ADDENDUM TO THE BID DOCUMENTS	Page: 1	Total Pages: 27
Addendum No: **# 1**	Date this Addendum Issued: **April 16, 2026**	
Issuing Office: Matanuska-Susitna Borough School District (MSBSD) Purchasing Department 690 Cope Industrial Way Palmer, Alaska 99645 Phone: (907) 861-5120 Facsimile: (907) 861-5184	Previous Addenda Issued: None _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	
Return Acknowledgment To: **Issuing Department** Bid Title: **Colony High School Tier II Seismic Assessment** Bid No: **B26-06**	Date and Hour of Bid Due Date: **April 28, 2026 at 2:00 P.M.** As Advertised (Frontiersman): **April 8 and 10, 2026** As Advertised (ADN): **April 5 and 8, 2026**	

The following corrections, changes, additions, deletions, revisions, and/or clarifications are hereby made a part of the contract documents. In case of conflicts between this addendum and previously issued documents, this addendum shall take precedence. The bidder must acknowledge receipt of this addendum in the space provided on Appendix #1. Failure to do so may subject the bidder to disqualification.

Clarifications:

1. Please replace the current Summary Data Sheet with Appendix 10: Revised Summary Data Sheet.

Attachments:

1. Appendix 10: Revised Summary Data Sheet (26 pages)

END OF ADDENDUM #1

APPROVED BY: Signature on File	DATE: April 16, 2026

Appendix C: Summary Data Sheet

BUILDING DATA

Building Name: Colony High School — Date: May 2020

Building Address: 9550 East Bogard Road Palmer, AK 99645

Latitude: 61.6084 N — Longitude: 149.2123 W — By: CS

Year Built: 1985 — Year(s) Remodeled: — Original Design Code: UBC 1985

Area (sf): 180,000 — Length (ft): 405 — Width (ft): 480

No. of Stories: 2 — Story Height: 15ft — Total Height: 34ft

USE ☐ Industrial ☐ Office ☐ Warehouse ☐ Hospital ☐ Residential ☑ Educational ☐ Other: _____

CONSTRUCTION DATA

Gravity Load Structural System: Masonry, Steel Framing

Exterior Transverse Walls: Masonry — Openings? yes

Exterior Longitudinal Walls: Masonry — Openings? yes

Roof Materials/Framing: Steel

Intermediate Floors/Framing: Steel

Ground Floor: Slab on grade

Columns: Steel TS and W shapes — Foundation: Concrete Stem wall

General Condition of Structure:

Levels Below Grade? No, but lower floor down slope

Special Features and Comments:

LATERAL-FORCE-RESISTING SYSTEM

	Longitudinal	Transverse
System:	Masonry Shear wall and braced frames	same
Vertical Elements:	Masonry wall and steel columns	same
Diaphragms:	steel deck on framing	same
Connections:		same

EVALUATION DATA

BSE-1N Spectral Response Accelerations: S_{DS}= — S_{D1}=

Soil Factors: Class= D — F_a= 1.163 — F_v= 1.704

BSE-1E Spectral Response Accelerations: S_{XS}= 0.979 — S_{X1}= 0.593

Level of Seismicity: High — Performance Level: Life Safety

Building Period: T=

Spectral Acceleration: S_a= 0.979

Modification Factor: $C_mC_1C_2$= — Building Weight: W= 1500 to 2000 kips

Pseudo Lateral Force: V= $C_mC_1C_2S_aW$= 1500 to 2000 kips per area (A, B, D etc.)

