

NEW ADDITION for Mr. and Mrs. DWYER STIRLING, NJ

PROJECT DIRECTORY

ARCHITECTS

RAYMOND E. O'BRIEN R.A., INC.
ARCHITECTURE

P.O. BOX 361 19 MAIN ST. BLAIRSTOWN, NJ. 07825
PHONE: (908) 362-5010
FAX : (908) 362-8830
E-MAIL: RAY@REOBRA.COM

8-14-19
FOR REVIEW
9-2-20
ISSUED FOR PERMIT

DATE
2-1-18 SCALE
NOTED

CADD No.
MASTER BY
REOB/SR

GENERAL SYMBOLS

- NEW OR REQUIRED POINT ELEVATION
- EXISTING POINT ELEVATION
- EXISTING CONTOURS
- NEW CONTOURS
- TEST BORING
- LEVEL LINE
- GLAZING TYPE
- DOOR NUMBER
- ROOM DESIGNATION
- ENLARGED DETAIL
- ENLARGED PLAN
- REVISION NUMBER LATEST REVISION ENCLOSED BY CLOUD
- SECTION MARKS
- SECTION OCCURS ON DIFF. SHEET
- SECTION OCCURS ON SAME SHEET
- SECTION COMPLETELY THROUGH ITEM
- CENTER LINES; FLOOR LINES IN EXTERIOR ELEVATIONS PROJECTED LINES
- PROPERTY LINES; BOUNDARY LINES
- BREAK LINES
- ELEVATION (ON SAME SHEET)
- ELEVATION (ON DIFFERENT SHEET)
- TRUE NORTH (VARIES)
- PLAN NORTH (SHEET NORTH)
- NORTH ARROW
- FIRE EXTINGUISHER

MATERIAL SYMBOLS

- EARTH
- GRAVEL/CRUSHED STONE
- FLEXIBLE BASE PAVING
- SAND
- CONCRETE
- BRICK
- STONE, GRANITE
- MARBLE
- CONC. (EXPOSED AGG.)
- CONCRETE MASONRY UNITS (C.M.U.)
- STRUCTURAL CLAY TILE
- PRE-CAST CONCRETE
- STEEL
- ALUMINUM
- BRASS; BRONZE
- PLASTER; STUCCO
- INCLIN.
- CMU
- EXISTING WALL
- EXISTING WALL TO BE REMOVED
- INSULATION (ROOF)
- INSULATION (BATT OR BLANKET)
- CEMENTIOUS ROOF FILL, GYPSUM, FIREPROOFING
- ACOUSTIC TILE OR BOARD
- CARPET
- RESILIENT FLOORING
- TERRAZZO
- TILE (CERAMIC OR GLAZED)
- W.P. ELASTOMERIC MEMBRANE
- RUBBER OR NEOPRENE
- SHEET METALS
- WOOD (STRUCTURAL)
- WOOD BLOCKING
- PLYWOOD
- WOOD (FINISHED)
- GLASS
- GYPSUM WALL BOARD

CODE & ZONING

NEW ADDITION CONSTRUCTED ON BLOCK 3101 LOT 13, STIRLING, NJ
INTERNATIONAL RESIDENTIAL CODE 2018 - N.J. EDITION
ZONE: RESIDENTIAL USE GROUP

1ST FLOOR LIVING SPACE = 1853 SF.
1ST FLOOR ADDITION LIVING SPACE = 380 SF.
1ST FLOOR RENOVATED AREA LIVING SPACE = 1250 SF.

BASEMENT ADDITION LIVING SPACE = 380 SF.
% OF INCREASE: 20%

VOLUME 6,688 CU. FT.

CONSTRUCTION CLASSIFICATION: 5B (UNPROTECTED FRAME)

LOADING: ROOF 40%SF (30LL + 10DL)
ATTIC 30%SF (20LL + 10 DL)
FLOORS 53%SF (40LL + 13DL)

CRAWL SPACE VENTILATION = W/ 1/4 MESH, 16F PER 1506F. W/OPERABLE VENTS
ROOF VENTILATION: 1/300 OF AREA VENTILATED, W/50% HIGH 50% LOW
NEW SMOKE ALARMS TIED TO EXISTING SYSTEM

INDEX OF DRAWINGS

- A1 TITLE / CODE SHEET
- A2 SPECIFICATIONS
- A2A LVL AND LEDGER BOARD DETAILS
- A3 FOUNDATION PLAN
- A4 FLOOR PLANS
- A5 ELEVATIONS
- A6 DETAILS
- A7 DETAILS
- A8 DETAILS

REScheck Software Version 4.6.5 Compliance Certificate

Project ADDITION FOR DWYER

Energy Code: 2015 IECC
Location: Summit, New Jersey
Construction Type: Single-family Addition
Project Type: Addition
Climate Zone: 4 (5894 HDD)
Permit Date:
Permit Number:

Construction Site: 58 DELAWARE AVENUE STIRLING, NJ
Owner/Agent: MR. AND MRS. DWYER
Designer/Contractor: RAYMOND E. O'BRIEN, R.A. RAYMOND E. O'BRIEN, R.A., INC. 19 MAIN STREET P.O. BOX 361 BLAIRSTOWN, NJ 07825 908-362-5010 RAY@REOBRA.COM

Compliance: Passes using UA trade-off
Compliance: 1.9% Better Than Code Maximum UA: 106 Your UA: 104 Maximum SHGC: 0.40 Your SHGC: 0.26
The % Better or Worse Than Code index reflects how close to compliance the house is based on code trade-off rules. IT DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Ceiling 1: Cathedral Ceiling	288	38.0	0.0	0.027	8
Wall 1: Wood Frame, 16" o.c.	400	19.0	0.0	0.060	14
Window 1: Metal Frame with Thermal Break: Double Pane with Low-E SHGC: 0.28	76			0.300	23
Door 1: Glass SHGC: 0.23	84			0.300	25
Basement Wall 1: Solid Concrete or Masonry Wall height: 11.0' Depth below grade: 8.0' Insulation depth: 11.0'	288	0.0	5.0	0.098	24
Window 2: Wood Frame: Double Pane with Low-E SHGC: 0.29	20			0.300	6
Door 2: Solid	21			0.200	4

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2015 IECC requirements in REScheck Version 4.6.5 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Raymond E. O'Brien R.A. [Signature] 9/11/19
Name - Title Date

Project Title: ADDITION FOR DWYER Report date: 09/11/19
Data filename: C:\Users\Owner\Documents\REScheck\REScheck\2019-60 DWYER.rck Page 1 of 1

PROJ. No.

2019-60

9-2-2020 ISSUED FOR PERMIT

A-1

BLOCK 3101 LOT 13
NEW ADDITION for
MR. AND MRS. DWYER
58 DELAWARE AVE
STIRLING, NJ
CODE / TITLE SHEET

PROJECT No.
2019-60

SHEET No.
A-1

O'BRIEN ARCHITECTS INC.
ARCHITECTURE plus
P.O. BOX 361 19 MAIN ST. BLAIRSTOWN, NEW JERSEY 07825
TEL: (908) 362-5000
FAX: (908) 362-8830
REOBRA.COM

RAYMOND E. O'BRIEN R.A.
N.J. A1 12/06

ENFORCING CODE IRC 2018 – NJ EDITION

GENERAL NOTES

- THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE COOPERATION AND COORDINATION BETWEEN VARIOUS TRADES AND SUBCONTRACTORS WHOSE WORK IS DEPENDENT UPON ONE ANOTHER.
- THE GENERAL CONTRACTOR SHALL FULLY INFORM EACH TRADE AND SUBCONTRACTOR OF THE RELATION OF HIS WORK TO OTHER SUBTRADES' WORK.
- THE GENERAL CONTRACTOR SHALL REQUIRE EACH TRADE OR SUBCONTRACTOR WHOSE WORK IS EXECUTED IN RELATION TO PRIOR WORK TO CAREFULLY INSPECT THIS PRIOR WORK AND SUBMIT WRITTEN NOTICE OF ANY DEFECTS, IMPROPER WORKMANSHIP OR MATERIALS OR OTHER CONDITIONS THAT WOULD AFFECT THE SATISFACTORY EXECUTION AND PERMANENCY OF HIS WORK. NO FURTHER WORK SHALL BE EXECUTED UNTIL ANY SUCH DEFECTS OR CONDITIONS HAVE BEEN CORRECTED OR AN AGREEMENT REACHED REGARDING DEFECTS WHICH MAY DEVELOP DUE TO CONDITIONS SO NOTED. THE ABSENCE OF ANY SUCH NOTIFICATION WILL BE CONSTRUED AS AN ACCEPTANCE BY THESE TRADES OR SUBCONTRACTORS OF ALL PRIOR RELATED WORK; AND LATER CLAIMS OF DEFECTS IN THIS WORK WILL NOT IN ANY WAY RELIEVE THESE TRADES OR SUBCONTRACTORS FROM RESPONSIBILITY FOR CORRECTING THEIR WORK.
- BEFORE ORDERING ANY MATERIAL OR DOING ANY WORK THE CONTRACTOR SHALL VERIFY MEASUREMENTS OF THE WORK AND BE RESPONSIBLE FOR THE CORRECTNESS OF SAME. HE MUST ALSO GIVE NOTIFICATION OF ANY DIFFERENCE WHICH MAY BE FOUND BEFORE PROCEEDING WITH THE WORK.
- CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR INITIATION AND MAINTENANCE OF PROTECTIVE REQUIREMENTS SPECIFIED.
- CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY LOSS OR DAMAGE CAUSED BY OPERATIONS OR ANY TRADE TO THE WORK, OR TO MATERIALS, TOOLS AND EQUIPMENT OF ONE ANOTHER; TO ADJACENT PROPERTY AND EXISTING STRUCTURES; AND TO PERSONS, AND MAKE GOOD ANY LOSS, DAMAGE OR INJURY WITHOUT COST TO THE OWNER.
- ALL CONTRACTORS SHALL CONFORM TO ALL MUNICIPAL ORDINANCES AND REGULATIONS APPLICABLE TO THE USE OF STREETS, SIDEWALK AREAS, WORKTIMES, AND NOISE.
- ALL CONTRACTORS SHALL COOPERATE WITH LOCAL AND OTHER GOVERNMENTAL OFFICIALS FOR INSPECTIONS NECESSARY BY PROVIDING ASSISTANCE AND FACILITIES THAT WILL EXPEDITE SUCH INSPECTIONS.
- ANY MANUFACTURER/CONTRACTOR FAILING TO SUBMIT NECESSARY INFORMATION REQUIRING PRIOR WORK BY OTHER TRADES (WHICH SPECIFICALLY FACILITATES INSTALLATION OF THEIR PRODUCT) SHALL BEAR ALL COSTS INVOLVED TO REMEDY SAID SITUATION.
- ALL WORKMANSHIP, MATERIALS AND CONSTRUCTION RELATING TO THE PROJECT SHALL BE IN COMPLIANCE WITH AND CONFORM TO ALL GOVERNING BUILDING CODES AND OTHER APPLICABLE CODES.
- SOLID BLOCKING SHALL BE PROVIDED BEHIND ALL WALL-MOUNTED ACCESSORIES AND HANDRAILS OCCURRING IN GYPSUM BOARD.
- WHERE TERMINATION STRIPS ARE REQUIRED DUE TO CHANGES IN SPECIFIED OR SELECTED FLOOR FINISHES, TERMINATION STRIPS SHALL BE LOCATED UNDER THE DOOR (IN A CLOSED POSITION) SO THAT THE TWO DIFFERENT FLOOR FINISHES ARE NOT EXPOSED TO VIEW IN THE SAME ROOM.
- ALL THROUGH-SLAB PENETRATIONS SHALL BE FILLED WITH NON-SHRINK GROUT, OR SAFING IMMEDIATELY UPON INSTALLATION OF CONDUIT, SLEEVES AND PIPING, ETC. ALL VERTICAL VOIDS AND CHASIS RESULTING FROM "BOXING-OUT" THE FRAME, SHALL BE FIRESTOPPED AT EACH FLOOR AROUND THE ISOLATED FLUE (E.G. FIREPLACE CHIMNEY).
- ALL EXTERIOR DOORS SHALL HAVE THRESHOLDS AND BE FITTED WITH APPROVED WEATHER-STRIPPING. ALL GLAZING SHALL BE INSULATING GLASS.
- PAINT NOTE:
ALL FINISH COATS, INCLUDING PAINTS AND VARNISHES SHALL COMPLY WITH NEW JERSEY REGULATIONS – colors by owner
- ALL DIMENSIONS SHOWN ARE TO STUD LINES.
- ALL DRYWALL IS TO BE TAPED, SPACKLED AND SANDED (DOUBLE). ALL PATCHING SHALL MATCH THE ADJOINING SURFACE OF EXISTING WALL, WHERE APPLICABLE.

- RUN RESILIENT FLOORING BENEATH ALL CABINETS, WALL-TO-WALL.
- ALL GYPSUM BOARD BEHIND CERAMIC TILE (OR IN WET AREAS) WILL BE WATER RESISTANT.
- ALL SURFACES SHALL BE PREPARED BY THE CONTRACTOR TO PROVIDE FOR A FLUSH, SEAMLESS INSTALLATION BETWEEN NEW AND EXISTING. ALL JOINTS BETWEEN DISSIMILAR MATERIALS SHALL BE CAULKED.

GENERAL SPECIFICATIONS

- DESIGN LOADS (RESIDENTIAL) IRC 2015 MIN. LIVE LOADS UNLESS OTHERWISE DESIGNATED ON PLANS:
ATTICS WITHOUT STORAGE = 10 LBS/SF
ATTICS WITH STORAGE = 20 LBS/SF
ROOMS OTHER THAN SLEEPING ROOMS = 40 LBS/SF
SLEEPING ROOMS = 30 LBS/SF
STAIRS = 40 LBS/SF (300 LB POINT LOAD)
GUARDRAILS AND HANDRAILS = 200 LBS/SF
SOIL BEARING CAPACITY = 3,500 PSF MIN.

ANY CHANGES IN LIVE LOADS, DEAD LOADS, WIND LOADS, LATERAL LOADS, AND ANY SPECIALTY LOADING CONDITIONS MUST BE CONFIRMED WITH THE ARCHITECT BEFORE CONSTRUCTION, AND ADJUSTMENTS TO PLANS MADE ACCORDINGLY.
- STAIRWAYS TO HAVE A MINIMUM WIDTH OF 36 INCHES. TREADS TO BE A MINIMUM OF 9 INCHES; AND A RISE HEIGHT MAXIMUM OF 8 1/4 INCHES.
- SMOKE ALARMS ARE TO BE LOCATED IN EACH SLEEPING ROOM, OUTSIDE OF EACH SEPARATE SLEEPING ROOM CLOSE TO DOOR WAY AND ONE ON EACH FLOOR. ALL ALARMS ARE TO BE INTERCONNECTED.
- DRAFTSTOPPING REQUIRED: WHERE THERE IS VISABLE SPACE BOTH ABOVE AND BELOW THE CONCEALED SPACE OF A FLOOR/CEILING ASSEMBLY, DRAFTSTOPS SHALL BE INSTALLED SO AREA OF CONCEALED SPACE DOES NOT EXCEED 1000 SF. DRAFTSTOPPING SHALL DIVIDE THE CONCEALED SPACE INTO APPROXIMATELY EQUAL AREAS, WHERE THE ASSEMBLY IS ENCLOSED BY A FLOOR MEMBRANE ABOVE AND A CEILING MEMBRANE BELOW DRAFTSTOPPING SHALL BE PROVIDED IN FLOOR/CEILING ASSEMBLIES UNDER THE FOLLOWING CIRCUMSTANCES:
A. CEILING IS SUSPENDED UNDER THE FLOOR FRAMING.
B. FLOOR FRAMING IS CONSTRUCTED OF TRUSS-TYPE OPEN-WEB OR PERFORATED MEMBERS.
DRAFTSTOPPING MATERIALS SHALL NOT BE LESS THAN 1/2 INCH GYPSUM BOARD, 3/8 INCH WOOD STRUCTURAL PANELS, 3/8 INCH TYPE 2-M-W PARTICLEBOARD OR OTHER APPROVED MATERIALS ADEQUATELY SUPPORTED. DRAFTSTOPPING SHALL BE INSTALLED PARALLEL TO THE FLOOR FRAMING MEMBERS UNLESS OTHERWISE APPROVED BY THE BUILDING OFFICIAL. THE INTEGRITY OF ALL DRAFTSTOPS SHALL BE MAINTAINED.
- FIREBLOCKING REQUIRED: FIREBLOCKING SHALL BE PROVIDED TO CUT OFF ALL CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) AND TO FORM EFFECTIVE FIRE BARRIER BETWEEN STORES, AND BETWEEN A TOP STORY AND THE ROOF SPACE. FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAME CONSTRUCTION IN THE FOLLOWING LOCATIONS:
1. IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVEL AND AT 10 FOOT INTERVALS BOTH VERTICAL AND HORIZONTAL. BATTIS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NONROD MATERIALS SHALL BE ALLOWED AS FIREBLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROWS OF STUDS OR STAGGERED STUDS.
2. AT ALL INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.
3. IN CONCEALED SPACES BETWEEN STAR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R314.8.
4. AT OPENINGS AROUND VENTS, PIPES, AND DUCTS AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.
5. FOR THE FIREBLOCKING OF CHIMNEYS AND FIREPLACES, SEE SECTION R1001.12.
6. FIREBLOCKING OF CORNICES OF A TWO-FAMILY DWELLING IS REQUIRED AT THE LINE OF DWELLING UNIT SEPARATION.

