VP STRUCTURE



DEALER
OWNER'S NAME

SITE LOCATION

CITY/TOWN SHERBORN
PROV./STATE MASSACHUSETTS
COUNTRY USA

PROJECT DESCRIPTION

LAT / LONG | APPROX. 42.224305 N,-71.401699W

SITE LOCATION

ADDRESS 12 AMES DRIVE

STRUCTURE TYPE

MODEL VP-EAVE
PROFILE WIDTH 70'
STRUCTURE LENGTH 156'
TRUSS SPACING 12'

DRAWING INDEX

IRON HORSE STRUCTURES
CHERTAVAIN EQUESTRIAN CENTER

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GENERAL DESIGN

 MANUFACTURING STANDARDS
 Fobrication in accordance with CAN/CSA S16 and CAN/CSA S136 (as applicable).
 Welding in accordance with CSA W59 and CAN/CSA S136 (as applicable).
 Calhoun Super Structures is certified in accordance with CSA W47.1 Division 2
 All Welders have been qualified in accordance with CSA W47.1 1. DESIGN STANDARDS
Ontario Building Code (OBC) 2006
CAN/CSA S16-01, Limit States design
CAN/CSA S136-01, Cold Formed Steel
CAN/ULC S109, Flame Tests of Flame n of Steel Structures el Structural Members e Resistant Fabrics anc and Films

These drawings have been prepared by the EOR primarily to safeguard against major structural damage and loss of life, not to limit damage or maintain function as per requirements of the current accepted building code as listed in the basis for design.

Professional standards of care normally exercised under similar circumstances reputable engineers in this area or similar localities have been used or exceeded drawings. by in these

Design of prefabricated structural products, (such as wood trusses, steel concrete pre-cast elements, etc) is not included, and must be provided by specifically noted on these drawings. 5. Design of non-structural elements, (such as stairs, railings, non-load bearing walls, veneers, curtain walls, etc) and their attachments, are not included and must be provided by others unless specifically noted on these drawings. joists, or others unless

7. Specification references, (such as ASTM, All latest accepted version where noted on these AISI, AWS, CCI, CISC, se drawings. CSA, CWB etc) shall be the

CONSTRUCTION

An experienced licensed contractor with a working knowledge of applicable codes and industry accepted standard practices shall perform the work depicted in these drawings.

2. All work shall conform to the minimum standards of the current accepted building code found in the basis for design and other codes, industry specific specifications, and standards listed herein. The contractor shall comply with requirements of all regulatory agencies with authority over any portion of the work. Work not explicitly shown on these drawings shall conform to all applicable codes and accepted standard practices.

3. The contractor shall verify all dimensions, elevations, and conditions on these drawings with all other relevant construction discipline drawings prior to the start of construction. Notify the EOR in writing before the start of construction regarding discrepancies, omissions or variations, or they shall become the sole responsibility of the contractor. Notes and the specific details on these drawings take precedence over general structural notes and typical details.

4. Construction methods are not explicitly included on these drawings. General sequences are shown for reference only. The contractor shall be solely responsible for all methods, sequences, and procedures of construction. The contractor shall provide adequate shoring, bracing, framework, etc. as required for the protection of life and property during construction.

Excavation procedures including shoring and protection of adjacent property, structures, streets, and utilities shall be performed in compliance with local building codes, regulations, and safety requirements, and shall be the contractor's responsibility.

Construction materials shall be spread out uniformly on structural systems such that sign live loads are not exceeded.

7. Openings, pockets, etc. shall not be placed in structural members unless specifically detailed on these drawings. When drawings by others show items in structural members not shown on the structural drawings, notify the EOR in writing to determine correct deposition.

8. Site visits by the EOR are a resource for the contractor and shall not be considered special inspections. Contractor and/or customer will be responsible for all costs incurred when requesting site visits by the EOR. S

BASIS FO	FOR DESIGN
GOVERNING BUILDING CODE	780 CMR - 8TH EDITION
ROOF	LOADS
DEAD LOAD	2.75 psf
COLLATERAL LOAD	0.25 psf
LIVE LOAD	20 psf
SNOW LOAD	55 Psf
IMPORTANCE FACTOR	1.0
Ct	1.2
Се	0.9
pf	41.58 Psf
WIND	DESIGN
BASIC WIND SPEED	100 mph
WIND EXPOSURE	С
BASIC/CLADDING (EXCLUDING GCP FIG 6-11)	18.33 Psf
IMPORTANCE FACTOR	1.0
ROOF HEIGHT	37'-7"
DESIGN ENCLOSURE	FULLY ENCLOSED
OCCUPANCY STANDARD	=
THIS STRUCTURE HAS BEEN DESIGNED AS OPENINGS MUST REMAIN PROTECTED AND REFERENCED CLADDING PRESSURE.	D AS A FULLY ENCLOSED BUILDING. AND DESIGNED TO THE

STRUCTURAL STEEL MATERIALS

Structural steel members shall conform to the following ASTM (CSA G-40.21) with the following grades and material properties U.N.O.

