



PARIC CORPORATION
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St. Louis, MO 63146
TEL: 636-561-9500
FAX: 636-561-9501

REQUEST FOR INFORMATION	DATE: March 09, 2017	NO.: RFI-476
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To: Cannon Design

Attn: Kelvin Patel

From: Paric Corporation

Requested By: Devin Gates

Project Name: 15051-Webster University Interdisciplinary Science Building	Project No.: 15051
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Subject: Movement joint at East Elevation between D and B lines

Response Required By: March 16, 2017

Drawing / Spec Reference:

Information Requested:

The Cold formed metal framing was installed continuous along 8.1 line near columns B & D at the highlighted areas on the attached plan at the 2nd and 3rd floor head of windows. This area is approx. 5' long and adjacent to the columns. We have verified with the CFMF engineer the deflection is negligible (see attached calculations). Please advise if the CFMF can remain continuous in these locations.

Response: THE CFMF AT THESE FOUR LOCATIONS MAY BE ACCEPTABLE BASED ON THE HORIZ DEFLECTION OF 1/32" NOTED IN THE CFMF CALCULATIONS ATTACHED AND THE DIFFERENTIAL VERTICAL MOVEMENT BETWEEN FLOORS ANTICIPATED TO BE APPROX 1/16". VERIFY THAT THE WEATHERPROOFING SYSTEM, AVB, WILL BE ABLE TO EXPAND/CONTRACT FOR THIS MOVEMENT.

ARCHITECT'S RESPONSE:

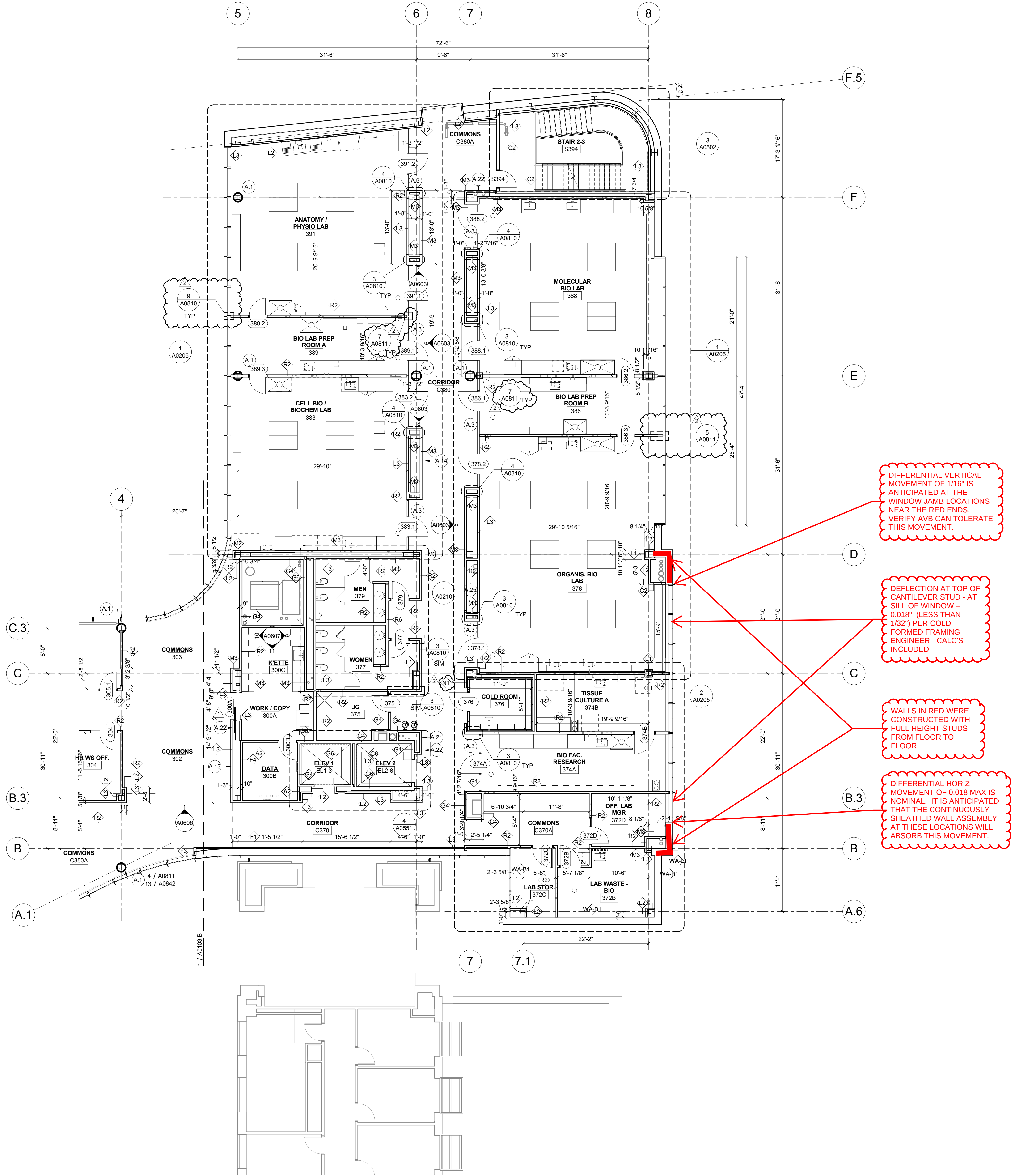
This information is provided as an interpretation of the Contract Documents for implementation. It is not an authorization for change to the Contract Sum or Contract Time. If this information results in a claim for a change to the Contract, the Contractor shall notify the [Construction Manager][Architect] of a change through the change process.

