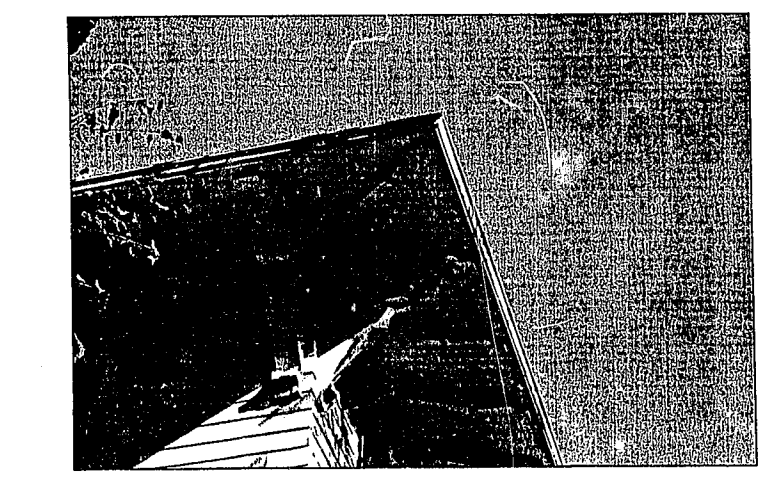
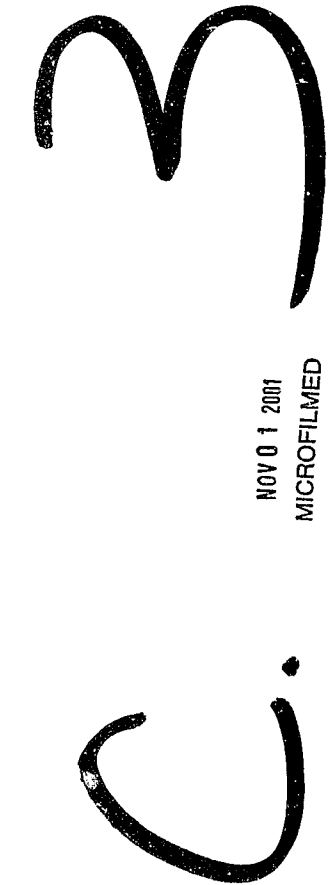


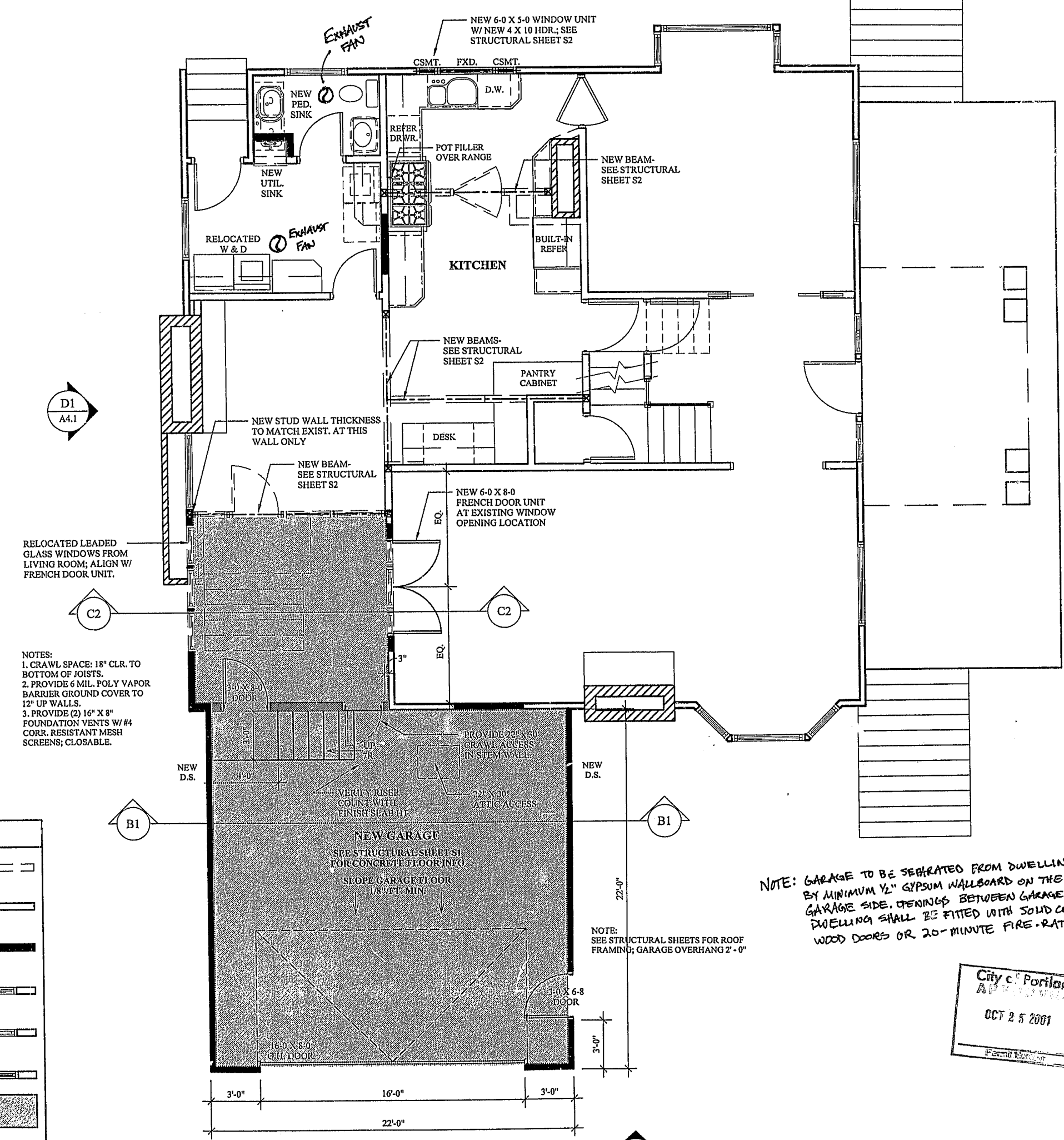
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C1 EAVE DETAIL (MATCH EXISTING EAVES & CORNER BRACKETS)  
NO SCALE'

| LEGEND:                               |                                                                                                                                                                                                                                                                                                                                                         |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EXISTING WALLS TO BE REMOVED:         |     |
| EXISTING WALLS TO REMAIN:             |                                                                                                                                                                                                                                                                    |
| NEW WALLS:                            |                                                                                                                                                                                                                                                                    |
| EXISTING DOORS/WINDOWS TO BE REMOVED: |                                                                                          |
| EXISTING DOORS/WINDOWS TO REMAIN:     |                                                                                                                                                                                                                                                                    |
| NEW DOORS/WINDOWS:                    |                                                                                                                                                                                                                                                                    |
| AREA OF NEW CONSTRUCTION:             |                                                                                                                                                                                                                                                                    |



C4 MAIN FLOOR PLAN  
1/4" = 1'-0"

NOTE: GARAGE TO BE SEPERATED FROM DWELLING BY MINIMUM 1/2" GYPSUM WALLBOARD ON THE GARAGE SIDE. OPENINGS BETWEEN GARAGE AND DWELLING SHALL BE FITTED WITH SOLID CORE WOOD DOORS OR 20-MINUTE FIRE-RATED DOORS.

**SHEET:**

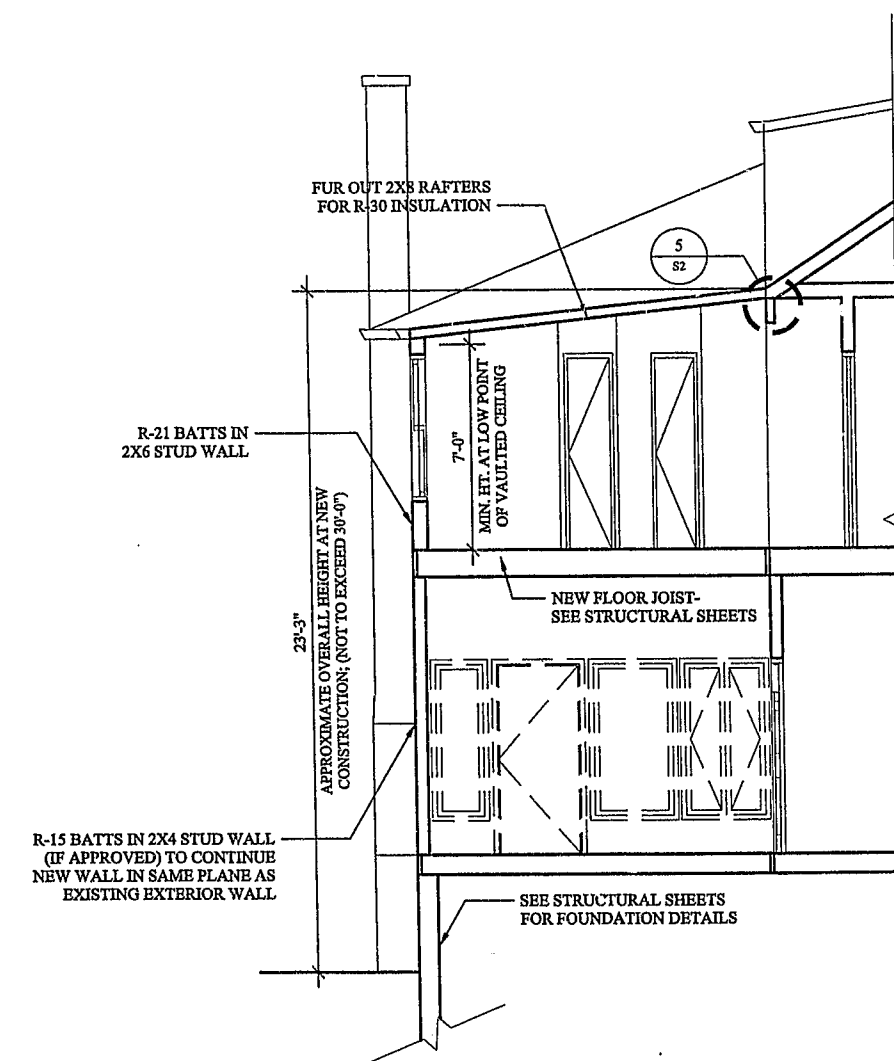
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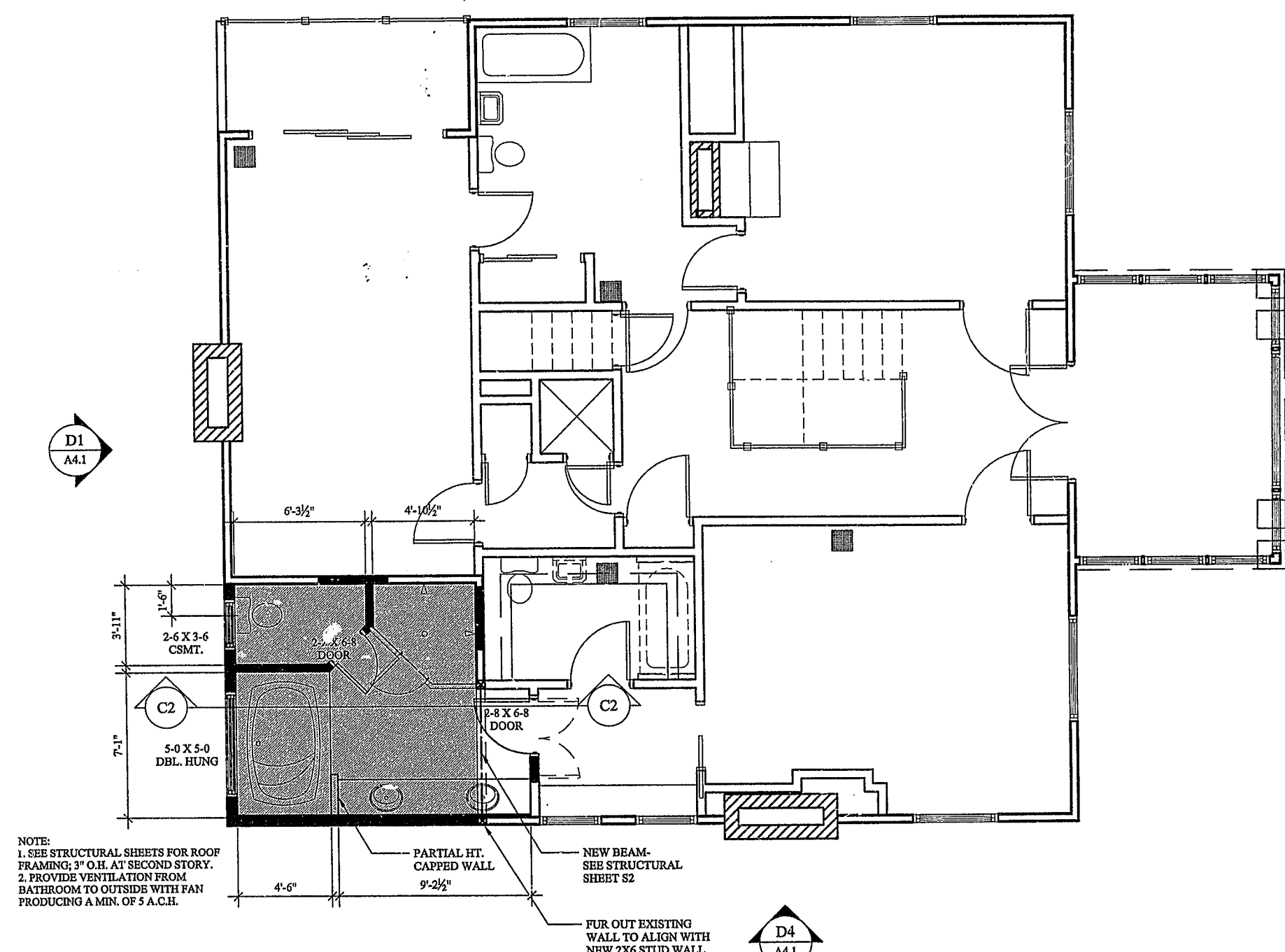
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C2 CROSS SECTION  
1/4" = 1'-0"



C4 UPPER FLOOR PLAN  
1/4" = 1'-0"

**LEGEND:**

|                                       |  |
|---------------------------------------|--|
| EXISTING WALLS TO BE REMOVED:         |  |
| EXISTING WALLS TO REMAIN:             |  |
| NEW WALLS:                            |  |
| EXISTING DOORS/WINDOWS TO BE REMOVED: |  |
| EXISTING DOORS/WINDOWS TO REMAIN:     |  |
| NEW DOORS/WINDOWS:                    |  |
| AREA OF NEW CONSTRUCTION:             |  |

