

ALBERT EINSTEIN COLLEGE OF MEDICINE
OF YESHIVA UNIVERSITY
BRONX, NEW YORK

1.0 DESIGN ASSUMPTIONS

Location: Bronx, NY
Design Based on: Building Code of New York State

(ASCE 7-98)

Wind Load: Components and Cladding

Basic Wind Speed: $V = 90$ mph (assumed)
Mean Building Height: $h = 57$ ft
Min. Building Width: $w = 126$ ft
Importance Factor: $I = 1.00$ (assumed)
Exposure: C (assumed)
Velocity Pressure Coefficient: $K_z = 1.05$
Wind Directionality Factor: $K_d = 0.85$
Topographic Factor: $K_{zt} = 1.0$
Basic Velocity Pressure: $q_v = 0.00256 \cdot K_z \cdot K_{zt} \cdot K_d \cdot V^2$

Internal Pressure Coefficient: $GC_{pi} = ? 0.18$
Design Wind Pressure: $P = q_v \cdot [(GC_p) - (GC_{pi})]$

Walls - Interior Zone
 $P = -23.2$ psf (calculated)

Walls - Corner Zone
 $P = -28.5$ psf (calculated)

Edge Zone - $a = \min(0.1 \cdot w \text{ or } 0.4 \cdot h) = 13' > 3'$ or 4% w

Deflection Criteria:
Exterior Walls (E.I.F.S) = $L/360$
Deflection of primary structure = $3/8"$ per S-101

The design of this project was based on the architectural and structural drawings dated 02/10/06 provided by Marjam Supply Company, Inc.

2.0 PRODUCT IDENTIFICATION

- 2.1 Marino/Ware is a member of the Steel Stud Manufacturers Association (SSMA.com). Marino/Ware meets or exceeds all product requirements set forth by SSMA. The table below is a comparison between SSMA & Marino/Ware product nomenclature.
- 2.2 Marino/Ware owns the following registered trade marks:
- STUD-RITE, JOIST-RITE, BRIDGE-RITE
TRUSS-RITE
- 2.3 Marino/Ware system components include:
- WSC-950: Curtain wall slide clip to vertical surface.
WSC-1500
-WSC-Outrigger: Curtain wall slide clip to horizontal surface.
-WSC-Deflex: Curtain wall top slide clip to bottom of structure.
3T-1000: 3-5/8" Wall Studs
6T-1000: 6" Wall Studs
-BRC-3 & BRC-6: Pre cut, pre punched bridge clip.

SSMA

Marino/Ware

Member Depth (Web Size)

Member Depth (Web Size)	SSMA	Marino/Ware
2-1/2"	250	212
3-5/8"	362	358
6"	600	6
12"	1200	12

Member Type

Member Type	SSMA	Marino/Ware	Flange Width
Studs	S137	CW	1-3/8"
	S162	SW	1-5/8"
	S200	J	2"
	S250	JE	2-1/2"
	S300	JX	3"
Tracks	S350	JXW	3-1/2"
	T125	T	1-1/4"
	T200	DT	2"

Material Thickness / Gauge

Mills	Gauge	Design Thickness	Minimum Thickness	Color Code
33	20	.0346"	.0329"	White
43	18	.0451"	.0428"	Yellow
54	16	.0566"	.0538"	Green
68	14	.0713"	.0677"	Orange
97	12	.1017"	.0969"	Red
118	10	.1242"	.1180"	Blue

3.0 GENERAL

- 3.1 Dimensions shown in this shop drawing package are for design reference only. Contract drawings should be used in determining exact distances and all conditions should be field verified before erection.
- 3.2 Marino/Ware Design Group does not assume any responsibility for the adequacy of the primary structure and foundation design.
- 3.3 All connections shall be complete as per the plans and specifications at the time of installation. Failure to promptly complete connections may compromise the structural integrity of the building.

3.0 GENERAL (Cont'd)

- 3.4 Precautions must be taken to avoid construction loads exceeding design live loads. Construction loads have not been considered in these recommendations.
- 3.5 Marino/Ware Design Group recommendations are minimum requirements of Marino/Ware member sizes that are adequate for the given loading conditions as specified in the Design Assumptions; heavier gauges may be substituted.
- 3.6 Marino/Ware Design Group assumes no liability for failure resulting from incorrect application or installation of the steel framing system. Marino/Ware steel framing products must not be used in the design of a structure without complete and detailed evaluation to verify any particular product's suitability for use in any structure. This verification must be accomplished by the owner's architect and/or structural engineer of record.
- 3.7 Marino/Ware Design Group shop drawings are intended to be used with Marino/Ware light steel framing products. The use of any light steel framing products that are not manufactured by Marino/Ware, unless specified in the shop drawings, is strictly prohibited and will result in nullification of the professional engineer's seal and any implied support by Marino/Ware Design Group.
- 3.8 The shop drawings have been designed in accordance with the AISI "Code of Standard Practice for Cold-Formed Steel Structural Framing - 2005 Edition."

4.0 CONNECTIONS

- 4.1 All metal to metal screw connections are based on Section E4 of the 2001 AISI Specification for Design of Cold-Formed Steel Structural Members which outlines provisions for metal to metal screw connections.
- 4.2 For screws, 3/4" minimum clearance must be maintained from all edges of the steel members. A 3/4" minimum on center spacing must be maintained between adjacent screws.
- 4.3 Powder driven fastener systems, expansion anchor systems, masonry screw systems, and adhesive anchor systems connections are based on literature published by Hilli Fastening Systems, Inc. Alternate manufacturer's fasteners of comparable specifications and load capacities are acceptable.
- 4.4 All welded connections are to be performed in accordance with the latest version of AWS D1.3-98 specifications for Welding Sheet Steel in Structures. Refer to AWS D19.0 Welding Zinc Coated Steel and ANSI standard Z49.1 for information regarding safe welding procedures.
- 4.5 Minimum weld throat thickness (t) must match or exceed the base steel thickness of the thinnest connected part unless noted otherwise.

