CITY OF
PORTLAND, OREGON
OFFICE OF PLANNING AND DEVELOPMENT REVIEW
1900 SW 4th Ave, Suite 5000
Portland, OR 97201

MULTNOMAH COUNTY

STATUS CHECK	Residential 1 & 2 Family Permit	Application # 01-176348-000-00-RS

Status Date: January 10, 2002 IVR Number: 2140344

APPLICANT	GROVE DEVELOPMENT INC	Phone: (503) 977-2166
OWNER	VIRGINIA H ROBINSON	Phone:
CONTRACTOR	GROVE DEVELOPMENT INC	Phone:

PROJECT INFORMATION

Street Address: 4709 SW FLOWER CT

Description of Work: NSFR- PARTITION PLAT2001-129 PARCEL 3

Occupancy Group	Construction Type	Sub Type	Work Proposed
R3 U1	V-N	Single Family Dwelling	New Construction

This report shows those reviews which have been assigned as of January 10, 2002 at 9:13 am. Technical reviews may trigger additional review assignments.

Review Type/Process	Mandatory	Status	Action Date	Reviewer	Phone
Completeness Check - RS	X	Closed	1/10/02	Hettman,Nancy	503-823-7360
Process Manager		Open		Hansen,Keith	503-823-0655
Assign plan and file location		Closed	12/19/01	Hansen,Keith	503-823-0655
Assign Reviews - RS		Closed	12/19/01	Hansen,Keith	503-823-0655
Corrections Received - RS		Open		DOCUMENT SERVICES	503-823-7357
Assign address	X	Checksheet		McBee,Carol	503-823-5115
Planning and Zoning Review	X	Approved	1/10/02	Wood,Sandra	503-823-7827
Erosion Control Plan Review	X	Approved	1/10/02	Wood,Sandra	503-823-7827
Life Safety Review	X	Open	1/10	Hettman,Nancy ✓ CKH	503-823-7360
Structural Review	X	Open		STRUCTURAL	503-823-7301
Residential Plumbing Review	X	Open		Ebeling,Mike	503 823-7247
Residential Subsurface Site Evaluation	X	Open		COMMERCIAL/RESIDENTIAL PLUMB	
BES Sanitary Review	X	Open		BES	503-823-7761
BES Stormwater Review	X	Open		BES	503-823-7761
BES - SDC Review	X	Open		BES	503-823-7761
Transportation SDC - review	X	Open		PDOT	503-823-7002
Parks SDC Review	X	Open		Raschke,Glenn	503-823-1697
Trans - Street Systems Review	X	Open		PDOT	503-823-7002
Street Systems - Assign Reviews		Open		PDOT	503-823-7002
Water Available	X	Open		WATER	503-823-7479
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,MI,MP	503-823-7357
Payment Received		Open			

Mechanical Permit Application

City of Portland

1900 SW 4th, Ste 5000, PO Box 8120, Portland, OR 97201
Phone: (503) 823-7363, Fax: (503) 823-3018
TDD: (503) 823-6868, Website: www.cpdr.ci.portland.or.us

OFFICE USE ONLY	
Date received:	Permit no.:
By:	

TYPE OF PERMIT

☐ 1 & 2 family dwelling or accessory ☐ Commercial/industrial ☐ Multi-family ☐ Tenant improvement
☒ New construction ☐ Addition/alteration/replacement ☐ Other: _____

JOB SITE INFORMATION

Job address: Lot # 01-00410 MP Parcel 3
Bldg. no.: | Suite no.:
Tax map/tax lot/account no.:
Lot: | Block: | Subdivision:
Project name:
City/county: | ZIP:
Description and location of work on premises: _____
Building Permit #, if applicable _____
Est. date of completion/inspection:
Will you call for inspection within 24 hours? ☐ Yes ☐ No
Tenant improvement or change of use:
Is existing space heated or conditioned? ☐ Yes ☐ No
Is existing space insulated? ☐ Yes ☐ No

MECHANICAL CONTRACTOR

Business name:
Address:
City: | State: | ZIP:
Phone: | Fax: | E-mail:
CCB no.:
City/metro lic. no.:
Name (please print):

CONTACT PERSON

Name:
Address:
City: | State: | ZIP:
Phone: | Fax: | E-mail:

OWNER

Name: Carol Hunt
Mailing address:
City: | State: | ZIP:
Phone: 503/977-2166 Fax: | E-mail:

ENGINEER

Name:
Address:
City: | State: | ZIP:
Phone: | Fax: | E-mail:
Applicant's signature: | Date:
Name (print):

COMMERCIAL VALUATION SCHEDULE

Indicate equipment quantities in boxes below. Indicate the dollar value of all mechanical materials, equipment, labor, overhead, profit. Value $ _____.

**See checklist for important application information and jurisdiction's fee schedule for residential permit fee.*

1 & 2 FAMILY DWELLING PERMIT FEE SCHEDULE AND COMMERCIAL/INDUSTRIAL EQUIPMENT SCHEDULE

Description	Qty.	Fee (ea.) Res. only	Total Res. only
HVAC:			
Air handling unit _____ CFM _____		$19	
Air conditioning (site plan required)		$19	
Alteration of existing HVAC system		$24	
Boiler/compressors			
State boiler permit no.:			
_____ HP _____ Tons _____ BTU/H		$24	
Fire/smoke dampers/duct smoke detectors		—	
Heat pump (site plan required)		$38	
Install/replace furnace/burner 80,000 BTU/H			
Including ductwork/vent/liner ☒ Yes ☐ No	1	$40	
Install/replace/relocate heaters – suspended, wall, or floor mounted		$19	
Vent for appliance other than furnace	1	$16	
Refrigeration:			
Absorption units _____ BTU/H		—	
Chillers _____ HP		—	
Compressors _____ HP		—	
Environmental exhaust and ventilation:			
Appliance vent		$16	
Dryer exhaust	1	$10	
Hoods, Type I/ II/res. kitchen/hazmat			
hood fire suppression system	1	$10	
Exhaust fan with single duct (bath fans)	4	$10	
Exhaust system apart from heating or AC		$16	
Fuel piping and distribution *(up to 4 outlets)*			
Type: _____ LPG X NG _____ Oil	1	$11	
Fuel piping each additional over 4 outlets		$2	
Process piping (schematic required)		—	
Number of outlets		—	
Other listed appliance or equipment:			
Decorative fireplace 3	1	$19	
Insert – type Gas		$42	
Woodstove/pellet stove		$42	
Other: (including oil tanks, gas and diesel generators, gas and electric ceramic kilns, gas fuel cells, jewelry torches, crucibles and other appliance/equipment not included above)		$24	

Notice: This permit application expires if a permit is not obtained within 180 days after it has been accepted as complete.

