



Civil Engineer Del Mont Consultants, Inc. 125 Colorado Ave.

Montrose, CO 81401 Ph: 970-249-2251

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Drawings and Dimensions	Construction Notes		No.	NR	
1. DO NOT SCALE THE DRAWINGS.	1. DRAWINGS ARE PREPARED USING DIMENSIONS AND PRODUCT CONFIGURATIONS OR DETAILS		Contraction In	() L 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
2. ALL DIMENSIONS ON PLANS ARE TO FACE OF BLOCK OR TO FACE OF STUD UNLESS	OF SPECIFIC MANUFACTURERS (TYPICALLY THE FIRST MANUFACTURER LISTED UNDER "ACCEPTABLE MANUFACTURERS" IN THE SPECIFICATIONS). DIMENSIONS AND DETAILS FOR	2	1	2	
NOTED OTHERWISE.	SPECIFIC PRODUCTS MAY CHANGE BEFORE THEY ARE ACTUALLY INCORPORATED INTO THE				
3. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ARCHITECT	ACTUAL INSTALLATION DETAILS AND DIMENSIONS MAY DIFFER FROM THOSE SHOWN.				The second se
IMMEDIATELY SHOULD ANY DISCREPANCIES BE FOUND IN THE DRAWINGS AND SPECIFICATIONS.	CONTRACTOR SHALL VERIFY INSTALLATION REQUIREMENTS FOR ALL PRODUCTS TO BE	1	1.12		
4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL FIELD CONDITIONS	RECESSED PRODUCTS), AND IS RESPONSIBLE FOR ACCOMMODATING AND COORDINATING CHANGES TO OTHER MATERIALS OR PRODUCTS THAT ARE NECESSARY, BECAUSE OF THESE		E Gar		
AND DIMENSIONS AS THEY RELATE TO THIS PROJECT. SHOULD DISCREPANCIES EXIST BETWEEN THE WORK INDICATED AND ACTUAL FIELD CONDITIONS NOTIFY THE ARCHITECT	DIFFERENCES		BAX.		50
PRIOR TO PROCEEDING WITH THE WORK.	2. PROVIDE SOLID BLOCKING WITHIN PARTITIONS AT ALL LOCATIONS WHERE ITEMS WILL BE		Per la constante		
5. ACTUAL CONTRACT LIMITS ARE TO BE DETERMINED BY THE CONTRACTOR AND APPROVED	MOUNTED ON PARTITIONS INCLUDING, BUT NOT LIMITED TO: ACCESSORIES, CASEWORK TRIM, FLASHING, WALL MOUNTED EQUIPMENT, TACK/BULLETIN/MARKER BOARDS, ETC.		33.8		
BY THE OWNER BEFORE ACTUAL CONSTRUCTION WORK BEGINS. ANY INDICATION OF PROJECT LIMITS OR LINES OF DEMARCATION ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR.					
AND ARE NOT TO BE TAKEN LITERALLY.	3. ALL WOOD BLOCKING SHALL BE FIRE-TREATED WOOD.				
6. SEE GENERAL NOTES ON ALL 'A' SERIES DRAWINGS FOR INFORMATION RELATED TO PLANS AND	4. MAINTAIN RATING AT ALL BLOCKOUTS FOR ALL FIRE EXTINGUISHERS AND TOILET ACCESSORIES		1		
	THAT ARE TO BE INSTALLED IN RATED WALLS.		St.		The second se
7. THE TERM "ALIGN" REFERS TO LOCATING DIFFERENT COMPONENTS OF CONSTRUCTION TO	5. PROVIDE 24" X 24" ACCESS PANELS IN PARTITIONS WHERE REQUIRED FOR MECHANICAL				
	EQUIPMENT EXCEPT WHERE SIZES ARE OTHERWISE NOTED.		1.4	PROJECT LOCATION -	
8. CONTRACTORS AND ALL SUB-CONTRACTORS SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION AND/OR ORDERING OF MATERIALS.	6 PROVIDE GYPSIJM BOARD CONTROL JOINTS IN PARTITIONS AND CEILINGS AT 30-0" MAX	-	1		
	SPACING. COORDINATE TO MEET FIRE RESISTIVE RATINGS OF THE ASSEMBLY, FIRESTOP JOINTS		Martin a		
9. USE OF THE WORD "VERIFY" POINTS OUT A SITUATION WHICH MUST BE CONFIRMED PRIOR TO PROCEEDING WITH THE WORK, FABRICATION OF EQUIPMENT, OR ORDERING	AT RATED PARTITIONS, SUB-CONTRACTOR MUST PROVIDE A SUBMITTAL FOR JOINT MATERIAL.				
MATERIAL. NOTIFY THE ARCHITECT OF ANY DISCREPANCY.	7. CAULK ALL JOINTS OR CRACKS WHICH OCCUR WHERE DISSIMILAR MATERIALS INTERSECT				
10. REFER TO THE REFLECTED CEILING PLAN WHEN PROVIDED FOR EXACT LOCATIONS OF	PERPENDICULAR TO EACH OTHER AND WHERE THE INTERSECTION IS EXPOSED TO VIEW, UNLESS		[
ALL CEILING FIXTURES. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR COMPLETE	8 FIRERLOCK ALL CONCEALED SPACES SOFFITS SHAFTS CHASES AND CEILING AREAS PER			Sheet Index	
	REQUIREMENTS OF THE ADOPTED IBC AND THE LOCAL JURISDICTION'S AMENDMENTS.		Sheet	Sheet Name	
DUCTWORK IS TO BE INSTALLED AT A SPECIFIC ELEVATION IN A CONTROLLED PATTERN.	9. PROVIDE CONTINUOUS PERIMETER BUILDING INSULATION AT ALL EXTERIOR WALLS FROM SLAB				
THE CONTRACTOR MUST RELY ON ALL OF THESE DISCIPLINES TO COMPLETE THE WORK AND SHOULD NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.	TO ROOF DECK.		General G0.1	Cover	
	10. THE ARCHITECTURAL AND STRUCTURAL DRAWINGS BOTH DESCRIBE VARIOUS FLOOR		G0.2	Life Safety Plans	
12. THE GENERAL CONTRACTOR SHALL COORDINATE THE WORK OF ALL TRADES INSTALLING THEIR RESPECTIVE EQUIPMENT IN THE CEILING PLENUMS. MECHANICAL,	DRAWINGS WHEN INSTALLING THE FLOOR SLAB.		Civil		
ELECTRICAL, STRUCTURAL, AND FIRE SPRINKLER SYSTEMS ALL SHARE THIS SAME SPACE.	11. PROVIDE SLIP JOINT CONNECTIONS AT PARTITIONS THAT EXTEND TO STRUCTURE ABOVE.		01	Cover Sheet	
AWARENESS OF THE OTHER TRADES THAT NEED TO SHARE THESE SPACES AND MUST	PROVIDE BRACING ABOVE AS REQUIRED. REFERT TO STRUCTURAL DRAWINGS AND TO SLIP		02	Construction Notes	
DRAWINGS OF THE OTHER TRADES.	12. ASSUME LEVEL 4 FINISH FOR ALL GYPSUM BOARD PARTITIONS, UNLESS NOTED OTHERWISE.			Construction Details	
				Existing Site Conditions	
13. ALL DOORS TO BE LOCATED 4" OFF ADJACENT CMU OR METAL STUD WALL UNLESS	ADEQUATELY ENCLOSE PIPING, CONDUITS, AND RECESSED EQUIPMENT. NOTIFY THE ARCHITECT OF		06	Demolition Plan Proposed Horizontal Layout	
	ANY DISCREPANCIES WITH THIS INTENT.			Proposed Utility Plan	
	14. ALL VERTICAL AND HORIZONTAL PIPES, CONDUITS, DUCTS, ETC. IN FINISHED ROOMS OR AREAS THROUGHOUT THE BUILDING SHALL BE FURRED IN TO MATCH THE ROOM FINISH UNLESS OTHERWISE			Proposed Grading Plan Parking Area Grading Plan	
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	15. WHERE MECHANICAL WORK PENETRATES ANY COMPONENT OF A FIRE-RATED ASSEMBLY,		Arch		a konstruction (a construction of the state
	DUCTWORK PENETRATES A PORTION OF THE RATED ASSEMBLY, OBTAIN CLARIFICATION FROM		A1.1	Site Plan	
	THE ARCHITECT PRIOR TO BIDDING. SEAL AROUND ALL PENETRATIONS THROUGH PROPOSED FIRE RATED PARTITIONS. PROVIDE UL APPROVED FIRESTOP SYSTEM TO MEET REQUIRED		A2.1	Main Level Floor Plan	
			A2.2 A2.5	Roof Plan	
Partition Notes	16. SEAL AROUND ALL PENETRATIONS THROUGH EXISTING AND PROPOSED FIRE RATED		A3.1	Elevations	
			A4.1 A4.2	Building Sections Wall Sections	
			A4.3	Wall Sections	
1. PROVIDE AND INSTALL ALL BLOCKING STIFFENERS, BRACING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK AND OF ALL FLOOR MOUNTED C			A5.1	Schedules & Details	
SUSPENDED MECHANICAL AND ELECTRICAL EQUIPMENT.			A5.3	Interior Elevations	
2. COORDINATE METAL STUD GAUGE WITH PRE-APPROVED EQUIPMENT ANCHORAGE. WHERE A			A6.2	Upper Level Finish Floor Plan	
DISCREPANCY OCCURS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.			A0.1 A7.1	Details	
3. THERE SHALL BE NO BACK-TO-BACK ELECTRICAL TELEPHONE, OR OTHER OUTLETS, EXCEPT WHERE SPECIFICALLY SHOWN			A7.2	Details	
			Structural		
AT SMOKE PARTITION AND AS REQUIRED BY TEST NUMBER	Barray C. M. C. M. C. M.		CS1	Structural Cover Sheet	
			F1.0 FD1	Footing Foundation Plan Footing Foundation Section Sheet	
			S1.0	Main Level Floor Framing Plan	
IBCINTERNATIONAL BUILDING CODE. RE: REFER/REF			S2.0	Main Level Wall Framing Plan	
TEM INDIC INDICATOR REINF REINFORCE INSUL INSULATION REQ REQUIRED	UNFIN UNFINISHED UON UNLESS OTHERWISE NOTED		S3.0 S4.0	Upper Level Wall Framing Plan	
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RCP. ROOF DRAIN REFER/REFERENCE

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TYPE 'X'

SHEET METAL AND AIR CONDITIONING CONTRACTOR NATIONAL ASSOCIATION SPECIFICATIONS STAINLESS STEEL SOUND TRANSMISSION CLASS

STRUCTURE, STRUCTURAL.

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REFER TO CONSTRUCTION SPECIFICATION .. INSTITUTE, UNIFORM DRAWING SYSTEM AND TO PROJECT SPECIFICATIONS FOR REFERENCE STANDARDS & ADDITIONAL ABBREVIATIONS

Vicinity Map



P0-1 Plumbing-Cover Sheet

P3-1 Plumbing-Details

E0-1 Electrical-Cover Sheet

E1-1 Lighting-Main Level Floor Plan

E1-2 Lighting-Upper Level Floor Plan

Electrical-Main Level Floor Plan

E2-2 Electrical-Upper Level Floor Plan

E2-3 Electrical-Schedules and Diagrams

Electrical

P1-1 Plumbing-Main Level Domestic Water

P1-3 Plumbing-Upper Level Sanitary Waste

P1-4 Plumbing - Main Level Sanitary Waste

P1-2 Plumbing-Upper Level Domestic Water

Acceptance I have received and reviewed the attached Construction Drawing Set from Motley Architecture & Design. I have found it to be acceptable and to meet the requirements of this project phase. I hereby authorize Motley Architecture & Design and their team of Consultants to proceed into the next phase of the project. This document is intended to create awareness of the impact to both design and construction schedules and design fees should major design changes occur after this phase. Approved to proceed to Design Development Phase:

Owner / Owner's Representative









HT. No.	SHEET NAME
1	COVER SHEET
2	CONSTRUCTION NOTES
3	LINE LEGEND AND CONSTRUCTION DETAILS
4	CONSTRUCTION DETAILS
5	EXISTING SITE CONDITIONS
7	PROPOSED HORIZONTAL LAYOUT
8	PROPOSED UTILITY PLAN
9	PROPOSED GRADING PLAN
C	PARKING AREA GRADING PLAN
1	WALL PROFILE VIEW

UTILITY CONTACTS										
Utility	Owner	Contact	Phone	Email						
Natural Gas	Black Hills Energy	Nathan Hijar	(970) 808-5036	Nathan.Hijar@blackhillscorp.com						
Telephone/Fiber	Century Link	Mark Preston	(970) 318-1891	Mark.Preston@lumen.com						
Cable/Fiber	Charter	Todd Andrews	(970) 316-1700	Todd.Andrews1@charter.com						
Power	DMEA	Phil Sanchez	(970) 275-8982	Phil.Sanchez@dmea.com						
Fiber	Elevate	Jonathan Nelson	(970) 240-6818	Jonathan.Nelson@elevatefiber.com						
Fiber	Clearnetworx	Doug Seacat	(970) 240-6600	support@clearnetworx.com						
Water	Town of Olathe	Heath Terrell	(970) 417-1469							
Water	Tri-County Water	Kyle Thompson	(970) 249-3369	Kyle@tricountywater.org						
Sanitary Sewer	Town of Olathe	Randy Inskeep	(970) 323-5701							
Storm Sewer	Town of Olathe	Heath Terrell	(970) 417-1469							
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STREET & UTILITY SPECIFICATIONS

<u>General</u>

1. Safety Requirements: The Contractor shall have full and complete responsibility for jobsite safety, and shall perform all work in full conformance with all Federal, State, and local safety regulations.

2. Town of Olathe Specifications and Standard Details: The streets, water, sewer, and storm drainage systems shall be constructed in accordance with current Town of Olathe Standards and Specifications. Contractor shall keep a copy of the current Town Specification on the job site whenever work is in progress. Contractor must supply a copy of the approved CDPHE permit and SWMP to the Town Engineer prior to construction.

3. Stormwater Management Plan and Permit: The Contractor shall prepare a Stormwater Management Plan, shall apply for and obtain the requisite Permit from the State of Colorado, shall construct and maintain the requisite facilities necessary to implement the Plan, and shall comply with the requirements of the Permit during construction. Upon completion of the work, and delivery of final payment, the Contractor shall close out the permit with the State.

4. Contractor Investigation: The Contractor shall familiarize himself with local conditions and the specifications of the governing entities, evaluate the soils report, and examine the site, make such tests, and perform such explorations as he deems necessary to evaluate the surface and subsurface physical conditions of the site, in order to perform the work under the conditions that exist on the site, in accordance with the Contract Documents for the Contract Price.

5. Underground Utility Locates: The Contractor shall have full responsibility to identify, locate, and protect all existing utilities lines. Contractor shall contact the Utility Notification Center of Colorado,1-800-922-1987, and the individual utility companies as needed, to locate and properly protect existing utilities prior to construction.

6. Hazardous Materials: In the event that the Contractor should encounter hazardous materials on the site (including but not limited to asbestos cement pipe), Contractor shall leave such materials undisturbed and shall contact the Owner for directions regarding disposal of said materials.

7. Notifications: Contractor shall notify the Town of Olathe Public Works Department at least 48 hours prior to commencing construction to arrange for inspection by the Town. The Town will inspect all public improvements for compliance with the Town's standards and specifications and will not accept improvements until all requirements of these standards and specifications are met.

8. Connections: The Contractor shall coordinate and/or make the connections to existing water and sewer mains in conformance with Town of Olathe requirements.

9. Topsoil: Contractor shall manage the work so that all topsoil is preserved for use in final landscaping. Contractor shall separate topsoil from subsoil during grading operations, and shall store the materials separately. In general, topsoil shall be stored on the back of the adjoining lots, and subsoil shall be used for overlot grading.

10. Embankment shall be placed and compacted in accordance with CDOT Standard Specifications for Road and Bridge Construction (current edition) Section 203.

11. Extra Work: A Change Order signed by the Owner's Representative is required to qualify any extra work for extra payment. Any extra work undertaken by the Contractor without having a Change Order signed by the Owner's Representative, shall be deemed to have been undertaken for the Contractor's convenience, and shall not be eligible for extra compensation.

12. Record Drawings: Contractor shall record precise locations of water and sewer fittings, and all variations from the design, on "as-built" drawings showing the locations and dimensions of any element of the utility system that is not installed as designed, and shall provide that information to the Owner prior to release of final payment.

<u>Trenching:</u>

1. Trench Compaction: Place all trench backfill in shallow lifts and compact to 95% of Modified Proctor, AASHTO T 180, at $\pm 2\%$ of optimum moisture in accordance with Town of Olathe Specifications.

2. Moisture Conditioning of Backfill: Contractor shall thoroughly moisture condition (wetting or drying as required, and mixing thoroughly) all backfill materials prior to placement in the trenches. Watering of loose backfill after it has been placed in the trench is prohibited.

3. Allowable Lift Depths will depend upon the type, weight, and power of the Contractor's compaction equipment, and are subject to the approval of the Engineer. In general, loose lift depths in excess of 12" will not achieve specified density for the full depth of the lift.

4. Density Testing will be provided by the Owner's testing agency. Testing is performed for the benefit of the Owner, to demonstrate general conformance with the design and the specifications. Contractor is responsible to compact all backfill in conformance with the specifications, shall coordinate the testing schedule with the Engineer, and shall normally be responsible for notifying the testing agency of readiness for testing. Contractor may expect density testing on every lift until effective methods have been demonstrated, and testing in conformance with the Town's testing frequency protocol thereafter. Retests in areas where density tests failed to meet the specification will be made at the Contractor's expense.

5. Trench Subsidence: Contractor is responsible for the quality of the installation of all facilities within this project. Contractor is wholly responsible to thoroughly, diligently, and completely compact all backfill of trenches and excavations around manholes, drainage structures, and other underground facilities in conformance with the specifications. In the event surface subsidence occurs during the warranty period anywhere within the Town right of way, the Contractor shall be wholly responsible for all remedial measures necessary to repair such damage. The existence of passing density tests, proof rolling results, or approval or acceptance of the work by the Owner, the Engineer, or the Town of Olathe does not relieve the Contractor of responsibility for surface subsidence during the warranty period.

6. Trench Stabilization Rock: If unstable conditions are encountered in the bottom of trenches, $1 \ 1/2$ " washed rock will be used to stabilize the bottom of the trench prior to installing pipelines.

7. Existing Wet Subgrade: Any trenches in the street subgrade that are wet and unstable at the time of trench backfill will be backfilled with select materials as directed by the Engineer. If available, select borrow may be developed on site from sources designated by the Engineer.

8. Replacement Stakes: The Contractor shall be responsible to maintain the survey stakes for use in the work. The Engineer will replace lost survey stakes at the Contractor's expense, including replacing any lost stakes needed by the Engineer to evaluate the Contractor's work.

9. Grade Transfer: The Contractor is responsible to transfer grades from the stakes to the work.

Sewer Collection System

1. Town of Olathe Sewer Specifications: The Contractor shall construct the sewer system in conformance with these plans and with the Standards and Specifications of the Town of Olathe, current edition, except as modified or augmented herein.

2. Sewer Connection: The Contractor shall measure the actual elevation of the existing sewer main at the connection points, and confirm that the design elevations and minimum grades upstream can be met. Notify the Engineer of any discrepancies.

3. Sewer Survey Control: The Contractor shall provide one (1) set of stakes at manhole locations and sewer service locations.

4. Laser Grade Control: The Contractor shall install sewer and storm drain mains using laser grade control. The Contractor shall provide trained, competent personnel to set, check, and manage the laser. The Contractor shall provide appropriate surveying equipment to establish laser alignment from manhole to manhole. Grade control methods and equipment are subject to approval of the Engineer.

5. Adjustments to Grade: At each manhole, the Contractor shall check the actual elevation of the pipeline as installed, and, if necessary, re-calculate the grade to the next manhole to compensate for any error in the previous section. Normal allowable pipeline installation tolerances at each manhole are +/- 0.2' vertical, and +/- 1.0' horizontal, unless the variation conflicts with other clearance or separation requirements.

6. Sewer Bedding: The Contractor shall bed all sewer mains and services in 3/4" washed rock, at least 6" all around the pipe.

7. Manhole Cover Tolerances: See Street Specifications, Note 10.

8. Sewer Services shall be installed as detailed, on straight lines and uniform grades, extended fully across the utility easement, capped, and marked with a 4x4 treated wooden post painted green. Services shall be installed at grades not less than 2%, and at a depth of at least 4' at the easement line unless otherwise limited by depth of the main.

9. Low Pressure Air Testing: The Contractor shall pressure test the sewer main and services in accordance with Town of Olathe specifications. Contractor shall call the Town and the Engineer to observe the pressure testing.

10. Lamp Olathe.

Engineer.

12. Locations for Record Drawings: Contractor shall measure and record the distance of each service elbow and clean out wye from the center of the tie in manhole, and shall include that information in the Record Drawings to be submitted to the Owner prior to release of the final payment.

Water Distribution System

plans and

2. Water System Survey Control: The Contractor shall provide one (1) set of stakes for water line construction designating water main alignment, valve locations, tees, service locations, meter pit locations and elevations, and fire hydrant locations and flange elevations. Hydrants shall be set 2' behind curbs, with flanges set 4" to 6" above top back of curb. Stakes will be set at offsets satisfactory to the Contractor.

3. Connection to Existing Water System will be made by Town of Olathe and coordinated with the owner's representative.

4. Conflicts with Other Utilities: Contractor shall verify clearance between water mains and other buried utilities, including sewer and storm drain lines, and shall adjust the depth of the water main as needed to provide minimum required clearances from other utilities, and minimum required depth of cover on water mains.

6. Inspection by Town of Olathe: The Town will inspect the installation of the water system. Prior to commencing construction the Contractor shall negotiate an inspection protocol with the Town to ensure the Town has adequate opportunity to observe the work.

7. Valves shall be located as shown on the drawings, and are generally isolated "in line" valves. Those valves that are mounted on tees and crosses shall be flange by mechanical joint. Valves for hydrants shall be bolted directly to the tee. All valves shall be installed on concrete pads with a minimum bearing area of 4 sf. The use of pre-cast pads is encouraged. Cast in place pads shall be formed sufficient to preclude contact between concrete and the bolt flanges on the valves. At intersections, space the valves at approximately 20' from the fitting such that no more than one valve is in the intersection.

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10. Thrust Blocks shall be sized in accordance with the Town of Olathe specifications. Concrete for thrust blocks shall be formed to control concrete placement, and to prevent concrete from coming in contact with bolt circles on fittings. Place plastic sheeting between the fitting and the concrete to prevent bonding. Contractor shall call the Town to observe thrust block bearing area and forming prior to casting blocks.

11. Locations for Record Drawings: Contractor shall measure tap locations from the nearest downstream valve, fitting locations from the nearest downstream fitting or valve and shall include that information in the Record Drawings to be submitted to the Architect prior to release of the final payment.

12. Disinfection: The Contractor shall disinfect (chlorinate) and flush the pipelines in conformance with Town of Olathe specifications.

13. Pressure Testing: The Contractor shall pressure test the water main in conformance with Town of Olathe specifications. Contractor shall call the Town and the Engineer to observe the pressure testing.

<u>Cable Utilities</u>

1. Cable Utilities: The Contractor shall provide trenching, backfilling, and compaction for the installation of power, phone, and cable TV lines in conformance with utility company requirements. Contractor shall coordinate and schedule all such work with the respective utility companies.

2. Cable Utility Survey Control: The Contractor shall provide one (1) set of stakes to locate power, gas, phone, and CTV utilities. Contractor shall provide adequate means to ensure that the cable utilities are installed at uniform depth and uniform distance behind the sidewalk, including where necessary incidental grading behind the sidewalk to provide a uniform surface from which to begin the work. Cable utilities will be installed 42" below top back of walk unless otherwise approved by the Engineer.

3. Cable Installation: After the utility companies have placed their cables, the Contractor shall be responsible to ensure that all cables and conduits are arranged in a neat, uniform, straight, untangled, uncrossed manner, at uniform depth and spacing, and in trenches that are a uniform distance behind the sidewalk. Cables and conduits shall be hand bedded using select bedding conforming to utility company requirements. In no event shall bedding be dumped directly on the cables and conduits from a loader bucket.

4. Cable Backfill & Compaction: No cable utilities shall be backfilled until the installation has been observed by the Engineer for compliance with this specification. All cable utility trenches shall be backfilled in shallow lifts. Trenches on lots shall be compacted to 90% Modified Proctor density at $\pm 2\%$ of optimum moisture. Trenches across streets shall be compacted to 95% Modified Proctor density at $\pm 2\%$ of optimum moisture. Backfill and compaction methods and equipment are subject to the approval of the Engineer. Expect density testing on utility trench backfill.

<u>Natural Gas</u>

1. Natural Gas pipelines will be installed by Black Hills Energy. Contractor shall provide the trenches, coordinate the work with Black Hills Energy, and backfill and compact the trenches. Contractor is responsible for ensuring that all road crossing conduits, in proper size, type, and quantity, are in place at the locations required by the gas company to allow road construction to progress in advance of gas line installation. Trenches on lots shall be compacted to 90% Modified Proctor density at $\pm 2\%$ of optimum moisture. Trenches across streets shall be compacted to 95% Modified Proctor density at $\pm 2\%$ of optimum moisture.

10. Lamp Testing & Camera Testing in conformance with Town Specifications will be performed by the Town of

11. Other Testing in accordance with the Town Specifications may be performed at the discretion of the

1. Town of Olathe Specifications: The Contractor shall construct the water system in conformance with these plans and with the Standards and Specifications of the Town of Olathe.

5. Bedding Materials: Pipe shall be bedded per Town Specifications.

8. Valve Box Tops: See Street Specifications, Note 11.

9. Water Services and meter pits shall be constructed in conformance with Town of Olathe specifications. Contractor shall furnish all materials except the meter itself.

<u>Streets</u>

1. Town of Olathe Specifications: All street construction work shall be performed in conformance with these Plans and with Town of Olathe Standards and Specifications, supplemented as needed by CDOT Standard Specifications for Roads and Bridges, latest edition.

2. Survey Control: The Contractor shall provide one (1) set of cut / fill stakes at 50' intervals, plus PC's, PT's, and grade breaks, at offsets designated by the Contractor, for street excavation and subgrade preparation. Contractor shall preserve street excavation stakes during utility installation for use in final subgrade preparation. Stakes lost during construction will be replaced at the Contractor's expense, including stakes needed for the Engineer to evaluate the Contractor's work.

3. Subgrade Preparation: Scarify the subgrade to 12" deep, moisture condition, and compact to 95% of Standard Proctor, AASHTO T 99 at $\pm 2\%$ of optimum moisture, prior to placement of base course gravel, unless otherwise directed by the Engineer. Density testing will be provided by the owner. Retesting in area where density tests failed to meet the specification will be made at the Contractor's expense. Contractor shall finish the subgrade to within $\pm .05'$ / -0.15' of design elevation. Contractor shall set bluetop hubs at not more than 50' grid intervals to control subgrade finishing operations, and shall replace any hubs lost during finishing operations to facilitate final elevation checks by the Engineer.

4. Subsurface Soil Conditions: Existing native soil conditions at subgrade elevation may not be satisfactory for road construction without remedial measures at some locations within the project. The Geotechnical Engineer will evaluate the subgrade prior to placement of subbase. At any location where unstable subgrade conditions are encountered, the Geotechnical Engineer will determine appropriate remedial measures, and the Engineer will issue a Change Order to compensate the Contractor for the cost of correcting the unstable subgrade conditions.

5. Proof Roll Observation by the Engineer: Contractor shall proof roll the base course gravel to demonstrate the stability, uniformity, and compaction of the base material. Proof rolling is incidental to the work, and the cost thereof shall be included in Contractor's unit prices. Any areas that yield excessively, in the judgment of the Engineer, will be reprocessed and recompacted to specifications at the Contractor's expense, and shall be proof rolled again to demonstrate competence of the base material.

7. Subbase Gravel, if required, shall conform to CDOT Class 2 Specifications, compacted to 95% Modified Proctor, AASHTO T 180, at +/-2% of optimum moisture. Density testing will be provided by the Owner. Retesting in areas where density tests failed to meet the specification will be made at the Contractor's expense.

8. Base Course Gravel shall conform to CDOT Class 6 Specifications, compacted to 95% Modified Proctor, AASHTO T 180, at +/-2% of optimum moisture. Density testing will be provided by the Owner. Retesting in areas where density tests failed to meet the specification will be made at the Contractor's expense.

9. Proof Roll Observation by the Engineer: Contractor shall proof roll the base course prior to placement of pavement or concrete to demonstrate to the Engineer the stability, uniformity, and compaction of the base. Any areas that yield excessively, in the judgment of the Engineer, will be reprocessed and recompacted to meet specifications and to adequately carry the proof roll load.

10. Manhole Covers shall be installed flush to 1/2" below finish grade of the base course gravel. Upon completion of paving operations the top of the cover shall be set to match street grade longitudinally, and to match the cross slope perpendicularly (generally 2%.) Grout placed under the ring shall be full width of the base of the ring. Allowable tolerance from design elevation and slope shall be +/-1/4". Expect the Engineer to check manhole ring placement with a 10' straightedge. Compaction tests will be performed adjacent the ring. At the time of placement of the 3" thick asphalt mat, a 2" or 2 1/2" manhole riser ring shall be installed, leaving the top of the cover 1" maximum to 1/2" minimum below finished pavement surface.

11. Water Valve Boxes shall be installed vertical, with the tops set 1" to 2" below top of gravel, and marked with steel fence posts pending completion of street construction. Tops shall be raised to within 1/2" to 3/4" of finished pavement grade during paving operations.

12. Concrete Survey Control: The Contractor shall provide one (1) set of cut/fill stakes at 50' intervals, plus BCR's, ECR's, grade breaks, and radius points, on both sides of each street, to construct the curb, gutter, and sidewalks. Stakes lost during construction will be replaced at the Contractor's expense.

13. Concrete shall conform to Town of Olathe Specifications. Contractor shall submit a concrete mix design to the Engineer for approval at least 10 days prior to the first concrete placement. Concrete shall be CDOT Class B or D from the CDOT Approved Products List (APL) 4500 psi mix with 1.5 lbs of fiber reinforcement per cubic yard. Slump shall not exceed 4". Sprinkling water on the surface during finishing is prohibited. Freshly placed concrete surfaces shall be protected from rain for 24 hours. Concrete flatwork shall be protected with curing compound approved by the Engineer applied immediately after finishing work is complete. Concrete shall be protected from freezing for at least 5 days after placement. If daytime temperatures are consistently below 60 F, and fall below freezing at night, ACI specifications for cold weather concrete placement will be implemented. The Owner will provide guality assurance testing.

14. Concrete Ponding Tolerance: All concrete surfaces shall be finished to drain. Gutters and pans shall be checked for ponding by the Engineer. Any area that holds water more than 1/2" deep, or which covers more than 2 sf, shall be repaired or reconstructed as determined by the Engineer.

15. Tolerances for Paving Preparation: base course gravel shall be finished to match curb or pan at a depth of 2 1/2" below the lip of the gutter prior to paving. Allowable tolerance for compacted base course prior to paving shall be +/-1/4" at curbline Contractor shall set bluetop hubs on 50' grid intervals to control gravel finishing operations. Call the Engineer to observe base course finishing tolerances at least 48 hours prior to paving.

16. Asphalt Pavement: Paving shall conform to Town of Olathe Specifications. The hot bituminous pavement mixture shall be a mix currently being used on CDOT work in this area, and shall conform to the tolerances specified in Table 401-1, CDOT Standards for Road & Bridge Construction, current edition. Pavement shall meet an N-Design value of 75 gyrations and use a PG64-22 asphalt binder. Contractor shall submit a mix design to the Engineer for approval at least 10 days prior to paving. Aggregate gradation shall be CDOT Grading S or SX, or a substitute approved by the Engineer. Three inch mats shall be placed in a single lift, and 4" mats placed in two each two inch lifts. Pavement shall be compacted to 92% to 96% of maximum theoretical density. CDOT temperature restrictions for asphalt placement will be fully observed. Quality assurance testing will be provided by the Owner. Contractor shall notify the Engineer at least 72 hours in advance of paving in order to schedule testing.