City of Portland  
APPROVED  
OCT 25 2001  
Permit Number

Patrick and Anne Dolan  
Portland, Oregon  
UPPER FLOOR PLAN / CROSS SECTION

REV. DATE: 09.25.01  
REV. DATE: 09.18.01  
DATE: 09.12.01  
CHECK: TLA  
DRAWN BY: TLA  
PROJECT #: Dolan

SHEET:  
A2.2

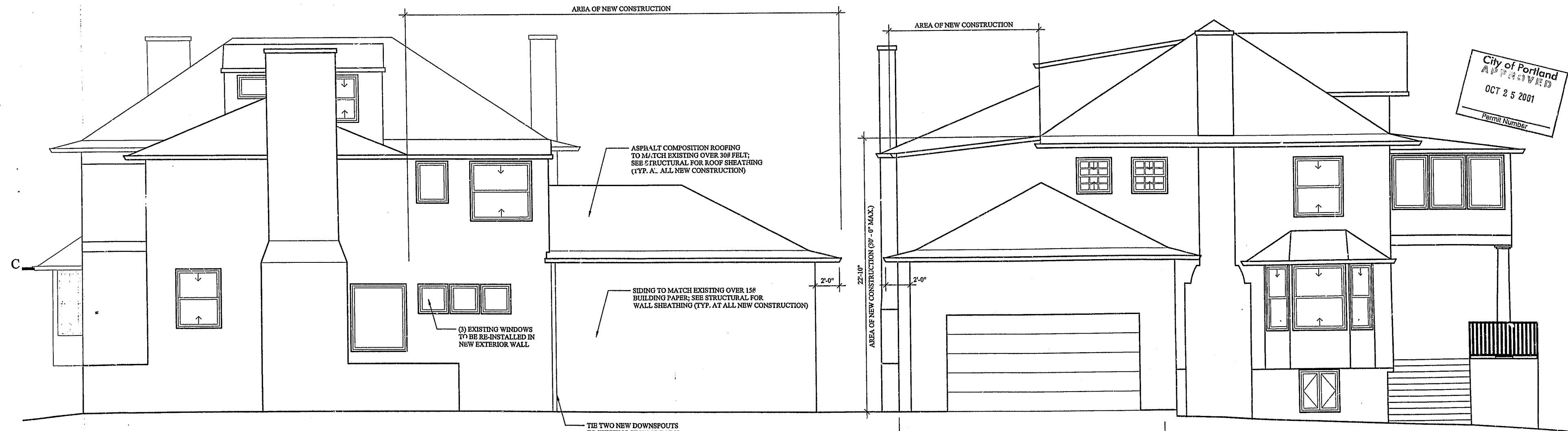


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B2 FRONT ELEVATION  
1/4" = 1'-0"



D1 REAR ELEVATION  
1/4" = 1'-0"

D4 SIDE ELEVATION  
1/4" = 1'-0"

City of Portland  
APPROVED  
OCT 25 2001  
Permit Number

Patrick and Anne Dolan  
Portland, Oregon  
EXTERIOR ELEVATIONS

REV. DATE: 09.25.01  
REV. DATE: 09.18.01

DATE: 09.12.01  
CHECK: TLA  
DRAWN BY: TLA  
PROJECT#: Dolan

SHEET:  
A4.1

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STRUCTURAL NOTES

**GENERAL:**  
1. THESE STRUCTURAL NOTES SUPPLEMENT THE SPECIFICATIONS. ANY DISCREPANCY FOUND AMONG THE DRAWINGS, SPECIFICATIONS, THESE NOTES, AND ANY SITE CONDITIONS SHALL BE REPORTED IN A TIMELY MANNER TO THE ENGINEER DESIGN TEAM WHO SHALL RESPOND TO ANY DISCREPANCY IN WRITING. ANY WORK DONE BY THE CONTRACTOR AFTER DISCOVERY OF SUCH DISCREPANCY SHALL BE DONE AT THE CONTRACTOR'S OWN RISK.  
2. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION.  
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEMOLITION AND CONSTRUCTION METHODS, TECHNIQUES, SEQUENCING, AND SAFETY REQUIRED FOR THE WORK.  
4. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL ERECTION BRACING, FORM WORK, AND TEMPORARY SHORING REQUIRED FOR THE WORK.  
**DESIGN CODE:**  
1. CASE ONE AND TWO FAMILY DWELLING CODE 1991 EDITION, STATE OF OREGON 1999 EDITION  
2. UNIFORM BUILDING CODE, 1991 EDITION, STATE OF OREGON 1999 EDITION STRUCTURAL SPECIALTY CODE  
3. ALL REFERENCES TO OTHER CODES AND STANDARDS (ACI, ASTM, ETC.) SHALL BE FOR THE LATEST OR MOST CURRENT EDITION AVAILABLE.  
**DESIGN LIVE LOADS:**  
ROOF (SNOW LOAD)..... 25 PSF (PLUS DRIFT ALLOWANCE)  
FLOORS..... 40 PSF  
WIND..... 80 MPH (EXPOSURE B)  
SEISMIC..... ZONE 3

**FOUNDATIONS:**  
1. MAXIMUM DESIGN SOIL BEARING PRESSURE = 1500 PSF ASSUMED.  
2. FOOTING ELEVATIONS SHOWN ON DRAWINGS ARE TO BOTTOM OF FOOTING.  
3. FOOTINGS SHALL BE FOUNDED ON FIRM, UNDISTURBED SOIL OR ON APPROVED STRUCTURAL FILL.  
4. STRUCTURAL FILL SHALL BE PLACED IN ONE CONTINUOUS LAYER, SAND AND GRAVEL, OR CRUSHED ROCK.  
5. THE STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND THOROUGHLY COMPACTED TO A DENSE, NON-YIELDING STATE.  
6. STRUCTURAL FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS OBTAINED BY ASTM MODIFIED PROCTOR.  
7. ALL FOOTINGS SHALL BE A MINIMUM OF 1'-6" BELOW FINAL GRADES OR 1'-0" BELOW EXISTING GRADE, WHICHEVER IS LOWER.  
8. BOTTOM OF FOOTINGS SHALL BE STEPPED FROM ELEVATION TO ELEVATION AT 2'-0" HORIZONTAL TO 1'-0" VERTICAL STEPS OR SHALL BE SLOPED NOT TO EXCEED 1 VERTICAL TO 10 HORIZONTAL WHEN APPROVED BY THE ENGINEER.  
**CONCRETE (CAST IN PLACE):**  
1. ALL CONCRETE SHALL BE NORMAL WEIGHT AND SHALL DEVELOP A MINIMUM 28 DAY LABORATORY CURED COMPRESSIVE CYLINDER STRENGTH OF:  
2500 PSI FOR ALL CONCRETE  
2. CONCRETE, FORMS, MIXING, PLACING AND CURING SHALL CONFORM TO ACI MANUAL OF CONCRETE PRACTICE, LATEST EDITION, AND SPECIFICATIONS.  
3. CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4 INCHES.  
4. CONCRETE SHALL BE PLACED IN ONE CONTINUOUS OPERATION.  
5. ALL BOLTS IN CONCRETE SHALL CONFORM TO ASTM SPECIFICATION A307 AND SHALL BE OF THE SIZE INDICATED ON THE DRAWINGS.  
**REINFORCING STEEL:**  
1. REINFORCING BARS SHALL BE NEW BILLET STEEL AND SHALL CONFORM TO:  
ASTM A615 GRADE 60 FOR ALL REINFORCEMENT.  
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A66.  
3. REINFORCEMENT SHALL BE DETAIL FABRICATED AND PLACED IN ACCORDANCE WITH ACI CODE 318 AND ACI MANUAL 318, UNLESS OTHERWISE NOTED. ALL REINFORCEMENT SHALL BE FREE OF LOOSE MILL AND RUST SCALE, OIL, DIRT AND COATINGS OF ANY MANNER THAT WILL REDUCE BOND. ALL REINFORCEMENT IS CONTINUOUS WITH ADEQUATE LAPS.  
4. REINFORCEMENT SHALL BE PLACED IN FORMS WITH SUITABLE TIES AND ANCHORAGE TO PREVENT DISPLACEMENT. BARS ADJACENT TO EARTH SHALL BE SUPPORTED BY CEMENT MORTAR CUBES.  
5. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:  
A) CONCRETE CAST AGAINST EARTH..... 3"  
B) CONCRETE EXPOSED TO EARTH OR WEATHER  
% AND LARGER..... 2"  
% AND SMALLER..... 1-1/2"  
C) CONCRETE NOT EXPOSED TO EARTH OR WEATHER  
SLABS, WALLS AND JOISTS, 1" AND SMALLER..... 3/4"  
BEAMS AND COLUMNS..... 1-1/2"

6. PLACE 2'-0" x 2'-0" BARS AT CORNERS AND INTERSECTIONS FOR WALLS AND FOUNDATIONS EQUAL IN SIZE AND SPACING TO HORIZONTAL REINFORCING.  
7. REINFORCEMENT SPLICES, SHALL BE 44 DIA. (24" MIN) LAPS.  
8. UNLESS OTHERWISE NOTED, DOUBLET CONCRETE WALLS TO FOOTING WITH BARS OF SAME SIZE & SPACING AS WALL REINFORCEMENT.  
**TRUSS JOIST MANUFACTURING:**  
1. ROOF AND FLOOR FRAMING DESIGNATED "LVL", SHALL BE THE TYPE AND SIZE INDICATED ON DRAWINGS, AS MANUFACTURED BY TRUSS JOIST MANUFACTURING CORP. WESTERN DIVISION, PORTLAND, OREGON OR APPROVED EQUAL.  
**METAL PLATE CONNECTED TRUSSES:**  
1. METAL PLATE CONNECTED TRUSSES SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH DESIGN SPECIFICATIONS FOR LIGHT METAL PLATE CONNECTED WOOD TRUSSES, TPI-24 AS PUBLISHED BY THE TRUSS PLATE INSTITUTE AND SHALL BE DESIGNED FOR THE FOLLOWING MINIMUM LOADS:  
TOP CHORD..... 25 PSF LIVE LOAD  
BOTTOM CHORD..... 10 PSF  
TOTAL LOAD..... 45 PSF + SELF WEIGHT  
NET UPLIFT (WIND)..... 15 PSF  
2. THE TRUSS MANUFACTURER SHALL SUBMIT DESIGNS, STRESS DIAGRAMS, SHOP DRAWINGS AND CALCULATIONS BEARING THE STAMP OF A (STRUCTURAL) ENGINEER REGISTERED IN THE STATE OF OREGON TO THE ENGINEER FOR REVIEW.  
3. THE TRUSS MANUFACTURER SHALL SUPPLY ALL HARDWARE, ANCHORAGE, AND METAL SEATS REQUIRED, AND SHALL DESIGN AND INDICATE BRACING REQUIRED TO BE SUPPLIED BY THE GENERAL CONTRACTOR.  
4. LOWER CHORDS SHALL BE CAMBERED TO PROVIDE FOR DEAD LOAD DEFLECTION AT GYPSUM BOARD CEILING.  
5. ALL CONNECTION PLATES SHALL DEVELOP THE FULL STRESS IN MEMBER WITH A MINIMUM TRANSFER AT ANY MEMBER OF 2000 LBS. AND MINIMUM SIZE OF PLATES OF 3" x 5".  
6. TRUSS SUPPLIER SHALL INSPECT ALL THE TRUSS BRIDGING, HANGERS, BLOCKING WEB STIFFENERS AND ALL OTHER CONCENTRATED LOADS PRIOR TO TRUSS FABRICATION.  
**GLUE LAMINATED MEMBERS:**  
1. ALL GLUE LAMINATED TIMBER BEAMS SHALL BE DOUGLAS FIR 24F-V4 AT ALL SIMPLE BEAMS AND GRADE 24F-V6 AT ALL CANTILEVER AND CONTINUOUS BEAMS, UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS.  
2. ALL GL. TIMBER SHALL BE FABRICATED IN ACCORDANCE WITH AITC IT-21 MANUFACTURING, USING D.F. LUMBER AND WATERPROOF ADHESIVE. EACH MEMBER SHALL BEAR AN AITC IDENTIFICATION MARK AND BE ACCOMPANIED BY AN AITC CERTIFICATE OF CONFORMANCE.  
3. GL. TIMBER BEAMS SHALL HAVE CAMBER AS INDICATED ON THE DRAWINGS.  
4. ALL GL. MEMBERS SHALL BE NOTCHED, SHAPED AND FINISHED AS PER PLANS AND SPECIFICATIONS.  
5. SEE SPECIFICATIONS FOR FINISH AND PROTECTION.  
**SAUN FRAMING LUMBER:**  
1. ALL SAUN LUMBER SHALL BE DOUGLAS FIR, S4S, GRADED IN ACCORDANCE WITH WCLB RULES %6, OF THE FOLLOWING GRADES:  
STUDS, JOISTS, PLATES, HEADERS, BLOCKING..... NO. 2  
4x BEAMS..... NO. 2  
6x BEAMS, POSTS..... NO. 1  
2. ALL 2x LUMBER SHALL BE S-DRY UNO.  
3. DOUBLE ALL JOISTS UNDER ALL PARALLEL PARTITIONS.