Permit fee ..... $ _____
Minimum fee ($50) .... $ _____
Commercial Plan review (at 60%) $ _____
State surcharge (8%) ..... $ _____
TOTAL ..... $ _____

Office of Planning and Development Review, City of Portland

New One and Two Family Dwelling Submittal Checklist

Folder Number: 04 116548 Stock Plan Number: _____ Review Date: 1/10/04

	The information listed below is the minimum information required for a "complete" submittal package. Failure to provide any of the following material that is deemed to be applicable to your project will be cause to reject your submittal. Incomplete plans will not be taken in for review.	Provided	Not Applicabl	Accepted [Staff use]
1	Four (4) Complete sets of legible plans drawn to scale, showing conformance to the applicable local and state building codes. Lateral design details and connectors must be incorporated into the plans or on a separate full size sheet attached to the plans with cross-references between plan location and details. Plan review cannot be completed if copyright violations exist.	✓		NRI
2	Site/Plot plan drawn to scale. The plan must show: lot and building setback dimensions; property corner elevations (if there is more than 4-ft. elevation differential the site plan must show contour lines at 2-ft. intervals); location and dimensions of easements and driveway, footprint of structure (including decks), location of wells/septic systems, utility locations, north arrow, lot area, building coverage area, percentage of coverage, impervious area (structures, paving, etc.), existing structures on site, location of utilities (storm and sanitary sewers, water, electric, etc.) , surface drainage, width of adjacent right of way and curb height.	✓		✓
3	Geotechnical/soils report: provide geotechnical or soils report as applicable for sites within soils hazard areas or with slopes in excess of 20% or where a special foundation system relying on lateral soil bearing is employed (e.g. pole buildings, etc.).		✓	—
4	Foundation plan. Show dimensions, anchor bolts, any hold-downs and reinforcing pads, connection details, vent size and location, location and size of crawl space access.	✓		✓
5	Floor plans. Show all dimensions, room identification, window size ocation of smoke detectors, water heater, furnace, ventilation fans, plumbing fixtures, balconies and decks, location and onstruction details for stairs and handrails, etc.	✓		✓
6	Cross section(s) and details. Show sizes and spacing for all framing members, such as floor beams, headers, joists, sub-floor, wall construction, roof construction. More than one cross section may be required to clearly portray construction. Show details of all wall and roof sheathing, roofing, roof slope, ceiling height, siding material, footings and foundation, stairs, fireplace construction, thermal insulation, etc.	✓		✓
7	Elevation views. Provide elevations for all sides for new construction; minimum of three elevations for additions and remodels. Exterior elevations must reflect the actual grade. Full size sheet addendums showing foundation elevation drawings with cross-references are acceptable.	✓		✓
8	Wall bracing (prescriptive path) and/or lateral analysis plans. Details and locations for lateral force resisting elements must be shown on plans; for non-prescriptive path analysis, specifications and calculations to engineering standards must be provided as well.	✓		✓
	Floor/roof framing plans are required for all floor and roof assemblies. Plans shall indicate member sizing, spacing and bearing locations. Show location of attic ventilation and size and location of attic access.	✓		✓
10	Basement and retaining wall cross sections and details showing placement of rebar, footing sizes, etc. shall be provided. For engineered systems, see item 14, for "Engineer's calculations."		✓	—
11	Beam calculations. Provide two sets of calculations using current code design values for all beams and multiple joists over ten feet in length and/or any beam/joist carrying a non-uniform load or for cantilever conditions.	✓		✓
12	Manufactured floor/ roof truss design details. Note: roof truss design details and calculations may be submitted as a "deferred submittal" item with approval of the building plans examiner doing this completeness check. Truss layout plan, however, must be provided at time of submittal and any details pertaining to lateral force resisting requirements of the trusses must be included. Manufactured floor system designs and calculations must be provided at time of submittal.		✓	—
13	Energy Code Compliance. Identify the prescriptive path or provide calculations.	✓		✓
14	Engineer's calculations when required or provided and prepared by an architect or engineer shall be stamped by an engineer or architect licensed in Oregon and shall be shown to be applicable to the project under review.		✓	—

I certify that the items checked above represent a complete submittal package for the application being made. I understand that this information is being reviewed by OPDR to determine completeness. I understand that if the submittal is determined to be incomplete plans will not be accepted and the plan review process will not start.

Applicant name (print): Gene Hunt Signature: [signature] Date: 1/10/04

Reviewed By: [signature] Accepted as complete: 1/10/04 Rejected as incomplete: _____

Notes: [illegible]

JAN 3rd Thur 9AM

City of Portland Development Services Center
1900 SW 4th Avenue, First Floor Portland, OR 97201 (503) 823-7310

Request for Application Intake Appointment (page 1)

X NSFR ___ NSFR w/ADU ___ Duplex ___ 2-unit rowhouse
___ 2-unit rowhouse w/ 1 ADU ___ 2-unit rowhouse w/2 ADU's ___ Mfd home on lot

PLEASE NOTE–The City of Portland NEEDS A MINIMUM OF 5 WORKING DAYS from the time we receive your request to the day of your appointment. Staff will set up your computer file, perform the necessary zoning research, and assign a site address prior to your appointment.

Appointments are available Monday through Friday mornings (circle your preference)
8:15, 9:00, 10:00 & 10:45 a.m. (Mo) Tu We Th Fr
Thursday Evenings at 5:30 & 6:30 p.m. First Available Time X

4709 SW Flower Ct

Applicant Fill Out Completely Below ***(Please Print Clearly)***
INCOMPLETE APPLICATIONS WILL BE RETURNED

Applicant (Company): Grove Development, Inc.	
Contact Person: Grove Hunt	
Applicant Mailing Address: 8627 SW Rustling Leaves	
Portland OR 97223	
Office Phone: (503) 977-2166	Cell Phone (503) 793-3099
Fax Number (503) 246-1981	Email:
Contractor Grove Dev. Inc.	CCB Number: 124694
Tax Account Number: R508380 ???	If you do not know your Tax Account Number, please call Multnomah County at (503) 988-3326 to get this information
Cross Streets: Cameron & Shattuck	Tax Lot Number:
Plat Name/Number: 2001-129	Block/Lot: ~~1~~ (3) / Qtr Sec #
Sq. Ft: Living area: 2600 sf	Basement: ___ sf Garage/Carport 600 sf
Garage/Carport attached? (Y) N (circle one)	
Number of Stories: 2	Number of Units: 3 Individual Single Family
How many exterior feet of pipe to connect your: Sewer? 40 Water? 40 Raindrains? 40 How many Bathrooms? 2½ Kitchens? 1	Electrical: Limited Energy? (Y) N (circle one) Electric Temporary? (Y) N
Land Use Review Case Numbers: Partition Plat # 2001-129	
Is this a Master House Plan? Y (N) Plan # :	

