



Terry McKee, IT & Procurement Director

901 N. Broadway • Knoxville, TN 37917-6699
 865.403.1133 • Fax 865.594.8858
 purchasinginfo@kcdc.org
 www.kcdc.org

Addendum

SOLICITATION NAME	Construction Services at Five Points Phase 3 C18016	ADDENDUM NUMBER	2	DATE	11-28-17
--------------------------	--	------------------------	----------	-------------	-----------------

This addendum answers questions raised about this solicitation. To aid in readability, the questions are in black, the answers are in **bolded blue**, and the answers follow immediately below.

Q1	Is the General Contractor to include the Energy Star Testing Fee(s) in their base proposal that is indicated in Addenda 1?
	No, however, additional fees may be incurred by the General Contractor based on the following: HERS Rater Additional Fees are charged: If, the Client, Client Representative, Prime (General) Contractor or Prime's Sub-Contractors requests a verification and the project is not ready for verification when the Rater arrives, the dwelling unit, apartment or townhouse, fails an insulation installation or energy star v3 performance test (foundation insulation, pre-drywall air seal or insulation installation RESNET grade 1, blower door, duct blaster, zonal pressure or exhaust ventilation), the HVAC Contractor's Energy Star required documentation is inaccurate or incomplete; then, each additional retest, verification or documentation review, shall be billed the Client at \$160.00 per/each mobilization needed and \$85 per/hour of additional testing or verification, minimum one hour charge. No ENERGY Star certificate will be provided the Client, until all Additional Charges are paid in full.
Q2	Type L copper is specified in the plans for the water lines. Can PEX water piping be provided?
	The book specifications shall prevail over the referenced notes on plans. PEX is permissible.
Q3	The Type L Copper is also specified to be insulated (hot water only) with fiberglass insulation. If we can use PEX water piping can we use Armor Flex insulation?
	The book specifications shall prevail over the referenced notes on plans. Refer to Section 220719.
Q4	Drawing ES101: The Notes do not seem to match up on this page.
	The reference notes for ES101 have been updated and revised sheet is included in Addendum 2.
Q5	Drawing ES201: Can you identify KUB's requirement for the Primary Conduit System? Is the Primary Pullbox provided by KUB?
	The conduit, pull boxes and pads or vaults for the pad-mounted transformers shall be provided by the contractor. KUB shall provide the primary cabling and the pad mounted transformers.
Q6	Drawing ES301: The Notes do not seem to match up on this page. Can you identify Pullbox requirements?
	The reference notes for ES301 have been updated and revised sheet is included in Addendum 2.

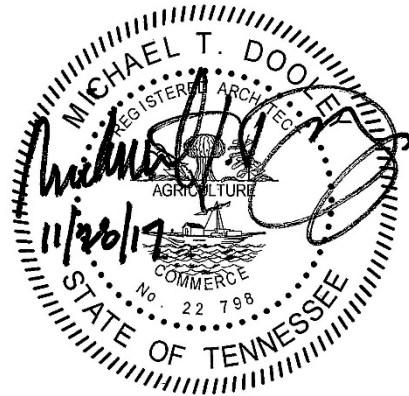


Q7	All Pages: Can you locate where the Meter/House Panels are going on each Building?
	See E201. The meter centers/house panels shall be located where the secondary extends to each building as the locating is determined by the nearest transformer location and varies per building type. The intent is that the panels will be located on the sides of each building, rather than on the back, facing parking lots or the front, facing any streets.
Q8	Are you accepting substitution request for the Five Point Apartments Project?
	Each section of the specification details whether or not KCDC will consider substitutions. Section 01-25-00 identifies the procedure for requesting a substitution.
Q9	Will KCDC consider factors other than cost in the award?
	<p>KCDC typically awards to the “responsible” bidder whose bid is “responsive” offering the lowest cost. Responsive means <i>conforming with all the material terms and conditions</i> of the invitation for bids.</p> <p>When determining if a bidder is “Responsive,” KCDC examines items including but not limited to:</p> <ul style="list-style-type: none"> • Are there pricing errors in the bid? • Did the bidder provide a bid bond? • Is the bonding company listed in the federal register of acceptable bonding companies? • Did the bidder alter specifications or terms and conditions? • Did the bidder attempt to impose additional terms and conditions? • Is the bid reasonable compared to the ICE (Independent Cost Estimate)? • Is the bidder debarred by HUD or by the federal government at large? • Is the vendor debarred by the State of Tennessee? • Is the bidder’s licensure sufficient and in compliance with state law? <p>When determining if a bidder is “Responsible,” KCDC must determine, among other items, that the bidder:</p> <ul style="list-style-type: none"> • Has adequate financial resources to perform the contract, or can obtain the resources. • Has the necessary organization, experience, accounting and operational controls, and technical skills, or the ability to obtain them. • Has the necessary production, construction, and technical equipment and facilities, or the ability to obtain them. • Be able to comply with the required or proposed delivery or performance schedule, taking into consideration all the bidder’s existing business commitments. • Has a satisfactory performance record. • Has a satisfactory record of integrity and business ethics. • Is otherwise qualified and eligible to receive an award under applicable laws and regulations. <p>Additionally KCDC reserves the right to check references, the Better Business Bureau, and any other resources available to ascertain the bidder’s ability to perform the contract successfully.</p>

DOCUMENT 00 91 13.02 – ADDENDUM 2

1.01 PROJECT INFORMATION

- A. Project Identification: Five Point – Phase 3.
 - 1. Project Location: 304 S. Kyle Street, Knoxville, TN 37915.
- B. Owner: Knoxville Community Development Corporation, 901 Broadway, N.E., Knoxville, Tennessee 37917-6699.
- C. Architect: BarberMcMurry architects, 505 Market Street, Suite 300, Knoxville, TN 37902-2175. Phone: 865-934-1915. Fax: 865-546-0242.
- D. Architect Project Number: 166200
- E. Date of Addendum: 28 November 2017.



1.02 NOTICE TO BIDDERS

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids is unchanged by this Addendum, at same time and location.
 - 1. Bid Date: 2:00 PM on Tuesday, 5 December 2017.

1.03 ATTACHMENTS

- A. This Addendum includes the following attached Documents and Specification Sections:
 - 1. Section 11 31 00 – Residential Appliances, dated 28 November 2017, new.
 - 2. M/P/FP Information Addendum #2, dated 28 November 2017, new.
- B. This Addendum includes the following attached Sheets:
 - 1. Architectural Sheet A401, revised 27 November 2017, reissued.
 - 2. Architectural Sheet A402, revised 27 November 2017, reissued.
 - 3. Mechanical Sheet M001, revised 27 November 2017, reissued.
 - 4. Electrical Sheet ES101, revised 27 November 2017, reissued.
 - 5. Electrical Sheet ES201, revised 27 November 2017, reissued.
 - 6. Electrical Sheet ES301, revised 27 November 2017, reissued.

END OF DOCUMENT 00 91 13.02

SECTION 11 31 00 - RESIDENTIAL APPLIANCES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Cooking appliances.
 - 2. Kitchen exhaust ventilation.
 - 3. Refrigeration appliances.
 - 4. Cleaning appliances.

1.02 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include rated capacities, operating characteristics, dimensions, furnished accessories, and finishes for each appliance.
- B. Sustainable Design Submittals:
 - 1. For appliances indicated, documentation that products are ENERGY STAR rated.
 - 2. For water-efficient clothes washer, documentation indicating modified energy factor and water factor.
- C. Samples: For each exposed product and for each color and texture specified, in manufacturer's standard size.
- D. Product Schedule: For appliances. Use same designations indicated on Drawings.

1.03 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of appliance, from manufacturer.
- B. Warranties: Sample of special warranties.

1.04 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For each residential appliance to include in operation and maintenance manuals.

1.05 QUALITY ASSURANCE

- A. Source Limitations: Obtain residential appliances from single source and each type of residential appliance from single manufacturer.
- B. Regulatory Requirements: Comply with the following:
 - 1. NFPA: Provide electrical appliances listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Accessibility: Where residential appliances are indicated to comply with accessibility requirements, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines.

1.06 WARRANTY

- A. Special Warranties: Manufacturer's standard form in which manufacturer agrees to repair or replace residential appliances or components that fail in materials or workmanship within specified warranty period:
 - 1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 RANGES

- A. Electric Range: Owner furnished, Owner installed. Contractor to coordinate power and space requirements with the Owner.

2.02 KITCHEN EXHAUST VENTILATION

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated or comparable product by the following:
 - 1. Air King Ventilation Products
- B. Overhead Exhaust Hood:
 - 1. Basis-of-Design Product: ESDQ1306, as manufactured by Air King Ventilation Products.
 - 2. Energy Star certified.
 - 3. Type: Wall-mounted, exhaust-hood system.
 - 4. Sones Levels: 1.5, 2.5, and 4.
 - 5. Dimensions:
 - a. Width: 30 inches.
 - b. Depth: 19-1/2 inches.
 - 6. Exhaust Fan: Three-speed, thermally protected, permanently lubricated motor.
 - a. Venting: Vented type with grease filter.
 - b. Fan Control: Hood-mounted fan switch, with separate hood-light control switch.
 - 7. Finish: Baked enamel.
 - a. Color: Black.
 - 8. Features:
 - a. Permanent, washable aluminum mesh.
 - b. Built-in LED lighting.

2.03 REFRIGERATOR/FREEZERS

- A. Refrigerator/Freezer: Owner furnished, Owner installed. Contractor to coordinate power and space requirements with the Owner.

2.04 CLOTHES WASHERS AND DRYERS

- A. Clothes Washer: Owner furnished, Owner installed. Contractor to coordinate power and space requirements with the Owner.
- B. Clothes Dryer: Owner furnished, Owner installed. Contractor to coordinate power and space requirements with the Owner.

2.05 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, power connections, and other conditions affecting installation and performance of residential appliances.
- B. Examine roughing-in for piping systems to verify actual locations of piping connections before appliance installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

- A. General: Comply with manufacturer's written instructions.
- B. Built-in Equipment: Securely anchor units to supporting cabinets or countertops with concealed fasteners. Verify that clearances are adequate for proper functioning and that rough openings are completely concealed.
- C. Freestanding Equipment: Place units in final locations after finishes have been completed in each area. Verify that clearances are adequate to properly operate equipment.

END OF SECTION 11 31 00

**M/P/FP INFORMATION
ADDENDUM #2**

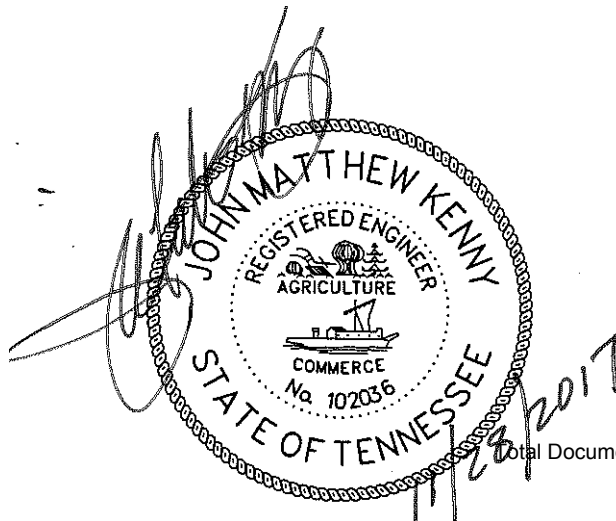
**TO: ALL INTERESTED PARTIES CONCERNING THE PROJECT DOCUMENTS FOR THE PROJECT –
KCDC FIVE POINTS PHASE 3**

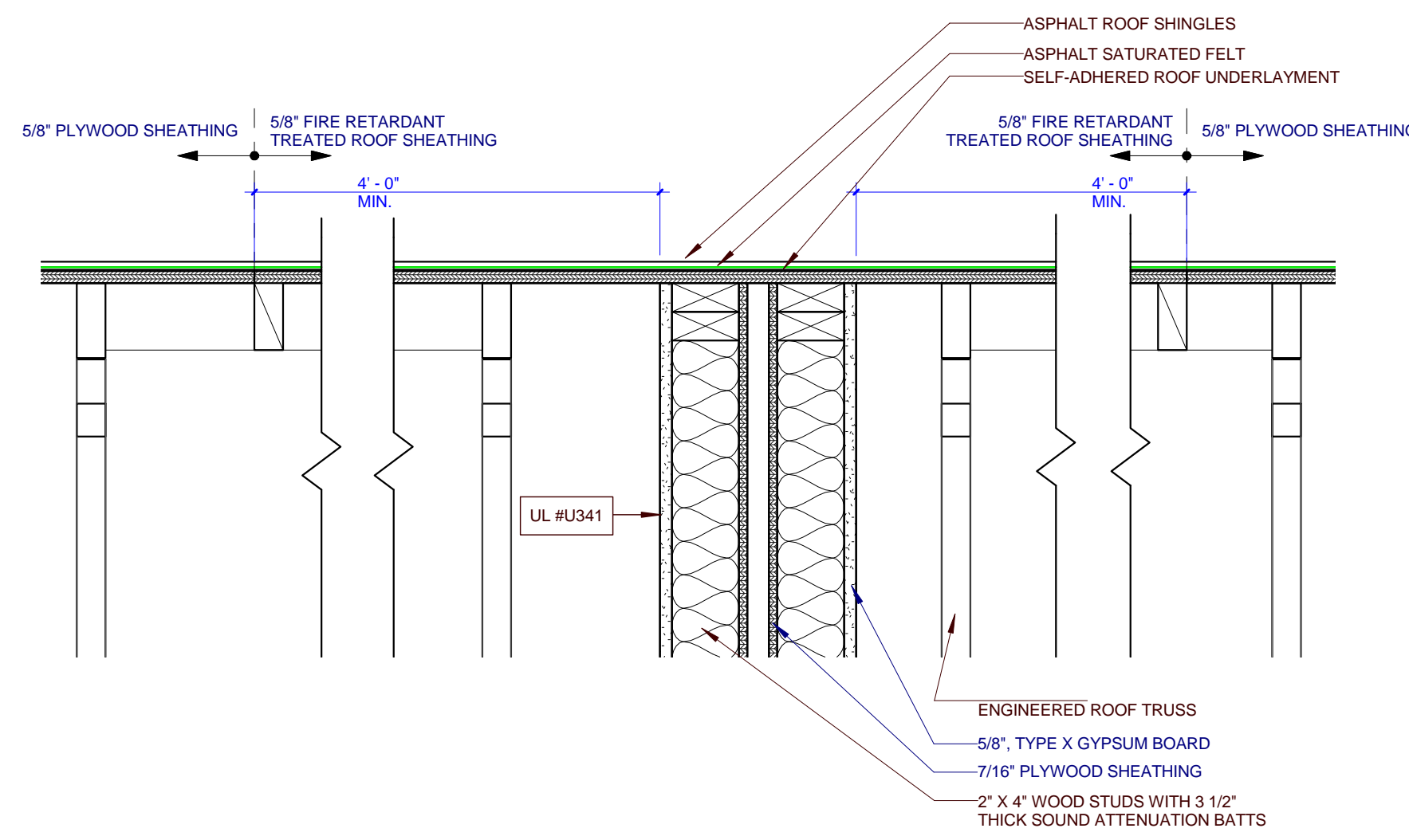
1. Refer to drawing P001, Notes. Plumbing piping and insulation materials shall be as specified in Specifications 221005 and 220719 unless noted otherwise for specific application on plan sheets.
2. Reference Sheet M001, Add the following to HVAC Notes: The project is to fully conform with the included 2015 Enterprise Green Communities Criteria Checklist and ENERGY Star v3. Rev 08 criteria. Should a conflict exist in the Construction Documents, the 2015 Enterprise Green Communities Criteria Checklist and ENERGY Star v3. Rev 08 shall prevail. The HVAC Contractor shall perform the load calculations, design system sizing, install and commission, as per ENERGY Star v3. Rev 08 criteria.
3. Refer to drawings and Specification 233300; Wall caps for bath and range exhaust shall be Broan 64 Series or approved equal, bird screen and spring loaded backdraft damper.
4. Refer to drawings and Specification 233300; Wall caps for dryer exhaust shall have single round gravity backdraft damper with gasket and external removable bird screen.
5. Refer to drawings and Specification 233300; Wall caps for outside air intake shall be Broan 64 Series or approved equal with bird screen. Motorized outside intake damper shall be Class 1A leakage rated.
6. Refer to drawings and Specification 233300; manual balancing dampers shall be remotely operated cable in airstream type, MAT Roto-Twist or approved equal.
7. All HVAC filters shall be provided with MERV 6 rating.