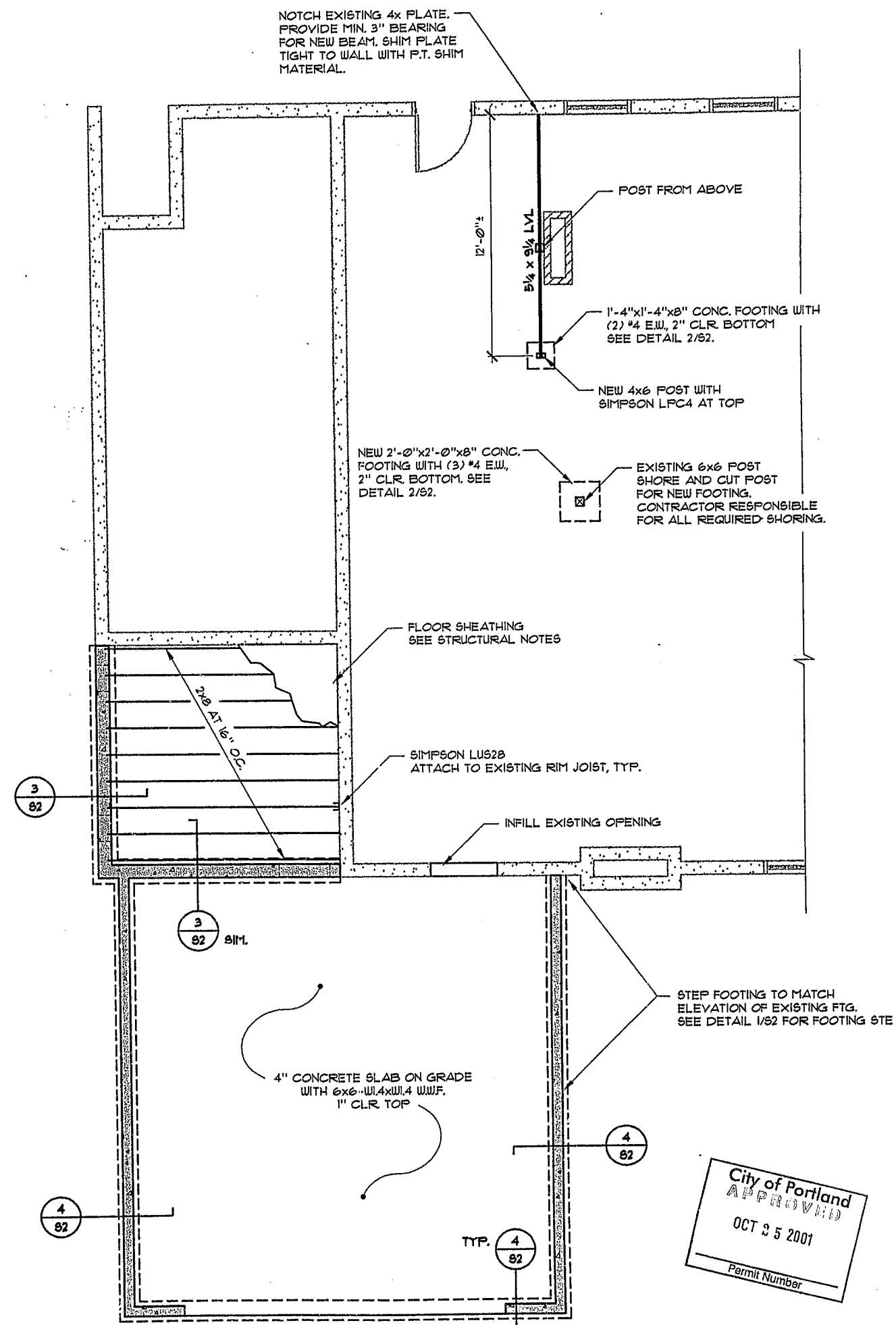
**PLYWOOD SHEATHING:**  
1. ALL SHEATHING SHALL BE PLYWOOD, APA GRADE-TRADEMARKED C-D WITH EXTERIOR GLUE AND PANEL IDENTIFICATION INDEX. PANEL THICKNESS AND IDENTIFICATION INDEX SHALL BE AS FOLLOWS:  
A) ROOF SHEATHING..... 1/2" INDEX 32/16  
B) FLOOR..... 3/4" INDEX 48/24  
C) WALLS..... 1/2" INDEX 32/16  
2. FLOOR AND ROOF PLYWOOD SHALL BE INSTALLED WITH FACE GRAIN PERPENDICULAR TO SUPPORTS AND END JOINTS SHALL BE STAGGERED.  
3. PROVIDE 1 FLY CLIP PER SPAN @ UNSUPPORTED EDGE OF PLYWOOD ROOF SHEATHING WHERE JOIST SPACING EXCEEDS 16" O.C. UNO, AS BLOCKED EDGES.  
4. BLOCK ALL WALL SHEATHING WITH 2 x 4 BLOCKING AT ALL EDGES.  
**NAILING AND FASTENERS:**  
1. NAILING INDICATED ON PLANS AND DETAILS ARE "COMMON" NAILS. MINIMUM FRAMING NAILING SHALL CONFORM TO UBC TABLE 23-II-B-1. SEE DETAILS FOR ADDITIONAL TYPICAL NAILING REQUIREMENTS. SUBSTITUTION OF NAILS OTHER THAN "COMMON" IS NOT PERMITTED WITHOUT PRIOR APPROVAL.  
2. POWER DRIVEN NAILS OTHER THAN "COMMON" NAILS MAY BE USED IF DATA IS SUBMITTED AND APPROVED PRIOR TO USE.  
3. PLYWOOD NAILING SHALL BE AS FOLLOWS:  
A) ROOF SHEATHING..... 8d AT 6" O.C. AT ALL PANEL EDGES  
8d AT 12" O.C. AT ALL INTERMEDIATE SUPPORTS  
B) FLOOR SHEATHING..... 8d AT 6" O.C. AT ALL PANEL EDGES  
8d AT 10" O.C. AT ALL INTERMEDIATE SUPPORTS  
C) WALL SHEATHING..... BLOCK ALL EDGES WITH 2 x 4 PLATE, NAILING AS INDICATED ON DRAWINGS.  
4. ALL BOLTED CONNECTIONS SHALL BE MADE WITH MACHINE BOLTS (M3) CONFORMING TO ASTM A307. ALL BOLTS AND LAGS SHALL BE INSTALLED WITH STANDARD WROUGHT WASHERS, UNLESS NOTED OTHERWISE.  
5. JOIST HANGERS, HOLD DOWNS, AND OTHER FRAMING ACCESSORIES ARE REFERRED TO ON PLANS BY PARTICULAR TYPE AS MANUFACTURED BY SIMPSON COMPANY - SAN LEANDRO, CA. ALL HARDWARE IS TO BE FASTENED PER MANUFACTURER'S SPECIFICATIONS, UNO.  
6. EPOXY ANCHOR BOLTS INDICATED ON DRAWINGS SHALL BE AS MANUFACTURED BY HILTI CO. OR APPROVED EQUAL. DEPTH OF EMBEDMENT SHALL BE AS CALLED FOR ON THE DRAWINGS. INSTALL AS RECOMMENDED BY THE MANUFACTURER WITH C-20 GROUT.  
7. SILLS AT WALLS SHALL BE BOLTED TO CONCRETE WITH 1/2" DIAMETER x 10" LONG ANCHOR BOLTS OR 1/2" DIAMETER EPOXY ANCHOR BOLTS AT 4'-0" O.C. MAXIMUM AND WITHIN 1'-0" OF SILL PLATE ENDS, CORNERS OR SPLICES, UNLESS DETAILED OTHERWISE.

| SHEAR WALL SCHEDULE                                                       |                                         |                                                  |          |  |
|---------------------------------------------------------------------------|-----------------------------------------|--------------------------------------------------|----------|--|
| WALL INFORMATION                                                          | P.T. SILL PLATE ANCHOR BOLTS            | RIM JOIST CONDITION                              | COMMENTS |  |
| 1/2" APA RATED 5/8" ONE SIDE W/ 8d NAILS @ 6" O.C. EDGES & 12" O.C. FIELD | 1/2" x 10" A.B.'s @ 48" O.C. (EMBED 1") | SIMPSON A307 @ 16" O.C. RIM JOIST TO PLATE BELOW |          |  |
| 1/2" APA RATED 5/8" ONE SIDE W/ 8d NAILS @ 4" O.C. EDGES & 12" O.C. FIELD | 1/2" x 10" A.B.'s @ 32" O.C. (EMBED 1") | SIMPSON A307 @ 16" O.C. RIM JOIST TO PLATE BELOW |          |  |

**NOTES:**  
1. IF A.B. SPACING IS GREATER THAN SHEAR WALL LENGTH INSTALL (1) A.B. WITHIN 12" OF EACH END AS PER UBC 1806.6 UNO.

| HOLDOWN SCHEDULE |                                                                                                               |                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| HOLDOWN          | ATTACHMENT                                                                                                    | COMMENTS                                                |
| NON REQUIRED     | NA                                                                                                            | NA                                                      |
| SIMPSON L5THD8   | EMBED IN CONCRETE MIN. 1/2" FROM END (CORNER) NAIL STRAP TO DBL. STUD W/ (24) 16d SINKER NAILS.               |                                                         |
| OR               | OR                                                                                                            |                                                         |
| SIMPSON HTT16    | 5/8" x 15" 1" ANCHOR BOLT TO FDN. 4 NAIL STRAP TO DBL. STUDS (16) 16d SINKER NAILS                            | PROVIDE 14 DOWELS W/ STANDARD HOOK @ EACH A.B. LOCATION |
| SIMPSON MST48    | (23) 16d NAILS @ TOP INTO DBL. STUDS & (23) 16d NAILS @ BOTTOM INTO DBL. STUDS BELOW. (CENTER STRAP ON FLOOR) | WRAP 4 NAIL STRAP TO BEAM/HEADER BELOW IF APPLICABLE    |

**NOTES:**  
1. DBL. STUDS SHALL BE LAMINATED TOGETHER W/ 16d NAILS @ 4" O.C. FULL HEIGHT (TYPICAL).  
2. PROVIDE HOLDOWN MINIMUM OF 6" FROM EACH END OF EACH SHEAR WALL.



**FOUNDATION PLAN NOTES**  
1. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.  
2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FLOOR ELEVATIONS, SLOPES, AND RECESSES.  
3. REFER TO GENERAL STRUCTURAL NOTES ON THIS SHEET.  
4. PROVIDE 2" SAND OVER VAPOR BARRIER OVER 6" (MINIMUM) OF CRUSHED ROCK BASE BENEATH ALL SLABS ON GRADE - TYPICAL.  
5. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS, AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ENGINEER FOR CLARIFICATION, IN A TIMELY MANNER, PRIOR TO CONSTRUCTION.

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STRUCTURAL  
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12,320  
Steven J. Entenman  
OREGON  
JULY 1985  
EXPIRES: 12/31/01

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Portland, Oregon  
STRUCTURAL

REV. 09.25.01

DATE: 09.12.01  
CHECK: DJS  
DRAWN BY: MJG  
PROJECT #: 2824

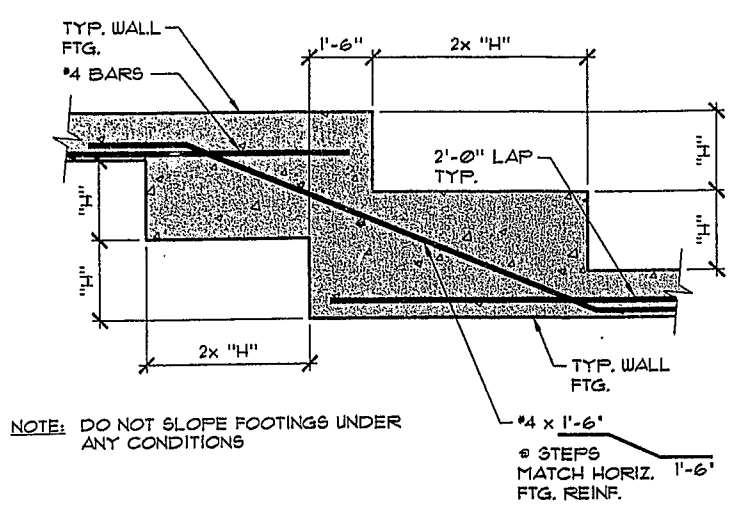
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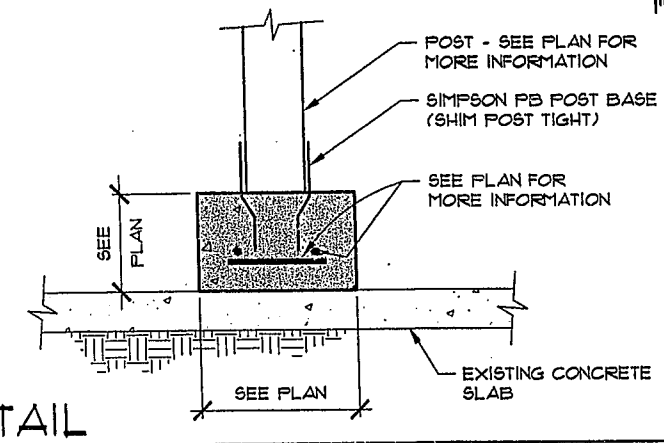
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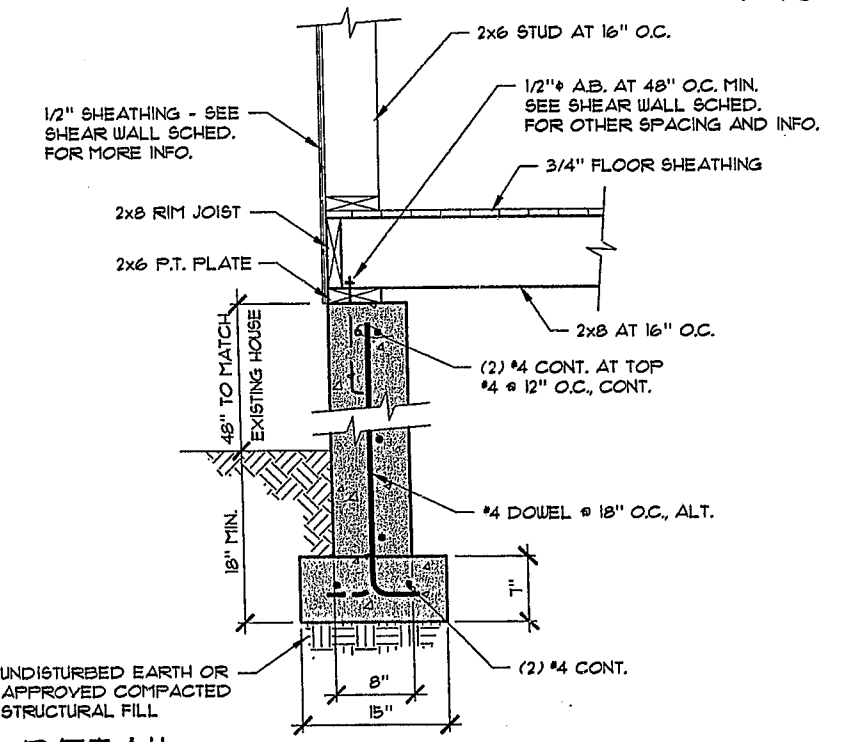
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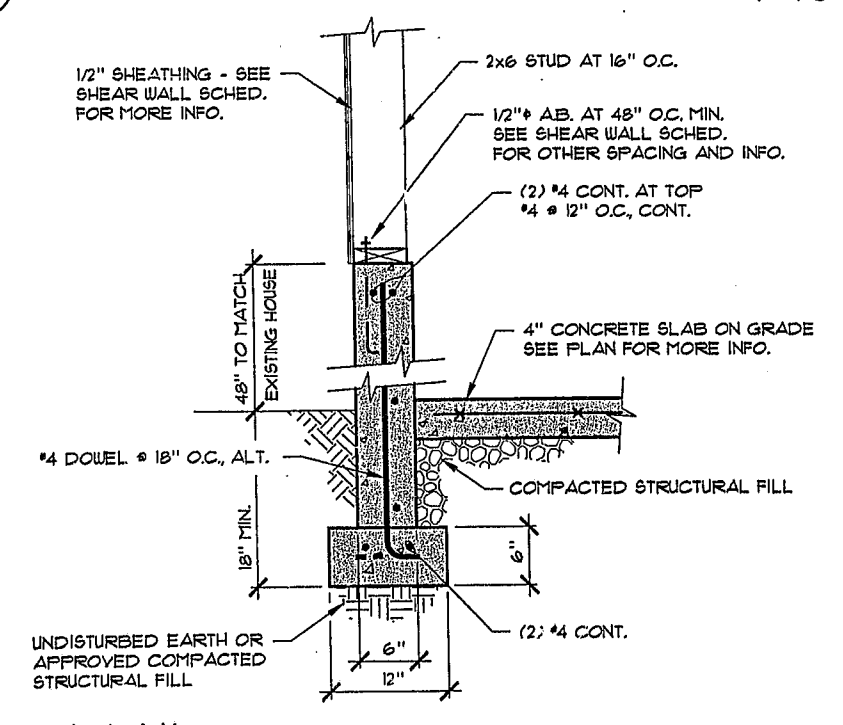
1 STEP FOOTING DETAIL 1" = 1'-0"