01-176160-IQ

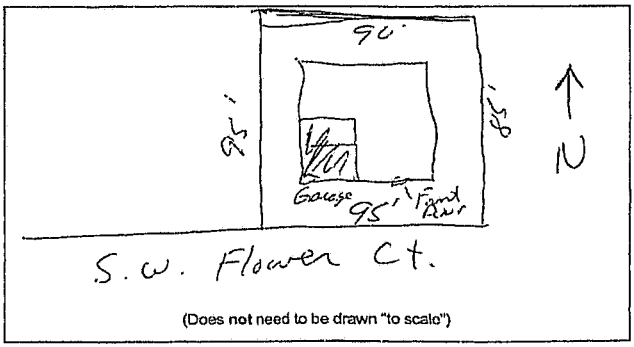
City of Portland Development Services Center
1900 SW 4th Avenue, First Floor Portland, OR 97201 (503) 823-7310

Request for Application Intake Appointment (page 2)

Addressing / Lot Verification

Prior to your appointment, the location of your lot must be verified. If your lot does not yet have a street address, one will be assigned. In the box below, draw a diagram of your lot and all structures (including detached garages). Indicate the following:

- ☐ dimensions of the lot
- ☐ streets, and street names for all streets adjoining your lot
- ☐ if more than one street adjoins your lot, indicate the front door entrance to the structure
- ☐ if multiple units, show all front door entrances
- ☐ place a North arrow in the box



(Does not need to be drawn "to scale")

Full Legal Description: (Required)
(If lot division is in progress, please provide the LUR or Partition Plat Number AND the Parcel Number)

Partition Plat # 2001. 129
Parcel # 3

To request an appointment, fax both completed pages of this form to (503) 823-4224.
You will receive a fax confirmation of your appointment date and time.

City of Portland Development Services Center

1900 SW 4th Avenue, First Floor Portland, OR 97201 (503) 823-7310

Intake Appointment Confirmation

Regarding your Application for: Lot 3. P.P. 2001-129

Property Identification R Number, Plat Name & Block, Permit Number

Your appointment is scheduled for: Date: Jan 13rd 02

Day: Thursday Time: from 9:00 to 9:45 am pm

at the Development Services Center / 1st floor / 1900 SW 4th Avenue

You have been given the next available appointment. Let us know if you are unavailable at this time by calling us at **(503) 823-0672** *to reschedule your appointment -- *48 hours in advance*

*Appointments cancelled with less than 48 hour notice, or "no shows" are subject to a $75 rescheduling fee (applied to application)

What to bring to your appointment:

The information listed below is the minimum required for acceptance of a Building Permit application. No incomplete information will be accepted. Incomplete submittal materials will be returned to applicants. Applications will not be processed or routed for any reviews until the required plan check fees have been paid in full.

The intake appointment program is designed to have submittal accomplished in one visit. Applicants are expected to arrive with complete submittal materials. There will be a $75 charge for each additional intake appointment required due to incomplete or insufficient application materials, missed appointments, or cancellation without proper notice.

- ❑ CONSTRUCTION DRAWINGS (4 sets of all plans)
- ❑ SITE PLANS (see handout)
- ❑ FOUNDATION PLAN – label hold-downs for lateral design
- ❑ FLOOR PLANS – to include all floors and lateral shear wall requirements
- ❑ CROSS SECTION(S) and DETAILS – engineered details must be on plans
- ❑ ELEVATION VIEWS – for all faces; must reflect slope of lot
- ❑ WALL BRACING/LATERAL ANALYSIS – indicate method of providing lateral bracing

The following information/forms are also required –

- ___ NSFR submittal checklist (includes sample site plan diagram)
- ___ Combination SDC form, and MIT or SIM form
- ___ Erosion Control plan (on site plan)
- ___ Mechanical Permit application form

* ADDITIONAL REQUIREMENTS – PROVIDE IF APPLICABLE TO YOUR PROJECT

- ❑ BASEMENT AND RETAINING WALLS provide details/engineering when necessary
- ❑ BEAM CALCULATION for beams over 10' in length or with point loads
- ❑ MANUFACTURED ROOF/FLOOR TRUSS LAYOUT if using engineered wood systems
- ❑ SOILS REPORT if site is over 20% slope

JAN 3rd Thur 9AM

City of Portland Development Services Center

1900 SW 4th Avenue, First Floor Portland, OR 97201 (503) 823-7310

Request for Application Intake Appointment (page 1)

X NSFR ____ NSFR w/ADU ____ Duplex ____ 2-unit rowhouse
____ 2-unit rowhouse w/ 1 ADU ____ 2-unit rowhouse w/2 ADU's ____ Mfd home on lot

PLEASE NOTE–The City of Portland NEEDS A MINIMUM OF 5 WORKING DAYS from the time we receive your request to the day of your appointment. Staff will set up your computer file, perform the necessary zoning research, and assign a site address prior to your appointment.

Appointments are available Monday through Friday mornings (circle your preference)
(8:15) 9:00, 10:00 & 10:45 a.m. (Mo) Tu We Th Fr
Thursday Evenings at 5:30 & 6:30 p.m. First Available Time X

Applicant Fill Out Completely Below *(Please Print Clearly)*

INCOMPLETE APPLICATIONS WILL BE RETURNED

Applicant (Company): Grove Development, Inc.
Contact Person: Grove Hunt
Applicant Mailing Address: 8627 SW Rustling Leaves
Portland OR 97223
Office Phone: (503) 977-2166 Cell Phone: (503) 793-3299
Fax Number: (503) 246-1981 Email:
Contractor: Grove Dev. Inc. CCB Number: 129694
Tax Account Number: R508350 25/032 If you do not know your Tax Account Number, please call Multnomah County at (503) 988-3326 to get this information
Cross Streets: Cameron & Shattuck Tax Lot Number:
Plat Name/Number: 2001-129 Block/Lot: 3/
Qtr Sec #
Sq. Ft: Living area: 2600 sf Basement: ____ sf Garage/Carport 600 sf
Garage/Carport attached? (Y) N (circle one)
Number of Stories: 2 Number of Units: 3 Individual Single family
How many exterior feet of pipe to connect your: Sewer? 40 Water? 40 Raindrains? 40
How many Bathrooms? 2½ Kitchens? 1
Electrical: Limited Energy? (Y) N (circle one)
Electric Temporary? (Y) N
Land Use Review Case Numbers: Partition Plat # 2001 129
Is this a Master House Plan? Y (N) Plan #:

01-176345-RS
01-176160-IQ

KH

CITY OF
PORTLAND, OREGON
BUREAU OF ENVIRONMENTAL SERVICES
1900 SW 4TH AVE, SUITE 2100
Portland, OR 97201

BES PLAN EXAMINATION CHECK SHEET

Application # 01-176348-000-00-RS
01-176344-000-00-RS

Review Date: **February 12, 2002**

IVR# 2140344

To:	CONTRACTOR/BUILDER	GROVE DEVELOPMENT INC 8627 SW RUSTLING LEAVES PORTLAND OR 97223	Work Fax	503 977-2166 503 246-1981
From:	BES	IGNATIUS DECHABERT	Phone Fax E-Mail	503-823-7116 503 823-4591 IGNATIUSD@BES.CI.PORTLAND.OR.US
cc:	OWNER	VIRGINIA H ROBINSON 10606 SW CAPITOL HWY #206 PORTLAND, OR 97219-6870		

PROJECT INFORMATION

Street Address:	4709 SW FLOWER CT
Description of Work	NSFR- PARTITION PLAT2001-129 PARCEL 3

The following are items that will need to be addressed prior to plan approval by the Bureau of Environmental Services. Approval of your plan for sanitary and storm management facilities by BES does not mean your building permit can be immediately issued; BES is only one of many bureaus that review your building plan.