BUILDING CLASSIFICATION: RM1, S2

REQUIRED TIER 1 CHECKLISTS

	Yes	No
Basic Configuration Checklist	☑	☐
Building Type ___ Structural Checklist	☑	☐
Nonstructural Component Checklist	☐	☑

FURTHER EVALUATION REQUIREMENT: _____

Project Name Colony High Tier I
Project Number 181152

ASCE 41-13 Tier 1 Checklists

FIRM:	PND Engineers
PROJECT NAME:	Colony High Tier I
SEISMICITY LEVEL:	High
PROJECT NUMBER:	181152
COMPLETED BY:	CS
DATE COMPLETED:	
REVIEWED BY:	
REVIEW DATE:	

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

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Project Name Colony High Tier I
Project Number 181152

16.1 Basic Checklist

Very Low Seismicity

Structural Components

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	LOAD PATH: The structure shall contain a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundation. (Commentary: Sec. A.2.1.1. Tier 2: Sec. 5.4.1.1)	
C	NC	N/A	U		
☒	☐	☐	☐	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support are anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 4.5.3.7. (Commentary: Sec. A.5.1.1. Tier 2: Sec. 5.7.1.1)	

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Project Name Colony High Tier I
Project Number 181152

16.1.2LS Life Safety Basic Configuration Checklist

Low Seismicity

Building System

General

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	LOAD PATH: The structure shall contain a complete, well-defined load path, including structural elements and connections, that serves to transfer the inertial forces associated with the mass of all elements of the building to the foundation. (Commentary: Sec. A.2.1.1. Tier 2: Sec. 5.4.1.1)	
C	NC	N/A	U		
☒	☐	☐	☐	ADJACENT BUILDINGS: The clear distance between the building being evaluated and any adjacent building is greater than 4% of the height of the shorter building. This statement need not apply for the following building types: W1, W1A, and W2. (Commentary: Sec. A.2.1.2. Tier 2: Sec. 5.4.1.2)	
C	NC	N/A	U		
☒	☐	☐	☐	MEZZANINES: Interior mezzanine levels are braced independently from the main structure or are anchored to the seismic-force-resisting elements of the main structure. (Commentary: Sec. A.2.1.3. Tier 2: Sec. 5.4.1.3)	anchored to main system

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Project Name Colony High Tier I
Project Number 181152

Building Configuration

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☐	☐	☒	☐	WEAK STORY: The sum of the shear strengths of the seismic-force-resisting system in any story in each direction is not less than 80% of the strength in the adjacent story above. (Commentary: Sec. A2.2.2. Tier 2: Sec. 5.4.2.1)	1-2 stories
C	NC	N/A	U		
☒	☐	☐	☐	SOFT STORY: The stiffness of the seismic-force-resisting system in any story is not less than 70% of the seismic-force-resisting system stiffness in an adjacent story above or less than 80% of the average seismic-force-resisting system stiffness of the three stories above. (Commentary: Sec. A.2.2.3. Tier 2: Sec. 5.4.2.2)	
C	NC	N/A	U		
☒	☐	☐	☐	VERTICAL IRREGULARITIES: All vertical elements in the seismic-force-resisting system are continuous to the foundation. (Commentary: Sec. A.2.2.4. Tier 2: Sec. 5.4.2.3)	
C	NC	N/A	U		
☒	☐	☐	☐	GEOMETRY: There are no changes in the net horizontal dimension of the seismic-force-resisting system of more than 30% in a story relative to adjacent stories, excluding one-story penthouses and mezzanines. (Commentary: Sec. A.2.2.5. Tier 2: Sec. 5.4.2.4)	

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C	NC	N/A	U		
☒	☐	☐	☐	MASS: There is no change in effective mass more than 50% from one story to the next. Light roofs, penthouses, and mezzanines need not be considered. (Commentary: Sec. A.2.2.6. Tier 2: Sec. 5.4.2.5)	
☒	☐	☐	☐	TORSION: The estimated distance between the story center of mass and the story center of rigidity is less than 20% of the building width in either plan dimension. (Commentary: Sec. A.2.2.7. Tier 2: Sec. 5.4.2.6)	