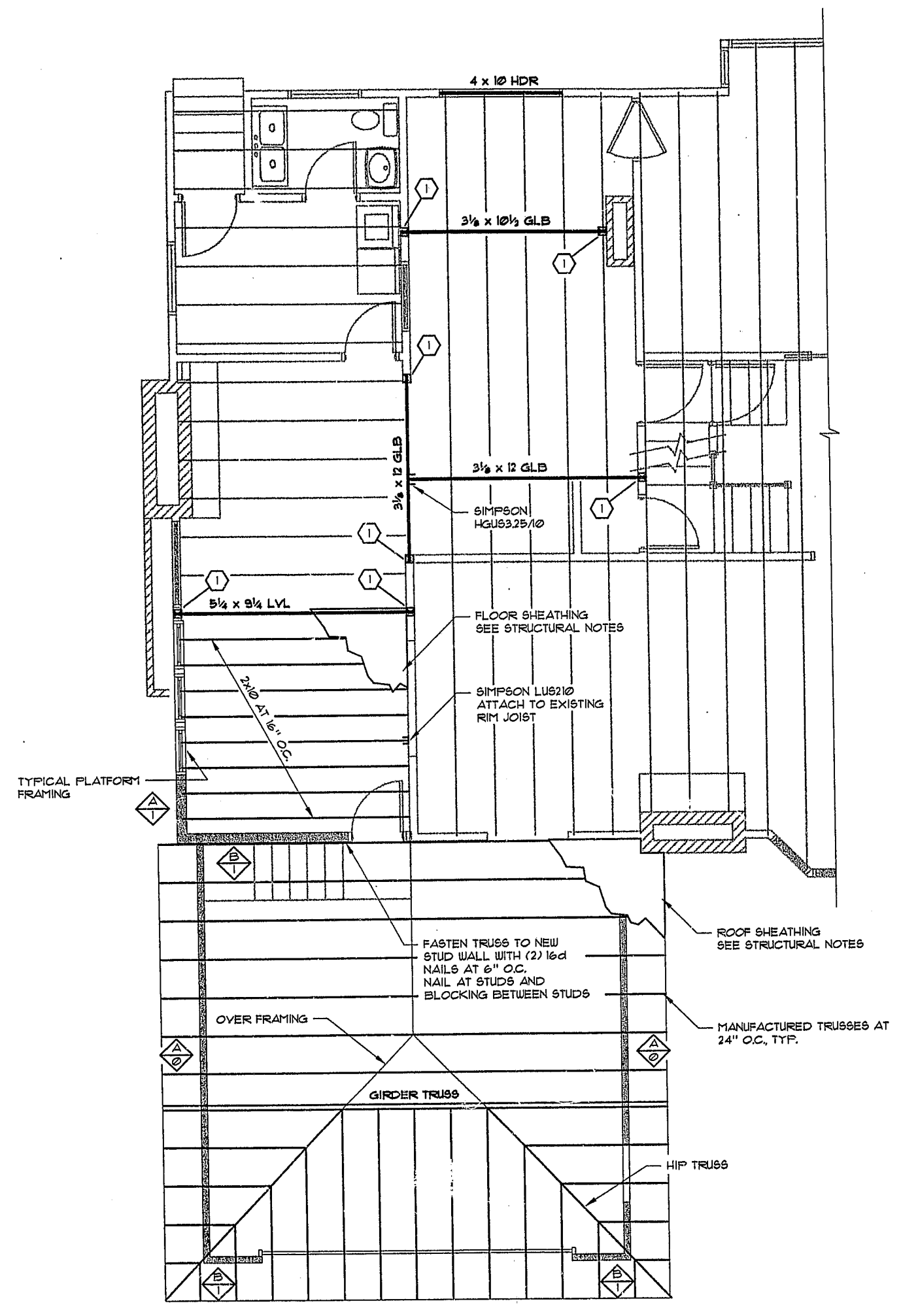
2 DETAIL 1" = 1'-0"



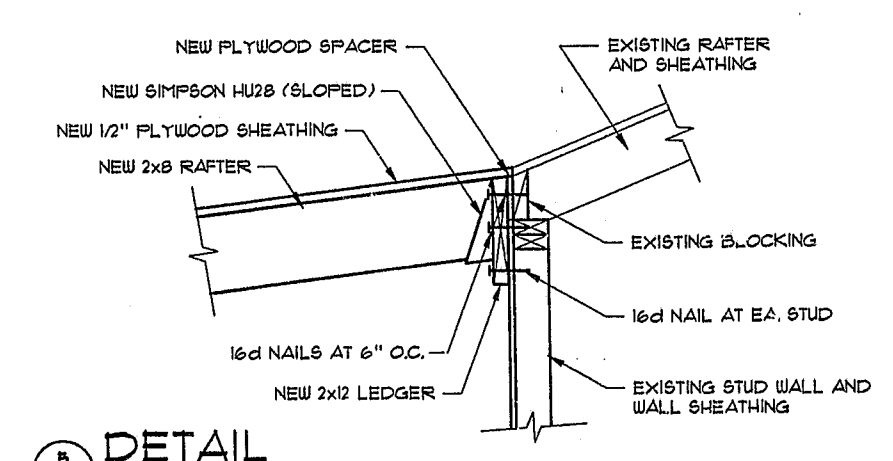
3 DETAIL 1" = 1'-0"



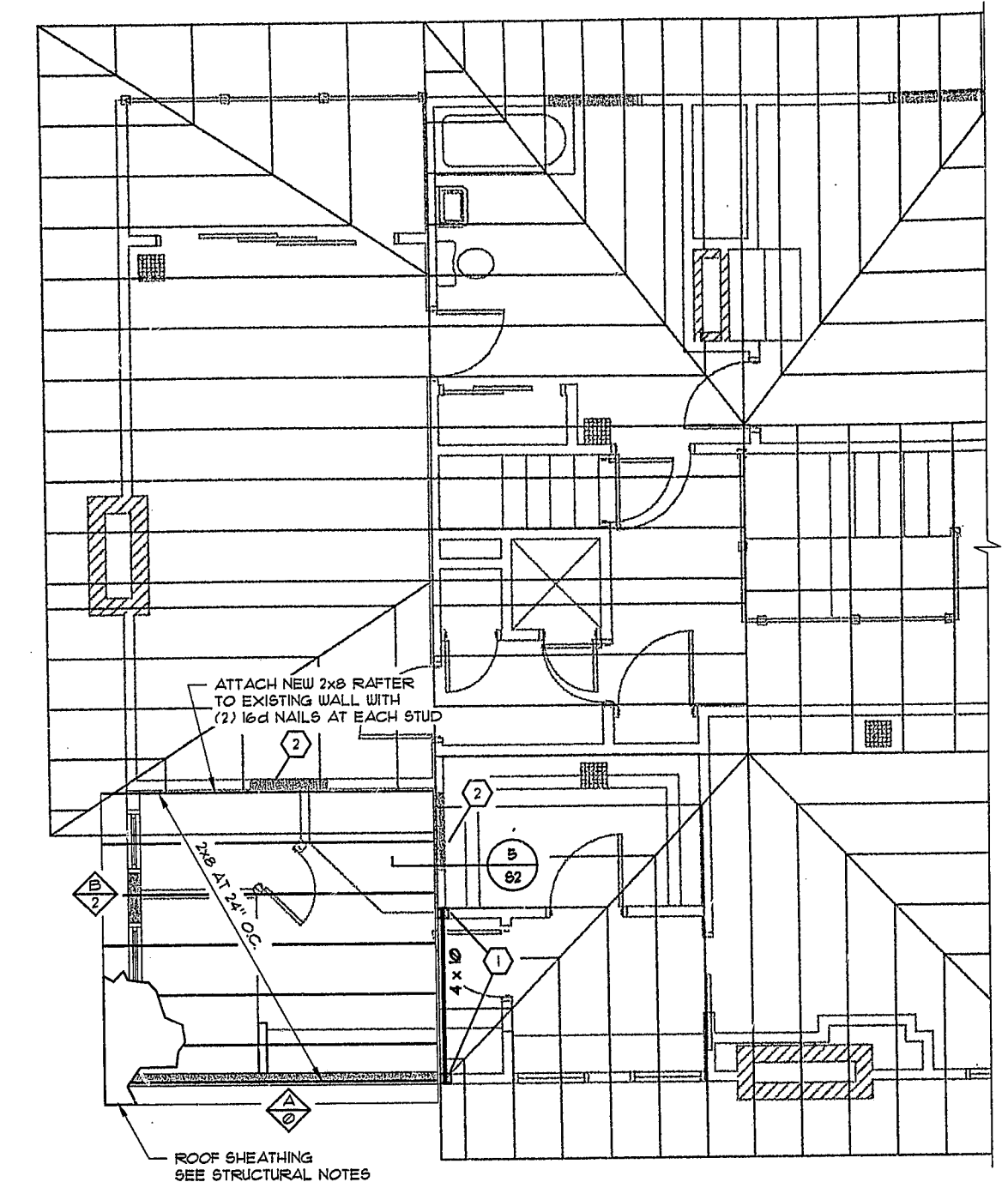
4 DETAIL 1" = 1'-0"



2ND FLOOR FRAMING AND GARAGE ROOF FRAMING PLAN 1/4" = 1'-0"



DETAIL 1" = 1'-0"



B ROOF FRAMING PLAN 1/4" = 1'-0"

- KEY NOTES:**
- 1. NEW 4x4 POST WITH SIMPSON LPC4 AT TOP AND BC40 AT BASE. PROVIDE CONTINUOUS BEARING TO FOUNDATION.
  - 2. REMOVE ALL EXISTING SHEATHING AND REPLACE WITH 1/2" PLYWOOD SHEATHING FULL HEIGHT OF WALL. FASTEN WITH 8d NAILS AT 4" PANEL EDGES AND 12" FIELD.

- FLOOR AND ROOF FRAMING PLAN NOTES**
- 1. REFER TO ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS.
  - 2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL FLOOR ELEVATIONS, SLOPES, AND RECESSES.
  - 3. REFER TO GENERAL STRUCTURAL NOTES ON SHEET S1.
  - 4. DIAMOND INDICATES SHEAR WALL AND HOLDOWN. SEE SCHEDULE ON SHEET S1.
  - 5. CONTRACTOR RESPONSIBLE FOR ALL REQUIRED SHORING.
  - 6. CONTRACTOR TO FIELD INSPECT ALL EXISTING LUMBER CONDITIONS AND REPORT TO ENGINEER ANY DECAY.
  - 1. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION METHODS FOR THIS STRUCTURE. CONNECTIONS, DETAILS, AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ENGINEER FOR CLARIFICATION, IN A TIMELY MANNER, PRIOR TO CONSTRUCTION.

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STRUCTURAL  
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12,520  
Steven J. Entwistle  
OCT 15, 2001  
EXPIRES 12/31/01

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City of Portland  
APPROVED  
OCT 25 2001  
Permit Number  
Patrick and Anne Dolan  
Portland, Oregon  
STRUCTURAL

REV. 09.25.01  
DATE: 09.12.01  
CHECK: DJS  
DRAWN BY: MJG  
PROJECT #: 2824

SHEET:  
S2

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CITY OF  
**PORTLAND, OREGON**

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1900 SW 4<sup>th</sup> Ave, Suite 5000  
Portland, OR 97201



|                                                                                                                                                            |                   |                                 |                                                                                              |                                   |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------|----------------------------------------------------------------------------------------------|-----------------------------------|--------------|
| <b>STATUS CHECK</b>                                                                                                                                        |                   | Residential 1 & 2 Family Permit |                                                                                              | Application # 01-159450-000-00-RS |              |
| Status Date: September 21, 2001                                                                                                                            |                   |                                 |                                                                                              | IVR Number: 2122915               |              |
| <b>APPLICANT</b>                                                                                                                                           |                   | PATRICK DOLAN                   |                                                                                              | Phone: (503) 969-8000             |              |
| <b>OWNER</b>                                                                                                                                               |                   | PATRICK DOLAN                   |                                                                                              | Phone: (503) 969-8000             |              |
| <b>CONTRACTOR</b>                                                                                                                                          |                   | PATRICK DOLAN                   |                                                                                              | Phone:                            |              |
| <b>PROJECT INFORMATION</b>                                                                                                                                 |                   |                                 | Description of Work: BUILD NEW 2 STORY ADDITION AND A 2 CAR GARAGE ATTACHED TO NEW ADDITION. |                                   |              |
| Street 2611 SW RAVENSVIEW DR                                                                                                                               |                   |                                 |                                                                                              |                                   |              |
| Address                                                                                                                                                    |                   |                                 |                                                                                              |                                   |              |
| Occupancy Group                                                                                                                                            | Construction Type | Sub Type                        | Work Proposed                                                                                |                                   |              |
| R3 U1                                                                                                                                                      | V-N               | Single Family Dwelling          | Addition                                                                                     |                                   |              |
| This report shows those reviews which have been assigned as of September 21, 2001 at 4:24 pm. Technical reviews may trigger additional review assignments. |                   |                                 |                                                                                              |                                   |              |
| Review Type/Process                                                                                                                                        | Mandatory         | Status                          | Action Date                                                                                  | Reviewer                          | Phone        |
| Completeness Check - RS                                                                                                                                    | X                 | Closed                          | 9/21/01                                                                                      | Quillin, Bill                     | 503-823-3444 |
| Assign plan and file location                                                                                                                              |                   | Open                            |                                                                                              | DOCUMENT SERVICES                 | 503-823-7357 |
| Assign Reviews - RS                                                                                                                                        |                   | Open                            |                                                                                              |                                   |              |
| Corrections Received - RS                                                                                                                                  |                   | Open                            |                                                                                              | DOCUMENT SERVICES                 | 503-823-7357 |
| Planning and Zoning Review                                                                                                                                 | X                 | Open                            |                                                                                              | DSC PLANNING                      | 503-823-7526 |
| Erosion Control Plan Review                                                                                                                                | X                 | Approved                        | 9/21/01                                                                                      | SITE DEVELOPMENT                  | 503-823-6892 |
| Site Development Review                                                                                                                                    | X                 | Open                            |                                                                                              | SITE DEVELOPMENT                  | 503-823-6892 |
| Spec. Insp. - Site Dev.                                                                                                                                    |                   | Open                            |                                                                                              | SITE DEVELOPMENT                  | 503-823-6892 |
| Life Safety Review                                                                                                                                         | X                 | Open                            | 9/26                                                                                         | LIFE SAFETY                       | 503-823-7301 |
| Structural Review                                                                                                                                          | X                 | Open                            |                                                                                              | STRUCTURAL                        | 503-823-7247 |
| Residential Plumbing Review                                                                                                                                | X                 | Open                            |                                                                                              | Ebeling, Mike                     |              |
| Residential Subsurface Site Evaluation                                                                                                                     | X                 | Open                            |                                                                                              | COMMERCIAL PLUMB                  |              |
| Urban Forestry Review                                                                                                                                      | X                 | Open                            |                                                                                              | Black, Myles                      | 503-823-4018 |
| Send Letter of intent to expire                                                                                                                            |                   | Open                            |                                                                                              | DOCUMENT SERVICES                 | 503-823-7357 |
| Plans checked out to Applicant                                                                                                                             |                   | Open                            |                                                                                              |                                   |              |
| Pre-issuance check                                                                                                                                         | X                 | Open                            |                                                                                              | PRE-ISSUANCE RS;M;MP              | 503-823-7357 |
| Payment Received                                                                                                                                           |                   | Open                            |                                                                                              |                                   |              |

**DO NOT REMOVE**

Approval criteria for Zoning must be attached to plans on construction site.

1 copy to each set of plans  
1 copy to DSC filePlancheck # 01-159450 RSPlanner: NR**ONE & TWO FAMILY RESIDENTIAL PLAN REVIEW SHEET**Date: 9/21/01Zone: R7

Addition and Lot: \_\_\_\_\_

LUR History: PLA 1220-39Substandard Lot  
PUD/ClusterY  
YN  
N

ADU

Detached Access. Structure

Y  
YN  
NLot size: 25,000

Plan District: \_\_\_\_\_

MinimumRequiredProposed

Front Setback

15NE

Side Setback

540

\*Rear Setback

ave. 2 1/2' to prop. line 5 building5

Parking Setback

4080

Outdoor Area

——

Trees (preservation, planting, or fund)

——Maximum

Vehicle Paving

40%access thru carport/back yard

Building Coverage

35%2702 11%

Height

30'30'

Impervious Surface

—%—%Base Zone Design Standards

Main Entrance

No change

Street Facing Façade

1520 road226 provided - OK

Length of Garage Wall

OK

Street Lot Line Setbacks

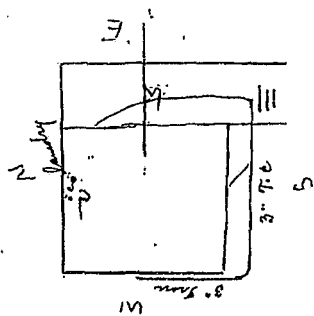
OKOther Req./Notes

9-28-20

## REPORT OF PLUMBING INSPECTION

Street and No. 545 Ravensview Drive Permit No. 16597  
 Owner M. Cartwright  
 Contractor Theo Roy & Wilson  
 Loc. 20-73 Block            Addition Hillview  
 Stories and class of building 2 sty old frame res.  
 Water Closets            Sinks            Urinals             
 Bath Tubs            Laundry Tubs            Slop Sinks             
 Basins            Floor Drains 1 Connected to SEWER  
 Rain Drains 4 Connected to             
 Kind of Vents            Kind of Drains             
 No. and Size of Stacks            Total No. Fixtures             
 Other Plumbing Fixtures connect 4 rain drains to sewer  
install floor drain  
 Water Permits             
 Date of First Inspection            Date of Final Inspection 9/28-20  
           Inspector            Inspector             
 Date of First Certificate            Date of Final Certificate           

SEE OTHER SIDE FOR REMARKS



Address 2611 S. W. Ravensview Drive Permit 184350

Lot Bldg Add.