THIS CHANGE SHALL BECOME A PART OF THE PROJECT MANUAL AND HAVE FULL EFFECT AS IF SUBMITTED WITH THE ORIGINAL BID DOCUMENTS.

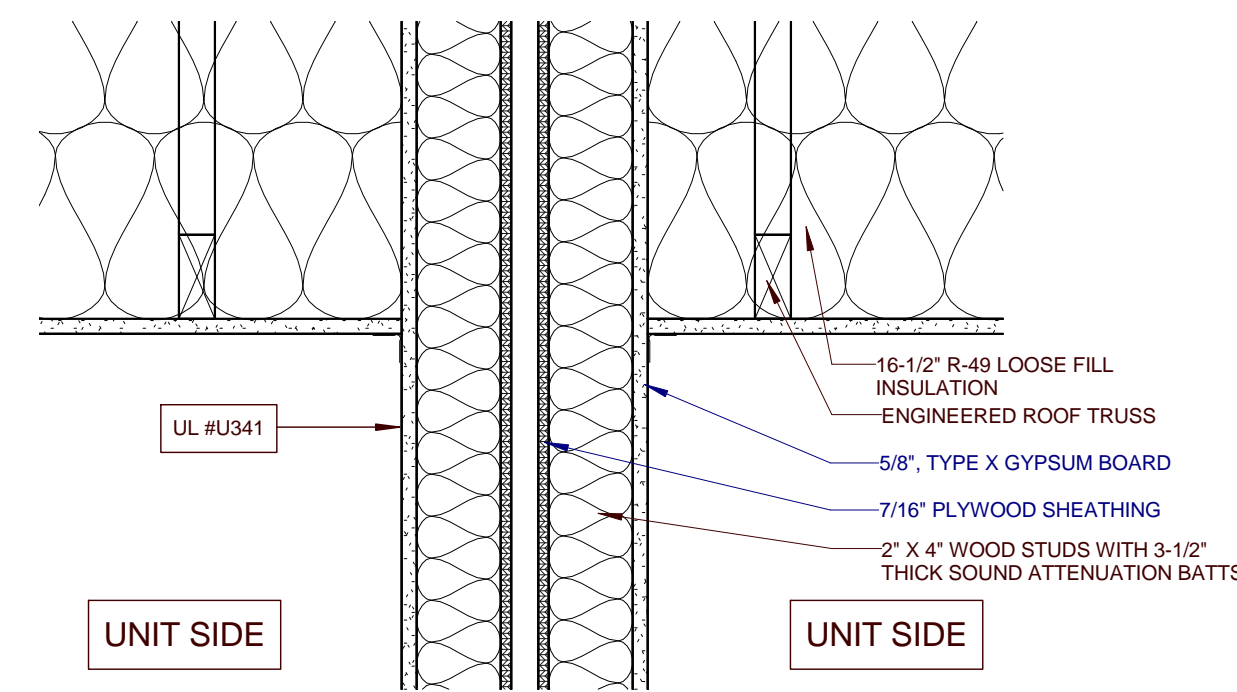
November 28, 2017
Date

By: John M. Kenny, P.E.
Facility Systems Consultants, LLC

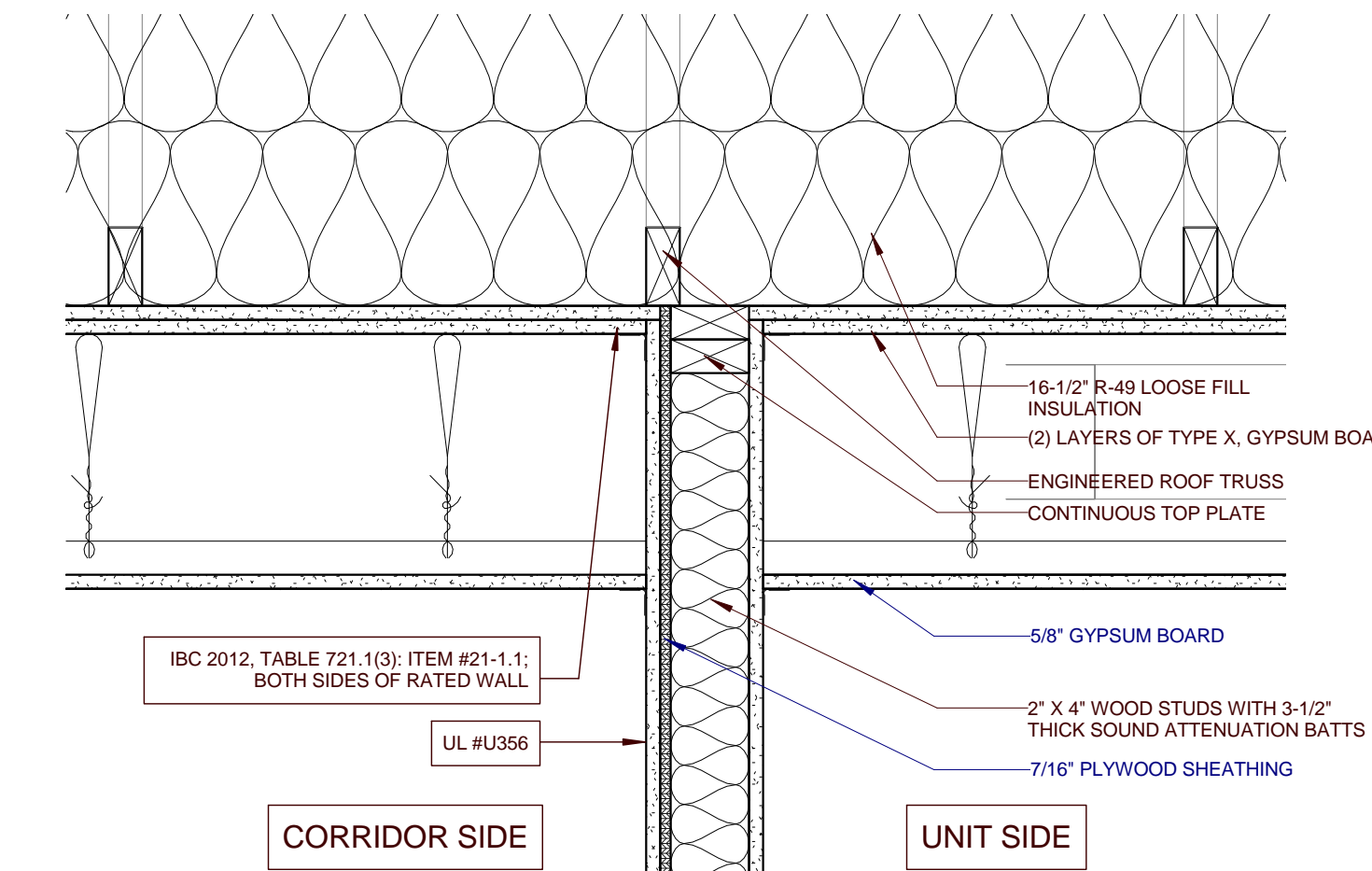




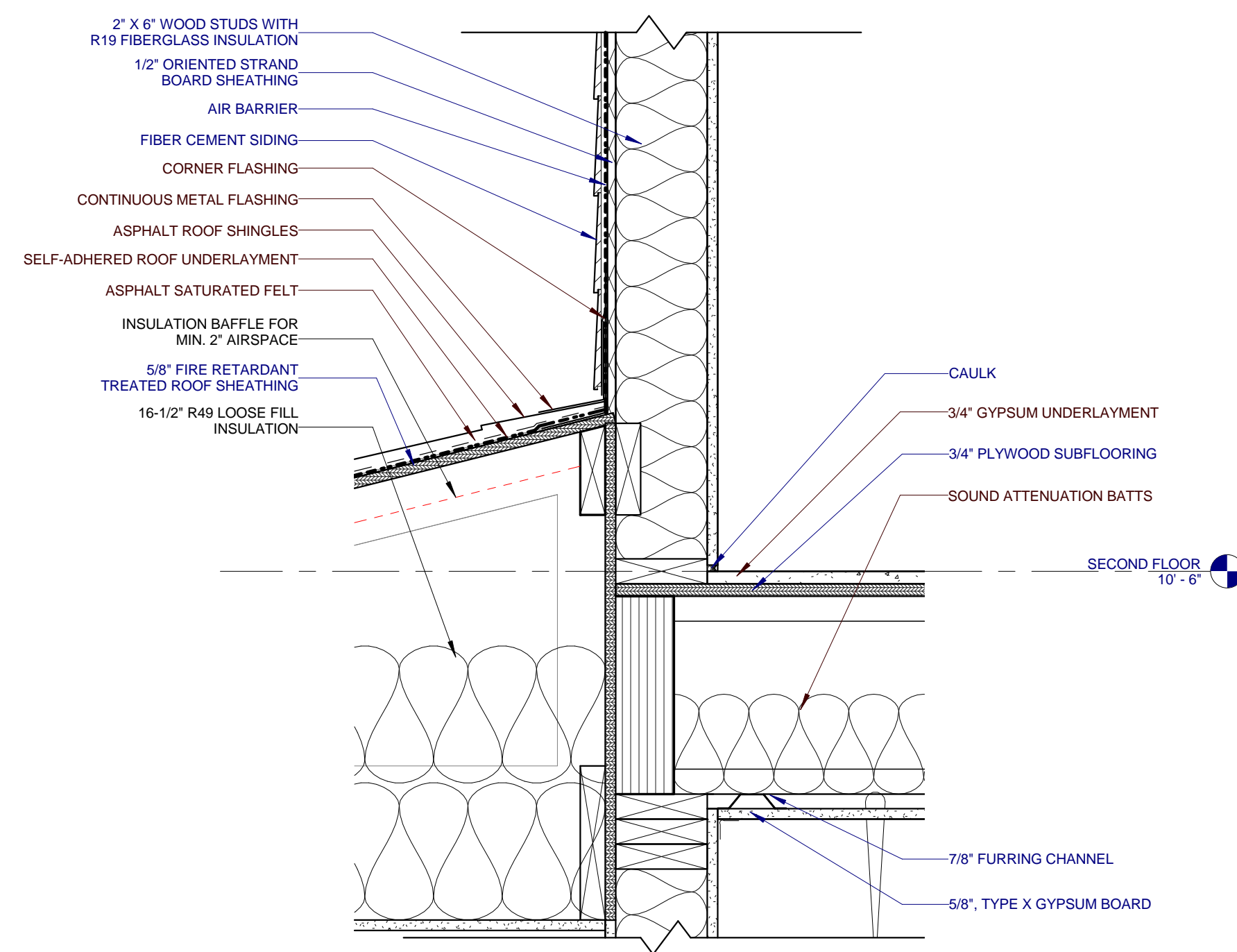
9 RATED WALL ROOF CONNECTION - C1, C2, D1, D2, E1, & E2
A401 0 3' 6' 9' 12'



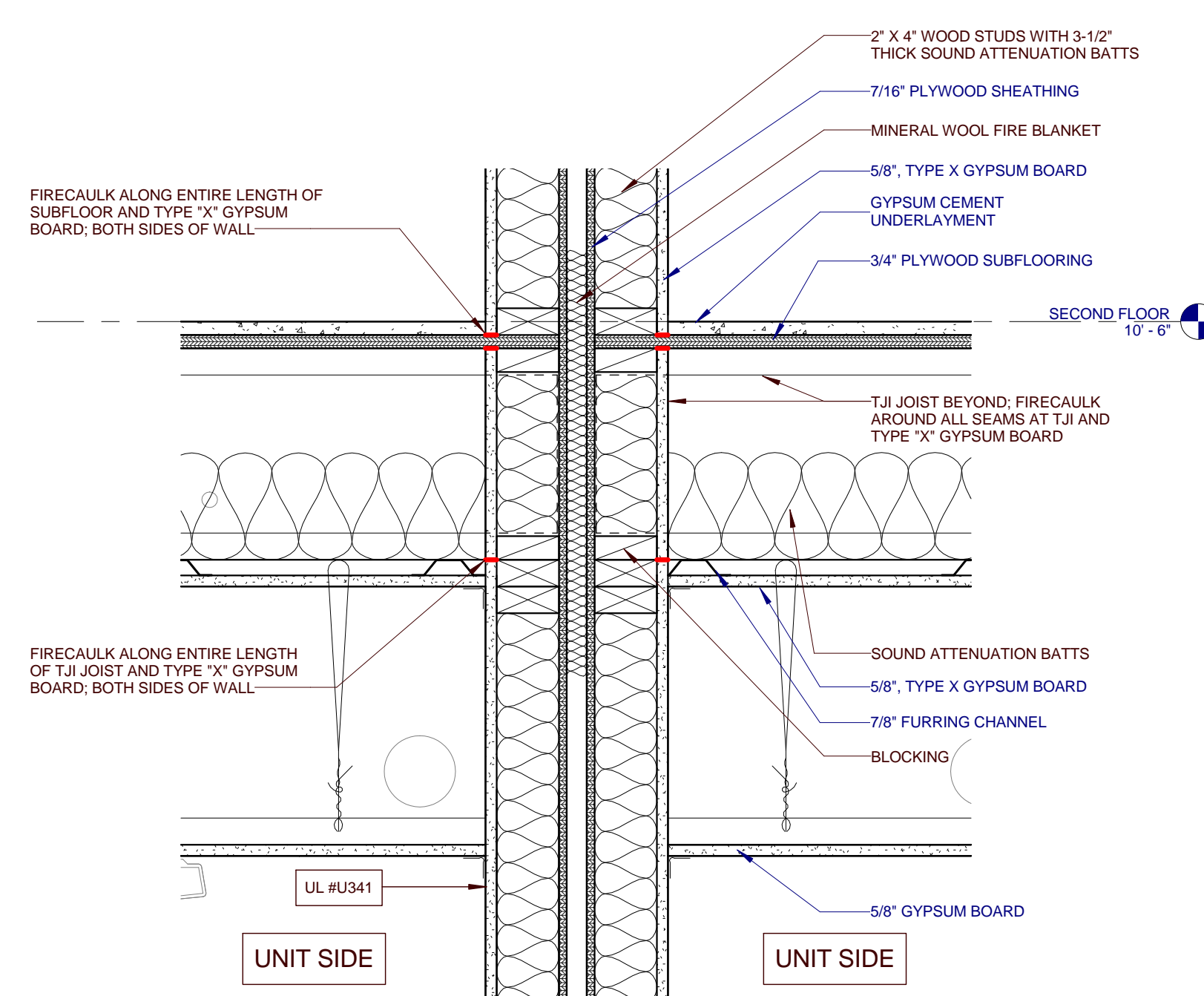
8 RATED WALL CEILING CONNECTION - C1, C2, D1, D2, E1, & E2
A401 0 3' 6' 9' 12'



