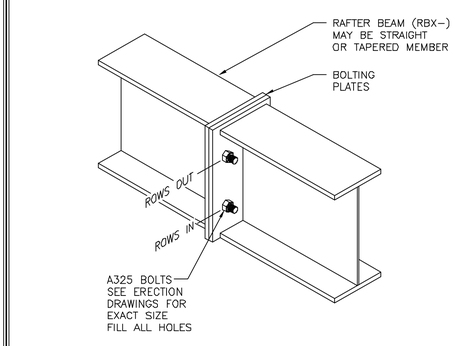
REV. DATE:08/12/16 | REV. NO. 00
PFR007
CLEAR HEIGHT DIMENSION WORK POINTS
AS SHOWN ON FRAME CROSS SECTION DRAWINGS



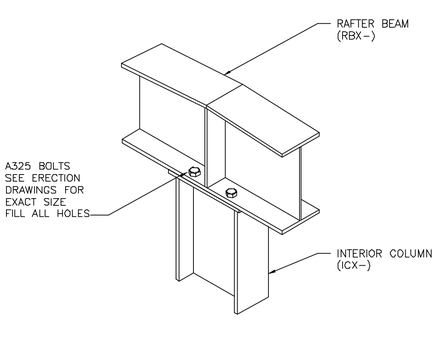
REV. DATE: 07/01/09 | REV. NO. 00
PF01A1
HAUNCH TO COLUMN CONNECTION
TOP BOLTED COLUMN



REV. DATE: 07/01/09 | REV. NO. 00
PF01A2
HAUNCH TO COLUMN CONNECTION
FACE/VERTICAL BOLTED COLUMN



REV. DATE: 07/01/09 | REV. NO. 00
PF03A1
RAFTER BEAM CONNECTION
RAKE BEAM OR FULL FRAME



REV. DATE: 07/01/09 | REV. NO. 00
PF05B1
INTERIOR COLUMN CONNECTION
COLUMN AT RIDGE

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS, SECONDARY CLIP CONNECTIONS, AND FLANGE BRACE CONNECTIONS, UNLESS NOTED OTHERWISE.
2. SLOT REINFORCEMENT PLATES NEED NOT BE LOCATED ON THE SAME SIDE OF THE WEB AS THE HILLSIDE WASHER.

THE VP ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF VP AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY VP. THE VP ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY VP EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY VP.

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THE GENERAL CONTRACTOR AND/OR ERECTOR IS SOLELY RESPONSIBLE FOR ACCURATE GOOD QUALITY WORKMANSHIP IN ERECTING THIS BUILDING IN ACCORDANCE WITH THIS DRAWING, DETAILS REFERENCED IN THIS DRAWING, ALL APPLICABLE VP BUILDINGS ERECTION GUIDES, AND INDUSTRY STANDARDS PERTAINING TO PROPER ERECTION, INCLUDING THE CORRECT USE OF TEMPORARY BRACING.

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 SEDSheet 10:41:32

PRIMARY BRACING SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-rtb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 18

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Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
E23	00110ES3311411D02	0.1130	10"		RS12PH, RS12PA
E24	10E3211411DDD02	0.1130	10"		RS12PA
E25	00210ES3311411D02	0.1130	10"		RS12PH, RS12PA
P64	10Z381141344D0	0.0880	10"	2'-10 1/2"	RS01U1
P65	10Z401141555D0	0.0730	10"	3'-10 1/2"	RS01U1
P67	10Z3711411A5D0	0.1130	10"	3'-10 1/2"	RS02T1, BR18E2, RS01U1
P68	10Z3711412A5D0	0.0980	10"	3'-10 1/2"	RS02T1, RS01U1
P69	10Z3711413A5D0	0.0880	10"	3'-10 1/2"	RS02T1, RS01U1
P70	10Z3711414A5D0	0.0790	10"	3'-10 1/2"	RS02T1, RS01U1
P103	01010ZS370541200	0.0980	10"	3'-10 1/2"	RS01TD, RS01U1
P77	10Z381141144D0	0.1130	10"	2'-10 1/2"	BR18E2, RS01U1
P94	00610ZS370541300	0.0880	10"	3'-10 1/2"	RS01U1, RS01TD
P84	10Z381141444D0	0.0790	10"	2'-10 1/2"	RS01U1
P98	00110ZS360741400	0.0790	10"	3'-10 1/2"	RS01U1, RS01TD, RS01TD1
P99	00210ZS360741200	0.0980	10"	3'-10 1/2"	RS01U1, RS01TD, RS01TD1
P100	00310ZS360741300	0.0880	10"	3'-10 1/2"	RS01U1, RS01TD, RS01TD1
P93	00510ZS370541200	0.0980	10"	3'-10 1/2"	RS01TD, RS01U1
P96	00710ZS370541200	0.0980	10"	3'-10 1/2"	RS01TD, RS01U1
P101	00410ZD370541200	0.0980	10"	3'-10 1/2"	RS01TD, RS01U1
P97	00810ZD370541300	0.0880	10"	3'-10 1/2"	RS01TD, RS01U1
P102	00910ZD370541300	0.0880	10"	3'-10 1/2"	RS01TD, RS01U1
	10Z3611411A4D0	0.1130	10"		RS02T1, RS01U1
	10Z3311411BBD0	0.1130	10"		RS01TC

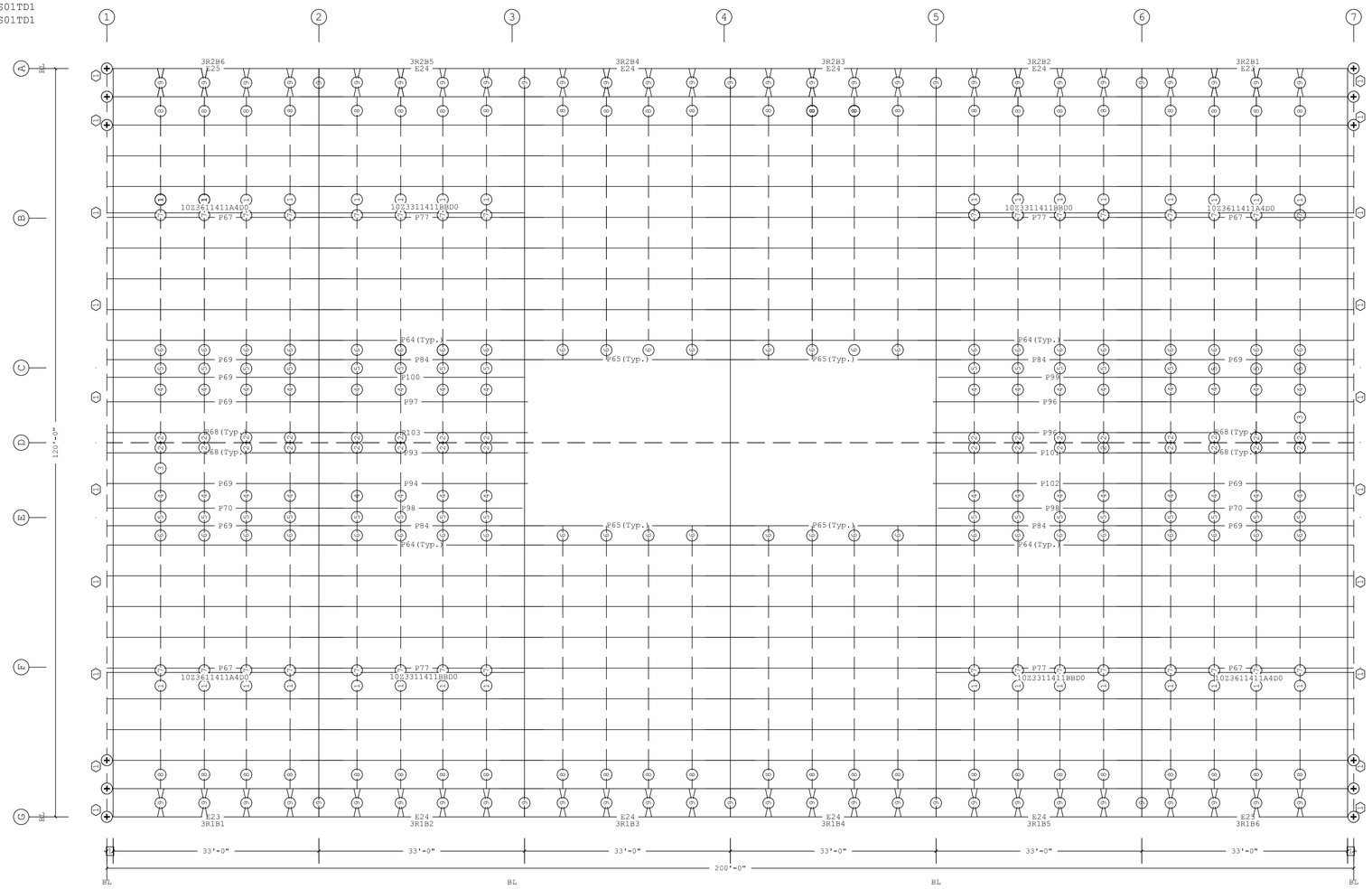
NOTE:
DO NOT ATTACH SSR CLIP TO COMPOSITE STRUT PURLIN

Part Mark Key
1 RKCB15
(+) SSR Fixed Clip Location

Secondary Bracing Schedule

Id	Qty	Mark No	Spacing
1	32	CPBB040414	4'-3 3/8"
2	32	CPBRC020000	1'-7 11/16"
3	336	CPBB050108(Typ.)	5'-0"
4	32	CPBB040108	4'-0"
5	32	CPBB021114	2'-10 5/16"
6	48	CPBB030304	3'-1 11/16"
7	32	CPBB001002	8 5/8"
8	48	CPBB040812	4'-7 1/8"
9	106	PBA0411	4'-7 1/8"

See SED:
BR09JR, BR09JG, BR18E2, BR09RY, BR09RZ
BR09PK, BR09PH, BR09JH, BR09K5, BR09K2



ROOF SECONDARY PLAN

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRYMAN No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

1 1'-0"
Dimension Key

Shape Name = Shape 1

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
2. FLANGE BRACES ARE AN INTEGRAL PART OF THE STABILITY OF THE STRUCTURAL SYSTEM AND MUST BE PROPERLY INSTALLED PRIOR TO ERECTION OF WALL AND ROOF SHEETS.
3. REMOVAL OR ALTERATION OF ANY COMPONENT IS PROHIBITED.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:59:32

ROOF SECONDARY PLAN

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
VPC VERSION: 2019.1a
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company

JOBNO 19-0130302-01
DATE 6/9/2025
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PAGE 19

Proprietary Design of VP Buildings America, Inc.

MAIN BUILDING LINE BELOW

Secondary Part Schedule

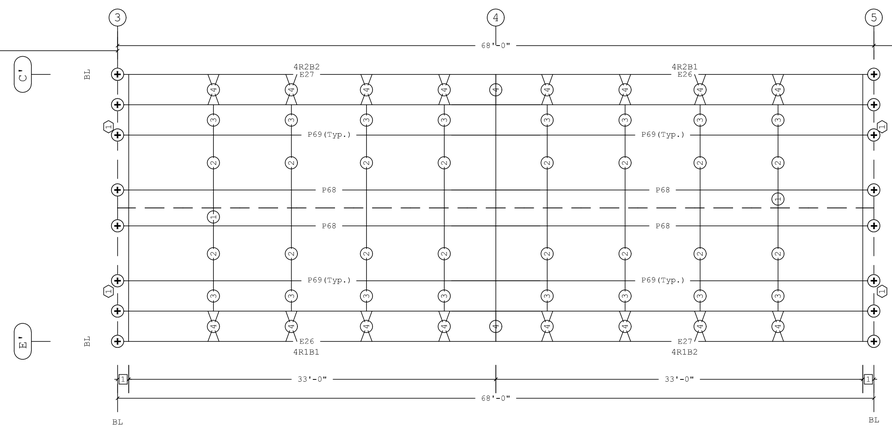
Mark	Part	Thick.	Depth	Lap	Detail
E26	00510ES3311414D02	0.0790	10"		RS12PF, RS12PE
E27	00410ES3311414D02	0.0790	10"		RS12PF, RS12PE
P68	10Z3711412A5D0	0.0980	10"	3'-10 1/2"	RS02T1, RS01U1
P69	10Z3711413A5D0	0.0880	10"	3'-10 1/2"	RS02T1, RS01U1

Secondary Bracing Schedule

Id	Qty	Mark No	Spacing
1	16	CPBRC020000(Typ.)	1'-7 11/16"
2	16	CPBB050108	5'-0"
3	16	CPBB021012	2'-9 3/16"
4	34	PBA0301	2'-9 3/16"

See SED:
BR09PK, BR09RY, BR09R2, BR09PH, BR09JH
BR09JG, BR09K5, BR09K2

Part Mark Key
1 RKCB15
(+) SSR Fixed Clip Location



CLERESTORY ROOF SECONDARY

MAIN BUILDING LINE BELOW

1 1'-0"
Dimension Key

Shape Name = Shape 1 Clerestory

FOR CONSTRUCTION

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERTRAM No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 14:01:39

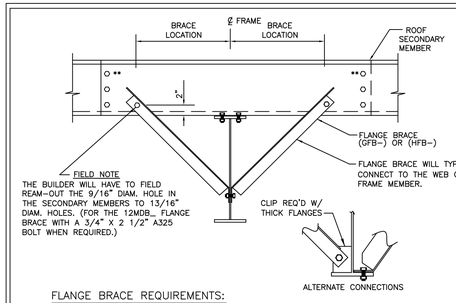
CLERESTORY ROOF SECONDARY

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS
VARCO PRUDEN
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VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
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PAGE 20

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FLANGE BRACE REQUIREMENTS:

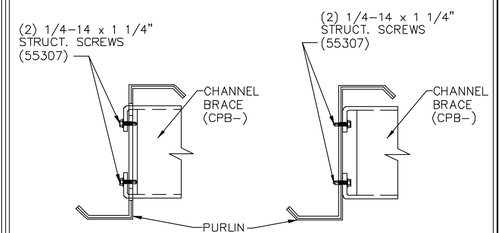
- RULE#1– ALL FLANGE BRACES ON CROSS SECTIONS MUST BE INSTALLED.
- RULE#2– SINGLE FLANGE BRACES ARE REQUIRED WHEN PART MARK ON CROSS SECTION IS NOT ACCOMPANIED BY (2).
- RULE#3– FLANGE BRACES ARE REQUIRED BOTH SIDES OF THE FRAME WEB WHEN PART MARK IS ACCOMPANIED BY (2).
- RULE#4– WHENEVER POSSIBLE, PLACE SINGLE BRACES TOWARD THE CENTER OF THE BUILDING.
- RULE#5– WHENEVER POSSIBLE, PLACE ALL SINGLE BRACES ON THE SAME SIDE OF THE FRAME WEB.

** 10" & 11 1/2" PURLINS REQUIRE 3 BOLTS AT EACH END OF PURLIN LAP.

REV. DATE:05/08/18	REV. NO. 02	BR06AE	TYPICAL FLANGE BRACE CONNECTIONS CONT. PURLIN LAP SHOWN, CONT. GIRT & SIMPLE PURLIN

ERECTION NOTE:

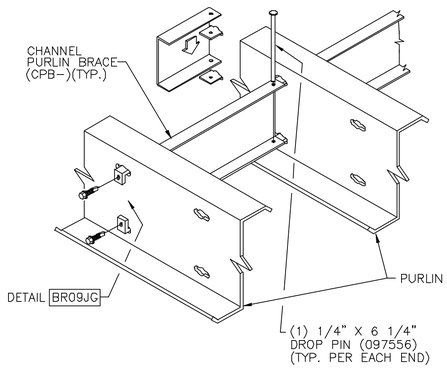
WHEN A CHANNEL BRACE DOES NOT LINE UP WITH ANOTHER CHANNEL BRACE OR THE SLOTS IN THE PURLIN WEB FOR A DROP PIN CONNECTION BEND THE CHANNEL TABS TOWARD THE PURLIN WEB AND USE A SELF-DRILLER (55307) TO ATTACH.



USE WHEN CHANNEL BRACE DOES LINE UP WITH THE SLOTS IN THE PURLIN WEB.

USE WHEN CHANNEL BRACE DOES NOT LINE UP WITH THE SLOTS IN THE PURLIN WEB.

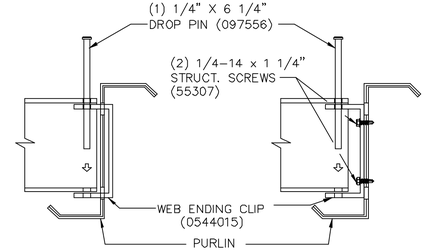
REV. DATE:04/01/11	REV. NO. 01	BR09JG	CHANNEL BRACE ENDING AT PURLIN WEB SELF-DRILLER WITH BENT TABS



REV DATE:07/01/09	REV NO 00	BR09JH	SINGLE CHANNEL PURLIN BRACE ENDING AT PURLIN WEB LOCATION

ERECTION NOTE:

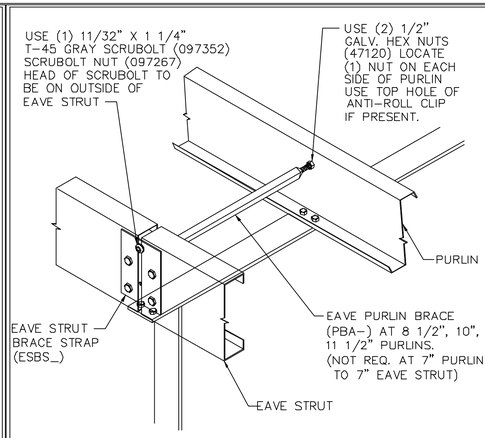
CHANNEL BRACES THAT END AT A PURLIN WEB, BUT DO NOT HAVE TABS TO BEND AND SECURE. INSERT CLIP (544015) THROUGH WEB SLOTS AND USE A DROP PIN TO ATTACH TO CHANNEL BRACE.



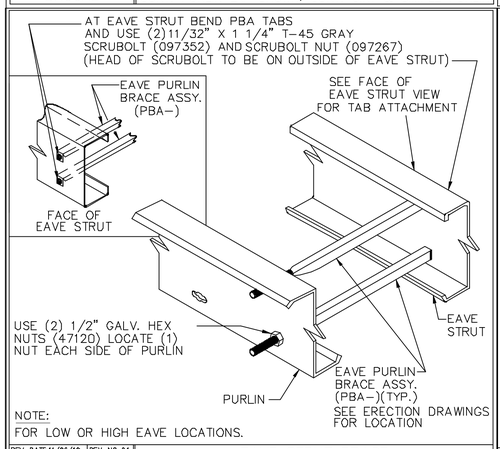
USE WHEN CHANNEL BRACE DOES LINE UP WITH THE SLOTS IN THE PURLIN WEB.

USE WHEN CHANNEL BRACE DOES NOT LINE UP WITH THE SLOTS IN THE PURLIN WEB.

REV. DATE 04/01/11	REV. NO. 01	BR09JR	CHANNEL BRACE ENDING AT PURLIN WEB WEB ENDING CLIP WITH DROP PIN

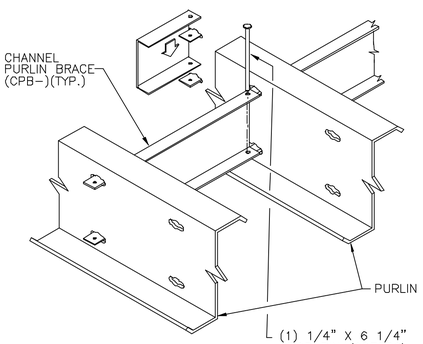


REV DATE:07/20/16	REV. NO. 05	BR09K2	EAVE BRACE STRAP AND EAVE PURLIN BRACE LOCATED AT EAVE – CENTERLINE OF FRAME



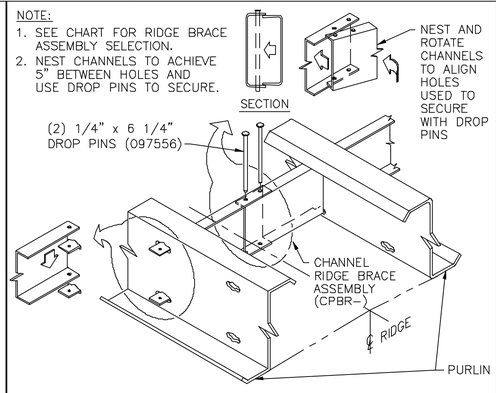
NOTE:
FOR LOW OR HIGH EAVE LOCATIONS.

REV. DATE:11/26/12	REV. NO. 04	BR09K5	EAVE STRUT BRACE

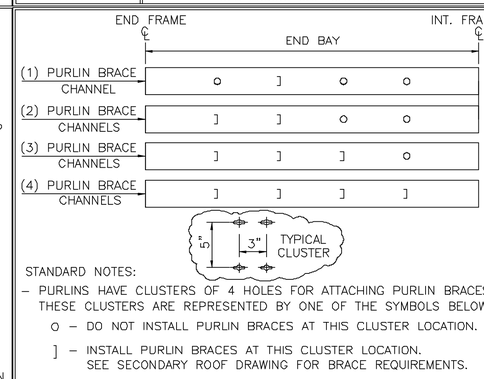


REV DATE: 07/01/09	REV NO 00	BR09PH	SINGLE CHANNEL PURLIN BRACE INTERMEDIATE LOCATION

NOTE:
1. SEE CHART FOR RIDGE BRACE ASSEMBLY SELECTION.
2. NEST CHANNELS TO ACHIEVE 5" BETWEEN HOLES AND USE DROP PINS TO SECURE.



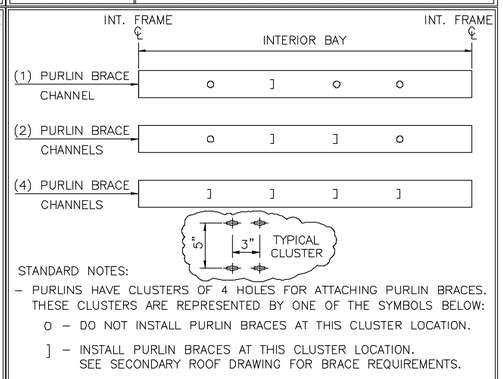
REV DATE: 07/01/09	REV NO 00	BR09PK	CHANNEL RIDGE BRACE ASSEMBLY SINGLE BRACE AT SYMMETRICAL RIDGE



STANDARD NOTES:

- PURLINS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING PURLIN BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:
  - O – DO NOT INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION.
  -] – INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY ROOF DRAWING FOR BRACE REQUIREMENTS.
- INSTALL PURLIN BRACES AT THE RIDGE AND WORK TOWARD THE EAVE.
- CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM EAVE TO EAVE IN A GIVEN BAY.

REV. DATE:07/01/09	REV. NO. 00	BR09RY	PURLIN BRACE CLUSTER LOCATION END BAY CHANNEL LOCATION

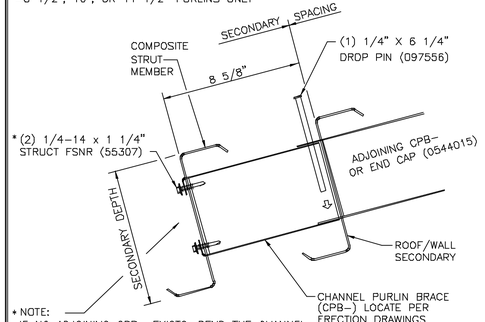


STANDARD NOTES:

- PURLINS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING PURLIN BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:
  - O – DO NOT INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION.
  -] – INSTALL PURLIN BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY ROOF DRAWING FOR BRACE REQUIREMENTS.
- INSTALL PURLIN BRACES AT THE RIDGE AND WORK TOWARD THE EAVE.
- CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM EAVE TO EAVE IN A GIVEN BAY.

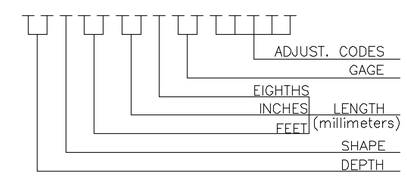
REV. DATE:07/01/09	REV. NO. 00	BR09RZ	PURLIN BRACE CLUSTER LOCATION INTERIOR BAY CHANNEL LOCATION

NOTES:
- –DO NOT ATTACH PANEL OR PANEL CLIPS TO COMPOSITE STRUT MEMBER.
- –SECONDARY ORIENTATION OR SHAPE MAY BE OTHER THAN SHOWN
- –COMPOSITE STRUT MEMBER MAY BE ABOVE OR BELOW SECONDARY MEMBER
- –8 1/2", 10", OR 11 1/2" PURLINS ONLY



* NOTE:
IF NO ADJOINING CPB_ EXISTS, BEND THE CHANNEL TABS TOWARD THE PURLIN WEB AND USE A SELF-DRILLER (55307) TO ATTACH. IF CPB- EXISTS BOTH SIDES OF COMPOSITE PURLIN THEN USE DROP PINS.

REV. DATE: 07/01/09	REV. NO. 00	BR18E2	COMPOSITE STRUT ASSEMBLY ATTACH. ROOF SECONDARY

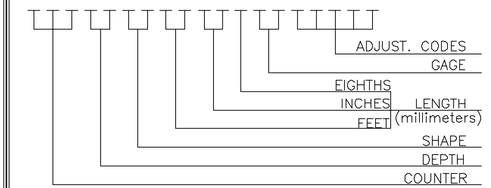


DEPTH
07 = 7"
08 = 8 1/2"
10 = 10"
11 = 11 1/2"

SHAPE
Z = ZEE
C = CEE
E = LOW EAVE STRUT
H = HIGH EAVE STRUT

GAGE
11 = 0.113
12 = 0.098
13 = 0.088
14 = 0.079
15 = 0.073
16 = 0.068
17 = 0.060

REV. DATE: 07/01/09	REV. NO. 00	EN51B1	SECONDARY PART MARK NUMBER COMMON GENERATED MARK NUMBERS



DEPTH
07 = 7"
08 = 8 1/2"
10 = 10"
11 = 11 1/2"

SHAPE
ZS = ZEE
CS = CEE
ES = LOW EAVE STRUT
HS = HIGH EAVE STRUT
BB = BACK TO BACK CEE
FB = FACE TO BACK CEE
FF = FACE TO FACE CEE

GAGE
11 = 0.113
12 = 0.098
13 = 0.088
14 = 0.079
15 = 0.073
16 = 0.068
17 = 0.060

REV. DATE. 07/01/09	REV. NO. 00	EN51B2	SPECIAL SECONDARY PART MARK KEY COMMON GENERATED MARK NUMBERS

ERECTION DRAWING PART MARK

C P R 1 W 1 B 3

- BAY NUMBER
- CANOPY (C)/PARTITION(P)/ ROOF(R)/WALL(W) NUMBER
- BUILDING SHAPE

THE BAY/BUNDLE CODE IDENTIFIES THE BUILDING CANOPY/PARTITION/ ROOF/WALL PLANE AND BAY

REV. DATE.01/31/13	REV. NO. 01	EN51B3	SECONDARY BUNDLE LOCATION KEY ALL SECONDARY DEPTHS



6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 SEDSheet 13:28:18

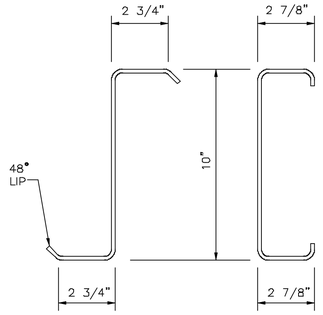
ROOF SECONDARY SED'S

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	
FILENAME:	Macarthur Street Properties Phase 1 Preliminary Design-ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

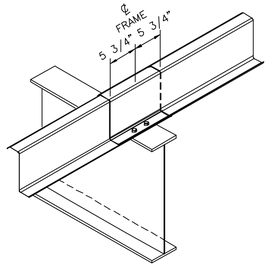
JOBNO	19-0130302-01
DATE	6/9/2025
DRAWN/CHECK	EA JLP
PAGE	21

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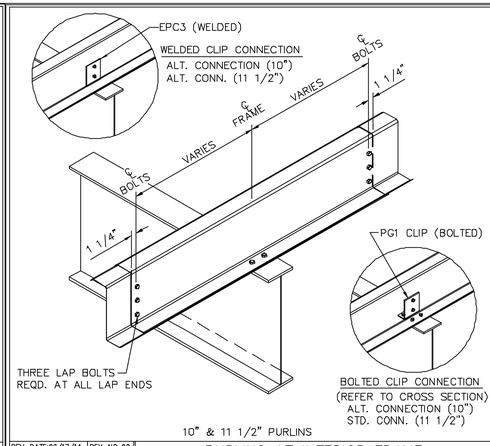
REV. DATE:07/01/09 | REV. NO. 00 | EN53G1

PURLIN AND GIRT SIZES
10" 254mm



REV. DATE:07/01/09 | REV. NO. 00 | RS01TD

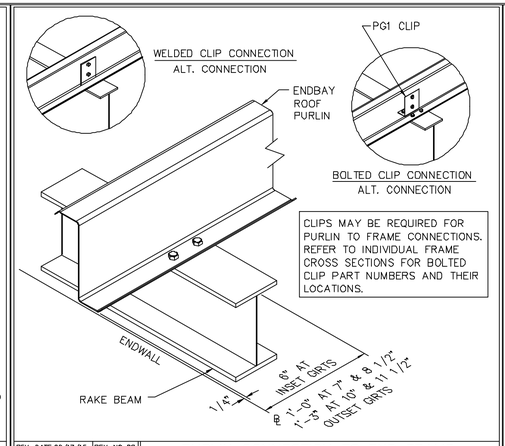
PURLINS AT INTERIOR FRAME
SIMPLE PURLINS W/O CLIP



10" & 11 1/2" PURLINS

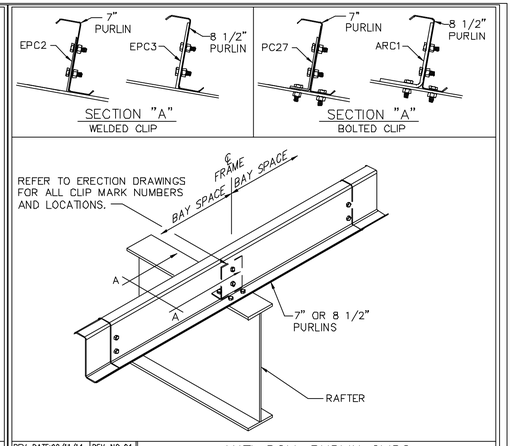
REV. DATE:06/17/14 | REV. NO. 02 | RS01U1

PURLINS AT INTERIOR FRAME
CONTINUOUS PURLINS



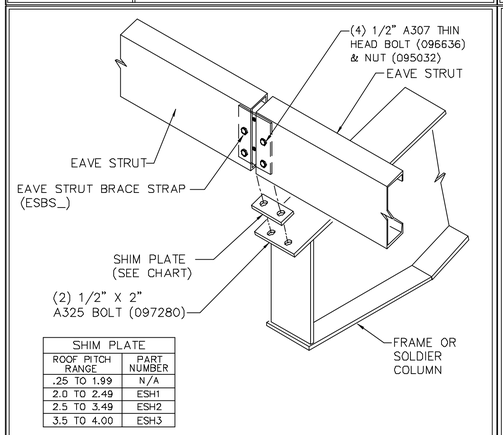
REV. DATE 08/17/15 | REV. NO. 02 | RS02T1

PURLIN CONNECTION TO END FRAME
CONTINUOUS PURLINS



REV. DATE:08/11/14 | REV. NO. 04 | RS03J1

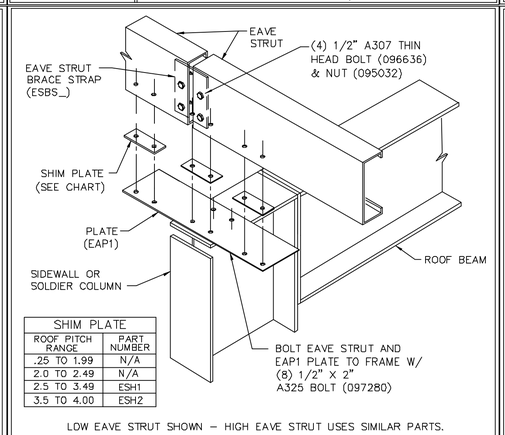
ANTI-ROLL PURLIN CLIPS
WHEN REQUIRED BY DESIGN



SHIM PLATE	
ROOF PITCH RANGE	PART NUMBER
.25 TO 1.99	N/A
2.0 TO 2.49	ESH1
2.5 TO 3.49	ESH2
3.5 TO 4.00	ESH3

REV. DATE:07/20/16 | REV. NO. 03 | RS12PA

EAVE STRUT CONNECTION
AT INTERIOR FRAME

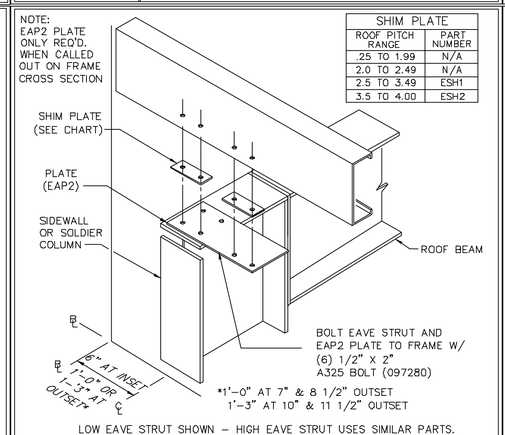


SHIM PLATE	
ROOF PITCH RANGE	PART NUMBER
.25 TO 1.99	N/A
2.0 TO 2.49	N/A
2.5 TO 3.49	ESH1
3.5 TO 4.00	ESH2

LOW EAVE STRUT SHOWN – HIGH EAVE STRUT USES SIMILAR PARTS.

REV. DATE:07/20/16 | REV. NO. 05 | RS12PE

EAVE STRUT W/ ATTACHMENT PLATE
INTERIOR FRAME

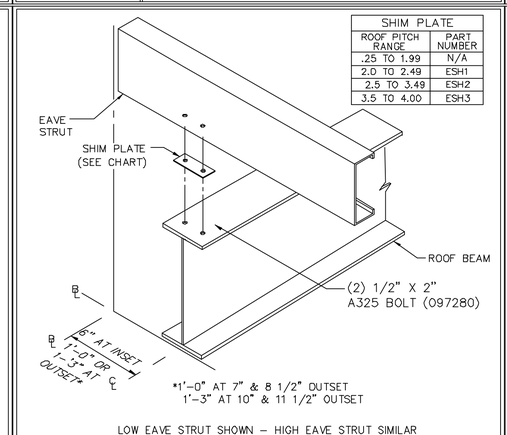


SHIM PLATE	
ROOF PITCH RANGE	PART NUMBER
.25 TO 1.99	N/A
2.0 TO 2.49	N/A
2.5 TO 3.49	ESH1
3.5 TO 4.00	ESH2

LOW EAVE STRUT SHOWN – HIGH EAVE STRUT USES SIMILAR PARTS.

REV. DATE:03/26/15 | REV. NO. 02 | RS12PF

EAVE STRUT W/ ATTACHMENT PLATE
END FRAME

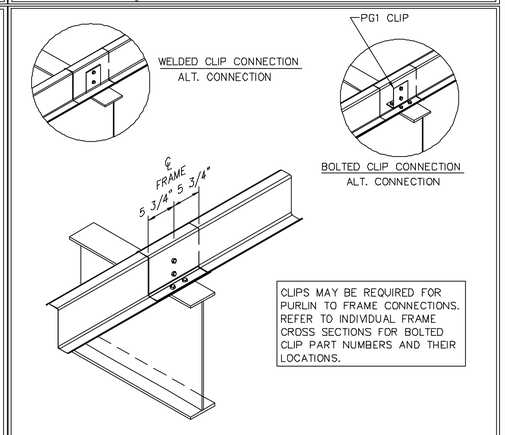


SHIM PLATE	
ROOF PITCH RANGE	PART NUMBER
.25 TO 1.99	N/A
2.0 TO 2.49	ESH1
2.5 TO 3.49	ESH2
3.5 TO 4.00	ESH3

LOW EAVE STRUT SHOWN – HIGH EAVE STRUT SIMILAR

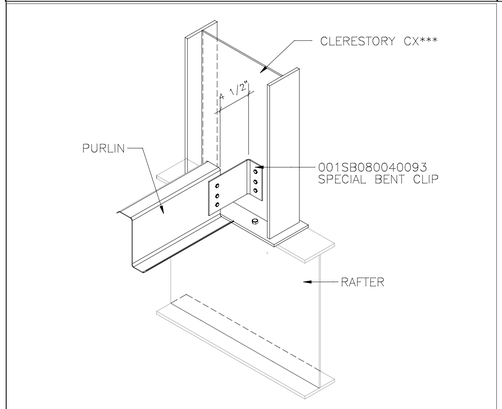
REV. DATE:03/26/15 | REV. NO. 01 | RS12PH

EAVE STRUT CONNECTION
AT END FRAME



REV. DATE 06/17/15 | REV. NO. 02 | RS01TC

PURLINS AT INTERIOR FRAME
SIMPLE PURLINS W/CLIP



REV. DATE:07/01/09 | REV. NO. 00 | RS01TD1

PURLINS TO CLERESTORY COLUMN
SIMPLE PURLINS W/ BENT CLIP

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERRY
No. C32080
CIVIL
STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 SEDSheet 10:41:36

ROOF SECONDARY SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-rtb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 22

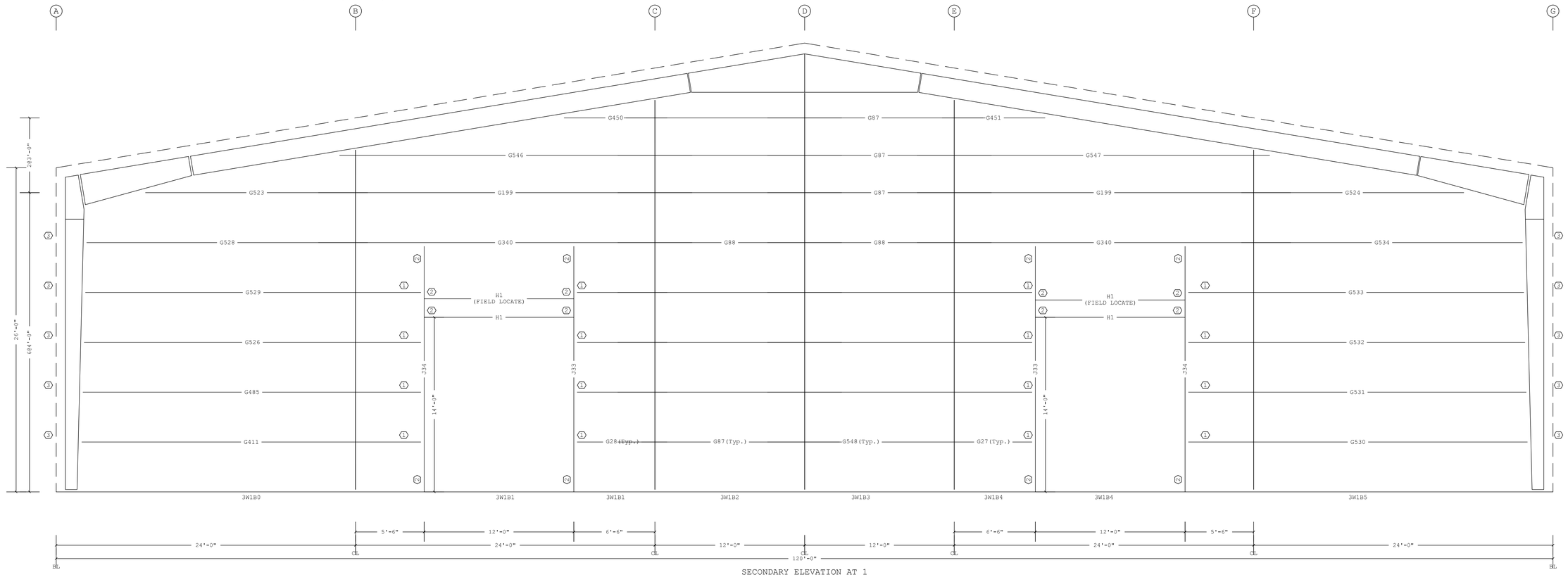
Metal Building Systems © BlueScope North America, Inc.

Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G199	08Z29114174400	0.0600	8 1/2"	2'-10 1/2"	WS01G3
G27	08Z0602417DG00	0.0600	8 1/2"		WS20F2, WS01G2
G28	08Z0702417G100	0.0600	8 1/2"	10 1/2"	WS01G3, WS20F2
G340	08Z29114154400	0.0730	8 1/2"	2'-10 1/2"	WS01G3
G411	00108ZS270211500	0.0730	8 1/2"		WS12J2, WS20F2, WS21D5
G450	00808ZS080311700	0.0600	8 1/2"	10 1/2"	WS01G3, WS04C2
G451	00908ZS080311700	0.0600	8 1/2"	10 1/2"	WS04C2, WS01G3
G485	00208ZS270101500	0.0730	8 1/2"		WS12J2, WS20F2, WS21D5
G523	01308ZS170971700	0.0600	8 1/2"	10 1/2"	WS04C2, WS01G3
G524	01408ZS170971700	0.0600	8 1/2"	10 1/2"	WS04C2, WS01G3
G526	01508ZS261161500	0.0730	8 1/2"		WS12J2, WS20F2, WS21D5
G528	01908ZS220631600	0.0680	8 1/2"	10 1/2"	WS12J2, WS01G3
G529	01808ZS261051500	0.0730	8 1/2"		WS12J2, WS20F2, WS21D5
G530	00308ZS270211700	0.0600	8 1/2"		WS12J2, WS20F2, WS21D5
G531	01008ZS270101700	0.0600	8 1/2"		WS12J2, WS20F2, WS21D5
G532	02008ZS261161700	0.0600	8 1/2"		WS12J2, WS20F2, WS21D5
G533	02108ZS261051700	0.0600	8 1/2"		WS12J2, WS20F2, WS21D5
G534	02208ZS220631600	0.0680	8 1/2"	10 1/2"	WS12J2, WS01G3
G546	03408ZS280311700	0.0600	8 1/2"	2'-10 1/2"	WS01G3, WS04C2, WS03X3
G547	03508ZS280311700	0.0600	8 1/2"	2'-10 1/2"	WS01G3, WS04C2, WS03X3
G548	03608ZS141141700	0.0600	8 1/2"	2'-10 1/2"	WS01G2, WS01G3
G87	08Z17114174400	0.0600	8 1/2"	2'-10 1/2"	WS01G3
G88	08Z17114164400	0.0680	8 1/2"	2'-10 1/2"	WS01G3
H1	00108JS1200017	0.0600	8 1/2"		WS20F9
H1	00108JS1200017	0.0600	8 1/2"		WS21D2 (FIELD LOCATE)
J33	00308JS1908212	0.0980	8 1/2"		WS20F9, WS20F2, WS20B2, WS20B8
J34	00208JS1908213	0.0880	8 1/2"		WS20F9, WS20F2, WS20B2, WS20B8

NOTE:
NO CATENARY LOADS WERE CONSIDERED TO BE GENERATED BY DOORS ON THE SUPPORT FRAMING. PLEASE NOTIFY BSBNA IMMEDIATELY IF DOOR WILL INDUCE ANY CATENARY FORCE ON SUPPORT FRAMING

NOTE:
VERTICAL CEE ABOVE DOOR HEADER IS FIELD LOCATED



SECONDARY ELEVATION AT 1

3 GFA300
2 PG1
1 JTG1

1 1'-0"

☐ Dimension Key ⬡ Part Mark Key

Shape Name = Shape 1, Wall = 1

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C62080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
2. FLANGE BRACES ARE AN INTEGRAL PART OF THE STABILITY OF THE STRUCTURAL SYSTEM AND MUST BE PROPERLY INSTALLED PRIOR TO ERECTION OF WALL AND ROOF SHEETS.
3. REMOVAL OR ALTERATION OF ANY COMPONENT IS PROHIBITED.

THE VP ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF VP AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY VP. THE VP ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY VP EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY VP.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 10:46:01

SECONDARY ELEVATION AT 1

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 23

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Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G279	08Z3611416D500	0.0680	8 1/2"	3'-10 1/2"	WS01G2, WS01G3
G286	00308BB321141200	0.0980	8 1/2"		WS01GA
G355	00108BB331141100	0.1130	8 1/2"		WS01GA, WS12H6 (Similar)
G36	08Z0508417AG00	0.0600	8 1/2"		WS20F2, WS12J2
G363	00208BB321141700	0.0600	8 1/2"		WS01GA
G365	00408BB331141100	0.1130	8 1/2"		WS01GA, WS12H6 (Similar)
G37	08Z1302417G400	0.0600	8 1/2"	2'-10 1/2"	WS01G3, WS20F2
G374	08Z341141711B0	0.0600	8 1/2"	10 1/2"	WS01G3
G522	01208ZS341141500	0.0730	8 1/2"	10 1/2"	WS12J2, WS01G3
G39	08Z1102417AG00	0.0600	8 1/2"		WS12J2, WS20F2
G402	08Z3211415DDB0	0.0730	8 1/2"		WS01G2
G459	01708ZS010701700	0.0600	8 1/2"		WS20F2
G475	08Z3311415ADB0	0.0730	8 1/2"		WS01G2
G477	08Z3511415D400	0.0730	8 1/2"	2'-10 1/2"	WS01G2, WS01G3
G478	08Z3611415D500	0.0730	8 1/2"	3'-10 1/2"	WS01G2, WS01G3
G48	08Z1002417DG00	0.0600	8 1/2"		WS20F2, WS01G2
G482	00408ZS410841700	0.0600	8 1/2"	3'-10 1/2"	WS20F2, WS01G3, WS21D5
G483	00508ZS370841200	0.0980	8 1/2"		WS01G3, WS20F2, WS21D5
H1	00108JS1200017	0.0600	8 1/2"		WS20F9
H1	00108JS1200017	0.0600	8 1/2"		WS21D2 (FIELD LOCATE)
H2	DHC0304417	0.0000	8 1/2"		WS21D7
J16	00408JS0708217	0.0600	8 1/2"		WS20F2, WS20B2, WS20B8, WS21D7
J44	00508JS1708213	0.0880	8 1/2"		WS20F9, WS20F2, WS20B2, WS20B8

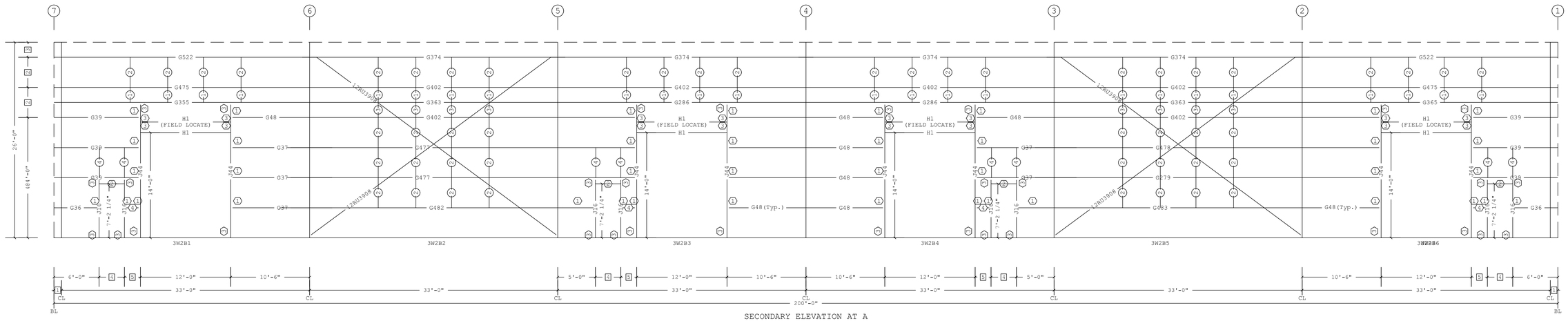
Bracing Part Schedule

Part	Qty	Length	Detail
12RU3908	4	39'-8"	BR02K1

Secondary Bracing Schedule

Id	Qty	Mark No	Spacing
1	24	CPBB020108	2'-0"
2	48	CPBB040108	4'-0"
3	8	CPBC020306	2'-0"
4	8	CPBB040108 (FEILD LOCATE)	4'-0"

NOTE:
NO CATENARY LOADS WERE CONSIDERED TO BE GENERATED BY DOORS ON THE SUPPORT FRAMING. PLEASE NOTIFY BSBNA IMMEDIATELY IF DOOR WILL INDUCE ANY CATENARY FORCE ON SUPPORT FRAMING



SECONDARY ELEVATION AT A

5	2'-1 1/2"
4	3'-4 1/2"
3	2'-0"
2	2 @ 2'-0"
1	1'-0"

4	G459
3	PG1
2	H2
1	JTG1

Dimension Key Part Mark Key

Shape Name = Shape 1, Wall = 2

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
2. FLANGE BRACES ARE AN INTEGRAL PART OF THE STABILITY OF THE STRUCTURAL SYSTEM AND MUST BE PROPERLY INSTALLED PRIOR TO ERECTION OF WALL AND ROOF SHEETS.
3. REMOVAL OR ALTERATION OF ANY COMPONENT IS PROHIBITED.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:24

SECONDARY ELEVATION AT A

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
VPC VERSION: 2019.1a
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design.ttb1

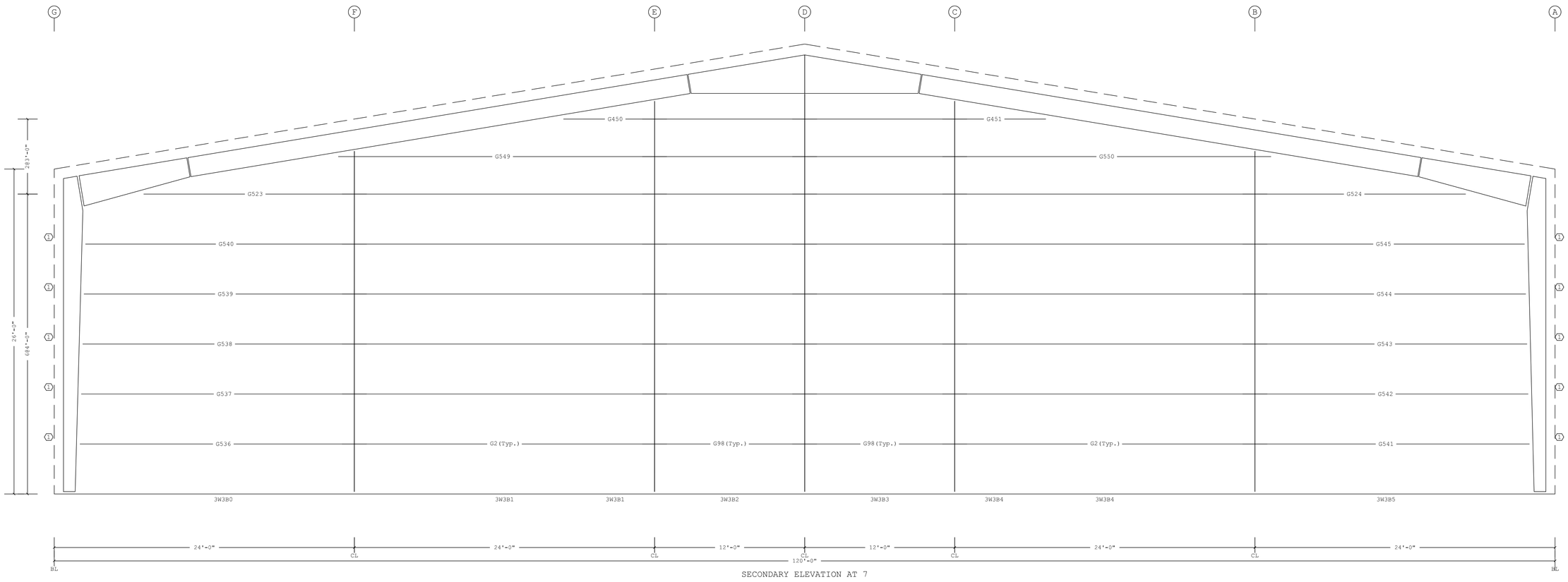
VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 24

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Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G2	08Z25114171100	0.0600	8 1/2"	10 1/2"	WS01G3
G450	00808ZS080311700	0.0600	8 1/2"	10 1/2"	WS01G3, WS04C2
G451	00908ZS080311700	0.0600	8 1/2"	10 1/2"	WS04C2, WS01G3
G523	01308ZS170971700	0.0600	8 1/2"	10 1/2"	WS04C2, WS01G3
G524	01408ZS170971700	0.0600	8 1/2"	10 1/2"	WS04C2, WS01G3
G536	02308ZS221101700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G537	02408ZS220961700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G538	02508ZS220831700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G539	02608ZS220711700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G540	02708ZS220561700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G541	02808ZS221111700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G542	02908ZS220971700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G543	03008ZS220861700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G544	03108ZS220751700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G545	03308ZS220631700	0.0600	8 1/2"	10 1/2"	WS12J2, WS01G3
G549	00708ZS260311700	0.0600	8 1/2"	10 1/2"	WS03X3, WS04C2, WS01G3
G550	01608ZS260311700	0.0600	8 1/2"	10 1/2"	WS03X3, WS04C2, WS01G3
G98	08Z13114171100	0.0600	8 1/2"	10 1/2"	WS01G3



SECONDARY ELEVATION AT 7

1 GFA300
⬡ Part Mark Key

Shape Name = Shape 1, Wall = 3

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGEN No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
2. FLANGE BRACES ARE AN INTEGRAL PART OF THE STABILITY OF THE STRUCTURAL SYSTEM AND MUST BE PROPERLY INSTALLED PRIOR TO ERECTION OF WALL AND ROOF SHEETS.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 10:46:03

SECONDARY ELEVATION AT 7

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 25

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Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G123	08Z1102417G100	0.0600	8 1/2"	10 1/2"	WS01G3, WS20F2, WS21D5
G278	08Z34114171100	0.0600	8 1/2"	10 1/2"	WS01G3
G279	08Z3611416D500	0.0680	8 1/2"	3'-10 1/2"	WS01G2, WS01G3
G286	00308BB321141200	0.0980	8 1/2"		WS01GA
G347	08Z3211415DD00	0.0730	8 1/2"		WS01G2
G355	00108BB331141100	0.1130	8 1/2"		WS01GA, WS12H6 (Similar)
G36	08Z0508417AG00	0.0600	8 1/2"		WS20F2, WS12J2
G363	00208BB321141700	0.0600	8 1/2"		WS01GA
G365	00408BB331141100	0.1130	8 1/2"		WS01GA, WS12H6 (Similar)
G37	08Z1302417G400	0.0600	8 1/2"	2'-10 1/2"	WS01G3, WS20F2
G374	08Z341141711B0	0.0600	8 1/2"	10 1/2"	WS01G3
G522	01208ZD341141500	0.0730	8 1/2"	10 1/2"	WS01G3, WS12J2
G39	08Z1102417AG00	0.0600	8 1/2"		WS20F2, WS12J2
G402	08Z3211415DDB0	0.0730	8 1/2"		WS01G2
G459	01708ZS0107017O0	0.0600	8 1/2"		WS20F2
G475	08Z3311415ADB0	0.0730	8 1/2"		WS01G2, WS12J2
G478	08Z3611415D500	0.0730	8 1/2"	3'-10 1/2"	WS01G2, WS01G3
G479	08Z3511415D4B0	0.0730	8 1/2"	2'-10 1/2"	WS01G2, WS01G3
G48	08Z1002417DG00	0.0600	8 1/2"		WS01G2, WS20F2
G483	00508ZS370841200	0.0980	8 1/2"		WS01G3, WS01G2, WS20F2 WS21D5
G484	00608ZS141141700	0.0600	8 1/2"		WS20F2, WS21D5
H1	00108JS1200017	0.0600	8 1/2"		WS20F9
H1	00108JS1200017	0.0600	8 1/2"		WS21D2 (FIELD LOCATE)
H2	DHC0304417	0.0000	8 1/2"		WS21D7
J16	00408JS0708217	0.0600	8 1/2"		WS20F2, WS20B2, WS20B8, WS21D7
J39	00808JS0708217	0.0600	8 1/2"		WS20F2, WS20B2, WS20B8, WS21D7
J44	00508JS1708213	0.0880	8 1/2"		WS20F9, WS20F2, WS20B2, WS20B8
J46	00908JS1708213	0.0880	8 1/2"		WS20F9, WS20F2, WS20B2, WS20B8

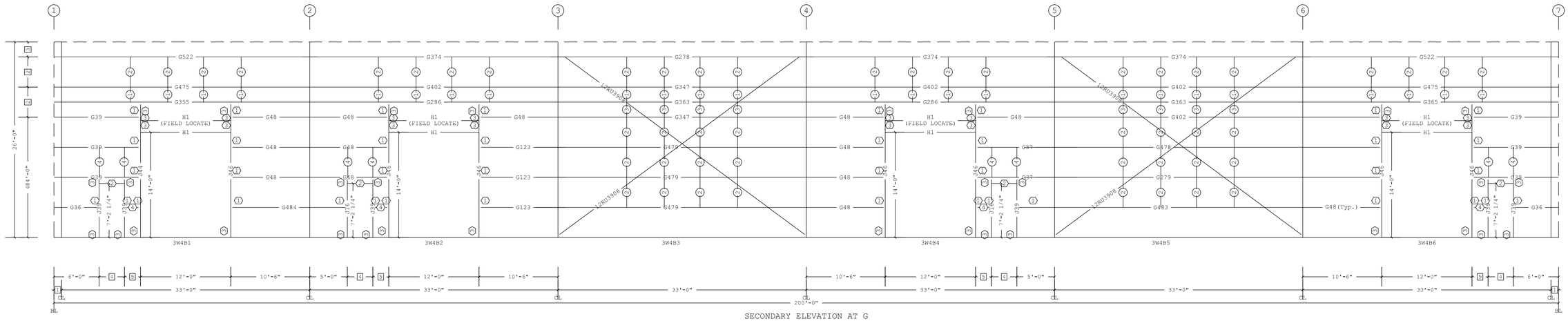
Bracing Part Schedule

Part	Qty	Length	Detail
12RU3908	4	39'-8"	BR02K1

○ Secondary Bracing Schedule

Id	Qty	Mark No	Spacing
1	24	CPBB020108	2'-0"
2	48	CPBB040108	4'-0"
3	8	CPBC020306	2'-0"
4	8	CPBB040108 (FEILD LOCATE)	4'-0"

NOTE:
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SECONDARY ELEVATION AT G

5	2'-1 1/2"		
4	3'-4 1/2"	4	G459
3	2'-0"	3	PG1
2	4'-0"	2	H2
1	1'-0"	1	JTG1

Dimension Key Part Mark Key

Shape Name = Shape 1, Wall = 4

REGISTERED PROFESSIONAL ENGINEER · TIMOTHY T. BERTRAM · No. C52080 · CIVIL · STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:26

SECONDARY ELEVATION AT G

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
VPC VERSION: 2019.1a
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 26

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Secondary Part Schedule

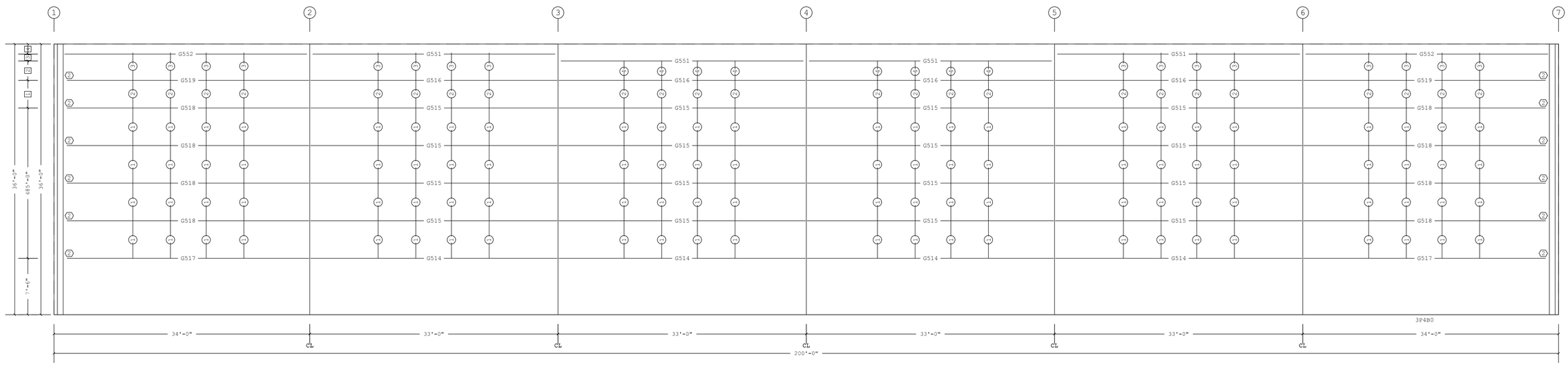
Mark	Part	Thick.	Depth	Lap	Detail
G514	08Z3209415EEB0	0.0730	8 1/2"		WS03C51
G515	08Z3209416EEB0	0.0680	8 1/2"		WS03C51
G516	08Z3209417EEB0	0.0600	8 1/2"		WS03C51
G517	08Z3202015DEB0	0.0730	8 1/2"		WSR026A, WS03C51
G518	08Z3202016DEB0	0.0680	8 1/2"		WSR026A, WS03C51
G519	08Z3202017DEB0	0.0600	8 1/2"		WSR026A, WS03C51
G551	01108ZS3202417B0	0.0600	8 1/2"		WS03C52
G552	03708ZS320241700	0.0600	8 1/2"		WS03C52

Secondary Bracing Schedule

Id	Qty	Mark No	Spacing
1	96	CPBB050108	5'-0"
2	24	CPBB030908	3'-8"
3	16	CPBB030708	3'-6"
4	8	CPBB020808	2'-7"

see SED:

BRR002, BRR003, BRR004, BRR005, BRR006



SECONDARY ELEVATION AT D

4 1'-4"
3 11"
2 2'-7"
1 3'-8"

2 GFA200
1 0097556

Dimension Key Part Mark Key

Shape Name = Shape 1, Wall = 1

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERTOLDI No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 10:46:05

SECONDARY ELEVATION AT D

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

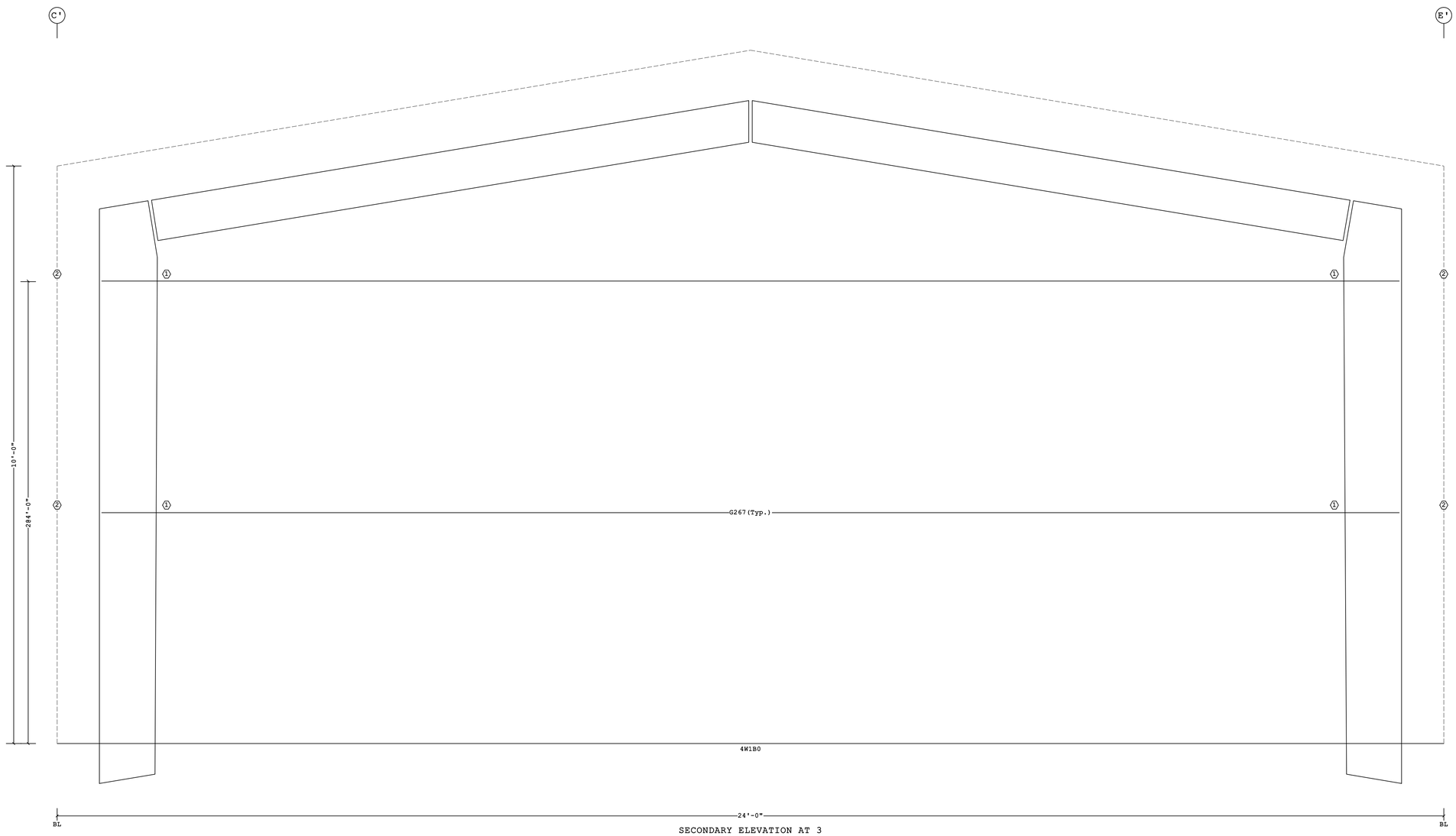
VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 27

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Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G267	08Z2205414QQ00	0.0790	8 1/2"		WS12A2



SECONDARY ELEVATION AT 3

2 GFA106
1 VCC07003090
⬡ Part Mark Key

Shape Name = Shape 1 Clerestory, Wall = 1

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERRIER
No. C062080
CIVIL
STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
2. FLANGE BRACES ARE AN INTEGRAL PART OF THE STABILITY OF THE STRUCTURAL SYSTEM AND MUST BE PROPERLY INSTALLED PRIOR TO ERECTION OF WALL AND ROOF SHEETS.
3. REMOVAL OR ALTERATION OF ANY COMPONENT IS PROHIBITED.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 13:28:28

SECONDARY ELEVATION AT 3

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	
FILENAME:	Macarthur Street Properties Phase 1 Preliminary Design.ldf

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO	19-0130302-01
DATE	6/9/2025
DRAWN/CHECK	EA JLP
PAGE	28

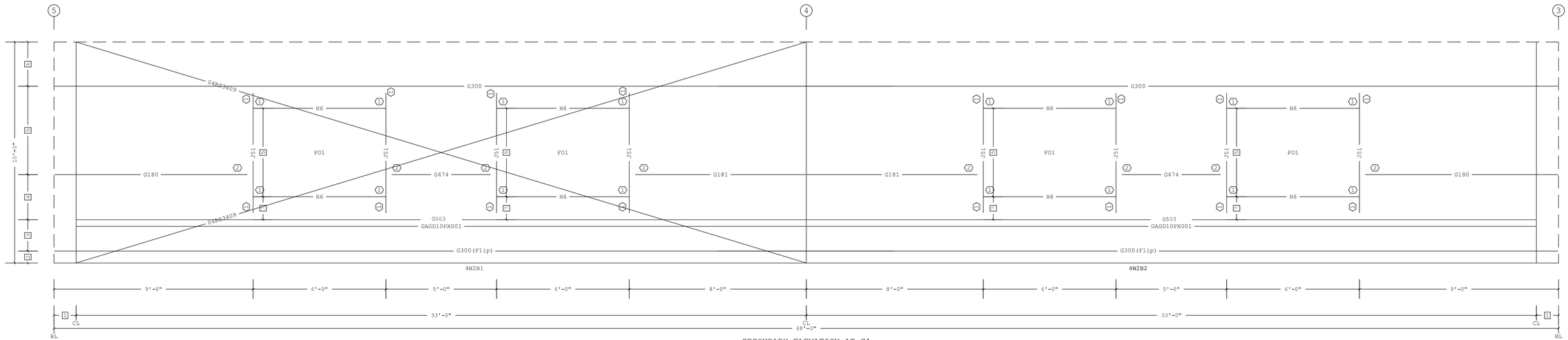
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Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G180	08Z0808417AG00	0.0600	8 1/2"		WS12A2, WS20F2
G181	08Z0708417DG00	0.0600	8 1/2"		WS01G2, WS20F2
G300	08Z3711413A500	0.0880	8 1/2"	3'-10 1/2"	WS12A2, WS01G3
G474	03208ZS040541700	0.0600	8 1/2"		WS20F2
G503	00508BB321141700	0.0600	8 1/2"		WS01GA
H6	00608JS0600017	0.0600	8 1/2"		WS20F9
J51	00708JS0505017	0.0600	8 1/2"		WS20FB, WS20F9, WS20B2, WS20F2, WS20HE
GAGD10PX001	LENGTH = 32'-5"	0.113	10"		WS01GA1 (ATTACHED TO G505W/ (2)55307 STRCT. FASNRS @12" O.C.)

Bracing Part Schedule

Part	Qty	Length	Detail
04RS3409	2	34'-9"	BR01G2



SECONDARY ELEVATION AT C'

7	1'-0 1/2"		
6	2'-0"		
5	4'-0"		
4	2'-0 1/2"		
3	1'-5"		
2	6 1/2"	2	JTG1
1	1'-0"	1	PG1

☐ Dimension Key ⬡ Part Mark Key

Shape Name = Shape 1 Clerestory, Wall = 2

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA 6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 10:46:08

SECONDARY ELEVATION AT C'

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
VPC VERSION: 2019.1a
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

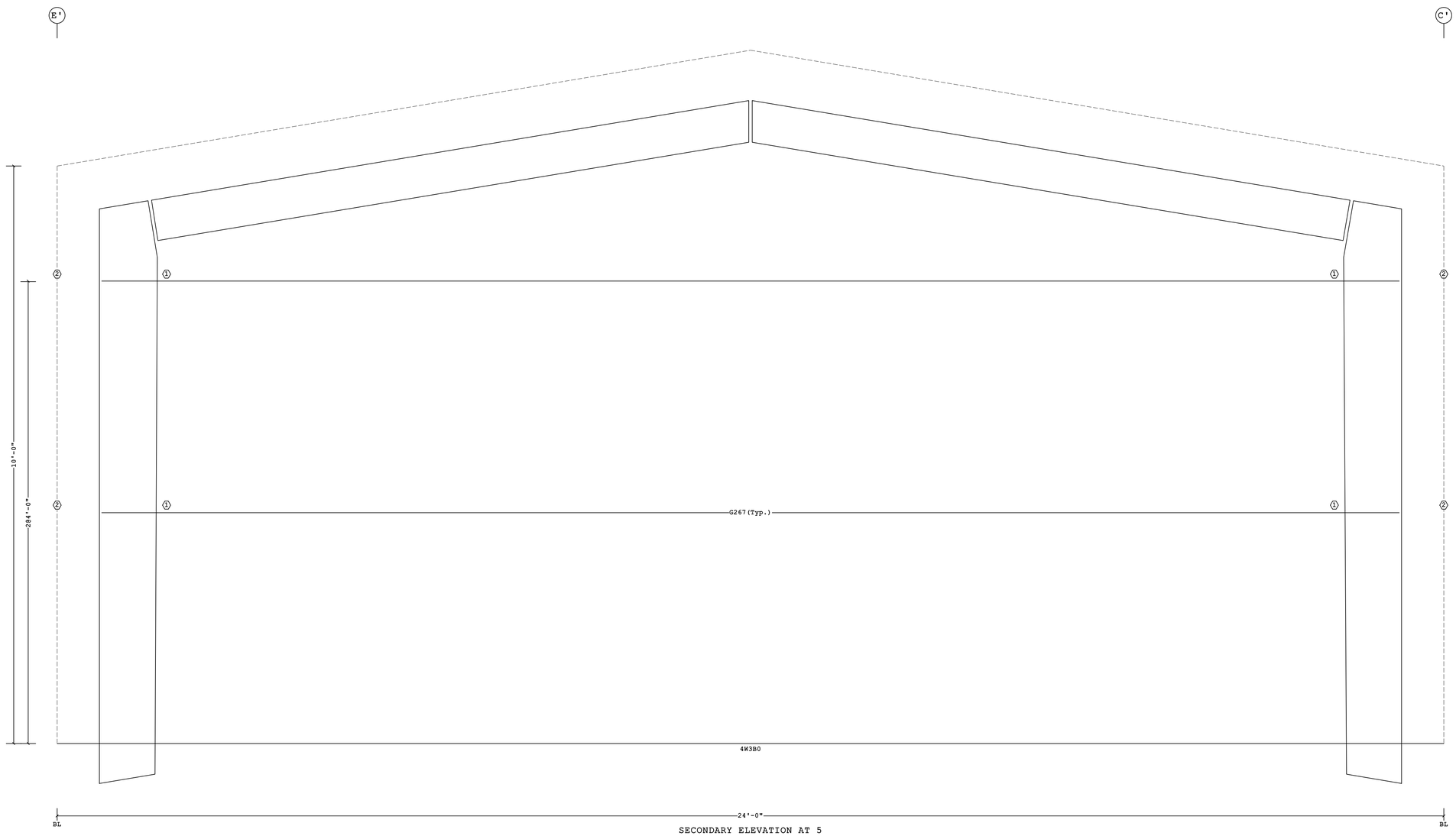
VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
PAGE 29

Proprietary Design of VP Buildings America, Inc.

Secondary Part Schedule

Mark	Part	Thick.	Depth	Lap	Detail
G267	08Z2205414QQ00	0.0790	8 1/2"		WS12A2



SECONDARY ELEVATION AT 5

2 GFA106
1 VCC07003090
⬡ Part Mark Key

Shape Name = Shape 1 Clerestory, Wall = 3

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGEN No. C062080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

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3200 Players Club Circle Memphis TN 38125

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10/3/2019 13:28:30

SECONDARY ELEVATION AT 5

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	
FILENAME:	Macarthur Street Properties Phase 1 Preliminary Design.ltd

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO	19-0130302-01
DATE	6/9/2025
DRAWN/CHECK	EA JLP
PAGE	30

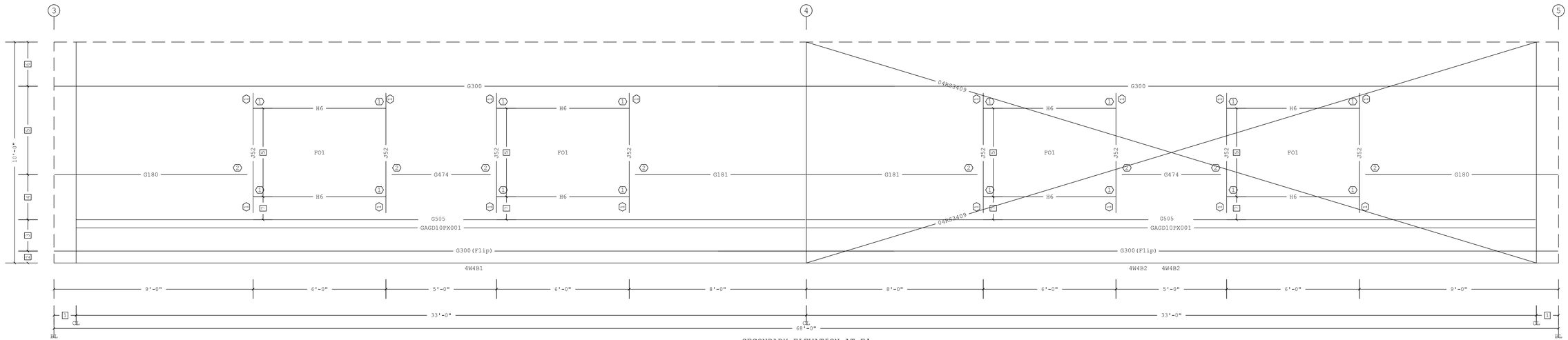
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Mark	Part	Thick.	Depth	Lap	Detail
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G181	08Z0708417DG00	0.0600	8 1/2"		WS01G2,
G300	08Z3711413A500	0.0880	8 1/2"	3'-10 1/2"	WS12A2, WS01G3
G474	03208ZS040541700	0.0600	8 1/2"		WS12A2, WS20F2
G505	00608BB321141700	0.0600	8 1/2"		WS01GA
H6	00608JS0600017	0.0600	8 1/2"		WS20F9
J52	01008JS0505017	0.0600	8 1/2"		WS20FB, WS20F9, WS20B2, WS20F2, WS20HE
GAGD10PX001	LENGTH = 32'-5"	0.113	10"		WS01GA1 (ATTACH TO G505 W/ (2)55307 STRUCT. FSNRS. @ 12" O.C.)

Bracing Part Schedule

Part	Qty	Length	Detail
04RS3409	2	34'-9"	BR01G2



SECONDARY ELEVATION AT E'

7 1'-0 1/2"
6 2'-0"
5 4'-0"
4 2'-0 1/2"
3 1'-5"
2 6 1/2" 2 JTG1
1 1'-0" 1 PG1

Dimension Key Part Mark Key

Shape Name = Shape 1 Clerestory, Wall = 4

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

FOR CONSTRUCTION

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3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

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SECONDARY ELEVATION AT E'

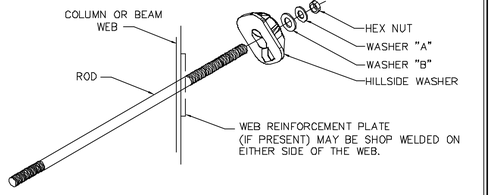
BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO 19-0130302-01
DATE 6/9/2025
DRAWN/CHECK EA JLP
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FILENAME: Macarthur Street Properties Phase 1 Preliminary Design ttb1

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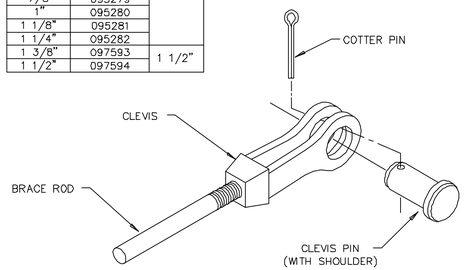


DESCRIPTION/PART NO				
ROD DIAM	NUT	HARD STEEL ROUND WASHER A	HARD STEEL WASHER B	HILLSIDE WASHER
3/8"	95321	3/8" FLAT WASHER (96408)	1/2" BEVEL SQUARE WASHER (46040)	543334
1/2"	95230	1/2" FLAT WASHER (95872)	3/4" FLAT ROUND WASHER (95946)	
5/8"	95233	5/8" FLAT WASHER (95945)		
3/4"	95235	3/4" FLAT WASHER (95946)	1" FLAT ROUND WASHER (95948)	543335
7/8"	95237	7/8" FLAT WASHER (95947)		
1"	95238	1" FLAT WASHER (95948)	1 1/8" FLAT ROUND WASHER (95949)	543336
1 1/8"	95239	1 1/8" FLAT WASHER (95949)		

REV. DATE:08/02/17 | REV. NO. 04

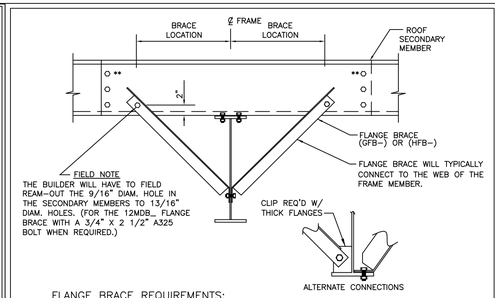
BR01G2 — ROD BRACE
WEB SLOT ASSEMBLY

ROD DIA.	CLEVIS MARK NO.	CLEVIS PIN DIA.
3/8"	097572	1 1/4"
1/2"	097573	
5/8"	095277	
3/4"	095278	
7/8"	095279	
1"	095280	
1 1/8"	095281	
1 1/4"	095282	
1 3/8"	097593	1 1/2"
1 1/2"	097594	



REV. DATE:06/23/11 | REV. NO. 03

BR02K1 — ROD BRACING
CLEVIS ASSEMBLY



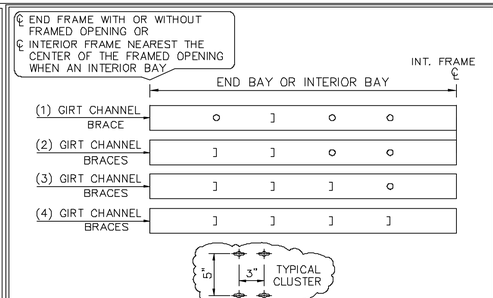
FLANGE BRACE REQUIREMENTS:

RULE#1– ALL FLANGE BRACES ON CROSS SECTIONS MUST BE INSTALLED.
RULE#2– SINGLE FLANGE BRACES ARE REQUIRED WHEN PART MARK ON CROSS SECTION IS NOT ACCOMPANIED BY (2).
RULE#3– FLANGE BRACES ARE REQUIRED BOTH SIDES OF THE FRAME WEB WHEN PART MARK IS ACCOMPANIED BY (2).
RULE#4– WHENEVER POSSIBLE, PLACE SINGLE BRACES TOWARD THE CENTER OF THE BUILDING.
RULE#5– WHENEVER POSSIBLE, PLACE ALL SINGLE BRACES ON THE SAME SIDE OF THE FRAME WEB.

** 10" & 11 1/2" PURLINS REQUIRE 3 BOLTS AT EACH END OF PURLIN LAP.

REV. DATE:05/08/18 | REV. NO. 02

BR06AE — TYPICAL FLANGE BRACE CONNECTIONS
CONT. PURLIN LAP SHOWN, CONT. GIRT & SIMPLE PURLIN

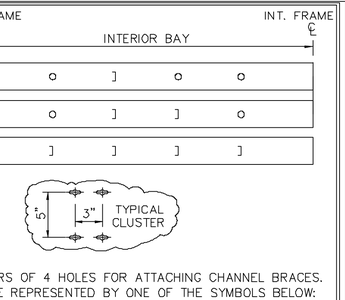


STANDARD NOTES:

– GIRTS HAVE CLUSTERS OF 4 HOLES FOR ATTACHING CHANNEL BRACES. THESE CLUSTERS ARE REPRESENTED BY ONE OF THE SYMBOLS BELOW:
O– DO NOT INSTALL BRACES AT THIS CLUSTER LOCATION.
⊣ INSTALL BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY WALL DRAWINGS FOR BRACE REQUIREMENTS.
– INSTALL BRACES WORKING FROM THE LOWEST GIRT TOWARD THE EAVE.
– CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM TOP TO BOTTOM IN A GIVEN BAY.

REV. DATE:09/04/13 | REV. NO. 00

BRR002 — CHANNEL BRACE CLUSTER LOCATION
INTERIOR BAY WITH FRAMED OPENING OR END BAY



STANDARD NOTES:

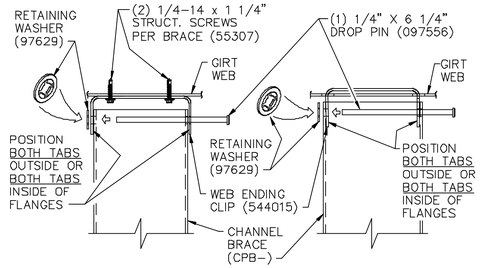
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⊣ INSTALL BRACES AT THIS CLUSTER LOCATION. SEE SECONDARY WALL DRAWINGS FOR BRACE REQUIREMENTS.
– INSTALL BRACES WORKING FROM THE LOWEST GIRT TOWARD THE EAVE.
– CHANNEL BRACE MAY BE LOCATED IN EITHER SET OF SLOTS IN CLUSTER PROVIDED THEY ARE ALIGNED FROM TOP TO BOTTOM IN A GIVEN BAY.

REV. DATE:09/04/13 | REV. NO. 00

BRR003 — CHANNEL BRACE CLUSTER LOCATION
INTERIOR BAY GIRTS

ERECTION NOTE:

CHANNEL BRACES THAT END AT A GIRT WEB, BUT DO NOT HAVE TABS USE WEB A WEB ENDING CLIP, A DROP PIN, AND A RETAINING WASHER TO SECURE CHANNEL BRACE.



USE WHEN CHANNEL BRACE DOES NOT LINE UP WITH THE SLOTS IN THE WEB.

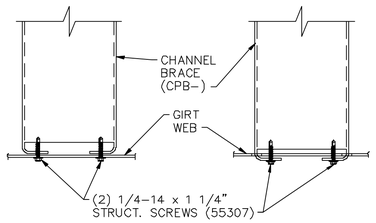
USE WHEN CHANNEL BRACE DOES LINE UP WITH THE SLOTS IN THE WEB.

REV. DATE:01/28/16 | REV. NO. 01

BRR004 — CHANNEL BRACE ENDING AT GIRT WEB
WEB ENDING CLIP ATTACHMENT

ERECTION NOTE:

WHEN A DROP PIN CONNECTION CANNOT BE USED, BEND THE CHANNEL BRACE TABS TOWARD THE GIRT WEB AND USE A SELF-DRILLER (55307) TO ATTACH EACH TAB.



USE WHEN CHANNEL BRACE DOES NOT LINE UP WITH THE SLOTS IN THE WEB.

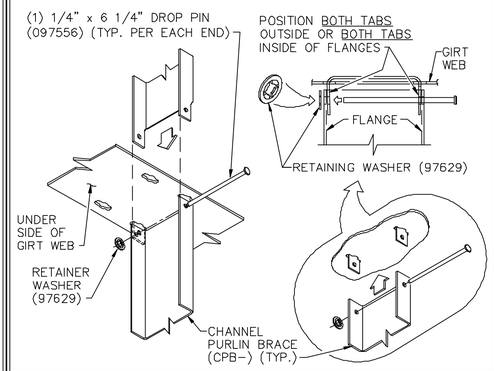
USE WHEN CHANNEL BRACE DOES LINE UP WITH THE SLOTS IN THE WEB.

REV. DATE:09/04/13 | REV. NO. 00

BRR005 — CHANNEL BRACE ENDING AT GIRT WEB
SELF-DRILLER WITH BENT TABS

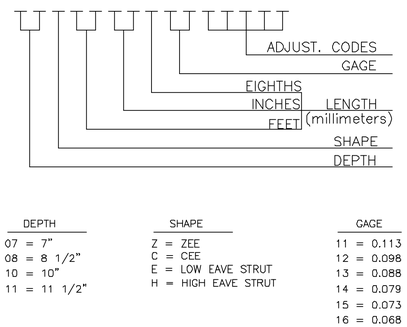
ERECTION NOTE:

DROP PIN IS LOCATED BELOW GIRT. INSTALL PIN FROM NON-FLANGE SIDE OF GIRT AND INSTALL RETAINING WASHER.