5.0 STUDS

- 5.1 All field cutting of studs must be done by sawing or shearing. Torch cutting of cold-formed members is unacceptable.
- 5.2 No notching or coping of studs is allowed, unless stated within this shop drawing package.
- 5.3 Ends of studs must seat firmly in runner track, which must have full bearing on structure.

5.0 STUDS (Cont'd)

- 5.4 Splicing of wall studs is not allowed, unless otherwise stated within this shop drawing package.
- 5.5 Framing fabricator is to ensure punchout alignment when assembling lateral bracing and field cutting studs to length. Lateral bracing must be installed at the time the wall is erected. Failure to install bracing at this time may compromise the structural integrity of the building.
- 5.6 Temporary bracing shall be provided and remain in place until work is completely stabilized.
- 5.7 Use a minimum of three studs at the corner of all exterior walls.
- 5.8 Use a minimum of three studs at the intersection of all load bearing walls (exterior / or interior).
- 5.9 Joist or roof member must bear directly over stud. If not, a structural member (by others) is required on top of runner track for proper bearing and anchorage.
- 5.10 Studs from floor above must bear directly over joists. If not, a structural member (by others) is required on top of joist for proper bearing.

6.0 HEADERS

- 6.1 All headers / built-up beams are to be constructed with UNPUNCHED material only.
- 6.2 Splicing of headers is not allowed, unless otherwise stated within this shop drawing package.

Project Engineer

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List of Drawings

LSF-1.0 GENERAL NOTES
LSF-1.1 KEY PLAN
LSF-2.0 - 2.7 SECTIONS & ELEVATIONS
LSF-3.0 - 3.2 TYPICAL DETAILS

REVISIONS

Marino/Ware Design Group assumes no liability for the application or installation of the steel framing system. The use of Marino/Ware steel framing products that are not manufactured by Marino/Ware is strictly prohibited and will result in nullification of the professional engineer's seal and any implied support by Marino/Ware Design Group. A complete and detailed evaluation for product suitability must be accomplished by the owner's architect or structural engineer.

Rahim A. Zadeh, P.E.

NY PROFESSIONAL ENGINEER
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MARINO WARE
DesignRite

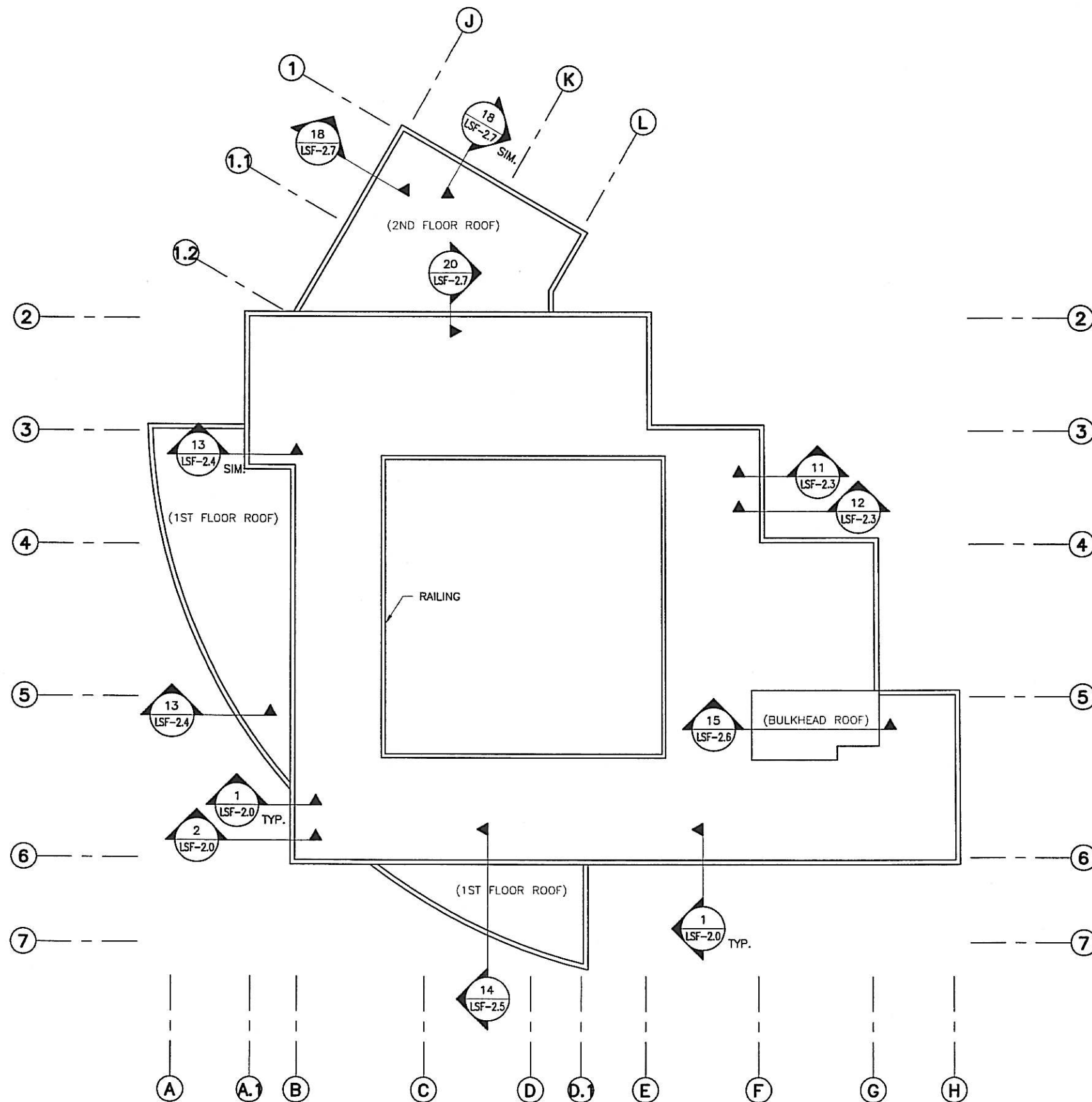
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DRAWN BY: L.MAK
DATE: 02/14/07
SCALE: N.T.S.
JOB NUMBER:
71087