SPECIAL CONDITIONS

INSTALL 5/8" FIRECODE GYPSUM BOARD AT THE FOLLOWING LOCATIONS:

- BASEMENT CEILING: OVER FUEL FIRED MECHANICAL EQUIPMENT AND EXTENDING 3'-0" BEYOND ALL EQUIPMENT - 5/8" FIRECODE X GYPSUM BOARD
- ATTACHED GARAGE: ALL COMMON WALLS AND FLOOR CEILING ASSEMBLIES BETWEEN HOUSE AND GARAGE. INSTALL LAYER OF 5/8" FIRECODE ON WALLS ADJACENT TO A LIVING SPACE AND TWO LAYERS ON CEILING BELOW LIVING SPACE. TAPE AND SPACKLE ALL JOINTS. ALL DOORS BETWEEN GARAGE AND HOUSE TO HAVE 45 MIN. RATING. ATTIC DOORS TO BE A MINIMUM OF 22" X 30" (SEE PLANS FOR LOCATION). INSTALL GUARD AND HANDRAILS AT ALL STEPS OR STAIRS WITH 3 OR MORE TREADS.
- ALL LISTED REQUIREMENTS SHALL APPLY, UNLESS OTHERWISE NOTED IN THE PLANS. THE GREATER REQUIREMENTS SHALL APPLY TO THE CONSTRUCTION.
- ALL SITE DRAINAGE, SITE UTILITY, SITE ENGINEERING REQUIREMENTS AND DESIGN SHALL BE PROVIDED UNDER SEPARATE COVER BY A CERTIFIED P.E.

CONCRETE & FOUNDATIONS

- FOOTINGS TO REST WITH A MINIMUM BEARING CAPACITY OF 3,500 P.S.F.
- ALL CONCRETE TO BE 3,000 P.S.I. AT 28 DAYS; ALL EXTERIOR CONCRETE SHALL BE AIR-ENTRAINED.
- ALL CONCRETE SLABS TO BE REINFORCED WITH 6X6, W2.9xW2.9 WWF FIBER MESH CAN BE SUBSTITUTED.
- ALL EXTERIOR CONCRETE MASONRY WALLS SHALL RECEIVE TWO COATS OF CEMENT PARING.
- ALL REINFORCING STEEL FOR CONCRETE SHALL COMPLY WITH ASTM SPECIFICATION A-615 GRADE 60.
- ALL CONCRETE PORCH SLABS SHALL BE FLASHED TIGHTLY BETWEEN HOUSE AND SLAB.
- ALL CONCRETE PORCH AND GARAGE FLOOR SLABS SHALL PITCH FOR POSITIVE DRAINING AWAY FROM THE HOUSE.
- ALL CONCRETE SLAB HAUNCHES SHALL BE DOWELED TO FOUNDATION WALLS.
- FILL HOLLOW CONCRETE MASONRY UNITS (CMU) SOLID AT HAUNCHED SLAB LOCATIONS; ALL CMU'S SHALL BE SOLID WHERE WALL THICKNESS IS CHANGED IN THE VERTICAL PLANE.
- FILL HOLLOW CONCRETE MASONRY UNITS SOLID UNDER ALL ORDER BEARING POINTS TO 12" ON EACH SIDE OF ORDER. USE STEEL BEARING PLATES AS SHOWN.
- SLABS ON GROUND WITH TURNED DOWN FOOTINGS OR MONOLITHICALLY SLAB AND FOOTING SHALL HAVE (1) NO. 5 BAR OR (2) NO. 4 BAR LOCATED IN THE MIDDLE THIRD OF THE WALL DEPTH.
- ALL SLABS ON GRADE SHALL HAVE 1 1/2" RIGID INSULATION BOARD AT PERIMETER EXTENDING UNDER SLAB A MINIMUM OF 2'-0" TO THE INTERIOR AND DOWN THE FOUNDATION WALL A MINIMUM OF 2'-0".
- INTERIOR CONCRETE SLABS SHALL HAVE 6 MIL. POLYETHYLENE VAPOR BARRIER UNDERNEATH.
- PROVIDE PROPER EXPANSION AND CONTROL JOINTS PER CODE.
- SAW CUT SLABS EVERY 20'-0" SPANNING NO MORE THAN 30'0" LONG BEFORE CROSS CUT.
- FOUNDATION CONCRETE WALLS SHALL BE CONSTRUCTED WITH:
A. GRADE N, TYPE 1, HOLLOW CORE LOAD BEARING CONCRETE MASONRY UNITS.
B. GRADE N, TYPE 1, SPECIALTY SHAPES LOAD BEARING CONCRETE MASONRY UNITS AS REQUIRED.
C. TYPE "M" MORTAR.
D. PROVIDE CONTINUOUS HORIZONTAL JOINT REINFORCING WITH 9 GAUGE WIRE EVERY THIRD COURSE.
E. REINFORCING SHALL CONFORM WITH LOCAL BUILDING REQUIREMENTS.
- ALL 36" X 36" X 18" CONCRETE PADS TO HAVE (2) #4 RODS EACH WAY.
- FOUNDATION WALLS ARE NOT TO BE BACKFILLED UNTIL FLOOR DIAPHRAM IS COMPLETELY FRAMED AND SHEATHING IS INSTALLED.
- ALL FOOTINGS SHALL BE A MINIMUM OF 3'-6" BELOW MAINTAINED FINISHED GRADE; AND SHALL REST ON VIRGIN SOIL.

- PROVIDE TERMITE PROTECTION AS REQUIRED BY HUD MINIMUM PROPERTY STANDARDS; WOLMANIZED LUMBER SHALL BE USED WHERE ANY FRAME ABUTS CONCRETE OR MASONRY.
- LATERAL SUPPORT IN BASEMENT WALLS SHALL CONSIST OF (1) #5 ROD IN THE FILLED CORES OF THE CONCRETE BLOCKS. - SPACED MAXIMUM 15'-0".
- FOUNDATION BOLTS MUST BE ANCHORED TO SILL PLATE WITH 1/2" BOLTS EMBEDDED 15" IN FILLED CORES, OR EQUIVALENT, APPROVED TIE SYSTEM (SIMPSON OR EQUAL AT 4'-0" O.C. PROPERLY GROUDED) - 12" FROM CORNERS CONNECTORS TO BE HOT DIPPED GALV. OR S. STEEL.
- PROVIDE ELECTRICAL CONNECTION TO FOOTING REBAR FOR PROPER GROUNDING AS PER CODE.
- SPACING OF LATERAL SUPPORT FOR MASONRY WALLS AS FOLLOWS:
CONSTRUCTION MAXIMUM WALL LENGTH TO THICKNESS OR WALL HEIGHT TO THICKNESS
BEARING WALL: SOLID OR SOLID GROUDED 20
BEARING WALLS: ALL OTHERS 18
NONBEARING WALLS: EXTERIOR 18
NONBEARING WALLS: INTERIOR 36

STEEL:

- ALL STRUCTURAL STEEL FOR BEAMS AND PLATES SHALL COMPLY WITH ASTM SPECIFICATION A-36.
- ALL STRUCTURAL STEEL FOR STEEL COLUMNS SHALL COMPLY WITH ASTM SPECIFICATION A-53 GRADE B OR A-501.
- ALL REINFORCING STEEL FOR CONCRETE SHALL COMPLY WITH ASTM SPECIFICATION A-615 GRADE 60.
- PROVIDE (1) #5 ROD IN SLUSHED CORES IN BEAM POCKETS.
- STEEL COLUMNS ARE TO BE 3" I.D. (INSIDE DIAMETER) UNLESS NOTED OTHERWISE.

FRAMING:

- FOR ANY WOOD IN CONTACT WITH CONCRETE "ACO" OR "CA" TYPE TREATED WOOD IN CONTACT WITH CONCRETE. ALL FASTENERS ARE TO BE HOT-DIPPED GALV. OR STAINLESS STEEL. THERE WILL BE NO EXCEPTIONS.
- LUMBER (GRADES AND TYPES) : ALL STRUCTURAL LUMBER TO MEET OR EXCEED THE REQUIREMENTS OF IRC 2015 CODE AND THE PUBLICATIONS OF THE NATIONAL FOREST PRODUCTS ASSOCIATION.
- ALL FRAMING LUMBER TO BE WELL SEASONED, CONFORMING TO THE FOLLOWING MINIMUM STRESS REQUIREMENTS:
FB = 1,250 PSI
FV = 90 PSI
FC = 375 PSI
FC=1,040 PSI
E=1,600,000

FOR NOTCHED LUMBER: PROVIDE 16 GALV. METAL TIES THAT ARE 1 1/2" WIDE THAT SPANS ACROSS A NOTCH IN WOOD FRAMING MEMBER. WHEN APPLYING SIMPSON OR EQUAL TIES, FOLLOW MANUF. NAILING INSTRUCTIONS. DO NOT USE SCREWS - ONLY GALV. NAILS AS DIRECTED.
- PLYWOOD ROOF AND WALL SHEATHING TO BE APA EXTERIOR GRADE C-D OR BETTER.
- DOUBLE JOISTS UNDER ALL PARTITIONS RUNNING PARALLEL TO WALLS.
- DOUBLE TRIMMERS AND HEADERS AROUND ALL FLOOR AND ROOF OPENINGS. INSTALL CATS FOR FASTENING WALL MOUNTED ACCESSORIES AND HANDRAILS.
- CONTRACTOR TO REPORT ANY DISCREPANCY IN PLANS OR SPECIFICATIONS.
- ALL INTERIOR WALLS ARE DIMENSIONED FROM STUD TO STUD.
- ALL EXTERIOR WALLS ARE DIMENSIONED TO OUTSIDE OF STUD.
- CALCULATED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE OFF DRAWINGS.
- ALL ANGLED WALLS ON FLOOR PLANS ARE AT A 45 DEGREE ANGLE, UNLESS OTHERWISE NOTED.
- ALL PLYWOOD FACE GRAIN SHALL RUN PERPENDICULAR TO WOOD STUDS AND RAFTERS.
- ALL TRUSSES SHALL BE ENGINEERED BY AN AUTHORIZED TRUSS MANUFACTURER ACCORDING TO THE LOADING INDICATED ON THIS PLAN.

- PLACE (1) ROW METAL (16 GA.) CROSS-BRIDGING ON ALL SPANS OVER 8'-0" AND (2) ROWS OF CROSS-BRIDGING ON ALL SPANS OVER 16'-0".
- PROVIDE SOLID BLOCKING AT ALL BEARING WALLS AT JOISTS, TO FULL DEPTH OF JOISTS.
- COLLAR TIES ARE TO BE LOCATED DOWN FROM THE RIDGE NO LESS THAN 1/3 THE OVERALL HEIGHT FROM PLATE TO RIDGE.
- ALL PURLINS AND KICKERS ARE TO BE 2X6'S, UNLESS NOTED OTHERWISE.
- ANY HIP OR VALLEY RAFTERS OVER A 24'-0" SPAN ARE TO BE LAMINATED VENER LUMBER (L.V.L.).
- ALL FLOOR AND CEILING JOISTS SHALL BE LAPPED AND NAILED AT ALL INTERNAL BEARING PLATES.
- ALL BEARING PLATES ARE TO BE DOUBLED.
- HEADERS SCHEDULE:
BASED UPON PERPENDICULAR BUILDING WIDTH OR MORE THAN 28'0" BUT LESS THAN 36'-0" WITH TWO (2) JACK STUDS EACH SIDE.
UP TO 2'-5" OPENING - (2) 2X4
UP TO 3'-5" OPENING - (2) 2X6
UP TO 4'-5" OPENING - (2) 2X8
UP TO 5'-5" OPENING - (2) 2X10
UP TO 6'-3" OPENING - (2) 2X12
UP TO 7'-10" OPENING - (3) 2X12
FOR ENGINEERED LUMBER USED FOR HEADERS REFER TO MANUFACTURER'S SPECS.

- ALL NAILING SHALL FOLLOW APA AND WOODPRODUCT MANUFACTURE'S GUIDELINES.
- ALL UNFINISHED WORK SHALL BE BRACED AND SECURED TO ELIMINATE ANY POSSIBLE DAMAGE BY WATER, WIND, PEDESTRIANS OR OTHER TRADES.
- UPLIFT CONNECTORS SHALL BE INSTALLED AT ALL ROOF RAFTER/TRUSS TO WALL AS PER IRC 2015 Table R802.11. USE "USP" R17A OR EQUAL.
- RIDGE STRAP CONNECTIONS SHALL BE INSTALLED AS PER IRC 2015 R802.3.1 CONNECTING THE RIDGE TO THE ROOF RAFTERS. USE APPROVED SIMPSON TIE OR EQUAL...
- ATTACHMENT OF BRACED WALLS TO FOUNDATIONS AND FLOOR AND ROOF DIAPHRAGMS: THE TOP TRACK OF BRACED WALL LINES SHALL BE ATTACHED DIRECTLY TO THE ROOF SHEATHING IN ACCORDANCE WITH FIGURE R802.3(1) AND (2) OR SHALL HAVE BLOOMING, INSTALLED IN ACCORDANCE WITH FIGURE R802.7. CONNECTING THE TOP TRACK TO THE ROOF SHEATHING AT LOCATIONS SPECIFIED HEREIN. BLOOMING SHALL BE INSTALLED AT EACH END OF BRACED WALL LINES. CONTINUOUS BLOOMING SHALL BE INSTALLED ABOVE ALL TYPE I BRACED WALL PANELS AND ABOVE FULL HEIGHT SHEATHING PANELS IN TYPE II BRACED WALL LINES. WHERE THE ROOF DIAPHRAGM SPANS MORE THAN 40 FEET BETWEEN BRACED WALL LINES, CONTINUOUS BLOOMING SHALL ALSO BE INSTALLED IN THE MIDDLE ONE-THIRD OF THE BRACED WALL LINES.