Moderate Seismicity

Geologic Site Hazards

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☐	☐	☐	☒	LIQUEFACTION: Liquefaction-susceptible, saturated, loose granular soils that could jeopardize the building☒s seismic performance shall not exist in the foundation soils at depths within 50 ft under the building. (Commentary: Sec. A.6.1.1. Tier 2: 5.4.3.1)	
☒	☐	☐	☐	SLOPE FAILURE: The building site is sufficiently remote from potential earthquake-induced slope failures or rockfalls to be unaffected by such failures or is capable of accommodating any predicted movements without failure. (Commentary: Sec. A.6.1.2. Tier 2: 5.4.3.1)	

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C	NC	N/A	U		
☒	☐	☐	☐	SURFACE FAULT RUPTURE: Surface fault rupture and surface displacement at the building site are not anticipated. (Commentary: Sec. A.6.1.3. Tier 2: 5.4.3.1)	1.5 miles from undifferentiated Quaternary fault

High Seismicity

Foundation Configuration

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	OVERTURNING: The ratio of the least horizontal dimension of the seismic-force-resisting system at the foundation level to the building height (base/ height) is greater than $0.6S_a$. (Commentary: Sec. A.6.2.1. Tier 2: Sec. 5.4.3.3)	
C	NC	N/A	U		
☒	☐	☐	☐	TIES BETWEEN FOUNDATION ELEMENTS: The foundation has ties adequate to resist seismic forces where footings, piles, and piers are not restrained by beams, slabs, or soils classified as Site Class A, B, or C. (Commentary: Sec. A.6.2.2. Tier 2: Sec. 5.4.3.4)	slab on grade

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Project Name Colony High Tier I
Project Number 181152

ASCE 41-13 Tier 1 Checklists

FIRM:	PND Engineers
PROJECT NAME:	Colony High Tier I
SEISMICITY LEVEL:	High
PROJECT NUMBER:	181152
COMPLETED BY:	CS
DATE COMPLETED:	5-27-2020
REVIEWED BY:	
REVIEW DATE:	

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Project Name Colony High Tier I
Project Number 181152

16.15LS Life Safety Structural Checklist for Building Types RM1: Reinforced Masonry Bearing Walls with Flexible Diaphragms and RM2: Reinforced Masonry Bearing Walls with Stiff Diaphragms

Low and Moderate Seismicity

Seismic-Force-Resisting System

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	REDUNDANCY: The number of lines of shear walls in each principal direction is greater than or equal to 2. (Commentary: Sec. A.3.2.1.1. Tier 2: Sec. 5.5.1.1)	
C	NC	N/A	U		
☒	☐	☐	☐	SHEAR STRESS CHECK: The shear stress in the reinforced masonry shear walls, calculated using the Quick Check procedure of Section 4.5.3.3, is less than 70 lb/in.^{2}. (Commentary: Sec. A.3.2.4.1. Tier 2: Sec. 5.5.3.1.1)	
C	NC	N/A	U		
☐	☒	☐	☐	REINFORCING STEEL: The total vertical and horizontal reinforcing steel ratio in reinforced masonry walls is greater than 0.002 of the wall with the minimum of 0.0007 in either of the two directions; the spacing of reinforcing steel is less than 48 in., and all vertical bars extend to the top of the walls. (Commentary: Sec. A.3.2.4.2. Tier 2: Sec. 5.5.3.1.3)	spacing is 48 inches

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

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Project Name Colony High Tier I
Project Number 181152

Stiff Diaphragms

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☐	☐	☒	☐	TOPPING SLAB: Precast concrete diaphragm elements are interconnected by a continuous reinforced concrete topping slab. (Commentary: Sec. A.4.5.1. Tier 2: Sec. 5.6.4)	

Connections

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	WALL ANCHORAGE: Exterior concrete or masonry walls that are dependent on the diaphragm for lateral support are anchored for out-of-plane forces at each diaphragm level with steel anchors, reinforcing dowels, or straps that are developed into the diaphragm. Connections shall have adequate strength to resist the connection force calculated in the Quick Check procedure of Section 4.5.3.7. (Commentary: Sec. A.5.1.1. Tier 2: Sec. 5.7.1.1)	
C	NC	N/A	U		
☐	☐	☒	☐	WOOD LEDGERS: The connection between the wall panels and the diaphragm does not induce cross-grain bending or tension in the wood ledgers. (Commentary: Sec. A.5.1.2. Tier 2: Sec. 5.7.1.3)	
C	NC	N/A	U		
☒	☐	☐	☐	TRANSFER TO SHEAR WALLS: Diaphragms are connected for transfer of seismic forces to the shear walls. (Commentary: Sec. A.5.2.1. Tier 2: Sec. 5.7.2)	