Item #	Location on plans	Clarifications / Corrections Required
1.	Site Plan - 01-176348-RS	Your submitted SIM Form does not indicate the amount of Non-Mitigated Impervious area to be treated by your stormwater facility (sand filter). Please properly complete the SIM Form and return to Document Services as prescribed below.
2.	01-176344-RS	Per your conversation with Judy Russell, please also properly complete the SIM Form for 4710 SW Cameron Rd. and submit as prescribed below NOTE: You may submit these forms concurrently with the O&M Forms you will be submitting for all four lots in the development, as per our prior conversation.

To respond to this checksheet, come to Document Services (the second floor of 1900 SW Fourth Ave., between 7:30 a.m. and 3:00 p.m.) and update all four sets of the originally submitted drawings. To update the drawings, you may either replace the original sheets with new sheets, or edit the originally submitted sheets. (Specific instructions for updating plans are posted in Document Services.)

Please complete the attached Checksheet Response Form and include it with your re-submittal.

If you have specific questions concerning this Checksheet, please call me at 503-823-7116. To check the status of your project please call (503) 823-7000 and select option 4. Your Plan Review Status will be faxed to you, so please be ready to provide a fax number. If you don't have a fax number you may dial 503 823-7357 to request a Plan Review Status or visit Document Services.

City of Portland Development Services Center

1900 SW 4th Avenue First Floor Portland, OR 97201 (503) 823-7310

Intake Appointment Confirmation

Regarding your Application for: Lot 3 AP 2001-129

Property Identification R Number, Plat Name & Block, Permit Number

Your appointment is scheduled for: Date: 1/10/02

Day: Thursday Time: from 8:15 to 9:00 am pm

at the Development Services Center / 1st floor / 1900 SW 4th Avenue

You have been given the next available appointment. Let us know if you are unavailable at this time by calling us at (503) 823-0672 to reschedule your appointment -- *48 hours in advance

*Appointments cancelled with less than 48 hour notice, or "no shows" are subject to a $75 rescheduling fee (applied to application)

What to bring to your appointment:

The information listed below is the minimum required for acceptance of a Building Permit application. No incomplete information will be accepted. Incomplete submittal materials will be returned to applicants. Applications will not be processed or routed for any reviews until the required plan check fees have been paid in full.

The intake appointment program is designed to have submittal accomplished in one visit. Applicants are expected to arrive with complete submittal materials. There will be a $75 charge for each additional intake appointment required due to incomplete or insufficient application materials, missed appointments, or cancellation without proper notice.

Notified on person. 1-3-02 8:08

- ☐ CONSTRUCTION DRAWINGS (4 sets of all plans)
- ☐ SITE PLANS (see handout)
- ☐ FOUNDATION PLAN – label hold-downs for lateral design
- ☐ FLOOR PLANS – to include all floors and lateral shear wall requirements
- ☐ CROSS SECTION(S) and DETAILS – engineered details must be on plans
- ☐ ELEVATION VIEWS – for all faces; must reflect slope of lot
- ☐ WALL BRACING/LATERAL ANALYSIS – indicate method of providing lateral bracing

The following information/forms are also required –

- ____ NSFR submittal checklist (includes sample site plan diagram)
- ____ Combination SDC form, and MIT or SIM form
- ____ Erosion Control plan (on site plan)
- ____ Mechanical Permit application form

* ADDITIONAL REQUIREMENTS – PROVIDE IF APPLICABLE TO YOUR PROJECT

- ☐ BASEMENT AND RETAINING WALLS provide details/engineering when necessary
- ☐ BEAM CALCULATION for beams over 10' in length or with point loads
- ☐ MANUFACTURED ROOF/FLOOR TRUSS LAYOUT if using engineered wood systems
- ☐ SOILS REPORT if site is over 20% slope

Life Safety Checksheet Response

Permit #: 01-176348-000-00-RS **Date:** 02/27/02

Customer name and phone number: GROVE HUNT 503 793-3299

Note: In the spaces below, please provide specific information concerning the changes that you have made in response to the checksheet. Note the checksheet item number, your response or a description of the revision, and the location of the change on the plans (i.e. page number and/or detail number). Use as many lines as needed. *If the item is not in response to a checksheet, write "Applicant" in the column labeled "Checksheet item number."*

Checksheet item number	Description of changes, corrections, additions, etc.	Location on plans
1	CORNICE ELEVATIONS ON SITE PLAN	SITE PLAN
2	DONE.	PG-4-6
3	DONE	PG- 5
4	Play Room	PG 6
5	Page # 10 NEW PAC-B	PG #10
6	Done	
7	Done	
8	Done	
9	OK Per our Discussion	
	c Changed to	
	d OK Per. our Discussion	
	e Changes to ABP	
	f Done	
	g Done	

Plan Bin Location: 48

CITY OF
PORTLAND, OREGON
OFFICE OF PLANNING AND DEVELOPMENT REVIEW
PO Box 8120
Portland, OR 97207-8120

MULTNOMAH COUNTY

LIFE SAFETY CHECKSHEET

Application #: 01-176348-000-00-RS
IVR #: 2140344

Review Date: February 14, 2002

To:				
	CONTRACTOR/BUILDER	GROVE DEVELOPMENT INC 8627 SW RUSTLING LEAVES PORTLAND OR 97223	Work: Fax:	503 977-2166 503 246-1981 ext.

From:				
	PLANS EXAMINER	NANCY HETTMAN	Phone: Fax: e-mail:	503-823-7360 hettmann@ci.portland.or.us

cc:			
	OWNER	VIRGINIA H ROBINSON 10606 SW CAPITOL HWY #206 PORTLAND, OR 97219-6870	

PROJECT INFORMATION

Street Address: 4709 SW FLOWER CT

Description of Work: NSFR- PARTITION PLAT2001-129 PARCEL 3

The following assumptions were made when reviewing your project:

Occupancy group	Construction Type	Square Footage	Stories	Sprinklers	Alarms	Detection
R3	V-N	3041	2	N/A	N/A	Y

PLAN REVIEW

Based on the plans submitted, the following items appear to be missing or not in conformance with: ☐ Oregon Structural Specialty Code OR ☒ Oregon 1&2 Family Dwelling Specialty Code, and/or other city, state, or federal requirements:

Item #	Location on plans	Code Section	Clarification / Correction Required
1	Pg. 1	112.1 IOTFDC	Show and correspond finished grade elevations at the corners of the house on the site plan and the façade drawings. Make sure that the cross sections then agree with the slopes shown.
2	Pg. 4-6	112.1 IOTFDC	At the Wall Key on the referenced pages, clarify what the page number of the Bracing Page is. Do not leave "X/X".
3	Pg. 5	112.1 IOTFDC	Why are you not referencing the details, but showing open circle designations?
4	Pg. 6	112.1 IOTFDC	Show the use of the "Attic Room".
5	Pg. 7	314 IOTFDC	Show the minimum clear headroom at the stair detail or provide a cross-section that shows the clear headroom requirement will be met.
6	Pg. 6	OR Energy	Show the required insulation at the roof and attic area on cross-sections.