- SPICES IN TOP TRACKS IN BRACED WALLS SHALL COMPLY WITH FIGURE R502.6.1 EXCEPT THE NUMBER OF SCREWS IN THE SPUCE SHALL BE AS SHOWN IN R802.3(1). SCREWS USED TO ATTACH BLOOMING TO THE TOP TRACK ARE PERMITTED TO BE COATED TOWARD THE REQUIRED NUMBER OF TRACK SPUCE SCREWS. SPICES IN THE TOP TRACK AND THE STRAP AT THE ROOF SHEATHING SHALL NOT OCCUR IN THE SAME STUD BAY.
- THE TOP AND BOTTOM TRACK OF BRACED WALLS SHALL BE ATTACHED TO FLOOR DIAPHRAGMS IN ACCORDANCE WITH FIGURE R403.1.6.
- SPICES IN THE FLOOR TRACK SHALL NOT OCCUR IN THE SAME BAY AS SPICES IN THE WALL TRACK IMMEDIATELY ABOVE OR BELOW THE FLOOR TRACK SPUCE.
- THE BOTTOM TRACK OF BRACED WALLS SUPPORTED ON FOUNDATIONS SHALL HAVE ANCHOR BOLTS INSTALLED IN ACCORDANCE WITH R403.1.6. FLOOR TRACK OR RM JOISTS SUPPORTING BRACED WALL LINES SHALL BE ATTACHED TO FOUNDATIONS IN ACCORDANCE WITH R403.1.6. THE MAXIMUM SPACING BETWEEN ANCHOR BOLTS SHALL BE AS SHOWN IN TABLE R404.1.3. ANCHOR BOLTS SHALL EXTEND 7 INCHES INTO CONCRETE OR MASONRY. AN ANCHOR BOLT SHALL BE LOCATED NOT MORE THAN 12 INCHES FROM WALL CORNERS OR THE TERMINATION OF BOTTOM TRACK SECTIONS.
- IN REGIONS WHERE THE BASIC WIND SPEED EQUALS OR EXCEEDS 110 MILES PER HOUR, THE BOTTOM TRACK IN EXTERIOR WALLS SHALL ALSO COMPLY WITH THE PROVISIONS OF TABLE R021.1 FOR UPLIFT.

- INSULATION - MUST HAVE VAPOR BARRIER
EXTERIOR WALLS = BATT INSULATION R-13 FOR 2 X 4 R-19 FOR 2 X 6 ROOF AND ATTIC = BATT INSULATION R-30 (MIN.) OR AS SHOWN ON DRAWINGS. CLEARANCE MUST BE MAINTAINED (2") BETWEEN INSULATION AND ROOF SHEATHING TO ASSURE VENTILATION.
ICE SHIELD TO BE INSTALLED 3'-0" FROM EDGE-TYPICAL.

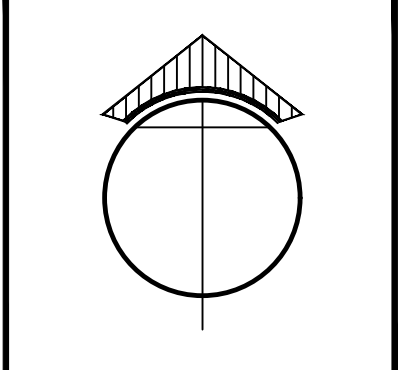
- ROOFING:
ROOFS AT OR OVER 4 ON 12 PITCH TO HAVE A FLASHING STRIP OF MINERAL SURFACED ROLL ROOFING APPLIED FROM EAVES AND EXTENDING AT LEAST 12" INSIDE THE INTERIOR WALL LINE. ALL VALLEYS SHALL BE "CLOSED" TYPE, WITH 36" WIDE RAIL BASE UNDERLAYMENT (50#). ROOFS WITH LESS THAN 4 ON 12 PITCH BUT NOT LESS THAN 2 ON 12 PITCH SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS FOR LOW PITCHED ROOFS, AND OVER AN UNDERLAYMENT OF TWO LAYERS OF ROOFING FELLS, APPLIED SINGLE FASHION. THE TWO LAYERS OF FELT ARE TO BE CEMENTED TOGETHER FROM THE EAVES AND EXTENDING AT LEAST 24" INSIDE THE INTERIOR WALL LINE. ALL FLASHING ALONG VERTICAL PLANES SHALL BE "STEPPED" FLASHING. IF WOOD SHAKES ARE SUBSTITUTED FOR FIBERGLASS SHINGLES, IT IS IMPERATIVE THAT ALL RECOMMENDATIONS OF C.S.S.B. BE FOLLOWED FOR PREPARATION AND APPLICATION.

- PREFABRICATED FIREPLACES AND FLUES ARE TO BE U.L. APPROVED AND INSTALLED STRICTLY AS PER MANUFACTURER'S SPECIFICATIONS. CLEARANCES (AIR SPACES) AND APPROVED FIRESTOPPING SHALL BE UTILIZED.
- ALL MATERIALS, SUPPLIES AND EQUIPMENT TO BE INSTALLED STRICTLY AS PER MANUFACTURER'S SPECIFICATIONS AND AS PER ALL CODES AND REQUIREMENTS.
- 1/2" WATER-RESISTANT DRYWALL SHALL BE INSTALLED AROUND SHOWERS, TUBS AND BATHPOOLS AND THROUGHOUT BATHROOM AREAS. 1/2" DRYWALL ON INTERIOR WALLS AND CEILING; TYPE AND FIRECODE AS SHOWN.
- ALL INTERIOR FINISHES AND COLORS SHALL BE SELECTED BY THE OWNER FOR INSTALLATION BY THE CONTRACTOR, UNLESS AGREED OTHERWISE BY CONTRACT.
- WINDOWS USED AS MEANS OF EGRESS FROM A SLEEPING ROOM SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. MIN. OPENING SHALL HAVE A MIN. NET CLEAR OPENING HEIGHT OF 24 INCHES AND MINIMUM WIDTH OF 20 INCHES.
- TYPICAL OVERHANG SIZES UNLESS NOTED OTHERWISE ON DRAWING:
ON PITCHES OF 4/12 - 5/12 - 6/12 = 24" OVERHANG; 7/12 = 18" OVERHANG; 8/12 = 16" OVERHANG; 9/12 = 14" OVERHANG; 10/12 - 11/12 - 12/12 = 12" OVERHANG. NOTE: ADJUST OVERHANGS TO PROVIDE CLEARANCE FOR WINDOWS TO OPEN. ADJUST OVERHANGS TO MAINTAIN CONSISTENT LEVEL WHEN THE PLANS CALL FOR (2) DIFFERENT PITCHES AT A HIP.

- ALL DRAINAGE PIPE TO BE PVC UNLESS OTHERWISE NOTED.
- WATER PIPES TO BE COPPER TUBING TYPE "L". UNDERGROUND COPPER TUBING TO BE TYPE "K". USE PROTECTIVES WHEREVER LINES RUN IN STUDS AND JOISTS WHERE NAILS MAY PROTRUDE.
- ALL WATERMAIN SHALL BE A MINIMUM OF 3/4" PIPE AND ALL FIXTURE RUNS TO BE 1/2".
- INSTALL 12" AIR POCKETS AT TOP OF WATER LINES.
- EACH FIXTURE GROUP SHALL HAVE SEPARATE TURN-OFF VALVES.
- MECHANICAL VENTS AND EXHAUSTS SHALL BE A MINIMUM OF 10'-0" (HORIZONTAL) FROM ANY WINDOW, DOOR OR OTHER OPENING AND AT LEAST 2'-0" ABOVE SUCH ADJACENT OPENING.
- HORIZONTAL PIPING RUNS TO PITCH 1/4" PER FOOT.
- ALL PLUMBING WORK TO CONFORM WITH THE REQUIREMENTS OF NATIONAL PLUMBING CODE.

ELECTRICAL

- MAXIMUM NUMBER OF OUTLETS ON BRANCH CIRCUITS ARE AS FOLLOWS:
7 ON 15 AMPS
8 ON 20 AMPS
- ALL RECEPTACLES SHALL BE GROUNDED TYPE, TO BE INSTALLED AT HEIGHTS AS INDICATED - MINIMUM OF 15" A.F.F.
- SMOKE DETECTOR ALARMS SHALL BE INSTALLED WHERE SHOWN ON THE DRAWINGS AND IN CONFORMANCE WITH ALL REQUIREMENTS OF COVERING AGENCIES.
- ALL TOILET ROOM EXHAUST FANS SHALL EXPEL A MINIMUM OF 70 CFM.
- INSTALL G.F.I. OUTLETS WHERE SHOWN ON THE DRAWINGS.
- ALL ELECTRICAL WORK TO CONFORM WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.
- PROVIDE ELECTRICAL GROUNDING TO FOOTING REBAR.



8-14-19
FOR REVIEW
9-2-20
ISSUED FOR PERMIT

DATE
2-1-18
SCALE
NOTED
CADD No.
MASTER
BY
REOB/SR

MISC. NOTES

1. PREFABRICATED FIREPLACES AND FLUES ARE TO BE U.L. APPROVED AND INSTALLED STRICTLY AS PER MANUFACTURER'S SPECIFICATIONS. CLEARANCES (AIR SPACES) AND APPROVED FIRESTOPPING SHALL BE UTILIZED.

2. ALL MATERIALS, SUPPLIES AND EQUIPMENT TO BE INSTALLED STRICTLY AS PER MANUFACTURER'S SPECIFICATIONS AND AS PER ALL CODES AND REQUIREMENTS.

3. 1/2" WATER-RESISTANT DRYWALL SHALL BE INSTALLED AROUND SHOWERS, TUBS AND BATHPOOLS AND THROUGHOUT BATHROOM AREAS. 1/2" DRYWALL ON INTERIOR WALLS AND CEILING; TYPE AND FIRECODE AS SHOWN.

4. ALL INTERIOR FINISHES AND COLORS SHALL BE SELECTED BY THE OWNER FOR INSTALLATION BY THE CONTRACTOR, UNLESS AGREED OTHERWISE BY CONTRACT.

5. WINDOWS USED AS MEANS OF EGRESS FROM A SLEEPING ROOM SHALL HAVE A SILL HEIGHT OF NOT MORE THAN 44 INCHES ABOVE THE FLOOR. MIN. OPENING SHALL HAVE A MIN. NET CLEAR OPENING HEIGHT OF 24 INCHES AND MINIMUM WIDTH OF 20 INCHES.

6. TYPICAL OVERHANG SIZES UNLESS NOTED OTHERWISE ON DRAWING:
ON PITCHES OF 4/12 - 5/12 - 6/12 = 24" OVERHANG; 7/12 = 18" OVERHANG; 8/12 = 16" OVERHANG; 9/12 = 14" OVERHANG; 10/12 - 11/12 - 12/12 = 12" OVERHANG. NOTE: ADJUST OVERHANGS TO PROVIDE CLEARANCE FOR WINDOWS TO OPEN. ADJUST OVERHANGS TO MAINTAIN CONSISTENT LEVEL WHEN THE PLANS CALL FOR (2) DIFFERENT PITCHES AT A HIP.

PROJECT No.
2019-60

SHEET No.
A-2

O'BRIEN ARCHITECTS INC.
ARCHITECTURE plus
P.O. BOX 361 19 MAIN ST. BLAIRSTOWN, NEW JERSEY 07825
TEL: (609) 982-5900 FAX: (609) 982-6880
REOBRA.COM

RAYMOND E O'BRIEN R.A.
N.J. Al 12606

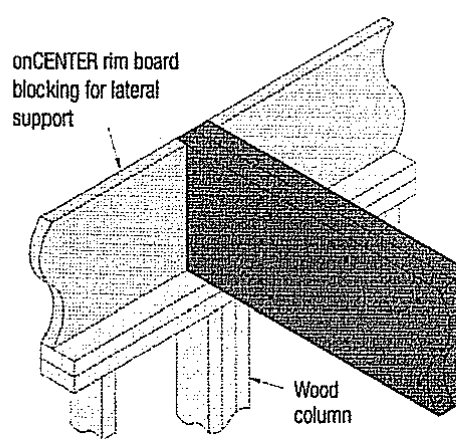
BLOCK 3101 LOT 13

NEW ADDITION for
MR. AND MRS. DWYER
58 DELAWARE AVE
STIRLING, NJ
SPECIFICATIONS

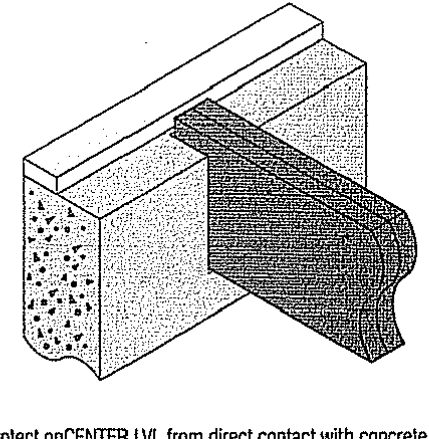
onCENTER™ LVL BEARING DETAILS

- Required bearing length depends on applied loads, but may not be less than 1 1/2" for end and 3" for intermediate bearings (see Bearing Length Requirements, page 44)
- Verify adequacy of supporting material to carry applied loads