GENERAL

NOTES

DWG. NUMBER:

LSF-1.0



1 KEY PLAN
ROOF

REVISIONS

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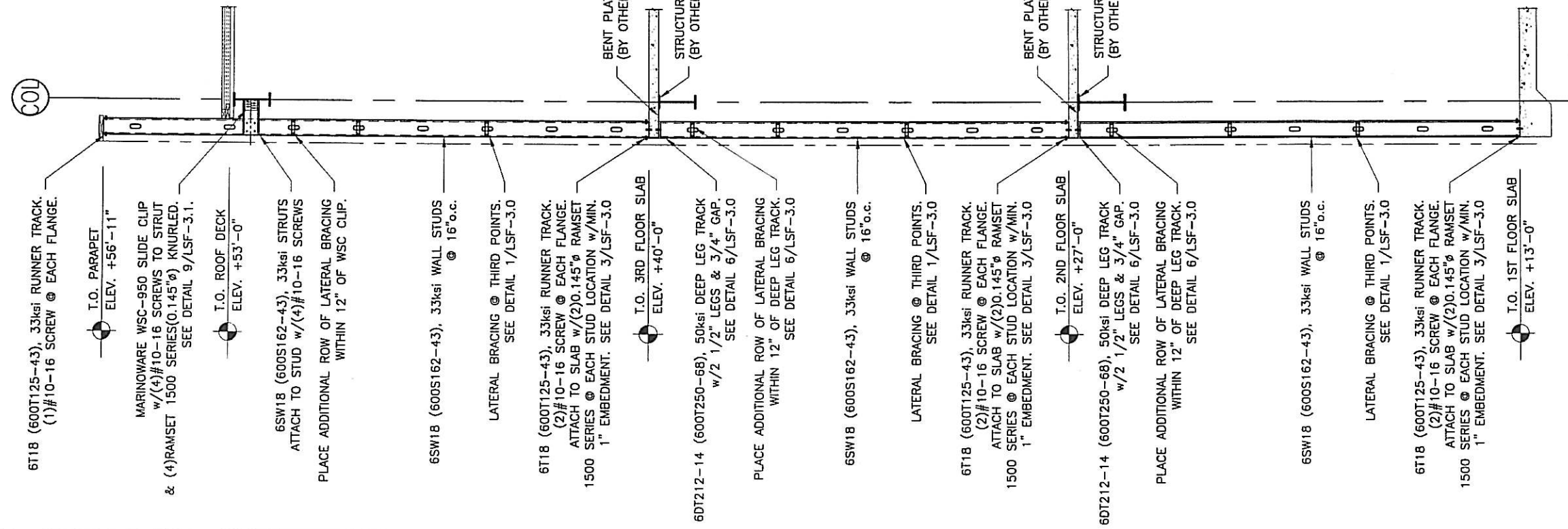
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DATE: 02/14/07
SCALE: N.T.S.
JOB NUMBER:
71067