17. Pavement shall be finished off 1/4" to 1/2" above the lip of catch gutter, 1/2" above the lip of all cross pans, and flush with the lip of spill gutter.



11

PRELIMINARY







TYPICAL CURB & GUTTER DETAILS

N.T.S.



LEGEND

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	- EXISTING CABLE TV LINE	CTV	PROPOSED CABLE
u u	- EXISTING UTILITY LINE	U	PROPOSED UTILITY
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g	- EXISTING GAS LINE	G	
t	- EXISTING TELEPHONE LINE	—— T ——	
fo	- EXISTING FIBER OPTIC LINE	FO	PROPOSED FIBER
w	- EXISTING WATER LINE	W	PROPOSED WATER
ss	- EXISTING SEWER LINE	SS	PROPOSED SEWER
fm	- EXISTING FORCE MAIN LINE	—— FM ———	PROPOSED FORCE
stm	- EXISTING STORM SEWER LINE	STM	
sd	- EXISTING SUBDRAIN LINE	SD	
irr	- EXISTING IRRIGATION LINE	IRR	
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HORIZ: 1" = 10' VERT: 1" = 5'





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Door Schedule

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	102A	··· A	7' - 0"	3' - 0"	WD	ST	STL	FF	
	102B	··· A	7' - 0"	2' - 6"	WD	ST	STL	FF	
	103	A	7' - 0"	3' - 0"	WD	ST	STL	FF FF	
	104	A	7' - 0"	3' - 0"	WD	ST	STL	FF	
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	111B	A	7' - 0"	2' - 6"	WD	ST	STL	FF	
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	112B	С	7' - 0"	3' - 0"	MTL	FF	STL	FF	Closer, Half-lite
	113A	В	7' - 0"	3' - 0"	WD	ST	STL	FF	Closer, Half-lite, Access Control Hardware
	113B	• A	7' - 0"	3' - 0"	WD	ST	STL	FF	Closer,Door Seal, panic hardware, 20 min rated, access contro
	113C	С	7' - 0"	3' - 0"	MTL	FF	STL	<u> </u>	Closer, Half-lite, Panic Hardware
	113D	A	7' - 0"	3' - 0"	WD	FF	STL	<u> </u>	· · · · · · · · · · · · · · · · · · ·
	114A · · ·	·····E	7' - 0"	3' - 0"	MTL	FF	STL	<u></u>	3 hr Fire Door with Closer, Smoke Seal, Fire Exit Hardware
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	115A	B ···	7' - 0"	3' - 0"	WD	ST	MTL	FF	Closer, Half-lite, Door Seal, 20 min rated
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	117B	A	7' - 0"	3' - 0"	WD	ST	STL	FF	
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	119B	С	7' - 0"	3' - 0"	MTL	FF	STL	FF	Closer, Half-lite
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	200B	В	7' - 0"	3' - 0"	WD	ST	STL	FF	Closer, Half-lite, Door Seal, 20 min rated
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	204	A	7' - 0"	2' - 8"	WD	ST	STL	PT	Privacy Hardware
	205	A	7' - 0"	2' - 8"	WD	ST	STL	PT	Privacy Hardware
	206	A	7' - 0"	2' - 8"	WD	ST	STL	PT	Door Seal, 20 min rated
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	211	A	7' - 0"	2' - 8"	WD	ST	STL	PT	Door Seal, 20 min rated
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n geologia e a seconda de la companya de la company Esperadore de la companya de la comp	214	A	7' - 0"	2' - 8"	WD	ST	STL	PT	Privacy Hardware
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	216	A ·	7' - 0"	2' - 8"	WD	ST	SIL		Door Seal, 20 mm rated
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	220	D	7' - 0"	3' - 0"	WD	ST	-	· · · · · · · · · · · · · · · · · · ·	Bi-fold Door
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	236	D	7' - 0"	3' - 0"	WD	ST	-	-	Bi-fold Door
	237	A	7' - 0"	2' - 6"	WD	ST	MTL	FF	Privacy Hardware
	238	D	7' - 0"	3' - 0"	WD	ST			Bi-fold Door
	239	A	7' - 0"	2' - 6"	WD	ST	MTL	FF	Privacy Hardware
	240	. A	7' - 0"	2' - 6"	WD	ST	MTL	 FF	Privacy Hardware
	241	D	7' - 0"	<u> </u>	WD	ST			B-fold Door
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a an	243	D	7' - 0"	3' - 0"	WD	ST		<u></u>	Bi-fold Door
	244	A	7' - 0"	2' - 6"	WD	ST	MTI	. FF	Privacy Hardware
	245	D	7' - 0"	3' - 0"	WD	ST		 	Bi-fold Door
	246	· · · · A	7' - 0"	2' - 6"	WD	ST	MTL	FF	Privacy Hardware
	24.7	A	7' - 0"	2' - 6"	WD	ST	MTL	 FF	Privacy Hardware
an a	248		7' - 0"	3' - 0"	WD	ST	-		Bi-fold Door
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DOOR FINISH & MATERIAL LEGEND: AL - Aluminum, FF - Factory Finish, MTL - Insulated Hollow Metal, ST - Stain, WD - Solid

FLUSH INSULATED METAL DOOR, WITH DOUBLE GLAZED TEMPERED HALF LIGHT 0

FLUSH SOLID WOOD

BIFOLD DOOR

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(PNT-1)

(WB-1)

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	Mechanical 107 VST-1 RB-1 PNT-1				
Util. 122 VST-1 RB-1 NT-1 1 ↓	$\begin{array}{c} \circ \\ \hline TS-1 \\ \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	Infan 120 VST-1 RB-1 (PNT-1	CPT-1	<u>PNT-3</u>	
orridor 113 VST-1 RB-1 PNT-1		Toilet	PNT-2 Lactatio	on/ 1 A3.1	
	TIO4 VST-1 RB-1 PNT-1	N RB-1 PNT-1	$ \begin{array}{c} \text{Sick} \\ 103 \\ \text{VST-1} \\ \text{RB-1} \\ \text{PNT-1} \\ \hline \end{array} $		
	Office, Meeting 102 VST-1 RB-1 PNT-1	PNT-2	Interview of the second	REF.	
Lobby					
FRAME					
Description	Manufacturer	Finish Sc Name / Style	chedule Color	Size Comments	
pet	Shaw Contract	Connected Threads / Drop Stitch Strataworx	Cozy 16111 2.	4" X 24"	
ic Laminate l Surface t t t t	Wilsonart LivingStone Sherwin Williams Sherwin Williams Sherwin Williams Sherwin Williams Sherwin Williams	Drift of Mist Evergreen Fog Jasper Stone Blustery Sky	Organic Cotton 4945 Thunder Cloud L712 9166 SW 9130 SW 9133 SW 9140		
mic Floor Tile mic Wall Tile	Daltile Ottimo Ceramics	Severino Dash	Cenere Fog SV9812Oak DAS01210	2" X 12" 6" X 48"	
isition Strip Isition Strip I Strip Tile ber Base od Base Base r Reinforced Pane	Daltile Johnsonite Daltile el Marlite	Asher Bend Millwork / Exhibit Severino Floor Bullnose FRP	Hearth Plank AB23 9 Vaporize, MW-282-FS 4. Cenere Fog SV98 3 S100G White 4	" X 71" .25" Height " X 12"	
od Floor		Select Red Oak	3,	/4" X 4"	

t Bedroom 214 WD-1 WB-2 PNT-1 PNT-1 PNT-1 Bedroom WD-1 WD-1 WB-2 PNT-1	Closet 218 Living A 216 WD-1 WB-2	rea	
t Toilet 215 T-1 WB-3 PNT-1 T-2 T-2 Toilet 220 T-1 WB-3 PNT-1 T-2 Toilet 220 PNT-1 T-1 WB-3 PNT-1	Closet 217 REF.		
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Bedroom 233 WD-1 WB-2 PNT-1 Closet 234 Closet 234 Closet 226 WD-1 WB-2 Closet 237 Closet 227	t Living Area		
Fin Description Manufacturer Name / Style	nish Schedule Color	Size	Comments
pet Shaw Contract Connected Threads / I Stitch Strataworx	Drop Cozy 16111	24" X 24"	
ue Lammate Wilsonart 1 Surface LivingStone it Sherwin Williams Blustery Sky amic Eloor Tile Dalrite	Organic Cotton 4945 Thunder Cloud L712 9166 SW 9130 SW 9133 SW 9140	12" X 12"	
amic Wall Tile Ottimo Ceramics Dash asition Strip asition Strip all Daltile Daltile Asher Bend	Oak DAS012	16" X 48" 	
ber Base Johnsonite Millwork / Exhibit od Base Daltile Severino Floor Bullnos er Reinforced Panel Marlite FRP od Floor Select Red Oak	Vaporize, MW-282-FS cenere Fog SV98 S100G White	4.25" Height 3" X 12" 4' X 8' 3/4" X 4"	
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	CONCRETE NOTES		ΤΤ
ALL (LA	CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI MANUAL OF CONCRETE PRACTICE TEST EDITION), EXCEPT AS MODIFIED BY THE REQUIREMENTS OF THESE CONTRACT DOCUMENTS.		
1)	PROPERTIES A. ALL CONCRETE SHALL OBTAIN A MINIMUM COMPRESSIVE STRENGTH AS LISTED IN CURRENT IBC SECTION 1904. REFER TO FOUNDATION NOTES, SHEET FD1/FD2 FOR ADDITIONAL STRENGTH REQUIREMENTS. THE MIX DESIGN SHALL BE PROVIDED TO THE STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION. RECOMMENDED PHYSICAL PROPERTIES SLUMP AIR CONTENT 6 in (±1in) [EXCEPTION RE:4E] (5-8% DEPENDING ON AVERAGE AGGREGATE SIZE) REFER TO ACI 332 140 3 pcf @6% AIR CONTENT		ALP
	WATER-CEMENTITIOUS MATERIAL RATIO(w/cm) WATER-CEMENTITIOUS MATERIAL RATIO(w/cm) SHALL NOT EXCEED 0.45 FOR EXTERIOR AND GARAGE SLABS AND ANY CONCRETE IN SEVERE SULFATE EXPOSURE SOILS. OTHER CONCRETE SHALL NOT EXCEED 0.50. B. PRODUCTION AND DELIVERY SHALL BE IN ACCORDANCE WITH ASTMC94-07 STANDARD SPECIFICATION FOR READY-MIXED CONCRETE. COMPRESSIVE STRENGTH PERFORMANCE IS CONDITIONAL WITH STRICT ADHERENCE TO THE CURRENT ASTM STANDARDS RELATING TO CONCRETE AND THE LATEST REVISIONS OF ACL 201, 219, AND 222		
	 C. 5.8.1 - ALL CONCRETE SHALL BE MIXED UNTIL THERE IS A UNIFORM DISTRIBUTION OF MATERIALS. D. 5.8.2 - READY MIXED CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH REQUIREMENTS OF ASTM C 94 (SPECIFICATIONS FOR READY-MIXED CONCRETE). 		
2)	 FREQUENCY OF TESTING (ACI318-CHAPTER 5) A. 5.6.2.1 - SAMPLES FOR STRENGTH TESTS OF EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 CUBIC YARDS OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS OR WALLS. TESTING NOT REQUIRED FOR NON-STRUCTURAL SLABS-ON-GRADE. B. 5.6.2.3 - WHEN TOTAL QUANTITY OF A GIVEN CLASS OF CONCRETE IS LESS THAN 50 CU. YARDS. STRENGTH TESTS ARE NOT REQUIRED WHEN EVIDENCE OF SATISFACTORY STRENGTH IS SUBMITTED AND APPROVED BY THE STRUCTURAL ENGINEER OR BUILDING OFFICIAL. 	2X A.B. ABV	NOMINAL 2X LUMBER ANCHOR BOLT ABOVE
	 C. 5.6.2.4 - A STRENGTH TEST SHALL BE THE AVERAGE OF THE STRENGTHS OF (2) 6x12 OR (3) 4x8 CYLINDERS MADE FROM THE SAME SAMPLE OF CONCRETE AND TESTED AT 28 DAYS OR AT THE TEST AGE DESIGNATED FOR DETERMINATION OF THE REQUIRED CONCRETE STRENGTH (fc). TEST RESULTS ARE TO BE FORWARDED TO FGE FOR REVIEW UPON COMPLETION. D. THE STRUCTURAL ENGINEER RECOMMENDS THE FOLLOWING COMPRESSIVE STRENGTH TEST CYLINDER REQUIREMENTS WHERE APPLICABLE: - 1 CYLINDER @ 7 DAYS - 1 CYLINDER @ 14 DAYS - 2-3 CYLINDERS @28 DAYS (MUST MEET MIN. DESIGN STRENGTH SPECIFIED ON PLANS) 	AC ACI ACG ADD ADJ AF&P AISC AITC	AIR CONDITIONING AMERICAN CONCRETE INSTIT ALKALINE COPPER QUATERN ADDITIONAL ADJUSTABLE AMERICAN FOREST & PAPER C AMERICAN INSTITUTE OF STE C AMERICAN INSTITUTE OF TIME
3)	 MATERIALS AND METHODS OF PLACEMENT OR PROTECTION (EXCERPTS FROM 306.7) A. THE CONSOLIDATION METHOD SHOULD BE COMPATIBLE WITH THE CONCRETE MIXTURE, PLACING CONDITION, FORM INTRICACY, AMOUNT OF REINFORCEMENT, ETC. MANY MANUAL AND MECHANICAL METHODS ARE AVAILABLE, SUCH AS VIBRATION, RODDING, TAMPING OR A COMBINATION OF THESE ACTIONS. RE: ACI 322 FOR RECOMMENDED METHODS. B. ACCELERATING ADMIXTURES ARE RECOMMENDED AND ENCOURAGED, AS LONG AS THE ADMIXTURE DOES NOT CONTAIN CALCIUM CHLORIDE, WHICH CAN CORRODE REINFORCING ELEMENTS. C. ALL MATERIALS AND EQUIPMENT REQUIRED FOR PROTECTION SHALL BE AVAILABLE AT THE 	ALI ANS APA ARC ASC ASC AST AVP	ALTERNATE/ALTERNATING AMERICAN NATIONAL STAND AMERICAN PLYWOOD ASSOC ARCHITECT/ARCHITECTURAL AMERICAN SOCIETY OF CIVIL ALLOWABLE STRESS DESIGN AMERICAN SOCIETY FOR TES A AMERICAN WOOD PRESERVE
4)	 PROJECT SITE BEFORE COLD WEATHER CONCRETE PLACEMENT BEGINS. D. REMOVE ALL SNOW, ICE, AND FROST FROM THE SURFACES, INCLUDING REINFORCEMENT, AGAINST WHICH THE CONCRETE IS TO BE PLACED. BEFORE BEGINNING CONCRETE PLACEMENT, THAW THE SUBGRADE TO A MINIMUM DEPTH OF 12 INCHES. E. DURING PERIODS NOT DEFINED AS COLD WEATHER, BUT WHEN FREEZING TEMPERATURES MAY OCCUR, PROTECT CONCRETE SURFACES AGAINST FREEZING FOR THE FIRST 24 HOURS AFTER PLACING. COLD WEATHER REQUIREMENTS (318-CHAPTER 5 & ACI 306.1) 	B.C. BCBI BCI BCS BLD0 BLK BM	BOTTOM CHORD B BOTTOM CHORD BEARING BL BOISE CASCADE I-JOIST I BUILDING COMPONENT SAFE G BUILDING BLOCK/BLOCKING BEAM BETWEEN
	 A. DEFINITION OF COLD WEATHER: A PERIOD WHEN, FOR MORE THAN 3 CONSECUTIVE DAYS, THE FOLLOWING CONDITIONS EXIST: 1) THE AVERAGE DAILY AIR TEMPERATURE IS LESS THAN 40°F AND 2) THE AIR TEMPERATURE IS NOT GREATER THAN 50°F FOR MORE THAN ONE-HALF OF ANY 24-HOUR PERIOD. THE AVERAGE DAILY AIR TEMPERATURE IS THE AVERAGE OF THE HIGHEST AND THE LOWEST TEMPERATURES OCCURRING DURING THE PERIOD FROM MIDNIGHT TO MIDNIGHT. B. A HI-LOW THERMOMETER, ACCURATE TO ±2°F, SHOULD BE PLACED NEAR A CORNER OR EDGE OF THE FOUNDATION/SLAB AND DIRECTLY ON TOP OF THE POURED CONCRETE, UNDER 	B.O.V BOT B.O.V BSM BTW CAN C/C	BOTTOM OF BOTTOM V. BOTTOM OF WALL T BASEMENT / BETWEEN T CANTILEVER CLEAR COVER
	INSULATING MATERIAL, TO CONFIRM THE FIRST 24 HOUR CURING TEMPERATURES OF THE CONCRETE IN QUESTION. THE MATERIALS & TESTING COMPANY OF RECORD SHALL CONFIRM THE TEMPERATURES AND RECORD THEM AT THE TIME THE TEST CYLINDERS ARE RETRIEVED FROM THE JOB SITE, WITHIN A 24 HOUR PERIOD (THIS APPLIES TO ALL SLAB CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, POST-TENSIONED FOUNDATION SLABS). RESULTS SHALL BE FORWARDED TO THE STRUCTURAL ENGINEER OF RECORD FOR APPROVAL. C. 306.2.2 - ALL CONCRETE SURFACES SHOULD BE PROTECTED FROM FREEZING FOR AT LEAST THE FIRST 24 HOURS AFTER PLACEMENT. PROTECTION OF THIS APTITUDE DOES NOT ASSURE	CF CL CLR COL CON CON CON	CONTINUOUS FOOTING CENTER LINE CLEAR/CLEARANCE COLUMN C CONCRETE T CONTINUOUS CRAWLSPACE
	A SATISFACTORY RATE OF STRENGTH DEVELOPMENT, PARTICULARLY WHEN FOLLOWED BY CONSIDERABLY COLDER WEATHER. PROTECTION AND CURING SHOULD CONTINUE LONG ENOUGH, AND AT A TEMPERATURE SUFFICIENTLY ABOVE FREEZING, TO PRODUCE THE STRENGTH REQUIRED FOR FORM REMOVAL OR STRUCTURAL SAFETY D. 306.2.3 - TO PREVENT FREEZING AT EARLY STAGES OF STRENGTH DEVELOPMENT, CONCRETE SHOULD BE PLACED AND MAINTAINED AT A MINIMUM OF 50°F FOR THICKNESSES UNDER 12 INCHES WHERE TEMPERATURES RANGE FROM 0 TO 30°F. PLACEMENT TEMPERATURES SHOULD NOT BE HIGHER THAN THIS MINIMUM VALUE BY MORE THAN 20°F. (REFER TO TABLE 3.1) E. 306.2.7 - CONCRETE WITH SLUMP LOWER THAN 4 INCHES IS DESIRABLE FOR EXPOSED SLAB	CTF ⁻ DBL DET DF DIA DSS	T COUNTERFORT DOUBLE DETAIL DOUGLAS-FIR DIAMETER DENSE SELECT STRUCTURAI
	 SPACES IN COLD WEATHER BECAUSE BLEEDING OF WATER IS MINIMIZED AND SETTING OCCURS EARLIER. IF BLEEDWATER IS PRESENT ON FLAT WORK, IT SHOULD BE SKIMMED OFF PRIOR TO TROWELING BY USING A ROPE OR HOSE. F. 306.5.3.1 - FOUNDATION WALLS WILL TYPICALLY FALL UNDER CATEGORY 1, WHERE PROTECTION AGAINST FREEZING SHOULD BE CONTINUED FOR A MINIMUM OF 2 DAYS. G. 306.7.2 - HEAT OF HYDRATION MAY BE RETAINED BY USING INSULATING BLANKETS. INSULATION INSIDE BLANKETS SHOULD BE ADEQUATELY PROTECTED FROM WIND, RAIN, SNOW, OR OTHER MOISTURE BY MEANS OF A TOUGH, MOISTURE PROOF COVER BECAUSE WETTING 	GE	NERAL FRAMING: LL FRAMING IS TO BE CONSTRUC FORTH IN THE APPLICABLE BUIL
5)	A. DEFINITION OF HOT WEATHER: ANY COMBINATION OF THE FOLLOWING CONDITIONS THAT TENDS TO IMPAIR THE QUALITY OF FRESHLY MIXED OR HARDENED CONCRETE BY ACCELERATING THE RATE OF MOISTURE LOSS AND RATE OF CEMENT HYDRATION, OR OTHERWISE CAUSING DETRIMENTAL RESULTS: HIGH AMBIENT TEMPERATURE, HIGH CONCRETE TEMPERATURE, LOW RELATIVE HUMIDITY, WIND SPEED, AND SOLAR RADIATION.	2)	ALL NAIL SPECIFICATIONS REF
	 b. CONCRETE TEMPERATORE AT TIME OF PLACEMENT SHOULD NOT EXCEED 90 F. C. UNDER HOT WEATHER CONDITIONS, SCHEDULING CONCRETE PLACEMENTS AT OTHER-THAN-NORMAL HOURS MAY BE ADVISABLE. PERTINENT CONSIDERATIONS INCLUDE EASE OF HANDLING AND PLACING, AND AVOIDING RISK OF PLASTIC-SHRINKAGE AND THERMAL CRACKING. D. AMPLE WATER SHOULD BE AVAILABLE AT THE PROJECT SITE FOR MOISTENING THE SUBGRADE PRIOR TO CONCRETE PLACEMENT. E. CURING MATERIALS SHOULD BE READILY AVAILABLE AT THE PROJECT SITE TO PERMIT PROMPT PROTECTION OF ALL EXPOSED SURFACES FROM PREMATURE DRYING UPON COMPLETION OF THE 	3)	REFER TO MANUFACTURER RI NAIL COUNT SUBSTITUTIONS. WRITTEN CONSENT FROM GR. ALL DOOR AND WINDOW HEAD WITH (2) 1/2" FLITCH AT 2x6 WA MINIMUM OF (1) 2x TRIMMER S THE HEADER SHALL NOT BE L OPENING OR 1, WHICHEVER IS USED FOR STRUCTURAL HEAD
6)	PLACEMENT. F. WITHOUT PROTECTION AGAINST MOISTURE LOSS, PLASTIC-SHRINKAGE CRACKS MAY OCCUR. IN RELATIVELY LARGE PLACEMENTS, REVIBRATION BEFORE FLOATING CAN SOMETIMES CLOSE THIS TYPE OF CRACKING. BEFORE THE CONCRETE REACHES FINAL SET, THE CRACKS CAN FREQUENTLY BE CLOSED BY STRIKING THE SURFACE ON EACH SIDE OF THE CRACK WITH A FLOAT. THE AFFECTED AREA IS THEN RETROWELED TO LEVEL FINISH. REINFORCEMENT A. ALL REINFORCING BARS SHALL BE ASTM A615-GRADE 60. WELDED WIRE FABRIC (IF USED) SHALL CONFORM TO ASTM A185.	4) 5) 6)	INDICATES TOTAL NUMBER OF LVL/LSL BEAMS SHALL BE DES MANUFACTURERS' SPECIFICA INCLUDED IN THESE PLANS. DOUBLE JOISTS SHALL BE ASS METAL CONNECTORS TO BE M REFER TO MANUFACTURERS' NAIL HOLES. NO ADDITIONAL
	 B. CONCRETE PROTECTION FOR REINFORCEMENT (UNLESS OTHERWISE NOTED) 1. CONCRETE POURED AGAINST EARTH	7)	ALL FRAMING MEMBERS SHAL CODE. PROVIDED DETAILS DO CONNECTIONS HAVE BEEN DE TABLE 2304.10.1 REQUIREMEN
7)	 3. SLABS	8)	STRUCTURAL LUMBER EXPOS PRESERVATIVE TREATED OR I SERVICEABILITY OF EXTERIOF TREATED. EXTERIOR WOOD D JOISTS AND BEAMS TO BE PRI CONSTRUCTION). PRESSURE TREATED, OR ALTERNATE AS NO LUMBER SHALL BE INSTAL FASTENERS AND HARDWARE TREATED LUMBER (i.e., SILL P
	 B. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING A QUALIFIED TESTING AGENCY TO PERFORM THE REQUIRED CONCRETE TESTING AND DOCUMENTATION OF MATERIALS AND CONCRETE MIXES. C. PIER/FOOTING AND FOUNDATION WALL STEEL OBSERVATIONS TO BE CONDUCTED IN ACCORDANCE w/LOCAL JURISDICTION REQUIREMENTS. 		OTHER FASTENERS AND HAR LUMBER. HOT-DIP GALVANIZE A153 AND HOT-DIP GALVANIZE (CLASS G-185).

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DNSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS SET SLE BUILDING CODE, RE: DESIGN CRITERIA.

BE HEM-FIR #2, SPRUCE-PINE-FIR (NORTH) #2, OR BETTER EXCEPT STUDS BE 'STUD' GRADE. SIZE, HEIGHT, AND SPACING OF BEARING WOOD STUDS TO VITH IBC TABLE 2308.5.1. EXTERIOR WALL STUDS OVER 10'-0" IN HEIGHT TO BE TER U.O.N. FULL HEIGHT SOLID STUDS ARE REQUIRED AT HOLDOWN UTIONS ARE NOT PERMITTED WITHOUT WRITTEN CONSENT FROM GRAF

ONS REFER TO COMMON NAILS. IF PNEUMATIC-DRIVEN NAILS ARE USED, URER RECOMMENDATIONS FOR APPROPRIATE ALTERNATE SPACING AND UTIONS. NAIL SUBSTITUTIONS IN HARDWARE ARE NOT PERMITTED WITHOUT ROM GRAF ENGINEERING, LLC.

OW HEADERS TO BE 2-2x10 WITH 1/2" FLITCH AT 2x4 FRAME WALLS AND 3-2x10 AT 2x6 WALLS U.O.N. FLITCH ALL OTHER HEADERS AS REQUIRED. PROVIDE A IMMER STUD. THE MINIMUM NUMBER OF FULL HEIGHT STUDS AT EA END OF NOT BE LESS THAN HALF THE NUMBER OF STUDS REPLACED BY THE **IEVER IS GREATER U.O.N..** NO SPLITS OR SHAKES ALLOWED IN MATERIAL RAL HEADERS. NOTE: POSTS SHOWN AT HEADERS (2-2x4, 3-2x4, ETC.) MBER OF TRIMMER STUDS REQUIRED UNDER EACH END OF HEADER. BE DESIGNED, DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH PECIFICATIONS. REFER TO MANUFACTURERS' LITERATURE FOR DETAILS NOT

BE ASSEMBLED PER MFG SPECIFICATIONS. TO BE MANUFACTURED BY SIMPSON STRONG-TIE CO. OR USP CONNECTORS. URERS' SPECIFICATIONS FOR INSTALLATION RECOMMENDATIONS. FILL ALL TIONAL SUBSTITUTIONS ARE APPROVED OR AUTHORIZED.

ERS SHALL BE FASTENED IN ACCORDANCE WITH THE APPLICABLE BUILDING TAILS DO NOT SUPERCEDE LOCAL BUILDING CODES. NOT ALL APPLICABLE BEEN DETAILED. FASTENERS SHALL BE INSTALLED IN ACCORDANCE WITH IBC JIREMENTS.

R EXPOSED TO WEATHER, WHERE REQUIRED BY CODE, SHALL BE TED OR MANUALLY SEALED AT TIME OF CONSTRUCTION. FOR LONG TERM XTERIOR FRAMING. GRAF RECOMMENDS ALL STRUCTURAL LUMBER BE WOOD DECKS OR PORCHES TO BE HEM-FIR #2 OR BETTER (DECK OR PORCH O BE PRESSURE TREATED OR MANUALLY SEALED AT TIME OF ESSURE TREATED MATERIAL TO BE ADVANCE GUARD BORATE PRESSURE NATE AS APPROVED BY THE AWPA BOOK OF STANDARDS (LATEST EDITION). INSTALLED IN CONTACT WITH SOILS U.O.N.

RDWARE (i.e., NAILS AND HANGERS) USED IN CONJUNCTION WITH ACQ .. SILL PLATES) ARE TO BE HOT-DIP GALVANIZED, STAINLESS STEEL, OR ND HARDWARE APPROVED BY THE MANUFACTURER FOR USE WITH ACQ ALVANIZED COATED FASTENERS SHALL CONFORM TO ASTM STANDARD ALVANIZED CONNECTORS SHALL CONFORM TO ASTM STANDARD A653

GENERAL FRAMING AND ROOF TRUSS NOTES

- 9) DOUBLE AND TRIPLE LVL/LSL BEAMS TO BE CONNECTED WITH A MINIMUM OF (3)16d NAILS PER LINEAR FOOT. FOUR PLY BEAMS OR GREATER TO BE BOLTED TOGETHER w/(2)ROWS ½"Ø THRU-BOLTS @24"O.C. STAGGERED U.O.N.
- 10) SEE I-JOIST, AND LVL/LSL MANUFACTURERS' LITERATURE FOR SPECIFIC CONSTRUCTION DETAILS NOT SHOWN ON PLANS. GENERIC DETAILS HAVE BEEN PROVIDED ON SHEET SD5. FOR REFERENCE ONI Y
- 11) ALL JOIST AND TRUSS QUANTITIES AND DIMENSIONS MUST BE VERIFIED BY THE RESPECTIVE SUPPLIERS.
- 12) PLYWOOD AND OSB SHALL CONFORM TO APA CURRENT PRODUCT STANDARD SPECIFICATIONS AND SHALL BE PERFORMANCE RATED BY THE APA TO THE GRADES SPECIFIED OR APPROVED OSB SHEATHING EQUIVALENT.
- A) ROOF SHEATHING SHALL BE 15/32" CDX 24/0 PLYWOOD OR 7/16" MIN. (15/32" MIN. FOR SLOPES LESS THAN 2:12) APA RATED, EXP 1 OSB NAILED WITH 8d COMMON NAILS AT 6" O.C. AT ALL PANEL EDGES AND 12" O.C. AT ALL INTERMEDIATE SUPPORTS or STAPLE w/16GA. 7/16" CROWN WITH 1 3/4" LEG STAPLES AT 3" O.C. FOR PANEL EDGE AND 6" O.C. FOR INTERMEDIATE SUPPORTS. SHEATHING TO BE INSTALLED WITH STRENGTH AXIS PERPENDICULAR TO TRUSS. INSTALL ROOF SHEATHING PER RECOMMENDATIONS SET FORTH IN THE APPLICABLE BUILDING CODE.
- B) FLOOR SHEATHING SHALL BE 23/32" CDX T&G 48/24 PLYWOOD OR 23/32" T&G 48/24 OSB MINIMUM, GLUE AND NAIL WITH 8d COMMON NAILS AT 6" O.C. AT ALL PANEL EDGES AND 12" O.C. AT ALL INTERMEDIATE SUPPORTS. STAPLE SUBSTITUTIONS ALLOWED PER IBC. INSTALL FLOOR SHEATHING PER RECOMMENDATIONS SET FORTH IN THE APPLICABLE BUILDING CODE.
- C) SHEATH ALL EXTERIOR WALLS WITH 7/16" APA RATED, EXP1 OSB SHEATHING. U.O.N. ON PLAN NAIL WITH 8d COMMON NAILS AT 6" O.C. ON PERIMETER AND AT 12" O.C. IN FIELD, OR STAPLE WITH 16GA, 7/16" CROWN WITH 1 3/4" LEG STAPLES @4"O.C. ON EDGE AND 12" IN FIELD. REFER TO LATERAL RESISTANCE PLANS FOR BRACED/SHEAR WALL PANEL LOCATIONS. REFER TO DETAIL L7, SHEET SD6 FOR EXTERIOR PANEL INSTALLATION RECOMMENDATIONS, AND REFER TO DETAIL NF, SHEET SD3 FOR INTERIOR PANEL INSTALLATION RECOMMENDATIONS. WALL SHEATHING TO BE GAPPED $\frac{1}{16}$ " MIN & $\frac{1}{8}$ " MAX @STUCO APPLICATIONS. VERIFY w/BUILDER PRIOR TO CONSTRUCTION
- 13) ALL 3-2x4 OR 2-2x6 AND LARGER POSTS SHALL BE BLOCKED SOLID TO FOUNDATION WALL PLATE OR SUPPORTING BEAM (UNLESS SPECIFICALLY NOTED, KING STUDS ARE NOT TO BE INCLUDED WITH TRIMMERS FOR POST COUNT).