7		Beams	Cross-reference the beams by ID #, page # of calculation packet, etc. to where the beam is used on the construction plans. Clearly show spans of members (rafters, joists, etc.) that bear on the beam.
8	Pg. 6	Structure	Indicate the rafter, joist, beam and post sizes, etc. on the cross-sections.
9		Prescriptive Bracing IR01-03	The following issues need to be resolved for the lateral bracing of this residence: a. The upper floor has exterior braced walls that do not align vertically with the floor below and they do not meet the requirements of unusually shaped buildings. They must be redesigned to meet prescriptive or be engineered. Note: b. The right, exterior wall of Bedroom-2 and the rear, braced walls near the upper floor baths do not align vertically to the exterior walls below, nor do they meet the 4x the joist depth. c. Bedroom-2 has a BP shown at the rear, corner. This is actually only wide enough for an ABP. Show it as an ABP. It falls over the 5-1/8th x 10-1/2 GLB below. Provide calculations that show that all loads are being considered for this beam – inclusive of tension/compression uplift of ABP. Be sure that the hip reaction is included. d. The Brace Panel at the right, exterior wall of Bedroom-2's bath falls over beams that are offset too far from exterior walls to meet prescriptive code. e. Bedroom-3's front, right Brace Panel at corner, is too narrow to be a brace Panel. Show it as an Alternate Brace Panel and provide a Two-Story Brace Panel detail. Make sure all hardware is for the correct loads. f. Mark all brace panels that fall inside of the exterior walls as IBP (Interior Brace Panels). Include "IBP" on the Wall Bracing Schedule and clarify the construction of these panels. Be aware of the wall bracing percentages. g. Add details for connection of trusses, Detail Pages 12 & 13 of the Interpretive Ruling 01-03.

To respond to this checksheet, come to Document Services (the second floor of 1900 SW Fourth Ave., between 7:30 a.m. and 3:00 p.m.) and update all four sets of the originally submitted drawings. To update the drawings, you may either replace the original sheets with new sheets, or edit the originally submitted sheets. (Specific instructions for updating plans are posted in Document Services.)

Please complete the attached Checksheet Response Form and include it with your re-submittal.

If you have specific questions concerning this Checksheet, please call me at 503-823-7360. To check the status of your project, please call 503 823-7000 and select option 4. Your Plan Review Status will be faxed to you, so please be ready to provide a fax number. If you don't have a fax number you may dial 503 823-7357 to request a Plan Review Status or visit Document Services.

You may receive separate Checksheets from other City agencies that will require separate responses.

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

1 copy to each set of plans	
1 copy to DSC file	Plancheck # 01-176348 RS

Planner: SANDRA WOOD

ONE & TWO FAMILY RESIDENTIAL PLAN REVIEW SHEET

Date: 1/10/02 Zone: R7 Addition and Lot: Partition Plat 2001-124 Parcel #3

LUR History: LUR 01-410MP

Substandard Lot	Y	(N)	ADU	Y	(N)
PUD/Cluster	Y	(N)	Detached Access. Structure	Y	(N)

Lot size: 8104 ☐ Plan District: —

Minimum	*Required*	*Proposed*
Front Setback	15'	15'
Side Setback	5'	L= 10' R= 10'
Rear Setback	5'	35.67'
Parking Setback	18'	25'
Outdoor Area	NONE	n/a
Trees (preservation, planting, or fund)	18"	24" preservation

Maximum				
Vehicle Paving	40 %	540 ☐	345 ☐	26%
Building Coverage	35 %	2836 ☐	2714 ☐	34%
Height		30'	27'	
Impervious Surface	%	N/A	N/A	%

Base Zone Design Standards

✓ Main Entrance on longest st facing wall of front street

✓ Street Facing Façade 15% [illegible] 15% proposed

✓ Length of Garage Wall [illegible] 39% proposed

✓ Street Lot Line Setbacks behind

Other Req./Notes

[Stamp: [illegible] Planning and Development Review [illegible] Zoning — SR [illegible] 01/10/02 — Approved for Building [illegible]]

Micro

CITY OF

PORTLAND, OREGON

OFFICE OF PLANNING AND DEVELOPMENT REVIEW

1900 S.W. 4TH Avenue, Suite 5000
Portland, Oregon 97201
(503) 823-7000
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TDD: (503) 823-6868
www.ci.portland.or.us/buildings

GENERAL NOTES AND SUPPLEMENTAL INFORMATION
2000 OREGON ONE AND TWO FAMILY DWELLING CODE

Date : March 7, 2002 Folder number: 02-176348 RS

Project Address: 4709 SW Flower Ct.

1 & 2 Code prescriptive wall bracing ☒ Engineered lateral design ☐ total # pages eng'r'g: ____

Energy Conservation: Path 1 ☒ Path 8 ☐ | Retaining walls >4' or surcharged ☐

The following "General Notes and Supplemental Information" are now part of your approved plans.

- It is the responsibility of the contractor to comply with these requirements during construction.
- Where there is a conflict between a general note and the plans, the more restrictive shall apply.
- If you have any questions regarding any of these items, please contact

Plans Examiner: NANCY HETTMAN Phone # (503) 823-7360

E-mail address: hettmann@ci.portland.or.us Fax # (503) 823-7692

General Supplemental Information
These 8½ x 11 sheets are part of this plan approval. Plans are [illegible] null and void without this [illegible] attached to the [illegible]

Foundation/ Under-floor

322.1 & 502.4 Protection against decay is required or the following conditions must be met:

- Maintain 18" clearance under floor joists, 12" under girders.
- Provide 3" of bearing at beam pockets and 1/2" air space at sides and ends.

322.1.1 All wood in direct contact with concrete, and all exposed wood supporting porches and decks, to be pressure treated or of natural resistance to decay.

403.1.1 Foundation and anchorage shall comply with the more restrictive of the following or the approved plans.

Foundation footing shall be 18" below finish grade and:

Number of floors	*Wall Thickness*	*Footing Width*	*Footing Thickness*
1	6"	12"	6"
2	8"	15"	7"
3	10"	18"	8"

403.1.5 Foundation anchor bolts shall be not less than 1/2" diameter bolts embedded at least 7" into concrete, or masonry, spaced 6'-0" on center maximum, with at least two bolts per plate and within 12" of ends and corners.