Answered By: JILL WALKER / DMA

Date: 03.16.2017

KEYED NOTE LEGEND - PLAN

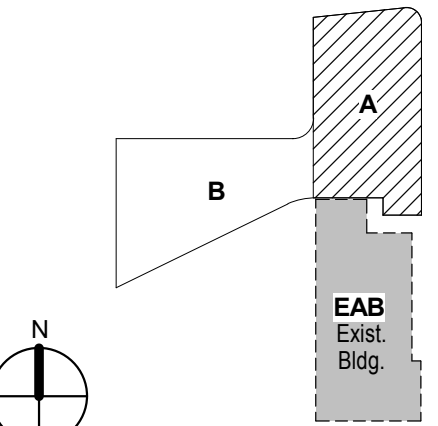
- A.1 092709 GRG COLUMN COVER TO 3" ABOVE CEILING - 20" DIA. TYP. SEE DETAIL 4/A0811 AND 13/A0842.
- A.2 081216 INTERIOR GLAZING SYSTEM: IGS-1: REFER TO TYPICAL INT. ELEVATIONS 1 AND 2 ON SHEET A0803
- A.3 081216 INTERIOR GLAZING SYSTEM IGS-2: SEE TYPICAL ELEVATION 5 AND 6 A0603
- A.4 081216 INTERIOR GLAZING SYSTEM: IGS-3: REFER TO INTERIOR ELEVATIONS
- A.5 088813 FIRE RATED GLAZING- 120 MIN. FIRE RATED GLAZING 10'-0" HIGH. BASIS OF DESIGN: VETROTECH CONTRAFILAMM STRUTTURA - WITH BUTT JOINTS AND PERIMETER FRAMING
- A.6 088813 FIRE RATED GLAZING AND FRAME- 120 MIN. FIRE RATED GLAZING 1'-8" HIGH X 5'-0" WIDE. BASIS OF DESIGN: VETROTECH CONTRAFILAMM WITH PERIMETER FRAMING
- A.7 111519 LOADING DOCK LIFT - STATIONARY - 6W X 8' DEEPW/ 14" PIT
- A.8 ALTERNATING TREAD STAIRWAY UP TO ROOF HATCH
- A.9 UNDERSLAB DRAINAGE SYSTEM PER OWNER'S GEOTECHNICAL CONSULTANT RECOMMENDATION TYPICAL ALL SLAB ON GRADE AREAS
- A.11 NEW CONCRETE STEPS TO MATCH EXISTING REMOVED FOR CONSTRUCTION
- A.12 553006 BRICK FACED CONCRETE DUMPSTER ENCLOSURE TOP OF WALL
- A.13 LCD SIGNAGE SCREEN IN WALL RECESS (OFCI)
- A.14 MARKERBOARD SURFACE
- A.15 WOOD SCREEN W/ SOLID LUMBER
- A.17 VIDEO WALL - 24 55" SCREENS
- A.18 LCD SCREEN LOCATION (OFOI)
- A.19 AIR PLENUM - INSULATED PLENUM CONSTRUCTION BY DIVISION 23
- A.20 122200 CURTAIN LOCATION
- A.21 104313 AED CABINET LOCATION
- A.22 10 4413 FEC WITH FIRE EXTINGUISHER
- A.23 08 4423 SULL SASH LOCATION: PROVIDE 1/4" TEMPERED CLEAR GLAZING AT INTERIOR FACE OF CURTAIN WALL MULLIONS FOR ACOUSTICAL SEPARATION.
- A.24 6" X 8" FORMED CONCRETE TRENCH IN FLOOR W/ METAL PLATE COVER. PROVIDE BLIND SIDE WATERPROOFING
- A.25 BUILT IN SALT WATER FISH TANK LOCATION. SIZE APPROX. 7'-6" X 2'-4" X 2'-6" HIGH. LOW IRON GLASS VIEW WINDOW ON CORRIDOR SIDE. SLIDING DOOR ON LAB SIDE. FISH TANK EQUIPMENT BELOW TANK W/ CABINET DOOR ACCESS ON LAB SIDE. FINISHED INTERIOR FACE OF WALLS AND CEILING INSIDE CAVITY W/ WATER RESISTANT GYP BOARD AND EPOXY PAINT.
- A.26 LCD SIGNAGE SCREEN IN WALL RECESS (OFCI)
- A.27 CONSTRUCT 2 HOUR RATED SEPARATION BETWEEN BOTTOM OF STAIR AND UTILITY PIPING CROSSING THIS AREA. USE HORIZ. GYP BD. ENCLOSURE ON SHEET A1002