GRAF ENGINEERING, LLC. RECOMMENDS THAT A REPRESENTATIVE OF GRAF BE CALLED TO THE SITE TO PERFORM A VISUAL OBSERVATION OF INSTALLED STRUCTURAL COMPONENTS. INSPECTION TO BE PERFORMED AFTER ALL MODIFICATIONS FOR PLUMBING, HVAC, AND ELECTRICAL HAVE BEEN MADE AND PRIOR TO PLACING WALL INSULATION OR INSTALLING INTERIOR GYPBOARD.

NO DEVIATIONS FROM DESIGN OR DETAILS IN THESE PLANS SHALL BE PERMITTED OR MADE WITHOUT WRITTEN APPROVAL BY GRAF ENGINEERING, LLC. APPROVAL BY CITY INSPECTION OR OTHER PARTY DOES NOT CONSTITUTE AUTHORITY TO DEVIATE FROM PLANS OR SPECIFICATIONS.

WATERPROOFING DETAILS AND RECOMMENDATIONS BY OTHERS. DETAILS ON THESE DRAWINGS THAT INDICATE WATERPROOFING COMPONENTS ARE PURELY FOR EXAMPLE OF THE INTERACTION BETWEEN THE STRUCTURE AND THE INDIVIDUAL COMPONENT INDICATED AND ARE BY NO MEANS TO BE INTERPRETED AS A SPECIFICATION FOR ANY WATERPROOFING DETAIL OR COMPONENT.

STRUCTURAL STEEL NOTES

- 1. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING ASTM STANDARDS - W-SHAPES - HOLLOW STRUCTURAL SHAPE A500
- PIPE COLUMNS A53, GRADE B - ANGLES, CHANNELS & ALL CONNECTION MATERIAL A36 FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE AISC SPECIFICATION AND CODE
- OF STANDARD PRACTICE, LATEST EDITION. 3. ALL FIELD CONNECTIONS SHALL BE MADE WITH ³/₄" DIAMETER ASTM A325N BOLTS U.O.N. SCREW CAP COLUMNS MAY BE USED PROVIDED THE ARE RATED FOR PERMANENT USE AND TO
- SUPPORT THE LOAD INDICATED ON THE PLAN 5. 3%" DIAMETER-SCHEDULE 40 PIPE COLUMNS SHALL BE FIXED CARBON STEEL PIPE MANUFACTURED IN ACCORDANCE WITH ASTM A 500 GRADE B, WITH A MINIMUM YIELD POINT OF 46ksi. PROVIDE A 6"x4"x'/" CAP AND BASE PLATE AND WELD COLUMN TO PLATES WITH $\frac{1}{4}$ " FILLET WELDS ALL SIDES. 4"
- AMETER-SCHEDULE 40 ADJUSTABLE PIPE COLUMNS MAY BE SUBSTITUTED FOR THE FIXED
- COLUMN, PROVIDED THE COLUMN SPECIFICATIONS ARE FORWARDED TO THIS OFFICE FOR PROVAL PRIOR TO CONSTRUCTION INSTALL PER MANUFACTURER REQUIREMENTS
- 3"Ø SCH 40 ADJUSTABLE PIPE COLUMNS TO BE RATED FOR 30 KIPS AT INSTALLED EXTENSION. 4 ADJUSTABLE PIPE COLUMNS TO BE RATED FOR 45 KIPS AT INSTALLED EXTENSION. INSTALL PER MANUFACTURER REQUIREMENTS

DESIGN DOCUMENT REFERENCES

ARCHITECTURAL DRAWINGS

THIS PLAN IS DESIGNED IN ACCORDANCE WITH ARCHITECTURAL PLANS DATED AUGUST 6, 2024 w/REVISIONS RECEIVED OCTOBER 16, 2024, AND IS NOT APPLICABLE WITH ANY OTHER ARCHITECTURAL RELEASE.

GEOTECHNICAL REPORT SOIL DATA WAS TAKEN FROM RECOMMENDATIONS SET FORTH IN SOIL REPORT NO. M23007GE, PREPARED BY LAMBERT & ASSOC., AND DATED APRIL 12, 2023. FOR LOT SPECIFIC SOILS INFORMATION RE: FD1.

TRUSS DESIGN TRUSS MANUFACTURER IS RESPONSIBLE TO DESIGN TRUSSES, INCLUDING ALL TRUSS TO TRUSS CONNECTIONS, IN ACCORDANCE WITH CODE AND JURISDICTION REQUIREMENTS, AND IN CONJUNCTION WITH THE TRUSS LAYOUT PROVIDED IN THESE STRUCTURAL DRAWINGS. THIS OFFICE HAS LAID OUT THE ROOF SYSTEM IN WHAT APPEARS TO BE A CONSTRUCTIBLE AND COST EFFECTIVE LAYOUT AND HAS CONSIDERED THIS LAYOUT IN THE DESIGN OF THE SUPPORTING STRUCTURE. IF THE TRUSS LAYOUT CANNOT BE CONSTRUCTED AS LAID OUT, OR A MORE COST EFFECTIVE LAYOUT IS DESIRED, IT IS THE RESPONSIBILITY OF THE TRUSS MANUFACTURER TO CONTACT THIS OFFICE TO REVIEW AND APPROVE CHANGES IN THE TRUSS LAYOUT TO COORDINATE ANY NECESSARY CHANGES WITH THE SUPPORTING STRUCTURE, PRIOR TO TRUSS MANUFACTURER CONSTRUCTING ANY TRUSSES. IF THE TRUSS LAYOUT VARIES FROM THESE DESIGN DRAWINGS, THE TRUSS MANUFACTURER ASSUMES ALL LIABILITY FOR THE COMPONENTS OF THE STRUCTURE INFLUENCED BY THE VARIANCE IN TRUSS LAYOUT.

GENERAL ROOF TRUSS

- RE: SD4 FOR ROOF DETAILS AND MANUFACTURED ROOF TRUSS DESIGN/FOUNDATION. PROVIDE MINIMUM CLEARANCE EQUAL TO TOTAL ANTICIPATED TRUSS DEFLECTION, BETWEEN TOP PLATE OF INTERIOR PARTITIONS AND BOTTOM CHORD OF TRUSSES TO ENSURE LOADING WILL BE AS DESIGNED. METAL WALL CLIPS MAY BE INSTALLED TO BRACE PARTITION WALLS
- PER BUILDER REQUIREMENTS (SIMPSON STC OR EQUIVALENT). ALL TRUSS DIMENSIONS AND GEOMETRY SHALL BE VERIFIED BY TRUSS MANUFACTURER PRIOR
- TO CONSTRUCTION. 3) TRUSS TO TRUSS CONNECTIONS ARE TO BE DETAILED BY TRUSS MANUFACTURER PER ANSI/TPI-1 UNLESS OTHERWISE NOTED ON PLANS.
- TRUSS CALCULATIONS AND DRAWINGS MUST BE APPROVED BY THE LOCAL BUILDING DEPARTMENT 4) PRIOR TO MANUFACTURING THE TRUSSES.
- 5) FIELD TRIM TRUSS TAILS AS NEEDED.
- TRUSS MANUFACTURER RESPONSIBLE FOR HIP SET CONNECTION ENGINEERING AND DETAILS. SECURE ALL TRUSSES AND RAFTERS TO PLATE WITH (1)SIMPSON H2.5T CLIP OR USP RT7 AND ALL GIRDER/HIP TRUSSES WITH (2)SIMPSON H2.5T OR USP RT7 CLIPS AT ALL BEARING POINTS, U.O.N. ON PLAN.
- PERMANENT BRACING FOR TRUSSES TO BE INSTALLED PER RECOMMENDATIONS SET FORTH IN ANSI/TPI 1, AND ERECTION BRACING IS TO BE INSTALLED PER RECOMMENDATIONS SET FORTH IN BCSI 1-03. PUBLISHED BY TRUSS PLATE INSTITUTE.
- OVERFRAME 16'-0" AND GREATER IN WIDTH (TOTAL HORIZONTAL PROJECTED WIDTH OF OVERFRAME) SHALL BE TRUSSED, WITH `VALLEY' SET TRUSSES, NOT STICK FRAMED. 10) PROVIDE H-CLIPS AT 4'-0"O.C. ALONG LONG EDGE OF SHEATHING.
- (OMIT IF REQUIREMENT OF IBC TABLE 2304.7(3) ARE MET.)
- 11) DO NOT PLACE VENTS AT TRUSSES OR ROOF SHEATHING SEAMS. BLOCK EDGES OF CUT-OUT AS REQUIRED.
- 12) FOLLOW ALL MANUFACTURER NAILING REQUIREMENTS FOR LISTED HARDWARE, NAIL SHANK LENGTH REDUCTION OR USE OF `TICO' NAILS IS **PROHIBITED** EXCEPT AT 1-PLY GIRDER FACE NAIL APPLICATIONS. `TICO' NAILS ARE PROHIBITED AT ALL SHEAR NAIL LOCATIONS.
- 13) PIGGY BACK TRUSSES, AS REQUIRED BY TRUSS MANUFACTURER ARE OMITTED FROM THIS DRAWING FOR CLARITY. INSTALL PIGGY BACK TRUSSES PER MANUFACTURER'S RECOMMENDATIONS.
- PROVIDE 2x4 NAILER/LEDGER WITH 2-16d AT 16"O.C. AT ROOF SHEATHING TO WALL INTERSECTION FOR ALL LOCATIONS WHERE ROOF TRUSSES ARE PARALLEL TO WALL ABOVE. REFER TO PLAN FOR LEDGER NAILING REQUIREMENTS WHERE ROOF TRUSSES ARE PERPENDICULAR TO WALL ABOVE.
- 15) BLOCK ALL TRUSS HEELS 8" OR GREATER. RE: NE/SD3
- 16) EXTEND PORCH HEADERS PAST COLUMNS AS REQUIRED FOR TRUSS BEARING.

DUE TO THE RELATIONSHIPS OF FRAMING HARDWARE TO THE OTHER COMPONENTS OF THE STRUCTURE, ANY FRAMING HARDWARE SUBSTITUTIONS, WITHOUT WRITTEN APPROVAL FROM GRAF ENGINEERING, LLC. WILL RENDER THESE PLANS NULL AND VOID, AND WILL RESULT IN THE INSTALLER/CONTRACTOR ASSUMING RESPONSIBILITY FOR THE DESIGN AND PERFORMANCE OF THE ENTIRE SYSTEM.

ISSUE/REVISION LIST				
ISSUE	DATE	SHEET	DESCRIPTION OF (
INITIAL	5/24/2023	ALL	INITIAL RELEASE	
1	1/29/2024	ALL	ARCH REV - ADD E	
2	9/3/2024	ALL	ARCH REV	
3	10/28/2024	VARIOUS	ARCH REV - RCV'D	
4	11/4/2024	VARIOUS	ARCH COMMENTS	

	ISSUE/REVISION LIST
SHEET	DESCRIPTION
CS1	STRUCTURAL COVER SHEET
F1.0	FSOG - FOUNDATION PLAN
F1.1	FSOG - FOUNDATION PLAN
FD1	FSOG - FOUNDATION SECTION SHEET
S1.0	MAIN LEVEL FLOOR FRAMING
S2.0	MAIN LEVEL WALL FRAMING
S3.0	ROOF FRAMING
SD1	FRAMING DETAIL SHEET - GENERAL DETAILS
SD2	FRAMING DETAIL SHEET - LATERAL RESISTANCE
THESE P	LANS ARE TO BE USED AS A SET, AND ARE NOT PE

SEPARATED FOR CONSTRUCTION PURPOSES. CONSTRUCTION ELEMENTS WHICH CROSS TRADES HAVE BEEN SHOWN IN ONE LOCATION ONLY. IT IS THE BUILDER/CONTRACTORS' RESPONSIBILITY TO THOROUGHLY REVIEW ALL PLAN SHEETS FOR ANY PERTINENT INFORMATION. ANY PLAN DISCREPANCIES OR INCONSISTENCIES MUST BE COMMUNICATED TO GEN PRIOR TO CONSTRUCTION. GEN WILL NOT BE RESPONSIBLE FOR REPAIRS DUE TO A LACK OF COMMUNICATION ON BEHALF OF THE BUILDER/CONTRACTOR.

DESIGN CRITERIA OLATHE, COLORADO

LOADS USED FOR DESIGN A. ROOF SNOW LOAD .

- TOTAL ROOF DEAD LOAD FOR GRAVITY DESIGN 5. FLOOR AND STAIR LIVE LOAD
- FLOOR AND STAIR DEAD LOAD 2. EXTERIOR DECK LIVE LOAD .
- EXTERIOR DECK DEAD LOAD DECK LEDGER LOADS (TOTAL
- . WIND SPEED(V3s FOR IRC) . 1. EXPOSURE FOR LATERAL AND UPLIFT DESIGN
- 2. EXPOSURE FOR SNOW LOADING . SEISMIC DESIGN CATEGORY
- MINIMUM FROST PROTECTION DEPTH) DESIGN CODES/SPECIFICATIONS
- A. INTERNATIONAL RESIDENTIAL/BUILDING CODE (IRC/IBC)-2018 EDITION -CONVENTIONAL LIGHT-FRAMED CONSTRUCTION - 2308
- B. AISC STEEL CONSTRUCTION MANUAL (FIFTEENTH EDITION) C. AWC NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD-2018 EDITION
- D. ANSI/TPI 1 (CURRENT EDITION)
- E. ACI 318-14 & 332-14 5. ASCE 7-16 MIN DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES
- G. AWC WOOD FRAMED CONSTRUCTION MANUAL (WFCM)-2018 EDITION 3) TRUSS CRITERIA A. WIND EXPOSURE (LATERAL/UPLIFT DESIGN)
- B. WIND EXPOSURE (SNOW LOADING).
- C. MAX TRUSS DEFLECTION FOR SPANS UP TO 25FT= . D. MAX TRUSS DEFLECTION FOR SPANS OVER 25FT= . .
- IT IS THE DUTY OF EVERY PERSON WHO PERFORMS WORK UNDER THE CODE TO COMPLY WITH THE CODE

THESE DRAWINGS ARE INTENDED FOR THE EXCLUSIVE USE BY THE CLIENT INDICATED IN THE TITLE BLOCK. AND ARE NOT VALID FOR USE BY OTHERS. ENGINEERING PRACTICE IS CONTINUALLY CHANGING AND EVOLVING, WITH THE INTRODUCTION AND DISMISSAL OF PRODUCTS AND MATERIALS AND THE ADOPTION OF NEW DESIGN METHODS, DESIGN STANDARDS, CONSTRUCTION CODES, AND EVOLVING STANDARDS OF PRACTICE/CARE. FOR THIS REASON, THESE DRAWINGS ARE NOT TO BE USED FOR CONSTRUCTION 3 YEARS BEYOND THE ISSUE DATE WITHOUT REVIEW, REVISIONS AS NECESSARY, AND APPROVAL OF GRAF ENGINEERING, LLC. THIS STRUCTURAL DRAWING SET IS VALID FOR USE ONLY WHEN CONSTRUCTED ON A SITE SPECIFIC FOUNDATION ENGINEERED BY GRAF ENGINEERING, LLC WITH FOUNDATION DRAWINGS THAT REFERENCE THE DATE OF THESE DRAWINGS. ANY OTHER USE IS FORBIDDEN.

CONTACT INFORMATION

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HOLDOWN SCHEDULE CONTRACTOR TO VERIFY ALL HOLDOWN LOCATIONS w/ARCHITECTURAL DRAWINGS AND LATERAL PAGES. VIDED DIMENSIONS MUST BE VERIFIED PRIOR TO PLACEMENT ALL HOLDOWNS/STRAPS TO BE NAILED TO FULL HEIGHT STUDS, NAILED TO SHEATHING w/EDGE NAILING. SIMPSON USP HD1 OR HD2 STHD14 / STHD14RJ STAD14 / STAD14RJ HD3 CS16x48" RS16-R (2)CS16x48" (2)RS16-R HD4 HD5 OR HD6 HTT5 (1) HTT22 (1) * USE (3)CS16 OR (1)CMST14 @FRAMED SHEARWALL BELOW OR (1)CS16 @ WSP OR CS-WSP BRACED WALLS.) REQUIRES 5/8"Ø THREADED ROD ANCHOR (A193 GR B7 OR F593 304SS) w/SIMPSON 'AT-XP' ADHESIVE. LOCATE ROD 4" (MIN) FROM EDGE OF CONC. AND EMBED 9 3/8" (MIN) INTO CONC. 2) IF STRAP IS PLACED IN THE MIDDLE OF WALL, BEND STRAIGH RE: MANUFACTURER FOR INSTALLATION INSTRUCTIONS PLACE BENEATH CURB AS REQ'D

BOTTOM OF WALL STEPS			
STEP CONI T	S MAY VARY WITH SIT DTIONS. VERIFY PRIOF O CONSTRUCTION		
STEP B.O.W DOWN IN DIRECTION OF ARROV → (LOT SPECIFIC ONLY			
ID	STEP SIZE		
8A)	1'-0"		
(8B)	2'-0"		
80	1'-8"		
(3D)	4'-0" @8' BSMT 5'-0" @9' BSMT 6'-0" @10' BSMT		
8E	6'-0"		

TOP OF			
vv	ALL SIEFS		
STEP CONI	S MAY VARY WITH SITE		
T	O CONSTRUCTION		
\mapsto	STEP T.O.W DOWN IN DIRECTION OF ARROW (LOT SPECIFIC ONLY)		
ID	STEP SIZE		
9A)	1'-0"		
9B	2'-0"		
90	3'-0"		
ⓐ	4'-0"		
9E	5'-0"		
9F	7'-8"		

	CONN	ECTOR LEGE	CONNECTOR LEGEND			
	TICO NAILS ARE PROHIBIT	ED @ALL HUS, HHUS, AND	HGUS LOCATIONS.			
		SIMPSON ITS2.06/14	USP TFL2014			
(H1)	BCI, GPI LPI, JSI	ITS2.37/14 ITS2.56/14	TFL2314 TFL2514			
(H2)	BCI, GPI LPI, JSI	IUS2.06/14 IUS2.37/14 IUS2.56/14	THF20140 THF23140 THF25140			
НЗ	LVL/LSL	MIT1.81/14	BPH1714			
(H4)	LVL/LSL	HU14	HD1714			
(H5)	TJI BCI, GPI LPI, JSI	MIT4.28/14 MIT3514-2 MIT314-2	THO20140-2 THO23140-2 THO25140-2			
(H6)	BCI, GPI	MIU4.28/14 MIU4.75/14 MIU5.12/14	THF20140-2 THF23140-2 THF23140-2			
(H7)	(2)LVL/(2)LSL/4x	U410	SUH410			
(H8)	(2)LVL/(2)LSL/4x	HHUS410	THD410			
(Н9)	(2)LVL/(2)LSL/4x	HGUS410	THDH48			
(HA)	(3)LVL/(3)LSL/6x	HGUS5.50/10	THDH610			
(НВ)	(4)LVL/(4)LSL/8x/(2)4x	HGUS7.25/10	THDH7210			
(нс)	2x/ROOF TRUSS	LUS24	JUS24			
(HD)	2x/ROOF TRUSS	LUS26	JUS26			
(HE)	2x/ROOF TRUSS	LUS28	JUS28			
HF)	2x/ROOF TRUSS	MUS26	HD28			
(HG)	2x/ROOF TRUSS	MUS28	HUS26			
(HH)	2x/ROOF TRUSS	HUS26	HUS26			
(HI)	2x/ROOF TRUSS	HUS28	HUS28			
(HJ)	(2)2x/DBL TRUSS	HHUS26-2	THD26-2			
нк	(2)2x/DBL TRUSS	HHUS28-2	THD28-2			
HL	(2)2x/DBL TRUSS	HHUS210-2	THD210-2			
HM	(2)2x/DBL TRUSS	HGUS26-2	THDH26-2			
(HN)	(2)2x/DBL TRUSS	HGUS28-2	THDH28-2			
HO	(2)2x/DBL TRUSS	HGUS210-2	THDH210-2			
HP	(3)2x/TRIPLE TRUSS	HGUS28-3	THDH28-3			
HQ	(3)2x/TRIPLE TRUSS	HGUS210-3	THDH210-3			
HR	HIP TRUSS	THJU26	HJC26			
HS	ALL	LS70 (PAIR)	MP7 (PAIR)			
HT	ROOFTRUSS	(2)H2.5T or HTS20 or ((4) SDWC 15600)	(2)RT7 or LFTA6			
HU	ROOF TRUSS	TBE (PAIR)	SBP (PAIR)			
NOTE: TRUSS BEARING ENHANCERS MAY BE REPLACED WITH BCBB(RE:A2/SD1) AND 'HT' HARDWARE WHERE NO ADD'L BCBB IS SPECIFIED AT BEARING. ADD'L HARDWARE MAY NOT BE OMITTED. TBE MUST BE REPLACED W/BCBB @SINGLE						
(HV)	ROOF TRUSS	HTS20+H2.5T or HTS20+(2)H3	LFTA6+RT or LFM6(2)H			
(HW)	ROOF TRUSS	TBE (PAIR) + HTS20	SBP (PAIR) + RT7			
HX	ROOF TRUSS	(2)HTS20	(2)LTFA6			
ΉY	ROOF TRUSS	TBE (PAIR) + (2)HTS20	SBP (PAIR) + (2)MTS1			
HZ	ROOF TRUSS	(2)CS16-R w/22-2.5"x0.148" NAILS	(2)RS16-R w/22-2.5"x0.148" NAII \$			
Ŏ	* = PRESSURE BLOC REFER TO SCHEDU	K/TOENAILING MAY REPLA	CE HARDWARE.			
IF NO OTHER HARDWARE PROVIDED ON DRAWINGS, SECURE `HV', `HW', `HX', `HY', AND `HZ' CONNECTORS TO FOUNDATION w/HTT5. SIMPSON HTT5-3/4 w/ ¾" ALL THREAD w/8" EMBED INTO CONCRETE w/ SIMPSON SET-XP AND 2.75" EDGE DISTANCE. FOR HZ USE SIMPSON HD19 TO 4x8 POST (MIN) w/1.25" ALLTHREAD w/8" EMBED w/SET-XP. IF HARDWARE ON SECOND STORY OR ABOVE WALKOUT/GL, BRIDGE STORIES w/CS16 (2 @`HY'&`HZ'). NOTE: H2 5T/PT7 & TEE/SED MAX NOT BE INSTALLED ON SINCLE TOD BLATE						

GENERAL FRAMING LEGEND	IF BOX IS 1" SQ. THEN SCALE IS ¼" IF BOX IS ½" SQ. THEN SCALE IS ½" IF BOX IS NOT ½" OR 1" SQ. THEN D
	WE NOTE THAT THESE DRAWINGS
LI EVEL T II 360@ SERIES (25%" WIDE ELANGE)	SCALE IS PROVIDED FOR REFEREN
 BOISE CASCADE BCI® 90 SERIES (3½" WIDE FLANGE) 	DIMENSIONS, IF DIMENSIONS NOT
• PINKWOOD PKI® 40 SERIES (3%) WIDE FLANGE)	
$1 \text{SL}_{XX} = 13/1 \times 14^{11}$ AMINIATED STRAND LUMPED FLUSH DEAM MINIMUM DESIGN	ALL DIMENSIONS ARE TO BE VERIFIED WITH ARCH P
ESE-XX = 1% X 14 LAMINATED STRAND LUMBER FLUSH BEAM MINIMUM DESIGN	
 ELEXTIDAL STRESS Eb = 2 325 nsi 	
 MODULUS OF ELASTICITY E = 1.55E 	
HORIZONTAL SHEAR PARALLEL TO GRAIN. Fy = 310 psi	
LSL PRODUCT MUST BE ICC APPROVED. APPROVED LVL PRODUCTS	BLOCKING NOTES
INCLUDE (BUT ARE NOT LIMITED TO) TIMBERSTRAND® , AND	
SOLIDSTART.™	FULL DEPTH BLOCKING BETWEEN FLOOR JOISTS IS R
LVL-XX = 1¾" x 14" LAMINATED VENEER LUMBER FLUSH BEAM MINIMUM DESIGN PROPERTIES:	WHEN ANY OF THE FOLLOWING CONDITIONS EXIST. 8 HOLE ALLOWED IN 11%"-16" BLOCKS.
 FLEXURAL STRESS, Fb = 2,600 psi 	
 MODULUS OF ELASTICITY, E = 1.9 x 10 ^opsi 	1) JOISTS ARE NOT CONTINUOUS OVER SUPPORTS
HORIZONTAL SHEAR PARALLEL TO GRAIN, Fv = 285 psi	2) BEARING WALL ABOVE & WITHIN 12" OF BEARING
LVL PRODUCT MUST BE ICC APPROVED. APPROVED LVL PRODUCTS	3) CANTILEVER CONDITION
INCLUDE (BUT ARE NOT LIMITED TO) MICROLLAM®, VERSA-LAM®	
(X)J-XX = MULTIPLE ENGINEERED WOOD JOIST, 'X' IS REQ'D PLY COUNT.	4) BRACED/SHEARWALL ABOVE OR BELOW
CONNECT PER FRAMING NOTE #10 U.N.U. ON PLAN.	
(SEE SINGLE JUIST SPECIFICATIONS FOR MORE INFORMATION).	
SECURE PLIES PER MAINUFACTURER RECOMMENDATIONS.	
(A)LOL-AA = MULTIPLE LAMINATED STRAND LUMBER BEAM, X IS REQ D PLY	
(SEE SINCLE LVL SPECIFICATIONS FOR MORE INFORMATION)	
SECURE PLIES PER GENERAL NOTES	
(X)LVL-XX = MULTIPLE LAMINATED VENEER LUMBER BEAM 'X' IS REQ'D PLY	
COUNT. CONNECT PER FRAMING NOTE #10 U.N.O. ON PLAN.	
(SEE SINGLE LVL SPECIFICATIONS FOR MORE INFORMATION).	
SECURE PLIES PER GENERAL NOTES.	
XX = LENGTH OF FRAMING MEMBER ROUNDED UP TO THE NEAREST FOOT.	
WHEN INDICATED AS "XX", FOLLOW ARCHITECTURAL DIMENSIONS	
FOR LENGTH OF MEMBER.	
= 14" ENGINEERED WOOD RIM BOARD. APPROVED MANUFACTURERS	
AND THEIR CORRESPONDING RIM MATERIAL ARE:	
• I-LEVEL, IIMBERSTRAND® (1/4" WIDE)	
● BOISE CASCADE, BC RIM BOARD USB™ (1%" WIDE)	
POST ABOVE PACK WEBS OF JOISTS PER MEG AS REO'D	
ADDITIONAL RIM MAY BE INSTALLED FOR SQUASH BLOCKS JOIST	
MATERIAL IS PROHIBITED FOR SQUASH BLOCKING.	
CONTRACTOR IS RESPONSIBLE TO VERIFY CLEARANCE FOR	
PLUMBING PRIOR TO SECURING FLOOR JOISTS	
STRUCTURAL PORCH POST. RE: PLAN FOR SIZE (SEE DETAILS	
P1/P2 ON SD2 FOR CONNECTION & A4/SD1 FOR PORCH HEADER	
CONNECTION DETAILS)	

IF BOX IS 1" SQ. THEN SCALE IS $\frac{1}{4}$ " = 1'-0" IF BOX IS $\frac{1}{2}$ " SQ. THEN SCALE IS $\frac{1}{8}$ "=1'-0" IF BOX IS NOT $\frac{1}{2}$ " OR 1" SQ. THEN DRAWING IS NOT TO SCALE. WE NOTE THAT THESE DRAWINGS ARE NOT TO BE SCALED. SCALE IS PROVIDED FOR REFERENCE ONLY. REFER TO PLAN

DIMENSIONS, IF DIMENSIONS NOT PROVIDED ON PLAN, REFER TO ARCHITECTURAL DRAWINGS FOR AREA IN QUESTION. MENSIONS ARE TO BE VERIFIED WITH ARCH PRIOR TO CONSTRUCTION.

BLOCKING NOTES DEPTH BLOCKING BETWEEN FLOOR JOISTS IS REQUIRED ANY OF THE FOLLOWING CONDITIONS EXIST. 8"Ø MAX ALLOWED IN 11⁷/₈"-16" BLOCKS.