REV. DATE:01/28/16 | REV. NO. 01

BRR006 — CHANNEL BRACE SPLICE AT GIRT
INTERMEDIATE LOCATION



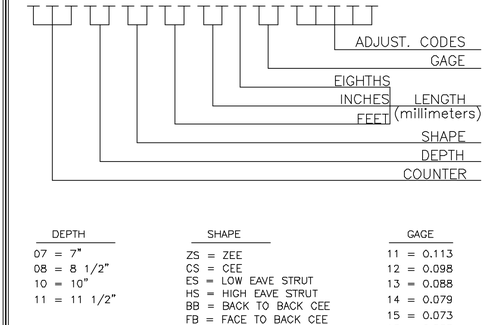
DEPTH
07 = 7"
08 = 8 1/2"
10 = 10"
11 = 11 1/2"

SHAPE
Z = ZEE
C = CEE
E = LOW EAVE STRUT
H = HIGH EAVE STRUT

GAGE
11 = 0.113
12 = 0.098
13 = 0.088
14 = 0.079
15 = 0.073
16 = 0.068
17 = 0.060

REV. DATE:07/01/09 | REV. NO. 00

EN51B1 — SECONDARY PART MARK NUMBER
COMMON GENERATED MARK NUMBERS



DEPTH
07 = 7"
08 = 8 1/2"
10 = 10"
11 = 11 1/2"

SHAPE
ZS = ZEE
CS = CEE
ES = LOW EAVE STRUT
HS = HIGH EAVE STRUT
BB = BACK TO BACK CEE
FB = FACE TO BACK CEE
FF = FACE TO FACE CEE

GAGE
11 = 0.113
12 = 0.098
13 = 0.088
14 = 0.079
15 = 0.073
16 = 0.068
17 = 0.060

REV. DATE:07/01/09 | REV. NO. 00

EN51B2 — SPECIAL SECONDARY PART MARK KEY
COMMON GENERATED MARK NUMBERS

ERECTION DRAWING PART MARK

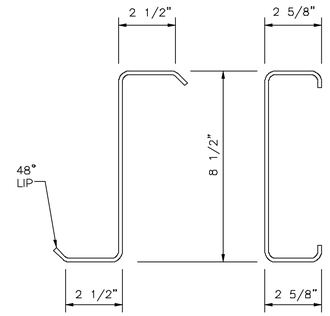
C P R 1 W 1 B 3

BAY NUMBER
CANOPY (C)/PARTITION(P)/ ROOF(R)/WALL(W) NUMBER
BUILDING SHAPE

THE BAY/BUNDLE CODE IDENTIFIES THE BUILDING CANOPY/PARTITION/ ROOF/WALL PLANE AND BAY

REV. DATE:01/31/13 | REV. NO. 01

EN51B3 — SECONDARY BUNDLE LOCATION KEY
ALL SECONDARY DEPTHS



REV. DATE:07/01/09 | REV. NO. 00

EN53F1 — PURLIN AND GIRT SIZES
8 1/2" 216mm



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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 SEDSheet 10:46:10

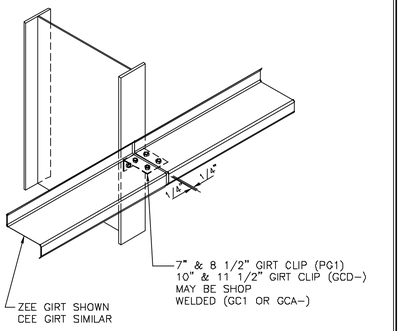
WALL SECONDARY SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 32

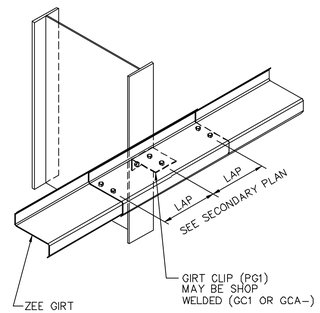
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REV. DATE:07/01/09 | REV. NO. 00

WS01G2

GIRT CONN. AT COLUMN
OUTSET SIMPLE GIRTS

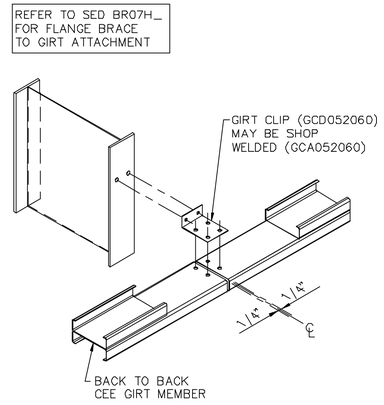


7" & 8 1/2" GIRT

REV. DATE:01/20/11 | REV. NO. 01

WS01G3

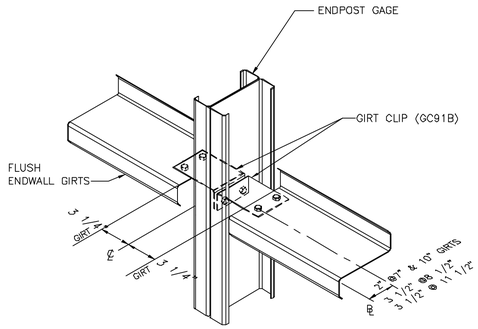
GIRT CONN. AT COLUMN
OUTSET CONTINUOUS GIRT



REV. DATE:11/13/16 | REV. NO. 02

WS01GA

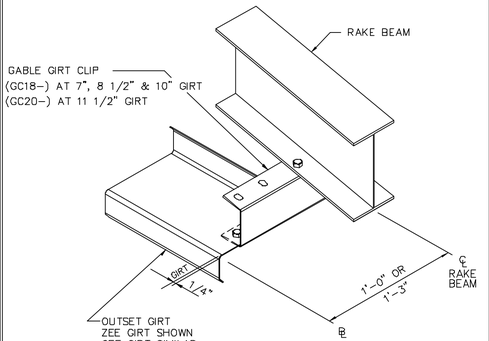
GIRT CONN. AT COLUMN
OUTSET BACK TO BACK



REV. DATE:04/27/10 | REV. NO. 01

WS03C5

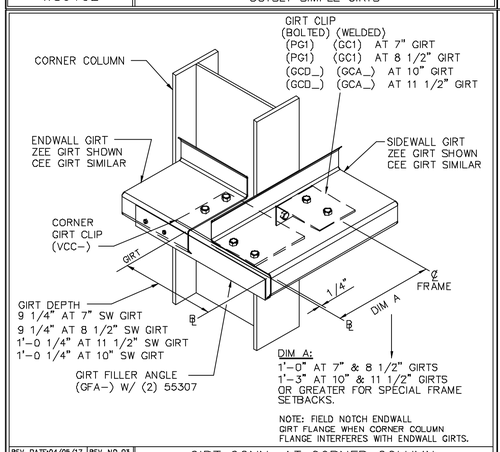
GIRT CONN. AT ENDWALL ENDPOST
ENDWALL FLUSH ZEE GIRTS



REV. DATE:07/23/13 | REV. NO. 01

WS04C2

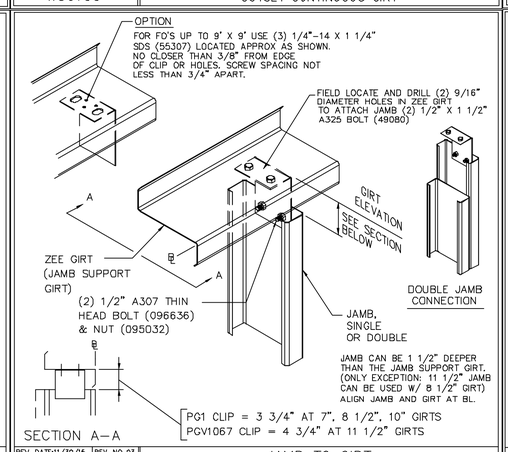
GABLE GIRT CONN. TO RAKE BEAM
OUTSET GIRTS



REV. DATE:04/05/17 | REV. NO. 03

WS12A2

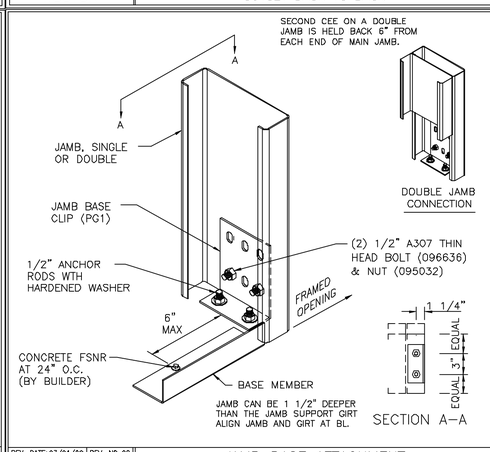
GIRT CONN. AT CORNER COLUMN
ANY OUTSET GIRT AT EW, ANY GIRT AT SW



REV. DATE:11/30/15 | REV. NO. 03

WS20B2

JAMB TO GIRT
SINGLE OR DOUBLE JAMB, ANY ZEE GIRT

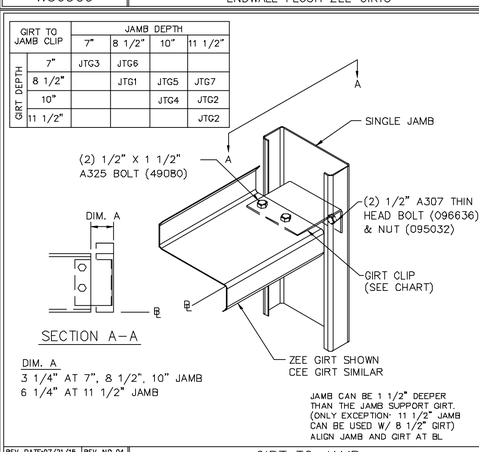


REV. DATE:07/01/09 | REV. NO. 00

WS20B8

JAMB BASE ATTACHMENT
SINGLE OR DOUBLE JAMB

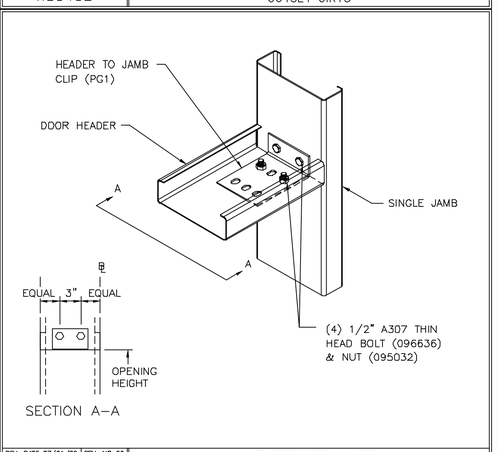
GIRT TO JAMB CLIP	JAMB DEPTH			
GIRT DEPTH	7"	8 1/2"	10"	11 1/2"
7"	JTG3	JTG6		
8 1/2"		JTG1	JTG5	JTG7
10"			JTG4	JTG2
11 1/2"				JTG2



REV. DATE:07/21/15 | REV. NO. 04

WS20F2

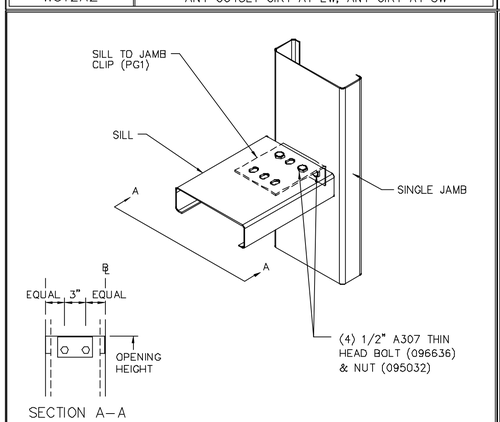
GIRT TO JAMB
SINGLE JAMB



REV. DATE:07/01/09 | REV. NO. 00

WS20F9

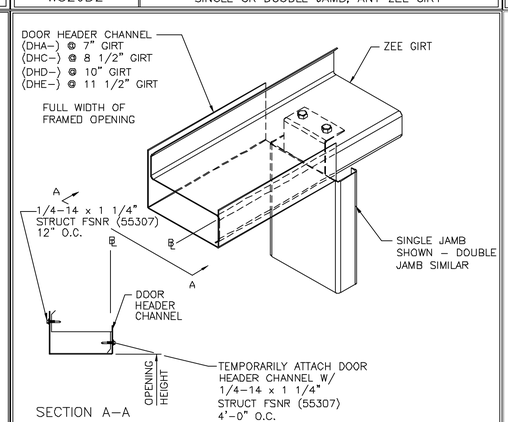
HEADER TO JAMB
ANY HEADER, ANY SINGLE JAMB



REV. DATE:07/01/11 | REV. NO. 00

WS20FB

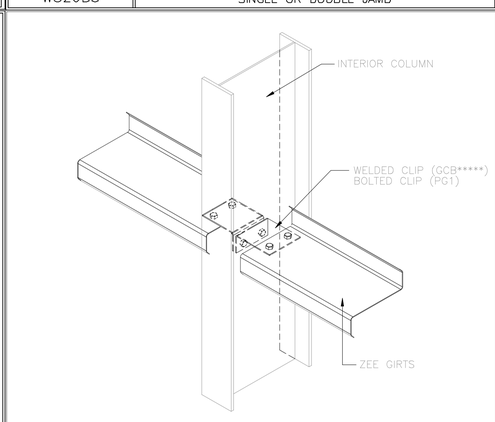
SILL TO JAMB
ANY SILL, ANY SINGLE JAMB



REV. DATE: 07/01/09 | REV. NO. 00

WS21D7

DOOR HEADER CHANNEL CONN.
ANY ZEE GIRT, ANY JAMB



REV. DATE: 04/27/10 | REV. NO. 01

WS03C51

GIRT CONN. AT INTERIOR COLUMN
INTERIOR WALL FULL FLUSH ZEE GIRTS

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BIERWERT
No. C52080
CIVIL
STATE OF CALIFORNIA
6/9/2025

FOR CONSTRUCTION

1. UNLESS NOTED, USE 1/2 X 1 1/2 A325T BOLT (49080) AND NUT (47120) W/O WASHERS. SNUG TIGHTEN BOLTS FOR ALL SECONDARY CONNECTIONS.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 SEDSheet 15:31:04

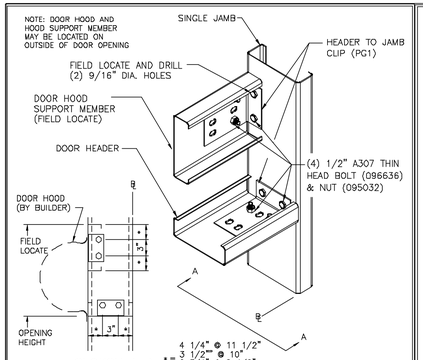
WALL SECONDARY SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-tb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.1a

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 33

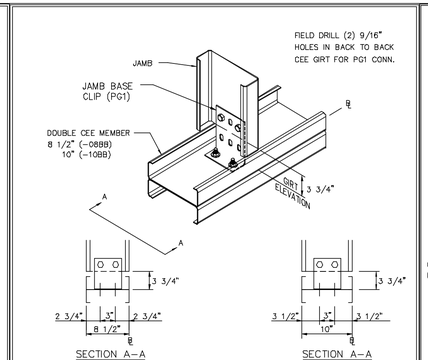
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REV. DATE:07/01/09 | REV. NO. 00

WS21D2

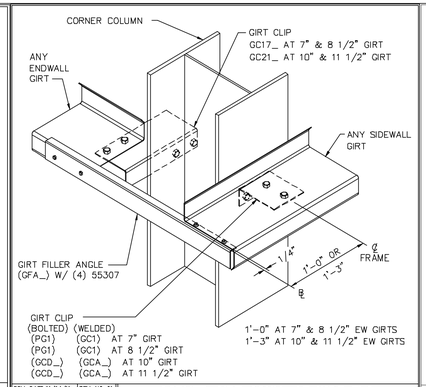
DOOR HEADER & HOOD SUPPORT
ROLL UP DOOR



REV. DATE:06/11/19 | REV. NO. 01

WS20HE

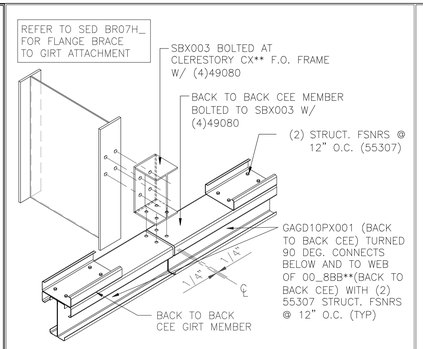
JAMB BASE TO GIRT
DOUBLE CEE GIRT – BACK TO BACK



REV. DATE:11/14/11 | REV. NO. 01

WS12J2

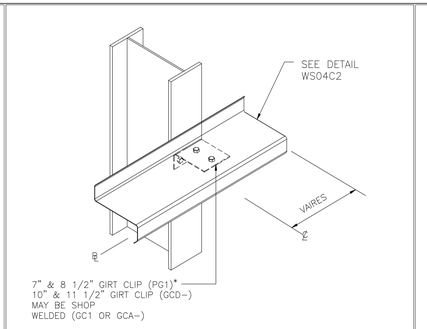
CORNER GIRT CONN. AT WIDE FLG
ANY OUTSET GIRT AT EW, ANY OUTSET GIRT AT SW



REV. DATE:11/15/18 | REV. NO. 02

WS01GA1

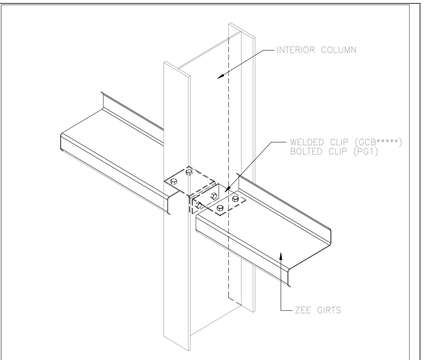
GIRT CONN. AT COLUMN
OUTSET BACK TO BACK WITH BACK TO BACK VERT. CEE



REV. DATE: 10/8/19 | REV. NO. 00

WS03X3

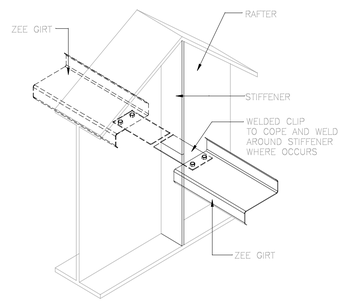
GIRT CONNECTION AT ENDPOST
–



REV. DATE:04/27/10 | REV. NO. 01

WS03C51

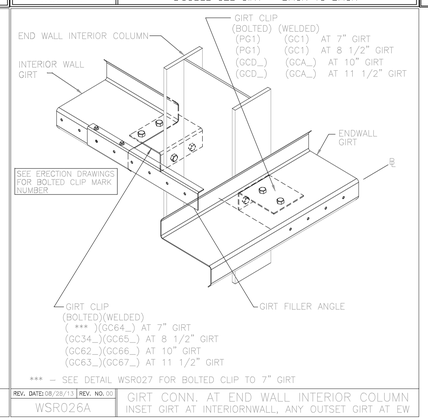
GIRT CONN. AT INTERIOR COLUMN
INTERIOR WALL FULL FLUSH ZEE GIRTS



REV. DATE:04/27/10 | REV. NO. 01

WS03C52

GIRT CONN. AT RAFTER
INTERIOR WALL FULL FLUSH ZEE GIRTS



*** – SEE DETAIL WSR027 FOR BOLTED CLIP TO 7" GIRT

REV. DATE:08/28/13 | REV. NO. 00

WSR026A

GIRT CONN. AT END WALL INTERIOR COLUMN
INSET GIRT AT INTERIORNWALL, ANY OUTSET GIRT AT EW

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C63080 CIVIL STATE OF CALIFORNIA

6/9/2025

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 SEDSheet 15:39:50

WALL SECONDARY SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: INSERTS REV1 Macarthur Street Properties Phase 1 Preliminary Design-ttb1 OLD

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 19-0130302-01
DATE: 6/9/2025
DRAWN/CHECK: EA JLP
PAGE: 34

C:\Users\EA\Desktop\Macarthur Street Properties Phase 1\INSERTS REV1 Macarthur Street Properties Phase 1 Preliminary Design-ttb1 OLD.vpc

Covering Schedule

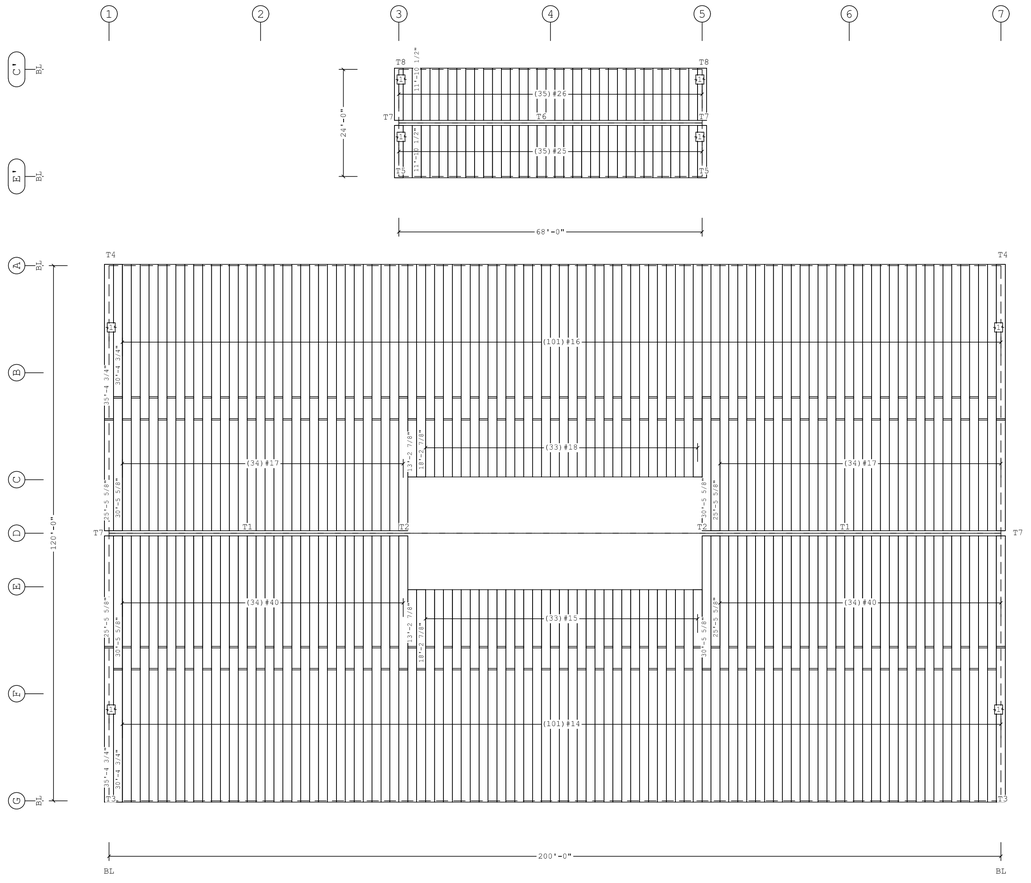
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#14	51	35'-4 3/4"	50	30'-4 3/4"	SSR	24	2	X	01
#40	34	25'-5 5/8"	34	30'-5 5/8"	SSR	24	2	X	01
#15	17	13'-2 7/8"	16	18'-2 7/8"	SSR	24	2	X	01
#16	51	35'-4 3/4"	50	30'-4 3/4"	SSR	24	2	X	01
#17	34	25'-5 5/8"	34	30'-5 5/8"	SSR	24	2	X	01
#18	17	13'-2 7/8"	16	18'-2 7/8"	SSR	24	2	X	01
#25	35	11'-10 1/2"			SSR	24	2	X	01
#26	35	11'-10 1/2"			SSR	24	2	X	01

Oper. Code:2=SQ, SQ
Finish:X=Special Request
Color:01=KXL Cool Weathered Copper SSR

Trim Schedule

Id	Parts
T1	SRCF06, (7)SRCF10, SRCM06, (7)SRCM10
T2	80539
T3	BS1, FPRF1, GGC2, MCC1
T4	BS1, FPRF1, GGC2, MCC1
T5	BS1, FPRF1, GGC2, MCC1
T6	SRCF06, (6.8)SRCF10, SRCM06, (6.8)SRCM10
T7	SPC20, SRR2
T8	BS1, FPRF1, GGC2, MCC1

Color	Details
Match Roof Color	RC34A7, RCV418, RCV419, RCV420, RCV421, RCV531
Match Roof Color	RC52A5, RC53A4, RCV027
Cool Leaf Green	RC38N1
Cool Leaf Green	RC38N1
Cool Leaf Green	RC38N1
Match Roof Color	RC34A7, RCV418, RCV419, RCV420, RCV421, RCV531
Cool Leaf Green	RCV501, RCV502
Cool Leaf Green	RC38N1



ROOF COVERING PLAN

1 1'-0" Starter Panel (Cut Dim. = 1'-1")
Dimension Key

Shape Name = Shape 1, Shape = Shape 1 Clerestory

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERRY
No. C62080
CIVIL
STATE OF CALIFORNIA
6/9/2025

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
4. SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

ROOF COVERING PLAN

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 35

MODIFIED IN AUTOCAD

Covering Schedule

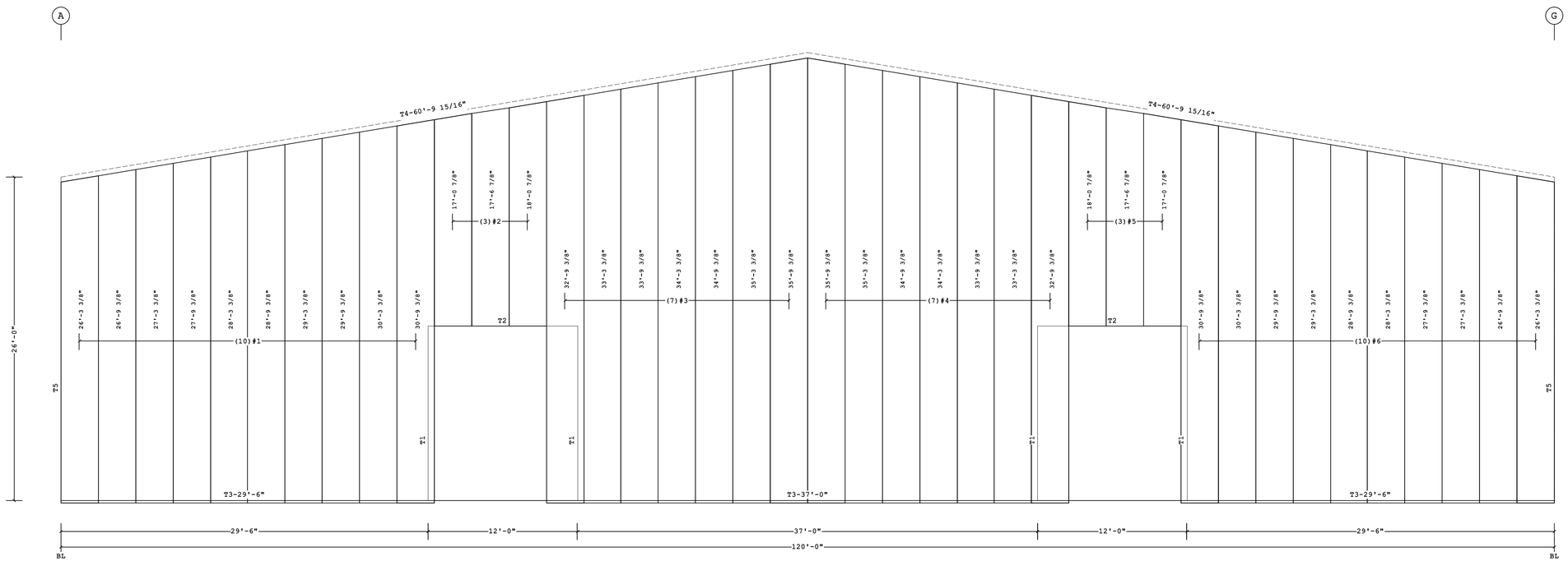
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#1	10	PR	26'-3 3/8"	26	J	K	GG	6"	Left to Right
#2	3	PR	17'-0 7/8"	26	C	K	GG	6"	Left to Right
#3	7	PR	32'-9 3/8"	26	J	K	GG	6"	Left to Right
#4	7	PR	35'-9 3/8"	26	K	K	GG	-6"	Left to Right
#5	3	PR	18'-0 7/8"	26	D	K	GG	-6"	Left to Right
#6	10	PR	30'-9 3/8"	26	K	K	GG	-6"	Left to Right

Oper. Code:J=CR,LF
Oper. Code:C=SQ,LF
Oper. Code:K=CR,RT
Oper. Code:D=SQ,RT
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

Trim Schedule

Id	Parts
T1	DFT14,JT14
T2	DFT12,HTS12
T3	(3.8)BA125
T4	(13)RCL10,(13)RFR10-130,(6)RKF20,RKF10,(13)RSB10,(13)RSC10
T5	CT16,CT10

Color	Details
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Dark Bronze	EN52A1,ENV003,RC00A1,WC01D9,WC04G1
Cool Leaf Green	RC10A1,RC30A1,RS10L5,WC10A2
Cool Granite Gray	WC20A1



COVERING ELEVATION AT 1

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097584-109	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

Shape Name = Shape 1, Wall = 1

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
4. SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

THE VP ENGINEER'S SEAL APPLIES ONLY TO THE WORK PRODUCT OF VP AND DESIGN AND PERFORMANCE REQUIREMENTS SPECIFIED BY VP. THE VP ENGINEER'S SEAL DOES NOT APPLY TO THE PERFORMANCE OR DESIGN OF ANY OTHER PRODUCT OR COMPONENT FURNISHED BY VP EXCEPT TO ANY DESIGN OR PERFORMANCE REQUIREMENTS SPECIFIED BY VP.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 10:41:56

COVERING ELEVATION AT 1

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-tb1

VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 1901303201
DATE: 6/9/2025
DRAWN/CHECK: KGH
PAGE: 36

A division of BlueScope Buildings North America, Inc.

Covering Schedule

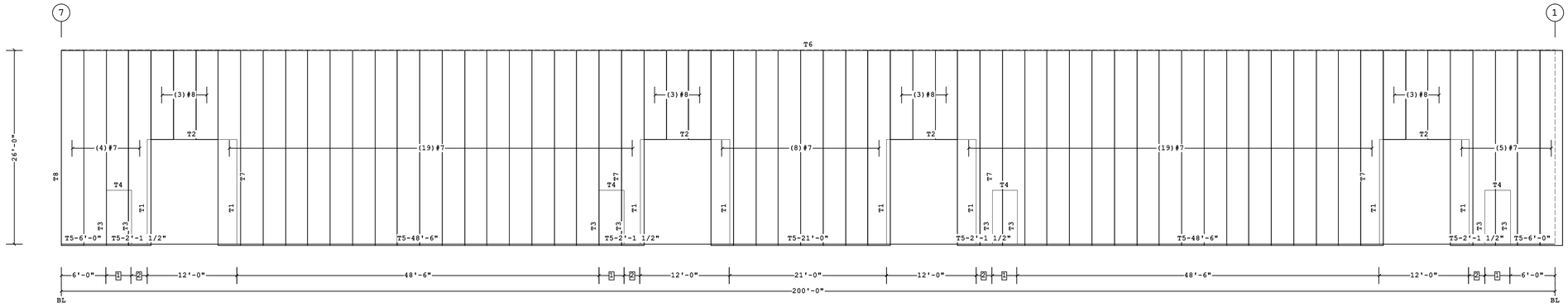
Id	Qty	Type	Start Length	Gage	OP	Fin.	Color	Direction
#7	55	PR	26'-1 3/4"	26	F	K	GG	Left to Right
#8	12	PR	11'-11 1/4"	26	1	K	GG	Left to Right

Oper. Code:F=CR,SQ
Oper. Code:1=SQ,SQ
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

Trim Schedule

Id	Parts
T1	DFT14,JT14
T2	DFT12,HTS12
T3	DFT10,JT07
T4	DFT05,HTS05
T5	(5.5)BA125
T6	(10)EG202,(2)GGC2,(20)PCA10A,(52)STR4
T7	5CE75,(3)CP510,DN1,(6)DST1
T8	CT16,CT10

Color	Details
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Dark Bronze	EN52A1,ENV003,RC00A1,WC01D9,WC04G1
Cool Leaf Green	RC32A1,RC38E1,RC61A6,RCV324,WC04G1,WC11F1
Cool Granite Gray	RC38P1
Cool Granite Gray	WC20A1



COVERING ELEVATION AT A

2 2'-1 1/2"
1 3'-4 1/2"
Dimension Key

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097584-109	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERTZ No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

Shape Name = Shape 1, Wall = 2

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
4. SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 10:41:57

COVERING ELEVATION AT A

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-tb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 37

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Covering Schedule

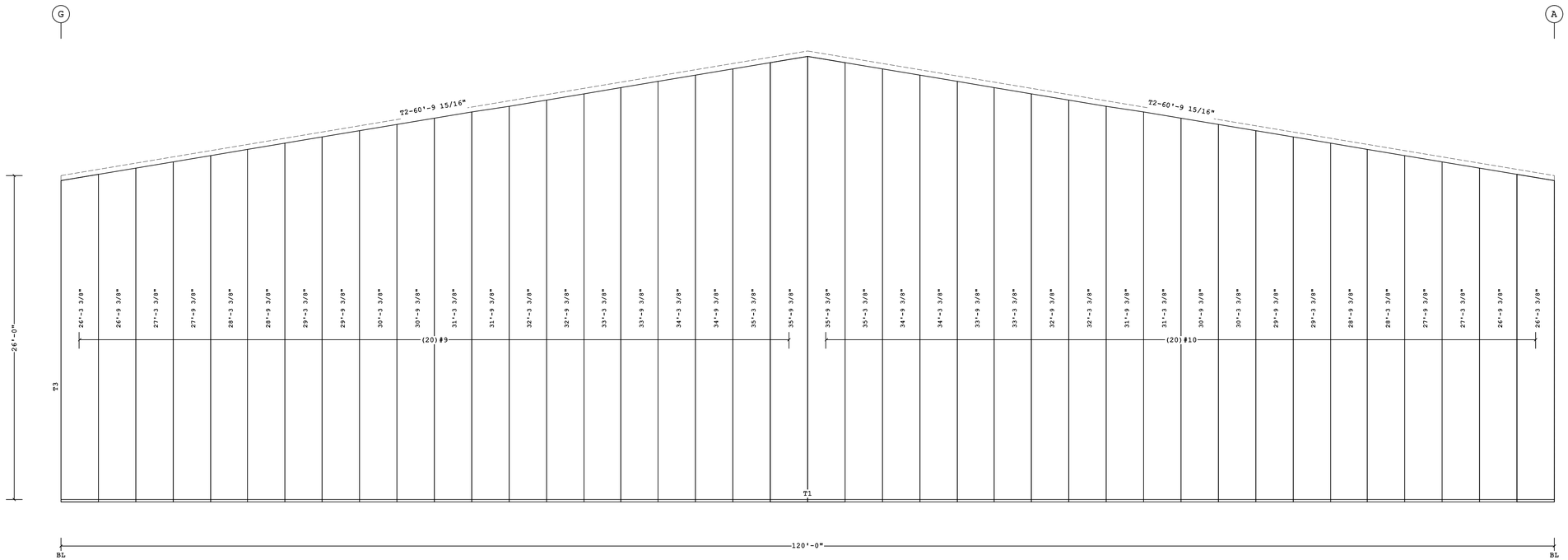
Id	Qty	Type	Start	Length	Gage	OP	Fin.	Color	Increment	Direction
#9	20	PR	26'-3 3/8"		26	J	K	GG	6"	Left to Right
#10	20	PR	35'-9 3/8"		26	K	K	GG	-6"	Left to Right

Oper. Code:J=CR,LF
Oper. Code:K=CR,RT
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

Trim Schedule

Id	Parts
T1	(4.8)BA125
T2	(13)RCL10,(13)RFR10-130,(6)RKF20,RKF10,(13)RSB10,(13)RSC10
T3	CT16,CT10

Color	Details
Cool Dark Bronze	EN52A1,ENV003,RC00A1,WC01D9,WC04G1
Cool Leaf Green	RC10A1,RC30A1,RS10L5,WC10A2
Cool Granite Gray	WC20A1



COVERING ELEVATION AT 7

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

Shape Name = Shape 1, Wall = 3

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
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3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 10:41:58

COVERING ELEVATION AT 7

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	
FILENAME:	Macarthur Street Properties Phase 1 Preliminary Design-tb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO	1901303201
DATE	6/9/2025
DRAWN/CHECK	KGH
PAGE	38

A division of BlueScope Buildings North America, Inc.

Covering Schedule

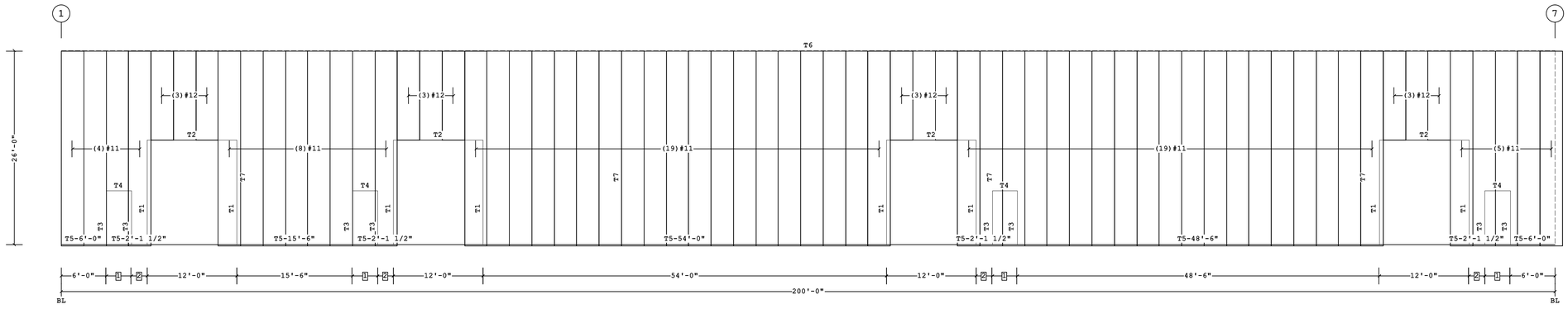
Id	Qty	Type	Start Length	Gage	OP	Fin.	Color	Direction
#11	55	PR	26'-1 3/4"	26	F	K	GG	Left to Right
#12	12	PR	11'-11 1/4"	26	1	K	GG	Left to Right

Oper. Code:F=CR,SQ
Oper. Code:1=SQ,SQ
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

Trim Schedule

Id	Parts
T1	DFT14,JT14
T2	DFT12,HTS12
T3	DFT10,JT07
T4	DFT05,HTS05
T5	(5.5)BA125
T6	(10)EG202,(2)GGC2,(20)PCA10A,(52)STR4
T7	5CE75,(3)CP510,DN1,(6)DST1

Color	Details
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Dark Bronze	EN52A1,ENV003,RC00A1,WC01D9,WC04G1
Cool Leaf Green	RC32A1,RC38E1,RC61A6,RCV324,WC04G1,WC11F1
Cool Granite Gray	RC38P1



COVERING ELEVATION AT G

2 2'-1 1/2"
1 3'-4 1/2"
Dimension Key

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097584-109	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERTEN No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

Shape Name = Shape 1, Wall = 4

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 10:41:59

COVERING ELEVATION AT G

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-tb1

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 39

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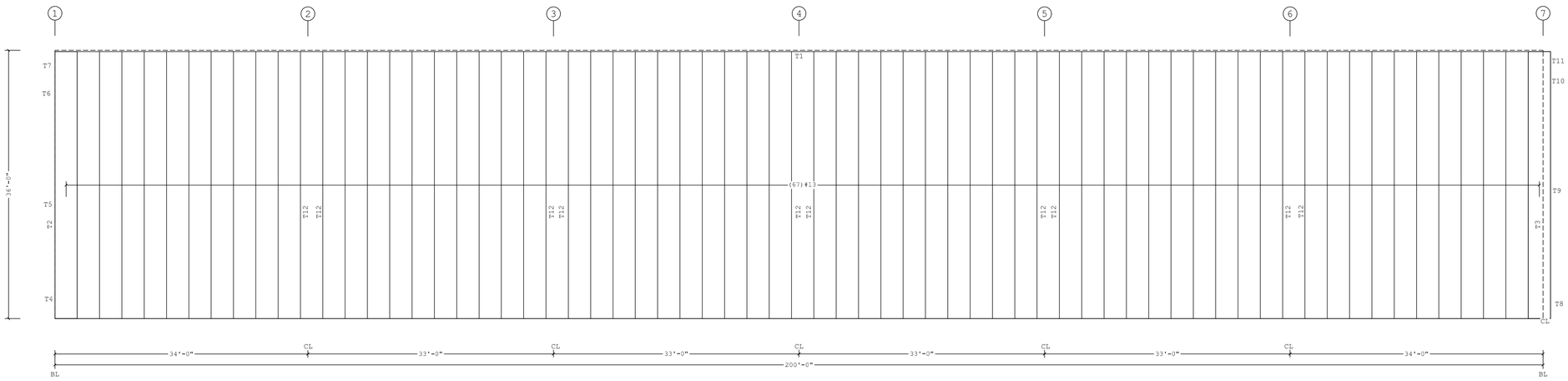
Covering Schedule

Id	Qty	Type	Start Length	Gage	OP	Fin.	Color	Direction
#13	67	PR	35'-10"	26	1	K	GG	Left to Right

Oper. Code:1=SQ, SQ
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

Trim Schedule

Id	Parts	Color	Details
T1	(20)NLTA10	Cool Granite Gray	WC61AX
T2	(2)HT14,HT10	Cool Granite Gray	WC64C7,WC80G1,WC80J2
T3	(2)HT14,HT10	Cool Granite Gray	WC64C7,WC80G1,WC80J2
T4	CFA2042,CSA2042R (At 4'-0" Girt Space from Finished Floor)	Cool Granite Gray	WC64C7,WC80J2,
T5	(10)CSA2042R (At (5)4'-0" Girt Spaces)	Cool Granite Gray	WC64C7,WC80J2,
T6	(4)CSA1102R (At (2)3'-0" Girt Spaces)	Cool Granite Gray	WC64C7,WC80J2,
T7	CSA3042R,CSF3042 (At 6'-0" Girt Space to Ridge)	Cool Granite Gray	WC64C7,WC80J2,(Field Work and Field Attachment for CSF3042 at Ridge NBVP
T8	CFA2042,CSA2042L (At 4'-0" Girt Space from Finished Floor)	Cool Granite Gray	WC64C7,WC80J2,
T9	(10)CSA2042L (At (5)4'-0" Girt Spaces)	Cool Granite Gray	WC64C7,WC80J2,
T10	(4)CSA1102L (At (2)3'-0" Girt Spaces)	Cool Granite Gray	WC64C7,WC80J2,
T11	CSA3042L,CSF3042 (At 6'-0" Girt space to Ridge)	Cool Granite Gray	WC64C7,WC80J2,(Field Work and Field Attachment for CSF3042 at Ridge NBVP
T12	(3) JT12	Cool Granite Gray	WC61A8



COVERING ELEVATION AT D

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

Shape Name = Shape 1, Wall = 1

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE'S AND/OR FASTENERS TO STRUCTURAL BEAMS
2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

COVERING ELEVATION AT D

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 1901303201
DATE: 6/9/2025
DRAWN/CHECK: KGH
PAGE: 40

MODIFIED IN AUTOCAD

FILENAME: C:\Users\khaywood\Desktop\Drawings for McArthur\Macarthur Street Properties Phase 1 Preliminary Design-ttb1_COVERING ELEVATION AT D.dwg

SAVE DATE: 10/16/2019 SAVE TIME: 16:22:53 LAST SAVED BY: khaywood

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Covering Schedule

Id	Qty	Type	Start Length	Gage	OP	Fin.	Color	Increment	Direction
#19	4	PR	9'-6 7/8"	26	X	K	GG	-1'-0"	Left to Right
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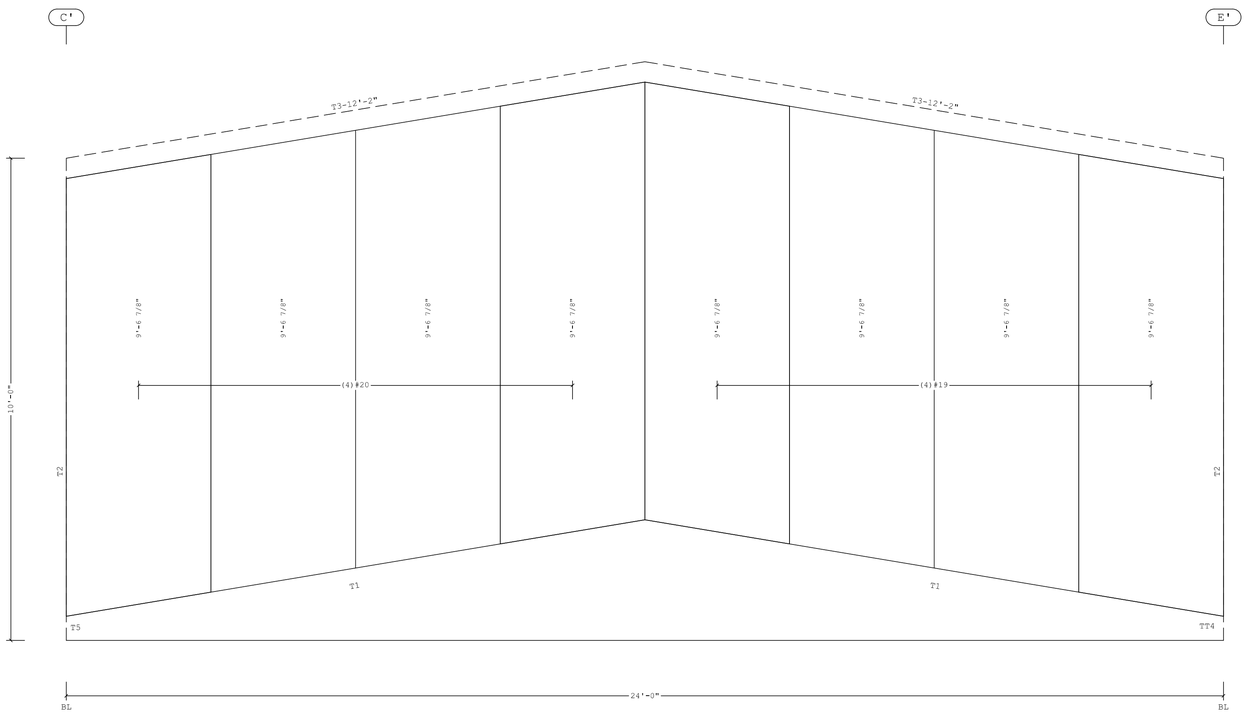
Oper. Code:X=RT, RT
Oper. Code:P=LF, LF
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

Trim Schedule

Id	Parts	Color	Details
T1	BWA0207, (2)TRMX01, (2)RFR10-130, (1.2)RHC010, RHM200007, (2)RHS10	Cool Weathered Copper	RC15A1, RC52A1, RCV104, RCV106, WC52A1
T2	CT10	Cool Granite Gray	WC20A1
T3	(3)RCL10, (3)RFR10-130, RKF16, RKF10, (3)RSB10, (3)RSC10	Cool Leaf Green	RC10A1, RC30A1, RS10L5, WC10A2
T4	TRMX02	Cool Weathered Copper	RC52A6, RCV104
T5	TRMX03	Cool Weathered Copper	RC52A6, RCV104

1 NOTE: TRMX01 REPLACES BWT- TRIM IN ANY DETAIL THAT SHOWS BWT- TRIM. FOR TRIM ID T1.

1 NOTE: TRMX02 & TRMX03 TRIMS REPLACES HCP'S TRIM SHOWN IN ANY DETAIL FOR TRIM IDs T4 & T5



COVERING ELEVATION AT 3

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRYMAN No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

Shape Name = Shape 1 Clerestory, Wall = 1

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
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REV	DATE	BY	DESCRIPTION
1	10/23/2019	JLP	TRMX01 REPLACES BWT110, PER PM REQUEST TO REVISE TRIM FROM 26 GAGE TO 24 GAGE MATERIAL. TRMX02 AND TRMX03 TO REPLACE HCP'S THAT WOULD NOT BUILD, PER OCD.

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

NTS

COVERING ELEVATION AT 3

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO	1901303201
DATE	6/9/2025
DRAWN/CHECK	KGH
PAGE	41

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SAVE DATE: 10/17/2019 SAVE TIME: 08:22:11 LAST SAVED BY: khaywood

a division of BlueScope Buildings North America, Inc.

Covering Schedule

Id	Qty	Type	Start Length	Gage	OP	Fin.	Color	Direction
#23	23	PR	9'-5 3/8"	26	1	K	GG	Left to Right

Oper. Code:1=SQ, SQ
Finish:K=KXL (Kynar)
Color:GG=Cool Granite Gray

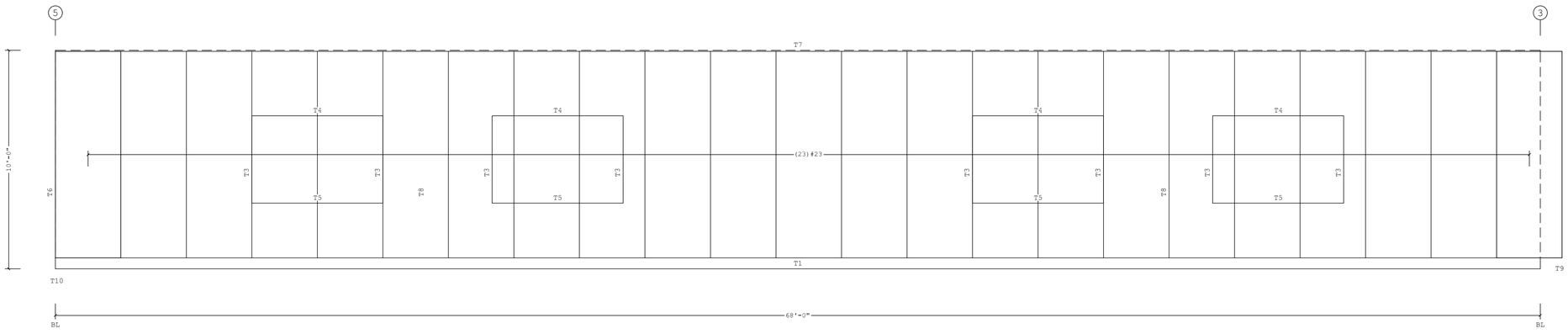
Trim Schedule

Id	Parts
T1	(4)BWA0207, (4)BWC20, (7)TRMX01, (7)LTA10, (6.8)SWRTA1
T3	DFT05, JT05
T4	DFT10, HTS10
T5	TDFH10
T6	CT10
T7	(3)EG202, EG122, (7)PCA10A, (18)STR4
T8	5CE75, CP510, DN1, (2)DST1
T9	TRMX02
T10	TRMX03

1 NOTE: TRMX01 REPLACES BWT- TRIM IN ANY DETAIL THAT SHOWS BWT- TRIM. FOR TRIM ID T1.

1 NOTE: TRMX02 & TRMX03 TRIMS REPLACES HCP'S TRIM SHOWN IN ANY DETAIL FOR TRIM IDs T9 & T10

Color	Details
Cool Weathered Copper	RCV104, RCV105, RCV420, RCV421, RCV422, RCV450, RCV457, RCV531, WC14D1, WC50A1
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Leaf Green	WC24A4
Cool Granite Gray	WC20A1
Cool Leaf Green	RC32A1, RC38E1, RCV324, WC04G1, WC11F1
Cool Granite Gray	RC38P1
Cool Weathered Copper	RC52A6,RCV104
Cool Weathered Copper	RC52A6,RCV104



COVERING ELEVATION AT C'

Fastener Schedule

Part	Description
0097584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097584-109	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
0097581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

Shape Name = Shape 1 Clerestory, Wall = 2

1. PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS TO STRUCTURAL BEAMS
2. STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM. REMOVAL OR ALTERATION WITHOUT PRIOR AUTHORIZATION IS PROHIBITED.
3. DUE TO MANUFACTURING LIMITATIONS SHORT PANELS MAY REQUIRE FIELD CUTTING, SEE THE COVERING SCHEDULE FOR CUT LENGTHS.
4. SEE JOB DETAILS FOR COVERING AND TRIM FASTENER SPECIFICATION.

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REV	DATE	BY	DESCRIPTION
1	10/23/2019	JLP	TRMX01 REPLACES BWT110, PER PM REQUEST TO REVISE TRIM FROM 26 GAGE TO 24 GAGE MATERIAL. TRMX02 AND TRMX03 TO REPLACE HCP'S THAT WOULD NOT BUILD, PER OCD.

NTS

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

COVERING ELEVATION AT C'

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 42

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FILENAME: C:\Users\khaywood\Desktop\Drawings for McArthur\Macarthur Street Properties Phase 1 Preliminary Design-ttb1_COVERING ELEVATION AT C'.dwg
SAVE DATE: 10/17/2019 SAVE TIME: 08:41:05 LAST SAVED BY: khaywood

a division of BlueScope Buildings North America, Inc.

vering Schedule

	Qty	Type	Start Length	Gage	OP	Fin.	Color	Increment	Direction
2	4	PR	9'-6 7/8"	26	X	K	GG	-1'-0"	Left to Right
1	4	PR	9'-6 7/8"	26	P	K	GG	-1'-0"	Right to Left

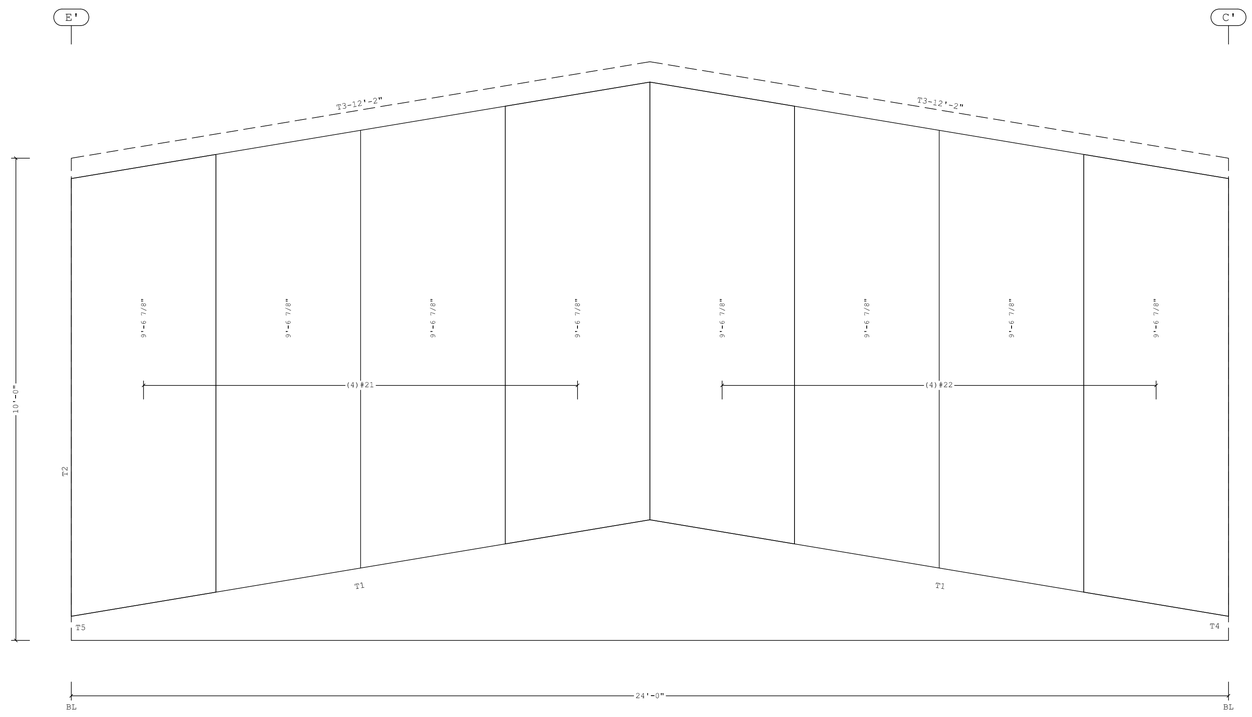
er. Code:X=RT, RT
er. Code:P=LF, LF
nish:K=KXL (Kynar)
lor:GG=Cool Granite Gray

Trim Schedule

Id	Parts	Color	Details
T1	BWA0207, (2)TRMX01, (2)RFR10-130, (1.2)RHC010, RHM200007, (2)RHS10	Cool Weathered Copper	RC15A1, RC52A1, RCV104, RCV106, WC52A1
T2	CT10	Cool Granite Gray	WC20A1
T3	(3)RCL10, (3)RFR10-130, RKF16, RKF10, (3)RSB10, (3)RSC10	Cool Leaf Green	RC10A1, RC30A1, RS10L5, WC10A2
T4	TRMX02	Cool Weathered Copper	RC52A6, RCV104
T5	TRMX03	Cool Weathered Copper	RC52A6, RCV104

1 NOTE: TRMX01 REPLACES BWT- TRIM IN ANY DETAIL THAT SHOWS BWT- TRIM. FOR TRIM ID T1.

1 NOTE: TRMX02 & TRMX03 TRIMS REPLACES HCP'S TRIM SHOWN IN ANY DETAIL FOR TRIM IDs T4 & T5



COVERING ELEVATION AT 5

stener Schedule

rt	Description
97584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
97581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

Shape Name = Shape 1 Clerestory, Wall = 3

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRYMAN No. C52080 CIVIL STATE OF CALIFORNIA
6/9/2025

PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS
MAY BE REQUIRED FOR HEAVY GAGE NESTED ZEE's AND/OR FASTENERS
TO STRUCTURAL BEAMS
STEEL PANELS ARE AN INTEGRAL PART OF THE STRUCTURAL SYSTEM.
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REV	DATE	BY	DESCRIPTION
1	10/23/2019	JLP	TRMX01 REPLACES BWT110, PER PM REQUEST TO REVISE TRIM FROM 26 GAGE TO 24 GAGE MATERIAL. TRMX02 AND TRMX03 TO REPLACE HCP'S THAT WOULD NOT BUILD, PER OCD.

D

VP Buildings
3200 Players Club Circle Memphis TN 38125

NTS

COVERING ELEVATION AT 5

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO	1901303201
DATE	6/9/2025
DRAWN/CHECK	KGH
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vering Schedule

	Qty	Type	Start Length	Gage	OP	Fin.	Color	Direction
1	23	PR	9'-5 3/8"	26	1	K	GG	Left to Right

ar. Code:1=SQ, SQ
nish:K=KXL (Kynar)
lor:GG=Cool Granite Gray

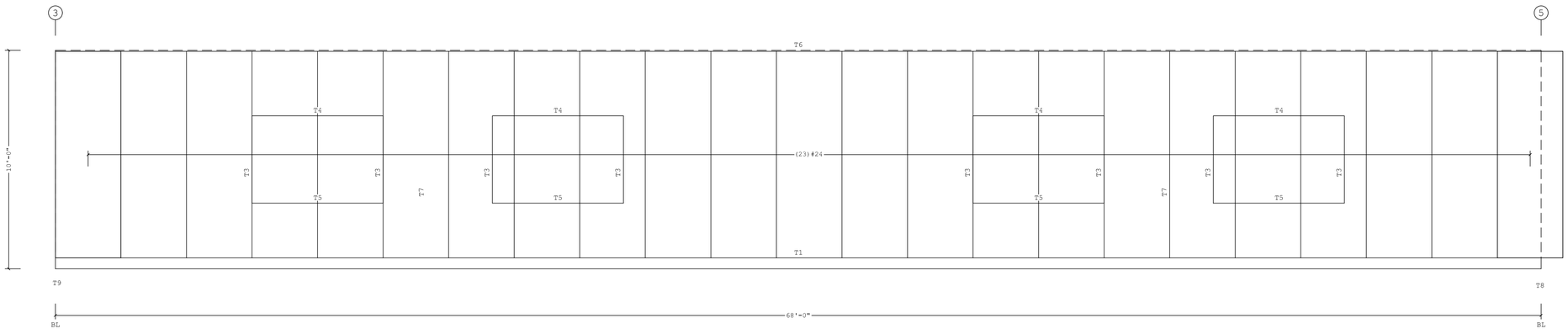
Trim Schedule

Id	Parts
T1	(4)BWA0207, (4)BWC20, (7)TRMX01, (7)LTA10, (6.8)SWRTA1
T3	DFT05, JT05
T4	DFT10, HTS10
T5	TDFH10
T6	(3)EG202, EG122, (7)PCA10A, (18)STR4
T7	5CE75, CP510, DN1, (2)DST1
T8	TRMX02
T9	TRMX03

1 NOTE: TRMX01 REPLACES BWT- TRIM IN ANY DETAIL THAT SHOWS BWT- TRIM, FOR TRIM ID T1.

1 NOTE: TRMX02 & TRMX03 TRIMS REPLACES HCP'S TRIM SHOWN IN ANY DETAIL FOR TRIM IDs T8 & T9

Color	Details
Cool Weathered Copper	RCV104, RCV105, RCV420, RCV421, RCV422, RCV450, RCV457, RCV531, WC14D1, WC50A1
Cool Leaf Green	WC24A1
Cool Leaf Green	WC24A2
Cool Leaf Green	WC24A4
Cool Leaf Green	RC32A1, RC38E1, RCV324, WC04G1, WC11F1
Cool Granite Gray	RC38P1
Cool Weathered Copper	RC52A6, RCV104
Cool Weathered Copper	RC52A6, RCV104



COVERING ELEVATION AT E'

stener Schedule

rt	Description
97584-112	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
97584-109	(T-2) #12-14 x 1 1/4", 5/16" Hex Hd, SS Cap w/Washer
97581-112	(T-1) 1/4-14 x 7/8", 5/16" Hex Hd, SS Cap w/Washer

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

Shape Name = Shape 1 Clerestory, Wall = 4

PRE-DRILLING 1/8 DIAMETER HOLES FOR STRUCTURAL FASTENERS
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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION
1	10/23/2019	JLP	TRMX01 REPLACES BWT110, PER PM REQUEST TO REVISE TRIM FROM 26 GAGE TO 24 GAGE MATERIAL. TRMX02 AND TRMX03 TO REPLACE HCP'S THAT WOULD NOT BUILD, PER OCD.

NTS

COVERING ELEVATION AT E'

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

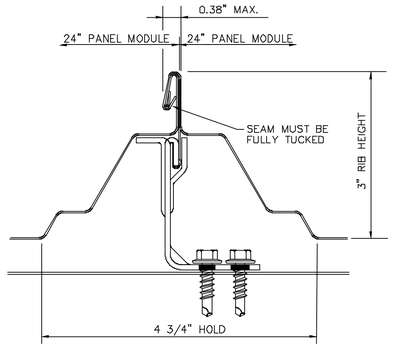
JOBNO	1901303201
DATE	6/9/2025
DRAWN/CHECK	KGH
PAGE	44

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SAVE DATE: 10/16/2019 SAVE TIME: 16:23:57 LAST SAVED BY: khaywood

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IT IS THE RESPONSIBILITY OF THE ERECTOR TO INSURE PROPER SEAM TIGHTNESS. FAILURE TO PROPERLY SEAM THE JOINT MAY RESULT IN PREMATURE FAILURE OF PANELS AND/OR SECONDARY MEMBERS UNDER UPLIFT OR DOWNWARD LOADING CONDITIONS.



BEFORE SEAMING, IT IS IMPORTANT TO WIPE THE SEAM CLEAN WITH SOAPY CLOTH IMMEDIATELY BEFORE SEAMING THE PANEL. THIS STEP WILL DRAMATICALLY REDUCE THE CHANCE OF MARRING THE SEAMS AT THE CLIP LOCATIONS.

REV. DATE:12/08/16 | REV. NO. 03 — EN01B2 — SSR SEAMING GUIDELINES — RIB AND SEAM PROFILE

F = FEET G = GAGE
I = INCHES O = OPERATION
E = EIGHTHS C = FIN/COLOR

PANEL/COVERING
W 1 3 1 1 7 2 6 1 K T D
* F F I I E G G O C C C
LENGTH CODE

INSULATION
I B 1 3 0 1 0 3 6 0 3 0 W V
* * F F F I I I I I I E C C
LENGTH WIDTH THK CODE

SECONDARY (STANDARD)
0 8 Z 1 9 1 1 4 1 7 – – – – –
* * * F F I I E G G * * * * *
DEPTH LENGTH SHAPE GAGE ADJUST.CODES

SECONDARY (SPECIAL)
0 0 1 0 8 Z 1 9 1 1 4 1 7 – – –
* * * * * * F F I I E G G * * *
COUNTER DEPTH & SHAPE LENGTH GAGE ADJUST CODES

ROD BRACING
0 3 R S 2 5 1 0
I E * * F F I I
DIA LENGTH

CX*** = COLUMN (PLATE)
CGX*** = COLUMN (GAGE)
WCX*** = COLUMN (HOTROLL)

RBX*** = RAFTER (PLATE)
BGX*** = RAFTER (GAGE)
WRX*** = RAFTER (HOTROLL)
TRX*** = TRUSS RAFTER

ICX*** = INTERIOR COLUMN
PCX*** = PIPE COLUMN
TCX*** = TUBE COLUMN

EPX*** = ENDPOST (PLATE)
EGX*** = ENDPOST (GAGE)

CBX*** = CANOPY (PLATE)
CBX*** = PIGGYBACK CANOPY

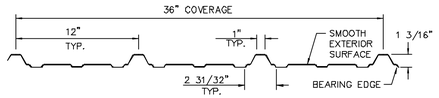
DCC*** = 8 1/2" GAGE POST
DCE*** = 10" GAGE POST

RS = THREADS BOTH ENDS
RT = THREADS ONE END – CLEVIS ONE END
RU = CLEVIS BOTH ENDS
RP = THREAD BOTH ENDS – NO HILLSIDES

REV. DATE:08/29/12 | REV. NO. 01 — EN50B1 — MARK NUMBER KEY — COMMON GENERATED MARK NUMBERS

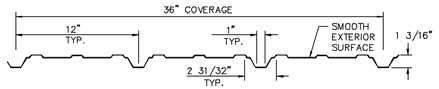
PR WALL PANEL MARK NO.: W F F I I E G G O C C C
LENGTH CODE
PR ROOF PANEL MARK NO.: R F F I I E G G O C C C
LENGTH CODE
PR RIDGE PANEL MARK NO.: P F F I I E G G O C C C
LENGTH CODE

F = FEET
I = INCHES
E = EIGHTHS
G = GAGE
O = OPERATION
C = FIN/COLOR



PANEL RIB ROOF AND WALL PANEL (PR)

RPR WALL PANEL MARK NO.: R R F F I I E G G O C C C
LENGTH CODE

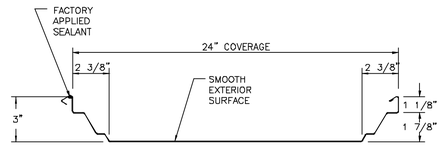


RPR WALL PANEL

REV. DATE:11/17/17 | REV. NO. 01 — EN52A1 — PR ROOF & PR/RPR WALL PANELS

F = FEET G = GAGE
I = INCHES O = OPERATION
E = EIGHTHS C = FIN/COLOR

SSR ROOF PANEL MARK NO.: S F F I I E G G O C C C
LENGTH CODE



REV. DATE:07/01/08 | REV. NO. 00 — EN52D1 — STANDING SEAM ROOF PANELS (SSR)

ROOF PANEL INSTALLATION GUIDE REQUIRED FOR THIS PROJECT:

REFER TO:

VARCO PRUDEN BUILDINGS

SSR ROOF INSTALLATION

The Field Guide for correctly storing and installing a VP Buildings Standing Seam Roof System

BACK COVER: 4005 SSR INSTALLATION

REV DATE:01/30/14 | REV. NO. 00 — ENV001 — ROOF INSTALLATION GUIDE – SSR

PANEL ERECTION GUIDE REQUIRED FOR THIS PROJECT:

REFER TO:

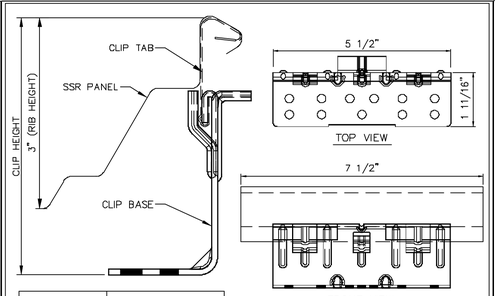
VARCO PRUDEN BUILDINGS

BASIC PANELS & ACCESSORIES

The field guide for correct installation of Varco Pruden's Wall and Roof Systems, Tuff-Lites, Wallites, Doors, Windows, Gutters and Trim.

BACK COVER: 4003 BASIC PANELS AND ACCESSORIES

REV. DATE:01/30/14 | REV. NO. 00 — ENV003 — BASIC PANEL AND ACCESSORIES — CONTAINS: PR ROOF – WALLS: PR, RPR, VR



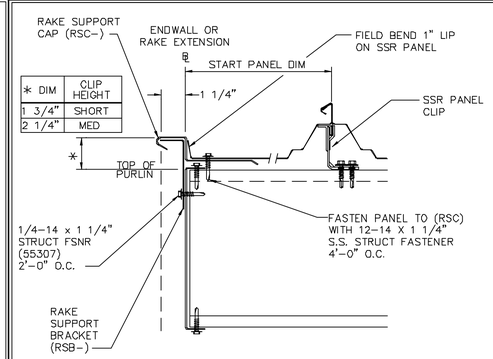
CLIP HEIGHT		CLIP TYPE & MARK	
SHORT	3 1/2"	FIXED	560771
		SLIDING	560772
MEDIUM	4"	FIXED	560773
		SLIDING	560774
TALL	4 1/2"	FIXED	560775
		SLIDING	560776
X-TALL	5"	FIXED	560777
		SLIDING	560778

*NOTE: CLIPS WILL BE STAMPED SHORT, MED, TALL, OR X-TALL. FIXED CLIPS WILL HAVE PAINTED CLIP TABS.

REV. DATE:11/17/17 | REV. NO. 01 — ENV011 — SSR PANEL CLIP — PROFILE AND MARK NUMBERS

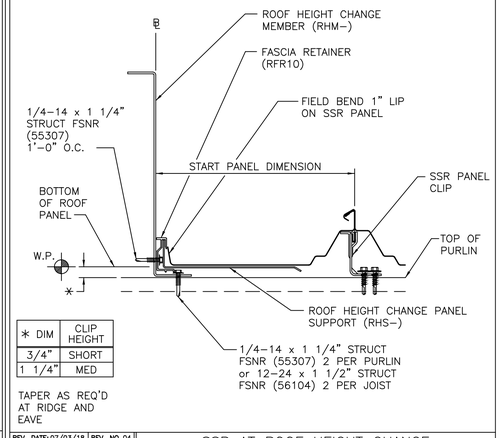
1. STANDARD ERECTION DETAILS (SED) SUPERSEDE SIMILAR DETAILS FOUND IN THE ERECTION GUIDES. REFER TO THE ERECTION GUIDES FOR OTHER DETAILS, INSTALLATION PROCEDURES AND ACCESSORIES NOT DESCRIBED IN THE SED'S.
2. ALL PANEL AND TRIM SURFACES MUST BE FREE OF DIRT AND OIL AT MASTIC AND SEALANT LOCATIONS.

REV. DATE:07/01/09 | REV. NO 00 — RC00A1 — NOTES

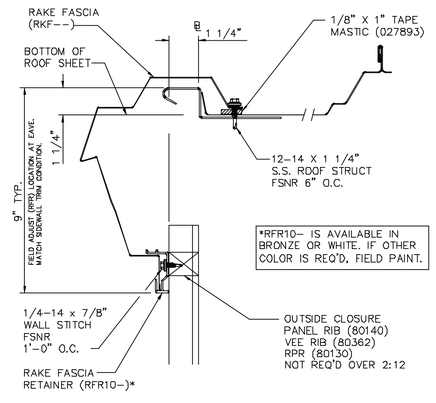


NOTE: SEE ERECTION DRAWINGS FOR FIELD CUT STARTER PANEL DIMENSION

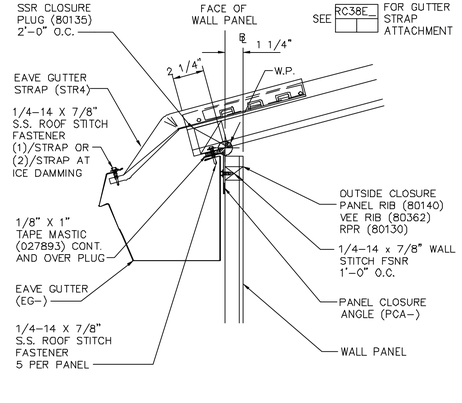
REV. DATE:07/15/16 | REV. NO. 06 — RC10A1 — SSR STARTING RAKE — PR, VR, OR RPR WALL W/ BLANKET INSUL.



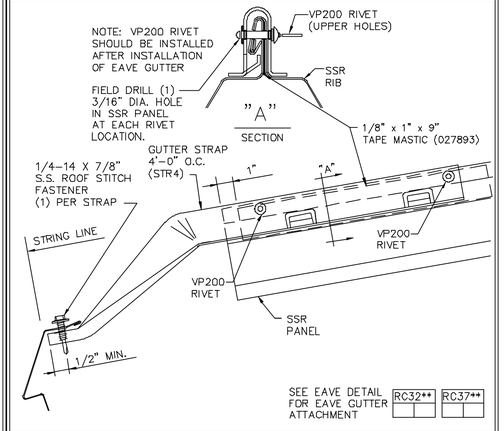
REV. DATE:07/03/18 | REV. NO. 04 — RC15A1 — SSR AT ROOF HEIGHT CHANGE — BLANKET INSULATION



REV. DATE:08/16/18 | REV. NO. 06 — RC30A1 — SSR RAKE TRIM — PR, VR OR RPR WALL



REV. DATE.01/15/16 | REV. NO. 04 — RC32A1 — SSR ROOF W/ EAVE GUTTER — PR, VR OR RPR WALL



REV. DATE 01/15/16 | REV. NO. 04 — RC38E1 — GUTTER STRAP ATTACHMENT — SSR ROOF (NON-ICE DAMMING)

REGISTERED PROFESSIONAL ENGINEER — TIMOTHY T. BERRY — No. C62080 — CIVIL — STATE OF CALIFORNIA

6/9/2025

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 SEDSheet 10:42:14

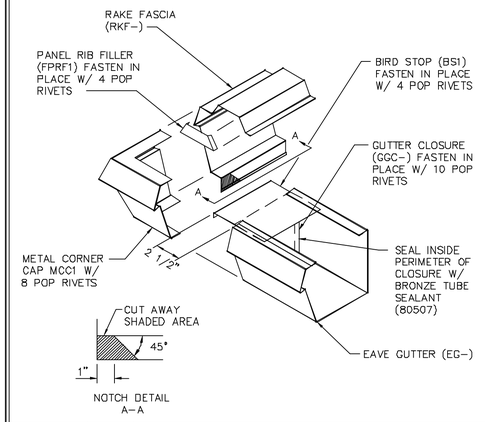
COVERING & TRIM SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design.tb1

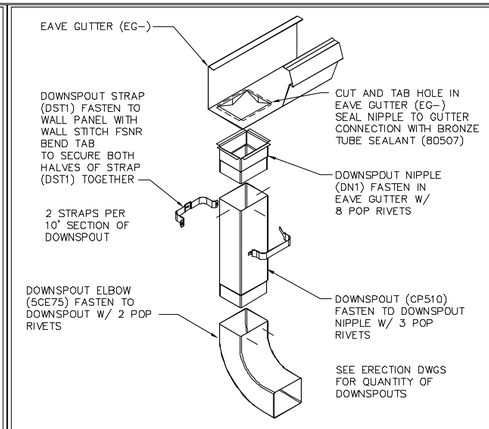
VP BUILDINGS — VARCO PRUDEN — A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 1901303201
DATE: 6/9/2025
DRAWN/CHECK: KGH
PAGE: 45

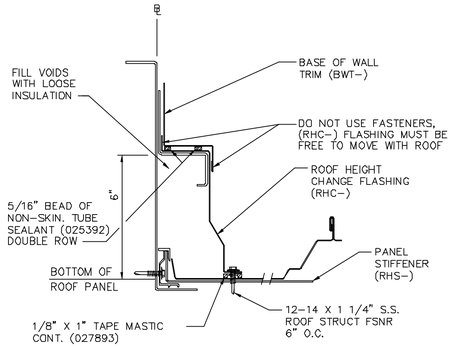
Building Solutions for North America, Inc.



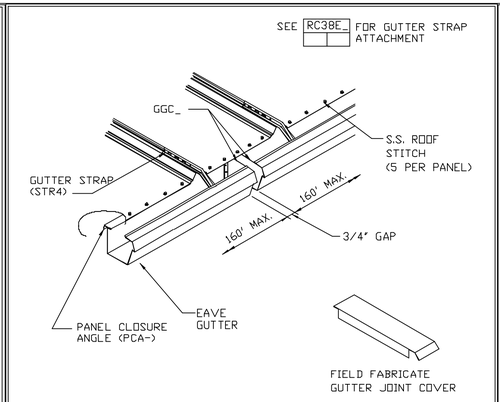
REV. DATE:10/07/14	REV. NO. 03	EAVE GUTTER CORNER ASSEMBLY
RC38N1		ALL SYSTEMS



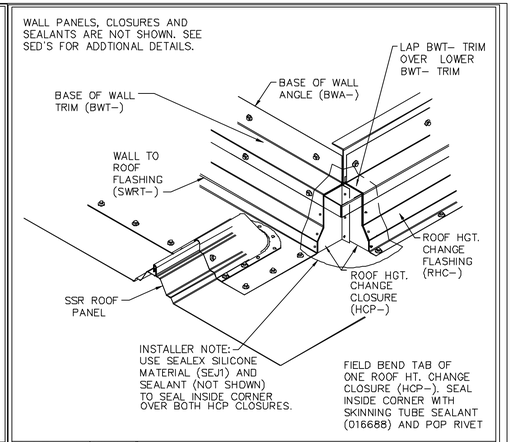
REV. DATE:10/22/12	REV. NO. 03	DOWNSPOUT ASSEMBLY
RC38P1		ALL SYSTEMS



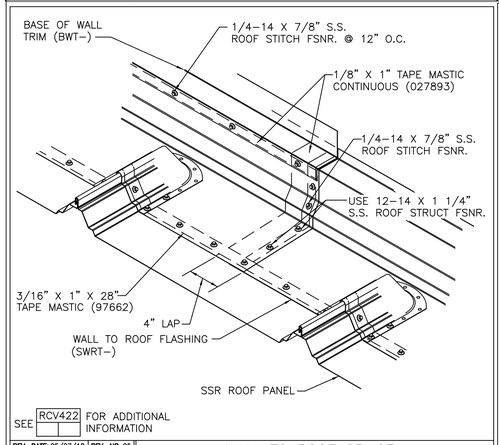
REV. DATE 01/19/16	REV. NO. 02	ROOF HEIGHT CHANGE FLASHING
RC52A1		SSR ROOF (METAL FLASHING)



REV. DATE:07/01/09	REV. NO. 00	SSR EAVE GUTTER EXPANSION JOINT
RC61A6		FOR BUILDING OVER 160' IN LENGTH

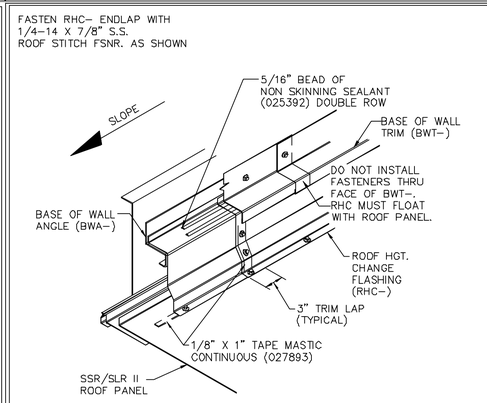


REV. DATE:04/26/16	REV. NO. 01	ROOF STEP O.S. CORNER FLASHING
RCV104		SSR ROOF METAL FLASHING

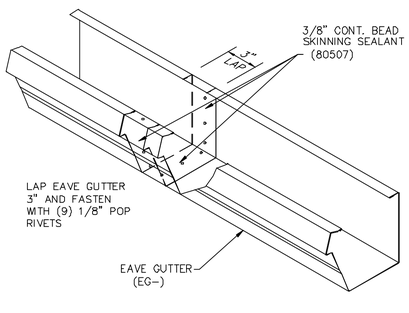


SEE RCV422 FOR ADDITIONAL INFORMATION

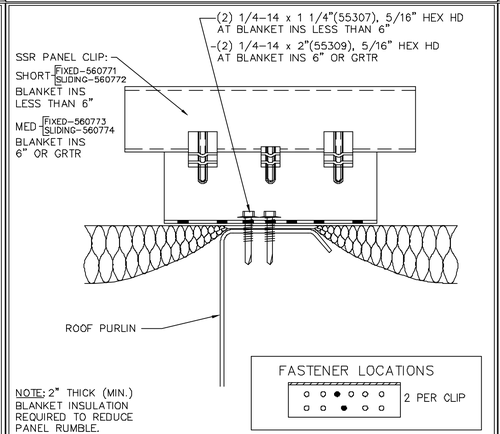
REV. DATE:05/07/18	REV. NO. 05	WALL TO ROOF SPLICE
RCV105		SSR ROOF METAL FLASHING



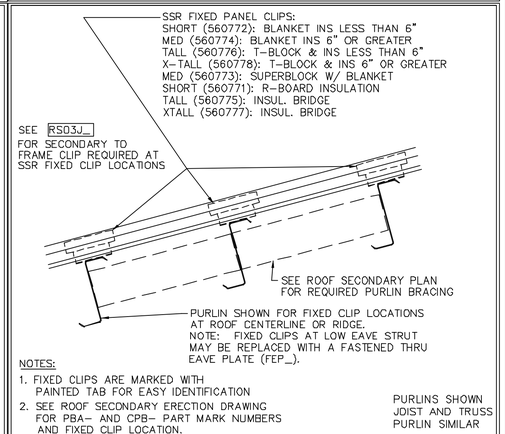
REV. DATE:04/27/16	REV. NO. 02	ROOF HEIGHT CHANGE TRIM SPLICE
RCV106		SSR/SLR II ROOF METAL FLASHING



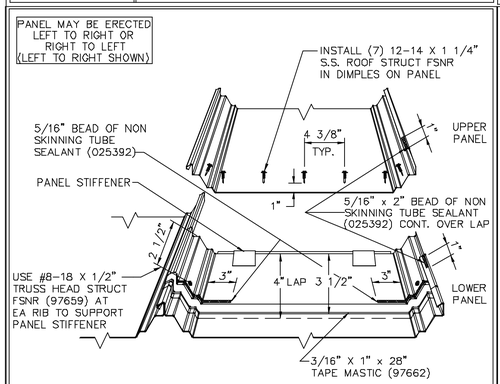
REV. DATE:03/03/15	REV. NO. 00	TRIM SPLICES
RCV324		EAVE GUTTER SPLICE



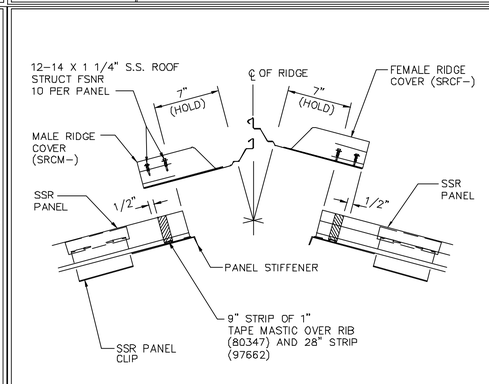
REV DATE 08/24/17	REV. NO. 03	SSR PANEL CLIP ATTACHMENT
RCV325		BLANKET INSULATION ON PURLINS



REV DATE 08/24/17	REV. NO. 03	SSR FIXED PANEL CLIP
RCV353		BLANKET, T–BLOCK, S–BLOCK, R–BOARD, & BRIDGE

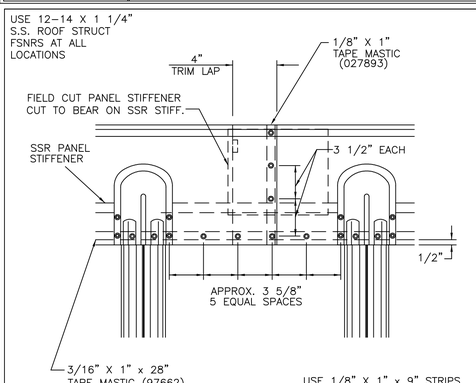


REV. DATE:11/09/17	REV. NO. 04	SSR PANEL STAGGERED ENDLAP
RCV414		FASTENER AND MASTIC PATTERN

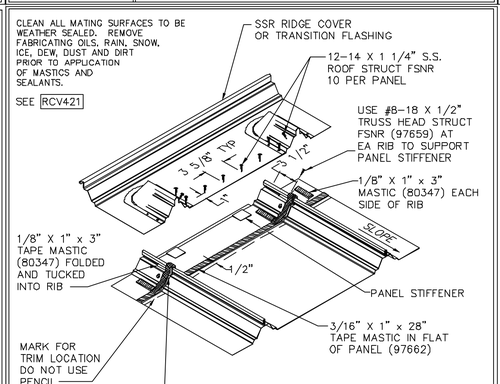


SEE RCV420 FOR FSNR AND MASTIC PATTERN

REV. DATE:11/09/17	REV. NO. 02	SSR RIDGE COVER ATTACHMENT
RCV418		



REV. DATE:05/07/18	REV. NO. 03	SSR SEAM CAP AT HIGH RIB
RCV419		SSR AT RIDGE PANEL SPLICE



REV. DATE:11/09/17	REV. NO. 03	SSR RIDGE/TRANSITION FLASHING
RCV420		FASTENER AND MASTIC PATTERN

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C062080 CIVIL STATE OF CALIFORNIA

6/9/2025

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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 SEDSheet 10:42:16

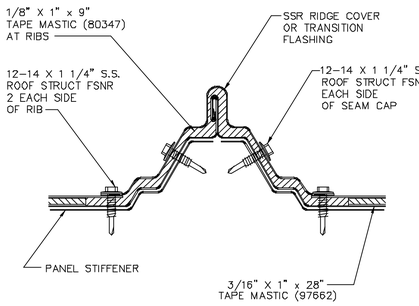
COVERING & TRIM SED'S

BUILDER	Seegert Construction
CUSTOMER	
LOCATION	Sonoma, California
PROJECT	Macarthur Street Properties Phase 1
BUILDERS PO#	
FILENAME:	Macarthur Street Properties Phase 1 Preliminary Design.ssd

VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO	1901303201
DATE	6/9/2025
DRAWN/CHECK	KGH
PAGE	46

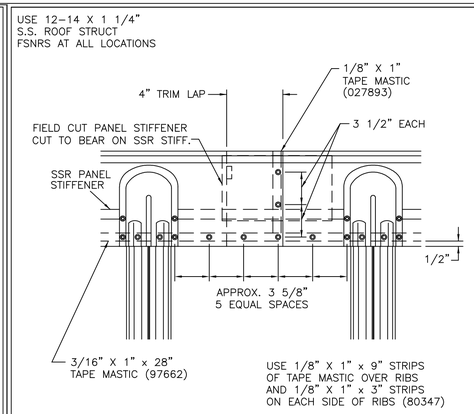
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REV. DATE:11/09/17 | REV. NO. 02

RCV421

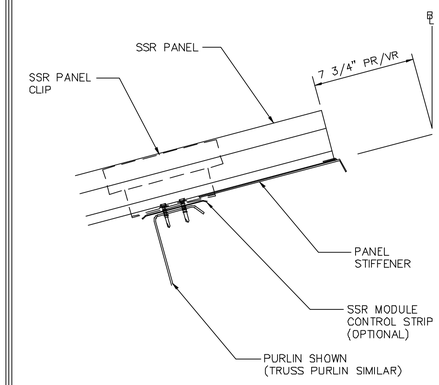
SSR SEAM CAP AT HIGH RIB
SSR RIDGE/TRANSITION (FLEXIBLE OR METAL)



REV. DATE:08/20/18 | REV. NO. 03

RCV422

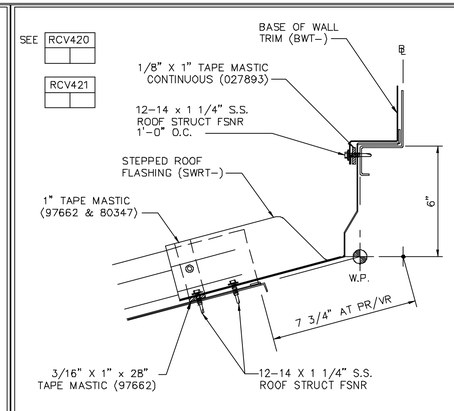
SSR SEAM CAP AT HIGH RIB
SSR AT STEPPED ROOF (FLEXIBLE OR METAL)



REV. DATE 08/11/17 | REV. NO. 01

RCV450

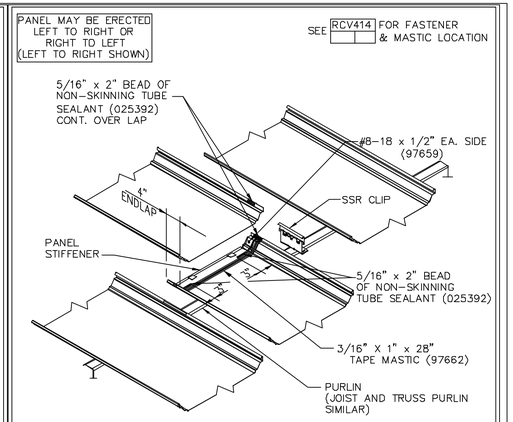
SSR AT WALL TO ROOF TRANSITION
BLANKET INSULATION



REV. DATE:11/10/17 | REV. NO. 01

RCV457

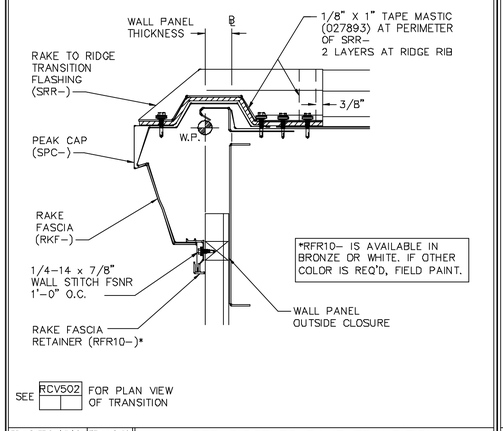
WALL TO ROOF TRANS. FLASHING
SSR ROOF (METAL FLASHING)



REV. DATE:11/10/17 | REV. NO. 02

RCV475

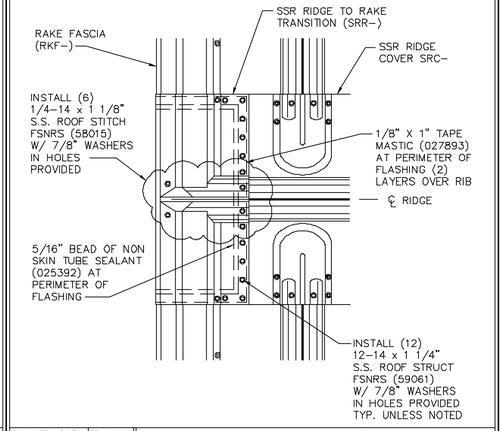
SSR STAGGERED PANEL ENDLAP
PLAN VIEW



REV. DATE:01/13/16 | REV. NO. 00

RCV501

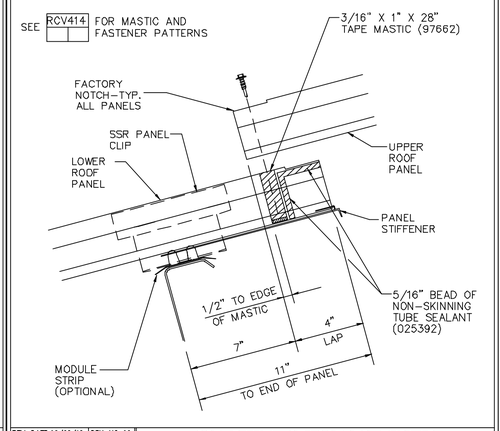
SSR RIDGE TO RAKE TRANSITION
ALL WALL PANELS



REV. DATE 01/13/16 | REV. NO. 00

RCV502

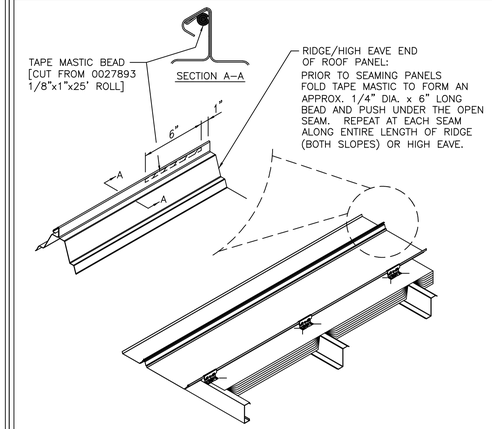
SSR RIDGE TO RAKE TRANSITION
PLAN VIEW



REV. DATE:02/28/18 | REV. NO. 02

RCV526

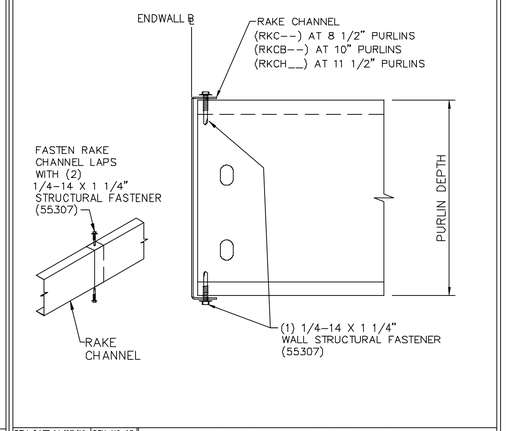
SSR PANEL STAGGERED ENDLAP
ON PURLINS



REV. DATE:05/01/18 | REV. NO. 00

RCV531

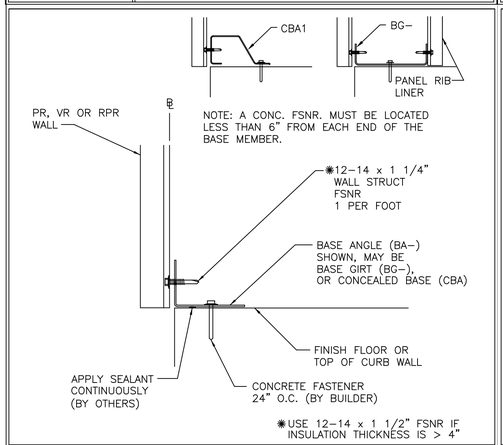
SSR SEAM MASTIC
@ RIDGE/HIGH EAVE/WALL TO ROOF TRANSITION



REV. DATE:04/27/16 | REV. NO. 03

RS10L5

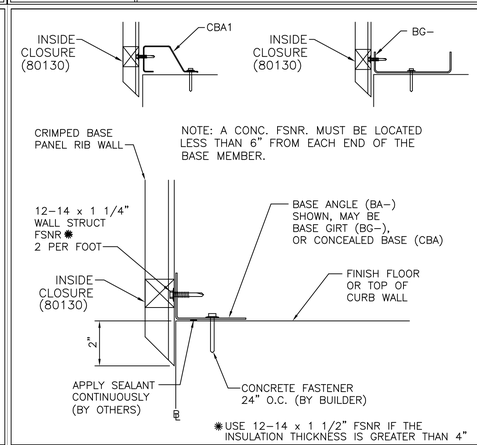
RAKE CHANNEL TO PURLIN
SSR, SLR II – PURLIN (METAL WALLS)



REV. DATE:05/09/18 | REV. NO. 04

WC01AD

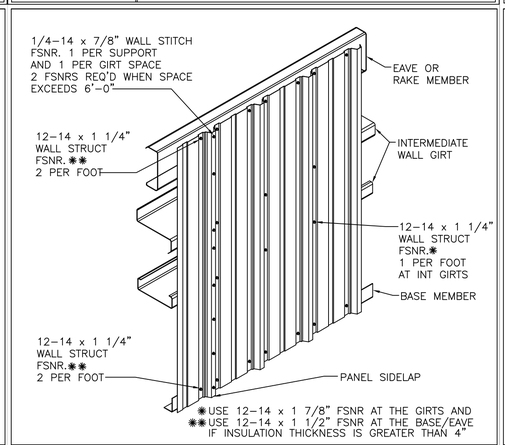
BASE OF WALL ATTACHMENT
PR, VR OR RPR AT PARTITION



REV. DATE: 05/17/18 | REV. NO. 04

WC01D9

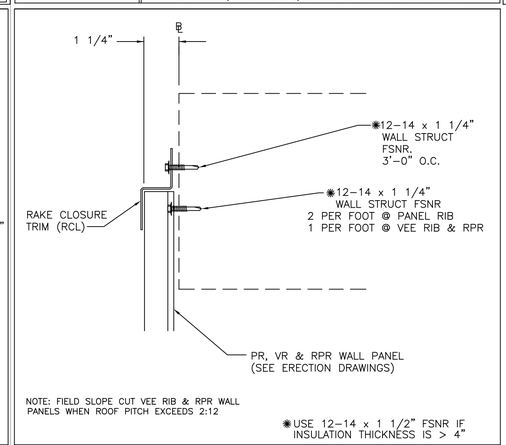
BASE OF WALL ATTACHMENT
CRIMPED BASE PANEL RIB WALL



REV. DATE: 05/09/18 | REV. NO. 03

WC04G1

PANEL RIB WALL
FASTENER PATTERNS



REV. DATE: 05/10/18 | REV. NO. 03

WC10A2

PR, VR & RPR ENDWALL AT RAKE
W/ BLANKET INSULATION OVER 2:12 PITCHES

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERRY
No. C30080
CIVIL
STATE OF CALIFORNIA

6/9/2025

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VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/3/2019 SEDSheet 10:42:17

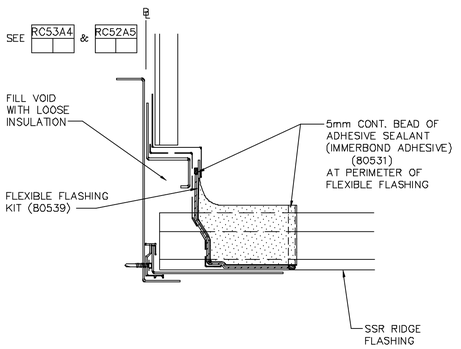
COVERING & TRIM SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-rtb1

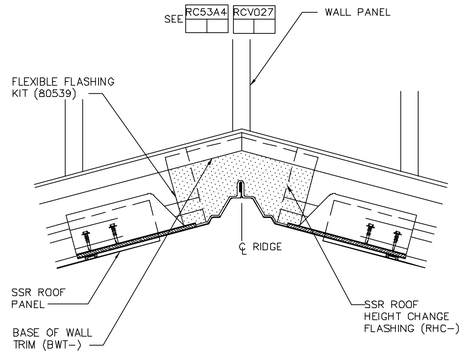
VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 1901303201
DATE: 6/9/2025
DRAWN/CHECK: KGH
PAGE: 47

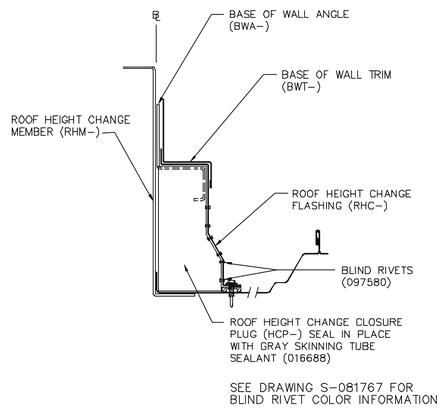
Software of VP Buildings, Inc. - BlueScope Buildings North America, Inc.



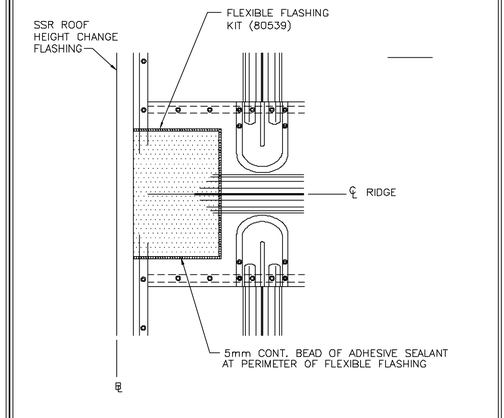
REV. DATE:08/14/15	REV. NO. 01	ROOF HEIGHT CHANGE FLASHING
RCV027		SSR ROOF AT PEAK (METAL FLASHING)



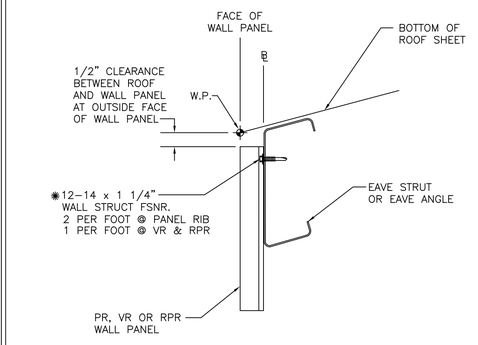
REV. DATE 08/14/15	REV. NO. 01	ROOF HEIGHT CHANGE FLASHING
RC52A5		SSR ROOF AT PEAK (METAL FLASHING)



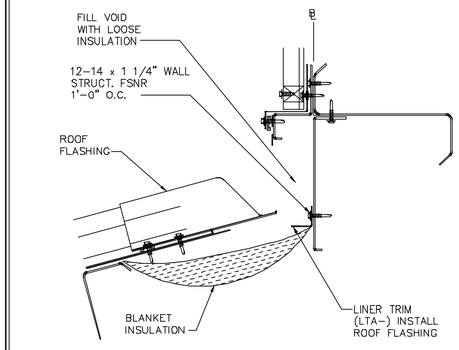
REV. DATE:10/07/13	REV. NO. 02	ROOF HEIGHT CHANGE END CAP
RC52A6		SSR ROOF AT EAVE (METAL FLASHING)



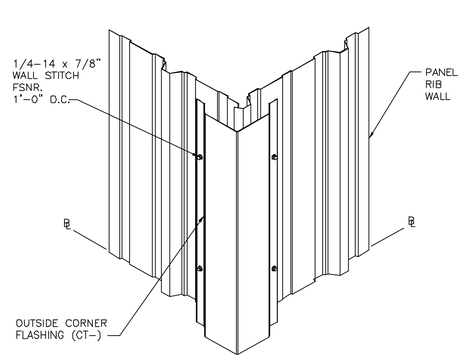
REV. DATE:07/01/09	REV. NO. 00	ROOF HEIGHT CHANGE FLASHING
RC53A4		SSR ROOF AT PEAK (FLEXIBLE OR METAL FLASHING)



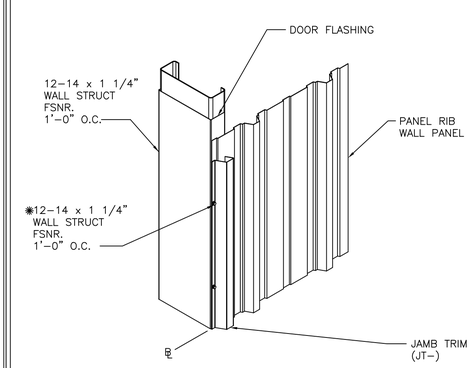
REV. DATE:05/10/18	REV. NO. 03	PR, VR & RPR WALL AT EAVE
WC11F1		STANDARD EAVE MEMBER



REV. DATE:04/29/16	REV. NO. 02	WALL CONN. BELOW WALL TO ROOF
WC14D1		OPEN WALL WITH SSR ROOF

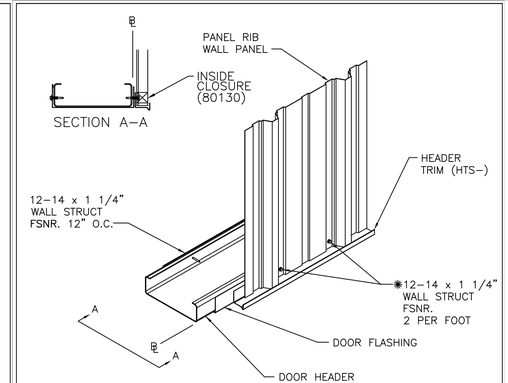


REV. DATE: 07/01/09	REV. NO 00	OUTSIDE CORNER TRIM
WC20A1		PANEL RIB WALL



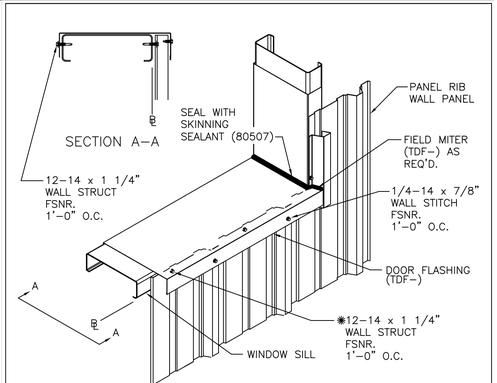
✱USE 12–14 x 1 1/2" FSNR IF INSULATION THICKNESS IS GREATER THAN 4"

REV. DATE: 05/21/18	REV. NO. 01	JAMB TRIM AT OVERHEAD DOOR
WC24A1		PANEL RIB WALL



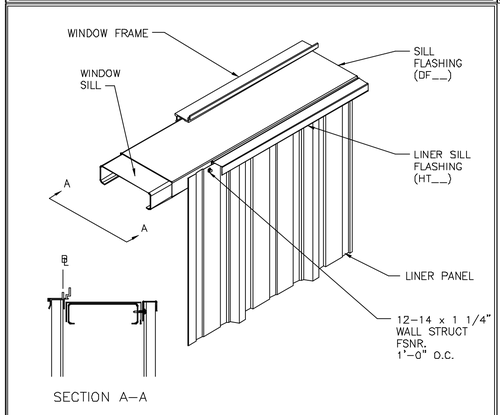
✱USE 12–14 x 1 1/2" FSNR IF INSULATION THICKNESS IS GREATER THAN 4"

REV. DATE: 05/21/18	REV. NO. 03	WALL TRIM AT DOOR HEAD
WC24A2		OVERHEAD DOOR OPENING

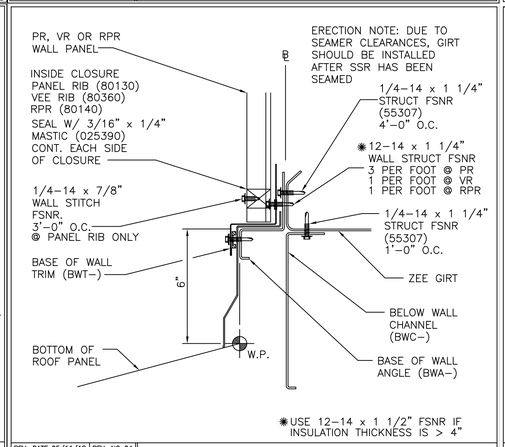


✱USE 12–14 x 1 1/2" FSNR IF INSULATION THICKNESS IS GREATER THAN 4"

REV. DATE: 05/21/18	REV. NO. 01	SILL TRIM
WC24A4		FRAMED OPENING (PANEL RIB)

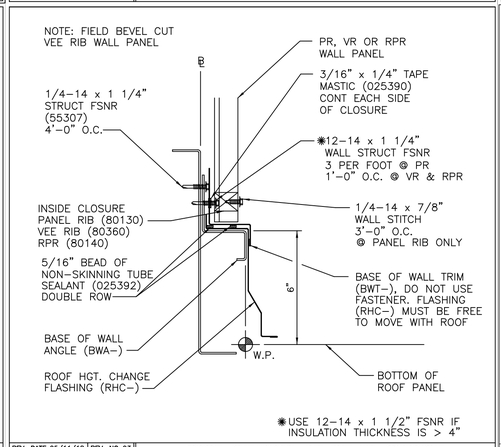


REV. DATE: 07/01/09	REV. NO. 00	LINER TRIM AT WINDOW SILL
WC31A3		WITH STANDARD WINDOWS



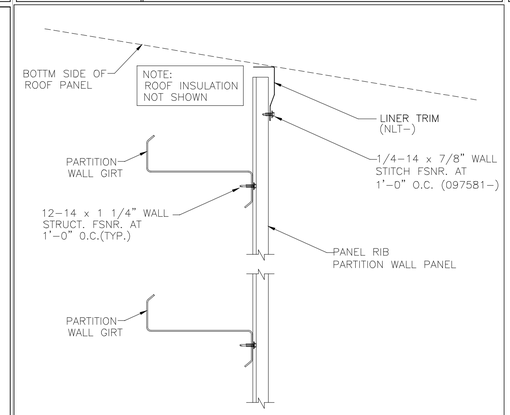
✱USE 12–14 x 1 1/2" FSNR IF INSULATION THICKNESS IS > 4"

REV. DATE: 05/11/18	REV. NO. 04	WALL BASE AT SSR WALL TO RF. METAL
WC50A1		PR, VR OR RPR WALL (NON–ICE DAMMING) FLASHING



✱USE 12–14 x 1 1/2" FSNR IF INSULATION THICKNESS IS > 4"

REV. DATE: 05/11/18	REV. NO. 03	BASE OF WALL AT RF HT CHANGE
WC52A1		PR, VR OR RPR WALL (NON–ICE DAMMING)METAL FLASHING



REV. DATE: 10/9/19	REV. NO. 00	PARTITION WALL PANEL ATTACHMENT
WC61AX		FULL HEIGHT AT PARTITION WALL

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERRY No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 SEDSheet 9:23:56

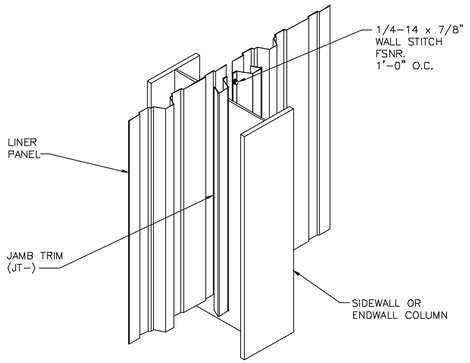
COVERING & TRIM SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-rtb1

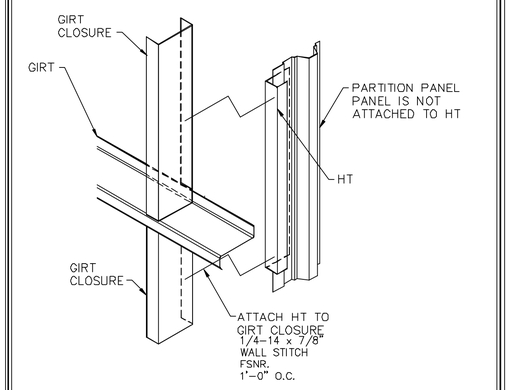
VP BUILDINGS VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 1901303201
DATE: 6/9/2025
DRAWN/CHECK: KGH
PAGE: 48

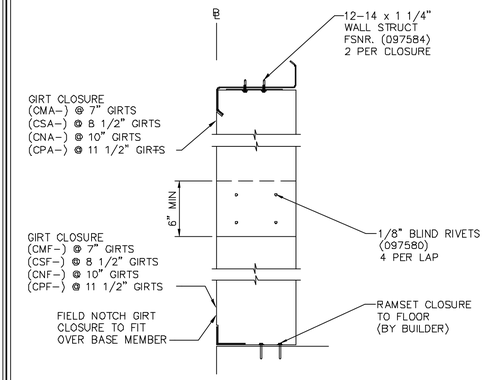
Confidential Property of BlueScope North America, Inc.