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C	NC	N/A	U		
☐	☐	☒	☐	TOPPING SLAB TO WALLS OR FRAMES: Reinforced concrete topping slabs that interconnect the precast concrete diaphragm elements are doweled for transfer of forces into the shear wall or frame elements. (Commentary: Sec. A.5.2.3. Tier 2: Sec. 5.7.2)	
C	NC	N/A	U		
☒	☐	☐	☐	FOUNDATION DOWELS: Wall reinforcement is doweled into the foundation. (Commentary: Sec. A.5.3.5. Tier 2: Sec. 5.7.3.4)	
C	NC	N/A	U		
☒	☐	☐	☐	GIRDER☒COLUMN CONNECTION: There is a positive connection using plates, connection hardware, or straps between the girder and the column support. (Commentary: Sec. A.5.4.1. Tier 2: Sec. 5.7.4.1)	

High Seismicity

Stiff Diaphragms

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls are less than 25% of the wall length. (Commentary: Sec. A.4.1.4. Tier 2: Sec. 5.6.1.3)	

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C	NC	N/A	U		
☒	☐	☐	☐	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls are not greater than 8 ft long. (Commentary: Sec. A.4.1.6. Tier 2: Sec. 5.6.1.3)	

Flexible Diaphragms

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	CROSS TIES: There are continuous cross ties between diaphragm chords. (Commentary: Sec. A.4.1.2. Tier 2: Sec. 5.6.1.2)	
C	NC	N/A	U		
☒	☐	☐	☐	OPENINGS AT SHEAR WALLS: Diaphragm openings immediately adjacent to the shear walls are less than 25% of the wall length. (Commentary: Sec. A.4.1.4. Tier 2: Sec. 5.6.1.3)	
C	NC	N/A	U		
☒	☐	☐	☐	OPENINGS AT EXTERIOR MASONRY SHEAR WALLS: Diaphragm openings immediately adjacent to exterior masonry shear walls are not greater than 8 ft long. (Commentary: Sec. A.4.1.6. Tier 2: Sec. 5.6.1.3)	

Legend: C = Compliant, NC = Noncompliant, N/A = Not Applicable, U = Unknown

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C	NC	N/A	U		
☐	☐	☒	☐	STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 2-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1. Tier 2: Sec. 5.6.2)	
☐	☐	☒	☐	SPANS: All wood diaphragms with spans greater than 24 ft consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2. Tier 2: Sec. 5.6.2)	
☐	☐	☒	☐	DIAGONALLY SHEATHED AND UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 40 ft and aspect ratios less than or equal to 4-to-1. (Commentary: Sec. A.4.2.3. Tier 2: Sec. 5.6.2)	
☒	☐	☐	☐	OTHER DIAPHRAGMS: The diaphragm shall not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1. Tier 2: Sec. 5.6.5)	

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Project Name Colony High Tier I
Project Number 181152

Connections

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	STIFFNESS OF WALL ANCHORS: Anchors of concrete or masonry walls to wood structural elements are installed taut and are stiff enough to limit the relative movement between the wall and the diaphragm to no greater than 1/8 in. before engagement of the anchors. (Commentary: Sec. A.5.1.4. Tier 2: Sec. 5.7.1.2)	

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Project Name Colony High Tier I
Project Number 181152

ASCE 41-13 Tier 1 Checklists

FIRM:	PND Engineers
PROJECT NAME:	Colony High Tier I
SEISMICITY LEVEL:	High
PROJECT NUMBER:	181152
COMPLETED BY:	CS
DATE COMPLETED:	5-27-2020
REVIEWED BY:	
REVIEW DATE:	