ISTS ARE NOT CONTINUOUS OVER SUPPORTS

MAIN LEVEL FLOOR FRAMING PLAN REFER TO SHEETS CS1, SD1 & SD2 FOR DETAILS & NOTES NOT SHOWN ON THIS PAGE. ALL HEADER & POST CALL OUTS ARE INDICATED IN WALL FRAMING PLAN ON PREVIOUS PAGE

SHEARWALL FRAMING / FASTENER SCHEDULE (APPLIES TO WALLS INDICATED AS "ENGINEERED SHEARWALL PANEL" ONLY U.O.N.)							BRAC	ED WALL SCHEDULE	3				
MARK			APPROX Vw	(SEE DETAIL L	CONNECTORS 1-L6/SD2 FOR LOCATION (OF FASTENERS	MARK	MARK EXPLANATION	SHEATHING	CONNECTOR	EDGE NAILING	FIELD NAILING	ADDITIONAL CONNECTOR NOTES
		NAILING	(plf) **	(SEE NOTE 12)	2	3***		 []		2½"x0.131"	6"O.C.	12"O.C.	
SA	1/2 " GYPSUM SHEATHING BOARD	N=4" SC=4"	150	A35 or LTP4 @36" O.C. or 3"x0.148" TOENAILS	3½"x0.162" @14"O.C.	½" A.B. @48"O.C. −or-	WSP	WOOD STRUCTURAL PANEL	7∕ ₁₆ " OSB U.O.N.	16GAx1¾" STAPLES	3"O.C.	6"O.C.	
				@10" O.C.		⅔" A.B. @ 48" O.C.	GB		½" GYPSUM BOARD	5d COOLER or 1½" SCREWS TYPE W or S			
SB	⅓6" *EXTERIOR RATED OSB, OR STRUCT 1 PLYWOOD (1 FACE)	N=6" ST=4"	335	A35 or LTP4 @14" O.C. or 3"x0.148" TOENAILS @4" O.C.	3½"x0.162" @6"O.C.	½" A.B. @23"O.C. -or- 5⁄≈" A.B. @ 34" O.C.	(INTERIOR)	GYPSUM BOARD	∜" GYPSUM BOARD	0.092"x17%"w/ ¼"HEAD or 15%" SCREWS TYPE W or S	7"O.C.	12"O.C.	
SC	%6" *EXTERIOR RATED OSB, OR STRUCT 1 PLYWOOD (1 FACE)	N=4" ST=2½"	520	A35 or LTP4 @9" O.C. or 3"x0.148" TOENAILS @2½" O.C.	3½"x0.162" @4"O.C.	½" A.B. @15"O.C. -or- 5%" A.B. @ 23" O.C.	GB (EXTERIOR)	GYPSUM BOARD	$\frac{1}{2}$ " GYPSUM BOARD	1½' GALVANIZED ROOFING NAIL; 1½" LONG GALVANIZED STAPLE; 1¼" SCREWS TYPE W or S	7"O.C.	7"O.C.	
SD	パ ₆ " *EXTERIOR RATED OSB, OR STRUCT 1 PLYWOOD (1 FACE)	N=3"	665	A35 or LTP4 @7" O.C. or (2)3"x0.148" VERTICAL NAILS @6" O.C.	3½"x0.162" @3"O.C.	¹ / ₂ " A.B. @12"O.C. -or- 5%" A.B. @ 17" O.C.	GB (EXTERIOR)	GYPSUM BOARD	5∕%" GYPSUM BOARD	1¾" GALVANIZED ROOFING NAIL; 1⅛" LONG GALVANIZED STAPLE; 1⅛" SCREWS TYPE W or S	7"O.C.	7"O.C.	
SE	⅓6" EXTERIOR RATED OSB, OR STRUCT 1 PLYWOOD (1 FACE) (SEE NOTE 6)	N=2"	884	A35 or LTP4 @6" O.C. or (2)3"x0.148" VERTICAL NAILS @3" O.C.	3½"x0.162" @2"O.C.	½" A.B. @10"O.C. -or- 5⁄8" A.B. @ 16" O.C.	PFH	INTERMITTENT PORTAL FRAME	7∕ ₁₆ " OSB U.O.N.	EXTEND HEADER AS REQ'D PER CODE DETAIL	RE:	RE:	SEE IBC SECTION 2308.6.5.2 FOR MORE INFORMATION
PRODUCT. a N = NAI SC = #6 b N = NAI ST = 16 2. OSB INTERI AT 8"O.C. R 3. 2x BLOCKIN SHEARWAL 4. WHERE PAI FRAMING M 5. PROVIDE A 3½"x0.162" N 6. INDICATED w/2-2.5"x0.1 7. AT DOUBLE NOT POSSII 8. BOLTHOLES 9. IN ADDITION 2 ANCHOR I 10. AT (2) PLY (2 (0.113"Ø) x3 11. FOLLOW AI 12. WHERE WA REQUIREMIN 13. OVERDRIVI LESS THE E * APA RATED THE NEXT S ** VALUE @ 2- *** U.O.N. ANC EXCEED 2:1	ILS FOR GYP SHALL BE 13GA (.092"Ø) x1 7/8" 6 BY 2" LONG (6x2) COURSE THREAD DRYWA ILS FOR OSB TO BE 8d COMMON NAILS (0.13) 6GA, 7/16" CROWN w/1.5" LEG STAPLES MAY 1 MEDIATE NAILING SHALL BE AT 6" O.C. MAY REDUCE INTERMEDIATE NAILING TO 6" O.C. IF NG IS REQUIRED AT ALL PANEL EDGES NOT 1 LS. FOR STUD SPACINGS GREATER THAN 16 NELS ARE APPLIED ON BOTH FACES OF A W MEMBERS & NAILS ON EACH SIDE SHALL BE 3 .3-STUD CORNER OR 3-2x4/2-2x6 @ALL SHEA NAILS @18"O.C. MIN PANEL EDGES SHALL REQUIRE 3x OR DOUE 48" NAILS @3.5" O.C. STAGGERED, LOCATE TOP PLATE SPLICE, PLATES ARE TO LAP 4". BLE, STRAP PLATES w/16GA STRAP NAILED S FOR "SIMPSON" HARDWARE SHALL BE 1/16 N TO THE SPACING PER THE SCHEDULE, AN BOLTS PER PLATE. 1/2"Øx6" TITEN HD ANCH GYPSUM PANELS, BASE PLY NAILING TO BE 3 3/8" LONG NAILS SPACED @7" O.C. LL MANUFACTURER'S INSTALLATION RECOM ALL SHEATHING IS INSTALLED PER DETAIL L ENTS MAY BE OMITTED. AT FLOOR TRUSS C EN FASTENERS ARE PROHIBITED AND WILL ENTIRE PANEL WILL REQUIRE REVIEW BY TH D EXTERIOR PLYWOOD (EXP 1) MAY BE SUBES SHEARWALL DOWN IN THE LIST, (e.g., SB BEG 4" O.C. STUD SPACING w/HEM-FIR FRAMING CHOR REQUIRE 0.229"x3"x3" WASHER. CUT W 1.	CUPHEAD 1 LL SCREWS 1"Øx2.5" LOI BE INSTALL BE INSTALL BE INCREAS 5 STUD SPA LANDING OI 6" O.C. SHE ALL, EXTER STAGGEREI AR WALL EN BLE 2x BLOO CENTER OF 0" MINIMUN WALL EN CONTER OF 13GA (0.092 MENDATIO 7.1/SD2, HA ONDITIONS REQUIRE A IS OFFICE C STITUTED F COMES SC).	TYPE GYPSI S PER GA 25 NG) U.O.N. ED IN OSB I SED TO 12" CING IS GR N STUD OR ATHING SH. NOR AND IN D AT ALL FF IDS. STUD (SKING/STUE TOUBLE S A AND ARE M OF 6-3"X0 RSIZED. TS ARE TO F BE RETROF 2"Ø)X17/8" L NS, INCLUE RDWARE AL NS, INCLUE RDWARE AL N ADDITION DR REPLAC OR STRUCT	UM WALLBOARD NAILS U.O 33 & ASTM C 1280 U.O.N. PER ICBO ER-2843 O.C. IF STUDS ARE 16" O.C. EATER THAN 16" O.C. PLATE, MAY BE FLATWISE ALL BE ORIENTED WITH ST ITERIOR PANEL EDGES ARE RAMING MEMBERS. SHEAR CONFIGURATION MAY VARY DS AT ALL ADJOINING EDGE TUD ON PANEL JOINT. PRO TO BE NAILED w/(2) ROWS .148" NAILS @EACH END. BE LOCATED A MINIMUM OF ITTED WHERE ANCHOR BO ONG NAILS SPACED @9"0.0 DING NAILING REQUIREMEN ND FASTENERS IN CONNEC S MAY BE INSTALLED VERT VAL FASTENER. IF ADDED F EMENT. FURAL I FOR SB-SD PROVID FOR SA-SC WHERE HEIGHT	2.N. 2. OR LESS. GYP INTERMEI (U.O.N.). PROVIDE 3x OR 2 RENGTH AXIS PERPENDIO E TO BE OFFSET TO FALL VALUES ARE ADDITIVE. Y. NAIL STUDS TOGETHER ES. NAIL BLOCKING/STUDS DVIDE STAGGERED NAILIN 3.5"x0.162" NAILS @8" O.C. F 12" FROM EACH PLATE E LTS ARE REQUIRED, BUT I C., AND FACE PLY NAILING NTS, FOR ALL SPECIFIED H CTOR (1) IN EXCESS OF II ICALLY FROM TRUSS/BLO ASTENER RESULTS IN SP DED THE EDGE NAIL SPACE T TO WIDTH RATIO OF WA	DIATE NAILING SHALL BE 2-2x BLOCKS @'SE' CULAR TO WALL STUDS. ON DIFFERENT w/(1) ROW OF 3 TOGETHER NG @ ALL EDGES. WHERE 4'-0" LAP IS 3 REAK w/A MINIMUM OF NOT INSTALLED. 3 TO BE 11 1/2"GA 4ARDWARE. RC SECTION 602 ICKING INTO TOP PLATE. ACING OF 2" O.C. OR ING IS DECREASED TO LL PANEL DOES NOT	OVERDRIV THE EN NOTE: ALL METHOL NOTE: SHE	EN FASTENERS ARE PROHIBITE FIRE PANEL WILL REQUIRE REV BRACED WALL TYPES REQUIRE 0 'GB' U.O.N. ATHING TO BE THICKER OF TH/	ED AND WILL REQUIRE /IEW BY THIS OFFICE (E A MINIMUM OF GYPS AT REQUIRED BY THIS	AN ADDITIONAL FASTENER. IF ADDED FAS OR REPLACEMENT. UM SHEATHING ON ONE SIDE OF THE WALL TABLE, FRAMING NOTES, AND CODE.	TENER RES	SULTS IN SP.	ACING OF 2" O.C. OR LESS DD 'GB'), INSTALLED PER
								(PROVI E70XX EDGE	DE 3" LENGTH 3/16" WELD EA. VERT TO BEAM FACE	GLUE 2x PI /S HILTI X-I RED, TYP. TE w/3/16" I HSS5x = ====== 3/16 COL (1 TE - 5"x8"x1 1/2" WELD " MIN EDG OLTS TO F	ATE TP HSS J72P8S36 @ WELD BEAM 570XX 2" PE 7x3/16 ====================================	S BEAM 24" O.C. 1 TO COL R EDGE MIN. ELL AROUND BOT PLATE ID, (4) 3/8" (4" MIN E) EXP/TITEN/SET-XP WELDS 3/16" E70XX

WSP

64

(3)1¾"x11%" LSL

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WSP

(X)

NON-BEARING 8" CMU WALL, PROVIDE #4 VERTS, FULL HT @16" O.C., GROUTED CELL. PROVIDE (2) #4 EA EDGE OF DOOR, GROUTED CELL. PROVIDE (2) #4 CENTERED IN LINTEL ABOVE DOOR, 4" ABOVE DOOR, GROUTED 12" DEEP MIN. DROVIDE MUNIMUM (2) W/I Z W/IDES MIN.

PROVIDE MINIMUM (2)W1.7 WIRES MIN. @16" O.C. HORIZONTAL. ALL GROUT AND WORK TO BE PUSUANT TO TMS 402

A2 ,

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WALL FRAME NOTES (FOR REFERENCE ONLY) RE: IBC	L
EXTERIOR & BEARING SUPPORTING	
ROOF & TWO FLOORS	ALL EX
24 WALLS	SHEAT
1) HEIGHTS UP TO 10'-0" - (2) 2x4 @16" O.C.	OPENI
2) HEIGHTS OVER 10'-0" - REFER TO PLAN	INDICA
2x6 WALLS	
1) HEIGHTS UP TO 12'-0" - 2x6 @16" O.C.	
2) HEIGHTS OVER 12'-0" - REFER TO PLAN	
EXTERIOR & BEARING SUPPORTING	
ROOF & <u>ONE</u> FLOOR	
2x4 WALLS	
1) HEIGHTS UP TO 10'-0" - 2x4 @16" O.C.	
2) HEIGHTS FROM 10'-0" to 12'-0" - (2)2x4 @16" O.C.	
3) HEIGHTS OVER 12'-0" - REFER TO PLAN	
2x6 WALLS	
1) HEIGHTS UP TO 10'-0" - 2x6 @24" O.C.	FULL
2) HEIGHTS FROM 10'-0" to 16'-0" - 2x6 @16" O.C.	_
3) HEIGHTS FROM 16'-0" to 18'-0" - 2x6 @12" O.C.	│
4) HEIGHTS OVER 18'-0" - REFER TO PLAN	51
EXTERIOR & BEARING SUPPORTING	
ROOF ONLY	
2x4 WALLS	│
1) HEIGHTS UP TO 12'-0" - 2x4 @16" O.C.	
2) HEIGHTS FROM 12'-0" to 14'-0" - (2)2x4 @16" O.C.	(u)
3) HEIGHTS OVER 14'-0" - REFER TO PLAN	O.S.
2x6 WALLS	
1) HEIGHTS UP TO 10'-0" - 2x6 @24" O.C.	
2) HEIGHTS FROM 10'-0" to 16'-0" - 2x6 @16" O.C.	
3) HEIGHTS FROM 16'-0" to 20'-0" - 2x6 @12" O.C.	
4) HEIGHTS OVER 20'-0" - REFER TO PLAN	

IF BOX IS 1" SQ. THEN SCALE IS $\frac{1}{4}$ " = 1'-0" IF BOX IS ½" SQ. THEN SCALE IS ½"=1'-0"

ALL DIMENSIONS ARE TO BE VERIFIED WITH ARCH PRIOR TO CONSTRUCTION.

IF BOX IS NOT $\frac{1}{2}$ " OR 1" SQ. THEN DRAWING IS NOT TO SCALE. WE NOTE THAT THESE DRAWINGS ARE NOT TO BE SCALED. SCALE IS PROVIDED FOR REFERENCE ONLY. REFER TO PLAN DIMENSIONS, IF DIMENSIONS NOT PROVIDED ON PLAN, REFER TO ARCHITECTURAL DRAWINGS FOR AREA IN QUESTION.

HEADER & POST CALL OUTS ARE INDICATED IN WALL FRAMING PLAN ON PREVIOUS PAGE

HOLDOWN SCHEDULE CONTRACTOR TO VERIFY ALL HOLDOWN LOCATIONS

WARCHITECTURAL DRAWINGS AND LATERAL PAGES. PROVIDED DIMENSIONS <u>MUST</u> BE VERIFIED PRIOR TO PLACEMENT. ALL HOLDOWNS/STRAPS TO BE NAILED TO FULL HEIGHT STUDS, NAILED TO SHEATHING W/EDGE NAILING.							
ID	SIMPSON	USP					
HD1 [*] OR HD2 [*]	STHD14 / STHD14RJ	STAD14 / STAD14RJ ₍₂₎					
HD3	CS16x48"	RS16-R					
HD4	(2)CS16x48"	(2)RS16-R					
HD5 OR HD6	HTT5 ₍₁₎	HTT22 ₍₁₎					
* USE (3)CS16 OR (1)CMST14 @FRAMED SHEARWALL BELOW OR (1)CS16 @ WSP OR CS-WSP BRACED WALLS.							
 (1) REQUIRES 5/8"Ø THREADED ROD ANCHOR (A193 GR B7 OR F593 304SS) w/SIMPSON 'AT-XP' ADHESIVE. LOCATE ROD 4" (MIN) FROM EDGE OF CONC. AND EMBED 9 3/8" (MIN) INTO CONC. (2) IF STRAP IS PLACED IN THE MIDDLE OF WALL, BEND STRAIGHT. RE: MANUFACTURER FOR INSTALLATION INSTRUCTIONS 							

(RJ) RJ SERIES REQUIRED AT GARAGE CURB AT BLOCKOUT. PLACE BENEATH CURB AS REQ'D

	CONN	ECTOR LEGE		GENERAL FRAMING LEGEND	SINGLE SPAN TRUSS UPLIFT LEGEND	
	MEMBER TYPE TJI BCI, GPI LPI, JSI	SIMPSON ITS2.06/14 ITS2.36/14 ITS2.56/14 US2.06/14	USP TFL2014 TFL2314 TFL2514 THE20140	 J-XX = 14" ENGINEERED WOOD FLOOR JOIST. APPROVED MANUFACTURERS AND THEIR CORRESPONDING JOIST SERIES ARE: I-LEVEL, TJI 360® SERIES (2⁵/₆" WIDE FLANGE) BOISE CASCADE, BCI® 90 SERIES (3¹/₂" WIDE FLANGE) PINKWOOD, PKI® 40 SERIES (3¹/₂" WIDE FLANGE) 	WIND SPEED 10 15 20 25 30 35 40 45 50 So of AN (17) 115B A A A A A A A B	55 B C
H2 H3	LVL/LSL	MIT1.81/14	THF23140 THF25140 BPH1714	LSL-XX = 1¾" x 14" LAMINATED STRAND LUMBER FLUSH BEAM MINIMUM DESIGN PROPERTIES: • FLEXURAL STRESS, Fb = 2,325 psi	$\begin{array}{c ccccccc} & & & & A & A & B & B & B & C & C & C \\ \hline & & & & & & & & & & & & & & & & & \\ \hline & & & &$	D E B
H4 H5	LVL/LSL TJI BCI, GPI L PI JSI	HU14 MIT4.28/14 MIT3514-2 MIT314-2	HD1714 TH020140-2 TH023140-2 TH025140-2	 MODULUS OF ELASTICITY, E = 1.55E HORIZONTAL SHEAR PARALLEL TO GRAIN, Fv = 310 psi LSL PRODUCT MUST BE ICC APPROVED. APPROVED LVL PRODUCTS INCLUDE (BUT ARE NOT LIMITED TO) TIMBERSTRAND® AND 	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	C D
H6 H7	1JI BCI, GPI LPI, JSI (2)LVL/(2)LSL/4x	MIU4.28/14 MIU4.75/14 MIU5.12/14 LI410	THF20140-2 THF23140-2 THF25140-2 SUH410	SOLIDSTART. [™] LVL-XX = 1¾" x 14" LAMINATED VENEER LUMBER FLUSH BEAM MINIMUM DESIGN PROPERTIES:	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	E B D
H H H H H H	(2)LVL/(2)LSL/4x	HHUS410	THD410	 FLEXURAL STRESS, Fb = 2,600 psi MODULUS OF ELASTICITY, E = 1.9 x 10⁶psi HORIZONTAL SHEAR PARALLEL TO GRAIN, Fv = 285 psi HORIZONTAL SHEAR PARALLEL TO GRAIN, Fv = 285 psi 	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	E
(H9) (HA)	(2)LVL/(2)LSL/4x (3)LVL/(3)LSL/6x	HGUS410 HGUS5.50/10	THDH48 THDH610	LVL PRODUCT MUST BE ICC APPROVED. APPROVED LVL PRODUCTS INCLUDE (BUT ARE NOT LIMITED TO) MICROLLAM®, VERSA-LAM® (X)J-XX = MULTIPLE ENGINEERED WOOD JOIST, 'X' IS REQ'D PLY COUNT. CONNECT PER FRAMING NOTE #10 U N O. ON PLAN	A = H3 OR H2.5T OR SDWC15600 B = (2)H3 OR H2.5T OR (2)H2A OR LTS12 OR (2)SDWC15600 (STP) OR SDWC15600 (DTP) C = (2)H3 OR (2)H2.5T OR (2)H2A OR LTS12 OR (3)SDWC15600 (STP) OR (2)SDWC15600 (DT	P)
HB (HC)	(4)LVL/(4)LSL/8x/(2)4x 2x/ROOF TRUSS	HGUS7.25/10 LUS24	THDH7210 JUS24	(SEE SINGLE JOIST SPECIFICATIONS FOR MORE INFORMATION). SECURE PLIES PER MANUFACTURER RECOMMENDATIONS. (X)LSL-XX = MULTIPLE LAMINATED STRAND LUMBER BEAM, 'X' IS REQ'D PLY	D = (3)H3 OR (2)H2.5T OR (2)H2A OR HTS20 OR (2)SDWC15600 (DTP) E = (4)H3 OR (2)H2.5T OR (2)H2A OR HTS20 OR (2)SDWC15600 (DTP) F = (4)H3 OR (2)H2.5T OR (3)H2A OR HTS200 C (3)SDWC15600 (DTP) C = (4)H3 OR (2)H2.5T OR (3)H2A OR HTS20 OR (3)SDWC15600 (DTP)	
		LUS26	JUS26	COUNT. CONNECT PER FRAMING NOTE #10 U.N.O. ON PLAN. (SEE SINGLE LVL SPECIFICATIONS FOR MORE INFORMATION). SECURE PLIES PER GENERAL NOTES.	NOTE: H2.5T CLIPS MAY NOT BE INSTALLED AT SINGLE TOP PLATE APPLICATIONS. STP = SINGLE TOP PLATE, DTP = DOUBLE TOP PLATE NOTE: DW SCREWS ARE TO BE INSTALLED IN ACCORDANCE w/MFG DETAILS.	
	2x/ROOF TRUSS	MUS26	HD28	(X)LVL-XX = MULTIPLE LAMINATED VENEER LOMBER BEAM, X IS REOD PLY COUNT. CONNECT PER FRAMING NOTE #10 U.N.O. ON PLAN. (SEE SINGLE LVL SPECIFICATIONS FOR MORE INFORMATION). SECURE PLIES PER GENERAL NOTES.		=
U U U U U U U	2x/ROOF TRUSS 2x/ROOF TRUSS	MUS28 HUS26	HUS26 HUS26	XX = LENGTH OF FRAMING MEMBER ROUNDED UP TO THE NEAREST FOOT. WHEN INDICATED AS "XX", FOLLOW ARCHITECTURAL DIMENSIONS FOR LENGTH OF MEMBER.	IF BOX IS 1" SQ. THEN SCALE IS $\frac{1}{4}$ " = 1'-0" IF BOX IS $\frac{1}{2}$ " SQ. THEN SCALE IS $\frac{1}{6}$ "=1'-0" IF BOX IS NOT $\frac{1}{2}$ " OR 1" SQ. THEN DRAWING IS NOT TO SCALE.	
ĒĴ	2x/ROOF TRUSS (2)2x/DBL TRUSS	HUS28 HHUS26-2	HUS28 THD26-2	 = 14" ENGINEERED WOOD RIM BOARD. APPROVED MANUFACTURERS AND THEIR CORRESPONDING RIM MATERIAL ARE: I-LEVEL, TIMBERSTRAND® (1¼" WIDE) DOING CAROADE. DO DIM DOADD CODE: (11/11/11/10E) 	WE NOTE THAT THESE DRAWINGS ARE NOT TO BE SCALED. SCALE IS PROVIDED FOR REFERENCE ONLY. REFER TO PLAN DIMENSIONS, IF DIMENSIONS NOT PROVIDED ON PLAN, REFER	
E) E	(2)2x/DBL TRUSS	HHUS28-2	THD28-2	 BOISE CASCADE, BC RIM BOARD OSB^{IM} (1/8 WIDE) INTERIOR BEARING WALL I = MINIMUM 1-2x4 POST (LARGER POST SPECIFIED ON PLAN) REFER TO CS1 FOR KING (FULL HEIGHT) STUD REQUIREMENTS 	ALL DIMENSIONS ARE TO BE VERIFIED WITH ARCH PRIOR TO CONSTRUCTION.	
	(2)2x/DBL TRUSS	HHUS210-2 HGUS26-2	THD210-2 THDH26-2	BLOCKING TO FDN OR STRUCTURAL MEMBER REQUIRED UNDER POST ABOVE. PACK WEBS OF JOISTS PER MFG. AS REQ'D. ADDITIONAL RIM MAY BE INSTALLED FOR SQUASH BLOCKS. JOIST		
HZ HZ	(2)2x/DBL TRUSS (2)2x/DBL TRUSS	HGUS28-2 HGUS210-2	THDH28-2 THDH210-2	MATERIAL IS PROHIBITED FOR SQUASH BLOCKING. = INDICATES APPROXIMATE PLUMBING DROP LOCATIONS. CONTRACTOR IS RESPONSIBLE TO VERIFY CLEARANCE FOR DLUMPING DRIOP TO SECURING FLOOP JOISTS		
HP HQ	(3)2x/TRIPLE TRUSS (3)2x/TRIPLE TRUSS	HGUS28-3 HGUS210-3	THDH28-3 THDH210-3	 STRUCTURAL PORCH POST. RE: PLAN FOR SIZE (SEE DETAILS P1/P2 ON SD2 FOR CONNECTION & A4/SD1 FOR PORCH HEADER CONNECTION DETAILS) 		
	HIP TRUSS	THJU26	HJC26			
HS) HT	ALL	LS70 (PAIR) (2)H2.5T or HTS20 or ((4) SDWC 15600)	MP7 (PAIR) (2)RT7 or LFTA6			
	ROOF TRUSS : TRUSS BEARING ENHANG HT' HARDWARE WHERE NO	TBE (PAIR) CERS MAY BE REPLACED V O ADD'I BCBB IS SPECIFIEI	SBP (PAIR) WITH BCBB(RE:A2/SD1) D AT BEARING ADD'I			
	WARE MAY NOT BE OMITT	TED. TBE MUST BE REPLAC	LETA6+RT or LEM6(2)H3			=
	ROOF TRUSS	HTS20+(2)H3 TBE (PAIR) + HTS20	SBP (PAIR) + RT7			
EX EX	ROOF TRUSS	(2)HTS20 TBE (PAIR) + (2)HTS20	(2)LTFA6 SBP (PAIR) + (2)MTS16		20514 TAOS	No.
HZ	ROOF TRUSS * = PRESSURE BLOO REFER TO SCHEDU	(2)CS16-R w/22-2.5"x0.148" NAILS CK/TOENAILING MAY REPLA	(2)RS16-R w/22-2.5"x0.148" NAILS ACE HARDWARE.			M
IF NO `HY', A ALL T	OTHER HARDWARE PROV AND 'HZ' CONNECTORS TO 'HREAD w/8" EMBED INTO	VIDED ON DRAWINGS, SEC D FOUNDATION w/HTT5. SIN CONCRETE w/ SIMPSON S	URE `HV', `HW', `HX', MPSON HTT5-3/4 w/ ¾" ET-XP AND 2.75" EDGE			
DISTA w/8" E WALK	NCE. FOR HZ USE SIMPS(EMBED w/SET-XP. IF HARD (OUT/GL, BRIDGE STORIES	ON HD19 TO 4x8 POST (MIN WARE ON SECOND STORY S w/CS16 (2 @`HY'&`HZ').	I) w/1.25" ALLTHREAD (OR ABOVE SINGLE TOP BLATE			
APPL	CATIONS. USE ALTERNAT	TE HARDWARE PROVIDED.				
				$\begin{vmatrix} 1 & 1 & 1 \\ 1 & + \end{vmatrix} = \begin{vmatrix} 1 & 1 \\ 1 & + + \end{vmatrix} = \begin{vmatrix} 1 & 1 \\ 1 & + + \end{vmatrix} = \begin{vmatrix} 1 & 1 \\ 1 & + + \end{vmatrix} = \begin{vmatrix} 1 & 1 \\ 1 & + + + \end{vmatrix}$		
						FI.
						-
		/				WE
				PROVIDE FIRE RESISTANCE ROOF SHEATHING AS REQ'D		
						WC
			P 1 ³ / ₄ "x11 ⁷ / ₆ " LS ATTACH TO WALL STUD	LEDGER, EA. PARAPET		
			WALL STOD LOK SIMPSO	W(2) 4" LEDGER N MIU1.88/11, TYP		
				PACK WEB OF RAFTER PER MANUF., PROVIDE SIMPSON LSSR1.81Z, TYP NOTE: RAFTER MAY NEED TO BE SKEWED TO ACCOMMODATE MAXIMUM HANGER SKEW		
				@ELEVATOR TALL WALLS, DBL 1.5"x5.5" STUDS @16" O.C. MI		
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					RI	EF EA

	ROOF TRUSS LEGEND
DTE: 1 DNCEF DR AC	THE FOLLOWING TRUSS CONVENTIONS ARE FOR PTUAL PURPOSES ONLY. REFER TO MFG'S LAYOUTS TUAL TRUSS ID'S.
Т	= ROOF TRUSS (IF SHOWN)
М	= STEPPED OR ALTERED ROOF TRUSS (IF SHOWN)
G	 GABLE END TRUSS (IF SHOWN) PROVIDE BRACING PER LB/SD2
S	 STRUCTURAL GABLE END TRUSS PROVIDE BRACING PER LB/SD2
Y	= HIP MASTER TRUSS
Н	= HIP TRUSS (IF SHOWN)
J	= JACK TRUSS (IF SHOWN)
Х	= GIRDER TRUSS
E	= END TRUSS (IF SHOWN)
V	= VALLEY SET (IF SHOWN)

(X)PL@Y = DESIGN TRUSSES FOR ADDITIONAL `X' PLF SNOW

BLOCKING NOTES

FULL DEPTH BLOCKING BETWEEN FLOOR JOISTS IS REQUIRED

WHEN ANY OF THE FOLLOWING CONDITIONS EXIST. 8"Ø MAX

1) JOISTS ARE NOT CONTINUOUS OVER SUPPORTS 2) BEARING WALL ABOVE & WITHIN 12" OF BEARING

4) BRACED/SHEARWALL ABOVE OR BELOW

BCBB = BOTTOM CHORD BEARING BLOCK RE:A2/SD1

@'Y' FT FROM UPPER WALL

(X)SL

SNOW

HOLE ALLOWED IN $11\frac{7}{8}$ "-16" BLOCKS.