SHAPE	CSA G40.21 DESIGNATION	ASTM DESIGNATION (SAE GRADE)	YEILD STRENGTH MPa (ksi)	TENSILE STRENGTH MPa (ksi)
TANDARD STEEL SHAPES	300 W	A36/44W	300 (44)	450-620 (65-80)
ROLLED WIDE FLANGE SECTIONS	350 W	A992	350 (50)	450 (65)
BARS AND PLATES	300 W	A36/44W	300 (44)	450-620 (65-80)
PIPES		A53	240 (35)	414 (60)
HSS SHAPES	350 W	G40.21 350W	350 (50)	450-650
MECHANICAL TUBING		787-05	380 (55)	
		A307 GR A		724-827 (60)
STRUCTURAL BOLTS		A325 TYPE 3 (GRADE 5.2)		724-827 (105-120)
		A354 GR BD (GRADE 8)		827 (120)
		A490 (GRADE 8.1)		1034 (150)
		F1554 GR 36	248 (36)	400-558 (58-80)
ANCHOR BOLTS		F1554 GR 55	380 (55)	517-655 (75-95)
		F1554 GR 105	724 (105)	125-150 (125-150)

Structural steel shall be fabricated and erected in accordance with AISC specifications e design fabrication and erection of structural steel buildings.

INSTALLATION

3. Welders shall be AWS/CWB certified where required by juristictional authority. All welding shall use E70 series low hydrogen electrodes. All welding shall conform to the latest American Welding Society standards; welds on drawings are shown as shop welds. Contractor may shop weld or field weld at his discretion. All full penetration welds shall be tested and certified by an independent testing laboratory.

4. All bolts shall be installed as bearing—type connections with threads excluded from shee plane (type "x" connection), UNO. High—strength bolts shall be snug tightened using any AISC/CISC approved method and do not require special inspections unless noted otherwise. All bolts in slotted or oversize holes and all high—strength bolts shall be installed with washers. m shear any

5. All expansion or epoxy bolts shall have current approved rating (ICC-ES or equivalent) material into which installation occurs. Headed studs shall conform to all requirements of the latest edition of the "recommended practices for stud welding" and the "structural welding code" published by AWS. All bolts, anchor bolts, expansion bolts, etc. shall be installed with steel washers at face of wood.

6. Grout beneath column bases or bearing plates shall be 5000psi (35MPa) minimum non-shrink flow-able grout or dry-pack. Install grout under bearing plates before framing member is installed. At columns, install grout under base plates after column has been plumbed but prior to floor or roof installation. Grout depth shall be sufficient to allow grout dry pack to be placed beneath plate without voids. grout

7. All misc. manual table nisc. welds not noted, including stiffeners, misc. plates, table J2.4 or in an AWS/CWB certified shop. etc. shall be per AISC/CISC

GAUGE STEEL FRAMING

1. All products to be manufactured by the current members of the steel stud manufacturers association. All galvanized studs and joist shall be formed from steel that corresponds to the minimum requirements of the latest addition of the AISA or CAN/CSA-S136. All structural members shall be designed in accordance with the Canadian institute of Steel Construction (CISC) or American Iron and Steel Institute (AISI) specification for the design of cold—formed steel structural members (latest edition).

Structural drawings show only the primary structural framing elements of the system, and the contractor shall provide all accessories required for the complete and proper installation, as recommended by the manufacturer for the steel members used.

shall All w all be performed by welders experienced in light welds per AWS D1.3 or AWS D1.3 as applicable. gauge

4. Prior to fabrication obtain approval. of framing, the contractor shall submit shop drawings to the EOR ç

5. All framing components shall be cut squarely for attachment to p members or as required for an angular fit against abutting members perpendicular

Temporary bracing where required, shall be provided until erection is complete.

7. Fastening of the components shall be with self-drilling screws or welding. Screws or welds shall be of sufficient size to insure the strength of the connection. All welds of galvanized steel shall be touched up with paint. Wire tying of components shall not be permitted.

8. Screws shall be self-tapping pan head, hex head, or wafer head sheet metal screws. Screws which are removed shall be replaced by a screw of a larger diameter where the replacement is made into an existing hole. Replace all screws which strip out material. Screws shall be spaced no closer than 5/8" o/c and with a minimum free edge distance 1/2". Screws No. 8 and larger shall have a minimum head size of 5/16".

Any on-site welding during structure erection shall be performed light gauge structural steel framing work. by welders experienced

REACTIO	REACTIONS FOR FOUNDATION DESIGN	NDATION DE	SIGN	
	WINDWARD / SIDE A	/ SIDE A	HEEWARD / SIDE B	/ SIDE B
BASIC LOAD CASE	HORIZONTAL (kip)	VERTICAL (kip)	HORIZONTAL (kip)	VERTICAL (kip)
DEAD LOAD	0.66	1.41	-0.66	1.41
COLLATERAL LOAD	0.06	0.13	-0.06	0.13
ROOF LIVE LOAD	2.86	6.17	-2.86	6.17
BALANCED SNOWLOAD	6.36	13.66	-6.36	13.66
UNBALANCED SNOWLOAD	7.31	12.58	-7.31	15.51
WIND PERP +CP	-4.14	-0.76	-2.59	-1.14
WIND PERP -CP	-3.97	-1.75	-1.78	-1.88
WIND PAR	-0.65	-4.75	-0.06	-4.59
WIND - (+-) IP ENCLOSED	-0.18	-1.56	0.18	-1.56
WIND - (+-) IP ENCLOSED	-0.55	-4.76	0.55	-4.76
FRAME SPACING AND REACTIONS ASSUME LATERAL DEFLECTION LESS THAN	ONS ASSUME	LATERAL DI	EFLECTION LES	SS THAN
1/4" AT TOP OF WALL FOR COMBINED LOADING, FOUNDATION WALL DEFLECTION SHALL BE A MAXIMUM OF L/600.	COMBINED LO	ADING. FOUN	DATION WALL	