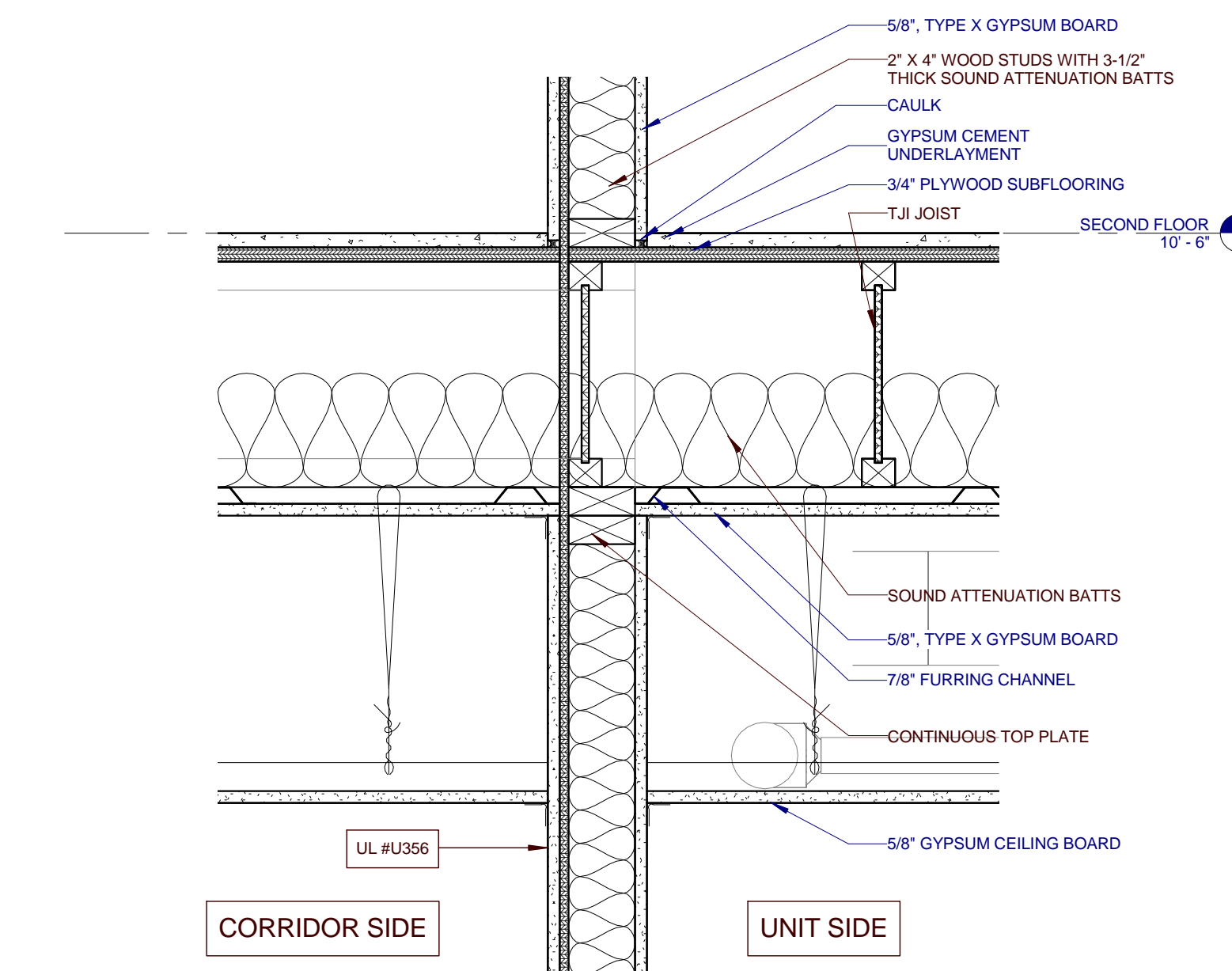
7 RATED WALL CEILING CONNECTION - A1, A2, & B
A401 0 3' 6' 9' 12'



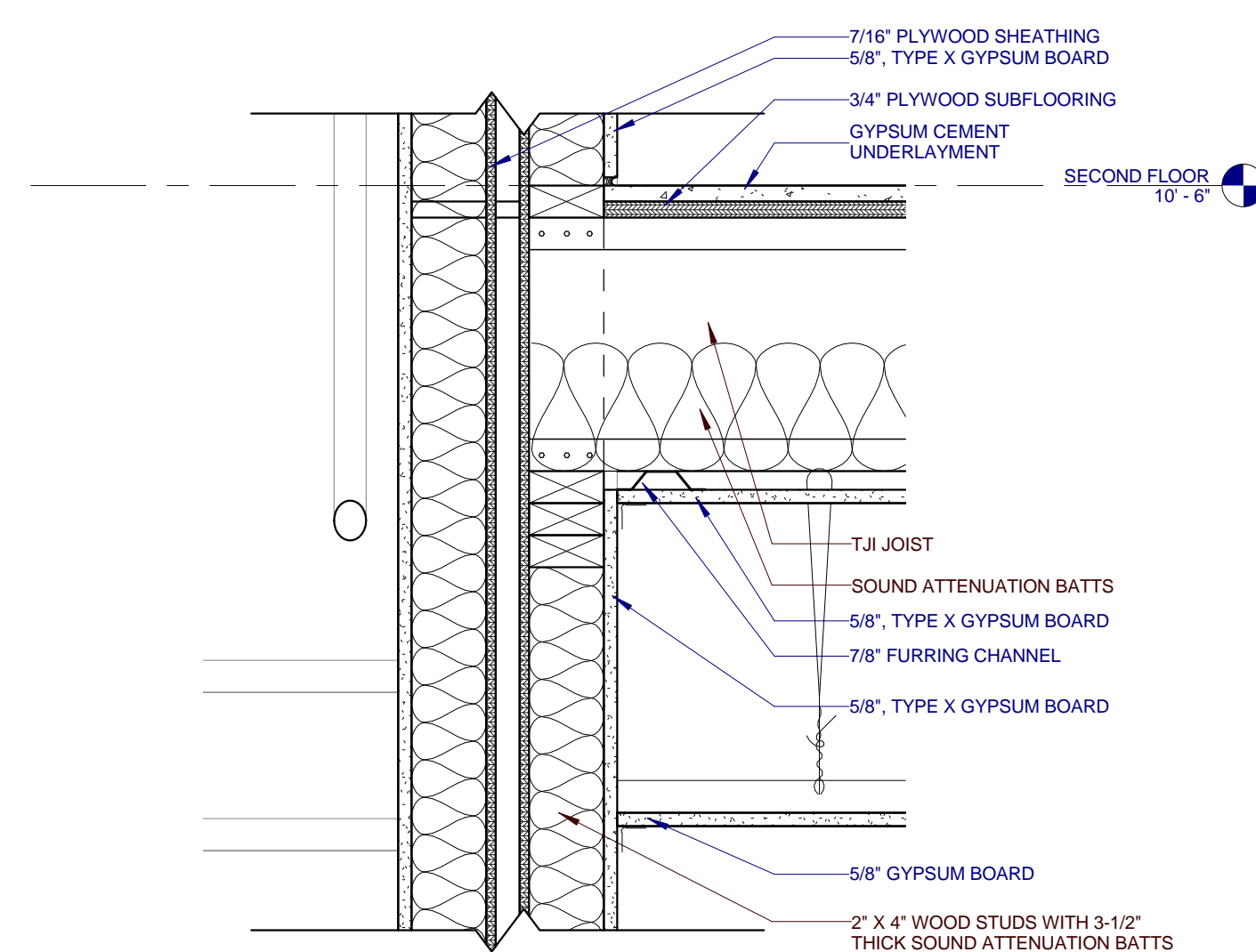
6 LOWER ROOF CONNECTION
A401 0 3' 6' 9' 12'



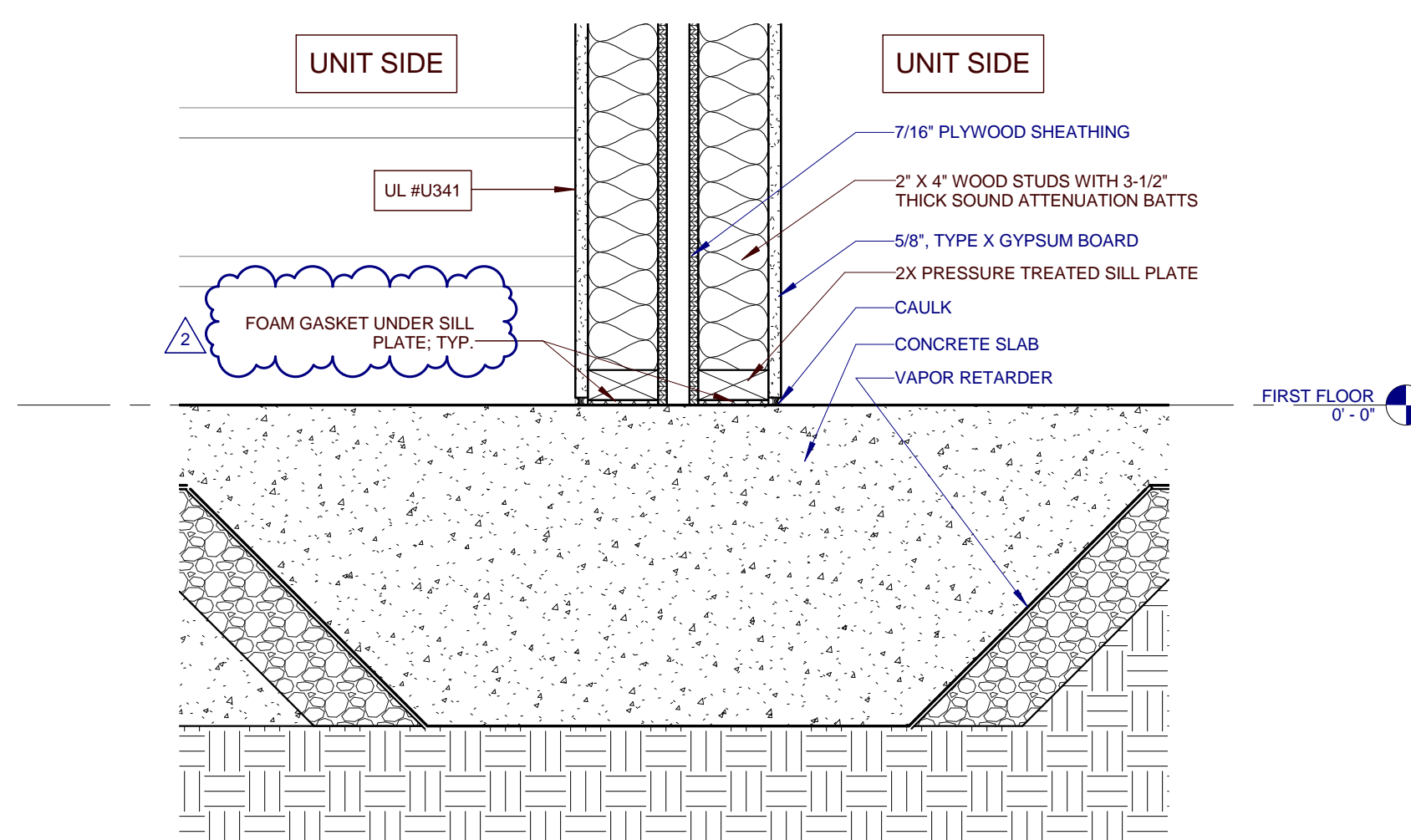
5 RATED WALL FLOOR CONNECTION - C1, C2, D1, & D2
A401 0 3' 6' 9' 12'



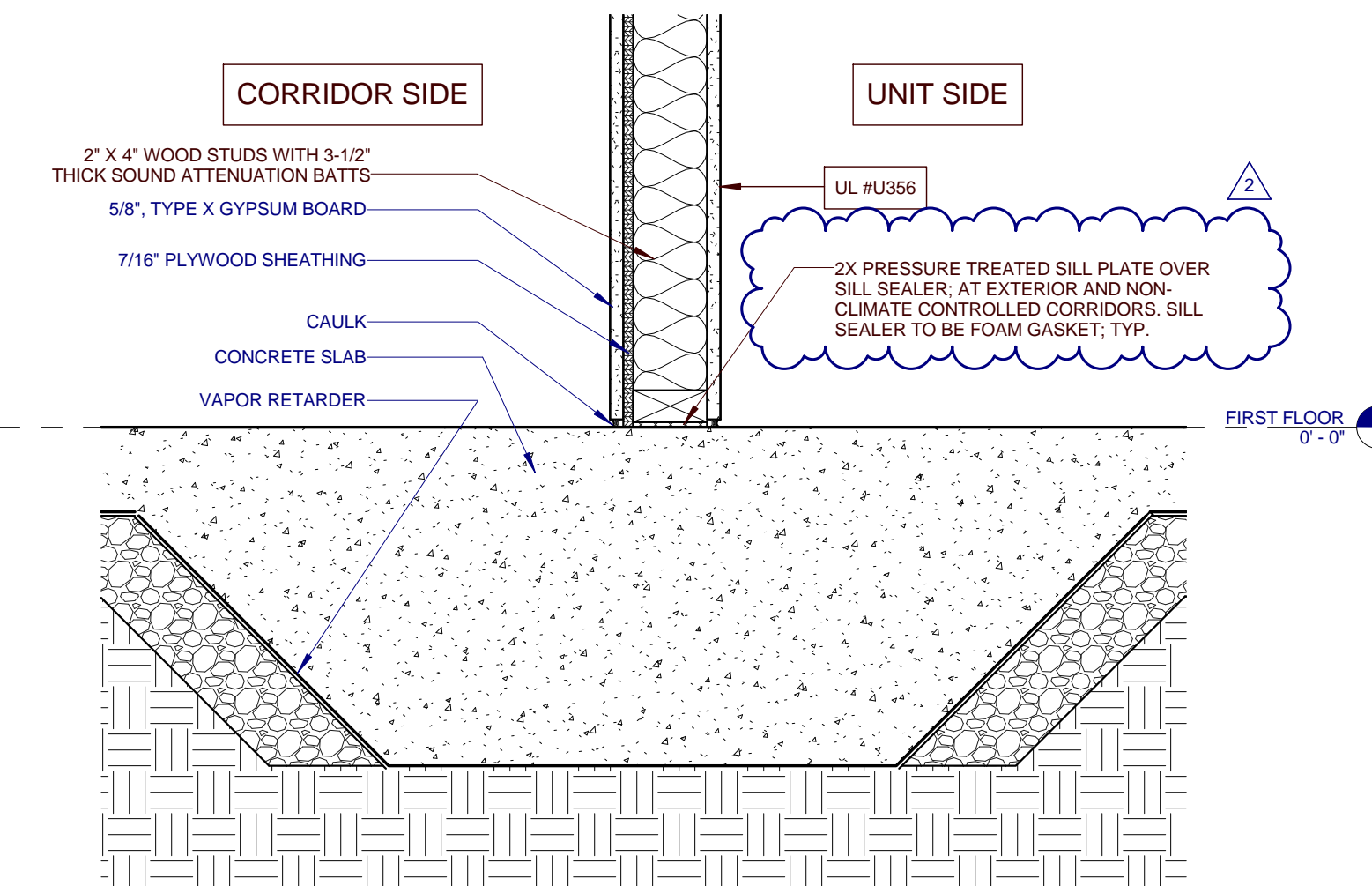
4 RATED WALL FLOOR CONNECTION - A1, A2, & B
A401 0 3' 6' 9' 12'



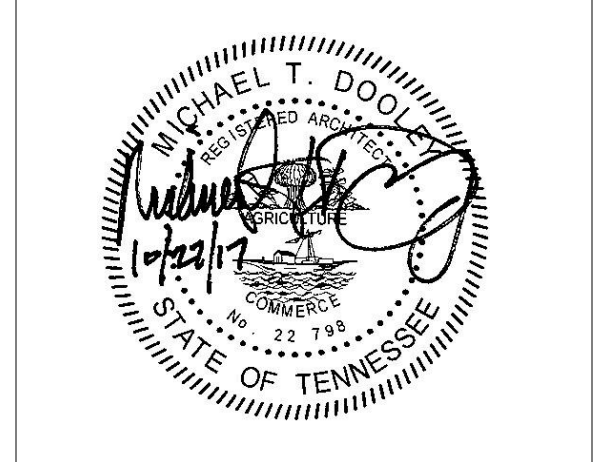
3 UNRATED FLOOR CONNECTION
A401 0 3' 6' 9' 12'