3) CANTILEVER CONDITION

 2x0
 (0) 0.5 x0.162
 Null

 2x10
 (4) 3.5"x0.162"
 NAILS

 2x12
 (5) 3.5"x0.162"
 NAILS
 14 18 LEDGERLOK® 5 2x6 (1) LEDGERLOK 12 2x8 or 2x10 (2) LEDGERLOK 2x12 (3) LEDGERLOK 18 WALL STUDS @ 24" O.C. MAX. TRUSS MIN. LEDGER FASTENERS PER SPAN (FT) SIZE STUD 2x6 (2) 3.5"x0.162" NAILS 4 7 2x8 (3) 3.5"x0.162" NAILS 2x10 (4) 3.5"x0.162" NAILS = DESIGN TRUSS FOR `X' PLF ADDITIONAL DRIFTING 9 2x12 (5) 3.5"x0.162" NAILS 12 LEDGERLOK® 2x6 (1) LEDGERLOK 3 2x8 or 2x10 (2) LEDGERLOK 8 2x12 (3) LEDGERLOK 13 NOTES: - FOR USE WITH MAX 30 PSF SNOW AND 23 PSF DEAD LOADS ONLY FASTENERS TO BE EVENLY SPACED. - FOR NAILS: 1" MIN EDGE DISTANCE, 2" MIN SPACING LEDGERLOK, SEE MANUF RECOMMENDATIONS - (2)2x = STACKED VERTICALLY

TRUSS LEDGER SCHEDULE

WALL STUDS @ 16" O.C. MAX. TRUSS MIN. LEDGER FASTENERS PER

STUD

2x6 (2) 3.5"x0.162" NAILS

2x8 (3) 3.5"x0.162" NAILS

SIZE

SPAN (FT)

6

10

JPPER LEVEL FLOOR/LOWER ROOF FRAMING PLAN FER TO SHEETS CS1, SD1 & SD2 FOR DETAILS & NOTES NOT SHOWN ON THIS PAGE. ALL

ADER & POST CALL OUTS ARE INDICATED IN WALL FRAMING PLAN ON PREVIOUS PAGE

	BRACED WALL SCHEDULE								
MARK	MARK EXPLANATION	SHEATHING	CONNECTOR	EDGE NAILING	FIELD NAILING	ADDITIONAL CONNECTOR NOTES			
			2½"x0.131"	6"O.C.	12"O.C.				
WSP	WOOD STRUCTURAL PANEL	7∕ ₁₆ " OSB U.O.N.	16GAx1¾" STAPLES	3"O.C.	6"O.C.				
GB		1/2" GYPSUM BOARD	5d COOLER or $1\frac{1}{4}$ " SCREWS TYPE W or S						
(INTERIOR)	GYPSUM BOARD	5∕8" GYPSUM BOARD	0.092"x17⁄8"w/ ½"HEAD or 15⁄8" SCREWS TYPE W or S	7"O.C.	12"O.C.				
GB (EXTERIOR)	GYPSUM BOARD	$\frac{1}{2}$ " GYPSUM BOARD	1½' GALVANIZED ROOFING NAIL; 1½" LONG GALVANIZED STAPLE; 1¼" SCREWS TYPE W or S	7"O.C.	7"O.C.				
GB (EXTERIOR)	GYPSUM BOARD	⁵‰" GYPSUM BOARD	1¾" GALVANIZED ROOFING NAIL; 1⅛" LONG GALVANIZED STAPLE; 1⅛" SCREWS TYPE W or S	7"O.C.	7"O.C.				
PFH	INTERMITTENT PORTAL FRAME	⅔16" OSB U.O.N.	EXTEND HEADER AS REQ'D PER CODE DETAIL	RE:	RE:	SEE IBC SECTION 2308.6.5.2 FOR MORE INFORMATION			
CONNECT BRACED WALLS TO FLOOR/CEILING FRAMING PER IBC REQUIREMENTS. OVERDRIVEN FASTENERS ARE PROHIBITED AND WILL REQUIRE AN ADDITIONAL FASTENER. IF ADDED FASTENER RESULTS IN SPACING OF 2" O.C. OR LESS THE ENTIRE PANEL WILL REQUIRE REVIEW BY THIS OFFICE OR REPLACEMENT. NOTE: ALL BRACED WALL TYPES REQUIRE A MINIMUM OF GYPSUM SHEATHING ON ONE SIDE OF THE WALL (BOTH SIDES @METHOD 'GB'), INSTALLED PER METHOD 'GB' U.O.N. NOTE: SHEATHING TO BE THICKER OF THAT REQUIRED BY THIS TABLE. FRAMING NOTES AND CODE									

WALL FRA

EXTERIOR & BEARING ROOF & <u>TWO</u> FLOORS 2x4 WALLS

1) HEIGHTS UP TO 10'-0" - (2) 2x4 @ 2) HEIGHTS OVER 10'-0" - REFER TO 2x6 WALLS 1) HEIGHTS UP TO 12'-0" - 2x6 @16 2) HEIGHTS OVER 12'-0" - REFER T

EXTERIOR & BEARING ROOF & <u>ONE</u> FLOOR 2x4 WALLS

1) HEIGHTS UP TO 10'-0" - 2x4 @16 2) HEIGHTS FROM 10'-0" to 12'-0" -3) HEIGHTS OVER 12'-0" - REFER T 2x6 WALLS

1) HEIGHTS UP TO 10'-0" - 2x6 @24 2) HEIGHTS FROM 10'-0" to 16'-0" - 2 3) HEIGHTS FROM 16'-0" to 18'-0" -4) HEIGHTS OVER 18'-0" - REFER **EXTERIOR & BEARING**

ROOF ONLY 2x4 WALLS 1) HEIGHTS UP TO 12'-0" - 2x4 @16 2) HEIGHTS FROM 12'-0" to 14'-0" -

3) HEIGHTS OVER 14'-0" - REFER T 2x6 WALLS

1) HEIGHTS UP TO 10'-0" - 2x6 @24" 2) HEIGHTS FROM 10'-0" to 16'-0" - 2 3) HEIGHTS FROM 16'-0" to 20'-0" - 2 4) HEIGHTS OVER 20'-0" - REFER TO

ME NOTES E ONLY) RE: IBC G SUPPORTING	LATERAL WALL FRAMING LEGEND	HEADER SCHEDULE (FRAME PER NOTES ON CS1)	HOL CONTRACTOR W/ARCHITECT	DOWN SCHE R TO VERIFY ALL HOLDO TURAL DRAWINGS AND L	DULE WN LOCATIONS ATERAL PAGES.
	ALL EXTERIOR WALLS TO BE CONTINUOUS STRUCTURAL PANEL SHEATHING, ABOVE AND BELOW ALL OPENINGS. SHEATHING SPECIFICATION TO MATCH ADJACENT WALL PANELS AT	$\overrightarrow{A?}$ = (?)2x6 HF/SPF#2	PROVIDED DIMENSIO ALL HOLDOWNS/ST NAILED	DNS <u>MUST</u> BE VERIFIED I RAPS TO BE NAILED TO TO SHEATHING w/EDGE	PRIOR TO PLACEMENT. FULL HEIGHT STUDS, NAILING.
@16" O.C. R TO PLAN	OPENINGS. BRACING MAY BE INSTALLED ON EITHER SIDE OF INDICATED WALL U.O.N.	$\frac{B?}{C?} = (?)2x10 \text{ HF/SPF#2}$	ID HD1 [*] OR HD2 [*]	SIMPSON STHD14 / STHD14RJ ₂	USP STAD14 / STAD14RJ ₂₃
16" O.C.	= BRACED WALL LINE. = (WALL PANELS WITHIN 4'-0" OF BRACED WALL LINE	D? = (?)2x12 HF/SPF#2	HD3	CS16x48"	RS16-R
C SUDDOD TING	& NO MORE THAN 8'-0" APART (TOTAL) ARE CONSIDERED PART OF THE BRACED WALL LINE	E?) = (?)1 3/4"x9 1/2" TIMBERSTRAND® 1.55E LSL	HD4	(2)CS16x48"	(2)RS16-R
J SUPPORTING	BBBBB = BRACED WALL PANEL. ENGINEERED SHEAR WALL PANEL	F? = (?)1 3/4"x11 7/8" TIMBERSTRAND® 1.55E LSL	HD5 OR HD6	HTT5 (1)	HTT22 (1)
16" O.C. - (2)2x4 @16" O.C. R TO PLAN 24" O.C. - 2x6 @16" O.C. - 2x6 @12" O.C. R TO PLAN G SUPPORTING	 ? = WALL PANEL MARK. REFER TO BRACED WALL SCHEDULE. MARKS SA-SE INDICATE ENGINEERED SHEARWALL PANEL. '?' CORRELATES PANEL TO SHEARWALL SCHEDULE. PANEL MATERIAL, FASTENER TYPE AND SPACING, ADDITIONAL CRITERIA ARE NOTED IN SHEARWALL SCHEDULE. FULL = INDICATES PANEL LENGTH IS EQUAL TO ENTIRE WALL LENGTH. = = HEADER PER PLAN. EXTEND TO WALL ENDS AND INSTALL STRAPS AND SHEATHING PER DETAIL ON SHEET THAT MATCHES INDICATED WALL MARK. HOLDOWN AS SPECIFIED IN HOLDOWN SCHEDULE. 	 G? = (?)1 3/4"x14" MICROLLAM® 2.0E LVL BM H? = (?)1 3/4"x16" MICROLLAM® 2.0E LVL BM I? = (?)1 3/4"x18" MICROLLAM® 2.0E LVL BM ? = NUMBER OF PLIES OF HEADER AS INDICATED ON THE STRUCTURAL DRAWINGS. IF NO NUMBER INDICATED FILL FULL WALL CAVITY UNLESS INSTRUCTED OTHERWISE BY THIS OFFICE. a = SIMPSON A35 BETWEEN HEADER AND KING STUD. b = (2)SIMPSON A23 BETWEEN HEADER AND KING STUD. 	 * USE (3)CS16 OR (OR (1)CS16 @ WS (1) REQUIRES 5/8"Ø 304SS) w/SIMPSO FROM EDGE OF ((2) IF STRAP IS PLAC RE: MANUFACTU (RJ) RJ SERIES REG PLACE BENEATH 	1)CMST14 @FRAMED SH SP OR CS-WSP BRACED V THREADED ROD ANCHO ON 'AT-XP' ADHESIVE. LO CONC. AND EMBED 9 3/8" CED IN THE MIDDLE OF W RER FOR INSTALLATION UIRED AT GARAGE CURI CURB AS REQ'D	EARWALL BELOW WALLS. R (A193 GR B7 OR F593 CATE ROD 4" (MIN) (MIN) INTO CONC. /ALL, BEND STRAIGHT. INSTRUCTIONS B AT BLOCKOUT.
16" O.C. - (2)2x4 @16" O.C. R TO PLAN 24" O.C. - 2x6 @16" O.C. - 2x6 @12" O.C. R TO PLAN	 COLLECTOR OR DRAG STRUT. CONSTRUCTION DETAIL REFERENCE INDICATED ON PLANS WHEN COLLECTOR SPECIFIED. (u) = NO EDGE BLOCKING REQUIRED. O.S. = ONE SIDE OF WALL PANEL HAS BEEN DESIGNED FOR SINGLE FACE BRACING. NO BRACING REQUIRED ON OPPOSITE FACE. 	 c = STRAP TRIMMERS ACROSS HEADER w/CS16 w/10-2.5"x 0.131" NAILS EA SIDE or UP TO TOP OF TOP PLATE (INSIDE FACE). WINDOW HEADERS ARE INDICATED AS 2-PLY IN A 2x6 WALL TO ALLOW FOR INSULATION OF HEADER CAVITY. HEADERS TO BE PLACED ON THE EXTERIOR FACE OF THE WALL AND INSULATE THE INTERIOR FACE. PROVIDE K.S.'S PER GENERAL FRAMING & ROOF TRUSS NOTES 	ALL DIMENSIONS A	IF BOX IS 1" SQ. THEN SO IF BOX IS ½" SQ. THEN SO IF BOX IS NOT ½" OR 1" S WE NOTE THAT THESE D SCALE IS PROVIDED FOF DIMENSIONS, IF DIMENS TO ARCHITECTURAL DRA IN IN IN IN IN I	CALE IS $\frac{1}{4}$ " = 1'-0" CALE IS $\frac{1}{8}$ "=1'-0" Q. THEN DRAWING IS NOT TO SCA PRAWINGS ARE NOT TO BE SCALEI R REFERENCE ONLY. REFER TO PL IONS NOT PROVIDED ON PLAN, RE AWINGS FOR AREA IN QUESTION. H ARCH PRIOR TO CONSTRUCTION

UPPER LEVEL WALL FRAMING PLAN REFER TO SHEETS CS1, SD1 & SD2 FOR DETAILS & NOTES NOT SHOWN ON THIS PAGE. ALL HEADER & POST CALL OUTS ARE INDICATED IN WALL FRAMING PLAN ON PREVIOUS PAGE

S NOT TO SCALE. TO BE SCALED. REFER TO PLAN ON PLAN, REFER N QUESTION. NSTRUCTION.

CONNECTOR LEGEND							
	TICO NAILS ARE PROHIBIT	ED @ALL HUS, HHUS, AND	HGUS LOCATIONS.				
	MEMBER TYPE TJI	SIMPSON ITS2 06/9 5	USP TEL 2095				
(H1)	BCI, GPI LPI, JSI	ITS2.37/9.5 ITS2.56/9.5	TFL2395 TFL2595				
(H2)	IJI BCI, GPI LPI, JSI	IUS2.06/9.5 IUS2.37/9.5 IUS2.56/9.5	THF20925 THF23925 THF25925				
(H3)	LVL/LSL	MIT9.5	BPH1795				
(H4)	LVL/LSL	HU9	HD17925				
(H5)	TJI BCI, GPI LPI, JSI	MIT4.28/9.5 MIT359.5-2 MIT39.5-2	THO20950-2 THO23950-2 THO25950-2				
(H6)	TJI BCI, GPI LPI, JSI	MIU4.28/9 MIU4.75/9 MIU5.12/9	THF20925-2 THF23925-2 THF25925-2				
(H7)	(2)LVL/(2)LSL/4x	U410	SUH410				
(H8)	(2)LVL/(2)LSL/4x	HHUS410	THD410				
(H9)	(2)LVL/(2)LSL/4x	HGUS410	THDH48				
HA	(3)LVL/(3)LSL/6x	HGUS5.50/10	THDH610				
HB	(4)LVL/(4)LSL/8x/(2)4x	HGUS7.25/10	THDH7210				
HC	2x/ROOF TRUSS	LUS24	JUS24				
HD	2x/ROOF TRUSS	LUS26	JUS26				
HE	2x/ROOF TRUSS	LUS28	JUS28				
HF	2x/ROOF TRUSS	MUS26	HD28				
HG	2x/ROOF TRUSS	MUS28	HUS26				
(HH)	2x/ROOF TRUSS	HUS26	HUS26				
HI	2x/ROOF TRUSS	HUS28	HUS28				
HJ	(2)2x/DBL TRUSS	HHUS26-2	THD26-2				
Ήĸ	(2)2x/DBL TRUSS	HHUS28-2	THD28-2				
(HL)	(2)2x/DBL TRUSS	HHUS210-2	THD210-2				
HM	(2)2x/DBL TRUSS	HGUS26-2	THDH26-2				
HN	(2)2x/DBL TRUSS	HGUS28-2	THDH28-2				
HO	(2)2x/DBL TRUSS	HGUS210-2	THDH210-2				
HP	(3)2x/TRIPLE TRUSS	HGUS28-3	THDH28-3				
HQ	(3)2x/TRIPLE TRUSS	HGUS210-3	THDH210-3				
HR	HIP TRUSS	THJU26	HJC26				
HS	ALL	LS70 (PAIR)	MP7 (PAIR)				
HT	ROOFTRUSS	(2)H2.51 or H1S20 or ((4) SDWC 15600)	(2)RT7 or LFTA6				
HU	ROOF TRUSS						
AND ' HARD	: TRUSS BEARING ENHANC HT' HARDWARE WHERE NO WARE MAY NOT BE OMITT PLATE APPLICATIONS	D ADD'L BCBB IS SPECIFIED ED. TBE MUST BE REPLAC) AT BEARING. ADD'L ED W/BCBB @SINGLE				
HV	ROOF TRUSS	HTS20+H2.5T or HTS20+(2)H3	LFTA6+RT or LFM6(2)H3				
HW	ROOF TRUSS	TBE (PAIR) + HTS20	SBP (PAIR) + RT7				
HX	ROOF TRUSS	(2)HTS20	(2)LTFA6				
(HY)	ROOF TRUSS	TBE (PAIR) + (2)HTS20	SBP (PAIR) + (2)MTS16				
HZ	ROOF TRUSS	(2)CS16-R w/22-2.5"x0.148" NAILS	(2)RS16-R w/22-2.5"x0.148" NAILS				
\bigcirc	<pre>* = PRESSURE BLOC REFER TO SCHEDUL</pre>	K/TOENAILING MAY REPLA	CE HARDWARE.				
IF NO OTHER HARDWARE PROVIDED ON DRAWINGS, SECURE `HV', `HW', `HX', `HY', AND `HZ' CONNECTORS TO FOUNDATION w/HTT5. SIMPSON HTT5-3/4 w/ ¾" ALL THREAD w/8" EMBED INTO CONCRETE w/ SIMPSON SET-XP AND 2.75" EDGE DISTANCE. FOR HZ USE SIMPSON HD19 TO 4x8 POST (MIN) w/1.25" ALLTHREAD w/8" EMBED w/SET-XP. IF HARDWARE ON SECOND STORY OR ABOVE WALKOUT/GL, BRIDGE STORIES w/CS16 (2 @`HY'&`HZ'). NOTE: H2.5T/RT7 & TBE/SBP MAY NOT BE INSTALLED ON SINGLE TOP PLATE ADDI LCATIONS, USE AL TERNATE HARDWARE PROVIDED							

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GENERAL FRAMING LEGEND	
J-XX = 9½" ENGINEERED WOOD FLOOR JOIST. APPROVED MANUFACTURERS AND THEIR CORRESPONDING JOIST SERIES ARE: • LP SOLIDSTART, LPI 530 SERIES (2½6" WIDE FLANGE) LSL-XX = 1¾" x 9½" LAMINATED STRAND LUMBER FLUSH BEAM MINIMUM DESIGN	
PROPERTIES: • FLEXURAL STRESS, Fb = 2,325 psi • MODULUS OF ELASTICITY, E = 1.55E • HORIZONTAL SHEAR PARALLEL TO GRAIN, Fv = 310 psi LSL PRODUCT MUST BE ICC APPROVED APPROVED I SL PRODUCTS	
INCLUDE (BUT ARE NOT LIMITED TO) TIMBERSTRAND® & SOLIDSTART® LVL-XX = 1¾" x 9½" LAMINATED VENEER LUMBER FLUSH BEAM MINIMUM DESIGN PROPERTIES: • FLEXURAL STRESS, Fb = 2,600 psi • MODULUS OF ELASTICITY, E = 1.9 x 10 ⁶ psi • HORIZONTAL SHEAR PARALLEL TO GRAIN, Fv = 285 psi	
LVL PRODUCT MUST BE ICC APPROVED. APPROVED LVL PRODUCTS INCLUDE (BUT ARE NOT LIMITED TO) MICROLLAM®, VERSA-LAM® (X)J-XX = MULTIPLE ENGINEERED WOOD JOIST, 'X' IS REQ'D PLY COUNT. CONNECT PER FRAMING NOTE #10 U.N.O. ON PLAN. (SEE SINGLE JOIST SPECIFICATIONS FOR MORE INFORMATION). SECURE PLIES PER MANUFACTURER RECOMMENDATIONS.	A
 (X)XB-XX = 9½" X-BEAM 24F-V4 AS MANUFACTURED BY ROSBORO. (X) IS REQ'D WIDTH IN INCHES. LSL OF SAME OR GREATER WIDTH MAY BE SUBSTITUTED AS DESIRED. 	
 (X)LSL-XX = MULTIPLE LAMINATED STRAND LUMBER BEAM, 'X' IS REQ'D PLY COUNT. CONNECT PER FRAMING NOTE #10 U.N.O. ON PLAN. (SEE SINGLE LSL SPECIFICATIONS FOR MORE INFORMATION). SECURE PLIES PER GENERAL NOTES. (X)LVL-XX = MULTIPLE LAMINATED VENEER LUMBER BEAM. 'X' IS REQ'D PLY 	G N S N
COUNT. CONNECT PER FRAMING NOTE #10 U.N.O. ON PLAN. (SEE SINGLE LVL SPECIFICATIONS FOR MORE INFORMATION). SECURE PLIES PER GENERAL NOTES.	
 XX = LENGTH OF FRAMING MEMBER ROUNDED UP TO THE NEAREST FOOT. WHEN INDICATED AS "XX", FOLLOW ARCHITECTURAL DIMENSIONS FOR LENGTH OF MEMBER. 	
 = 9½" ENGINEERED WOOD RIM BOARD. APPROVED MANUFACTURERS AND THEIR CORRESPONDING RIM MATERIAL ARE: I-LEVEL, TIMBERSTRAND® (1¼" WIDE) BOISE CASCADE, BC RIM BOARD OSB™ (1½" WIDE) 	
ZZZZZZ = INTERIOR BEARING WALL	
 MINIMUM 1-2x4 POST (LARGER POST SPECIFIED ON PLAN) REFER TO CS1 FOR KING (FULL HEIGHT) STUD REQUIREMENTS BLOCKING TO FDN OR STRUCTURAL MEMBER REQUIRED UNDER POST ABOVE. PACK WEBS OF JOISTS RE: PER MFG. AS REQ'D. ADDITIONAL RIM MAY BE INSTALLED FOR SQUASH BLOCKS. JOIST MATERIAL IS PROHIBITED FOR SQUASH BLOCKING. 	

= STRUCTURAL PORCH POST. RE: PLAN FOR SIZE (SEE DETAILS P1/P2 ON SD2 FOR CONNECTION & A4/SD1 FOR PORCH HEADER CONNECTION DETAILS)

SINGLE SPAN TRUSS UPLIFT LEGEND

	TRUSS SPAN (FT)													
PEED	10	15	20	25	30	35	40	45	50	55				
	А	А	А	А	А	А	А	А	В	В				
	А	А	А	А	В	В	В	В	В	С				
	А	А	А	В	В	В	С	С	С	D				
	А	А	В	В	В	С	С	D	D	Е				
	А	А	А	А	А	А	А	А	В	В				
	А	А	А	В	В	В	В	В	В	С				
	А	А	А	В	В	В	С	С	С	D				
	А	А	В	В	В	С	D	D	D	Е				
	А	А	А	А	А	А	А	А	В	В				
	А	А	А	В	В	В	В	С	С	D				
	А	А	В	В	В	В	С	D	D	Е				
	A	В	В	В	В	С	D	D	Е	E				

B = (2)H3 OR H2.5T OR (2)H2A OR LTS12 OR (2)SDWC15600 (STP) OR SDWC15600 (DTP) C = (2)H3 OR (2)H2.5T OR (2)H2A OR LTS12 OR (3)SDWC15600 (STP) OR (2)SDWC15600 (DTP)) = (3)H3 OR (2)H2.5T OR (2)H2A OR HTS20 OR (2)SDWC15600 (DTP) E = (4)H3 OR (2)H2.5T OR (2)H2A OR HTS20 OR (2)SDWC15600 (DTP)

F = (4)H3 OR (2)H2.5T OR (3)H2A OR HTS20OR (3)SDWC15600 (DTP) G = (4)H3 OR (3)H2.5T OR (3)H2A OR HTS20 OR (3)SDWC15600 (DTP)

STP = SINGLE TOP PLATE, DTP = DOUBLE TOP PLATE NOTE: DW SCREWS ARE TO BE INSTALLED IN ACCORDANCE w/MFG DETAILS.

ROOF TRUSS LEGEND NOTE: THE FOLLOWING TRUSS CONVENTIONS ARE FOR CONCEPTUAL PURPOSES ONLY. REFER TO MFG'S LAYOUTS FOR ACTUAL TRUSS ID'S. T.. = ROOF TRUSS (IF SHOWN)

- M.. = STEPPED OR ALTERED ROOF TRUSS (IF SHOWN)
- G... = GABLE END TRUSS (IF SHOWN)
- PROVIDE BRACING PER LB/SD2 S... = STRUCTURAL GABLE END TRUSS
 - PROVIDE BRACING PER LB/SD2 = HIP MASTER TRUSS
 - = HIP TRUSS (IF SHOWN)
 - = JACK TRUSS (IF SHOWN)
 - = GIRDER TRUSS = END TRUSS (IF SHOWN)
- V... = VALLEY SET (IF SHOWN) (X)SL = DESIGN TRUSS FOR `X' PLF ADDITIONAL DRIFTING
- SNOW (X)PL@Y = DESIGN TRUSSES FOR ADDITIONAL `X' PLF SNOW

@'Y' FT FROM UPPER WALL BCBB = BOTTOM CHORD BEARING BLOCK RE:A2/SD1

UPPER ROOF FRAMING PLAN REFER TO SHEETS CS1, SD1 & SD2 FOR DETAILS & NOTES NOT SHOWN ON THIS PAGE. ALL HEADER & POST CALL OUTS ARE INDICATED IN WALL FRAMING PLAN ON PREVIOUS PAGE

TENSION STRAP TABLE FOR METHOD PFH, PFG, AND CS-PF BRACED WALL PANELS										
MIN. WALL STUD	MIN. PONY				TENSION S	STRAP REC	'D (a,b,c,d)) (MPH)			
FRAMING NOMINAL SIZE AND GRADE	WALL HEIGHT (FT)	WALL HEIGHT (FT)	WIDTH (FT)	85	90	100	85	90	100	110
	(* *)	(* *)		E	XPOSURE	В		EXPOS	URE C	
	0	10	18	LSTA24	LSTA24	LSTA24	LSTA24	LSTA24	LSTA24	LSTA24
			9	LSTA24	LSTA24	LSTA24	LSTA24	LSTA24	CS16	CS16
	1	10	16	LSTA24	LSTA24	CS14	CS14	(2)LSTA24	(2)CS16	(2)CS16
			18	LSTA24	LSTA24	(2)LSTA24	(2)LSTA24	(2)CS16	(3)CS16	(3)CS16
	2	10	9	LSTA24	LSTA24	LSTA24	LSTA24	CS16	(2)CS16	(2)CS16
			16	CS16	(2)LSTA24	(2)CS16	(2)CS16	(3)CS16	(3)CS16	(3)CS16
2 x 4 NO.2 GRADE			18	(2)LSTA24	(2)LSTA24	(2)CS14	(3)LSTA24	(3)CS16	MSTC66	MSTC66
	2	12	9	LSTA24	LSTA24	(2)LSTA24	(2)LSTA24	(2)CS16	(3)CS16	(3)CS16
			16	(2)CS16	(2)CS16	(3)CS16	(3)CS16	(3)CS16	MSTC66	MSTC66
			18	(2)CS16	(3)CS16	MSTC66	(3)CS16	MSTC66	(4)CS16	(4)CS16
	4	10	9	CS14	(2)LSTA24	(2)CS14	(2)CS14	(3)CS16	MSTC66	MSTC66
	4	12	16	(3)CS16	(4)CS16	(2)MSTC66	(2)MSTC66	(2)MSTC66	(2)MSTC66	(2)MSTC66
			9	LSTA24	LSTA24	CS16	CS16	CS14	(2)CS16	(2)CS16
	2	12	16	CS16	(2)LSTA24	(2)CS16	(2)CS16	(2)CS14	(3)CS16	(3)CS16
			18	(2)LSTA24	(2)LSTA24	(2)CS14	(2)CS14	(3)CS16	(3)CS16	(3)CS16
2 X 0 STUD GRADE	4	10	9	LSTA24	CS16	(2)LSTA24	(2)LSTA24	(2)CS16	(3)CS16	(3)CS16
	4	12	16	(2)CS16	(2)CS16	(3)CS16	(3)CS16	(3)CS16	(4)CS16	(4)CS16
			18	(2)CS16	(2)CS14	(4)CS16	MSTC66	MSTC66	(2)MSTC66	(2)MSTC66
a. STRAP SHALL BE b. USE 16d SINKERS c. INCREASE JACK	a. STRAP SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS b. USE 16d SINKERS IN MSTC66 STRAPS. USE 10d COMMON IN ALL OTHER STRAPS. CONTACT THIS OFFICE IF OTHER NAILS ARE USED									

MAXIMUM TRUSS LENGTH FASTENED w/3¹/₂"x0.162" TOE-NAILS

NUMBER OF	SOUTHE	RN PINE	DOUGLAS	HEM-							
TOE-NAILS	1 PLY	2 PLY	1 PLY	2 PLY	1 PLY						
2	3'-0"	4'-0"	3'-0"	4'-0"	3'-0"						
3	4'-0"	5'-0"	4'-0"	5'-0"	4'-0"						
4	6'-0"	7'-0"	6'-0"	7'-0"	5'-0"						
5	7'-0"	8'-0"	7'-0"	8'-0"	6'-0"						
ALL VALUES MAY BE MULTIPLIED BY APPROPRIATE DURATION OF LOAD FACTOR											

THE NUMBER OF TOE-NAILS TO BE USED IN A SPECIFIC APPLICATION IS DEPENDENT UPON PROPERTIES FOR THE CHORD SIZE, LUMBER SPECIES, AND NAIL TYPE. PROPER CONSTRUCTION PRACTICES AS WELL AS GOOD JUDGEMENT SHOULD DETERMINE THE NUMBER OF NAILS TO BE USED. SPLIT LUMBER IS TO BE REPLACED.

TOE-NAILS TO BE DRIVEN AT AN ANGLE OF APPROXIMATELY THIRTY DEGREES WITH THE PIECE AND STARTED APPROXIMATELY ONE-THIRD THE LENGTH OF THE NAIL FROM THE END OF THE MEMBER. PER ANSI/AF&PA NDS-CURRENT EDITION SECTION 12.4.1 - EDGE DISTANCE, END DISTANCE, SPACING: "EDGE DISTANCES, END DISTANCES AND SPACINGS FOR NAILS AND SPIKES SHALL BE SUFFICIENT TO PREVENT SPLITTING OF THE WOOD." THIS DETAIL DISPLAYS A TOE-NAILED CONNECTION FOR JACK FRAMING INTO A SINGLE OR DOUBLE PLY SUPPORTING GIRDER.

VALES CALCULATED FROM ANSI/AF&PA NDS-CURRENT EDITION, TABLE 11P, WITH ADJUSTMENTS PER SECTION 11.5

2x4 RIBBON CHORD (TOP

ROVIDE TRUSS COMPONENT BRACING PER MANUFACTURERS' RECOMMENDATIONS)

N.T.S

REQ'D WHERE NOTED ON PLAN.

SEE PLAN FOR LOCATION.

* DEPICTS DIFFERENT

APPROX. LOCATIONS, ONLY ONE LOCATION REQ'D PER FLOOR

* INSPECTED/OBSERVED PRIOR TO COVERING

N.T.S.

— CS16, 48" LONG & SPACED @48" O.C. OR LTP4 @SOLE TO SIM & @RIM TO TOP > PLATE SPACED @24" O.C. REQUIRED @RIBBOM

- CS16, 48" LONG & SPACED @48" O.C OR LTP4 @SOLE TO SIM & @RIM TO TOP ➡ PLATE SPACED @24" O.C. REQUIRED @RIBBOM CONDITIONS

N.T.S.

RAMING PLAN x24" LONG STRAP. TYP A. SIDE OF CONNECTION

MANUFACTURER SPEC.

MOOW OPENING @SHEAR WALL CONNECTIONS N.T.S.