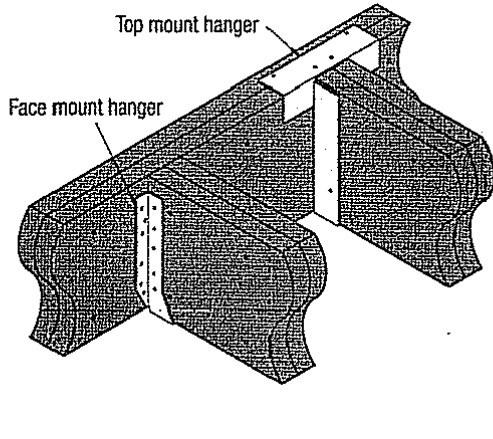
B1 BEARING ON WALL



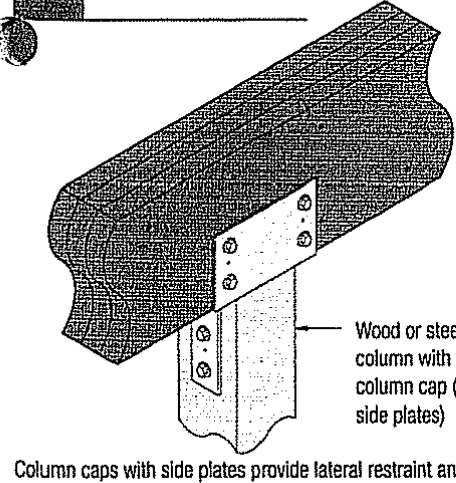
B2 BEARING ON CONCRETE WALL



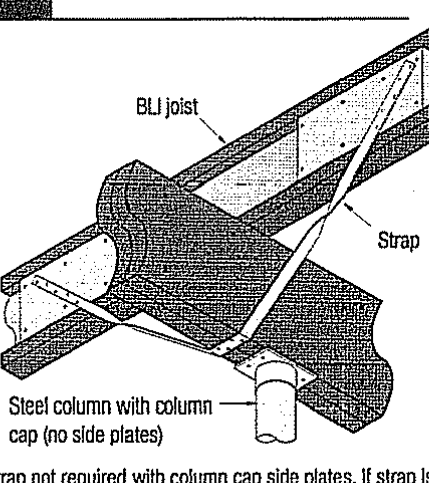
B3 BEAM-TO-BEAM CONNECTION



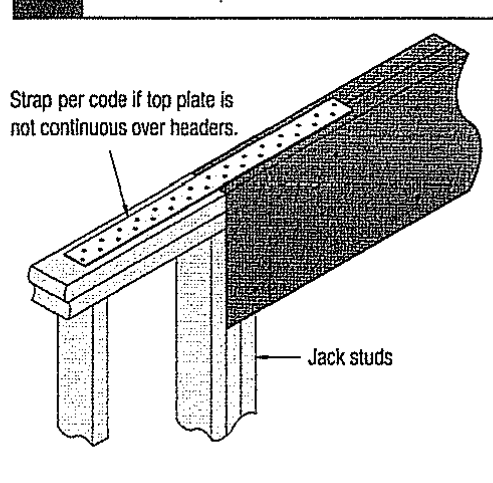
B4 BEARING ON COLUMN



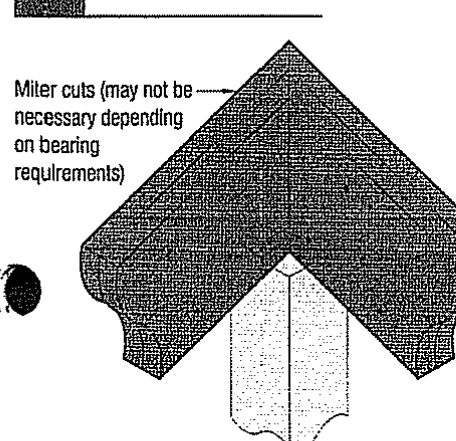
B5 BEAM-TO-COLUMN LATERAL BRACE



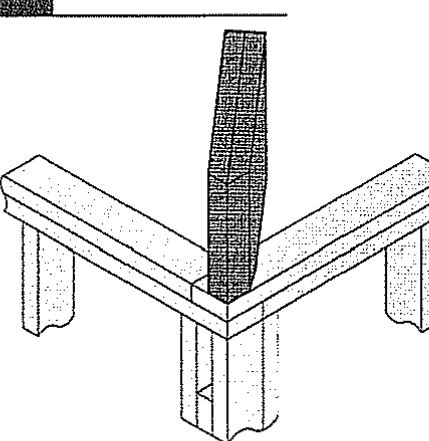
B6 BEARING FOR DOOR OR WINDOW HEADER



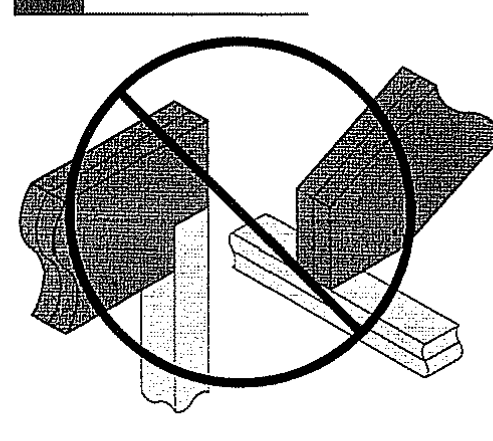
B7 HIGH END HIP BEARING



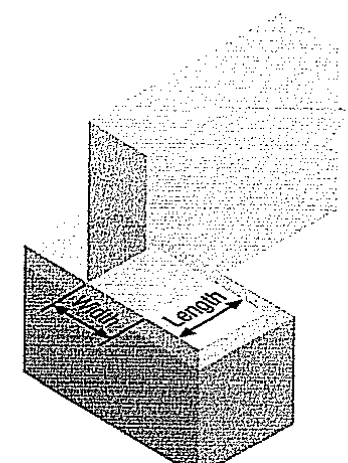
B8 LOW END HIP BEARING



B9 NOTCHING / SEAT CUT



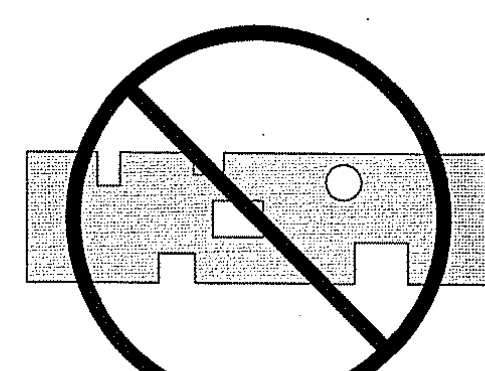
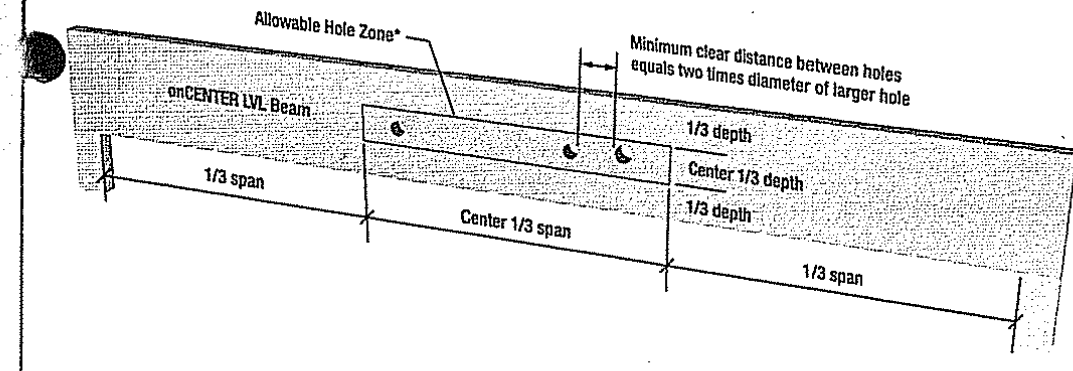
onCENTER™ LVL BEARING LENGTH REQUIREMENTS



- NOTES:
- Minimum bearing length is 1 1/2" at beam ends, and 3" at intermediate and cantilever supports.
 - Bearing must support entire width of beam.
 - Structural adequacy of supporting member to be determined by a design professional.
 - Provide restraint at supports and ends of beams to prevent lateral rotation.
 - If onCENTER LVL beam bears directly on cripples (PF, SF, or BF) or is supported by a hanger or steel column plate, use tabulated bearing lengths for onCENTER LVL beam. If onCENTER LVL beam bears directly on SPF cripples, use tabulated bearing lengths for Southern Pine.
 - Load duration adjustments to bearing lengths are not permitted.

Reaction (lbs)	Support Material																													
	Hem-Fir Plate (405 psi)							SPF or Non-Dense S. Pine Plate (425 psi)							Southern Pine Plate (665 psi)							onCENTER LVL Beam (750 psi)								
	Beam Width							Beam Width							Beam Width							Beam Width								
1,000	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"

HOLES IN onCENTER™ LVL



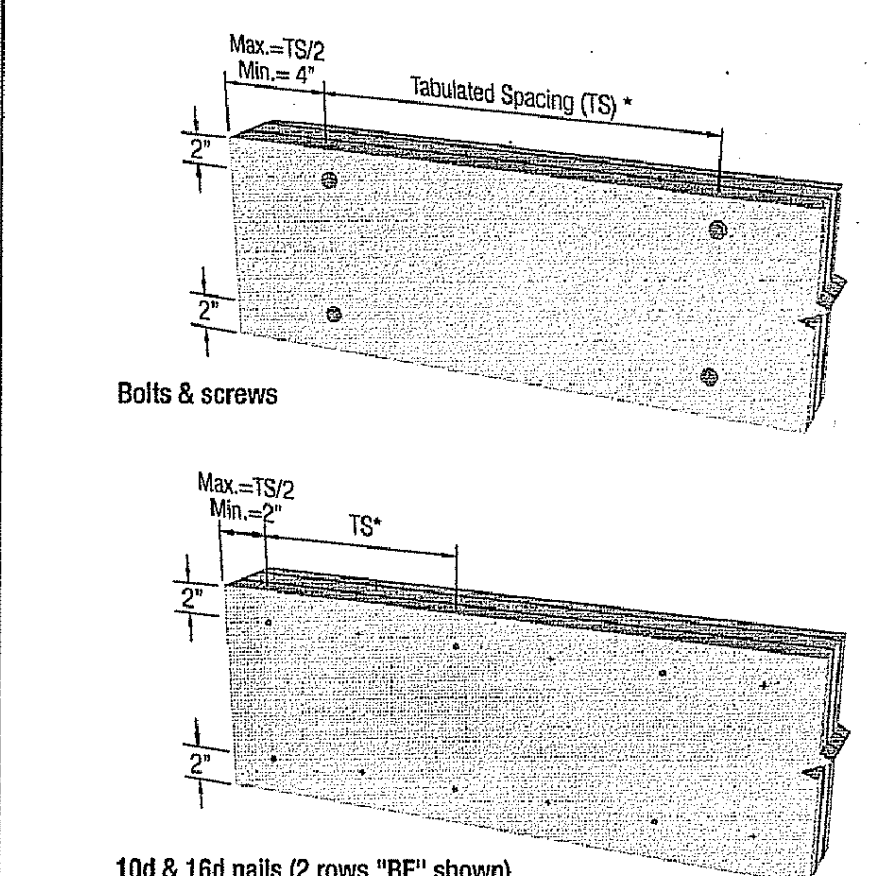
Beam Depth	Maximum Round Hole Diameter
4 1/2"	3/4"
5 1/2"	1 1/8"
7 1/2"	1 1/2"
9 1/2" - 24"	2"

- NOTES:
- Hole(s) must be located entirely in the Allowable Hole Zone.
 - Rectangular holes not allowed.
 - No more than 3 holes allowed per span.
 - Table applies to single and multiple span uniformly loaded beams only. Table not valid for cantilevers.
 - To avoid problems with rigid pipes, consider hole location, clearance, and effects of beam deflection.

LVL STORAGE, HANDLING, AND INSTALLATION

- Do not store onCENTER LVL in direct contact with the ground. Air circulation is required around material stacks and beneath covering.
- Protect onCENTER LVL from weather.
- Keep bundles covered with factory wrap until time of use.
- onCENTER LVL must be handled and stacked flat wise.
- Goggles, gloves, and other personal protective equipment should be used when handling or installing onCENTER engineered lumber.
- MSDS information is available from BlueLine.
- onCENTER framing members must be installed per code. Permanent installation must be in direct contact with masonry or concrete.
- Materials must be protected from weather and installed in dry-use conditions where moisture content is less than 16%.
- Use common, box, or sinker type nails when nail type is not otherwise specified in this guide.
- All bearings must be sized based on applied loads, but in no case shall end bearing be less than 1 1/2" and intermediate bearing less than 3".
- onCENTER LVL must be restrained from rotation at ends and each support. The top (or compression) edge must be laterally supported at 24" on-center or closer by bracing or by perpendicular flush framing. Properly installed sheathing directly attached to the compression edge is generally acceptable for lateral restraint.
- 1 3/4" onCENTER LVL beams with depths exceeding 14" are to be used in multiple-ply applications only (e.g. 2 plies of 16" LVL).
- When nailing into the narrow face of onCENTER LVL for one row of nails, nails must be spaced no closer than 3" (8d commons), 4" (10d commons), or 6" (16d commons). For two rows, increase spacing to 4" (8d commons) and 5" (10d commons). Maximum nail penetration into the LVL is 2 1/2" (2" for 16d commons). Minimum end distance is 2 1/2" (3 1/2" for 10d if two rows, and for 16d commons).
- Do not stagger-splice onCENTER LVL beams as is commonly done with dimension lumber. If the multiple span length exceeds the available length of LVL, LVL ends must butt over a common bearing.
- onCENTER LVL is produced without camber, so other narrow face camber can be at the top.
- In code-prescribed light-frame wood construction, it may be possible to substitute onCENTER LVL for dimension lumber roof members as its design properties exceed those of typical framing lumber. However, design of conventional construction is beyond the scope of this guide and of BlueLine Engineered Lumber Technical Services.
- With fire-retardant or preservative treated wood, use only stainless steel or hot-dipped galvanized connectors, fasteners, and hardware as required by code. Hot-dipped galvanized fasteners should conform to ASTM Standard A 653 and hot-dipped connectors should conform to ASTM Standard A 307. Stainless steel connectors and fasteners should be used in demanding applications or in highly corrosive environments. Check local building codes as they may mandate their usage.

MULTIPLE-PLY LVL FASTENING GENERAL NOTES



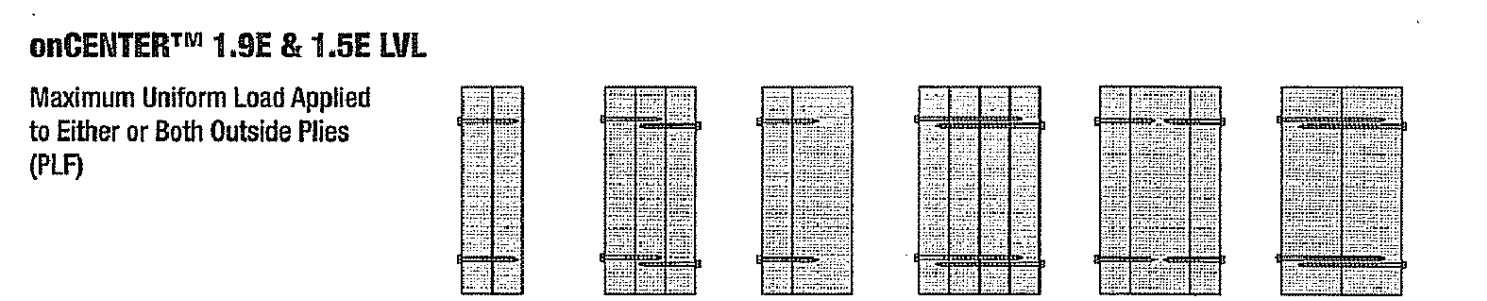
- Tables below and on page 47 show required fastener spacings and number of rows. End distances and edge distances must comply with diagram on left. For offset fastening patterns, maximum and minimum distance applies to all rows.
- Fastening requirements for depths less than 7 1/2" require special consideration. Contact BlueLine.
- All fasteners must have full embedment of the shank, but must not be over-driven, over-tightened, or counter-sunk.
- Bolt holes must be 1/8" to 1/4" diameter larger than the bolt diameter. Bolts are to meet ASTM A307 or SAE J429 grades. Each bolt must extend through the full thickness of the member and at least 1/2" beyond. Use washers under the head and nut.
- Carriage bolts (3/4" diameter) are acceptable to use for the 1/2" bolt fasteners. Carriage bolt heads may be drawn into the face of the LVL beam such that the top of the heads are even with the exterior face of the outer ply of the LVL.
- Spacings closer than those indicated may be acceptable, but require evaluation. Please contact BlueLine.
- SDS and SDW structural screws are produced by Simpson Strong-Tie® Company, Inc. WS structural screws are produced by United Steel Products Company. Truss-LDK structural screws are produced by FastenMaster-OMG, Inc. Install screws per the specific manufacturer's guidelines.

MULTIPLE-PLY LVL FASTENING (TOP-LOADED)

Fastener Type	LVL Depth	3 1/2" Wide					5 1/2" Wide				
		2-ply 1 3/4"	3-ply 1 3/4"	1 3/4" + 3 1/2"	4-ply 1 3/4"	1 3/4" + 3 1/2" + 1 3/4"	2-ply 3 1/2"	3-ply 3 1/2"	4-ply 3 1/2"	5-ply 3 1/2"	
10d Box Nails (0.128" x 3")	7 1/2" ≤ d < 14"	3 rows @ 12" o.c.	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	3 rows @ 12" o.c. (BF)	

- NOTES:
- See General Notes at top of page.
 - These minimum requirements are adequate only when all loads are evenly applied to the top surface of all plies. If loads are applied to the side face of the beam, see page 47.
 - Screws are SDS, SDW, WS, or Truss-LDK.
 - If "BF" is shown, fastener embedment must be restricted on both faces with fasteners on both faces offset in one half the indicated spacing of fasteners.

MULTIPLE-PLY LVL FASTENING (SIDE-LOADED)



Fastener Type	Fastener Rows	Fastener Spacing	3 1/2" Wide		5 1/2" Wide		7" Wide	
			2-ply 1 3/4"	3-ply 1 3/4"	1 3/4" + 3 1/2"	4-ply 1 3/4"	1 3/4" + 3 1/2" + 1 3/4"	2-ply 3 1/2"
10d Box Nails (0.128" x 3")	2	12"	362	272	272	241	241	241

- NOTES:
- See General Notes (page 46).
 - This table only shows the uniform load capacity for a given fastener pattern. The beam must be designed to ensure it can support the design load.
 - If the beam is supporting side loads from both faces, use the greater side load to determine the proper fastening.
 - Revised and finalized uniform load values require that fasteners be applied to both faces. On the opposite face, offset half the spacing from the first face.
 - Uniform load capacity can be divided if fastener spacing is halved for a particular application.
 - For two rows of fasteners, uniform load capacity can be increased 50% if a third fastener row is added.
 - Uniform loads shown are based on 100% LDF. Capacities can be increased for roof LDF of 115% and 125% if allowed by local building code.
 - Special consideration must be given for supporting large concentrated loads, such as from a beam, onto the side face of an LVL beam.
 - Beams that are 7" wide must be side loaded from both faces to minimize rotation.
 - Multiple member beams greater than 7" wide are not permitted.