REV. DATE:07/01/09	REV. NO. 00	LINER PANEL ATTACHMENT TRIM AT COLUMN; INSET WALL
WC61A8		

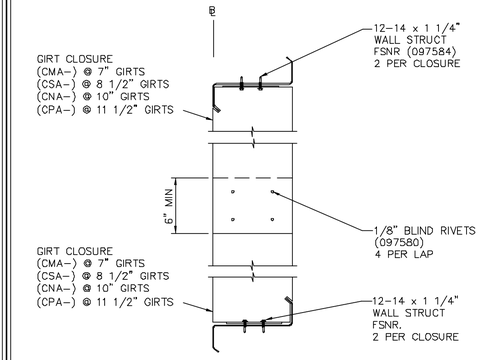


REV DATE 10/18/11	REV. NO. 00	PARTITION PANEL ATTACHMENT WALL GIRT CLOSURE
WC64C7		



SEE COMMON WAREHOUSE DRAWING FOR BLIND RIVET COLOR INFORMATION

REV. DATE:04/17/17	REV. NO. 02	GIRT CLOSURES BASE TO ZEE GIRT
WC80G1		



SEE COMMON WAREHOUSE DRAWING FOR BLIND RIVET COLOR INFORMATION

REV. DATE:04/17/17	REV. NO. 02	GIRT CLOSURES ZEE GIRT TO ZEE GIRT
WC80J2		

REGISTERED PROFESSIONAL ENGINEER
TIMOTHY T. BERRY
No. C62080
CIVIL
STATE OF CALIFORNIA
6/9/2025

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REV	DATE	BY	DESCRIPTION

NTS

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D

VP Buildings
3200 Players Club Circle Memphis TN 38125

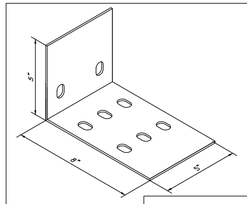
COVERING & TRIM SED'S

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design.tb1

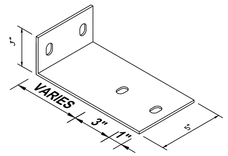
VP BUILDINGS
VARCO PRUDEN
A BlueScope Steel Company
VPC VERSION: 2019.2

JOBNO: 1901303201
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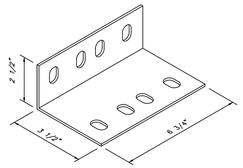
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ANTI-ROLL CLIP **ARC1**

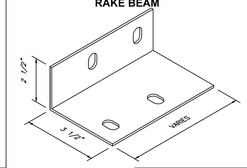


DOOR JAMB CLIP (OUTSET) **DJC1-**



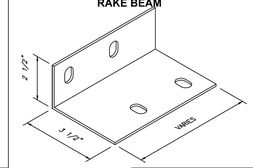
DOOR JAMB CLIP (INSET) **DJC2_**

7" JAMB CONN. TO INSET RAKE BEAM
11 1/2" JAMB CONN. TO INSET RAKE BEAM

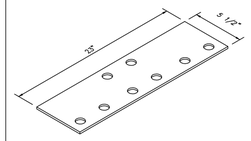


DOOR JAMB CLIP (INSET) **DJC4L_**

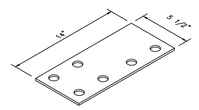
7" JAMB CONN. TO INSET RAKE BEAM
11 1/2" JAMB CONN. TO INSET RAKE BEAM



DOOR JAMB CLIP (INSET) **DJC4R_**

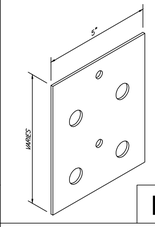


EAVE ATTACHMENT PLATE **EAP1**

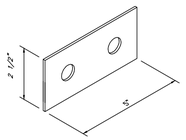


ENDFRAME EAVE ATTACHMENT PLATE **EAP2**

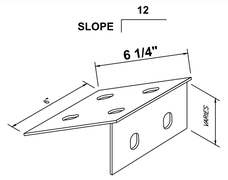
EAVE STRUT BRACE STRAP



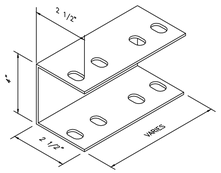
ESBS_



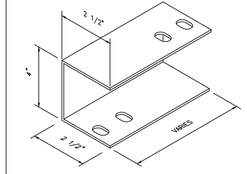
EAVE STRUT SHIM PLATE **ESH-**



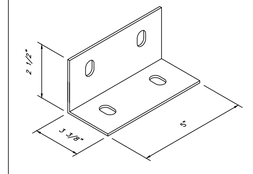
BOLTED FULL FRAME CLIP **FFC_**



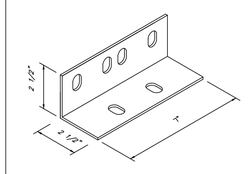
GIRT CLIP TO RAFTER **GC18_**



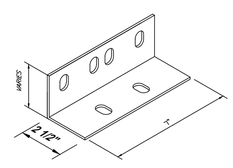
INSET GIRT CLIP TO RAFTER LEFT / RIGHT **GC19 L/R**



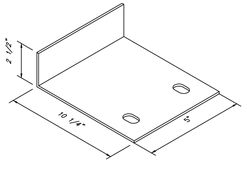
GIRT / JAMB CLIP **GC5**



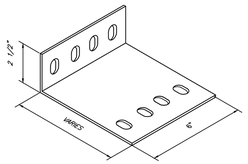
INSET GIRT TO GAGE COLUMN FLG. CLIP **GC53**



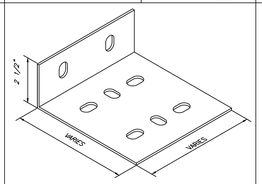
VARIABLE LEG CLIP 8.5 GIRTS **GC71_**



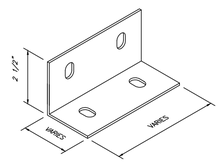
CORNER COLUMN TO RAKE CHANNEL CLIP **GC9**



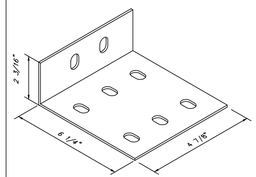
GIRT CLIP GAGE ENDWALL **GC91 A/B**



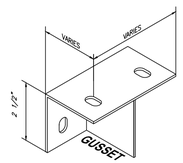
VARIABLE OUTSET GIRT CLIP **GCD**



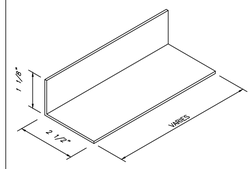
VARIABLE INSET GIRT CLIP **GCE**



GAGE POST GIRT CLIP **GCW1**

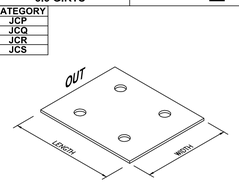


11.5 INSET GIRT CLIP **GCZZ**

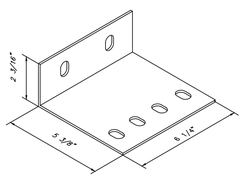


GIRT FILLER ANGLE **GFA**

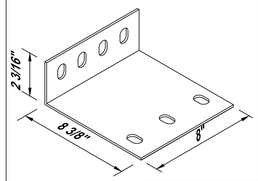
CATEGORY
JCF
JCQ
JCR
JCS



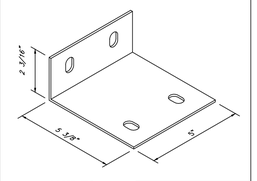
JAMB TO COLUMN MISC. PLATE **JC_**



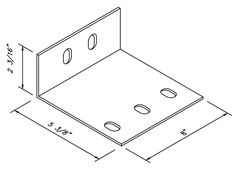
JAMB TO GIRT CLIP 8.5 - 8.5 **JTG1**



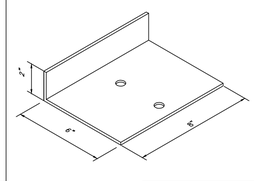
JAMB TO GIRT CLIP 11.5 -10 / 11.5 **JTG2**



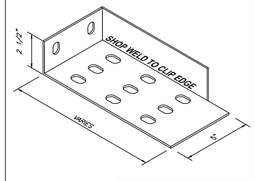
JAMB TO GIRT CLIP 7 - 7 **JTG3**



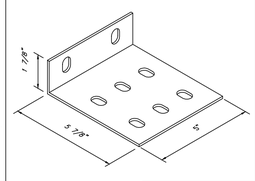
JAMB TO GIRT CLIP 10 - 10 **JTG4**



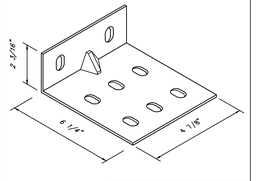
SIMPLE SAVER FB CLIP **KMA1**



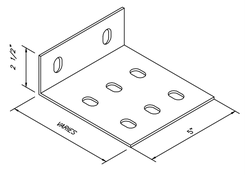
GUSSETED PURLIN GIRT CLIP **PC4/PC5**



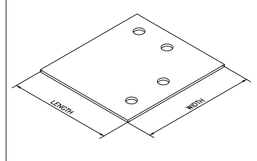
ANTI-ROLL PURLIN CLIP **PC27**



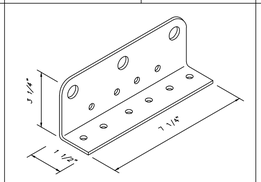
PURLIN / GIRT CLIP **PG1**



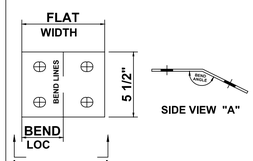
VARIABLE PURLIN GIRT CLIP **PGV_**



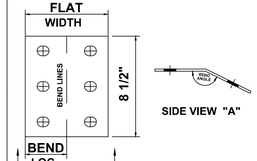
VARIABLE OUTSET GIRT CORNER CLIP **VCC_**



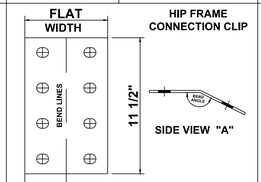
CLIP **WBBC2**



HIP FRAME CONNECTION CLIP **02H_**



HIP FRAME CONNECTION CLIP **06H_**



10H_



6/9/2025

BENT CLIPS

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NF	RJR			
FIRST RELEASE DATE	REVISION DATE	B	B-081765	04
01/28/13	07/21/16			

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VP Buildings, Inc.
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

9/27/2019 SEDSheet 15:27:53

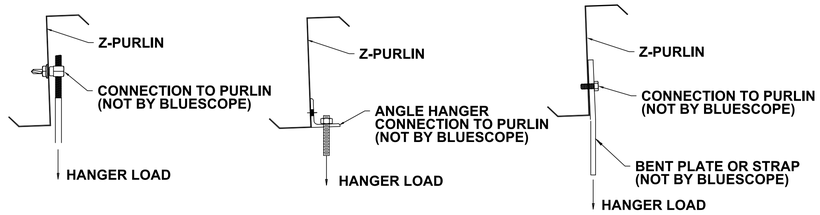
B-081765

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

VP BUILDINGS VARCO-PRUDEN
VPC VERSION: 2019.2

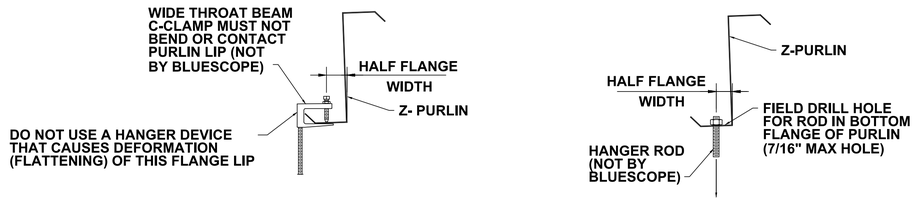
JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 50

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1



WEB HANGERS

FOR 1/2" DIAM. BOLT TO PURLIN CONNECTION-- MAX HANGER LOAD=1500lbs
PURLIN MUST BE SPECIFICALLY DESIGNED FOR LOADS GREATER THAN 500 LB. SEE NOTE #2.



VERIFY OVERALL PURLIN DESIGN CAN TAKE APPLIED LOADS. SEE NOTE #2

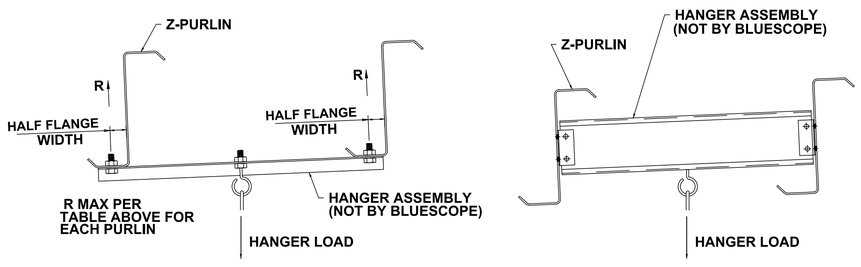
MAXIMUM LOAD SUSPENDED FROM BOTTOM FLANGE (LOCATED AT HALF-FLANGE WIDTH)			
THICKNESS	MAX LOAD	THICKNESS	MAX LOAD
0.060"	110lbs	0.088"	200lbs
0.068"	120lbs	0.098"	250lbs
0.073"	140lbs		
0.079"	180lbs	0.113"	250lbs

FOR LOADS LOCATED MORE THAN HALF FLANGE WIDTH
FROM WEB, USE HALF OF THE LOADS SHOWN ABOVE.

BOTTOM FLANGE CLAMP HANGER
(TOP FLANGE SIMILAR)

BOTTOM FLANGE ROD HANGER
(TOP FLANGE SIMILAR)

DO NOT USE ANY OF THE DETAILS ABOVE IF ROOF SLOPE IS GREATER THAN 4:12



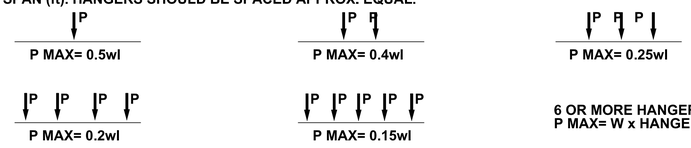
DOUBLE PURLIN HANGERS

VERIFY OVERALL PURLIN DESIGN CAN SUPPORT APPLIED LOADS.

GENERAL NOTES

1. CONCENTRATED LOADS GREATER THAN 500lbs ON ANY SINGLE PURLIN MUST BE EXPLICITLY LOCATED AND DESIGNED FOR DURING DESIGN OF BUILDING SYSTEM.

2. SPECIFIED COLLATERAL LOADS MAY BE CONVERTED TO SAFE CONCENTRATED LOADS AS FOLLOWS, WHERE P = MAX CONCENTRATED LOAD(lbs); W = UNIFORM COLLATERAL LOAD (PSF) x PURLIN SPACING (ft) = lbs/ft; L = PURLIN SPAN (ft). HANGERS SHOULD BE SPACED APPROX. EQUAL.



EXAMPLE: A PIPE IS SUSPENDED FROM A PURLIN AT 3 LOCATIONS EQUALLY SPACED
BAY SPACING = 24'-0" PURLIN SPACING = 5'-0"
SPECIFIED COLLATERAL LOAD = 5 PSF
W = 5 PSF x 5 FT = 25 PLF L = 24'-0"
PMAX = 0.25 x 25 PLF x 24'-0" = 150 LBS AT EACH LOCATION
THE PURLIN CAN SUPPORT 3 LOADS UP TO 150 LBS EACH. PICK A HANGER CONNECTION CAPABLE OF SUPPORTING ACTUAL APPLIED LOADS.

3. FOR LOADS GREATER THAN 250 lbs, PURLINS MUST BE "BLOCKED" AT LOCATION OF LOAD TO PREVENT PURLIN ROTATION.

4. EQUIPMENT LOADS SHOULD BE OBTAINED FROM CERTIFIED EQUIPMENT DRAWINGS AND MANUFACTURER'S DATA.

5. Z-PURLINS WILL DEFLECT UNDER SNOW AND WIND LOADS. ITEMS THAT MAY BE DAMAGED DUE TO DEFLECTIONS, (EX. GAS LINES), VERIFY THAT PIPES OR SUSPENDED EQUIPMENT ARE COMPATIBLE WITH EXPECTED DEFLECTION RANGES (±L/180).

6. THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) REQUIRES SPRINKLER HANGERS TO BE DESIGNED FOR A MINIMUM LOAD OF FIVE TIMES THE WEIGHT OF THE WATER-FILLED PIPE PLUS 250 POUNDS. THE HANGER ITSELF MUST BE ABLE TO SUPPORT THIS LOADING, IT IS NOT NECESSARY TO DESIGN THE SUPPORTING MEMBER FOR THIS LOAD IN COMBINATION WITH THE DESIGN LOADS.

7. SUSPENDED LOADS WILL NEED TO BE BRACED (TO THE PRIMARY FORCE RESISTING SYSTEM) FOR LATERAL STABILITY DUE TO EARTHQUAKES.

8. HANGER DESIGN IS NOT THE RESPONSIBILITY OF BLUESCOPE.

9. TOP FLANGE HANGERS SHOULD BE AVOIDED ON BUILDINGS WITHOUT INSULATION SPACER BLOCKS ON TOP OF THE TOP FLANGE. IF TOP FLANGE HANGERS ARE REQUIRED, PLACE THE HANGERS AT THE ROOF PANEL MAJOR CORRUGATION LOCATION TO AVOID DAMAGING THE ROOF PANEL WITH THE HANGER WHEN THE ROOF PANEL IS LOADED OR WALKED ON.

10. WHEN BEAM C-CLAMPS OR OTHER ROD HANGERS ARE USED ON THE TOP FLANGE, THE ROD SHOULD NOT EXTEND ABOVE THE TOP OF THE CLAMP TO AVOID DAMAGING THE ROOF PANEL WITH THE ROD WHEN THE ROOF PANEL IS LOADED OR WALKED ON.

11. DO NOT HANG ANY TYPE OF CRANE, HOIST, CONVEYOR OR ANY MOVING LOADS FROM THE Z-PURLINS.

12. DO NOT HANG ANY LOAD FROM BBNA SUPPLIED PURLIN BRACES OR BRIDGING.

13. DO NOT WELD ANY PART OF THE Z-PURLIN.

14. HOLES MUST NOT EXCEED 9/16" DIAMETER UNLESS AUTHORIZED BY BBNA ENGINEER. DRILL OR REAM HOLES WHEN REQUIRED- DO NOT FLAME CUT



6/9/2025

CONCENTRATED LOADS ON ROOF
Z-PURLIN HANGER DETAILS

DRAWN BY	CHECKED BY	GROUP NUMBER: 80 - 054 - 01		
REVERITT	RBENTON			
FIRST RELEASE DATE	REVISION DATE	B	B-081465	07
02/26/10	11/20/13			

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3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

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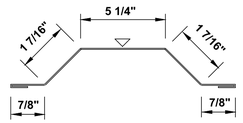
B-081465

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#

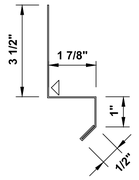
VP BUILDINGS VARCO-PRUDEN
VPC VERSION: 2019.2

JOBNO 1901303201
DATE 6/9/2025
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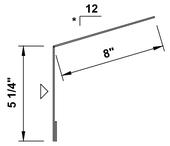
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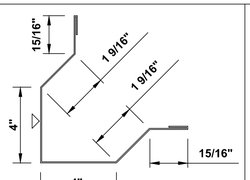
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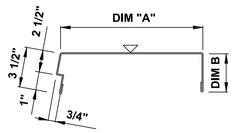
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CANOPY EAVE TRIM **CET_**



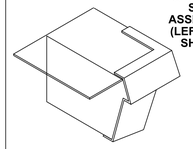
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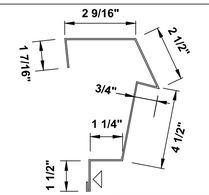
CAP TRIM FACADE (MANSARD) **CTF**



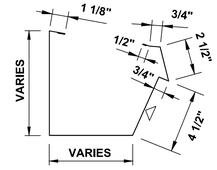
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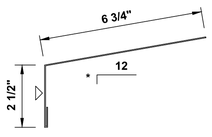
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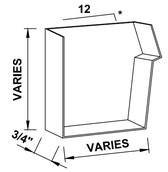
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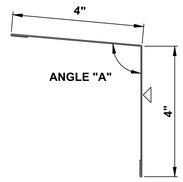
EAVE GUTTER **EG_**



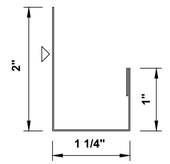
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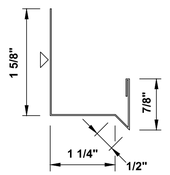
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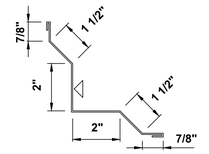
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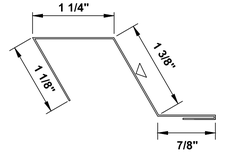
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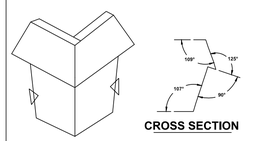
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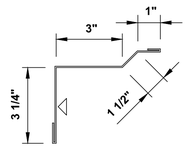
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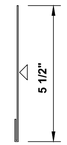
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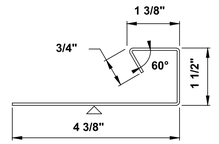
METAL CORNER CAP **MCC1**



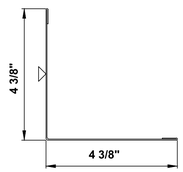
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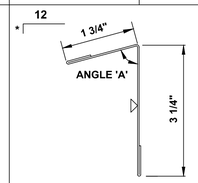
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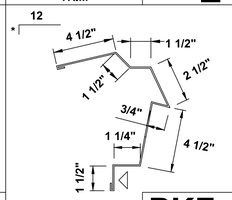
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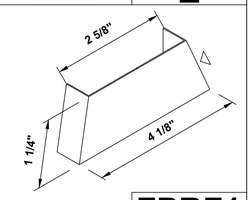
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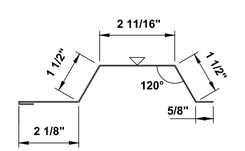
PANEL CLOSURE ANGLE **PCA**



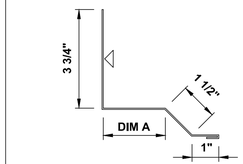
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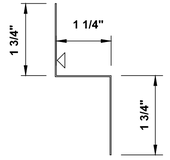
PANEL RIB FILLER **FPRF1**



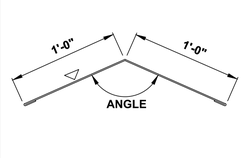
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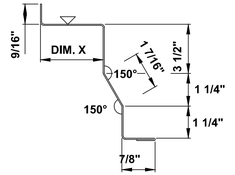
ROOF HEIGHT CHANGE FLASHING **RCF_**



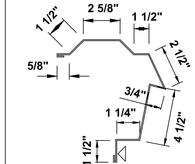
RAKE CLOSURE **RCL_**



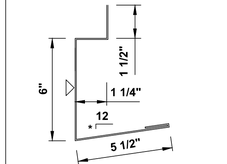
RIDGE ROLL **RGC**



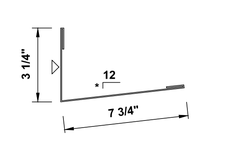
ROOF HEIGHT CHANGE TRIM **RHC**



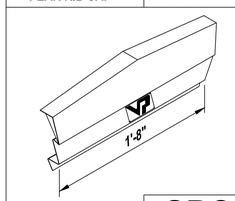
RAKE FASCIA **RKF_**



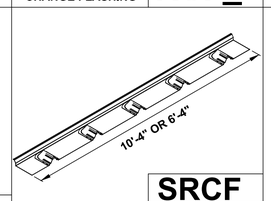
SOFFIT EAVE FLASH **SEF_**



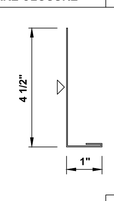
SOFFIT EAVE TRIM **SET_**



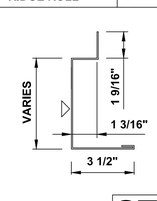
SHEET METAL PEAK CAP **SPC**



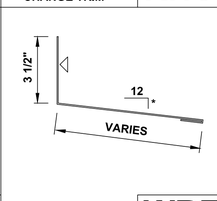
SSR RIDGE COVER **SRCF** **SRCM**



SOFFIT TRIM **ST_**



SOFFIT TRIM (ROOF EXT.) **STC_**



WALL TO ROOF FLASHING **WRF_**

TRIM COLOR NOTE

△ **DESIGNATES COLOR SIDE**

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGEN No. C62080 CIVIL STATE OF CALIFORNIA

6/9/2025

STANDARD TRIMS

DRAWN BY	CHECKED BY	GROUP NUMBER:	-	-
NF	RJR			
FIRST RELEASE DATE	REVISION DATE	B	S-081766	02
03/05/13	12/05/18			

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VP Buildings, Inc.
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

9/27/2019 SEDSheet 15:27:55

S-081766

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
VPC VERSION: 2019.2

VP BUILDINGS VARCO-PRUDEN

JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 52

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

ROOF/WALL STRUCTURAL FASTENER

(T-2) #12-14 x 1 1/4", 5/16" HEX HD, SS CAP W/WASHER

MARK NUMBER	COLOR
097584___	SEE COLOR SUFFIX CHART BELOW

ROOF/WALL STRUCTURAL FASTENER

(T-2) #12-14 x 1 1/2", 5/16" HEX HD, SS CAP W/WASHER

MARK NUMBER	COLOR
097585___	SEE COLOR SUFFIX CHART BELOW

WALL STRUCTURAL FASTENER

(T-2) #17/#12-14 x 1 7/8", STAND OFF 5/16" HEX HD, SS CAP W/WASHER

MARK NUMBER	COLOR
097597___	SEE COLOR SUFFIX CHART BELOW

ROOF/WALL STITCH FASTENER

(T-1) 1/4-14 x 7/8", 5/16" HEX HD, SS CAP W/WASHER

MARK NUMBER	COLOR
097581___	SEE COLOR SUFFIX CHART BELOW

COLOR SUFFIX CHART

SUFFIX	COLOR
100	COOL ARCTIC WHITE
101	COOL EGYPTIAN WHITE
102	COOL COTTON WHITE
103	COOL COLONIAL RED
104	COOL STRAW GOLD
105	COOL DARK BRONZE
106	COOL WEATHERED COPPER
107	COOL BERMUDA GREEN
108	COOL HEMLOCK GREEN
109	COOL LEAF GREEN
110	COOL EBONY
111	COOL IMPERIAL BLUE
112	COOL GRANITE GRAY
113	COOL SIERRA TAN
115	COOL COLBALT BLUE
116	COOL ZINC GRAY
117	COOL COPPER PENNY
118	COOL METALLIC SILVER
119	COOL JADE GREEN
120	COOL BRIGHT RED
121	COOL PARCHMENT
122	COOL OLD TOWN GRAY
UNPNTD	UN PAINTED
SPR	SPECIAL REQUEST

MISC. STRUCTURAL FASTENERS

MARK NUMBER	
55307	(T-3) 1/4-14 x 1 1/4", 5/16" HEX HD
55309	(T-3) 1/4-14 x 2", 5/16" HEX HD
55310	(T-3) 1/4-14 x 3", 3/8" HEX HD
55311	(T-3) 1/4-14 x 4", 3/8" HEX HD
56104	(T-5) #12-24 x 1 1/2", 5/16" HEX HD
59227	(T-5) 1/4-28 x 3", 5/16" HEX HD
59228	(T-5) 1/4-28 x 4", 5/16" HEX HD
55308	(T-AB) #17-14 x 1", 5/16" HEX HD, SS CAP W/WASHER (BAG of 50)
58015	(T-1) 1/4-14 x 1 1/8", 5/16" HEX HD, SS CAP W/ 7/8" WASHER

RIVETS

BULB TITE STRUCTURAL BLIND RIVET

MARK NUMBER	DESCRIPTION	COLOR
55160	VP200 RIVET (RV6604-6-8W OLYMPIC BULB TITE)	ALUMINUM
55181	VP205 RIVET (RV6604-6-4W OLYMPIC BULB TITE)	COOL ARCTIC WHITE
55185	VP205 RIVET (RV6604-6-4W OLYMPIC BULB TITE)	COOL DARK BRONZE

SEALANT

MARK NUMBER	DESCRIPTION
016688	GRAY SKINNING
025392	GRAY NON-SKINNING
80507	BRONZE SKINNING
80531	FLEXIBLE FLASHING SILICONE ADHESIVE (GRAY)

TAPE MASTIC

MARK NUMBER	DESCRIPTION
97663	3/16" X 1 1/2" X 40' ROLL
97662	3/16" X 1" X 28" BOX OF 100 200 LINEAL FEET OF COVERAGE PER BOX
80347	1/8" X 1" X 9" (50) AND 3" (150) BOX 100 LINEAR FEET OF COVERAGE PER BOX
027893	1/8" X 1" X 25' ROLL
025390	3/16" X 1/4" X 40' ROLL

PANEL CLOSURES

MARK NUMBER	DESCRIPTION
80130	PANEL RIB 3' INSIDE CLOSURE
80140	PANEL RIB 3' OUTSIDE CLOSURE
80360	VEE RIB 3' INSIDE CLOSURE
80362	VEE RIB 3' OUTSIDE CLOSURE
80140	RPR 3' INSIDE PANEL CLOSURE
80130	RPR 3' OUTSIDE PANEL CLOSURE
80135	SSR FOAM INSIDE CLOSURE
80136	SSR HARD RUBBER INSIDE CLOSURE

POP RIVETS

POP RIVET 1/8 x 3/8"

MARK NUMBER	COLOR
097580___	SEE COLOR SUFFIX CHART BELOW

REGISTERED PROFESSIONAL ENGINEER TIMOTHY T. BERGER No. C52080 CIVIL STATE OF CALIFORNIA

6/9/2025

VP COMMON WAREHOUSE PARTS

DRAWN BY	CHECKED BY	GROUP NUMBER:		
BJW	RJR			
FIRST RELEASE DATE	REVISION DATE	B	S-081767	07
01/22/13	05/16/18			

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VP Buildings, Inc.
3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

9/27/2019 SEDSheet 15:27:56

S-081767

BUILDER Seegert Construction
CUSTOMER
LOCATION Sonoma, California
PROJECT Macarthur Street Properties Phase 1
BUILDERS PO#
VPC VERSION: 2019.2

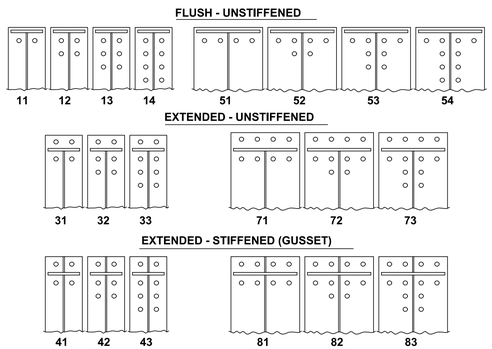
VP BUILDINGS VARCO-PRUDEN

JOBNO 1901303201
DATE 6/9/2025
DRAWN/CHECK KGH
PAGE 53

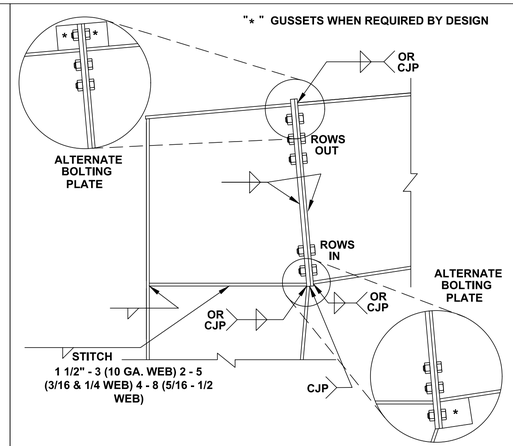
FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

REFERENCE NOTES:

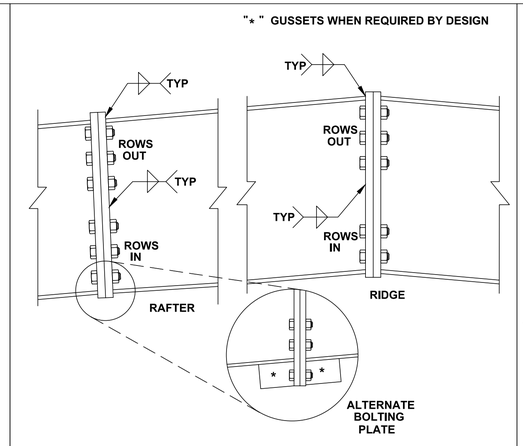
1. ALL BOLTED AND WELDED JOINTS ARE DESIGNED FOR FORCES FROM CODES AND LOADS SPECIFIED BY CONTRACT AS SHOWN ON CODES AND LOADS PAGE OF THESE DRAWINGS (PAGE 2).
2. CONNECTION DETAILS SHOWN ARE REPRESENTATIVE OF TYPICAL CONNECTIONS. FOR CONNECTION SPECIFIC INFORMATION SEE FRAME CROSS SECTIONS FOR PLATE THICKNESS, AND NUMBER AND SIZE OF BOLTS.
3. SEE DETAIL 1 FOR MOMENT CONNECTION BOLT CONFIGURATIONS. NUMBERS INDICATE CONFIGURATION ID NUMBER. SEE "BOLTED END-PLATE CONNECTIONS" TABLE IN THE DESIGN CALCULATIONS FOR MEMBER SPECIFIC PLATE ID NUMBERS CALLED FOR BY DESIGN FOR EACH CONNECTION.
4. ALL WELDING IS DONE WITH E70 LOW-HYDROGEN ELECTRODES IN ACCORDANCE WITH AWS A5-FILLER METAL SPECIFICATIONS AND CSA STANDARD W48-FILLER METALS AND ALLIED MATERIALS FOR METAL ARC WELDING. WELD PROCESSES USED IN BBNA SHOPS ARE GMAW HAND WELD AND SAW MACHINE WELDING. ALL SHOP WELDING IS DONE BY AWS OR CWB CERTIFIED WELDERS.
5. FILLER METALS MEET OR EXCEED REQUIREMENTS OF AISC-341 - SEISMIC PROVISIONS FOR DEMAND CRITICAL WELDS. MINIMUM CVN OF 20 FT-LBS @ 0 DEG F AND 40 FT-LBS @ +20 DEG F.
6. 3-PLATE FLANGES, WEBS, AND HSS SECTIONS MAY BE RANDOMLY SHOP SPLICED WITH CJP WELDS TO MAKE UP A FULL LENGTH SHIPPABLE MEMBER.



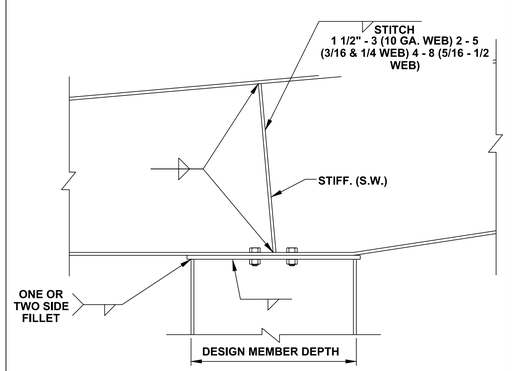
DETAIL 1 — **MOMENT CONNECTION CONFIGURATIONS**



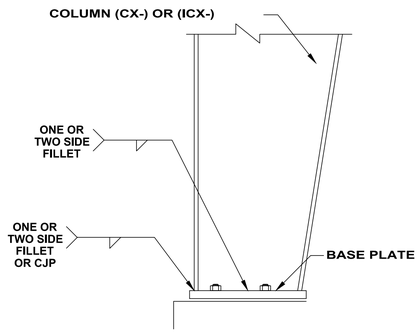
DETAIL 2 — **HAUNCH CONNECTION**
FACE BOLTED SHOWN - TOP BOLTED SIMILAR



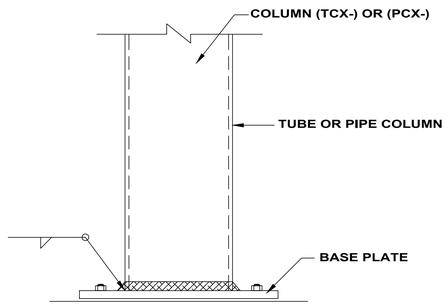
DETAIL 3 — **BOLTED RAFTER SPLICE CONNECTIONS**
WELD STD.



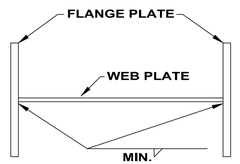
DETAIL 4 — **FRAME CONNECTION AT INTERIOR COLUMN**
WELD STD.



DETAIL 5 — **TYPICAL BASE PLATE CONNECTION**
BASE PLATE TO COLUMN WELD STD.



DETAIL 6 — **TYPICAL BASE PLATE CONNECTION**
BASE PLATE TO COLUMN WELD STD.



GENERAL NOTES:

THE FILLET WELD SHALL BE CONTINUOUSLY SUBMERGED ARC WELDED ONE SIDE OF THE WEB TO BOTH FLANGES AS ILLUSTRATED. THE MINIMUM FILLET WELD SIZE SHALL BE TAKEN FROM TABLE BELOW.

MINIMUM FILLET WELD SIZES (USA, CANADA & MEXICO) (AWSD1.1-TABLE 5.8)

	FLANGE THICKNESS											
WEB THICKNESS	3/16" OR LESS	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	1"	1 1/8"	1 1/4"	OVER 1 1/4"
10 GA	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
8 GA	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"
3/16"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	3/16"	3/16"	3/16"
1/4"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	3/16"	3/16"	3/16"	3/16"
5/16"	1/8"	1/8"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"
3/8"	1/8"	1/8"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"
1/2"	1/8"	1/8"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"
5/8"	1/8"	1/8"	3/16"	3/16"	3/16"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
≥ 3/4"	1/8"	1/8"	3/16"	3/16"	3/16"	1/4"	1/4"	5/16"	5/16"	5/16"	5/16"

DETAIL 7 — **TYPICAL NOTES**
TYPICAL SECTION THRU BUILT-UP MEMBERS



6/9/2025

PRIMARY FRAME CONNECTIONS
BOLTED AND WELDED

DRAWN BY	CHECKED BY	GROUP NUMBER:		
RT	BB			
FIRST RELEASE DATE	REVISION DATE	B	MRD50	04
07/01/09	08/08/17			

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3200 Players Club Circle Memphis TN 38125

REV	DATE	BY	DESCRIPTION

NTS

10/17/2019 SEDSheet 9:26:59

MRD50 Detail

BUILDER: Seegert Construction
CUSTOMER:
LOCATION: Sonoma, California
PROJECT: Macarthur Street Properties Phase 1
BUILDERS PO#:

VP BUILDINGS VARCO-PRUDEN
VPC VERSION: 2019.2

JOBNO: T901303201
DATE: 6/9/2025
DRAWN/CHECK: KGH
PAGE: 54

FILENAME: Macarthur Street Properties Phase 1 Preliminary Design-ttb1

STRUCTURAL CALCULATIONS

New Warehouse Building
Mac Arthur Street
Sonoma, CA

RGA Job Number: 24-459

November 17, 2025

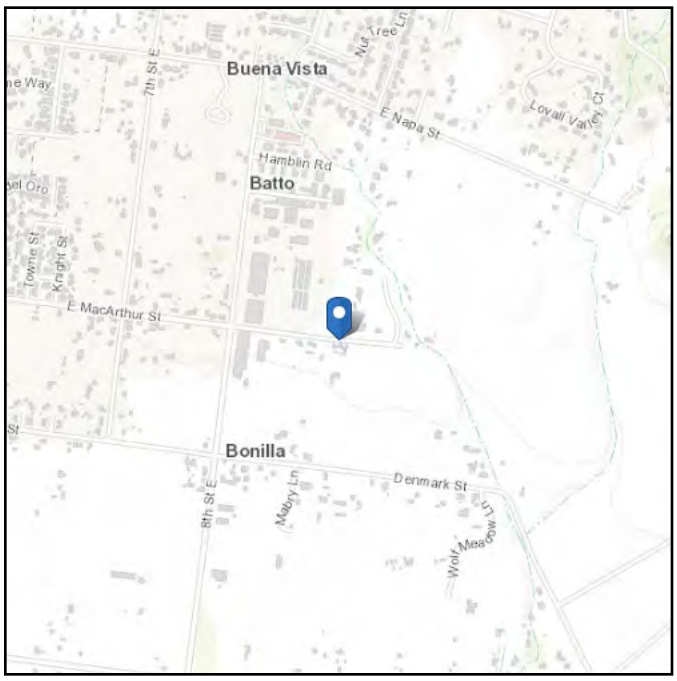


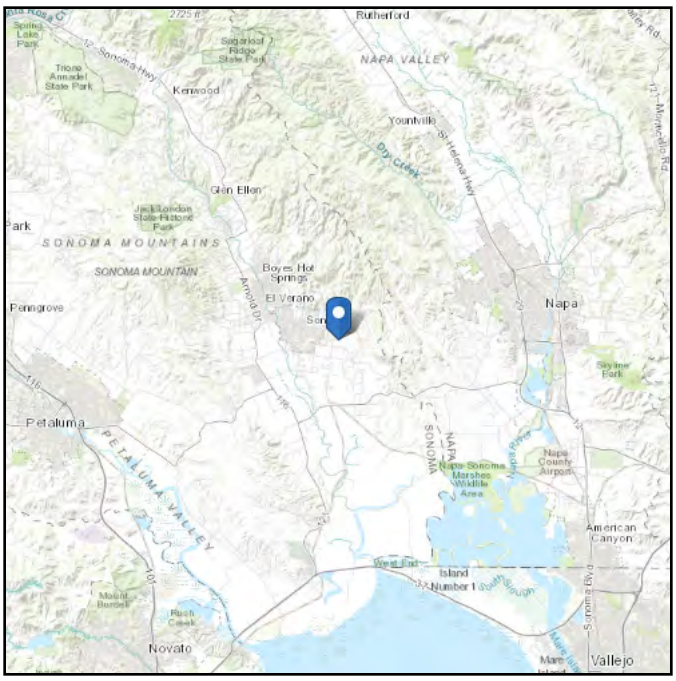
115 Meyers Street Suite 110 Chico, California 95928 r·g·a t 530.342.0302 f 530.342.1882 www.rgachico.com

ASCE Hazards Report

Address:
1301 E MacArthur St
Sonoma, California
95476

Standard:	ASCE/SEI 7-16	**Latitude:**	38.282179
Risk Category:	II	**Longitude:**	-122.433054
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	87.11709403774692 ft (NAVD 88)





Wind

Results:

Wind Speed	92 Vmph
10-year MRI	64 Vmph
25-year MRI	70 Vmph
50-year MRI	75 Vmph
100-year MRI	79 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Mon Nov 10 2025

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is not in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2.

Seismic

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_S :	1.597	S_{D1} :	N/A
S_1 :	0.6	T_L :	8
F_a :	1.2	PGA :	0.671
F_v :	N/A	PGA_M :	0.805
S_{MS} :	1.917	F_{PGA} :	1.2
S_{M1} :	N/A	I_e :	1
S_{DS} :	1.278	C_v :	1.419

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Mon Nov 10 2025

Date Source: USGS Seismic Design Maps

The ASCE Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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DESIGN LIVE AND DEAD LOADS

ROOF DEAD LOAD :

Pre-Engineered Metal Building	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
SUB-TOTAL	=		PSF
SLOPE CORRECTION "X:12"	0.25	1.00	
MISCELLANEOUS	=	2.0	PSF
CEILING DEAD LOAD :	=	3	PSF
ROOF SNOW LOAD :	=	0.0	PSF
CEILING LIVE LOAD :	=	10.0	PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF

TYPICAL FLOOR LOADS:

	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
			PSF
	=		PSF
TOTAL FLOOR DEAD LOAD :	=	0.0	PSF
FLOOR LIVE LOAD :	=		

EXTERIOR WALL LOADS:

Pre-Engineered Metal Building	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
	=		PSF
TOTAL EXTERIOR WALL :	=	0.0	PSF

SOILS DATA:

SOILS REPORT :	N/A
GEOTECHNICAL ENGINEER :	Assumed Code Minimums
DATE OF REPORT :	

BASIC BEARING PRESSURE

PADS & CONT. FNDT. = Qa	=	1,500	PSF
INCREASE FOR WIDTH	=	0.0	%
INCREASE FOR DEPTH	=	0.0	%
MAX. SOIL PRESSURE - Qa	=	1,500	PSF
ISOLATED FOUNDATIONS	=	1,500	PSF
ALLOW PASSIVE PRESSURE	=	250.0	PCF
ALLOW SOIL FRICTION	=	0.30	
EQUIV. FLUID PRESSURE	=	65.0	PCF

SNOW LOAD DESIGN CRITERIA:

ELEVATION =	78.0 FT	
GROUND SNOW LOAD (Pg) =	0.0 PSF	
EXPOSURE: FULL	Ce =	0.90
THERMAL: WARM ROOF	Ct =	1.00
FLAT ROOF SNOW LOAD (Pf) =	0.0 PSF	
ROUGHNESS: Obstructed or Non-Slippery	Cs =	1.00
SLOPED ROOF SNOW LOAD (Ps) =	0.0 PSF	

SEISMIC LATERAL DESIGN FORCES

SEISMIC LOADS:

RISK CATEGORY	=	2		
IMPORTANCE FACTOR	=	**1.00**		
BASIC LOAD COMBO FOR ALLOW STRESS DESIGN				
(12.4) $E = \rho Q_E + E_v$	=	**$1.0 E_h$**		
D + E/1.4	=	**V/1.4**		
SITE DATA				
BASIC LATERAL SYSTEM	=	All other Buildings		
MAX. OVERALL HEIGHT (h_n)	=	**41.0**	FT.	
$T = Ct (h_n)^x$	=	**0.324**		
T_L (Figure 22-14)	=	**16**	sec.	
MAPPED RESPONSE$_{SHORT}$ (usgs)	=	**159.7**	%g	**Ss**
MAPPED RESPONSE$_{1SEC}$ (usgs)	=	**60.0**	%g	**S1**
SITE CLASS (Table 20.3-1)	=	D		
*SITE COEFFICIENT $_{SHORT}$ - **Fa***	=	**1.20**		
*SITE COEFFICIENT $_{1SEC}$ - **Fv***		**1.50**		
% DAMPED S.R.A.$_{SHORT}$ - **SM_S**	=	**Fa x Ss**	=	**1.913**
% DAMPED S.R.A.$_{1SEC}$ - **SM_1**	=	**Fv x S1**	=	**0.900**
DESIGN S.R.A.$_{SHORT}$ - **SD_S**	=	**2/3 S_S**	=	**1.275**
DESIGN S.R.A.$_{1SEC}$ - **SD_1**	=	**2/3 S_1**	=	**0.600**

STRUCTURAL SYSTEMS TABLE 12.2-1

		N/S	E/W
Structural System #1			
Lateral Force Resisting Sys (R)	=	Ord. Moment Frame	Ord. Moment Frame
		R = 3.50	**R = 3.50**

		N/S	Governs	E/W	Governs
Structural System #1					
$V = [(S_{DS}) / (R / I)] W$	=	**0.364**	E	**0.364**	E
(But Not Less Than)					
$V = 0.044 S_{DS} I$ or $[0.5 S_1/(R/I)]W$		**0.086**	E	**0.086**	E
(But Need Not Exceed)					
$V = SD1 / T (R / I)] W$	=	**0.529**	E	**0.529**	E

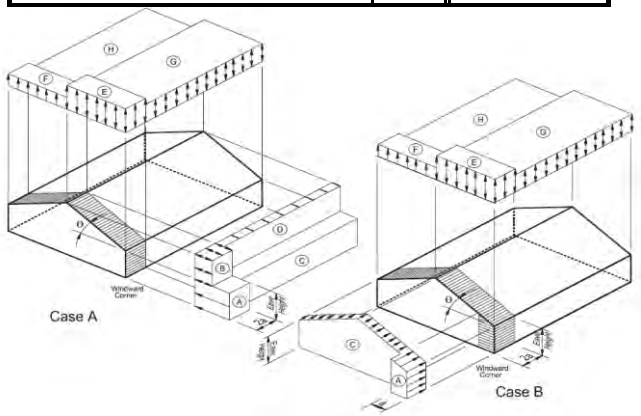
SIMPLIFIED DESIGN WIND LOADS

$$P_S = \lambda * K_{ZT} * P_{S30}$$

DESIGN WIND VELOCITY	=	95
EXPOSURE CATEGORY	=	C
ROOF ANGLE	=	0.3 DEG
MEAN ROOF HEIGHT	=	15.0 FT
K_{ZT}	=	**1.00**
λ adjustment factor	=	***1.21***

MWFRS (ASCE FIGURE (28.5-1)

		UN-FACTORED
HORIZONTAL PRESSURES	A	17.3 PSF
	B	9.0 PSF
	C	16.0 PSF
	D	8.0 PSF
VERTICAL PRESSURES	*E*	20.8 PSF
	F	11.9 PSF
	G	14.5 PSF
	H	9.2 PSF
OVERHANGS	E_{OH}	29.2 PSF
	G_{OH}	22.7 PSF



Spread Footing
Thrust Calc Summary

Footing	Width	Length	Thickness	Number	Volume
1-G	6	4	3	2	72
1-F	3	3	3	1	27
1-E	3	3	3	1	27
1-D	7	4	3.5	3	98
1-C	3	3	3	1	27
1-B	3	3	3	1	27
1-A	6	4	3	2	72
2-G	7	4	3.5	3	98
2-D	7	7	3	4	147
2-A	7	4	3.5	3	98
2-A (B)	4	7	3.5	3	98
3-G	7	4	3.5	3	98
3-G (B)	4	7	3.5	3	98
3-D	7	7	3	4	147
3-A	7	4	3.5	3	98
3-A (B)	4	7	3.5	3	98
4-G	7	4	3.5	3	98
4-G (B)	4	7	3.5	3	98
4-D	7	7	3	4	147
4-A	4	7	3.5	3	98
5-G	7	4	3.5	3	98
5-G (B)	4	7	3.5	3	98
5-D	7	7	3	4	147
5-A	7	4	3.5	3	98
5-A (B)	4	7	3.5	3	98
6-G	7	4	3.5	3	98
6-G (B)	4	7	3.5	3	98
6-D	7	7	3	4	147
6-A	7	4	3.5	3	98
6-A (B)	4	7	3.5	3	98
7-G	6	4	3	2	72
7-F	3	3	3	1	27
7-E	3	3	3	1	27
7-D	7	4	3.5	3	98
7-C	3	3	3	1	27
7-B	3	3	3	1	27
7-A	6	4	3	2	72

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

1-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	10.900	2.770	0.000
D+C+0.6W	6.034	3.808	0.000
D+C+0.75L+.45W	10.191	4.344	0.000
D+C+0.75L+0.525E	11.039	4.309	0.000
D+C+0.7E	7.208	3.771	0.000
0.6D-0.6W	-9.318	6.522	0.000
0.6D-0.7E	-0.207	2.161	0.000

Footing Info

Width =	6.00 ft	
Length =	4.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	1
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Both Directions

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Results

DOWNLOAD	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing** (not increased by 1/3)		
	11.04	4.31		16.20 k	27.24 k	Area Req.=	7.32	ft^2
Passive Resistance =		9.45				Area Prov.=	24.00	ft^2
Friction Resistance =		9.53					O.K.	
Safety Factor								
F.S. =	n/a	O.K.						

UPLIFT	**Axial**	**Thrust**	**Shear**	**Downward**	**Net Uplift**	**Concrete**		
	-9.32	6.52	0.00 k	16.20 k	0.40 k	Volume Req.=	79.53	ft^2
Passive Resistance =		9.45	9.59		6.88 k	Volume Prov.=	84.00	ft^2
Friction Resistance =		0.14	9.59				O.K.	
Safety Factor				**Safety Factor**				
F.S. =	n/a	O.K.		F.S. =	1.04 O.K.			

THRUST H	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing**		
(Ftg. Width)	-9.32	6.52		16.20 k	6.88 k	Area Req.=	-2.15	ft^2
Passive Resistance =		9.45	11.86			Area Prov.=	24.00	ft^2
Friction Resistance =		2.41	11.86				O.K.	
Safety Factor								
F.S. =	n/a	O.K.						

THRUST L	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing**		
(Ftg. Length)	10.90	0.00		16.20 k	27.10 k	Area Req.=	7.25	ft^2
Passive Resistance =		6.30	15.79			Area Prov.=	24.00	ft^2
Friction Resistance =		9.49	15.79				O.K.	
Safety Factor								
F.S. =	n/a	O.K.						

			1		
Width: As T&B, min =	2.33 in^2	# 5 BAR	@ 10" o.c.	=3.72 in^2	O.K.
Length: As T&B, min =	1.56 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

1-F
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.490	0.000	0.000
D+C+0.6W	0.490	0.000	5.286
D+C+0.75L+.45W	0.490	0.000	3.965
D+C+0.75L+0.525E	0.553	0.000	0.110
D+C+0.7E	0.578	0.000	0.147
0.6D-0.6W	0.294	0.000	4.758
0.6D-0.7E	0.206	0.000	0.147

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Results

DOWNLOAD	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing** (not increased by 1/3)		
	0.58	0.15		12.49 k	13.07 k	Area Req.=	0.96	ft^2
Passive Resistance =		4.73				Area Prov.=	9.00	ft^2
Friction Resistance =		4.57					O.K.	
Safety Factor								
F.S. =		63.25	O.K.					

UPLIFT	**Axial**	**Thrust**	**Shear**	**Downward**	**Net Uplift**	**Concrete**		
	0.21	0.15	0.00 k	12.49 k	7.70 k	Volume Req.=	-54.04	ft^2
Passive Resistance =		4.73	7.42		12.69 k	Volume Prov.=	31.50	ft^2
Friction Resistance =		2.69	7.42				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		50.47	O.K.	F.S. =	36.34 O.K.			

THRUST H	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing**		
(Ftg. Width)	0.49	0.00		12.49 k	12.98 k	Area Req.=	0.69	ft^2
Passive Resistance =		4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =		4.54	9.27				O.K.	
Safety Factor								
F.S. =		N.A.	O.K.					

THRUST L	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing**		
(Ftg. Length)	0.49	5.29		12.49 k	12.98 k	Area Req.=	0.92	ft^2
Passive Resistance =		4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =		4.54	9.27				O.K.	
Safety Factor								
F.S. =		1.75	O.K.					

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

1-E
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.550	0.000	0.000
D+C+0.6W	0.550	0.000	4.494
D+C+0.75L+.45W	0.550	0.000	3.371
D+C+0.75L+0.525E	0.620	0.000	0.095
D+C+0.7E	0.649	0.000	0.126
0.6D-0.6W	0.330	0.000	4.044
0.6D-0.7E	0.231	0.000	0.126

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Base Plate Info
6.0 in
L = 9.0 in

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
0.65	0.13		12.49 k	13.14 k	Area Req.=	1.00	ft^2
Passive Resistance =	4.73				Area Prov.=	9.00	ft^2
Friction Resistance =	4.60					O.K.	

Safety Factor
F.S. = 73.99 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
0.23	0.13	0.00 k	12.49 k	7.72 k	Volume Req.=	-54.32	ft^2
Passive Resistance =	4.73	7.43		12.72 k	Volume Prov.=	31.50	ft^2
Friction Resistance =	2.70	7.43				O.K.	

Safety Factor
F.S. = 58.96 O.K.

Safety Factor
F.S. = 32.37 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 0.55	0.00		12.49 k	13.04 k	Area Req.=	0.71	ft^2
Passive Resistance =	4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =	4.56	9.29				O.K.	

Safety Factor
F.S. = N.A. O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 0.55	4.49		12.49 k	13.04 k	Area Req.=	0.95	ft^2
Passive Resistance =	4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =	4.56	9.29				O.K.	

Safety Factor
F.S. = 2.07 O.K.

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

1-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	24.330	0.000	0.000
D+C+0.6W	11.606	0.000	3.006
D+C+0.75L+.45W	20.423	0.000	2.255
D+C+0.75L+0.525E	23.583	0.000	0.063
D+C+0.7E	14.461	0.000	0.084
0.6D-0.6W	-15.114	0.000	2.712
0.6D-0.7E	0.587	0.000	0.084

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:

Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
24.33	0.00		26.10 k	50.43 k	Area Req.=	14.62	ft^2
Passive Resistance =	15.01				Area Prov.=	28.00	ft^2
Friction Resistance =	17.65					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-15.11	2.71	0.00 k	26.10 k	0.55 k	Volume Req.=	105.93	ft^2
Passive Resistance =	15.01	15.20		10.99 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	0.19	15.20				O.K.	

Safety Factor F.S. = 5.60 O.K.
Safety Factor F.S. = 1.04 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 24.33	0.00		26.10 k	50.43 k	Area Req.=	10.99	ft^2
Passive Resistance =	15.01	32.66			Area Prov.=	28.00	ft^2
Friction Resistance =	17.65	32.66				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 11.61	3.01		26.10 k	37.71 k	Area Req.=	8.25	ft^2
Passive Resistance =	8.58	21.77			Area Prov.=	28.00	ft^2
Friction Resistance =	13.20	21.77				O.K.	

Safety Factor
F.S. = 7.24 O.K.

1

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing
Thrust Calcs

Job No. 24-459
11/13/2025

1-C
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.550	0.000	0.000
D+C+0.6W	0.550	0.000	4.494
D+C+0.75L+.45W	0.550	0.000	3.371
D+C+0.75L+0.525E	0.620	0.000	0.095
D+C+0.7E	0.649	0.000	0.126
0.6D-0.6W	0.330	0.000	4.044
0.6D-0.7E	0.231	0.000	0.126

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	0.65	0.13		12.49 k	13.14 k	Area Req.=	1.00	ft^2
Passive Resistance =		4.73				Area Prov.=	9.00	ft^2
Friction Resistance =		4.60					O.K.	
Safety Factor								
F.S. =		73.99	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	0.23	0.13	0.00 k	12.49 k	7.72 k	Volume Req.=	-54.32	ft^2
Passive Resistance =		4.73	7.43		12.72 k	Volume Prov.=	31.50	ft^2
Friction Resistance =		2.70	7.43				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		58.96	O.K.	F.S. =	32.37	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	0.55	0.00		12.49 k	13.04 k	Area Req.=	0.71	ft^2
Passive Resistance =		4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =		4.56	9.29				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	0.55	4.49		12.49 k	13.04 k	Area Req.=	0.95	ft^2
Passive Resistance =		4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =		4.56	9.29				O.K.	
Safety Factor								
F.S. =		2.07	O.K.					

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

1-B
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.490	0.000	0.000
D+C+0.6W	0.490	0.000	5.286
D+C+0.75L+.45W	0.490	0.000	3.965
D+C+0.75L+0.525E	0.553	0.000	0.110
D+C+0.7E	0.578	0.000	0.147
0.6D-0.6W	0.294	0.000	4.758
0.6D-0.7E	0.206	0.000	0.147

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
0.58	0.15		12.49 k	13.07 k	Area Req.=	0.96	ft^2
Passive Resistance =	4.73				Area Prov.=	9.00	ft^2
Friction Resistance =	4.57					O.K.	

Safety Factor
F.S. = 63.25 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
0.21	0.15	0.00 k	12.49 k	7.70 k	Volume Req.=	-54.04	ft^2
Passive Resistance =	4.73	7.42		12.69 k	Volume Prov.=	31.50	ft^2
Friction Resistance =	2.69	7.42				O.K.	

Safety Factor F.S. = 50.47 O.K.
Safety Factor F.S. = 36.34 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 0.49	0.00		12.49 k	12.98 k	Area Req.=	0.69	ft^2
Passive Resistance =	4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =	4.54	9.27				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 0.49	5.29		12.49 k	12.98 k	Area Req.=	0.92	ft^2
Passive Resistance =	4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =	4.54	9.27				O.K.	

Safety Factor
F.S. = 1.75 O.K.

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

1-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	10.900	2.770	0.000
D+C+0.6W	6.034	5.654	0.000
D+C+0.75L+.45W	10.191	2.753	0.000
D+C+0.75L+0.525E	11.039	-0.739	0.000
D+C+0.7E	7.208	0.989	0.000
0.6D-0.6W	-9.318	2.940	0.000
0.6D-0.7E	-0.207	2.599	0.000

Footing Info

Width =	6.00 ft	
Length =	4.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	1
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Both Directions

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
11.04	0.00		16.20 k	27.24 k	Area Req.=	7.32	ft^2
Passive Resistance =	9.45				Area Prov.=	24.00	ft^2
Friction Resistance =	9.53					O.K.	

Safety Factor
F.S. = n/a O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-9.32	2.94	0.00 k	16.20 k	0.40 k	Volume Req.=	79.53	ft^2
Passive Resistance =	9.45	9.59		6.88 k	Volume Prov.=	84.00	ft^2
Friction Resistance =	0.14	9.59				O.K.	

Safety Factor F.S. = n/a O.K.
Safety Factor F.S. = 1.04 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 6.03	5.65		16.20 k	22.23 k	Area Req.=	3.62	ft^2
Passive Resistance =	9.45	17.23			Area Prov.=	24.00	ft^2
Friction Resistance =	7.78	17.23				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 10.90	0.00		16.20 k	27.10 k	Area Req.=	7.25	ft^2
Passive Resistance =	6.30	15.79			Area Prov.=	24.00	ft^2
Friction Resistance =	9.49	15.79				O.K.	

Safety Factor
F.S. = n/a O.K.

			1		
Width: As T&B, min =	2.33 in^2	# 5 BAR	@ 10" o.c.	=3.72 in^2	O.K.
Length: As T&B, min =	1.56 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

2-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.400	5.310	0.000
D+C+0.6W	10.704	6.856	0.000
D+C+0.75L+.45W	18.963	8.025	0.000
D+C+0.75L+0.525E	20.490	8.295	0.000
D+C+0.7E	12.814	7.235	0.000
0.6D-0.6W	-15.024	10.350	0.000
0.6D-0.7E	-0.900	4.266	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	20.49	8.29		26.10 k	46.59 k	Area Req.=	12.69	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.31					O.K.	
Safety Factor								
F.S. =		3.77	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-15.02	10.35	0.00 k	26.10 k	0.64 k	Volume Req.=	104.93	ft^2
Passive Resistance =		15.01	15.23		11.08 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.22	15.23				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		1.47	O.K.	F.S. =	1.04 O.K.			

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	-15.02	10.35		26.10 k	11.08 k	Area Req.=	-3.81	ft^2
Passive Resistance =		15.01	18.88			Area Prov.=	28.00	ft^2
Friction Resistance =		3.88	18.88				O.K.	
Safety Factor								
F.S. =		1.82	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	20.40	0.00		26.10 k	46.50 k	Area Req.=	12.65	ft^2
Passive Resistance =		8.58	24.85			Area Prov.=	28.00	ft^2
Friction Resistance =		16.28	24.85				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

2-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	43.370	0.000	0.000
D+C+0.6W	20.710	1.350	0.000
D+C+0.75L+.45W	36.205	1.013	0.000
D+C+0.75L+0.525E	39.789	0.000	0.000
D+C+0.7E	22.652	0.000	0.000
0.6D-0.6W	-22.050	1.350	0.000
0.6D-0.7E	3.425	0.000	0.000

Footing Info

Width =	7.00 ft	
Length =	7.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	4
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:

Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
43.37	0.00		49.13 k	92.50 k	Area Req.=	25.36	ft^2
Passive Resistance =	11.03				Area Prov.=	49.00	ft^2
Friction Resistance =	32.37					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-22.05	1.35	0.00 k	49.13 k	7.43 k	Volume Req.=	89.00	ft^2
Passive Resistance =	11.03	13.62		27.08 k	Volume Prov.=	171.50	ft^2
Friction Resistance =	2.60	13.62				O.K.	

Safety Factor F.S. = 10.09 O.K.

Safety Factor F.S. = 1.34 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 20.71	1.35		49.13 k	69.84 k	Area Req.=	10.55	ft^2
Passive Resistance =	11.03	35.47			Area Prov.=	49.00	ft^2
Friction Resistance =	24.44	35.47				O.K.	

Safety Factor
F.S. = 26.27 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 43.37	0.00		49.13 k	92.50 k	Area Req.=	25.36	ft^2
Passive Resistance =	11.03	43.40			Area Prov.=	49.00	ft^2
Friction Resistance =	32.37	43.40				O.K.	

Safety Factor
F.S. = N.A. O.K.

1

Width: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

2-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.510	5.310	0.000
D+C+0.6W	10.814	8.600	0.000
D+C+0.75L+.45W	19.073	3.568	0.000
D+C+0.75L+0.525E	20.614	-1.333	0.000
D+C+0.7E	12.944	2.047	0.000
0.6D-0.6W	-14.982	5.136	0.000
0.6D-0.7E	-0.854	5.016	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
20.61	0.00		26.10 k	46.71 k	Area Req.=	12.76	ft^2
Passive Resistance =	15.01				Area Prov.=	28.00	ft^2
Friction Resistance =	16.35					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-14.98	5.14	0.00 k	26.10 k	0.68 k	Volume Req.=	104.47	ft^2
Passive Resistance =	15.01	15.24		11.12 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	0.24	15.24				O.K.	

Safety Factor F.S. = 2.97 O.K.
Safety Factor F.S. = 1.05 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 10.81	8.60		26.10 k	36.91 k	Area Req.=	5.91	ft^2
Passive Resistance =	15.01	27.93			Area Prov.=	28.00	ft^2
Friction Resistance =	12.92	27.93				O.K.	

Safety Factor
F.S. = 3.25 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 20.51	0.00		26.10 k	46.61 k	Area Req.=	12.71	ft^2
Passive Resistance =	8.58	24.89			Area Prov.=	28.00	ft^2
Friction Resistance =	16.31	24.89				O.K.	

Safety Factor
F.S. = n/a O.K.

			2		
Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

2-A (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.510	5.310	0.000
D+C+0.6W	14.156	2.128	4.452
D+C+0.75L+.45W	21.580	4.587	3.339
D+C+0.75L+0.525E	6.812	-5.008	9.539
D+C+0.7E	-5.459	2.853	12.719
0.6D-0.6W	-2.886	0.642	6.600
0.6D-0.7E	-14.217	0.634	12.635

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
21.58	4.59		26.10 k	47.68 k	Area Req.=	13.24	ft^2
Passive Resistance =	8.58				Area Prov.=	28.00	ft^2
Friction Resistance =	16.69					O.K.	

Safety Factor
F.S. = 5.51 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-14.22	12.64	0.00 k	26.10 k	1.44 k	Volume Req.=	95.96	ft^2
Passive Resistance =	8.58	9.08		11.88 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	0.51	9.08				O.K.	

Safety Factor F.S. = n/a O.K.
Safety Factor F.S. = 1.10 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 20.51	5.31		26.10 k	46.61 k	Area Req.=	9.55	ft^2
Passive Resistance =	8.58	24.89			Area Prov.=	28.00	ft^2
Friction Resistance =	16.31	24.89				O.K.	

Safety Factor
F.S. = 4.69 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) -5.46	12.72		26.10 k	20.64 k	Area Req.=	-0.28	ft^2
Passive Resistance =	15.01	22.23			Area Prov.=	28.00	ft^2
Friction Resistance =	7.22	22.23				O.K.	

Safety Factor
F.S. = n/a O.K.

2

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

3-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.220	6.030	0.000
D+C+0.6W	11.030	8.168	0.000
D+C+0.75L+.45W	19.648	9.394	0.000
D+C+0.75L+0.525E	21.379	9.115	0.000
D+C+0.7E	13.416	7.818	0.000
0.6D-0.6W	-15.324	11.322	0.000
0.6D-0.7E	-1.030	4.429	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

Results

DOWNLOAD

	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	21.38	9.11		26.10 k	47.48 k	Area Req.=	13.14	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.62					O.K.	
Safety Factor								
F.S. =		3.47	O.K.					

UPLIFT

	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-15.32	11.32	0.00 k	26.10 k	0.34 k	Volume Req.=	108.27	ft^2
Passive Resistance =		15.01	15.12		10.78 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.12	15.12				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		1.34	O.K.	F.S. =	1.02	O.K.		

THRUST H

	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	-15.32	11.32		26.10 k	10.78 k	Area Req.=	-3.92	ft^2
Passive Resistance =		15.01	18.78			Area Prov.=	28.00	ft^2
Friction Resistance =		3.77	18.78				O.K.	
Safety Factor								
F.S. =		1.66	O.K.					

THRUST L

	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	21.22	0.00		26.10 k	47.32 k	Area Req.=	13.06	ft^2
Passive Resistance =		8.58	25.14			Area Prov.=	28.00	ft^2
Friction Resistance =		16.56	25.14				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing
Thrust Calcs

Job No. 24-459
11/13/2025

3-G (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.220	6.030	0.000
D+C+0.6W	14.384	2.558	4.488
D+C+0.75L+.45W	22.163	5.186	3.366
D+C+0.75L+0.525E	10.039	5.555	9.513
D+C+0.7E	-1.704	3.072	12.684
0.6D-0.6W	-2.796	0.642	6.642
0.6D-0.7E	-10.732	0.534	15.673

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

BASED ON SOILS REPORT BY:
Code Minimums

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

Results

DOWNLOAD	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing** (not increased by 1/3)		
	22.16	5.19		26.10 k	48.26 k	Area Req.=	13.53	ft^2
Passive Resistance =		8.58				Area Prov.=	28.00	ft^2
Friction Resistance =		16.89					O.K.	
Safety Factor								
F.S. =		4.91	O.K.					

UPLIFT	**Axial**	**Thrust**	**Shear**	**Downward**	**Net Uplift**	**Concrete**		
	-10.73	15.67	0.00 k	26.10 k	4.93 k	Volume Req.=	57.24	ft^2
Passive Resistance =		8.58	10.30		15.37 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		1.72	10.30				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.46	O.K.		

THRUST H	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing**		
(Ftg. Width)	21.22	6.03		26.10 k	47.32 k	Area Req.=	9.82	ft^2
Passive Resistance =		8.58	25.14			Area Prov.=	28.00	ft^2
Friction Resistance =		16.56	25.14				O.K.	
Safety Factor								
F.S. =		4.17	O.K.					

THRUST L	**Axial**	**Thrust**		**Downward**	**Net Uplift**	**Bearing**		
(Ftg. Length)	-10.73	15.67		26.10 k	15.37 k	Area Req.=	-2.92	ft^2
Passive Resistance =		15.01	20.39			Area Prov.=	28.00	ft^2
Friction Resistance =		5.38	20.39				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

3-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	48.700	0.000	0.000
D+C+0.6W	21.870	1.356	0.000
D+C+0.75L+.45W	40.553	1.017	0.000
D+C+0.75L+0.525E	44.253	0.000	0.000
D+C+0.7E	24.098	0.000	0.000
0.6D-0.6W	-21.570	1.356	0.000
0.6D-0.7E	3.658	0.000	0.000

Footing Info

Width =	7.00 ft	
Length =	7.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	4
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
48.70	0.00		49.13 k	97.83 k	Area Req.=	28.03	ft^2
Passive Resistance =	11.03				Area Prov.=	49.00	ft^2
Friction Resistance =	34.24					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-21.57	1.36	0.00 k	49.13 k	7.91 k	Volume Req.=	83.67	ft^2
Passive Resistance =	11.03	13.79		27.56 k	Volume Prov.=	171.50	ft^2
Friction Resistance =	2.77	13.79				O.K.	

Safety Factor F.S. = 10.17 O.K.
Safety Factor F.S. = 1.37 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 21.87	1.36		49.13 k	71.00 k	Area Req.=	10.98	ft^2
Passive Resistance =	11.03	35.87			Area Prov.=	49.00	ft^2
Friction Resistance =	24.85	35.87				O.K.	

Safety Factor
F.S. = 26.46 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 48.70	0.00		49.13 k	97.83 k	Area Req.=	28.03	ft^2
Passive Resistance =	11.03	45.26			Area Prov.=	49.00	ft^2
Friction Resistance =	34.24	45.26				O.K.	

Safety Factor
F.S. = N.A. O.K.

1

Width: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

3-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.290	6.030	0.000
D+C+0.6W	11.124	9.598	0.000
D+C+0.75L+.45W	19.721	3.931	0.000
D+C+0.75L+0.525E	21.459	-1.676	0.000
D+C+0.7E	13.520	2.101	0.000
0.6D-0.6W	-15.300	6.324	0.000
0.6D-0.7E	-0.970	5.490	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	21.46	0.00		26.10 k	47.56 k	Area Req.=	13.18	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.65					O.K.	
Safety Factor								
F.S. =		N.A.	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-15.30	6.32	0.00 k	26.10 k	0.36 k	Volume Req.=	108.00	ft^2
Passive Resistance =		15.01	15.13		10.80 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.13	15.13				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		2.39	O.K.	F.S. =	1.02	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	11.12	9.60		26.10 k	37.22 k	Area Req.=	6.02	ft^2
Passive Resistance =		15.01	28.03			Area Prov.=	28.00	ft^2
Friction Resistance =		13.03	28.03				O.K.	
Safety Factor								
F.S. =		2.92	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	21.29	0.00		26.10 k	47.39 k	Area Req.=	13.10	ft^2
Passive Resistance =		8.58	25.16			Area Prov.=	28.00	ft^2
Friction Resistance =		16.59	25.16				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

			2		
Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

3-A (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.290	6.030	0.000
D+C+0.6W	14.538	2.486	6.582
D+C+0.75L+.45W	22.281	5.168	4.937
D+C+0.75L+0.525E	29.082	-5.550	11.881
D+C+0.7E	23.684	3.065	15.841
0.6D-0.6W	-2.784	0.654	4.410
0.6D-0.7E	-10.819	0.541	15.841

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	29.08	11.88		26.10 k	55.18 k	Area Req.=	16.99	ft^2
Passive Resistance =		8.58				Area Prov.=	28.00	ft^2
Friction Resistance =		19.31					O.K.	
Safety Factor								
F.S. =		2.35	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-10.82	15.84	0.00 k	26.10 k	4.84 k	Volume Req.=	58.21	ft^2
Passive Resistance =		8.58	10.27		15.28 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		1.69	10.27				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.45	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	21.29	6.03		26.10 k	47.39 k	Area Req.=	9.85	ft^2
Passive Resistance =		8.58	25.16			Area Prov.=	28.00	ft^2
Friction Resistance =		16.59	25.16				O.K.	
Safety Factor								
F.S. =		4.17	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	23.68	15.84		26.10 k	49.78 k	Area Req.=	14.29	ft^2
Passive Resistance =		15.01	32.43			Area Prov.=	28.00	ft^2
Friction Resistance =		17.42	32.43				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

4-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	19.160	4.330	0.000
D+C+0.6W	10.358	9.840	0.000
D+C+0.75L+.45W	17.944	9.698	0.000
D+C+0.75L+0.525E	19.720	7.972	0.000
D+C+0.7E	12.798	7.555	0.000
0.6D-0.6W	-14.802	12.138	0.000
0.6D-0.7E	-1.306	5.034	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	19.72	7.97		26.10 k	45.82 k	Area Req.=	12.31	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.04					O.K.	
Safety Factor								
F.S. =		3.89	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-14.80	12.14	0.00 k	26.10 k	0.86 k	Volume Req.=	102.47	ft^2
Passive Resistance =		15.01	15.31		11.30 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.30	15.31				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		1.26	O.K.	F.S. =	1.06 O.K.			

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	-14.80	12.14		26.10 k	11.30 k	Area Req.=	-3.72	ft^2
Passive Resistance =		15.01	18.96			Area Prov.=	28.00	ft^2
Friction Resistance =		3.95	18.96				O.K.	
Safety Factor								
F.S. =		1.56	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	19.16	0.00		26.10 k	45.26 k	Area Req.=	12.03	ft^2
Passive Resistance =		8.58	24.42			Area Prov.=	28.00	ft^2
Friction Resistance =		15.84	24.42				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

4-G (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	19.160	4.330	0.000
D+C+0.6W	13.634	1.974	6.636
D+C+0.75L+.45W	20.401	3.798	4.977
D+C+0.75L+0.525E	27.007	4.161	11.750
D+C+0.7E	22.514	2.473	15.666
0.6D-0.6W	-2.916	0.540	4.452
0.6D-0.7E	-10.889	0.307	15.666

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
27.01	11.75		26.10 k	53.11 k	Area Req.=	15.95	ft^2
Passive Resistance =	8.58				Area Prov.=	28.00	ft^2
Friction Resistance =	18.59					O.K.	

Safety Factor
F.S. = 2.31 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-10.89	15.67	0.00 k	26.10 k	4.77 k	Volume Req.=	58.99	ft^2
Passive Resistance =	8.58	10.24		15.21 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	1.67	10.24				O.K.	

Safety Factor F.S. = n/a O.K.
Safety Factor F.S. = 1.44 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 19.16	4.33		26.10 k	45.26 k	Area Req.=	9.05	ft^2
Passive Resistance =	8.58	24.42			Area Prov.=	28.00	ft^2
Friction Resistance =	15.84	24.42				O.K.	

Safety Factor
F.S. = 5.64 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 22.51	15.67		26.10 k	48.61 k	Area Req.=	13.71	ft^2
Passive Resistance =	15.01	32.02			Area Prov.=	28.00	ft^2
Friction Resistance =	17.02	32.02				O.K.	

Safety Factor
F.S. = n/a O.K.

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

4-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	51.190	0.000	0.000
D+C+0.6W	26.578	1.332	0.000
D+C+0.75L+.45W	43.549	0.999	0.000
D+C+0.75L+0.525E	47.877	0.000	0.000
D+C+0.7E	29.586	0.000	0.000
0.6D-0.6W	-16.992	1.332	0.000
0.6D-0.7E	4.705	0.000	0.000

Footing Info

Width =	7.00 ft	
Length =	7.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	4
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:

Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
51.19	0.00		49.13 k	100.32 k	Area Req.=	29.27	ft^2
Passive Resistance =	11.03				Area Prov.=	49.00	ft^2
Friction Resistance =	35.11					O.K.	

Safety Factor

F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-16.99	1.33	0.00 k	49.13 k	12.48 k	Volume Req.=	32.80	ft^2
Passive Resistance =	11.03	15.39		32.13 k	Volume Prov.=	171.50	ft^2
Friction Resistance =	4.37	15.39				O.K.	

Safety Factor F.S. = 11.56 O.K.

Safety Factor F.S. = 1.73 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 26.58	1.33		49.13 k	75.70 k	Area Req.=	12.75	ft^2
Passive Resistance =	11.03	37.52			Area Prov.=	49.00	ft^2
Friction Resistance =	26.50	37.52				O.K.	

Safety Factor

F.S. = 28.17 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 51.19	0.00		49.13 k	100.32 k	Area Req.=	29.27	ft^2
Passive Resistance =	11.03	46.14			Area Prov.=	49.00	ft^2
Friction Resistance =	35.11	46.14				O.K.	

Safety Factor

F.S. = N.A. O.K.

1

Width: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

Spread Footing
Thrust Calcs

4-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	19.160	4.330	0.000
D+C+0.6W	10.358	10.746	0.000
D+C+0.75L+.45W	17.944	5.742	0.000
D+C+0.75L+0.525E	19.720	0.071	0.000
D+C+0.7E	12.798	3.169	0.000
0.6D-0.6W	-14.802	8.442	0.000
0.6D-0.7E	-1.306	5.690	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	19.72	0.07		26.10 k	45.82 k	Area Req.=	12.31	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.04					O.K.	
Safety Factor								
F.S. =		437.72	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-14.80	8.44	0.00 k	26.10 k	0.86 k	Volume Req.=	102.47	ft^2
Passive Resistance =		15.01	15.31		11.30 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.30	15.31				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		1.81	O.K.	F.S. =	1.06	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	10.36	10.75		26.10 k	36.46 k	Area Req.=	5.74	ft^2
Passive Resistance =		15.01	27.77			Area Prov.=	28.00	ft^2
Friction Resistance =		12.76	27.77				O.K.	
Safety Factor								
F.S. =		2.58	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	19.16	0.00		26.10 k	45.26 k	Area Req.=	12.03	ft^2
Passive Resistance =		8.58	24.42			Area Prov.=	28.00	ft^2
Friction Resistance =		15.84	24.42				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

			2		
Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

5-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.030	6.050	0.000
D+C+0.6W	10.928	8.164	0.000
D+C+0.75L+.45W	19.474	9.411	0.000
D+C+0.75L+0.525E	21.197	9.210	0.000
D+C+0.7E	13.303	7.918	0.000
0.6D-0.6W	-15.276	11.412	0.000
0.6D-0.7E	-1.044	4.549	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	21.20	9.21		26.10 k	47.30 k	Area Req.=	13.05	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.55					O.K.	
Safety Factor								
F.S. =		3.43	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-15.28	11.41	0.00 k	26.10 k	0.38 k	Volume Req.=	107.73	ft^2
Passive Resistance =		15.01	15.14		10.82 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.13	15.14				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		1.33	O.K.	F.S. =	1.03 O.K.			

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	-15.28	11.41		26.10 k	10.82 k	Area Req.=	-3.90	ft^2
Passive Resistance =		15.01	18.79			Area Prov.=	28.00	ft^2
Friction Resistance =		3.79	18.79				O.K.	
Safety Factor								
F.S. =		1.65	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	21.03	0.00		26.10 k	47.13 k	Area Req.=	12.97	ft^2
Passive Resistance =		8.58	25.07			Area Prov.=	28.00	ft^2
Friction Resistance =		16.50	25.07				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

5-G (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.030	6.050	0.000
D+C+0.6W	14.282	2.662	3.582
D+C+0.75L+.45W	21.989	5.284	2.687
D+C+0.75L+0.525E	28.568	5.771	-11.729
D+C+0.7E	23.131	3.333	15.638
0.6D-0.6W	-2.736	0.696	6.624
0.6D-0.7E	-10.550	0.358	15.638

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	28.57	5.77		26.10 k	54.67 k	Area Req.=	16.73	ft^2
Passive Resistance =		8.58				Area Prov.=	28.00	ft^2
Friction Resistance =		19.13					O.K.	
Safety Factor								
F.S. =		4.80	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-10.55	15.64	0.00 k	26.10 k	5.11 k	Volume Req.=	55.22	ft^2
Passive Resistance =		8.58	10.36		15.55 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		1.79	10.36				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.48	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	21.03	6.05		26.10 k	47.13 k	Area Req.=	9.75	ft^2
Passive Resistance =		8.58	25.07			Area Prov.=	28.00	ft^2
Friction Resistance =		16.50	25.07				O.K.	
Safety Factor								
F.S. =		4.14	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	23.13	15.64		26.10 k	49.23 k	Area Req.=	14.02	ft^2
Passive Resistance =		15.01	32.24			Area Prov.=	28.00	ft^2
Friction Resistance =		17.23	32.24				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

5-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	48.990	0.000	0.000
D+C+0.6W	21.764	1.530	0.000
D+C+0.75L+.45W	40.750	1.148	0.000
D+C+0.75L+0.525E	44.427	0.000	0.000
D+C+0.7E	23.973	0.000	0.000
0.6D-0.6W	-22.104	1.530	0.000
0.6D-0.7E	3.556	0.000	0.000

Footing Info

Width =	7.00 ft	
Length =	7.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	4
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
48.99	0.00		49.13 k	98.12 k	Area Req.=	28.17	ft^2
Passive Resistance =	11.03				Area Prov.=	49.00	ft^2
Friction Resistance =	34.34					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-22.10	1.53	0.00 k	49.13 k	7.37 k	Volume Req.=	89.60	ft^2
Passive Resistance =	11.03	13.60		27.02 k	Volume Prov.=	171.50	ft^2
Friction Resistance =	2.58	13.60				O.K.	

Safety Factor F.S. = 8.89 O.K.

Safety Factor F.S. = 1.33 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 21.76	1.53		49.13 k	70.89 k	Area Req.=	10.95	ft^2
Passive Resistance =	11.03	35.84			Area Prov.=	49.00	ft^2
Friction Resistance =	24.81	35.84				O.K.	

Safety Factor
F.S. = 23.42 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 48.99	0.00		49.13 k	98.12 k	Area Req.=	28.17	ft^2
Passive Resistance =	11.03	45.37			Area Prov.=	49.00	ft^2
Friction Resistance =	34.34	45.37				O.K.	

Safety Factor
F.S. = N.A. O.K.

1

Width: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

5-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.010	6.050	0.000
D+C+0.6W	10.918	9.530	0.000
D+C+0.75L+.45W	19.456	3.860	0.000
D+C+0.75L+0.525E	21.178	-1.750	0.000
D+C+0.7E	13.291	2.029	0.000
0.6D-0.6W	-15.270	6.228	0.000
0.6D-0.7E	-1.044	5.398	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
21.18	0.00		26.10 k	47.28 k	Area Req.=	13.04	ft^2
Passive Resistance =	15.01				Area Prov.=	28.00	ft^2
Friction Resistance =	16.55					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-15.27	6.23	0.00 k	26.10 k	0.39 k	Volume Req.=	107.67	ft^2
Passive Resistance =	15.01	15.14		10.83 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	0.14	15.14				O.K.	

Safety Factor F.S. = 2.43 O.K.
Safety Factor F.S. = 1.03 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 10.92	9.53		26.10 k	37.02 k	Area Req.=	5.95	ft^2
Passive Resistance =	15.01	27.96			Area Prov.=	28.00	ft^2
Friction Resistance =	12.96	27.96				O.K.	

Safety Factor
F.S. = 2.93 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 21.01	0.00		26.10 k	47.11 k	Area Req.=	12.96	ft^2
Passive Resistance =	8.58	25.06			Area Prov.=	28.00	ft^2
Friction Resistance =	16.49	25.06				O.K.	

Safety Factor
F.S. = n/a O.K.

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

5-A (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	21.010	6.050	0.000
D+C+0.6W	14.272	2.404	4.440
D+C+0.75L+.45W	21.972	5.235	3.330
D+C+0.75L+0.525E	28.665	-5.435	-11.881
D+C+0.7E	23.273	2.885	15.841
0.6D-0.6W	-2.838	0.762	6.582
0.6D-0.7E	-10.844	0.806	15.841

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	28.66	-5.44		26.10 k	54.76 k	Area Req.=	16.78	ft^2
Passive Resistance =		8.58				Area Prov.=	28.00	ft^2
Friction Resistance =		19.17					O.K.	
Safety Factor								
F.S. =		5.10	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-10.84	15.84	0.00 k	26.10 k	4.82 k	Volume Req.=	58.49	ft^2
Passive Resistance =		8.58	10.26		15.26 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		1.69	10.26				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.44	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	21.01	6.05		26.10 k	47.11 k	Area Req.=	9.74	ft^2
Passive Resistance =		8.58	25.06			Area Prov.=	28.00	ft^2
Friction Resistance =		16.49	25.06				O.K.	
Safety Factor								
F.S. =		4.14	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	23.27	15.84		26.10 k	49.37 k	Area Req.=	14.09	ft^2
Passive Resistance =		15.01	32.29			Area Prov.=	28.00	ft^2
Friction Resistance =		17.28	32.29				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing
Thrust Calcs

Job No. 24-459
11/13/2025

6-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.400	5.310	0.000
D+C+0.6W	10.698	6.754	0.000
D+C+0.75L+.45W	18.959	7.948	0.000
D+C+0.75L+0.525E	20.490	8.295	0.000
D+C+0.7E	12.814	7.235	0.000
0.6D-0.6W	-15.024	10.242	0.000
0.6D-0.7E	-0.900	4.266	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
20.49	8.29		26.10 k	46.59 k	Area Req.=	12.69	ft^2
Passive Resistance =	15.01				Area Prov.=	28.00	ft^2
Friction Resistance =	16.31					O.K.	

Safety Factor
F.S. = 3.77 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-15.02	10.24	0.00 k	26.10 k	0.64 k	Volume Req.=	104.93	ft^2
Passive Resistance =	15.01	15.23		11.08 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	0.22	15.23				O.K.	

Safety Factor F.S. = 1.49 O.K.
Safety Factor F.S. = 1.04 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) -15.02	10.24		26.10 k	11.08 k	Area Req.=	-3.81	ft^2
Passive Resistance =	15.01	18.88			Area Prov.=	28.00	ft^2
Friction Resistance =	3.88	18.88				O.K.	

Safety Factor
F.S. = 1.84 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 20.40	0.00		26.10 k	46.50 k	Area Req.=	12.65	ft^2
Passive Resistance =	8.58	24.85			Area Prov.=	28.00	ft^2
Friction Resistance =	16.28	24.85				O.K.	

Safety Factor
F.S. = n/a O.K.

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

6-G (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.400	5.310	0.000
D+C+0.6W	14.052	2.350	6.630
D+C+0.75L+.45W	21.474	4.645	4.973
D+C+0.75L+0.525E	28.034	5.087	11.739
D+C+0.7E	22.873	2.958	15.652
0.6D-0.6W	-2.874	0.636	4.512
0.6D-0.7E	-10.763	0.389	15.652

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:
Code Minimums

HAIRPIN
n

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	28.03	11.74		26.10 k	54.13 k	Area Req.=	16.47	ft^2
Passive Resistance =		8.58				Area Prov.=	28.00	ft^2
Friction Resistance =		18.95					O.K.	
Safety Factor								
F.S. =		2.34	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-10.76	15.65	0.00 k	26.10 k	4.90 k	Volume Req.=	57.59	ft^2
Passive Resistance =		8.58	10.29		15.34 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		1.71	10.29				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.45 O.K.			

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	20.40	5.31		26.10 k	46.50 k	Area Req.=	9.51	ft^2
Passive Resistance =		8.58	24.85			Area Prov.=	28.00	ft^2
Friction Resistance =		16.28	24.85				O.K.	
Safety Factor								
F.S. =		4.68	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	22.87	15.65		26.10 k	48.97 k	Area Req.=	13.89	ft^2
Passive Resistance =		15.01	32.15			Area Prov.=	28.00	ft^2
Friction Resistance =		17.14	32.15				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

6-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	43.390	0.000	0.000
D+C+0.6W	20.720	1.350	0.000
D+C+0.75L+.45W	36.223	1.013	0.000
D+C+0.75L+0.525E	39.808	0.000	0.000
D+C+0.7E	22.664	0.000	0.000
0.6D-0.6W	-22.014	1.350	0.000
0.6D-0.7E	3.425	0.000	0.000

Footing Info

Width =	7.00 ft	
Length =	7.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	4
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	No

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Base Plate Info
6.0 in
L = 9.0 in

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
43.39	0.00		49.13 k	92.52 k	Area Req.=	25.37	ft^2
Passive Resistance =	11.03				Area Prov.=	49.00	ft^2
Friction Resistance =	32.38					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-22.01	1.35	0.00 k	49.13 k	7.46 k	Volume Req.=	88.60	ft^2
Passive Resistance =	11.03	13.64		27.11 k	Volume Prov.=	171.50	ft^2
Friction Resistance =	2.61	13.64				O.K.	

Safety Factor F.S. = 10.10 O.K.

Safety Factor F.S. = 1.34 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 20.72	1.35		49.13 k	69.85 k	Area Req.=	10.55	ft^2
Passive Resistance =	11.03	35.47			Area Prov.=	49.00	ft^2
Friction Resistance =	24.45	35.47				O.K.	

Safety Factor
F.S. = 26.27 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 43.39	0.00		49.13 k	92.52 k	Area Req.=	25.37	ft^2
Passive Resistance =	11.03	43.41			Area Prov.=	49.00	ft^2
Friction Resistance =	32.38	43.41				O.K.	

Safety Factor
F.S. = N.A. O.K.

1

Width: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	2.72 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

6-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.410	5.310	0.000
D+C+0.6W	10.714	8.576	0.000
D+C+0.75L+.45W	18.973	3.550	0.000
D+C+0.75L+0.525E	20.501	-1.333	0.000
D+C+0.7E	12.826	2.047	0.000
0.6D-0.6W	-15.018	5.094	0.000
0.6D-0.7E	-0.896	5.016	0.000

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	20.50	0.00		26.10 k	46.60 k	Area Req.=	12.70	ft^2
Passive Resistance =		15.01				Area Prov.=	28.00	ft^2
Friction Resistance =		16.31					O.K.	
Safety Factor								
F.S. =		N.A.	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-15.02	5.09	0.00 k	26.10 k	0.64 k	Volume Req.=	104.87	ft^2
Passive Resistance =		15.01	15.23		11.08 k	Volume Prov.=	112.00	ft^2
Friction Resistance =		0.22	15.23				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		2.99	O.K.	F.S. =	1.04	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	10.71	8.58		26.10 k	36.81 k	Area Req.=	5.87	ft^2
Passive Resistance =		15.01	27.89			Area Prov.=	28.00	ft^2
Friction Resistance =		12.88	27.89				O.K.	
Safety Factor								
F.S. =		3.25	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	20.41	0.00		26.10 k	46.51 k	Area Req.=	12.66	ft^2
Passive Resistance =		8.58	24.85			Area Prov.=	28.00	ft^2
Friction Resistance =		16.28	24.85				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

2

Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

6-A (B)
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	20.410	5.310	0.000
D+C+0.6W	14.062	2.128	6.600
D+C+0.75L+.45W	21.484	4.587	4.950
D+C+0.75L+0.525E	28.198	-4.825	11.907
D+C+0.7E	23.088	2.608	15.876
0.6D-0.6W	-2.880	0.684	4.476
0.6D-0.7E	-10.808	0.739	15.876

Footing Info

Width =	4.00 ft	
Length =	7.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (L)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
28.20	11.91		26.10 k	54.30 k	Area Req.=	16.55	ft^2
Passive Resistance =	8.58				Area Prov.=	28.00	ft^2
Friction Resistance =	19.00					O.K.	

Safety Factor
F.S. = 2.32 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-10.81	15.88	0.00 k	26.10 k	4.85 k	Volume Req.=	58.09	ft^2
Passive Resistance =	8.58	10.27		15.29 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	1.70	10.27				O.K.	

Safety Factor F.S. = n/a O.K.
Safety Factor F.S. = 1.45 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 20.41	5.31		26.10 k	46.51 k	Area Req.=	9.52	ft^2
Passive Resistance =	8.58	24.85			Area Prov.=	28.00	ft^2
Friction Resistance =	16.28	24.85				O.K.	

Safety Factor
F.S. = 4.68 O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 23.09	15.88		26.10 k	49.19 k	Area Req.=	13.99	ft^2
Passive Resistance =	15.01	32.22			Area Prov.=	28.00	ft^2
Friction Resistance =	17.22	32.22				O.K.	

Safety Factor
F.S. = n/a O.K.