MECHANICAL ELEMENTS / VALVING									
+++++++++++++++++++++++++++++++++++++++	EXISTING EQUIPMENT OR PIPE TO BE REMOVED.		RELIEF/SAFETY VALVE	——————————————————————————————————————	ANCHOR				
	GATE VALVE		GAS COCK	G EJ	GUIDE				
	GLOBE VALVE		AUTOMATIC FILL VALVE		EXPANSION JOINT				
₹	PLUG VALVE	н> MV	MANUAL AIR VENT	FS	FLOW SWITCH				
—[BUTTERFLY VALVE		AUTOMATIC AIR VENT (EXTEND	Π	TEMPERATURE TRANSMITTER				
—-þ	BALL VALVE		DISCHARGE TO DRAIN)	PT/PS	PRESSURE TRANSMITTER OR				
	SWING CHECK VALVE		FLOW METER-VENTURI	🖟 тн	PRESSURE SWITCH				
	LIFT CHECK VALVE		FLOW METER-ORIFICE	Q	THERMOMETER				
	GATE VALVE, ANGLE		DIRECTION OF FLOW	¢	GAUGE WITH GAUGE COCK				
	GLOBE VALVE, ANGLE		DIRECTION OF PITCH-RISE OR DROP	\diamond	& STPHON (STEAM)				
	DIAPHRAGM VALVE	-+	STRAINER		AQUASTAT				
	BALANCING VALVE		STRAINER WITH BLOW OFF VALVE		GAS PRESSURE REGULATOR				
CBV	CIRCUIT SETTING	———————————————————————————————————————	PIPE RISING UP	•	FLOAT OPERATED CONTROL VALVE				
)	PIPE DROPPING DOWN	——————————————————————————————————————	STEAM TRAP				
	THREE WAY CONTROL VALVE		CONCENTRIC REDUCER	$\bigcap_{i=1}^{n}$					
	TWO WAY CONTROL VALVE		ECCENTRIC REDUCER		EXPANSION LOOP				
S					VACUUM BREAKER				
				T	THERMOSTAT				
₩ <u></u>	PRESSURE REDUCING VALVE (PRV)	FSD	FIRE SMOKE DAMPER	S	DIGITAL SENSOR				
	TEMPERATURE/PRESSURE RELIEF VALVE	œ	CARBON DIOXIDE	🛇 or 💄	PUMP				
	HYDRAULIC SEPARATOR	⋛ <mark>₩</mark>	AIR SEPARATOR	(HX)	HEAT EXCHANGER				

Data filename:

Project Title: 24042 Haven House Addition

Report date:10/24/24 Page 4 of12

WORK SYMBOLS
SMOKE DAMPER
SUPPLY OR OUTSIDE AIR DUCT
ACCESS DOOR (BOTTOM OR SIDE)
ACOUSTICALLY LINED DUCT
FIRE DAMPER, SMOKE DAMPER, FIRE/SMOKE DAMF
MANUAL VOLUME DAMPER
INCLINED DROP IN DIRECTION OF ARROW
INCLINED RISE IN DIRECTION OF ARROW
TRANSITION, RECTANGULAR TO ROUND
FLEXIBLE DUCT
IN-LINE FAN
TRANSITION, RECTANGULAR
SPIN-IN COLLAR INTO ADAPTER ON TOP OF DUCT
CEILING SUPPLY AIR REGISTER/GRILLE
SIDEWALL SUPPLY AIR REGISTER (SR)
ELBOW TURNED DOWN

ELBOW TURNED UP

ELBOW, RADIUS TYPE ELBOW, SQUARE OR RECTANGULAR TYPE WITH AIRFOIL TURNING VANES

CEILING RETURN AIR REGISTER (RR)

SIDEWALL RETURN AIR REGISTER (RR)

FLEXIBLE CONNECTION

OPEN END DUCT

LINE DESIGNATION SYMBOLS

CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CA	COMPRESSED AIR
CR	CONDENSER WATER RETURN
cs	CONDENSER WATER SUPPLY
——— D ———	DRAIN
HPR	HEAT PUMP RETURN
HPS	HEAT PUMP SUPPLY
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
G	NATURAL GAS
RH	REFRIGERANT HIGH PRESSURE VAPOR
R	REFRIGERANT LIQUID AND VAPOR LINE
RS	REFRIGERANT SUCTION / VAPOR
SMR	SNOWMELT RETURN
SMS	SNOWMELT SUPPLY
V	VENT PIPING
• • •	POINT OF CONNECTION OF NEW TO EXISTING

RESPONSIBLE	DIVISION

ITEMFURNISHEDSETPOWER WIREDCONTROL WIREDEQUIPMENT232326COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS23(1)2626(2)23FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS262626MANUAL-OPERATING AND MULTI-SPEED SWITCHES TRANSFORMERS2323262626CONTROLS, RELAYS, TRANSFORMERS2323262323THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES2323262626TEMPERATURE CONTROL PANELS232326232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323262323PUSH-BUTTON STATIONS AND PILOT LIGHTS232326232323PUSH-BUTTON STATIONS AND PILOT LIGHTS2323262323FLATING, COOLING, VENTILATION AND AIR CONDTIONING CONTROLS23232623EXHAUST FAN SWITCHES2323262323EXHAUST FAN SWITCHES2323262323	UNLESS OTHERWISE INDICATED ALL HI AND OTHER MECHANICAL EQUIPMENT, IN PLACE AND WIRED AS FOLLOWS:	EATING, VENTII MOTORS, AND	LATING, AIR CONTROLS	CONDITION S SHALL BE	IING, PLUMBING, FURNISHED, SET
EQUIPMENT 23 23 26 COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS 23(1) 26 26(2) 23 FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS 26 26 26 MANUAL-OPERATING AND MULTI-SPEED SWITCHES 23 26 26 26 CONTROLS, RELAYS, TRANSFORMERS 23 23 26 23 THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES 23 23 26 26 THERMOSTATS (LINE VOLTAGE) 23 23 26 23 THERMOSTATS (LINE VOLTAGE) 23 23 26 26 TEMPERATURE CONTROL PANELS 23 23 26 23 MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES 23 23 23(2) 23(2) PUSH-BUTTON STATIONS AND PILOT LIGHTS 23 23 23(2) 23(2) HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS 23 23 26 23 EXHAUST FAN SWITCHES	ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
COMBINATION MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS23(1)2626(2)23FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS262626MANUAL-OPERATING AND MULTI-SPEED SWITCHES23262626CONTROLS, RELAYS, TRANSFORMERS23232623THERMACTURE AND TIME SWITCHES23232623THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE) AND TIME SWITCHES23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES232323(2)23(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS2323232623HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES2326232623	EQUIPMENT	23	23	26	
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS262626MANUAL-OPERATING AND MULTI-SPEED SWITCHES23262626CONTROLS, RELAYS, TRANSFORMERS23232623THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE)23232626THERMOSTATS (LINE VOLTAGE)23232623THERMOSTATS (LINE VOLTAGE)23232623THERMOSTATS (LINE VOLTAGE)23232623THERMOSTATS (LINE VOLTAGE)23232623THENDERATURE CONTROL PANELS23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323(2)23(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS232323(2)23(2)HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES232623(2)23(2)	COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
MANUAL-OPERATING AND MULTI-SPEED SWITCHES23262626CONTROLS, RELAYS, TRANSFORMERS23232623THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE)23232626TEMPERATURE CONTROL PANELS23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES232323(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS232323(2)23(2)HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES23232623	FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	
CONTROLS, RELAYS, TRANSFORMERS23232623THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE)23232626TEMPERATURE CONTROL PANELS23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323(2)23(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS2323(2)23(2)HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES23232623	MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES23232623THERMOSTATS (LINE VOLTAGE)23232626TEMPERATURE CONTROL PANELS23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323(2)23(2)PUSH-BUTTON STATIONS 	CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LINE VOLTAGE)23232626TEMPERATURE CONTROL PANELS23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323(2)23(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS2323(2)23(2)HEATING, COOLING, 	THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
TEMPERATURE CONTROL PANELS23232623MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323(2)23(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS2323(2)23(2)HEATING, COOLING, 	THERMOSTATS (LINE VOLTAGE)	23	23	26	26
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES2323(2)23(2)PUSH-BUTTON STATIONS AND PILOT LIGHTS2323(2)23(2)HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES232623(2)	TEMPERATURE CONTROL PANELS	23	23	26	23
PUSH-BUTTON STATIONS AND PILOT LIGHTS2323(2)23(2)HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES232623(2)	MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)		23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS23232623EXHAUST FAN SWITCHES232623(2)	PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)		23(2)
EXHAUST FAN SWITCHES 23 26 23(2)	HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
	EXHAUST FAN SWITCHES	23	26	26	23(2)

SUBSCRIPT FOOTNOTES: . MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1)NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.

IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23, CONNECT UNDER DIVISION 26.

ABBDEV/IATIONS

ABB	REVIATIONS:	
44" FINISH DEVIC	MOUNTING HEIGHT ABOVE IED FLOOR TO CENTER OF E	
А	AMPS	(I
A.D.	ACCESS DOOR	
AAV	AIR ADMITTANCE VALVE	
ABV	ABOVE	
AC	AIR CONDITIONING UNIT	
AC	ABOVE COUNTER	
AD	AREA DRAIN (SEE SYMBOLS)	
A.F.C.	ABOVE FINISHED CEILING	
A.F.G.	ABOVE FINISHED GRADE	
AIC	AMPERE INTERRUPTING	
CAPAC	CITY	
	ARC FAULT CIRCUIT	
	ACCESS PANEL OR DOOR	
ΔΤς		
		E
		E
BAS		T
BB	BASEBOARD	Е
RU		F
BED		E
BI		F
		F
BLDG		F
		F
BOB		F
BOD		F
BOP		F
B2MI		F
BIU		' F
C		' F
CAFCI	COMBINATION ARC FAULT CIRCUIT INTERRUPTERS	' F
CAP		F
CB		' F
CBV	CIRCUIT BALANCING VALVE	F
CCT		' F
	TEMPERATURE	' F
CKT	CIRCUIT	' F
CFH	CUBIC FEET PER HOUR	' F
CFM	CUBIC FEET PER MINUTE	г с
CHWR	CHILLED WATER RETURN	F
CHWS	CHILLED WATER SUPPLY	г с
CI	CAST IRON	г С
CL	CENTER LINE	ن د
CLG	CEILING	(·
CMU	CONCRETE MASONRY UNIT	(·
СО	CLEAN OUT	6
COL	COLUMN	0
COMP	COMPRESSOR	۔ ر
CONC	CONCRETE	Ĩ
COND	CONDENSATE	G
CONN	CONNECTION	G
CONT	CONTINUATION	G
CONT	R CONTRACTOR	G
CRI		Н
CT.		Н
СТ		Н
CU	CONDENSING UNIT	Н
CU	COPPER	Н
СПП		Н
C//P		Н
		н
CWR		н
0005		H
		H
		H
		IL
DIA		، د ۱۷
DIAG		is In
DIFF		if IN
DISCH	DISCHARGE	ıſ
DIV	DIVISION	J

DN DOWN

DS DUCT SILENCER

DWG	DRAWING
DX	DIRECT EXPANSION
(E)	EXISTING
EA	EXHAUST AIR GRILLE/REGISTER
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
EF	EXHAUST FAN
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EM	EMERGENCY FUNCTION
ENT	ENTERING
EMT	ELECTRIC METALLIC TUBE
FQ	FOUAI
=∝ FQUIP	
FOUN	
EQUIV	
ESD	
LOF	
EWC	ELECTRIC WATER COOLER
	ENTERING WATER
FX	FXHAUST
EXT	
FA	
FC	
FC	FOOTCANDLE
FCV	
FD	FIRE DAMPER
FD	FLOOR DRAIN
FIN	FINISHED
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLR	FLOOR
FOB	FLAT ON BOTTOM
FOT	FLAT ON TOP
FP	FIRE PROTECTION
FP	FIRE PUMP
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FSD	FIRE/SMOKE DAMPER
FT	FEET
FXC	ELEXIBLE CONNECTION
GND	GROUND
GA	GAUGE
GAI	GALLON
GALV	
COND	UCTOR
GFCI /	GFI GROUND FAULT CIRCUIT
INTER	RUPTER
GC	GENERAL CONTRACTOR
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRS/L	B GRAINS PER POUND
H 20	WATER
HB	HOSE BIBB
HD	HEAD (SEE SCHEDULES)
HP	
HP	HORSEPOWER
нр	HOUR
цт	HEIGHT
нн цтр	HEATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
ΗX	HEAT EXCHANGER
ΗZ	HERTZ
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IN	
	INCHES
INV	INCHES INVERT

K KELVIN

SUBSTITUTIONS:

A. SUBSTITUTIONS: SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS.

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.

B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.

C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.

D. THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL PLUMBING AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.

E. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO

INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

KW KILOWATT KVA KILO VOLT - AMPS LENGTH LAT LEAVING AIR TEMPERATURE LV LAVATORY LB POUND LD LINEAR DIFFUSER LF LINEAR FEET LIN LINEAR LIQ LIQUID LM LUMEN LRA LOCKED ROTOR AMPS LV LOUVER LVG LEAVING LWT LEAVING WATER TEMPERATURE MBH THOUSANDS OF BTU PER HOUR MC MECHANICAL CONTRACTOR MCA MINIMUM CIRCUIT AMPACITY MCB MAIN CIRCUIT BREAKER MD MOTORIZED DAMPER MDP MAIN DISTRIBUTION PANEL MED MEDIUM MFR MANUFACTURER MIN MINIMUM MISC MISCELLANEOUS MLO MAIN LUG ONLY MOCP MAXIMUM OVERCURRENT PROTECTION MTD MOUNTED MUA MAKE-UP AIR UNIT N NEUTRAL NC NORMALLY CLOSED NEG NEGATIVE NIC NOT IN CONTRACT NL NIGHT / SECURITY LIGHT - DO NOT SWITCH NO NORMALLY OPEN NOM NOMINAL NTS NOT TO SCALE OA OUTSIDE AIR OBD OPPOSED BLADE DAMPER OC ON CENTER OCC OCCUPIED OCP OVER CURRENT PROTECTION OD OUTSIDE DIAMETER OL OVERLOAD ORD OVERFLOW ROOF DRAIN OZ OUNCE

PBD PARALLEL BLADE DAMPER

- PD PRESSURE DROP PH PHASE
- POS POSITIVE PRESSURE
- POS POINT OF SALES PRV PRESSURE REDUCING VALVE

- PS PRESSURE SWITCH PSI POUNDS PER SQUARE INCH
- PT PRESSURE TRANSMITTER
- PTAC PACKAGED TERMINAL AIR
- CONDITIONER
- PV PLUG VALVE PVC POLYVINYL CHLORIDE
- QTY QUANTITY
- RA RETURN AIR GRILLE / REGIS
- RCP REFLECTED CEILING PLAN
- RD ROOF DRAIN REL RELIEF
- REQD REQUIRED
- RF RETURN FAN
- RH RELATIVE HUMIDITY
- RHC REHEAT COIL
- RLA RATED LOAD AMPS
- RM ROOM
- RPM REVOLUTIONS PER MINUTE SA SUPPLY AIR GRILLE / REGISTER
- SC SHORT CIRCUIT
- SCA SHORT CIRCUIT AVAILABLE
- SCCR SHORT CIRCUIT CURRENT RATING
- SCH SCHEDULE
- SD SMOKE DAMPER
- SEF SMOKE EXHAUST FAN SF SUPPLY FAN
- SH SENSIBLE HEAT
- SH SHOWER
- SP STATIC PRESSURE SPD SURGE PROTECTION DEVICE
- SPEC SPECIFICATION
- SQ SQUARE
- SS STAINLESS STEEL SS SAFETY SHOWER
- STD STANDARD
- STL STEEL
- SYS SYSTEM TEMP TEMPERATURE
- TR TRANSFER GRILLE / REGISTER
- TR TAMPER RESISTANT
- TT TEMPERATURE TRANSMITTER TTB TELECOMMUNICATIONS
- TERMINAL BACKBOARD
- TYP TYPICAL TX TRANSFORMER
- UC UNDERCUT DOOR
- UH UNIT HEATER UNO UNLESS NOTED OTHERWISE
- UNOCC UNOCCUPIED
- UR URINAL
- V VOLTS VA VOLT AMPERE

REVISIONS

Electrical

Engineers

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Haven House Expansion

PROJECT NO: PHASE: ISSUE: ISSUE DATE:

2033 BCE# 24042 REVIEW SET 09/09/24

Mechanical Cover Sheet

SHEET NAME

	VOLT	VOLTAGE
	VTR	VENT THROUGH ROOF
	W	WIDTH
	W	WATTS
STER	W/	WITH
	W/O	WITHOUT
	WB	WET BULB
	WC	WATER COLUMN
	WC	WATER CLOSET
	WG	WATER GAUGE
	WP	WEATHERPROOF

VA VALVE

VAV VARIABLE AIR VOLUME UNIT

VFD VARIABLE FREQUENCY DRIVE

VRF VARIABLE REFRIGERANT FLOW

- WPIU WEATHERPROOF IN-USE WSR WITHSTAND RATING XFMR TRANSFORMER

			I	LOUVER SCHEDULE			
EQUIPMENT NO.	SERVICE	WIDTH (IN)	HEIGHT (IN)	THICKNESS OF WALL (IN)	MATERIAL	MANUFACTURER & MODEL	OPT
LV-1	FIRST FLOOR TOILETS	10	8	7 3/4"	ALUMINUM	GREENHECK ESD-202-10x8	
				NOTES:			

1. PROVIDE MOTORIZED DAMPER, HOUSING AND BIRD SCREEN.

TIONS/ACCESSORIES

NOTE-1

	ENERGY RECOVER VENTILATOR SCHEDULE																		
	SERVICE			TEMPE	ERATURE	ESP(INWG)		SUPPL	Y FAN				EXHAU	ST FAN	PRE- HEAT	ELEC	TRICAL		
EQUIPMENT NO.	SERVICE	LOCATION	SUFFLI CIM	E.A.T	L.A.T		w	TYPE:	V./PH./HZ.	V./PH./HZ.		w	TYPE:	V./PH./HZ.	KW	MCA	MOCP	MANUFACTURER & MODEL	OF HONS/ACCESSORIES
ERV-1,2	MAIN LEVEL	MECH	770			1.6	370		208-230/1/60	1.6	770	370		208-230/1/60	-	3.9	15	RENEWAIRE HE10IN	
NOTES:																			

1. PROVIDE WITH RETURN AIR THERMOSTAT, INTERNALLY MOUNTED CONTROL CENTER SENSORS, MOTOR STARTER, CONTROL TRANSFORMER, HANGERS AND RUBBER IN SHEAR VIBRATION ISOLATORS, DOUBLE WALL CONSTRUCTION, MERV 8 FILTERS ON THE OUTSIDE AIR INTAKE, DEFROST PREHEATER, DUCT FLANGES, AND CONVENIENCE OUTLETS.

	INDOOR HP UNIT EQUIPMENT SCHEDULE											
EQUIPMENT NO.	SERVICE	NOMINAL COOLING	NOMINAL HEATING	CFM		REFRIGERANT PIPING DIAMETER		ELEC	TRICAL	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES	
		(BTU/HR.)	(BTU/HR.)			LIQUID	SUCTION	MCA (AMPS)	V./PH./HZ.			
HP-1	TODDLER	30,000	32,000	840	14.1	3/8"	5/8"	1	208-230/1/60	MITSUBISHI PLA-A30EA8		
HP-2	PRESCHOOL	30,000	32,000	840	14.1	3/8"	5/8"	1	208-230/1/60	MITSUBISHI PLA-A30EA9		
HP-3	INFANT	30,000	32,000	840	14.1	3/8"	5/8"	1	208-230/1/60	MITSUBISHI PLA-A30EA10		
HP-4	PRESCHOOL	30,000	32,000	840	14.1	3/8"	5/8"	1	208-230/1/60	MITSUBISHI PLA-A30EA11		
HP-5	PRE-K	30,000	32,000	840	14.1	3/8"	5/8"	1	208-230/1/60	MITSUBISHI PLA-A30EA12		
HP-6	OFFICE/MEETING	30,000	32,000	840	14.1	3/8"	5/8"	1	208-230/1/60	MITSUBISHI PLA-A30EA13		
NOTES: 1. PROVIDE WITH P	OWER DISCONNECT, LIN	ESET RECOMME	ENDED BY MAN	UFACTU	RER.							

	AIR CONDITIONING EQUIPMENT SCHEDULE												
		NOMINAL COOLING	NOMINAL HEATING	054		REFRIGE	RANT PIPING	ELEC	CTRICAL		OPTIONS/ACCESSORIES		
EQUIPMENT NO.	SERVICE	CAPACITY (BTU/HR.)	CAPACITY (BTU/HR.)			LIQUID	SUCTION	MCA (AMPS)	V./PH./HZ.	MANUFACTURER & MODEL			
AC-2-1	UNIT 201	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/60	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-2	UNIT 202	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/61	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-3	UNIT 203	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/62	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-4	UNIT 204	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/63	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-5	UNIT 205	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/64	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-6	UNIT 206	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/65	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-7	UNIT 207	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/66	MITSUBISHI SVZ-KP18NA	NOTE-1		
AC-2-8	UNIT 208	18,000	21,600	675	12.5	1/4"	1/2"	3	208-230/1/67	MITSUBISHI SVZ-KP18NA	NOTE-1		
NOTES:	*								•	•	4		

NOTES: 1.PROVIDE KUMO TOUCH REDLINK WIRELESS CONTROLLER (MODEL #MHK2), BLUE DIAMOND (ADVANCED) MINI CONDENSATE PUMP W/ RESERVOIR & SENSOR (208V/230V) (MODEL #X87-721), UNIT DISCONNECT SWITCH, FILTER. UNIT TO BE SUSPENDED 1 FOOT FROM THE GROUND.

EXHAUST FAN SCHEDULE													
			CEM	EXTERNAL STATIC PRESS (IN.	MOTOR								
EQUIPMENT NO.	SERVICE	LUCATION		W.G.)	WATTS	HP	RPM	MCA (A)	MOP (A)	VOLT/PH/HZ	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES	
EF-1	TOILET	CEILING	100	0.25	19.00	-	1127	1.9	15	115/60/1	GREENHECK CSP-A390-VG		
IOTES: . PROVIDE WITH MOTOR STARTER, POWER DISCONNECT, AND DIRECT DRIVEN VFD MOTOR. SAME EXHAUST FAN IS TO BE INSTALLED IN EACH BATHROOM (TOTAL 17)													

AIR COOLED CONDENSING UNIT SCHEDULE											
EQUIPMENT	SERVICE	NOMINAL COOLING	REFRIG. PIPING		EL	ECTRIC					
NO.	JERVICE	CAPACITY (TON)	LIQUID	VAPOR	V/PH/HZ	MOP (A)	MCA (A)	MANUTACTORER & MODEL	OPTIONS/ACESSORIES		
CU-1-1	TODDLER	2.5	3/8"	5/8"	208-230/1/60	40	24	MITSUBISHI PUZ-HA30NKA	NOTE-1		
CU-1-2	PRESCHOOL	2.5	3/8"	5/8"	208-230/1/61	40	24	MITSUBISHI PUZ-HA30NKA	NOTE-1		
CU-1-3	INFANT	2.5	3/8"	5/8"	208-230/1/62	40	24	MITSUBISHI PUZ-HA30NKA	NOTE-1		
CU-1-4	PRESCHOOL	2.5	3/8"	5/8"	208-230/1/63	40	24	MITSUBISHI PUZ-HA30NKA	NOTE-1		
CU-1-5	PRE-K	2.5	3/8"	5/8"	208-230/1/64	40	24	MITSUBISHI PUZ-HA30NKA	NOTE-1		
CU-1-6	OFFICE/MEETING	2.5	3/8"	5/8"	208-230/1/65	40	24	MITSUBISHI PUZ-HA30NKA	NOTE-1		
CU-2-1	UNIT 201	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-2	UNIT 202	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-3	UNIT 203	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-4	UNIT 204	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-5	UNIT 205	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-6	UNIT 206	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-7	UNIT 207	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
CU-2-8	UNIT 208	1.5	1/4"	1/2"	208-230/1/60	31	17	MITSUBISHI SUZ-KA18NAHZ	NOTE-2		
NOTES: 1. AIR COOLED CONDENSING UNIT, PROVIDE LINE SET AS RECOMMENDED BY MANUFACTURER, MATCHING DX COIL SECTION IN HP. VARIABLE SPEED CONDENSER FAN, FREEZESTAT											

WEIGHT 261 LBS.

WEIGHT 131 LBS.

INDOOR HP UNIT EQUIPMENT SCHEDULE

CRANKCASE HEATER, SOUND COVER, LOSS OF CHARGE KIT, CONTROLS TO INTERFACE UNIT WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHTTIME/DAYTIME SETTINGS, WALL MOUNTING KIT EQUIVALENT TO QSWBSS, POWERED CONVINIENCE OUTLET WITHIN 25 FEET, ICM MODEL #493 VOLTAGE SURGE/SAG PROTECTION DEVICE OR EQUIVALENT. UNIT

2. AIR COOLED CONDENSING UNIT. PROVIDE LINE SET AS RECOMMENDED BY MANUFACTURER, MATCHING DX COIL SECTION IN HP, VARIABLE SPEED CONDENSER FAN, FREEZESTAT, CRANKCASE HEATER, SOUND COVER, LOSS OF CHARGE KIT, CONTROLS TO INTERFACE UNIT WITH 7-DAY PROGRAMMABLE THERMOSTAT WITH NIGHTTIME/DAYTIME SETTINGS, WALL MOUNTING KIT EQUIVALENT TO QSWBSS, POWERED CONVINIENCE OUTLET WITHIN 25 FEET, ICM MODEL #493 VOLTAGE SURGE/SAG PROTECTION DEVICE OR EQUIVALENT. UNIT

MOTLEY ARCHITECTVRE & EFIGN	NKE 8
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915 S. 10th St. Montrose, CO 81401 p: (970) 249-1980 motleyarc.com

Haven House Expansion

PROJECT NO: 2033 BCE# 24042 PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24

Mechanical -Details

SHEET NAME

REVISIONS

Grand Junction, CO 81501 Phone (970) 241-8709

LINE TYPE	DESCRIPTION
140	_ HIGH TEMPERATURE (140°) WATER PIPE
	- COLD WATER PIPE (CW)
— CA ———	- COMPRESSED AIR
— DC ———	- DECONTAMINATION PIPING
—DER———	- DEIONIZED WATER RETURN
—DES———	- DEIONIZED WATER SUPPLY
— DIS ———	DISTILLED WATER SUPPLY
— DIR ———	- DISTILLED WATER RETURN
— CD ———	- EQUIPMENT CONDENSATE DRAIN
— FP ———	- FIRE MAIN
GW	- GREASE WASTE PIPE
— HE ———	- HELIUM
-HPS	- HIGH PRESSURE STEAM
-HPC	- HIGH PRESSURE CONDENSATE
	- HOT WATER RECIRCULATION (HWR)
HW	- HOT WATER PIPE (HW)
— H2 ———	- HYDROGEN
-LPC	- LOW PRESSURE CONDENSATE
-LPS	- LOW PRESSURE STEAM
— MA ———	- MEDICAL AIR
— G ———	- NATURAL GAS PIPE
— N2 ———	- NITROGEN
—N2O———	- NITROUS OXIDE
-ORD	- OVERFLOW STORM WATER PIPE
— 02 ———	- OXYGEN
— PG ———	- PROPANE GAS
— RD ———	- ROOF DRAIN PIPE
W	- SANITARY WASTE PIPE
— S/O ———	- SOIL / OIL WASTE PIPE
	- TOWER WATER RETURN
—TWS———	- TOWER WATER SUPPLY
-VAC	- VACUUM
	·· VENT PIPE (V)

	PLUMBING ELEM	IEN
LINE TYPE	DESCRIPTION	
	PRESSURE REDUCING VALVE (PRV)	
	GATE VALVE	
	GLOBE VALVE	
	PLUG VALVE	
I[BUTTERFLY VALVE	
	BALL VALVE	
	SWING CHECK VALVE	
	LIFT CHECK VALVE	
<u></u> ↓	GATE VALVE, ANGLE	
' <u>↓</u>	GLOBE VALVE, ANGLE	
	TEMPERATURE AND PRESSURE RELIEF VALVE	
举	RELIEF/SAFETY VALVE	
	GAS COCK	
	GAS PRESSURE REGULATOR	
— <u>+</u> ,	STRAINER	
	STRAINER WITH BLOW OFF VALVE	
WH	WATER HEATER	
—(M)—	WATER METER	
\bigcirc	PRESSURE GAGE	
Ē	TEMPERATURE GAGE	

ITS / VALVING

RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

TEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED
EQUIPMENT	23	23	26	
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26	_
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23
THERMOSTATS (LINE VOLTAGE)	23	23	26	26
TEMPERATURE CONTROL PANELS	23	23	26	23
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)		23(2)
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)		23(2)
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23
EXHAUST FAN SWITCHES	23	26	26	23(2)

SUBSCRIPT FOOTNOTES:

MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1)NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.

IF ITEM IS FOR LINE VOLTAGE. SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE CHED TO PIPING OR DUCTS AND USING LINE 23, CONNECT UNDER DIVISION 26.

ABBI	REVIATIONS:		
44" FINISH	MOUNTING HEIGHT ABOVE	DIA	DIAMETER
A	AMPS	DIAG	DIAGRAM
	ACCESS DOOR	DIFF	DIFFERENTIAL
ΔΔ\/		DISCH	DISCHARGE
ABV	ABOVE	DIV	DIVISION
AC		DN	DOWN
AC	ABOVE COUNTER	DS	DUCT SILENCE
AD	AREA DRAIN (SEE SYMBOLS)	DWG	DRAWING
AFC	ABOVE FINISHED CEILING		DIRECTEXPAN
AFG	ABOVE FINISHED GRADE	(E)	EXISTING
AIC		EA	EXHAUSTAIR
CAPAC		EAI	
AFCI	ARC FAULT CIRCUIT	EC	
INTERF	RUPTERS	ECC	ECCENTRIC
A.F.F.	ABOVE FINISHED FLOOR	EF	EXHAUST FAN
AHU	AIR HANDLING UNIT		EFFICIENCY
ALUM	ALUMINUM	EL	ELEVATION
AP	ACCESS PANEL OR DOOR	ELEC	ELECTRIC
ATS	AUTOMATIC TRANSFER SWITCH	ELEV	ELEVATOR
AV	AUDIO / VIDEO	EM	EMERGENCY F
AVG	AVERAGE	ENI	ENTERING
AWG	AMERICAN WIRE GAGE	EMI	ELECTRIC MET
BAS	BUILDING AUTOMATION SYSTEM	EQ	EQUAL
BB	BASEBOARD	EQUIP	EQUIPMENT
BD	BACK DRAFT DAMPER	EQUIV	EQUIVALENT
BFP	BACK FLOW PREVENTOR	ES	END SWITCH
BL	BOILER	ESP	EXTERNAL STA
BLDG	BUILDING	ET	EXPANSION TA
BLW	BELOW	EWC	ELECTRIC WAT
BOB	BOTTOM OF BEAM	EWT	ENTERING WA
BOD	BOTTOM OF DUCT	FX	EXHAUST
BOP	BOTTOM OF PIPE	EXPAN	
BSMT	BASEMENT	FXT	
BTU	BRITISH THERMAL UNIT	E	
С	CHILLER	FA	
CAFCI	COMBINATION ARC FAULT	FC	
045		FC	
CAP		FCV	
CB		FD	
CBV		FD	
CCT	TEMPERATURE	FIN	FINISHED
СКТ	CIRCUIT	FLA	FULL LOAD AM
CFH	CUBIC FEET PER HOUR	FLEX	FLEXIBLE
CFM	CUBIC FEET PER MINUTE	FLR	FLOOR
CHWR	CHILLED WATER RETURN	FOB	FLAT ON BOTT
CHWS	CHILLED WATER SUPPLY	FOT	FLAT ON TOP
CI	CAST IRON	FP	FIRE PROTECT
CL	CENTER LINE	FP	FIRE PUMP
CLG	CEILING	FPM	FEET PER MINU
CMU	CONCRETE MASONRY UNIT	FPS	FEET PER SEC

DEPT DEPARTMENT

DF DRINKING FOUNTAIN

AAV	AIR ADMITTANCE VALVE	DIV	DIVISION
ABV	ABOVE	DN	DOWN
AC	AIR CONDITIONING UNIT	DS	
AC	ABOVE COUNTER		
AD	AREA DRAIN (SEE SYMBOLS)	DVVG	
AFC	ABOVE FINISHED CEILING		
AFG		(E)	EXISTING
AIC		EA	EXHAUST AIR GRILLE/REGISTER
CAPAC	INPERE INTERROPTING	EAT	ENTERING AIR TEMPERATURE
		EC	ELECTRICAL CONTRACTOR
INTERF	RUPTERS	ECC	ECCENTRIC
A.F.F.	ABOVE FINISHED FLOOR	EF	EXHAUST FAN
AHU		EFF	EFFICIENCY
		EL	ELEVATION
		FLEC	FLECTRIC
AF		ELEV	
AIS			
AV	AUDIO / VIDEO		
AVG	AVERAGE		
AWG	AMERICAN WIRE GAGE	EMI	ELECTRIC METALLIC TUBE
BAS	BUILDING AUTOMATION SYSTEM	EQ	EQUAL
BB	BASEBOARD	EQUIP	EQUIPMENT
BD	BACK DRAFT DAMPER	EQUIV	EQUIVALENT
BFP	BACK FLOW PREVENTOR	ES	END SWITCH
BL	BOILER	ESP	EXTERNAL STATIC PRESSURE
BLDG	BUILDING	ET	EXPANSION TANK
RIW	BELOW	EWC	ELECTRIC WATER COOLER
		FWT	ENTERING WATER
		TEMPE	RATURE
BOD		EX	EXHAUST
BOb	BOITOM OF PIPE	EXPAN	EXPANSION
BSMT	BASEMENT	EXT	EXTERNAL
BTU	BRITISH THERMAL UNIT	F	DEGREES FAHRENHEIT
С	CHILLER	Γ Γ	
CAFCI	COMBINATION ARC FAULT	FC	
	CIRCUIT INTERRUPTERS		
CAP	CAPACITY	FC	FOUTCANDLE
СВ	CIRCUIT BREAKER	FCV	FLOW CONTROL VALVE
CBV	CIRCUIT BALANCING VALVE	FD	FIRE DAMPER
CCT	CORRELATED COLOR	FD	FLOOR DRAIN
	TEMPERATURE	FIN	FINISHED
CKT	CIRCUIT	FLA	FULL LOAD AMPS
CFH	CUBIC FEET PER HOUR	FLEX	FLEXIBLE
CFM	CUBIC FEET PER MINUTE	FLR	FLOOR
CHWR	CHILLED WATER RETURN	FOB	FLAT ON BOTTOM
CHWS	CHILLED WATER SUPPLY	FOT	FLAT ON TOP
CI	CAST IRON	FP	FIRE PROTECTION
CL	CENTER LINE	FP	FIRE PUMP
CLG	CEILING	FPM	FEET PER MINUTE
CMU	CONCRETE MASONRY UNIT	FPS	
CO	CLEAN OUT	FS	
COL			
		FSD	
	COMPRESSOR	FI	
CONC	CONCRETE	FXC	FLEXIBLE CONNECTION
COND	CONDENSATE	GND	GROUND
CONN	CONNECTION	GA	GAUGE
CONT	CONTINUATION	GAL	GALLON
CONTR	CONTRACTOR	GALV	GALVANIZED
CRI	COLOR RENDERING INDEX	GEC	GROUND ELECTRODE
СТ	COOLING TOWER	CONDU	JCTOR
СТ	CURRENT TRANSFORMER	GFCI /	GFI GROUND FAULT CIRCUIT
CU	CONDENSING UNIT	INTERF	KUPIER
CU	COPPER	GC	GENERAL CONTRACTOR
CUH		GPH	GALLONS PER HOUR
CVP		GPM	GALLONS PER MINUTE
		GRS/LE	3 GRAINS PER POUND
CVVR		H 20	WATER
CWS	CONDENSER WATER SUPPLY	НВ	HOSE BIBB
ĎВ	DRY BULB	HD	HEAD (SEE SCHEDULES)
			· /

HP HEAT PUMP

A. SUBSTITUTIONS: SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE ALLOWED THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTOR. CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE DAYS PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCLUDE CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIECE OF EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUBSTITUTION AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INCLUDING STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. SEE ALSO DIVISION I GENERAL REQUIREMENTS. EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS:

A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PROVIDE ALL NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING SYSTEM WITHIN THE SITE CONDITIONS.