PLACEMENT OF LAG SCREWS AND BOLTS IN LEDGERS

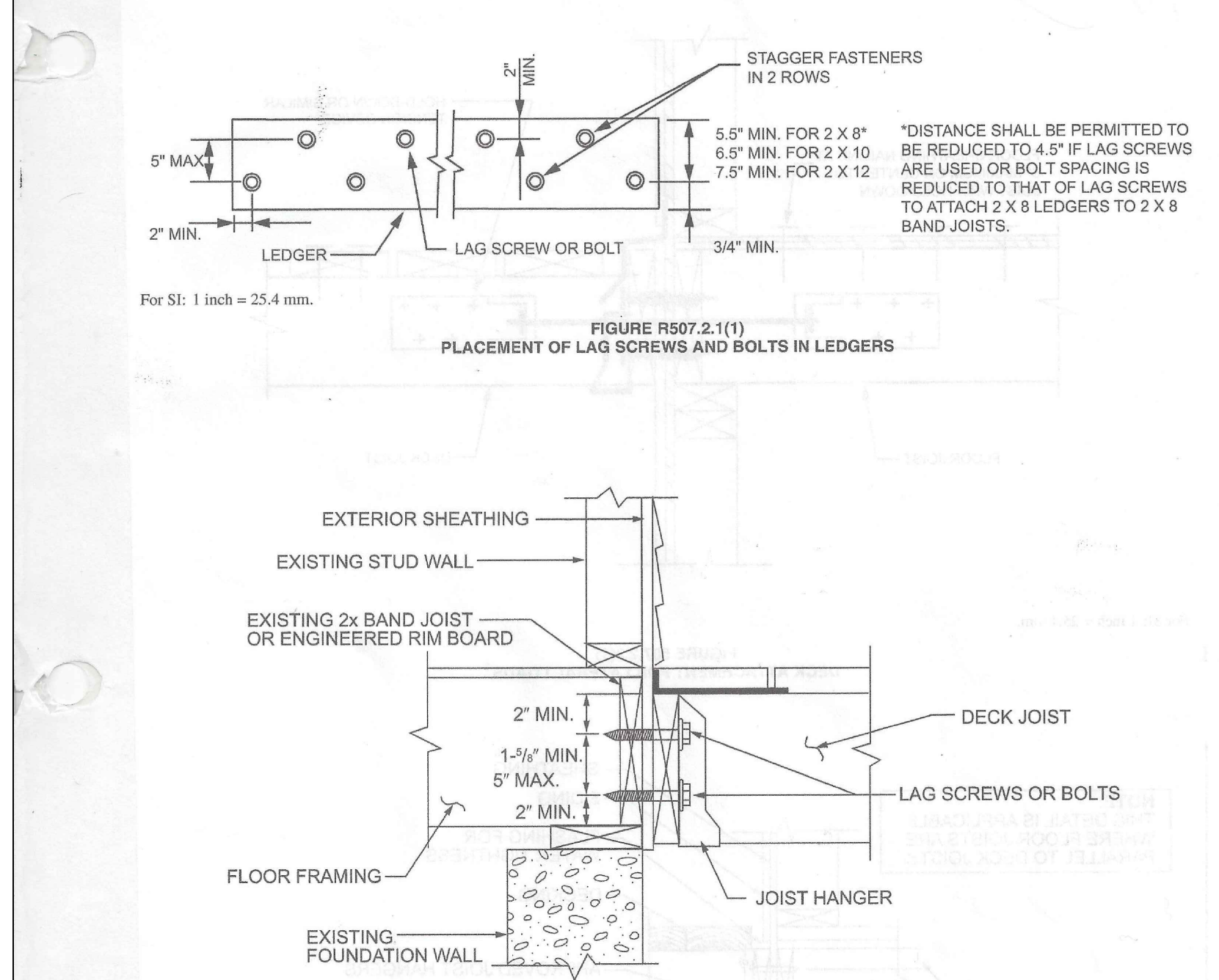
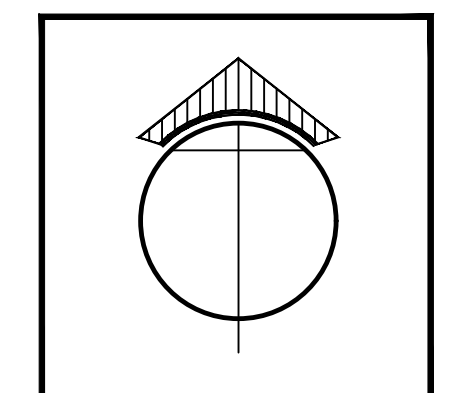


FIGURE RS07.2.1(2) PLACEMENT OF LAG SCREWS AND BOLTS IN BAND JOISTS



8-14-19
FOR REVIEW
9-2-20
ISSUED FOR PERMIT

DATE: 2-1-18
SCALE: NOTED
CADD No. MASTER
BY: REOB/SR

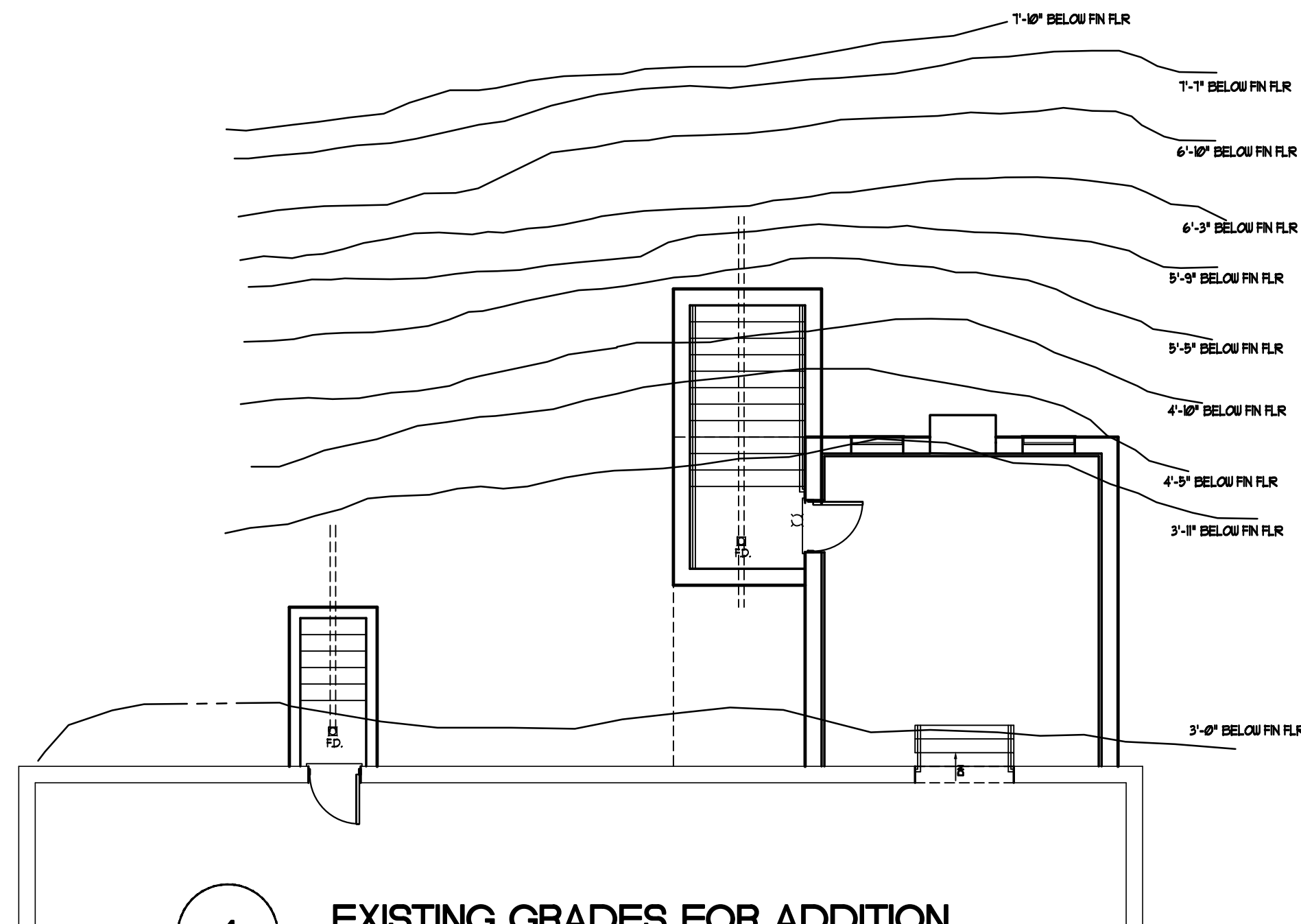
BLOCK 3101 LOT 13
NEW ADDITION for
MR. AND MRS. DWYER
58 DELAWARE AVE
STIRLING, NJ
LVL / LEDGER SPECS

PROJECT No.
2019-60

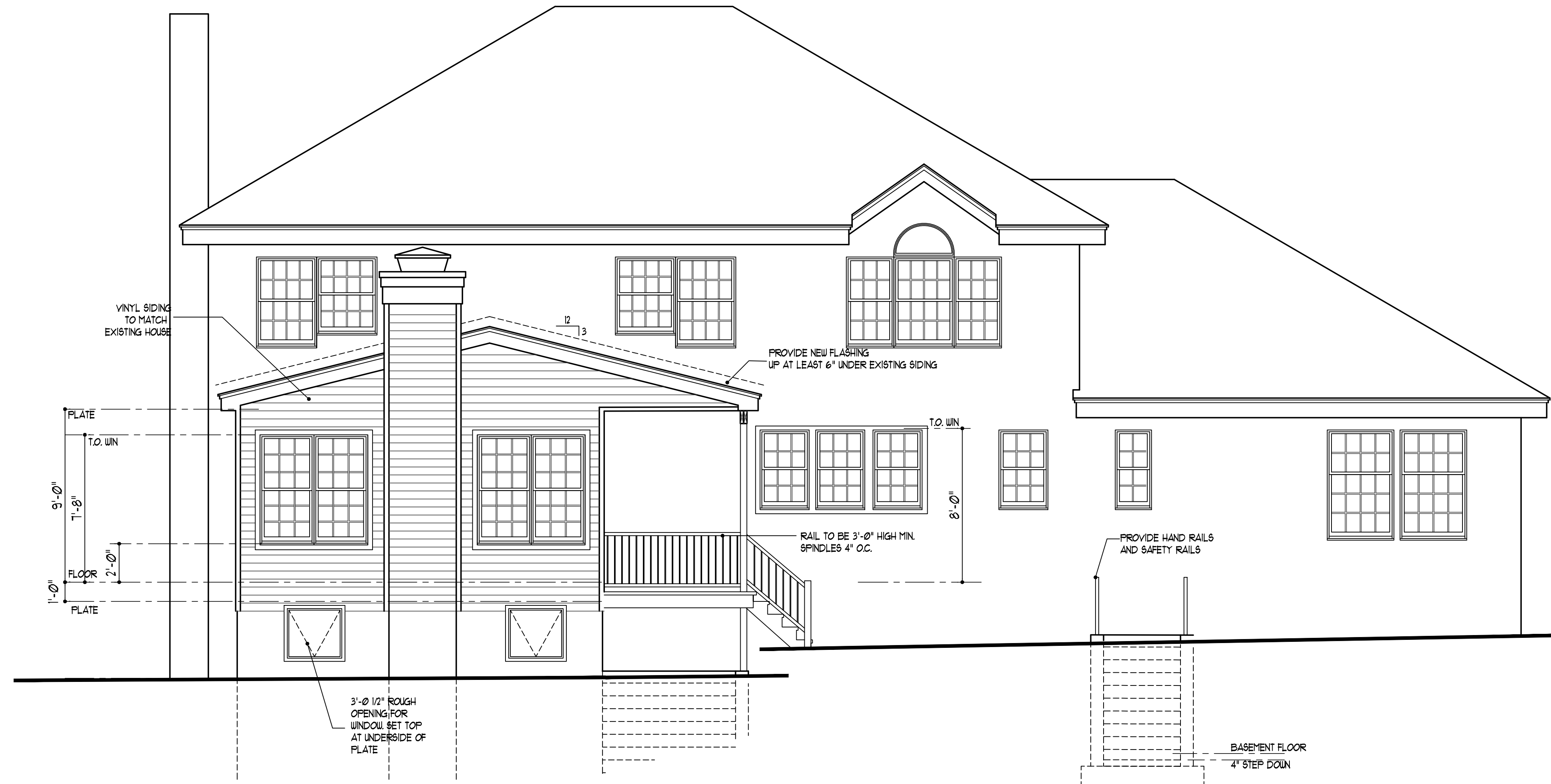
SHEET No.
A-2A

O'BRIEN ARCHITECTS INC.
ARCHITECTURE plus
P.O. BOX 361 19 MAIN ST.
BLAIRTOWN, NEW JERSEY 07825
TEL: (908) 982-5900
FAX: (908) 982-0880
REOBRA.COM