2 RATED WALL SLAB CONNECTION - C1, C2, D1, D2, E1, AND E2
A401 0 3' 6' 9' 12'

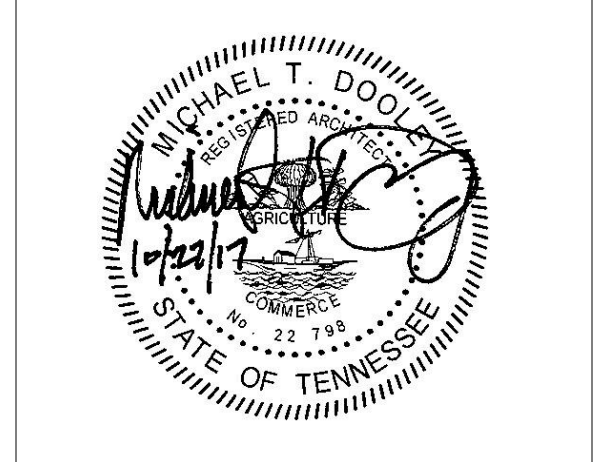


1 RATED WALL SLAB CONNECTION - A1, A2, & B
A401 0 3' 6' 9' 12'



PROJECT NUMBER
166200
PROJECT NAME
FIVE POINTS - PHASE 3
OWNER
KNOXVILLE'S COMMUNITY
DEVELOPMENT
CORPORATION
PROJECT ADDRESS
304 S. KYLE STREET
KNOXVILLE, TN 37915

PARTNER-IN-CHARGE	MTD
PROJECT MANAGER	ELD
DRAWN BY	ELD
REVIEWED BY	TWM
ISSUE DATE	10.27.2017
REVISIONS	
2	ADDENDUM NO. 2 2017/11/27



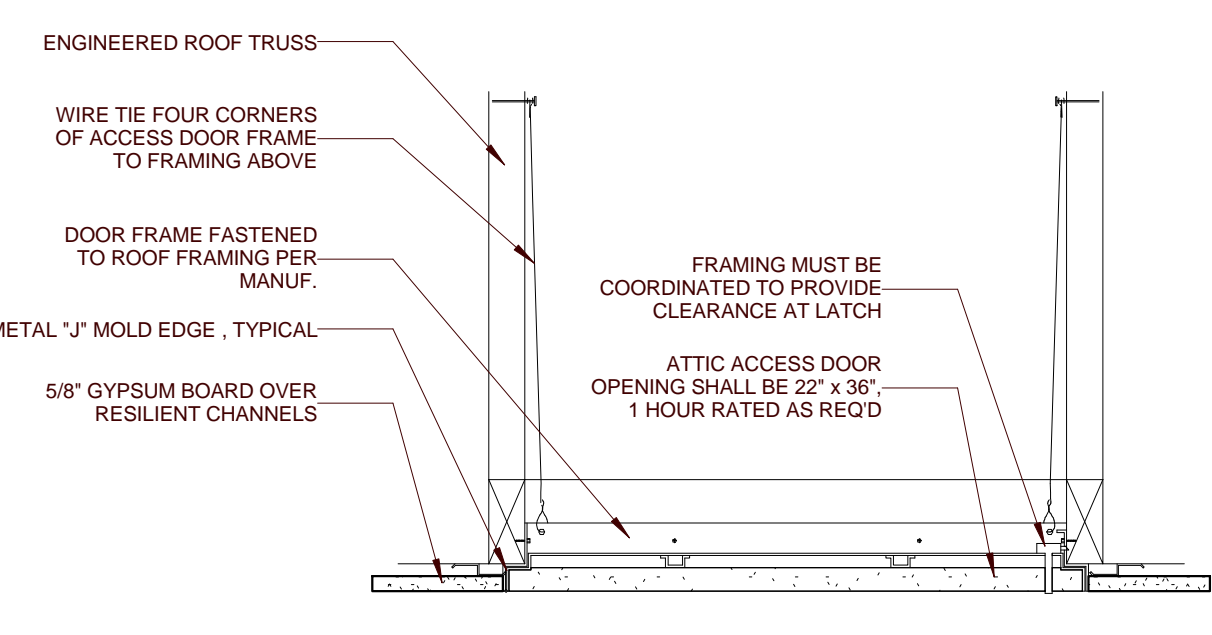
PROJECT NUMBER
166200

PROJECT NAME
FIVE POINTS - PHASE 3

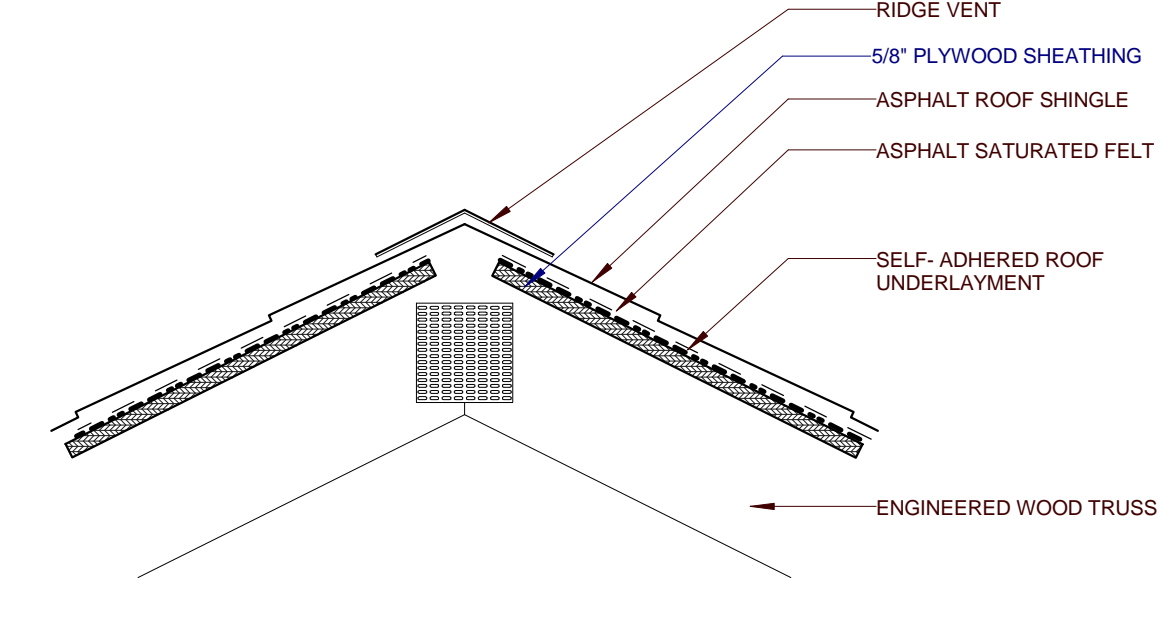
OWNER
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

PROJECT ADDRESS
**304 S. KYLE STREET
 KNOXVILLE, TN 37915**

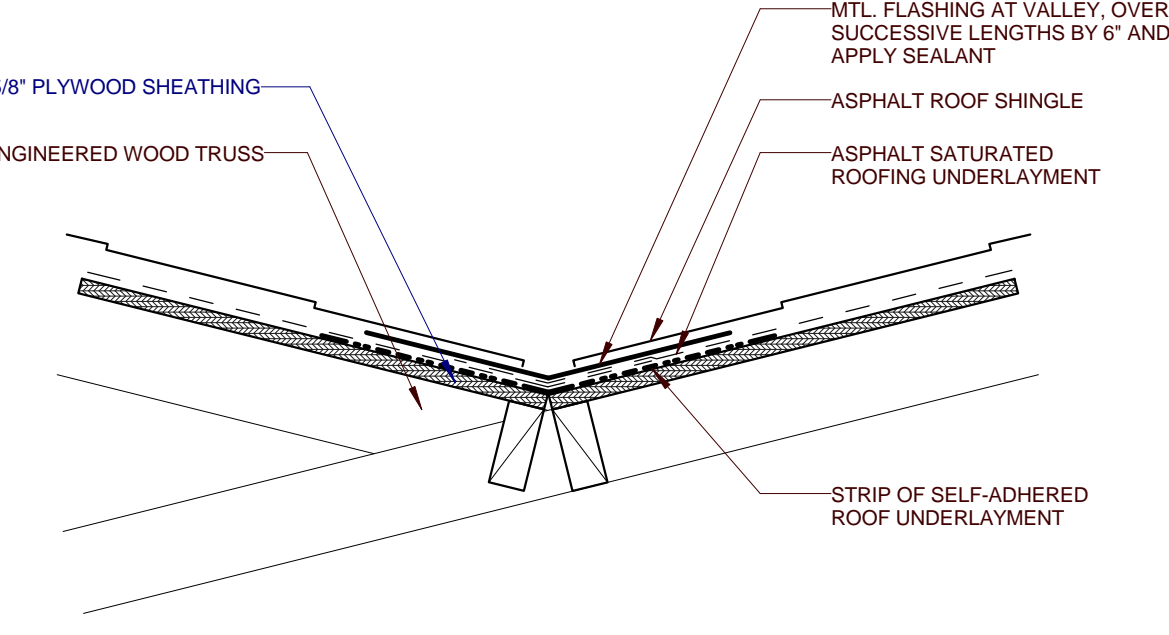
PARTNER-IN-CHARGE	MTD
PROJECT MANAGER	ELD
DRAWN BY	ELD
REVIEWED BY	TWM
ISSUE DATE	10.27.2017
REVISIONS	
2	ADDENDUM NO. 2 2017/11/27



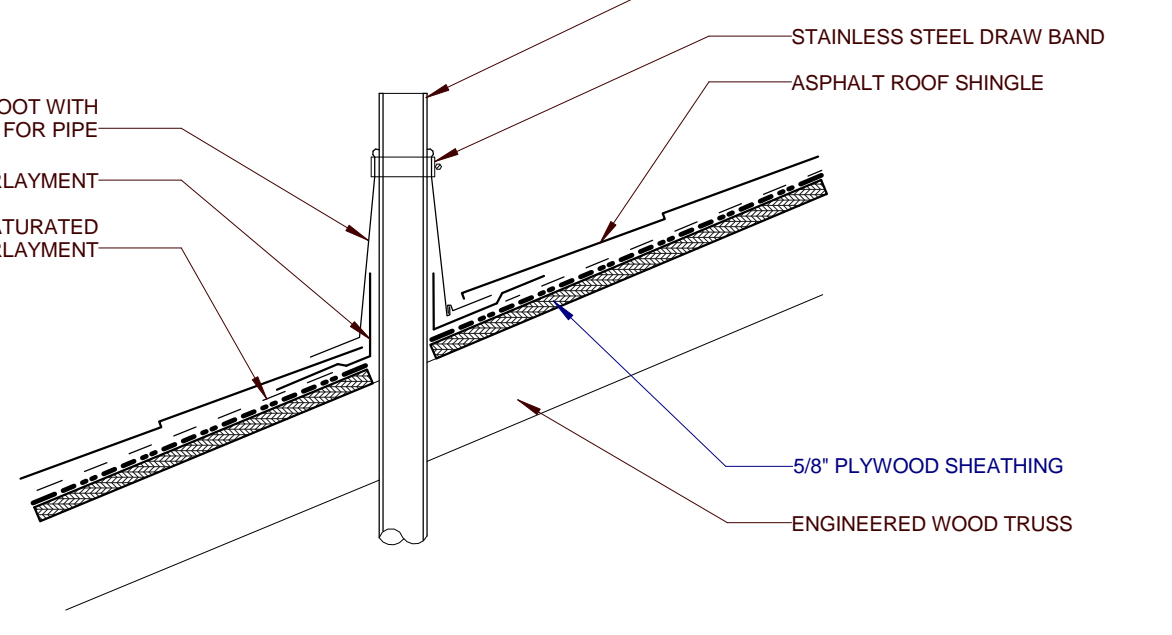
13 TYP. ATTIC ACCESS DETAIL
 A402 0 3' 6' 9' 12'



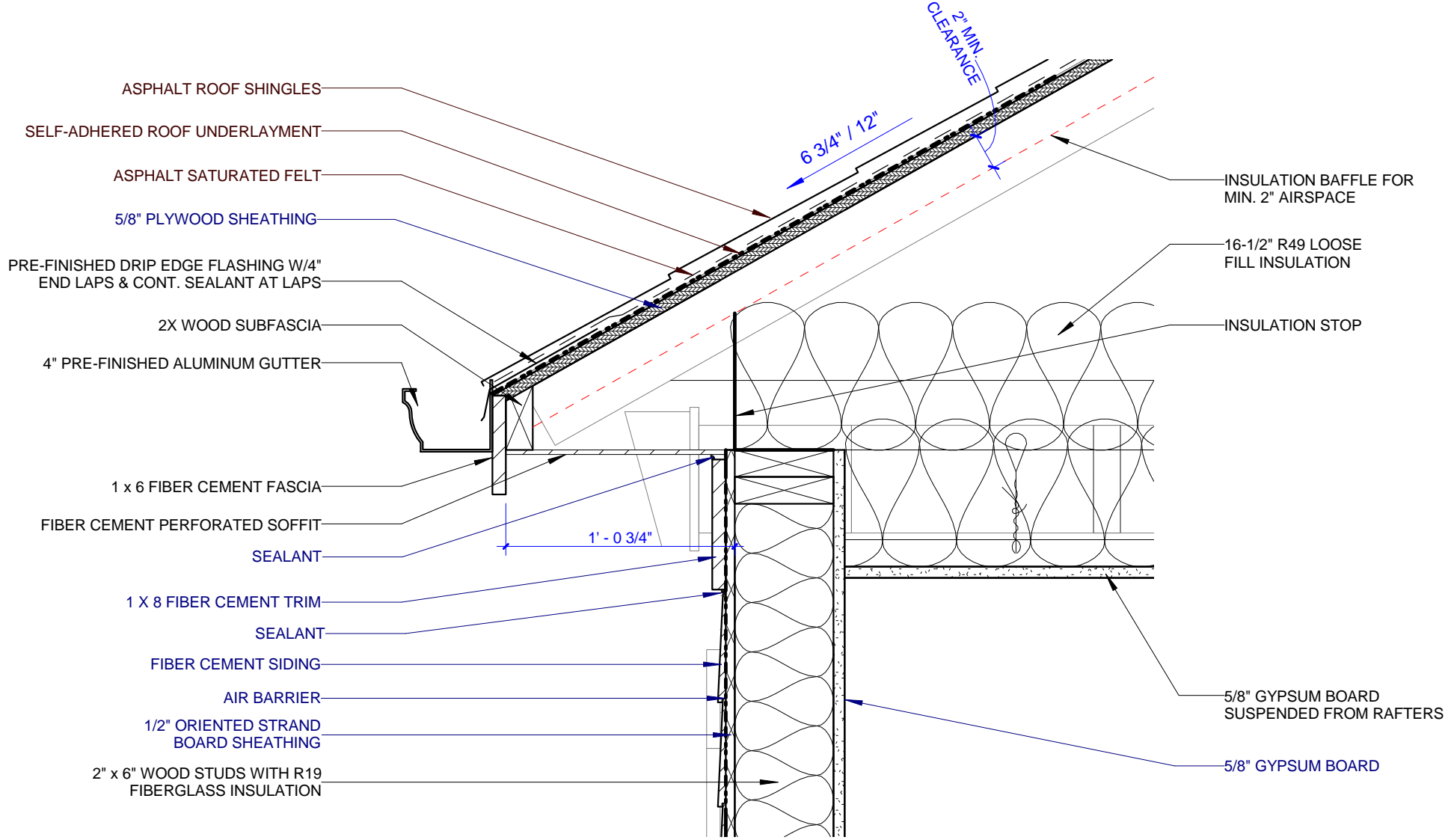
12 TYP. ROOF RIDGE DETAIL
 A402 0 3' 6' 9' 12'