404.1.6 Foundation wall shall extend at least 6" above the finished grade adjacent to the foundation at all points.

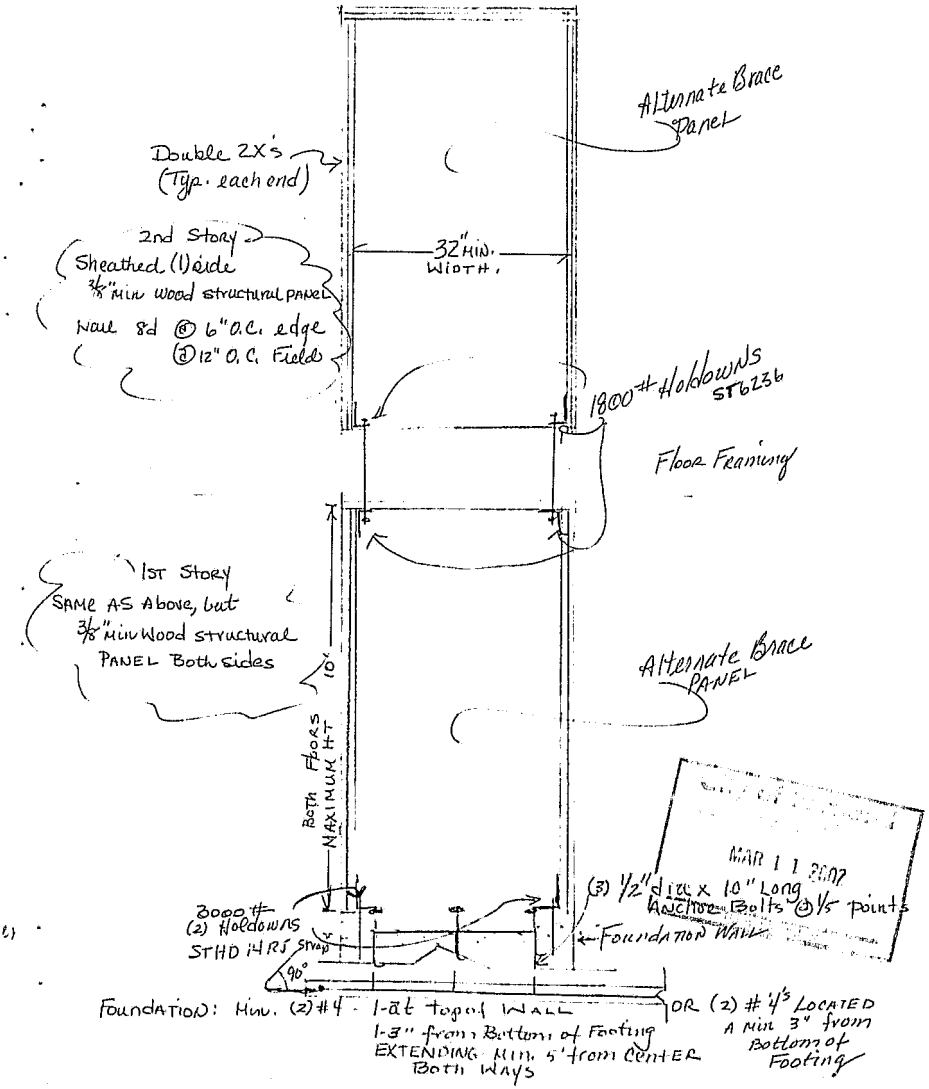
405.1 Foundation drainage shall be provided around foundations enclosing habitable or usable space below grade.

406.2 Foundation wall enclosing habitable space requires waterproofing on the outside surface.

408.3	Columns and posts shall be adequately anchored to prevent lateral displacement. Columns less than 4' in length, bearing on a pier or footing within a crawl space are not required to be restrained at the bottom end.
409.1	Ventilation openings at the crawl space are required within 3' of each corner. The minimum net area of ventilation openings shall not be less than one (1) square foot vent area per 150 square feet of under-floor area.
409.2	An 18" x 24" access is required to the under-floor space.
Garages	
309.1	Provide a 1-3/8" minimum solid core door, a 20-minute rated fire door or a metal insulated exterior door between garage and residence.
309.1.1	Ducts penetrating the wall or ceiling separating the dwelling from the garage shall be of not less than 26 gauge steel, with no duct openings in the garage.
309.2	Separation required between dwelling unit and garage by means of minimum ½" gyp board applied to garage side. Where separation is a floor-ceiling assembly, structure supporting the separation shall be protected by ½" gyp board, including wrapping of all beams and supporting posts.
1307.2	Seismic anchorage of water heaters is required.
1307.3	• Appliances installed in the garage generating a glow, spark or flame are to be located 18" above the floor. • Furnaces or water heaters located in a garage shall be protected from vehicle impact by 2"dia. steel post embedded 18" deep in 6" diameter hole, concrete filled, extending 36" above garage floor.
Dwelling Unit	
303.3	Bath and laundry rooms require windows with a min. of 3 sq. ft. with 1.5 sq. ft. openable area or mechanical ventilation system capable of producing a change of air every 12 minutes (5 air changes per hour) or 20 cfm of continuous ventilation.
308.4	Safety glazing shall be provided at hazardous locations such as: • Tub or shower enclosures where the glazing is less than 60" above the drain. • Within 24" of a door and less than 60" above the floor. • Panes greater than 9 sq. ft. and less than 18" above the floor.
310.1	Every sleeping room shall have at least one openable window or door for emergency egress with a net clear opening of 5.7 square feet (5 for grade floor windows). • Minimum clear opening height 22"; width 20". • Sill height above finished floor is 44' max.
311.1 & 312.1.1	A minimum of one egress door is required. Such door shall be provided a minimum 36" landing on both sides of the door. The landing shall not be more than 8" below the top of the threshold.
316.1	Provide 110V interconnected smoke alarms with battery backup, in each sleeping room, outside of each separate sleeping area in the immediate vicinity of the bedrooms, and on each additional story, including basement. Certain required locations may disallow the use of ionization-type alarms. Photoelectric-type alarms are suitable for all code-required locations.