KEY PLAN

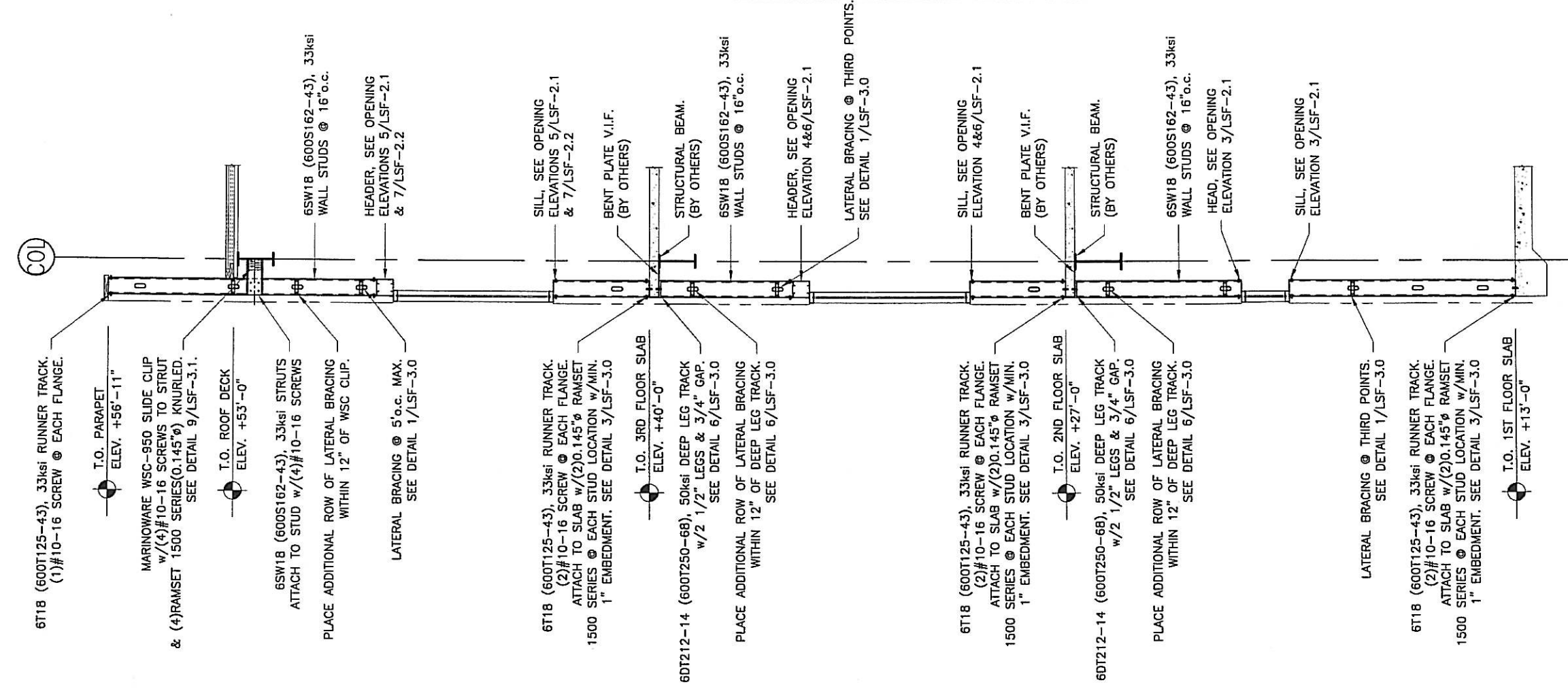
ROOF

DWG. NUMBER:

LSF-1.1



1 WALL SECTION
REF: SIM. 1/A-502



2 WALL SECTION
REF: 1/A-502



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ENGR: T. HOGAN
 DRAWN BY: JAK
 DATE: 2/14/07
 SCALE: N.T.S.
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**SECTIONS &
ELEVATIONS**

DWG. NUMBER:
LSF-2.0

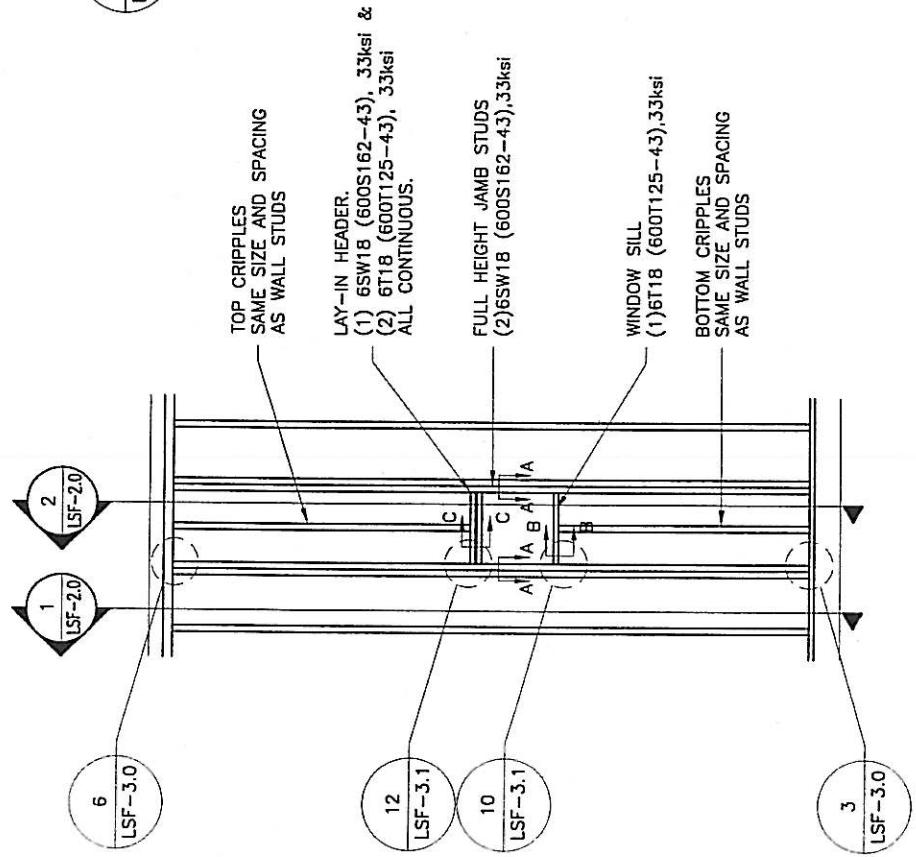
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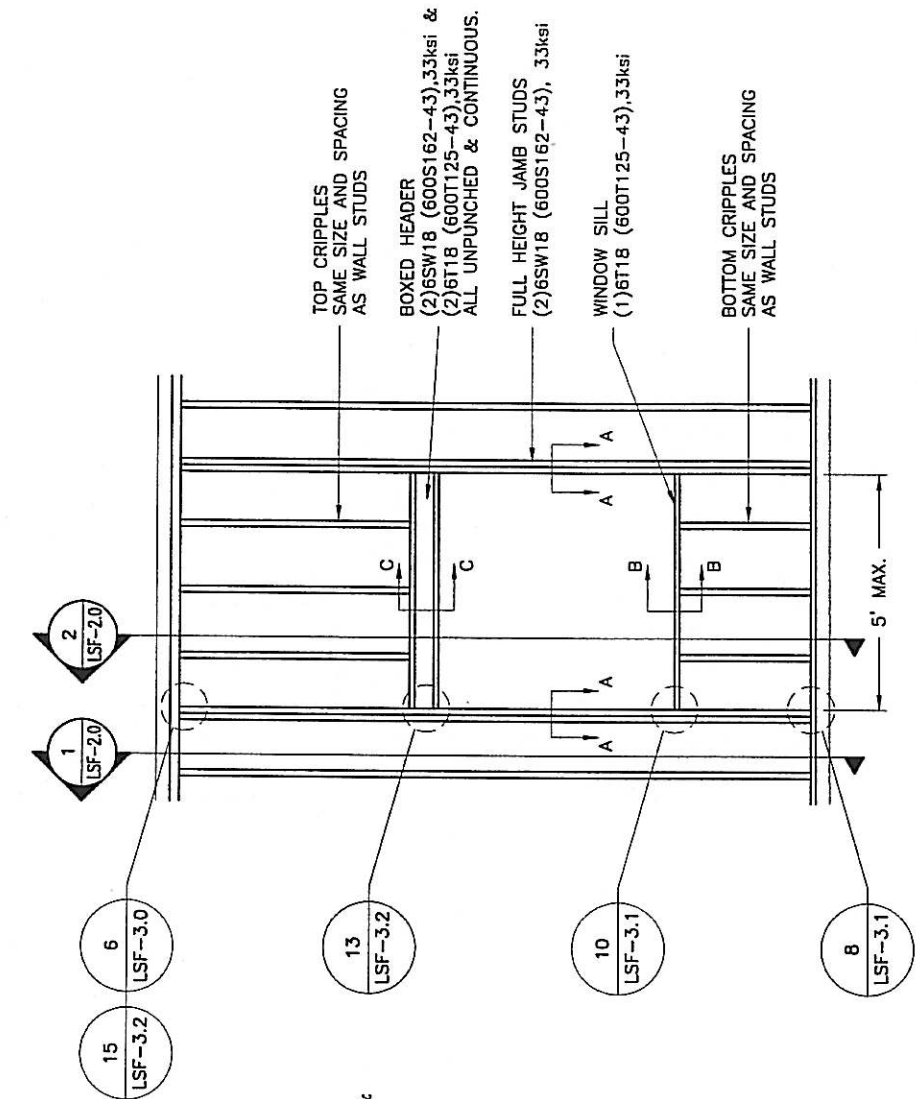
Rahim A. Zadeh, P.E.