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Project Name Colony High Tier I
Project Number 181152

16.5LS Life Safety Structural Checklist for Building Types S2: Steel Braced Frames with Stiff Diaphragms and S2A: Steel Braced Frames with Flexible Diaphragms

Low Seismicity

Seismic-Force-Resisting System

RATING				DESCRIPTION	COMMENTS
C ☐	NC ☒	N/A ☐	U ☐	COLUMN AXIAL STRESS CHECK: The axial stress caused by gravity loads in columns subjected to overturning forces is less than $0.10F_y$. Alternatively, the axial stress caused by overturning forces alone, calculated using the Quick Check procedure of Section 4.5.3.6, is less than $0.30F_y$. (Commentary: Sec. A.3.1.3.2. Tier 2: Sec. 5.5.2.1.3)	Gym exceeds 0.3Fy
C ☒	NC ☐	N/A ☐	U ☐	BRACE AXIAL STRESS CHECK: The axial stress in the diagonals, calculated using the Quick Check procedure of Section 4.5.3.4, is less than $0.50F_y$. (Commentary: Sec. A.3.3.1.2. Tier 2: Sec. 5.5.4.1)	

Connections

RATING				DESCRIPTION	COMMENTS
C ☒	NC ☐	N/A ☐	U ☐	TRANSFER TO STEEL FRAMES: Diaphragms are connected for transfer of seismic forces to the steel frames. (Commentary: Sec. A.5.2.2. Tier 2: Sec. 5.7.2)	

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C	NC	N/A	U		
☒	☐	☐	☐	STEEL COLUMNS: The columns in seismic-force-resisting frames are anchored to the building foundation. (Commentary: Sec. A.5.3.1. Tier 2: Sec. 5.7.3.1)	

Moderate Seismicity

Seismic-Force-Resisting System

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	REDUNDANCY: The number of lines of braced frames in each principal direction is greater than or equal to 2. The number of braced bays in each line is greater than 2. (Commentary: Sec. A.3.3.1.1. Tier 2: Sec. 5.5.1.1)	
C	NC	N/A	U		
☒	☐	☐	☐	CONNECTION STRENGTH: All the brace connections develop the buckling capacity of the diagonals. (Commentary: Sec. A.3.3.1.5. Tier 2: Sec. 5.5.4.4)	
C	NC	N/A	U		
☒	☐	☐	☐	COMPACT MEMBERS: All brace elements meet compact section requirements set forth by AISC 360, Table B4.1. (Commentary: Sec. A.3.3.1.7. Tier 2: Sec. 5.5.4)	

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C	NC	N/A	U		
☒	☐	☐	☐	K-BRACING: The bracing system does not include K-braced bays. (Commentary: Sec. A.3.3.2.1. Tier 2: Sec. 5.5.4.6)	

High Seismicity

Seismic-Force-Resisting System

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☐	☐	☒	☐	COLUMN SPLICES: All column splice details located in braced frames develop 50% of the tensile strength of the column. (Commentary: Sec. A.3.3.1.3. Tier 2: Sec. 5.5.4.2)	
C	NC	N/A	U		
☒	☐	☐	☐	SLENDERNESS OF DIAGONALS: All diagonal elements required to carry compression have Kl/r ratios less than 200. (Commentary: Sec. A.3.3.1.4. Tier 2: Sec. 5.5.4.3)	
C	NC	N/A	U		
☐	☒	☐	☐	CONNECTION STRENGTH: All the brace connections develop the yield capacity of the diagonals. (Commentary: Sec. A.3.3.1.5. Tier 2: Sec. 5.5.4.4)	(4) 6" welds do not match yield strength