3

Width: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.
Length: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-G
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	10.940	2.810	0.000
D+C+0.6W	6.072	3.834	0.000
D+C+0.75L+.45W	10.239	4.383	0.000
D+C+0.75L+0.525E	11.097	4.372	0.000
D+C+0.7E	7.259	3.830	0.000
0.6D-0.6W	-9.366	6.576	0.000
0.6D-0.7E	-0.230	2.192	0.000

Footing Info

Width =	6.00 ft	
Length =	4.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	1
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Both Directions

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	11.10	4.37		16.20 k	27.30 k	Area Req.=	7.35	ft^2
Passive Resistance =		9.45				Area Prov.=	24.00	ft^2
Friction Resistance =		9.55					O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-9.37	6.58	0.00 k	16.20 k	0.35 k	Volume Req.=	80.07	ft^2
Passive Resistance =		9.45	9.57		6.83 k	Volume Prov.=	84.00	ft^2
Friction Resistance =		0.12	9.57				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.04	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	-9.37	6.58		16.20 k	6.83 k	Area Req.=	-2.17	ft^2
Passive Resistance =		9.45	11.84			Area Prov.=	24.00	ft^2
Friction Resistance =		2.39	11.84				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	10.94	0.00		16.20 k	27.14 k	Area Req.=	7.27	ft^2
Passive Resistance =		6.30	15.80			Area Prov.=	24.00	ft^2
Friction Resistance =		9.50	15.80				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

1

Width: As T&B, min =	2.33 in^2	# 5 BAR	@ 10" o.c.	=3.72 in^2	O.K.
Length: As T&B, min =	1.56 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-F
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.490	0.000	0.000
D+C+0.6W	0.490	0.000	5.286
D+C+0.75L+.45W	0.490	0.000	3.965
D+C+0.75L+0.525E	0.553	0.000	0.105
D+C+0.7E	0.578	0.000	0.140
0.6D-0.6W	0.294	0.000	4.758
0.6D-0.7E	0.206	0.000	0.140

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	23.0 in

BASED ON SOILS REPORT BY:

Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
0.58	0.14		12.49 k	13.07 k	Area Req.=	0.96	ft^2
Passive Resistance =	4.73				Area Prov.=	9.00	ft^2
Friction Resistance =	4.57					O.K.	

Safety Factor
F.S. = 66.41 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
0.21	0.14	0.00 k	12.49 k	7.70 k	Volume Req.=	-54.04	ft^2
Passive Resistance =	4.73	7.42		12.69 k	Volume Prov.=	31.50	ft^2
Friction Resistance =	2.69	7.42				O.K.	

Safety Factor F.S. = 53.00 O.K.

Safety Factor F.S. = 36.34 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 0.49	0.00		12.49 k	12.98 k	Area Req.=	0.69	ft^2
Passive Resistance =	4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =	4.54	9.27				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 0.49	5.29		12.49 k	12.98 k	Area Req.=	0.92	ft^2
Passive Resistance =	4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =	4.54	9.27				O.K.	

Safety Factor
F.S. = 1.75 O.K.

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-E
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.550	0.000	0.000
D+C+0.6W	0.550	0.000	4.494
D+C+0.75L+.45W	0.550	0.000	3.371
D+C+0.75L+0.525E	0.620	0.000	0.089
D+C+0.7E	0.649	0.000	0.119
0.6D-0.6W	0.330	0.000	4.044
0.6D-0.7E	0.231	0.000	0.119

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
0.65	0.12		12.49 k	13.14 k	Area Req.=	1.00	ft^2
Passive Resistance =	4.73				Area Prov.=	9.00	ft^2
Friction Resistance =	4.60					O.K.	

Safety Factor
F.S. = 78.34 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
0.23	0.12	0.00 k	12.49 k	7.72 k	Volume Req.=	-54.32	ft^2
Passive Resistance =	4.73	7.43		12.72 k	Volume Prov.=	31.50	ft^2
Friction Resistance =	2.70	7.43				O.K.	

Safety Factor F.S. = 62.42 O.K.
Safety Factor F.S. = 32.37 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 0.55	0.00		12.49 k	13.04 k	Area Req.=	0.71	ft^2
Passive Resistance =	4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =	4.56	9.29				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 0.55	4.49		12.49 k	13.04 k	Area Req.=	0.95	ft^2
Passive Resistance =	4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =	4.56	9.29				O.K.	

Safety Factor
F.S. = 2.07 O.K.

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-D
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	24.270	0.000	0.000
D+C+0.6W	11.534	0.000	3.006
D+C+0.75L+.45W	20.402	0.000	2.255
D+C+0.75L+0.525E	23.522	0.000	0.058
D+C+0.7E	14.418	0.000	0.077
0.6D-0.6W	-15.132	0.000	2.712
0.6D-0.7E	0.589	0.000	0.077

Footing Info

Width =	7.00 ft	
Length =	4.00 ft	
Thickness =	3.50 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:

Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
24.27	0.00		26.10 k	50.37 k	Area Req.=	14.59	ft^2
Passive Resistance =	15.01				Area Prov.=	28.00	ft^2
Friction Resistance =	17.63					O.K.	

Safety Factor
F.S. = N.A. O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
-15.13	2.71	0.00 k	26.10 k	0.53 k	Volume Req.=	106.13	ft^2
Passive Resistance =	15.01	15.19		10.97 k	Volume Prov.=	112.00	ft^2
Friction Resistance =	0.18	15.19				O.K.	

Safety Factor F.S. = 5.60 O.K.

Safety Factor F.S. = 1.03 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 24.27	0.00		26.10 k	50.37 k	Area Req.=	10.97	ft^2
Passive Resistance =	15.01	32.64			Area Prov.=	28.00	ft^2
Friction Resistance =	17.63	32.64				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 11.53	3.01		26.10 k	37.63 k	Area Req.=	8.22	ft^2
Passive Resistance =	8.58	21.75			Area Prov.=	28.00	ft^2
Friction Resistance =	13.17	21.75				O.K.	

Safety Factor
F.S. = 7.23 O.K.

		1		
Width: As T&B, min =	3.18 in^2	# 5 BAR	@ 10" o.c.	=4.34 in^2 O.K.
Length: As T&B, min =	1.81 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2 O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-C
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.550	0.000	0.000
D+C+0.6W	0.550	0.000	4.494
D+C+0.75L+.45W	0.550	0.000	3.371
D+C+0.75L+0.525E	0.620	0.000	0.089
D+C+0.7E	0.649	0.000	0.119
0.6D-0.6W	0.330	0.000	4.044
0.6D-0.7E	0.231	0.000	0.119

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD

Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
0.65	0.12		12.49 k	13.14 k	Area Req.=	1.00	ft^2
Passive Resistance =	4.73				Area Prov.=	9.00	ft^2
Friction Resistance =	4.60					O.K.	

Safety Factor
F.S. = 78.34 O.K.

UPLIFT

Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
0.23	0.12	0.00 k	12.49 k	7.72 k	Volume Req.=	-54.32	ft^2
Passive Resistance =	4.73	7.43		12.72 k	Volume Prov.=	31.50	ft^2
Friction Resistance =	2.70	7.43				O.K.	

Safety Factor F.S. = 62.42 O.K.
Safety Factor F.S. = 32.37 O.K.

THRUST H

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width) 0.55	0.00		12.49 k	13.04 k	Area Req.=	0.71	ft^2
Passive Resistance =	4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =	4.56	9.29				O.K.	

Safety Factor
F.S. = n/a O.K.

THRUST L

Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length) 0.55	4.49		12.49 k	13.04 k	Area Req.=	0.95	ft^2
Passive Resistance =	4.73	9.29			Area Prov.=	9.00	ft^2
Friction Resistance =	4.56	9.29				O.K.	

Safety Factor
F.S. = 2.07 O.K.

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-B
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	0.490	0.000	0.000
D+C+0.6W	0.490	0.000	5.286
D+C+0.75L+.45W	0.490	0.000	3.965
D+C+0.75L+0.525E	0.553	0.000	0.105
D+C+0.7E	0.578	0.000	0.140
0.6D-0.6W	0.294	0.000	4.758
0.6D-0.7E	0.206	0.000	0.140

Footing Info

Width =	3.00 ft	
Length =	3.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	2
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Thrust (H)

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

Base Plate Info

	6.0 in
L =	9.0 in

BASED ON SOILS REPORT BY:

Code Minimums

HAIRPIN
n

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	0.58	0.14		12.49 k	13.07 k	Area Req.=	0.96	ft^2
Passive Resistance =		4.73				Area Prov.=	9.00	ft^2
Friction Resistance =		4.57					O.K.	
Safety Factor								
F.S. =		66.41	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	0.21	0.14	0.00 k	12.49 k	7.70 k	Volume Req.=	-54.04	ft^2
Passive Resistance =		4.73	7.42		12.69 k	Volume Prov.=	31.50	ft^2
Friction Resistance =		2.69	7.42				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		53.00	O.K.	F.S. =	36.34	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	0.49	0.00		12.49 k	12.98 k	Area Req.=	0.69	ft^2
Passive Resistance =		4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =		4.54	9.27				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	0.49	5.29		12.49 k	12.98 k	Area Req.=	0.92	ft^2
Passive Resistance =		4.73	9.27			Area Prov.=	9.00	ft^2
Friction Resistance =		4.54	9.27				O.K.	
Safety Factor								
F.S. =		1.75	O.K.					

1

Width: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.
Length: As T&B, min =	1.17 in^2	# 5 BAR	@ 10" o.c.	=1.86 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

MacAthur Street
DR

Spread Footing Thrust Calcs

Job No. 24-459
11/13/2025

7-A
Column

Reaction Package dated: 4-16-2025

Load Case	Axial (V)	Thrust (H)	Thrust (L)
D+C+L	10.930	2.810	0.000
D+C+0.6W	6.020	5.616	0.000
D+C+0.75L+.45W	10.198	2.705	0.000
D+C+0.75L+0.525E	11.049	-0.797	0.000
D+C+0.7E	7.198	0.937	0.000
0.6D-0.6W	-9.312	2.874	0.000
0.6D-0.7E	-0.186	2.575	0.000

Footing Info

Width =	6.00 ft	
Length =	4.00 ft	
Thickness =	3.00 ft	O.K.
Ftg. Depth below slab =	0.50 ft	
Equiv. Fluid =	350 pcf	
Friction =	0.35	
Shear Resistance =	0 pcf	
1/3 increase (y/n)	y	
25% OT Reduction ASCE 12.13.4 (y/n)	n	
50% Friction or Passive Reduction (y/n)	n	

Slab Info

# of Covered Sides =	1
Slab Extension =	6.00 ft
Slab Thickness =	6 in
Cont. Grade Beam	Both Directions

Structural Properties

Thrust Depth Ignored =	0.50 ft		
Soil Bearing Pressure =	2.00 ksf		
f'c =	3.0 ksi	fy steel =	60 ksi
S_{DS} =	1.28 g		

HAIRPIN
n

Base Plate Info
6.0 in
L = 9.0 in

BASED ON SOILS REPORT BY:
Code Minimums

Results

DOWNLOAD	Axial	Thrust		Downward	Net Uplift	Bearing (not increased by 1/3)		
	11.05	0.00		16.20 k	27.25 k	Area Req.=	7.32	ft^2
Passive Resistance =		9.45				Area Prov.=	24.00	ft^2
Friction Resistance =		9.54					O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

UPLIFT	Axial	Thrust	Shear	Downward	Net Uplift	Concrete		
	-9.31	2.87	0.00 k	16.20 k	0.41 k	Volume Req.=	79.47	ft^2
Passive Resistance =		9.45	9.59		6.89 k	Volume Prov.=	84.00	ft^2
Friction Resistance =		0.14	9.59				O.K.	
Safety Factor				**Safety Factor**				
F.S. =		n/a	O.K.	F.S. =	1.04	O.K.		

THRUST H	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Width)	6.02	5.62		16.20 k	22.22 k	Area Req.=	3.62	ft^2
Passive Resistance =		9.45	17.23			Area Prov.=	24.00	ft^2
Friction Resistance =		7.78	17.23				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

THRUST L	Axial	Thrust		Downward	Net Uplift	Bearing		
(Ftg. Length)	10.93	0.00		16.20 k	27.13 k	Area Req.=	7.27	ft^2
Passive Resistance =		6.30	15.80			Area Prov.=	24.00	ft^2
Friction Resistance =		9.50	15.80				O.K.	
Safety Factor								
F.S. =		n/a	O.K.					

1

Width: As T&B, min =	2.33 in^2	# 5 BAR	@ 10" o.c.	=3.72 in^2	O.K.
Length: As T&B, min =	1.56 in^2	# 5 BAR	@ 10" o.c.	=2.48 in^2	O.K.

FOOTING DESIGN IS: ADEQUATE FOR THE DESIGN LOADS

D-1

VP Buildings

3200 Players Club Circle
Memphis, TN 38125-8843

STRUCTURAL DESIGN DATA

Project: Macarthur Street Properties Phase 1
Name: Macarthur Street Properties Phase 1 Preliminary Design-ttb1
Builder PO #:
Jobsite: 1201 E Macarthur Street

City, State: Sonoma, California 95476
County: Sonoma
Country: United States

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6/9/2025

Building Loading - Expanded Report

Shape: Shape 1

Loads and Codes - Shape: Shape 1

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.01 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Frame Weight (assumed for seismic):3.00 psf - USR

Side	Type	Mag	Units	Shape	Applied to	Description
A	D	2.378	psf	Entire	Frm	Covering Weight - 24 SSR + Secondary Weight 1.18 : Roof: A
A	D	1.200	psf	Entire	Pur	Covering Weight - 24 SSR : Roof: A
B	D	2.381	psf	Entire	Frm	Covering Weight - 24 SSR + Secondary Weight 1.18 : Roof: B
B	D	1.200	psf	Entire	Pur	Covering Weight - 24 SSR : Roof: B

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph
Wind Enclosure: Enclosed
Height Used: 26/0/0 (Type: Eave)
Base Elevation: 0/0/0
Primary Zone Strip Width: 2a: 20/9/10
Topographic Factor: Kzt: 1.0000
Directionality Factor: Kd: 0.8500
Wind Exposure: C - Kz: 0.953
Basic Wind Pressure: q: 18.52 psf
Gust Factor: G: 1.0000
Least Horiz. Dimension: 120/0/0
NOT Windborne Debris Region
Parts / Portions Zone Strip Width: a: 12/0/0
qz= 0.00256 * (1.00) * (92.00)^2 * (1.00)
18.52
The 'Envelope Procedure' is Used

Snow Load
Ground Snow Load: pg: 0.00 psf
Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Snow Accumulation Factor: 1.000
Snow Importance: Is: 1.000
Ground / Roof Conversion: 0.70
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed Ce: 0.90
Thermal Factor: Unheated - Ct: 1.20
Slope Reduction: Cs: 1.00
Slope Used: 9.462 deg. (2.000:12)

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990x W

Side	Type	Mag	Units	Shape	Applied to	Description
1	E	0.584	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.13 : Wall: 1
1	E	0.629	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.13 : Wall: 1
2	E	0.636	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.32 : Wall: 2
2	E	0.685	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.32 : Wall: 2

3	E	0.573	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.10 : Wall: 3
3	E	0.617	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.10 : Wall: 3
4	E	0.636	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.32 : Wall: 4
4	E	0.685	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.32 : Wall: 4
A	E	0.680	psf	Entire	Frm	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.18 : Roof: A
A	E	2.286	psf	Spec	Frm	(Includes 5.000 Collateral 3.000 Frame Weight) : Roof: A
A	E	0.732	psf	Entire	Brc	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.18 : Roof: A
A	E	2.462	psf	Spec	Brc	(Includes 5.000 Collateral 3.000 Frame Weight) : Roof: A
A	E	9.714	plf	Line	Frm	Seismic Effect From Cupola wall weight : Roof: A
A	E	10.462	plf	Line	Brc	Seismic Effect From Cupola wall weight : Roof: A
A	E	9.714	plf	Line	Frm	Seismic Effect From Cupola wall weight : Roof: A
A	E	10.462	plf	Line	Brc	Seismic Effect From Cupola wall weight : Roof: A
A	E	9.714	plf	Line	Frm	Seismic Effect From Cupola wall weight : Roof: A
A	E	10.462	plf	Line	Brc	Seismic Effect From Cupola wall weight : Roof: A
B	E	0.680	psf	Entire	Frm	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.18 : Roof: B
B	E	2.286	psf	Spec	Frm	(Includes 5.000 Collateral 3.000 Frame Weight) : Roof: B
B	E	0.733	psf	Entire	Brc	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.18 : Roof: B
B	E	2.462	psf	Spec	Brc	(Includes 5.000 Collateral 3.000 Frame Weight) : Roof: B
B	E	9.714	plf	Line	Frm	Seismic Effect From Cupola wall weight : Roof: B
B	E	10.462	plf	Line	Brc	Seismic Effect From Cupola wall weight : Roof: B
B	E	9.714	plf	Line	Frm	Seismic Effect From Cupola wall weight : Roof: B
B	E	10.462	plf	Line	Brc	Seismic Effect From Cupola wall weight : Roof: B
B	E	9.714	plf	Line	Frm	Seismic Effect From Cupola wall weight : Roof: B
B	E	10.462	plf	Line	Brc	Seismic Effect From Cupola wall weight : Roof: B

Deflection Conditions
Frames are vertically supporting:Metal Roof Purlins and Panels
Frames are laterally supporting:Metal Wall Girts and Panels
Purlins are supporting:Metal Roof Panels
Girts are supporting:Metal Wall Panels

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-

35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
57	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
58	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4
63	System Derived	1.000	0.6 MWB	MWB - Wall: 1
64	System Derived	1.000	0.6 MWB	MWB - Wall: 2
65	System Derived	1.000	0.6 MWB	MWB - Wall: 3
66	System Derived	1.000	0.6 MWB	MWB - Wall: 4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
69	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
70	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
74	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
75	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
76	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
79	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
80	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
83	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
84	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
85	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
86	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>
2	System	1.000	1.0 D + 0.6 <W1	D + <W1
3	System	1.000	1.0 D + 0.6 W2>	D + W2>
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	System	1.000	1.0 D + 0.6 W3>	D + W3>
6	System	1.000	1.0 D + 0.6 <W3	D + <W3
7	System	1.000	1.0 D + 0.6 W4>	D + W4>
8	System	1.000	1.0 D + 0.6 <W4	D + <W4
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4

13	System	1.000	1.0 D + 0.7 E>	D + E>
14	System	1.000	1.0 D + 0.7 <E	D + <E
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
19	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W3>	D + CG + W3>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W3	D + CG + <W3
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W4>	D + CG + W4>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W4	D + CG + <W4
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
26	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W3>	D + CU + W3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W3	D + CU + <W3
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W4>	D + CU + W4>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W4	D + CU + <W4
31	System Derived	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
32	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
33	System Derived	1.000	0.6 D + 0.6 CG + 0.7 E> + 0.7 EG-	D + CG + E> + EG-
34	System Derived	1.000	0.6 D + 0.6 CG + 0.7 <E + 0.7 EG-	D + CG + <E + EG-

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB1>	D + CG + W1> + WB1>
3	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
4	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
5	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB1>	D + CU + <W2 + WB1>
6	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB1>	D + CG + L + W1> + WB1>
7	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB1>	D + CG + L + <W2 + WB1>
8	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB1	D + CG + W1> + <WB1
9	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
10	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
11	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB1	D + CU + <W2 + <WB1
12	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB1	D + CG + L + W1> + <WB1
13	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB1	D + CG + L + <W2 + <WB1
14	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB2>	D + CG + W1> + WB2>
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
16	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
17	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB2>	D + CU + <W2 + WB2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB2>	D + CG + L + W1> + WB2>
19	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB2>	D + CG + L + <W2 + WB2>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB2	D + CG + W1> + <WB2
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2
22	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB2	D + CU + <W2 + <WB2
24	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB2	D + CG + L + W1> + <WB2
25	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB2	D + CG + L + <W2 + <WB2
26	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB3>	D + CG + W1> + WB3>
27	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB3>	D + CU + <W2 + WB3>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB3>	D + CG + L + W1> + WB3>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB3>	D + CG + L + <W2 + WB3>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB3	D + CG + W1> + <WB3
33	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
34	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
35	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB3	D + CU + <W2 + <WB3
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB3	D + CG + L + W1> + <WB3
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB3	D + CG + L + <W2 + <WB3
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB4>	D + CG + W1> + WB4>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB4>	D + CU + <W2 + WB4>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB4>	D + CG + L + W1> + WB4>

43	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB4>	D + CG + L + <W2 + WB4>
44	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB4	D + CG + W1> + <WB4
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB4	D + CU + <W2 + <WB4
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB4	D + CG + L + W1> + <WB4
49	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB4	D + CG + L + <W2 + <WB4
50	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
51	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
52	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
53	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 CG + 0.6 W1>	CG + W1>
2	System	1.000	1.0 CG + 0.6 <W2	CG + <W2

Design Load Combinations - Roof - Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 L	D + L
2	System	1.000	1.0 D + 0.6 <W2	D + <W2
3	System	1.000	0.6 D + 0.6 W1>	D + W1>

Design Load Combinations - Wall - Panel

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>
2	System	1.000	0.6 <W2	<W2

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	1.0 L	L
2	System	1.000	180	0.42 W1>	W1>
3	System	1.000	180	0.42 <W2	<W2

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	90	0.42 W1>	W1>
2	System	1.000	90	0.42 <W2	<W2

Deflection Load Combinations - Roof - Panel

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	60	60	0.42 <W2	<W2

Load Type Descriptions

D	Material Dead Weight	C	Collateral Load
CG	Collateral Load for Gravity Cases	CU	Collateral Load for Wind Cases
L	Roof Live Load	ASL^	Alternate Span Live Load, Shifted Right
^ASL	Alternate Span Live Load, Shifted Left	PL2	Partial Live, Full, 2 Spans
L>	Live - Notional Right	<L	Live - Notional Left
S	Snow Load	US1*	Unbalanced Snow Load 1, Shifted Right
*US1	Unbalanced Snow Load 1, Shifted Left	US2*	Unbalanced Snow Load 2, Shifted Right
*US2	Unbalanced Snow Load 2, Shifted Left	SD	Snow Drift Load
SS	Sliding Snow Load	RS	Rain Surcharge Load
PF1	Partial Load, Full, 1 Span	PH1	Partial Load, Half, 1 Span

PF2	Partial Load, Full, 2 Spans
S>	Snow - Notional Right
SMS	Specified Min. Roof Snow
<SMS	Specified Min. Roof Snow - Notional Left
PS2	Partial Load, Half Span 2
W1>	Wind Load, Case 1, Right
W2>	Wind Load, Case 2, Right
W3>	Wind Load, Case 3, Right
W4>	Wind Load, Case 4, Right
W5>	Wind Load, Case 5, Right
W6>	Wind Load, Case 6, Right
WP	Wind Load, Parallel to Ridge
WPL	Wind Load, ‖ Ridge, Left
WPA2	Wind Parallel - Ref A, Case 2
WPB2	Wind Parallel - Ref B, Case 2
WPC2	Wind Parallel - Ref C, Case 2
WPD2	Wind Parallel - Ref D, Case 2
<WB1	Wind Brace Reaction, Case 1, Left
<WB2	Wind Brace Reaction, Case 2, Left
<WB3	Wind Brace Reaction, Case 3, Left
<WB4	Wind Brace Reaction, Case 4, Left
<WB5	Wind Brace Reaction, Case 5, Left
<WB6	Wind Brace Reaction, Case 6, Left
MWB	Minimum Wind Bracing Reaction
E>	Seismic Load, Right
EG	Vertical Seismic Effect
EG-	Vertical Seismic Effect, Subtractive
<EB	Seismic Brace Reaction, Left
FL*	Alternate Span Floor Live Load, Shifted Right
FD	Floor Dead Load
AL*>	Auxiliary Live Load, Right, Right
<AL*	Auxiliary Live Load, Left, Right
AL*	Aux Live, Right
AL*>(1)	Auxiliary Live Load, Right, Right, Aisle 1
<AL*(1)	Auxiliary Live Load, Left, Right, Aisle 1
AL*(1)	Aux Live, Right, Aisle 1
AL*>(2)	Auxiliary Live Load, Right, Right, Aisle 2
<AL*(2)	Auxiliary Live Load, Left, Right, Aisle 2
AL*(2)	Aux Live, Right, Aisle 2
AL*>(3)	Auxiliary Live Load, Right, Right, Aisle 3
<AL*(3)	Auxiliary Live Load, Left, Right, Aisle 3
AL*(3)	Aux Live, Right, Aisle 3
AL*>(4)	Auxiliary Live Load, Right, Right, Aisle 4
<AL*(4)	Auxiliary Live Load, Left, Right, Aisle 4
AL*(4)	Aux Live, Right, Aisle 4
AL*>(5)	Auxiliary Live Load, Right, Right, Aisle 5
<AL*(5)	Auxiliary Live Load, Left, Right, Aisle 5
AL*(5)	Aux Live, Right, Aisle 5
ALB	Aux Live Bracing Reaction
<ALB	Aux Live Bracing Reaction, Left
<WALB	Wind, Aux Live Bracing Reaction, Left
<ALB(1)	Aux Live Bracing Reaction, Left, Aisle 1
<WALB(1)	Wind, Aux Live Bracing Reaction, Left, Aisle 1
<ALB(2)	Aux Live Bracing Reaction, Left, Aisle 2
<WALB(2)	Wind, Aux Live Bracing Reaction, Left, Aisle 2
<ALB(3)	Aux Live Bracing Reaction, Left, Aisle 3
<WALB(3)	Wind, Aux Live Bracing Reaction, Left, Aisle 3
<ALB(4)	Aux Live Bracing Reaction, Left, Aisle 4
<WALB(4)	Wind, Aux Live Bracing Reaction, Left, Aisle 4
<ALB(5)	Aux Live Bracing Reaction, Left, Aisle 5
<WALB(5)	Wind, Aux Live Bracing Reaction, Left, Aisle 5
AD	Auxiliary Dead Load
U1	User Defined Load - 1
U3	User Defined Load - 3
U5	User Defined Load - 5
U7	User Defined Load - 7
U9	User Defined Load - 9
UB1	User Brace Reaction - 1
PH2	Partial Load, Half, 2 Spans
<S	Snow - Notional Left
SMS>	Specified Min. Roof Snow - Notional Right
PS1	Partial Load, Half Span 1
W	Wind Load
<W1	Wind Load, Case 1, Left
<W2	Wind Load, Case 2, Left
<W3	Wind Load, Case 3, Left
<W4	Wind Load, Case 4, Left
<W5	Wind Load, Case 5, Left
<W6	Wind Load, Case 6, Left
WPR	Wind Load, ‖ Ridge, Right
WPA1	Wind Parallel - Ref A, Case 1
WPB1	Wind Parallel - Ref B, Case 1
WPC1	Wind Parallel - Ref C, Case 1
WPD1	Wind Parallel - Ref D, Case 1
WB1>	Wind Brace Reaction, Case 1, Right
WB2>	Wind Brace Reaction, Case 2, Right
WB3>	Wind Brace Reaction, Case 3, Right
WB4>	Wind Brace Reaction, Case 4, Right
WB5>	Wind Brace Reaction, Case 5, Right
WB6>	Wind Brace Reaction, Case 6, Right
MW	Minimum Wind Load
E	Seismic Load
<E	Seismic Load, Left
EG+	Vertical Seismic Effect, Additive
EB>	Seismic Brace Reaction, Right
FL	Floor Live Load
*FL	Alternate Span Floor Live Load, Shifted Left
AL	Auxiliary Live Load
*AL>	Auxiliary Live Load, Right, Left
<*AL	Auxiliary Live Load, Left, Left
*AL	Aux Live, Left
*AL>(1)	Auxiliary Live Load, Right, Left, Aisle 1
<*AL(1)	Auxiliary Live Load, Left, Left, Aisle 1
*AL(1)	Aux Live, Left, Aisle 1
*AL>(2)	Auxiliary Live Load, Right, Left, Aisle 2
<*AL(2)	Auxiliary Live Load, Left, Left, Aisle 2
*AL(2)	Aux Live, Left, Aisle 2
*AL>(3)	Auxiliary Live Load, Right, Left, Aisle 3
<*AL(3)	Auxiliary Live Load, Left, Left, Aisle 3
*AL(3)	Aux Live, Left, Aisle 3
*AL>(4)	Auxiliary Live Load, Right, Left, Aisle 4
<*AL(4)	Auxiliary Live Load, Left, Left, Aisle 4
*AL(4)	Aux Live, Left, Aisle 4
*AL>(5)	Auxiliary Live Load, Right, Left, Aisle 5
<*AL(5)	Auxiliary Live Load, Left, Left, Aisle 5
*AL(5)	Aux Live, Left, Aisle 5
ALB>	Aux Live Bracing Reaction, Right
WALB>	Wind, Aux Live Bracing Reaction, Right
ALB>(1)	Aux Live Bracing Reaction, Right, Aisle 1
WALB>(1)	Wind, Aux Live Bracing Reaction, Right, Aisle 1
ALB>(2)	Aux Live Bracing Reaction, Right, Aisle 2
WALB>(2)	Wind, Aux Live Bracing Reaction, Right, Aisle 2
ALB>(3)	Aux Live Bracing Reaction, Right, Aisle 3
WALB>(3)	Wind, Aux Live Bracing Reaction, Right, Aisle 3
ALB>(4)	Aux Live Bracing Reaction, Right, Aisle 4
WALB>(4)	Wind, Aux Live Bracing Reaction, Right, Aisle 4
ALB>(5)	Aux Live Bracing Reaction, Right, Aisle 5
WALB>(5)	Wind, Aux Live Bracing Reaction, Right, Aisle 5
WALB	Wind, Aux Live Bracing Reaction
U0	User Defined Load
U2	User Defined Load - 2
U4	User Defined Load - 4
U6	User Defined Load - 6
U8	User Defined Load - 8
UB	User Brace Reaction
UB2	User Brace Reaction - 2

UB3	User Brace Reaction - 3	UB4	User Brace Reaction - 4
UB5	User Brace Reaction - 5	UB6	User Brace Reaction - 6
UB7	User Brace Reaction - 7	UB8	User Brace Reaction - 8
UB9	User Brace Reaction - 9	R	Rain Load
T	Temperature Load	V	Shear

User Applied Surface Loads (Local Coordinate System)

Side	Shape	Units	Type	Description	Mag	X-Loc	Y-Loc	Frm	Brc	Grt	Pur	Pnl	Supp.	Dir.	Loc.
1	PT	k	CG	door load	0.15	29/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
1	PT	k	CG	door load	0.15	41/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
1	PT	k	CG	door load	0.15	78/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
1	PT	k	CG	door load	0.15	90/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
1	PT	k	CG	door load	0.15	29/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
1	PT	k	CG	door load	0.15	41/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
1	PT	k	CG	door load	0.15	78/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
1	PT	k	CG	door load	0.15	90/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	11/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	23/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	77/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	89/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	176/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	188/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	110/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	122/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
2	PT	k	CG	door load	0.15	11/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	23/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	77/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	89/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	176/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	188/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	122/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	PT	k	CG	door load	0.15	110/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	5/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	11/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	5/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	10/4/13	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	10/4/13	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	11/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	5/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	10/4/13	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	10/4/13	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	11/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	71/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	76/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	71/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	76/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	71/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	76/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	123/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	129/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	123/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	129/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	123/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	129/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	195/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/7/3	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	195/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/7/3	8/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/7/3	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	195/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	189/7/3	12/0/0	N	N	Y	N	N	N	IN	OF
2	LN	plf	W	walk door loads	30.00	5/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
2	LN	plf	W	walk door loads	30.00	11/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
2	LN	plf	W	walk door loads	30.00	71/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF

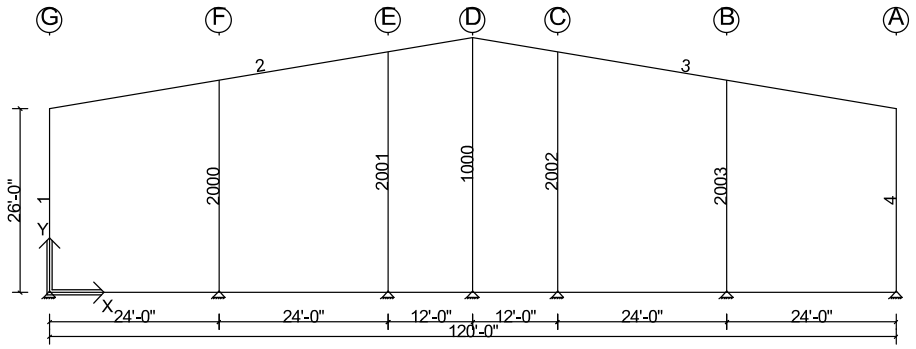
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2	LN	plf	W	walk door loads	30.00	123/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
2	LN	plf	W	walk door loads	30.00	129/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
2	LN	plf	W	walk door loads	30.00	189/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
2	LN	plf	W	walk door loads	30.00	195/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	11/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	23/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	176/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	188/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	110/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	122/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	44/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	56/6/0	14/0/0	N	N	Y	N	N	N	OUT	OF
4	PT	k	CG	door load	0.15	11/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	23/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	176/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	188/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	110/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	122/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	44/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	PT	k	CG	door load	0.15	56/6/0	16/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	124/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	129/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	124/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	129/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	124/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	129/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	190/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	195/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	190/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	195/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	190/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	195/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	5/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	11/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	5/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	5/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	11/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	10/4/13	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	11/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	38/0/0	8/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	43/0/0	8/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	38/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	43/0/0	12/0/0	Y	N	N	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	38/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	43/0/0	8/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	38/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	43/0/0	12/0/0	N	N	Y	N	N	N	IN	OF
4	LN	plf	W	walk door loads	30.00	124/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	W	walk door loads	30.00	129/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	W	walk door loads	30.00	190/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	W	walk door loads	30.00	195/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	W	walk door loads	30.00	5/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
4	LN	plf	W	walk door loads	30.00	11/0/0	8/0/0	Y	N	N	N	N	N	OUT	OF
A	PT	k	W1>	cupula	1.02	132/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	<W1	cupula	0.56	132/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	RC	psf	W	OPPOSING WIND : Parts - Side Zone 2	27.43	67/0/0	0/0/0	N	N	N	Y	Y	N	OUT	OF
A	RC	psf	W	OPPOSING WIND : Parts - Side Zone 2	27.43	67/0/0	-12/0/0	N	N	N	Y	Y	N	OUT	OF
A	RC	psf	W	OPPOSING WIND : Parts - Side	27.43	133/0/0	-12/0/0	N	N	N	Y	Y	N	OUT	OF

				Zone 2											
A	RC	psf	W	OPPOSING WIND : Parts - Side Zone 2	27.43	133/0/0	0/0/0	N	N	N	Y	Y	N	OUT	OF
A	PT	k	W1>	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W1>	cupula	0.56	66/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	<W1	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W1	cupula	1.02	66/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	E>	cupula	0.40	132/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	E>	cupula	2.71	99/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	E>	cupula	0.40	66/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	<E	cupula	0.40	132/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<E	cupula	2.71	99/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<E	cupula	0.40	66/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	LN	plf	CG	Cupola wall weight	34.00	67/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
A	LN	plf	CG	Cupola wall weight	34.00	133/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
A	LN	plf	CG	Cupola wall weight	34.00	67/0/0	0/0/0	Y	N	N	Y	N	N	IN	OF
A	LN	plf	CG	Cupola wall weight	34.00	67/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
A	LN	plf	CG	Cupola wall weight	34.00	133/0/0	0/0/0	Y	N	N	Y	N	N	IN	OF
A	LN	plf	CG	Cupola wall weight	34.00	133/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
A	PT	k	W2>	cupula	1.02	132/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W3>	cupula	1.02	132/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W4>	cupula	1.02	132/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	<W2	cupula	0.56	132/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W3	cupula	0.56	132/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W4	cupula	0.56	132/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	W2>	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W3>	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W4>	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W2>	cupula	0.56	66/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W3>	cupula	0.56	66/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	W4>	cupula	0.56	66/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
A	PT	k	<W2	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W3	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W4	cupula	1.56	99/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W2	cupula	1.02	66/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W3	cupula	1.02	66/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
A	PT	k	<W4	cupula	1.02	66/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W1>	cupula	0.50	67/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	<W1	cupula	0.30	67/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	RC	psf	W	OPPOSING WIND: Parts - Side Zone 2: Parts - Side Zone 2: Parts - Side Zone 2	27.43	67/0/0	0/0/0	N	N	N	Y	Y	N	OUT	OF
B	RC	psf	W	OPPOSING WIND: Parts - Side Zone 2: Parts - Side Zone 2: Parts - Side Zone 2	27.43	67/0/0	-12/0/0	N	N	N	Y	Y	N	OUT	OF
B	RC	psf	W	OPPOSING WIND: Parts - Side Zone 2: Parts - Side Zone 2: Parts - Side Zone 2	27.43	133/0/0	-12/0/0	N	N	N	Y	Y	N	OUT	OF
B	RC	psf	W	OPPOSING WIND: Parts - Side Zone 2: Parts - Side Zone 2: Parts - Side Zone 2	27.43	133/0/0	0/0/0	N	N	N	Y	Y	N	OUT	OF
B	PT	k	W1>	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W1>	cupula	0.30	133/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	<W1	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W1	cupula	0.50	133/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	E>	cupula	0.40	67/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	E>	cupula	2.71	100/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	E>	cupula	0.40	133/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	<E	cupula	0.40	67/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<E	cupula	2.71	100/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<E	cupula	0.40	133/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	LN	plf	CG	Cupola wall weight	34.00	67/0/0	0/0/0	Y	N	N	Y	N	N	IN	OF
B	LN	plf	CG	Cupola wall weight	34.00	67/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
B	LN	plf	CG	Cupola wall weight	34.00	67/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
B	LN	plf	CG	Cupola wall weight	34.00	133/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
B	LN	plf	CG	Cupola wall weight	34.00	133/0/0	0/0/0	Y	N	N	Y	N	N	IN	OF
B	LN	plf	CG	Cupola wall weight	34.00	133/0/0	-13/6/0	Y	N	N	Y	N	N	IN	OF
B	PT	k	W2>	cupula	0.50	67/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF

B	PT	k	W3>	cupula	0.50	67/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W4>	cupula	0.50	67/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	<W2	cupula	0.30	67/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W3	cupula	0.30	67/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W4	cupula	0.30	67/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	W2>	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W4>	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W3>	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W2>	cupula	0.30	133/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W3>	cupula	0.30	133/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	W4>	cupula	0.30	133/0/0	-13/6/0	N	Y	N	N	N	N	LEFT	OF
B	PT	k	<W2	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W3	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W4	cupula	0.80	100/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W2	cupula	0.50	133/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W3	cupula	0.50	133/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF
B	PT	k	<W4	cupula	0.50	133/0/0	-13/6/0	N	Y	N	N	N	N	RIGHT	OF

User Defined Frame Point Loads for Cross Section: 1

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF

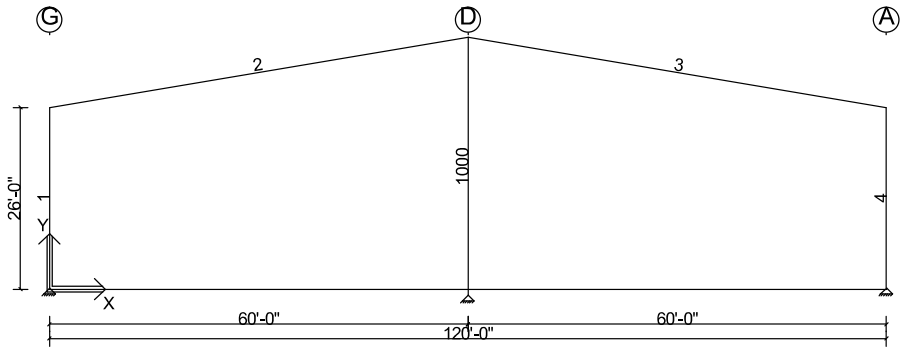


User Defined Frame Point Loads for Cross Section: 2

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 2

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	2 bay loading	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
2	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	D	2 bay loads	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF


G
D
A
2
3
1000
4
26'-0"
1
Y
X
60'-0"
60'-0"
120'-0"

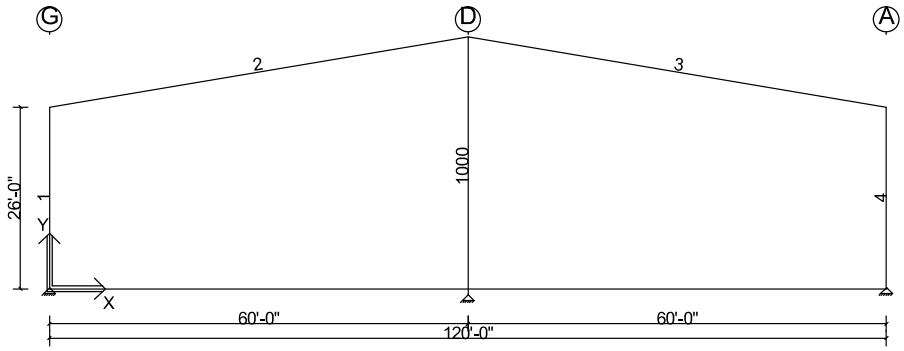
User Defined Frame Point Loads for Cross Section: 3

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-0.23	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	CG	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	W1>	Imported - CUPOLA	4.22	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W1>	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W1	Imported - CUPOLA	-1.53	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W1	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
2	k	W2>	Imported - CUPOLA	4.46	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W2>	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W2	Imported - CUPOLA	-1.29	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W2	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPL	Imported - CUPOLA	0.09	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WPL	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPR	Imported - CUPOLA	-0.33	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPR	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
2	k	CU	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	L	Imported - CUPOLA	-0.97	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
2	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
3	k	D	Imported - CUPOLA	0.23	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	CG	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	W1>	Imported - CUPOLA	1.53	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W1>	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W1	Imported - CUPOLA	-4.22	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W1	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
3	k	W2>	Imported - CUPOLA	1.29	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W2>	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W2	Imported - CUPOLA	-4.46	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W2	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPL	Imported - CUPOLA	0.33	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPL	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPR	Imported - CUPOLA	-0.09	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WPR	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
3	k	CU	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	L	Imported - CUPOLA	0.97	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
3	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF

1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 3

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
2	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF
3	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
3	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF



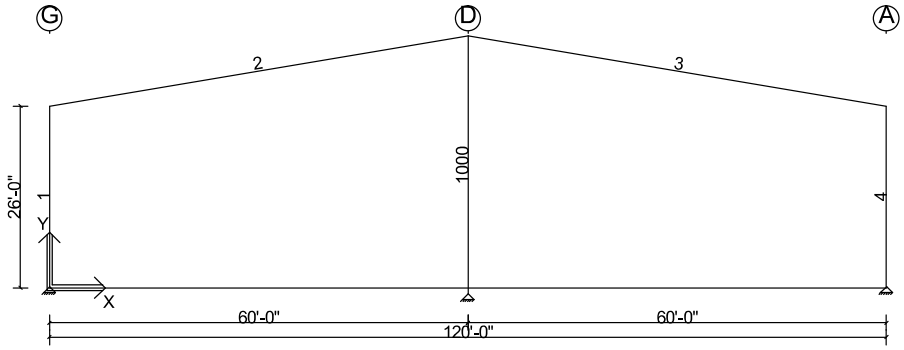
User Defined Frame Point Loads for Cross Section: 4

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
2	k	WB1>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB2>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB3>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB4>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	EB>	Imported - CUPOLA	0.83	11/6/4	NA	NA	N	UP	1.000	OF
2	k	D	Imported - CUPOLA	-0.48	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-1.75	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	CG	Imported - CUPOLA	-0.72	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CG	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	W1>	Imported - CUPOLA	6.91	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W1>	Imported - CUPOLA	12.25	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W1	Imported - CUPOLA	-2.56	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W1	Imported - CUPOLA	6.65	11/6/4	NA	NA	N	UP	1.000	OF
2	k	W2>	Imported - CUPOLA	7.36	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W2>	Imported - CUPOLA	7.84	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W2	Imported - CUPOLA	-2.11	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W2	Imported - CUPOLA	2.24	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPL	Imported - CUPOLA	-0.15	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPL	Imported - CUPOLA	8.00	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPR	Imported - CUPOLA	-0.81	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPR	Imported - CUPOLA	9.54	11/6/4	NA	NA	N	UP	1.000	OF
2	k	CU	Imported - CUPOLA	-0.72	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CU	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	L	Imported - CUPOLA	-1.39	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	L	Imported - CUPOLA	-4.75	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB1>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB1>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB1	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB1	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB2>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB2>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB2	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB2	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB3>	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB3>	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB3	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB3	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB4>	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB4>	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB4	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB4	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	p	CG	Cupola wall weight ->Resolved From Plane	-1122.00	13/6/0	NA	NA	N	DOWN	1.000	OF
3	k	WB1>	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB2>	Imported - CUPOLA	0.44	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB3>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB4>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	EB>	Imported - CUPOLA	0.84	11/6/4	NA	NA	N	UP	1.000	OF
3	k	D	Imported - CUPOLA	0.48	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	D	Imported - CUPOLA	-1.75	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	CG	Imported - CUPOLA	0.72	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CG	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	W1>	Imported - CUPOLA	2.56	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W1>	Imported - CUPOLA	6.65	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W1	Imported - CUPOLA	-6.91	11/6/4	NA	NA	N	LEFT	1.000	OF

3	k	<W1	Imported - CUPOLA	12.25	11/6/4	NA	NA	N	UP	1.000	OF
3	k	W2>	Imported - CUPOLA	2.11	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W2>	Imported - CUPOLA	2.24	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W2	Imported - CUPOLA	-7.36	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W2	Imported - CUPOLA	7.84	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPL	Imported - CUPOLA	0.81	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPL	Imported - CUPOLA	9.54	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPR	Imported - CUPOLA	0.15	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPR	Imported - CUPOLA	8.00	11/6/4	NA	NA	N	UP	1.000	OF
3	k	CU	Imported - CUPOLA	0.72	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CU	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	L	Imported - CUPOLA	1.39	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	L	Imported - CUPOLA	-4.75	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB1>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB1>	Imported - CUPOLA	0.46	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB1	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB1	Imported - CUPOLA	-0.43	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB2>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB2>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB2	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB2	Imported - CUPOLA	-0.44	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB3>	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB3>	Imported - CUPOLA	0.50	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB3	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB3	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB4>	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB4>	Imported - CUPOLA	0.50	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB4	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB4	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	EB>	Imported - CUPOLA	0.05	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	EB>	Imported - CUPOLA	0.88	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<EB	Imported - CUPOLA	-0.04	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<EB	Imported - CUPOLA	-0.83	11/6/4	NA	NA	N	DOWN	1.000	OF
3	p	CG	Cupola wall weight ->Resolved From Plane	-1122.00	13/6/0	NA	NA	N	DOWN	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 4

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	opposing dead load	76.54	0/0/2	76.54	12/6/0	N	UP	1.000	OF
3	plf	D	opposing dead load	76.63	0/0/2	76.63	12/6/0	N	UP	1.000	OF


G
D
A
2
3
1000
26'-0"
1
4
Y
X
60'-0"
60'-0"
120'-0"

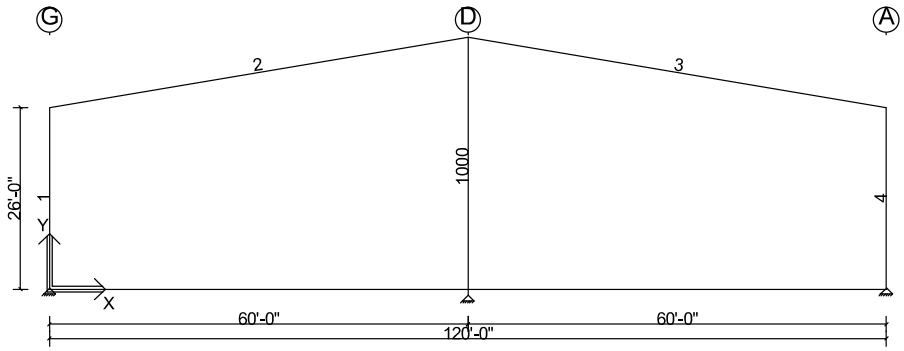
User Defined Frame Point Loads for Cross Section: 5

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
2	k	<WB1	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB2	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB3	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB4	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<EB	Imported - CUPOLA	0.84	11/6/4	NA	NA	N	UP	1.000	OF
2	k	D	Imported - CUPOLA	-0.23	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	CG	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	W1>	Imported - CUPOLA	4.22	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W1>	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W1	Imported - CUPOLA	-1.53	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W1	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
2	k	W2>	Imported - CUPOLA	4.46	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W2>	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W2	Imported - CUPOLA	-1.29	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W2	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPL	Imported - CUPOLA	0.09	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WPL	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPR	Imported - CUPOLA	-0.33	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPR	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
2	k	CU	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	L	Imported - CUPOLA	-0.97	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB1>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB1>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB1	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB1	Imported - CUPOLA	0.49	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB2>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB2>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB2	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB2	Imported - CUPOLA	0.49	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB3>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB3>	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB3	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB3	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB4>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB4>	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB4	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB4	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	EB>	Imported - CUPOLA	0.04	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	EB>	Imported - CUPOLA	-0.83	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<EB	Imported - CUPOLA	-0.05	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<EB	Imported - CUPOLA	0.88	11/6/4	NA	NA	N	UP	1.000	OF
2	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
3	k	<WB1	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB2	Imported - CUPOLA	0.44	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB3	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB4	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<EB	Imported - CUPOLA	0.83	11/6/4	NA	NA	N	UP	1.000	OF
3	k	D	Imported - CUPOLA	0.23	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	CG	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF

3	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	W1>	Imported - CUPOLA	1.53	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W1>	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W1	Imported - CUPOLA	-4.22	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W1	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
3	k	W2>	Imported - CUPOLA	1.29	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W2>	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W2	Imported - CUPOLA	-4.46	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W2	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPL	Imported - CUPOLA	0.33	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPL	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPR	Imported - CUPOLA	-0.09	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WPR	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
3	k	CU	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	L	Imported - CUPOLA	0.97	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB1>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB1>	Imported - CUPOLA	-0.43	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB1	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB1	Imported - CUPOLA	0.41	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB2>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB2>	Imported - CUPOLA	-0.44	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB2	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB2	Imported - CUPOLA	0.42	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB3>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB3>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB3	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB3	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB4>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB4>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB4	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB4	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
3	k	EB>	Imported - CUPOLA	-0.04	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	EB>	Imported - CUPOLA	-0.84	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<EB	Imported - CUPOLA	0.05	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<EB	Imported - CUPOLA	0.79	11/6/4	NA	NA	N	UP	1.000	OF
3	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 5

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
2	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF
3	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
3	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF

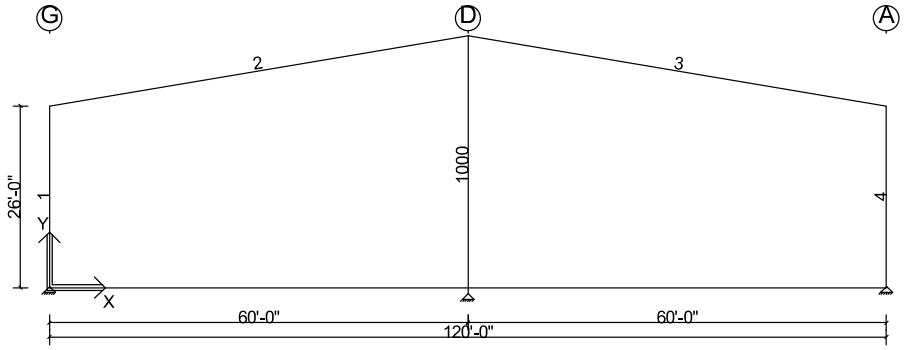

G
D
A
2
3
1000
4
26'-0"
1
Y
X
60'-0"
60'-0"
120'-0"

User Defined Frame Point Loads for Cross Section: 6

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

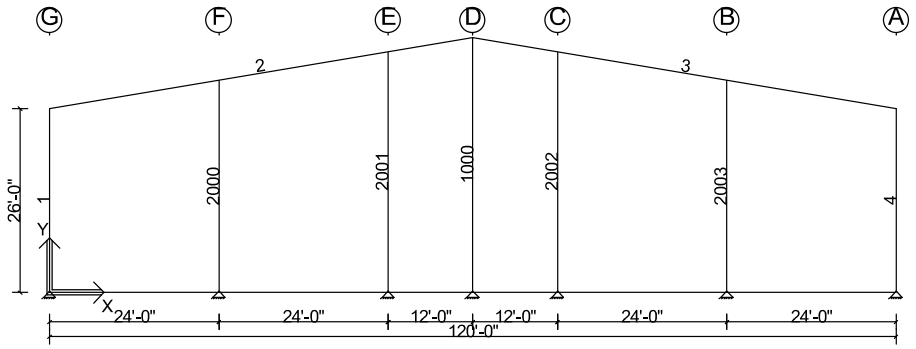
User Defined Frame Line Loads for Cross Section: 6

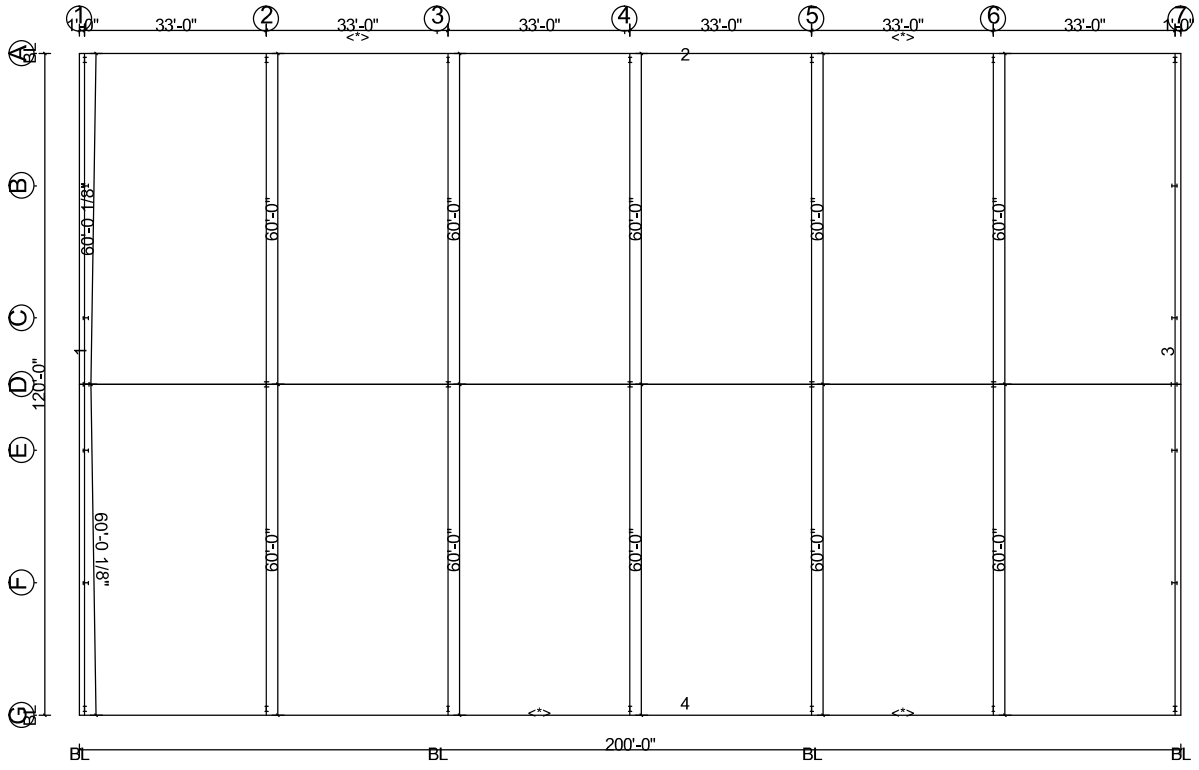
Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	2 bay loads	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
2	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	D	2 bay loads	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF



User Defined Frame Point Loads for Cross Section: 7

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF





<*> The building is designed with bracing diagonals in the designated bays. Column base reactions, base plates and anchor rods are affected by this bracing and diagonals may not be relocated without consulting the building supplier's engineer.

Shape: Shape 1 Clerestory

Loads and Codes - Shape: Shape 1 Clerestory

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code Structural: 16AISC - ASD Rainfall: I: 4.00 inches per hour
Based on Building Code: 2021 International Building Code Cold Form: 16AISI - ASD f'c: 3000.00 psi Concrete
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Dead and Collateral Loads

Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Frame Weight (assumed for seismic):2.50 psf

Side	Type	Mag	Units	Shape	Applied to	Description
A	D	2.893	psf	Entire	Frm	Covering Weight - 24 SSR + Secondary Weight 1.69 : Roof: A
A	D	1.200	psf	Entire	Pur	Covering Weight - 24 SSR : Roof: A
B	D	2.893	psf	Entire	Frm	Covering Weight - 24 SSR + Secondary Weight 1.69 : Roof: B
B	D	1.200	psf	Entire	Pur	Covering Weight - 24 SSR : Roof: B

Roof Live Load

Roof Live Load: 20.00 psf Reducible

Wind Load

Wind Speed: Vult: 92.00 (Vasd: 71.26) mph
Wind Enclosure: Enclosed
Height Used: 46/0/0 (Type: Eave)
Base Elevation: 36/0/0
Primary Zone Strip Width: 2a: 6/0/0

Topographic Factor: Kzt: 1.0000
Directionality Factor: Kd: 0.8500
Wind Exposure: C - Kz: 1.075
Basic Wind Pressure: q: 18.52 psf

Gust Factor: G: 0.8500
Least Horiz. Dimension: 24/0/0

NOT Windborne Debris Region
Parts / Portions Zone Strip Width: a: 3/0/0
qz= 0.00256 * (1.00) * (92.00)^2 * (1.00)
The 'Envelope Procedure' is Used - User Modified

Snow Load

Ground Snow Load: pg: 0.00 psf
Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Snow Accumulation Factor: 1.000
Snow Importance: Is: 1.000
Ground / Roof Conversion: 0.70

Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed Ce: 0.90
Thermal Factor: Unheated - Ct: 1.20
Slope Reduction: Cs: 1.00
Slope Used: 9.462 deg. (2.000:12)

Seismic Load

Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
% Snow Used in Seismic: 0.00
Seismic Snow Load: 0.00 psf
Diaphragm Condition: Flexible
Fundamental Period Height Used: 46/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.5989
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3533
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990x W

Side	Type	Mag	Units	Shape	Applied to	Description
1	E	0.495	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 0.82 : Wall: 1
1	E	0.533	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 0.82 : Wall: 1
2	E	0.686	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.49 : Wall: 2
2	E	0.739	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.49 : Wall: 2
3	E	0.495	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 0.82 : Wall: 3

3	E	0.533	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 0.82 : Wall: 3
4	E	0.686	psf	Entire	Frm	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.49 : Wall: 4
4	E	0.739	psf	Entire	Brc	Seismic: Covering Weight - 26 Panel Rib + Secondary Weight 1.49 : Wall: 4
A	E	2.970	psf	Entire	Frm	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.69 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: A
A	E	3.198	psf	Entire	Brc	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.69 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: A
B	E	2.970	psf	Entire	Frm	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.69 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: B
B	E	3.198	psf	Entire	Brc	Seismic: Covering Weight - 24 SSR + Secondary Weight 1.69 + (Includes 5.000 Collateral 2.500 Frame Weight) : Roof: B

Deflection Conditions
Frames are vertically supporting:Metal Roof Purlins and Panels
Frames are laterally supporting:Metal Wall Girts and Panels
Purlins are supporting:Metal Roof Panels
Girts are supporting:Metal Wall Panels

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
4	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
5	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
7	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
8	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
14	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
15	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
29	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
30	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
31	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
32	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
33	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
34	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
35	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
36	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
37	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
38	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
40	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
43	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
44	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
45	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
46	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2

48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
49	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
50	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
51	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
52	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
53	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
54	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
55	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
56	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
57	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
58	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
59	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
60	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4
61	System Derived	1.000	0.6 MWB	MWB - Wall: 1
62	System Derived	1.000	0.6 MWB	MWB - Wall: 2
63	System Derived	1.000	0.6 MWB	MWB - Wall: 3
64	System Derived	1.000	0.6 MWB	MWB - Wall: 4
65	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
66	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
69	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
70	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
73	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
74	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
75	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
76	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
79	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
80	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
83	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
84	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>
2	System	1.000	1.0 D + 0.6 <W1	D + <W1
3	System	1.000	1.0 D + 0.6 W2>	D + W2>
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	System	1.000	1.0 D + 0.6 W3>	D + W3>
6	System	1.000	1.0 D + 0.6 <W3	D + <W3
7	System	1.000	1.0 D + 0.6 W4>	D + W4>
8	System	1.000	1.0 D + 0.6 <W4	D + <W4
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	1.0 D + 0.7 E>	D + E>
14	System	1.000	1.0 D + 0.7 <E	D + <E
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
19	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W3>	D + CG + W3>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W3	D + CG + <W3
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W4>	D + CG + W4>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W4	D + CG + <W4
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
26	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W3>	D + CU + W3>

28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W3	D + CU + <W3
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W4>	D + CU + W4>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W4	D + CU + <W4
31	System Derived	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
32	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
33	System Derived	1.000	0.6 D + 0.6 CG + 0.7 E> + 0.7 EG-	D + CG + E> + EG-
34	System Derived	1.000	0.6 D + 0.6 CG + 0.7 <E + 0.7 EG-	D + CG + <E + EG-

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB1>	D + CG + W1> + WB1>
3	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
4	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
5	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB1>	D + CU + <W2 + WB1>
6	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB1>	D + CG + L + W1> + WB1>
7	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB1>	D + CG + L + <W2 + WB1>
8	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB1	D + CG + W1> + <WB1
9	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
10	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
11	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB1	D + CU + <W2 + <WB1
12	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB1	D + CG + L + W1> + <WB1
13	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB1	D + CG + L + <W2 + <WB1
14	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB2>	D + CG + W1> + WB2>
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
16	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
17	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB2>	D + CU + <W2 + WB2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB2>	D + CG + L + W1> + WB2>
19	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB2>	D + CG + L + <W2 + WB2>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB2	D + CG + W1> + <WB2
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2
22	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB2	D + CU + <W2 + <WB2
24	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB2	D + CG + L + W1> + <WB2
25	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB2	D + CG + L + <W2 + <WB2
26	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB3>	D + CG + W1> + WB3>
27	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB3>	D + CU + <W2 + WB3>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB3>	D + CG + L + W1> + WB3>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB3>	D + CG + L + <W2 + WB3>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB3	D + CG + W1> + <WB3
33	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
34	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
35	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB3	D + CU + <W2 + <WB3
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB3	D + CG + L + W1> + <WB3
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB3	D + CG + L + <W2 + <WB3
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB4>	D + CG + W1> + WB4>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB4>	D + CU + <W2 + WB4>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB4>	D + CG + L + W1> + WB4>
43	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB4>	D + CG + L + <W2 + WB4>
44	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB4	D + CG + W1> + <WB4
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB4	D + CU + <W2 + <WB4
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB4	D + CG + L + W1> + <WB4
49	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB4	D + CG + L + <W2 + <WB4
50	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
51	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
52	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
53	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>

2	System	1.000	0.6 <W2	<W2

Design Load Combinations - Roof - Panel

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 L	D + L
2	System	1.000	1.0 D + 0.6 <W2	D + <W2
3	System	1.000	0.6 D + 0.6 W1>	D + W1>

Design Load Combinations - Wall - Panel

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>
2	System	1.000	0.6 <W2	<W2

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Deflection Load Combinations - Purlin

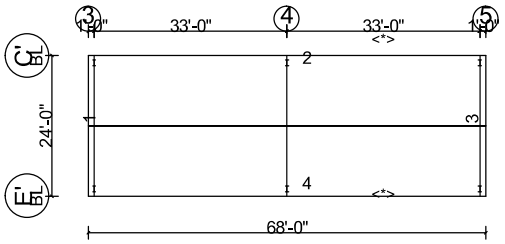
No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	1.0 L	L
2	System	1.000	180	0.42 W1>	W1>
3	System	1.000	180	0.42 <W2	<W2

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	90	0.42 W1>	W1>
2	System	1.000	90	0.42 <W2	<W2

Deflection Load Combinations - Roof - Panel

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	60	60	0.42 <W2	<W2



BL BL

<*> The building is designed with bracing diagonals in the designated bays. Column base reactions, base plates and anchor rods are affected by this bracing and diagonals may not be relocated without consulting the building supplier's engineer.

Bracing - Summary Report

Shape: Shape 1

Loads and Codes - Shape: Shape 1

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.01 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):3.00 psf - USR

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used
Wind Exposure: C - Kz: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Primary Zone Strip Width: 2a: 20/9/10
Parts / Portions Zone Strip Width: a: 12/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

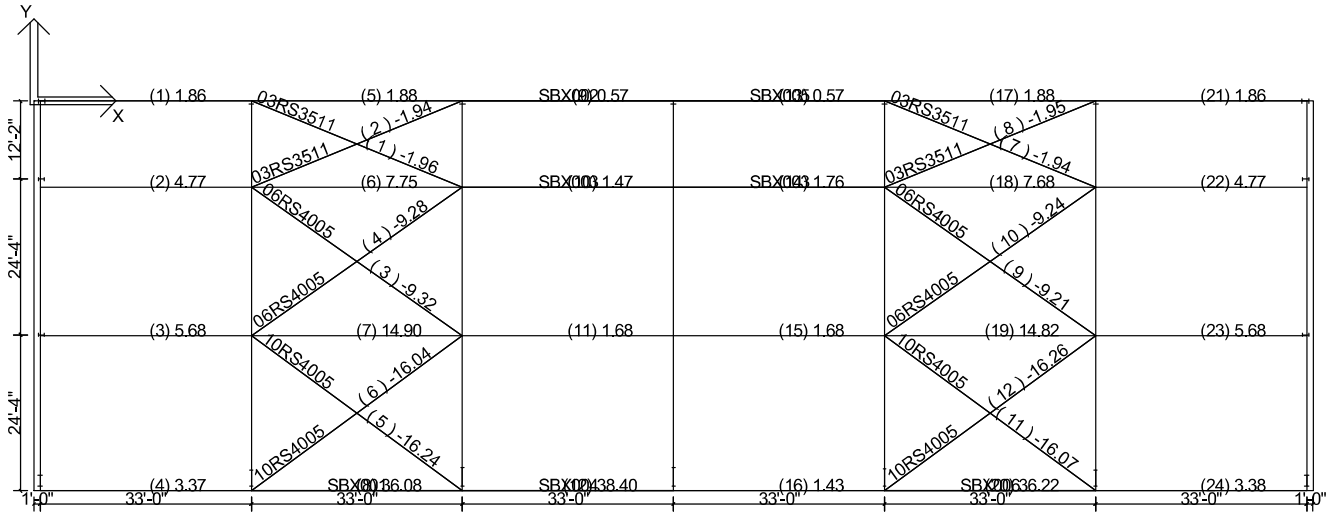
Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Deflection Conditions
Frames are vertically supporting:Metal Roof Purlins and Panels
Frames are laterally supporting:Metal Wall Girts and Panels
Purlins are supporting:Metal Roof Panels
Girts are supporting:Metal Wall Panels

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>
2	System	1.000	1.0 D + 0.6 <W1	D + <W1
3	System	1.000	1.0 D + 0.6 W2>	D + W2>
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	System	1.000	1.0 D + 0.6 W3>	D + W3>
6	System	1.000	1.0 D + 0.6 <W3	D + <W3
7	System	1.000	1.0 D + 0.6 W4>	D + W4>
8	System	1.000	1.0 D + 0.6 <W4	D + <W4
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4

13	System	1.000	1.0 D + 0.7 E>	D + E>
14	System	1.000	1.0 D + 0.7 <E	D + <E
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
19	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W3>	D + CG + W3>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W3	D + CG + <W3
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W4>	D + CG + W4>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W4	D + CG + <W4
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
26	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W3>	D + CU + W3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W3	D + CU + <W3
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W4>	D + CU + W4>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W4	D + CU + <W4
31	System Derived	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
32	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
33	System Derived	1.000	0.6 D + 0.6 CG + 0.7 E> + 0.7 EG-	D + CG + E> + EG-
34	System Derived	1.000	0.6 D + 0.6 CG + 0.7 <E + 0.7 EG-	D + CG + <E + EG-



Diagonal Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	35.89	23.7	-1.96	1.0000	1.0000	0.765	1.0D+1.0CG+0.7<E+0.7EG+	passed	
2	R 0.375	35.89	23.7	-1.94	1.0000	1.0000	0.758	1.0D+1.0CG+0.7E>+0.7EG+	passed	
3	R 0.75	40.40	36.2	-9.32	1.0000	1.0000	0.858	1.0D+1.0CG+0.7<E+0.7EG+	passed	
4	R 0.75	40.40	36.2	-9.28	1.0000	1.0000	0.853	1.0D+1.0CG+0.7E>+0.7EG+	passed	
5	R 1.0	40.41	37.4	-16.24	1.0000	1.0000	0.841	1.0D+1.0CG+0.7<E+0.7EG+	passed	
6	R 1.0	40.41	37.4	-16.04	1.0000	1.0000	0.831	1.0D+1.0CG+0.7E>+0.7EG+	passed	
7	R 0.375	35.89	23.7	-1.94	1.0000	1.0000	0.756	1.0D+1.0CG+0.7<E+0.7EG+	passed	
8	R 0.375	35.89	23.7	-1.95	1.0000	1.0000	0.760	1.0D+1.0CG+0.7E>+0.7EG+	passed	
9	R 0.75	40.40	36.2	-9.21	1.0000	1.0000	0.847	1.0D+1.0CG+0.7<E+0.7EG+	passed	
10	R 0.75	40.40	36.2	-9.24	1.0000	1.0000	0.850	1.0D+1.0CG+0.7E>+0.7EG+	passed	
11	R 1.0	40.41	37.4	-16.07	1.0000	1.0000	0.833	1.0D+1.0CG+0.7<E+0.7EG+	passed	
12	R 1.0	40.41	37.4	-16.26	1.0000	1.0000	0.842	1.0D+1.0CG+0.7E>+0.7EG+	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.96, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.96, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.94, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.94, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
3	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.32, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.32, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
4	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.28, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.28, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
5	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.24, E factor = 1.000, stress increase = 1.000, slot offset, =

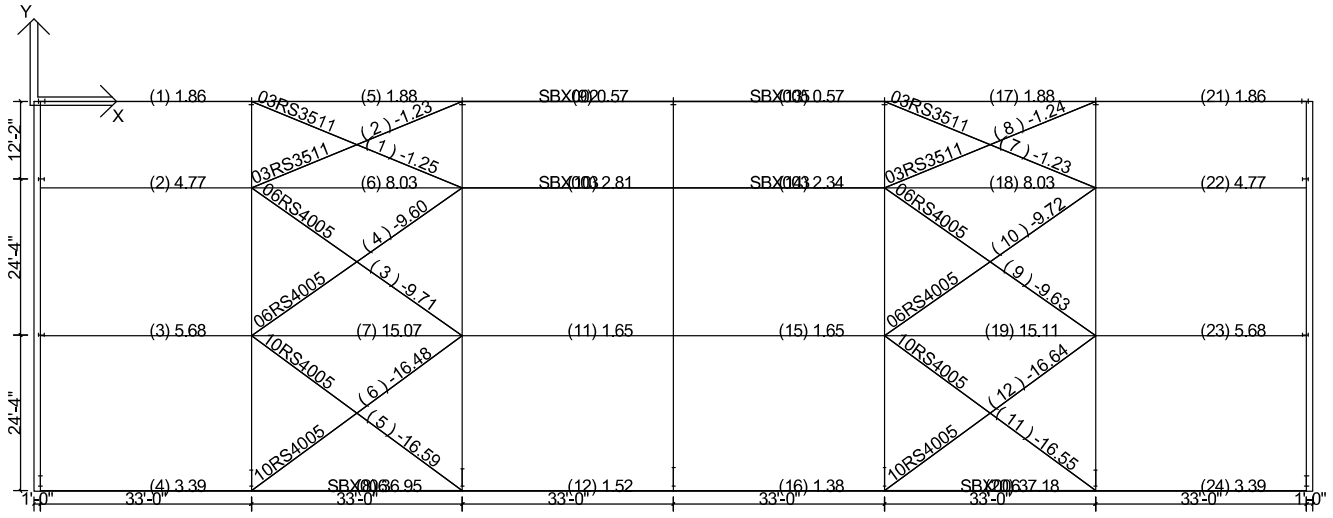
	Right	3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED. Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
6	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.04, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.04, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
7	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.94, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.94, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
8	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.95, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.95, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
9	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.21, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.21, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
10	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
11	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.07, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.07, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
12	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.26, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.26, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.

Strut Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Description
8	3P 9x3/8x3/16x9	33.00	14.43	2.5000	1.0000	0.947	1.0D+1.0CG+0.7E>+0.7EG+	passed	Eave Strut, Collector
9	3P 8x1/4x0.1345x9	33.00	0.57	1.0000	1.0000	0.210	0.6MW Wall 3	passed	Ridge Strut
10	3P 8x1/4x0.1345x9	33.00	1.47	1.0000	1.0000	0.254	1.0D+1.0CG+0.6<W4	passed	Unbraced Bay Strut
12	3P 10x3/8x3/16x12	33.00	15.36	2.5000	1.0000	0.737	1.0D+1.0CG+0.7E>+0.7EG+	passed	Eave Strut, Collector
13	3P 8x1/4x0.1345x9	33.00	0.57	1.0000	1.0000	0.210	0.6MW Wall 3	passed	Ridge Strut
14	3P 8x1/4x0.1345x9	33.00	1.76	1.0000	1.0000	0.269	1.0D+1.0CG+0.7E>+0.7EG+	passed	Unbraced Bay Strut
20	3P 9x3/8x3/16x12	33.00	14.49	2.5000	1.0000	0.945	1.0D+1.0CG+0.7<E+0.7EG+	passed	Eave Strut, Collector

Mem.	End	Strut Connection Design Information
8	Left	Clip 3MZG0740607000002B (2) Rows of (2) 0.750in. ASTM A325N, Axial 36.08k, Vertical Shear 0.45k, Bolt Shear Stress Ratio 3.02/4.00 = 0.76 OK, Bolt Bearing Min Web Thickness 0.115in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZG0740607000002B (2) Rows of (2) 0.750in. ASTM A325N, Axial 36.08k, Vertical Shear 0.45k, Bolt Shear Stress Ratio 3.02/4.00 = 0.76 OK, Bolt Bearing Min Web Thickness 0.115in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
9	Left	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.16 = 0.05 OK, Bolt Bearing Min Web Thickness 0.007in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0500607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.05 = 0.05 OK, Bolt Bearing Min Web Thickness 0.008in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
10	Left	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 1.47k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.13/1.41 = 0.09 OK, Bolt Bearing Min Web Thickness 0.013in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 1.47k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.13/1.41 = 0.09 OK, Bolt Bearing Min Web Thickness 0.013in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
12	Left	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 38.40k, Vertical Shear 12.74k, Bolt Shear Stress Ratio 3.39/4.04 = 0.84 OK, Bolt Bearing Min Web Thickness 0.127in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 38.40k, Vertical Shear 12.74k, Bolt Shear Stress Ratio 3.39/4.04 = 0.84 OK, Bolt Bearing Min Web Thickness 0.127in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
13	Left	Clip 3MZE0500607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.05 = 0.05 OK, Bolt Bearing Min Web Thickness 0.008in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.16 = 0.05 OK, Bolt Bearing Min Web Thickness 0.007in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
14	Left	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 1.76k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.15/2.00 = 0.07 OK, Bolt Bearing Min Web Thickness 0.011in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.

	Right	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 1.76k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.15/2.00 = 0.07 OK, Bolt Bearing Min Web Thickness 0.011in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
20	Left	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 36.22k, Vertical Shear 12.73k, Bolt Shear Stress Ratio 3.22/4.04 = 0.80 OK, Bolt Bearing Min Web Thickness 0.121in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 36.22k, Vertical Shear 12.73k, Bolt Shear Stress Ratio 3.22/4.04 = 0.80 OK, Bolt Bearing Min Web Thickness 0.121in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.



Diagonal Bracing Member Design Summary: Roof B

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	35.89	23.7	-1.25	1.0000	1.0000	0.490	1.0D+1.0CG+0.7E>+0.7EG+	passed	
2	R 0.375	35.89	23.7	-1.23	1.0000	1.0000	0.481	1.0D+1.0CG+0.7<E+0.7EG+	passed	
3	R 0.75	40.40	36.2	-9.71	1.0000	1.0000	0.893	1.0D+1.0CG+0.7E>+0.7EG+	passed	
4	R 0.75	40.40	36.2	-9.60	1.0000	1.0000	0.883	1.0D+1.0CG+0.7<E+0.7EG+	passed	
5	R 1.0	40.41	37.4	-16.59	1.0000	1.0000	0.860	1.0D+1.0CG+0.7E>+0.7EG+	passed	
6	R 1.0	40.41	37.4	-16.48	1.0000	1.0000	0.854	1.0D+1.0CG+0.7<E+0.7EG+	passed	
7	R 0.375	35.89	23.7	-1.23	1.0000	1.0000	0.481	1.0D+1.0CG+0.7E>+0.7EG+	passed	
8	R 0.375	35.89	23.7	-1.24	1.0000	1.0000	0.485	1.0D+1.0CG+0.7<E+0.7EG+	passed	
9	R 0.75	40.40	36.2	-9.63	1.0000	1.0000	0.886	1.0D+1.0CG+0.7E>+0.7EG+	passed	
10	R 0.75	40.40	36.2	-9.72	1.0000	1.0000	0.894	1.0D+1.0CG+0.7<E+0.7EG+	passed	
11	R 1.0	40.41	37.4	-16.55	1.0000	1.0000	0.857	1.0D+1.0CG+0.7E>+0.7EG+	passed	
12	R 1.0	40.41	37.4	-16.64	1.0000	1.0000	0.862	1.0D+1.0CG+0.7<E+0.7EG+	passed	

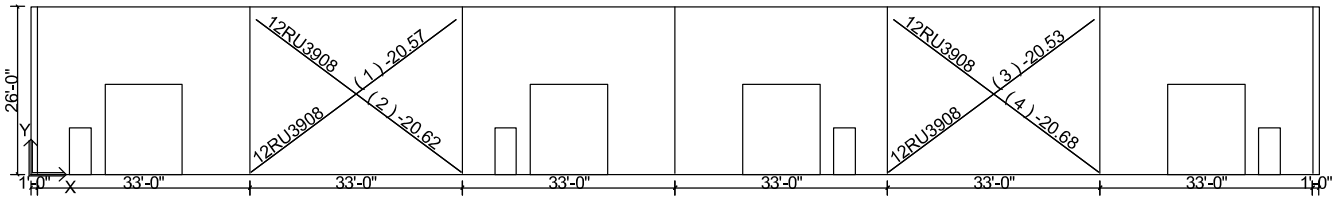
Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.25, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.25, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.23, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.23, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
3	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.71, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.71, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
4	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.60, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.60, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
5	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.59, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.59, E factor = 1.000, stress increase = 1.000, slot offset, =

		3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
6	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.48, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.48, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
7	Left	Slot: Web Thk = 0.250, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.23, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 1.23, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
8	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 1.24, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
9	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.63, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 9.63, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
10	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.72, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 9.72, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
11	Left	Slot: Web Thk = 0.188, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.55, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 16.55, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
12	Left	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.64, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.164, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 16.64, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.

Strut Bracing Member Design Summary: Roof B

Mem. No.	Bracing Shape	Length (ft)	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Description
8	3P 9x3/8x3/16x12	33.00	14.78	2.5000	1.0000	0.962	1.0D+1.0CG+0.7<E+0.7EG+	passed	Eave Strut, Collector
9	3P 8x1/4x0.1345x9	33.00	0.57	1.0000	1.0000	0.210	0.6MW Wall 3	passed	Ridge Strut
10	3P 8x1/4x0.1345x9	33.00	2.81	1.0000	1.0000	0.320	1.0D+0.7E>	passed	Unbraced Bay Strut
13	3P 8x1/4x0.1345x9	33.00	0.57	1.0000	1.0000	0.210	0.6MW Wall 3	passed	Ridge Strut
14	3P 8x1/4x0.1345x9	33.00	2.34	1.0000	1.0000	0.297	1.0D+1.0CG+0.7<E+0.7EG+	passed	Unbraced Bay Strut
20	3P 9x3/8x3/16x12	33.00	14.87	2.5000	1.0000	0.967	1.0D+1.0CG+0.7E>+0.7EG+	passed	Eave Strut, Collector

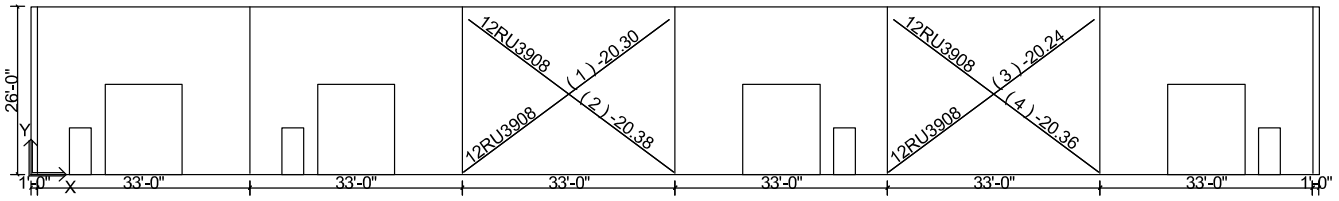
Mem.	End	Strut Connection Design Information
8	Left	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 36.95k, Vertical Shear 12.89k, Bolt Shear Stress Ratio 3.28/4.04 = 0.81 OK, Bolt Bearing Min Web Thickness 0.123in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 36.95k, Vertical Shear 12.89k, Bolt Shear Stress Ratio 3.28/4.04 = 0.81 OK, Bolt Bearing Min Web Thickness 0.123in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
9	Left	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.16 = 0.05 OK, Bolt Bearing Min Web Thickness 0.007in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0500607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.05 = 0.05 OK, Bolt Bearing Min Web Thickness 0.008in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
10	Left	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 2.81k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.24/2.00 = 0.12 OK, Bolt Bearing Min Web Thickness 0.018in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 2.81k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.24/2.00 = 0.12 OK, Bolt Bearing Min Web Thickness 0.018in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
13	Left	Clip 3MZE0500607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.05 = 0.05 OK, Bolt Bearing Min Web Thickness 0.008in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 0.57k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.05/1.16 = 0.05 OK, Bolt Bearing Min Web Thickness 0.007in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
14	Left	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 2.34k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.20/2.00 = 0.10 OK, Bolt Bearing Min Web Thickness 0.015in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZE0440607000002B (1) Row of (2) 0.750in. ASTM A325N, Axial 2.34k, Vertical Shear 0.29k, Bolt Shear Stress Ratio 0.20/2.00 = 0.10 OK, Bolt Bearing Min Web Thickness 0.015in. < Strut Web Thickness 0.134in. OK, Clip Weld Fillet Both Sides 0.188in.
20	Left	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 37.18k, Vertical Shear 12.93k, Bolt Shear Stress Ratio 3.30/4.04 = 0.82 OK, Bolt Bearing Min Web Thickness 0.124in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.
	Right	Clip 3MZG0740610000003B (2) Rows of (3) 0.750in. ASTM A325N, Axial 37.18k, Vertical Shear 12.93k, Bolt Shear Stress Ratio 3.30/4.04 = 0.82 OK, Bolt Bearing Min Web Thickness 0.124in. < Strut Web Thickness 0.188in. OK, Clip Weld Fillet Both Sides 0.188in.



Diagonal Bracing Member Design Summary: Sidewall 2

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 1.25	39.60	38.1	-20.57	1.3000	1.0000	0.867	1.0D+1.0CG+0.7<E+0.7EG+	passed	
2	R 1.25	39.60	38.1	-20.62	1.3000	1.0000	0.869	1.0D+1.0CG+0.7E>+0.7EG+	passed	
3	R 1.25	39.60	38.1	-20.53	1.3000	1.0000	0.866	1.0D+1.0CG+0.7<E+0.7EG+	passed	
4	R 1.25	39.60	38.1	-20.68	1.3000	1.0000	0.872	1.0D+1.0CG+0.7E>+0.7EG+	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both
	Right	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
2	Left	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
	Right	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both
3	Left	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both
	Right	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
4	Left	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
	Right	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both



Diagonal Bracing Member Design Summary: Sidewall 4

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 1.25	39.60	38.1	-20.30	1.3000	1.0000	0.856	1.0D+1.0CG+0.7E>+0.7EG+	passed	
2	R 1.25	39.60	38.1	-20.38	1.3000	1.0000	0.859	1.0D+1.0CG+0.7<E+0.7EG+	passed	
3	R 1.25	39.60	38.1	-20.24	1.3000	1.0000	0.854	1.0D+1.0CG+0.7E>+0.7EG+	passed	
4	R 1.25	39.60	38.1	-20.36	1.3000	1.0000	0.858	1.0D+1.0CG+0.7<E+0.7EG+	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both
	Right	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
2	Left	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
	Right	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both
3	Left	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both
	Right	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
4	Left	Clevis Connection Per DP 3.15.2, SQW5x5x0.625, Weld To Flange 0.375 Both Sides, Web Yielding **FAILED** -> Web Stiffener and Opposite Conrac Weld Added
	Right	Clevis Connection Per DP 3.15.2, SQW 5.0x5.0x0.375, Design angle = 36.4 deg, , dimA = 5.438 in., SQW Weld 0.19 Fillet Both

Shape: Shape 1 Clerestory

Loads and Codes - Shape: Shape 1 Clerestory

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.00 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used - User Modified
Wind Exposure: C - Kz: 1.075
Parts Wind Exposure Factor: 1.075
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 36/0/0
Primary Zone Strip Width: 2a: 6/0/0
Parts / Portions Zone Strip Width: a: 3/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 46/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.5989
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

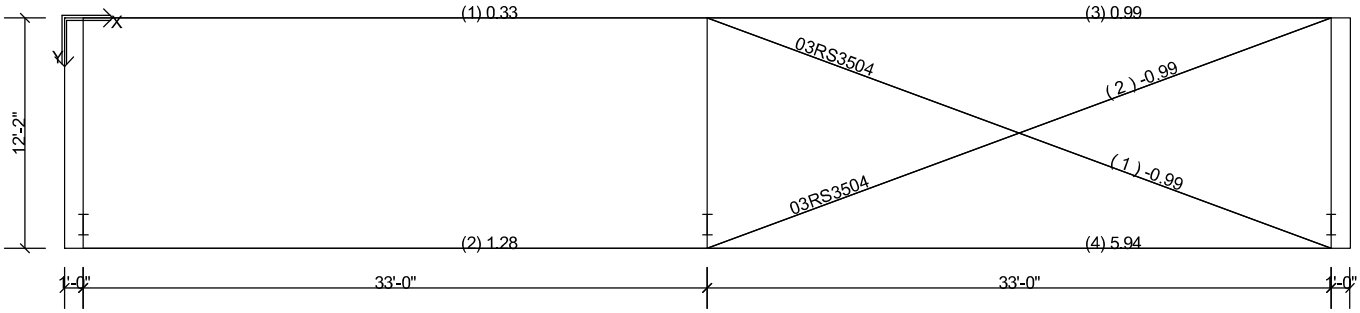
Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3533
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Deflection Conditions
Frames are vertically supporting:Metal Roof Purlins and Panels
Frames are laterally supporting:Metal Wall Girts and Panels
Purlins are supporting:Metal Roof Panels
Girts are supporting:Metal Wall Panels

Design Load Combinations - Bracing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 0.6 W1>	D + W1>
2	System	1.000	1.0 D + 0.6 <W1	D + <W1
3	System	1.000	1.0 D + 0.6 W2>	D + W2>
4	System	1.000	1.0 D + 0.6 <W2	D + <W2
5	System	1.000	1.0 D + 0.6 W3>	D + W3>
6	System	1.000	1.0 D + 0.6 <W3	D + <W3
7	System	1.000	1.0 D + 0.6 W4>	D + W4>
8	System	1.000	1.0 D + 0.6 <W4	D + <W4
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	1.0 D + 0.7 E>	D + E>
14	System	1.000	1.0 D + 0.7 <E	D + <E

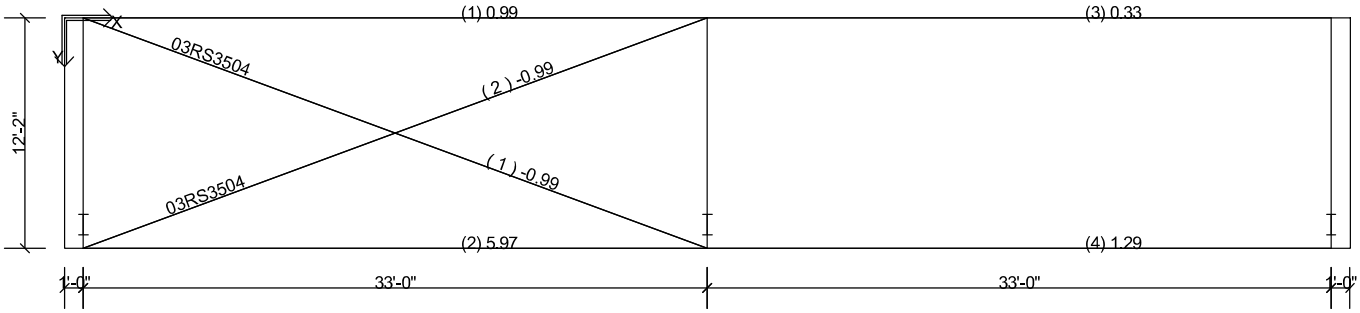
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
16	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
17	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
19	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W3>	D + CG + W3>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W3	D + CG + <W3
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W4>	D + CG + W4>
22	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W4	D + CG + <W4
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
24	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
25	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
26	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
27	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W3>	D + CU + W3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W3	D + CU + <W3
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W4>	D + CU + W4>
30	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W4	D + CU + <W4
31	System Derived	1.000	1.0 D + 1.0 CG + 0.7 E> + 0.7 EG+	D + CG + E> + EG+
32	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <E + 0.7 EG+	D + CG + <E + EG+
33	System Derived	1.000	0.6 D + 0.6 CG + 0.7 E> + 0.7 EG-	D + CG + E> + EG-
34	System Derived	1.000	0.6 D + 0.6 CG + 0.7 <E + 0.7 EG-	D + CG + <E + EG-



Diagonal Bracing Member Design Summary: Roof A

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	35.26	21.7	-0.99	1.0000	1.0000	0.385	1.0D+0.7<E	passed	
2	R 0.375	35.26	21.7	-0.99	1.0000	1.0000	0.385	1.0D+0.7E>	passed	

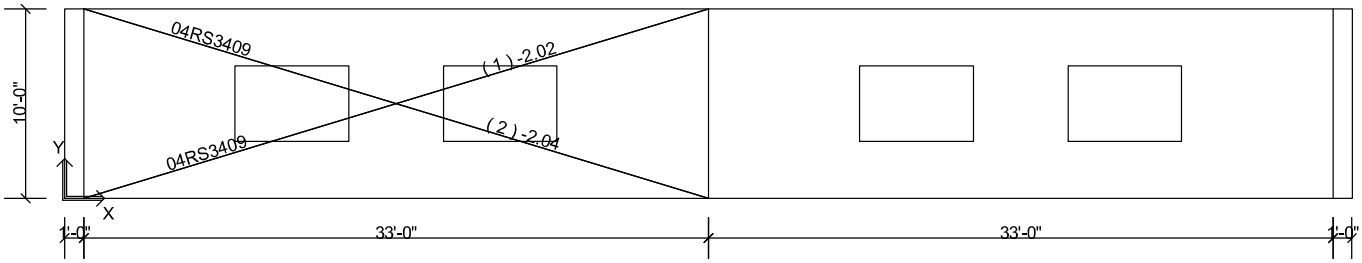
Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.134, Load Case 1.0D+0.7<E, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+0.7<E, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.134, Load Case 1.0D+0.7E>, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+0.7E>, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.



Diagonal Bracing Member Design Summary: Roof B

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.375	35.26	21.7	-0.99	1.0000	1.0000	0.385	1.0D+1.0CG+0.7E>+0.7EG+	passed	
2	R 0.375	35.26	21.7	-0.99	1.0000	1.0000	0.385	1.0D+1.0CG+0.7<E+0.7EG+	passed	

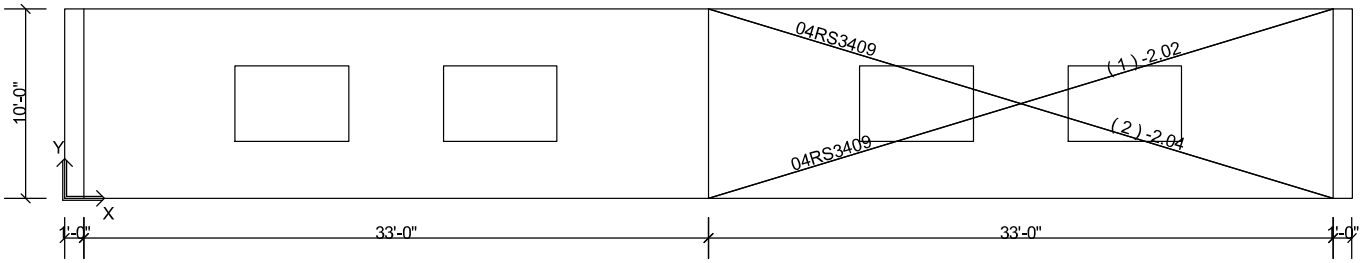
Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 0.99, E factor = 1.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.



Diagonal Bracing Member Design Summary: Sidewall 2

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.5	34.68	16.9	-2.02	1.3000	1.0000	0.573	1.0D+1.0CG+0.7<E+0.7EG+	passed	
2	R 0.5	34.68	16.9	-2.04	1.3000	1.0000	0.578	1.0D+1.0CG+0.7E>+0.7EG+	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 4.04, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 4.04, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 4.08, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 4.08, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.



Diagonal Bracing Member Design Summary: Sidewall 4

Mem. No.	Bracing Shape	Length (ft)	Angle	Design Axial (k)	Seismic Factor	Stress Factor	Stress Ratio	Governing Load Case	Design Status	Comment
1	R 0.5	34.68	16.9	-2.02	1.3000	1.0000	0.573	1.0D+1.0CG+0.7E>+0.7EG+	passed	
2	R 0.5	34.68	16.9	-2.04	1.3000	1.0000	0.578	1.0D+1.0CG+0.7<E+0.7EG+	passed	

Mem.	End	Diagonal Connection Design Information
1	Left	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 4.04, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7E>+0.7EG+, Factored F = 4.04, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
2	Left	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 4.08, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.
	Right	Slot: Web Thk = 0.134, Load Case 1.0D+1.0CG+0.7<E+0.7EG+, Factored F = 4.08, E factor = 2.000, stress increase = 1.000, slot offset, = 3.000, web-flange weld OK, web direct shear OK, web punching shear OK, tensile fracture of web OK, >> PASSED.