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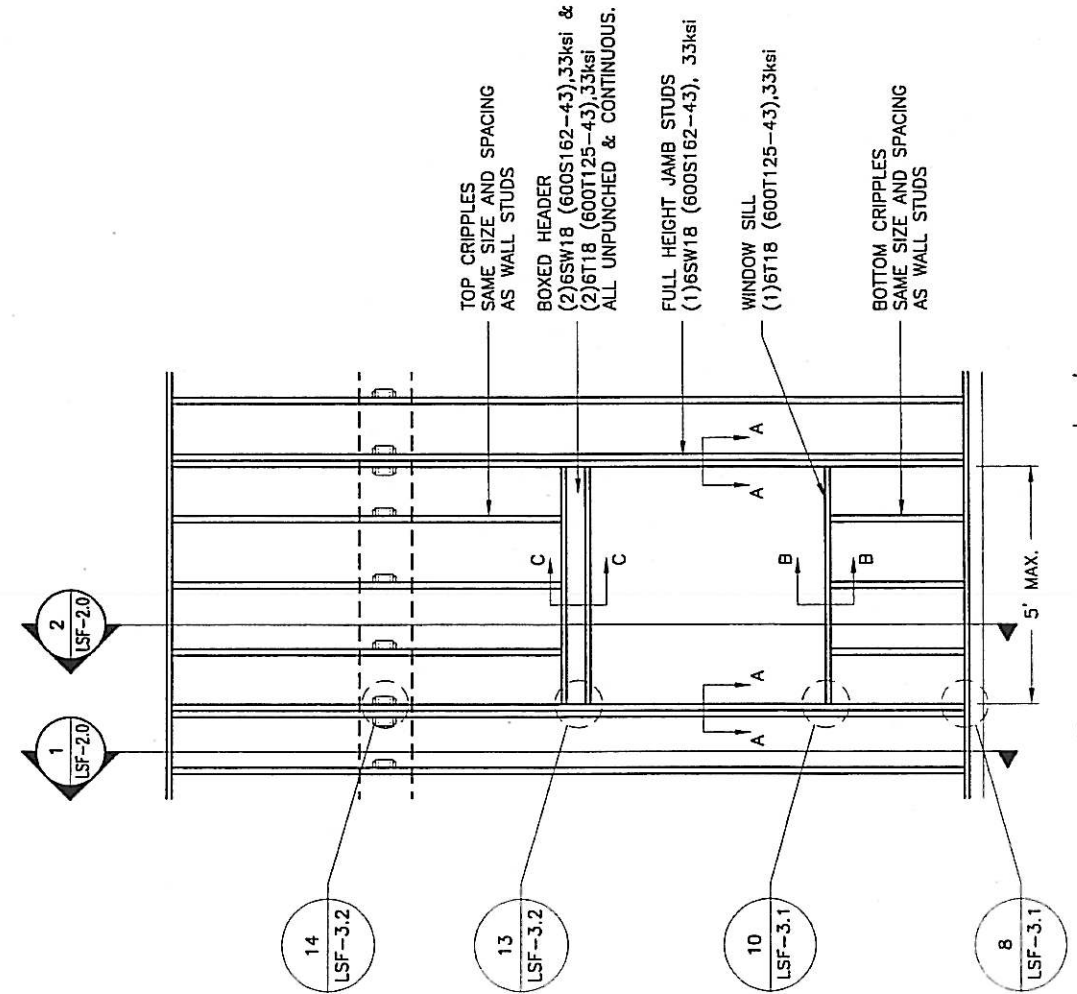
SECTION A-A SECTION B-B SECTION C-C