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C	NC	N/A	U		
☐	☒	☐	☐	COMPACT MEMBERS: All brace elements meet section requirements set forth by AISC 341, Table D1.1, for moderately ductile members. (Commentary: Sec. A.3.3.1.7. Tier 2: Sec. 5.5.4)	5x5x1/4
☐	☒	☐	☐	CHEVRON BRACING: Beams in chevron, or V-braced, bays are capable of resisting the vertical load resulting from the simultaneous yielding and buckling of the brace pairs. (Commentary: Sec. A.3.3.2.3. Tier 2: Sec. 5.5.4.6)	Grid R.9/20-22
☒	☐	☐	☐	CONCENTRICALLY BRACED FRAME JOINTS: All the diagonal braces shall frame into the beam⊠ column joints concentrically. (Commentary: Sec. A.3.3.2.4. Tier 2: Sec. 5.5.4.8)	

Diaphragms (Flexible or Stiff)

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	OPENINGS AT FRAMES: Diaphragm openings immediately adjacent to the braced frames extend less than 25% of the frame length. (Commentary: Sec. A.4.1.5. Tier 2: Sec. 5.6.1.3)	

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Project Name Colony High Tier I
Project Number 181152

Flexible Diaphragms

RATING				DESCRIPTION	COMMENTS
C	NC	N/A	U		
☒	☐	☐	☐	CROSS TIES: There are continuous cross ties between diaphragm chords. (Commentary: Sec. A.4.1.2. Tier 2: Sec. 5.6.1.2)	
C	NC	N/A	U		
☐	☐	☒	☐	STRAIGHT SHEATHING: All straight sheathed diaphragms have aspect ratios less than 2-to-1 in the direction being considered. (Commentary: Sec. A.4.2.1. Tier 2: Sec. 5.6.2)	
C	NC	N/A	U		
☐	☐	☒	☐	SPANS: All wood diaphragms with spans greater than 24 ft consist of wood structural panels or diagonal sheathing. (Commentary: Sec. A.4.2.2. Tier 2: Sec. 5.6.2)	
C	NC	N/A	U		
☐	☐	☒	☐	DIAGONALLY SHEATHED AND UNBLOCKED DIAPHRAGMS: All diagonally sheathed or unblocked wood structural panel diaphragms have horizontal spans less than 40 ft and aspect ratios less than or equal to 4-to-1. (Commentary: Sec. A.4.2.3. Tier 2: Sec. 5.6.2)	

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C	NC	N/A	U		
☒	☐	☐	☐	OTHER DIAPHRAGMS: The diaphragm does not consist of a system other than wood, metal deck, concrete, or horizontal bracing. (Commentary: Sec. A.4.7.1. Tier 2: Sec. 5.6.5)	

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Colony High Quick Check Calculations

ASCE 41-13

Psuedo Seismic Force and Story Shear

§4.5.2

Seismic Mass	*psf*	*sf*	*kip*
A	**Dead**	**Area**	**W**
Masonry Wall	110	5,000	550
Snow	12	10,800	130
Low Roof	12	10,800	130
		Σ	809

	Dead	**Area**	**W**
Masonry Wall	125	6,000	750
Snow	12	16,700	200
Gym Roof	12	16,700	200
		Σ	1151

kip	*ft*						*kip*
W	**hn**	**C**	**Sx1**	**Sxs**	**T**	**Sa**	**V**
1960	26	1	0.593	0.979	0.23	0.979	1919

T =0.02*[@hn]^0.75
Sa =MIN([@Sx1]/[@T],[@Sxs])
V =[@C]*[@Sa]*[@W]

B	**Dead**	**Area**	**W**
Masonry Wall	110	10,000	1100
Snow	12	21,000	252
Roof	12	21,000	252
		Σ	1604

kip	*ft*						*kip*
W	**hn**	**C**	**Sx1**	**Sxs**	**T**	**Sa**	**V**
1604	23	1	0.593	0.979	0.21	0.979	1570

D	**Dead**	**Area**	**W**
Masonry Wall	110	10,000	1100
Snow	12	17,800	214
Roof	12	17,800	214
		Σ	1527

kip	*ft*						*kip*
W	**hn**	**C**	**Sx1**	**Sxs**	**T**	**Sa**	**V**
1527	29	1	0.593	0.979	0.25	0.979	1495