Stairs & Guardrails	
314	Stairs must comply with the following dimensions: • 36" minimum width. 6'-8" headroom height measured vertically from the plane of the nosings of the treads. • 8" maximum rise and 9" minimum run.
315	Stairs with more than 3 risers must comply with the following: • Provide a 1-1/2" minimum to 2-5/8" maximum diameter rail with 1-1/2" minimum between handrail and wall and mounted at +30" -38" above the tread nosing. • Handrails which also function as guardrails shall be 34" - 38" above the tread nosing. • Guardrail(s) require a minimum height of 36" with intermediate rails spaced such that a sphere 5" in diameter cannot pass through. NOTE: Guardrails on decks, platforms and balconies require max. 4" openings.
314.8	Walls and soffits of enclosed accessible space under stairs shall be protected with ½" gypsum board.
4403.2	All exterior and interior stairways are to be provided illumination. Such lighting shall be located in the immediate vicinity of exterior landings and controlled from inside. For interior stairs, such lighting shall be in the vicinity of top and bottom landings and controlled from top and bottom.
Attics	
806.1	Provide cross-ventilation at each enclosed rafter space.
806.2	Attic ventilation shall be not less than 1 square foot per each 150 square foot of attic area. The total area may be reduced to 1 to 300 with ½ venting at ridge and ½ at eaves.
807.1	Provide a 22" x 30" minimum attic access to all attic areas with 30" or more headroom.
C401.2.1	Provide a rigid baffle, extending above the insulation at eave or soffit vents.
Energy Code	
C401.1(1)	*PATH 1:* Wall: R-21; Under-floor: R-25; Flat Ceilings: R-38; Vaulted Ceilings: R-30; Main Entry Door (max. 24 sf.) U=0.54; other exterior doors U=0.20 *PATH 8:* 12% maximum glazing, and 1,500 square feet or less Wall: R-15; Under-floor: R-21; Flat Ceilings: R-49; Vaulted Ceilings: R-38; Main Entry Door (max. 24 sf.) U=0.20 All: Windows U=0.40; Other exterior doors U-0.20; Skylights (max. 2% of floor area): U-0.50; Basement Walls: R-15; Slab Floor Edges: R-15; Forced Air Ducts: R-8

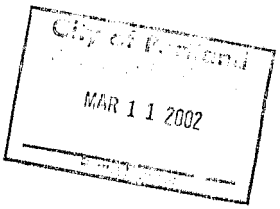
2- STORY ABP TO ABP



MITCHELL IMLAY
Designer
(503)309-9026

Re: Permit application No. 01-176348-000-00-rs
NOTE: LIVE LOADS PER 2000 OTFDC, TABLE 301.4
Loading used:

ROOFS	DEAD LOADS		**EXT. WALLS**	DEAD LOADS	
	2x8 Rafters @ 24" o/c	1.5# psf		2x6 studs @ 16" o/c	1.6# psf
	comp. shingles	3.0# psf		sheathing	1.5# psf
	sheathing	1.5# psf		gypsum bd.	2.5# psf
	felt	0.5# psf		batt insulation	1.9# psf
	total	6.5# psf		felt	0.5# psf
	increase for 9:12 roof (125%)	8.3# psf		siding	2.0# psf
	USED FOR CALCS.	10# psf		**TOTAL DEAD LOAD**	**10.0#psf**
	LIVE LOAD	25# psf			
	TOTAL LOADING USED	**35# psf**	**INT. WALLS**		
VAULT	DEAD LOAD		(INSULATED)	2x6 studs @ 16" o/c	1.6# psf
	gypsum board	2.5# psf		sheathing	1.5# psf
	batt insulation	2.5# psf		gypsum bd.	2.5# psf
	additional rafters or furring	.7#psf		batt insulation	1.9# psf
	total from roof structure above	6.5# psf		**TOTAL DEAD LOAD**	**7.5# psf**
	total	12.2#psf			
	increase for 9:12 roof (125%)	15.25#psf	**INT. WALLS**		
	LIVE LOAD	25# psf	(NO PLYWOOD)	2x6 studs @ 16" o/c	1.6# psf
	TOTAL LOADING USED	**40.25# psf**		gypsum bd.	2.5# psf
				batt insulation	1.9# psf
				TOTAL DEAD LOAD	**6.0# psf**
CEIL'G	DEAD LOAD				
	2x8 jsts @ 24" o/c	1.5# psf			
	gypsum board	2.5# psf			
	batt or loose insulation	3.0# psf			
	total	6.0# psf			
	LIVE LOAD :				
	AREAS REASONABLY ASSUMED				
	TO HAVE NO ATTIC STORAGE	10# psf			
	TOTAL LOADING USED	**16.0 #psf**			
	LIVE LOAD :				
	AREAS W/ LIMITED STOR.	20# psf			
	DEAD LOAD	16# psf			
	LOADING USED USED	**26#psf**			
	AREAS W/ PLYWOOD				
	DEAD LOAD	15.2# psf			
	(NO INSULATION & 2x12s)	**25.2#**			
	AREAS W/ PLYWOOD				
	DEAD LOAD	8.2# psf			
	(INCLUDING CEILING INSUL)	**28.2#psf**			



Parcel 3

MITCHELL IMLAY

* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE ATTIC

RIDGE BOARD / REAR

Date: 11/18/01 BeamChek 2.2

Choice 1-3/4x 9-1/2 1.9E TJ Microllam® LVL

Conditions

Min. Bearing Area R1= 2.3 in² R2= 2.3 in²

Data

Beam Span	13.0 ft	Reaction 1	1718 #
Beam Wt per ft	4.27 #	Reaction 2	1718 #
Beam Weight	56 #	Maximum V	1718 #
Max Moment	5583 '#	Max V (Reduced)	1509 #
TL Max Defl	L / 180	TL Actual Defl	L / 219

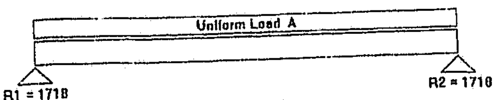
Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	26.32	16.63	0.71
Critical	21.70	6.90	0.87
Status	OK	OK	OK
Ratio	82%	42%	82%

		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Values	Base Values	2600	285	1.9	750
	Base Adjusted	3087	328	1.9	750
Adjustments	CF Size Factor	1.032			
	Cd Duration	1.15	1.15		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 260 = A



SPAN = 13 FT

Uniform and partial uniform loads are lbs per lineal ft.

01-176 3485

MITCHELL IMLAY
* Designer *

2

GROVE DEVELOPMENT, CONWAY RESIDENCE ATTIC Date: 11/18/01 BeamCheck 2.2

RIDGE BOARD / FRONT

Choice 1-3/4x 9-1/2 1.9E TJ Microllam® LVL

Conditions Min Bearing Area R1= 1.7 in² R2= 1.7 in²

Data

Beam Span	13.0 ft	Reaction 1	1282 #
Beam Wt per ft	4.27 #	Reaction 2	1282 #
Beam Weight	56 #	Maximum V	1282 #
Max Moment	4167 '#	Max V (Reduced)	1126 #
TL Max Defl	L / 180	TL Actual Defl	L / 293

Attributes

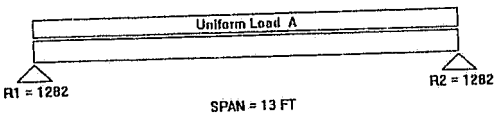
	Section (in³)	Shear (in²)	TL Defl (in)
Actual	26.32	16.63	0.53
Critical	16.20	5.15	0.87
Status	OK	OK	OK
Ratio	62%	31%	61%

Values / *Adjustments*

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc_L (psi)
Base Values	2600	285	1.9	750
Base Adjusted	3087	328	1.9	750
CF Size Factor	1.032			
Cd Duration	1.15	1.15		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

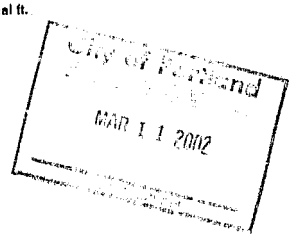
BeamCheck has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 193 = A



SPAN = 13 FT

Uniform and partial uniform loads are lbs per lineal ft.