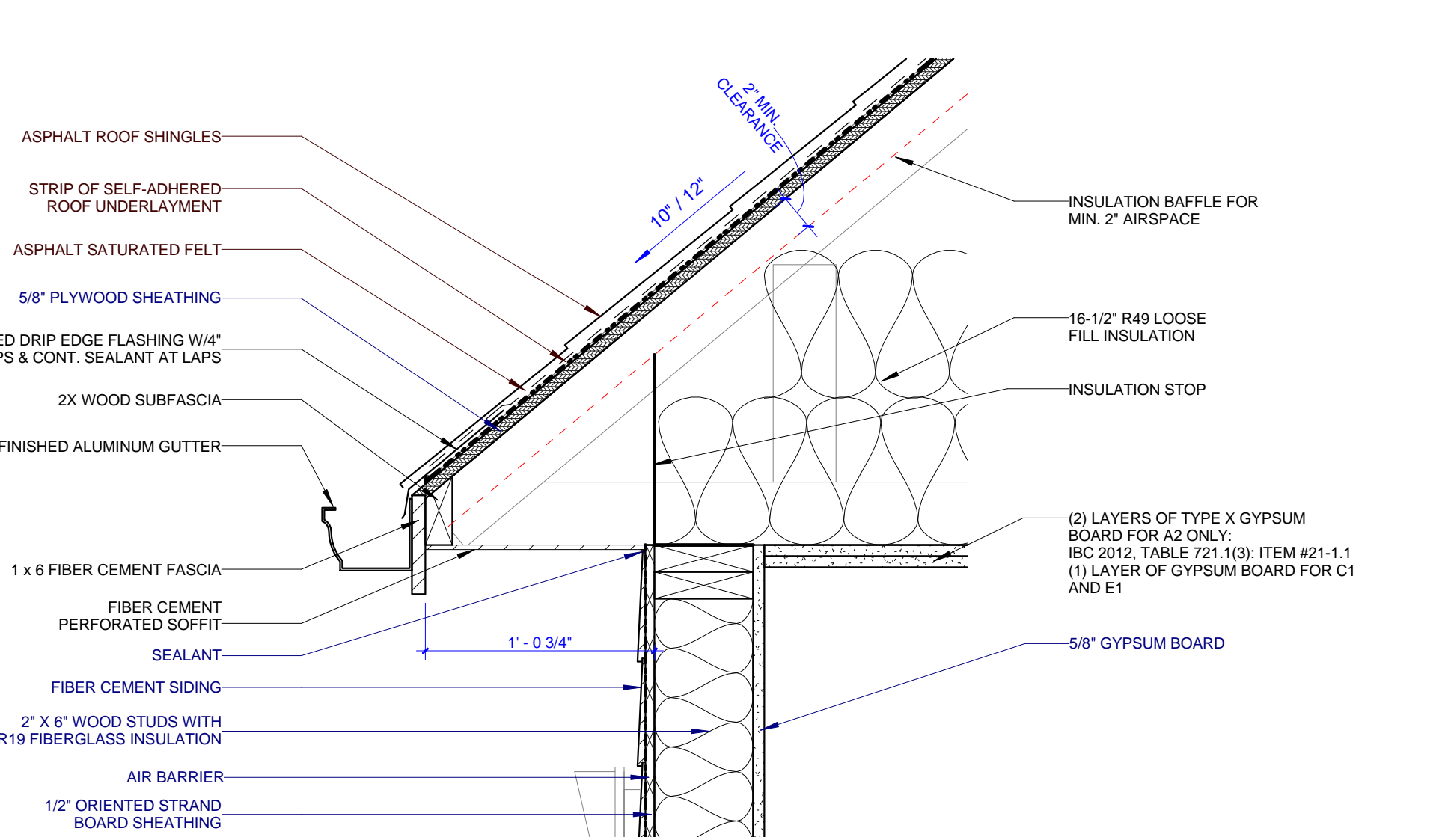
11 TYP. ROOF VALLEY DETAIL
 A402 0 3' 6' 9' 12'



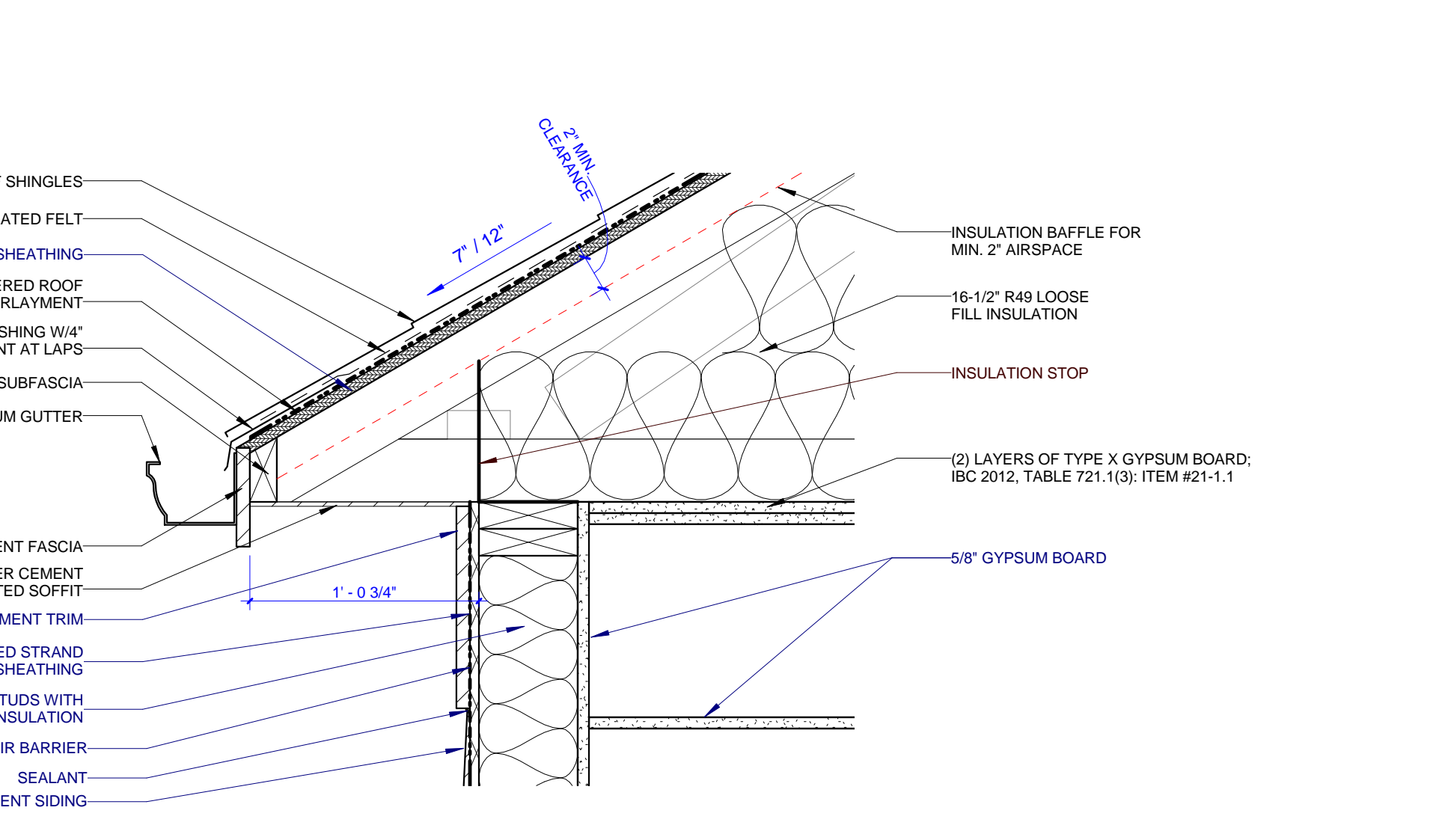
10 TYP. VENT THRU ROOF DETAIL
 A402 0 3' 6' 9' 12'



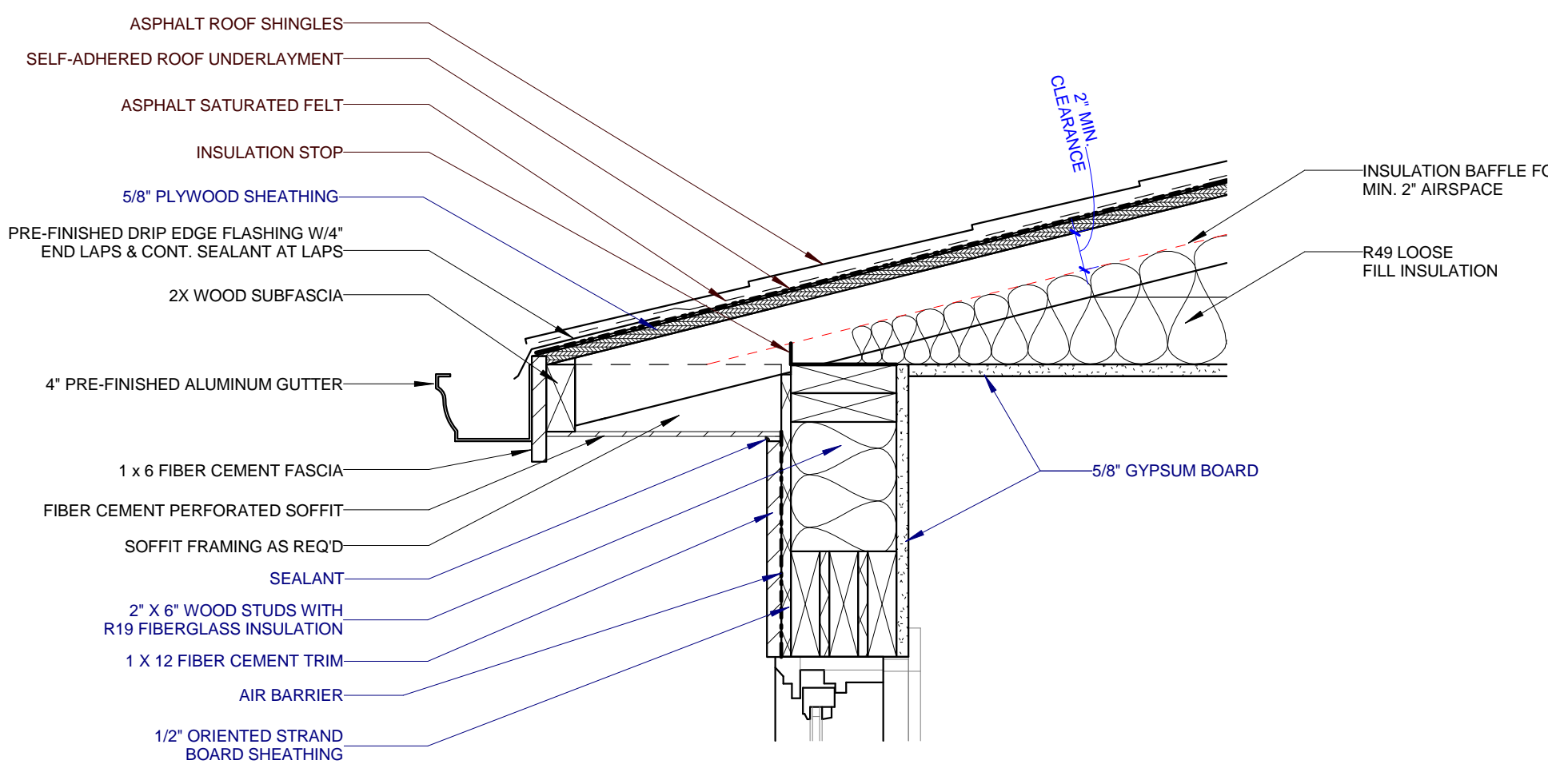
9 TYP. ROOF EAVE - TYPES C2, D1, D2, & E2
 A402 0 3' 6' 9' 12'



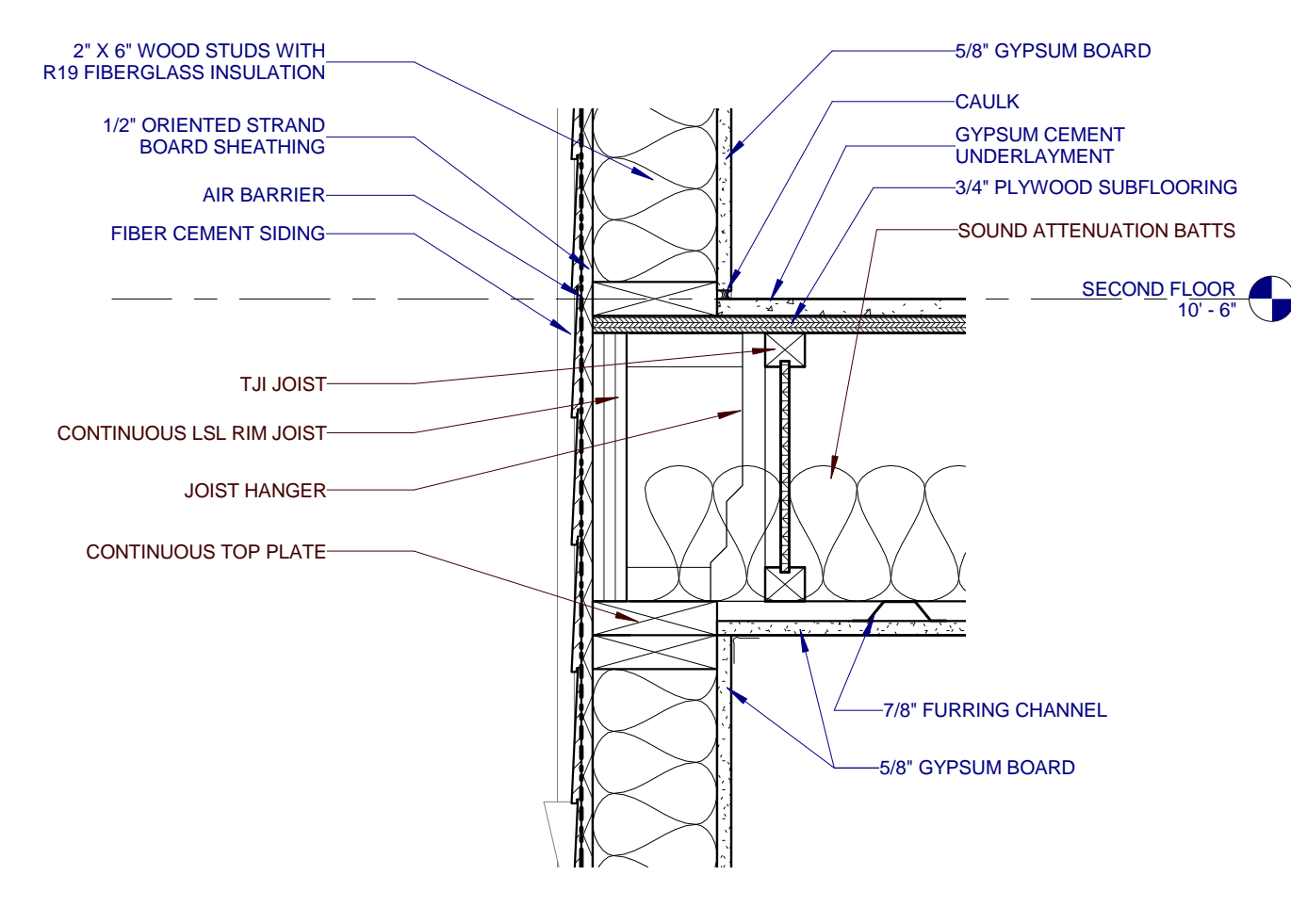
8 TYP. ROOF EAVE - TYPES A2, C1, & E1
 A402 0 3' 6' 9' 12'