B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR TO BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CONFLICTS TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT PRIOR TO BID TIME.

REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENTS AND SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.

SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST ADOPTED VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SHALL BE REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. OTHER APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABLE OF THESE REQUIREMENTS.

E. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE REQUIRED TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL BEING INSTALLED, PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PROCEED UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH THESE RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

HP HORSEPOWER

HR	HOUR
HT	HEIGHT
HTR	HEATER
HWR	HEATING WATER RETURN
HWS	HEATING WATER SUPPLY
HX	HEAT EXCHANGER
ΗZ	HERTZ
ID	INSIDE DIAMETER
IG	ISOLATED GROUND
IN	INCHES
INV	INVERT
JBOX	JUNCTION BOX
K	KELVIN
KW	KILOWATT
KVA	KILO VOLT - AMPS
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LV	LAVATORY
LB	POUND
LD	LINEAR DIFFUSER
LF	
LIN	LINEAR
LIQ	
MBH	THOUSANDS OF BTU PER HOUR
MC	
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MED	MEDIUM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MLO	MAIN LUG ONLY
MOCP PROTE	
MTD	MOUNTED
MUA	MAKE-UP AIR UNIT
N	NEUTRAL
NC	NORMALLY CLOSED
NEG	NEGATIVE
NIC	NOT IN CONTRACT
NL	NIGHT / SECURITY LIGHT - DO
NOTS	
NUN	
0A	
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OCC	OCCUPIED
OCP	OVER CURRENT PROTECTION
OD	OUTSIDE DIAMETER
OL	OVERLOAD
ORD	OVERFLOW ROOF DRAIN
ΟZ	OUNCE
PBD	PARALLEL BLADE DAMPER
PD	PRESSURE DROP
PH	
PUS	
PS	PRESSURE SWITCH
PSI	POUNDS PER SQUARF INCH
PT	PRESSURE TRANSMITTER

REL RELIEF RM ROOM RATING SF SUPPLY FAN SH SENSIBLE HEAT TEMP TEMPERATURE TR TRANSFER GRILLE / REGISTER UNOCC UNOCCUPIED W/ WITH WG WATER GAUGE

C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE FOR

D. THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING CODES

PTAC PACKAGED TERMINAL AIR

CONDITIONER

PV PLUG VALVE PVC POLYVINYL CHLORIDE QTY QUANTITY RA RETURN AIR GRILLE / REGISTER RCP REFLECTED CEILING PLAN RD ROOF DRAIN REQD REQUIRED RF RETURN FAN RH RELATIVE HUMIDITY RHC REHEAT COIL RLA RATED LOAD AMPS RPM REVOLUTIONS PER MINUTE SA SUPPLY AIR GRILLE / REGISTER SC SHORT CIRCUIT SCA SHORT CIRCUIT AVAILABLE SCCR SHORT CIRCUIT CURRENT SCH SCHEDULE SD SMOKE DAMPER SEF SMOKE EXHAUST FAN

SH SHOWER SP STATIC PRESSURE SPD SURGE PROTECTION DEVICE SPEC SPECIFICATION SQ SQUARE SS STAINLESS STEEL SS SAFETY SHOWER STD STANDARD STL STEEL SYS SYSTEM

TR TAMPER RESISTANT TT TEMPERATURE TRANSMITTER TTB TELECOMMUNICATIONS TERMINAL BACKBOARD TYP TYPICAL TX TRANSFORMER UC UNDERCUT DOOR UH UNIT HEATER UNO UNLESS NOTED OTHERWISE

UR URINAL V VOLTS VA VOLT AMPERE VA VALVE VAV VARIABLE AIR VOLUME UNIT VFD VARIABLE FREQUENCY DRIVE

VRF VARIABLE REFRIGERANT FLOW VOLT VOLTAGE VTR VENT THROUGH ROOF W WIDTH W WATTS W/O WITHOUT WB WET BULB WC WATER COLUMN WC WATER CLOSET

WP WEATHERPROOF WPIU WEATHERPROOF IN-USE WSR WITHSTAND RATING XFMR TRANSFORMER

REVISIONS

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Haven House Expansion

PROJECT NO: 2033 BCE# 24042 PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24

PLUMBING -Cover Sheet

SHEET NAME

PLUMBING GENERAL NOTES:

- 1. DRAWING IS DIAGRAMMATIC IN NATURE. LOCATIONS AND SIZES MAY VARY DURING FIELD COORDINATION & INSTALLATION OF MECHANICAL, PLUMBING, & ELECTRICAL. DRAWINGS DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
- 2. PIPE DIMENSIONS DO NOT REFLECT ADDITIONAL DIMENSIONS FOR INSULATION. ALL PIPING SHALL BE INSULATED PER 2018 IECC CODE REQUIREMENTS. 3. CONDENSING WATER HEATER, GAS FURNACE, AND BOILER VENT MATERIAL SHALL COMPLY WITH MANUFACTURER'S LISTED AND APPROVED MATERIALS. PVC SHALL NOT BE USED FOR FLUE/COMBUSTION AIR VENTING MATERIAL. ENGINEERS PREFERRED MATERIAL IS PRESSURE RATED, DOUBLE WALL, GASKETED, 316 STAINLESS STEEL CONDENSING FLUE VENTING MATERIAL. RECOMMENDED MANUFACTURER'S SELKIRK OR JERMIAS.
- 4. ALL PLUMBING FIXTURES WITH QUICK CLOSING VALVES ON DOMESTIC COLD/HOT WATER SHALL BE PROVIDED WITH WATER HAMMER ARRESTOR. 5. ALL PLUMBING FIXTURES SHALL BE VENTED BY PLUMBING CONTRACTOR PER IPC REQUIREMENTS.
- 6. ELEVATOR SUMP PUMP SHALL OPERATE AT 50 GPM PER ELEVATOR CAR. ELEVATOR SUMP PUMP SHALL BE PROVIDED WITH OIL DETECTION ALARM AND MEET ASME A17.1 ELEVATOR CODE REQUIREMENTS. ELEVATOR SUMP PUMP SHALL BE PROVIDED WITH INLINE CHECK VALVE, ISOLATION VALVES AND DISCHARGE INDIRECTLY THROUGH AIR GAP SIZED PER IPC TO NEARBY FLOOR SINK.
- 7. NEW GAS METER TO BE PROVIDED. GAS METER TO BE LOW PRESSURE (I.E. LESS THAN 14" W.C.) GAS METER LOAD IS --- MBH (~--- CFH). LONGEST EQUIVALENT LINE LENGTH OF PIPING IS 300 FEET. GENERAL CONTRACTOR SHALL VERIFY THAT INSTALLED GAS METER CAN ACCOMMODATE GAS LOAD OF --- CFH. REFERENCE GAS PIPE SIZING CALCULATIONS TABLE ON P1-4 FOR MORE INFORMATION.
- 8. PLUMBING FIXTURE MANUFACTURERS AS SCHEDULED ON PLUMBING DRAWINGS ARE SUGGESTED MANUFACTURER'S AND MODELS. UNLESS NOTED OTHERWISE DUE TO OWNER/CLIENT REQUIREMENTS AND PREFERENCES. PLUMBING CONTRACTOR CAN SUBMIT EQUIVALENT FIXTURES FROM MANUFACTURERS THAT DIFFER FROM SCHEDULED PLUMBING FIXTURES. ALTERNATE MANUFACTURERS OF PLUMBING FIXTURES WILL BE REVIEWED FOR EQUIVALENCE OF PERFORMANCE AND FUNCTIONALITY BY ENGINEER.
- 9. ALL EXTERIOR METALLIC NATURAL GAS PIPING SHALL BE TREATED WITH CORROSIVE INHIBITOR COATING. COATING SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATION SO THAT COATING MAINTAINS INTEGRITY OF GAS PIPING. COATING SHALL BE UV RESISTANT.
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REVISIONS

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Haven House Expansion

PROJECT NO: 2033 BCE# 24042 PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24

PLUMBING GENERAL NOTES:

- 1. DRAWING IS DIAGRAMMATIC IN NATURE. LOCATIONS AND SIZES MAY VARY DURING FIELD COORDINATION & INSTALLATION OF MECHANICAL, PLUMBING, & ELECTRICAL. DRAWINGS DO NOT NECESSARILY INDICATE EVERY REQUIRED OFFSET, FITTING, ETC. DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. TAKE ALL DIMENSIONS FROM ARCHITECTURAL DRAWINGS, CERTIFIED EQUIPMENT DRAWINGS AND FROM THE STRUCTURE ITSELF BEFORE FABRICATING ANY WORK, VERIFY ALL SPACE REQUIREMENTS COORDINATING WITH OTHER TRADES, AND INSTALL THE SYSTEMS IN THE SPACE PROVIDED WITHOUT EXTRA CHARGES TO THE OWNER.
- 2. PIPE DIMENSIONS DO NOT REFLECT ADDITIONAL DIMENSIONS FOR INSULATION. ALL PIPING SHALL BE INSULATED PER 2018 IECC CODE REQUIREMENTS. 3. CONDENSING WATER HEATER, GAS FURNACE, AND BOILER VENT MATERIAL SHALL COMPLY WITH MANUFACTURER'S LISTED AND APPROVED MATERIALS. PVC SHALL NOT BE USED FOR FLUE/COMBUSTION AIR VENTING MATERIAL. ENGINEERS PREFERRED MATERIAL IS PRESSURE RATED,
- DOUBLE WALL, GASKETED, 316 STAINLESS STEEL CONDENSING FLUE VENTING MATERIAL. RECOMMENDED MANUFACTURER'S SELKIRK OR JERMIAS. 4. ALL PLUMBING FIXTURES WITH QUICK CLOSING VALVES ON DOMESTIC COLD/HOT WATER SHALL BE PROVIDED WITH WATER HAMMER ARRESTOR.
- 5. ALL PLUMBING FIXTURES SHALL BE VENTED BY PLUMBING CONTRACTOR PER IPC REQUIREMENTS.
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REVISIONS PROJECT NO: 2033 BCE# 24042 NOTLEY ARCHITECTVRE & DEFIGN PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24 915 S. 10th St. Montrose, CO 81401 PLUMBING p: (970) 249-1980 UPPER LEVEL motleyarc.com Bighorn Consulting DOM. WATER Engineers, Inc. SHEET NAME Mechanical & Electrical Haven House Engineers P1-2 Expansion 386 Indian Road

SHEET NUMBER

Grand Junction, CO 81501

Phone (970) 241-8709

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Haven House Expansion

PROJECT NO: 2033 BCE# 24042 PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24

PLUMBING SPECIFICATION:

- 1. SCOPE OF WORK
- A. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS, AND LABOR TO SATISFY A COMPLETE WORKING SYSTEM WHETHER SPECIFIED OR IMPLIED.
- B. ALL WORK IS TO BE PREFORMED IN STRICT COMPLIANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION), ALL LOCAL CODES AND ALL OTHER REGULATION GOVERNING WORK OF THIS NATURE.
- C. THE CONTRACTOR SHALL, BEFORE SUBMITTING ANY PROPOSAL, EXAMINE THE PROPOSED SITE AND SHALL DETERMINE FOR HIMSELF THE CONDITIONS THAT MAY AFFECT THE WORK. NO ALLOWANCE SHALL BE MADE IF THE CONTRACTOR FAILS TO MAKE SUCH EXAMINATIONS.
- D. ALL EQUIPMENT AND MATERIALS SHALL BE AS SPECIFIED OR "APPROVED AS EQUAL" BY THE ENGINEER OR ARCHITECT.
- 2. PERMITS
- A. THE CONTRACTOR SHALL SECURE ALL PERMITS OR APPLICATIONS AND PAY ANY AND ALL FEES.
- 3. SHOP DRAWINGS
- A. SUBMIT MATERIAL LIST AND SHOP DRAWINGS FOR MAJOR EQUIPMENT TO THE ARCHITECT/ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL SUBMIT FIVE SETS OF SHOP DRAWINGS AND THEY SHALL BE CLEARLY LABELED.
- 4. DOMESTIC WATER SUPPLY PIPING
- A. UNDERGROUND: PROVIDE TYPE "K" SOFT DRAWN COPPER TUBING WITH BRAZED CONNECTIONS.
- B. ABOVE GROUND: PROVIDE TYPE "L" HARD DRAWN COPPER TUBING WITH 125 PSI SOLDER JOINTS, COPPER OR BRASS FITTINGS. ALL SOLDER TO BE "NO LEAD" TYPE.
- C. ALL HOT WATER PIPING TO BE INSULATED WITH 1" FIBERGLASS INSULATION.
- D. ALL COLD WATER PIPING TO BE INSULATED WITH $\frac{1}{2}$ " FOAM INSULATION.
- 5. SANITARY/STORM DRAINAGE AND VENT PIPING
- A. ABOVE GRADE:
- -2" BELOW: SCHEDULE 40 GALV. STEEL PIPE WITH SCREWED ENDS OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS OR DWV COPPER WITH SOLDER JOINTS. ALL SOLDER TO BE "NO LEAD" TYPE.
- -3" AND ABOVE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS.
- B. BELOW GRADE: SERVICE WT. CAST IRON WITH NO-HUB OR BELL AND SPIGOT JOINTS; OR SOLID CORE SCHEDULE 40 PVC WITH SOLVENT JOINTS.
- C. PVC PIPING SHALL NOT BE USED IN AIR PLENUM CEILINGS AND SHALL NOT
- CROSS FIRE RATED WALLS, CEILINGS, OR FLOORS. D. DRAINAGE PIPING SHALL BE RUN AS STRAIGHT AS POSSIBLE AND SHALL HAVE LONG TURN FITTINGS.
- E. DRAINAGE PIPING 3" SIZE AND SMALLER SHALL RUN AT A UNIFORM GRADE OF AT LEAST $\frac{1}{4}$ " PER FOOT. AND PIPING LARGER THAN 3" SHALL BE RUN AT A GRADE OF NO LESS THAN ¹/₈" PER FOOT.
- F. ALL VENT PIPING SHALL BE SLOPED TO DRAIN BACK TO FIXTURES.
- G. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER FLASHING OF THE VENT PIPING RUN THROUGH THE ROOF.
- H. PVC USED TO BE SOLID CORE TYPE SCHEDULE 40 PVC.
- 7. PIPE SUPPORTS
- A. ABOVE GRADE: ALL PIPE SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN A NEAT AND WORKMANLIKE MANNER. THE USE OF WIRE AND PERFORATED METAL TO SUPPORT PIPES WILL NOT BE PERMITTED. SPACING OF PIPE SUPPORTS SHALL BE A S SPECIFIED IN INTERNATIONAL PLUMBING CODE (LATEST EDITION).
- B. BELOW GRADE: EARTH SHALL BE EXCAVATED TO A MINIMUM DEPTH WITH AN EVEN SURFACE TO INSURE SOLID BEARING OF PIPE FOR ITS ENTIRE LENGTH. -INTERIOR: THE PIPE SHALL BE INSTALLED (UNLESS OTHERWISE SPECIFIED) A MINIMUM OF 4 INCHES BELOW THE BOTTOM OF THE SLAB AND SHALL NOT BE IN ANY DIRECT CONTACT WITH THE CONCRETE AT ANY POINT. -EXTERIOR: THE WATER PIPE SHALL HAVE A MINIMUM OF 60" OF COVER AND
- THE SANITARY WASTE PIPE SHALL HAVE A MINIMUM OF 24" OF COVER. 8. MISCELLANEOUS
- A. COORDINATE INSTALLATION OF ALL ROOFS FLASHING AT ROOF PENETRATIONS.
- B. DO NOT SCALE THIS DRAWING FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS AND DIMENSIONS AT THE JOB SITE.
- C. THE PLUMBING PLANS ARE INTENDED TO BE DIAGRAMMATIC AND ARE BASED ON ONE MANUFACTURER'S EQUIPMENT. THEY ARE NOT INTENDED TO SHOW EVERY ITEM IN ITS EXACT LOCATION. THE EXACT DIMENSIONS OR ALL THE DETAILS OF THE EQUIPMENT. THE CONTRACTOR SHALL VERIFY THE ACTUAL DIMENSIONS OF THE EQUIPMENT PROPOSED TO ENSURE THAT THE EQUIPMENT WILL FIT THE AVAILABLE SPACE.
- 9. TESTING
- A. PLUMBING SYSTEM SHALL BE FLOW AND PRESSURE TESTED IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE (LATEST EDITION).
- 10 GUARANTEE
- A. MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE. DEFECTS WHICH APPEAR DURING THAT PERIOD SHALL BE CORRECTED AT THIS CONTRACTORS EXPENSE.
- B. FOR THE SAME PERIOD THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO PREMISES CAUSED BY DEFECTS IN WORKMANSHIP OR IN THE WORK OR EQUIPMENT FURNISHED AND/OR INSTALLED BY HIM.

	1 1													
FIXTURE NO	DESCRIPTION	MANUFACTURER	MODEL		TRIM		PIP		CTIONS			OPTIONS-ACCESSORIES		
							S/W	VENT	C.W.	нพ				
DF-1	BARRIER FREE WALL MOUNT FOUNTAIN	ELKAY	LZSTL8WSLK		-		1 1/2"	1 1/2"	1/2"	-	PROVIDE WI DOMESTIC (AMPS, DUAL	TH WALL CARRIEF COLD WATER, FLEX . LEVEL ADA DRINI	, 1/4 TURNS, CHROME WALL ESCUTCHEON (I-GUARD SAFETY BUBBLER, 115V/1PH/60H (ING FOUNTAIN WITH BOTTLE FILLER.	IS, 8 GPH FILTERED Z 370 WATTS FLA 6
FD-1	FLOOR DRAIN	ZURN	Z415S	CAST IRON HOUSIN	G, NICKEL BRONZ	E STRAINER	3"	2"	-	-	PROVIDE NI TRAP SEAL. RECEIVE CC	CKEL BRONZE STF PROVIDE ACID RE NDENSATE DISCH	AINER, ASSE 1017 RATED J.R. SMITH QUAD SISTING EPOXY COATED CAST IRON AT FL ARGE FROM HIGH EFFICIENCY GAS EQUIP	O-CLOSE MECHANICAL OOR DRAINS WHICH MENT.
HB-1	FREEZE PROOF HOSE BIB	WOODFORD	B67		-		-	-	3/4"	-	FREEZE PROOF ANTI-SIPHON EXTERIOR HOSE BIB. PROVIDE WITH LOCKING ENCLOSU COORDINATE STANDPIPE LENGTH WITH INSTALLATION LOCATION IN FIELD PRIOR TO (HOSE BIBB.			
LV-1	ADA WALL HUNG BATHROOM SINK	AMERICAN STANDARD	9024.901EC	PROVIDE WITH AME GPM SELECTRONIC	RICAN STANDARE FAUCET.	D - 605B.204 .35	1 1/2"	1 1/2"	3/4"	3/4"	PROVIDE WI CONNECTIO CHROME WA BATTERY OF	MESTIC WATER CONNECTIONS, FAUCET AND SINK,		
LV-2	ADA COUNTER TOP MOUNTED BATHROOM SINK	AMERICAN STANDARD	476228	PROVIDE WITH 605B.204 .35 GPM SELECTRONIC FAUCET. 1 1/2" 1 1/2" 1 1/2" 3/4" 3/4" PROVIDE WITH LOCAL THERMOSTATIC M CONNECTIONS, FLEXIBLE BRAIDED STAI CHROME WALL ESCUTCHEON, P-TRAP, W BATTERY OPERATED INFRARED .35 GPM					HERMOSTATIC MIXING VALVE, 1/4 TURNS ON DOMESTIC WATER LE BRAIDED STAINLESS STEEL DOMESTIC WATER CONNECTIONS, CHEON, P-TRAP, WALL CARRIER, ADA COMPLIANT FAUCET AND SINK, IFRARED .35 GPM FAUCET.					
MSB-1	MOP SERVICE SINK BASIN	FIAT	TSB200	PROVIDE WITH FIAT SERVICE SINK FAUC	PROVIDE WITH FIAT FAUCET MODEL# 830AA000, SERVICE SINK FAUCET			1-1/2"	1/2"	1/2"	PROVIDE TERRAZO BASIN, S.S. WALL GUARDS, FLAT DRAIN, INTEGRAL VACUUM BREAMUTILITY TOP BRACE FAUCET, HOSE AND HOSE BRACKET, MOP HANGER, SILICONE SEA			ACUUM BREAKER ON SILICONE SEALANT.
KS-1	1 COMPARTMENT SINK	JUST MANUFACTURING	SLADA1921A55-J	PROVIDE WITH JUST MANUFACTURING FAUCET MODEL # JPO-250			1 1/2"	1 1/2"	1/2"	1/2"	PROVIDE WITH JUST MANUFACTURING SINK DRAIN AND STRAINER BASKET.			ET.
KS-2	KITCHEN SINK	JUST MANUFACTURING	DLADA1829A55-J	PROVIDE WITH JUS MODEL # JPO-250	PROVIDE WITH JUST MANUFACTURING FAUCET MODEL # JPO-250			1 1/2"	3/4"	3/4"	PROVIDE WITH JUST MANUFACTURING SINK DRAINS, AND STRAINER BASKET. PROVIDE V INSINKERATOR BADGER 5 GARBAGE DISPOSAL.			KET. PROVIDE WITH
GD-1	GARBAGE DISPOSAL	INSINKERATOR	BADGER 5	1/2 HORSEPOWER,	WITH POWER COF	RD	-	-	-	-	120 V, 1/2 HF	, SINGLE PHASE, 6	0 HZ	
BT-1	ALCOVE BATH	AMERICAN STANDARD	2390.202	PROVIDE WITH AME BATH/SHOWER FAU FINISH, 1.8 GPM	RICAN STANDARE ICET #7413508.002) 2, CHROME	1-1/2"	1-1/2"	1/2"	1/2"	PRESSURE BALANCED MIXING VALVE, CURTAIN ROD, SINGLE LEVER VALVE, GRID FLOO CONTRACTOR TO FIELD COORDINATE. ARCH TO COORDINATE FINISHES.			
IMB-1	FIRE RATED REFRIGERATOR WALL BOX	OATEY	38490	FIRE RATED WHERE ASSEMBLY	E LOCATED IN FIRE	E RATED	-	-	1/2"	-	PROVIDE ST MAKER BOX THAT MAINT MANUFACTU	ANDARD WALL BC IS LOCATED WITH AINS FIRE RATING JRER'S INSTALLAT	X WITH WATER HAMMER ARRESTOR AND IN FIRE RATED ASSEMBLY PROVIDED UL L OF ASSEMBLY BEING PENETRATED. INST ON INSTRUCTIONS.	I/4 TURN VALVE. IF ICE ISTED ICE MAKER BOX ALL PER
WC-1	ADA FLOOR MOUNTED WATER CLOSET	AMERICAN STANDARD	2467.1	TWO PIECE 1.1 gpf			4"	2"	1"	-	PROVIDE EL TANK WATE FLEXIBLE DO LEVER SIDE	ONGATED SEAT, E R CLOSET, 1/4 TUF DMESTIC WATER C WITH LOCATION II	PDM SEAL, EPA WATER SENSE, ADA FLOO N ON DOMESTIC WATER SUPPLY, BRAIDEI ONNECTION, WATER HAMMER ARRESTOR N FIELD PRIOR TO ORDERING.	R MOUNTED FLUSH D STAINLESS STEEL . COORDINATE TRIP
WC-2	ADA FLOOR MOUNTED WATER CLOSET	AMERICAN STANDARD	TANDARD 2315.228 TWO PIECE 1.28 gpf				4"	2"	1"	-	PROVIDE BABY DEVORO SEAT, EPDM SEAL, EPA WATER SENSE, ADA FLOOR MOUNTED FLU TANK WATER CLOSET, 1/4 TURN ON DOMESTIC WATER SUPPLY, BRAIDED STAINLESS STEE FLEXIBLE DOMESTIC WATER CONNECTION, WATER HAMMER ARRESTOR. COORDINATE TR LEVER SIDE WITH LOCATION IN FIELD PRIOR TO ORDERING.			OOR MOUNTED FLUSH D STAINLESS STEEL . COORDINATE TRIP
						,				GAS FI	RED WATER	HEATER SCHEDUL	E	
					EQUIPMENT NO.	CAPACITY	RECOVERY @10	DEG F. RISE	ВТ	U PER HR.	GAS CONN.	WATER CONN.	MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
					WH-1	81	197		1	99,999	1/2"	3/4"	BRADFORD WHITE UCG-80H-199-3N	NOTE-1

PLUMBING FIXTURE SCHEDULE

 CONCRETE FLOOR

	PUMP SCHEDULE										
	SERVICE	LOCATION	GPM	HEAD (ET)			MOTOR			- MANUFACTURER & MODEL	OPTIONS/ACCESSORIES
EQUIFMENT NO.	SERVICE		Grivi		WATTS	RPM	V./PH./HZ.	HP	FLA		
CP-1	BUILDING	MECH	20	26	-	3250	115/1/60	1/6	2	TACO 0013-F3-1-IFC	NOTE-1
SP-1	ELEVATOR	ELEVATOR ROOM	55	10	-	3450	230/1/60	1/2	4	LIBERTY ELV280HV	NOTE-2
NOTES: 1. PROVIDE WITH CAST IROI 2. POLYMER IMPELLER, STA	DTES: PROVIDE WITH CAST IRON CASING, STAINLESS STEEL IMPELLER, FLANGED CONNNECTIONS AND VFD. MOTOR HORSEPOWER SHALL BE GREATER THAN NON-OVERLOADING BRAKE HORSEPOWER. POLYMER IMPELLER, STAINLESS STEEL SHAFT AND HARDWARE, THERMAL OVERLOAD PROTECTION, CAST IRON HOUSING, OIL DETECTION AND ALARM SYSTEM, SUMP PIT TO BE 24" DIAMETER, AND NOT LESS THAN 30" DEEP										

NOT TO SCALE

RESPONSIBLE DIVISION:

UNLESS OTHERWISE INDICATED ALL HEATING, VENTILATING, AIR CONDITIONING, PLUMBING, AND OTHER MECHANICAL EQUIPMENT, MOTORS, AND CONTROLS SHALL BE FURNISHED, SET IN PLACE AND WIRED AS FOLLOWS:

ITEM	FURNISHED	SET	POWER WIRED	CONTROL WIRED	
EQUIPMENT	23	23	26		
COMBINATION MAGNETIC MOTOR STARTERS, MAGNETIC MOTOR STARTERS, VFD'S AND CONTACTORS	23(1)	26	26(2)	23	
FUSED AND UNFUSED DISCONNECT SWITCHES, THERMAL OVERLOAD SWITCHES AND HEATERS, MANUAL MOTOR STARTERS	26	26	26		
MANUAL-OPERATING AND MULTI-SPEED SWITCHES	23	26	26	26	
CONTROLS, RELAYS, TRANSFORMERS	23	23	26	23	
THERMOSTATS (LOW VOLTAGE) AND TIME SWITCHES	23	23	26	23	
THERMOSTATS (LINE VOLTAGE)	23	23	26	26	
TEMPERATURE CONTROL PANELS	23	23	26	23	
MOTOR AND SOLENOID VALVES, DAMPER MOTORS, PE & EP SWITCHES	23	23(2)		23(2)	
PUSH-BUTTON STATIONS AND PILOT LIGHTS	23	23(2)		23(2)	
HEATING, COOLING, VENTILATION AND AIR CONDITIONING CONTROLS	23	23	26	23	
EXHAUST FAN SWITCHES	23	26	26	23(2)	

SUBSCRIPT FOOTNOTES:

1. MOTOR STARTER TO INCLUDE CONTROL TRANSFORMER, HOA SWITCH, (1) NO AND (1)NC AUXILIARY CONTACT, AND "ON" AND "OFF" PILOT LIGHTS.

2. IF ITEM IS FOR LINE VOLTAGE, SET IN PLACE AND CONNECT UNDER DIVISION 26. WHERE FACTORY MOUNTED ON EQUIPMENT OR ATTACHED TO PIPING OR DUCTS AND USING LINE VOLTAGE FURNISH AND SET UNDER DIVISION 23, CONNECT UNDER DIVISION 26.