Secondary - Summary Report

Loads and Codes - Shape: Shape 1

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.01 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):3.00 psf - USR

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used
Wind Exposure: C - Kz: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Primary Zone Strip Width: 2a: 20/9/10
Parts / Portions Zone Strip Width: a: 12/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB1>	D + CG + W1> + WB1>
3	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
4	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
5	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB1>	D + CU + <W2 + WB1>
6	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB1>	D + CG + L + W1> + WB1>
7	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB1>	D + CG + L + <W2 + WB1>
8	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB1	D + CG + W1> + <WB1
9	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
10	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
11	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB1	D + CU + <W2 + <WB1
12	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB1	D + CG + L + W1> + <WB1
13	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB1	D + CG + L + <W2 + <WB1
14	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB2>	D + CG + W1> + WB2>
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
16	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
17	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB2>	D + CU + <W2 + WB2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB2>	D + CG + L + W1> + WB2>
19	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB2>	D + CG + L + <W2 + WB2>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB2	D + CG + W1> + <WB2
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2

22	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2
23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB2	D + CU + <W2 + <WB2
24	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB2	D + CG + L + W1> + <WB2
25	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB2	D + CG + L + <W2 + <WB2
26	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB3>	D + CG + W1> + WB3>
27	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB3>	D + CU + <W2 + WB3>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB3>	D + CG + L + W1> + WB3>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB3>	D + CG + L + <W2 + WB3>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB3	D + CG + W1> + <WB3
33	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
34	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
35	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB3	D + CU + <W2 + <WB3
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB3	D + CG + L + W1> + <WB3
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB3	D + CG + L + <W2 + <WB3
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB4>	D + CG + W1> + WB4>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB4>	D + CU + <W2 + WB4>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB4>	D + CG + L + W1> + WB4>
43	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB4>	D + CG + L + <W2 + WB4>
44	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB4	D + CG + W1> + <WB4
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB4	D + CU + <W2 + <WB4
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB4	D + CG + L + W1> + <WB4
49	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB4	D + CG + L + <W2 + <WB4
50	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
51	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
52	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
53	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 CG + 0.6 W1>	CG + W1>
2	System	1.000	1.0 CG + 0.6 <W2	CG + <W2

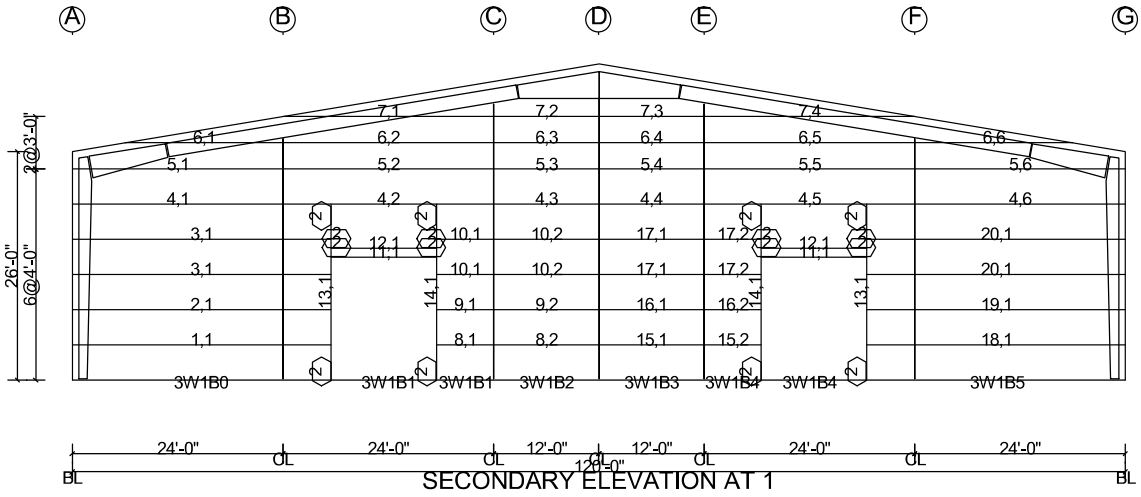
Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	1.0 L	L
2	System	1.000	180	0.42 W1>	W1>
3	System	1.000	180	0.42 <W2	<W2

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	90	0.42 W1>	W1>
2	System	1.000	90	0.42 <W2	<W2

Wall: 1



Dimension Key
1 1'-0"

Maximum Secondary Designs for Shape Shape 1 on Side 1

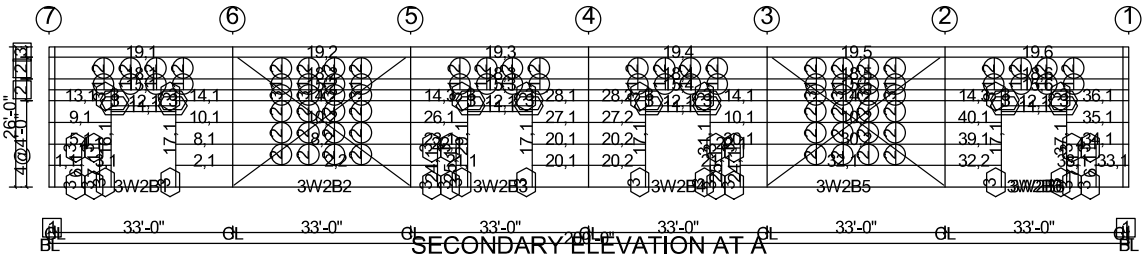
Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	29.50	8.50x0.073 Z Sim-60.0	Yes	0.0							0.97	0.21	0.63	0.00	2						
2,1	29.50	8.50x0.073 Z Sim-60.0	Yes	0.0							0.97	0.21	0.63	0.00	2						
3,1	29.50	8.50x0.073 Z Sim-60.0	Yes	0.0							0.97	0.21	0.63	0.00	2						
4,1	24.00	8.50x0.068 Z Con-60.0	Yes	10.5							0.87	0.23	0.71	0.00	2	0.56	0.14	0.57	0.00	1	10.5
4,2	24.00	8.50x0.073 Z Con-60.0	Yes	34.5	0.56	0.26	0.62	0.00	1	34.5	1.03	0.00	0.63	0.00	1	0.67	0.27	0.72	0.00	1	34.5
4,3	12.00	8.50x0.068 Z Con-60.0	Yes	34.5	0.67	0.19	0.69	0.00	1	34.5	0.92	0.34	0.80	0.00	2	0.31	0.10	0.33	0.00	1	34.5
4,4	12.00	8.50x0.068 Z Con-60.0	Yes	34.5	0.31	0.10	0.33	0.00	1	34.5	0.92	0.34	0.80	0.00	2	0.67	0.19	0.69	0.00	1	34.5
4,5	24.00	8.50x0.073 Z Con-60.0	Yes	34.5	0.67	0.27	0.72	0.00	1	34.5	1.03	0.00	0.00	0.00	1	0.56	0.26	0.62	0.00	1	34.5
4,6	24.00	8.50x0.068 Z Con-60.0	Yes	10.5	0.56	0.14	0.57	0.00	1	10.5	0.87	0.23	0.71	0.00	2						
5,1	24.00	8.50x0.060 Z Con-60.0	Yes	10.5							0.71	0.00	0.50	0.00	1	0.37	0.18	0.41	0.00	1	10.5
5,2	24.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.37	0.15	0.40	0.00	1	10.5	0.69	0.26	0.60	0.00	2	0.17	0.12	0.20	0.00	1	10.5
5,3	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.17	0.10	0.19	0.00	1	10.5	0.26	0.18	0.31	0.00	1	0.02	0.05	0.05	0.00	1	10.5
5,4	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.02	0.05	0.05	0.00	1	10.5	0.26	0.18	0.32	0.00	1	0.17	0.10	0.20	0.00	1	10.5
5,5	24.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.17	0.12	0.21	0.00	1	10.5	0.68	0.26	0.59	0.00	2	0.36	0.15	0.39	0.00	1	10.5
5,6	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.36	0.17	0.40	0.00	1	10.5	0.68	0.00	0.00	0.00	1						
6,1	18.00	8.50x0.060 Z Con-60.0	Yes	10.5							0.33	0.19	0.38	0.00	1	0.21	0.11	0.23	0.00	1	10.5
6,2	24.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.21	0.12	0.24	0.00	1	10.5	0.40	0.00	0.00	0.00	1	0.18	0.11	0.22	0.00	1	10.5
6,3	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.18	0.10	0.21	0.00	1	10.5	0.29	0.18	0.34	0.00	1	0.01	0.03	0.03	0.00	1	10.5
6,4	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.01	0.03	0.03	0.00	1	10.5	0.29	0.18	0.34	0.00	1	0.18	0.10	0.21	0.00	1	10.5
6,5	24.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.18	0.11	0.22	0.00	1	10.5	0.40	0.00	0.24	0.00	1	0.21	0.12	0.24	0.00	1	10.5
6,6	18.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.21	0.11	0.23	0.00	1	10.5	0.33	0.19	0.38	0.00	1						
7,1	24.00	8.50x0.060 Z Con-60.0	Yes	10.5							0.55	0.00	0.33	0.00	1	0.25	0.14	0.29	0.00	1	10.5
7,2	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.25	0.13	0.28	0.00	1	10.5	0.47	0.22	0.43	0.00	2	0.01	0.04	0.04	0.00	1	10.5
7,3	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.01	0.04	0.04	0.00	1	10.5	0.47	0.22	0.43	0.00	2	0.25	0.13	0.28	0.00	1	10.5
7,4	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.25	0.14	0.29	0.00	1	10.5	0.55	0.00	0.00	0.00	1						
8,1	6.50	8.50x0.060 Z Con-60.0	Yes	10.5							0.14	0.14	0.19	0.00	1	0.10	0.08	0.13	0.00	1	10.5
8,2	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.10	0.10	0.14	0.00	1	10.5	0.24	0.00	0.14	0.00	1						
9,1	6.50	8.50x0.060 Z Con-60.0	Yes	10.5							0.14	0.14	0.19	0.00	1	0.10	0.08	0.13	0.00	1	10.5
9,2	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.10	0.10	0.14	0.00	1	10.5	0.24	0.00	0.14	0.00	1						
10,1	6.50	8.50x0.060 Z Con-60.0	Yes	10.5							0.14	0.14	0.19	0.00	1	0.10	0.08	0.13	0.00	1	10.5
10,2	12.00	8.50x0.060 Z Con-60.0	Yes	34.5	0.10	0.10	0.14	0.00	1	10.5	0.24	0.00	0.14	0.00	1						
11,1	12.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.28	0.00	0.00	0.00	1						

12,1	12.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.24	0.00	0.00	0.00	1						
13,1	20.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.93	0.00	0.97	0.00	1						
14,1	20.00	8.50x0.098 C Sim-60.0	Yes	0.0							0.89	0.00	0.92	0.00	1						
15,1	12.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.38	0.00	0.00	0.00	1						
15,2	6.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.12	0.00	0.07	0.00	1						
16,1	12.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.38	0.00	0.00	0.00	1						
16,2	6.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.12	0.00	0.07	0.00	1						
17,1	12.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.38	0.00	0.00	0.00	1						
17,2	6.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.12	0.00	0.07	0.00	1						
18,1	29.50	8.50x0.060 Z Sim-60.0	Yes	0.0							1.01	0.31	0.69	0.00	2						
19,1	29.50	8.50x0.060 Z Sim-60.0	Yes	0.0							1.01	0.31	0.69	0.00	2						
20,1	29.50	8.50x0.060 Z Sim-60.0	Yes	0.0							1.01	0.31	0.69	0.00	2						

Maximum Secondary Deflections for Shape Shape 1 on Side 1

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.35	(L/813)	9.50	1	0.42W1>
2	1	0.35	(L/813)	9.50	1	0.42W1>
3	1	0.35	(L/813)	9.50	1	0.42W1>
4	1	-0.15	(L/1968)	19.50	1	0.42W1>
4	2	0.82	(L/349)	35.88	1	0.42W1>
4	3	-0.12	(L/1244)	51.88	1	0.42W1>
4	4	-0.12	(L/1247)	67.88	1	0.42W1>
4	5	0.82	(L/352)	83.88	1	0.42W1>
4	6	-0.14	(L/2016)	100.38	1	0.42W1>
5	1	0.56	(L/516)	10.50	1	0.42W1>
5	2	0.16	(L/1763)	37.88	1	0.42W1>
5	3	0.00	(L/9714)	50.88	1	0.42W1>
5	4	0.00	(L/8800)	69.38	1	0.42W1>
5	5	0.17	(L/1736)	82.38	1	0.42W1>
5	6	0.54	(L/536)	109.88	1	0.42W1>
6	1	0.05	(L/3998)	6.50	1	0.42W1>
6	2	0.24	(L/1205)	30.38	1	0.42W1>
6	3	0.00	(L/6513)	44.88	1	0.42W1>
6	4	0.00	(L/6352)	62.88	1	0.42W1>
6	5	0.24	(L/1207)	77.88	1	0.42W1>
6	6	0.06	(L/3737)	101.38	1	0.42W1>
7	1	0.39	(L/735)	10.50	1	0.42W1>
7	2	-0.03	(L/4560)	26.88	1	0.42W1>
7	3	-0.03	(L/4503)	44.88	1	0.42W1>
7	4	0.40	(L/721)	61.38	1	0.42W1>
8	1	-	-	-	-	-
8	2	0.04	(L/3460)	13.38	1	0.42W1>
9	1	-	-	-	-	-
9	2	0.04	(L/3460)	13.38	1	0.42W1>
10	1	-	-	-	-	-
10	2	0.04	(L/3460)	13.38	1	0.42W1>
11	1	0.06	(L/2250)	6.00	1	0.42W1>
12	1	0.05	(L/2700)	6.00	1	0.42W1>
13	1	0.99	(L/242)	10.00	1	0.42W1>
14	1	0.99	(L/244)	10.00	1	0.42W1>
15	1	0.08	(L/1702)	6.00	1	0.42W1>
15	2	-	-	-	-	-
16	1	0.08	(L/1702)	6.00	1	0.42W1>
16	2	-	-	-	-	-
17	1	0.08	(L/1702)	6.00	1	0.42W1>
17	2	-	-	-	-	-
18	1	0.62	(L/461)	19.00	1	0.42W1>
19	1	0.62	(L/461)	19.00	1	0.42W1>
20	1	0.62	(L/461)	19.00	1	0.42W1>

Wall: 2



Dimension Key

1 1'-0"
2 4'-0"
3 2'-0"
4 3'-4 1/2"
5 2'-1 1/2"

Maximum Secondary Designs for Shape Shape 1 on Side 2

				Detail	Exterior						Interior					Exterior					
Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Lap (in.)	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	6.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.09	0.09	0.00	1						
2,1	10.50	8.50x0.060 Z Con-60.0	Yes	34.5							0.53	0.22	0.47	0.00	2	0.50	0.18	0.53	0.00	1	34.5
2,2	38.00	8.50x0.060 Z Con-60.0	Yes	46.5	0.50	0.20	0.54	0.00	1	46.5	1.03	0.01	0.56	0.00	1						
3,1	2.13	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.00	0.00	0.00	1						
4,1	3.38	8.50x0.000 WD Sim-***	Yes	0.0																	
5,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.30	0.05	0.29	0.00	1						
6,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.15	0.04	0.14	0.00	1						
7,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.10	0.02	0.09	0.00	1						
8,1	10.50	8.50x0.060 Z Con-60.0	Yes	34.5							0.92	0.30	0.78	0.00	2	0.54	0.15	0.56	0.00	1	10.5
8,2	33.00	8.50x0.073 Z Con-60.0	Yes	34.5	0.54	0.17	0.57	0.00	1	34.5	0.91	0.23	0.76	0.00	2						
9,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.45	0.00	0.19	0.00	2						
10,1	10.50	8.50x0.060 Z Con-60.0	Yes	34.5							0.93	0.32	0.87	0.00	1	0.54	0.15	0.56	0.00	1	10.5
10,2	33.00	8.50x0.073 Z Con-60.0	Yes	34.5	0.54	0.17	0.57	0.00	1	34.5	0.92	0.23	0.76	0.00	2						
11,1	12.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.19	0.00	0.00	0.00	1						
12,1	12.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.14	0.00	0.00	0.00	1						
13,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.36	0.00	0.15	0.00	1						
14,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
14,2	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
14,3	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
15,1	34.00	8.50x0.113 BB Sim-60.0	Yes	0.0							0.92	0.00	0.00	0.00	1						
15,2	33.00	8.50x0.060 BB Sim-60.0	Yes	0.0							0.68	0.01	0.37	0.00	1						
15,3	33.00	8.50x0.098 BB Sim-60.0	Yes	0.0							1.03	0.00	0.00	0.00	1						
15,4	33.00	8.50x0.098 BB Sim-60.0	Yes	0.0							1.02	0.00	0.00	0.00	1						
15,5	33.00	8.50x0.060 BB Sim-60.0	Yes	0.0							0.68	0.01	0.37	0.00	1						
15,6	34.00	8.50x0.113 BB Sim-60.0	Yes	0.0							0.92	0.00	0.00	0.00	1						
16,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.95	0.00	0.99	0.00	1						
17,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.95	0.00	0.98	0.00	1						
18,1	34.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.00	0.00	0.00	0.00	1						
18,2	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,3	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,4	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,5	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,6	34.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.00	0.00	0.00	0.00	1						
19,1	34.00	8.50x0.073 Z Con-60.0	Yes	10.5							0.89	0.02	0.50	0.00	1	0.41	0.13	0.43	0.00	1	10.5
19,2	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.41	0.11	0.43	0.00	1	10.5	1.03	0.30	0.91	0.00	1	0.36	0.14	0.39	0.00	1	10.5

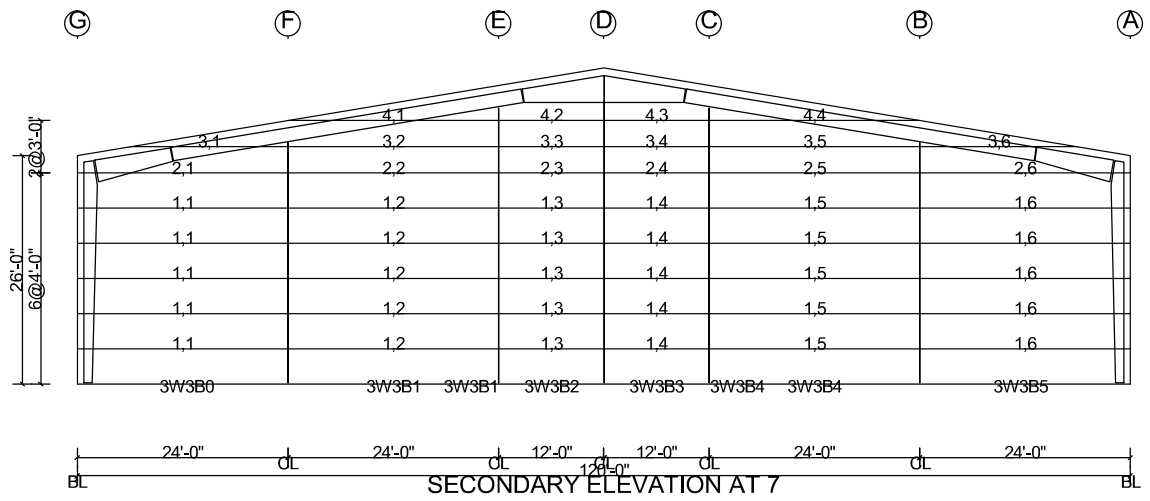
19,3	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.36	0.15	0.39	0.00	1	10.5	1.03	0.00	0.00	0.00	1	0.41	0.15	0.44	0.00	1	10.5
19,4	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.41	0.15	0.44	0.00	1	10.5	0.80	0.26	0.68	0.00	2	0.36	0.15	0.39	0.00	1	10.5
19,5	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.36	0.14	0.39	0.00	1	10.5	1.03	0.30	0.91	0.00	1	0.41	0.11	0.43	0.00	1	10.5
19,6	34.00	8.50x0.073 Z Con-60.0	Yes	10.5	0.41	0.13	0.43	0.00	1	10.5	0.89	0.02	0.50	0.00	1						
20,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
20,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
21,1	2.13	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.00	0.01	0.00	1						
22,1	3.38	8.50x0.000 WD Sim-***	Yes	0.0																	
23,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.28	0.05	0.28	0.00	2						
24,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.11	0.03	0.11	0.00	1						
25,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.08	0.02	0.08	0.00	1						
26,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.46	0.00	0.20	0.00	2						
27,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
27,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
28,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
28,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
29,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.91	0.00	0.94	0.00	1						
30,1	10.50	8.50x0.060 Z Con-60.0	Yes	34.5							0.94	0.35	0.67	0.00	2	0.96	0.19	0.62	0.00	2	34.5
30,2	33.00	8.50x0.068 Z Con-60.0	Yes	46.5	0.64	0.20	0.67	0.00	1	46.5	1.03	0.06	0.70	0.00	1						
31,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.89	0.00	0.93	0.00	1						
32,1	38.00	8.50x0.098 Z Sim-60.0	Yes	0.0							0.99	0.01	0.45	0.00	1						
32,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
33,1	6.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.09	0.09	0.00	1						
34,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.30	0.05	0.29	0.00	1						
35,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.45	0.00	0.19	0.00	2						
36,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.36	0.00	0.15	0.00	1						
37,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.95	0.00	0.99	0.00	1						
38,1	2.13	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.00	0.01	0.00	1						
39,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
40,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 on Side 2

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-	-	-	-	-
2	1	-0.09	(L/1440)	6.00	1	0.42W1>
2	2	1.02	(L/387)	27.38	1	0.42W1>
3	1	-	-	-	-	-
4	1	0.00	(L/0)	0.00	0	1.0CG+0.6W1>
5	1	0.08	(L/1670)	6.50	1	0.42W1>
6	1	0.00	(L/4902)	4.00	1	0.42W1>
7	1	0.00	(L/6984)	4.00	1	0.42W1>
8	1	-0.14	(L/906)	6.00	1	0.42W1>
8	2	1.68	(L/235)	28.88	1	0.42W1>
9	1	-0.05	(L/2372)	6.50	2	0.42<W2
10	1	-0.15	(L/866)	6.00	1	0.42W1>
10	2	1.69	(L/234)	28.88	1	0.42W1>
11	1	0.04	(L/3375)	6.00	1	0.42W1>
12	1	0.03	(L/4501)	6.00	1	0.42W1>
13	1	0.04	(L/2995)	6.50	1	0.42W1>
14	1	0.04	(L/3340)	5.00	1	0.42W1>
14	2	2.55	(L/156)	27.00	1	0.42W1>
14	3	0.04	(L/3340)	48.50	1	0.42W1>
15	1	3.09	(L/128)	17.50	1	0.42W1>
15	2	1.06	(L/374)	50.50	1	0.42W1>
15	3	3.47	(L/114)	83.50	1	0.42W1>
15	4	3.45	(L/115)	116.50	1	0.42W1>
15	5	1.06	(L/374)	149.50	1	0.42W1>
15	6	3.09	(L/128)	182.50	1	0.42W1>
16	1	0.81	(L/266)	9.00	1	0.42W1>
17	1	0.82	(L/263)	9.00	1	0.42W1>
18	1	2.54	(L/156)	17.50	1	0.42W1>
18	2	2.55	(L/156)	50.50	1	0.42W1>
18	3	2.55	(L/156)	83.50	1	0.42W1>
18	4	2.55	(L/156)	116.50	1	0.42W1>
18	5	2.55	(L/156)	149.50	1	0.42W1>
18	6	2.54	(L/156)	182.50	1	0.42W1>
19	1	1.24	(L/320)	15.50	1	0.42W1>

19	2	0.35	(L/1117)	51.88	1	0.42W1>
19	3	0.61	(L/646)	83.38	1	0.42W1>
19	4	0.62	(L/643)	116.88	1	0.42W1>
19	5	0.35	(L/1146)	148.38	1	0.42W1>
19	6	1.26	(L/314)	184.38	1	0.42W1>
20	1	0.05	(L/2527)	5.50	1	0.42W1>
20	2	0.05	(L/2527)	16.00	1	0.42W1>
21	1	-	-	-	-	-
22	1	0.00	(L/0)	0.00	0	1.0CG+0.6W1>
23	1	-0.07	(L/1718)	5.50	2	0.42<W2
24	1	0.00	(L/6520)	4.00	1	0.42W1>
25	1	0.00	(L/8335)	4.00	1	0.42W1>
26	1	-0.05	(L/2341)	5.50	2	0.42<W2
27	1	0.05	(L/2527)	5.50	1	0.42W1>
27	2	0.05	(L/2527)	16.00	1	0.42W1>
28	1	0.04	(L/3340)	5.00	1	0.42W1>
28	2	0.04	(L/3340)	15.50	1	0.42W1>
29	1	-0.78	(L/277)	9.00	2	0.42<W2
30	1	-0.13	(L/990)	5.50	1	0.42W1>
30	2	1.69	(L/234)	28.88	1	0.42W1>
31	1	-0.79	(L/273)	9.00	2	0.42<W2
32	1	1.21	(L/326)	23.50	1	0.42W1>
32	2	0.05	(L/2527)	43.50	1	0.42W1>
33	1	-	-	-	-	-
34	1	0.08	(L/1670)	5.00	1	0.42W1>
35	1	-0.05	(L/2372)	5.00	2	0.42<W2
36	1	0.04	(L/2995)	5.00	1	0.42W1>
37	1	0.81	(L/266)	9.00	1	0.42W1>
38	1	-	-	-	-	-
39	1	0.05	(L/2527)	5.50	1	0.42W1>
40	1	0.05	(L/2527)	5.50	1	0.42W1>

Wall: 3



Maximum Secondary Designs for Shape Shape 1 on Side 3

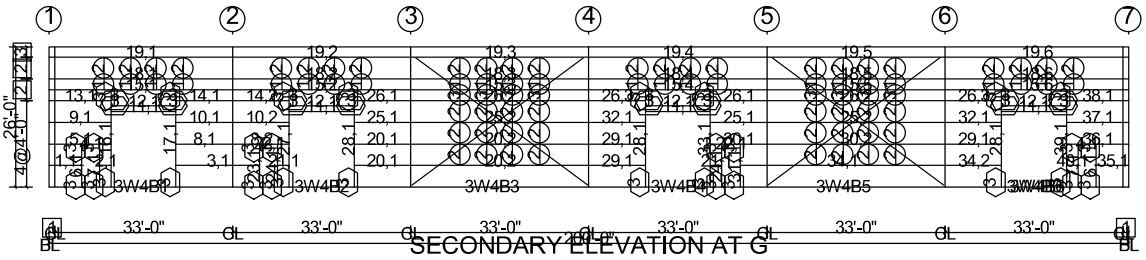
Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	24.00	8.50x0.060 Z Con-60.0	Yes	10.5							0.74	0.00	0.52	0.00	1	0.40	0.19	0.44	0.00	1	10.5
1,2	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.40	0.17	0.44	0.00	1	10.5	0.76	0.29	0.66	0.00	2	0.20	0.14	0.24	0.00	1	10.5
1,3	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.20	0.12	0.23	0.00	1	10.5	0.31	0.21	0.37	0.00	1	0.02	0.05	0.06	0.00	1	10.5
1,4	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.02	0.05	0.06	0.00	1	10.5	0.31	0.21	0.37	0.00	1	0.20	0.12	0.23	0.00	1	10.5
1,5	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.20	0.14	0.24	0.00	1	10.5	0.76	0.29	0.66	0.00	2	0.40	0.17	0.44	0.00	1	10.5
1,6	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.40	0.19	0.44	0.00	1	10.5	0.74	0.00	0.00	0.00	1						
2,1	24.00	8.50x0.060 Z Con-60.0	Yes	10.5		0.14					0.71	0.00	0.50	0.00	1	0.37	0.18	0.41	0.00	1	10.5
2,2	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.37	0.15	0.40	0.00	1	10.5	0.69	0.26	0.60	0.00	2	0.17	0.12	0.20	0.00	1	10.5
2,3	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.17	0.10	0.19	0.00	1	10.5	0.26	0.18	0.31	0.00	1	0.02	0.05	0.05	0.00	1	10.5
2,4	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.02	0.05	0.05	0.00	1	10.5	0.26	0.18	0.32	0.00	1	0.17	0.10	0.20	0.00	1	10.5
2,5	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.17	0.12	0.21	0.00	1	10.5	0.68	0.26	0.59	0.00	2	0.36	0.15	0.39	0.00	1	10.5
2,6	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.36	0.17	0.40	0.00	1	10.5	0.68	0.00	0.00	0.00	1						
3,1	18.00	8.50x0.060 Z Con-60.0	Yes	10.5							0.33	0.19	0.38	0.00	1	0.21	0.11	0.23	0.00	1	10.5
3,2	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.21	0.12	0.24	0.00	1	10.5	0.40	0.00	0.00	0.00	1	0.18	0.11	0.22	0.00	1	10.5
3,3	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.18	0.10	0.21	0.00	1	10.5	0.29	0.18	0.34	0.00	1	0.01	0.03	0.03	0.00	1	10.5
3,4	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.01	0.03	0.03	0.00	1	10.5	0.29	0.18	0.34	0.00	1	0.18	0.10	0.21	0.00	1	10.5
3,5	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.18	0.11	0.22	0.00	1	10.5	0.40	0.00	0.24	0.00	1	0.21	0.12	0.24	0.00	1	10.5
3,6	18.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.21	0.11	0.23	0.00	1	10.5	0.33	0.19	0.38	0.00	1						
4,1	24.00	8.50x0.060 Z Con-60.0	Yes	10.5							0.55	0.00	0.33	0.00	1	0.25	0.14	0.29	0.00	1	10.5
4,2	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.25	0.13	0.28	0.00	1	10.5	0.47	0.22	0.43	0.00	2	0.01	0.04	0.04	0.00	1	10.5
4,3	12.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.01	0.04	0.04	0.00	1	10.5	0.47	0.22	0.43	0.00	2	0.25	0.13	0.28	0.00	1	10.5
4,4	24.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.25	0.14	0.29	0.00	1	10.5	0.55	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 on Side 3

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	0.58	(L/499)	10.50	1	0.42W1>
1	2	0.20	(L/1421)	37.38	1	0.42W1>
1	3	0.00	(L/7683)	50.88	1	0.42W1>
1	4	0.00	(L/7493)	69.38	1	0.42W1>
1	5	0.20	(L/1463)	82.38	1	0.42W1>
1	6	0.59	(L/490)	109.88	1	0.42W1>
2	1	0.56	(L/516)	10.50	1	0.42W1>
2	2	0.16	(L/1763)	37.88	1	0.42W1>
2	3	0.00	(L/9714)	50.88	1	0.42W1>

2	4	0.00	(L/8800)	69.38	1	0.42W1>
2	5	0.17	(L/1736)	82.38	1	0.42W1>
2	6	0.54	(L/536)	109.88	1	0.42W1>
3	1	0.05	(L/3998)	6.50	1	0.42W1>
3	2	0.24	(L/1205)	30.38	1	0.42W1>
3	3	0.00	(L/6513)	44.88	1	0.42W1>
3	4	0.00	(L/6352)	62.88	1	0.42W1>
3	5	0.24	(L/1207)	77.88	1	0.42W1>
3	6	0.06	(L/3737)	101.38	1	0.42W1>
4	1	0.39	(L/735)	10.50	1	0.42W1>
4	2	-0.03	(L/4560)	26.88	1	0.42W1>
4	3	-0.03	(L/4503)	44.88	1	0.42W1>
4	4	0.40	(L/721)	61.38	1	0.42W1>

Wall: 4



Dimension Key

1 1'-0"
2 4'-0"
3 2'-0"
4 3'-4 1/2"
5 2'-1 1/2"

Maximum Secondary Designs for Shape Shape 1 on Side 4

				Detail	Exterior						Interior					Exterior					
Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Lap (in.)	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	% Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	6.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.09	0.09	0.00	1						
2,1	2.13	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.00	0.00	0.00	1						
3,1	15.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.13	0.17	0.21	0.00	1						
4,1	3.38	8.50x0.000 WD Sim-***	Yes	0.0																	
5,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.30	0.05	0.29	0.00	1						
6,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.15	0.04	0.14	0.00	1						
7,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.10	0.02	0.09	0.00	1						
8,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
8,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.28	0.05	0.29	0.00	2						
9,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.45	0.00	0.19	0.00	2						
10,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
10,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.46	0.00	0.20	0.00	2						
11,1	12.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.19	0.00	0.00	0.00	1						
12,1	12.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.14	0.00	0.00	0.00	1						
13,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.36	0.00	0.15	0.00	1						
14,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
14,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
15,1	34.00	8.50x0.113 BB Sim-60.0	Yes	0.0							0.91	0.00	0.00	0.00	1						
15,2	33.00	8.50x0.098 BB Sim-60.0	Yes	0.0							1.03	0.00	0.00	0.00	1						
15,3	33.00	8.50x0.060 BB Sim-60.0	Yes	0.0							0.68	0.01	0.37	0.00	1						
15,4	33.00	8.50x0.098 BB Sim-60.0	Yes	0.0							1.03	0.00	0.00	0.00	1						
15,5	33.00	8.50x0.060 BB Sim-60.0	Yes	0.0							0.68	0.01	0.37	0.00	1						
15,6	34.00	8.50x0.113 BB Sim-60.0	Yes	0.0							0.92	0.00	0.00	0.00	1						
16,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.95	0.00	0.99	0.00	1						
17,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.94	0.00	0.98	0.00	1						
18,1	34.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.00	0.00	0.00	0.00	1						
18,2	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,3	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,4	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,5	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
18,6	34.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.00	0.00	0.00	0.00	1						
19,1	34.00	8.50x0.073 Z Con-60.0	Yes	10.5							0.89	0.02	0.50	0.00	1	0.41	0.13	0.43	0.00	1	10.5
19,2	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.41	0.11	0.43	0.00	1	10.5	1.03	0.30	0.91	0.00	1	0.36	0.14	0.39	0.00	1	10.5
19,3	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.36	0.15	0.39	0.00	1	10.5	1.03	0.00	0.00	0.00	1	0.41	0.15	0.44	0.00	1	10.5
19,4	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.41	0.15	0.44	0.00	1	10.5	0.80	0.26	0.68	0.00	2	0.36	0.15	0.39	0.00	1	10.5

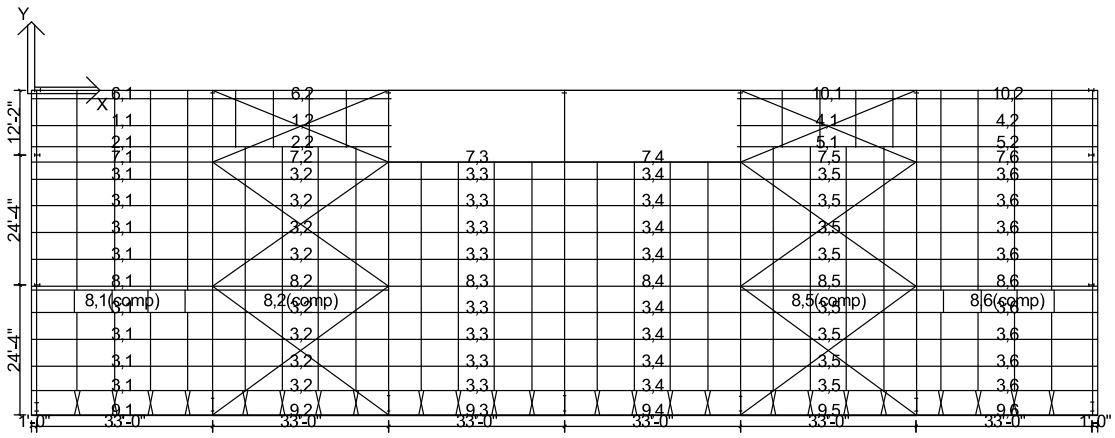
19,5	33.00	8.50x0.060 Z Con-60.0	Yes	10.5	0.36	0.14	0.39	0.00	1	10.5	1.03	0.30	0.91	0.00	1	0.41	0.11	0.43	0.00	1	10.5
19,6	34.00	8.50x0.073 Z Con-60.0	Yes	10.5	0.41	0.13	0.43	0.00	1	10.5	0.89	0.02	0.50	0.00	1						
20,1	10.50	8.50x0.060 Z Con-60.0	Yes	10.5							0.92	0.30	0.78	0.00	2	0.54	0.15	0.56	0.00	1	10.5
20,2	33.00	8.50x0.073 Z Con-60.0	Yes	34.5	0.54	0.17	0.57	0.00	1	34.5	0.91	0.23	0.76	0.00	2						
21,1	2.13	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.00	0.01	0.00	1						
22,1	3.38	8.50x0.000 WD Sim-***	Yes	0.0																	
23,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.12	0.03	0.11	0.00	1						
24,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.08	0.02	0.08	0.00	1						
25,1	10.50	8.50x0.060 Z Con-60.0	Yes	10.5							0.93	0.32	0.87	0.00	1	0.54	0.15	0.56	0.00	1	10.5
25,2	33.00	8.50x0.073 Z Con-60.0	Yes	34.5	0.54	0.17	0.57	0.00	1	34.5	0.92	0.23	0.76	0.00	2						
26,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
26,2	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							1.01	0.00	0.00	0.00	1						
26,3	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.32	0.00	0.14	0.00	1						
27,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.91	0.00	0.94	0.00	1						
28,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.95	0.00	0.98	0.00	1						
29,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
30,1	10.50	8.50x0.060 Z Con-60.0	Yes	34.5							0.94	0.35	0.67	0.00	2	0.96	0.18	0.62	0.00	2	34.5
30,2	33.00	8.50x0.068 Z Con-60.0	Yes	46.5	0.64	0.20	0.67	0.00	1	46.5	1.03	0.06	0.70	0.00	1						
31,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.11	0.03	0.11	0.00	1						
32,1	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
33,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.91	0.00	0.94	0.00	1						
34,1	38.00	8.50x0.098 Z Sim-60.0	Yes	0.0							0.99	0.01	0.45	0.00	1						
34,2	10.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.43	0.00	0.18	0.00	1						
35,1	6.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.09	0.09	0.00	1						
36,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.30	0.05	0.30	0.00	1						
37,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.45	0.00	0.19	0.00	2						
38,1	11.50	8.50x0.060 Z Sim-60.0	Yes	0.0							0.36	0.00	0.15	0.00	1						
39,1	18.00	8.50x0.088 C Sim-60.0	Yes	0.0							0.97	0.00	1.00	0.00	1						
40,1	2.13	8.50x0.060 Z Sim-60.0	Yes	0.0							0.01	0.00	0.01	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 on Side 4

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-	-	-	-	-
2	1	-	-	-	-	-
3	1	0.00	(L/4737)	4.50	1	0.42W1>
4	1	0.00	(L/0)	0.00	0	1.0CG+0.6W1>
5	1	0.08	(L/1670)	6.50	1	0.42W1>
6	1	0.00	(L/4902)	4.00	1	0.42W1>
7	1	0.00	(L/6984)	4.00	1	0.42W1>
8	1	0.05	(L/2527)	5.50	1	0.42W1>
8	2	-0.07	(L/1693)	16.00	2	0.42<W2
9	1	-0.05	(L/2372)	6.50	2	0.42<W2
10	1	0.05	(L/2527)	5.50	1	0.42W1>
10	2	-0.05	(L/2341)	16.00	2	0.42<W2
11	1	0.04	(L/3375)	6.00	1	0.42W1>
12	1	0.03	(L/4501)	6.00	1	0.42W1>
13	1	0.04	(L/2995)	6.50	1	0.42W1>
14	1	0.04	(L/3340)	5.00	1	0.42W1>
14	2	0.04	(L/3340)	15.50	1	0.42W1>
15	1	3.09	(L/128)	17.50	1	0.42W1>
15	2	3.47	(L/114)	50.50	1	0.42W1>
15	3	1.06	(L/374)	83.50	1	0.42W1>
15	4	3.47	(L/114)	116.50	1	0.42W1>
15	5	1.06	(L/374)	149.50	1	0.42W1>
15	6	3.11	(L/127)	182.50	1	0.42W1>
16	1	0.81	(L/266)	9.00	1	0.42W1>
17	1	0.82	(L/264)	9.00	1	0.42W1>
18	1	2.54	(L/156)	17.50	1	0.42W1>
18	2	2.55	(L/156)	50.50	1	0.42W1>
18	3	2.55	(L/156)	83.50	1	0.42W1>
18	4	2.55	(L/156)	116.50	1	0.42W1>
18	5	2.55	(L/156)	149.50	1	0.42W1>
18	6	2.54	(L/156)	182.50	1	0.42W1>
19	1	1.24	(L/320)	15.50	1	0.42W1>
19	2	0.35	(L/1117)	51.88	1	0.42W1>
19	3	0.61	(L/646)	83.38	1	0.42W1>
19	4	0.62	(L/643)	116.88	1	0.42W1>

19	5	0.35	(L/1146)	148.38	1	0.42W1>
19	6	1.26	(L/314)	184.38	1	0.42W1>
20	1	-0.14	(L/906)	6.00	1	0.42W1>
20	2	1.68	(L/235)	28.88	1	0.42W1>
21	1	-	-	-	-	-
22	1	0.00	(L/0)	0.00	0	1.0CG+0.6W1>
23	1	0.00	(L/6113)	4.00	1	0.42W1>
24	1	0.00	(L/8335)	4.00	1	0.42W1>
25	1	-0.15	(L/868)	6.00	1	0.42W1>
25	2	1.69	(L/234)	28.88	1	0.42W1>
26	1	0.04	(L/3340)	5.00	1	0.42W1>
26	2	2.55	(L/156)	27.00	1	0.42W1>
26	3	0.04	(L/3340)	48.50	1	0.42W1>
27	1	-0.78	(L/276)	9.00	2	0.42<W2
28	1	0.82	(L/263)	9.00	1	0.42W1>
29	1	0.05	(L/2527)	5.50	1	0.42W1>
30	1	-0.13	(L/993)	5.50	1	0.42W1>
30	2	1.69	(L/234)	28.88	1	0.42W1>
31	1	0.00	(L/6520)	4.00	1	0.42W1>
32	1	0.05	(L/2527)	5.50	1	0.42W1>
33	1	-0.78	(L/277)	9.00	2	0.42<W2
34	1	1.21	(L/326)	23.50	1	0.42W1>
34	2	0.05	(L/2527)	43.50	1	0.42W1>
35	1	-	-	-	-	-
36	1	0.08	(L/1657)	5.00	1	0.42W1>
37	1	-0.05	(L/2397)	5.00	2	0.42<W2
38	1	0.04	(L/2995)	5.00	1	0.42W1>
39	1	0.82	(L/262)	9.00	1	0.42W1>
40	1	-	-	-	-	-

Roof: A



Maximum Secondary Designs for Shape Shape 1 on Side A

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	34.00	10.00x0.088 Z Con-60.0	Yes	46.5							1.03	0.33	0.91	0.00	7	0.82	0.20	0.88	0.70	7	46.5
1,2	33.50	10.00x0.088 Z Con-60.0	Yes	46.5	0.82	0.20	0.88	0.70	7	46.5	1.03	0.33	0.91	0.00	7						
2,1	34.00	10.00x0.079 Z Con-60.0	Yes	46.5							0.93	0.35	0.84	0.00	7	0.73	0.22	0.82	0.68	7	46.5
2,2	33.50	10.00x0.079 Z Con-60.0	Yes	46.5	0.73	0.22	0.82	0.68	7	46.5	0.93	0.35	0.83	0.00	7						
3,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.98	0.00	0.00	0.00	7	0.69	0.18	0.76	0.62	7	46.5
3,2	33.00	10.00x0.088 Z Con-60.0	Yes	34.5	0.69	0.16	0.76	0.62	7	34.5	0.94	0.29	0.83	0.00	7	0.58	0.21	0.73	0.69	7	34.5
3,3	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.58	0.22	0.73	0.69	7	46.5	0.87	0.49	0.86	0.00	7	0.79	0.32	0.99	0.93	7	46.5
3,4	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.79	0.32	0.99	0.93	7	46.5	0.87	0.49	0.86	0.00	7	0.58	0.22	0.73	0.69	7	46.5
3,5	33.00	10.00x0.088 Z Con-60.0	Yes	34.5	0.58	0.21	0.73	0.69	7	34.5	0.94	0.29	0.83	0.00	7	0.69	0.16	0.76	0.62	7	34.5
3,6	34.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.69	0.18	0.76	0.62	7	46.5	0.98	0.00	0.00	0.00	7						
4,1	33.50	10.00x0.088 Z Con-60.0	Yes	46.5							1.03	0.33	0.91	0.00	7	0.82	0.20	0.88	0.70	7	46.5
4,2	34.00	10.00x0.088 Z Con-60.0	Yes	46.5	0.82	0.20	0.88	0.70	7	46.5	1.03	0.33	0.91	0.00	7						
5,1	33.50	10.00x0.079 Z Con-60.0	Yes	46.5							0.93	0.35	0.83	0.00	7	0.73	0.22	0.82	0.68	7	46.5
5,2	34.00	10.00x0.079 Z Con-60.0	Yes	46.5	0.73	0.22	0.82	0.68	7	46.5	0.93	0.35	0.84	0.00	7						
6,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.87	0.24	0.96	0.00	43	0.70	0.15	0.74	0.55	43	46.5
6,2	33.50	10.00x0.098 Z Con-60.0	Yes	46.5	0.70	0.15	0.74	0.55	43	46.5	0.87	0.24	0.96	0.00	43						
7,1	34.00	10.00x0.088 Z Con-60.0	Yes	46.5							0.72	0.00	0.98	0.00	43	0.46	0.15	0.58	0.46	43	46.5
7,2	33.00	10.00x0.079 Z Con-60.0	Yes	34.5	0.46	0.13	0.61	0.46	43	22.5	0.62	0.23	0.96	0.00	43	0.49	0.16	0.66	0.63	43	22.5
7,3	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.49	0.24	0.64	0.63	7	46.5	0.92	0.48	0.90	0.00	7	0.82	0.31	1.00	0.93	7	46.5
7,4	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.82	0.31	1.00	0.93	7	46.5	0.92	0.48	0.90	0.00	7	0.49	0.24	0.64	0.63	7	46.5
7,5	33.00	10.00x0.079 Z Con-60.0	Yes	34.5	0.49	0.16	0.66	0.63	49	22.5	0.62	0.23	0.96	0.00	49	0.46	0.13	0.61	0.46	49	22.5
7,6	34.00	10.00x0.088 Z Con-60.0	Yes	46.5	0.46	0.15	0.58	0.46	49	46.5	0.72	0.00	0.98	0.00	49						
8,1	34.00	10.00x0.113 ZS3 Con-60.0	Yes	46.5							0.83	0.00	0.95	0.00	19	0.54	0.10	0.59	0.41	19	34.5
8,2	33.00	10.00x0.113 ZS3 Con-60.0	Yes	34.5	0.54	0.09	0.62	0.41	19	34.5	0.79	0.15	0.98	0.00	19	0.49	0.12	0.59	0.49	19	34.5
8,3	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.49	0.13	0.56	0.49	7	46.5	0.89	0.49	0.98	0.00	19	0.79	0.31	0.99	0.93	7	46.5
8,4	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.79	0.31	0.99	0.93	7	46.5	0.89	0.49	0.98	0.00	19	0.49	0.13	0.56	0.49	7	46.5
8,5	33.00	10.00x0.113 ZS3 Con-60.0	Yes	34.5	0.49	0.12	0.59	0.49	25	34.5	0.79	0.15	0.98	0.00	25	0.54	0.09	0.62	0.41	25	34.5
8,6	34.00	10.00x0.113 ZS3 Con-	Yes	46.5	0.54	0.10	0.59	0.41	25	34.5	0.83	0.00	0.95	0.00	25						

		60.0																				
9,1	34.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.58	0.00	0.72	0.00	19							
9,2	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.00	0.00	7							
9,3	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.00	0.00	7							
9,4	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.96	0.00	25							
9,5	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.00	0.00	7							
9,6	34.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.58	0.00	0.72	0.00	25							
10,1	33.50	10.00x0.098 Z Con-60.0	Yes	46.5							0.87	0.24	0.96	0.00	49	0.70	0.15	0.74	0.55	49	46.5
10,2	34.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.70	0.15	0.74	0.55	49	46.5	0.87	0.24	0.96	0.00	49						

Maximum Secondary Deflections for Shape Shape 1 on Side A

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.37	(L/290)	14.00	2	0.42W1>
1	2	-1.31	(L/303)	53.38	1	1.0L
2	1	1.11	(L/356)	14.00	2	0.42W1>
2	2	-1.11	(L/358)	53.38	1	1.0L
3	1	1.56	(L/253)	15.00	2	0.42W1>
3	2	-0.29	(L/1386)	52.38	1	1.0L
3	3	-0.80	(L/493)	82.88	1	1.0L
3	4	-0.80	(L/493)	116.88	1	1.0L
3	5	-0.28	(L/1418)	147.88	1	1.0L
3	6	1.58	(L/251)	184.88	2	0.42W1>
4	1	-1.29	(L/308)	13.50	1	1.0L
4	2	1.38	(L/287)	53.38	2	0.42W1>
5	1	-1.09	(L/363)	13.50	1	1.0L
5	2	1.12	(L/352)	53.38	2	0.42W1>
6	1	1.20	(L/329)	14.00	2	0.42W1>
6	2	-1.15	(L/344)	53.38	1	1.0L
7	1	-1.15	(L/345)	15.00	1	1.0L
7	2	-0.17	(L/2360)	51.88	1	1.0L
7	3	-0.59	(L/668)	82.88	1	1.0L
7	4	-0.59	(L/670)	117.38	1	1.0L
7	5	-0.16	(L/2413)	147.88	1	1.0L
7	6	-1.16	(L/341)	184.38	1	1.0L
8	1	-1.48	(L/268)	15.00	1	1.0L
8	2	-0.21	(L/1902)	52.38	1	1.0L
8	3	-0.79	(L/499)	82.88	1	1.0L
8	4	-0.79	(L/499)	116.88	1	1.0L
8	5	-0.20	(L/1986)	147.88	1	1.0L
8	6	-1.49	(L/266)	184.38	1	1.0L
9	1	1.40	(L/283)	17.50	2	0.42W1>
9	2	-2.16	(L/183)	50.50	1	1.0L
9	3	-2.16	(L/183)	83.50	1	1.0L
9	4	-2.16	(L/183)	116.50	1	1.0L
9	5	-2.16	(L/183)	149.50	1	1.0L
9	6	1.40	(L/283)	182.50	2	0.42W1>
10	1	-1.13	(L/349)	13.50	1	1.0L
10	2	1.22	(L/326)	53.38	2	0.42W1>

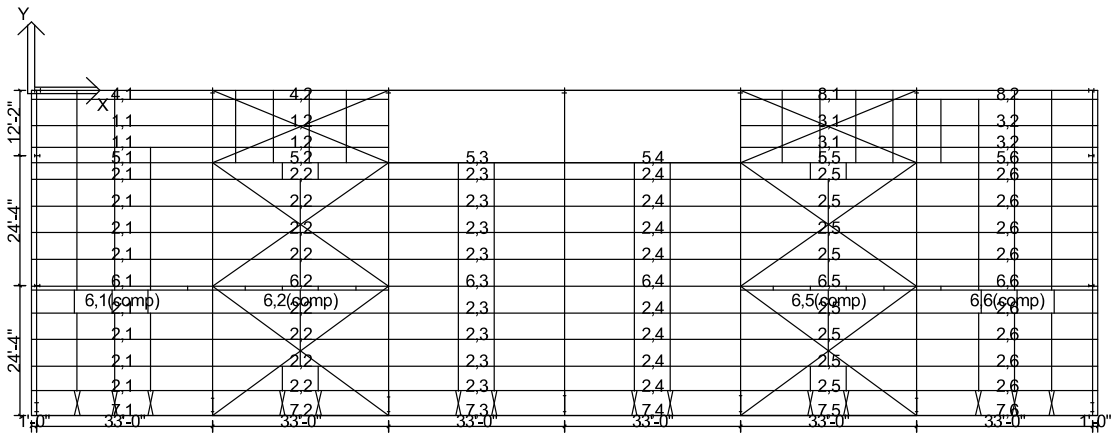
Purlin Anchorage Forces for Shape Shape 1, Roof A, Panel Type is SSR, Pitch = 2.000:12 AR Clip if req'd - PC7

Bay	Thickness	Load(psf)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.098	-17.97	1	13	34.00	N	60.83	1.133	0.030
2	0.088	-17.97	1	13	33.00	N	60.83	1.100	0.023
3	0.073	-19.14	1	10	33.00	N	60.83	1.100	0.024
4	0.073	-19.14	1	10	33.00	N	60.83	1.100	0.025
5	0.088	-17.97	1	13	33.00	N	60.83	1.100	0.023
6	0.098	-17.97	1	13	34.00	N	60.83	1.133	0.030

Reference Frm-Line	Located @	Force per Anch. Line(k)	Force per Anchor	Anch. Allow	Req'd AR Anchors	Actual AR, STD	Required Stiffness	Available Stiffness	Diaphragm Allow	Diaphragm Shr	Diaphragm Stress Ratio
1(0.00)	Frame	0.73D	0.34D (k)	1.14W	2	2, 0	2.919	94.796	0.022	0.012	0.554
	BR.1	0.37D	0.36D (k)	1.74	1	1, 0	1.482	15.614	0.022	0.003	0.135
	BR.2	0.37D	0.36D (k)	1.74	1	1, 0	1.482	15.614	0.022	0.003	0.135
	BR.3	0.23D	0.22D (k)	1.74	1	1, 0	0.940	15.915	0.022	0.002	0.084
	BR.4	0.23D	0.22D (k)	1.74	1	1, 0	0.940	15.915	0.022	0.002	0.084
2(34.00)	Frame	1.43D	0.33D (k)	1.14W	4	4, 1	5.716	200.572	0.022	0.012	0.562

	BR.1	0.28D	0.26D (k)	1.74	1	1, 0	1.114	15.835	0.022	0.002	0.100
	BR.2	0.28D	0.26D (k)	1.74	1	1, 0	1.114	15.835	0.022	0.002	0.100
	BR.3	0.28D	0.26D (k)	1.74	1	1, 0	1.101	15.835	0.022	0.002	0.099
	BR.4	0.28D	0.26D (k)	1.74	1	1, 0	1.101	15.835	0.022	0.002	0.099
3(67.00)	Frame	1.68D	0.41D (k)	1.14W	4	4, 1	6.703	187.459	0.022	0.016	0.720
	BR.1	0.28D	0.27D (k)	1.74	1	1, 0	1.136	15.532	0.022	0.002	0.104
	BR.2	0.28D	0.27D (k)	1.74	1	1, 0	1.136	15.532	0.022	0.002	0.104
	BR.3	0.28D	0.27D (k)	1.74	1	1, 0	1.120	15.532	0.022	0.002	0.103
	BR.4	0.28D	0.27D (k)	1.74	1	1, 0	1.120	15.532	0.022	0.002	0.103
4(100.00)	Frame	1.87D	0.37D (k)	1.14W	5	5, 0	7.461	227.898	0.022	0.015	0.708
	BR.1	0.28D	0.27D (k)	1.74	1	1, 0	1.120	15.532	0.022	0.002	0.103
	BR.2	0.28D	0.27D (k)	1.74	1	1, 0	1.120	15.532	0.022	0.002	0.103
	BR.3	0.30D	0.29D (k)	1.74	1	1, 0	1.213	15.532	0.022	0.002	0.111
	BR.4	0.30D	0.29D (k)	1.74	1	1, 0	1.213	15.532	0.022	0.002	0.111
5(133.00)	Frame	1.63D	0.43D (k)	1.14W	3	3, 1	6.519	164.947	0.022	0.012	0.562
	BR.1	0.28D	0.27D (k)	1.74	1	1, 0	1.125	15.835	0.022	0.002	0.101
	BR.2	0.28D	0.27D (k)	1.74	1	1, 0	1.125	15.835	0.022	0.002	0.101
	BR.3	0.28D	0.26D (k)	1.74	1	1, 0	1.114	15.835	0.022	0.002	0.100
	BR.4	0.28D	0.26D (k)	1.74	1	1, 0	1.114	15.835	0.022	0.002	0.100
6(166.00)	Frame	1.43D	0.33D (k)	1.14W	4	4, 1	5.716	200.572	0.022	0.012	0.562
	BR.1	0.23D	0.22D (k)	1.74	1	1, 0	0.940	15.915	0.022	0.002	0.084
	BR.2	0.23D	0.22D (k)	1.74	1	1, 0	0.940	15.915	0.022	0.002	0.084
	BR.3	0.37D	0.36D (k)	1.74	1	1, 0	1.482	15.614	0.022	0.003	0.135
	BR.4	0.37D	0.36D (k)	1.74	1	1, 0	1.482	15.614	0.022	0.003	0.135
7(200.00)	Frame	0.73D	0.34D (k)	1.14W	2	2, 0	2.919	94.796	0.022	0.012	0.554

Roof: B



Maximum Secondary Designs for Shape Shape 1 on Side B

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.92	0.24	0.78	0.00	7	0.71	0.15	0.74	0.56	7	46.5
1,2	33.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.71	0.15	0.74	0.56	7	46.5	0.89	0.24	0.78	0.00	7						
2,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.98	0.00	0.00	0.00	7	0.69	0.18	0.76	0.62	7	46.5
2,2	33.00	10.00x0.088 Z Con-60.0	Yes	34.5	0.69	0.16	0.76	0.62	7	34.5	0.98	0.29	0.83	0.00	7	0.58	0.21	0.73	0.69	7	34.5
2,3	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.58	0.22	0.73	0.69	7	46.5	0.88	0.49	0.86	0.00	7	0.79	0.32	0.99	0.93	7	46.5
2,4	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.79	0.32	0.99	0.93	7	46.5	0.88	0.49	0.86	0.00	7	0.58	0.22	0.73	0.69	7	46.5
2,5	33.00	10.00x0.088 Z Con-60.0	Yes	34.5	0.58	0.21	0.73	0.69	7	34.5	0.98	0.29	0.83	0.00	7	0.69	0.16	0.76	0.62	7	34.5
2,6	34.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.69	0.18	0.76	0.62	7	46.5	0.98	0.00	0.00	0.00	7						
3,1	33.00	10.00x0.088 Z Con-60.0	Yes	46.5							1.03	0.33	0.91	0.00	7	0.82	0.20	0.88	0.70	7	46.5
3,2	34.00	10.00x0.088 Z Con-60.0	Yes	46.5	0.82	0.20	0.88	0.70	7	46.5	1.03	0.33	0.91	0.00	7						
4,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.90	0.24	0.99	0.00	49	0.70	0.15	0.74	0.55	49	46.5
4,2	33.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.70	0.15	0.74	0.55	49	46.5	0.87	0.24	0.96	0.00	49						
5,1	34.00	10.00x0.088 Z Con-60.0	Yes	46.5							0.74	0.24	1.00	0.00	49	0.46	0.15	0.58	0.46	25	46.5
5,2	33.00	10.00x0.079 Z Con-60.0	Yes	34.5	0.46	0.13	0.61	0.46	49	22.5	0.65	0.23	0.98	0.00	49	0.49	0.16	0.65	0.64	49	22.5
5,3	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.49	0.23	0.64	0.64	7	46.5	0.93	0.48	0.89	0.00	7	0.81	0.31	0.99	0.92	7	46.5
5,4	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.81	0.31	0.99	0.92	7	46.5	0.93	0.48	0.89	0.00	7	0.49	0.23	0.64	0.64	7	46.5
5,5	33.00	10.00x0.079 Z Con-60.0	Yes	34.5	0.49	0.17	0.65	0.64	43	22.5	0.65	0.23	0.98	0.00	43	0.46	0.13	0.61	0.46	43	22.5
5,6	34.00	10.00x0.088 Z Con-60.0	Yes	46.5	0.46	0.15	0.58	0.46	43	46.5	0.74	0.24	1.00	0.00	43						
6,1	34.00	10.00x0.113 ZS3 Con-60.0	Yes	46.5							0.84	0.00	0.96	0.00	49	0.54	0.10	0.59	0.41	49	34.5
6,2	33.00	10.00x0.113 ZS3 Con-60.0	Yes	34.5	0.54	0.09	0.62	0.41	49	34.5	0.81	0.15	1.01	0.00	49	0.49	0.12	0.59	0.49	49	34.5
6,3	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.49	0.13	0.56	0.49	7	46.5	0.91	0.49	1.00	0.00	49	0.79	0.31	0.99	0.93	7	46.5
6,4	33.00	10.00x0.073 Z Con-60.0	Yes	46.5	0.79	0.31	0.99	0.93	7	46.5	0.91	0.49	1.00	0.00	49	0.49	0.13	0.56	0.49	7	46.5
6,5	33.00	10.00x0.113 ZS3 Con-60.0	Yes	34.5	0.49	0.12	0.59	0.49	43	34.5	0.81	0.15	1.01	0.00	43	0.54	0.09	0.62	0.41	43	34.5
6,6	34.00	10.00x0.113 ZS3 Con-60.0	Yes	46.5	0.54	0.10	0.59	0.41	43	34.5	0.84	0.00	0.97	0.00	43						
7,1	34.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.58	0.00	0.72	0.00	49						
7,2	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.00	0.00	7						
7,3	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.97	0.00	43						

7,4	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.96	0.00	43						
7,5	33.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.89	0.00	0.00	0.00	7						
7,6	34.00	10.00x0.113 EZ Sim-60.0	Yes	0.0							0.58	0.00	0.72	0.00	43						
8,1	33.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.70	0.15	0.74	0.55	43	46.5	0.87	0.23	0.96	0.00	43	0.70	0.14	0.74	0.55	43	46.5
8,2	34.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.70	0.15	0.74	0.55	43	46.5	0.89	0.24	0.99	0.00	43						

Maximum Secondary Deflections for Shape Shape 1 on Side B

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.23	(L/323)	14.00	2	0.42W1>
1	2	-1.19	(L/333)	53.88	1	1.0L
2	1	1.56	(L/253)	15.00	2	0.42W1>
2	2	-0.29	(L/1386)	52.38	1	1.0L
2	3	-0.80	(L/493)	82.88	1	1.0L
2	4	-0.80	(L/493)	116.88	1	1.0L
2	5	-0.28	(L/1418)	147.88	1	1.0L
2	6	1.58	(L/251)	184.88	2	0.42W1>
3	1	-1.28	(L/310)	13.50	1	1.0L
3	2	1.38	(L/286)	52.88	2	0.42W1>
4	1	1.20	(L/330)	14.00	2	0.42W1>
4	2	-1.17	(L/340)	53.88	1	1.0L
5	1	-1.15	(L/345)	15.00	1	1.0L
5	2	-0.17	(L/2362)	51.88	1	1.0L
5	3	-0.59	(L/668)	82.88	1	1.0L
5	4	-0.59	(L/671)	117.38	1	1.0L
5	5	-0.17	(L/2395)	147.88	1	1.0L
5	6	-1.16	(L/341)	184.38	1	1.0L
6	1	-1.48	(L/268)	15.00	1	1.0L
6	2	-0.21	(L/1902)	52.38	1	1.0L
6	3	-0.79	(L/499)	82.88	1	1.0L
6	4	-0.79	(L/499)	116.88	1	1.0L
6	5	-0.20	(L/1986)	147.88	1	1.0L
6	6	-1.49	(L/266)	184.38	1	1.0L
7	1	1.40	(L/283)	17.50	2	0.42W1>
7	2	-2.16	(L/183)	50.50	1	1.0L
7	3	-2.16	(L/183)	83.50	1	1.0L
7	4	-2.16	(L/183)	116.50	1	1.0L
7	5	-2.16	(L/183)	149.50	1	1.0L
7	6	1.40	(L/283)	182.50	2	0.42W1>
8	1	-1.12	(L/352)	13.50	1	1.0L
8	2	1.22	(L/325)	52.88	2	0.42W1>

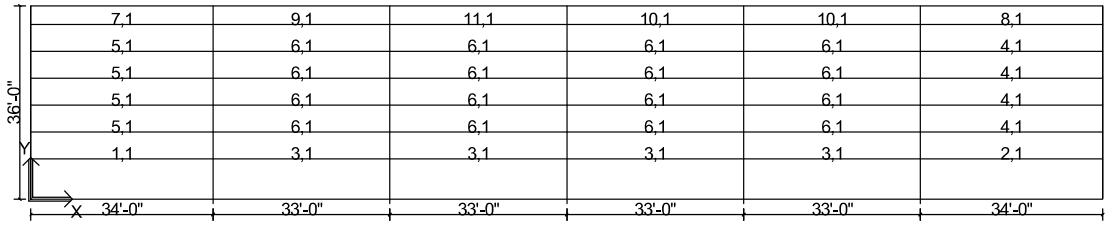
Purlin Anchorage Forces for Shape Shape 1, Roof B, Panel Type is SSR, Pitch = 2.000:12 AR Clip if req'd - PC7

Bay	Thickness	Load(psf)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.098	-17.97	1	13	34.00	N	60.83	1.133	0.031
2	0.088	-17.97	1	13	33.00	N	60.83	1.100	0.023
3	0.073	-18.69	1	10	33.00	N	60.83	1.100	0.039
4	0.073	-19.15	1	10	33.00	N	60.83	1.100	0.041
5	0.088	-17.99	1	13	33.00	N	60.83	1.100	0.023
6	0.098	-17.97	1	13	34.00	N	60.83	1.133	0.030

Reference Frm-Line	Located @	Force per Anch. Line(k)	Force per Anchor	Anch. Allow	Req'd AR Anchors	Actual AR, STD	Required Stiffness	Available Stiffness	Diaphragm Allow	Diaphragm Shr	Diaphragm Stress Ratio
1(0.00)	Frame	1.04D	0.49D (k)	1.14W	2	2, 0	4.163	94.873	0.022	0.017	0.789
	BR.1	0.37D	0.35D (k)	1.74	1	1, 0	1.487	15.767	0.022	0.003	0.135
	BR.2	0.30D	0.29D (k)	1.74	1	1, 0	1.216	15.955	0.022	0.002	0.109
	BR.3	0.24D	0.22D (k)	1.74	1	1, 0	0.945	16.143	0.022	0.002	0.084
2(34.00)	Frame	1.72D	0.40D (k)	1.14W	4	4, 1	6.887	200.687	0.022	0.016	0.743
	BR.1	0.28D	0.26D (k)	1.74	1	1, 0	1.114	15.835	0.022	0.002	0.100
	BR.2	0.28D	0.26D (k)	1.74	1	1, 0	1.114	15.835	0.022	0.002	0.100
	BR.3	0.28D	0.26D (k)	1.74	1	1, 0	1.101	15.835	0.022	0.002	0.099
	BR.4	0.28D	0.26D (k)	1.74	1	1, 0	1.101	15.835	0.022	0.002	0.099
3(67.00)	Frame	2.04D	0.50D (k)	1.14W	4	4, 1	8.151	187.636	0.022	0.022	1.000
	BR.1	0.40D	0.38D (k)	1.74	1	1, 0	1.597	15.887	0.022	0.005	0.243
	BR.2	0.40D	0.38D (k)	1.74	1	1, 0	1.600	15.887	0.022	0.005	0.244
4(100.00)	Frame	2.60D	0.64D (k)	1.14W	4	4, 0	10.419	183.862	0.022	0.022	0.998
	BR.1	0.41D	0.39D (k)	1.74	1	1, 0	1.638	15.887	0.022	0.005	0.250

	BR.2	0.44D	0.41D (k)	1.74	1	1, 0	1.746	15.887	0.022	0.006	0.266
5(133.00)	Frame	2.01D	0.53D (k)	1.14W	3	3, 1	8.043	165.125	0.022	0.017	0.800
	BR.1	0.28D	0.27D (k)	1.74	1	1, 0	1.126	15.835	0.022	0.002	0.101
	BR.2	0.28D	0.27D (k)	1.74	1	1, 0	1.126	15.835	0.022	0.002	0.101
	BR.3	0.28D	0.26D (k)	1.74	1	1, 0	1.115	15.835	0.022	0.002	0.100
	BR.4	0.28D	0.26D (k)	1.74	1	1, 0	1.115	15.835	0.022	0.002	0.100
6(166.00)	Frame	1.43D	0.34D (k)	1.14W	4	4, 1	5.720	200.572	0.022	0.012	0.562
	BR.1	0.23D	0.22D (k)	1.74	1	1, 0	0.940	15.915	0.022	0.002	0.084
	BR.2	0.23D	0.22D (k)	1.74	1	1, 0	0.940	15.915	0.022	0.002	0.084
	BR.3	0.37D	0.36D (k)	1.74	1	1, 0	1.482	15.614	0.022	0.003	0.135
	BR.4	0.37D	0.36D (k)	1.74	1	1, 0	1.482	15.614	0.022	0.003	0.135
7(200.00)	Frame	0.73D	0.34D (k)	1.14W	2	2, 0	2.919	94.796	0.022	0.012	0.554

Partition or Misc. 1



Maximum Secondary Designs for Shape Shape 1 on Side 1

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	34.00	8.50x0.073 Z Sim-60.0	Yes	0.0							0.99	0.00	0.00	0.00	1						
2,1	34.00	8.50x0.073 Z Sim-60.0	Yes	0.0							0.99	0.00	0.00	0.00	1						
3,1	33.00	8.50x0.073 Z Sim-60.0	Yes	0.0							0.94	0.00	0.00	0.00	1						
4,1	34.00	8.50x0.068 Z Sim-60.0	Yes	0.0							0.91	0.00	0.00	0.00	1						
5,1	34.00	8.50x0.068 Z Sim-60.0	Yes	0.0							0.91	0.00	0.00	0.00	1						
6,1	33.00	8.50x0.068 Z Sim-60.0	Yes	0.0							0.86	0.00	0.00	0.00	1						
7,1	34.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.93	0.00	0.00	0.00	1						
8,1	34.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.93	0.00	0.00	0.00	1						
9,1	33.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.88	0.00	0.00	0.00	1						
10,1	33.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.88	0.00	0.00	0.00	1						
11,1	33.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.88	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 on Side 1

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.97	(L/207)	17.00	1	0.42W1>
2	1	1.97	(L/207)	17.00	1	0.42W1>
3	1	1.75	(L/227)	16.50	1	0.42W1>
4	1	1.72	(L/237)	17.00	1	0.42W1>
5	1	1.72	(L/237)	17.00	1	0.42W1>
6	1	1.53	(L/259)	16.50	1	0.42W1>
7	1	1.66	(L/246)	17.00	1	0.42W1>
8	1	1.66	(L/246)	17.00	1	0.42W1>
9	1	1.47	(L/269)	16.50	1	0.42W1>
10	1	1.47	(L/269)	16.50	1	0.42W1>
11	1	1.47	(L/269)	16.50	1	0.42W1>

Loads and Codes - Shape: Shape 1 Clerestory

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.00 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used - User Modified
Wind Exposure: C - Kz: 1.075
Parts Wind Exposure Factor: 1.075
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 36/0/0
Primary Zone Strip Width: 2a: 6/0/0
Parts / Portions Zone Strip Width: a: 3/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 46/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.5989
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3533
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Design Load Combinations - Purlin

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L	D + CG + L
2	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB1>	D + CG + W1> + WB1>
3	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB1>	D + CG + <W2 + WB1>
4	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB1>	D + CU + W1> + WB1>
5	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB1>	D + CU + <W2 + WB1>
6	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB1>	D + CG + L + W1> + WB1>
7	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB1>	D + CG + L + <W2 + WB1>
8	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB1	D + CG + W1> + <WB1
9	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB1	D + CG + <W2 + <WB1
10	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB1	D + CU + W1> + <WB1
11	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB1	D + CU + <W2 + <WB1
12	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB1	D + CG + L + W1> + <WB1
13	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB1	D + CG + L + <W2 + <WB1
14	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB2>	D + CG + W1> + WB2>
15	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB2>	D + CG + <W2 + WB2>
16	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB2>	D + CU + W1> + WB2>
17	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB2>	D + CU + <W2 + WB2>
18	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB2>	D + CG + L + W1> + WB2>
19	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB2>	D + CG + L + <W2 + WB2>
20	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB2	D + CG + W1> + <WB2
21	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB2	D + CG + <W2 + <WB2
22	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB2	D + CU + W1> + <WB2

23	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB2	D + CU + <W2 + <WB2
24	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB2	D + CG + L + W1> + <WB2
25	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB2	D + CG + L + <W2 + <WB2
26	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB3>	D + CG + W1> + WB3>
27	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB3>	D + CG + <W2 + WB3>
28	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB3>	D + CU + W1> + WB3>
29	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB3>	D + CU + <W2 + WB3>
30	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB3>	D + CG + L + W1> + WB3>
31	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB3>	D + CG + L + <W2 + WB3>
32	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB3	D + CG + W1> + <WB3
33	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB3	D + CG + <W2 + <WB3
34	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB3	D + CU + W1> + <WB3
35	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB3	D + CU + <W2 + <WB3
36	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB3	D + CG + L + W1> + <WB3
37	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB3	D + CG + L + <W2 + <WB3
38	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 WB4>	D + CG + W1> + WB4>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 WB4>	D + CG + <W2 + WB4>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 WB4>	D + CU + W1> + WB4>
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 WB4>	D + CU + <W2 + WB4>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 WB4>	D + CG + L + W1> + WB4>
43	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 WB4>	D + CG + L + <W2 + WB4>
44	System Derived	1.000	1.0 D + 1.0 CG + 0.6 W1> + 0.6 <WB4	D + CG + W1> + <WB4
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 <W2 + 0.6 <WB4	D + CG + <W2 + <WB4
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 W1> + 0.6 <WB4	D + CU + W1> + <WB4
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 <W2 + 0.6 <WB4	D + CU + <W2 + <WB4
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1> + 0.45 <WB4	D + CG + L + W1> + <WB4
49	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2 + 0.45 <WB4	D + CG + L + <W2 + <WB4
50	System Derived	1.000	1.0 D + 1.0 CG + 0.7 EB> + 0.7 EG+	D + CG + EB> + EG+
51	System Derived	1.000	0.6 D + 0.6 CU + 0.7 EB> + 0.7 EG-	D + CU + EB> + EG-
52	System Derived	1.000	1.0 D + 1.0 CG + 0.7 <EB + 0.7 EG+	D + CG + <EB + EG+
53	System Derived	1.000	0.6 D + 0.6 CU + 0.7 <EB + 0.7 EG-	D + CU + <EB + EG-

Design Load Combinations - Girt

No.	Origin	Factor	Application	Description
1	System	1.000	0.6 W1>	W1>
2	System	1.000	0.6 <W2	<W2

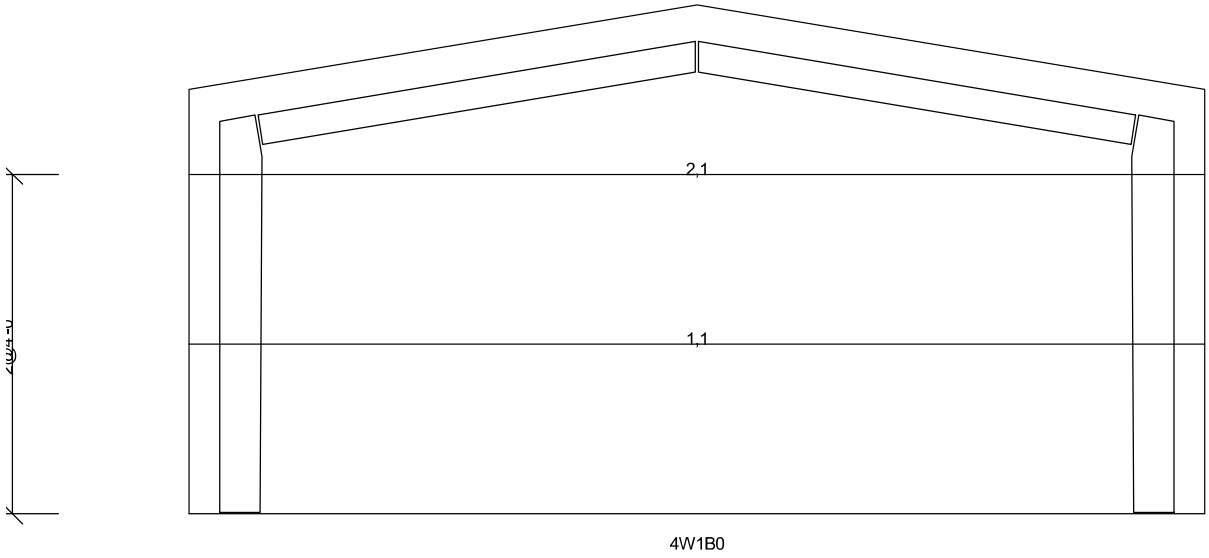
Deflection Load Combinations - Purlin

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	150	1.0 L	L
2	System	1.000	180	0.42 W1>	W1>
3	System	1.000	180	0.42 <W2	<W2

Deflection Load Combinations - Girt

No.	Origin	Factor	Deflection	Application	Description
1	System	1.000	90	0.42 W1>	W1>
2	System	1.000	90	0.42 <W2	<W2

Wall: 1



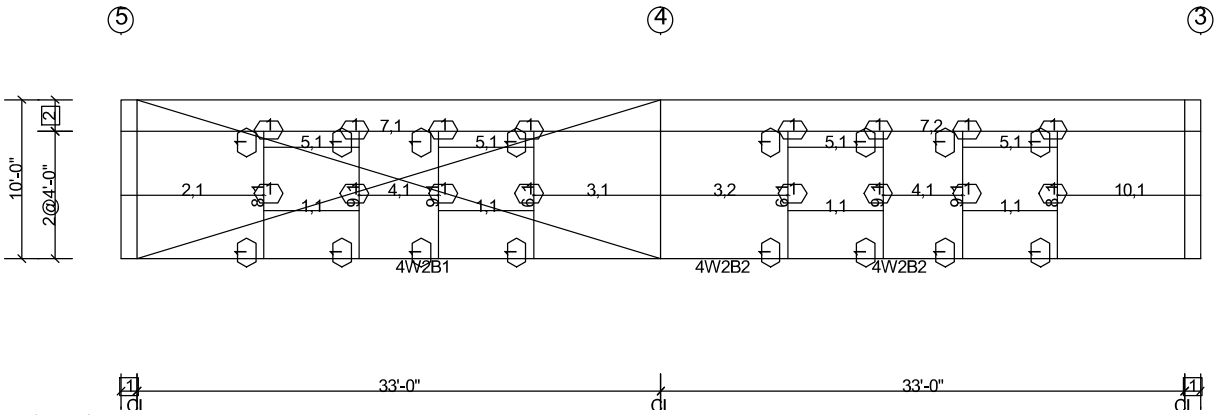
Maximum Secondary Designs for Shape Shape 1 Clerestory on Side 1

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	24.00	8.50x0.079 Z Sim-60.0	Yes	0.0							1.02	0.00	0.00	0.00	1						
2,1	24.00	8.50x0.079 Z Sim-60.0	Yes	0.0							0.99	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 Clerestory on Side 1

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.04	(L/276)	12.00	1	0.42W1>
2	1	1.01	(L/286)	12.00	1	0.42W1>

Wall: 2



Dimension Key

1 1'-0"
2 2'-0"
3 3'-0"
4 4'-0"

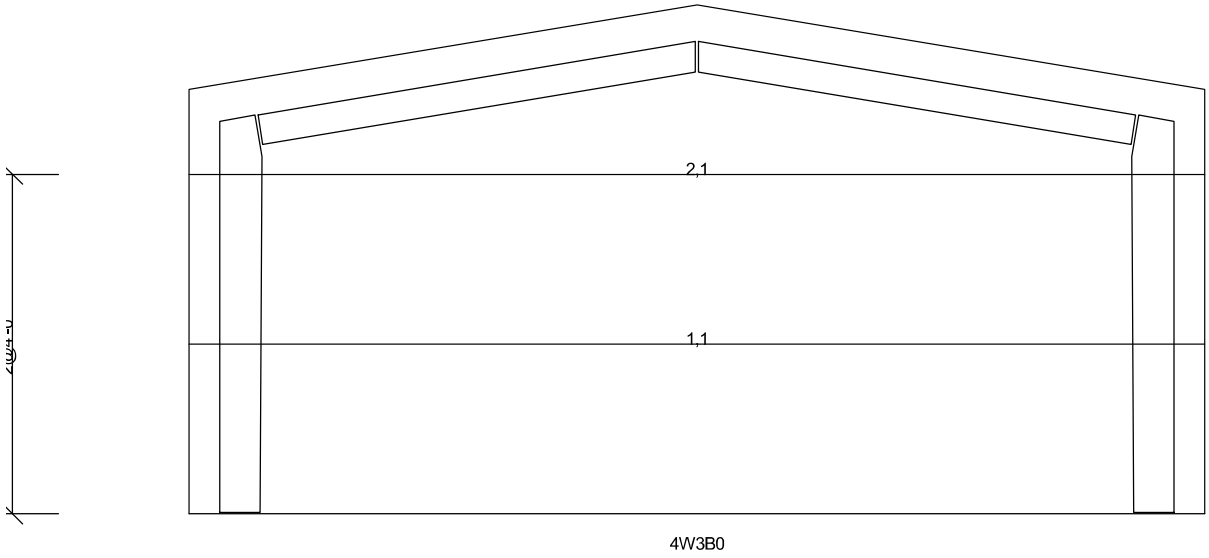
Maximum Secondary Designs for Shape Shape 1 Clerestory on Side 2

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	6.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.04	0.00	0.00	0.00	1						
2,1	9.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.19	0.00	0.12	0.00	1						
3,1	8.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.20	0.00	0.00	0.00	1						
3,2	8.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.20	0.00	0.00	0.00	1						
4,1	5.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.08	0.00	0.00	0.00	1						
5,1	6.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.01	0.00	0.00	0.00	1						
6,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.23	0.07	0.22	0.00	1						
7,1	34.00	8.50x0.088 Z Con-60.0	Yes	46.5							0.96	0.20	0.80	0.00	2	0.79	0.12	0.80	0.00	1	46.5
7,2	34.00	8.50x0.088 Z Con-60.0	Yes	46.5	0.79	0.12	0.80	0.00	1	46.5	0.96	0.20	0.80	0.00	2						
8,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.23	0.07	0.22	0.00	1						
9,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.19	0.04	0.18	0.00	1						
10,1	9.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.19	0.00	0.12	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 Clerestory on Side 2

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-	-	-	-	-
2	1	0.00	(L/5106)	5.00	1	0.42W1>
3	1	0.00	(L/4969)	4.00	1	0.42W1>
3	2	0.00	(L/4969)	12.00	1	0.42W1>
4	1	-	-	-	-	-
5	1	-	-	-	-	-
6	1	0.00	(L/3140)	4.00	1	0.42W1>
7	1	1.58	(L/250)	14.50	1	0.42W1>
7	2	1.62	(L/245)	53.38	1	0.42W1>
8	1	0.00	(L/3135)	4.00	1	0.42W1>
9	1	0.00	(L/3835)	4.00	1	0.42W1>
10	1	0.00	(L/5106)	4.00	1	0.42W1>

Wall: 3



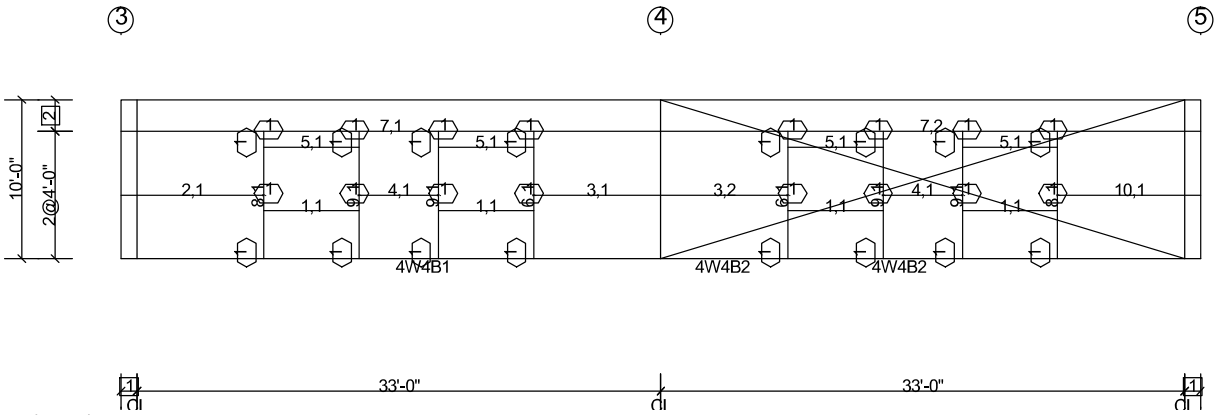
Maximum Secondary Designs for Shape Shape 1 Clerestory on Side 3

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	24.00	8.50x0.079 Z Sim-60.0	Yes	0.0							1.02	0.00	0.00	0.00	1						
2,1	24.00	8.50x0.079 Z Sim-60.0	Yes	0.0							0.99	0.00	0.00	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 Clerestory on Side 3

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	1.04	(L/276)	12.00	1	0.42W1>
2	1	1.01	(L/286)	12.00	1	0.42W1>

Wall: 4



Dimension Key

1 1'-0"
2 2'-0"
3 3'-0"
4 4'-0"

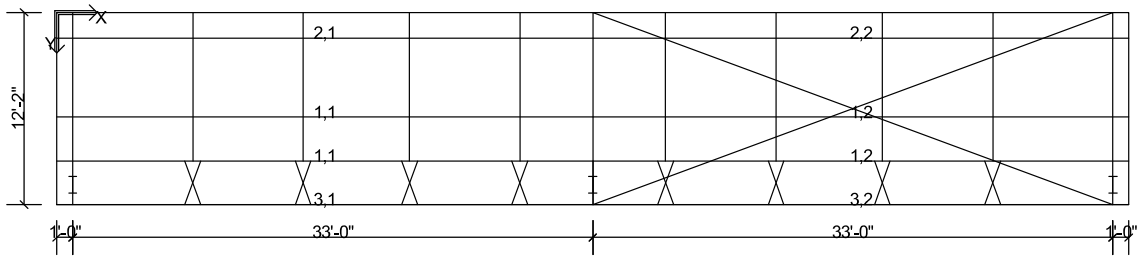
Maximum Secondary Designs for Shape Shape 1 Clerestory on Side 4

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)	Interior % Bnd	Interior % Shr	Interior % Cmb	Interior % Wcp	Interior Ld Cs	Exterior % Bnd	Exterior % Shr	Exterior % Cmb	Exterior % Wcp	Exterior Ld Cs	Exterior Lap (in.)
1,1	6.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.04	0.00	0.00	0.00	1						
2,1	9.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.19	0.00	0.12	0.00	1						
3,1	8.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.20	0.00	0.00	0.00	1						
3,2	8.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.20	0.00	0.00	0.00	1						
4,1	5.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.08	0.00	0.00	0.00	1						
5,1	6.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.01	0.00	0.00	0.00	1						
6,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.23	0.07	0.22	0.00	1						
7,1	34.00	8.50x0.088 Z Con-60.0	Yes	46.5							0.96	0.20	0.80	0.00	2	0.79	0.12	0.80	0.00	1	46.5
7,2	34.00	8.50x0.088 Z Con-60.0	Yes	46.5	0.79	0.12	0.80	0.00	1	46.5	0.96	0.20	0.80	0.00	2						
8,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.23	0.07	0.22	0.00	1						
9,1	8.00	8.50x0.060 C Sim-60.0	Yes	0.0							0.19	0.04	0.18	0.00	1						
10,1	9.00	8.50x0.060 Z Sim-60.0	Yes	0.0							0.19	0.00	0.12	0.00	1						

Maximum Secondary Deflections for Shape Shape 1 Clerestory on Side 4

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-	-	-	-	-
2	1	0.00	(L/5106)	5.00	1	0.42W1>
3	1	0.00	(L/4969)	4.00	1	0.42W1>
3	2	0.00	(L/4969)	12.00	1	0.42W1>
4	1	-	-	-	-	-
5	1	-	-	-	-	-
6	1	0.00	(L/3140)	4.00	1	0.42W1>
7	1	1.58	(L/250)	14.50	1	0.42W1>
7	2	1.62	(L/245)	53.38	1	0.42W1>
8	1	0.00	(L/3135)	4.00	1	0.42W1>
9	1	0.00	(L/3835)	4.00	1	0.42W1>
10	1	0.00	(L/5106)	4.00	1	0.42W1>

Roof: A



Maximum Secondary Designs for Shape Shape 1 Clerestory on Side A

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	34.00	10.00x0.088 Z Con-60.0	Yes	46.5							0.92	0.29	0.81	0.00	7	0.73	0.18	0.79	0.63	7	46.5
1,2	34.00	10.00x0.088 Z Con-60.0	Yes	46.5	0.73	0.18	0.79	0.63	7	46.5	0.92	0.29	0.81	0.00	7						
2,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.89	0.24	0.78	0.00	7	0.72	0.15	0.74	0.56	7	46.5
2,2	34.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.72	0.15	0.74	0.56	7	46.5	0.89	0.24	0.78	0.00	7						
3,1	34.00	10.00x0.079 EZ Sim-60.0	Yes	0.0							0.87	0.00	1.00	0.00	19						
3,2	34.00	10.00x0.079 EZ Sim-60.0	Yes	0.0							0.20	0.00	0.72	0.00	50						

Maximum Secondary Deflections for Shape Shape 1 Clerestory on Side A

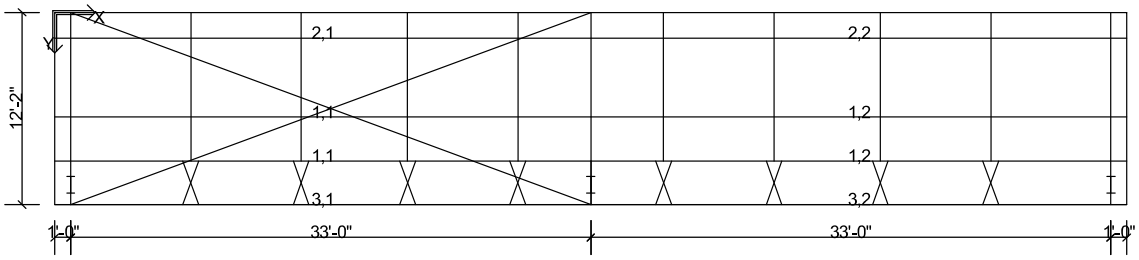
Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-1.11	(L/358)	14.00	1	1.0L
1	2	-1.12	(L/353)	53.38	1	1.0L
2	1	0.95	(L/416)	14.00	2	0.42W1>
2	2	0.97	(L/410)	53.88	2	0.42W1>
3	1	1.55	(L/255)	17.50	2	0.42W1>
3	2	1.18	(L/334)	50.50	2	0.42W1>

Purlin Anchorage Forces for Shape Shape 1 Clerestory, Roof A, Panel Type is SSR, Pitch = 2.000:12 AR Clip if req'd - PC7

Bay	Thickness	Load(psf)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.088	-17.97	1	3	34.00	N	12.17	1.133	0.013
2	0.088	-17.97	1	3	34.00	N	12.17	1.133	0.013

Reference Frm-Line	Located @	Force per Anch. Line(k)	Force per Anchor	Anch. Allow	Req'd AR Anchors	Actual AR, STD	Required Stiffness	Available Stiffness	Diaphragm Allow	Diaphragm Shr	Diaphragm Stress Ratio
1(0.00)	Frame	0.14D	0.05D (k)	1.14W	3	3, 0	0.551	131.062	0.022	0.011	0.524
	BR.1	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
	BR.2	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
	BR.3	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
	BR.4	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
2(34.00)	Frame	0.26D	0.09D (k)	1.14W	3	3, 0	1.038	139.583	0.022	0.011	0.493
	BR.1	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
	BR.2	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
	BR.3	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
	BR.4	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
3(68.00)	Frame	0.14D	0.05D (k)	1.14W	3	3, 0	0.551	131.062	0.022	0.011	0.524

Roof: B



Maximum Secondary Designs for Shape Shape 1 Clerestory on Side B

Des Id	Len (ft)	Description - Fy(ksi)	Design Status	Detail Lap (in.)	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)	Interior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Exterior % Bnd	% Shr	% Cmb	% Wcp	Ld Cs	Lap (in.)
1,1	34.00	10.00x0.088 Z Con-60.0	Yes	46.5							0.92	0.29	0.81	0.00	7	0.73	0.18	0.79	0.63	7	46.5
1,2	34.00	10.00x0.088 Z Con-60.0	Yes	46.5	0.73	0.18	0.79	0.63	7	46.5	0.92	0.29	0.81	0.00	7						
2,1	34.00	10.00x0.098 Z Con-60.0	Yes	46.5							0.89	0.24	0.78	0.00	7	0.72	0.15	0.74	0.56	7	46.5
2,2	34.00	10.00x0.098 Z Con-60.0	Yes	46.5	0.72	0.15	0.74	0.56	7	46.5	0.89	0.24	0.78	0.00	7						
3,1	34.00	10.00x0.079 EZ Sim-60.0	Yes	0.0							0.20	0.00	0.72	0.00	50						
3,2	34.00	10.00x0.079 EZ Sim-60.0	Yes	0.0							0.87	0.00	1.00	0.00	43						

Maximum Secondary Deflections for Shape Shape 1 Clerestory on Side B

Design Id	Segment	Deflection(in.)	Ratio	Location(ft)	Load Case	Description
1	1	-1.11	(L/358)	14.00	1	1.0L
1	2	-1.12	(L/353)	53.38	1	1.0L
2	1	0.95	(L/416)	14.00	2	0.42W1>
2	2	0.97	(L/410)	53.88	2	0.42W1>
3	1	1.18	(L/334)	17.50	2	0.42W1>
3	2	1.55	(L/255)	50.50	2	0.42W1>

Purlin Anchorage Forces for Shape Shape 1 Clerestory, Roof B, Panel Type is SSR, Pitch = 2.000:12 AR Clip if req'd - PC7

Bay	Thickness	Load(psf)	Ld Case	# Purlins	Length	Simple?	Diaphragm Width	Allowable Defl	Actual Defl
1	0.088	-17.97	1	3	34.00	N	12.17	1.133	0.013
2	0.088	-17.97	1	3	34.00	N	12.17	1.133	0.013

Reference Frm-Line	Located @	Force per Anch. Line(k)	Force per Anchor	Anch. Allow	Req'd AR Anchors	Actual AR, STD	Required Stiffness	Available Stiffness	Diaphragm Allow	Diaphragm Shr	Diaphragm Stress Ratio
1(0.00)	Frame	0.14D	0.05D (k)	1.14W	3	3, 0	0.551	131.062	0.022	0.011	0.524
	BR.1	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
	BR.2	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
	BR.3	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
	BR.4	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
2(34.00)	Frame	0.26D	0.09D (k)	1.14W	3	3, 0	1.038	139.583	0.022	0.011	0.493
	BR.1	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
	BR.2	0.06D	0.06D (k)	1.74	1	1, 0	0.254	15.193	0.022	0.003	0.119
	BR.3	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
	BR.4	0.10D	0.10D (k)	1.74	1	1, 0	0.391	15.131	0.022	0.004	0.184
3(68.00)	Frame	0.14D	0.05D (k)	1.14W	3	3, 0	0.551	131.062	0.022	0.011	0.524

Framing - Summary Report

Loads and Codes - Shape: Shape 1

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.01 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):3.00 psf - USR

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used
Wind Exposure: C - Kz: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Primary Zone Strip Width: 2a: 20/9/10
Parts / Portions Zone Strip Width: a: 12/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

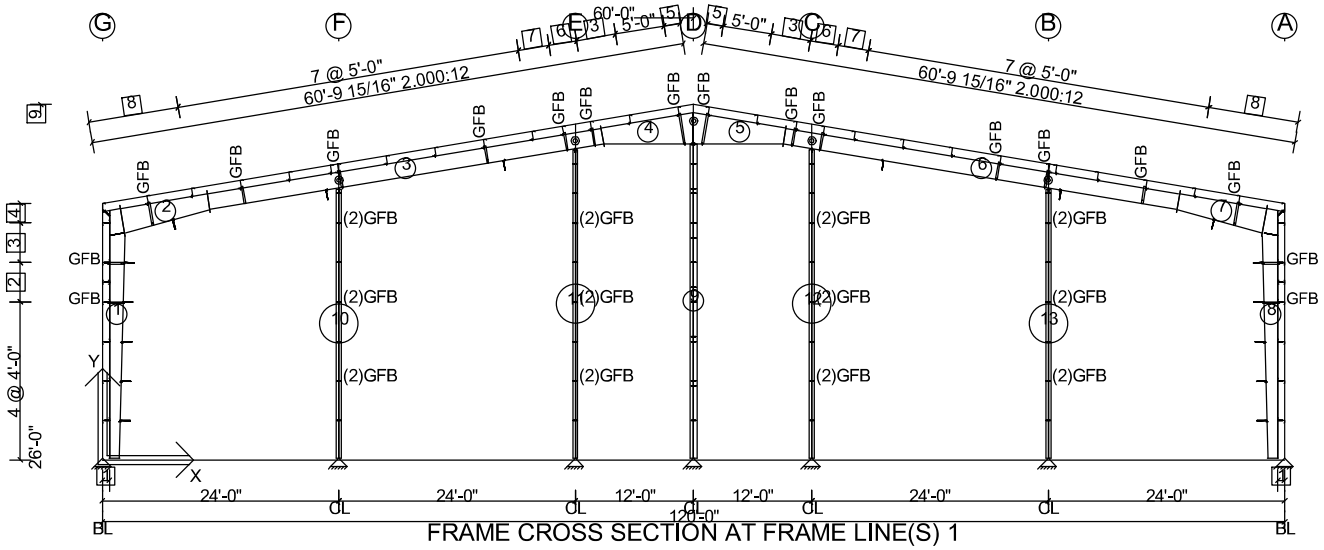
Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Deflection Conditions
Frames are vertically supporting:Metal Roof Purlins and Panels
Frames are laterally supporting:Metal Wall Girts and Panels
Purlins are supporting:Metal Roof Panels
Girts are supporting:Metal Wall Panels

Wall: 4, Frame at: 1/0/0

Frame Cross Section: 1



Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 1'-7 11/16"
6 2'-10 5/16"
7 3'-1 11/16"
8 2 @ 4'-7 1/8"
9 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX001) and 8(CX001): 115'-5 11/16"
Vert. Clearance at member 1(CX001): 22'-7 15/16"
Vert. Clearance at member 8(CX001): 22'-7 15/16"
Vert. Clearance at member 9(EPX001): 32'-0 3/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
1/0/0	17/6/0	Frame Lines 1 & 7	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	8.00	0.3750	0.1644	12.00	18.00	25.11	818.5	55.00	55.00	BP	KN	3P
2	8.00	0.2500	0.1644	30.00	19.00	10.02	368.9	55.00	55.00	KN	SP	3P
3	8.00	0.2500	0.1644	19.00	19.00	40.54	1032.1	55.00	55.00	SP	SP	3P
4	8.00	0.2500	0.1875	19.00	36.97	9.50	317.9	55.00	55.00	SP	SS	3P
5	8.00	0.2500	0.1875	36.97	19.00	9.50	317.9	55.00	55.00	SS	SP	3P
6	8.00	0.2500	0.1644	19.00	19.00	40.50	1064.3	55.00	55.00	SP	SP	3P
7	8.00	0.2500	0.1644	19.00	30.00	10.06	403.4	55.00	55.00	SP	KN	3P
8	8.00	0.3750	0.1644	12.00	18.00	25.11	818.5	55.00	55.00	BP	KN	3P
9	8.00	0.3750	0.1644	12.00	12.00	31.86	874.3	55.00	55.00	BP	CP	3P
10	6.00	0.2500	0.1644	11.00	11.00	29.83	448.1	55.00	55.00	BP	SS	3P
11	6.00	0.2500	0.1644	11.00	11.00	33.83	512.4	55.00	55.00	BP	SS	3P
12	6.00	0.2500	0.1644	11.00	11.00	33.83	512.4	55.00	55.00	BP	SS	3P
13	6.00	0.2500	0.1644	11.00	11.00	29.83	448.1	55.00	55.00	BP	SS	3P

Total Frame Weight = 7936.7 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes

13	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	24/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	24/0/0	30/0/0	Yes	No	No	0/0/0	0/0/0	0.0000
12	72/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	72/0/0	34/0/0	Yes	No	No	0/0/0	0/0/0	0.0000
11	48/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	48/0/0	34/0/0	Yes	No	No	0/0/0	0/0/0	0.0000
9	60/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
13	96/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	96/0/0	30/0/0	Yes	No	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 1

Type		Exterior Column		Interior Column			Interior Column			Interior Column			Interior Column		
X-Loc		0/0/0		24/0/0			48/0/0			60/0/0			72/0/0		
Grid1 - Grid2		1-G		1-F			1-E			1-D			1-C		
Base Plate W x L (in.)		9 X 13		8 X 12			8 X 12			9 X 13			8 X 12		
Base Plate Thickness (in.)		0.375		0.375			0.375			0.375			0.375		
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750			4 - 0.750			4 - 0.750			4 - 0.750		
Column Base Elev.		100'-2"		100'-2"			100'-2"			100'-2"			100'-2"		
Load Type	Desc.	Hx	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
D	Frm	0.52	2.57	-	-	0.49	-	-	0.55	-	-	5.27	-	-	0.55
CG	Frm	0.66	2.45	-	-	-	-	-	-	-	-	5.61	-	-	-
L>	Frm	1.59	5.88	-	-	-	-	-	-	-	-	13.45	-	-	-
<L	Frm	1.59	5.88	-	-	-	-	-	-	-	-	13.45	-	-	-
ASL^	Frm	0.80	-0.28	-	-	-	-	-	-	-	-	6.73	-	-	-
^ASL	Frm	0.80	6.16	-	-	-	-	-	-	-	-	6.73	-	-	-
W1>	Frm	-10.89	-18.10	-	8.81	-	-	7.49	-	-	5.01	-30.46	-	7.49	-
<W1	Frm	4.38	-10.04	-	-7.93	-	-	-6.74	-	-	-4.52	-30.46	-	-6.74	-
W2>	Frm	-11.39	-12.57	-	-	-	-	-	-	-	-	-20.75	-	-	-
<W2	Frm	3.88	-4.51	-	-	-	-	-	-	-	-	-20.74	-	-	-
WPL	Frm	-1.39	-10.86	-	-	-	-	-	-	-	-	-26.28	-	-	-
WPR	Frm	1.04	-17.05	-	-	-	-	-	-	-	-	-26.28	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW	Frm	2.81	1.69	-	-	-	-	-	-	-	-	-1.21	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW	Frm	-5.82	-0.47	-	-	-	-	-	-	-	-	-1.22	-	-	-
CU	Frm	0.27	0.98	-	-	-	-	-	-	-	-	2.24	-	-	-
L	Frm	1.59	5.88	-	-	-	-	-	-	-	-	13.45	-	-	-
E>	Frm	-3.40	-1.84	-	0.21	-	-	0.18	-	-	0.12	-	-	0.18	-
EG+	Frm	0.28	1.02	-	-	-	-	-	-	-	-	2.33	-	-	-
<E	Frm	3.40	1.84	-	-0.21	-	-	-0.18	-	-	-0.12	-	-	-0.18	-
EG-	Frm	-0.28	-1.02	-	-	-	-	-	-	-	-	-2.33	-	-	-