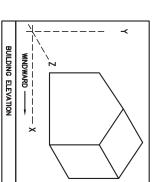
REACTIONS FOR PRYING INCLUDING ANCHOR BOLT DESIGN	RYING INCLUE	JING ANCHO	R BOLT DESIG	¥
	A 3DIS / DAYMONIM	/ SIDE A	B 3DIS / DAWA331	/ SIDE B
BASIC LOAD CASE	HORIZONTAL (kip)	VERTICAL (kip)	HORIZONTAL (kip)	VERTICAL (kip)
DEAD LOAD	0.68	-0.91	-0.68	-0.91
COLLATERAL LOAD	0.06	-0.08	-0.06	-0.08
ROOF LIVE LOAD	2.98	-3.99	-2.98	-3.99
BALANCED SNOWLOAD	6.62	-8.91	-6.62	-8.91
JNBALANCED SNOWLOAD	7.63	-20.51	-7.63	-6.94
MIND PERP +CP	-4.16	-32.12	-2.57	-28.44
WIND PERP -CP	-4.01	-28.19	-1.74	-22.69
WIND PAR	-0.65	-5.87	-0.06	-5.90
WIND - (+-) IP ENCLOSED	-0.18	-1.56	0.18	-1.56
WIND - (+-) IP ENCLOSED	-0.55	-4.77	0.55	-4.77

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	OP OF WALL FOR COMBINED LOADING. FOUNDATION WALL	_	
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ı		ACING AND REACTIONS ASSUME LATERAL DEFLECTION LESS TH	

🕱	ARE BASED UPON 1 1 55 PSF
EXPOSURE	EXPOSED
FRAMES SPACING	12' o/c
WIND SPEED	100 MPH
WIND EXPOSURE	"C"
DESIGN ENCLOSURE	FULLY