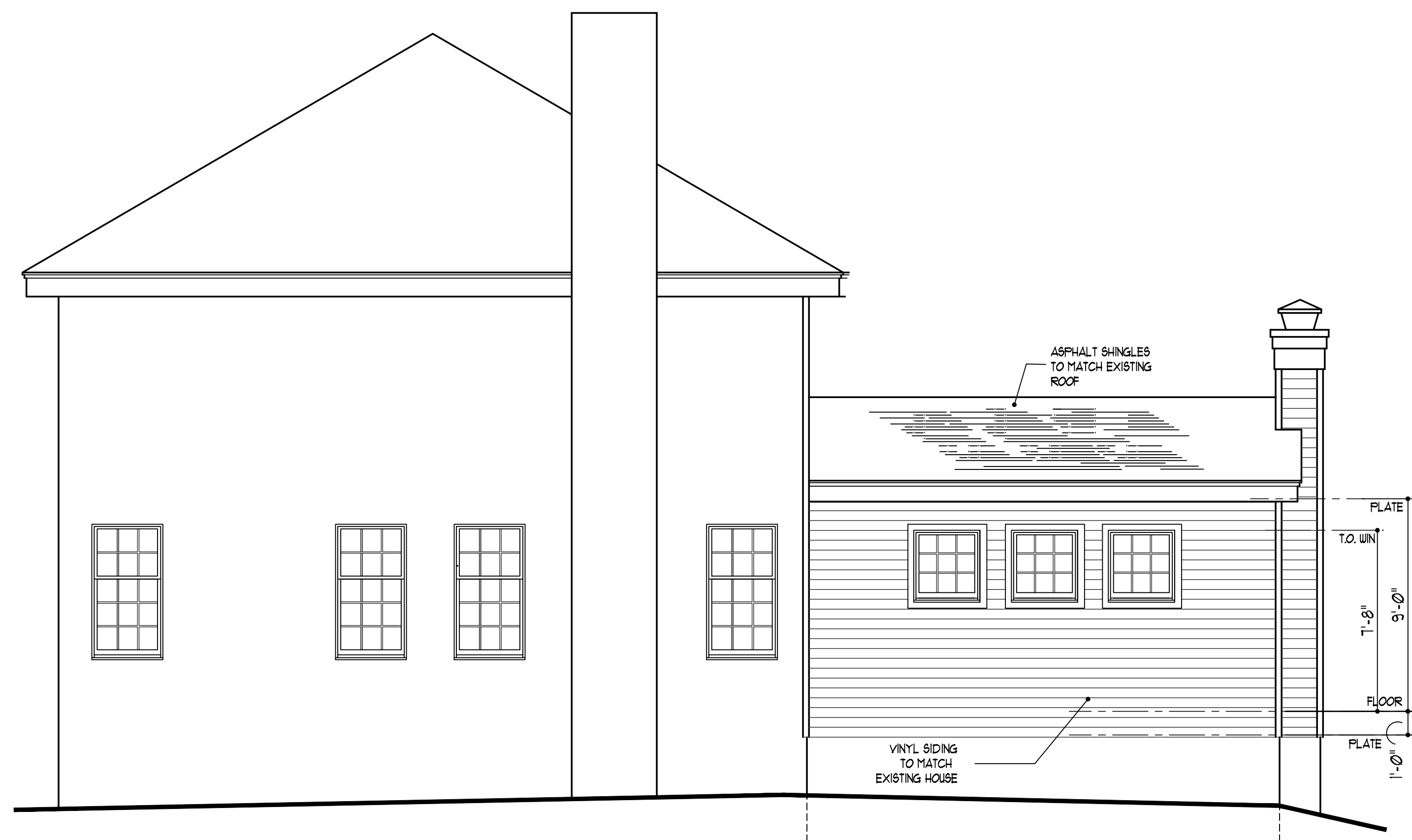
RAYMOND E O'BRIEN P.E. R.A.
N.J. 12666



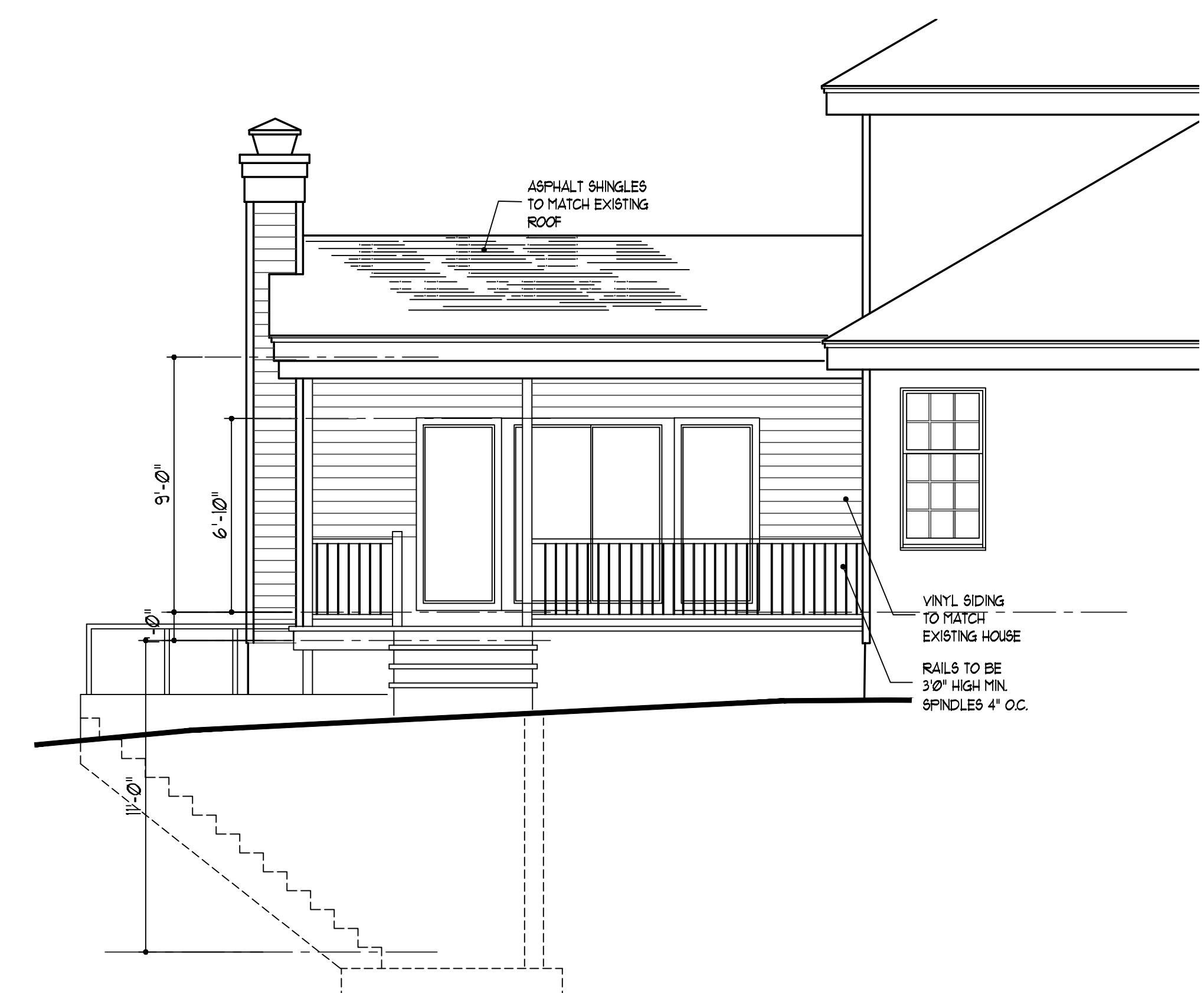
4 EXISTING GRADES FOR ADDITION
SCALE: 1/8" = 1'-0"



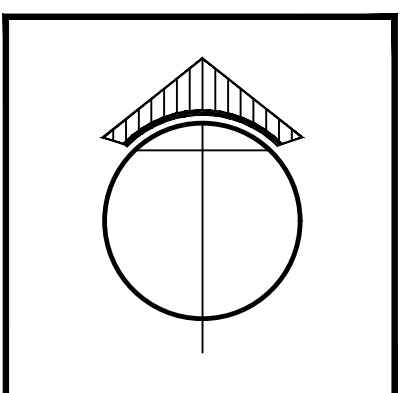
1 REAR ELEVATION
SCALE: 1/4" = 1'-0"