Type		Interior Column			Exterior Column				
X-Loc		96/0/0			120/0/0				
Grid1 - Grid2		1-B			1-A				
Base Plate W x L (in.)		8 X 12			9 X 13				
Base Plate Thickness (in.)		0.375			0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750			4 - 0.750				
Column Base Elev.		100'-2"			100'-2"				
Load Type	Desc.	Hx	Hz	Vy	Hx	Vy			
D	Frm	-	-	0.49	-0.52	2.57	-	-	-
CG	Frm	-	-	-	-0.66	2.45	-	-	-
L>	Frm	-	-	-	-1.59	5.88	-	-	-
<L	Frm	-	-	-	-1.59	5.88	-	-	-
ASL^	Frm	-	-	-	-0.80	6.16	-	-	-
^ASL	Frm	-	-	-	-0.80	-0.28	-	-	-
W1>	Frm	-	8.81	-	-4.38	-10.03	-	-	-
<W1	Frm	-	-7.93	-	10.89	-18.10	-	-	-

W2>	Frm	-	-	-	-3.88	-4.51	-	-	-
<W2	Frm	-	-	-	11.39	-12.57	-	-	-
WPL	Frm	-	-	-	-1.04	-17.05	-	-	-
WPR	Frm	-	-	-	1.39	-10.86	-	-	-
MW	Frm	-	-	-	-	-	-	-	-
MW	Frm	-	-	-	5.82	-0.47	-	-	-
MW	Frm	-	-	-	-	-	-	-	-
MW	Frm	-	-	-	-2.82	1.69	-	-	-
CU	Frm	-	-	-	-0.27	0.98	-	-	-
L	Frm	-	-	-	-1.59	5.88	-	-	-
E>	Frm	-	0.21	-	-3.40	1.84	-	-	-
EG+	Frm	-	-	-	-0.28	1.02	-	-	-
<E	Frm	-	-0.21	-	3.40	-1.84	-	-	-
EG-	Frm	-	-	-	0.28	-1.02	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	13.0	10.4
CG	0.0	0.0	10.5	10.5
L>	0.0	0.0	25.2	25.2
<L	0.0	0.0	25.2	25.2
ASL^	0.0	0.0	12.6	12.6
^ASL	0.0	0.0	12.6	12.6
W1>	15.3	15.3	58.5	58.6
<W1	15.3	15.3	58.5	58.6
W2>	15.3	15.3	37.8	37.8
<W2	15.3	15.3	37.8	37.8
WPL	2.4	2.4	54.1	54.2
WPR	2.4	2.4	54.1	54.2
MW	0.0	0.0	0.0	0.0
MW	8.6	8.6	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	8.6	8.6	0.0	0.0
CU	0.0	0.0	4.2	4.2
L	0.0	0.0	25.2	25.2
E>	6.8	6.8	0.0	0.0
EG+	0.0	0.0	4.4	4.4
<E	6.8	6.8	0.0	0.0
EG-	0.0	0.0	4.4	4.4

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	1-G	6.36	17	7.33	32	-	-	-	-	8.73	15	11.18	4	-	-	-	-
24/0/0	1-F	-	-	-	-	4.76	6	5.29	5	-	-	0.49	1	-	-	-	-
24/0/0	30/0/0	-	-	-	-	4.47	6	4.96	5	0.49	1	-	-	-	-	-	-
48/0/0	1-E	-	-	-	-	4.05	6	4.50	5	-	-	0.55	1	-	-	-	-
48/0/0	34/0/0	-	-	-	-	3.75	6	4.17	5	0.55	1	-	-	-	-	-	-
60/0/0	1-D	-	-	-	-	2.71	6	3.01	5	13.77	15	24.33	1	-	-	-	-
72/0/0	1-C	-	-	-	-	4.05	6	4.50	5	-	-	0.55	1	-	-	-	-
72/0/0	34/0/0	-	-	-	-	3.75	6	4.17	5	0.55	1	-	-	-	-	-	-
96/0/0	1-B	-	-	-	-	4.76	6	5.29	5	-	-	0.49	1	-	-	-	-
96/0/0	30/0/0	-	-	-	-	4.47	6	4.96	5	0.49	1	-	-	-	-	-	-
120/0/0	1-A	7.33	31	6.36	18	-	-	-	-	8.73	16	11.18	3	-	-	-	-

Base Plate Summary
Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	1-G	1	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
24/0/0	1-F	10	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
48/0/0	1-E	11	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
60/0/0	1-D	9	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
72/0/0	1-C	12	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
96/0/0	1-B	13	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	1-A	8	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	7.09	8.99	32	6.02	-8.65	15	1.81	10.96	4	1.01	-8.65	6.02	15
24/0/0	5.29	0.29	15	-	-	0	-	0.49	1	-	-	-	0
48/0/0	4.50	0.33	15	-	-	0	-	0.55	1	-	-	-	0
60/0/0	2.90	-7.31	5	2.52	-13.69	16	0.01	24.34	1	-	-	-	0
72/0/0	4.50	0.33	15	-	-	0	-	0.55	1	-	-	-	0
96/0/0	5.29	0.29	15	-	-	0	-	0.49	1	-	-	-	0
120/0/0	7.09	9.01	31	6.02	-8.65	16	1.81	10.94	3	1.01	-8.65	6.02	16

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.307	32	0.225	15	-	0	-	0	0.085	4	0.258	15	0.066	4	0.122	4	0.213	32
24/0/0	0.229	15	-	0	-	0	-	0	0.005	1	-	0	0.005	1	0.006	1	0.175	15
48/0/0	0.195	15	-	0	-	0	-	0	0.005	1	-	0	0.006	1	0.007	1	0.149	15
60/0/0	0.126	5	0.356	16	0.356	16	-	0	0.188	1	0.408	16	0.147	1	0.270	1	0.134	16
72/0/0	0.195	15	-	0	-	0	-	0	0.005	1	-	0	0.006	1	0.007	1	0.149	15
96/0/0	0.229	15	-	0	-	0	-	0	0.005	1	-	0	0.005	1	0.006	1	0.175	15
120/0/0	0.308	31	0.225	16	-	0	-	0	0.085	3	0.258	16	0.066	3	0.121	3	0.213	31

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	***	MUST	Use	Alternate	Web	Thick.=	0.1875	*	*	*	*
1	2	S9	22.55	17.740	107.91	N/A	N/A	0.5000	3.000	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
4	1	S2	9.49	37.489	199.94	N/A	N/A	0.2500	3.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
8	***	MUST	Use	Alternate	Web	Thick.=	0.1875	*	*	*	*
8	2	S9	22.55	17.740	107.91	N/A	N/A	0.5000	3.000	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem.	Jt.	Type	Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	32	Extended	4.75/2.75	32	Extended	4.75/2.75
2	1	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	32	Extended	4.75/2.75	32	Extended	4.75/2.75
2	2	SP	0.500	9.00	26.80	1.000	F1852X/PT	4.50	31	Extended	4.50	32	Extended	4.50/2.75
3	1	SP	0.500	9.00	26.75	1.000	F1852X/PT	4.50	31	Extended	4.50	32	Extended	4.50/2.75
3	2	SP	0.500	8.00	25.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
4	1	SP	0.500	8.00	25.33	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
5	2	SP	0.500	8.00	25.33	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
6	1	SP	0.500	8.00	25.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
6	2	SP	1.000	9.00	26.75	1.000	F1852X/PT	4.50	31	Extended	4.50	31	Extended	4.50
7	1	SP	1.000	9.00	26.85	1.000	F1852X/PT	4.50	31	Extended	4.50/4.50	31	Extended	4.50/4.50
7	2	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	32	Extended	4.75/2.75	32	Extended	4.75/2.75
8	2	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	32	Extended	4.75/2.75	32	Extended	4.75/2.75
9	2	CP	0.375	9.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-6.9	7.3	2617.7	AISC DG-16/Thick plate	0.642	0.033	0.824	0.208	0.291	0.017	0.925	0.631
2	1	36	-6.9	7.3	2617.7	AISC DG-16/Thick plate	0.642	0.033	0.824	0.208	0.291	0.017	0.799	0.631
2	2	28	-3.8	3.9	800.6	AISC DG-16/Thin plate	0.388	0.023	0.697	0.216	0.301	0.028	0.959	0.631
3	1	28	-3.8	3.9	800.6	AISC DG-16/Thin plate	0.388	0.023	0.697	0.216	0.301	0.028	0.959	0.631
3	2	3	-1.6	3.9	783.3	AISC DG-16/Thin plate	0.681	0.042	0.637	0.243	0.325	0.039	0.959	0.719
4	1	3	-1.6	3.9	783.3	AISC DG-16/Thin plate	0.681	0.042	0.637	0.243	0.325	0.039	0.959	0.719
5	2	4	-2.0	3.8	783.0	AISC DG-16/Thin plate	0.677	0.041	0.633	0.243	0.325	0.037	0.959	0.719
6	1	4	-2.0	3.8	783.0	AISC DG-16/Thin plate	0.677	0.041	0.633	0.243	0.325	0.037	0.959	0.719
6	2	27	-3.6	4.1	799.4	AISC DG-16/Thin plate	0.359	0.025	0.175	0.108	0.151	0.015	0.959	0.631
7	1	27	-3.6	4.1	799.4	AISC DG-16/Thin plate	0.359	0.025	0.175	0.108	0.151	0.015	0.959	0.631
7	2	35	-6.9	7.3	2619.0	AISC DG-16/Thin plate	0.538	0.033	0.317	0.208	0.291	0.017	0.799	0.631
8	2	35	-6.9	7.3	2619.0	AISC DG-16/Thin plate	0.538	0.033	0.317	0.208	0.291	0.017	0.926	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	4.1	2.1	2197.3	AISC DG-16/Thick plate	0.608	0.010	0.824	0.187	0.261	0.005	1.000	0.631
2	1	37	4.1	2.1	2197.3	AISC DG-16/Thick plate	0.608	0.010	0.824	0.187	0.261	0.005	0.799	0.631
2	2	27	0.2	1.4	891.9	AISC DG-16/Thin plate	0.332	0.006	0.733	0.234	0.327	0.006	0.693	0.631
3	1	27	0.2	1.4	891.9	AISC DG-16/Thin plate	0.332	0.006	0.733	0.234	0.327	0.006	0.693	0.631
3	2	19	6.4	3.2	575.5	AISC DG-16/Thin plate	0.563	0.035	0.526	0.243	0.325	0.032	0.959	0.719
4	1	19	6.4	3.2	575.5	AISC DG-16/Thin plate	0.563	0.035	0.526	0.243	0.325	0.032	0.959	0.719
5	2	20	6.6	2.8	575.7	AISC DG-16/Thin plate	0.565	0.030	0.528	0.243	0.325	0.028	0.959	0.719
6	1	20	6.6	2.8	575.7	AISC DG-16/Thin plate	0.565	0.030	0.528	0.243	0.325	0.028	0.959	0.719
6	2	28	0.2	1.4	893.0	AISC DG-16/Thin plate	0.420	0.008	0.204	0.117	0.163	0.005	0.694	0.631
7	1	28	0.2	1.4	893.0	AISC DG-16/Thin plate	0.420	0.008	0.204	0.117	0.163	0.005	0.694	0.631
7	2	38	4.1	2.1	2198.7	AISC DG-16/Thin plate	0.483	0.010	0.285	0.187	0.261	0.005	0.799	0.631
8	2	38	4.1	2.1	2198.7	AISC DG-16/Thin plate	0.483	0.010	0.285	0.187	0.261	0.005	1.000	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	5	7.4	2.7	15	13.7	2.7	0.431	0.129	0.000	0.312	0.069	0.035	0.248	0.087

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	15/10/0	16/0/0	GFB2063	1.442	15	
1	19/10/0	20/0/0	GFB2081	1.691	28	
2	2/10/5	56/2/13	GFB3021	1.131	0	
3	3/6/8	46/7/11	GFB2081	0.834	27	
3	13/6/8	36/7/11	GFB2093	0.931	4	
3	28/6/8	21/7/11	GFB2081	0.688	4	
3	36/8/3	13/6/0	GFB2093	0.776	3	
3	39/6/8	10/7/11	GFB2093	0.926	3	
4	8/0/0	1/7/11	GFB4052	0.936	2	
5	1/6/0	1/7/11	GFB4052	0.936	1	
6	1/0/0	10/7/11	GFB2093	0.926	4	
6	3/10/5	13/6/0	GFB2093	0.776	4	
6	22/0/0	31/7/11	GFB2093	0.952	3	
6	27/0/0	36/7/11	GFB2093	0.931	3	
6	37/0/0	46/7/11	GFB2081	0.835	28	
7	6/1/2	56/2/13	GFB3021	1.131	27	
8	15/10/0	16/0/0	GFB2063	1.443	16	
8	19/10/0	20/0/0	GFB2081	1.692	27	
10	7/10/0	8/0/0	(2)GFB2050	0.000	0	
10	15/10/0	16/0/0	(2)GFB2050	0.000	0	
10	23/10/0	24/0/0	(2)GFB2050	0.000	0	
12	7/10/0	8/0/0	(2)GFB2050	0.000	0	
12	15/10/0	16/0/0	(2)GFB2050	0.000	0	
12	23/10/0	24/0/0	(2)GFB2050	0.000	0	

11	7/10/0	8/0/0	(2)GFB2050	0.000	0	
11	15/10/0	16/0/0	(2)GFB2050	0.000	0	
11	23/10/0	24/0/0	(2)GFB2050	0.000	0	
13	7/10/0	8/0/0	(2)GFB2050	0.000	0	
13	15/10/0	16/0/0	(2)GFB2050	0.000	0	
13	23/10/0	24/0/0	(2)GFB2050	0.000	0	

Top OF Post Summary

X-Loc	Grid	Top Reaction	Conn. Force	Condition	Flg Mn Moment	Rb Allow Shear	Comp	FB Force R1	FB Angle R2	Min Purlin	FB Typ	Purlin Bearing	Bolt Shear	FB/WSF Bearing
24/0/0	1-F	4.96	3.96	Stub - 1	82.22	3.96	-	6.53	2.57	-	-	-	-	-
72/0/0	1-C	4.17	3.22	Std	220.00	15.42	N	2.15	45.61	0.088	GFB	3.70	5.30	3.07
							N	2.46	45.61	0.088	GFB	3.70	5.30	3.07
48/0/0	1-E	4.17	3.22	Std	220.00	15.42	N	2.15	45.61	0.079	GFB	3.32	5.30	3.07
							N	2.46	45.61	0.088	GFB	3.70	5.30	3.07
96/0/0	1-B	4.96	3.96	Stub - 1	82.22	3.96	-	6.53	2.57	-	-	-	-	-

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

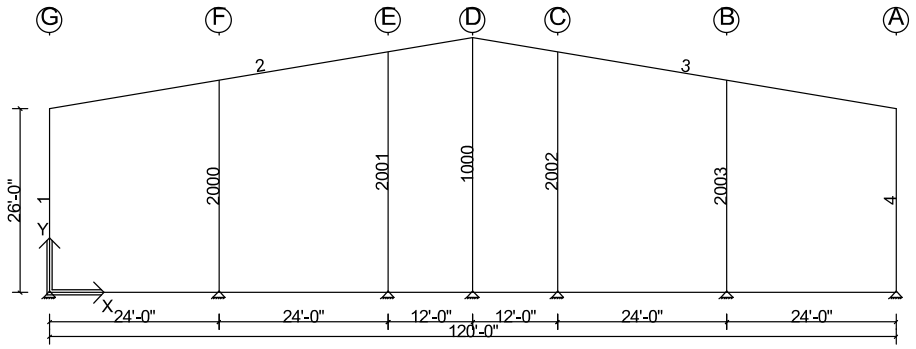
			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	22.82	18.00	28		-7.4		-1278.3	0.0	204.1		1894.1	344.7	0.69	
1	22.82	18.00		28		-4.5				21.2				0.21
2	9.52	19.00	27		0.2		891.9	0.0	232.4		1066.6	123.4	0.84	
2	0.54	30.00		4		9.1				12.1				0.75
3	16.04	19.00	4		-1.9		1056.4	0.0	79.0		1066.6	123.4	1.00	
3	40.54	19.00		1		-8.7				19.4				0.45
4	9.27	36.97	2		-1.8		-1789.1	0.0	116.1		2319.8	250.4	0.78	
4	9.27	36.97		1		-12.0				14.4				0.83
5	0.00	36.97	1		-1.8		-1789.1	0.0	116.1		2319.8	250.4	0.78	
5	0.00	36.97		2		12.0				14.4				0.83
6	24.50	19.00	3		-1.9		1056.8	0.0	87.3		1066.6	123.4	1.00	
6	0.00	19.00		2		8.7				19.4				0.45
7	0.00	19.00	28		0.2		893.0	0.0	232.4		1066.6	123.4	0.84	
7	9.02	30.00		3		-9.1				12.1				0.75
8	22.82	18.00	27		-7.4		-1279.3	0.0	204.1		1894.1	344.7	0.69	
8	22.82	18.00		27		4.5				21.2				0.21
9	26.55	12.00	1		-24.3		0.0	0.0	33.0		350.6	354.4	0.74	
9	0.00	12.00		15		-3.0				32.2				0.09
10	14.92	11.00	5		-0.5		-471.7	0.0	88.3		571.2	123.4	0.83	
10	0.00	11.00		15		-5.3				31.7				0.17
11	16.92	11.00	5		-0.6		-454.9	0.0	79.3		571.2	123.4	0.80	
11	0.00	11.00		15		-4.5				31.7				0.14
12	16.92	11.00	5		-0.6		-454.9	0.0	79.3		571.2	123.4	0.80	
12	0.00	11.00		15		-4.5				31.7				0.14
13	14.92	11.00	5		-0.5		-471.7	0.0	88.3		571.2	123.4	0.83	
13	0.00	11.00		15		-5.3				31.7				0.17

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	22.82	273.88	35.9	35.9	8.84	3.00	536.35	32.01	59.59	8.00	65.10	12.12	0.31	2485.62	1.05	1.00	1.05	0.93	0.81
2	9.52	705.47	115.2	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.06	1.00	1.05	0.68	1.00
3	16.04	705.47	180.0	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.05	1.00	1.05	0.68	0.80
4	9.27	705.47	29.9	29.9	10.84	2.00	2106.71	21.35	113.96	5.34	135.80	8.32	0.16	7199.17	1.02	0.95	1.00	0.65	0.54
5	0.00	705.47	29.9	29.9	10.84	2.00	2106.70	21.35	113.96	5.34	135.80	8.32	0.16	7199.14	1.02	0.95	1.00	0.65	0.54
6	24.50	705.47	60.0	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.00	1.00	1.05	0.68	0.78
7	0.00	705.47	115.2	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.06	1.00	1.05	0.68	1.00
8	22.82	273.88	35.9	35.9	8.84	3.00	536.35	32.01	59.59	8.00	65.10	12.12	0.31	2485.62	1.05	1.00	1.05	0.93	0.81
9	26.55	400.86	382.4	382.4	7.85	3.00	222.29	32.00	37.05	8.00	40.08	12.08	0.30	1081.27	1.00	1.00	1.08	0.98	1.00
10	14.92	358.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.90
11	16.92	406.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.92
12	16.92	406.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.92
13	14.92	358.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.90

User Defined Frame Point Loads for Cross Section: 1

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2

6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 1

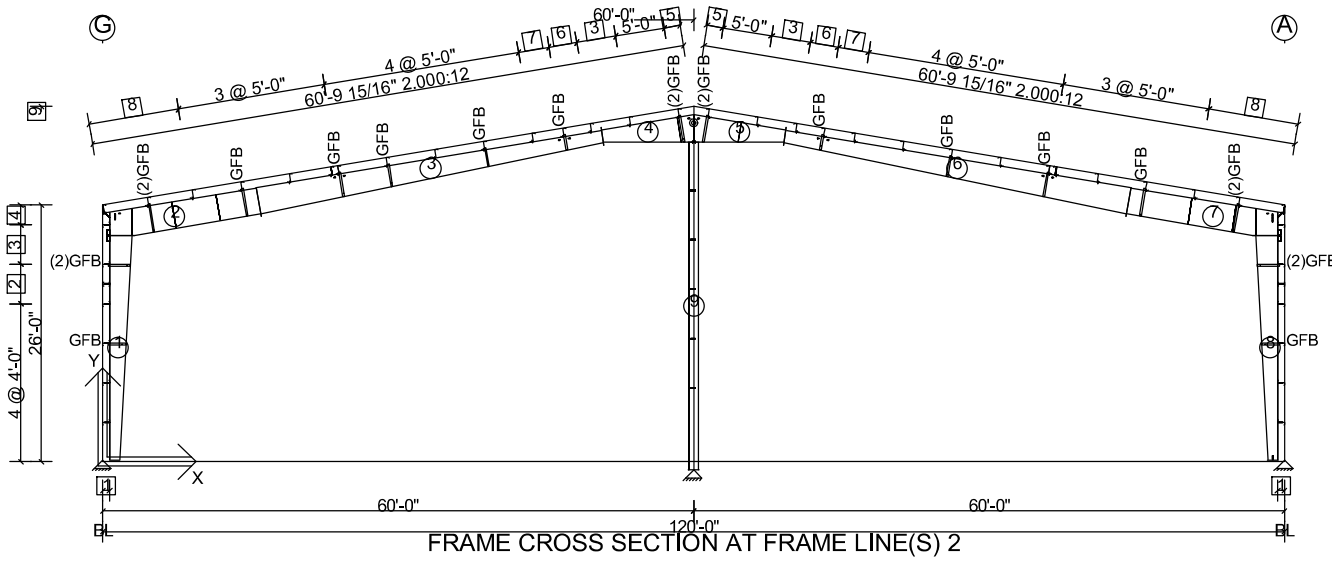
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/120)	2.377	1	2	6	WPL
Max. Vertical Deflection for Span 1	(L/635)	1.105	3	1	7	WPR
Max. Vertical Deflection for Span 2	(L/633)	1.109	7	1	6	WPL

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 0.957 (k/in)
Fundamental Period (calculated) (T): 1.488 (sec.)

Wall: 4, Frame at: 34/0/0

Frame Cross Section: 2



FRAME CROSS SECTION AT FRAME LINE(S) 2

Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 1'-7 11/16"
6 2'-10 5/16"
7 3'-1 11/16"
8 2 @ 4'-7 1/8"
9 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX002) and 8(CX003): 114'-1"
Vert. Clearance at member 1(CX002): 22'-10 15/16"
Vert. Clearance at member 8(CX003): 22'-10 15/16"
Vert. Clearance at member 9(ICX001): 32'-4 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
34/0/0	33/0/0	CB-1 Frame Lines 2 & 6	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
57	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
58	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4

63	System Derived	1.000	0.6 MWB	MWB - Wall: 1
64	System Derived	1.000	0.6 MWB	MWB - Wall: 2
65	System Derived	1.000	0.6 MWB	MWB - Wall: 3
66	System Derived	1.000	0.6 MWB	MWB - Wall: 4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
69	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
70	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
74	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
75	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
76	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
79	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
80	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
83	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
84	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
85	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
86	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.3750	0.1644	12.00	27.00	25.08	624.6	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1644	32.00	32.00	15.11	562.5	55.00	55.00	KN	SP	3P
3	6.00	0.3750	0.1644	32.00	15.00	35.50	1054.0	55.00	55.00	SP	SP	3P
4	6.00	0.3750	0.1875	15.00	33.08	9.50	311.3	55.00	55.00	SP	SS	3P
5	6.00	0.3750	0.1875	33.08	15.00	9.50	311.2	55.00	55.00	SS	SP	3P
6	6.00	0.3750	0.1644	15.00	32.00	35.50	1053.9	55.00	55.00	SP	SP	3P
7	6.00	0.3750	0.1644	32.00	32.00	15.11	562.7	55.00	55.00	SP	KN	3P
8	6.00	0.3750	0.1644	12.00	27.00	25.08	626.0	55.00	55.00	BP	KN	3P
9	9.00	0.3750	0.1644	12.00	12.00	33.19	997.1	55.00	55.00	BP	CP	3P

Total Frame Weight = 6103.2 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
9	60/0/0	-0/10/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 2

Type		Exterior Column		Interior Column		Exterior Column				
X-Loc		0/0/0		60/0/0		120/0/0				
Grid1 - Grid2		2-G		2-D		2-A				
Base Plate W x L (in.)		8 X 13		10 X 13		9 X 13				
Base Plate Thickness (in.)		0.375		0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750		4 - 1.250				
Column Base Elev.		100'-2"		99'-2"		100'-2"				
Load Type	Desc.	Hx	Vy	Hx	Vy	Hx	Hz	Vy		
D	Frm	0.89	3.85	-	8.14	-0.89	-	3.86	-	-
CG	Frm	1.31	4.88	-	11.07	-1.31	-	4.88	-	-
L>	Frm	3.11	11.67	-	24.16	-3.11	-	11.67	-	-
<L	Frm	3.11	11.67	-	24.16	-3.11	-	11.67	-	-
ASL^	Frm	1.56	-0.23	-	12.07	-1.56	-	11.90	-	-
^ASL	Frm	1.56	11.90	-	12.09	-1.56	-	-0.23	-	-
W1>	Frm	-17.51	-28.89	-2.25	-44.89	-7.67	-	-16.40	-	-
<W1	Frm	7.76	-16.44	2.25	-44.89	17.38	-	-28.93	-	-

W2>	Frm	-18.14	-17.86	-2.25	-27.85	-7.04	-	-5.37	-	-
<W2	Frm	7.13	-5.41	2.25	-27.85	18.00	-	-17.90	-	-
WPL	Frm	-1.32	-18.70	-	-37.99	-1.80	-	-27.00	-	-
WPR	Frm	2.02	-26.96	-	-37.89	1.54	-	-18.74	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	5.50	3.29	-	-2.50	10.78	-	-0.79	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	-10.78	-0.79	-	-2.50	-5.50	-	3.29	-	-
CU	Frm	0.53	1.96	-	5.03	-0.53	-	1.96	-	-
L	Frm	3.11	11.67	-	24.16	-3.11	-	11.67	-	-
E>	Frm	-6.63	-3.60	-	-	-6.63	-	3.60	-	-
EG+	Frm	0.54	2.02	-	4.48	-0.54	-	2.02	-	-
<E	Frm	6.63	3.60	-	-	6.63	-	-3.60	-	-
EG-	Frm	-0.54	-2.02	-	-4.48	0.54	-	-2.02	-	-
WB1>	Brc	0.17	0.11	-	-0.11	-0.17	-10.39	-8.13	-	-
<WB1	Brc	-	0.02	-	-0.11	-	-	8.21	-	-
WB2>	Brc	0.17	0.11	-	-0.11	-0.17	-10.39	-8.21	-	-
<WB2	Brc	-	0.02	-	-0.11	-	-	8.24	-	-
WB3>	Brc	0.18	0.11	-	-0.12	-0.18	-11.00	-8.77	-	-
<WB3	Brc	-	0.02	-	-0.12	-	-	8.86	-	-
WB4>	Brc	0.18	0.11	-	-0.12	-0.18	-11.00	-8.77	-	-
<WB4	Brc	-	0.02	-	-0.12	-	-	8.86	-	-
MWB	Brc	0.12	0.08	-	-0.08	-0.12	-7.42	-5.80	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
MWB	Brc	-	0.01	-	-0.08	-	-	5.82	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
EB>	Brc	0.37	0.24	-	-0.25	-0.37	-22.69	-18.05	-	-
<EB	Brc	-	0.04	-	-0.24	-	-	18.17	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	16.2	15.8
CG	0.0	0.0	20.8	20.8
L>	0.0	0.0	47.5	47.5
<L	0.0	0.0	47.5	47.5
ASL^	0.0	0.0	23.7	23.7
^ASL	0.0	0.0	23.8	23.8
W1>	27.4	27.4	90.1	90.2
<W1	27.4	27.4	90.2	90.3
W2>	27.4	27.4	51.0	51.1
<W2	27.4	27.4	51.1	51.2
WPL	3.1	3.1	83.6	83.7
WPR	3.6	3.6	83.5	83.6
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
CU	0.0	0.0	9.0	9.0
L	0.0	0.0	47.5	47.5
E>	13.3	13.3	0.0	0.0
EG+	0.0	0.0	8.5	8.5
<E	13.3	13.3	0.0	0.0
EG-	0.0	0.0	8.5	8.5
WB1>	0.0	0.0	0.0	8.1
<WB1	0.0	0.0	0.0	8.1
WB2>	0.0	0.0	0.0	8.2
<WB2	0.0	0.0	0.0	8.2
WB3>	0.0	0.0	0.0	8.8
<WB3	0.0	0.0	0.0	8.8
WB4>	0.0	0.0	0.0	8.8
<WB4	0.0	0.0	0.0	8.8
MWB	0.0	0.0	0.0	5.8
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	5.8

MWB	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	18.1
<EB	0.0	0.0	0.0	18.0

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	2-G	11.13	33	14.18	32	-	-	-	-	13.85	15	20.63	4	-	-	-	-
60/0/0	2-D	1.35	5	1.35	8	-	-	-	-	19.03	16	43.37	1	-	-	-	-
120/0/0	2-A	14.18	31	11.13	34	39.71	75	-	-	29.52	76	41.95	85	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	2-G	1	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
60/0/0	2-D	9	0.375	10	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	2-A	8	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	13.61	16.51	32	9.62	-13.73	15	5.39	20.43	2	-	-	-	0
60/0/0	1.62	-18.95	15	1.62	-18.95	16	0.02	43.41	1	-	-	-	0
120/0/0	13.61	16.54	31	1.03	-29.54	76	2.66	41.97	85	39.71	-29.54	1.03	76

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.590	32	0.357	15	0.405	15	-	0	0.178	2	0.500	15	0.210	2	0.281	2	0.408	32
60/0/0	0.070	15	0.493	16	0.493	16	-	0	0.302	1	0.487	16	0.330	1	0.440	1	0.193	1
120/0/0	0.620	76	0.277	76	0.407	76	-	0	0.325	85	0.976	76	0.662	85	0.865	76	0.611	76

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
2	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
2	2	S1	6.44	31.640	192.46	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	3	S1	10.99	31.436	191.22	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	4	S9	2.32	31.824	193.58	N/A	N/A	0.3750	3.500	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875
4	1	S1	7.79	29.833	159.11	2.50	73.63	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
4	2	S2	9.49	33.237	177.27	N/A	N/A	0.1875	2.000	Both	F-BS-0.1875,W-OS-0.1250,F-OS-0.1250
5	1	S1	4.93	23.385	124.72	1.75	40.53	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
7	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
7	2	S1	6.25	31.531	191.80	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	3	S1	10.81	31.735	193.04	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	4	S9	12.80	31.824	193.58	N/A	N/A	0.3750	3.500	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	1	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	2	SP	0.500	6.00	35.75	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
3	1	SP	0.500	6.00	35.73	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
3	2	SP	0.625	8.00	21.52	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00

4	1	SP	0.625	8.00	21.60	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
5	2	SP	0.625	8.00	21.60	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
6	1	SP	0.625	8.00	21.52	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
6	2	SP	0.500	6.00	35.73	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
7	1	SP	0.500	6.00	35.75	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
7	2	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
8	2	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
9	2	CP	0.375	10.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-19.4	17.1	4841.1	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.959	0.631
2	1	36	-19.4	17.1	4841.1	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.799	0.631
2	2	84	-3.7	3.0	1199.5	AISC DG-16/Thin plate	0.595	0.032	0.961	0.000	0.000	0.026	0.959	0.631
3	1	84	-3.7	3.0	1199.5	AISC DG-16/Thin plate	0.595	0.032	0.961	0.000	0.000	0.026	0.959	0.631
3	2	3	-2.9	6.6	1077.4	AISC DG-16/Thin plate	0.823	0.054	0.820	0.319	0.427	0.034	0.840	0.719
4	1	3	-2.9	6.6	1077.4	AISC DG-16/Thin plate	0.823	0.054	0.820	0.319	0.427	0.034	0.840	0.719
5	2	4	-3.7	6.2	1078.2	AISC DG-16/Thin plate	0.818	0.050	0.816	0.317	0.425	0.032	0.835	0.719
6	1	4	-3.7	6.2	1078.2	AISC DG-16/Thin plate	0.818	0.050	0.816	0.317	0.425	0.032	0.835	0.719
6	2	82	-3.6	2.9	1203.4	AISC DG-16/Thin plate	0.598	0.032	0.966	0.000	0.000	0.026	0.959	0.631
7	1	82	-3.6	2.9	1203.4	AISC DG-16/Thin plate	0.598	0.032	0.966	0.000	0.000	0.026	0.959	0.631
7	2	35	-19.4	17.1	4841.3	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.799	0.631
8	2	35	-19.4	17.1	4841.3	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.959	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	7.1	14.4	4100.4	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	0.959	0.631
2	1	37	7.1	14.4	4100.4	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	1.000	0.631
2	2	78	0.8	1.1	1847.8	AISC DG-16/Thin plate	0.638	0.009	0.974	0.433	0.640	0.007	0.855	0.631
3	1	78	0.8	1.1	1847.8	AISC DG-16/Thin plate	0.638	0.009	0.974	0.433	0.640	0.007	0.855	0.631
3	2	61	11.0	4.5	615.8	AISC DG-16/Thin plate	0.709	0.048	0.597	0.218	0.293	0.035	0.959	0.719
4	1	61	11.0	4.5	615.8	AISC DG-16/Thin plate	0.709	0.048	0.597	0.218	0.293	0.035	0.959	0.719
5	2	40	11.2	3.5	611.8	AISC DG-16/Thin plate	0.707	0.038	0.596	0.218	0.293	0.027	0.959	0.719
6	1	40	11.2	3.5	611.8	AISC DG-16/Thin plate	0.707	0.038	0.596	0.218	0.293	0.027	0.959	0.719
6	2	28	0.7	1.2	1836.0	AISC DG-16/Thin plate	0.634	0.009	0.967	0.430	0.635	0.008	0.849	0.631
7	1	28	0.7	1.2	1836.0	AISC DG-16/Thin plate	0.634	0.009	0.967	0.430	0.635	0.008	0.849	0.631
7	2	38	7.1	14.4	4100.6	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	1.000	0.631
8	2	38	7.1	14.4	4100.6	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	0.959	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	8	-2.6	1.6	16	18.9	1.6	0.595	0.076	0.000	0.391	0.085	0.021	0.408	0.052

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	11/10/0	12/0/0	GFB2081	1.707	80	
1	19/10/0	20/0/0	(2)GFB3000	1.161	80	
2	4/0/3	56/2/13	(2)GFB4027	0.736	80	
2	13/7/5	46/7/11	GFB4027	0.869	80	
3	8/6/1	36/7/11	GFB3021	1.142	4	
3	13/6/1	31/7/11	GFB3000	1.256	4	
3	23/6/1	21/7/11	GFB2097	1.128	4	
3	31/7/11	13/6/0	GFB2063	1.161	3	
4	8/0/0	1/7/11	(2)GFB4007	0.809	2	
5	1/6/0	1/7/11	(2)GFB4007	0.810	1	
6	3/10/6	13/6/0	GFB2063	1.164	4	
6	17/0/0	26/7/11	GFB3000	1.258	3	
6	27/0/0	36/7/11	GFB3021	1.143	3	

7	1/6/1	46/7/11	GFB4027	0.871	28	
7	11/1/3	56/2/13	(2)GFB4027	0.736	78	
8	11/10/0	12/0/0	GFB2081	1.757	78	
8	19/10/0	20/0/0	(2)GFB3000	1.182	78	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	22.79	27.00	80		-13.6		-2377.0	0.0	179.4		2475.9	228.6	1.00	
1	22.79	27.00		80		-8.5				13.7				0.62
2	0.89	32.00	80		-7.4		-2380.8	0.0	164.9		2954.8	229.7	0.83	
2	10.16	32.00		4		11.0				11.5				0.96
3	18.51	23.14	4		-2.8		2033.1	0.0	118.9		1992.1	227.7	1.03	
3	0.00	32.00		4		8.1				11.5				0.71
4	0.00	15.00	3		-3.7		-1077.3	0.0	88.4		1206.2	226.9	0.91	
4	8.03	30.61		1		-20.7				20.7				1.00
5	9.30	15.00	4		-3.7		-1078.2	0.0	88.4		1205.2	226.9	0.92	
5	1.27	30.61		3		20.7				20.7				1.00
6	17.01	23.14	3		-2.8		2008.3	0.0	118.9		1974.5	227.7	1.03	
6	35.51	32.00		3		-8.1				11.5				0.71
7	13.28	32.00	78		-7.3		-2380.4	0.0	164.9		2954.8	229.7	0.83	
7	4.00	32.00		3		-11.0				11.5				0.96
8	19.84	25.06	78		-18.4		-2088.8	0.0	140.9		2206.9	228.2	1.01	
8	22.79	27.00		68		8.6				13.7				0.63
9	27.66	12.00	1		-43.4		0.0	0.0	43.3		438.7	409.8	1.00	
9	27.66	12.00		8		1.6				32.2				0.05

Parameters Used for Axial and Flexural Design

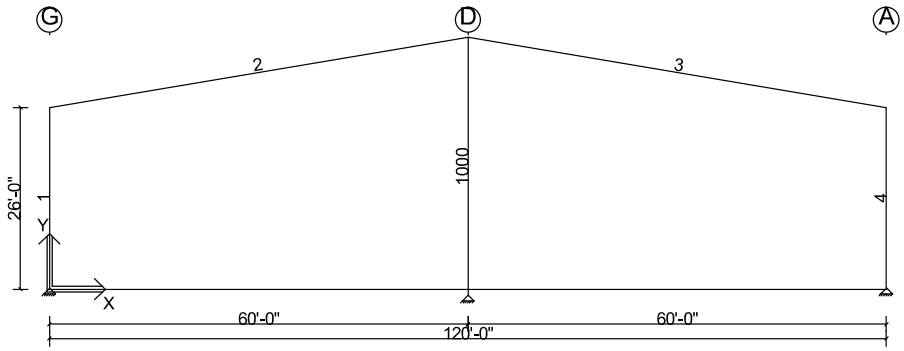
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	22.79	273.44	35.4	35.4	8.82	2.25	1045.36	13.51	77.43	4.50	88.23	6.93	0.25	2394.23	1.05	0.97	1.00	1.00	0.64
2	0.89	696.95	24.7	24.7	9.64	2.25	1543.30	13.51	96.46	4.50	111.29	6.96	0.26	3378.37	1.00	0.93	1.00	1.00	0.60
3	18.51	696.95	120.0	60.0	8.18	2.25	736.86	13.51	63.69	4.50	71.83	6.90	0.24	1750.16	1.02	1.00	1.00	1.00	0.74
4	0.00	696.95	142.7	142.7	7.17	2.25	285.89	13.51	38.12	4.50	42.42	6.88	0.24	722.30	1.33	1.00	1.11	1.00	0.92
5	9.30	696.95	142.7	142.7	7.17	2.25	285.89	13.51	38.12	4.50	42.42	6.88	0.24	722.30	1.32	1.00	1.11	1.00	0.92
6	17.01	696.95	120.0	60.0	8.18	2.25	737.00	13.51	63.69	4.50	71.83	6.90	0.24	1750.46	1.01	1.00	1.00	1.00	0.74
7	13.28	696.95	26.1	26.1	9.64	2.25	1543.30	13.51	96.46	4.50	111.29	6.96	0.26	3378.37	1.05	0.93	1.00	1.00	0.60
8	19.84	273.44	96.0	96.0	8.50	2.25	882.46	13.51	70.43	4.50	79.83	6.91	0.25	2058.06	1.18	0.99	1.00	1.00	0.67
9	27.66	414.86	398.3	398.3	8.60	3.38	247.64	45.57	41.27	10.13	44.44	15.26	0.33	1539.48	1.00	1.00	1.08	0.93	1.00

User Defined Frame Point Loads for Cross Section: 2

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 2

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	2 bay loading	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
2	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	D	2 bay loads	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 2

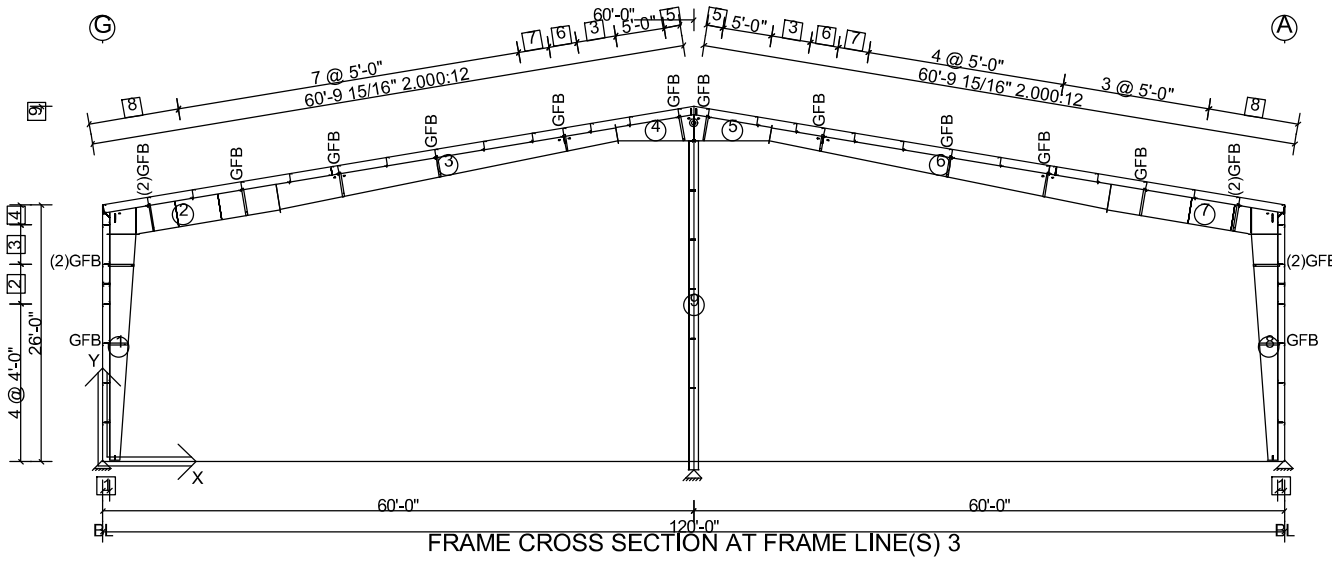
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/124)	2.302	1	2	4	W2>
Max. Vertical Deflection for Span 1	(L/573)	1.217	3	1	7	WPR
Max. Vertical Deflection for Span 2	(L/575)	1.212	7	1	6	WPL

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 2.242 (k/in)
Fundamental Period (calculated) (T): 1.455 (sec.)

Wall: 4, Frame at: 67/0/0

Frame Cross Section: 3



FRAME CROSS SECTION AT FRAME LINE(S) 3

Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 1'-7 11/16"
6 2'-10 5/16"
7 3'-1 11/16"
8 2 @ 4'-7 1/8"
9 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX004) and 8(CX004): 113'-3"
Vert. Clearance at member 1(CX004): 23'-0 13/16"
Vert. Clearance at member 8(CX004): 23'-0 13/16"
Vert. Clearance at member 9(ICX002): 32'-6 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
67/0/0	33/0/0	CB-1 Frame Lines 3 & 5	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
57	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
58	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4

63	System Derived	1.000	0.6 MWB	MWB - Wall: 1
64	System Derived	1.000	0.6 MWB	MWB - Wall: 2
65	System Derived	1.000	0.6 MWB	MWB - Wall: 3
66	System Derived	1.000	0.6 MWB	MWB - Wall: 4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
69	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
70	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
74	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
75	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
76	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
79	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
80	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
83	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
84	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
85	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
86	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.3750	0.1644	12.00	32.00	25.08	699.4	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1644	31.00	31.00	17.11	649.5	55.00	55.00	KN	SP	3P
3	6.00	0.3750	0.1644	31.00	16.00	35.00	1040.4	55.00	55.00	SP	SP	3P
4	8.00	0.3750	0.2500	16.00	31.14	8.00	342.9	55.00	55.00	SP	SS	3P
5	8.00	0.3750	0.2500	31.14	16.00	8.00	342.4	55.00	55.00	SS	SP	3P
6	6.00	0.5000	0.1875	16.00	31.00	35.00	1275.0	55.00	55.00	SP	SP	3P
7	6.00	0.3750	0.1644	31.00	31.00	17.11	649.5	55.00	55.00	SP	KN	3P
8	6.00	0.3750	0.1644	12.00	32.00	25.08	699.4	55.00	55.00	BP	KN	3P
9	10.00	0.3750	0.1644	12.00	12.00	33.36	1102.8	55.00	55.00	BP	CP	3P

Total Frame Weight = 6801.3 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
9	60/0/0	-0/10/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 3

Type		Exterior Column			Interior Column		Exterior Column				
X-Loc		0/0/0			60/0/0		120/0/0				
Grid1 - Grid2		3-G			3-D		3-A				
Base Plate W x L (in.)		9 X 13			12 X 13		9 X 13				
Base Plate Thickness (in.)		0.375			0.500		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.250			4 - 0.750		4 - 1.250				
Column Base Elev.		100'-2"			99'-2"		100'-2"				
Load Type	Desc.	Hx	Hz	Vy	Hx	Vy	Hx	Hz	Vy	-	-
D	Frm	1.02	-	3.99	-	8.71	-1.02	-	4.10	-	-
CG	Frm	1.49	-	5.09	-	11.72	-1.49	-	5.08	-	-
L>	Frm	3.52	-	12.14	-	28.27	-3.52	-	12.11	-	-
<L	Frm	3.52	-	12.14	-	28.27	-3.52	-	12.11	-	-
ASL^	Frm	1.55	-	0.03	-	9.22	-1.55	-	11.89	-	-
^ASL	Frm	1.77	-	11.80	-	9.76	-1.77	-	-0.09	-	-
W1>	Frm	-19.47	-	-29.53	-2.26	-44.66	-9.52	-	-14.31	-	-
<W1	Frm	9.43	-	-14.38	2.26	-44.26	19.80	-	-29.60	-	-

W2>	Frm	-19.89	-	-18.24	-2.26	-27.48	-9.14	-	-3.02	-	-
<W2	Frm	9.01	-	-3.09	2.26	-27.08	20.18	-	-18.31	-	-
WPL	Frm	-1.39	-	-18.48	-	-37.51	-1.62	-	-25.78	-	-
WPR	Frm	1.55	-	-25.68	-	-38.08	1.81	-	-18.38	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-
MW	Frm	5.35	-	3.25	-	-2.42	10.93	-	-0.82	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-
MW	Frm	-10.72	-	-0.83	-	-2.40	-5.55	-	3.24	-	-
CU	Frm	0.61	-	2.05	-	5.10	-0.61	-	2.05	-	-
L	Frm	3.52	-	12.14	-	28.27	-3.52	-	12.11	-	-
E>	Frm	-6.94	-	-3.87	-	0.01	-7.23	-	3.85	-	-
EG+	Frm	0.71	-	2.16	-	4.55	-0.49	-	2.03	-	-
<E	Frm	6.94	-	3.87	-	-0.01	7.23	-	-3.85	-	-
EG-	Frm	-0.71	-	-2.16	-	-4.55	0.49	-	-2.03	-	-
WB1>	Brc	0.08	-11.07	-8.64	-	-0.16	-0.08	-	8.27	-	-
<WB1	Brc	0.07	-	8.80	-	-0.16	-0.07	10.36	-8.09	-	-
WB2>	Brc	0.08	-11.07	-8.65	-	-0.16	-0.08	-	8.36	-	-
<WB2	Brc	0.07	-	8.84	-	-0.16	-0.07	10.36	-8.13	-	-
WB3>	Brc	0.07	-10.46	-8.30	-	-0.16	-0.07	-	8.93	-	-
<WB3	Brc	0.07	-	8.46	-	-0.16	-0.07	10.97	-8.74	-	-
WB4>	Brc	0.07	-10.46	-8.31	-	-0.17	-0.07	-	8.93	-	-
<WB4	Brc	0.07	-	8.46	-	-0.16	-0.07	10.97	-8.74	-	-
MWB	Brc	0.05	-7.48	-5.84	-	-0.11	-0.05	-	5.91	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-	-
MWB	Brc	0.05	-	5.91	-	-0.11	-0.05	7.35	-5.74	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-	-
EB>	Brc	0.16	-22.39	-17.73	-	-0.34	-0.16	-	18.37	-	-
<EB	Brc	0.15	-	18.12	-	-0.34	-0.15	22.63	-17.92	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	17.3	16.8
CG	0.0	0.0	21.9	21.9
L>	0.0	0.0	52.5	52.5
<L	0.0	0.0	52.5	52.5
ASL^	0.0	0.0	21.1	21.1
^ASL	0.0	0.0	21.5	21.5
W1>	30.6	31.2	88.3	88.5
<W1	30.9	31.5	88.1	88.2
W2>	30.6	31.3	48.6	48.7
<W2	30.8	31.4	48.4	48.5
WPL	3.2	3.0	81.6	81.8
WPR	3.5	3.4	82.0	82.1
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
CU	0.0	0.0	9.2	9.2
L	0.0	0.0	52.5	52.5
E>	14.2	14.2	0.0	0.0
EG+	0.0	0.2	9.0	8.7
<E	14.2	14.2	0.0	0.0
EG-	0.0	0.2	9.0	8.7
WB1>	0.0	0.0	0.0	0.5
<WB1	0.0	0.0	0.0	0.5
WB2>	0.0	0.0	0.0	0.4
<WB2	0.0	0.0	0.0	0.6
WB3>	0.0	0.0	0.0	0.5
<WB3	0.0	0.0	0.0	0.4
WB4>	0.0	0.0	0.0	0.5
<WB4	0.0	0.0	0.0	0.4
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	0.1

MWB	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	0.3
<EB	0.0	0.0	0.0	0.2

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	3-G	11.67	33	15.15	32	39.19	75	-	-	28.91	76	42.30	85	-	-	-	-
60/0/0	3-D	1.36	5	1.36	8	-	-	-	-	18.51	15	48.69	1	-	-	-	-
120/0/0	3-A	15.50	31	12.02	34	-	-	39.60	85	29.10	86	42.75	75	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	3-G	1	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875
60/0/0	3-D	9	0.500	12	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	3-A	8	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	14.53	17.39	32	0.70	-28.95	76	3.26	42.31	85	39.19	-28.95	0.70	76
60/0/0	1.68	-18.12	16	1.66	-18.38	15	0.08	48.74	1	-	-	-	0
120/0/0	14.91	17.35	31	0.79	-29.14	86	3.20	42.77	75	39.60	-29.14	0.79	86

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.612	76	0.271	76	0.394	76	-	0	0.327	85	0.957	76	0.667	85	0.854	76	0.598	76
60/0/0	0.073	16	0.478	15	0.478	15	-	0	0.283	1	0.213	15	0.294	1	0.454	1	0.199	1
120/0/0	0.618	86	0.273	86	0.400	86	-	0	0.331	75	0.963	86	0.675	75	0.863	86	0.603	86

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
2	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
2	2	S1	6.73	30.666	186.53	1.75	52.94	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	3	S1	11.14	30.490	185.46	1.75	52.94	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	4	S9	2.74	30.825	187.50	N/A	N/A	0.3750	3.000	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875
4	1	S2	8.00	31.243	124.97	N/A	N/A	0.2500	3.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
7	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
7	2	S1	8.25	30.581	186.02	1.75	52.94	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	3	S1	12.66	30.757	187.09	1.75	52.94	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	4	S9	14.37	30.825	187.50	N/A	N/A	0.3750	3.000	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	33	Extended	4.25/2.50	33	Extended	4.25/2.50
2	1	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	33	Extended	4.25/2.50	33	Extended	4.25/2.50
2	2	SP	0.500	6.00	34.75	0.750	F1852X/PT	4.00	13	Flush	2.00/2.00	33	Extended	4.25/2.00
3	1	SP	0.500	6.00	34.73	0.750	F1852X/PT	4.00	13	Flush	2.00/2.00	33	Extended	4.25/2.00
3	2	SP	0.625	8.00	22.52	0.750	F1852X/PT	4.00	31	Extended	4.25	31	Extended	4.25
4	1	SP	0.625	8.00	22.60	0.750	F1852X/PT	4.00	31	Extended	4.25	31	Extended	4.25
5	2	SP	0.625	8.00	22.35	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
6	1	SP	0.625	8.00	22.27	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
6	2	SP	0.500	6.00	34.61	0.750	F1852X/PT	4.00	13	Flush	2.00/2.00	33	Extended	4.25/2.00
7	1	SP	0.500	6.00	34.63	0.750	F1852X/PT	4.00	13	Flush	2.00/2.00	33	Extended	4.25/2.00
7	2	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	33	Extended	4.25/2.50	33	Extended	4.25/2.50

8	2	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	33	Extended	4.25/2.50	33	Extended	4.25/2.50
9	2	CP	0.500	12.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-20.7	18.1	5143.6	AISC DG-16/Thin plate	0.942	0.086	0.898	0.303	0.424	0.047	0.959	0.631
2	1	36	-20.7	18.1	5143.6	AISC DG-16/Thin plate	0.942	0.086	0.898	0.303	0.424	0.047	0.959	0.631
2	2	16	3.5	0.7	1197.2	AISC DG-16/Thin plate	0.489	0.005	0.963	0.000	0.000	0.004	0.959	0.631
3	1	16	3.5	0.7	1197.2	AISC DG-16/Thin plate	0.489	0.005	0.963	0.000	0.000	0.004	0.959	0.631
3	2	3	-2.2	8.4	1047.7	AISC DG-16/Thin plate	0.982	0.091	0.823	0.291	0.391	0.065	0.958	0.959
4	1	3	-2.2	8.4	1047.7	AISC DG-16/Thin plate	0.982	0.091	0.823	0.291	0.391	0.065	0.959	0.959
5	2	4	-3.5	8.3	1220.4	AISC DG-16/Thin plate	0.873	0.067	0.858	0.340	0.456	0.044	0.832	0.959
6	1	4	-3.5	8.3	1220.4	AISC DG-16/Thin plate	0.873	0.067	0.858	0.340	0.456	0.044	0.895	0.959
6	2	15	3.4	0.6	1209.2	AISC DG-16/Thin plate	0.499	0.005	0.985	0.000	0.000	0.003	0.959	0.719
7	1	15	3.4	0.6	1209.2	AISC DG-16/Thin plate	0.499	0.005	0.985	0.000	0.000	0.003	0.959	0.719
7	2	35	-20.7	18.6	5294.2	AISC DG-16/Thin plate	0.972	0.088	0.927	0.303	0.424	0.048	0.959	0.631
8	2	35	-20.7	18.6	5294.2	AISC DG-16/Thin plate	0.972	0.088	0.927	0.303	0.424	0.048	0.959	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	7.9	15.1	4313.6	AISC DG-16/Thin plate	0.868	0.072	0.828	0.303	0.424	0.039	0.959	0.631
2	1	37	7.9	15.1	4313.6	AISC DG-16/Thin plate	0.868	0.072	0.828	0.303	0.424	0.039	1.000	0.631
2	2	68	0.9	0.6	1851.5	AISC DG-16/Thin plate	0.512	0.004	0.916	0.448	0.662	0.003	0.885	0.631
3	1	68	0.9	0.6	1851.5	AISC DG-16/Thin plate	0.512	0.004	0.916	0.448	0.662	0.003	0.885	0.631
3	2	52	10.6	5.7	591.3	AISC DG-16/Thin plate	0.642	0.061	0.539	0.291	0.391	0.044	0.959	0.959
4	1	52	10.6	5.7	591.3	AISC DG-16/Thin plate	0.642	0.061	0.539	0.291	0.391	0.044	0.959	0.959
5	2	49	11.3	4.6	709.4	AISC DG-16/Thin plate	0.769	0.049	0.636	0.291	0.391	0.036	0.959	0.959
6	1	49	11.3	4.6	709.4	AISC DG-16/Thin plate	0.769	0.049	0.636	0.291	0.391	0.036	0.959	0.959
6	2	80	1.5	0.8	1991.2	AISC DG-16/Thin plate	0.555	0.005	0.982	0.486	0.718	0.004	0.959	0.719
7	1	80	1.5	0.8	1991.2	AISC DG-16/Thin plate	0.555	0.005	0.982	0.486	0.718	0.004	0.955	0.719
7	2	38	7.7	15.6	4465.8	AISC DG-16/Thin plate	0.898	0.074	0.856	0.303	0.424	0.040	1.000	0.631
8	2	38	7.7	15.6	4465.8	AISC DG-16/Thin plate	0.898	0.074	0.856	0.303	0.424	0.040	0.959	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	8	-4.4	1.6	15	18.4	1.6	0.577	0.076	0.000	0.181	0.074	0.020	0.424	0.052

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	11/10/0	12/0/0	GFB2097	1.650	80	
1	19/10/0	20/0/0	(2)GFB4007	0.843	80	
2	4/0/3	56/2/13	(2)GFB4007	0.820	0	
2	13/7/5	46/7/11	GFB4007	0.938	0	
3	6/6/1	36/7/11	GFB3111	0.880	4	
3	16/6/1	26/7/11	GFB3000	1.146	4	
3	29/7/11	13/6/0	GFB2081	0.791	4	
4	6/6/1	1/7/11	GFB4007	1.934	2	
5	1/6/0	1/7/11	GFB4007	1.940	1	
6	5/4/5	13/6/0	GFB2081	1.041	3	
6	18/6/0	26/7/11	GFB3000	1.241	3	
6	28/6/0	36/7/11	GFB3111	0.930	3	
7	3/6/0	46/7/11	GFB4007	1.018	80	
7	13/1/2	56/2/13	(2)GFB4007	0.836	68	
8	11/10/0	12/0/0	GFB2097	1.728	68	
8	19/10/0	20/0/0	(2)GFB4007	0.875	68	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.85	29.30	80		-19.2		-2153.5	0.0	141.5		2594.4	229.1	0.90	
1	22.95	32.00		70		-9.0				11.5				0.78
2	1.10	31.00	80		-8.1		-2519.2	0.0	163.5		2861.5	229.5	0.91	
2	9.93	31.00		2		11.6				11.9				0.97
3	16.51	23.93	4		-3.4		1905.4	0.0	119.0		2046.7	227.9	0.95	
3	31.44	17.53		1		-18.6				21.8				0.85
4	7.81	31.14	1		-2.2		-3090.6	0.0	229.8		4000.0	348.6	0.78	
4	7.81	31.14		1		-24.4				41.5				0.59
5	0.00	31.14	1		-2.6		-3090.5	0.0	229.8		3999.9	348.6	0.78	
5	0.00	31.14		2		24.0				41.5				0.58
6	21.00	25.00	3		-3.6		2115.9	0.0	157.7		2804.7	304.0	0.77	
6	3.64	17.56		2		18.6				33.3				0.56
7	14.84	31.00	68		-8.4		-2559.6	0.0	163.5		2861.5	229.5	0.92	
7	6.00	31.00		1		-11.7				11.9				0.98
8	19.85	29.30	68		-19.2		-2235.6	0.0	141.5		2594.7	229.1	0.93	
8	22.95	32.00		78		9.3				11.5				0.81
9	27.80	12.00	1		-48.7		0.0	0.0	58.7		563.2	458.4	0.83	
9	27.80	12.00		8		1.6				32.2				0.05

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	19.85	275.37	96.1	96.1	9.19	2.25	1259.86	13.51	86.00	4.50	98.57	6.94	0.25	2825.43	1.18	0.95	1.00	1.00	0.62
2	1.10	691.80	26.3	26.3	9.47	2.25	1434.40	13.51	92.54	4.50	106.52	6.95	0.26	3168.01	1.00	0.94	1.00	1.00	0.61
3	16.51	691.80	120.0	60.0	8.31	2.25	794.66	13.51	66.42	4.50	75.07	6.91	0.25	1873.30	1.01	0.99	1.00	1.00	0.78
4	7.81	691.80	30.8	30.8	13.60	3.00	2004.31	32.04	128.73	8.01	150.01	12.47	0.44	7580.56	1.03	1.00	1.03	0.91	0.66
5	0.00	691.80	30.8	30.8	13.60	3.00	2004.30	32.04	128.73	8.01	150.01	12.47	0.44	7580.51	1.03	1.00	1.03	0.91	0.66
6	21.00	691.80	120.0	60.0	10.50	3.00	1116.50	18.01	89.32	6.00	100.50	9.21	0.55	2703.10	1.01	1.00	1.01	1.00	0.76
7	14.84	691.80	20.9	20.9	9.47	2.25	1434.40	13.51	92.54	4.50	106.52	6.95	0.26	3168.01	1.04	0.94	1.00	1.00	0.61
8	19.85	275.37	96.1	96.1	9.19	2.25	1259.86	13.51	86.00	4.50	98.57	6.94	0.25	2825.43	1.18	0.95	1.00	1.00	0.62
9	27.80	415.86	400.3	400.3	9.35	3.75	272.98	62.50	45.50	12.50	48.80	18.83	0.37	2111.71	1.00	1.00	1.07	0.87	1.00

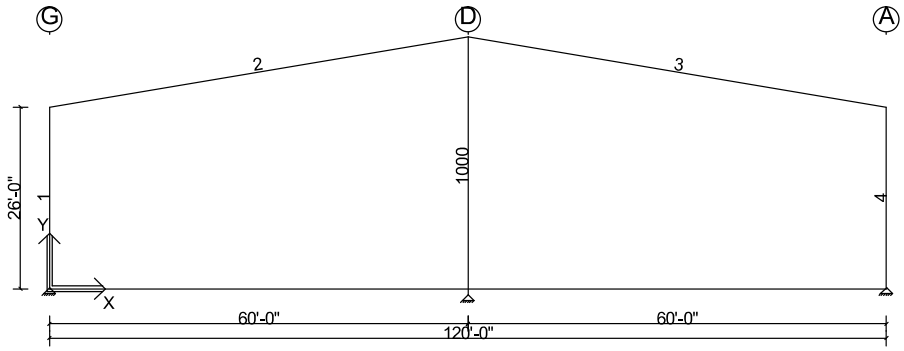
User Defined Frame Point Loads for Cross Section: 3

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-0.23	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	CG	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	W1>	Imported - CUPOLA	4.22	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W1>	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W1	Imported - CUPOLA	-1.53	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W1	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
2	k	W2>	Imported - CUPOLA	4.46	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W2>	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W2	Imported - CUPOLA	-1.29	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W2	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPL	Imported - CUPOLA	0.09	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WPL	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPR	Imported - CUPOLA	-0.33	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPR	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
2	k	CU	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	L	Imported - CUPOLA	-0.97	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
2	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
3	k	D	Imported - CUPOLA	0.23	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	CG	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	W1>	Imported - CUPOLA	1.53	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W1>	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W1	Imported - CUPOLA	-4.22	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W1	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
3	k	W2>	Imported - CUPOLA	1.29	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W2>	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W2	Imported - CUPOLA	-4.46	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W2	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPL	Imported - CUPOLA	0.33	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPL	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPR	Imported - CUPOLA	-0.09	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WPR	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
3	k	CU	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	L	Imported - CUPOLA	0.97	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
3	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF

1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 3

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
2	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF
3	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
3	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 3

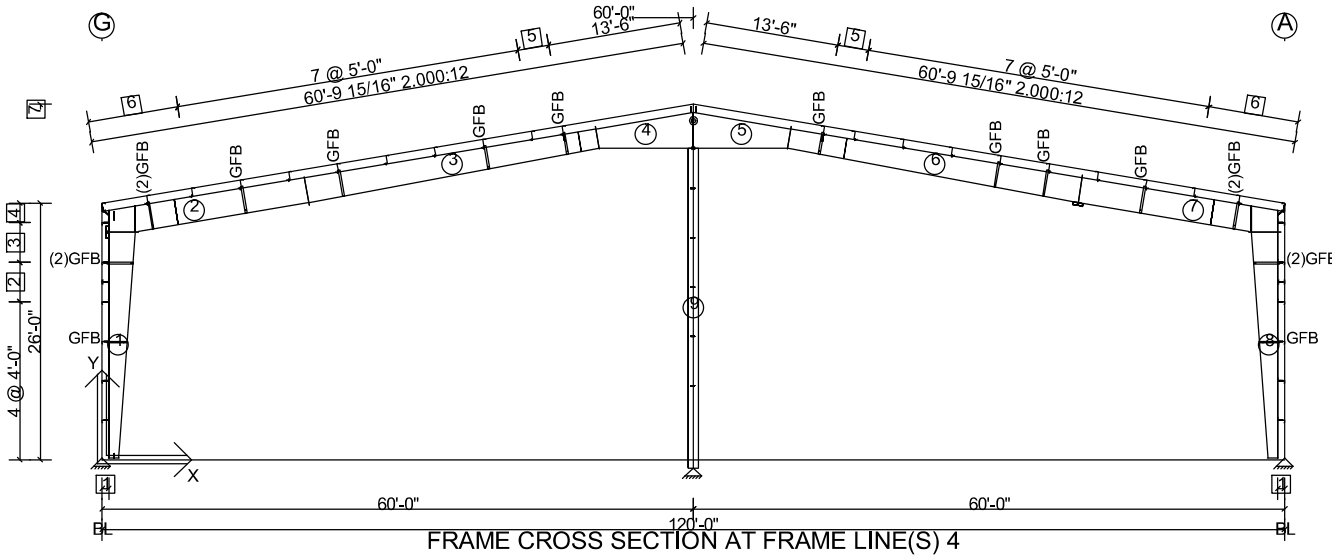
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/101)	-2.846	1	2	3	<W1
Max. Vertical Deflection for Span 1	(L/548)	1.267	3	1	3	<W1
Max. Vertical Deflection for Span 2	(L/646)	1.075	7	1	2	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 2.578 (k/in)
Fundamental Period (calculated) (T): 1.403 (sec.)

Wall: 4, Frame at: 100/0/0

Frame Cross Section: 4



FRAME CROSS SECTION AT FRAME LINE(S) 4

Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 3'-1 11/16"
6 2 @ 4'-7 1/8"
7 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX005) and 8(CX006): 113'-3"
Vert. Clearance at member 1(CX005): 23'-0 13/16"
Vert. Clearance at member 8(CX006): 23'-0 13/16"
Vert. Clearance at member 9(ICX003): 31'-6 7/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
100/0/0	33/0/0	CB-1 Frame Line 4	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
57	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
58	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4

61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4
63	System Derived	1.000	0.6 MWB	MWB - Wall: 1
64	System Derived	1.000	0.6 MWB	MWB - Wall: 2
65	System Derived	1.000	0.6 MWB	MWB - Wall: 3
66	System Derived	1.000	0.6 MWB	MWB - Wall: 4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
69	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
70	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
74	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
75	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
76	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
79	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
80	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
83	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
84	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
85	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
86	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.3750	0.1644	12.00	32.00	25.08	666.2	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1644	31.00	31.00	20.11	720.5	55.00	55.00	KN	SP	3P
3	10.00	0.3750	0.1875	31.00	24.00	30.00	1374.6	55.00	55.00	SP	SP	3P
4	10.00	0.6250	0.2500	24.00	42.81	10.00	720.5	55.00	55.00	SP	SS	3P
5	10.00	0.6250	0.2500	42.81	24.00	10.00	720.2	55.00	55.00	SS	SP	3P
6	10.00	0.3750	0.1875	24.00	31.00	30.00	1353.3	55.00	55.00	SP	SP	3P
7	6.00	0.3750	0.1644	31.00	31.00	20.11	741.1	55.00	55.00	SP	KN	3P
8	6.00	0.3750	0.1644	12.00	32.00	25.08	698.0	55.00	55.00	BP	KN	3P
9	10.00	0.3750	0.1644	12.00	12.00	32.37	1071.4	55.00	55.00	BP	CP	3P

Total Frame Weight = 8066.0 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
9	60/0/0	-0/10/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 4

Type		Exterior Column			Interior Column		Exterior Column			
X-Loc		0/0/0			60/0/0		120/0/0			
Grid1 - Grid2		4-G			4-D		4-A			
Base Plate W x L (in.)		9 X 13			12 X 13		8 X 13			
Base Plate Thickness (in.)		0.375			0.500		0.375			
Anchor Rod Qty/Diam. (in.)		4 - 1.250			4 - 0.750		4 - 0.750			
Column Base Elev.		100'-2"			99'-2"		100'-2"			
Load Type	Desc.	Hx	Hz	Vy	Hx	Vy	Hx	Vy		
D	Frm	0.78	-	3.80	-	11.18	-0.78	3.80	-	-
CG	Frm	1.08	-	4.59	-	13.91	-1.08	4.59	-	-
L>	Frm	2.47	-	10.77	-	26.10	-2.47	10.77	-	-
<L	Frm	2.47	-	10.77	-	26.10	-2.47	10.77	-	-
ASL^	Frm	1.17	-	-0.55	-	8.52	-1.17	11.10	-	-
^ASL	Frm	1.17	-	11.10	-	8.52	-1.17	-0.55	-	-

W1>	Frm	-19.83	-	-28.47	-2.22	-46.36	-13.29	-10.76	-	-
<W1	Frm	13.30	-	-10.76	2.22	-46.36	19.83	-28.47	-	-
W2>	Frm	-21.01	-	-18.21	-2.22	-26.68	-12.11	-0.50	-	-
<W2	Frm	12.12	-	-0.50	2.22	-26.69	21.01	-18.21	-	-
WPL	Frm	0.10	-	-16.34	-	-39.50	-3.09	-23.60	-	-
WPR	Frm	3.09	-	-23.61	-	-39.50	-0.10	-16.34	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	5.49	-	3.28	-	-2.48	10.79	-0.80	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	-10.79	-	-0.80	-	-2.48	-5.49	3.28	-	-
CU	Frm	0.45	-	1.88	-	7.55	-0.45	1.88	-	-
L	Frm	2.47	-	10.77	-	26.10	-2.47	10.77	-	-
E>	Frm	-7.66	-	-4.15	-	-	-7.66	4.15	-	-
EG+	Frm	0.68	-	2.02	-	5.32	-0.20	1.75	-	-
<E	Frm	7.66	-	4.15	-	-	7.66	-4.15	-	-
EG-	Frm	-0.68	-	-2.02	-	-5.32	0.20	-1.75	-	-
WB1>	Brc	-	-	8.74	-	-1.87	-	-	-	-
<WB1	Brc	0.19	11.06	-8.62	-	0.73	-0.19	0.13	-	-
WB2>	Brc	-	-	8.74	-	-1.89	-	-	-	-
<WB2	Brc	0.19	11.06	-8.66	-	0.74	-0.19	0.14	-	-
WB3>	Brc	-	-	8.40	-	-1.90	-	-0.02	-	-
<WB3	Brc	0.18	10.45	-8.29	-	0.75	-0.18	0.14	-	-
WB4>	Brc	-	-	8.41	-	-1.90	-	-0.02	-	-
<WB4	Brc	0.18	10.45	-8.29	-	0.75	-0.18	0.14	-	-
MWB	Brc	-	-	5.94	-	-0.10	-	0.02	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
MWB	Brc	0.12	7.42	-5.80	-	-0.09	-0.12	0.08	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
EB>	Brc	-0.03	-	18.03	-	-2.74	-0.02	-0.06	-	-
<EB	Brc	0.40	22.38	-17.84	-	0.53	-0.36	0.33	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	19.2	18.8
CG	0.0	0.0	23.1	23.1
L>	0.0	0.0	47.6	47.6
<L	0.0	0.0	47.6	47.6
ASL^	0.0	0.0	19.1	19.1
^ASL	0.0	0.0	19.1	19.1
W1>	34.3	35.3	85.3	85.6
<W1	34.3	35.3	85.3	85.6
W2>	34.3	35.3	45.3	45.4
<W2	34.3	35.3	45.3	45.4
WPL	3.2	3.0	79.2	79.4
WPR	3.2	3.0	79.2	79.4
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
CU	0.0	0.0	11.3	11.3
L	0.0	0.0	47.6	47.6
E>	15.3	15.3	0.0	0.0
EG+	0.0	0.5	9.6	9.1
<E	15.3	15.3	0.0	0.0
EG-	0.0	0.5	9.6	9.1
WB1>	0.0	0.0	1.8	6.9
<WB1	0.0	0.0	0.9	7.8
WB2>	0.0	0.0	1.8	6.8
<WB2	0.0	0.0	0.9	7.8
WB3>	0.0	0.0	1.8	6.5
<WB3	0.0	0.0	0.9	7.4
WB4>	0.0	0.0	1.8	6.5
<WB4	0.0	0.0	0.9	7.4
MWB	0.0	0.0	0.0	5.9

MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	5.8
MWB	0.0	0.0	0.0	0.0
EB>	0.2	0.0	2.5	15.2
<EB	0.2	0.0	0.8	17.0

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	4-G	13.14	33	15.74	32	-	-	39.16	85	29.23	86	41.34	75	-	-	-	-
60/0/0	4-D	1.33	7	1.33	6	-	-	-	-	16.58	16	51.18	1	-	-	-	-
120/0/0	4-A	15.40	31	12.81	34	-	-	-	-	13.68	16	19.49	3	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	4-G	1	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875
60/0/0	4-D	9	0.500	12	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	4-A	8	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	15.34	17.10	32	0.95	-29.25	86	2.36	41.37	75	39.16	-29.25	0.95	86
60/0/0	1.66	-16.35	15	1.66	-16.35	16	0.02	51.23	2	-	-	-	0
120/0/0	15.04	16.93	31	11.23	-13.61	16	2.86	19.27	3	-	-	-	0

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.612	86	0.274	86	0.398	86	-	0	0.320	75	0.966	86	0.653	75	0.854	86	0.605	86
60/0/0	0.072	15	0.425	16	0.425	16	-	0	0.297	2	0.189	16	0.309	2	0.478	2	0.209	2
120/0/0	0.652	31	0.354	16	0.435	16	-	0	0.168	3	0.496	16	0.198	3	0.265	3	0.451	31

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
2	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
2	2	S1	6.74	30.694	186.70	1.75	52.94	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	3	S9	2.75	30.826	187.51	N/A	N/A	0.3750	3.000	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875
3	1	S1	28.18	23.684	126.32	3.00	71.05	0.2500	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
4	1	S2	10.00	42.743	170.97	N/A	N/A	0.3125	3.500	Both	F-OS-0.1875,W-OS-0.1250,F-OS-0.1875
6	1	S1	5.77	24.606	131.23	3.00	73.82	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
7	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
7	2	S1	13.55	30.700	186.74	1.75	52.94	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	3	S9	17.37	30.826	187.51	N/A	N/A	0.3750	3.000	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	1	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	2	SP	0.625	6.00	34.75	0.750	F1852X/PT	4.00	12	Flush	2.00	31	Extended	4.25
3	1	SP	0.625	10.00	34.74	0.750	F1852X/PT	4.00	12	Flush	2.00	31	Extended	4.25
3	2	SP	0.500	10.00	27.76	0.750	F1852X/PT	4.00	31	Extended	4.50	11	Flush	19.06

4	1	SP	0.500	10.00	27.83	0.750	F1852X/PT	4.00	31	Extended	4.50	11	Flush	19.06
5	2	SP	0.500	10.00	27.83	0.750	F1852X/PT	4.00	31	Extended	4.50	12	Flush	2.00
6	1	SP	0.500	10.00	27.76	0.750	F1852X/PT	4.00	31	Extended	4.50	12	Flush	2.00
6	2	SP	0.500	10.00	37.49	0.750	F1852X/PT	4.00	31	Extended	4.25	42	Ext/Gusset	4.25/2.00
		Gusset In 3.250 x 0.3750 x 5.75 SP-BS-0.3125,												
7	1	SP	0.500	6.00	37.50	0.750	F1852X/PT	4.00	31	Extended	4.25	42	Ext/Gusset	4.25/2.00
		Gusset In 3.250 x 0.3750 x 5.75 SP-BS-0.3125,												
7	2	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	33	Extended	4.25/2.50	33	Extended	4.25/2.50
8	2	KN(Top)	0.750	8.00	39.00	0.875	F1852X/PT	4.00	33	Extended	4.25/2.50	33	Extended	4.25/2.50
9	2	CP	0.500**	12.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

**Flange is thicker than plate.

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-20.7	19.2	5445.3	AISC DG-16/Thick plate	0.895	0.091	0.991	0.000	0.000	0.050	0.959	0.631
2	1	36	-20.7	19.2	5445.3	AISC DG-16/Thick plate	0.895	0.091	0.991	0.000	0.000	0.050	0.959	0.631
2	2	16	1.2	1.6	1442.0	AISC DG-16/Thin plate	0.749	0.017	0.815	0.000	0.000	0.011	0.959	0.719
3	1	16	1.2	1.6	1442.0	AISC DG-16/Thin plate	0.749	0.017	0.815	0.000	0.000	0.011	0.959	0.719
3	2	3	0.0	11.9	1344.0	AISC DG-16/Thin plate	0.992	0.128	0.773	0.607	0.771	0.114	0.959	0.959
4	1	3	0.0	11.9	1344.0	AISC DG-16/Thin plate	0.992	0.128	0.773	0.607	0.771	0.114	0.959	0.959
5	2	4	-1.2	11.8	1344.8	AISC DG-16/Thin plate	0.987	0.127	0.752	0.607	0.771	0.114	0.959	0.959
6	1	4	-1.2	11.8	1344.8	AISC DG-16/Thin plate	0.987	0.127	0.752	0.607	0.771	0.114	0.959	0.959
6	2	15	1.2	1.6	1442.6	AISC DG-16/Thin plate	0.711	0.017	0.896	0.364	0.538	0.015	0.959	0.719
7	1	15	1.2	1.6	1442.6	AISC DG-16/Thin plate	0.711	0.017	0.896	0.364	0.538	0.015	0.959	0.719
7	2	35	-20.5	18.9	5354.6	AISC DG-16/Thin plate	0.984	0.090	0.939	0.303	0.424	0.049	0.959	0.631
8	2	35	-20.5	18.9	5354.6	AISC DG-16/Thin plate	0.984	0.090	0.939	0.303	0.424	0.049	0.959	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	8.8	17.0	4848.3	AISC DG-16/Thin plate	0.976	0.081	0.930	0.303	0.424	0.044	0.959	0.631
2	1	37	8.8	17.0	4848.3	AISC DG-16/Thin plate	0.976	0.081	0.930	0.303	0.424	0.044	1.000	0.631
2	2	78	2.6	1.1	2020.2	AISC DG-16/Thin plate	0.999	0.012	0.808	0.396	0.585	0.009	0.977	0.719
3	1	78	2.6	1.1	2020.2	AISC DG-16/Thin plate	0.999	0.012	0.808	0.396	0.585	0.009	0.959	0.719
3	2	58	10.1	7.0	741.4	AISC DG-16/Thick plate	0.993	0.113	0.978	0.000	0.000	0.108	0.959	0.959
4	1	58	10.1	7.0	741.4	AISC DG-16/Thick plate	0.993	0.113	0.978	0.000	0.000	0.108	0.959	0.959
5	2	40	10.8	6.0	745.8	AISC DG-16/Thin plate	0.748	0.065	0.791	0.000	0.000	0.052	0.959	0.959
6	1	40	10.8	6.0	745.8	AISC DG-16/Thin plate	0.748	0.065	0.791	0.000	0.000	0.052	0.959	0.959
6	2	70	3.2	1.2	2097.2	AISC DG-16/Thin plate	0.761	0.010	0.864	0.000	0.000	0.008	0.959	0.719
7	1	70	3.2	1.2	2097.2	AISC DG-16/Thin plate	0.761	0.010	0.864	0.000	0.000	0.008	0.815	0.719
7	2	38	8.6	16.7	4757.7	AISC DG-16/Thin plate	0.957	0.079	0.913	0.303	0.424	0.043	1.000	0.631
8	2	38	8.6	16.7	4757.7	AISC DG-16/Thin plate	0.957	0.079	0.913	0.303	0.424	0.043	0.959	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	7	-9.4	1.6	16	16.3	1.6	0.513	0.077	0.000	0.161	0.066	0.016	0.446	0.052

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	11/10/0	12/0/0	GFB2097	1.654	70	
1	19/10/0	20/0/0	(2)GFB4007	0.846	70	
2	4/0/3	56/2/13	(2)GFB4007	0.841	0	
2	13/7/5	46/7/11	GFB4007	1.038	70	
3	3/6/1	36/7/11	GFB4007	1.040	68	
3	18/6/1	21/7/11	GFB3021	0.830	4	
3	26/7/11	13/6/0	GFB3000	1.091	3	
6	3/4/5	13/6/0	GFB3000	1.091	4	
6	21/6/0	31/7/11	GFB4007	0.929	3	
6	26/6/0	36/7/11	GFB4007	1.045	70	
7	6/6/0	46/7/11	GFB4007	1.088	70	

7	16/1/2	56/2/13	(2)GFB4007	0.799	68	
8	11/10/0	12/0/0	GFB2097	1.613	78	
8	19/10/0	20/0/0	(2)GFB4007	0.824	78	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.85	29.30	70		-18.7		-2188.3	0.0	141.5		2594.9	229.1	0.91	
1	22.95	32.00		80		-9.1				11.5				0.79
2	2.84	31.00	70		-8.2		-2354.3	0.0	124.7		2616.2	229.5	0.93	
2	7.43	31.00		4		11.8				11.9				0.99
3	30.00	24.00	3		0.0		-1344.0	0.0	391.4		1787.6	400.7	0.75	
3	28.30	24.40		1		-15.9				22.7				0.70
4	9.74	42.81	2		0.3		-4153.2	0.0	755.4		4942.6	1052.7	0.84	
4	9.74	42.81		1		-25.2				30.5				0.83
5	0.00	42.81	2		0.5		-4153.2	0.0	755.4		4944.3	1052.7	0.84	
5	0.00	42.81		2		25.2				30.5				0.83
6	0.00	24.00	4		0.0		-1344.8	0.0	391.4		1787.7	400.7	0.75	
6	3.36	24.78		2		15.1				22.3				0.68
7	16.09	31.00	68		-8.1		-2233.6	0.0	124.7		2631.4	229.5	0.88	
7	11.50	31.00		3		-11.8				11.9				0.99
8	19.85	29.30	78		-13.7		-2148.4	0.0	141.5		2598.5	229.1	0.88	
8	22.95	32.00		78		8.7				11.5				0.76
9	18.83	12.00	23		-32.9		262.3	0.0	62.4		774.6	458.4	0.83	
9	26.98	12.00		7		-1.6				32.2				0.05

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	19.85	275.37	96.1	96.1	9.19	2.25	1259.86	13.51	86.00	4.50	98.57	6.94	0.25	2825.43	1.18	0.95	1.00	1.00	0.62
2	2.84	690.84	115.1	115.1	9.47	2.25	1434.40	13.51	92.54	4.50	106.52	6.95	0.26	3168.01	1.22	0.94	1.00	1.00	0.65
3	30.00	690.84	314.2	314.2	11.86	3.75	1242.98	62.51	103.58	12.50	113.93	18.95	0.40	8722.73	1.28	1.00	1.02	0.79	1.00
4	9.74	690.84	314.2	314.2	22.89	6.25	7058.66	104.22	329.73	20.84	371.66	31.90	1.85	46376.50	1.29	1.00	1.00	1.00	1.00
5	0.00	690.84	314.2	314.2	22.89	6.25	7058.66	104.22	329.73	20.84	371.66	31.90	1.85	46376.50	1.29	1.00	1.00	1.00	1.00
6	0.00	690.84	314.2	314.2	11.86	3.75	1242.98	62.51	103.58	12.50	113.93	18.95	0.40	8722.73	1.28	1.00	1.02	0.79	1.00
7	16.09	690.84	115.1	115.1	9.47	2.25	1434.40	13.51	92.54	4.50	106.52	6.95	0.26	3168.01	1.22	0.94	1.00	1.00	0.61
8	19.85	275.37	96.1	96.1	9.19	2.25	1259.86	13.51	86.00	4.50	98.57	6.94	0.25	2825.43	1.18	0.95	1.00	1.00	0.62
9	18.83	409.86	388.5	388.5	9.35	3.75	272.98	62.50	45.50	12.50	48.80	18.83	0.37	2111.71	1.32	1.00	1.07	0.87	1.00

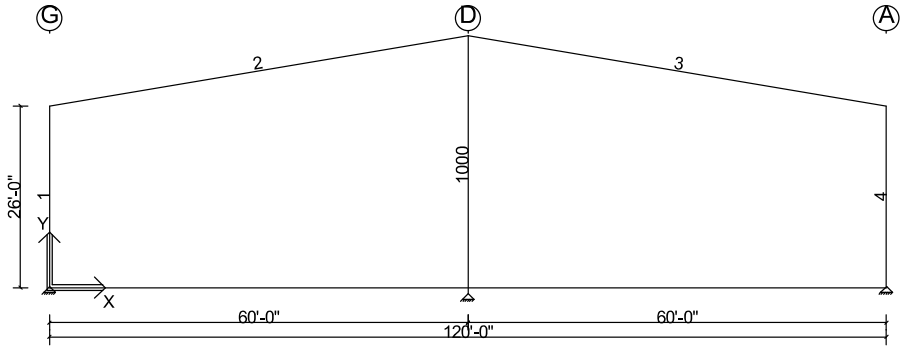
User Defined Frame Point Loads for Cross Section: 4

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
2	k	WB1>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB2>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB3>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB4>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	EB>	Imported - CUPOLA	0.83	11/6/4	NA	NA	N	UP	1.000	OF
2	k	D	Imported - CUPOLA	-0.48	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-1.75	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	CG	Imported - CUPOLA	-0.72	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CG	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	W1>	Imported - CUPOLA	6.91	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W1>	Imported - CUPOLA	12.25	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W1	Imported - CUPOLA	-2.56	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W1	Imported - CUPOLA	6.65	11/6/4	NA	NA	N	UP	1.000	OF
2	k	W2>	Imported - CUPOLA	7.36	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W2>	Imported - CUPOLA	7.84	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W2	Imported - CUPOLA	-2.11	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W2	Imported - CUPOLA	2.24	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPL	Imported - CUPOLA	-0.15	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPL	Imported - CUPOLA	8.00	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPR	Imported - CUPOLA	-0.81	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPR	Imported - CUPOLA	9.54	11/6/4	NA	NA	N	UP	1.000	OF
2	k	CU	Imported - CUPOLA	-0.72	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CU	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	L	Imported - CUPOLA	-1.39	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	L	Imported - CUPOLA	-4.75	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB1>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB1>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB1	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB1	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB2>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB2>	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB2	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB2	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB3>	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB3>	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB3	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB3	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB4>	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WB4>	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB4	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	<WB4	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	p	CG	Cupola wall weight ->Resolved From Plane	-1122.00	13/6/0	NA	NA	N	DOWN	1.000	OF
3	k	WB1>	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB2>	Imported - CUPOLA	0.44	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB3>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB4>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	EB>	Imported - CUPOLA	0.84	11/6/4	NA	NA	N	UP	1.000	OF
3	k	D	Imported - CUPOLA	0.48	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	D	Imported - CUPOLA	-1.75	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	CG	Imported - CUPOLA	0.72	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CG	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	W1>	Imported - CUPOLA	2.56	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W1>	Imported - CUPOLA	6.65	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W1	Imported - CUPOLA	-6.91	11/6/4	NA	NA	N	LEFT	1.000	OF

3	k	<W1	Imported - CUPOLA	12.25	11/6/4	NA	NA	N	UP	1.000	OF
3	k	W2>	Imported - CUPOLA	2.11	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W2>	Imported - CUPOLA	2.24	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W2	Imported - CUPOLA	-7.36	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W2	Imported - CUPOLA	7.84	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPL	Imported - CUPOLA	0.81	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPL	Imported - CUPOLA	9.54	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPR	Imported - CUPOLA	0.15	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPR	Imported - CUPOLA	8.00	11/6/4	NA	NA	N	UP	1.000	OF
3	k	CU	Imported - CUPOLA	0.72	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CU	Imported - CUPOLA	-2.48	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	L	Imported - CUPOLA	1.39	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	L	Imported - CUPOLA	-4.75	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB1>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB1>	Imported - CUPOLA	0.46	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB1	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB1	Imported - CUPOLA	-0.43	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB2>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB2>	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB2	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB2	Imported - CUPOLA	-0.44	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB3>	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB3>	Imported - CUPOLA	0.50	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB3	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB3	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB4>	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WB4>	Imported - CUPOLA	0.50	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB4	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<WB4	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	EB>	Imported - CUPOLA	0.05	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	EB>	Imported - CUPOLA	0.88	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<EB	Imported - CUPOLA	-0.04	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<EB	Imported - CUPOLA	-0.83	11/6/4	NA	NA	N	DOWN	1.000	OF
3	p	CG	Cupola wall weight ->Resolved From Plane	-1122.00	13/6/0	NA	NA	N	DOWN	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 4

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	opposing dead load	76.54	0/0/2	76.54	12/6/0	N	UP	1.000	OF
3	plf	D	opposing dead load	76.63	0/0/2	76.63	12/6/0	N	UP	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 4

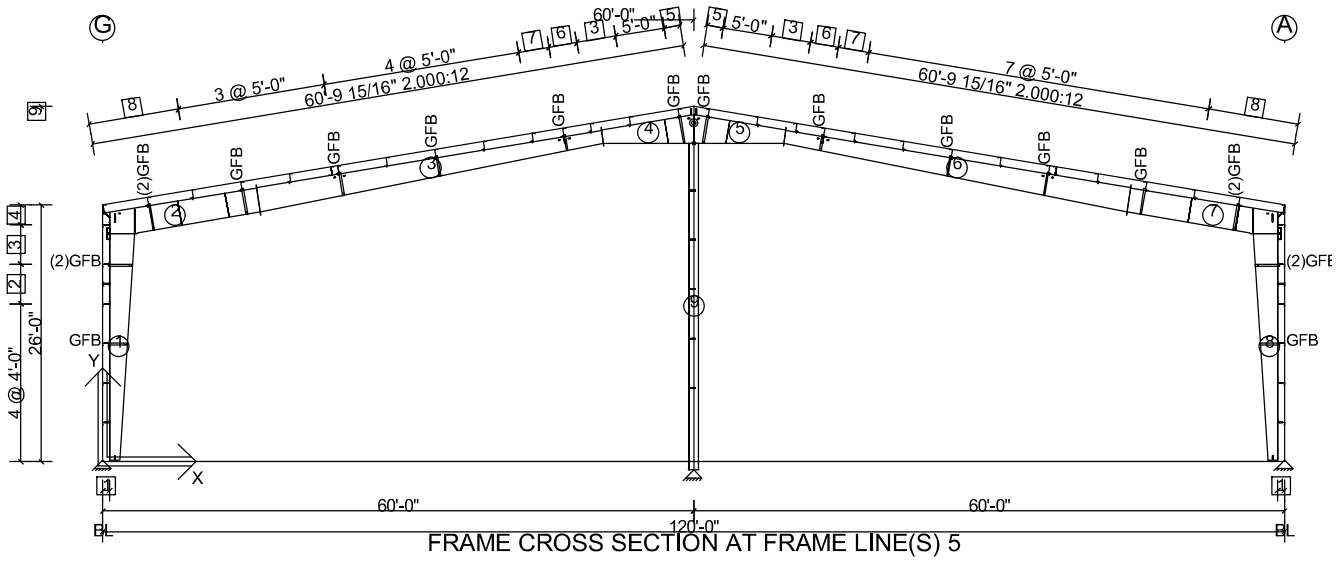
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/92)	-3.103	8	2	5	<W2
Max. Vertical Deflection for Span 1	(L/666)	1.042	3	1	3	<W1
Max. Vertical Deflection for Span 2	(L/666)	1.042	7	1	2	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 2.890 (k/in)
Fundamental Period (calculated) (T): 1.380 (sec.)