1 LEVEL 03 AREA A - NORTH FLOOR PLAN
1/8" = 1'-0"

CONFORMED SET 01 JUL 2016

2	ADDENDUM 3-2	15 APR 2016
1	ADDENDUM 3-1	06 APR 2016
-	ISSUED FOR CONSTRUCTION (BP3)	15 MAR 2016
No.	Description	Date



KEY PLAN

Drawing Title:

LEVEL 03 AREA A FLOOR
PLAN

Project No.: 04561.01 Checked by:

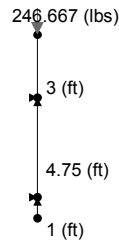
A0103.A

Company: THHinc McClure
 Address:
 Country: United States
 State: Missouri
 Zip Code:

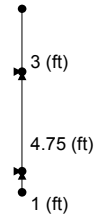
PARIC Webster ISB
 Ribbon Window On East Face

Date:

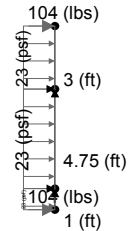
User Defined Curtain Wall Layout



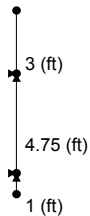
Dead Load



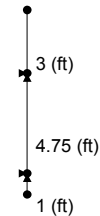
Live Load



Wind Load



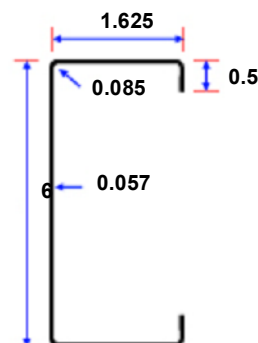
Seismic Load



Snow/Roof Live Load

Gross Section Properties:

Ix (major) (in4)	2.861
Sx (major) (in3)	0.954
rx (major) (in)	2.268
Iy (minor) (in4)	0.18
Sy (minor) (in3)	0.149
ry (minor) (in)	0.57
Area (in²)	0.556
Xo (in)	-1.049
J x 1000 (in4)	0.594
Cw (in6)	1.337
Ro (in)	2.563
Weight (lbs/ft)	1.893



600S162-54mil, 50 ksi

Wall Information:

Design Code	2009 IBC w/ AISI S100-07
Design Method	ASD
Wall Height (ft)	8.75
Stud Spacing (in)	16

Material Properties:

Fy (ksi)	50
Fu (ksi)	65
E (ksi)	29500
G (ksi)	11300

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Allowable Hl. Deflection L /	360
Absolute Deflection (in)	1
Dead Load (lbs/ft)	80
Wall Own Weight (psf)	12
Max. Bridging Spacing (ft)	5
Deflection calculation method at parapet free end	Relative value considered

Span Loads:

Span	Wind Load (psf)
1	23
2	23
3	23

Bracing Data:

Lateral Bracing (in)	@ Bridging Spacing
Torsional Bracing (in)	@ Bridging Spacing
K ϕ Distortional Buckling Rotational Stiffness (lbf-in./in.)	0

Reactions:

Joint	Rx (kips)	Ry (kips)	Rm (kips.in)
2	-0.138	0	0
3	-0.338	0.247	0

Unfactored Reactions:

Load Case	Joint	Rx (kips)	Ry (kips)	Rm (kips.in)
Dead Load	2	0	0	0
Dead Load	3	0	0.247	0
Live Load	2	0	0	0
Live Load	3	0	0	0
Wind Load	2	-0.138	0	0
Wind Load	3	-0.338	0	0
Seismic Load	2	0	0	0
Seismic Load	3	0	0	0
Snow/Roof Live Load	2	0	0	0
Snow/Roof Live Load	3	0	0	0