GREG GREG STRUCTURAL SILES SOUNAL EMERGES	

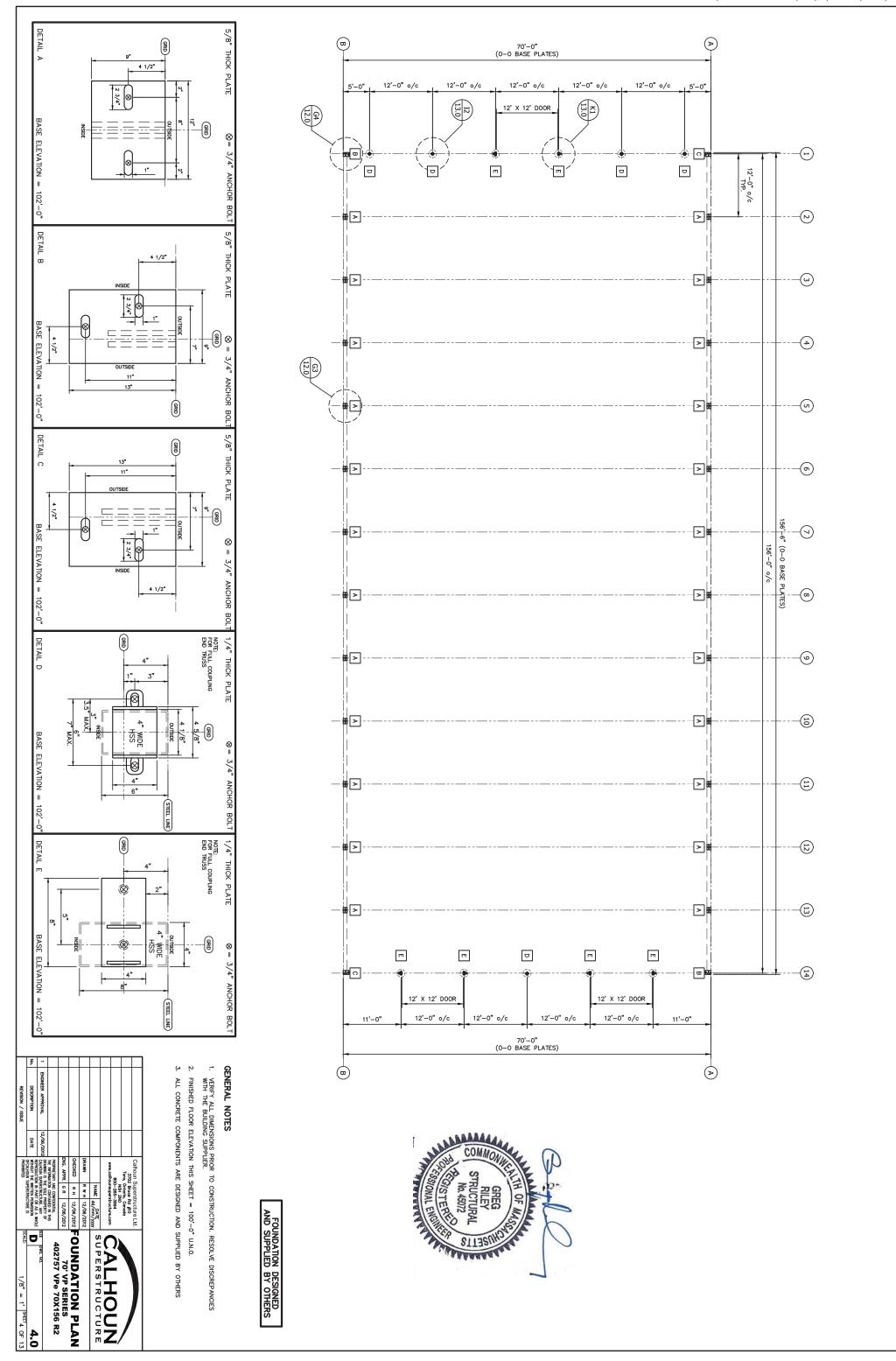


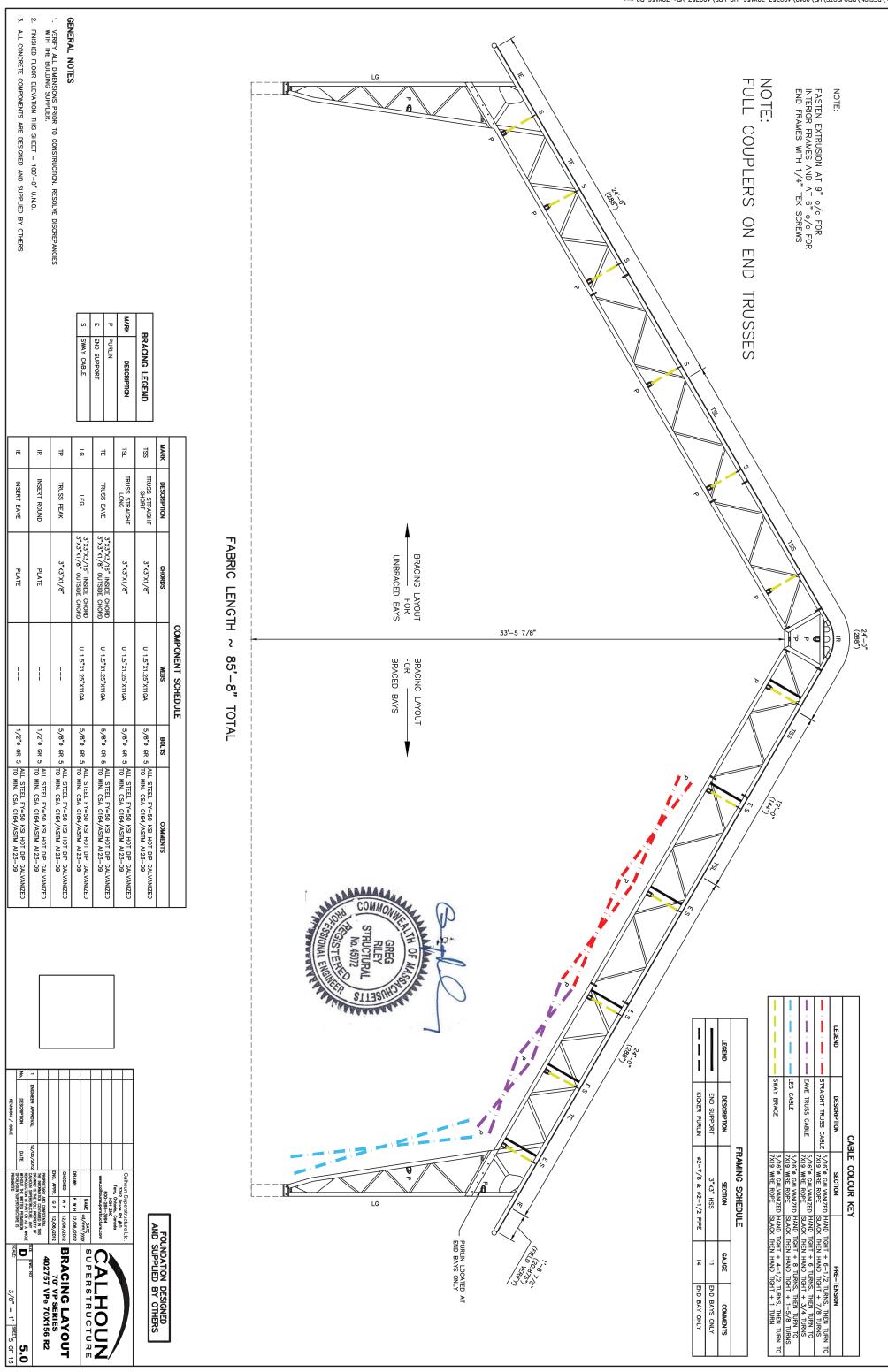
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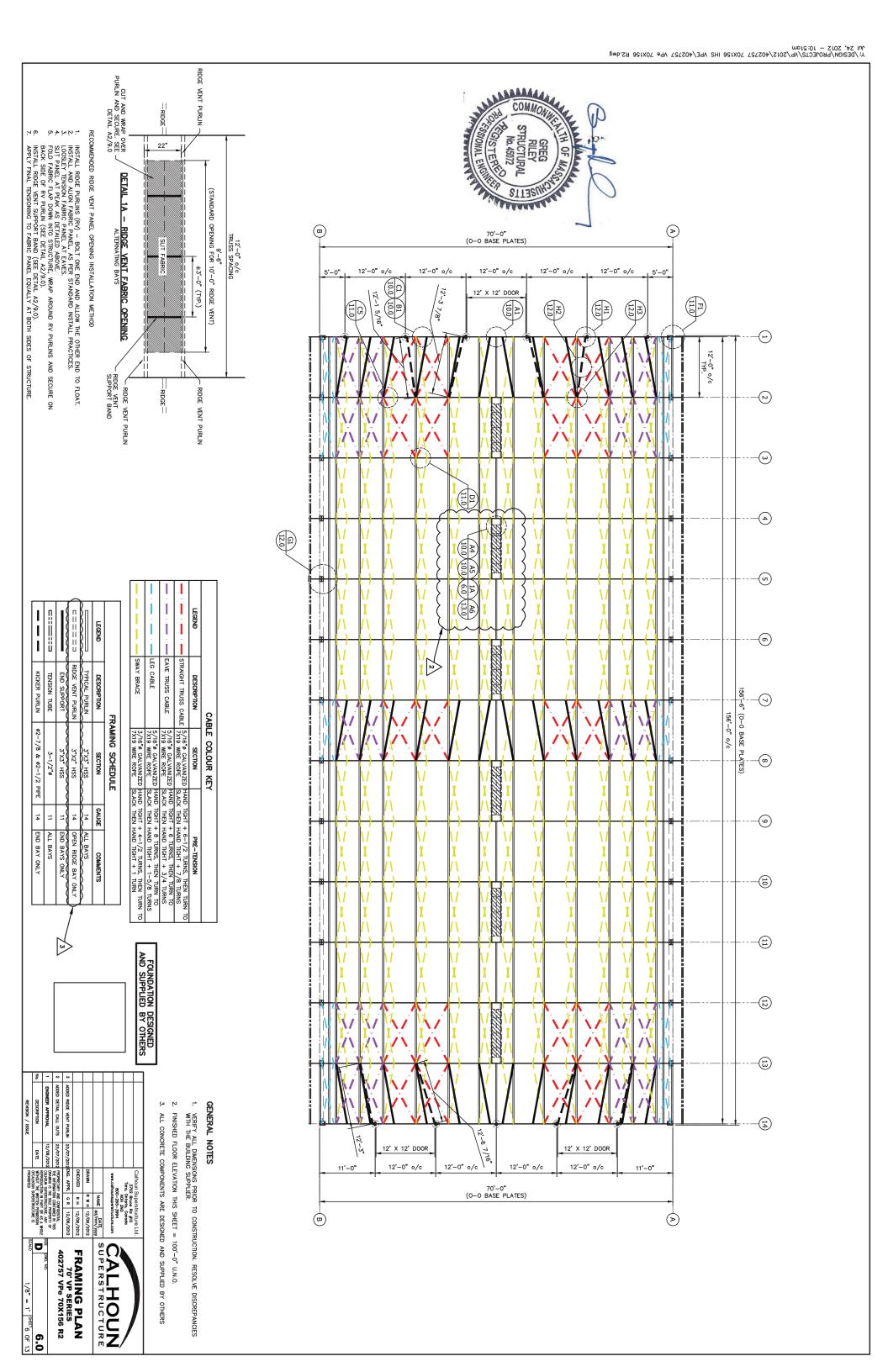
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	R W H 12/06/2012	70 ₩ ±	DRAWN	
SUPERSTRUCTURE	DATE dd/mm/yyyy	NAME		
	www.cainounsuperstructure.com	unsupers	www.com	
	3994	NOH 2NO 800-265-3994		
	Rd #10 Canada	3702 Bruce Rd #10 Tara, Ontario, Canada	Tara,	
	Calhoun Superstructure Ltd.	Supersi	Calhoun	