Wall: 4, Frame at: 133/0/0

Frame Cross Section: 5



FRAME CROSS SECTION AT FRAME LINE(S) 5

Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 1'-7 11/16"
6 2'-10 5/16"
7 3'-1 11/16"
8 2 @ 4'-7 1/8"
9 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX007) and 8(CX008): 113'-7"
Vert. Clearance at member 1(CX007): 23'-1 1/2"
Vert. Clearance at member 8(CX008): 23'-1 1/2"
Vert. Clearance at member 9(ICX004): 32'-3 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
133/0/0	33/0/0	CB-1 Frame Lines 3 & 5	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
57	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
58	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4

63	System Derived	1.000	0.6 MWB	MWB - Wall: 1
64	System Derived	1.000	0.6 MWB	MWB - Wall: 2
65	System Derived	1.000	0.6 MWB	MWB - Wall: 3
66	System Derived	1.000	0.6 MWB	MWB - Wall: 4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
69	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
70	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
74	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
75	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
76	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
79	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
80	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
83	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
84	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
85	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
86	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.3750	0.1644	12.00	30.00	25.08	653.2	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1644	30.00	30.00	15.11	543.9	55.00	55.00	KN	SP	3P
3	6.00	0.3750	0.1644	30.00	16.00	35.50	1046.1	55.00	55.00	SP	SP	3P
4	6.00	0.3750	0.1875	16.00	34.05	9.50	318.3	55.00	55.00	SP	SS	3P
5	6.00	0.3750	0.1875	34.05	16.00	9.50	318.3	55.00	55.00	SS	SP	3P
6	6.00	0.3750	0.1644	16.00	30.00	35.50	1046.0	55.00	55.00	SP	SP	3P
7	6.00	0.3750	0.1644	30.00	30.00	15.11	544.1	55.00	55.00	SP	KN	3P
8	6.00	0.3750	0.1644	12.00	30.00	25.08	653.2	55.00	55.00	BP	KN	3P
9	10.00	0.3750	0.1644	12.00	12.00	33.11	1095.0	55.00	55.00	BP	CP	3P

Total Frame Weight = 6218.1 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
9	60/0/0	-0/10/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 5

Type		Exterior Column			Interior Column		Exterior Column				
X-Loc		0/0/0			60/0/0		120/0/0				
Grid1 - Grid2		5-G			5-D		5-A				
Base Plate W x L (in.)		9 X 13			12 X 13		9 X 13				
Base Plate Thickness (in.)		0.375			0.500		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.250			4 - 0.750		4 - 1.250				
Column Base Elev.		100'-2"			99'-2"		100'-2"				
Load Type	Desc.	Hx	Hz	Vy	Hx	Vy	Hx	Hz	Vy		
D	Frm	1.00	-	3.94	-	8.45	-1.00	-	3.94	-	-
CG	Frm	1.50	-	5.05	-	11.88	-1.50	-	5.04	-	-
L>	Frm	3.55	-	12.04	-	28.66	-3.55	-	12.03	-	-
<L	Frm	3.55	-	12.04	-	28.66	-3.55	-	12.03	-	-
ASL^	Frm	1.67	-	-0.07	-	9.59	-1.68	-	11.82	-	-
^ASL	Frm	1.68	-	11.82	-	9.73	-1.67	-	-0.07	-	-
W1>	Frm	-19.61	-	-29.40	-2.25	-45.29	-9.38	-	-14.18	-	-
<W1	Frm	9.44	-	-14.18	2.25	-45.19	19.66	-	-29.39	-	-

W2>	Frm	-20.02	-	-18.19	-2.25	-27.77	-9.00	-	-2.98	-	-
<W2	Frm	9.03	-	-2.98	2.25	-27.67	20.05	-	-18.19	-	-
WPL	Frm	-1.61	-	-18.26	-	-38.49	-1.55	-	-25.56	-	-
WPR	Frm	1.60	-	-25.56	-	-38.64	1.65	-	-18.26	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-
MW	Frm	5.43	-	3.23	-	-2.39	10.85	-	-0.84	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-
MW	Frm	-10.85	-	-0.84	-	-2.39	-5.43	-	3.23	-	-
CU	Frm	0.61	-	2.04	-	5.17	-0.61	-	2.03	-	-
L	Frm	3.55	-	12.04	-	28.66	-3.55	-	12.03	-	-
E>	Frm	-7.10	-	-3.86	-	-	-7.11	-	3.86	-	-
EG+	Frm	0.72	-	2.14	-	4.62	-0.50	-	2.02	-	-
<E	Frm	7.10	-	3.86	-	-	7.11	-	-3.86	-	-
EG-	Frm	-0.72	-	-2.14	-	-4.62	0.50	-	-2.02	-	-
WB1>	Brc	0.26	-11.04	-8.50	-	0.69	-0.26	-10.36	-8.04	-	-
<WB1	Brc	-0.05	-	8.69	-	-1.89	0.05	-	8.18	-	-
WB2>	Brc	0.26	-11.04	-8.50	-	0.70	-0.26	-10.36	-8.12	-	-
<WB2	Brc	-0.05	-	8.73	-	-1.90	0.05	-	8.22	-	-
WB3>	Brc	0.27	-10.43	-8.16	-	0.70	-0.27	-10.97	-8.67	-	-
<WB3	Brc	-0.05	-	8.36	-	-1.93	0.05	-	8.82	-	-
WB4>	Brc	0.27	-10.43	-8.16	-	0.70	-0.27	-10.97	-8.67	-	-
<WB4	Brc	-0.05	-	8.36	-	-1.93	0.05	-	8.82	-	-
MWB	Brc	0.16	-7.46	-5.77	-	-0.11	-0.16	-7.40	-5.76	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-	-
MWB	Brc	-	-	5.97	-	-0.15	-	-	5.92	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-	-
EB>	Brc	0.55	-22.34	-17.44	-	1.22	-0.55	-22.63	-17.86	-	-
<EB	Brc	-0.09	-	17.90	-	-3.57	0.09	-	18.12	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	16.7	16.3
CG	0.0	0.0	22.0	22.0
L>	0.0	0.0	52.7	52.7
<L	0.0	0.0	52.7	52.7
ASL^	0.0	0.0	21.3	21.3
^ASL	0.0	0.0	21.5	21.5
W1>	30.6	31.2	88.7	88.9
<W1	30.7	31.3	88.6	88.8
W2>	30.6	31.3	48.8	48.9
<W2	30.7	31.3	48.7	48.8
WPL	3.3	3.2	82.1	82.3
WPR	3.4	3.2	82.3	82.5
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
CU	0.0	0.0	9.2	9.2
L	0.0	0.0	52.7	52.7
E>	14.2	14.2	0.0	0.0
EG+	0.0	0.2	9.0	8.8
<E	14.2	14.2	0.0	0.0
EG-	0.0	0.2	9.0	8.8
WB1>	0.0	0.0	0.9	15.9
<WB1	0.0	0.0	1.8	15.0
WB2>	0.0	0.0	0.9	15.9
<WB2	0.0	0.0	1.8	15.0
WB3>	0.0	0.0	0.9	16.1
<WB3	0.0	0.0	1.8	15.2
WB4>	0.0	0.0	0.9	16.1
<WB4	0.0	0.0	1.8	15.2
MWB	0.0	0.0	0.0	11.6
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	11.7

MWB	0.0	0.0	0.0	0.0
EB>	0.0	0.0	1.6	34.1
<EB	0.0	0.0	3.3	32.5

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	5-G	11.97	33	15.43	32	39.09	75	-	-	28.43	76	41.82	85	-	-	-	-
60/0/0	5-D	1.35	5	1.35	8	-	-	-	-	19.00	15	48.99	1	-	-	-	-
120/0/0	5-A	15.28	31	11.82	34	39.60	75	-	-	29.08	76	42.11	85	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	5-G	1	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875
60/0/0	5-D	9	0.500	12	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	5-A	8	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	14.64	17.20	32	1.39	-28.44	76	2.93	41.88	85	39.09	-28.44	1.39	76
60/0/0	1.72	-18.78	16	1.71	-18.85	15	0.03	49.03	1	-	-	-	0
120/0/0	14.51	17.15	31	1.52	-29.09	76	2.56	42.05	85	39.60	-29.09	1.52	76

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.611	76	0.266	76	0.386	76	-	0	0.324	85	0.940	76	0.661	85	0.852	76	0.589	76
60/0/0	0.074	16	0.490	15	0.490	15	-	0	0.284	1	0.218	15	0.296	1	0.457	1	0.200	1
120/0/0	0.619	76	0.272	76	0.400	76	-	0	0.325	85	0.961	76	0.663	85	0.863	76	0.602	76

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
2	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
2	2	S1	7.03	29.621	180.18	2.00	58.50	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	3	S1	11.91	29.398	178.82	2.00	58.50	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	4	S9	2.57	29.825	181.42	N/A	N/A	0.3750	3.500	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875
4	1	S1	6.47	28.190	150.34	3.00	83.59	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
4	2	S2	9.49	34.237	182.60	N/A	N/A	0.1875	2.000	Both	F-BS-0.1875,W-OS-0.1250,F-OS-0.1250
5	1	S1	3.70	26.854	143.22	1.25	33.20	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
7	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
7	2	S1	6.25	29.538	179.67	2.00	58.50	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	3	S1	11.13	29.760	181.02	2.00	58.50	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	4	S9	12.54	29.825	181.42	N/A	N/A	0.3750	3.500	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem. No.	Jt. No.	Type	End-Plate Dimensions Thick. (in.)	Width (in.)	Length (in.)	Bolt Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Outside Flange Configuration ID	Desc.	Pitches 1st/2nd (in.)	Inside Flange Configuration ID	Desc.	Pitches 1st/2nd (in.)
1	2	KN(Top)	0.750	8.00	37.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	1	KN(Top)	0.750	8.00	37.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	2	SP	0.500	6.00	36.50	0.750	F1852X/PT	4.00	31	Extended	4.25	33	Extended	4.25/2.00
3	1	SP	0.500	6.00	36.48	0.750	F1852X/PT	4.00	31	Extended	4.25	33	Extended	4.25/2.00
3	2	SP	0.625	8.00	22.52	0.750	F1852X/PT	4.00	31	Extended	4.25	31	Extended	4.25

4	1	SP	0.625	8.00	22.60	0.750	F1852X/PT	4.00	31	Extended	4.25	31	Extended	4.25
5	2	SP	0.625	8.00	22.60	0.750	F1852X/PT	4.00	31	Extended	4.25	31	Extended	4.25
6	1	SP	0.625	8.00	22.52	0.750	F1852X/PT	4.00	31	Extended	4.25	31	Extended	4.25
6	2	SP	0.500	6.00	36.48	0.750	F1852X/PT	4.00	31	Extended	4.25	33	Extended	4.25/2.00
7	1	SP	0.500	6.00	36.50	0.750	F1852X/PT	4.00	31	Extended	4.25	33	Extended	4.25/2.00
7	2	KN(Top)	0.750	8.00	37.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
8	2	KN(Top)	0.750	8.00	37.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
9	2	CP	0.500	12.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-20.6	18.6	5285.6	AISC DG-16/Thick plate	0.915	0.088	0.987	0.000	0.000	0.048	0.959	0.631
2	1	36	-20.6	18.6	5285.6	AISC DG-16/Thick plate	0.915	0.088	0.987	0.000	0.000	0.048	0.799	0.631
2	2	84	-4.1	3.2	1331.6	AISC DG-16/Thin plate	0.639	0.034	0.806	0.364	0.538	0.030	0.959	0.631
3	1	84	-4.1	3.2	1331.6	AISC DG-16/Thin plate	0.639	0.034	0.806	0.364	0.538	0.030	0.959	0.631
3	2	3	-2.4	8.3	1064.3	AISC DG-16/Thin plate	0.996	0.089	0.835	0.295	0.396	0.064	0.972	0.719
4	1	3	-2.4	8.3	1064.3	AISC DG-16/Thin plate	0.996	0.089	0.835	0.295	0.396	0.064	0.972	0.719
5	2	4	-3.5	7.9	1071.4	AISC DG-16/Thin plate	0.996	0.085	0.835	0.295	0.396	0.061	0.971	0.719
6	1	4	-3.5	7.9	1071.4	AISC DG-16/Thin plate	0.996	0.085	0.835	0.295	0.396	0.061	0.971	0.719
6	2	82	-4.4	3.2	1346.5	AISC DG-16/Thin plate	0.645	0.034	0.813	0.364	0.538	0.031	0.959	0.631
7	1	82	-4.4	3.2	1346.5	AISC DG-16/Thin plate	0.645	0.034	0.813	0.364	0.538	0.031	0.959	0.631
7	2	35	-20.5	18.4	5245.0	AISC DG-16/Thick plate	0.911	0.087	0.987	0.000	0.000	0.048	0.799	0.631
8	2	35	-20.5	18.4	5245.0	AISC DG-16/Thick plate	0.911	0.087	0.987	0.000	0.000	0.048	0.959	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	7.9	15.5	4445.0	AISC DG-16/Thin plate	0.960	0.074	0.915	0.303	0.424	0.040	0.959	0.631
2	1	37	7.9	15.5	4445.0	AISC DG-16/Thin plate	0.960	0.074	0.915	0.303	0.424	0.040	1.000	0.631
2	2	78	1.0	1.1	1902.1	AISC DG-16/Thin plate	0.546	0.007	0.977	0.476	0.704	0.005	0.940	0.631
3	1	78	1.0	1.1	1902.1	AISC DG-16/Thin plate	0.546	0.007	0.977	0.476	0.704	0.005	0.940	0.631
3	2	61	10.6	6.1	590.4	AISC DG-16/Thin plate	0.642	0.066	0.538	0.218	0.293	0.047	0.959	0.719
4	1	61	10.6	6.1	590.4	AISC DG-16/Thin plate	0.642	0.066	0.538	0.218	0.293	0.047	0.959	0.719
5	2	43	11.2	5.2	604.7	AISC DG-16/Thin plate	0.660	0.056	0.553	0.218	0.293	0.040	0.959	0.719
6	1	43	11.2	5.2	604.7	AISC DG-16/Thin plate	0.660	0.056	0.553	0.218	0.293	0.040	0.959	0.719
6	2	28	1.2	1.1	1921.1	AISC DG-16/Thin plate	0.552	0.007	0.988	0.481	0.712	0.006	0.951	0.631
7	1	28	1.2	1.1	1921.1	AISC DG-16/Thin plate	0.552	0.007	0.988	0.481	0.712	0.006	0.951	0.631
7	2	38	7.8	15.4	4404.3	AISC DG-16/Thin plate	0.951	0.073	0.906	0.303	0.424	0.040	1.000	0.631
8	2	38	7.8	15.4	4404.3	AISC DG-16/Thin plate	0.951	0.073	0.906	0.303	0.424	0.040	0.959	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	8	-4.0	1.6	15	18.8	1.6	0.592	0.076	0.000	0.185	0.076	0.021	0.427	0.052

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	11/10/0	12/0/0	GFB2097	1.802	80	
1	19/10/0	20/0/0	(2)GFB3021	1.184	80	
2	4/0/3	56/2/13	(2)GFB4007	0.884	80	
2	13/7/5	46/7/11	GFB4007	1.039	80	
3	8/6/1	36/7/11	GFB3021	1.161	4	
3	18/6/1	26/7/11	GFB2097	1.176	4	
3	31/7/11	13/6/0	GFB2081	1.037	3	
4	8/0/0	1/7/11	GFB4027	1.857	2	
5	1/6/0	1/7/11	GFB4027	1.861	1	
6	3/10/6	13/6/0	GFB2081	1.049	4	
6	17/0/0	26/7/11	GFB2097	1.159	3	
6	27/0/0	36/7/11	GFB3021	1.157	3	
7	1/6/1	46/7/11	GFB4007	1.027	28	

7	11/1/3	56/2/13	(2)GFB4007	0.859	78	
8	11/10/0	12/0/0	GFB2097	1.799	78	
8	19/10/0	20/0/0	(2)GFB3021	1.204	78	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.84	27.53	80		-19.0		-2262.8	0.0	141.3		2435.5	228.7	1.00	
1	23.00	30.00		28		-9.2				12.3				0.75
2	1.02	30.00	80		-8.3		-2653.7	0.0	161.6		2766.7	229.3	0.98	
2	10.02	30.00		2		11.4				12.3				0.93
3	18.51	22.70	4		-3.3		1942.3	0.0	118.8		1929.9	227.6	1.02	
3	34.51	16.39		1		-19.2				23.5				0.82
4	9.29	34.05	1		-2.3		-3205.7	0.0	178.5		3362.5	232.4	0.96	
4	8.66	32.82		1		-24.1				23.9				1.01
5	0.00	34.05	1		-2.4		-3205.6	0.0	178.5		3362.5	232.4	0.96	
5	1.26	31.59		2		23.6				22.9				1.03
6	17.00	22.71	3		-3.3		1929.2	0.0	118.8		1931.0	227.6	1.01	
6	1.00	16.40		2		19.2				23.5				0.82
7	12.99	30.00	78		-8.3		-2581.3	0.0	161.6		2766.8	229.3	0.96	
7	4.00	30.00		1		-11.4				12.3				0.93
8	19.84	27.53	78		-19.0		-2259.2	0.0	141.3		2435.5	228.7	0.99	
8	23.00	30.00		68		9.3				12.3				0.76
9	27.59	12.00	1		-49.0		0.0	0.0	59.6		569.4	458.4	0.82	
9	27.59	12.00		8		1.6				32.2				0.05

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	19.84	276.01	96.1	96.1	8.90	2.25	1092.68	13.51	79.38	4.50	90.57	6.93	0.25	2490.41	1.18	0.97	1.00	1.00	0.64
2	1.02	693.47	25.1	25.1	9.31	2.25	1330.23	13.51	88.68	4.50	101.82	6.95	0.25	2964.40	1.00	0.95	1.00	1.00	0.62
3	18.51	693.47	120.0	60.0	8.11	2.25	705.89	13.51	62.18	4.50	70.05	6.90	0.24	1683.67	1.01	1.00	1.00	1.00	0.79
4	9.29	693.47	30.4	30.4	10.74	2.25	1853.04	13.52	108.84	4.51	127.76	7.04	0.28	3832.93	1.03	0.94	1.00	1.00	0.57
5	0.00	693.47	30.4	30.4	10.74	2.25	1853.04	13.52	108.84	4.51	127.76	7.04	0.28	3832.93	1.03	0.94	1.00	1.00	0.57
6	17.00	693.47	120.0	60.0	8.11	2.25	706.01	13.51	62.19	4.50	70.05	6.90	0.24	1683.92	1.01	1.00	1.00	1.00	0.75
7	12.99	693.47	22.8	22.8	9.31	2.25	1330.24	13.51	88.68	4.50	101.82	6.95	0.25	2964.41	1.04	0.95	1.00	1.00	0.62
8	19.84	276.01	96.1	96.1	8.90	2.25	1092.68	13.51	79.38	4.50	90.57	6.93	0.25	2490.41	1.18	0.97	1.00	1.00	0.64
9	27.59	414.36	397.3	397.3	9.35	3.75	272.98	62.50	45.50	12.50	48.80	18.83	0.37	2111.71	1.00	1.00	1.07	0.87	1.00

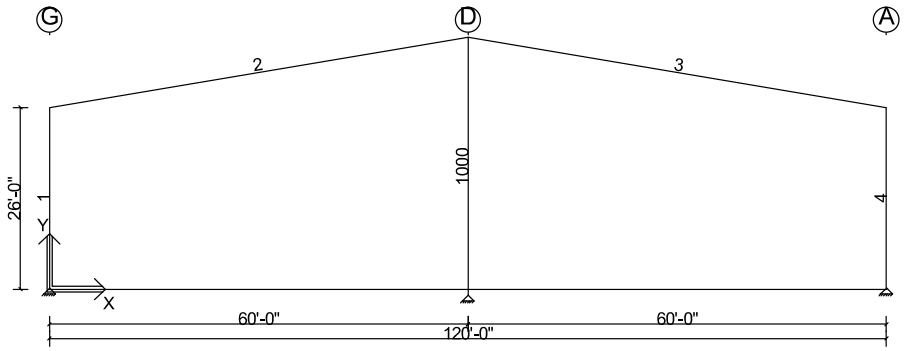
User Defined Frame Point Loads for Cross Section: 5

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
2	k	<WB1	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB2	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB3	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<WB4	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<EB	Imported - CUPOLA	0.84	11/6/4	NA	NA	N	UP	1.000	OF
2	k	D	Imported - CUPOLA	-0.23	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	CG	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	W1>	Imported - CUPOLA	4.22	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W1>	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W1	Imported - CUPOLA	-1.53	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W1	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
2	k	W2>	Imported - CUPOLA	4.46	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	W2>	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
2	k	<W2	Imported - CUPOLA	-1.29	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<W2	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPL	Imported - CUPOLA	0.09	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WPL	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WPR	Imported - CUPOLA	-0.33	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	WPR	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
2	k	CU	Imported - CUPOLA	-0.31	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	L	Imported - CUPOLA	-0.97	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	WB1>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB1>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB1	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB1	Imported - CUPOLA	0.49	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB2>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB2>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB2	Imported - CUPOLA	-0.03	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB2	Imported - CUPOLA	0.49	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB3>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB3>	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB3	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB3	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	WB4>	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	WB4>	Imported - CUPOLA	-0.45	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<WB4	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<WB4	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
2	k	EB>	Imported - CUPOLA	0.04	11/6/4	NA	NA	N	RIGHT	1.000	OF
2	k	EB>	Imported - CUPOLA	-0.83	11/6/4	NA	NA	N	DOWN	1.000	OF
2	k	<EB	Imported - CUPOLA	-0.05	11/6/4	NA	NA	N	LEFT	1.000	OF
2	k	<EB	Imported - CUPOLA	0.88	11/6/4	NA	NA	N	UP	1.000	OF
2	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
3	k	<WB1	Imported - CUPOLA	0.43	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB2	Imported - CUPOLA	0.44	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB3	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<WB4	Imported - CUPOLA	0.47	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<EB	Imported - CUPOLA	0.83	11/6/4	NA	NA	N	UP	1.000	OF
3	k	D	Imported - CUPOLA	0.23	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	D	Imported - CUPOLA	-0.92	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	CG	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF

3	k	CG	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	W1>	Imported - CUPOLA	1.53	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W1>	Imported - CUPOLA	3.86	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W1	Imported - CUPOLA	-4.22	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W1	Imported - CUPOLA	7.32	11/6/4	NA	NA	N	UP	1.000	OF
3	k	W2>	Imported - CUPOLA	1.29	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	W2>	Imported - CUPOLA	1.52	11/6/4	NA	NA	N	UP	1.000	OF
3	k	<W2	Imported - CUPOLA	-4.46	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	<W2	Imported - CUPOLA	4.98	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPL	Imported - CUPOLA	0.33	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	WPL	Imported - CUPOLA	5.67	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WPR	Imported - CUPOLA	-0.09	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WPR	Imported - CUPOLA	4.69	11/6/4	NA	NA	N	UP	1.000	OF
3	k	CU	Imported - CUPOLA	0.31	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	CU	Imported - CUPOLA	-1.05	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	L	Imported - CUPOLA	0.97	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	L	Imported - CUPOLA	-3.33	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	WB1>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB1>	Imported - CUPOLA	-0.43	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB1	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB1	Imported - CUPOLA	0.41	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB2>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB2>	Imported - CUPOLA	-0.44	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB2	Imported - CUPOLA	0.03	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB2	Imported - CUPOLA	0.42	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB3>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB3>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB3	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB3	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
3	k	WB4>	Imported - CUPOLA	-0.02	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	WB4>	Imported - CUPOLA	-0.47	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<WB4	Imported - CUPOLA	0.02	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<WB4	Imported - CUPOLA	0.45	11/6/4	NA	NA	N	UP	1.000	OF
3	k	EB>	Imported - CUPOLA	-0.04	11/6/4	NA	NA	N	LEFT	1.000	OF
3	k	EB>	Imported - CUPOLA	-0.84	11/6/4	NA	NA	N	DOWN	1.000	OF
3	k	<EB	Imported - CUPOLA	0.05	11/6/4	NA	NA	N	RIGHT	1.000	OF
3	k	<EB	Imported - CUPOLA	0.79	11/6/4	NA	NA	N	UP	1.000	OF
3	p	CG	Cupola wall weight ->Resolved From Plane	-561.00	13/6/0	NA	NA	N	DOWN	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 5

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
2	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF
3	plf	D	opposing dead load	37.95	0/0/2	37.95	12/6/0	N	UP	1.000	OF
3	plf	L	additional live load	-132.00	0/0/2	-132.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	Cupola wall weight ->Resolved From Plane	-34.00	0/0/0	-34.00	13/6/0	N	DOWN	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 5

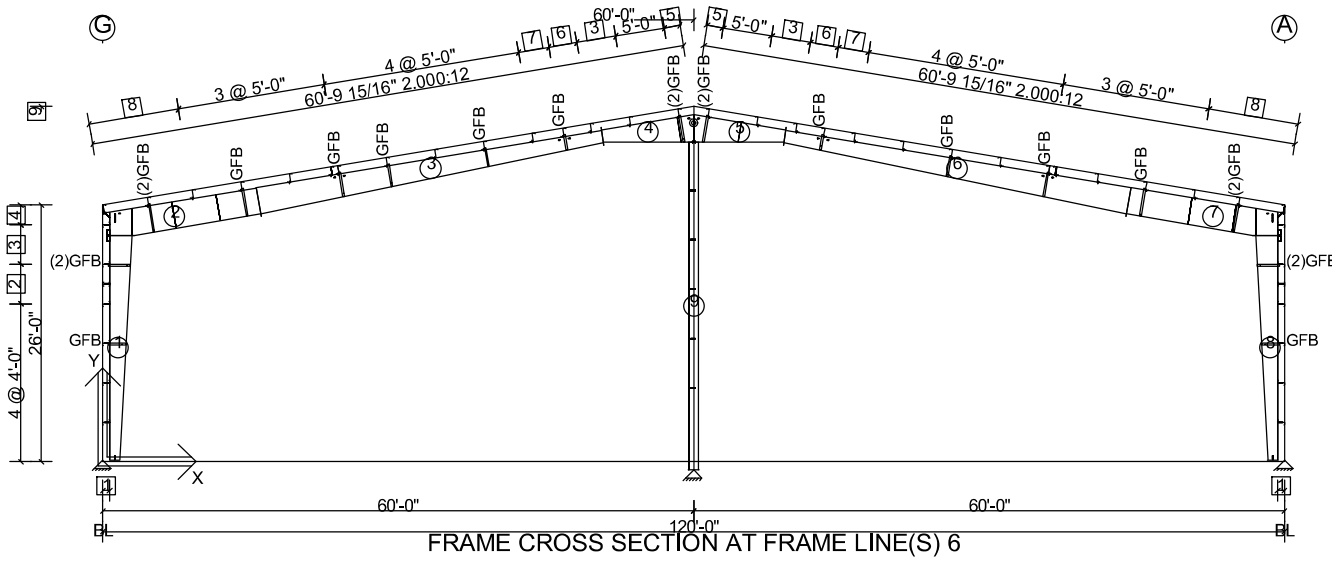
Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/92)	-3.127	1	2	3	<W1
Max. Vertical Deflection for Span 1	(L/550)	1.265	3	1	3	<W1
Max. Vertical Deflection for Span 2	(L/556)	1.250	7	1	2	W1>

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 2.203 (k/in)
Fundamental Period (calculated) (T): 1.520 (sec.)

Wall: 4, Frame at: 166/0/0

Frame Cross Section: 6



FRAME CROSS SECTION AT FRAME LINE(S) 6

Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 1'-7 11/16"
6 2'-10 5/16"
7 3'-1 11/16"
8 2 @ 4'-7 1/8"
9 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX003) and 8(CX009): 114'-1"
Vert. Clearance at member 1(CX003): 22'-10 15/16"
Vert. Clearance at member 8(CX009): 22'-10 15/16"
Vert. Clearance at member 9(ICX001): 32'-4 5/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
166/0/0	33/0/0	CB-1 Frame Lines 2 & 6	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
39	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
40	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
41	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
42	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
43	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
44	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
45	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
46	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
47	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
48	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
49	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
50	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
51	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
52	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
53	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
54	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
55	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
56	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
57	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
58	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
59	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
60	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
61	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
62	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4

63	System Derived	1.000	0.6 MWB	MWB - Wall: 1
64	System Derived	1.000	0.6 MWB	MWB - Wall: 2
65	System Derived	1.000	0.6 MWB	MWB - Wall: 3
66	System Derived	1.000	0.6 MWB	MWB - Wall: 4
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
69	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
70	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
73	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
74	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
75	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
76	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
79	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
80	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
83	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
84	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
85	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
86	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.3750	0.1644	12.00	27.00	25.08	626.0	55.00	55.00	BP	KN	3P
2	6.00	0.3750	0.1644	32.00	32.00	15.11	562.5	55.00	55.00	KN	SP	3P
3	6.00	0.3750	0.1644	32.00	15.00	35.50	1054.0	55.00	55.00	SP	SP	3P
4	6.00	0.3750	0.1875	15.00	33.08	9.50	311.3	55.00	55.00	SP	SS	3P
5	6.00	0.3750	0.1875	33.08	15.00	9.50	311.2	55.00	55.00	SS	SP	3P
6	6.00	0.3750	0.1644	15.00	32.00	35.50	1053.9	55.00	55.00	SP	SP	3P
7	6.00	0.3750	0.1644	32.00	32.00	15.12	562.8	55.00	55.00	SP	KN	3P
8	6.00	0.3750	0.1644	12.00	27.00	25.08	626.0	55.00	55.00	BP	KN	3P
9	9.00	0.3750	0.1644	12.00	12.00	33.19	997.1	55.00	55.00	BP	CP	3P

Total Frame Weight = 6104.6 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
9	60/0/0	-0/10/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 6

Type		Exterior Column			Interior Column		Exterior Column				
X-Loc		0/0/0			60/0/0		120/0/0				
Grid1 - Grid2		6-G			6-D		6-A				
Base Plate W x L (in.)		9 X 13			10 X 13		9 X 13				
Base Plate Thickness (in.)		0.375			0.375		0.375				
Anchor Rod Qty/Diam. (in.)		4 - 1.250			4 - 0.750		4 - 1.250				
Column Base Elev.		100'-2"			99'-2"		100'-2"				
Load Type	Desc.	Hx	Hz	Vy	Hx	Vy	Hx	Hz	Vy		
D	Frm	0.89	-	3.85	-	8.14	-0.89	-	3.86	-	-
CG	Frm	1.31	-	4.88	-	11.08	-1.31	-	4.88	-	-
L>	Frm	3.11	-	11.67	-	24.17	-3.11	-	11.67	-	-
<L	Frm	3.11	-	11.67	-	24.17	-3.11	-	11.67	-	-
ASL^	Frm	1.55	-	-0.23	-	12.08	-1.56	-	11.90	-	-
^ASL	Frm	1.56	-	11.90	-	12.09	-1.56	-	-0.23	-	-
W1>	Frm	-17.33	-	-28.89	-2.25	-44.80	-7.60	-	-16.44	-	-
<W1	Frm	7.59	-	-16.44	2.25	-44.83	17.32	-	-28.89	-	-

W2>	Frm	-17.96	-	-17.85	-2.25	-27.75	-6.97	-	-5.41	-	-
<W2	Frm	6.97	-	-5.41	2.25	-27.78	17.95	-	-17.85	-	-
WPL	Frm	-1.49	-	-18.70	-	-37.93	-1.86	-	-26.96	-	-
WPR	Frm	1.85	-	-26.96	-	-37.89	1.48	-	-18.70	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-
MW	Frm	5.50	-	3.28	-	-2.50	10.78	-	-0.79	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-
MW	Frm	-10.78	-	-0.79	-	-2.50	-5.50	-	3.29	-	-
CU	Frm	0.53	-	1.96	-	5.03	-0.53	-	1.96	-	-
L	Frm	3.11	-	11.67	-	24.17	-3.11	-	11.67	-	-
E>	Frm	-6.63	-	-3.60	-	-	-6.63	-	3.60	-	-
EG+	Frm	0.54	-	2.02	-	4.48	-0.54	-	2.02	-	-
<E	Frm	6.63	-	3.60	-	-	6.63	-	-3.60	-	-
EG-	Frm	-0.54	-	-2.02	-	-4.48	0.54	-	-2.02	-	-
WB1>	Brc	-	-	8.76	-	-0.23	-	-	8.22	-	-
<WB1	Brc	0.25	11.05	-8.60	-	-0.17	-0.25	10.38	-8.01	-	-
WB2>	Brc	-	-	8.76	-	-0.23	-	-	8.31	-	-
<WB2	Brc	0.25	11.05	-8.64	-	-0.17	-0.25	10.39	-8.05	-	-
WB3>	Brc	-	-	8.42	-	-0.23	-	-	8.87	-	-
<WB3	Brc	0.25	10.44	-8.26	-	-0.17	-0.25	10.99	-8.66	-	-
WB4>	Brc	-	-	8.42	-	-0.23	-	-	8.87	-	-
<WB4	Brc	0.25	10.44	-8.26	-	-0.17	-0.25	11.00	-8.66	-	-
MWB	Brc	-	-	5.92	-	-0.16	-	-	5.87	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-	-
MWB	Brc	0.17	7.52	-5.85	-	-0.12	-0.17	7.46	-5.76	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-	-
EB>	Brc	0.02	-	17.97	-	-0.48	-0.02	-	18.26	-	-
<EB	Brc	0.52	22.36	-17.69	-	-0.35	-0.52	22.68	-17.76	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	16.2	15.8
CG	0.0	0.0	20.8	20.8
L>	0.0	0.0	47.5	47.5
<L	0.0	0.0	47.5	47.5
ASL^	0.0	0.0	23.7	23.7
^ASL	0.0	0.0	23.8	23.8
W1>	27.2	27.2	90.1	90.1
<W1	27.2	27.2	90.1	90.2
W2>	27.2	27.2	51.0	51.0
<W2	27.2	27.2	51.0	51.0
WPL	3.3	3.3	83.5	83.6
WPR	3.3	3.3	83.5	83.6
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	16.3	16.3	0.0	0.0
CU	0.0	0.0	9.0	9.0
L	0.0	0.0	47.5	47.5
E>	13.3	13.3	0.0	0.0
EG+	0.0	0.0	8.5	8.5
<E	13.3	13.3	0.0	0.0
EG-	0.0	0.0	8.5	8.5
WB1>	0.0	0.0	0.0	16.8
<WB1	0.0	0.0	0.0	16.8
WB2>	0.0	0.0	0.0	16.8
<WB2	0.0	0.0	0.0	16.9
WB3>	0.0	0.0	0.0	17.1
<WB3	0.0	0.0	0.0	17.1
WB4>	0.0	0.0	0.0	17.1
<WB4	0.0	0.0	0.0	17.1
MWB	0.0	0.0	0.0	11.6
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	11.7

MWB	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	35.7
<EB	0.0	0.0	0.0	35.8

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	6-G	11.13	33	14.18	32	-	-	39.13	85	28.88	86	41.59	75	-	-	-	-
60/0/0	6-D	1.35	7	1.35	8	-	-	-	-	19.00	16	43.38	1	-	-	-	-
120/0/0	6-A	14.18	31	11.13	34	-	-	39.68	85	29.01	86	42.11	75	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	6-G	1	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875
60/0/0	6-D	9	0.375	10	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	6-A	8	0.375	9	13	No	4	1.250	5.0	5.0	Std	BS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	13.61	16.51	32	1.43	-28.86	86	2.50	41.52	75	39.13	-28.86	1.43	86
60/0/0	1.62	-18.90	15	1.62	-18.92	16	0.02	43.43	1	-	-	-	0
120/0/0	13.61	16.54	31	1.44	-29.00	86	2.72	42.16	75	39.68	-29.00	1.44	86

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.611	86	0.270	86	0.392	86	-	0	0.321	75	0.954	86	0.655	75	0.853	86	0.597	86
60/0/0	0.070	15	0.492	16	0.492	16	-	0	0.302	1	0.486	16	0.330	1	0.440	1	0.193	1
120/0/0	0.620	86	0.272	86	0.399	86	-	0	0.326	75	0.958	86	0.665	75	0.865	86	0.600	86

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
2	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
2	2	S1	6.44	31.640	192.46	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	3	S1	10.99	31.436	191.22	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
2	4	S9	2.32	31.824	193.58	N/A	N/A	0.3750	3.500	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875
4	1	S1	7.79	29.831	159.10	2.50	73.63	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
4	2	S2	9.49	33.235	177.25	N/A	N/A	0.1875	2.000	Both	F-BS-0.1875,W-OS-0.1250,F-OS-0.1250
5	1	S1	4.93	23.382	124.70	1.75	40.53	0.1875	2.000	Opposite Fillet	F-OS-0.1875,W-OS-0.1875
7	***	MUST	Use	Alternate	Web	Thick.=	0.2500	*	*	*	*
7	2	S1	6.26	31.531	191.80	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	3	S1	10.81	31.735	193.04	1.75	54.69	0.1875	2.000	Both	F-OS-0.1875,W-OS-0.1875
7	4	S9	12.80	31.824	193.58	N/A	N/A	0.3750	3.500	Both	SP-BS-0.3125,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem. No.	Jt. No.	Type	End-Plate Dimensions Thick. (in.)	Width (in.)	Length (in.)	Bolt Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Outside Flange Configuration ID	Desc.	Pitches 1st/2nd (in.)	Inside Flange Configuration ID	Desc.	Pitches 1st/2nd (in.)
1	2	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	1	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
2	2	SP	0.500	6.00	35.75	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
3	1	SP	0.500	6.00	35.73	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
3	2	SP	0.625	8.00	21.52	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00

4	1	SP	0.625	8.00	21.60	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
5	2	SP	0.625	8.00	21.60	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
6	1	SP	0.625	8.00	21.52	0.750	F1852X/PT	4.00	32	Extended	4.25/2.00	31	Extended	4.25/2.00
6	2	SP	0.500	6.00	35.73	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
7	1	SP	0.500	6.00	35.75	0.750	F1852X/PT	4.00	12	Flush	2.00	32	Extended	4.25/2.00
7	2	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
8	2	KN(Top)	0.750	8.00	34.00	0.875	F1852X/PT	4.00	43	Ext/Gusset	4.25/2.50	33	Extended	4.25/2.50
		Gusset Out 3.500 x 0.3750 x 6.13 SP-BS-0.3125,												
9	2	CP	0.375	10.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-19.4	17.1	4840.8	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.959	0.631
2	1	36	-19.4	17.1	4840.8	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.799	0.631
2	2	74	-3.6	3.1	1243.3	AISC DG-16/Thin plate	0.619	0.033	0.999	0.000	0.000	0.027	0.959	0.631
3	1	74	-3.6	3.1	1243.3	AISC DG-16/Thin plate	0.619	0.033	0.999	0.000	0.000	0.027	0.959	0.631
3	2	3	-2.9	6.6	1077.7	AISC DG-16/Thin plate	0.823	0.054	0.820	0.319	0.428	0.034	0.840	0.719
4	1	3	-2.9	6.6	1077.7	AISC DG-16/Thin plate	0.823	0.054	0.820	0.319	0.428	0.034	0.840	0.719
5	2	4	-3.7	6.2	1078.1	AISC DG-16/Thin plate	0.818	0.050	0.816	0.317	0.425	0.032	0.835	0.719
6	1	4	-3.7	6.2	1078.1	AISC DG-16/Thin plate	0.818	0.050	0.816	0.317	0.425	0.032	0.835	0.719
6	2	72	-3.7	3.0	1224.1	AISC DG-16/Thin plate	0.608	0.032	0.982	0.000	0.000	0.026	0.959	0.631
7	1	72	-3.7	3.0	1224.1	AISC DG-16/Thin plate	0.608	0.032	0.982	0.000	0.000	0.026	0.959	0.631
7	2	35	-19.4	17.1	4841.2	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.799	0.631
8	2	35	-19.4	17.1	4841.2	AISC DG-16/Thick plate	0.931	0.081	0.982	0.000	0.000	0.044	0.959	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	7.1	14.4	4100.1	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	0.959	0.631
2	1	37	7.1	14.4	4100.1	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	1.000	0.631
2	2	68	0.7	1.1	1854.1	AISC DG-16/Thin plate	0.640	0.009	0.977	0.434	0.642	0.007	0.857	0.631
3	1	68	0.7	1.1	1854.1	AISC DG-16/Thin plate	0.640	0.009	0.977	0.434	0.642	0.007	0.857	0.631
3	2	58	10.9	4.5	617.1	AISC DG-16/Thin plate	0.710	0.049	0.598	0.218	0.293	0.035	0.959	0.719
4	1	58	10.9	4.5	617.1	AISC DG-16/Thin plate	0.710	0.049	0.598	0.218	0.293	0.035	0.959	0.719
5	2	40	11.3	3.6	617.6	AISC DG-16/Thin plate	0.713	0.038	0.601	0.218	0.293	0.027	0.959	0.719
6	1	40	11.3	3.6	617.6	AISC DG-16/Thin plate	0.713	0.038	0.601	0.218	0.293	0.027	0.959	0.719
6	2	28	0.7	1.2	1836.6	AISC DG-16/Thin plate	0.634	0.009	0.967	0.430	0.636	0.008	0.849	0.631
7	1	28	0.7	1.2	1836.6	AISC DG-16/Thin plate	0.634	0.009	0.967	0.430	0.636	0.008	0.849	0.631
7	2	38	7.1	14.4	4100.5	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	1.000	0.631
8	2	38	7.1	14.4	4100.5	AISC DG-16/Thin plate	0.994	0.068	0.947	0.303	0.424	0.037	0.959	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	7	-2.7	1.6	16	18.9	1.6	0.594	0.076	0.000	0.391	0.085	0.021	0.408	0.052

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	11/10/0	12/0/0	GFB2081	1.759	70	
1	19/10/0	20/0/0	(2)GFB3000	1.183	70	
2	4/0/3	56/2/13	(2)GFB4027	0.756	70	
2	13/7/5	46/7/11	GFB4027	0.899	70	
3	8/6/1	36/7/11	GFB3021	1.156	4	
3	13/6/1	31/7/11	GFB3000	1.266	4	
3	23/6/1	21/7/11	GFB2097	1.131	4	
3	31/7/11	13/6/0	GFB2063	1.161	3	
4	8/0/0	1/7/11	(2)GFB4007	0.809	2	
5	1/6/0	1/7/11	(2)GFB4007	0.810	1	
6	3/10/6	13/6/0	GFB2063	1.164	4	
6	17/0/1	26/7/11	GFB3000	1.262	3	
6	27/0/1	36/7/11	GFB3021	1.151	3	

7	1/6/1	46/7/11	GFB4027	0.886	28	
7	11/1/3	56/2/13	(2)GFB4027	0.747	68	
8	11/10/0	12/0/0	GFB2081	1.781	68	
8	19/10/0	20/0/0	(2)GFB3000	1.199	68	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	19.84	25.06	70		-18.5		-2090.4	0.0	140.9		2206.8	228.2	1.01	
1	22.79	27.00		70		-8.4				13.7				0.62
2	0.89	32.00	70		-7.3		-2445.3	0.0	164.9		2954.8	229.7	0.85	
2	10.16	32.00		4		11.0				11.5				0.96
3	18.51	23.14	4		-2.8		2033.1	0.0	118.9		1992.1	227.7	1.03	
3	0.00	32.00		4		8.1				11.5				0.71
4	0.00	15.00	3		-3.7		-1077.6	0.0	88.4		1206.1	226.9	0.91	
4	8.03	30.61		1		-20.7				20.7				1.00
5	9.30	15.00	4		-3.7		-1078.1	0.0	88.4		1205.2	226.9	0.92	
5	1.27	30.60		3		20.7				20.7				1.00
6	17.01	23.14	3		-2.8		2009.2	0.0	118.9		1974.6	227.7	1.03	
6	35.51	32.00		3		-8.1				11.5				0.71
7	13.28	32.00	68		-7.4		-2414.1	0.0	164.9		2954.8	229.7	0.84	
7	4.01	32.00		3		-11.0				11.5				0.96
8	19.84	25.06	68		-18.5		-2118.9	0.0	140.9		2206.9	228.2	1.03	
8	22.79	27.00		78		8.7				13.7				0.63
9	27.66	12.00	1		-43.4		0.0	0.0	43.3		438.7	409.8	1.00	
9	27.66	12.00		7		-1.6				32.2				0.05

Parameters Used for Axial and Flexural Design

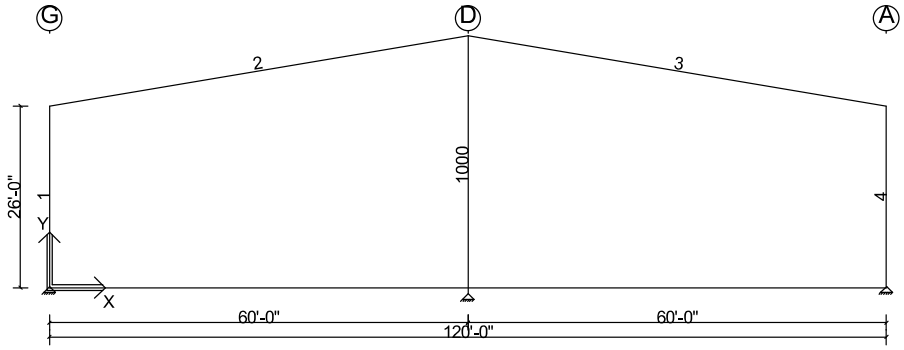
Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	19.84	273.44	96.0	96.0	8.50	2.25	882.46	13.51	70.43	4.50	79.83	6.91	0.25	2058.06	1.18	0.99	1.00	1.00	0.67
2	0.89	696.95	24.7	24.7	9.64	2.25	1543.30	13.51	96.46	4.50	111.29	6.96	0.26	3378.37	1.00	0.93	1.00	1.00	0.60
3	18.51	696.95	120.0	60.0	8.18	2.25	736.86	13.51	63.69	4.50	71.83	6.90	0.24	1750.16	1.02	1.00	1.00	1.00	0.74
4	0.00	696.95	142.7	142.7	7.17	2.25	285.89	13.51	38.12	4.50	42.42	6.88	0.24	722.30	1.33	1.00	1.11	1.00	0.92
5	9.30	696.95	142.7	142.7	7.17	2.25	285.89	13.51	38.12	4.50	42.42	6.88	0.24	722.30	1.32	1.00	1.11	1.00	0.92
6	17.01	696.95	120.0	60.0	8.18	2.25	737.08	13.51	63.70	4.50	71.84	6.90	0.24	1750.65	1.01	1.00	1.00	1.00	0.74
7	13.28	696.95	26.1	26.1	9.64	2.25	1543.30	13.51	96.46	4.50	111.29	6.96	0.26	3378.36	1.05	0.93	1.00	1.00	0.60
8	19.84	273.44	96.0	96.0	8.50	2.25	882.46	13.51	70.43	4.50	79.83	6.91	0.25	2058.06	1.18	0.99	1.00	1.00	0.67
9	27.66	414.87	398.3	398.3	8.60	3.38	247.64	45.57	41.27	10.13	44.44	15.26	0.33	1539.48	1.00	1.00	1.08	0.93	1.00

User Defined Frame Point Loads for Cross Section: 6

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	p	W1>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	29.55	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-29.55	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-29.55	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	29.55	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-38.18	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	38.18	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	38.18	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-38.18	8/0/0	NA	NA	N	LEFT	1.000	OF
1000	k	W1>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W1	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL
1000	k	W2>	wind from partition	4.95	18/0/0	NA	NA	N	RIGHT	1.000	CL
1000	k	<W2	wind from partition	-4.95	18/0/0	NA	NA	N	LEFT	1.000	CL

User Defined Frame Line Loads for Cross Section: 6

Side	Units	Type	Description	Mag1	Loc1	Mag2	Loc2	Supp.	Dir.	Coef.	Loc.
2	plf	D	2 bay loads	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
2	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
2	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	D	2 bay loads	-20.00	0/0/2	-20.00	12/6/0	N	DOWN	1.000	OF
3	plf	CG	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF
3	plf	CU	2 bay loads	-42.00	0/0/2	-42.00	12/6/0	N	DOWN	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1

4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 6

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/126)	2.275	1	2	4	W2>
Max. Vertical Deflection for Span 1	(L/575)	1.213	3	1	7	WPR
Max. Vertical Deflection for Span 2	(L/573)	1.216	7	1	6	WPL

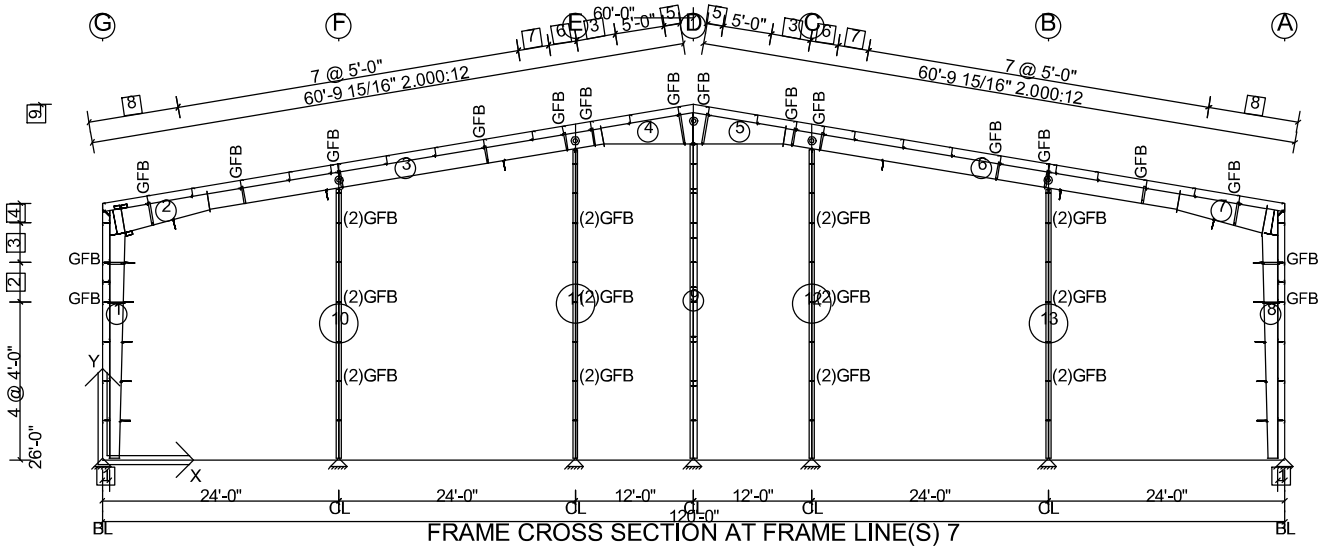
* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 2.242 (k/in)
Fundamental Period (calculated) (T): 1.455 (sec.)

Wall: 4, Frame at: 199/0/0

Frame Cross Section: 7



Dimension Key

1 8 1/2"
2 2 @ 2'-0"
3 4'-0"
4 2'-0"
5 1'-7 11/16"
6 2'-10 5/16"
7 3'-1 11/16"
8 2 @ 4'-7 1/8"
9 36'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX010) and 8(CX011): 115'-5"
Vert. Clearance at member 1(CX010): 22'-8"
Vert. Clearance at member 8(CX011): 22'-7 15/16"
Vert. Clearance at member 9(EPX001): 32'-0 3/8"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
199/0/0	17/6/0	Frame Lines 1 & 7	90.0000		-	Analysis Only

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 1.0 ASL^	D + CG + ASL^
4	System	1.000	1.0 D + 1.0 CG + 1.0 ^ASL	D + CG + ^ASL
5	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
7	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
8	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
9	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
10	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
11	System	1.000	0.6 MW	MW - Wall: 1
12	System	1.000	0.6 MW	MW - Wall: 2
13	System	1.000	0.6 MW	MW - Wall: 3
14	System	1.000	0.6 MW	MW - Wall: 4
15	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
17	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
18	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
19	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
20	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
25	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
26	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
27	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
28	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
29	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
30	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
31	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
32	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
33	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
34	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
35	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
36	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
37	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
38	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	8.00	0.3750	0.1644	12.00	18.66	25.11	763.7	55.00	55.00	BP	KN	3P
2	8.00	0.2500	0.1644	30.00	19.00	10.02	301.3	55.00	55.00	KN	SP	3P
3	8.00	0.2500	0.1644	19.00	19.00	40.54	1026.7	55.00	55.00	SP	SP	3P
4	8.00	0.2500	0.1875	19.00	36.97	9.50	317.9	55.00	55.00	SP	SS	3P
5	8.00	0.2500	0.1875	36.97	19.00	9.50	317.9	55.00	55.00	SS	SP	3P
6	8.00	0.2500	0.1644	19.00	19.00	40.50	1031.1	55.00	55.00	SP	SP	3P
7	8.00	0.2500	0.1644	19.00	30.00	10.06	370.0	55.00	55.00	SP	KN	3P
8	8.00	0.3750	0.1644	12.00	18.00	25.11	818.5	55.00	55.00	BP	KN	3P
9	8.00	0.3750	0.1644	12.00	12.00	31.86	874.3	55.00	55.00	BP	CP	3P
10	6.00	0.2500	0.1644	11.00	11.00	29.83	448.1	55.00	55.00	BP	SS	3P
11	6.00	0.2500	0.1644	11.00	11.00	33.83	512.4	55.00	55.00	BP	SS	3P
12	6.00	0.2500	0.1644	11.00	11.00	33.83	512.4	55.00	55.00	BP	SS	3P
13	6.00	0.2500	0.1644	11.00	11.00	29.83	448.1	55.00	55.00	BP	SS	3P

Total Frame Weight = 7742.4 (p) (Includes all plates)

Frame Member Releases

Member	Joint 1	Joint 2
9	No	Yes
10	No	Yes
11	No	Yes
12	No	Yes
13	No	Yes

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
8	120/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
10	24/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	24/0/0	30/0/0	Yes	No	No	0/0/0	0/0/0	0.0000
12	72/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	72/0/0	34/0/0	Yes	No	No	0/0/0	0/0/0	0.0000
11	48/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	48/0/0	34/0/0	Yes	No	No	0/0/0	0/0/0	0.0000
9	60/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
13	96/0/0	0/2/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
0	96/0/0	30/0/0	Yes	No	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.01 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 7

Type		Exterior Column		Interior Column			Interior Column			Interior Column			Interior Column		
X-Loc		0/0/0		24/0/0			48/0/0			60/0/0			72/0/0		
Grid1 - Grid2		7-G		7-F			7-E			7-D			7-C		
Base Plate W x L (in.)		9 X 13		8 X 12			8 X 12			9 X 13			8 X 12		
Base Plate Thickness (in.)		0.375		0.375			0.375			0.375			0.375		
Anchor Rod Qty/Diam. (in.)		4 - 0.750		4 - 0.750			4 - 0.750			4 - 0.750			4 - 0.750		
Column Base Elev.		100'-2"		100'-2"			100'-2"			100'-2"			100'-2"		
Load Type	Desc.	Hx	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy	Hx	Hz	Vy
D	Frm	0.53	2.58	-	-	0.49	-	-	0.55	-	-	5.26	-	-	0.55
CG	Frm	0.67	2.46	-	-	-	-	-	-	-	-	5.59	-	-	-
L>	Frm	1.61	5.90	-	-	-	-	-	-	-	-	13.42	-	-	-
<L	Frm	1.61	5.90	-	-	-	-	-	-	-	-	13.42	-	-	-
ASL^	Frm	0.81	-0.27	-	-	-	-	-	-	-	-	6.71	-	-	-
^ASL	Frm	0.81	6.17	-	-	-	-	-	-	-	-	6.71	-	-	-
W1>	Frm	-11.00	-18.19	-	8.81	-	-	7.49	-	-	5.01	-30.27	-	7.49	-
<W1	Frm	4.39	-10.03	-	-7.93	-	-	-6.74	-	-	-4.52	-30.48	-	-6.74	-
W2>	Frm	-11.49	-12.65	-	-	-	-	-	-	-	-	-20.58	-	-	-
<W2	Frm	3.91	-4.48	-	-	-	-	-	-	-	-	-20.79	-	-	-
WPL	Frm	-1.45	-10.91	-	-	-	-	-	-	-	-	-26.19	-	-	-
WPR	Frm	1.02	-17.07	-	-	-	-	-	-	-	-	-26.24	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW	Frm	2.86	1.72	-	-	-	-	-	-	-	-	-1.28	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW	Frm	-5.87	-0.51	-	-	-	-	-	-	-	-	-1.14	-	-	-
CU	Frm	0.27	0.98	-	-	-	-	-	-	-	-	2.24	-	-	-
L	Frm	1.61	5.90	-	-	-	-	-	-	-	-	13.42	-	-	-
E>	Frm	-3.45	-1.88	-	0.20	-	-	0.17	-	-	0.11	0.07	-	0.17	-
EG+	Frm	0.28	1.02	-	-	-	-	-	-	-	-	2.32	-	-	-
<E	Frm	3.45	1.88	-	-0.20	-	-	-0.17	-	-	-0.11	-0.07	-	-0.17	-
EG-	Frm	-0.28	-1.02	-	-	-	-	-	-	-	-	-2.32	-	-	-

Type		Interior Column			Exterior Column				
X-Loc		96/0/0			120/0/0				
Grid1 - Grid2		7-B			7-A				
Base Plate W x L (in.)		8 X 12			9 X 13				
Base Plate Thickness (in.)		0.375			0.375				
Anchor Rod Qty/Diam. (in.)		4 - 0.750			4 - 0.750				
Column Base Elev.		100'-2"			100'-2"				
Load Type	Desc.	Hx	Hz	Vy	Hx	Vy			
D	Frm	-	-	0.49	-0.53	2.57	-	-	-
CG	Frm	-	-	-	-0.67	2.46	-	-	-

L>	Frm	-	-	-	-1.61	5.90	-	-	-
<L	Frm	-	-	-	-1.61	5.90	-	-	-
ASL^	Frm	-	-	-	-0.81	6.17	-	-	-
^ASL	Frm	-	-	-	-0.81	-0.27	-	-	-
W1>	Frm	-	8.81	-	-4.26	-10.13	-	-	-
<W1	Frm	-	-7.93	-	10.88	-18.09	-	-	-
W2>	Frm	-	-	-	-3.78	-4.59	-	-	-
<W2	Frm	-	-	-	11.36	-12.55	-	-	-
WPL	Frm	-	-	-	-0.99	-17.09	-	-	-
WPR	Frm	-	-	-	1.42	-10.88	-	-	-
MW	Frm	-	-	-	-	-	-	-	-
MW	Frm	-	-	-	5.79	-0.44	-	-	-
MW	Frm	-	-	-	-	-	-	-	-
MW	Frm	-	-	-	-2.77	1.65	-	-	-
CU	Frm	-	-	-	-0.27	0.98	-	-	-
L	Frm	-	-	-	-1.61	5.90	-	-	-
E>	Frm	-	0.20	-	-3.36	1.81	-	-	-
EG+	Frm	-	-	-	-0.28	1.02	-	-	-
<E	Frm	-	-0.20	-	3.36	-1.81	-	-	-
EG-	Frm	-	-	-	0.28	-1.02	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	12.8	10.4
CG	0.0	0.0	10.5	10.5
L>	0.0	0.0	25.2	25.2
<L	0.0	0.0	25.2	25.2
ASL^	0.0	0.0	12.6	12.6
^ASL	0.0	0.0	12.6	12.6
W1>	15.3	15.3	58.5	58.6
<W1	15.3	15.3	58.5	58.6
W2>	15.3	15.3	37.8	37.8
<W2	15.3	15.3	37.8	37.8
WPL	2.4	2.4	54.1	54.2
WPR	2.4	2.4	54.1	54.2
MW	0.0	0.0	0.0	0.0
MW	8.6	8.6	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	8.6	8.6	0.0	0.0
CU	0.0	0.0	4.2	4.2
L	0.0	0.0	25.2	25.2
E>	6.8	6.8	0.0	0.0
EG+	0.0	0.0	4.4	4.4
<E	6.8	6.8	0.0	0.0
EG-	0.0	0.0	4.4	4.4

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	7-G	6.42	17	7.43	32	-	-	-	-	8.78	15	11.20	4	-	-	-	-
24/0/0	7-F	-	-	-	-	4.76	6	5.29	5	-	-	0.49	1	-	-	-	-
24/0/0	30/0/0	-	-	-	-	4.47	6	4.96	5	0.49	1	-	-	-	-	-	-
48/0/0	7-E	-	-	-	-	4.05	6	4.50	5	-	-	0.55	1	-	-	-	-
48/0/0	34/0/0	-	-	-	-	3.75	6	4.17	5	0.55	1	-	-	-	-	-	-
60/0/0	7-D	-	-	-	-	2.71	6	3.01	5	13.79	16	24.27	1	-	-	-	-
72/0/0	7-C	-	-	-	-	4.05	6	4.50	5	-	-	0.55	1	-	-	-	-
72/0/0	34/0/0	-	-	-	-	3.75	6	4.17	5	0.55	1	-	-	-	-	-	-
96/0/0	7-B	-	-	-	-	4.76	6	5.29	5	-	-	0.49	1	-	-	-	-
96/0/0	30/0/0	-	-	-	-	4.47	6	4.96	5	0.49	1	-	-	-	-	-	-
120/0/0	7-A	7.28	31	6.34	18	-	-	-	-	8.72	16	11.20	3	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.01 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	7-G	1	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
24/0/0	7-F	10	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
48/0/0	7-E	11	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
60/0/0	7-D	9	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
72/0/0	7-C	12	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
96/0/0	7-B	13	0.375	8	12	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
120/0/0	7-A	8	0.375	9	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	7.19	9.08	32	6.08	-8.70	15	1.83	10.98	4	1.01	-8.70	6.08	15
24/0/0	5.29	0.29	15	-	-	0	-	0.49	1	-	-	-	0
48/0/0	4.50	0.33	15	-	-	0	-	0.55	1	-	-	-	0
60/0/0	2.91	-7.23	5	2.52	-13.70	16	0.02	24.28	1	-	-	-	0
72/0/0	4.50	0.33	15	-	-	0	-	0.55	1	-	-	-	0
96/0/0	5.29	0.29	15	-	-	0	-	0.49	1	-	-	-	0
120/0/0	7.02	8.95	31	6.01	-8.64	16	1.84	10.97	3	1.01	-8.64	6.01	16

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.312	32	0.226	15	-	0	-	0	0.085	4	0.259	15	0.066	4	0.122	4	0.216	32
24/0/0	0.229	15	-	0	-	0	-	0	0.005	1	-	0	0.005	1	0.006	1	0.175	15
48/0/0	0.195	15	-	0	-	0	-	0	0.005	1	-	0	0.006	1	0.007	1	0.149	15
60/0/0	0.126	5	0.357	16	0.357	16	-	0	0.188	1	0.409	16	0.147	1	0.270	1	0.134	16
72/0/0	0.195	15	-	0	-	0	-	0	0.005	1	-	0	0.006	1	0.007	1	0.149	15
96/0/0	0.229	15	-	0	-	0	-	0	0.005	1	-	0	0.005	1	0.006	1	0.175	15
120/0/0	0.304	31	0.225	16	-	0	-	0	0.085	3	0.258	16	0.066	3	0.122	3	0.211	31

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S11		Alternate	Web	Thick.=	0.1875	0.3750	3.500	Opposite Fillet	W-OS-0.1250
1	2	S9	22.55	18.415	112.02	N/A	N/A	0.5000	3.000	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875
4	1	S2	9.49	37.489	199.94	N/A	N/A	0.2500	3.000	Both	F-OS-0.1250,W-OS-0.1250,F-OS-0.1250
8	1	S11		Alternate	Web	Thick.=	0.1875	0.3750	3.500	Opposite Fillet	W-OS-0.1250
8	2	S9	22.55	17.740	107.91	N/A	N/A	0.5000	3.000	Both	SP-BS-0.4375,W-BS-0.1250,F-OS-0.1875

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem. No.	Jt. No.	Type	Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	42	Ext/Gusset	4.75/2.75	31	Extended	4.75/2.75
		Gusset Out 4.000 x 0.3750 x 7.00 SP-BS-0.3125,												
2	1	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	42	Ext/Gusset	4.75/2.75	41	Ext/Gusset	4.75/2.75
		Gusset Out 4.000 x 0.3750 x 7.00 SP-BS-0.3125,									Gusset In 4.000 x 0.3750 x 7.38 SP-BS-0.3125,			
2	2	SP	0.500	8.00	25.30	0.750	F1852X/PT	4.00	31	Extended	4.00	32	Extended	4.00/2.00
3	1	SP	0.500	8.00	25.25	0.750	F1852X/PT	4.00	31	Extended	4.00	32	Extended	4.00/2.00
3	2	SP	0.500	8.00	25.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
4	1	SP	0.500	8.00	25.33	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
5	2	SP	0.500	8.00	25.33	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
6	1	SP	0.500	8.00	25.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
6	2	SP	0.500	9.00	26.75	1.000	F1852X/PT	4.50	31	Extended	4.50	32	Extended	4.50/2.75
7	1	SP	0.500	9.00	26.80	1.000	F1852X/PT	4.50	31	Extended	4.50	32	Extended	4.50/2.75
7	2	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	32	Extended	4.75/2.75	32	Extended	4.75/2.75
8	2	KN(Face)	1.000	9.00	38.00	1.000	F1852X/PT	4.50	32	Extended	4.75/2.75	32	Extended	4.75/2.75
9	2	CP	0.375	9.00	13.00	0.500	A325/-	3.00	11	Flush	3.00	11	Flush	3.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	36	-7.1	7.3	2650.0	AISC DG-16/Thin plate	0.545	0.033	0.238	0.000	0.000	0.017	0.936	0.631
2	1	36	-7.1	7.3	2650.0	AISC DG-16/Thin plate	0.545	0.033	0.238	0.000	0.000	0.017	0.799	0.631
2	2	28	-3.9	3.9	813.5	AISC DG-16/Thin plate	0.688	0.042	0.643	0.243	0.325	0.039	0.959	0.631
3	1	28	-3.9	3.9	813.5	AISC DG-16/Thin plate	0.688	0.042	0.643	0.243	0.325	0.039	0.959	0.631
3	2	3	-1.6	3.9	779.6	AISC DG-16/Thin plate	0.677	0.042	0.633	0.243	0.325	0.039	0.959	0.719
4	1	3	-1.6	3.9	779.6	AISC DG-16/Thin plate	0.677	0.042	0.633	0.243	0.325	0.039	0.959	0.719
5	2	4	-2.0	3.7	781.0	AISC DG-16/Thin plate	0.675	0.040	0.631	0.243	0.325	0.037	0.959	0.719
6	1	4	-2.0	3.7	781.0	AISC DG-16/Thin plate	0.675	0.040	0.631	0.243	0.325	0.037	0.959	0.719
6	2	27	-3.5	4.1	792.2	AISC DG-16/Thin plate	0.385	0.025	0.692	0.216	0.301	0.030	0.959	0.631
7	1	27	-3.5	4.1	792.2	AISC DG-16/Thin plate	0.385	0.025	0.692	0.216	0.301	0.030	0.959	0.631
7	2	35	-6.8	7.2	2595.0	AISC DG-16/Thin plate	0.533	0.033	0.314	0.206	0.288	0.017	0.799	0.631
8	2	35	-6.8	7.2	2595.0	AISC DG-16/Thin plate	0.533	0.033	0.314	0.206	0.288	0.017	0.917	0.631

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	37	4.2	2.2	2227.1	AISC DG-16/Thin plate	0.677	0.013	0.234	0.000	0.000	0.008	1.000	0.631
2	1	37	4.2	2.2	2227.1	AISC DG-16/Thin plate	0.677	0.013	0.234	0.000	0.000	0.008	0.799	0.631
2	2	27	0.2	1.4	897.4	AISC DG-16/Thin plate	0.579	0.011	0.684	0.265	0.355	0.009	0.697	0.631
3	1	27	0.2	1.4	897.4	AISC DG-16/Thin plate	0.579	0.011	0.684	0.265	0.355	0.009	0.697	0.631
3	2	19	6.4	3.2	572.9	AISC DG-16/Thin plate	0.561	0.035	0.524	0.243	0.325	0.032	0.959	0.719
4	1	19	6.4	3.2	572.9	AISC DG-16/Thin plate	0.561	0.035	0.524	0.243	0.325	0.032	0.959	0.719
5	2	20	6.6	2.8	574.2	AISC DG-16/Thin plate	0.563	0.030	0.527	0.243	0.325	0.027	0.959	0.719
6	1	20	6.6	2.8	574.2	AISC DG-16/Thin plate	0.563	0.030	0.527	0.243	0.325	0.027	0.959	0.719
6	2	28	0.1	1.4	877.2	AISC DG-16/Thin plate	0.326	0.006	0.721	0.230	0.321	0.007	0.681	0.631
7	1	28	0.1	1.4	877.2	AISC DG-16/Thin plate	0.326	0.006	0.721	0.230	0.321	0.007	0.681	0.631
7	2	38	4.0	2.0	2168.1	AISC DG-16/Thin plate	0.476	0.009	0.281	0.184	0.257	0.005	0.799	0.631
8	2	38	4.0	2.0	2168.1	AISC DG-16/Thin plate	0.476	0.009	0.281	0.184	0.257	0.005	1.000	0.631

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Pinned Connections:

		Maximum Shear Case			Maximum Tension Case			Strength Ratios							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Ld Cs	Axial (k)	Shear (k)	Bolt Tension	Bolt Shear	Bolt V + T	Plate Bending	Flange Yielding	Flange Bearing	Flange Weld	Web Weld
9	2	5	7.3	2.7	16	13.7	2.5	0.432	0.129	0.000	0.312	0.069	0.035	0.248	0.087

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	15/10/0	16/0/0	GFB2081	1.427	15	
1	19/10/0	20/0/0	GFB2081	1.669	28	
2	2/9/10	56/2/13	GFB3021	1.145	0	
3	3/6/8	46/7/11	GFB2081	0.845	27	
3	13/6/8	36/7/11	GFB2093	0.929	4	
3	28/6/8	21/7/11	GFB2081	0.688	4	
3	36/8/3	13/6/0	GFB2093	0.773	3	
3	39/6/8	10/7/11	GFB2093	0.922	3	
4	8/0/0	1/7/11	GFB4052	0.932	1	
5	1/6/0	1/7/11	GFB4052	0.933	1	
6	1/0/0	10/7/11	GFB2093	0.924	4	
6	3/10/5	13/6/0	GFB2093	0.774	4	
6	22/0/0	31/7/11	GFB2093	0.950	3	
6	27/0/0	36/7/11	GFB2093	0.928	3	
6	37/0/0	46/7/11	GFB2081	0.824	28	
7	6/1/2	56/2/13	GFB3021	1.123	27	
8	15/10/0	16/0/0	GFB2063	1.433	16	
8	19/10/0	20/0/0	GFB2081	1.680	27	
10	7/10/0	8/0/0	(2)GFB2050	0.000	0	
10	15/10/0	16/0/0	(2)GFB2050	0.000	0	
10	23/10/0	24/0/0	(2)GFB2050	0.000	0	
12	7/10/0	8/0/0	(2)GFB2050	0.000	0	
12	15/10/0	16/0/0	(2)GFB2050	0.000	0	
12	23/10/0	24/0/0	(2)GFB2050	0.000	0	

11	7/10/0	8/0/0	(2)GFB2050	0.000	0	
11	15/10/0	16/0/0	(2)GFB2050	0.000	0	
11	23/10/0	24/0/0	(2)GFB2050	0.000	0	
13	7/10/0	8/0/0	(2)GFB2050	0.000	0	
13	15/10/0	16/0/0	(2)GFB2050	0.000	0	
13	23/10/0	24/0/0	(2)GFB2050	0.000	0	

Top OF Post Summary

X-Loc	Grid	Top Reaction	Conn. Force	Condition	Flg Mn Moment	Rb Allow Shear	Comp	FB Force R1	FB Angle R2	Min Purlin	FB Typ	Purlin Bearing	Bolt Shear	FB/WSF Bearing
24/0/0	7-F	4.96	3.96	Stub - 1	82.22	3.96	-	6.53	2.57	-	-	-	-	-
72/0/0	7-C	4.17	3.22	Std	220.00	15.42	N	2.15	45.61	0.098	GFB	4.12	5.30	3.07
							N	2.46	45.61	0.088	GFB	3.70	5.30	3.07
48/0/0	7-E	4.17	3.22	Std	220.00	15.42	N	2.15	45.61	0.079	GFB	3.32	5.30	3.07
							N	2.46	45.61	0.088	GFB	3.70	5.30	3.07
96/0/0	7-B	4.96	3.96	Stub - 1	82.22	3.96	-	6.53	2.57	-	-	-	-	-

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

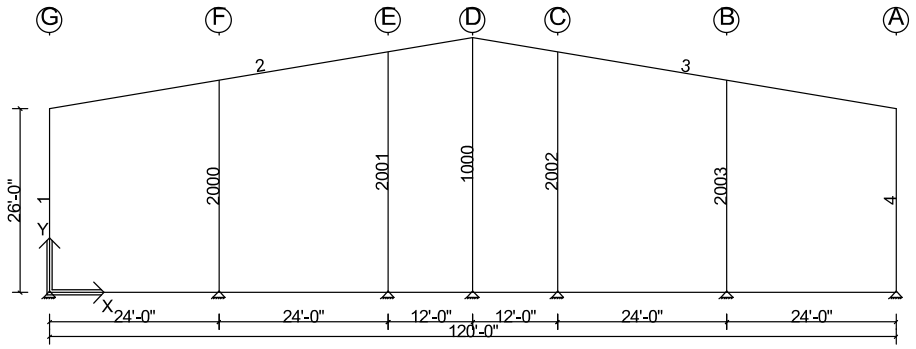
			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	22.83	18.66	28		-7.4		-1292.6	0.0	204.3		1961.2	343.7	0.68	
1	22.83	18.66		28		-4.6				20.4				0.23
2	9.49	19.00	27		0.2		897.4	0.0	232.4		1066.6	123.4	0.84	
2	0.57	30.00		4		9.0				12.1				0.75
3	16.04	19.00	4		-1.9		1055.2	0.0	79.0		1066.6	123.4	1.00	
3	40.54	19.00		1		-8.7				19.4				0.45
4	9.27	36.97	1		-1.8		-1782.0	0.0	116.2		2319.8	250.4	0.78	
4	9.27	36.97		1		-11.9				14.4				0.83
5	0.00	36.97	1		-1.8		-1782.0	0.0	116.1		2319.8	250.4	0.78	
5	0.00	36.97		2		11.9				14.4				0.83
6	24.50	19.00	3		-1.9		1053.3	0.0	87.3		1066.6	123.4	1.00	
6	0.00	19.00		2		8.6				19.4				0.44
7	0.00	19.00	28		0.1		877.2	0.0	232.4		1066.6	123.4	0.82	
7	9.02	30.00		3		-9.1				12.1				0.75
8	22.82	18.00	27		-7.4		-1270.4	0.0	204.1		1894.1	344.7	0.69	
8	22.82	18.00		27		4.5				21.2				0.21
9	26.55	12.00	1		-24.3		0.0	0.0	33.0		350.6	354.4	0.74	
9	0.00	12.00		15		-3.0				32.2				0.09
10	14.92	11.00	5		-0.5		-471.7	0.0	88.3		571.2	123.4	0.83	
10	0.00	11.00		15		-5.3				31.7				0.17
11	16.92	11.00	5		-0.6		-454.9	0.0	79.3		571.2	123.4	0.80	
11	0.00	11.00		15		-4.5				31.7				0.14
12	16.92	11.00	5		-0.6		-454.9	0.0	79.3		571.2	123.4	0.80	
12	0.00	11.00		15		-4.5				31.7				0.14
13	14.92	11.00	5		-0.5		-471.7	0.0	88.3		571.2	123.4	0.83	
13	0.00	11.00		15		-5.3				31.7				0.17

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	22.83	273.99	36.0	36.0	8.94	3.00	580.12	32.01	62.19	8.00	68.03	12.12	0.31	2674.58	1.05	1.00	1.05	0.93	0.80
2	9.49	704.80	115.2	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.06	1.00	1.05	0.68	1.00
3	16.04	704.80	180.0	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.05	1.00	1.05	0.68	0.80
4	9.27	704.80	29.9	29.9	10.84	2.00	2106.71	21.35	113.96	5.34	135.80	8.32	0.16	7199.16	1.02	0.95	1.00	0.65	0.54
5	0.00	705.47	29.9	29.9	10.84	2.00	2106.70	21.35	113.96	5.34	135.80	8.32	0.16	7199.14	1.02	0.95	1.00	0.65	0.54
6	24.50	705.47	60.0	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.00	1.00	1.05	0.68	0.78
7	0.00	705.47	115.2	60.0	7.04	2.00	438.33	21.34	46.14	5.34	51.57	8.13	0.11	1875.60	1.07	1.00	1.05	0.68	1.00
8	22.82	273.88	35.9	35.9	8.84	3.00	536.35	32.01	59.59	8.00	65.10	12.12	0.31	2485.62	1.05	1.00	1.05	0.93	0.81
9	26.55	400.86	382.4	382.4	7.85	3.00	222.29	32.00	37.05	8.00	40.08	12.08	0.30	1081.27	1.00	1.00	1.08	0.98	1.00
10	14.92	358.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.90
11	16.92	406.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.92
12	16.92	406.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.92
13	14.92	358.00	96.0	96.0	4.73	1.50	102.55	9.00	18.64	3.00	20.66	4.57	0.08	260.13	1.00	1.00	1.11	0.93	0.90

User Defined Frame Point Loads for Cross Section: 7

Side	Units	Type	Description	Mag1	Loc1	Offset	H or V	Supp.	Dir.	Coef.	Loc.
1	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
1	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
1	p	W1>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	120.45	12/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	-120.45	12/0/0	NA	NA	N	LEFT	1.000	OF
1	p	W1>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W1	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	W2>	walk door loads->Resolved From Plane	-120.45	8/0/0	NA	NA	N	LEFT	1.000	OF
1	p	<W2	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPL	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
1	p	WPR	walk door loads->Resolved From Plane	120.45	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	k	W1>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W1	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	W2>	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	<W2	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	k	WPL	weak axis load	2.30	7/0/0	NA	NA	N	IN	1.000	WA
4	k	WPR	weak axis load	-2.30	7/0/0	NA	NA	N	OUT	1.000	WA
4	p	W1>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	-141.82	12/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	141.82	12/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W1>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W1	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	W2>	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	<W2	walk door loads->Resolved From Plane	141.82	8/0/0	NA	NA	N	RIGHT	1.000	OF
4	p	WPL	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF
4	p	WPR	walk door loads->Resolved From Plane	-141.82	8/0/0	NA	NA	N	LEFT	1.000	OF



Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2

6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 7

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/120)	-2.392	8	2	7	WPR
Max. Vertical Deflection for Span 1	(L/637)	1.102	3	1	7	WPR
Max. Vertical Deflection for Span 2	(L/636)	1.103	7	1	6	WPL

* Negative horizontal deflection is left
* Negative vertical deflection is down
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 0.971 (k/in)
Fundamental Period (calculated) (T): 1.480 (sec.)

Loads and Codes - Shape: Shape 1 Clerestory

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.00 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used - User Modified
Wind Exposure: C - Kz: 1.075
Parts Wind Exposure Factor: 1.075
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 36/0/0
Primary Zone Strip Width: 2a: 6/0/0
Parts / Portions Zone Strip Width: a: 3/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 46/0/0

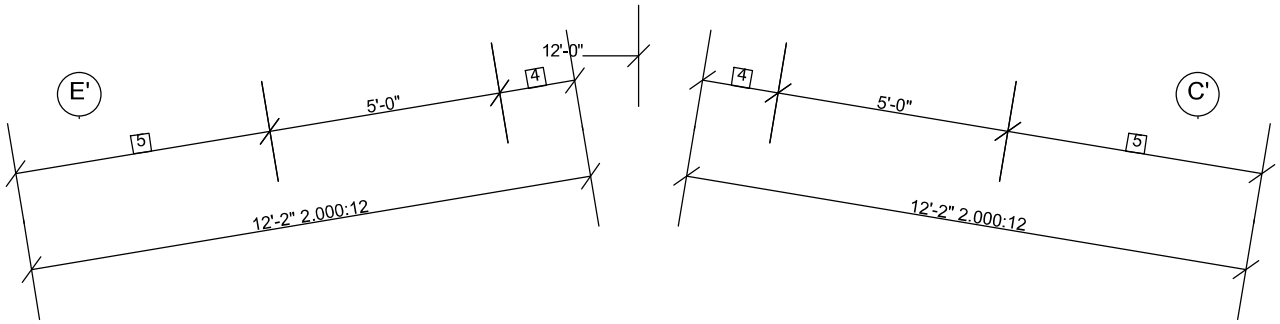
Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.5989
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

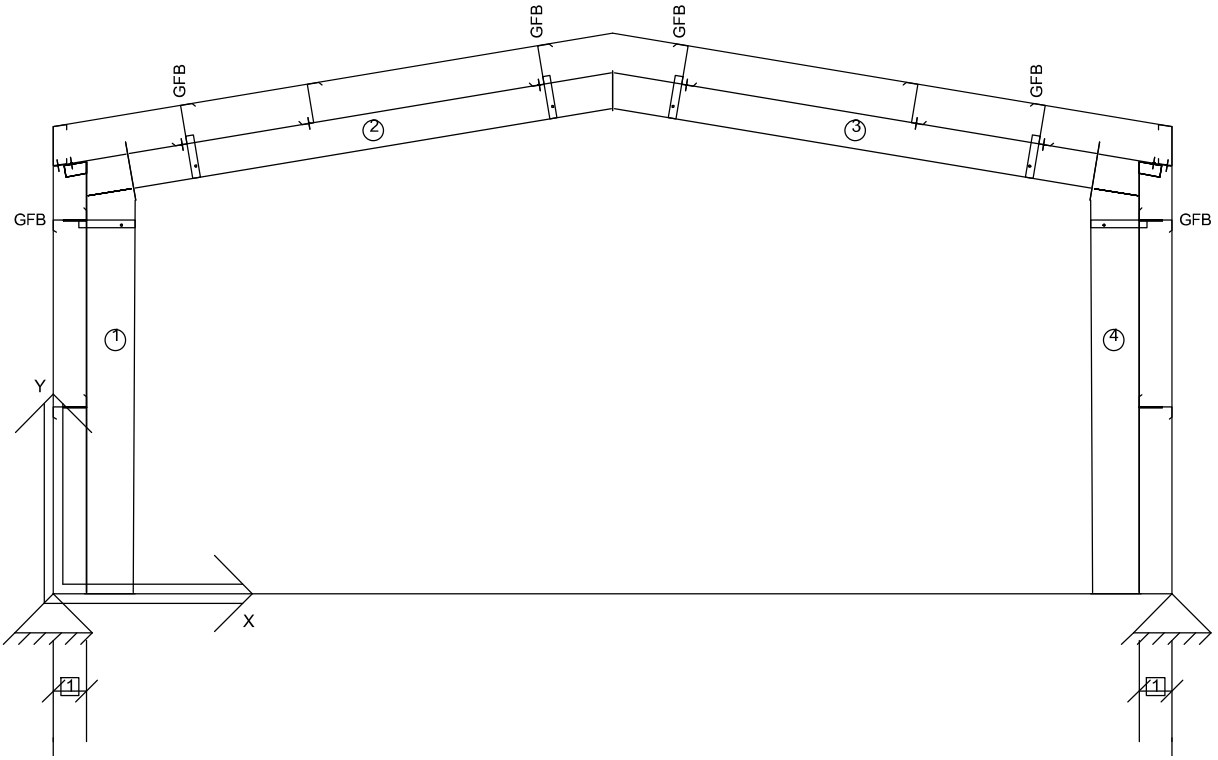
Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3533
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Deflection Conditions
Frames are vertically supporting:Metal Roof Purlins and Panels
Frames are laterally supporting:Metal Wall Girts and Panels
Purlins are supporting:Metal Roof Panels
Girts are supporting:Metal Wall Panels

Wall: 4, Frame at: 1/0/0

Frame Cross Section: 3





Dimension Key

1 8 1/2"
2 2 @ 4'-0"
3 2'-0"
4 1'-7 11/16"
5 2 @ 2'-9 3/16"
6 12'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX012) and 4(CX012): 20'-6"
Vert. Clearance at member 1(CX012): 8'-5 1/16"
Vert. Clearance at member 4(CX012): 8'-5 1/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
1/0/0	17/6/0	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
4	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
5	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
7	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
8	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
14	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
15	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
29	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
30	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
31	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
32	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
33	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
34	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
35	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
36	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.2500	0.1345	12.00	12.00	9.27	168.4	55.00	55.00	BP	KN	3P
2	6.00	0.2500	0.1345	9.00	9.00	11.44	163.1	55.00	55.00	KN	SP	3P
3	6.00	0.2500	0.1345	9.00	9.00	11.44	163.1	55.00	55.00	SP	KN	3P
4	6.00	0.2500	0.1345	12.00	12.00	9.27	168.4	55.00	55.00	BP	KN	3P

Total Frame Weight = 663.0 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
4	24/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 3

Type	Exterior Column	Exterior Column			
X-Loc	0/0/0	24/0/0			
Grid1 - Grid2	3-E'	3-C'			
Base Plate W x L (in.)	8 X 13	8 X 13			
Base Plate Thickness (in.)	0.375	0.375			
Anchor Rod Qty/Diam. (in.)	4 - 0.750	4 - 0.750			

Column Base Elev.		100'-0"		100'-0"				
Load Type	Desc.	Hx	Vy	Hx	Vy			
D	Frm	0.23	0.92	-0.23	0.92	-	-	-
CG	Frm	0.31	1.05	-0.31	1.05	-	-	-
L>	Frm	0.97	3.33	-0.97	3.33	-	-	-
<L	Frm	0.97	3.33	-0.97	3.33	-	-	-
W1>	Frm	-4.22	-7.32	-1.53	-3.86	-	-	-
<W1	Frm	1.53	-3.86	4.22	-7.32	-	-	-
W2>	Frm	-4.46	-4.98	-1.29	-1.52	-	-	-
<W2	Frm	1.29	-1.52	4.46	-4.98	-	-	-
WPL	Frm	-0.09	-4.69	-0.33	-5.67	-	-	-
WPR	Frm	0.33	-5.67	0.09	-4.69	-	-	-
MW	Frm	-	-	-	-	-	-	-
MW	Frm	0.86	0.77	2.22	-0.77	-	-	-
MW	Frm	-	-	-	-	-	-	-
MW	Frm	-2.22	-0.77	-0.86	0.77	-	-	-
CU	Frm	0.12	0.42	-0.12	0.42	-	-	-
L	Frm	0.97	3.33	-0.97	3.33	-	-	-
E>	Frm	-0.74	-0.68	-0.74	0.68	-	-	-
EG+	Frm	0.13	0.44	-0.13	0.44	-	-	-
<E	Frm	0.74	0.68	0.74	-0.68	-	-	-
EG-	Frm	-0.13	-0.44	0.13	-0.44	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	1.9	1.8
CG	0.0	0.0	2.1	2.1
L>	0.0	0.0	6.7	6.7
<L	0.0	0.0	6.7	6.7
W1>	5.8	5.8	11.2	11.2
<W1	5.8	5.8	11.2	11.2
W2>	5.8	5.8	6.5	6.5
<W2	5.8	5.8	6.5	6.5
WPL	0.4	0.4	10.4	10.4
WPR	0.4	0.4	10.4	10.4
MW	0.0	0.0	0.0	0.0
MW	3.1	3.1	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	3.1	3.1	0.0	0.0
CU	0.0	0.0	0.8	0.8
L	0.0	0.0	6.7	6.7
E>	1.5	1.5	0.0	0.0
EG+	0.0	0.0	0.9	0.9
<E	1.5	1.5	0.0	0.0
EG-	0.0	0.0	0.9	0.9

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	3-E'	2.46	15	1.96	20	-	-	-	-	3.59	13	5.30	1	-	-	-	-
24/0/0	3-C'	1.96	19	2.46	16	-	-	-	-	3.59	14	5.30	1	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for “cast-in-place” anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	3-E'	1	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
24/0/0	3-C'	4	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	2.47	-2.18	15	2.33	-3.58	13	1.52	5.31	2	-	-	-	0
24/0/0	2.47	-2.18	16	2.33	-3.58	14	1.52	5.31	1	-	-	-	0

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.107	15	0.093	13	-	0	-	0	0.046	2	0.132	13	0.055	2	0.068	2	0.093	13
24/0/0	0.107	16	0.093	14	-	0	-	0	0.046	1	0.132	14	0.055	1	0.068	1	0.093	14

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	8.49	11.826	87.93	N/A	N/A	0.1875	2.000	Both	SP-BS-0.1875,W-BS-0.1250,F-OS-0.1250
4	1	S9	8.49	11.826	87.93	N/A	N/A	0.1875	2.000	Both	SP-BS-0.1875,W-BS-0.1250,F-OS-0.1250

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem.	Jt.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
2	1	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00/4.00	31	Extended	4.00/4.00
2	2	SP	0.375	6.00	10.12	0.750	F1852X/PT	4.00	11	Flush	2.50/2.50	11	Flush	2.50/2.50
3	1	SP	0.375	6.00	10.12	0.750	F1852X/PT	4.00	11	Flush	2.50/2.50	11	Flush	2.50/2.50
3	2	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00/4.00	31	Extended	4.00/4.00
4	2	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	34	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516
2	1	34	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516
2	2	14	1.4	0.7	48.6	AISC DG-16/Thin plate	0.275	0.011	0.423	0.000	0.000	0.015	0.959	0.516
3	1	14	1.4	0.7	48.6	AISC DG-16/Thin plate	0.275	0.011	0.423	0.000	0.000	0.015	0.959	0.516
3	2	33	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516
4	2	33	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	13	1.5	3.1	164.8	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516
2	1	13	1.5	3.1	164.8	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516
2	2	2	-1.5	0.2	102.6	AISC DG-16/Thin plate	0.479	0.003	0.737	0.000	0.000	0.004	0.959	0.516
3	1	2	-1.5	0.2	102.6	AISC DG-16/Thin plate	0.479	0.003	0.737	0.000	0.000	0.004	0.959	0.516
3	2	14	1.5	3.1	164.9	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516
4	2	14	1.5	3.1	164.9	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	8/0/0	8/0/0	GFB2050	0.301	13	
2	1/3/7	9/4/13	GFB2037	0.267	13	
2	9/0/9	1/7/11	GFB2037	0.138	0	
3	1/6/0	1/7/11	GFB2037	0.138	2	
3	9/3/3	9/4/13	GFB2037	0.267	14	
4	8/0/0	8/0/0	GFB2050	0.301	14	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	8.68	12.00	13		3.6		175.3	0.0	150.0		625.7	118.8	0.29	
1	0.00	12.00		15		2.5				17.4				0.14
2	0.44	9.00	13		1.5		164.8	0.0	136.7		451.9	122.8	0.37	
2	0.44	9.00		2		4.2				21.4				0.19
3	10.50	9.00	14		1.5		164.9	0.0	136.7		451.9	122.8	0.37	
3	10.50	9.00		1		-4.2				21.4				0.19
4	8.68	12.00	14		3.6		175.3	0.0	150.0		625.7	118.8	0.29	
4	0.00	12.00		16		-2.5				17.4				0.14

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	8.68	104.15	8.2	8.2	4.55	1.50	120.61	9.00	20.10	3.00	22.07	4.55	0.07	310.72	1.02	1.00	1.10	0.90	1.00
2	0.44	125.95	8.9	8.9	4.14	1.50	64.32	9.00	14.29	3.00	15.55	4.54	0.07	172.30	1.00	1.00	1.09	0.94	1.00
3	10.50	125.95	15.5	15.5	4.14	1.50	64.32	9.00	14.29	3.00	15.55	4.54	0.07	172.30	1.13	1.00	1.09	0.94	1.00
4	8.68	104.15	8.2	8.2	4.55	1.50	120.61	9.00	20.10	3.00	22.07	4.55	0.07	310.72	1.02	1.00	1.10	0.90	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 3

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/390)	0.276	1	2	2	W1>
Max. Vertical Deflection for Span 1	(L/1389)	-0.186	3	1	1	L

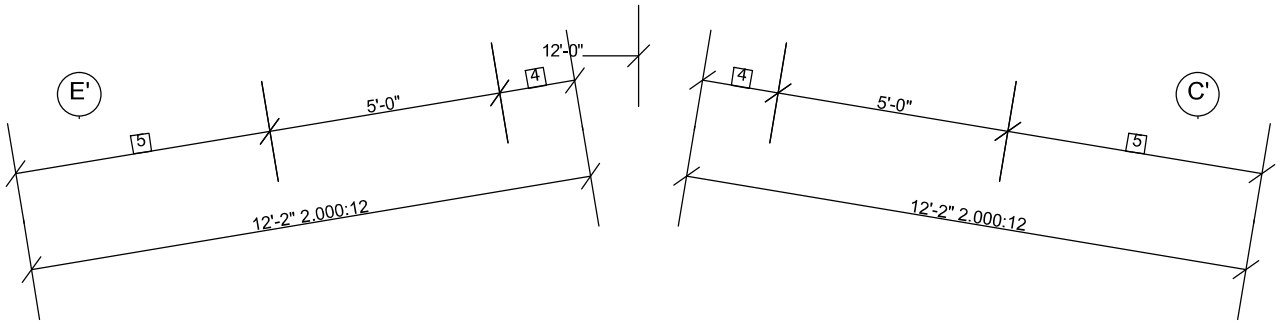
* Negative horizontal deflection is left
* Negative vertical deflection is down

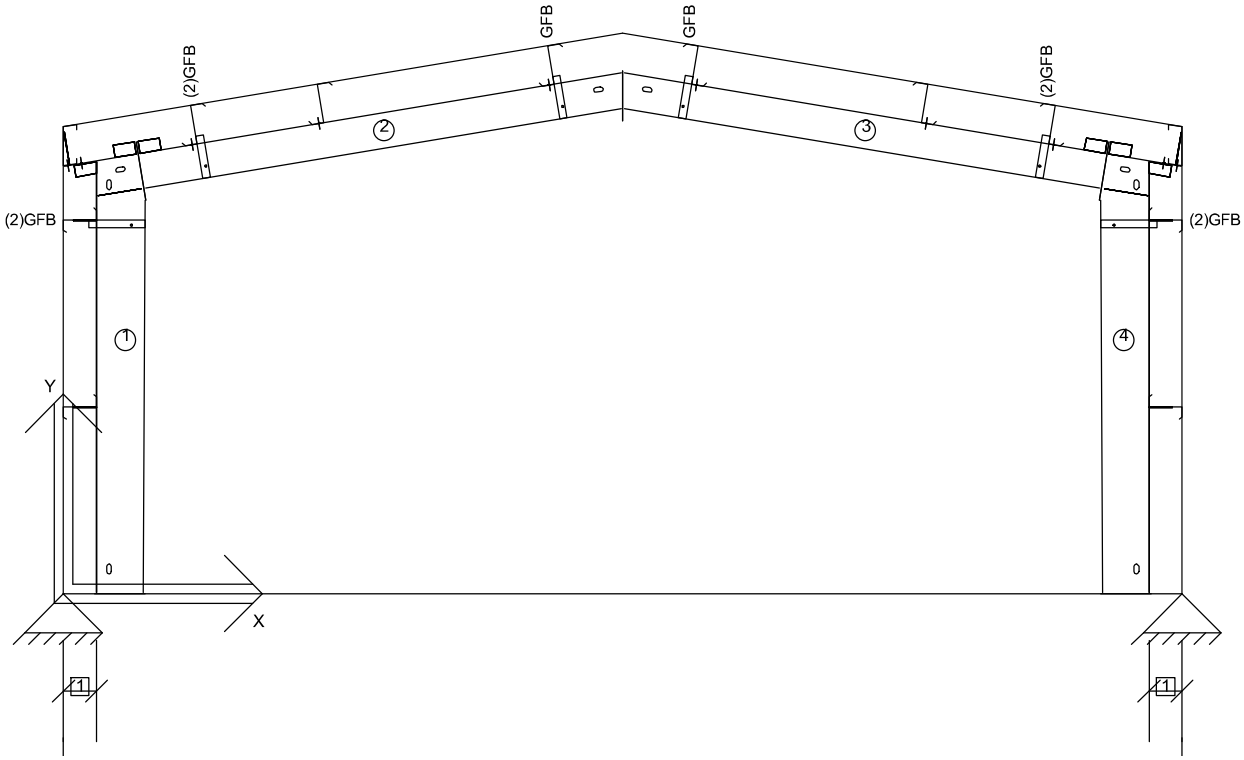
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 5.387 (k/in)
Fundamental Period (calculated) (T): 0.315 (sec.)