Owner Eric Kollaratek

Contractor F. W. Skobel

Stories and class of building 1 story new play house

Toilets Floor Drains Beer Cab

Bath Tubs Rain Drains Refr. Drains

Bath Showers Fountains Urinals

Basins H &amp; W. Tanks Catch Basins

Sinks Cesspool Water Service

Laundry Trays Dry Wells Connected to Sewer

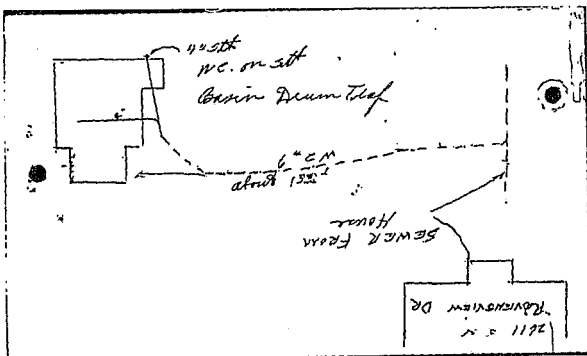
Water Permits 177841 Sewer Permit

Other Plumbing Fixtures Bldg. permit 287050

Date of First Inspection 12/17/46 Date of Final Inspection 12/31/46

Inspector J. H. Collins Inspector

Date of First Certificate Date of Final Certificate



*Remewiew*  
REPORT OF PLUMBING INSPECTION

Date 5/18/54Address 2611 S. W. Riverview DrivePermit 41107

Lot..... Bk..... Add.....  
Owner E. M. Kollavanitek  
Contractor Service Plbg Co.  
\* Stories and class of building.....  
Toilets..... 2..... Floor Drains..... Beer Cab.....  
Bath Tubs..... 2..... Rain Drains..... 1..... Refr. Drains.....  
\* Bath Showers..... Fountains..... Urinals.....  
Basins..... 2..... H. W. Tanks..... Catch Basins.....  
Sinks..... 1 repl...... Cesspool..... Water Service.....  
Laundry Trays..... Dry Wells..... Conn. To.....  
Water Permit..... Bldg. Per. 342259..... Sewer Permit.....  
Remarks 1 Dshw. Sink repl

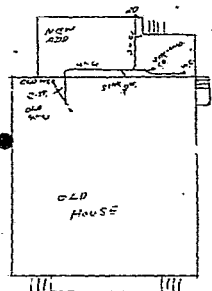
Date of First Inspection 5-27-54 Date of Final Inspection 10-4-54Inspector Edw. J. [Signature]

Inspector

1ST FLOOR OLD HOUSE CHANGE SINK & WASH.  
WASTE TO NEW 4" DI 12" TO 2" W.C. V.  
AUTO W. 1 1/2" TO SINK & TRAP IN WALL.

NEW ADD 1ST FLOOR W.C. ONLY IN ROOF.  
WB 1 1/2" TO 4" AT 1 1/2" TO 2" CEILING.  
2ND FLOOR OLD HOUSE W.C. AT 1 1/2" TO 2" FLOOR.  
TUB 1 1/2" TO 2" WB 1 1/2" TO 2".

OLD BATH ROOM WEST SIDE 1ST FLOOR.  
REMOVED. W.C. BEND AND 2" CLV PLUGGED  
AT FLOOR AND CEILING.  
WB. PLUGGED IN WALL. SHOWER PLUGGED AT 1 1/2".



J.M. RAVERSHEIM DR.

3227

FORM W 271

CITY OF PORTLAND, OREGON  
DEPARTMENT OF PUBLIC WORKS  
BUREAU OF MAINTENANCE

PERMIT NO. 5013

2611 S.W.

DATE

2-5-41

LOCATION

BETWEEN

APPLICANT

LOT 18

BLOCK

BOOK

PAGE

DATE

# Structural Calculations for

## Lateral and Gravity Design Dolan Residence Addition Portland, Oregon

Prepared for

Eslinger Jones & Associates

9/20/01

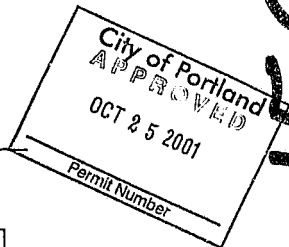
LEI JOB NUMBER 2824

\*\*\*Limitations\*\*\*

Engineer was retained in limited capacity for this project. Design is based upon information provided by the client, who is solely responsible for the accuracy of same. No responsibility and/or liability is assumed by, or is to be assigned to the engineer for items beyond that shown on these sheets. 23 sheets total including this cover sheet.



EXPIRES: 12/31/01



This Packet of Calculations is Null and Void if Signature above is not Original

Lee Engineering, Inc.  
1300 John Adams St.  
Oregon City, OR 97045  
(503) 655-1342 Fax (503) 655-1360

2-28-05/6-1-10

## DESIGN CRITERIA

DESIGN CODE : 1997 UBC

SBP : 1500 PSF (ASSUMED)

ROOF LL : 25PSF + DRIFTING ALLOWANCE

WIND DESIGN : VELOCITY = 80 MPH, EXPOSURE B

SEISMIC ZONE : 3

|                |                |         |                |              |
|----------------|----------------|---------|----------------|--------------|
| ROOF DEAD LOAD | RFR := 4-PSF   | FRAMING | RME := 0.5-PSF | MECH & ELECT |
|                | RPL := 2-PSF   | PLYWOOD | RMS := 0.5-PSF | MISC         |
|                | RRF := 5.5-PSF | ROOFING | RCG := 2.5-PSF | CEILING      |
|                |                |         | RIN := 1-PSF   | INSULATION   |

ROOF DEAD LOAD  $RDL := RFR + RPL + RRF + RME + RMS + RCG + RIN$

$RDL = 16.00 \text{ PSF}$

ROOF LIVE LOAD  $RLL := 25 \text{ PSF}$

ROOF TOTAL LOAD  $RTL := RDL + RLL$   $RTL = 41.00 \text{ PSF}$

WALL WEIGHT  $WWT := 15 \text{ PSF}$

### DETERMINE WT OF STRUCTURE LOADING DIAPHRAGMS IN TRANSVERSE DIRECTION

$RF_{DL} := RDL \cdot (22 \cdot R - 22 \cdot ft)$

$RF_{DL} = 7.74 \cdot K$

$WALL_{DL} := WALL_{WT} \cdot 44 \cdot ft \cdot 4.75 \cdot ft$

$WALL_{DL} = 3.13 \cdot K$

$WT_T := RF_{DL} + WALL_{DL}$

$WT_T = 10.88 \cdot K$

### DETERMINE WT OF STRUCTURE LOADING DIAPHRAGMS IN LONGITUDINAL DIRECTION

$RF_{DL} := RDL \cdot (22 \cdot R - 22 \cdot ft)$

$RF_{DL} = 7.74 \cdot K$

$WALL_{DL} := WALL_{WT} \cdot 44 \cdot ft \cdot 4.75 \cdot ft$

$WALL_{DL} = 3.13 \cdot K$

$WT_L := RF_{DL} + WALL_{DL}$

$WT_L = 10.88 \cdot K$



### LEE ENGINEERING, INC.

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FAX (503) 655-1360

MADE BY SWE

DATE: 8/30/01

SHT NO. 1

CLIENT ESLINGER JONES & ASSOCIATES

JOB NO. 2824

PROJECT DOLAN RESIDENCE ADDITION

**STATIC FORCE PROCEDURE**Soil Type: S<sub>D</sub>

SHEAR WALL BUILDING (PLYWD)

|                                      |                     |               |                             |
|--------------------------------------|---------------------|---------------|-----------------------------|
| $C_v := 0.54$                        | 1997 UBC TABLE 16-R | $R := 5.5$    | 1997 UBC TABLE 16-N OR 16-P |
| $I := 1.0$                           | 1997 UBC TABLE 16-k | $C_t := 0.02$ | 1997 UBC SECTION 1630.2.2   |
| $h_n := 18.3\text{FT}$               | HEIGHT OF BUILDING  | $C_a := 0.36$ | 1997 UBC TABLE 16-Q         |
| $T := C_t \cdot (h_n)^{\frac{3}{4}}$ | $T = 0.18$          | $\rho := 1.5$ |                             |

**BASE SHEAR COEFFICIENTS****Base Shear**

$$V := \frac{C_v \cdot I}{R \cdot T} \quad V = 0.55$$

**Base Shear Need Not Exceed**

$$V_1 := \frac{2.5 \cdot C_a \cdot I}{R} \quad V_1 = 0.16 \quad \text{Controls}$$

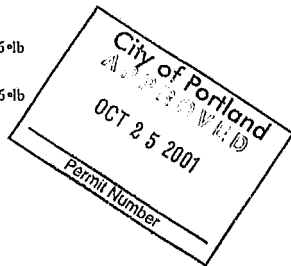
**Base Shear Shall Not Be Less**

$$V_2 := 0.11 \cdot C_a \cdot I \quad V_2 = 0.04 \quad E_1 := \frac{V_1 \cdot \rho}{1.4} \quad E_1 = 0.18$$

**BASE SHEARS**

$$\text{TRANSVERSE DIRECTION} \quad E_T := E_1 \cdot W_T \quad E_T = 1907.36 \text{ lb}$$

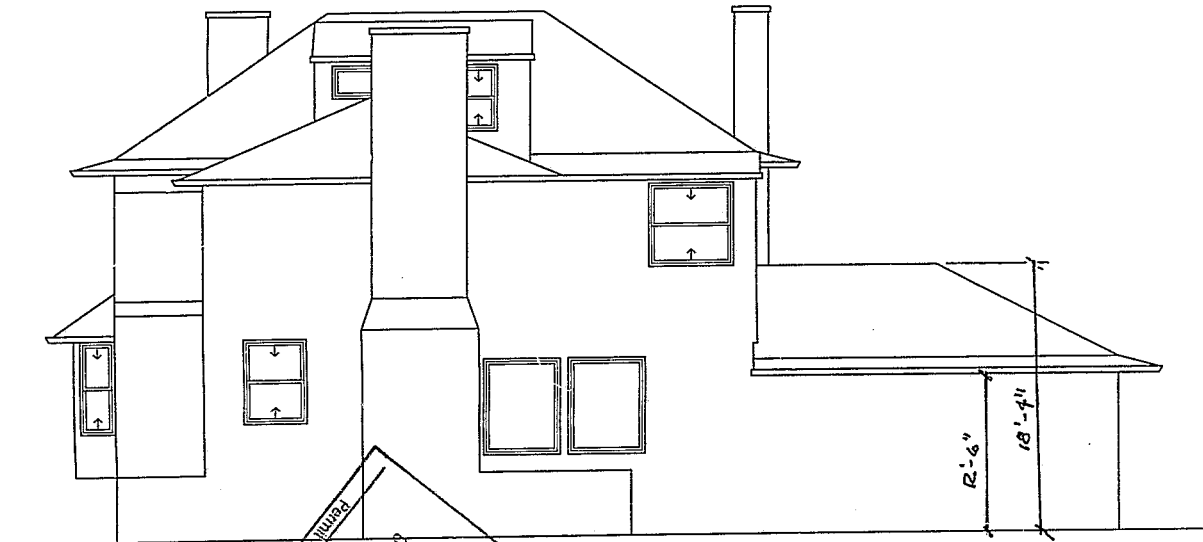
$$\text{LONGITUDINAL DIRECTION} \quad E_L := E_1 \cdot W_L \quad E_L = 1907.36 \text{ lb}$$

**LEE ENGINEERING, INC.**1300 JOHN ADAMS ST.  
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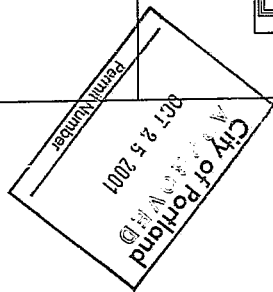
FAX (503) 655-1360

MADE BY SWEDATE: 8/30/01SHT NO. 2CLIENT ESLINGER JONES & ASSOCIATESJOB NO. 2824PROJECT DOLAN RESIDENCE ADDITION



2'-6"

11'-1 1/2"



# WIND ANALYSIS

Wind Speed: 80 MPH Exposure: B Method: 2 UBC

$$P_w = C_q \times C_e \times Q_s \times I$$

$$C_q := 1.3 \quad C_{qv} := 0.7 \quad Q_s := 16.4 \text{ PSF} \quad I := 1.0$$

$$C_{e15} := 0.62 \quad C_{e20} := 0.67 \quad C_{e25} := 0.72$$

## WIND PRESSURE

$$P_{w15} := C_q \cdot C_{e15} \cdot Q_s \cdot I \quad P_{w15} = 13.22 \text{ PSF} \quad \text{BASIC WIND FORCE}$$

$$P_{w20} := C_q \cdot C_{e20} \cdot Q_s \cdot I \quad P_{w20} = 14.28 \text{ PSF}$$

$$P_{w25} := C_q \cdot C_{e25} \cdot Q_s \cdot I \quad P_{w25} = 15.35 \text{ PSF}$$