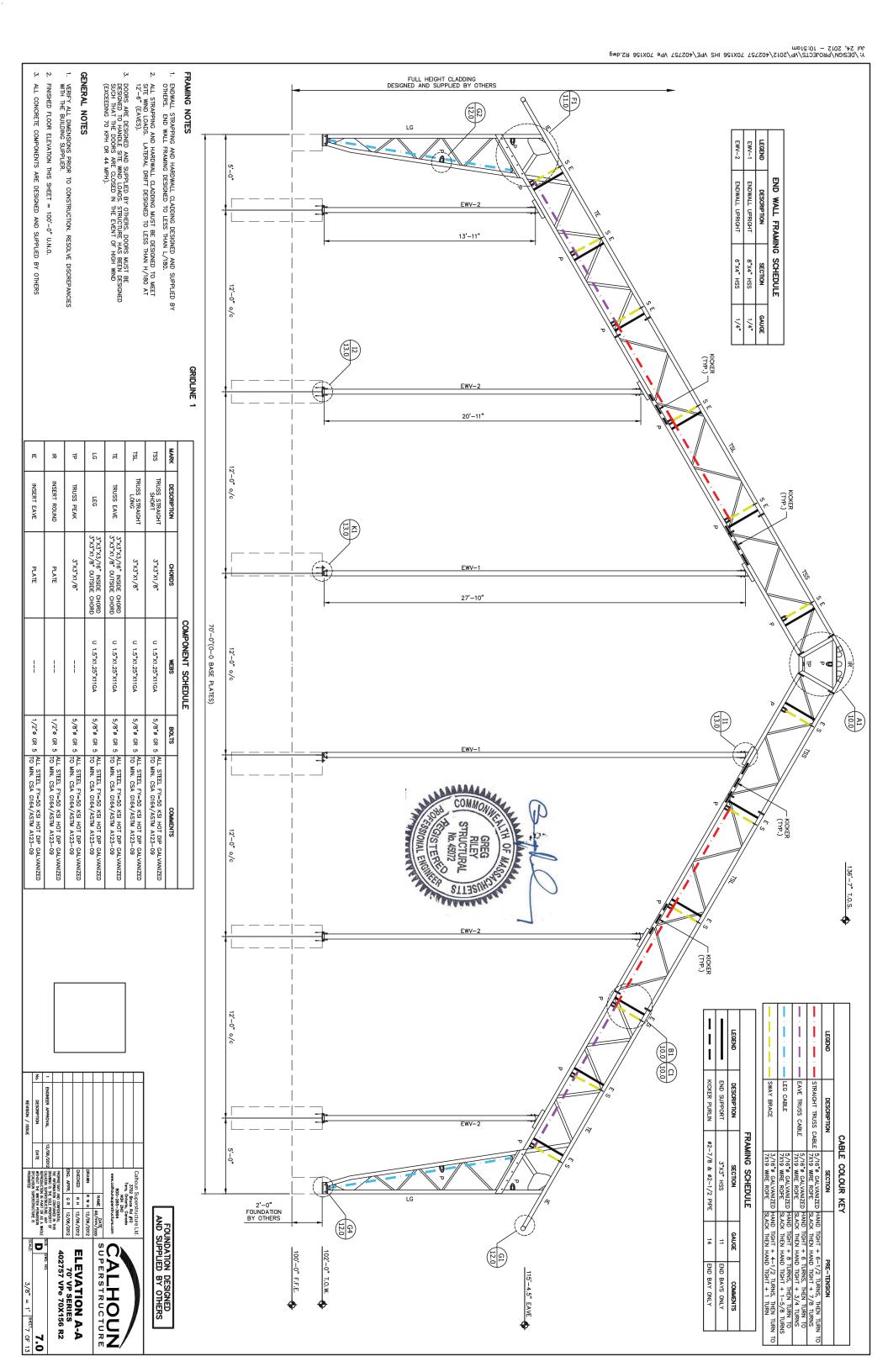
402757 VPe 70X156 R2

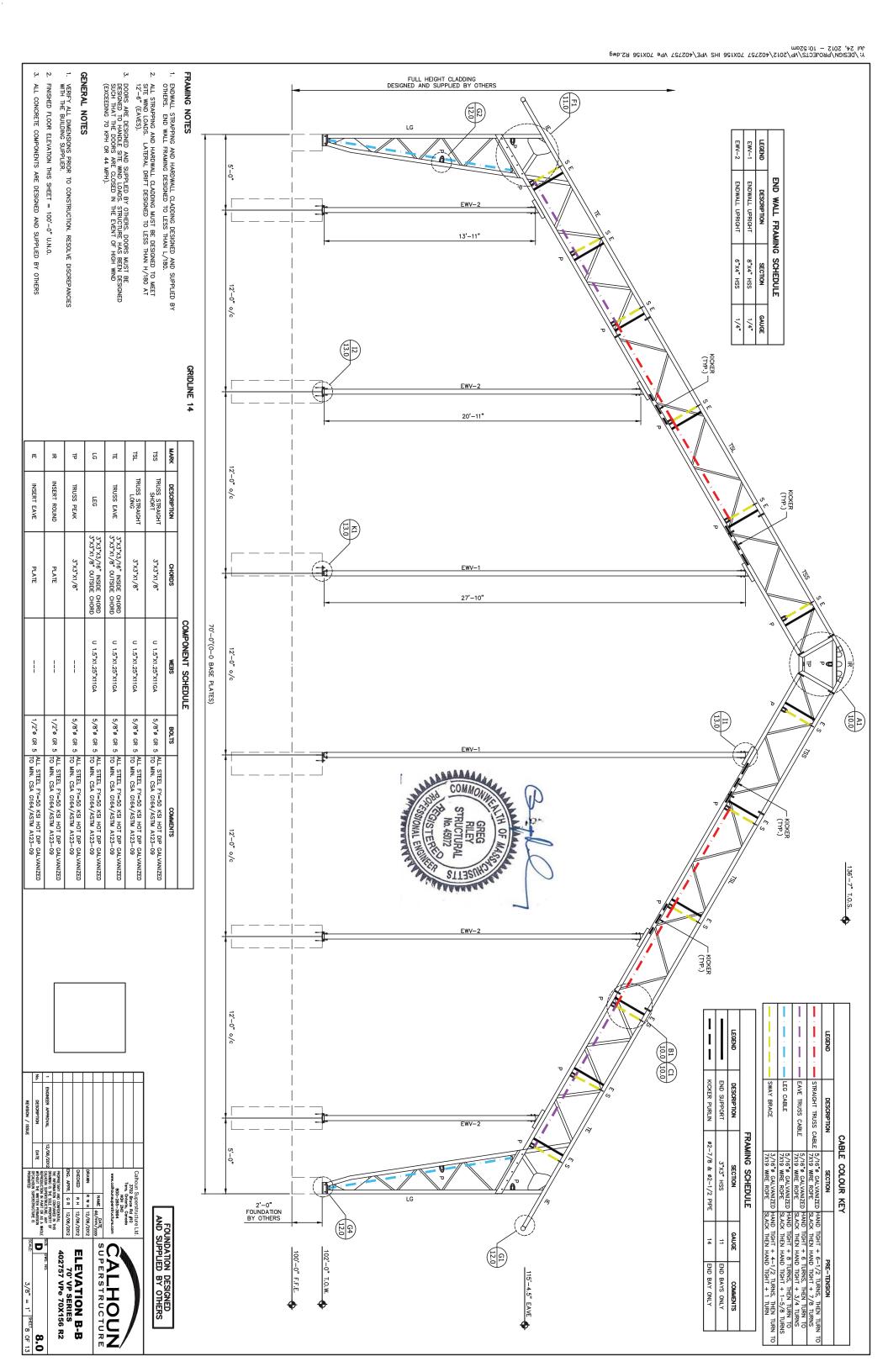