2 SIDE ELEVATION
SCALE: 1/4" = 1'-0"



3 SIDE ELEVATION
SCALE: 1/4" = 1'-0"



9-2-20
ISSUED FOR PERMIT

DATE 8-9-19	SCALE NOTED
CADD No. MASTER	BY REOB/SR

BLOCK 3101 LOT 13
NEW ADDITION for
MR. AND MRS. DWYER
58 DELAWARE AVE
STIRLING, NJ
ELEVATIONS

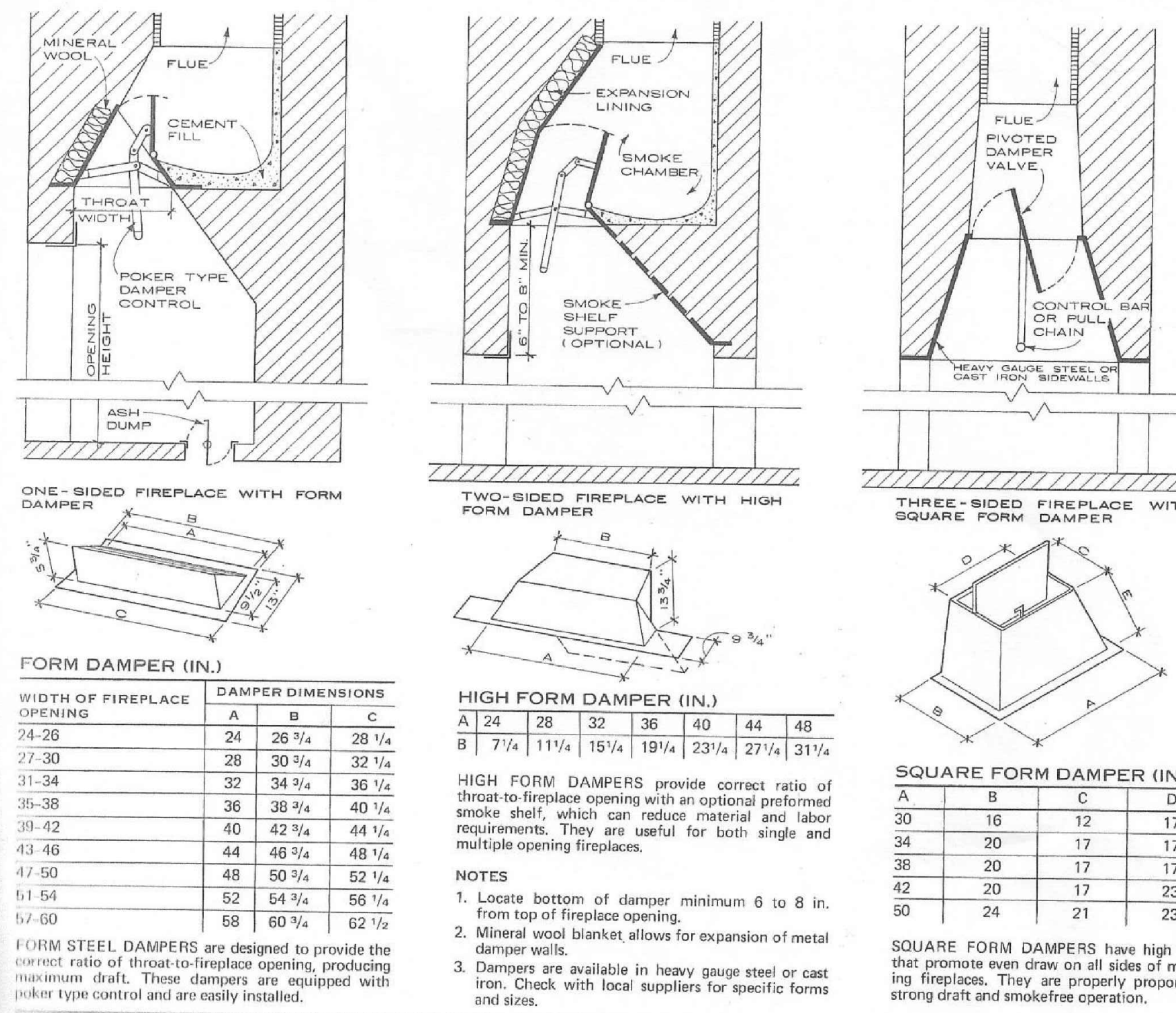
PROJECT No.
2019-60

SHEET No.
A-5

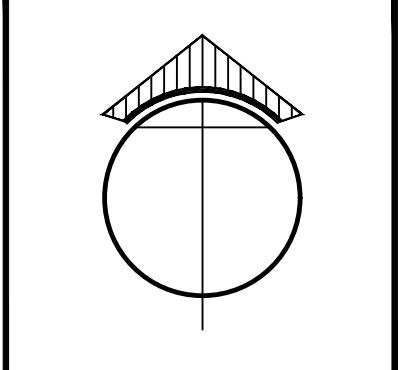
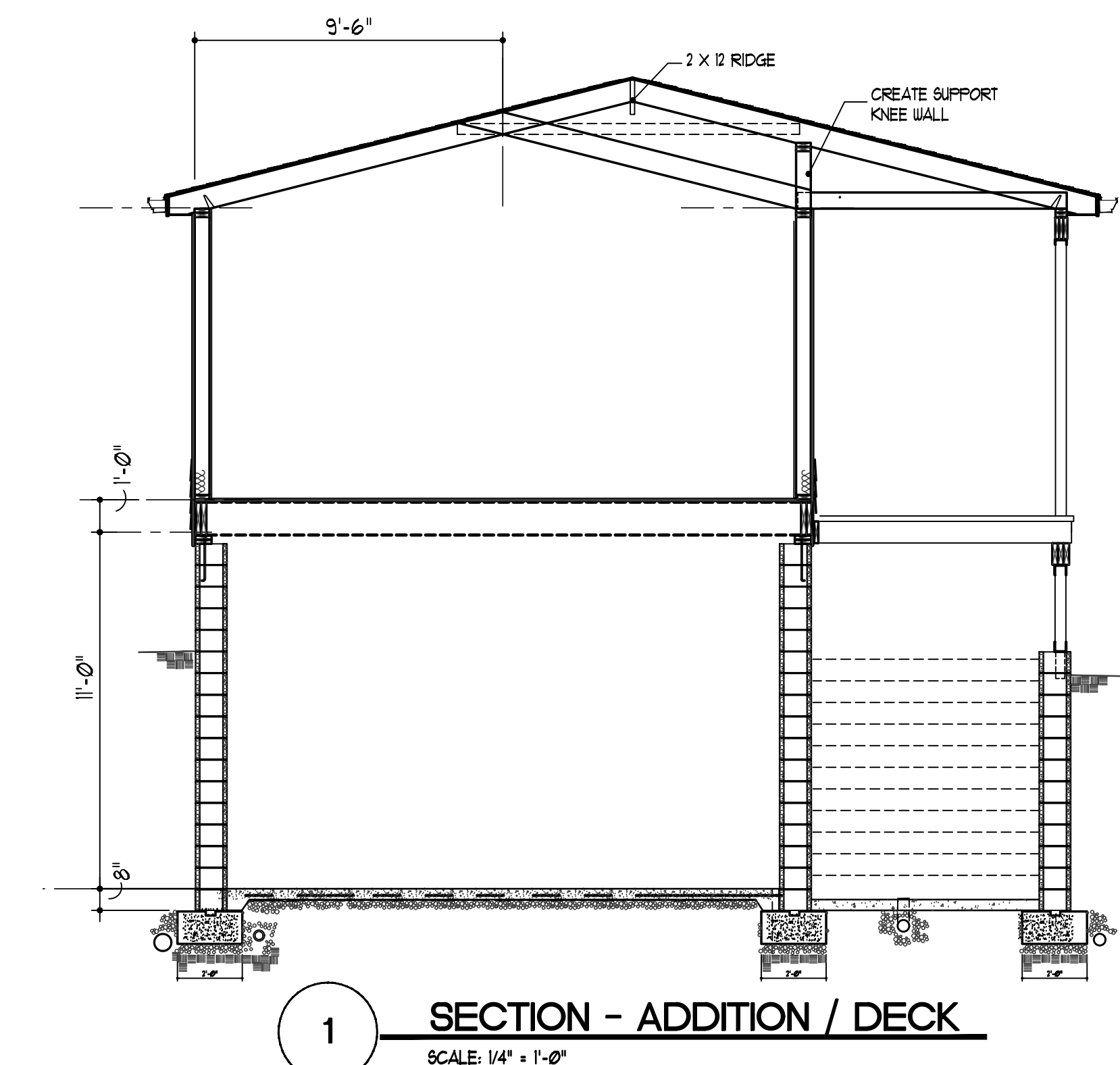
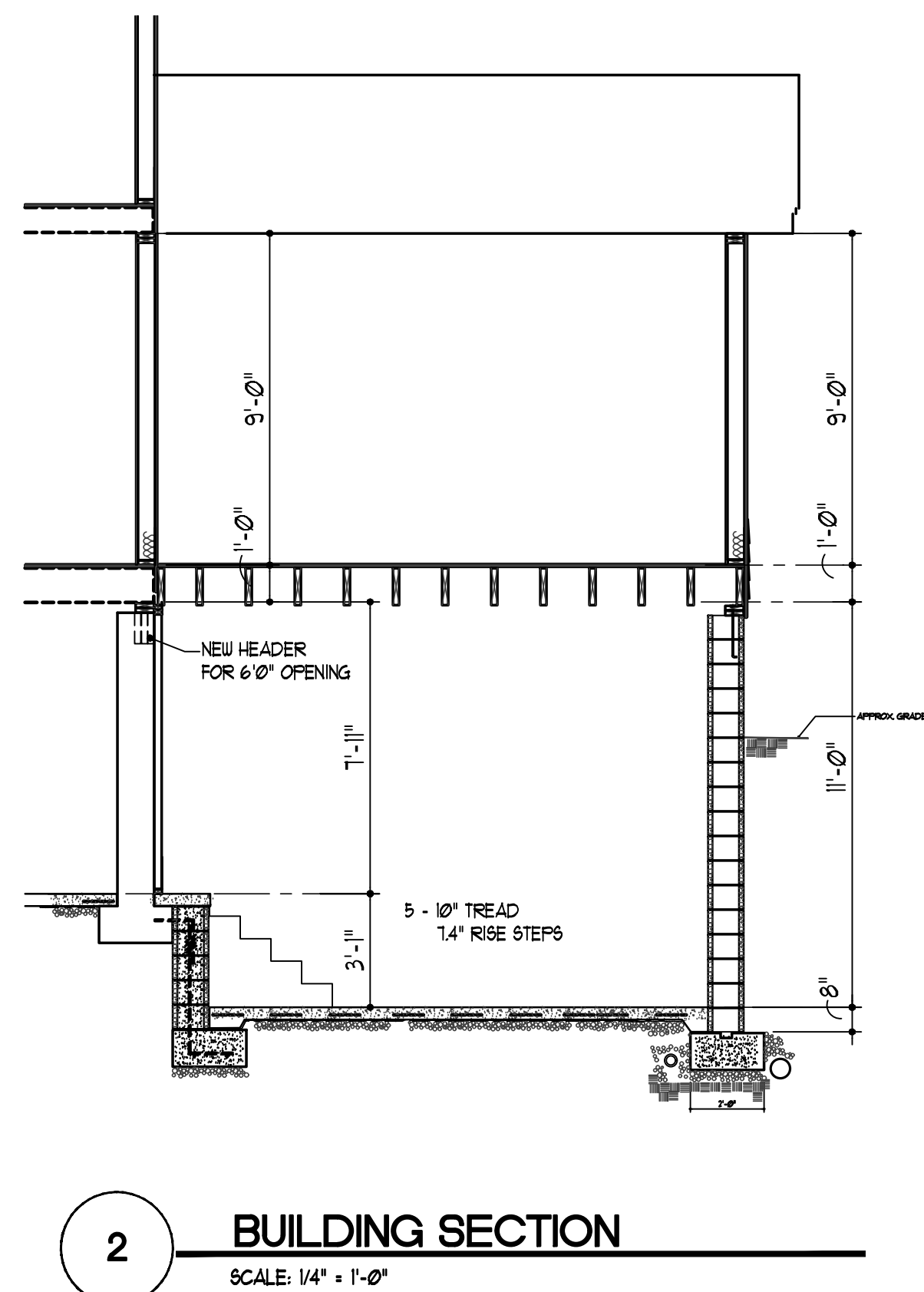
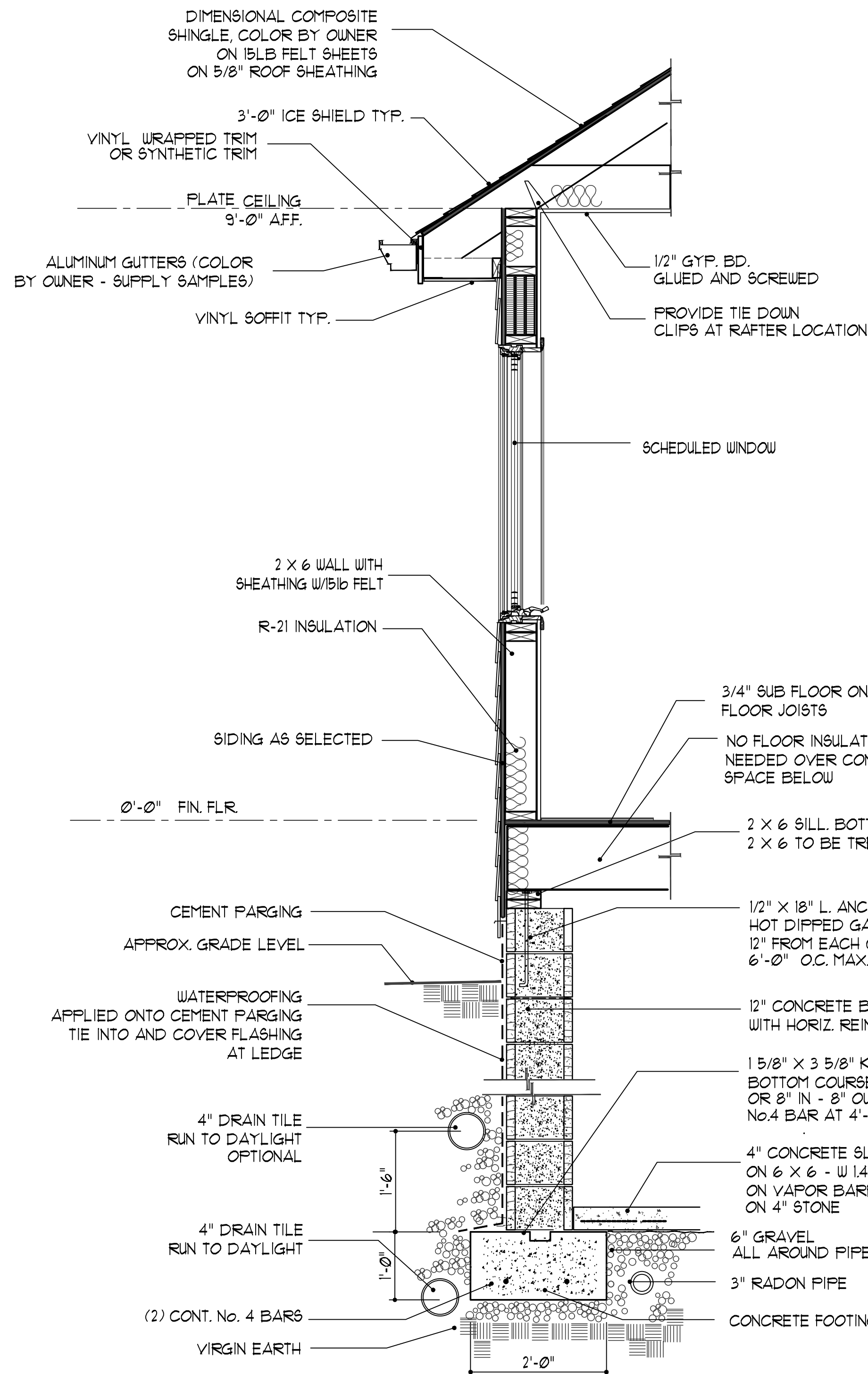
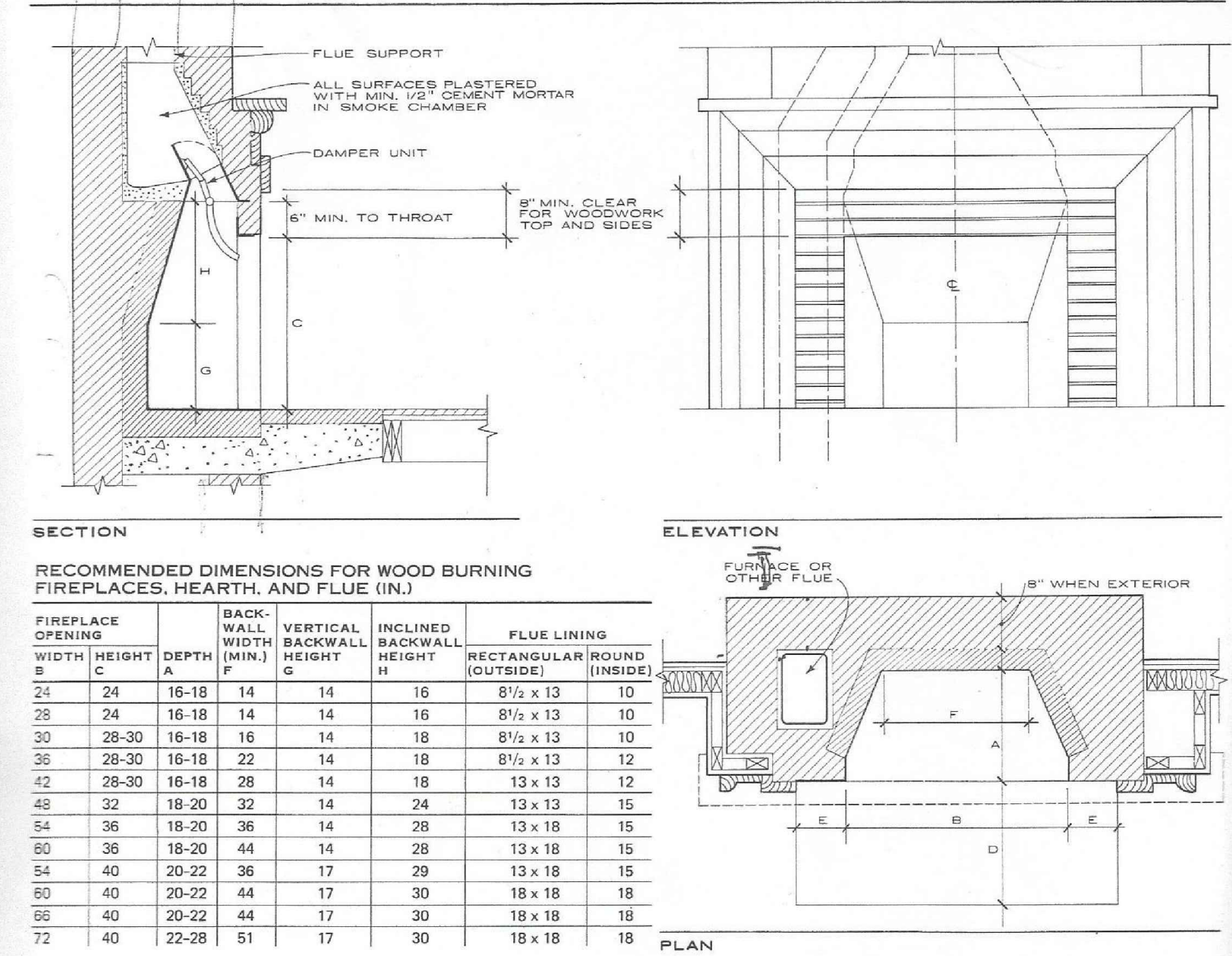
O'BRIEN ARCHITECTS INC.
ARCHITECTURE plus
P.O. BOX 361 19 MAIN ST. BLAIRTOWN, NEW JERSEY 07825
TEL: (908) 982-5900
FAX: (908) 982-6880
REOBRA.COM

RAYMOND E. O'BRIEN R.A.
N.J. AI 12606

Fireplace Openings: Dampers, Ash Dumps, and Cleanouts



Typical Fireplace Dimensions



XXXX FOR REVIEW
9-2-20
ISSUED FOR PERMIT

DATE 8-9-19
SCALE NOTED
CADD No. MASTER
BY REOB/SR

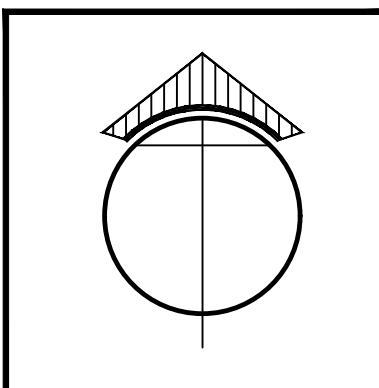
BLOCK 3101 LOT 13
NEW ADDITION for MR. AND MRS. DWYER
58 DELAWARE AVE
STIRLING, NJ
SECTIONS

PROJECT No. 2019-60

SHEET No. A-6

O'BRIEN ARCHITECTS INC.
ARCHITECTURE plus
P.O. BOX 361 19 MAIN ST. BLAIRSTOWN, NEW JERSEY 07825
TEL: (908) 982-5900 FAX: (908) 982-6880
REOBRA.COM

RAYMOND E. O'BRIEN R.A.
N.J. AI 12606



9-2-20
ISSUED FOR PERMIT

DATE 8-9-19	SCALE NOTED
CADD No. MASTER	BY REOB/SR

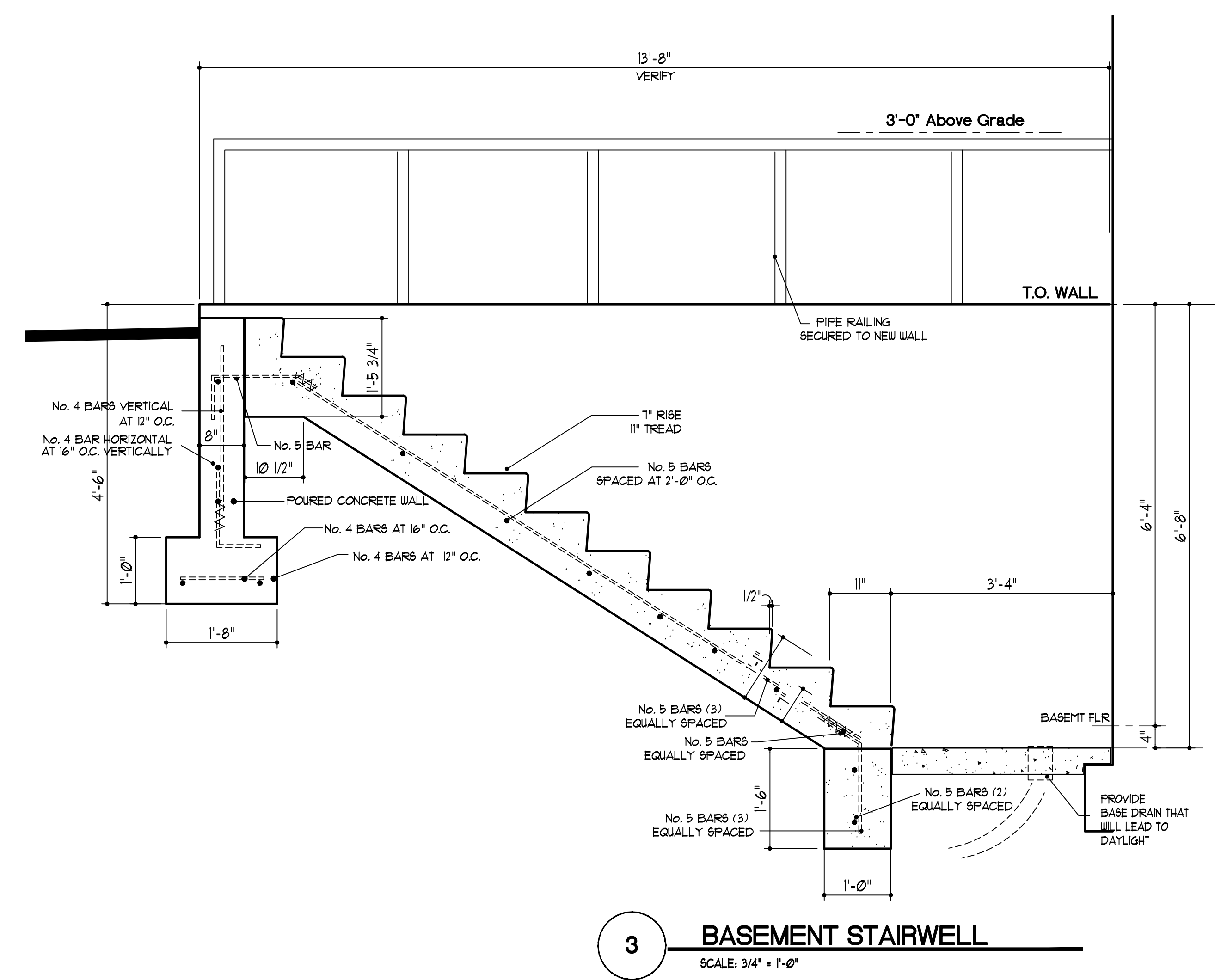
BLOCK 3101 LOT 13
NEW ADDITION for
MR. AND MRS. DWYER
58 DELAWARE AVE
STIRLING, NJ
DETAILS