## DETERMINE WIND SAIL (LONGITUDINAL)

$$\text{TRANSVERSE LENGTH } L_T := 12 \text{ FT}$$

$$\text{WSAIL}_{15} := 8.75 \text{ FT} \cdot L_T \quad \text{WSAIL}_{20} := 3.33 \text{ FT} \cdot L_T \quad \text{WSAIL}_{25} := 0 \text{ FT} \cdot L_T$$

$$\text{WINDLD}_{15} := \text{WSAIL}_{15} \cdot P_{w15} \quad \text{WINDLD}_{20} := \text{WSAIL}_{20} \cdot P_{w20} \quad \text{WINDLD}_{25} := \text{WSAIL}_{25} \cdot P_{w25}$$

$$\text{WFORCE}_L := \text{WINDLD}_{15} + \text{WINDLD}_{20}$$

$$\text{WFORCE}_L = 3.59 \text{ K} < E_L = 1.91 \text{ K}$$

## DETERMINE WIND SAIL (TRANSVERSE)

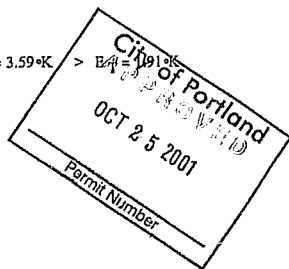
$$\text{LONGITUDINAL LENGTH } L_L := 22 \text{ FT}$$

$$\text{WSAIL}_{15} := 8.75 \text{ FT} \cdot L_L \quad \text{WSAIL}_{20} := 3.33 \text{ FT} \cdot L_L \quad \text{WSAIL}_{25} := 0 \text{ FT} \cdot L_L$$

$$\text{WINDLD}_{15} := \text{WSAIL}_{15} \cdot P_{w15} \quad \text{WINDLD}_{20} := \text{WSAIL}_{20} \cdot P_{w20} \quad \text{WINDLD}_{25} := \text{WSAIL}_{25} \cdot P_{w25}$$

$$\text{WFORCE}_T := \text{WINDLD}_{15} + \text{WINDLD}_{20}$$

$$\text{WFORCE}_T = 3.59 \text{ K} > E_T = 1.91 \text{ K}$$



## LEE ENGINEERING, INC.

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MADE BY SWE

DATE: 8/30/01

SHT NO 4

CLIENT ESLINGER JONES & ASSOCIATES

JOB NO 2824

PROJECT DOLAN RESIDENCE ADDITION

# MASS OF EXISTING HOUSE - ROOF AND FLOOR ONLY

ASSUME FLOOR DEAD LOAD      FLR := 15·PSF

$$RF_{DL} := RDL \cdot (29\text{-ft} \cdot 39\text{-ft} + 12\text{-ft} \cdot 27\text{-ft} + 10\text{-ft} \cdot 14\text{-ft}) \quad RF_{DL} = 25.52 \cdot K$$

$$FLR_{DL} := FLR \cdot (29\text{-ft} \cdot 39\text{-ft} + 12\text{-ft} \cdot 27\text{-ft} + 10\text{-ft} \cdot 14\text{-ft}) \quad FLR_{DL} = 23.93 \cdot K$$

$$WT_{TOTE} := RF_{DL} + FLR_{DL} \quad WT_{TOTE} = 49445.00 \text{ lb}$$

# MASS OF HOUSE ADDITION - ROOF AND FLOOR ONLY

ASSUME FLOOR DEAD LOAD      FLR := 15·PSF

$$RF_{DL} := RDL \cdot (12\text{-ft} \cdot 12\text{-ft}) \quad RF_{DL} = 2.30 \cdot K$$

$$FLR_{DL} := FLR \cdot (12\text{-ft} \cdot 12\text{-ft}) \quad FLR_{DL} = 2.16 \cdot K$$

$$WT_{TOTA} := RF_{DL} + FLR_{DL} \quad WT_{TOTA} = 4464.00 \text{ lb}$$

# MASS TRIBUTARY TO EXISTING BUILDING

$$TRIB_{WTA} := WT_{TOTA} \cdot \frac{1}{2} \quad TRIB_{WTA} = 2232.00 \text{ lb}$$

$$\frac{TRIB_{WTA}}{WT_{TOTE}} = 0.045 \quad \text{LESS THAN } 5\%$$

# SEISMIC LOAD AT BUILDING ADDITION

TOTAL MASS OF ADDITION

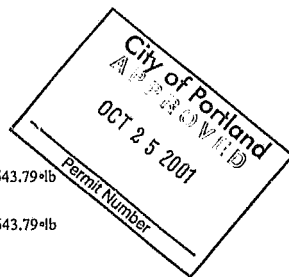
$$WALL_{DL} := WALL_{WT} \cdot 24\text{-FT} \cdot 4\text{-FT} \quad WALL_{DL} = 1.44 \cdot K$$

$$MASS_{ADDITION} := TRIB_{WTA} + WALL_{DL}$$

# BASE SHEARS

$$\text{TRANSVERSE DIRECTION} \quad E_T := E_I \cdot MASS_{ADDITION} \quad E_T = 643.79 \cdot lb$$

$$\text{LONGITUDINAL DIRECTION} \quad E_L := E_I \cdot MASS_{ADDITION} \quad E_L = 643.79 \cdot lb$$



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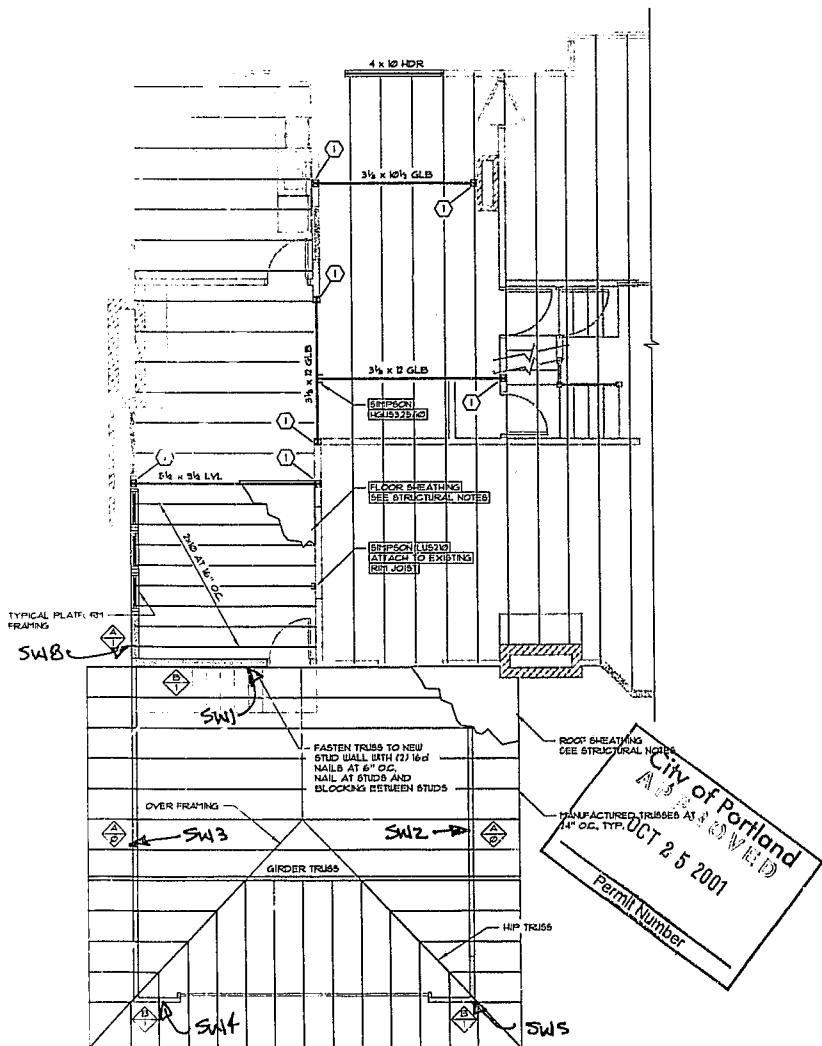
DATE: 8/30/01

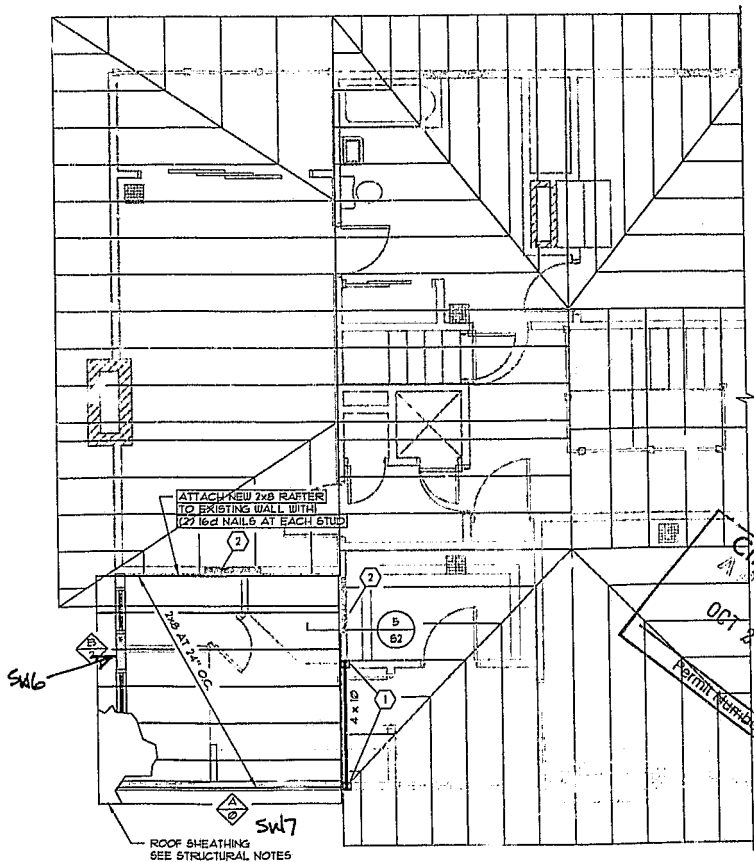
SHT NO. 4A

CLIENT ESLINGER JONES & ASSOCIATES

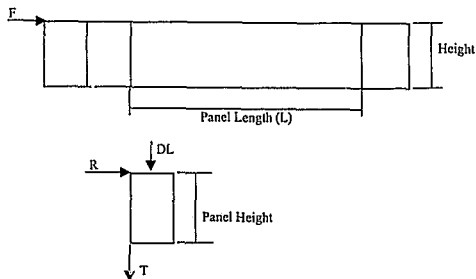
JOB NO. 2824

PROJECT DCLAN RESIDENCE ADDITION





# SHEAR PANELS



$L$  = Panel Length

$H$  = Panel Height

$V = F / \Sigma L$

$F$  = Line Load

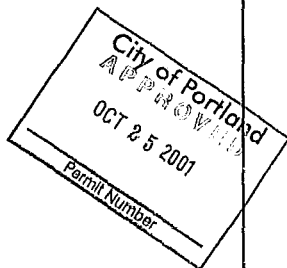
$R = V \times L$

$M_O = R \times H + R(\text{above}) \times H(\text{above})$

$M_R = 0.67 \times DL \times L^{3/2}$

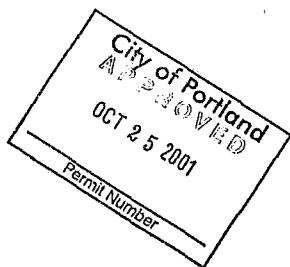
$\text{Uplift } (T) = (M_O - M_R) / (L - 6 \text{ in})$

| Shear Panel | H (ft) | L (ft) | Wall Lgth. (ft) | H/L  | Line Load |      | Line Load From Above |   | Dead Load (klf) | V (plf) | Panel Sides | Panel Type | $M_O$ (ft-k) | $M_R$ (ft-k) | Uplift T (k) |
|-------------|--------|--------|-----------------|------|-----------|------|----------------------|---|-----------------|---------|-------------|------------|--------------|--------------|--------------|
|             |        |        |                 |      | ht        | k    | ht                   | k |                 |         |             |            |              |              |              |
| 1           | 8      | 8.00   | 8.00            | 1.00 | OK        | 8.00 | 2.44                 |   | 0.27            | 305     | Single      | II         | 19.54        | 8.64         | 1.83         |
| 2           | 8      | 16.00  | 16.00           | 0.50 | OK        | 8.00 | 1.80                 |   | 0.29            | 113     | Single      | I          | 14.40        | 36.48        | -0.65        |
| 3           | 8      | 22.00  | 22.00           | 0.36 | OK        | 8.00 | 1.80                 |   | 0.20            | 82      | Single      | I          | 14.40        | 47.19        | -0.80        |
| 4           | 8      | 3.00   | 6.00            | 2.67 | OK        | 8.00 | 1.80                 |   | 0.28            | 300     | Single      | II         | 7.20         | 1.26         | 2.54         |
| 5           | 8      | 3.00   | 6.00            | 2.67 | OK        | 8.00 | 1.80                 |   | 0.28            | 300     | Single      | II         | 7.20         | 1.26         | 2.54         |
| 6           | 7      | 2.25   | 2.25            | 3.11 | OK        | 7.00 | 0.64                 |   | 0.17            | 286     | Single      | II         | 4.50         | 0.42         | 2.41         |
| 7           | 8      | 12.00  | 12.00           | 0.67 | OK        | 8.00 | 0.64                 |   | 0.17            | 54      | Single      | I          | 5.14         | 11.88        | -0.24        |
| 8           | 8      | 3.00   | 3.00            | 2.67 | OK        | 8.00 | 0.64                 |   | 0.17            | 214     | Single      | I          | 5.14         | 0.74         | 1.86         |



# **SHEAR WALL SUMMARY**

| Panel | Wall Shear<br>V (plf) | Wall Type                                | Good For<br>(plf) | Uplift<br>(lb/ft) | Simpson Holdown | Good For<br>(lb) | Shear<br>Check | Holdown<br>Check |
|-------|-----------------------|------------------------------------------|-------------------|-------------------|-----------------|------------------|----------------|------------------|
| 1     | 305                   | 1/2" APA Rated Plyw'd w/ 8d Nails @ 4/12 | 380               | 1834.0            | Simpson HTT16   | 3480             | OK             | OK               |
| 2     | 113                   | 1/2" APA Rated Plyw'd w/ 8d Nails @ 6/12 | 260               | 647.8             | Simpson None    | 0                | OK             | OK               |
| 3     | 82                    | 1/2" APA Rated Plyw'd w/ 8d Nails @ 6/12 | 260               | 800.8             | Simpson None    | 0                | OK             | OK               |
| 4     | 300                   | 1/2" APA Rated Plyw'd w/ 8d Nails @ 4/12 | 380               | 2542.3            | Simpson HTT16   | 3480             | OK             | OK               |
| 5     | 300                   | 1/2" APA Rated Plyw'd w/ 8d Nails @ 4/12 | 380               | 2542.3            | Simpson HTT16   | 3480             | OK             | OK               |

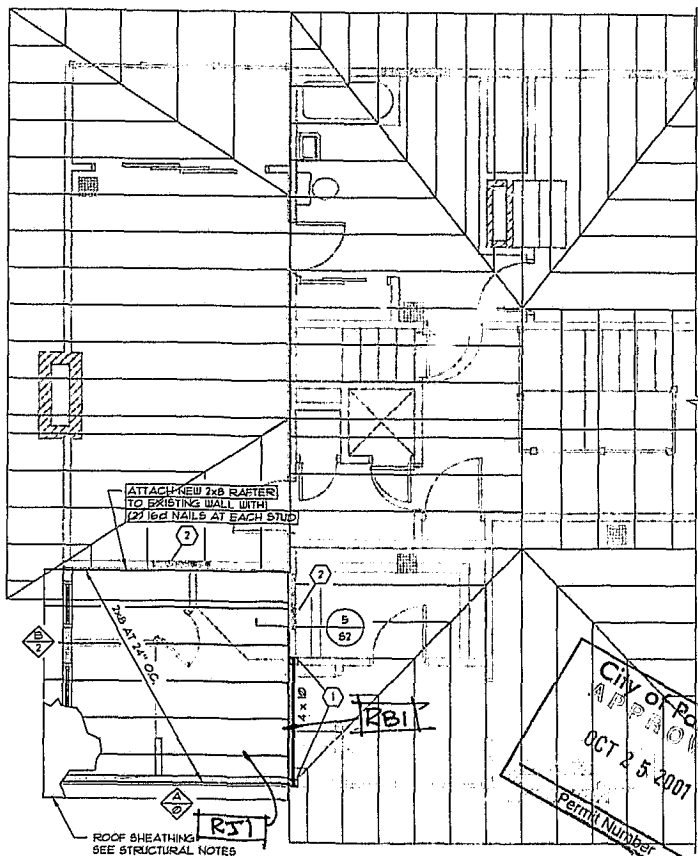


**LEE ENGINEERING, INC**  
1300 JOHN ADAMS ST  
OREGON CITY, OR 97045

DONE BY: \_\_\_\_\_

SHT NO: 7

JOB NO: \_\_\_\_\_



LEE ENGINEERING, INC  
1300 JOHN ADAMS ST  
OREGON CITY, OR  
(503) 655-1342  
(503) 655-1360 (FAX)

Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 4:19PM, 31 AUG 01  
Description :

Scope :

Rev: 510304  
User: RW 06/03/2000, Ver 5.1.3, 22-Jun-1999, Win32  
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## Timber Beam & Joist