3 OPENING ELEVATION
REF: WINDOW 3, 1ST FLOOR



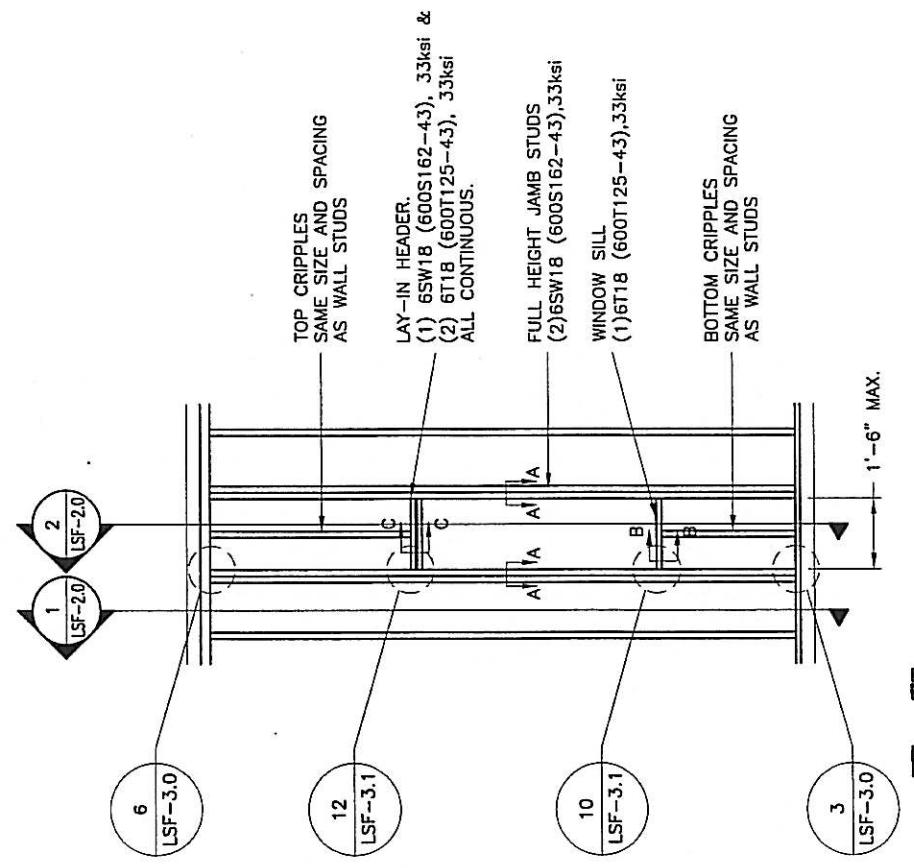
SECTION A-A SECTION B-B SECTION C-C

4 OPENING ELEVATION
REF: WINDOW 1 & 2, 1ST & 2ND FLOOR



SECTION A-A SECTION B-B SECTION C-C

5 OPENING ELEVATION
REF: WINDOW 1 & 2, 3RD FLOOR



SECTION A-A SECTION B-B SECTION C-C

6 OPENING ELEVATION
REF: WINDOW 4, 2ND FLOOR

ENGR. T. JACOB	SECTIONS & ELEVATIONS
DRAWN BY: ADK	DWG. NUMBER: LSF-2.1
DATE: 2/14/07	
SCALE: N.T.S.	
JOB NUMBER: 71087	



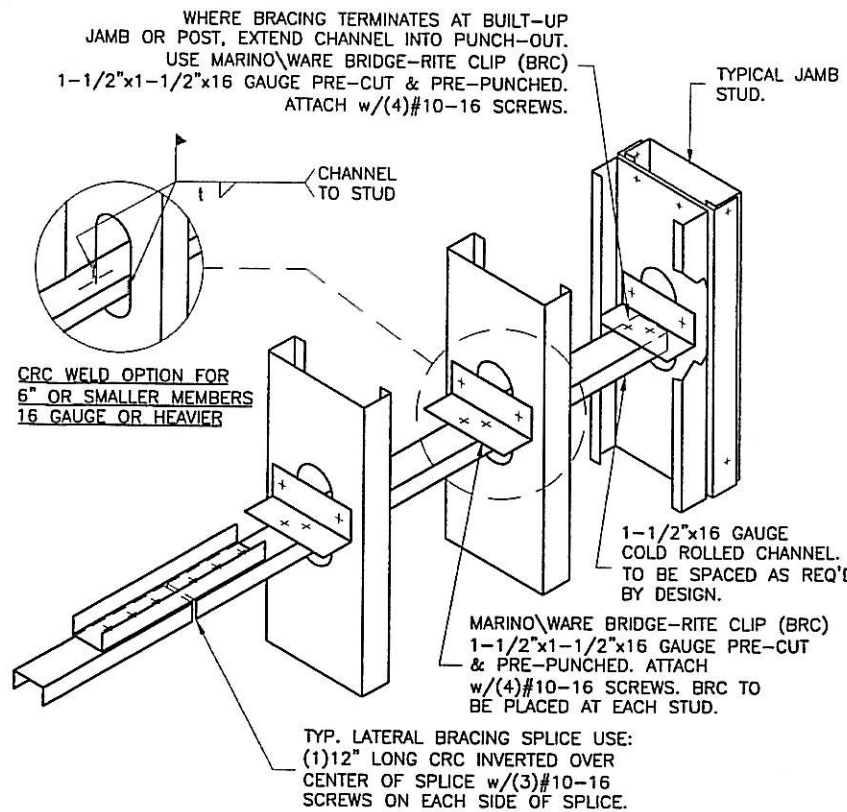
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BY PROFESSIONAL ENGINEER
No. 076577