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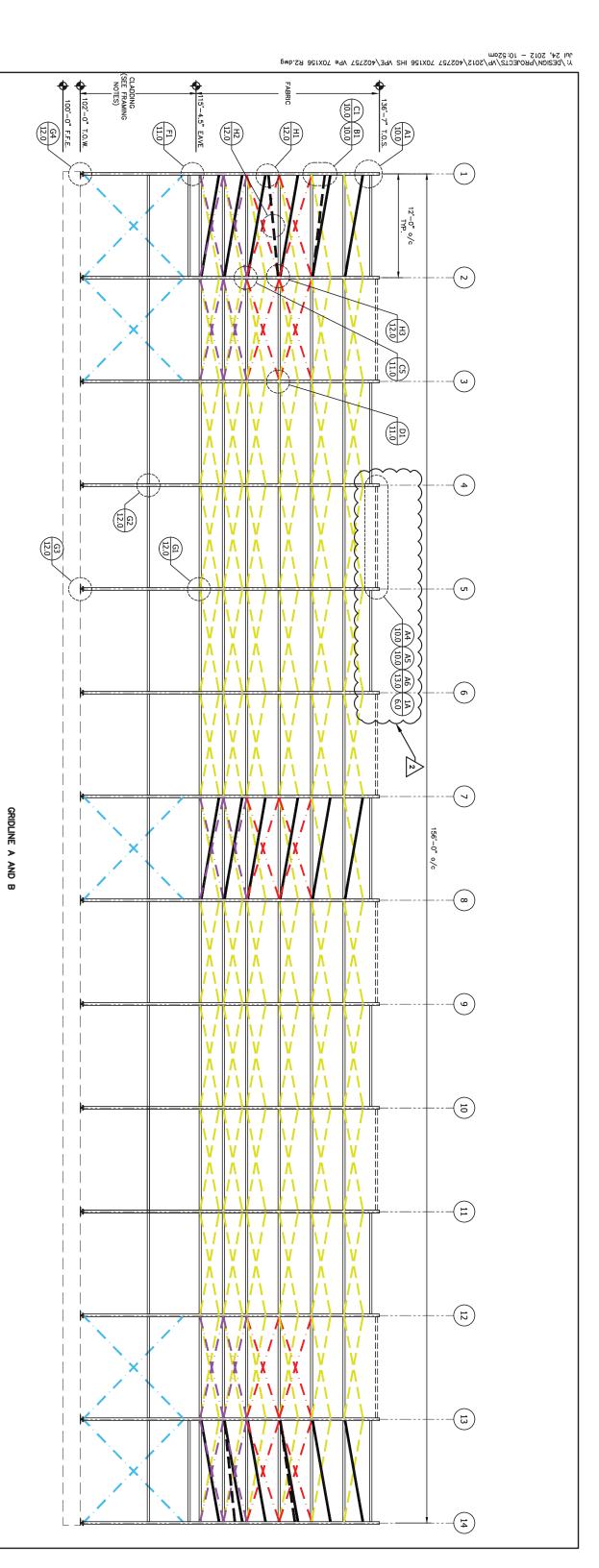