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Colony High Quick Check Calculations

		psf	*sf*	*kip*
E		**Dead**	**Area**	**W**
	Masonry	115	10,000	1150
	Snow	12	24,700	296
	Roof	12	24,700	296
			Σ	1743

kip	*ft*						*kip*
W	**hn**	**C**	**Sx1**	**Sxs**	**T**	**Sa**	**V**
1743	23	1	0.593	0.979	0.21	0.979	1706

		psf	*sf*	*kip*
F		**Dead**	**Area**	**W**
	Wall	12	4,800	58
	Roof	12	25,000	300
	2nd Floor	60	14,000	840
	Snow	12	25,000	300
	Masonry	110	2,000	220
			Σ	1718

kip	*ft*						*kip*
W	**hn**	**C**	**Sx1**	**Sxs**	**T**	**Sa**	**V**
1718	8	1	0.593	0.979	0.095	0.979	1682

		psf	*sf*	*kip*
G		**Dead**	**Area**	**W**
	Wall	12	7,000	84
	2nd Floor	60	18,000	1080
	Roof	12	30,000	360
	Snow	12	30,000	360
	Masonry	110	1,100	121
			Σ	2005

kip	*ft*						*kip*
W	**hn**	**C**	**Sx1**	**Sxs**	**T**	**Sa**	**V**
2005	14	1	0.593	0.979	0.145	0.979	1963

Overturning

	Grid	**b**	**h**	**Sa**	**b/h**	**0.6Sa**
A	7	116	33	0.979	3.52	0.587
B	24	54	23	0.979	2.35	0.587
D	3	20	29	0.979	0.69	0.587
E	23	55	23	0.979	2.39	0.587
F	3	78	32	0.979	2.44	0.587
G	23	30	32	0.979	0.94	0.587

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Colony High Quick Check Calculations

Flexible Diaphragm Connection Force

§4.5.3.7

		Demand								Capacity								
										Weld					Stud, bolt, or bar			
		psf	*ft*	*ft*	*sf*			*kip*		*ksi*	*in*	*in*	*in²*	*kip*	*in*	*in²*	*ksi*	*kip*
	Grid	**wp**	**wt**	**ht**	**Ap**	**ψ**	**Sxs**	**Tc**	**Ratio**	**Fexx**	**a**	**l**	**Aw**	**ϕR**	**Ø**	**Asa**	**Fu**	**ϕQnv**
A	1	110	1.333	8	10.67	1.5	0.979	1.72	0.13	70	5/8	6	2.65	83.5	5/8	0.31	65	13.0
A	B	110	3	8	24	1.5	0.979	3.88	0.30	70	5/8	3	1.33	41.8	5/8	0.31	65	13.0
B	E	120	3	11.5	34.5	1.5	0.979	6.08	0.47	70	5/8	3	1.33	41.8	5/8	0.31	65	13.0
B	24	120	1.333	11.5	15.33	1.5	0.979	2.70	0.21	70	5/8	6	2.65	83.5	5/8	0.31	65	13.0
E	24	120	1.333	11.5	15.33	1.5	0.979	2.70	0.21	70	5/8	6	2.65	83.5	5/8	0.31	65	13.0
F	3	120	2	8	16	1.5	0.979	2.82	0.15						3/4	0.44	65	18.7
G	24	120	2	8	16	1.5	0.979	2.82	0.15						3/4	0.44	65	18.7

Ap =[@wt]*[@ht]
ψ average of LS (1.2) and IO(1.8)
Tc =[@ψ]*[@Sxs]*[@wp]*[@Ap]/1000

ϕR =0.45*[@Fexx]*[@Aw]
ϕQnv =0.65*[@Fu]*[@Asa]