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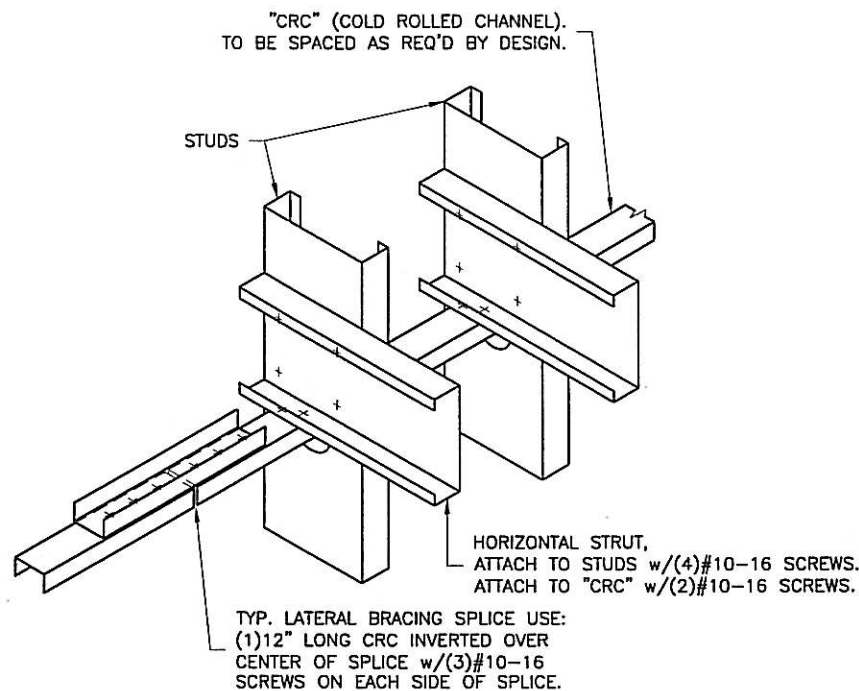
Marino Ware Design Group assumes no responsibility for the application or installation of the any cold formed steel products used in this project. Marino Ware is not responsible for any and will result in nullification of the professional engineer's seal and any implied support by Marino Ware. Detailed evaluation for product suitability must be accomplished by owner's architect or structural engineer.