FRAMING NOTES

LEGEND

DESCRIPTION

CABLE COLOUR KEY

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GREG RILEY RUCTURAL No. 45072 SONAL ENGINEERS

SWAY BRACE

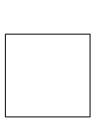
FRAMING SCHEDULE

LEG CABLE

EAVE TRUSS CABLE STRAIGHT TRUSS CABLE

- ENDWALL STRAPPING AND HARDWALL CLADDING DESIGNED AND SUPPLIED BY OTHERS. END WALL FRAMING DESIGNED TO LESS THAN L/180.
- ALL STRAPPING AND HARDWALL CLADDING MUST BE DESIGNED TO MEET SITE WIND LOADS. LATERAL DRIFT DESIGNED TO LESS THAN H/180 AT 12-6" (EAVES).
- GENERAL NOTES
- VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. RESOLVE DISCREPANCIES WITH THE BUILDING SUPPLIER.
- FINISHED FLOOR ELEVATION THIS SHEET = 100'-0" U.N.O. ALL CONCRETE COMPONENTS ARE DESIGNED AND SUPPLIED BY OTHERS

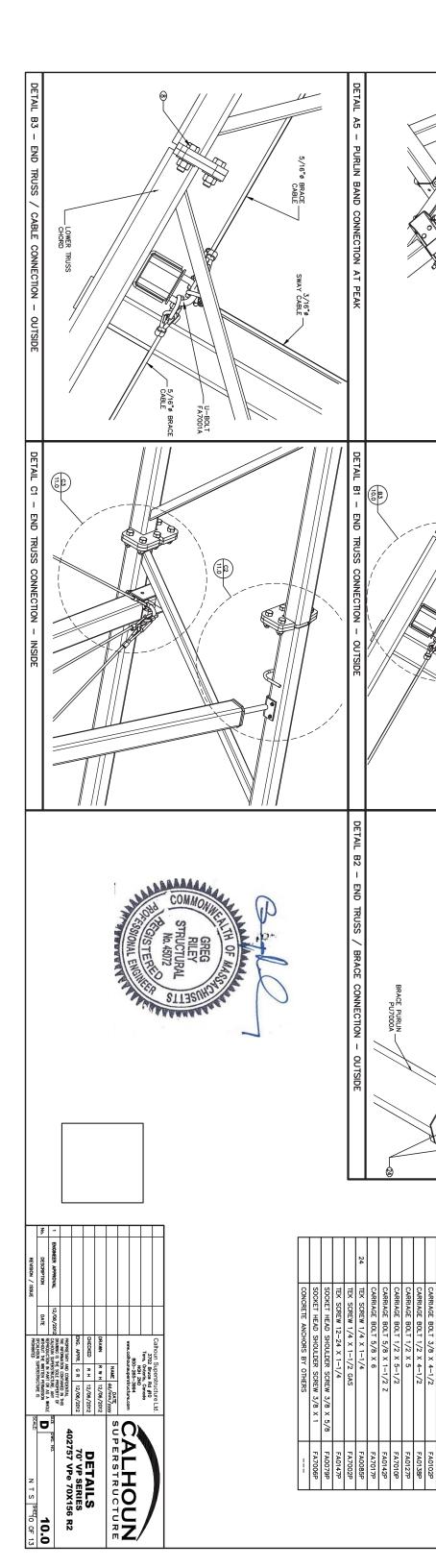
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KICKER PURLIN	TENSION TUBE	END SUPPORT	RIDGE VENT PURLIN	TYPICAL PURLIN	DESCRIPTION
\$2-7/8 & \$2-1/2 PIPE	3-1/2"ø	END SUPPORT 3"X3" HSS 11 END BAYS ONLY	3"X2" HSS	TYPICAL PURLIN 3"X3" HSS 14 ALL BAYS	SECTION
14	11	12	14	14	GAUGE
END BAY ONLY	ALL BAYS	END BAYS ONLY	OPEN RIDGE BAY ONLY	ALL BAYS	COMMENTS
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	DESCRIPTION	ENGINEER APPROVAL	ADDED DETAIL CALL OUTS	ADDED RIDGE VENT PURLIN						
	DATE	12/06/2012	23/07/2012	23/07/2012ENG. APPR.						
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF CALHOUN SUPERSTRUCTURE. ANY REPRODUCTION IN PART OR AS A WH WITHOUT THE WRITTEN PERMISSION DEVALIBIES.			ENG. APPR.	CHECKED	DRAWN		Tara, Ontario, Can NOH 2NO 800-265-3994 www.calhounsuperstruct			
			GR	RН	RWН	NAME	Insupera	3702 Bruce Rd #10 ara, Ontario, Canad		
IDENTIAL AINED IN THIS PROPERTY OF URE. ANY OR AS A WHOLE PERMISSION CTURE IS				12/06/2012	12/06/2012	R W H 12/06/2012	DATE dd/mm/yyyy	www.cainounsuperstructure.com	3702 Bruce Rd #10 Tara, Ontario, Canada	
70										

CALHOUN ELEVATION C-C 70' VP SERIES 402757 VPe 70X156 R2 9.0 3/16" = 1' SHEET 9 OF 13

FOUNDATION DESIGNED AND SUPPLIED BY OTHERS



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