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Description Roof Joist RJ1

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                      |
|----------------------|-----|----------------------|
| Timber Section       |     | 2x8                  |
| Beam Width           | In  | 1.500                |
| Beam Depth           | In  | 7.250                |
| Le: Unbraced Length  | ft  | 0.00                 |
| Timber Grade         |     | Douglas Fir - Larch, |
| Fb - Basic Allow     | psi | 875.0                |
| Fv - Basic Allow     | psi | 95.0                 |
| Elastic Modulus      | ksi | 1,600.0              |
| Load Duration Factor |     | 1.150                |
| Member Type          |     | Sawn                 |
| Repetitive Status    |     | Repetitive           |

### Center Span Data

|           |      |       |
|-----------|------|-------|
| Span      | ft   | 11.50 |
| Dead Load | #/ft | 30.00 |
| Live Load | #/ft | 50.00 |

Results Ratio = 0.8697

|                |      |            |
|----------------|------|------------|
| Mmax @ Center  | In-k | 15.87      |
| @ X =          | ft   | 5.75       |
| fb : Actual    | psi  | 1,207.7    |
| Fb : Allowable | psi  | 1,388.6    |
|                |      | Bending OK |
| fv : Actual    | psi  | 55.8       |
| Fv : Allowable | psi  | 109.3      |
|                |      | Shear OK   |

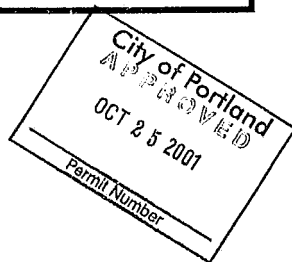
### Reactions

|                |     |        |
|----------------|-----|--------|
| @ Left End DL  | lbs | 172.50 |
| LL             | lbs | 287.50 |
| Max. DL+LL     | lbs | 460.00 |
| @ Right End DL | lbs | 172.50 |
| LL             | lbs | 287.50 |
| Max. DL+LL     | lbs | 460.00 |

### Deflections

Ratio OK

|                   |    |        |
|-------------------|----|--------|
| Center DL Defl    | In | -0.155 |
| L/Defl Ratio      |    | 890.9  |
| Center LL Defl    | In | -0.258 |
| L/Defl Ratio      |    | 534.6  |
| Center Total Defl | In | -0.413 |
| Location          | ft | 5.750  |
| L/Defl Ratio      |    | 334.1  |



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(503) 655-1342  
(503) 655-1360 (FAX)

Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 4:19PM, 31 AUG 01  
Description :

Scope :

Rev: 510304  
User: KW 0603240, Ver 5.1.3, 22 Jun 1999, Win32  
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## Timber Beam & Joist

Page 1

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Description Roof Beam RB

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                      |
|----------------------|-----|----------------------|
| Timber Section       |     | 4x10                 |
| Beam Width           | In  | 3.500                |
| Beam Depth           | In  | 9.250                |
| Le: Unbraced Length  | ft  | 0.00                 |
| Timber Grade         |     | Douglas Fir - Larch, |
| Fb - Basic Allow     | psi | 875.0                |
| Fv - Basic Allow     | psi | 95.0                 |
| Elastic Modulus      | ksi | 1,600.0              |
| Load Duration Factor |     | 1.150                |
| Member Type          |     | Sawn                 |
| Repetitive Status    |     | Repetitive           |

### Center Span Data

|           |      |        |
|-----------|------|--------|
| Span      | ft   | 6.50   |
| Dead Load | #/ft | 315.00 |
| Live Load | #/ft | 525.00 |

### Results

Ratio = 0.8892

|                            |      |            |
|----------------------------|------|------------|
| Mmax @ Center              | In-k | 53.23      |
| @ X =                      | ft   | 3.25       |
| f <sub>b</sub> : Actual    | psi  | 1,066.6    |
| F <sub>b</sub> : Allowable | psi  | 1,388.6    |
|                            |      | Bending OK |
| f <sub>v</sub> : Actual    | psi  | 97.1       |
| F <sub>v</sub> : Allowable | psi  | 109.3      |
|                            |      | Shear OK   |

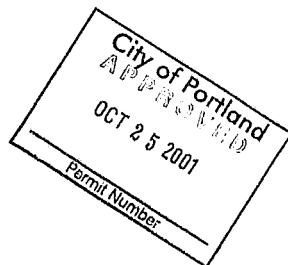
### Reactions

|             |            |     |          |
|-------------|------------|-----|----------|
| @ Left End  | DL         | lbs | 1,023.75 |
|             | LL         | lbs | 1,706.25 |
|             | Max. DL+LL | lbs | 2,730.00 |
| @ Right End | DL         | lbs | 1,023.75 |
|             | LL         | lbs | 1,706.25 |
|             | Max. DL+LL | lbs | 2,730.00 |

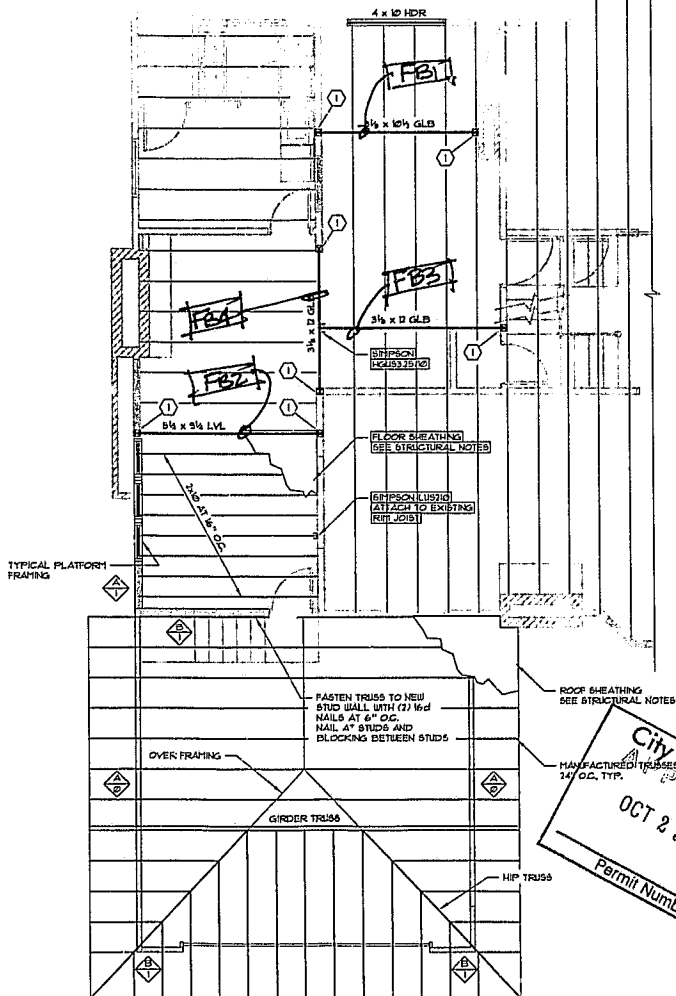
### Deflections

Ratio OK

|                   |    |         |
|-------------------|----|---------|
| Center DL Defl    | In | -0.034  |
| L/Defl Ratio      |    | 2,277.1 |
| Center LL Defl    | In | -0.057  |
| L/Defl Ratio      |    | 1,366.3 |
| Center Total Defl | In | -0.091  |
| Location          | ft | 3.250   |
| L/Defl Ratio      |    | 853.9   |



10



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1300 JOHN ADAMS ST  
OREGON CITY, OR  
(503) 655-1342  
(503) 655-1360 (FAX)

Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 3:33PM, 7 SEP 01  
Description :  
Scope :

Rev: 510304  
User: HW 0603240, Ver 5.1.3, 22 Jun 1999, Win32  
(C) 1993-99 ENR/CALC

## Timber Beam & Joist

Page 1

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Description Floor Beam FB1

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                     |
|----------------------|-----|---------------------|
| Timber Section       |     | 3.125x10.5          |
| Beam Width           | In  | 3.125               |
| Beam Depth           | In  | 10.500              |
| Le: Unbraced Length  | ft  | 0.00                |
| Timber Grade         |     | Douglas Fir, 24F-V4 |
| Fb - Basic Allow     | psi | 2,400.0             |
| Fv - Basic Allow     | psi | 165.0               |
| Elastic Modulus      | ksi | 1,800.0             |
| Load Duration Factor |     | 1.150               |
| Member Type          |     | GluLam              |
| Repetitive Status    |     | No                  |

### Center Span Data

|           |      |        |
|-----------|------|--------|
| Span      | ft   | 10.25  |
| Dead Load | #/ft | 225.00 |
| Live Load | #/ft | 575.00 |

### Results

Ratio = 0.8218

|                            |      |            |
|----------------------------|------|------------|
| Mmax @ Center              | In-k | 126.07     |
| @ X =                      | ft   | 5.12       |
| f <sub>b</sub> : Actual    | psi  | 2,195.6    |
| F <sub>b</sub> : Allowable | psi  | 2,760.0    |
|                            |      | Bending OK |
| f <sub>v</sub> : Actual    | psi  | 155.9      |
| F <sub>v</sub> : Allowable | psi  | 189.8      |
|                            |      | Shear OK   |

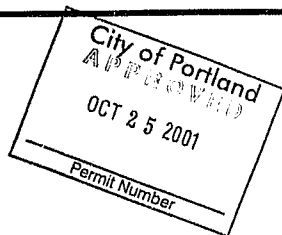
### Reactions

|             |            |     |          |
|-------------|------------|-----|----------|
| @ Left End  | DL         | lbs | 1,153.12 |
|             | LL         | lbs | 2,946.87 |
|             | Max. DL+LL | lbs | 4,100.00 |
| @ Right End | DL         | lbs | 1,153.12 |
|             | LL         | lbs | 2,946.87 |
|             | Max. DL+LL | lbs | 4,100.00 |

### Deflections

Ratio OK

|                   |    |         |
|-------------------|----|---------|
| Center DL Defl    | In | -0.103  |
| L/Defl Ratio      |    | 1,194.4 |
| Center LL Defl    | In | -0.293  |
| L/Defl Ratio      |    | 467.4   |
| Center Total Defl | In | -0.366  |
| Location          | ft | 5.125   |
| L/Defl Ratio      |    | 335.9   |



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1300 JOHN ADAMS ST  
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Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 4:19PM, 31 AUG 01  
Description :  
Scope :

Rev: 5/10/04  
User: KW-0503240, Ver 5.1.3, 22-Jun-1999, Win32  
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## Timber Beam & Joist

Page 1

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Description Floor Beam FB2

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                     |
|----------------------|-----|---------------------|
| Timber Section       |     | MicroLam:           |
| Beam Width           | in  | 5.250               |
| Beam Depth           | in  | 9.250               |
| Le: Unbraced Length  | ft  | 0.00                |
| Timber Grade         |     | uss Joist - MacMill |
| Fb - Basic Allow     | psi | 2,600.0             |
| Fv - Basic Allow     | psi | 285.0               |
| Elastic Modulus      | ksi | 1,900.0             |
| Load Duration Factor |     | 1.150               |
| Member Type          |     | Manul/Pine          |
| Repetitive Status    |     | Repetitive          |

### Center Span Data

|           |      |        |
|-----------|------|--------|
| Span      | ft   | 11.75  |
| Dead Load | #/ft | 315.00 |
| Live Load | #/ft | 400.00 |

### Results

Ratio = 0.5752

|                            |      |            |
|----------------------------|------|------------|
| Mmax @ Center              | in-k | 148.07     |
| @ X =                      | ft   | 5.87       |
| f <sub>b</sub> : Actual    | psi  | 1,977.8    |
| F <sub>b</sub> : Allowable | psi  | 3,438.5    |
|                            |      | Bending OK |
| f <sub>v</sub> : Actual    | psi  | 113.1      |
| F <sub>v</sub> : Allowable | psi  | 327.6      |
|                            |      | Shear OK   |

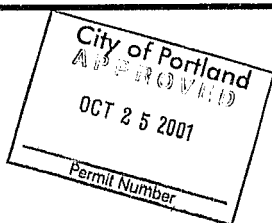
### Reactions

|             |            |     |          |
|-------------|------------|-----|----------|
| @ Left End  | DL         | lbs | 1,850.62 |
|             | LL         | lbs | 2,350.00 |
|             | Max. DL+LL | lbs | 4,200.62 |
| @ Right End | DL         | lbs | 1,850.62 |
|             | LL         | lbs | 2,350.00 |
|             | Max. DL+LL | lbs | 4,200.62 |

### Deflections

Ratio OK

|                   |    |        |
|-------------------|----|--------|
| Center DL Defl    | in | -0.205 |
| L/Defl Ratio      |    | 686.7  |
| Center LL Defl    | in | -0.261 |
| L/Defl Ratio      |    | 540.7  |
| Center Total Defl | in | -0.466 |
| Location          | ft | 5.875  |
| L/Defl Ratio      |    | 302.5  |



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OREGON CITY, O.  
(503) 655-1342  
(503) 655-1360 (FAX)

Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 3:33PM, 7 SEP 01  
Description :  
Scope :

Rev: 510304  
User: KW-0603140, Ver 5.1.3, 22 Jun-1999, Win32  
C:\1993-99\ENERGALC

## Timber Beam & Joist

Page 1

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Description Floor Beam FB3

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                     |
|----------------------|-----|---------------------|
| Timber Section       |     | 3.125x12.0          |
| Beam Width           | In  | 3.125               |
| Beam Depth           | In  | 12.000              |
| Le: Unbraced Length  | ft  | 0.00                |
| Timber Grade         |     | Douglas Fir, 24F-V4 |
| Fb - Basic Allow     | psi | 2,400.0             |
| Fv - Basic Allow     | psi | 165.0               |
| Elastic Modulus      | ksi | 1,800.0             |
| Load Duration Factor |     | 1.155               |
| Member Type          |     | GluLam              |
| Repetitive Status    |     | No                  |

### Center Span Data

|           |      |        |
|-----------|------|--------|
| Span      | ft   | 12.00  |
| Dead Load | #/ft | 233.00 |
| Live Load | #/ft | 515.00 |

### Results Ratio = 0.7947

|                            |      |            |
|----------------------------|------|------------|
| Mmax @ Center              | In-k | 161.57     |
| @ X =                      | ft   | 6.00       |
| f <sub>b</sub> : Actual    | psi  | 2,154.2    |
| F <sub>b</sub> : Allowable | psi  | 2,760.0    |
|                            |      | Bending OK |
| f <sub>v</sub> : Actual    | psi  | 150.8      |
| F <sub>v</sub> : Allowable | psi  | 189.8      |
|                            |      | Shear OK   |

### Reactions

|             |            |     |          |
|-------------|------------|-----|----------|
| @ Left End  | DL         | lbs | 1,398.00 |
|             | LL         | lbs | 3,090.00 |
|             | Max. DL+LL | lbs | 4,488.00 |
| @ Right End | DL         | lbs | 1,398.00 |
|             | LL         | lbs | 3,090.00 |
|             | Max. DL+LL | lbs | 4,488.00 |

### Deflections Ratio OK

|                   |    |         |
|-------------------|----|---------|
| Center DL Defl    | In | -0.134  |
| L/Defl Ratio      |    | 1,073.0 |
| Center LL Defl    | In | -0.297  |
| L/Defl Ratio      |    | 485.4   |
| Center Total Defl | In | -0.431  |
| Location          | ft | 6.000   |
| L/Defl Ratio      |    | 334.2   |



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1300 JOHN ADAMS ST  
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Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 3:33PM, 7 SEP 01  
Description :  
Scope :

Rev: 510304  
User: RW 0603240, Ver 5.1.3, 22-Jun-1999, Win32  
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## Timber Beam & Joist