PROJECT No.
2019-60

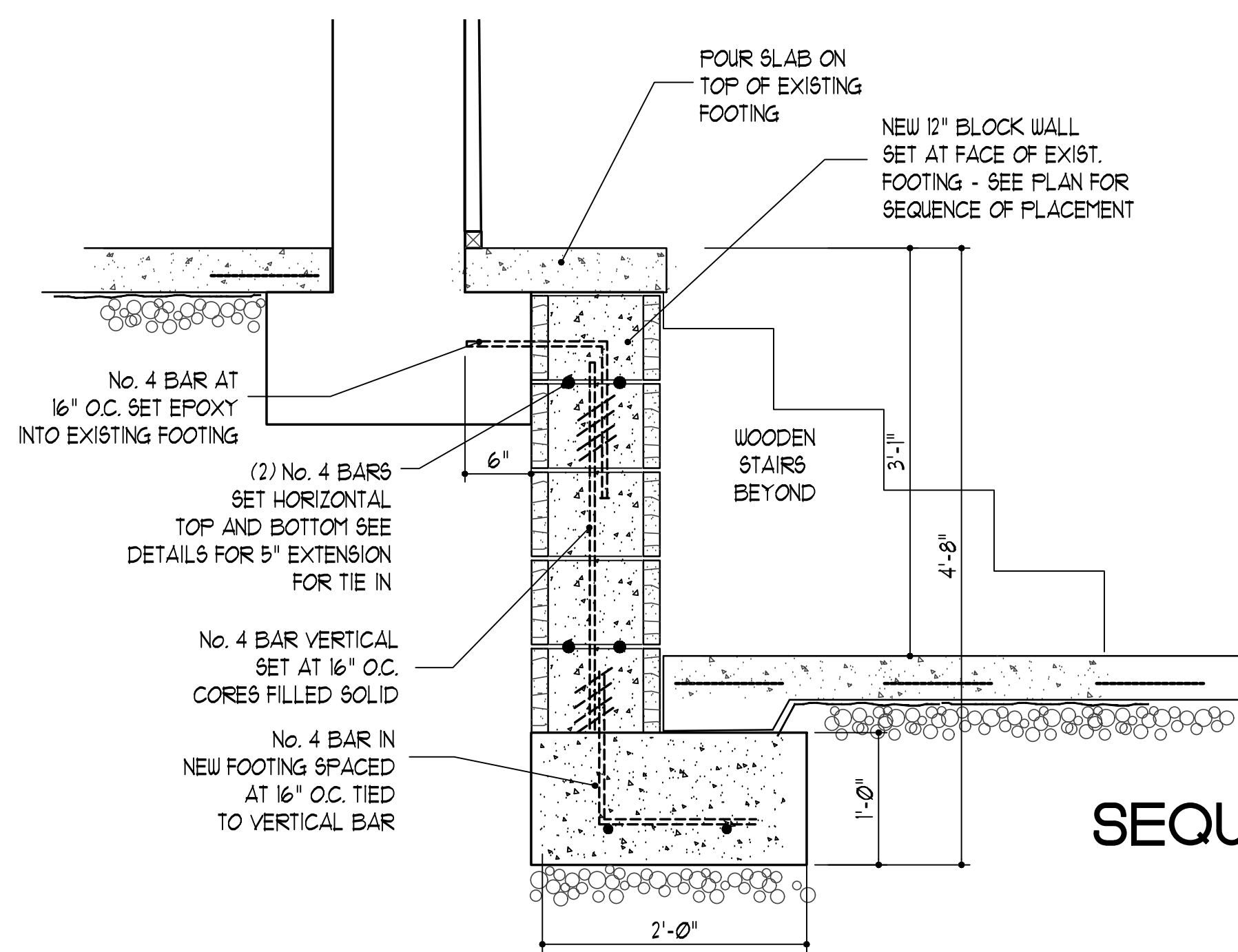
SHEET No.
A-7

O'BRIEN ARCHITECTS INC.
ARCHITECTURE plus
P.O. BOX 361 19 MAIN ST. BLAIRSTOWN, NEW JERSEY 07825
TEL: (908) 982-5900 FAX: (908) 982-6880
REOBRA.COM

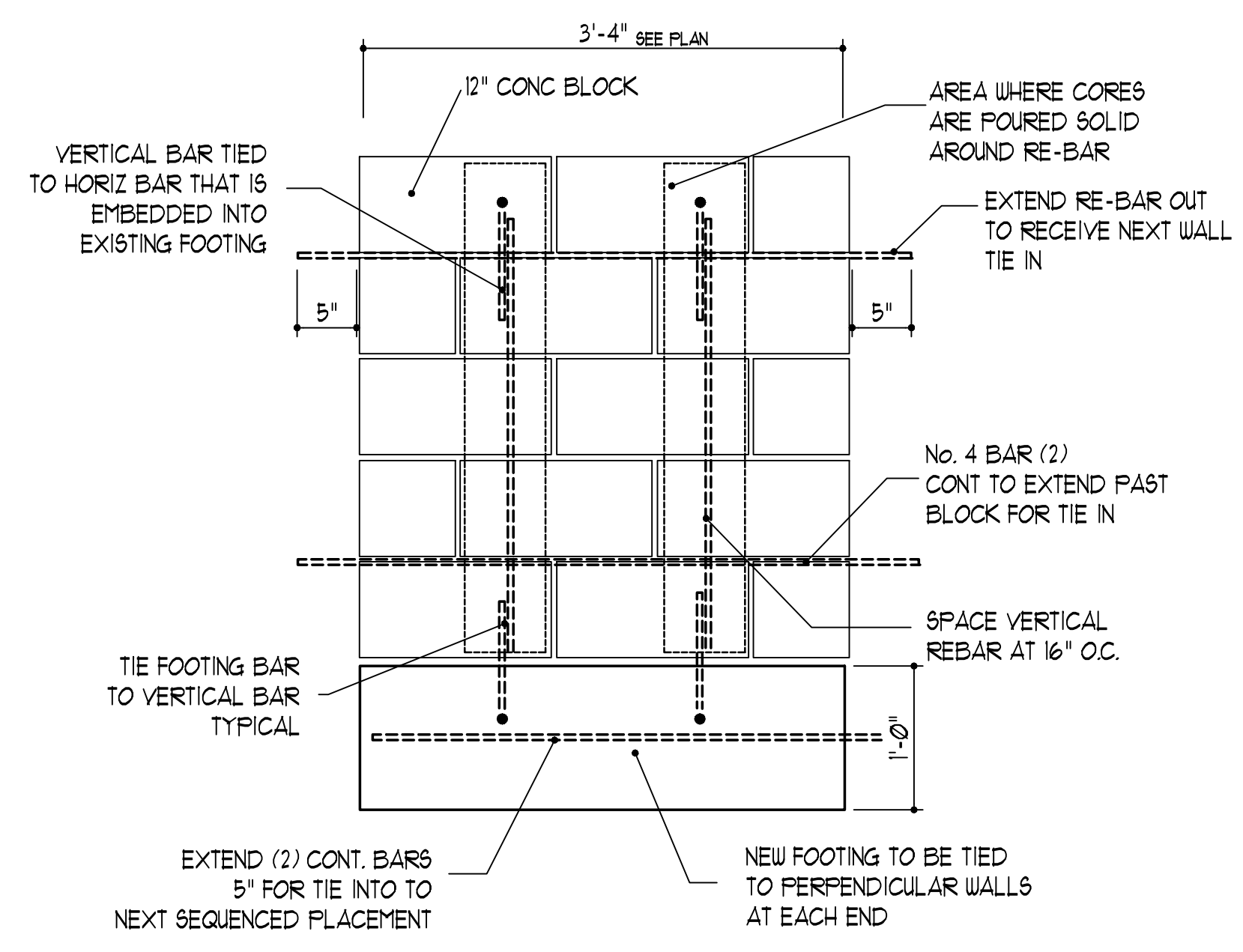
RAYMOND E. O'BRIEN R.A.
N.J. AI 12606



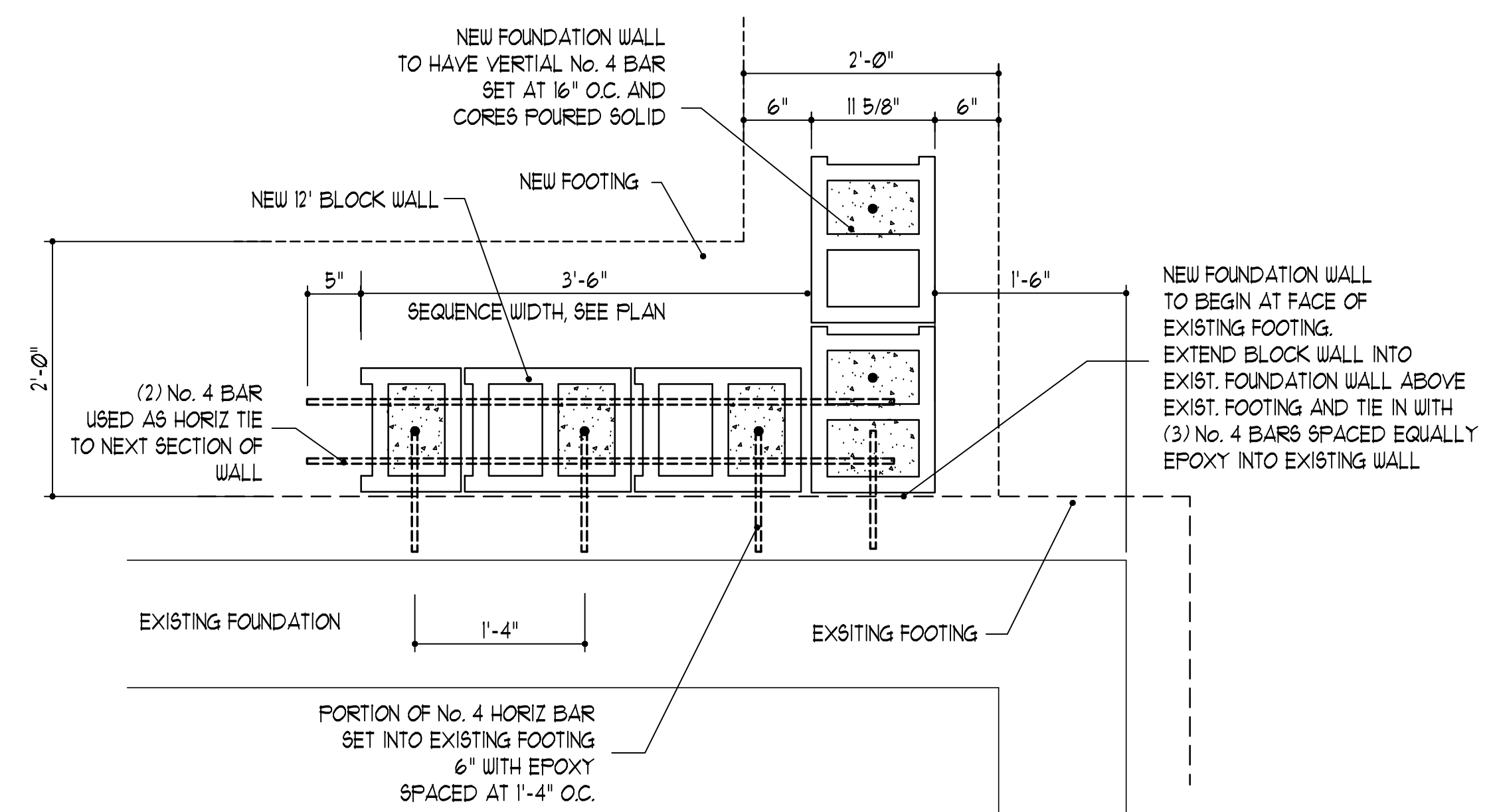
3 BASEMENT STAIRWELL
SCALE: 3/4" = 1'-0"



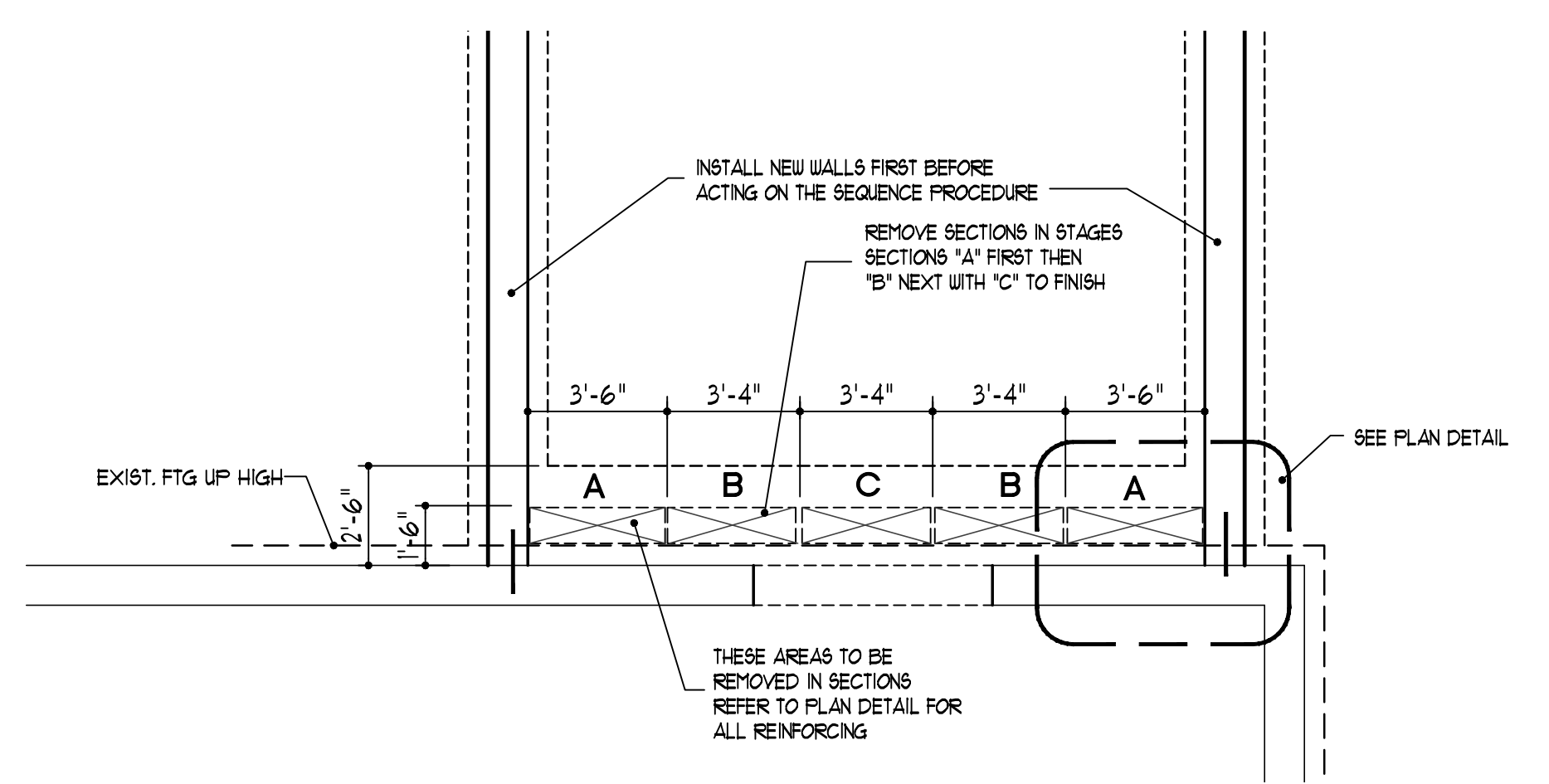
SEQUENCE SECTION



SEQUENCE ELEVATION



1 FOUNDATION DETAILS
SCALE: 1" = 1'-0"



2 SEQUENCE PLAN
SCALE: 1/4" = 1'-0"