Design Options:

° Section Layout	Single
° Fastener Spacing (in)	N/A
° Standard Punchout	Considered
° Strength Increase from Cold Work of Forming (AISI, Sec. A7.2)	Considered
° CMx	1
° Cb	1
° Shear Coeff. Kv	5.34
° X (in)	4

Note:Applied Members Loads are calculated from Wall Loads

Joint Supports:

Joint	Support Type
1	Unsupported
2	Hinged
3	Hinged
4	Unsupported

Joint Loads:

#	Load Case	Axial (lbs)	Lateral (lbs)	M (lbs.ft)
4	Dead Load	246.667	0	0
1	Wind Load	0	104	0
4	Wind Load	0	104	0

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Member Loads:

#	Load Case	Axial	Lateral	Moment	X/L
1	Wind Load	0 (lbs/ft)	30.667 (lbs/ft)	0.0 (lbs/ft)	Uniform
2	Wind Load	0 (lbs/ft)	30.667 (lbs/ft)	0.0 (lbs/ft)	Uniform
3	Wind Load	0 (lbs/ft)	30.667 (lbs/ft)	0.0 (lbs/ft)	Uniform

Load Combination Factors:

#	Dead	Live	Wind	Seismic	Snow/Roof Live Load	Used For
1	1	0	0	0	0	Strength
2	1	1	0	0	0	Strength
3	1	0	0	0	1	Strength
4	1	0.75	0	0	0.75	Strength
5	1	0	1	0	0	Strength
6	1	0	0	0.7	0	Strength
7	1	0.75	0.75	0	0.75	Strength
8	1	0.75	0	0.525	0.75	Strength
9	0	0	0.7	0	0	Deflection
10	0	0	0	0.7	0	Deflection

Capacity Check:

Member		Moment (kips.in)	Shear (kips)	Tension (kips)	Compression (kips)	Hz. Deflection (in)	Crippling (kips)
1	Actual	1.432	0.135	N/A	N/A	0.001	N/A
	Allowable	26.582	2.823	17.268	8.935	0.067	N/A
	Act./All.	0.054	0.048	N/A	N/A	0.009	N/A
	X/L	1.000	1.000	N/A	N/A	N/A	N/A
2	Actual	5.4	0.117	N/A	N/A	0.009	N/A
	Allowable	25.528	1.947	15.321	4.787	0.158	N/A
	Act./All.	0.212	0.060 *	N/A	N/A	0.055	N/A
	X/L	1.000	0.825	N/A	N/A	N/A	N/A
3	Actual	5.4	0.17	N/A	0.247	0.018	N/A
	Allowable	25.728	1.947	15.321	6.945	0.2	N/A
	Act./All.	0.210	0.088 *	N/A	0.036 *	0.089	N/A
	X/L	0.000	0.278	N/A	0.300	N/A	N/A

Effective Section Properties:

Member	Value
1	Ae(Comp.) (in ²)
	Sxe (in ³)
	Ixe (in ⁴)
	Fy Design (ksi)
2	Ae(Comp.) (in ²)
	Sxe (in ³)
	Ixe (in ⁴)
	Fy Design (ksi)
3	Ae(Comp.) (in ²)
	Sxe (in ³)
	Ixe (in ⁴)
	Fy Design (ksi)

Design for Web Crippling is Disabled

Interaction Check (kips.in, kips):

Member	Combined (M,V)		Combined (M,Pcr)		Combined (M,T)		Combined (M,P)	
1	Moment(Mx)	1.432	Moment(Mx)	N/A	Moment(Mx)	N/A	Moment(Mx)	N/A
	Shear(Vy)	-0.135	Pcr (Crippling)	N/A	Tension (T)	N/A	Comp. (P)	N/A
	Act./All.	0.067	Act./All.	N/A	Act./All.	N/A	Act./All.	N/A
	X/L	1.000	X/L	N/A	X/L	N/A	X/L	N/A
2	Moment(Mx)	5.4	Moment(Mx)	N/A	Moment(Mx)	N/A	Moment(Mx)	N/A
	Shear(Vy)	-0.142	Pcr (Crippling)	N/A	Tension (T)	N/A	Comp. (P)	N/A
	Act./All.	0.185	Act./All.	N/A	Act./All.	N/A	Act./All.	N/A
	X/L	1.000	X/L	N/A	X/L	N/A	X/L	N/A
3	Moment(Mx)	5.4	Moment(Mx)	N/A	Moment(Mx)	N/A	Moment(Mx)	5.4
	Shear(Vy)	0.196	Pcr (Crippling)	N/A	Tension (T)	N/A	Comp. (P)	-0.247
	Act./All.	0.191	Act./All.	N/A	Act./All.	N/A	Act./All.	0.245
	X/L	0.000	X/L	N/A	X/L	N/A	X/L	0.000