Page 1

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Description Floor Beam FB4

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                     |
|----------------------|-----|---------------------|
| Timber Section       |     | 3.125x12.0          |
| Beam Width           | in  | 3.125               |
| Beam Depth           | in  | 12.000              |
| Le: Unbraced Length  | ft  | 0.00                |
| Timber Grade         |     | Douglas Fir, 24F-V4 |
| Fb - Basic Allow     | psi | 2,400.0             |
| Fv - Basic Allow     | psi | 165.0               |
| Elastic Modulus      | ksi | 1,800.0             |
| Load Duration Factor |     | 1.150               |
| Member Type          |     | GluLam              |
| Repetitive Status    |     | No                  |

### Center Span Data

|             |      |          |
|-------------|------|----------|
| Span        | ft   | 9.00     |
| Dead Load   | #/ft | 180.00   |
| Live Load   | #/ft | 390.00   |
| Point #2 DL | lbs  | 1,400.00 |
| LL          | lbs  | 3,090.00 |
| @ X         | ft   | 4.000    |

### Results

Ratio = 0.9498

|                |      |            |
|----------------|------|------------|
| Mmax @ Center  | in-k | 188.00     |
| @ X =          | ft   | 4.00       |
| fb : Actual    | psi  | 2,506.7    |
| Fb : Allowable | psi  | 2,760.0    |
|                |      | Bending OK |
| fv : Actual    | psi  | 180.2      |
| Fv : Allowable | psi  | 169.8      |
|                |      | Shear OK   |

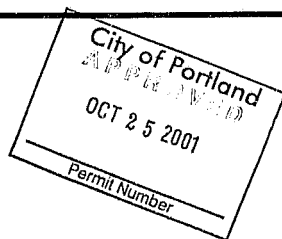
### Reactions

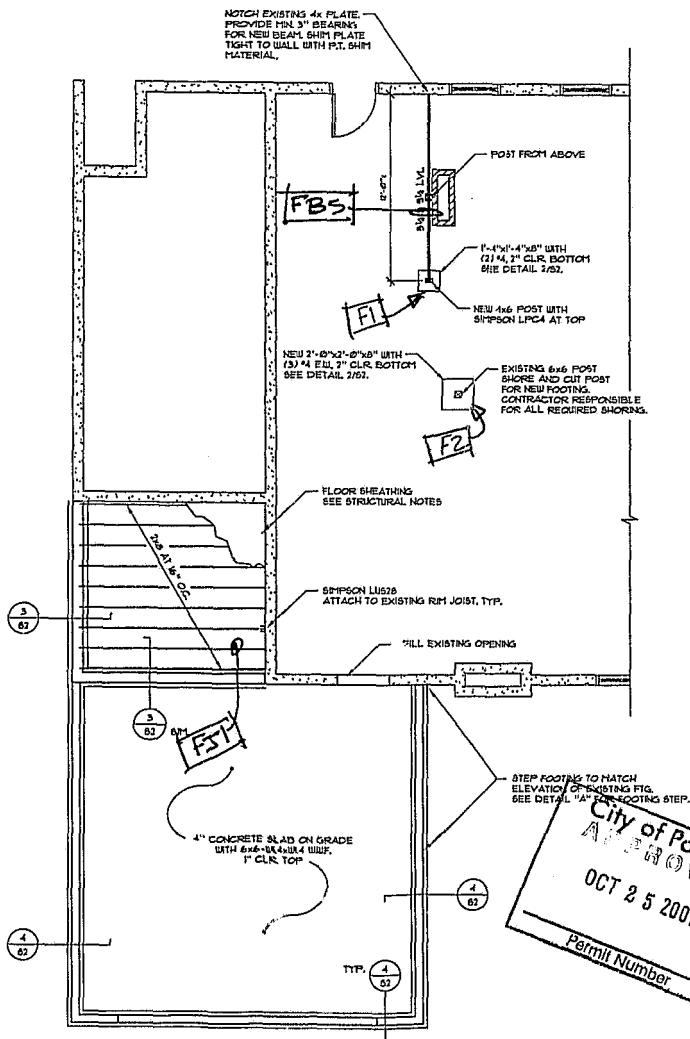
|                |     |          |
|----------------|-----|----------|
| @ Left End DL  | lbs | 1,587.78 |
| LL             | lbs | 3,471.67 |
| Max. DL+LL     | lbs | 5,059.44 |
| @ Right End DL | lbs | 1,432.22 |
| LL             | lbs | 3,128.33 |
| Max. DL+LL     | lbs | 4,560.55 |

### Deflections

Ratio OK

|                   |    |         |
|-------------------|----|---------|
| Center DL Defl    | in | -0.077  |
| L/Defl Ratio      |    | 1,395.4 |
| Center LL Defl    | in | -0.170  |
| L/Defl Ratio      |    | 637.2   |
| Center Total Defl | in | -0.247  |
| Location          | ft | 4.392   |
| L/Defl Ratio      |    | 437.4   |





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Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 4:19PM, 31 AUG 01  
Description :  
Scope :

Rev: 510304  
User: RW-0603240, Ver 5.1.3, 22-Jun-1999, Win32  
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## Timber Beam & Joist

Page 1

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Description Floor Joist FJ1

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                      |
|----------------------|-----|----------------------|
| Timber Section       |     | 2x8                  |
| Beam Width           | In  | 1.500                |
| Beam Depth           | In  | 7.250                |
| Le: Unbraced Length  | ft  | 0.00                 |
| Timber Grade         |     | Douglas Fir - Larch, |
| Fb - Basic Allow     | psi | 875.0                |
| Fv - Basic Allow     | psi | 95.0                 |
| Elastic Modulus      | ksi | 1,600.0              |
| Load Duration Factor |     | 1.000                |
| Member Type          |     | Sawn                 |
| Repetitive Status    |     | Repetitive           |

### Center Span Data

|           |      |       |
|-----------|------|-------|
| Span      | ft   | 11.75 |
| Dead Load | #/ft | 16.00 |
| Live Load | #/ft | 56.30 |

### Results Ratio = 0.9436

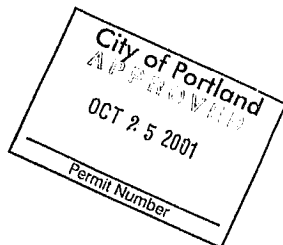
|                |      |            |
|----------------|------|------------|
| Mmax @ Center  | In-k | 14.97      |
| @ X =          | ft   | 5.87       |
| fb : Actual    | psi  | 1,139.4    |
| Fb : Allowable | psi  | 1,207.5    |
|                |      | Bending OK |
| fv : Actual    | psi  | 53.0       |
| Fv : Allowable | psi  | 95.0       |
|                |      | Shear OK   |

### Reactions

|                |     |        |
|----------------|-----|--------|
| @ Left End DL  | lbs | 94.00  |
| LL             | lbs | 330.76 |
| Max. DL+LL     | lbs | 424.76 |
| @ Right End DL | lbs | 94.00  |
| LL             | lbs | 330.76 |
| Max. DL+LL     | lbs | 424.76 |

### Deflections Ratio OK

|                   |    |         |
|-------------------|----|---------|
| Center DL Defl    | In | -0.090  |
| L/Defl Ratio      |    | 1,566.1 |
| Center LL Defl    | In | -0.317  |
| L/Defl Ratio      |    | 445.1   |
| Center Total Defl | In | -0.407  |
| Location          | ft | 5.875   |
| L/Defl Ratio      |    | 346.6   |



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1300 JOHN ADAMS ST  
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(503) 655-1342  
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Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 2:01PM, 11 SEP 01  
Description :  
Scope :

Rev: 510354  
User: R0V 060324D, Ver 5 1.3, 22-Jun-1999, Win32  
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## Timber Beam & Joist

Page 1

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Description Floor Beam FB5

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

|                      |     |                     |
|----------------------|-----|---------------------|
| Timber Section       |     | MicroLam:           |
| Beam Width           | in  | 5.250               |
| Beam Depth           | in  | 9.250               |
| Le: Unbraced Length  | ft  | 0.00                |
| Timber Grade         |     | uss Joist - MacMill |
| Fb - Basic Allow     | psi | 2,600.0             |
| Fv - Basic Allow     | psi | 285.0               |
| Elastic Modulus      | ksi | 1,900.0             |
| Load Duration Factor |     | 1.000               |
| Member Type          |     | Manu/Pine           |
| Repetitive Status    |     | No                  |

### Center Span Data

|             |      |          |
|-------------|------|----------|
| Span        | ft   | 12.00    |
| Dead Load   | #/ft | 15.00    |
| Live Load   | #/ft | 40.00    |
| Point #1 DL | lbs  | 1,153.00 |
| LL          | lbs  | 2,947.00 |
| @ X         | ft   | 6.000    |

### Results Ratio = 0.8193

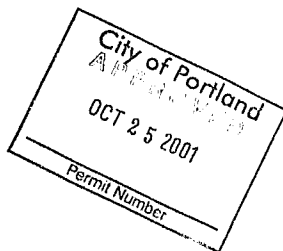
|                |      |            |
|----------------|------|------------|
| Mmax @ Center  | in-k | 159.48     |
| @ X =          | ft   | 6.00       |
| fb : Actual    | psi  | 2,130.2    |
| Fb : Allowable | psi  | 2,600.0    |
|                |      | Bending OK |
| fv : Actual    | psi  | 72.2       |
| Fv : Allowable | psi  | 285.0      |
|                |      | Shear OK   |

### Reactions

|                |     |          |
|----------------|-----|----------|
| @ Left End DL  | lbs | 666.50   |
| LL             | lbs | 1,713.50 |
| Max. DL+LL     | lbs | 2,380.00 |
| @ Right End DL | lbs | 666.50   |
| LL             | lbs | 1,713.50 |
| Max. DL+LL     | lbs | 2,380.00 |

### Deflections Ratio OK

|                   |    |         |
|-------------------|----|---------|
| Center DL Defl    | in | -0.120  |
| L/Defl Ratio      |    | 1,203.4 |
| Center LL Defl    | in | -0.307  |
| L/Defl Ratio      |    | 469.0   |
| Center Total Defl | in | -0.427  |
| Location          | ft | 6.000   |
| L/Defl Ratio      |    | 337.5   |



LEE ENGINEERING, INC  
1300 JOHN ADAMS ST  
OREGON CITY, OR  
(503) 655-1342  
(503) 655-1360 (FAX)

Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 2:07PM, 11 SEP 01  
Description :

Scope :

Rcr: 5/19/01  
User: RW-0603240, Ver 5.1.3, 22-Jun-1999, Win32  
(c) 1987-99 ENERCALC

## Square Footing Design

Page 1

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Description FOOTING F1

### General Information

Calculations are designed to ACI 318-95 and 1997 UBC Requirements

|                        |            |          |                        |              |
|------------------------|------------|----------|------------------------|--------------|
| Dead Load              | 0.670 k    | REACTION | Footing Dimension      | 1.330 ft     |
| Live Load              | 1.720 k    | FBS      | Thickness              | 8.00 in      |
| Short Term Load        | 0.000 k    |          | # of Bars              | 2            |
| Seismic Zone           | 4          |          | Bar Size               | 4            |
| Overburden Weight      | 0.000 psf  |          | Rebar Cover            | 2.000        |
| Concrete Weight        | 150.00 pcf |          | f'c                    | 2,500.0 psi  |
| LL & ST Act Separately |            |          | Fy                     | 60,000.0 psi |
| Load Duration Factor   | 1.000      |          |                        |              |
| Column Dimension       | 0.00 in    |          | Allowable Soil Bearing | 1,500.00 psf |

### Reinforcing

|                             |            |                             |           |
|-----------------------------|------------|-----------------------------|-----------|
| Rebar Requirement           |            |                             |           |
| Actual Rebar "d" depth used | 5.750 in   | As to USE per foot of Width | 0.097 in2 |
| 200/Fy                      | 0.0033     | Total As Req'd              | 0.128 in2 |
| As Req'd by Analysis        | 0.0003 in2 | Min Allow % Reinf           | 0.0014    |
| Min. Reinf % to Req'd       | 0.0014 %   |                             |           |

### Summary

Footing OK

1.33ft square x 8.0in thick with 2- #4 bars

Max. Static Soil Pressure 1,451.12 psf  
Allow Static Soil Pressure 1,500.00 psf

Max. Short Term Soil Pressure 478.77 psf  
Allow Short Term Soil Pressure 1,500.00 psf

Mu : Actual 0.51 k-ft / ft  
Mn \* Phi : Capacity 7.30 k-ft / ft

Vu : Actual One-Way 6.26 psi  
Vn\*Phi : Allow One-Way 85.00 psi

Vu : Actual Two-Way 27.04 psi  
Vn\*Phi : Allow Two-Way 170.00 psi

Alternate Rebar Selections...

1 # 4's 1 # 5's 1 # 6's  
1 # 7's 1 # 8's 1 # 9's 1 # 10's



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Title : DOLAN RESIDENCE ADDITION Job # 2824  
Dsgnr: SWE Date: 2:07PM, 11 SEP 01  
Description :

Scope :

Rev: 510301  
User: JWW 06/03/2000, Ver: 5.1.3, 22-Jun-1999, Win32  
(c) 1993-99 ENERCALC

## Square Footing Design

Page 1

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Description FOOTING F2

### General Information

Calculations are designed to ACI 318-95 and 1997 UBC Requirements

|                        |            |              |                        |              |
|------------------------|------------|--------------|------------------------|--------------|
| Dead Load              | 1.500 k    | Reaction FB3 | Footing Dimension      | 2.000 ft     |
| Live Load              | 4.000 k    | + 2400# For  | Thickness              | 8.00 in      |
| Short Term Load        | 0.000 k    | ADDITIONAL   | # of Bars              | 2            |
|                        |            | LOAD         | Bar Size               | 4            |
| Seismic Zone           | 3          |              | Rebar Cover            | 2.000        |
| Overburden Weight      | 0.000 psf  |              | f'c                    | 2,500.0 psi  |
| Concrete Weight        | 150.00 pcf |              | Fy                     | 60,000.0 psi |
| LL & ST Act Separately |            |              |                        |              |
| Load Duration Factor   | 1.000      |              |                        |              |
| Column Dimension       | 0.00 in    |              | Allowable Soil Bearing | 1,500.00 psf |

### Reinforcing

|                             |            |                             |           |
|-----------------------------|------------|-----------------------------|-----------|
| Rebar Requirement           |            |                             |           |
| Actual Rebar "d" depth used | 5.750 in   | As to USE per foot of Width | 0.097 in2 |
| 200/Fy                      | 0.0033     | Total As Req'd              | 0.193 in2 |
| As Req'd by Analysis        | 0.0007 in2 | Min Allow % Reinf           | 0.0014    |
| Min. Reinf % to Req'd       | 0.0014 %   |                             |           |

### Summary

Footing OK

2.00ft square x 8.0in thick with 2- #4 bars

|                                |                |                               |            |
|--------------------------------|----------------|-------------------------------|------------|
| Max. Static Soil Pressure      | 1,475.00 psf   | Vu : Actual One-Way           | 17.85 psi  |
| Allow Static Soil Pressure     | 1,500.00 psf   | Vn*Phi : Allow One-Way        | 85.00 psi  |
| Max. Short Term Soil Pressure  | 475.00 psf     | Vu : Actual Two-Way           | 67.43 psi  |
| Allow Short Term Soil Pressure | 1,500.00 psf   | Vn*Phi : Allow Two-Way        | 170.00 psi |
| Mu : Actual                    | 1.18 k-ft / ft | Alternate Rebar Selections... |            |
| Mn * Phi : Capacity            | 4.96 k-ft / ft | 1 #4's 1 #5's 1 #6's          |            |
|                                |                | 1 #7's 1 #8's 1 #9's 1 #10's  |            |