ABBREVIATIONS

44"	N	MOUNTING HEIGHT ABOVE	DIA	DIAMETER	HP	HORSEPOWER
FINI	SHE	D FLOOR TO CENTER OF DEVICE	DIAG	DIAGRAM	HR	HOUR
А	/	AMPS	DIFF	DIFFERENTIAL	нт	HEIGHT
A.D	. /	ACCESS DOOR		DISCHARGE	итр	
	, ,	AIR ADMITTANCE VALVE	DISCIT			
	, ,		DIV	DIVISION	HWR	HEATING WATER RETURN
ADV	· /		DN	DOWN	HWS	HEATING WATER SUPPLY
AC		AIR CONDITIONING UNIT	DS	DUCT SILENCER	HX	HEAT EXCHANGER
AC	/	ABOVE COUNTER	DWG	DRAWING	HZ	HERTZ
AD	/	AREA DRAIN (SEE SYMBOLS)	пх	DIRECT EXPANSION	п	INSIDE DIAMETER
A.F.	C. /	ABOVE FINISHED CEILING				
A E	<u> </u>		(E)	EXISTING	IG	ISOLATED GROUND
А.г.	G. /		EA	EXHAUST AIR GRILLE/REGISTER	IN	INCHES
AIC		AMPERE INTERRUPTING	EAT	ENTERING AIR TEMPERATURE	INV	INVERT
CAP	ACI	11	EC	ELECTRICAL CONTRACTOR	JBOX	JUNCTION BOX
AFC			FCC	ECCENTRIC	к	KEI VIN
INTE		UPTERS				
A.F.	F. /	ABOVE FINISHED FLOOR	EF	EXTAUST FAN	r.vv	KILOWATT
AHL	J	AIR HANDLING UNIT	EFF	EFFICIENCY	KVA	KILO VOLT - AMPS
ALU	м	ALUMINUM	EL	ELEVATION	L	LENGTH
AP		ACCESS PANEL OR DOOR	ELEC	ELECTRIC	LAT	LEAVING AIR TEMPERATURE
лтс лтс			FLEV	FLEVATOR	LV	LAVATORY
A13	, ,	AUTOMATIC TRANSPER SWITCH				
AV		AUDIO / VIDEO				
AVG	3 /	AVERAGE	ENT	ENTERING	LD	LINEAR DIFFUSER
AW	G /	AMERICAN WIRE GAGE	EMT	ELECTRIC METALLIC TUBE	LF	LINEAR FEET
BAS	S F	BUILDING AUTOMATION SYSTEM	EQ	EQUAL	LIN	LINEAR
0,10	, - ,		FOUIP	EQUIPMENT	U IQ	
BB	Ľ	BASEBUARD				
BD	E	BACK DRAFT DAMPER	EQUIV	EQUIVALENT		
BFP	' E	BACK FLOW PREVENTOR	ES	END SWITCH	LRA	LOCKED ROTOR AMPS
BL	E	BOILER	ESP	EXTERNAL STATIC PRESSURE	LV	LOUVER
BLD	GF		ET	EXPANSION TANK	LVG	LEAVING
	, ,		EWC	ELECTRIC WATER COOLER	IWT	I FAVING WATER TEMPERATURE
BLV		BELOW				
BOE	3 E	BOTTOM OF BEAM				THOUSANDS OF BTU PER HOUR
BOD) E	BOTTOM OF DUCT			MC	MECHANICAL CONTRACTOR
BOF	> E	BOTTOM OF PIPE	ΕX	EXHAUSI	MCA	MINIMUM CIRCUIT AMPACITY
RSN	ит в	BASEMENT	EXPAN	EXPANSION	MCB	MAIN CIRCUIT BREAKER
			EXT	EXTERNAL	MD	MOTORIZED DAMPER
BIU		BRITISH THERMAL UNIT	F	DEGREES FAHRENHEIT	MDD	
С	(CHILLER	FΔ		NDP	
CAF	CIO	COMBINATION ARC FAULT	50		MED	MEDIUM
	(CIRCUIT INTERRUPTERS	FC	FAN COIL UNIT	MFR	MANUFACTURER
CAF	р (CAPACITY	FC	FOOTCANDLE	MIN	MINIMUM
CB	(CIRCUIT BREAKER	FCV	FLOW CONTROL VALVE	MISC	
	, ,		FD	FIRE DAMPER	MIO	
CDV			ED		MLO	MAIN LUG ONLY
CCT	-				MOCP	MAXIMUM OVERCURRENT
		TEMPERATURE	FIN	FINISHED	PROTE	CHON
CKT	- (CIRCUIT	FLA	FULL LOAD AMPS	MTD	MOUNTED
CFH	1 (CUBIC FEET PER HOUR	FLEX	FLEXIBLE	MUA	MAKE-UP AIR UNIT
CFN	/ (CUBIC FEET PER MINUTE	FLR	FLOOR	Ν	NEUTRAL
CHV	NR (CHILLED WATER RETURN	EOR		NC	
0110			FUB		NEO	NORMALLICLOSED
CHV	v5 (CHILLED WATER SUPPLY	FOI	FLAT ON TOP	NEG	NEGATIVE
CI	(CAST IRON	FP	FIRE PROTECTION	NIC	NOT IN CONTRACT
CL	(CENTER LINE	FP	FIRE PUMP	NL	NIGHT / SECURITY LIGHT - DO
CLG	6 (CEILING	FPM	FEET PER MINUTE	NOT SV	WITCH
СМІ	1 0	CONCRETE MASONRY LINIT	EDe		NO	NORMALLY OPEN
0000			FF3		NOM	NOMINAI
CO	(CLEAN OUT	FS	FLOW SWITCH	NTO	
COL	_ (COLUMN	FSD	FIRE/SMOKE DAMPER	N15	NOT TO SCALE
CON	MP (COMPRESSOR	FT	FEET	OA	OUTSIDE AIR
CON		CONCRETE	FXC	ELEXIBLE CONNECTION	OBD	OPPOSED BLADE DAMPER
00		CONDENISATE			OC	ON CENTER
001			GND	GROUND	000	
CON	NN (CONNECTION	GA	GAUGE	000	
CON	NT (CONTINUATION	GAL	GALLON	UCP	OVER CORRENT PROTECTION
CON	NTR	CONTRACTOR	GALV	GALVANIZED	OD	OUTSIDE DIAMETER
CRI	(COLOR RENDERING INDEX	GEC	GROUND ELECTRODE	OL	OVERLOAD
ОТ			CONDL	JCTOR	ORD	OVERFLOW ROOF DRAIN
	(GECL		07	OUNCE
СТ	(CURRENT TRANSFORMER	INTERF	RUPTER		
CU	(CONDENSING UNIT	60		ЧRD	PARALLEL BLADE DAMPER
CU	(COPPER	00		PD	PRESSURE DROP
CUF	+ (CABINET UNIT HEATER	GPH	GALLONS PER HOUR	PH	PHASE
<u>с</u> ул	2 /		GPM	GALLONS PER MINUTE	POS	POSITIVE PRESSURE
OVE	, (_		GRS/LE	3 GRAINS PER POUND	POS	POINT OF SALES
CW	R (CONDENSER WATER RETURN	H 20	WATER		
CWS	s (CONDENSER WATER SUPPLY			ЧКV	PRESSURE REDUCING VALVE
DB	[DRY BULB			PS	PRESSURE SWITCH
DEE	л т	DEPARTMENT	HD	HEAD (SEE SCHEDULES)	PSI	POUNDS PER SQUARE INCH
			HP	HEAT PUMP	PT	PRESSURE TRANSMITTER
	L	UKINKING FUUNTAIN			· ·	

SUBSTITUTIONS:

A. SUBSTITUTIONS: SUBSTITUTION OF SPECIFIED EQUIPMENT WILL BE THROUGH A PRIOR APPROVAL PROCESS INITIATED BY THE CONTRACTO CONTRACTOR SHALL SUBMIT INTENDED SUBSTITUTION AT LEAST FIVE D PRIOR TO BID FOR APPROVAL FROM ENGINEER. SUBMITTAL SHALL INCL CAPACITIES, DIMENSIONS AND OPERATING INSTRUCTIONS FOR EACH PIE EQUIPMENT. SUBSTITUTION SHALL OCCUR AT NO COST TO THE OWNER. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF APPROVED SUB AND SHALL INCUR ALL COSTS ASSOCIATED WITH THE SUBSTITUTION INC STRUCTURAL MODIFICATIONS, SPACE LAYOUT AND REDESIGN COSTS. S DIVISION I GENERAL REQUIREMENTS.

EXAMINATION OF SITE, DRAWINGS, SPECIFICATIONS: A. EXAMINE CAREFULLY THE SITE AND CONDITIONS OF THE SITE. PRO

NECESSARY EQUIPMENT AND LABOR TO INSTALL A COMPLETE WORKING WITHIN THE SITE CONDITIONS. B. EXAMINE THE DRAWINGS AND SPECIFICATIONS AND 5 DAYS PRIOR

BIDDING REPORT ANY ERRORS, OMISSIONS, INCONSISTENCIES, AND CO TO THE ENGINEER TO BE REMEDIED IN AN ADDENDUM TO THE PROJECT BID TIME.

C. DRAWINGS ARE DIAGRAMMATIC AND CATALOG NUMBERS GIVEN ARE REFERENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VEF THE CAPACITY OF THE EQUIPMENT MEETS THE DRAWING REQUIREMENT SHALL NOT DIMENSION FROM THE MECHANICAL, PLUMBING, OR PIPING DRAWINGS.

D. THE LATEST ADOPTED VERSIONS OF THE INTERNATIONAL BUILDING SHALL BE USED AS REQUIRED. THIS WILL ALSO INCLUDE THE LATEST A VERSIONS OF THE MECHANICAL, PLUMBING, AND ENERGY CONSERVATION CODES. ALL METHODS AND MATERIALS REQUIRED BY THESE CODES SH REQUIRED BY THESE SPECIFICATIONS UNLESS INDICATED OTHERWISE. APPLICABLE LOCAL CODES AND ORDINANCES SHALL BE AS REQUIRED A SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO BE KNOWLEDGEABL THESE REQUIREMENTS.

E. WHERE INSTALLATION PROCEDURES OR ANY PART THEREOF ARE F TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFAC OF THE MATERIAL BEING INSTALLED. PRINTED COPIES OF THESE RECOMMENDATIONS SHALL BE FURNISHED TO THE ENGINEER PRIOR TO INSTALLATION. INSTALLATION OF THE ITEM WILL NOT BE ALLOWED TO PF UNTIL THE RECOMMENDATIONS ARE RECEIVED. FAILURE TO FURNISH TH RECOMMENDATIONS CAN BE CAUSE FOR REJECTION OF THE MATERIAL.

PTAC	PACKAGED TERMINAL
CONDI	TIONER
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RA	RETURN AIR GRILLE / F
RCP	REFLECTED CEILING P
RD	
REL	RELIEF
REQU	
кг оц	
RHC	
RIA	
RM	ROOM
RPM	REVOLUTIONS PER MI
SA	SUPPLY AIR GRILLE / R
SC	SHORT CIRCUIT
SCA	SHORT CIRCUIT AVAIL
SCCR	SHORT CIRCUIT CURR
RATIN	G
SCH	SCHEDULE
SD	SMOKE DAMPER
SEF	SMOKE EXHAUST FAN
SF	SUPPLY FAN
SH	SENSIBLE HEAT
SH	SHOWER
SP	STATIC PRESSURE
SPD	SURGE PROTECTION E
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SS	SAFETY SHOWER
SID	STANDARD
SIL	STEEL
SIS TEMD	
TR	TAMPER RESISTANT
тт	
TTB	
TERMI	NAL BACKBOARD
TYP	TYPICAL
ТΧ	TRANSFORMER
UC	UNDERCUT DOOR
UH	UNIT HEATER
UNO	UNLESS NOTED OTHER
UNOCO	C UNOCCUPIED
UR	URINAL
V	VOLTS
VA	VOLT AMPERE
VA	VALVE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY
VRF	VARIABLE REFRIGERA
VOLI	VOLTAGE
VIR	VENT THROUGH ROOF
VV	WIDTH
	WATIS
W/O	
WC	
WC	
WG	WATER GALIGE
WP	
W/PILL	
WSR	
XFMR	TRANSFORMER
2.3. WILX	

		FIRE ALARM EQUIPMENT LEGEND
ALLOWED PR. DAYS LUDE ECE OF S. STITUTION	FACP F	FIRE ALARM CONTROL PANEL FIRE ALARM PULL STATION
CLUDING SEE ALSO		FIRE ALARM HORN FIRE ALARM STROBE FIRE ALARM HORN/STROBE
OVIDE ALL G SYSTEM	 □ □	CEILING MOUNTED SPEAKER DUCT DETECTOR
TO INFLICTS PRIOR TO	R 2 P	REMOTE LAMP SMOKE DETECTOR - PHOTOELECTRIC
E FOR RIFYING TS AND	(H) _{135°} (PIR) (DH)	135° STANDARD HEAT DETECTOR PIR DETECTOR DOOR HOLD - MAGNETIC HOLD
CODES DOPTED ON HALL BE OTHER AND IT	(73) (75)	FLOW SWITCH TAMPER SWITCH
EOF		COMMUNICATION LEGEND
REQUIRED CTURER	Ŷ	CLOCK ONLY
ROCEED HESE	S	CLOCK / PA SPEAKER WALL MOUNTED
	S HC WAP	SQUARE SPEAKER
	A PROJECTOR	WIRELESS ACCESS POINT ABOVE THE CEILING ABOVE THE CEILING PROJECTOR CONNECTION
	ПНОМІ	WALL MOUNTED HDMI
AIR		PLAIN DATA OUTLET

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\
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\
80"

 \mathbf{V}

 \prec

HC

DS

CR

PLAIN DATA OUTLET WITH MOUNTING HEIGHT

FLOOR MOUNTED COMBINATION DATA/TELEPHONE

CEILING MOUNTED COMBINATION DATA/TELEPHONE

SECURITY SYSTEM LEGEND

COMBINATION DATA/TELEPHONE

TELEVISION OUTLET

SECURITY CAMERA

ELECTRIC DOOR STRIKE

ADA DOOR OPERATOR PUSH BUTTON

CARD READER FOR DOOR OPERATOR

L CHLORIDE AIR GRILLE / REGISTER ED CEILING PLAN

AN HUMIDITY OIL AD AMPS

ONS PER MINUTE IR GRILLE / REGISTER RCUIT RCUIT AVAILABLE RCUIT CURRENT

ESSURE ROTECTION DEVICE TION

TURE R GRILLE / REGISTER RESISTANT FURE TRANSMITTER MUNICATIONS

RMER T DOOR TER

OTED OTHERWISE CUPIED

AIR VOLUME UNIT FREQUENCY DRIVE REFRIGERANT FLOW

OUGH ROOF

DLUMN OSET AUGE RPROOF **PROOF IN-USE** ND RATING RMER

OCCUR, THE ITEM SHALL BE PROVIDED AND INSTALLED.
VARIATION AND/OR COMBINATION MAY BE USED ON THE PLANS.
A NUMBER NEXT TO A RECEPTACLE OR DEVICE INDICATES A CIRCUIT NUMBER.
AN UPPER CASE LETTER NEXT TO A SWITCH INDICATES THE FUNCTION OF THE SWITCH. A LOWER CASE LETTER INDICATES THE SWITCH CIRCUIT.
AN UPPER CASE LETTER NEXT TO A LIGHT FIXTURE INDICATES THE TYPE OF FIXTURE. REFER TO THE LUMINAIRE SCHEDULE FOR FIXTURE SPECIFICATIONS. A LOWER CASE LETTER NEXT TO A LIGHT CORRESPONDS TO THE SWITCH DESIGNATION.
SWITCHES
\$ SINGLE POLE SWITCH
\$ ₂ TWO POLE SWITCH
\$3 THREE-WAY SWITCH
 ♣3D 3 WAY DIMMER SWITCH - (4D INDICATES A 4WAY DIMMER)
 *DR DOOR ACTIVATED SWITCH WALL MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR SWITCH
\$ _{LV} LOW VOLTAGE LIGHT SWITCH
\$ _{TO} MANUAL MOTOR STARTER
\$ _P PILOT LIGHT SWITCH
\$ _{OS} AUTO ON / AUTO OFF LIGHT SWITCH
\$MO DUAL TECHNOLOGY MOTION / OCCUPANCY SENSOR LIGHT SWITCH
\$ MANUAL ON / AUTO OFF DIMMING LIGHT SWITCH
Ψ _K KET OFERATED LIGHT SWITCH \$ MANUAL ON - TIMED OFE LIGHT SWITCH
(MO (MO CEILING MOUNTED DUAL TECHNOLOGY OCCUPANCY SENSOR SWITCH
MAY MAY CEILING MOUNTED DUAL TECHNOLOGY MANUAL ON / AUTO OFF VACANCY SENSOR
(DS) (DS) CEILING MOUNTED DAYLIGHT HARVESTING SENSOR
\$ _{SC} SCENE CONTROL STATION
\$ _{MS} UNIT LIGHTING MANAGEMENT CONTROL STATION,
A 1'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
A 2'x4' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
A 2'x2' LED TROFFER OR DIRECT/INDIRECT TYPE FIXTURE GRID, FLANGE OR SURFACE MOUNTED
WALL BRACKET LINEAR FIXTURE
A WALL MOUNTED SCONCE LIGHT FIXTURE
A - C RECESSED DOWNLIGHT CAN FIXTURE
A
EX2 DOUBLE FACE EXIT SIGN, WALL AND CEILING MOUNTED
EX1 SINGLE FACE EXIT SIGN, WALL AND CEILING MOUNTED

LIGHTING LEGEND

SYMBOLS SHOWN ARE STANDARD. VARIATION AND/OR COMBINATIONS MAY BE USED ON

PROJECT DRAWINGS; HOWEVER, WHEREVER THE SYMBOL ON THE PROJECT DRAWINGS

THE PLANS. THIS LIST SHOWS STANDARD SYMBOLS AND ALL MAY NOT APPEAR ON THE

NOTES:

EM () WALL MOUNTED EMERGENCY LIGHT

EMR 🖀 EMERGENCY EXTERIOR EGRESS FIXTURE

GENERAL ELECTRICAL NOTES 1. ALL ELECTRICAL WORK TO COMPLY WITH LATEST EDITION OF NEC, IECC AND ALL APPLICABLE

- GOVERNING CODES. 2. FIELD COORDINATION DURING CONSTRUCTION IS IMPERATIVE. CONTRACTORS BIDDING THIS
- WORK MUST MAKE REASONABLE ALLOWANCES FOR UNFORESEEN CONTINGENCIES.
- 3. ELECTRIC UTILITY TO ADVISE OWNER AND/OR THE ELECTRICAL ENGINEER PRIOR TO SERVICE MODIFICATION REQUIRING COST TO THE OWNER.

- 1. ALL WIRING IS SHOWN DIAGRAMMATICALLY ON DRAWING, FIELD VERIFY ALL CONDITIONS PRIOR TO ROUGH-IN. 2. ALL CONDUITS AND CONVEYANCES SHALL BE CONCEALED. IN THE EVENT THAT A NEW DEVICE IS BEING INSTALLED IN AN EXISTING DRYWALL PARTITION, PROVIDE A CUT IN TYPE BOX AND FISH
- FLEXIBLE CONDUIT DOWN INSIDE THE WALL FROM ABOVE THE CEILING AND REPAIR THE DRYWALL AROUND THE CONDUIT. TRANSITION TO EMT ONCE ABOVE THE CEILING.
- 3. SIZES OF WIRE AND CABLES ARE BASED UPON COPPER CONDUCTORS, UNLESS OTHERWISE INDICATED. ALL CIRCUITS SHALL CONTAIN (2) #12 AWG WITH (1) #12 GND IN 1/2" CONDUIT UNLESS NOTED OTHERWISE.
- 4. ALL BRANCH CIRCUITS WITH HOME RUNS OVER 50 FEET, WILL BE SIZED ONE SIZE LARGER. 5. ALL PENETRATIONS IN OR THROUGH FIRE RATED PARTITIONS SHALL BE FIRE STOPPED IN SUCH A
- WAY THAT THE PENETRATION MATCHES THE FIRE RATING OF THE WALL.
- 6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION BETWEEN THE APPROPRIATE DISCIPLINES AND CONTRACTORS
- 7. COORDINATE ALL DEVICE, FIXTURE AND HARDWARE COLOR SELECTIONS WITH THE ARCHITECT PRIOR TO MAKING SHOP DRAWING SUBMITTALS.
- 8. COORDINATE THE MOUNTING HEIGHTS OF ALL RECEPTACLES MOUNTED ABOVE COUNTERS, CASEWORK AND APPLIANCE RECEPTACLES WITH ARCHITECTURAL ELEVATIONS. 9. BRANCH CIRCUIT AND SPECIAL SYSTEMS WIRING FOR DEVICES ON WALLS IN FINISHED AREAS
- WHICH CANNOT BE CONCEALED SHALL BE INSTALLED IN SURFACE MOUNTED RACEWAY. 10. ALL EXPOSED CONDUITS, BOXES, ETC. IN ROOMS TO BE PAINTED SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE. EXPOSED CONDUITS, BOXES, ETC. IN ROOMS WHICH ARE NOT PAINTED MAY BE LEFT UN-PAINTED. EXPOSED CONDUIT, BOXES, ETC. ON THE EXTERIOR OF
- BUILDINGS SHALL BE PAINTED TO MATCH THE SURROUNDING SURFACE AS CLOSELY AS POSSIBLE. 11. THE CONTRACTOR IS RESPONSIBLE FOR PATCHING, PAINTING, REPAIRING OR REPLACEMENT OF ALL WALLS, CEILING OR OTHER BUILDING ELEMENTS WHICH ARE DISTURBED AS PART OF THE DEMOLITION AND/OR INSTALLATION OF ELECTRICAL WORK.
- 12. PROVIDE ELECTRICAL CONNECTION TO ALL FIRE, SMOKE, AND FIRE / SMOKE DAMPERS INCLUDING POWER AND FIRE ALARM. VERIFY EXACT SIZE AND FINAL LOCATION OF ALL DAMPERS WITH THE MECHANICAL CONTRACTOR. ALL ROOFTOP UNITS RATED AT MORE THAN 2000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN THE RETURN DUCT. ALL ROOFTOP UNITS RATED AT MORE THAN 15000 CFM WILL BE OUTFITTED WITH A DUCT DETECTOR IN BOTH THE SUPPLY AND RETURN DUCT AT ROOFTOP LEVEL AND IN THE RETURN DUCT AT EVERY LEVEL THAT IS SERVED. ELECTRICAL CONTRACTOR WILL PROVIDE A REMOTE TEST STATION AND ALL WIRING NECESSARY TO COMPLETE INSTALLATION.
- 13. REFER TO THE MECHANICAL EQUIPMENT SCHEDULE FOR ADDITIONAL REQUIREMENTS ASSOCIATED WITH PLUMBING AND HVAC EQUIPMENT AND OWNER/GENERAL CONTRACTOR FURNISHED EQUIPMENT.

LUMINAIRES:

- 1. COORDINATE THE LOCATION OF ALL LIGHTING EQUIPMENT INCLUDING BUT NOT LIMITED TO THE LUMINAIRES, SWITCHES WITH THE ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS AND ALL OTHER TRADES AS REQUIRED. REFER TO THE INTERIOR DESIGNER'S REFLECTED CEILING PLANS FOR DIMENSIONAL LOCATION OF LIGHT FIXTURES.
 - 2. LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE AND SHALL NOT BE SUPPORTED FROM THE T-BAR CEILING GRID.
 - 3. THE ELECTRICAL CONTRACTOR IS TO CONFIRM THE LIGHT FIXTURES ORDERED WILL BE COMPATIBLE WITH THE CEILING TYPES AS SHOWN ON THE ARCHITECTURAL REFLECTED CEILING PLANS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING THE FIXTURES.
 - 4. VERIFY LUMINAIRE MOUNTING REQUIREMENTS AND OVERALL HEIGHT OF ALL PENDANT MOUNTED FIXTURES PRIOR TO ORDERING.
 - 5. ALL LIGHT FIXTURES NEED TO BE COMPATIBLE WITH THE SWITCHES AND CONTROLS BEING PROVIDED.
 - 6. THE LIGHTING PACKAGE SHALL BE APPROVED BY BOTH THE ARCHITECT AND ENGINEER AS APPROVED EQUAL BEFORE BID. NO LIGHT FIXTURE SHALL BE ORDERED UNTIL THE LIGHT FIXTURE SUBMITTAL PACKAGE HAS BEEN APPROVED IN WRITING BY THE ARCHITECT, GENERAL CONTRACTOR AND ELECTRICAL ENGINEER.
 - 7. COORDINATE LUMINAIRE MOUNTING REQUIREMENTS PRIOR TO PLACING ORDER.

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Haven House

Expansion

PROJECT NO: 2033 BCE# 24042 PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24

| Electrical -Cover Sheet

SHEET NAME

Bighorn Consulting Engineers, Inc. Mechanical & Electrical Engineers

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09/09/24

NOT TO SCALE

- NOTES: 1. PROVIDE GROUNDING AND BONDING TO MEET THE 2023 NEC ARTICLE 250 REQUIREMENTS. 2. FAULT CURRENT CALCULATIONS BASED UPON AN ANTICIPATED 100kVA TRANSFORMER AT AN ESTIMATED
- DISTANCE OF 50FT FROM THE TRANSFORMER TO THE SERVICE DISTRIBUTION PANEL. 3. PROVIDE LABELING TO MEET THE REQUIREMENTS OF NEC 110.21 AND 230.85.
- 4. PROVIDE SERIES RATED COMBINATIONS BETWEEN THE FEEDER BREAKERS IN PANEL MDP AND THE BRANCH
- BREAKERS OF PANELS P1, P2 AND P3 TO MEET THE REQUIREMENTS OF 240.86.5. PROVIDE SURGE PROTECTIVE DEVICES THAT COMPLY WITH NEC 225.42 AND 230.67.

WIRE SCHEDULE:

- (2) 3"C (3#500kCMIL(AL,THWN))
- B 2"C (3#3/0AWG(CU,THHN) + 1#6AWG(CU)G)
- C 1 1/4"C (3#3AWG(CU,THHN) + 1#8AWG(CU)G)
- G1 #1/0AWG CU TO METAL WATER PIPES AND STRUCTURAL STEEL #4AWG CU TO 20' UNCOATED CONCRETE ENCASED ELECTRODE

FAULT CURRENT CALCULATIONS: F = Lxlx2 NxCxE

- L LENGTH OF CABLE IN FEET I AVAILABLE FAULT CURRENT N NUMBER OF CONDUCTORS PER PHASE C - CONDUCTANCE CONSTANT
- 500kCMIL ALUMINUM: 21,391
- E VOLTAGE LINE TO LINE F INTERMEDIARY VALUE FOR COMPUTATION
- M = 1/(1+F) M - MULTIPLIER TO ACHIEVE AVAILABLE FAULT $I(SC) = I(SC)^*M$
- $\frac{\text{RUN \#1: TRANSFORMER TO SERVICE}}{\overline{\text{F} = \text{Lxlx2}} = \frac{50\text{FT x 21,900 A x 2}}{\text{NxCxE}} = \frac{50\text{FT x 21,900 A x 2}}{2 \text{ x 21,391 x 240 V}}$
- $M = \frac{1}{1+F} = \frac{1}{1+0.213} = 0.824$
- I(SC) = IxM = 21,900A x 0.824 = 18,080 A

1 Electrical - Roof Plan

PANEL SCHEDULE -	MDC2	TYPE:	SERVICE	BUS SIZE:	1000	PHASES:	1	NEUTRAL BUS:	YE
		VOLTAGE:	120/240	MAIN BRKR:	1000	WIRES:	3	GROUND BUS:	YE
		ENCLOSURE	: NEMA1	MOUNTING:	FLUSH	SC RATING:	10000		
LOADS BY TYPE:				LOADS BY PHASE:					
LOAD	CONNECTED	DEMAND	DEMAND		CONNECTED	CONN	IECTED	BALANCE	
TYPE	LOAD (VA)	FACTOR	LOAD (VA)	PHASE	LOAD (VA)	LOAD (Al	MPS)	(PERCENT)	
LIGHTING	4000.00	1.25	5000.00	A	112860.00	94	0.50	A-B: 92.9	
KITCHEN	0.00	0.65	0.00	В	104800.00	87	3.33	B-A: 92.9	
PROCESS	0.00	1.00	0.00	С			-		
RECEPTACLES	10000.00	1.00	10000.00						
RECEPTACLES	60940.00	0.50	30470.00	TOTAL/AVERAGE	217660.00	90	06.92	92.9	
MECH HEATING	33280.00	1.00	33280.00						
MECH COOLING	0.00	1.00	0.00						
MECH YEAR ROUND	38240.00	1.00	38240.00	NOTES:					
APPLIANCE	64000.00	.36	23040.00						
MISCELLANEOUS	0.00	1.00	0.00	1. THE LARGEST C	ONNECTED MOTOR L	OAD IS INCLUD	ED IN MECH	IANICAL, PROCESS, OR	MOT
MOTOR	0.00	1.00	0.00						
SPARE	0000.00	1.00	0000.00						
LARGEST MOTOR ¹	ABOVE	0.25	1440.00						
TOTAL	217660.00		118430.00						

MECHANICAL E	QUIPMENT	SCHEDULE
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COMB: MAG:	COMBINATION MOTOR STARTER MAGNETIC MOTOR STARTER		NR: NONE REQUIRED P/I: PLUG-IN UNIT MAN: MANUAL MOTOR STARTER W/U: SUPPLIED WITH UNIT:							TER		
	FUNCTION	LOAD	VOLTS	ø	FULL	BRANCH CIRCUIT		GRND	BRKR	START	DISC	
NO	(NOTES)				LOAD AMPS	CONDUIT SIZE	NO.	WIRE SIZE	WIRE SIZE	SIZE		FUSE
$\left< \begin{array}{c} AC \\ 1 \end{array} \right>$	AIR CONDITIONING UNIT ALL AC UNITS ARE SIMILAR		208V	1	3A	1/2'	2	12	12	15	W/U	\$ 2
	AIR CONDITIONING UNIT UNITS CU 1-2 / CU 1-6 ARE SIMILAR		208V	1	24A	1/2'	2	10	10	30	W/U	30 30
	AIR CONDITIONING UNIT UNITS CU 2-2 / CU 2-8 ARE SIMILAR		208V	1	17A	1/2'	2	10	10	30	W/U	30 30
$\left \begin{array}{c} \left\langle EF \\ 1 \end{array} \right\rangle \right $	EXHAUST FAN		115V	1	1.9A	1/2'	2	12	12	20	W/U	P/I
$\left \begin{array}{c} \left\langle HP \\ 1 \end{array} \right\rangle \right $	HEAT PUMP UNITS HP-2 / HP-6 ARE SIMILAR		208V	1	1.0A	1/2'	2	12	12	20	W/U	\$ 2
	ENERGY RECOVERY UNIT UNIT ERV-2 IS SIMILAR		208V	1	5.84A	1/2'	2	12	12	15	W/U	\$ 2
$\left< \begin{array}{c} DF \\ 1 \end{array} \right>$	DRINKING FOUNTAIN		115V	1	6.0A	1/2'	2	12	12	15	W/U	P/I

YES YES

R MOTOR LOADS.

PANEL SCHEDULE -	TP1	TYPE: VOLTAGE: ENCLOSUR	PANELB 120/240 E: NEMA1	OARD	BUS MAI MOI	SIZE: N BRKR: JNTING:	1 N F
LOAD TYPE	LOAD DESCRIPTION	l		AMPS POLES	CKT# LOAD	۵	CK1 LOA
RECEPTACLE	KITCHEN CIRCUIT ARC FAULT BREAKE	R		20A 1P	1 1500	A	2 400
RECEPTACLE	KITCHEN CIRCUIT ARC FAULT BREAKE	R		20A 1P	3 1500	В	4 400
RECEPTACLE	BATHROOM OUTLET ARC FAULT BREAKE	r :R		20A 1P	5 1500	A	6 312
RECEPTACLE	BEDROOM OUTLETS ARC FAULT BREAKE	S R		15A 1P	7 1440	В	8 312
RECEPTACLE	DINING ROOM ARC FAULT BREAKE	R		20A 1P	9 540	A	10 176
RECEPTACLE	BEDROOM OUTLETS ARC FAULT BREAKE	S R		15A 1P	11 360	В	12 176
LIGHTING	LIGHTS ARC FAULT BREAKE	R		15A 1P	13 500	A	14 0
SPACE					15 0	В	16 0
SPACE					17 0	A	18 0
LOADS BY TYPE:					LOADS E	BY PHAS	E:
LOAD TYPE	CONNECTED LOAD (VA)	DEMAND FACTOR	DEMAND LOAD (VA)		PHAS	E	
LIGHTING	500.00	1.25	625.00		A		
KITCHEN	0.00	0.00	0.00		B		
PROCESS	0.00	1.00	0.00		C		
	0840.00 4160.00	1.00	4160.00				
MECH COOLING	0.00	1.00	0.00				NOL
MECH YEAR ROUND	0.00	1.00	0.00		NOTES	:	
APPLIANCE	8000.00	1.00	8000.00				
MISCELLANEOUS	0.00	1.00	0.00		1. THE	LARGE	ST COI
MOTOR	0.00	1.00	0.00				
SPARE	0.00	1.00	0.00				
LARGEST MOTOR	ABOVE	0.25	0.00				
TOTAL	19500.00		19625.00				

PANEL SCHEDULE -	PP1	TYPE: VOLTAGE: ENCLOSURE:	PANELBO 120/240 NEMA1	OARD	BUS MAIN MOU	SIZE: BRKR: NTING:	1 N F
LOAD TYPE	LOAD DESCRIPTION			AMPS POLES	CKT# LOAD	۵	CK1 LOA
RECEPTACLE	PRESCHOOL 115 COU	NTER		20A 1P	1 180	A	2 720
RECEPTACLE	PRESCHOOL 115 COU	NTER		20A 1P	3 180	В	4 720
RECEPTACLE	PRE-K 119 COUNTER			20A 1P	5 180	A	6 720
RECEPTACLE	PRE-K 119 COUNTER			20A 1P	7 180	В	8 720
RECEPTACLE	OFFICE MEETING 102			20A 1P	9 360	A	10 720
RECEPTACLE	OFFICE MEETING 102			20A 1P	11 360	В	12 180
RECEPTACLE	TOILETS 104, 105 & LA 	CTATION 103		20A 1P	13 1260	A	14 180
RECEPTACLE	INFANT 120 			20A 1P	15 720	В	16 180
RECEPTACLE	TOILETS 104, 105 & LA	CTATION 103		20A	17	A	18

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Haven House Expansion

PROJECT NO: 2033 BCE# 24042 PHASE: REVIEW SET ISSUE: ISSUE DATE: 09/09/24

Electrical -Roof Plan Plan SHEET NAME

E2-3 SHEET NUMBER