Wall: 4, Frame at: 34/0/0

Frame Cross Section: 4





Dimension Key

1 8 1/2"
2 2 @ 4'-0"
3 2'-0"
4 1'-7 11/16"
5 2 @ 2'-9 3/16"
6 12'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX013) and 4(CX013): 20'-6"
Vert. Clearance at member 1(CX013): 8'-5 1/16"
Vert. Clearance at member 4(CX013): 8'-5 1/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
34/0/0	33/0/0	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
4	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
5	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
7	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
8	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
14	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
15	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
29	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
30	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
31	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
32	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
33	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
34	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
35	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
36	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
37	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
38	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
40	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
43	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
44	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
45	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
46	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
49	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
50	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
51	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
52	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
53	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
54	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
55	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
56	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
57	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
58	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
59	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
60	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4

61	System Derived	1.000	0.6 MWB	MWB - Wall: 1
62	System Derived	1.000	0.6 MWB	MWB - Wall: 2
63	System Derived	1.000	0.6 MWB	MWB - Wall: 3
64	System Derived	1.000	0.6 MWB	MWB - Wall: 4
65	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
66	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
69	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
70	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
73	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
74	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
75	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
76	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
79	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
80	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
83	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
84	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.2500	0.1345	12.00	12.00	9.27	165.2	55.00	55.00	BP	KN	3P
2	6.00	0.2500	0.1345	9.00	9.00	11.43	161.3	55.00	55.00	KN	SP	3P
3	6.00	0.2500	0.1345	9.00	9.00	11.43	161.3	55.00	55.00	SP	KN	3P
4	6.00	0.2500	0.1345	12.00	12.00	9.27	165.2	55.00	55.00	BP	KN	3P

Total Frame Weight = 652.8 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
4	24/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 4

Type		Exterior Column			Exterior Column					
X-Loc		0/0/0			24/0/0					
Grid1 - Grid2		4-E'			4-C'					
Base Plate W x L (in.)		8 X 13			8 X 13					
Base Plate Thickness (in.)		0.375			0.375					
Anchor Rod Qty/Diam. (in.)		4 - 0.750			4 - 0.750					
Column Base Elev.		100'-0"			100'-0"					
Load Type	Desc.	Hx	Hz	Vy	Hx	Hz	Vy			
D	Frm	0.48	-	1.75	-0.48	-	1.75	-	-	-
CG	Frm	0.72	-	2.48	-0.72	-	2.48	-	-	-
L>	Frm	1.39	-	4.75	-1.39	-	4.75	-	-	-
<L	Frm	1.39	-	4.75	-1.39	-	4.75	-	-	-
W1>	Frm	-6.91	-	-12.25	-2.56	-	-6.65	-	-	-
<W1	Frm	2.56	-	-6.65	6.91	-	-12.25	-	-	-
W2>	Frm	-7.36	-	-7.84	-2.11	-	-2.24	-	-	-
<W2	Frm	2.11	-	-2.24	7.36	-	-7.84	-	-	-
WPL	Frm	0.15	-	-8.00	-0.81	-	-9.54	-	-	-
WPR	Frm	0.81	-	-9.54	-0.15	-	-8.00	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	1.62	-	1.44	4.19	-	-1.44	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	-4.19	-	-1.44	-1.62	-	1.44	-	-	-
CU	Frm	0.29	-	0.99	-0.29	-	0.99	-	-	-
L	Frm	1.39	-	4.75	-1.39	-	4.75	-	-	-
E>	Frm	-1.40	-	-1.28	-1.40	-	1.28	-	-	-
EG+	Frm	0.24	-	0.82	-0.24	-	0.82	-	-	-

<E	Frm	1.40	-	1.28	1.40	-	-1.28	-	-	-
EG-	Frm	-0.24	-	-0.82	0.24	-	-0.82	-	-	-
WB1>	Brc	0.02	-1.55	-0.45	-0.02	-1.43	-0.46	-	-	-
<WB1	Brc	-0.02	-	0.47	0.02	-	0.43	-	-	-
WB2>	Brc	0.02	-1.55	-0.45	-0.02	-1.43	-0.47	-	-	-
<WB2	Brc	-0.02	-	0.47	0.02	-	0.44	-	-	-
WB3>	Brc	0.03	-1.43	-0.42	-0.03	-1.55	-0.50	-	-	-
<WB3	Brc	-0.02	-	0.45	0.02	-	0.47	-	-	-
WB4>	Brc	0.03	-1.43	-0.42	-0.03	-1.55	-0.50	-	-	-
<WB4	Brc	-0.02	-	0.45	0.02	-	0.47	-	-	-
MWB	Brc	0.02	-1.06	-0.30	-0.02	-1.06	-0.34	-	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
MWB	Brc	-0.01	-	0.32	0.01	-	0.32	-	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
EB>	Brc	0.05	-2.72	-0.79	-0.05	-2.72	-0.88	-	-	-
<EB	Brc	-0.04	-	0.84	0.04	-	0.83	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	3.6	3.5
CG	0.0	0.0	4.9	5.0
L>	0.0	0.0	9.5	9.5
<L	0.0	0.0	9.5	9.5
W1>	9.5	9.5	18.9	18.9
<W1	9.5	9.5	18.9	18.9
W2>	9.5	9.5	10.1	10.1
<W2	9.5	9.5	10.1	10.1
WPL	0.7	0.7	17.5	17.5
WPR	0.7	0.7	17.5	17.5
MW	0.0	0.0	0.0	0.0
MW	5.8	5.8	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	5.8	5.8	0.0	0.0
CU	0.0	0.0	2.0	2.0
L	0.0	0.0	9.5	9.5
E>	2.8	2.8	0.0	0.0
EG+	0.0	0.0	1.6	1.6
<E	2.8	2.8	0.0	0.0
EG-	0.0	0.0	1.6	1.6
WB1>	0.0	0.0	0.0	0.9
<WB1	0.0	0.0	0.0	0.9
WB2>	0.0	0.0	0.0	0.9
<WB2	0.0	0.0	0.0	0.9
WB3>	0.0	0.0	0.0	0.9
<WB3	0.0	0.0	0.0	0.9
WB4>	0.0	0.0	0.0	0.9
<WB4	0.0	0.0	0.0	0.9
MWB	0.0	0.0	0.0	0.6
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	0.6
MWB	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	1.7
<EB	0.0	0.0	0.0	1.7

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	4-E'	3.96	15	3.82	30	4.75	73	-	-	5.71	13	8.98	1	-	-	-	-
24/0/0	4-C'	3.82	29	3.96	16	4.75	73	-	-	5.71	14	8.98	1	-	-	-	-

Base Plate Summary
Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter
Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	4-E'	1	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
24/0/0	4-C'	4	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	3.97	-3.05	15	3.70	-5.67	13	2.61	9.00	2	4.75	3.43	1.46	73
24/0/0	3.97	-3.05	16	3.70	-5.67	14	2.61	8.99	1	4.75	3.25	1.44	73

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.216	73	0.148	13	-	0	-	0	0.078	2	0.209	13	0.093	2	0.207	73	0.148	13
24/0/0	0.215	73	0.147	14	-	0	-	0	0.078	1	0.209	14	0.093	1	0.207	73	0.148	14

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	***	MUST	Use	Alternate	Web	Thick.=	0.1644	*	*	*	*
1	2	S9	8.49	11.826	87.93	N/A	N/A	0.2500	2.000	Both	SP-BS-0.2500,W-BS-0.1250,F-OS-0.1250
4	***	MUST	Use	Alternate	Web	Thick.=	0.1644	*	*	*	*
4	2	S9	8.49	11.826	87.93	N/A	N/A	0.2500	2.000	Both	SP-BS-0.2500,W-BS-0.1250,F-OS-0.1250

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

Mem. No.	Jt. No.	Type	End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
			Thick. (in.)	Width (in.)	Length (in.)	Diam. (in.)	Spec/Joint	Gages In/Out (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)	Configuration ID	Configuration Desc.	Pitches 1st/2nd (in.)
1	2	KN(Face)	0.500	6.00	15.25	0.750	F1852X/PT	4.00	41	Ext/Gusset	4.00	31	Extended	4.00
		Gusset Out 3.125 x 0.2500 x 5.50 SP-BS-0.1875,												
2	1	KN(Face)	0.500	6.00	15.25	0.750	F1852X/PT	4.00	41	Ext/Gusset	4.00/4.00	31	Extended	4.00/4.00
		Gusset Out 3.125 x 0.2500 x 5.50 SP-BS-0.1875,												
2	2	SP	0.375	6.00	12.75	0.750	F1852X/PT	4.00	11	Flush	4.75	31	Extended	4.00
3	1	SP	0.375	6.00	12.75	0.750	F1852X/PT	4.00	11	Flush	4.75	31	Extended	4.00
3	2	KN(Face)	0.500	6.00	15.25	0.750	F1852X/PT	4.00	41	Ext/Gusset	4.00/4.00	31	Extended	4.00/4.00
		Gusset Out 3.125 x 0.2500 x 5.50 SP-BS-0.1875,												
4	2	KN(Face)	0.500	6.00	15.25	0.750	F1852X/PT	4.00	41	Ext/Gusset	4.00	31	Extended	4.00
		Gusset Out 3.125 x 0.2500 x 5.50 SP-BS-0.1875,												

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	34	-3.9	6.4	460.0	AISC DG-16/Thin plate	0.754	0.069	0.692	0.000	0.000	0.063	0.980	0.516
2	1	34	-3.9	6.4	460.0	AISC DG-16/Thin plate	0.754	0.069	0.692	0.000	0.000	0.063	0.980	0.516
2	2	14	2.4	1.2	74.2	AISC DG-16/Thin plate	0.424	0.019	0.653	0.000	0.000	0.025	0.959	0.516
3	1	14	2.4	1.2	74.2	AISC DG-16/Thin plate	0.424	0.019	0.653	0.000	0.000	0.025	0.959	0.516
3	2	33	-3.9	6.4	460.0	AISC DG-16/Thin plate	0.754	0.069	0.692	0.000	0.000	0.063	0.980	0.516
4	2	33	-3.9	6.4	460.0	AISC DG-16/Thin plate	0.754	0.069	0.692	0.000	0.000	0.063	0.980	0.516

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	35	1.5	1.8	302.0	AISC DG-16/Thin plate	0.525	0.020	0.723	0.259	0.383	0.018	0.683	0.516
2	1	35	1.5	1.8	302.0	AISC DG-16/Thin plate	0.525	0.020	0.723	0.259	0.383	0.018	0.683	0.516
2	2	1	-2.6	0.4	176.4	AISC DG-16/Thin plate	0.313	0.004	0.677	0.324	0.479	0.005	0.959	0.516
3	1	1	-2.6	0.4	176.4	AISC DG-16/Thin plate	0.313	0.004	0.677	0.324	0.479	0.005	0.959	0.516
3	2	36	1.5	1.8	302.0	AISC DG-16/Thin plate	0.525	0.020	0.723	0.259	0.383	0.018	0.683	0.516
4	2	36	1.5	1.8	302.0	AISC DG-16/Thin plate	0.525	0.020	0.723	0.259	0.383	0.018	0.683	0.516

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	8/0/0	8/0/0	(2)GFB2050	0.269	22	
2	1/3/5	9/4/13	(2)GFB2037	0.237	22	
2	9/0/7	1/7/11	GFB2037	0.214	0	
3	1/6/0	1/7/11	GFB2037	0.214	2	
3	9/3/3	9/4/13	(2)GFB2037	0.238	21	
4	8/0/0	8/0/0	(2)GFB2050	0.269	21	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	8.68	12.00	22		-6.8		-287.1	0.0	108.8		625.7	118.8	0.49	
1	0.00	12.00		15		3.9				17.4				0.23
2	0.44	9.00	22		-2.9		-270.2	0.0	107.4		451.9	122.8	0.61	
2	0.44	9.00		2		7.2				21.4				0.33
3	10.50	9.00	21		-2.9		-270.3	0.0	107.4		451.9	122.8	0.61	
3	10.50	9.00		1		-7.2				21.4				0.33
4	8.68	12.00	21		-6.8		-287.1	0.0	108.8		625.7	118.8	0.49	
4	0.00	12.00		16		-3.9				17.4				0.23

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	8.68	104.15	8.2	8.2	4.55	1.50	120.61	9.00	20.10	3.00	22.07	4.55	0.07	310.72	1.03	1.00	1.10	0.90	0.83
2	0.44	125.95	8.9	8.9	4.14	1.50	64.32	9.00	14.29	3.00	15.55	4.54	0.07	172.30	1.00	1.00	1.09	0.94	0.90
3	10.50	125.95	15.5	15.5	4.14	1.50	64.32	9.00	14.29	3.00	15.55	4.54	0.07	172.30	1.14	1.00	1.09	0.94	0.90
4	8.68	104.15	8.2	8.2	4.55	1.50	120.61	9.00	20.10	3.00	22.07	4.55	0.07	310.72	1.03	1.00	1.10	0.90	0.83

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 4

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/235)	0.458	1	2	2	W1>
Max. Vertical Deflection for Span 1	(L/973)	-0.266	3	1	1	L

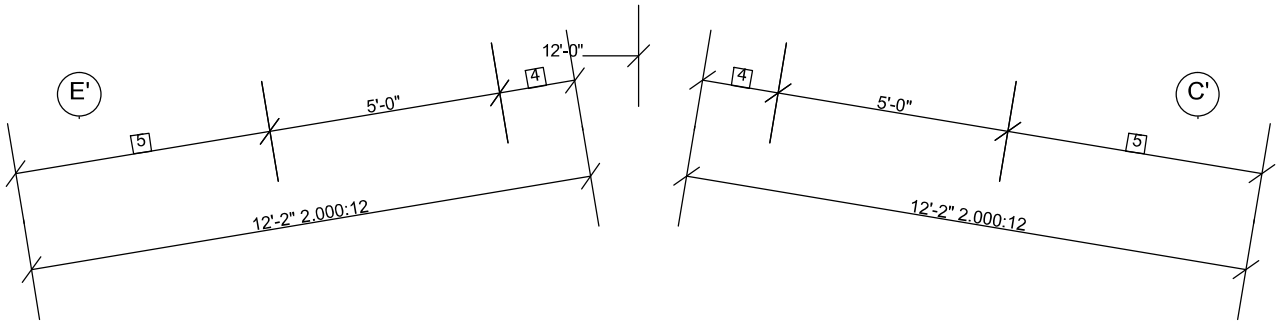
* Negative horizontal deflection is left
* Negative vertical deflection is down

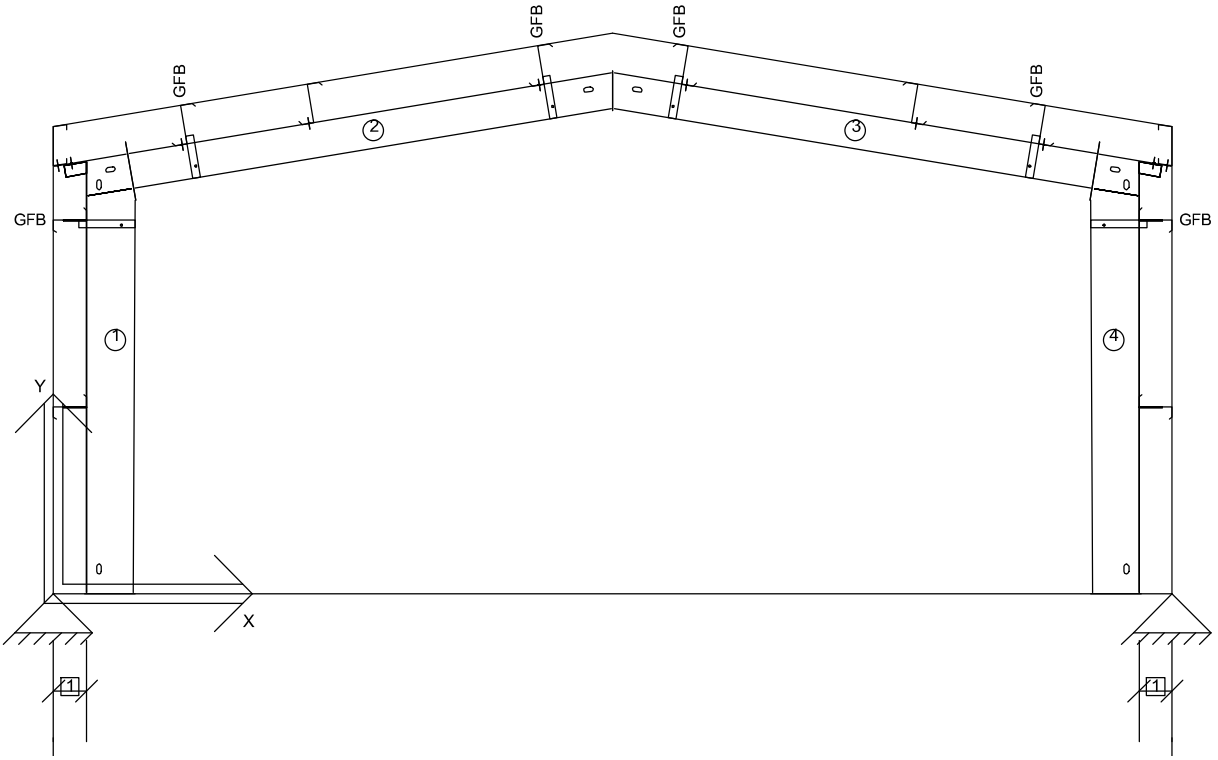
Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 5.387 (k/in)
Fundamental Period (calculated) (T): 0.432 (sec.)

Wall: 4, Frame at: 67/0/0

Frame Cross Section: 5





Dimension Key

1 8 1/2"
2 2 @ 4'-0"
3 2'-0"
4 1'-7 11/16"
5 2 @ 2'-9 3/16"
6 12'-0" Ridge Ht.

Frame Clearances

Horiz. Clearance between members 1(CX014) and 4(CX014): 20'-6"
Vert. Clearance at member 1(CX014): 8'-5 1/16"
Vert. Clearance at member 4(CX014): 8'-5 1/16"
Finished Floor Elevation = 100'-0" (Unless Noted Otherwise)

Frame Location Design Parameters:

Location	Avg. Bay Space	Description	Angle	Group	Trib. Override	Design Status
67/0/0	17/6/0	Rigid Frame	90.0000		-	Stress Check

Design Load Combinations - Framing

No.	Origin	Factor	Application	Description
1	System	1.000	1.0 D + 1.0 CG + 1.0 L>	D + CG + L>
2	System	1.000	1.0 D + 1.0 CG + 1.0 <L	D + CG + <L
3	System	1.000	1.0 D + 1.0 CG + 0.6 W1>	D + CG + W1>
4	System	1.000	1.0 D + 1.0 CG + 0.6 <W1	D + CG + <W1
5	System	1.000	1.0 D + 1.0 CG + 0.6 W2>	D + CG + W2>
6	System	1.000	1.0 D + 1.0 CG + 0.6 <W2	D + CG + <W2
7	System	1.000	1.0 D + 1.0 CG + 0.6 WPL	D + CG + WPL
8	System	1.000	1.0 D + 1.0 CG + 0.6 WPR	D + CG + WPR
9	System	1.000	0.6 MW	MW - Wall: 1
10	System	1.000	0.6 MW	MW - Wall: 2
11	System	1.000	0.6 MW	MW - Wall: 3
12	System	1.000	0.6 MW	MW - Wall: 4
13	System	1.000	0.6 D + 0.6 CU + 0.6 W1>	D + CU + W1>
14	System	1.000	0.6 D + 0.6 CU + 0.6 <W1	D + CU + <W1
15	System	1.000	0.6 D + 0.6 CU + 0.6 W2>	D + CU + W2>
16	System	1.000	0.6 D + 0.6 CU + 0.6 <W2	D + CU + <W2
17	System	1.000	0.6 D + 0.6 CU + 0.6 WPL	D + CU + WPL
18	System	1.000	0.6 D + 0.6 CU + 0.6 WPR	D + CU + WPR
19	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W1>	D + CG + L + W1>
20	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W1	D + CG + L + <W1
21	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 W2>	D + CG + L + W2>
22	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 <W2	D + CG + L + <W2
23	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL	D + CG + L + WPL
24	System	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR	D + CG + L + WPR
25	System	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+	D + CG + E> + EG+
26	System	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+	D + CG + <E + EG+
27	System	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG-	D + CU + E> + EG-
28	System	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG-	D + CU + <E + EG-
29	Special	1.000	1.0 D + 1.0 CG + 1.75 E> + 0.7 EG+	D + CG + E> + EG+
30	Special	1.000	1.0 D + 1.0 CG + 1.75 <E + 0.7 EG+	D + CG + <E + EG+
31	Special	1.000	0.6 D + 0.6 CU + 1.75 E> + 0.7 EG-	D + CU + E> + EG-
32	Special	1.000	0.6 D + 0.6 CU + 1.75 <E + 0.7 EG-	D + CU + <E + EG-
33	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 E> + 0.7 EG+	D + CG + E> + EG+
34	OMF Connection	1.000	1.0 D + 1.0 CG + 2.45 <E + 0.7 EG+	D + CG + <E + EG+
35	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 E> + 0.7 EG-	D + CU + E> + EG-
36	OMF Connection	1.000	0.6 D + 0.6 CU + 2.45 <E + 0.7 EG-	D + CU + <E + EG-
37	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB1>	D + CG + WPR + WB1>
38	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB1>	D + CU + WPR + WB1>
39	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB1>	D + CG + L + WPR + WB1>
40	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB1	D + CG + WPR + <WB1
41	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB1	D + CU + WPR + <WB1
42	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB1	D + CG + L + WPR + <WB1
43	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 WB2>	D + CG + WPR + WB2>
44	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 WB2>	D + CU + WPR + WB2>
45	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 WB2>	D + CG + L + WPR + WB2>
46	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPR + 0.6 <WB2	D + CG + WPR + <WB2
47	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPR + 0.6 <WB2	D + CU + WPR + <WB2
48	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPR + 0.45 <WB2	D + CG + L + WPR + <WB2
49	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB3>	D + CG + WPL + WB3>
50	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB3>	D + CU + WPL + WB3>
51	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB3>	D + CG + L + WPL + WB3>
52	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB3	D + CG + WPL + <WB3
53	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB3	D + CU + WPL + <WB3
54	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB3	D + CG + L + WPL + <WB3
55	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 WB4>	D + CG + WPL + WB4>
56	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 WB4>	D + CU + WPL + WB4>
57	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 WB4>	D + CG + L + WPL + WB4>
58	System Derived	1.000	1.0 D + 1.0 CG + 0.6 WPL + 0.6 <WB4	D + CG + WPL + <WB4
59	System Derived	1.000	0.6 D + 0.6 CU + 0.6 WPL + 0.6 <WB4	D + CU + WPL + <WB4
60	System Derived	1.000	1.0 D + 1.0 CG + 0.75 L + 0.45 WPL + 0.45 <WB4	D + CG + L + WPL + <WB4
61	System Derived	1.000	0.6 MWB	MWB - Wall: 1
62	System Derived	1.000	0.6 MWB	MWB - Wall: 2

63	System Derived	1.000	0.6 MWB	MWB - Wall: 3
64	System Derived	1.000	0.6 MWB	MWB - Wall: 4
65	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 EB>	D + CG + E> + EG+ + EB>
66	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 EB>	D + CG + E> + EG+ + EB>
67	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 EB>	D + CG + <E + EG+ + EB>
68	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 EB>	D + CG + <E + EG+ + EB>
69	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 EB>	D + CU + E> + EG- + EB>
70	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 EB>	D + CU + E> + EG- + EB>
71	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 EB>	D + CU + <E + EG- + EB>
72	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 EB>	D + CU + <E + EG- + EB>
73	Special	1.000	1.0 D + 1.0 CG + 1.75 EB> + 0.7 EG+	D + CG + EB> + EG+
74	Special	1.000	0.6 D + 0.6 CU + 1.75 EB> + 0.7 EG-	D + CU + EB> + EG-
75	System Derived	1.000	1.0 D + 1.0 CG + 0.273 E> + 0.7 EG+ + 0.91 <EB	D + CG + E> + EG+ + <EB
76	System Derived	1.000	1.0 D + 1.0 CG + 0.91 E> + 0.7 EG+ + 0.273 <EB	D + CG + E> + EG+ + <EB
77	System Derived	1.000	1.0 D + 1.0 CG + 0.273 <E + 0.7 EG+ + 0.91 <EB	D + CG + <E + EG+ + <EB
78	System Derived	1.000	1.0 D + 1.0 CG + 0.91 <E + 0.7 EG+ + 0.273 <EB	D + CG + <E + EG+ + <EB
79	System Derived	1.000	0.6 D + 0.6 CU + 0.273 E> + 0.7 EG- + 0.91 <EB	D + CU + E> + EG- + <EB
80	System Derived	1.000	0.6 D + 0.6 CU + 0.91 E> + 0.7 EG- + 0.273 <EB	D + CU + E> + EG- + <EB
81	System Derived	1.000	0.6 D + 0.6 CU + 0.273 <E + 0.7 EG- + 0.91 <EB	D + CU + <E + EG- + <EB
82	System Derived	1.000	0.6 D + 0.6 CU + 0.91 <E + 0.7 EG- + 0.273 <EB	D + CU + <E + EG- + <EB
83	Special	1.000	1.0 D + 1.0 CG + 1.75 <EB + 0.7 EG+	D + CG + <EB + EG+
84	Special	1.000	0.6 D + 0.6 CU + 1.75 <EB + 0.7 EG-	D + CU + <EB + EG-

Frame Member Sizes

Mem. No.	Flg Width (in.)	Flg Thk (in.)	Web Thk (in.)	Depth1 (in.)	Depth2 (in.)	Length (ft)	Weight (p)	Flg Fy (ksi)	Web Fy (ksi)	Splice Jt.1	Codes Jt.2	Shape
1	6.00	0.2500	0.1345	12.00	12.00	9.27	168.4	55.00	55.00	BP	KN	3P
2	6.00	0.2500	0.1345	9.00	9.00	11.44	163.1	55.00	55.00	KN	SP	3P
3	6.00	0.2500	0.1345	9.00	9.00	11.44	163.1	55.00	55.00	SP	KN	3P
4	6.00	0.2500	0.1345	12.00	12.00	9.27	168.4	55.00	55.00	BP	KN	3P

Total Frame Weight = 663.0 (p) (Includes all plates)

Boundary Condition Summary

Member	X-Loc	Y-Loc	Supp. X	Supp. Y	Moment	Displacement X(in.)	Displacement Y(in.)	Displacement ZZ(rad.)
1	0/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000
4	24/0/0	0/0/0	Yes	Yes	No	0/0/0	0/0/0	0.0000

Values shown are resisting forces of the foundation.
Base Connection Design is Based on 3000.00 (psi) Concrete

Reactions - Unfactored Load Type at Frame Cross Section: 5

Type		Exterior Column			Exterior Column					
X-Loc		0/0/0			24/0/0					
Grid1 - Grid2		5-E'			5-C'					
Base Plate W x L (in.)		8 X 13			8 X 13					
Base Plate Thickness (in.)		0.375			0.375					
Anchor Rod Qty/Diam. (in.)		4 - 0.750			4 - 0.750					
Column Base Elev.		100'-0"			100'-0"					
Load Type	Desc.	Hx	Hz	Vy	Hx	Hz	Vy			
D	Frm	0.23	-	0.92	-0.23	-	0.92	-	-	-
CG	Frm	0.31	-	1.05	-0.31	-	1.05	-	-	-
L>	Frm	0.97	-	3.33	-0.97	-	3.33	-	-	-
<L	Frm	0.97	-	3.33	-0.97	-	3.33	-	-	-
W1>	Frm	-4.22	-	-7.32	-1.53	-	-3.86	-	-	-
<W1	Frm	1.53	-	-3.86	4.22	-	-7.32	-	-	-
W2>	Frm	-4.46	-	-4.98	-1.29	-	-1.52	-	-	-
<W2	Frm	1.29	-	-1.52	4.46	-	-4.98	-	-	-
WPL	Frm	-0.09	-	-4.69	-0.33	-	-5.67	-	-	-
WPR	Frm	0.33	-	-5.67	0.09	-	-4.69	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	0.86	-	0.77	2.22	-	-0.77	-	-	-
MW	Frm	-	-	-	-	-	-	-	-	-
MW	Frm	-2.22	-	-0.77	-0.86	-	0.77	-	-	-
CU	Frm	0.12	-	0.42	-0.12	-	0.42	-	-	-
L	Frm	0.97	-	3.33	-0.97	-	3.33	-	-	-
E>	Frm	-0.74	-	-0.68	-0.74	-	0.68	-	-	-
EG+	Frm	0.13	-	0.44	-0.13	-	0.44	-	-	-
<E	Frm	0.74	-	0.68	0.74	-	-0.68	-	-	-
EG-	Frm	-0.13	-	-0.44	0.13	-	-0.44	-	-	-

WB1>	Brc	-0.02	-	0.47	0.02	-	0.43	-	-	-
<WB1	Brc	0.03	1.55	-0.49	-0.03	1.43	-0.41	-	-	-
WB2>	Brc	-0.02	-	0.47	0.02	-	0.44	-	-	-
<WB2	Brc	0.03	1.55	-0.49	-0.03	1.43	-0.42	-	-	-
WB3>	Brc	-0.02	-	0.45	0.02	-	0.47	-	-	-
<WB3	Brc	0.02	1.43	-0.47	-0.02	1.55	-0.45	-	-	-
WB4>	Brc	-0.02	-	0.45	0.02	-	0.47	-	-	-
<WB4	Brc	0.02	1.43	-0.47	-0.02	1.55	-0.45	-	-	-
MWB	Brc	-0.01	-	0.32	0.01	-	0.32	-	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
MWB	Brc	0.02	1.06	-0.34	-0.02	1.06	-0.30	-	-	-
MWB	Brc	-	-	-	-	-	-	-	-	-
EB>	Brc	-0.04	-	0.83	0.04	-	0.84	-	-	-
<EB	Brc	0.05	2.72	-0.88	-0.05	2.72	-0.79	-	-	-

Sum of Forces with Reactions Check - Framing

Load Type	Horizontal		Vertical	
	Load (k)	Reaction (k)	Load (k)	Reaction (k)
D	0.0	0.0	1.9	1.8
CG	0.0	0.0	2.1	2.1
L>	0.0	0.0	6.7	6.7
<L	0.0	0.0	6.7	6.7
W1>	5.8	5.8	11.2	11.2
<W1	5.8	5.8	11.2	11.2
W2>	5.8	5.8	6.5	6.5
<W2	5.8	5.8	6.5	6.5
WPL	0.4	0.4	10.4	10.4
WPR	0.4	0.4	10.4	10.4
MW	0.0	0.0	0.0	0.0
MW	3.1	3.1	0.0	0.0
MW	0.0	0.0	0.0	0.0
MW	3.1	3.1	0.0	0.0
CU	0.0	0.0	0.8	0.8
L	0.0	0.0	6.7	6.7
E>	1.5	1.5	0.0	0.0
EG+	0.0	0.0	0.9	0.9
<E	1.5	1.5	0.0	0.0
EG-	0.0	0.0	0.9	0.9
WB1>	0.0	0.0	0.0	0.9
<WB1	0.0	0.0	0.0	0.9
WB2>	0.0	0.0	0.0	0.9
<WB2	0.0	0.0	0.0	0.9
WB3>	0.0	0.0	0.0	0.9
<WB3	0.0	0.0	0.0	0.9
WB4>	0.0	0.0	0.0	0.9
<WB4	0.0	0.0	0.0	0.9
MWB	0.0	0.0	0.0	0.6
MWB	0.0	0.0	0.0	0.0
MWB	0.0	0.0	0.0	0.6
MWB	0.0	0.0	0.0	0.0
EB>	0.0	0.0	0.0	1.7
<EB	0.0	0.0	0.0	1.7

Maximum Combined Reactions Summary with Factored Loads - Framing

Note: All reactions are based on 1st order structural analysis.

X-Loc	Grid	Hrz left (-Hx) (k)	Load Case	Hrz Right (Hx) (k)	Load Case	Hrz In (-Hz) (k)	Load Case	Hrz Out (Hz) (k)	Load Case	Uplift (-Vy) (k)	Load Case	Vrt Down (Vy) (k)	Load Case	Mom cw (-Mzz) (in-k)	Load Case	Mom ccw (Mzz) (in-k)	Load Case
0/0/0	5-E'	2.46	15	1.96	20	-	-	4.75	83	3.59	13	5.30	1	-	-	-	-
24/0/0	5-C'	1.96	19	2.46	16	-	-	4.75	83	3.59	14	5.30	1	-	-	-	-

Base Plate Summary

Base Connection Design is Based on 3000.00 (psi) Concrete
Plate Fy = 55.00 ksi
Grade A36 Anchor Rods used to determine quantity and diameter

Gage & pitch standards are based on ACI-318 Appendix D criteria for "cast-in-place" anchor rods (Min space = 4*drod)

X-Loc	Grid	Mem. No.	Thickness (in.)	Width (in.)	Length (in.)	Stiff.	Num. Of Rods	Rod Diam. (in.)	Pitch (in.)	Gage (in.)	Hole Type	Welds to Flange	Welds to Web
0/0/0	5-E'	1	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875
24/0/0	5-C'	4	0.375	8	13	No	4	0.750	5.0	5.0	Std	OS-0.1875	OS-0.1875

Pinned Base Plate Connection Loading

	Maximum Shear Case			Maximum Tension Case			Maximum Comp Case			Maximum Bracing/WA Case			
X-Loc	Shear (k)	Axial (k)	Load Case	Shear (k)	Tension (k)	Load Case	Shear (k)	Comp (k)	Load Case	Shear (k)	Axial (k)	Frame Shear (k)	Load Case
0/0/0	2.47	-2.18	15	2.33	-3.58	13	1.52	5.31	2	4.75	-1.04	0.20	84
24/0/0	2.47	-2.18	16	2.33	-3.58	14	1.52	5.31	1	4.75	-0.89	0.20	84

Base Plate Connection Strength Ratios

X-Loc	Rod Shear	Load Case	Rod Tension	Load Case	Rod V + T	Load Case	Rod Bending	Load Case	Conc. Bearing	Load Case	Plate Tension	Load Case	Plate Comp	Load Case	Flange Weld	Load Case	Web Weld	Load Case
0/0/0	0.206	84	0.093	13	-	0	-	0	0.046	2	0.132	13	0.055	2	0.207	84	0.093	13
24/0/0	0.206	84	0.093	14	-	0	-	0	0.046	1	0.132	14	0.055	1	0.207	84	0.093	14

Web Stiffener Summary

Mem. No.	Stiff. No.	Desc.	Loc. (ft)	Web Depth (in.)	h/t	a/h	a (in.)	Thick. (in.)	Width (in.)	Side	Welding Description
1	1	S9	8.49	11.826	87.93	N/A	N/A	0.1875	2.000	Both	SP-BS-0.1875,W-BS-0.1250,F-OS-0.1250
4	1	S9	8.49	11.826	87.93	N/A	N/A	0.1875	2.000	Both	SP-BS-0.1875,W-BS-0.1250,F-OS-0.1250

Bolted End-Plate Connections (Plate Fy = 55.00 ksi)

			End-Plate Dimensions			Bolt			Outside Flange			Inside Flange		
Mem.	Jt.	Type	Thick.	Width	Length	Diam.	Spec/Joint	Gages In/Out	Configuration		Pitches 1st/2nd	Configuration		Pitches 1st/2nd
No.	No.		(in.)	(in.)	(in.)	(in.)		(in.)	ID	Desc.	(in.)	ID	Desc.	(in.)
1	2	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00
2	1	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00/4.00	31	Extended	4.00/4.00
2	2	SP	0.375	6.00	10.12	0.750	F1852X/PT	4.00	11	Flush	2.50/2.50	11	Flush	2.50/2.50
3	1	SP	0.375	6.00	10.12	0.750	F1852X/PT	4.00	11	Flush	2.50/2.50	11	Flush	2.50/2.50
3	2	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00/4.00	31	Extended	4.00/4.00
4	2	KN(Face)	0.375	6.00	15.25	0.750	F1852X/PT	4.00	31	Extended	4.00	31	Extended	4.00

Moment Connections:

Outside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	34	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516
2	1	34	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516
2	2	14	1.4	0.7	48.6	AISC DG-16/Thin plate	0.275	0.011	0.423	0.000	0.000	0.015	0.959	0.516
3	1	14	1.4	0.7	48.6	AISC DG-16/Thin plate	0.275	0.011	0.423	0.000	0.000	0.015	0.959	0.516
3	2	33	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516
4	2	33	-1.9	3.1	234.8	AISC DG-16/Thin plate	0.435	0.034	0.944	0.324	0.479	0.041	0.959	0.516

Inside Flange		Required Strength					Strength Ratios *							
Mem. No.	Jt. No.	Ld Cs	Axial (k)	Shear (k)	Moment (in-k)	Design Proc.	Bolt Tension	Bolt Shear	Plate Bending	Shear Yielding	Shear Rupture	Bearing Tearing	Flange Weld	Web Weld
1	2	13	1.5	3.1	164.8	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516
2	1	13	1.5	3.1	164.8	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516
2	2	2	-1.5	0.2	102.6	AISC DG-16/Thin plate	0.479	0.003	0.737	0.000	0.000	0.004	0.959	0.516
3	1	2	-1.5	0.2	102.6	AISC DG-16/Thin plate	0.479	0.003	0.737	0.000	0.000	0.004	0.959	0.516
3	2	14	1.5	3.1	164.9	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516
4	2	14	1.5	3.1	164.9	AISC DG-16/Thin plate	0.330	0.033	0.715	0.324	0.479	0.040	0.959	0.516

* Strength ratios shown for the connections are reported as a percentage of the system default or user Override Stress Limit (Stress Limit = 1.03)

Flange Brace Summary

Member	From Member Joint 1	From Side Point 1	Part	Axial Load per FB (k)	Load Case	Design Note
1	8/0/0	8/0/0	GFB2050	0.301	13	
2	1/3/7	9/4/13	GFB2037	0.267	13	
2	9/0/9	1/7/11	GFB2037	0.138	0	
3	1/6/0	1/7/11	GFB2037	0.138	2	
3	9/3/3	9/4/13	GFB2037	0.267	14	
4	8/0/0	8/0/0	GFB2050	0.301	14	

Frame Design Member Summary - Controlling Load Case and Maximum Combined Stresses per Member (Locations are from Joint 1)

			Controlling Cases		Required Strength				Available Strength				Strength Ratios	
Mem. No.	Loc. ft	Depth in.	Axial + Flexure	Shear	Axial Pr k	Shear Vr k	Mom-x Mrx in-k	Mom-y Mry in-k	Axial Pc k	Shear Vc k	Mom-x Mcx in-k	Mom-y Mcy in-k	Axial + Flexure	Shear
1	8.68	12.00	13		3.6		175.3	0.0	150.0		625.7	118.8	0.29	
1	0.00	12.00		15		2.5				17.4				0.14
2	0.44	9.00	13		1.5		164.8	0.0	136.7		451.9	122.8	0.37	
2	0.44	9.00		2		4.2				21.4				0.19
3	10.50	9.00	14		1.5		164.9	0.0	136.7		451.9	122.8	0.37	
3	10.50	9.00		1		-4.2				21.4				0.19
4	8.68	12.00	14		3.6		175.3	0.0	150.0		625.7	118.8	0.29	
4	0.00	12.00		16		-2.5				17.4				0.14

Parameters Used for Axial and Flexural Design

Mem. No.	Loc. ft	Lx in.	Ly/Lt in.	Lb in.	Ag in.2	Afn in.2	Ixx in.4	Iyy in.4	Sx in.3	Sy in.3	Zx in.3	Zy in.3	J in.4	Cw in.6	Cb	Rpg	Rpc	Qs	Qa
1	8.68	104.15	8.2	8.2	4.55	1.50	120.61	9.00	20.10	3.00	22.07	4.55	0.07	310.72	1.02	1.00	1.10	0.90	1.00
2	0.44	125.95	8.9	8.9	4.14	1.50	64.32	9.00	14.29	3.00	15.55	4.54	0.07	172.30	1.00	1.00	1.09	0.94	1.00
3	10.50	125.95	15.5	15.5	4.14	1.50	64.32	9.00	14.29	3.00	15.55	4.54	0.07	172.30	1.13	1.00	1.09	0.94	1.00
4	8.68	104.15	8.2	8.2	4.55	1.50	120.61	9.00	20.10	3.00	22.07	4.55	0.07	310.72	1.02	1.00	1.10	0.90	1.00

Deflection Load Combinations - Framing

No.	Origin	Factor	Def H	Def V	Application	Description
1	System	1.000	0	180	1.0 L	L
2	System	1.000	60	180	0.42 W1>	W1>
3	System	1.000	60	180	0.42 <W1	<W1
4	System	1.000	60	180	0.42 W2>	W2>
5	System	1.000	60	180	0.42 <W2	<W2
6	System	1.000	60	180	0.42 WPL	WPL
7	System	1.000	60	180	0.42 WPR	WPR
8	System	1.000	10	0	1.0 E> + 1.0 EG-	E> + EG-
9	System	1.000	10	0	1.0 <E + 1.0 EG-	<E + EG-

Controlling Frame Deflection Ratios for Cross Section: 5

Description	Ratio	Deflection (in.)	Member	Joint	Load Case	Load Case Description
Max. Horizontal Deflection	(H/390)	0.276	1	2	2	W1>
Max. Vertical Deflection for Span 1	(L/1389)	-0.186	3	1	1	L

* Negative horizontal deflection is left
* Negative vertical deflection is down

Lateral deflections of primary frames are calculated on a bare frame basis and do not include resistance from systems such as roof and endwall diaphragms or partial base fixity. Therefore, these deflections may be considerably overstated.

Frame Lateral Stiffness (K): 5.387 (k/in)
Fundamental Period (calculated) (T): 0.315 (sec.)

Covering - Summary Report

Shape: Shape 1

Loads and Codes - Shape: Shape 1

City: Sonoma **County:** Sonoma **State:** California **Country:** United States
Building Code: 2022 California Building Code
Based on Building Code: 2021 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)
Structural: 16AISC - ASD
Cold Form: 16AISI - ASD
Rainfall: I: 4.00 inches per hour
f'c: 3000.01 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):3.00 psf - USR

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 92.00 (Vasd: 71.26) mph

The 'Envelope Procedure' is Used
Wind Exposure: C - Kz: 0.953
Parts Wind Exposure Factor: 0.953
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 0/0/0
Primary Zone Strip Width: 2a: 20/9/10
Parts / Portions Zone Strip Width: a: 12/0/0
Basic Wind Pressure: q: 18.52 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 162.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.2960
Design Acceleration Parameter: Sd1: 0.7580
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 26/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3794
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.3700 x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.2303
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3990 x W

Covering Design Loads - Wall: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	0/0/0	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	0/0/0	20.000	0.89	IN	1.080
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	109/7/3	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	109/7/3	20.000	0.89	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	19.25	10/4/13	23.000	0.84	OUT	-1.170
Interior Area	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	10/4/13	20.000	0.89	IN	1.080

Covering Design Loads - Wall: 2

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	0/0/0	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	0/0/0	20.000	0.89	IN	1.080
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	189/7/3	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	189/7/3	20.000	0.89	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	19.25	10/4/13	23.000	0.84	OUT	-1.170
Interior Area	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	10/4/13	20.000	0.89	IN	1.080

Covering Design Loads - Wall: 3

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	0/0/0	34.000	0.70	OUT	-1.440

End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	0/0/0	20.000	0.89	IN	1.080
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	109/7/3	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	109/7/3	20.000	0.89	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	19.25	10/4/13	23.000	0.84	OUT	-1.170
Interior Area	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	10/4/13	20.000	0.89	IN	1.080

Covering Design Loads - Wall: 4

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	0/0/0	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	0/0/0	20.000	0.89	IN	1.080
End Zone	psf	W1>	Non-std Spacing: 5/0/0 Required - CHECK	23.70	189/7/3	34.000	0.70	OUT	-1.440
End Zone	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	189/7/3	20.000	0.89	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	19.25	10/4/13	23.000	0.84	OUT	-1.170
Interior Area	psf	<W2	Standard Spacing is Adequate - CHECK	17.77	10/4/13	20.000	0.89	IN	1.080

Covering Design Loads - Roof: A

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Side Zone	psf	<W2	Standard Spacing is Adequate	-1.20	67/0/0	49.000	-0.02	OUT	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	10.93	67/0/0	120.000	0.09	IN	-1.880
Entire Surface	psf	L	Standard Spacing is Adequate	20.93	0/0/0	120.000	0.17	IN	0.986
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	12/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	12/0/0	49.000	0.41	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	12/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	188/0/0	49.000	0.41	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	188/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	188/0/0	49.000	0.41	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	188/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	12/0/0	49.000	0.41	OUT	-1.260
Interior Area	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Interior Area	psf	W1>	Standard Spacing is Adequate	17.05	12/0/0	49.000	0.35	OUT	-1.080

Covering Design Loads - Roof: B

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Side Zone	psf	<W2	Standard Spacing is Adequate	-1.20	67/0/0	49.000	-0.02	OUT	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	10.93	67/0/0	120.000	0.09	IN	-1.880
Entire Surface	psf	L	Standard Spacing is Adequate	20.93	0/0/0	120.000	0.17	IN	0.986
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	12/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	12/0/0	49.000	0.41	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	12/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	188/0/0	49.000	0.41	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	188/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	188/0/0	49.000	0.41	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	12.39	188/0/0	120.000	0.10	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	29.93	188/0/0	49.000	0.61	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	20.01	12/0/0	49.000	0.41	OUT	-1.260
Interior Area	psf	<W2	Standard Spacing is Adequate	12.39	12/0/0	120.000	0.10	IN	0.680
Interior Area	psf	W1>	Standard Spacing is Adequate	17.05	12/0/0	49.000	0.35	OUT	-1.080

Panel Data

Wall/Roof	Type	Thickness	Finish	Color	Direction	Gable Dir	Max. Length
Wall: 1	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Wall: 2	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0

Wall: 3	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Wall: 4	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Roof: A	SSR	24	Special Request	KXL Cool Weathered Copper SSR	System Generated	Not Applicable	51/0/0
Roof: B	SSR	24	Special Request	KXL Cool Weathered Copper SSR	System Generated	Not Applicable	51/0/0
Partition or Misc. 1	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Peak Out	40/0/0

Fastener Data

Wall/Roof	Type	Length	Spacing	Washers	Insul. Block	Mod. Ctrl.	Ice Damming
Wall: 1	SS Capped	Standard Option	Standard Option	No	None	No	No
Wall: 2	SS Capped	Standard Option	Standard Option	No	None	No	No
Wall: 3	SS Capped	Standard Option	Standard Option	No	None	No	No
Wall: 4	SS Capped	Standard Option	Standard Option	No	None	No	No
Roof: A	Stainless Steel Capped	Standard Option	Standard Option	Yes	None	No	No
Roof: B	Stainless Steel Capped	Standard Option	Standard Option	Yes	None	No	No
Partition or Misc. 1	SS Capped	Standard Option	Standard Option	No	None	No	No

Shape: Shape 1 Clerestory

Loads and Codes - Shape: Shape 1 Clerestory

City: Sonoma **County:** Sonoma **State:** California **Country:** United States

Building Code: 2016 California Building Code
Based on Building Code: 2015 International Building Code
Building Risk/Occupancy Category: II (Standard Occupancy Structure)

Structural: 10AISC - ASD
Cold Form: 12AISI - ASD

Rainfall: I: 4.00 inches per hour
f'c: 3000.00 psi Concrete

Dead and Collateral Loads
Collateral Gravity:5.00 psf
Collateral Uplift: 2.00 psf
Roof Covering + Second. Dead Load: Varies
Frame Weight (assumed for seismic):2.50 psf

Roof Live Load
Roof Live Load: 20.00 psf Reducible

Wind Load
Wind Speed: Vult: 115.00 (Vasd: 89.08) mph

The 'Envelope Procedure' is Used - User Modified
Wind Exposure: C - Kz: 1.075
Parts Wind Exposure Factor: 1.075
Wind Enclosure: Enclosed
Topographic Factor: Kzt: 1.0000

NOT Windborne Debris Region
Base Elevation: 36/0/0
Primary Zone Strip Width: 2a: 6/0/0
Parts / Portions Zone Strip Width: a: 3/0/0
Basic Wind Pressure: q: 30.93 psf

Snow Load
Ground Snow Load: pg: 0.00 psf

Flat Roof Snow: pf: 0.00 psf
Design Snow (Sloped): ps: 0.00 psf
Rain Surcharge: 0.00
Exposure Factor: 1 Fully Exposed - Ce: 0.90
Snow Importance: Is: 1.000
Thermal Factor: Unheated - Ct: 1.20
Ground / Roof Conversion: 0.70

Seismic Load
Lateral Force Resisting Systems using Equivalent Force Procedure
Mapped MCE Acceleration: Ss: 150.00 %g
Mapped MCE Acceleration: S1: 66.90 %g
Site Class: Stiff soil (D)
Seismic Importance: Ie: 1.000
Design Acceleration Parameter: Sds: 1.0000
Design Acceleration Parameter: Sd1: 0.6690
Seismic Design Category: D
Seismic Snow Load: 0.00 psf
% Snow Used in Seismic: 0.00
Diaphragm Condition: Flexible
Fundamental Period Height Used: 46/0/0

Transverse Direction Parameters
Ordinary Steel Moment Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.5989
R-Factor: 3.50
Overstrength Factor: Omega: 2.50
Deflection Amplification Factor: Cd: 3.00
Base Shear: V: 0.2857 x W

Longitudinal Direction Parameters
Ordinary Steel Concentric Braced Frames
Redundancy Factor: Rho: 1.30
Fundamental Period: Ta: 0.3533
R-Factor: 3.25
Overstrength Factor: Omega: 2.00
Deflection Amplification Factor: Cd: 3.25
Base Shear: V: 0.3077 x W

Covering Design Loads - Wall: 1

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	0/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	0/0/0	64.000	0.31	IN	1.080
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	21/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	21/0/0	64.000	0.31	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	21.71	3/0/0	57.000	0.38	OUT	-1.170
Interior Area	psf	<W2	Need Lower Girt - CHECK	20.04	3/0/0	64.000	0.31	IN	1.080

Covering Design Loads - Wall: 2

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	0/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	0/0/0	64.000	0.31	IN	1.080
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	65/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	65/0/0	64.000	0.31	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	21.71	3/0/0	57.000	0.38	OUT	-1.170
Interior Area	psf	<W2	Need Lower Girt - CHECK	20.04	3/0/0	64.000	0.31	IN	1.080

Covering Design Loads - Wall: 3

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	0/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	0/0/0	64.000	0.31	IN	1.080
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	21/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	21/0/0	64.000	0.31	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	21.71	3/0/0	57.000	0.38	OUT	-1.170
Interior Area	psf	<W2	Need Lower Girt - CHECK	20.04	3/0/0	64.000	0.31	IN	1.080

Covering Design Loads - Wall: 4

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	0/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	0/0/0	64.000	0.31	IN	1.080
End Zone	psf	W1>	Need Lower Girt - CHECK	26.72	65/0/0	57.000	0.47	OUT	-1.440
End Zone	psf	<W2	Need Lower Girt - CHECK	20.04	65/0/0	64.000	0.31	IN	1.080
Interior Area	psf	W1>	Need Lower Girt - CHECK	21.71	3/0/0	57.000	0.38	OUT	-1.170
Interior Area	psf	<W2	Need Lower Girt - CHECK	20.04	3/0/0	64.000	0.31	IN	1.080

Covering Design Loads - Roof: A

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	20.93	0/0/0	106.000	0.20	IN	0.986
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	3/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	3/0/0	43.000	0.53	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	3/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	65/0/0	43.000	0.53	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	65/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	65/0/0	43.000	0.53	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	65/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	3/0/0	43.000	0.53	OUT	-1.260
Interior Area	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Interior Area	psf	W1>	Standard Spacing is Adequate	19.32	3/0/0	43.000	0.45	OUT	-1.080

Covering Design Loads - Roof: B

Zone	Units	Type	Description	Actual	Loc1	Allow.	Ratio	Dir.	Coef.
Entire Surface	psf	L	Standard Spacing is Adequate	20.93	0/0/0	106.000	0.20	IN	0.986
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	3/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	3/0/0	43.000	0.53	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	3/0/0	43.000	0.79	OUT	-1.863

Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	65/0/0	43.000	0.53	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	65/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	65/0/0	43.000	0.53	OUT	-1.260
Corner Zone	psf	<W2	Standard Spacing is Adequate	13.82	65/0/0	106.000	0.13	IN	0.680
Corner Zone	psf	W1>	Standard Spacing is Adequate	33.84	65/0/0	43.000	0.79	OUT	-1.863
Side Zone	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Side Zone	psf	W1>	Standard Spacing is Adequate	22.65	3/0/0	43.000	0.53	OUT	-1.260
Interior Area	psf	<W2	Standard Spacing is Adequate	13.82	3/0/0	106.000	0.13	IN	0.680
Interior Area	psf	W1>	Standard Spacing is Adequate	19.32	3/0/0	43.000	0.45	OUT	-1.080

Panel Data

Wall/Roof	Type	Thickness	Finish	Color	Direction	Gable Dir	Max. Length
Wall: 1	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Wall: 2	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Wall: 3	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Wall: 4	Panel Rib	26	KXL (Kynar)	Cool Granite Gray	Left to Right	Left to Right	40/0/0
Roof: A	SSR	24	Special Request	KXL Cool Weathered Copper SSR	System Generated	Not Applicable	51/0/0
Roof: B	SSR	24	Special Request	KXL Cool Weathered Copper SSR	System Generated	Not Applicable	51/0/0

Fastener Data

Wall/Roof	Type	Length	Spacing	Washers	Insul. Block	Mod. Ctrl.	Ice Damming
Wall: 1	SS Capped	Standard Option	Standard Option	No	None	No	No
Wall: 2	SS Capped	Standard Option	Standard Option	No	None	No	No
Wall: 3	SS Capped	Standard Option	Standard Option	No	None	No	No
Wall: 4	SS Capped	Standard Option	Standard Option	No	None	No	No
Roof: A	Stainless Steel Capped	Standard Option	Standard Option	Yes	None	No	No
Roof: B	Stainless Steel Capped	Standard Option	Standard Option	Yes	None	No	No

Manual loading and calculations

Weak axis wind load at 4 corner columns

Wind pressure=27.43 psf

Trib width= 12 ft

Line load= 27.43x12=330 plf

Opening height = 14 ft

Point Load on column = 330 plf x 14 ft x 0.5= 2.3 kips

Partition wind load on interior columns

Wind pressure =8.33 psf

Column height =36 ft

Trib width = 33 ft

Line load = 8.33 psf x 33 ft = 275 plf

Equivalent point load for column = 275 plf x 36 ft x 0.5 = 4.95 kips

Door loads

Door weight = 600 lbs

Drum size =24 inches

Load on Jambs = (0.6 x12"x0.5)/24"= 0.15kips

Seismic forces from Cupola

Metal Building weight = 3psf

CG load = 5 psf

Roof load= 8 psf x 24ftx 68 ft= 13.1 kips

Wall load = 2x24 ft x 10 ft x3 psf +2x68 ft x 10 ft x3 psf= 5.6 kips

Seismic load for frames = (13.1 + 5.6 kips) x 0.2857= 5.34 kips

Apply load 1.33 kips for line 3 and 5.

Apply load 2.67 kips for line 4

Seismic load for bracing = (13.1 + 5.6 kips) x 0.3077=5.76 kips

Apply load 2.84 kips in roof plane at bracing location.

Check for top of endpost

Line 1 and line 7

Stub posts are generated.

Posts and purlins are within 6”. No weak axis load is generated on rafter.

Connection load = 4.96 kips

(2) ½ inch dia bolts are okay for connection.

Line 1 and line 7 at Grid D (Ridge)

Column reaction= 3.01 kips

Rafter size 8x0.25

Rafter ok

GFB`s okay

VP Buildings	26 Ga. Panel Rib Wall ASD - Panel Available Strength (psf) *Equal Wall Support Spaces - Supported In VISION*	Job No.	xx
		Page:	1
		Date:	8/30/19
		Prepared By:	xx
		Reviewed By:	xx
		Rev.: 18	8/15/2016

Reference: DP 25.1

Panel		Span Lengths, ft.						Suction (-) Loads			Pressure (+) Loads	
Length (ft.)	# of Spans	# 1	# 2	# 3	# 4	# 5	# 6	ASD - Available Strength		Deflection	ASD	Deflection
								Panel	Connection	Δ = L / 60	Panel	Δ = L / 60
1.5 or 3	1 or 2	1.50	1.50	—	—	---	---	295	171	3297	171	2587
2 or 4	1 or 2	2.00	2.00	—	—	---	---	173	129	1391	129	1092
2.5 or 5	1 or 2	2.50	2.50	—	—	---	---	113	103	712	103	559
3 or 6	1 or 2	3.00	3.00	—	—	---	---	80	---	412	82	323
3.25 or 6.5	1 or 2	3.25	3.25	—	—	---	---	68	---	324	70	254
3.5 or 7	1 or 2	3.50	3.50	—	—	---	---	59	---	259	60	204
3.75 or 7.5	1 or 2	3.75	3.75	—	—	---	---	51	---	211	52	166
4 or 8	1 or 2	4.00	4.00	—	—	---	---	45	---	174	46	136
4.25 or 8.5	1 or 2	4.25	4.25	—	—	---	---	40	---	145	41	114
4.5 or 9	1 or 2	4.50	4.50	—	—	---	---	36	---	122	36	96
4.75 or 9.5	1 or 2	4.75	4.75	—	—	---	---	32	---	104	33	81
5 or 10	1 or 2	5.00	5.00	—	—	---	---	29	---	89	29	70
4.50	3	1.50	1.50	1.50	—	---	---	355	171	6221	195	4882
6.00	3	2.00	2.00	2.00	—	---	---	211	129	2624	146	2060
7.50	3	2.50	2.50	2.50	—	---	---	139	103	1344	117	1055
9.00	3	3.00	3.00	3.00	—	---	---	98	86	778	97	610
9.75	3	3.25	3.25	3.25	—	---	---	84	79	612	90	480
10.50	3	3.50	3.50	3.50	—	---	---	73	---	490	82	384
11.25	3	3.75	3.75	3.75	—	---	---	64	---	398	72	312
12.00	3	4.00	4.00	4.00	—	---	---	56	---	328	63	257
12.75	3	4.25	4.25	4.25	—	---	---	50	---	273	56	215
13.50	3	4.50	4.50	4.50	—	---	---	45	---	230	50	181
14.25	3	4.75	4.75	4.75	—	---	---	40	---	196	45	154
15.00	3	5.00	5.00	5.00	—	---	---	36	---	168	41	132
6.00	≥ 4	1.50	1.50	1.50	1.50	etc.	---	336	171	6604	187	5183
8.00	≥ 4	2.00	2.00	2.00	2.00	etc.	---	199	129	2786	141	2186
10.00	≥ 4	2.50	2.50	2.50	2.50	etc.	---	131	103	1426	112	1119
12.00	≥ 4	3.00	3.00	3.00	3.00	etc.	---	92	86	825	94	648
13.00	≥ 4	3.25	3.25	3.25	3.25	etc.	---	79	---	649	87	510
14.00	≥ 4	3.50	3.50	3.50	3.50	etc.	---	68	---	520	77	408
15.00	≥ 4	3.75	3.75	3.75	3.75	etc.	---	60	---	423	67	332
16.00	≥ 4	4.00	4.00	4.00	4.00	etc.	---	53	---	348	59	273
17.00	≥ 4	4.25	4.25	4.25	4.25	etc.	---	47	---	290	53	228
18.00	≥ 4	4.50	4.50	4.50	4.50	etc.	---	42	---	245	47	192
19.00	≥ 4	4.75	4.75	4.75	4.75	etc.	---	38	---	208	42	163
20.00	≥ 4	5.00	5.00	5.00	5.00	etc.	---	34	---	178	38	140

Corner wall suction =26.7 psf
4 ft girt spacing okay

Notes:

1. Panel available strength (r … b crippling, combined bending and shear, and connection strengths (resistances), as … on using ASD Allowable Strength Design format.

Panel :	26 Ga.		Flexure: Compression on Outside of Panel			Shear:			
t_{base} =	0.018	in.	$S_{x(+)}$ =	0.0369	in.^{3} / ft. width	Allowable Strength =	0.640	kips / ft. width panel	
F_y =	50	ksi	$I_{x(+)}$ =	0.0333	in.^{4} / ft. width	Web Crippling - End:			
F_u =	65	ksi	Flexure: Compression on Inside of Panel			Allowable Strength =	0.223	kips / ft. width panel	
E =	29500	ksi	$S_{x(-)}$ =	0.0419	in.^{3} / ft. width	Web Crippling - Int.:			
Weight =	0.91	psf	$I_{x(-)}$ =	0.0297	in.^{4} / ft. width	Allowable Strength =	0.321	kips / ft. width panel	

Fastener : #12-14 Wall Structural, Stainless — Fastener Spacing = 1.00 per foot width of panel

Pullover Allowable Strength = 270 lbs. per ft. width of panel

Pullout Allowable Strength = 257 lbs.per ft. width of panel from 0.06 in. secondary

2. Panel self-weight not included.
3. Ix (+) used for (+) positive load deflections. Ix (-) used for (-) suction load deflections.
4. Load reduction factor = 0.7 used for (-) suction deflection determinations.

When printed, this document becomes uncontrolled. Verify current revision number with controlled, on-line document.

VP Buildings	24 Ga. SSR w/ Standard Clip ASD - Panel Available Strength (psf) *Equal Roof Support Spaces - Supported In VISION*	Job No.	xx
		Page:	1
		Date:	8/30/19
		Prepared By:	xx
		Reviewed By:	xx
		Rev.: 18	8/15/2016

Reference: DP 25.5

Panel		Span Lengths, ft.						Suction (-) Loads			Pressure (+) Loads	
Length	# of							ASD - Available Strength		Deflection	ASD	Deflection
(ft.)	Spans	# 1	# 2	# 3	# 4	# 5	# 6	Panel	Connection	Δ = L / 60	Panel	Δ = L / 60
1.5 or 3	1 or 2	1.50	1.50	—	—	---	---	124	---	13930	330	22027
2 or 4	1 or 2	2.00	2.00	—	—	---	---	124	---	5877	300	9293
2.5 or 5	1 or 2	2.50	2.50	—	—	---	---	111	---	3009	270	4758
3 or 6	1 or 2	3.00	3.00	—	—	---	---	99	---	1741	240	2753
3.25 or 6.5	1 or 2	3.25	3.25	—	—	---	---	93	92	1370	225	2166
3.5 or 7	1 or 2	3.50	3.50	—	—	---	---	86	85	1097	210	1734
3.75 or 7.5	1 or 2	3.75	3.75	—	—	---	---	80	79	892	195	1410
4 or 8	1 or 2	4.00	4.00	—	—	---	---	74	---	735	180	1162
4.25 or 8.5	1 or 2	4.25	4.25	—	—	---	---	68	---	612	165	968
4.5 or 9	1 or 2	4.50	4.50	—	—	---	---	62	---	516	150	816
4.75 or 9.5	1 or 2	4.75	4.75	—	—	---	---	56	---	439	135	694
5 or 10	1 or 2	5.00	5.00	—	—	---	---	49	---	376	120	595
4.50	3	1.50	1.50	1.50	—	---	---	124	---	26286	330	41566
6.00	3	2.00	2.00	2.00	—	---	---	124	---	11090	300	17536
7.50	3	2.50	2.50	2.50	—	---	---	111	---	5678	270	8978
9.00	3	3.00	3.00	3.00	—	---	---	99	---	3286	240	5196
9.75	3	3.25	3.25	3.25	—	---	---	93	92	2584	225	4087
10.50	3	3.50	3.50	3.50	—	---	---	86	85	2069	210	3272
11.25	3	3.75	3.75	3.75	—	---	---	80	79	1682	195	2660
12.00	3	4.00	4.00	4.00	—	---	---	74	---	1386	180	2192
12.75	3	4.25	4.25	4.25	—	---	---	68	---	1156	165	1827
13.50	3	4.50	4.50	4.50	—	---	---	62	---	974	150	1539
14.25	3	4.75	4.75	4.75	—	---	---	56	---	828	135	1309
15.00	3	5.00	5.00	5.00	—	---	---	49	---	710	120	1122
6.00	≥ 4	1.50	1.50	1.50	1.50	etc.	---	124	---	27904	330	44124
8.00	≥ 4	2.00	2.00	2.00	2.00	etc.	---	124	---	11772	300	18615
10.00	≥ 4	2.50	2.50	2.50	2.50	etc.	---	111	---	6027	270	9531
12.00	≥ 4	3.00	3.00	3.00	3.00	etc.	---	99	---	3488	240	5515
13.00	≥ 4	3.25	3.25	3.25	3.25	etc.	---	93	92	2743	225	4338
14.00	≥ 4	3.50	3.50	3.50	3.50	etc.	---	86	85	2197	210	3473
15.00	≥ 4	3.75	3.75	3.75	3.75	etc.	---	80	79	1786	195	2824
16.00	≥ 4	4.00	4.00	4.00	4.00	etc.	---	74	---	1472	180	2327
17.00	≥ 4	4.25	4.25	4.25	4.25	etc.	---	68	---	1227	165	1940
18.00	≥ 4	4.50	4.50	4.50	4.50	etc.	---	62	---	1033	150	1634
19.00	≥ 4	4.75	4.75	4.75	4.75	etc.	---	56	---	879	135	1390
20.00	≥ 4	5.00	5.00	5.00	5.00	etc.	---	49	---	753	120	1191

Notes:

live load = 20psf
wind load in suction = 29.9 psf
5 ft spacing okay

1. Panel available strength (resista , combined bending and shear, and connection strengths (resistances), as applic ASD Allowable Strength Design format.
   Panel gravity and suction loads d

Panel :	24 Ga.		Flexure: Compression on Outside of Panel			Shear:			
t_{base} =	0.023	in.	$S_{x(+)}$ =	0.1157	in.^{3} / ft. width	Allowable Strength =	0.806	kips / ft. width panel	
F_y =	50	ksi	$I_{x(+)}$ =	0.2835	in.^{4} / ft. width	Web Crippling - End:			
F_u =	65	ksi	Flexure: Compression on Inside of Panel			Allowable Strength =	0.237	kips / ft. width panel	
E =	29500	ksi	$S_{x(-)}$ =	0.0789	in.^{3} / ft. width	Web Crippling - Int.:			
Weight =	1.20	psf	$I_{x(-)}$ =	0.1255	in.^{4} / ft. width	Allowable Strength =	0.679	kips / ft. width panel	

Fastener : #1/4-14 Clip Struct., Carbon — Fastener Spacing = 1.00 per foot width of panel
Pullover Allowable Strength = 1285 lbs. per ft. width of panel
Pullout Allowable Strength = 298 lbs.per ft. width of panel from 0.06 in. secondary

2. Panel self-weight not included.
3. Ix (+) used for (+) positive load deflections. Ix (-) used for (-) suction load deflections.
4. Load reduction factor = 0.7 used for (-) suction deflection determinations.

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Design Tool

Pinned Base Plate Design

Ref. Design Procedure Sections 3.2.1, 3.2.4 & 3.5

Job No.	
Page:	6/6/2025
Date:	09/04/19
Prepared By:	
Reviewed By:	
Revison 10.4, 9/29/17	

Description: Line 1 and line 7 exterior columns

Input Loads

LC #	Shear Reduction	Hx (k)	Hz (k)	Vy (k)
1		6.13		10.72
2		6.13		-8.00
3				
4				
5				
6				

Column Shape: (•) 3-Plate/WF ( ) HSS Tube ( ) HSS Pipe

Design Spec.: AISC 360-10

Design Method: ASD

Column Type: (•) Exterior Col. ( ) Interior Col.

Welds: [ ] Match DP 3.2.1 [ ] 2-sided at Flngs [ ] 2-sided at Web

Modifications: [ ] Centered Holes [ ] Oversized Hole [ ] Not SW MR Col. [ ] Flush Plate [x] Grout Pad

Plate Fy (ksi)	55	Default
Column Fy (ksi)	55	Default
Concrete f'c (ksi)	3	
Max. S.R.	1	
Hold ratio of 1.0 for A2/A1?	[x] Yes	

Suggested Min. AR Projection: 1.5 in.

COLUMN DATA

d (in)	bf (in)	tf (in)	tw (in)
12	6	5/16	0.1644

BRACING DATA (Override)

Bracing Type:	STD Hillside Washer	
Bracing Offset (in):	3 5/16	

BASE PLATE DATA (Override)

Length, N (in)	13	
Width, B (in)	8	
Plate Thick. (in)	3/8	OK
Flange Offset (in)	8 1/2	
Web Offset (in)	12	
Edge Dist.	4 in	
Plate Extension	0.5 in	

ANCHOR ROD DATA (Override)

# of Rods	4		
Rod ∅ (in)	3/4	OK	
Shear Capacity (%)	100.00	80	Default is 100%.
ASTM F1554 Grade:	Gr. 36	Standard Grade	
Pitch	5 in		
Gage	5 in		
# shear rods	4		
# tension rods	4		
Hole Size Increase	1/8 in		

PLATE AVAILABILITY: STOCKED.

BASE PLATE RESULTS:

		LC
$t_{p\ (req)}$ for Compression, (in) =	0.1266	1
$t_{p\ (req)}$ for Tension, (in) =	0.2062	2
DESIGN PLATE THICK. =	**0.375 in.**	**2**

ANCHOR RODS RESULTS:

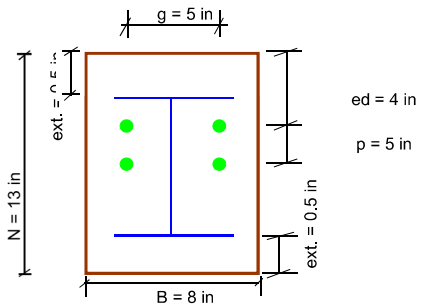
		LC	
Req'd ∅ for Uplift, in. =	0.3422	2	
Req'd ∅ for Shear, in. =	0.4323	1	
Req'd ∅ for Combined, in. =	0.0000	n/a	
∅ Used for Welded SQW, in. =	n/a	n/a	n/a
REQ'D ANCHOR ROD ∅ =	**0.75 in.**	**1**	

NOTES:

Uplift weld uses the web only.

DETAILING SUMMARY

Plan View



Flange weld =	3/16	in (One-side)
Web weld =	1/8	in (One-side)
Plate Thickness =	0.375 in.	Fy = 55 ksi
AR's = (4) - 0.75"	Hole ∅ =	0.875 in

DETAILING NOTES:

NOTES TO BE PUT ON THE DRAWINGS:

GENERAL NOTES:

Design Tool

Pinned Base Plate Design

Ref. Design Procedure Sections 3.2.1, 3.2.4 & 3.5

Job No.:	
Page:	6/6/2025
Date:	09/04/19
Prepared By:	
Reviewed By:	
Revison 10.4, 9/29/17	

Description: Line 1 and line 7 interior column

Input Loads

LC #	Shear Reduction	Hx (k)	Hz (k)	Vy (k)
1		3.00		24.25
2		3.00		-13.00
3				
4				
5				
6				

Column Shape: (•) 3-Plate/WF ( ) HSS Tube ( ) HSS Pipe

Design Spec.: AISC 360-10

Design Method: ASD

Column Type: ( ) Exterior Col. (•) Interior Col.

Welds: [ ] Match DP 3.2.1 [ ] 2-sided at Flngs [ ] 2-sided at Web

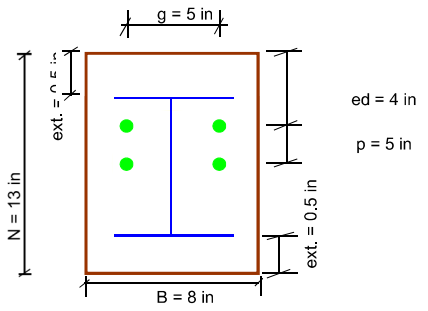
Modifications: [x] Centered Holes [ ] Oversized Hole [ ] Flush Plate [x] Grout Pad

Plate Fy (ksi)	55	Default
Column Fy (ksi)	55	Default
Concrete f'c (ksi)	3	
Max. S.R.	1	
Hold ratio of 1.0 for A2/A1?	[x] Yes	

Suggested Min. AR Projection: 1.5 in.

DETAILING SUMMARY

Plan View



Flange weld =	3/16	in (One-side)
Web weld =	1/8	in (One-side)
Plate Thickness =	0.375 in.	Fy = 55 ksi
AR's = (4) - 0.75"	Hole ∅ =	0.875 in

COLUMN DATA

d (in)	bf (in)	tf (in)	tw (in)
12	6	5/16	0.1644

BRACING DATA ↓Override↓

Bracing Type:	STD Hillside Washer	
Bracing Offset (in):	3 5/16	

BASE PLATE DATA ↓Override↓

Length, N (in)	13	
Width, B (in)	8	
Plate Thick. (in)	3/8	OK
Flange Offset (in)	8 1/2	
Web Offset (in)	12	
Edge Dist.	4 in	
Plate Extension	0.5 in	

ANCHOR ROD DATA ↓Override↓

# of Rods	4		
Rod ∅ (in)	3/4	OK	
Shear Capacity (%)	100.00	80	Default is 100%.
ASTM F1554 Grade:	Gr. 36	Standard Grade	
Pitch	5 in		
Gage	5 in		
# shear rods	4		
# tension rods	4		
Hole Size Increase	1/8 in		

PLATE AVAILABILITY: STOCKED.

BASE PLATE RESULTS:

		LC
$t_{p\ (req)}$ for Compression, (in) =	0.1904	1
$t_{p\ (req)}$ for Tension, (in) =	0.2629	2
DESIGN PLATE THICK. =	**0.375 in.**	**2**

ANCHOR RODS RESULTS:

		LC	
Req'd ∅ for Uplift, in. =	0.4362	2	
Req'd ∅ for Shear, in. =	0.3024	1	
Req'd ∅ for Combined, in. =	0.0000	n/a	
∅ Used for Welded SQW, in. =	n/a	n/a	n/a
REQ'D ANCHOR ROD ∅ =	**0.75 in.**	**2**	

NOTES:

Uplift weld uses the web only.

DETAILING NOTES:

NOTES TO BE PUT ON THE DRAWINGS:

GENERAL NOTES:

Design Tool

Pinned Base Plate Design

Ref. Design Procedure Sections 3.2.1, 3.2.4 & 3.5

Job No.:	
Page:	6/6/2025
Date:	09/04/19
Prepared By:	
Reviewed By:	
Revison 10.4, 9/29/17	

Description: line 4 ext col

Input Loads

LC #	Shear Reduction	Hx (k)	Hz (k)	Vy (k)
1		13.53	19.21	26.45
2		13.53	19.21	-14.82
3				
4				
5				
6				

Column Shape: (•) 3-Plate/WF ( ) HSS Tube ( ) HSS Pipe

Design Spec.: AISC 360-10

Design Method: ASD

Column Type: (•) Exterior Col. ( ) Interior Col.

Welds: [ ] Match DP 3.2.1 [ ] 2-sided at Flngs [ ] 2-sided at Web

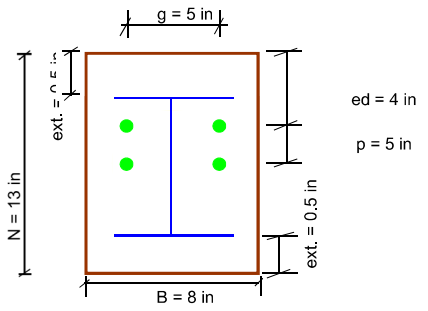
Modifications: [ ] Centered Holes [ ] Oversized Hole [ ] Not SW MR Col. [ ] Flush Plate [x] Grout Pad

Plate Fy (ksi)	55	Default
Column Fy (ksi)	55	Default
Concrete f'c (ksi)	3	
Max. S.R.	1	
Hold ratio of 1.0 for A2/A1?	[x] Yes	

Suggested Min. AR Projection: 1.875 in.

DETAILING SUMMARY

Plan View



Flange weld =	3/16	in (One-side)
Web weld =	1/8	in (One-side)
Plate Thickness =	0.375 in.	Fy = 55 ksi
AR's = (4) - 1"	Hole ∅ =	1.125 in

COLUMN DATA

d (in)	bf (in)	tf (in)	tw (in)
12	6	3/8	0.1644

BRACING DATA ↓Override↓

Bracing Type:	STD Hillside Washer	
Bracing Offset (in):	3 3/8	

BASE PLATE DATA ↓Override↓

Length, N (in)	13	
Width, B (in)	8	
Plate Thick. (in)	3/8	OK
Flange Offset (in)	8 1/2	
Web Offset (in)	12	
Edge Dist.	4 in	
Plate Extension	0.5 in	

ANCHOR ROD DATA ↓Override↓

# of Rods	4		
Rod ∅ (in)	1	OK	
Shear Capacity (%)	100.00	80	Default is 100%.
ASTM F1554 Grade:	Gr. 36	Standard Grade	
Pitch	5 in		
Gage	5 in		
# shear rods	4		
# tension rods	4		
Hole Size Increase	1/8 in		

PLATE AVAILABILITY: STOCKED.

BASE PLATE RESULTS:

		LC
$t_{p\ (req)}$ for Compression, (in) =	0.1988	1
$t_{p\ (req)}$ for Tension, (in) =	0.2800	2
DESIGN PLATE THICK. =	**0.375 in.**	**2**

ANCHOR RODS RESULTS:

		LC	
Req'd ∅ for Uplift, in. =	0.4657	2	
Req'd ∅ for Shear, in. =	0.8464	1	
Req'd ∅ for Combined, in. =	0.0000	n/a	
∅ Used for Welded SQW, in. =	n/a	n/a	n/a
REQ'D ANCHOR ROD ∅ =	**1 in.**	**1**	

NOTES:

Uplift weld uses the web only.

DETAILING NOTES:

NOTES TO BE PUT ON THE DRAWINGS:

GENERAL NOTES:

Design Tool

Pinned Base Plate Design

Ref. Design Procedure Sections 3.2.1, 3.2.4 & 3.5

Job No.:	
Page:	6/6/2025
Date:	09/04/19
Prepared By:	
Reviewed By:	
Revison 10.4, 9/29/17	

Description: line 4 int col

Input Loads

LC #	Shear Reduction	Hx (k)	Hz (k)	Vy (k)
1		1.32		51.55
2		1.32		-16.16
3				
4				
5				
6				

Column Shape: (•) 3-Plate/WF ( ) HSS Tube ( ) HSS Pipe

Design Spec.: AISC 360-10

Design Method: ASD

Column Type: ( ) Exterior Col. (•) Interior Col.

Welds: [ ] Match DP 3.2.1 [ ] 2-sided at Flngs [ ] 2-sided at Web

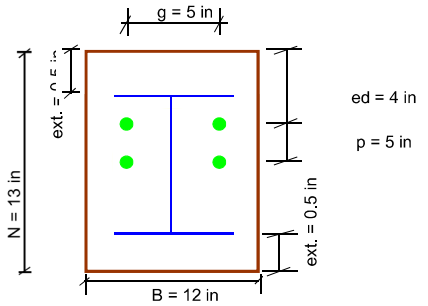
Modifications: [x] Centered Holes [ ] Oversized Hole [ ] Flush Plate [x] Grout Pad

Plate Fy (ksi)	55	Default
Column Fy (ksi)	55	Default
Concrete f'c (ksi)	3	
Max. S.R.	1	
Hold ratio of 1.0 for A2/A1?	[x] Yes	

Suggested Min. AR Projection: 1.625 in.

DETAILING SUMMARY

Plan View



Flange weld =	3/16	in (One-side)
Web weld =	1/8	in (One-side)
Plate Thickness =	0.5 in.	Fy = 55 ksi
AR's = (4) - 0.75"	Hole ∅ =	0.875 in

COLUMN DATA

d (in)	bf (in)	tf (in)	tw (in)
12	10	3/8	0.1644

BRACING DATA ↓Override↓

Bracing Type:	STD Hillside Washer	
Bracing Offset (in):	3 3/8	

BASE PLATE DATA ↓Override↓

Length, N (in)	13	
Width, B (in)	12	
Plate Thick. (in)	1/2	OK
Flange Offset (in)	8 1/2	
Web Offset (in)	12	
Edge Dist.	4 in	
Plate Extension	0.5 in	

ANCHOR ROD DATA ↓Override↓

# of Rods	4		
Rod ∅ (in)	3/4	OK	
Shear Capacity (%)	100.00	80	Default is 100%.
ASTM F1554 Grade:	Gr. 36	Standard Grade	
Pitch	5 in		
Gage	5 in		
# shear rods	4		
# tension rods	4		
Hole Size Increase	1/8 in		

PLATE AVAILABILITY: STOCKED.

BASE PLATE RESULTS:

		LC
$t_{p\ (req)}$ for Compression, (in) =	0.2833	1
$t_{p\ (req)}$ for Tension, (in) =	0.2195	2
DESIGN PLATE THICK. =	**0.375 in.**	**1**

NOTES:

Uplift weld uses the web and both flanges.

ANCHOR RODS RESULTS:

		LC	
Req'd ∅ for Uplift, in. =	0.4863	2	
Req'd ∅ for Shear, in. =	0.2006	1	
Req'd ∅ for Combined, in. =	0.0000	n/a	
∅ Used for Welded SQW, in. =	n/a	n/a	n/a
REQ'D ANCHOR ROD ∅ =	**0.75 in.**	**2**	

DETAILING NOTES:

NOTES TO BE PUT ON THE DRAWINGS:

GENERAL NOTES:

Dead load reduction for lines 3,4,5

For line 3 and 5

Trib width = 33 ftx 0.5 = 16.5 ft

Excess dead load = 2.3 psf x 16.5 = 37.95 plf

For line 4

Trib width = 33 ft

Excess dead load = 2.3 psf x 33ft = 75.9 plf

Live load for lines 3 and 5

For line 3 and 5

Roof Slope, F:12	Tributary Loaded Area (A_t) in Square Feet for any Structural Member		
	$A_t \leq 200$	$200 < A_t < 600$	$A_t \geq 600$
$F \leq 4$	20	$20(1.2-0.001A_t)$	12
$4 < F < 12$	$20(1.2-0.05F)$	$20(1.2-0.001A_t)(1.2-0.05F) \geq 12$	12
$F \geq 12$	12	12	12

Area= At = 33 ftx 12 ft= 396 ft ^2

Load = 20 (1.2 -0.001 At)= 20 (1.2 -0.001x396) = 16 psf

Line load on line 3 and 5 from 0-12.5 ft= (20-16)psf x 33 ft= 132 plf

Line load for walk door canopy support girts

D. Components and Cladding:

For purlins in the interior zones, girts, wall panels, wall fasteners, and endwall columns, refer to Example 1.3.4.9(b)-1 for similar calculations.

1.) *Sidewall Roof Overhangs:*

Effective wind load area is the span times the greater of:

a. The average of two adjacent tributary widths, $(25 + 25) \div 2 = 25$ ft

b. The span divided by 3, $10 \div 3 = 3.33$ ft

$\therefore A = 10 \times 25 = 250$ ft^2

A= 4x4 =16ft^2
0.715log(16)-3.03=2.16
Load=27.5 psfx2.16=59.7 plfx2ft /4 ft (girt spacing)
=29.7 plf
Load is applied on the two girts above the walk doors

6/6/2025

Design Tool

Member Stability Bracing

Ref: DP 2.11

Job No.	
Page:	
Date:	09/08/19
Prepared By:	
Reviewed By:	
Rev:	2.3 03/16

Notes: Check for ridge FB`s at line 1 and 6

Design Method: (•) ASD ( ) LRFD ( ) LSD — AISC 360-10

Special Design Requirements:
- [x] 2% Pfl (Traditional Design)
- [ ] 2% bf tf Fy ... SMF Column at MC
- [ ] 2% Ry Zx Fy ... SMF Beams
- [ ] 6% Ry Zx Fy ... IMF/SMF at Plastic Hinges

Member Geometry & Loading

		Left End	Left Intermediate	At Brace	Right Intermediate	Right End
Flange width	b_f (in)			8		
Flange thickness	t_f (in)			0.25		
Web thickness	t_w (in)			0.1875		
Member depth	d (in)			36		
Unbraced length		L_1 (in)	120		L_2 (in)	120
Rqd. axial strength	P_r (kips)			0		
Rqd. flexural str.	M_r (in-k)			-4200		
Bending coeffic.	C_b			1		
Double curv. fact.	C_d	1.0	1.0	1.0	1.0	1.0
Flexural member?		N/A	N/A	N/A	N/A	N/A
Flange force	P_{fl} (kips)	0.00	0.00	117.48	0.00	0.00
Controlling point		[x] Auto	( ) 1	( ) 2	(•) 3	( ) 4 ( ) 5

DP 2.11.1 Eq. 2 — DP 2.11.1 Eq. 1

Flange cross-section (splice) location

	<-- a -->	<-- b -->
From left end	18	222
I_{yc} (in^4)	10.7	10.7

R_{web}	0.48	DP 2.11.1 Eq. 6
E (ksi)	29000	
F_y (ksi)	55	
R_y	1	
$I_{y\,eff}$ (in^4)	15.8	DP 2.11.1 Eq. 5
I_y overrride >>		
L (in)	120	
Z_x (in^3)	130.6	

Secondary Framing

		Bay 1	Bay 2	
Span length	B (ft)	25	0	
Depth (Zee/Cee)	d_s (in)	8.5		
Thickness (Zee/Cee)	t_s (in)	0.098	0.060	
Brace offset (if braced)	a (in)	36	36	
		[x] End Bay	[ ] End Bay	
Moment of inertia	I_x (in^4)	15.37		DP 20.1.1
I_x overrride >>				
Torsional stiffness	β_T (k-in/rad)	5857	0	DP 2.11. Table 2
Available stiffness	$\beta_{act\,L}$ (k/in)	**4.52**	**0.00**	**4.52** DP 2.11.1 Eq. 7
		100%	0%	

Torsional Bracing Analysis

[x] [ ] Rafter brace adjacent to exterior column (include stiffness provided by ext. column)

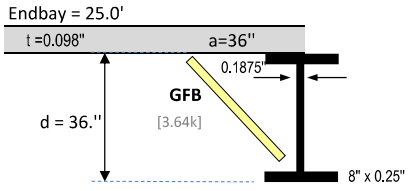
				Ratio
Required strength	F_{br} (kips)=	**2.35**	DP 2.11.1 Eq. 3	1.02 1
Required stiffness	β_{br} (k/in)=	**26.08**	DP 2.11.1 Eq. 4	N/A

Relative Bracing Analysis (in development)

[ ] Secondary members attached to panel with adequate diaphragm properties.

Flange Braces

		Bay 1	Bay 2	
Selected flange brace		GFB	GFB	
Flange brace angle	α_{FB} (°)	49.8		
Flange brace length	L_{FB} (in)	49.8		
Required brace force	F_{br} (kips)	**3.64**		
Brace compr. strength	$P_{C\,H}$ (kips)	4.74		
Bearing - flange brace	$R_{Bear\,FB}$ (k)	**3.56**		
Bolt shear strength	$R_{b\,V}$ (kips)	5.30		
Bearing - secondary	$R_{Bear\,Z}$ (k)	4.12		
Available strength	$F_{FB\,H}$ (kips)	**3.56**	**0.00**	2.30
Modulus of elasticity	E_s (ksi)	29500		
Bolt diameter	d_b (in)	0.5	0.5	
Bolt standard	ASTM	A325T		
Brace-to-secondary connection		[x] Washers	[ ] Washers	
FB bolt within lapped region?		[ ] Yes	[ ] Yes	



Design Tool

Section Strength Check

AISC 360 - 10 (14th)

I-Shaped Beam-Column

Design Method = ASD

Unit System ☐ Metric Units

Job No:	
Page:	
Date:	9/12/2019
Prepared By:	
Reviewed By:	
Rev: 5.6	May 2019

check for roof strut for collector loads

INPUT DATA

☐ LRFD

Required Strength	INPUT		
(Compression) Axial P_r =	5.00	kips	Used
Strong Axis Shear V_r =	0.00	kips	0.29
Strong Axis Moment M_{rx} =	0.00	in-k	28.71
Weak Axis Moment M_{ry} =	0.00	in-k	
Weak Axis Shear V_{ry} =	0.00	kips	

☑ Add self-weight (moment Mx & V)

☐ Generate floor loads (program adds Mx & V)

Material Strength		User override	
Fy (ksi) =	55		
Fu (ksi) =	70		
E (ksi) =	29000	G (ksi) =	11200

Unsupported Length	INPUT	
L_x =	396	in
L_y =	396	in
L_t =	396	in
L_b =	396	in
K_x =	1.00	
K_y =	1.00	
K_t =	1.00	
C_b =	1.000	1.00

MEMBER DATA

(in)

b_f =	8
t_f =	0.25
t_w =	0.1345
d =	9

AISC 360 SPECIFICATION - STRENGTH CHECK

Combined Strength Ratio	**0.407**	OK	**H1.1 (H1-1a)**	**Member Weight**
Shear Ratio	**0.014**	OK	**G2.**	(plf)
Standard Weld OK				**17.58**

ALLOWABLE STRENGTHS

Tension	Pc (kips) =	169.73
Compression	Pc (kips) =	**20.49**
Shear	Vc (kips) =	**21.42**
Moment-X	Mcx (in-k) =	**156.74**
Moment-Y	Mcy (in-k) =	159.49
Shear-Y	Vcy (kips) =	79.20

AISC 341: Non-ductile

DESIGN DATA

Flange Properties		Web Properties			
$\lambda = b_f/(2t_f)$ =	**16.00**	$\lambda = h/t_w$ =	**63.20**	Lp (in) =	56.67
λ_{pf} =	8.73	λ_{pw} =	86.34	Lr (in) =	193.44
λ_{rf} =	18.49	λ_{rw} =	130.89	R_{pc} =	N/A
Flexure	noncompact	Flexure	compact	R_{pg} =	N/A
Axial	slender	Axial	slender	h/t_w =	63.20
$\lambda_{rf\ axial}$ =	10.42	$\lambda_{rw\ axial}$ =	34.21	$(h/t_w)MAX$ =	210.91
Q_s =	0.777	Q_a =	1.000	k_c =	0.5032
				f (ksi) =	6.64
					194.43

max (KL/r)

CROSS SECTION PROPERTIES

A (in2) =	5.14	Ix (in4) =	83.47	Iy (in4) =	21.34	rt (in) =	2.243	h (in) =	8.5
An (in2) =	5.14	Sx (in3) =	18.55	Sy (in3) =	5.33	rts (in) =	2.243	hc (in) =	8.5
Afg (in2) =	2	rx (in) =	4.028	ry (in) =	2.037	J (in4) =	0.0902	ho (in) =	8.75
Afn (in2) =	2	Zx (in3) =	19.93	Zy (in3) =	8.038	Cw (in6) =	408.37	a_w =	1.883
				Iyc (in4) =	10.667				

Stiffener Spacing **a** = 999 in 83.25 ft … a/h = 117.53

Max. stiff. spacing for TFA (ft) = 2.12

Tension field action: ☑ Try **Not permitted** ☐ End panel

Stiffener size (in): 3.5 x 0.375 - both sides

Required stiffener I_s:	0.01	in4	
Provided stiffener I_s:	11.349	in4	OK
Required stiffener area A_s:	0	in2	
Provided stiffener area A_s:	2.625	in2	OK
Stiffener maximum **b/t**:	12.86		
Provided stiffener **b/t**:	9.33		OK

Flange Holes

flanges with holes = 0

Bolt db = 0.5 in

Selected flange size is not affected by Flexural Rupture

BLUESCOPE BUILDINGS

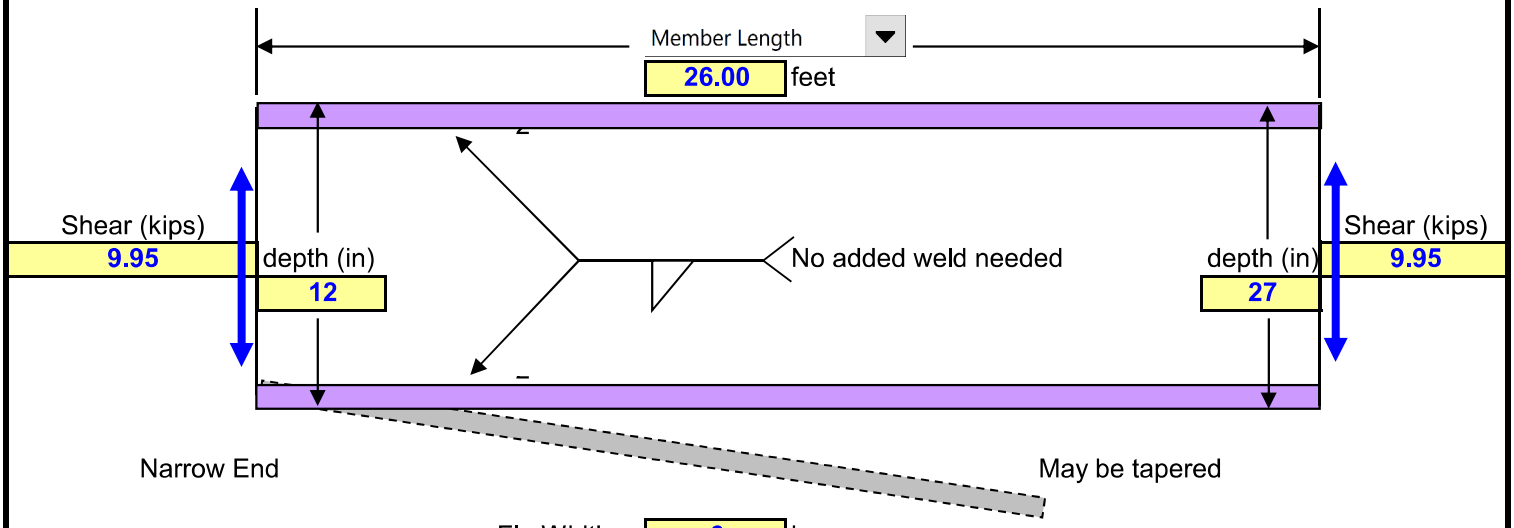
CONRAC WELD CHECK

Submerged Arc Welding Process

DM Sec 3.5 Rev 5 - Dec-2012

Job No.:
Page: to
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Prepared By:
Reviewed By:

Notes: column at grid 2/A



Flg Width = 6 in
Flg Tk = 0.375 in
Web Tk = 0.1644 in

CSA S16.1-09

Design per Canadian CSA S16.1-2009

Critical location =	0.0	feet from left end
Ix =	171.59	in^4
Q =	13.08	in^3
v = VQ/I =	**0.76**	**kips/in horizontal shear req'd strength**
Conrac weld size =	0.125	(inches) SAW fillet weld
Nominal weld metal strength (F_w) =	46.90	ksi
Effective Area (A_w) =	0.1326	in per W59-03 Clause 4.3.2.4
Weld Strength =	**4.17**	**kips/in** ϕ = 0.67
Req'd Strength / Avail Strength ratio =	0.18	**Safe**

Standard conrac weld OK

BLUESCOPE BUILDINGS

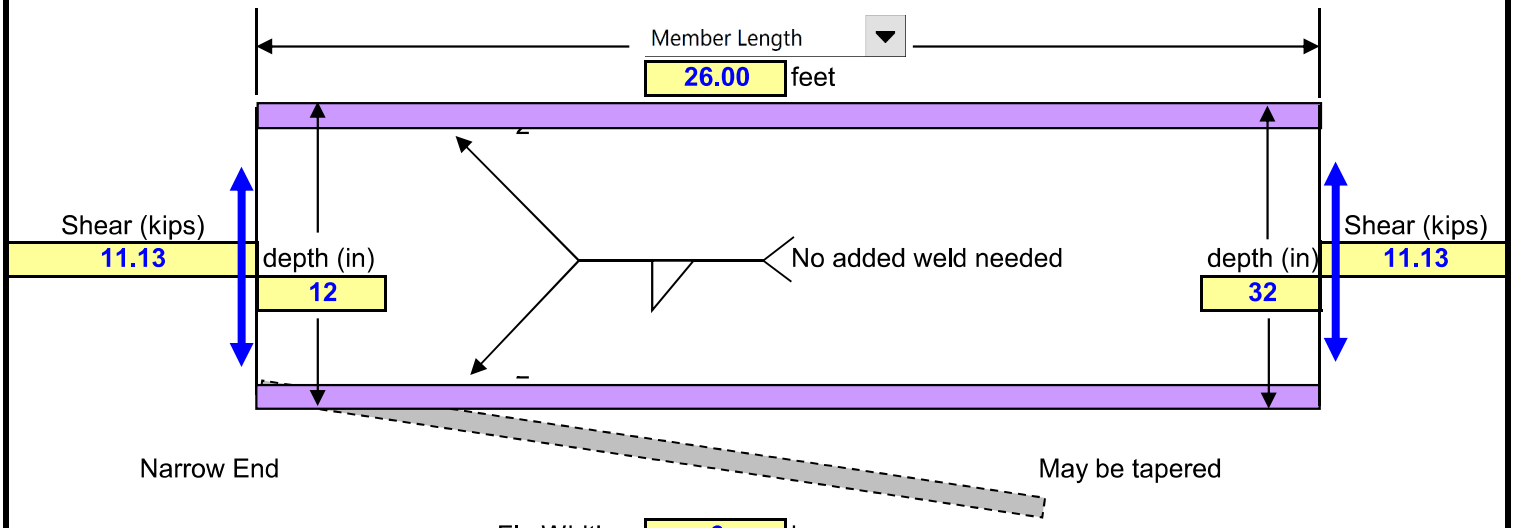
CONRAC WELD CHECK

Submerged Arc Welding Process

DM Sec 3.5 Rev 5 - Dec-2012

Job No.:
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Prepared By:
Reviewed By:

Notes: column at grid 3/A and 3/G



Flg Width = 6 in
Flg Tk = 0.375 in
Web Tk = 0.1644 in

CSA S16.1-09

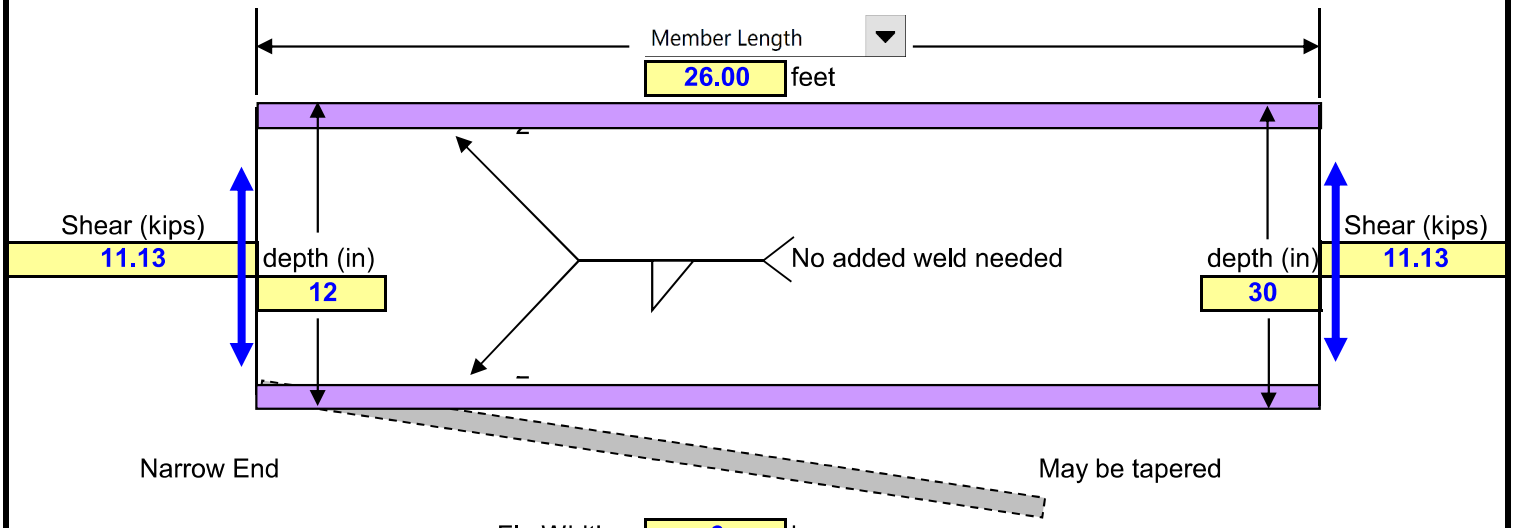
Design per Canadian CSA S16.1-2009

Critical location =	0.0	feet from left end
Ix =	171.59	in^4
Q =	13.08	in^3
v = VQ/I =	**0.85**	**kips/in horizontal shear req'd strength**
Conrac weld size =	0.125	(inches) SAW fillet weld
Nominal weld metal strength (F_w) =	46.90	ksi
Effective Area (A_w) =	0.1326	in per W59-03 Clause 4.3.2.4
Weld Strength =	**4.17**	**kips/in** ϕ = 0.67
Req'd Strength / Avail Strength ratio =	0.20	Safe

Standard conrac weld OK

BLUESCOPE BUILDINGS	CONRAC WELD CHECK Submerged Arc Welding Process DM Sec 3.5 Rev 5 - Dec-2012	Job No.: Page: to Date: 9/13/2019 Prepared By: Reviewed By:

Notes: column at grid 5/A and 5/G



Flg Width = 6 in
Flg Tk = 0.375 in
Web Tk = 0.1644 in

CSA S16.1-09

Design per Canadian CSA S16.1-2009

Critical location =	0.0	feet from left end
Ix =	171.59	in^4
Q =	13.08	in^3
v = VQ/I =	**0.85**	**kips/in horizontal shear req'd strength**
Conrac weld size =	0.125	(inches) SAW fillet weld
Nominal weld metal strength (F_w) =	46.90	ksi
Effective Area (A_w) =	0.1326	in per W59-03 Clause 4.3.2.4
Weld Strength =	**4.17**	**kips/in** ϕ = 0.67
Req'd Strength / Avail Strength ratio =	0.20	Safe

Standard conrac weld OK

BLUESCOPE BUILDINGS

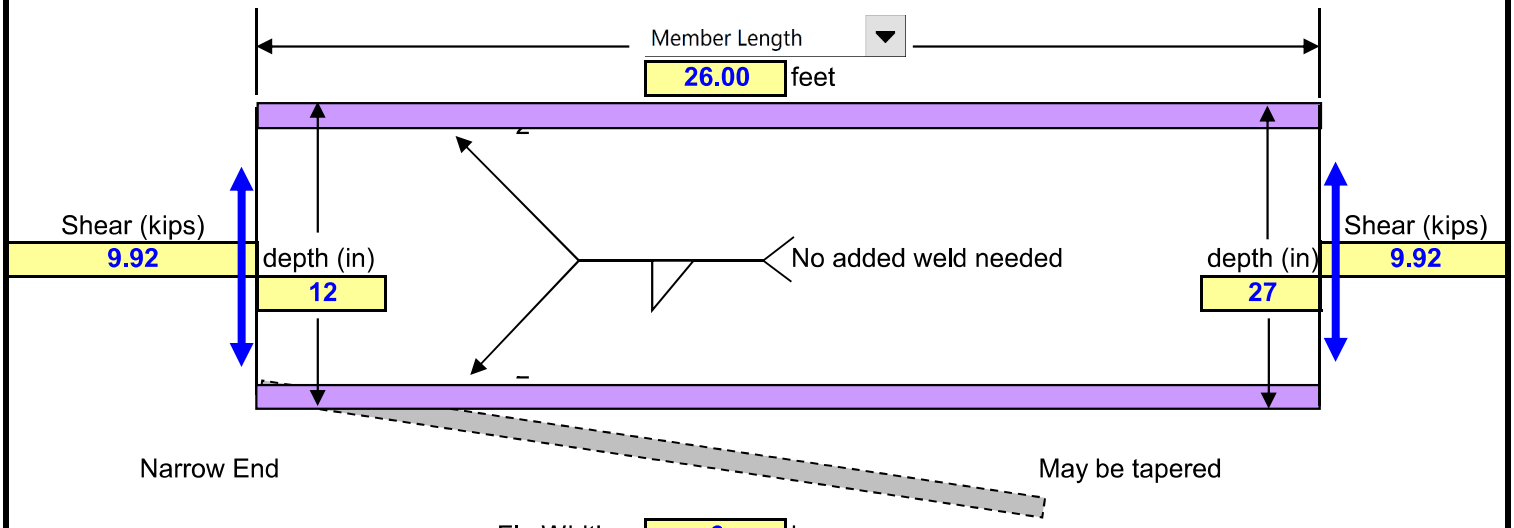
CONRAC WELD CHECK

Submerged Arc Welding Process

DM Sec 3.5 Rev 5 - Dec-2012

Job No.:
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Prepared By:
Reviewed By:

Notes: column at grid 6/A and 6/G



Flg Width =	6	in
Flg Tk =	0.375	in
Web Tk =	0.1644	in

CSA S16.1-09

Design per Canadian CSA S16.1-2009

Critical location =	0.0	feet from left end
Ix =	171.59	in^4
Q =	13.08	in^3
v = VQ/I =	**0.76**	**kips/in horizontal shear req'd strength**
Conrac weld size =	0.125	(inches) SAW fillet weld
Nominal weld metal strength (F_w) =	46.90	ksi
Effective Area (A_w) =	0.1326	in per W59-03 Clause 4.3.2.4
Weld Strength =	**4.17**	**kips/in** ϕ = 0.67
Req'd Strength / Avail Strength ratio =	0.18	**Safe**

Standard conrac weld OK