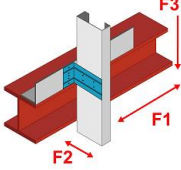
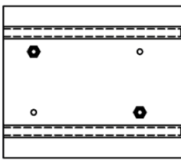
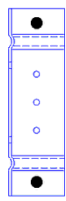
Company: THHinc McClure
Address:
Country: United States
State: Missouri
Zip Code:

PARIC Webster ISB
Ribbon Window On East Face

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User Defined Curtain Wall Layout

Connection Data:

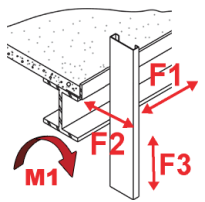
1	Clip Data	Clip Position	Bypass Connection @ joint 2	
		Clip Type	StiffClip LB600	
		Screws	2 (#12)	
	Allowable Loads	F1 (kips)	0.536	
		F2 (kips)	1.954	
		F3 (kips)	1.792	
		M1 (kips.in)	N/A	
		Screw Shear (kips)	0.569	
		Screw Tension (kips)	0.225	
	Actual Loads	F1 (kips)	0.000	
		F2 (kips)	-0.138	
		F3 (kips)	0.000	
		M1 (kips.in)	N/A	
		Screw Shear (kips)	0.069	
		Screw Tension (kips)	0.000	
	Interaction	Clip Linear Interaction ratio	0.071	
		Screws Linear Interaction ratio	N/A	
	Base Material	Material	Steel with fy >= 36 ksi	
		Concrete Compressive Strength (psi)	N/A	
	Attachment to Structure	Fastener Designation	X-U, 0.157(in)	
		Quantity	2	
		Min. Penetration (in)	0.188	
		Min. Edge Distance for Shear (in)	0.5	
		Min. Edge Distance for Tension (in)	0.5	
		Min. Fastener Spacing for Shear (in)	1	
		Min. Fastener Spacing for Tension (in)	1	
		Allowable Shear (kips)	0.72	
		Allowable Tension (kips)	0.535	
	Fastener Design Load	Actual Shear (kips)	0.000	
		Actual Tension (kips)	0.114	
		Interaction Ratio	N/A	
		Tensile Strength Reduction Factor	1.000	
		Shear Strength Reduction Factor	1.000	

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2	Clip Data	Clip Position	Bypass Connection @ joint 3	
		Clip Type	None	
		Screws	N/A	
	Allowable Loads	F1 (kips)	N/A	
		F2 (kips)	N/A	
		F3 (kips)	N/A	
		M1 (kips.in)	N/A	
		Screw Shear (kips)	N/A	
		Screw Tension (kips)	N/A	
	Actual Loads	F1 (kips)	0.000	
		F2 (kips)	-0.338	
		F3 (kips)	0.247	
		M1 (kips.in)	0.000	
		Screw Shear (kips)	N/A	
		Screw Tension (kips)	N/A	
	Interaction	Clip Linear Interaction ratio	N/A	
		Screws Linear Interaction ratio	N/A	
	Base Material	Material	N/A	
		Concrete Compressive Strength (psi)	N/A	
	Attachment to Structure	Fastener Designation	N/A	
		Quantity	N/A	
		Min. Penetration (in)	N/A	
		Min. Edge Distance for Shear (in)	N/A	
		Min. Edge Distance for Tension (in)	N/A	
		Min. Fastener Spacing for Shear (in)	N/A	
		Min. Fastener Spacing for Tension (in)	N/A	
		Allowable Shear (kips)	N/A	
		Allowable Tension (kips)	N/A	
	Fastener Design Load	Actual Shear (kips)	N/A	
		Actual Tension (kips)	N/A	
		Interaction Ratio	N/A	
		Tensile Strength Reduction Factor	N/A	
		Shear Strength Reduction Factor	N/A	

- When more than one load affect a connection, simple linear relationship is used to check the interaction of multiple loads acting on the connection.
- Fastener attachment of connectors to the primary structure should be reviewed by a design professional.
- Displayed actual & allowable are for one fastener.