Shear Stress

§4.5.3.3

	kip	*sf*	*ksf*	*psi*
	Ms	**Vj**	**Aw**	**Vjavg**	
A NS	3	1919	260	2.5	17.1
A EW	3	1919	460	1.4	9.7
B NS	3	1570	195	2.7	18.6
B EW	3	1570	340	1.5	10.7
D NS	3	1495	260	1.9	13.3
D EW	3	1495	225	2.2	15.4
E NS	3	1706	270	2.1	14.6
E EW	3	1706	455	1.2	8.7
F NS	3	1682	175	3.2	22.2
F EW	3	1682	60	9.3	64.9
G NS	3	1963	116	5.6	39.2

L	w	Aw
0	0.833	40
60	0.667	

Ms average of LS (4) and IO(2)
Vj from respective story shear above
Vjavg =[@Vj]/[@Aw]/[@Ms]

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Colony High Quick Check Calculations

Masonry Reinforcing

in	#	#	in	#	#	in	in²	in²				#	Ø
Width	**Vn**	**Vbar**	**Vocs**	**Hn**	**Hbar**	**Hocs**	**Va**	**Ha**	**Vr**	**Hr**	**r**	3	0.11
12	2	6	48	2	6	48	0.88	0.88	0.0015	0.0015	0.0031	4	0.2
10	2	5	48	1	7	48	0.62	0.6	0.0013	0.0013	0.0025	5	0.31
8	1	6	48	1	6	48	0.44	0.44	0.0011	0.0011	0.0023	6	0.44
6	1	5	48	1	5	48	0.31	0.31	0.0011	0.0011	0.0022	7	0.6

Column Axial Stress Check

§4.5.3.6

		#	*kip*	*ft*	*ft*		*in²*	*ksi*	*ksi*	
	Fy	**nf**	**V**	**hn**	**L**	**Ms**	**A**	**Pot**	**0.3Fy**	
Gym	36	2	1127	33	62	1.65	7.6	16.0	10.8	6x6x3/8
G	36	6	787	16	30	1.65	6.4	4.4	10.8	6x6x5/16

Ms average of LS(2.0) and IO(1.3)

Pot =2*[@V]*[@hn]/[@Ms]/3/[@L]/[@nf]/[@A]

Brace Axial Stress Check

§4.5.3.4

	ksi	*kip*	*ft*		*ft*	#	*in²*	*ksi*	*ksi*
	Fy	**Vj**	**Lbr**	**Ms**	**s**	**Nbr**	**Abr**	**fj**	**0.5Fy**
F EW	36	1682	28.8	2.25	24.7	11	4.72	16.8	18
G EW	36	1682	32.9	2.25	29.5	12	5.2	13.4	18

Brace Connection Check

TS Square, K=1

	Yield			Buckle					Weld					
	in²	ksi	kip	ft	in	ksi	ksi	kip	*ksi*	*in*	*in*	*in²*	*kip*	
	Ag	**Fy**	**ϕP**	**Lb**	**r**	**Fe**	**Fcr**	**ϕPn**	**Fexx**	**a**	**l**	**Aw**	**ϕR**	**KL/r**
6x5/16	6.43	36	208	25.2	2.31	16.7	14.6	85	70	3/8	80	21.21	668	131
5x1/4	4.3	36	139	21.00	1.93	16.8	14.7	57	70	3/16	24	3.18	100	131
7x3/8	8.97	36	291	34.80	2.69	11.9	10.4	84	70	1/4	56	9.90	312	155

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Colony High Quick Check Calculations

Compact Members

		ksi		
	b/t	**Fy**	**λ**	**λmd**
6x5/16	17.6	36	39.74	18.16
5x1/4	18.5	36	39.74	18.16
7x3/8	17.1	36	39.74	18.16

Chevron Bracing

	kip	°	*kip*	*ft*	*kip/ft*	*k ft*	*k ft*	*k ft*	*in³*	*k ft*	
WF	**Yield**	**θ**	**P+**	**span**	**wd**	**Mp+**	**Mwd**	**Mu**	**Zx**	**ϕMn**	**Ratio**
24x76	208	39.4	132.2	39	0.27	1289	51.3	1351	200.0	540	2.50