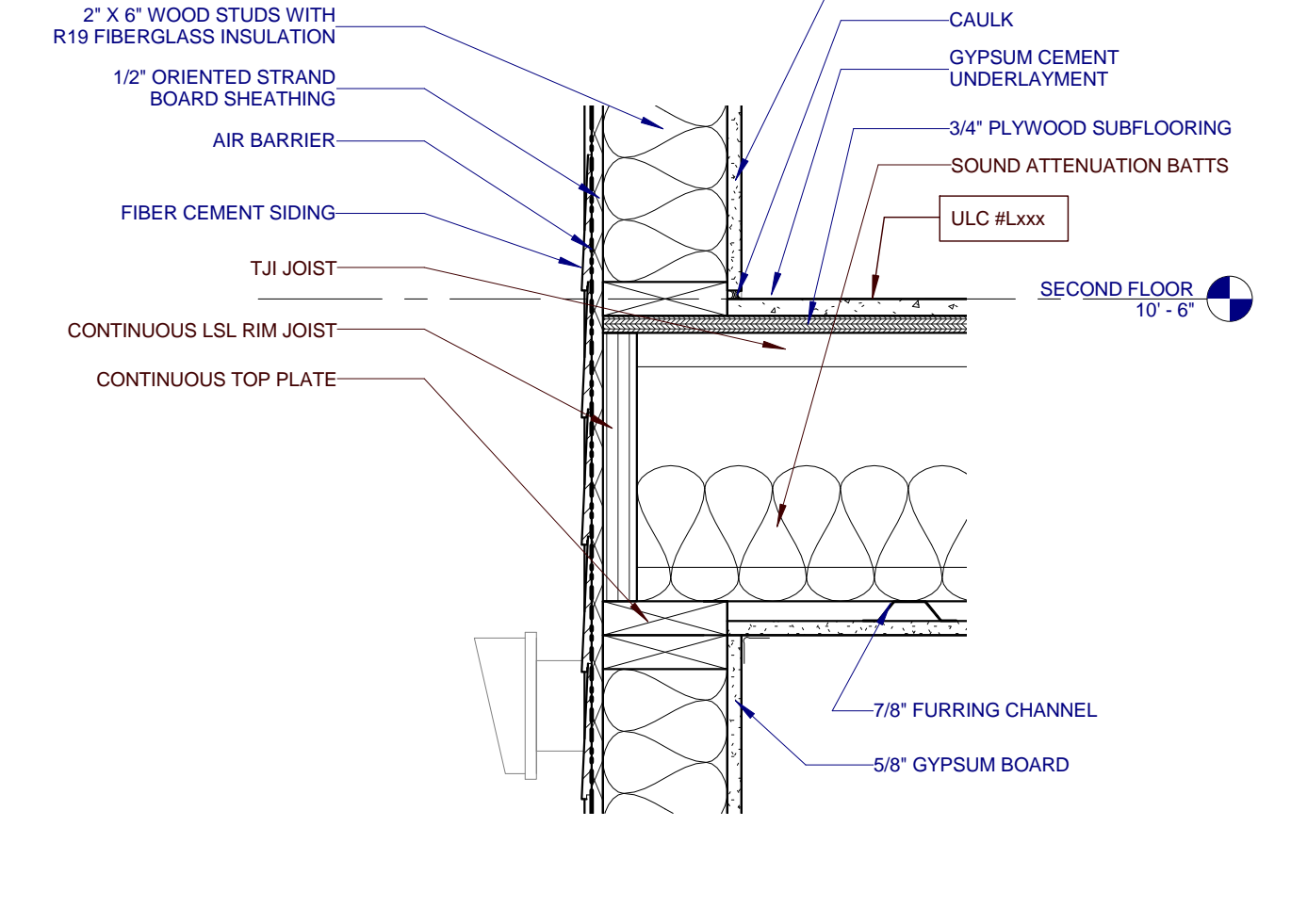
7 TYP. ROOF EAVE - TYPES A1 & B
 A402 0 3' 6' 9' 12'



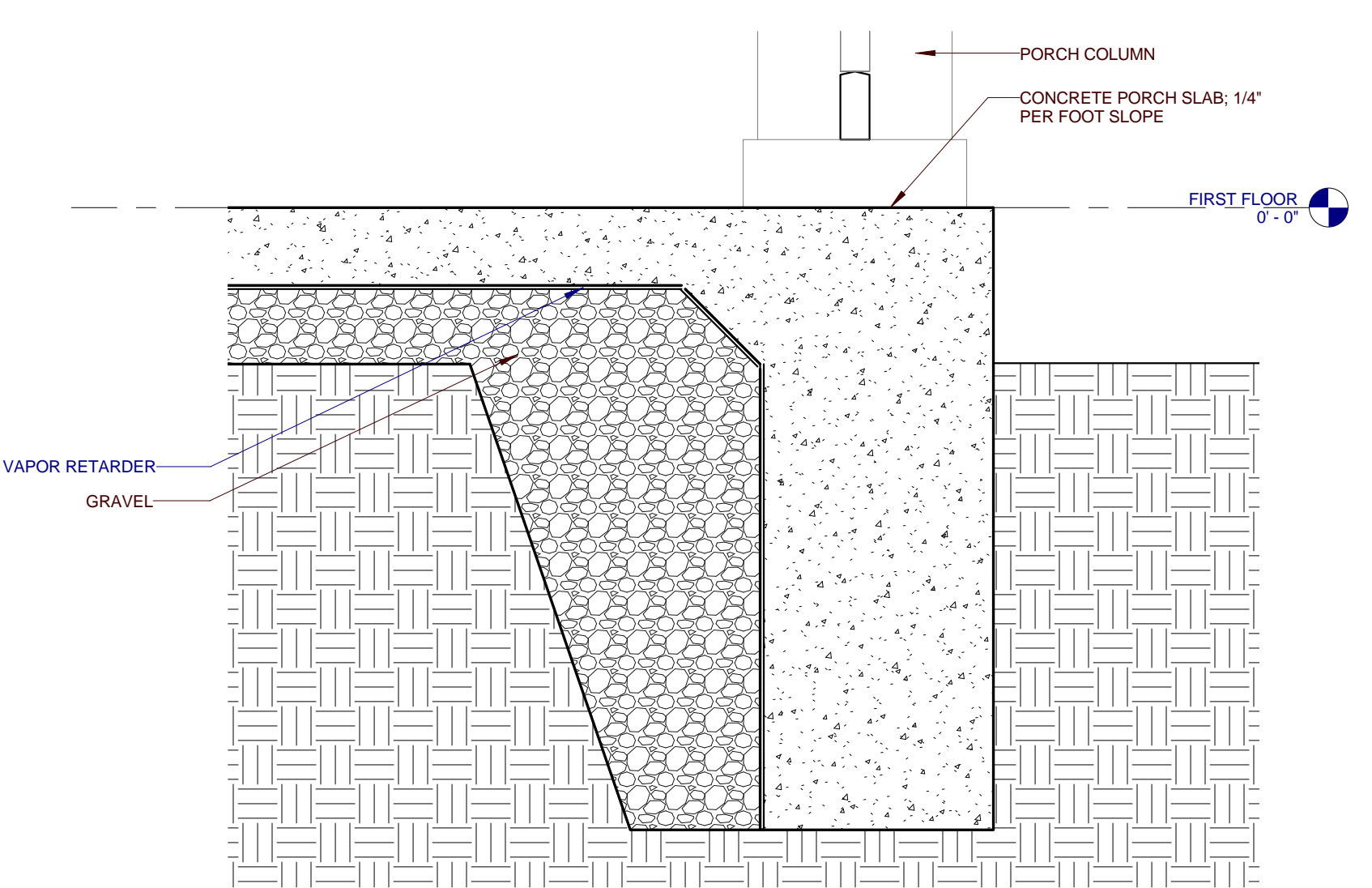
6 LOWER ROOF EAVE - TYPE B
 A402 0 3' 6' 9' 12'



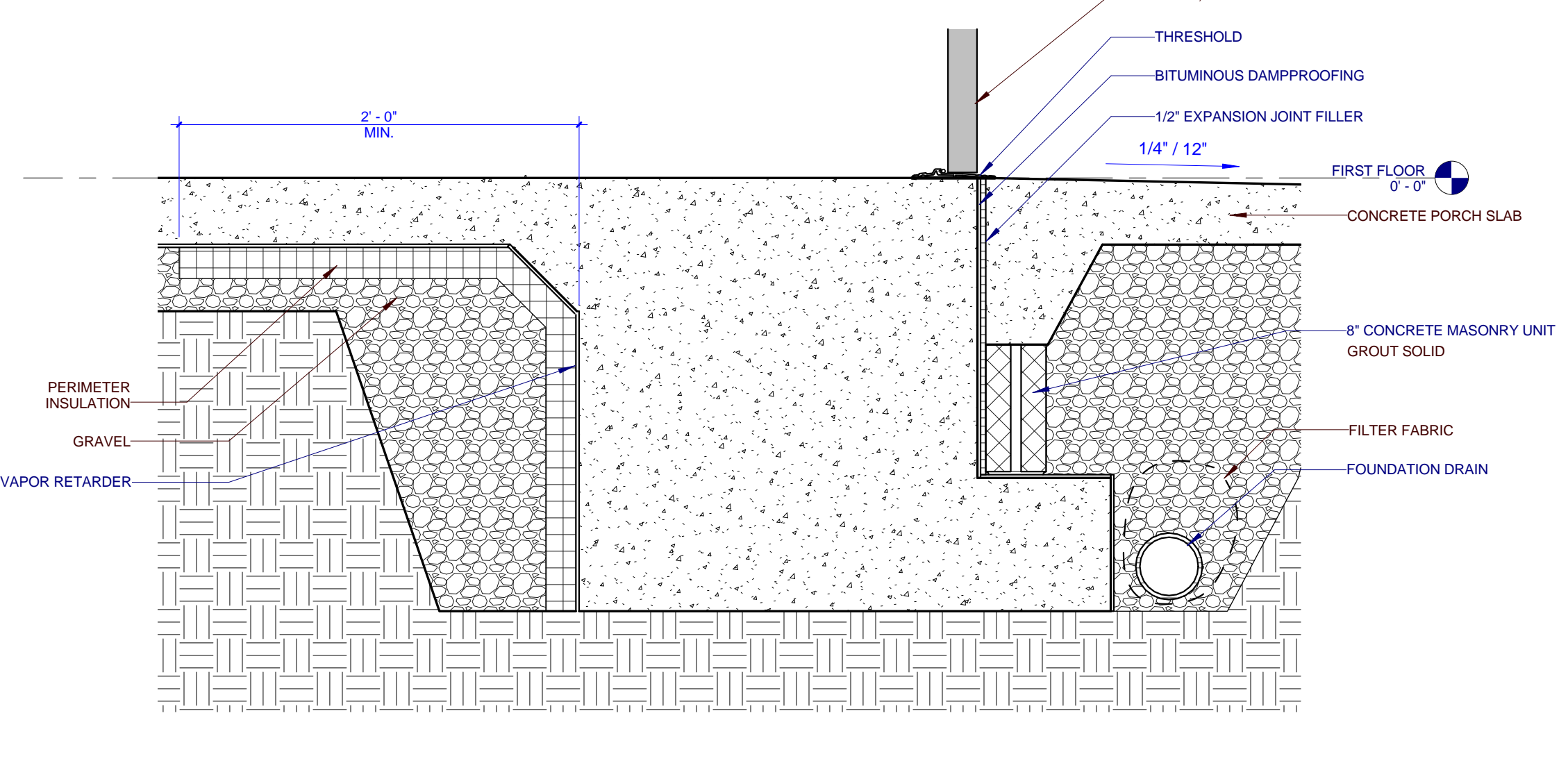
5 JOIST BEARING AT EXT. WALL - TYPES C1, C2, D1 & D2
 A402 0 3' 6' 9' 12'



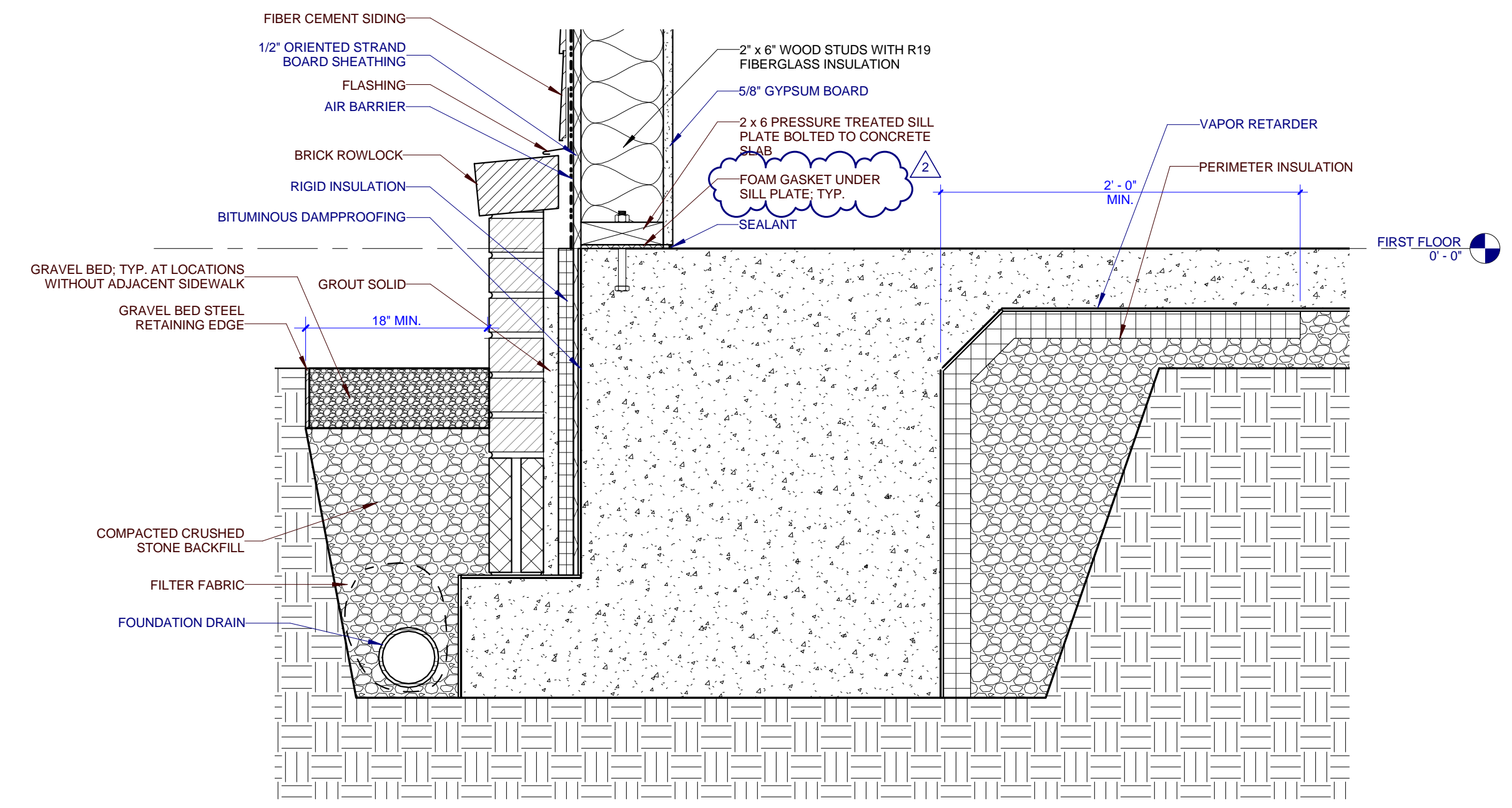
4 JOIST BEARING AT EXT. WALL - TYPES A1, A2 & B
 A402 0 3' 6' 9' 12'



3 FOUNDATION AT PORCH - ALL TYPES
 A402 0 3' 6' 9' 12'



2 FOUNDATION AT PORCH - ALL TYPES
 A402 0 3' 6' 9' 12'



1 TYP. FOUNDATION DETAIL - ALL TYPES
 A402 0 3' 6' 9' 12'

ELECTRIC SPLIT SYSTEM HEAT PUMP SCHEDULE (TYPICAL)																				
INDOOR DRAWING SYMBOL	OUTDOOR DRAWING SYMBOL	CFM	CFM O.A.	EXT. S.P. IN.	CAPACITY (BTUH)			HEAT PUMP UNIT				AIR HANDLER UNIT				E.V.P. FAN H.P.	HSP/F SEER	MANUFACTURER & MODEL NO.		
					TOTAL COOLING	SEN. COOLING	HEAT	WGT. LBS.	MCA	MCP	VOLT.	WGT. LBS.	AUX. HEAT	MCA	MCP			VOLT.	AIR HANDLER	COND. UNIT
⊙ AHU 1	⊙ HP 1	800	0	.50	23,600	16,100	22,300	165	14	25	230/1	110	9.6	52.0	60.0	230/1	8.5/15.0	TRANE TEM40B24S21SA	TRANE 4TWR5204H000A	
⊙ AHU 2	⊙ HP 2	800	0	.50	17,700	11,900	17,000	145	12	20	230/1	110	7.6	42.0	45	230/1	8.6/14.5	TRANE TEM44B18S21SA	TRANE 4TWR5204H000A	
⊙ AHU 3	⊙ HP 3	1,200	0	.50	36,100	26,800	22,400	220	18	30	230/1	145	14.4	60	83	230/1	1.5	8.5/14.75	TRANE TEM44C36S1	TRANE 4TWR5204H000A

ACCESSORIES AND FEATURES:
 * 5 YEAR COMPRESSOR WARRANTY.
 * EQUIPMENT TO BE AIR CERTIFIED AND UL APPROVED.
 * COOLING CAPACITY AT 80°F S.A.T., 95 O.D.T.
 * HEATING CAPACITY AT 47° O.D.T.
 * ESP DOES NOT INCLUDE FILTER SECTION.
 * PROVIDE FILTER RACK AND 1" THICK THROW-AWAY FILTER.
 * PROVIDE 24V PROGRAMMABLE THERMOSTAT FOR EACH UNIT.
 * PROVIDE PRE-CHARGED REFRIGERANT LMR KITS. (PROVIDE ACR COPPER REFRIGERANT TUBING WITH FILTER-DRYER, SIGHT GLASS, AND SERVICE VALVES).
 * PROVIDE LOW AMBIENT HEAD PRESSURE CONTROL TO O/F.
 * ALTERNATE MANUFACTURERS: YORK.
 * CONTRACTOR SHALL REFER TO PLANS FOR QUANTITY OF EACH UNIT.
 * PROVIDE ECM FAN MOTOR.