REVISIONS



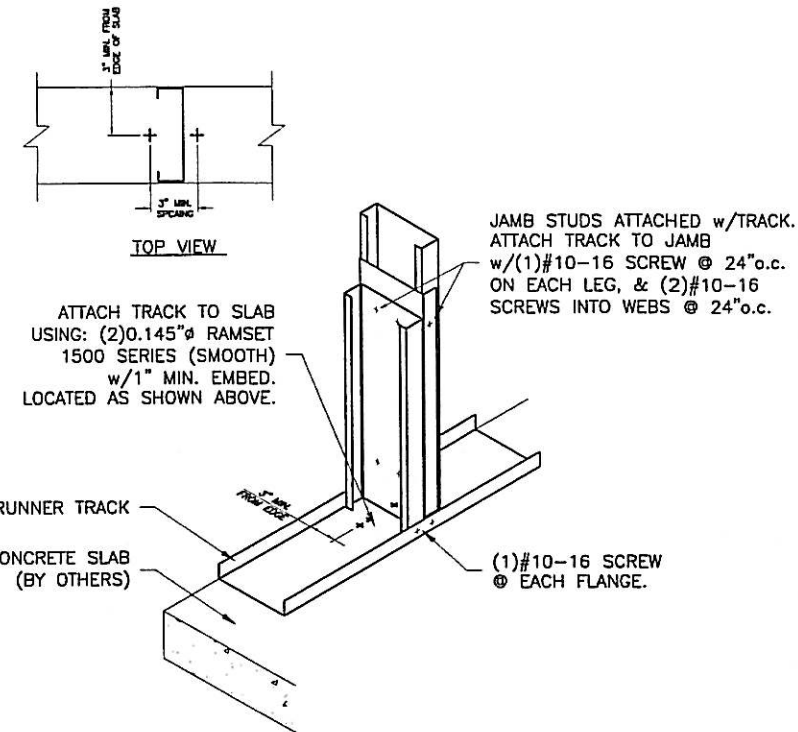
1 CRC LATERAL BRACING

LOAD BEARING & NON-LOAD BEARING
BRC-3 FOR 3 5/8" & 4" STUDS & BRC-6 FOR 6" STUDS



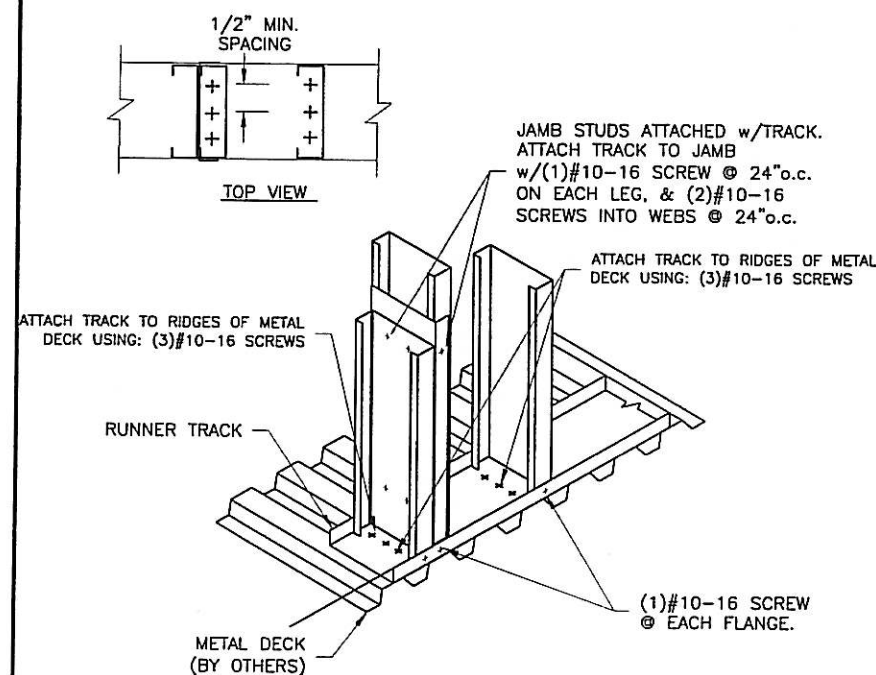
2 CRC LATERAL BRACING

LOAD BEARING & NON-LOAD BEARING
SUBSTITUTE FOR "BRC" @ STRUTS



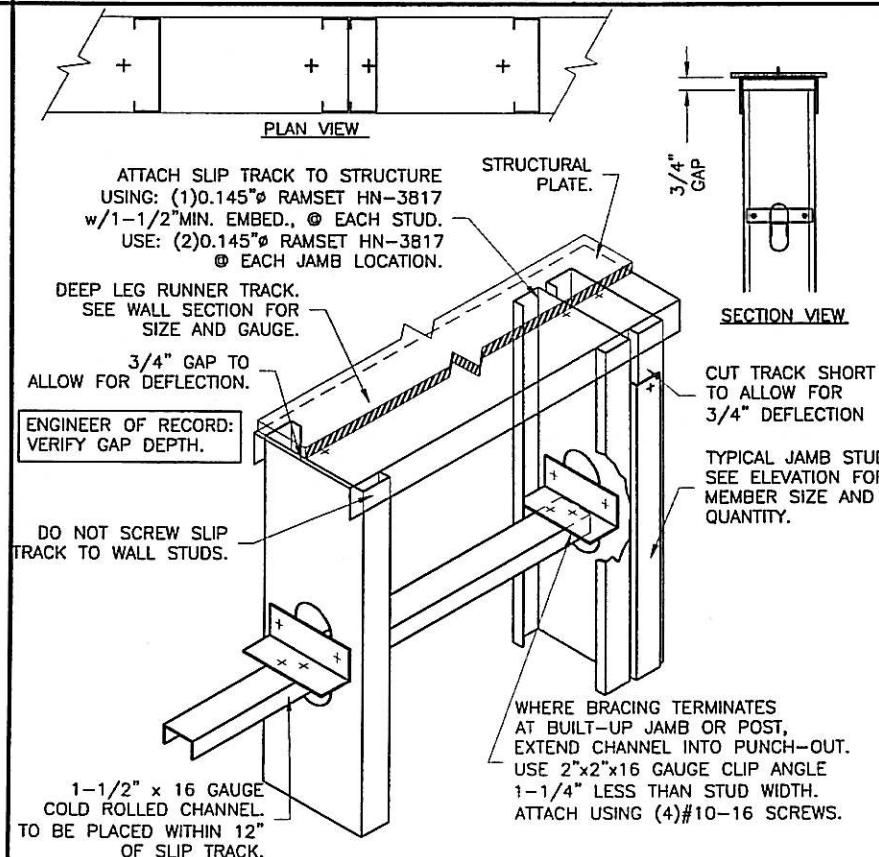
3 STUD/JAMB TO TRACK DETAIL

ANCHORAGE TO STRUCTURE w/(2)P.A.F.'s



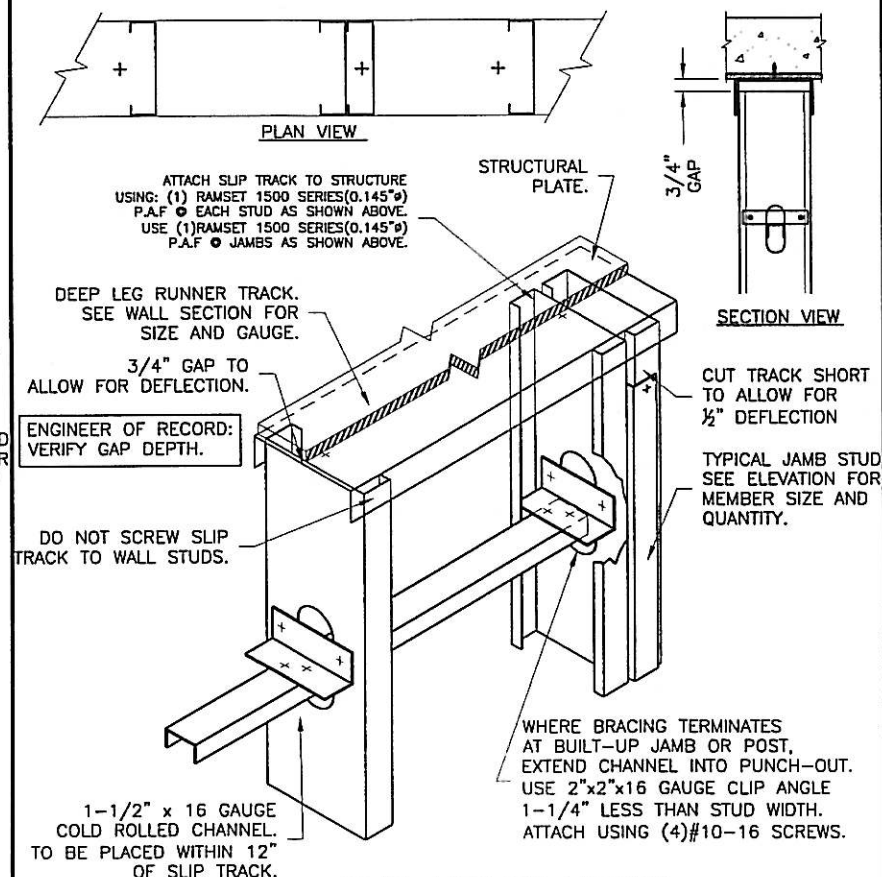
4 STUD TO TRACK DETAIL

ANCHORAGE TO METAL DECK
w/(3) SCREWS



5 SLIP TRACK DETAIL

CURTAIN WALL STUD w/ LATERAL BRACING
WITHIN 12" OF SLIP TRACK



6 SLIP TRACK DETAIL

CURTAIN WALL STUD w/ LATERAL BRACING
WITHIN 12" OF SLIP TRACK

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TYPICAL

DETAILS

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