ELECTRIC DUCTLESS SPLIT SYSTEM HEAT PUMP UNIT SCHEDULE																		
DRAWING SYMBOL	INDOOR	OUTDOOR	CFM	CFM O.A.	CAPACITY (BTUH)			INDOOR UNIT ELEC.				OUTDOOR UNIT ELEC.				SEER	MANUFACTURER & MODEL NO.*	
					TOTAL COOLING	SEN. COOLING	HEATING	WGT. LBS.	MCA	MCP	VOLT.	WGT. LBS.	MCA	MCP	VOLT.		AIR HANDLER	COND. UNIT
⊙ AHU 4	⊙ HP 4	500	40		18,000	13,500	20,000	45	-	-	208/1	150	16.5	20	208/1	17.2	DAKIN FQ21PFAUJ1	DAKIN RZ21HPJUB9

ACCESSORIES AND FEATURES:
 * FILTER RACK AND FILTER FURNISHED WITH UNIT.
 * 5 YEAR COMPRESSOR WARRANTY.
 * EQUIPMENT TO BE AIR CERTIFIED AND UL APPROVED.
 * COOLING CAPACITY AT 80°F S.A.T., 95 O.D.T.
 * PROVIDE CONDENSATE PUMP WITH UNIT.
 * PROVIDE AIR HANDLER WITH LOW AMBIENT CONTROLS.
 * PROVIDE UNIT WITH HARD START KIT.
 * ALTERNATE MANUFACTURERS: YORK, LG.

EXHAUST FAN SCHEDULE (TYPICAL)											
DRAWING SYMBOL	AMCA CFM	S.P. IN WATER	PPM	WATTS/HP	TYPE	CONTROL	VOLTAGE	SONES	WEIGHT LBS.	MANUFACTURER & MODEL NO.	NOTES
⊙ EF 1	100	.375	757	128 W	CEILING	OCCUPANCY SENSOR	120/160	1.5	15	GREENHECK SP-8150	1,2,3,4,5

ACCESSORIES AND FEATURES:
 1. PROVIDE BACKDRAFT DAMPER.
 2. PROVIDE SOLD STATE SPEED CONTROL.
 3. PROVIDE MANUFACTURERS WALL CAP.
 4. EXHAUST FAN SHALL BE ENERGY STAR RATED.
 5. PROVIDE FAN WITH INTEGRAL MOTION DETECTOR FOR OPERATION.
 6. CONTRACTOR SHALL REFER TO PLANS FOR QUANTITIES.

DRYER BOOSTER FAN SCHEDULE (TYPICAL)										
DRAWING SYMBOL	AMCA CFM	S.P. IN WATER	PPM	WATTS	TYPE	VOLTAGE	SONES	WEIGHT LBS.	MANUFACTURER & MODEL NO.	NOTES
⊙ DB 1	145	0.4	2699	80	DIRECT	115/160	-	9	FANTECH DBF110	

1. REFER TO DRAWINGS FOR LOCATIONS.
 2. PROVIDE PRESSURE SWITCH, MOUNTING BRACKETS AND ROOF CAP.

ELECTRIC HEATER SCHEDULE (TYPICAL)						
DRAWING SYMBOL	KW	CONTROL	AMPS	VOLTAGE	WEIGHT LBS.	MANUFACTURER & MODEL NUMBER
⊙ EH 1	3	TSTAT	12.5	240/1	29	MARVEL HF332TD-HP

ACCESSORIES AND FEATURES:
 * UNITS MUST BE UL LISTED.
 * BUILT IN THERMOSTAT.
 * PROVIDE WITH FACTORY DISCONNECT SWITCH.
 * ALTERNATIVE MANUFACTURERS: REZNOR, MOORE.
 * CONTRACTOR SHALL REFER TO PLANS FOR QUANTITIES.

HVAC LEGEND & SYMBOLS	
	A. RECTANGULAR DUCT: * MANUAL OPPOSED BLADE DAMPER WITH LOCKING QUADRANT, LEVER OPERATOR, OF STEEL CONSTRUCTION. * LOUVERS & DAMPERS MODEL CD-600, KRUEGER MODEL 080-DM TYPE 2 OPERATION FOR LESS THAN 12" WIDE. B. ROUND DUCT: * ROUND BLADE CONTROL DAMPER OF STEEL CONSTRUCTION WITH MANUAL OPERATOR. * LOUVERS AND DAMPERS MODEL CD-600.
	* RECTANGULAR ELBOW WITH SINGLE THICKNESS TURNING VANES OF STEEL CONSTRUCTION.
	* CONSTRUCT ALL BRANCH CONNECTIONS WITH 45° FITTING PER SMACNA STANDARDS. * DIMENSION: L = 1/4"W, 4" MINIMUM.
	* SHEET METAL CONNECTIONS, INC. HIGH EFFICIENCY TAKEOFF WITH DAMPER AND LOCKING QUADRANT FOR ROUND DUCT TAKEOFFS FROM RECTANGULAR DUCTWORK. INCREASE MAIN DUCT SIZE AT FITTING TO ACCOMMODATE ITS INSTALLATION IF REQUIRED TO MEET SMACNA AND MANUFACTURERS INSTRUCTIONS. * DIMENSION: D = ROUND DUCT DIAMETER (R-1/4")
	* SUPPLY DUCT
	* RETURN DUCT
	* EXHAUST DUCT
	* SUPPLY DUCT RISER
	* SUPPLY DUCT DROP
	* ROUND SUPPLY DUCT RISER
	* ROUND SUPPLY DUCT DROP
	* FLEXIBLE DUCT EQUAL TO FLEXMASTER TYPE 3 INSULATED FLEXIBLE DUCT WITH ALUMINUM FOIL JACKET AND ALUMINUM FIBERGLASS POLYESTER LAMINATE LINER. INSTALL IN ACCORDANCE WITH SECTION 05 05 00 "HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE."
	SUPPLY DUCT
	RETURN DUCT
	EXHAUST DUCT
	* INDICATES HVAC EQUIPMENT
	* DUCT TRANSITION
	* INDICATES 3/4" UNDERDROUT DOOR
	* WALL MOUNTED THERMOSTAT
	* MOTORIZED DAMPER

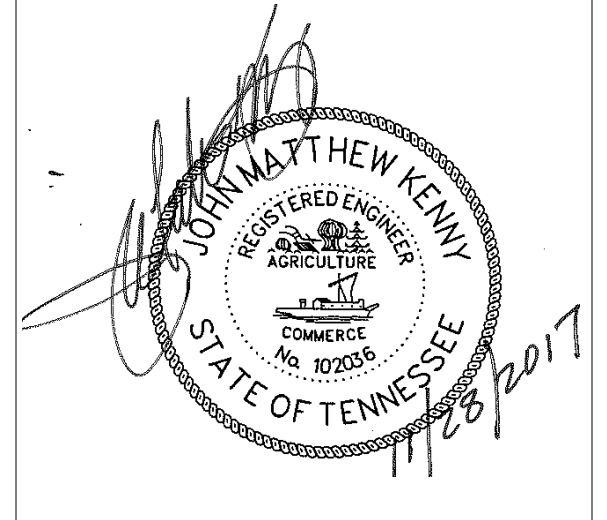
AIR DISTRIBUTION SCHEDULE					
SYM	SERVICE	DESCRIPTION	MATERIAL	MFG & MOD	ACCESSORIES & FEATURES
⊙ CD1	LOUVERED SUPPLY REGISTER	* FOUR-WAY DEFLECTION * FACE AIR VOLUME CONTROL	STEEL CONSTRUCTION WITH BAKED ENAMEL FINISH	HART & COOLEY MODEL 504	* OPPOSED BLADE DAMPER * NC < 35 BETWEEN 500-700 FPM
⊙ CD2	LOUVERED SIDEWALL SUPPLY REGISTER	* THREE-WAY DEFLECTION * FACE AIR VOLUME CONTROL	STEEL CONSTRUCTION WITH BAKED ENAMEL FINISH	HART & COOLEY MODEL 608M	* OPPOSED BLADE DAMPER * NC < 35 BETWEEN 500-700 FPM
⊙ RG1	LOUVERED CEILINGWALL RETURN FILTER GRILLE	* FREE PATTERN	STEEL WITH BAKED ENAMEL FINISH	HART & COOLEY MODEL 673	* NC < 35 * FACE VELOCITY TO BE 500 FPM MAXIMUM
	LOUVERED WALL TRANSFER GRILLE	* FREE PATTERN	STEEL WITH BAKED ENAMEL FINISH	HART & COOLEY MODEL 672	* NC < 35 * FACE VELOCITY TO BE 500 FPM MAXIMUM

* SEE REFLECTED CEILING PLANS FOR LAY-AN, SURFACE, OR HANGING TYPE

GENERAL NOTES:	
1.	CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS BEFORE FABRICATION OF H.V.A.C. COMPONENTS OR PURCHASE OF EQUIPMENT.
2.	CONTRACTOR SHALL COORDINATE ALL OTHER TRADES WITH THE INSTALLATION OF H.V.A.C. SYSTEM.
3.	H.V.A.C. LEGEND MAY CONTAIN SYMBOLS AND ABBREVIATIONS NOT USED ON THIS SPECIFIC PROJECT. LEGEND SHALL BE USED FOR REFERENCE PURPOSES.
4.	CONTRACTOR IS RESPONSIBLE FOR THE COMPLETE H.V.A.C. SYSTEM AS IT RELATES TO DRAWINGS AND SPECIFICATIONS.
5.	CONTRACTOR IS REQUIRED TO REVIEW ARCHITECTURAL PLANS FOR RATED ASSEMBLIES. CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF FIRE AND/OR SMOKE DAMPERS IN ACCORDANCE WITH THE SPECIFICATIONS AND APPLICABLE BUILDING CODES.
6.	*STANDARD ACCESSORIES OR CONTROLS ON H.V.A.C. EQUIPMENT SHALL BE THOSE WHICH MANUFACTURER PROVIDES ON THE MAJORITY OF STOCK MERCHANDISE.
7.	BRAND NAMES AND MODEL NUMBERS ARE PROVIDED TO ESTABLISH A LEVEL OF QUALITY AND PERFORMANCE. EQUAL TO ITEMS MAY BE SUBMITTED FOR CONSIDERATION BY THE ENGINEER AND OWNER.
8.	THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND INDICATE THE APPROXIMATE ROUTING OF PIPING AND DUCTWORK. CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES. MINOR OFFSETS AND ADJUSTMENTS SHALL BE PROVIDED WHERE REQUIRED AT NO ADDITIONAL COST TO THE OWNER.
9.	COORDINATE CEILING DIFFUSERS AND REGISTER LOCATIONS WITH ARCHITECT'S REFLECTED CEILING PLAN.
HVAC NOTES:	
1.	THE CONTRACTOR IS RESPONSIBLE TO PROVIDE SUPPLY DUCT AS FOLLOWS: DUCTWORK TO BE DESIGNED, BRACED, AND SUPPORTED IN ACCORDANCE WITH SMACNA FOR LOW PRESSURE APPLICATIONS, SEAL CLASS C PER SMACNA AND SUPPORTED IN ACCORDANCE WITH SMACNA FOR LOW PRESSURE APPLICATIONS, SEAL CLASS C PER SMACNA.
2.	ALL DUCT ELBOWS SHALL BE 1.5 R/O, UNLESS NOTED OTHERWISE.
3.	MANUAL OPPOSED BLADE DAMPERS SHALL BE PLACED IN EACH BRANCH OF SUPPLY DUCTWORK FOR FINAL BALANCING PURPOSES. BALANCING DEVICES SHALL BE IN ACCORDANCE WITH IMC (2012) 603.18.
4.	CONTRACTOR SHALL FIELD VERIFY ALL DUCT ROUTING DIMENSIONS AND TERMINAL DEVICES TO AVOID INTERFERENCES. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL SUPPORTS FOR PIPING AND DUCTWORK.
5.	THE MECHANICAL SYSTEMS SHALL HAVE TESTING AND BALANCING PERFORMED BY THE CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEMS). THE CONTRACTOR SHALL PREPARE AND SUBMIT A COMPLETE REPORT IDENTIFYING ALL MAJOR PIECES OF HVAC EQUIPMENT AND AIR DISTRIBUTION DEVICES WITH PERFORMANCE AND FINAL AIR BALANCE OF EACH. SUBMITTAL SHALL BE PRESENTED TO THE ENGINEER AND BUILDING OWNER OR TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL.
6.	THERMOSTATS SHALL BE MOUNTED 48" ABOVE FINISHED FLOOR UNLESS INDICATED OTHERWISE.
7.	PROVIDE ACCESS DOOR (24"x24" MIN) AS REQUIRED FOR DAMPER AND CONTROL ACCESS IN WALLS AND CEILINGS.
8.	THE PROJECT IS TO FULLY CONFORM WITH THE INCLUDED 2015 ENTERPRISE GREEN COMMUNITIES CRITERIA CHECKLIST AND ENERGY STAR v3 REV 08 CRITERIA. SHOULD A CHECKLIST EXIST IN THE CONSTRUCTION DOCUMENTS, THE 2015 ENTERPRISE GREEN COMMUNITIES CRITERIA CHECKLIST AND ENERGY STAR v3 REV 08 SHALL PREVAIL. THE HVAC CONTRACTOR SHALL PERFORM THE LOAD CALCULATIONS, DESIGN SYSTEM SIZING, INSTALL AND COMMISSION AS PER THE ENERGY STAR v3 REV 08 CRITERIA.
DUCT SEALING:	
A.	PRESSURE SENSITIVE TAPE USED AS THE PRIMARY SEALANT IS CERTIFIED AND SHALL COMPLY WITH UL-181A OR UL-181B.
B.	PROVIDE LONGITUDINAL SEAMS ON RIGID DUCT AND TRANSVERSE SEAMS ON ALL DUCTS.
C.	PROVIDE MECHANICAL FASTENERS AND SEALANTS SHALL BE USED TO CONNECT DUCTS AND AIR DISTRIBUTION DEVICES.
PENETRATIONS:	
1.	SLEEVES SHALL BE INSTALLED WHERE DUCTS, LOUVERS, OR PIPING PENETRATE NON-RATED EXTERIOR WALLS, PARTITIONS, FLOORS, OR ROOF. PACK AROUND SLEEVES AND SEAL WEATHER TIGHT. INSTALL FLASHING AS REQUIRED. SLEEVES SHALL BE MINIMUM 16 GAUGE GALVANIZED STEEL AND SHALL BE FIRMLY SET IN BUILDING STRUCTURE.
SUBMITTALS AND ACCEPTANCE:	
1.	UNLESS OTHERWISE INSTRUCTED, THE CONTRACTOR SHALL SUBMIT THREE (3) SETS OF HVAC SHOP DRAWINGS TO THE PROJECT MANAGER WHO SHALL THEN RELAY THEM TO THE DESIGN ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE PURCHASE OF EQUIPMENT.
2.	OPERATION AND MAINTENANCE MANUALS FOR ALL MECHANICAL EQUIPMENT SHALL BE COMPILED INTO A THREE RING BINDER AND TURNED OVER TO BUILDING OWNER UPON PROJECT COMPLETION.
ELECTRIC SPLIT SYSTEM HEAT PUMP SEQUENCE (AHU-1,2,3,4)	
OCCUPIED MODE:	
OCCUPANCY MODE OF THE HEAT PUMP WILL BE CONTROLLED BY A SEVEN DAY PROGRAMMABLE THERMOSTAT. DURING THE OCCUPIED MODE THE SUPPLY FAN SHALL OPERATE CONTINUOUSLY.	
UNOCCUPIED MODE:	
DURING THE UNOCCUPIED MODE THE SUPPLY FAN SHALL CYCLE WITH HEATING OR COOLING TO MAINTAIN UNOCCUPIED ZONE SET POINTS.	
HEAT PUMP CONTROL:	
WHEN THE ZONE TEMPERATURE FALLS BELOW THE ZONE TEMPERATURE SET POINT THE REVERSING VALVE (S) WILL BE INDEXED TO PROVIDE HEATING WHEN THE COMPRESSOR IS RUNNING. WHEN THE ZONE TEMPERATURE RISES ABOVE THE ZONE TEMPERATURE SET POINT THE REVERSING VALVE (S) WILL BE INDEXED TO PROVIDE COOLING MODE WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW THE LOCKOUT SET POINT. THE COMPRESSOR WILL BE LOCKOUT FROM HEATING MODE WHEN THE OUTDOOR AIR TEMPERATURE IS ABOVE THE LOCKOUT SET POINT.	
MOTORIZED DAMPER CONTROL:	
POWER OPEN ON THERMOSTAT OCCUPANCY SCHEDULE. PROVIDE DISCONNECT SWITCH FOR DAMPER POWER W/ LABEL.	



505 Market St Suite 300 Knoxville, TN 37902
 1 865 934 1915 F 865 546 0242
 bma1915.com



PROJECT NUMBER
166200

PROJECT NAME
FIVE POINTS - PHASE 3

OWNER
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

PROJECT ADDRESS
**304 S. KYLE STREET
 KNOXVILLE, TN 37915**

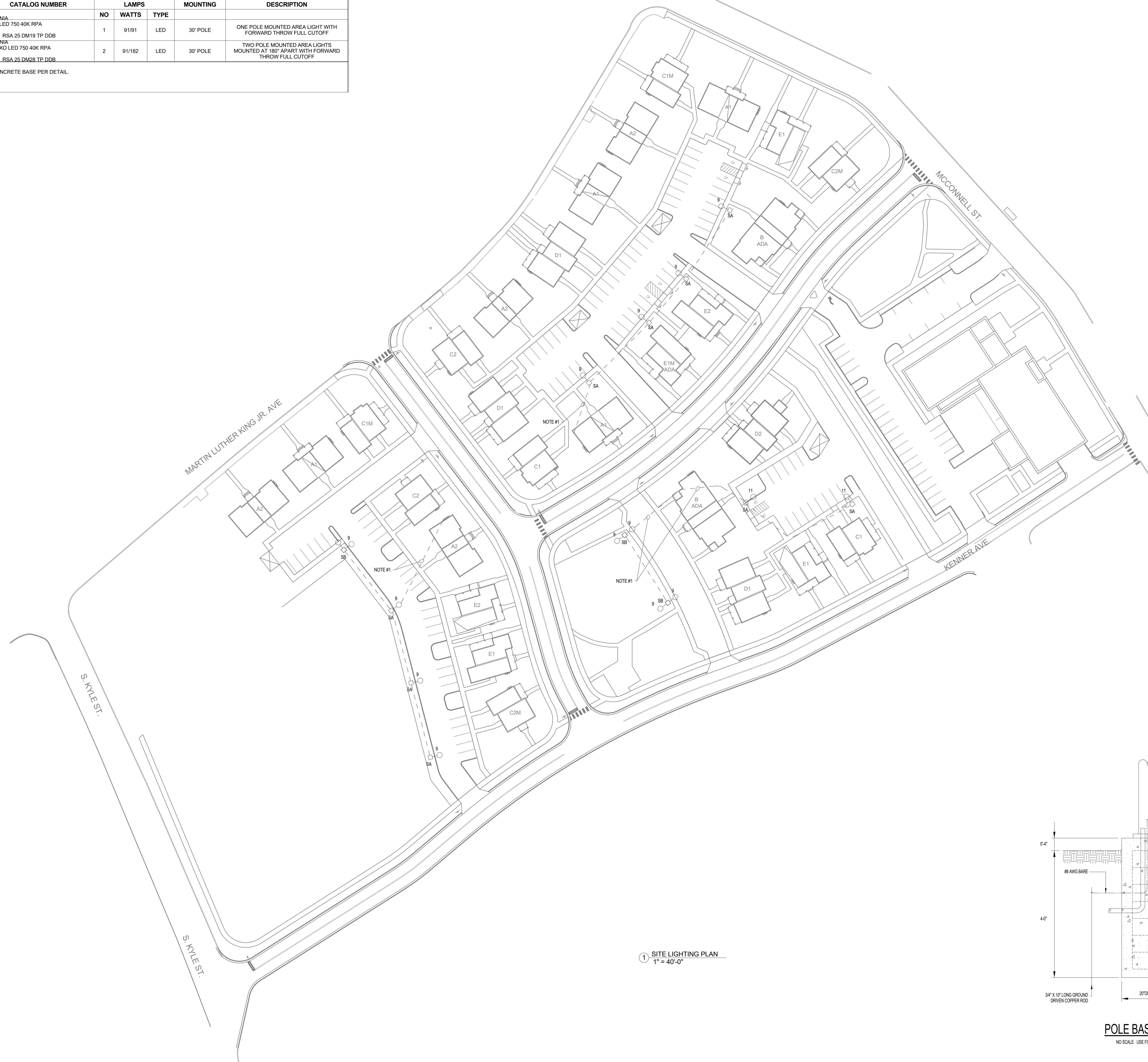
PARTNER-IN-CHARGE	MTD
PROJECT MANAGER	ELD
DRAWN BY	WAR
REVIEWED BY	JMK
ISSUE DATE	10-27-2017
REVISIONS	
3	Addendum 2 11/28/17

M001
 MECHANICAL NOTES AND LEGEND

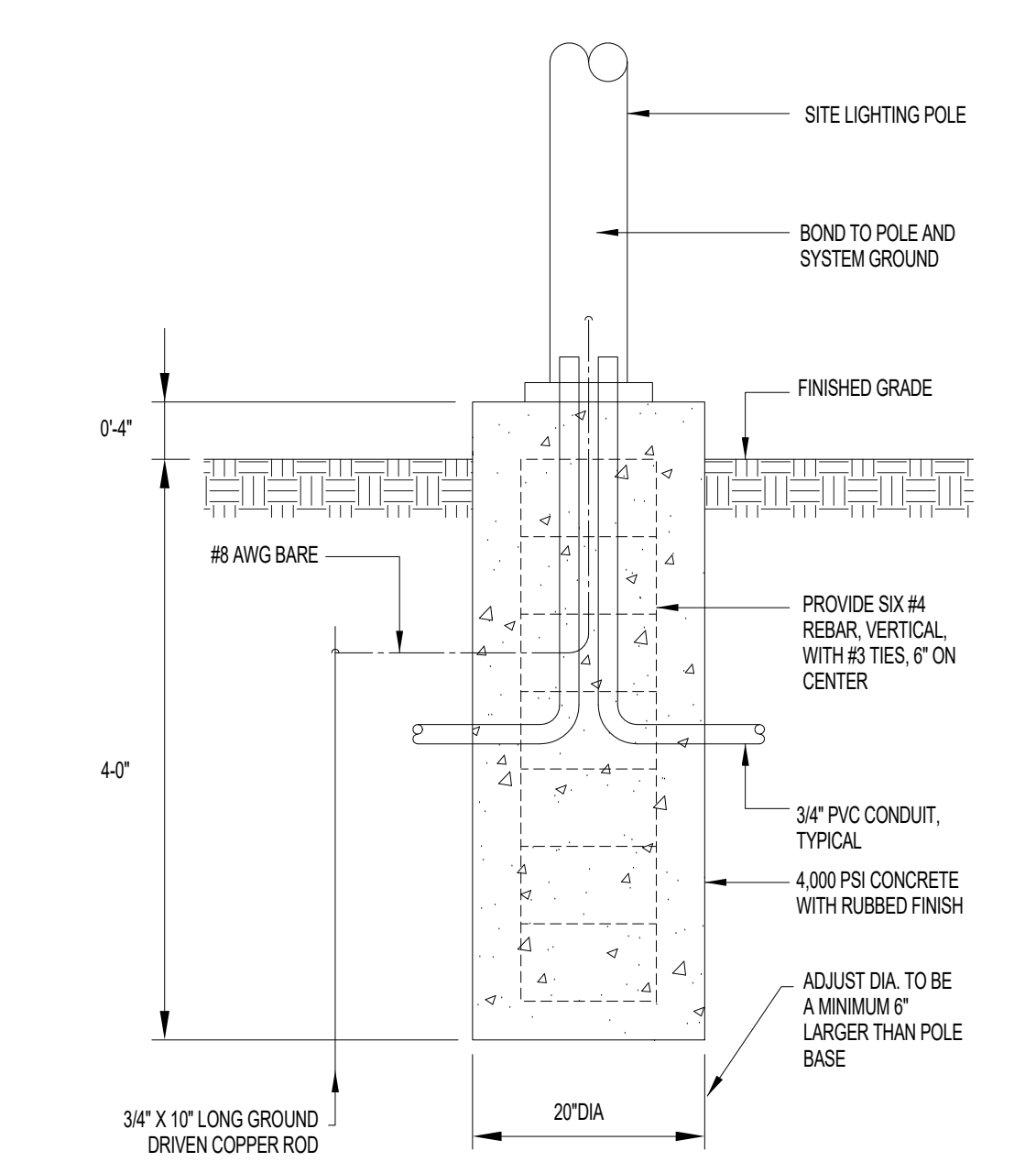
SITE LIGHTING FIXTURE SCHEDULE					
SYM	CATALOG NUMBER	LAMPS		MOUNTING	DESCRIPTION
		NO	WATTS		
SA	LITHONIA DSXO LED 750 40K RPA DDB POLE: RSA 25 DM19 TP DDB	1	91/91	LED 30' POLE	ONE POLE MOUNTED AREA LIGHT WITH FORWARD THROW FULL CUTOFF
SB	LITHONIA (2) DSXO LED 750 40K RPA DDB POLE: RSA 25 DM28 TP DDB	2	91/182	LED 30' POLE	TWO POLE MOUNTED AREA LIGHTS MOUNTED AT 180° APART WITH FORWARD THROW FULL CUTOFF

NOTES:
1. PROVIDE CONCRETE BASE PER DETAIL.

REFERENCE NOTES:
1. EXTEND TO SERVICE LOCATION AS SHOWN AND CONNECT PHOTOCELL TO SERVE SITE LIGHTING.



1 SITE LIGHTING PLAN
1" = 40'-0"



POLE BASE DETAIL
NO SCALE. USE FOR SA

oma
BARBER McMURRY
architects since 1915

505 Market St Suite 300 Knoxville, TN 37902
t 865.934.1915 f 865.546.0242
bma1915.com



PROJECT NUMBER
166200

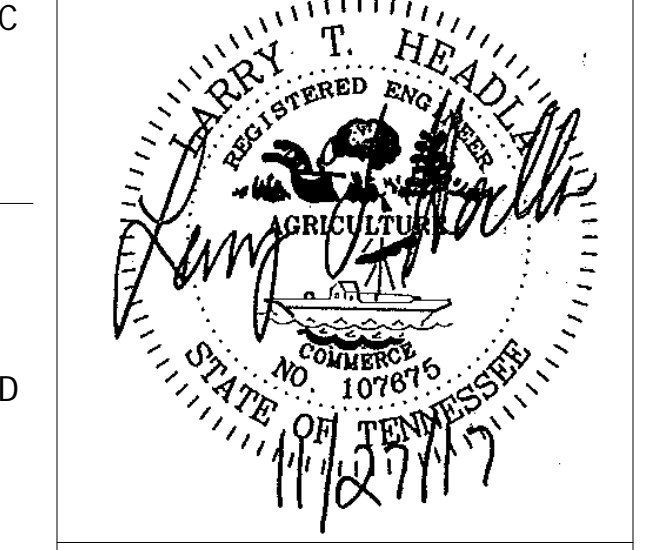
PROJECT NAME
FIVE POINTS - PHASE 3

OWNER
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

PROJECT ADDRESS
**304 S. KYLE STREET
KNOXVILLE, TN 37915**

PARTNER-IN-CHARGE	MTD
PROJECT MANAGER	ELD
DRAWN BY	ALH
REVIEWED BY	LTH
ISSUE DATE	10.27.2017
REVISIONS	
2	Addendum 2 11/27/17

ES101
SITE LIGHTING PLAN



PROJECT NUMBER
166200

PROJECT NAME
FIVE POINTS - PHASE 3

OWNER
KNOXVILLE'S COMMUNITY DEVELOPMENT CORPORATION

PROJECT ADDRESS
**304 S. KYLE STREET
 KNOXVILLE, TN 37915**



SITE POWER LEGEND	
SYMBOL	DESCRIPTION
	KUB SINGLE PHASE TRANSFORMER, PROVIDE PAD OR VAULT AS DIRECTED BY KUB.
	FLUSH PULLBOX FOR PRIMARY, PROVIDED BY CONTRACTOR, AS DIRECTED BY KUB.
	UNDERGROUND CONDUIT

GENERAL SITE POWER NOTES:
 1. PRIMARY CONDUIT SHALL BE PROVIDED BY OTHERS AS PART OF SEPARATE SITE INFRASTRUCTURE PROJECT.
 2. SECONDARY - REFER TO RISER DIAGRAMS FOR RESPECTIVE BUILDING TYPES.

REFERENCE SITE POWER NOTES:
 1. CONNECT HOT BOX, 120 VOLTS, 20 AMP. EXTEND 1", 2#10 TO HOUSE PANEL AT LOCATION SHOWN AND CONNECT TO SPARE 20A BREAKER.

1 SITE POWER PLAN - ALTERNATE
 1" = 40'-0"

BUILDING SERVICE SIZE		
BUILDING TYPE	NUMBER OF UNITS	SERVICE SIZE
A1	5	400 AMP
A2	5	400 AMP
B	5	400 AMP
C1	2	300 AMP
C2	2	300 AMP
D1	3	400 AMP
D2	3	400 AMP
E1	2	250 AMP
E2	2	250 AMP

NOTES:
 1. ALL SERVICES SHALL BE 120/240V, SINGLE PHASE, THREE WIRE SERVICE
 2. BUILDINGS A1, A2, B, AND D2 WILL HAVE ADDITIONAL METER FOR HOUSE PANELS.

PARTNER-IN-CHARGE	MTD
PROJECT MANAGER	ELD
DRAWN BY	ALH
REVIEWED BY	LTH
ISSUE DATE	11/27/17
REVISIONS	
2	Addendum 2 11/27/17