3

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE ATTIC

FLUSH BM UNDER RIDGES

Date: 11/18/01 *BeamChek 2.2*

Choice 3-1/8x 9 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2760

Conditions

Min Bearing Area R1= 2.6 in² R2= 2.6 in²

Data

Beam Span	11.5 ft	Reaction 1	1654 #
Beam Wt per ft	6.83 #	Reaction 2	1654 #
Beam Weight	79 #	Maximum V	1654 #
Max Moment	9069 '#	Max V (Reduced)	1634 #
TL Max Defl	L / 180	TL Actual Defl	L / 219

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	42.19	26.13	0.63
Critical	39.43	11.22	0.77
Status	OK	OK	OK
Ratio	93%	40%	82%

Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2760	219	1.8	650

Adjustments

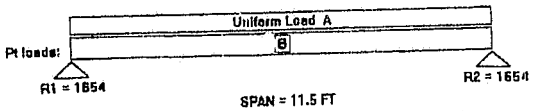
Cv Volume	1.000	
Cd Duration	1.15	1.15
Cr Repetitive		
Ch Shear Stress		
Cm Wet Use		

BeamChek has automatically added the beam self-weight into the calculations.

Loads

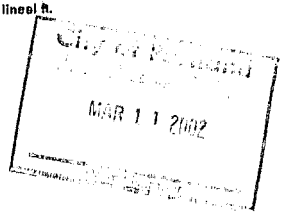
Uniform TL: 20 = A

Point TL	Distance
B = 3000	5.75



SPAN = 11.5 FT

Uniform and partial uniform loads are lbs per lineal ft.



4

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE MASTER SUITE
FLOOR JOISTS ABOVE

Date: 11/19/01 BeamChek 2.2

Choice 2x12 DF-L #2 @ 12 In. oc BASE Fb = 875 ADJ Fb = 1006

Conditions Repetitive Use, '91 NDS
Min Bearing Area R1= 0.5 in² R2= 0.9 in²

Data

Beam Span	15.0 ft	Reaction 1	337 #
Beam Wt per ft	0 #	Reaction 2	548 #
Beam Weight	0 #	Maximum V	548 #
Max Moment	2114 '#	Max V (Reduced)	501 #
TL Max Defl	L / 240	TL Actual Defl	L / 585

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	31.64	16.88	0.31
Critical	25.22	7.92	0.75
Status	OK	OK	OK
Ratio	80%	47%	41%

Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	875	95	1.6	625
Base Adjusted	1006	95	1.6	625

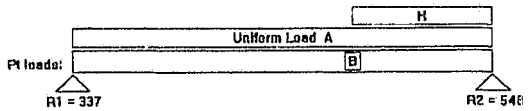
Adjustments

CF Size Factor	1.060	
Cd Duration	1.00	1.00
Cr Repetitive	1.15	
Ch Shear Stress		
Cm Wet Use		

The beam self-weight was not automatically added to the loads by BeamChek.

Loads Uniform TL: 25 = A

Point TL	Distance	Per Unit TL	Start	End
B = 385	10.0	H = 25	10.0	15.0



SPAN = 15 FT

Uniform and partial uniform loads are lbs per lineal ft.

5

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE MASTER SUITE

FLOOR JOISTS ABOVE

Date: 11/19/01 BeamChek 2.2

Choice 2x12 DF-L #2 @ 16 In. oc BASE Fb = 875 ADJ Fb = 1006

Conditions Repetitive Use, '91 NDS

Min Bearing Area R1= 0.6 In² R2= 1.2 In²

Data

Beam Span	15.0 ft	Reaction 1	367 #
Beam Wt per ft	0 #	Reaction 2	767 #
Beam Weight	0 #	Maximum V	767 #
Max Moment	2017 '#	Max V (Reduced)	704 #
TL Max Defl	L / 240	TL Actual Defl	L / 547

Attributes

	Section (In³)	Shear (In²)	TL Defl (in)
Actual	31.64	16.88	0.33
Critical	24.05	11.12	0.75
Status	OK	OK	OK
Ratio	76%	66%	44%

Values / Adjustments

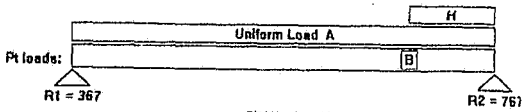
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc_L (psi)
Base Values	875	95	1.6	625
Base Adjusted	1006	95	1.6	625
CF Size Factor	1.090			
Cd Duration	1.00	1.00		
Cr Repetitive	1.15			
Ch Shear Stress				
Cm Wet Use				

The beam self-weight was not automatically added to the loads by BeamChek.

Loads

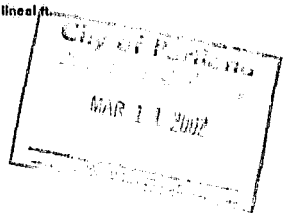
Uniform TL: 33 = A

Point TL	Distance	Per Unit TL	Start	End
B = 633	12.0	H = 33	12.0	15.0



SPAN = 15 FT

Uniform and partial uniform loads are lbs per lineal ft.



6

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE — UPPER HALL

MULTI- JST OVER STAIRS — Date: 11/19/01 — BeamChek 2.2

Choice	(2) 2x 12 DF-L #2	BASE Fb = 875	ADJ Fb = 975
Conditions	'91 NDS		

Min Bearing Area: R1= 1.2 in² R2= 1.7 in²

Data

Beam Span	8.5 ft	Reaction 1	753 #
Beam Wt per ft	8.2 #	Reaction 2	1056 #
Beam Weight	70 #	Maximum V	1056 #
Max Moment	2784 '#	Max V (Reduced)	1016 #
TL Max Defl	L / 240	TL Actual Defl	L / >1000

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	63.28	33.75	0.07
Critical	38.18	16.05	0.43
Status	OK	OK	OK
Ratio	60%	46%	17%

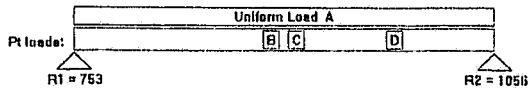
Values		Fb (psi)	Fv (psi)	E (psi x mil)	Fc_L (psi)
	Base Values	875	95	1.6	625
	Base Adjusted	875	95	1.6	625
Adjustments	CF Size Factor	1.000			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 34 = A

Point TL	Distance
B = 350	4.0
C = 550	4.5
D = 550	6.5



SPAN = 8.5 FT

Uniform and partial uniform loads are lbs per lineal ft.

7

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE GARAGE

RIDGE BOARD

Date: 11/19/01 BeamChek 2.2

Choice 1-3/4x 11-7/8 1.9E TJ Microllam® LVL BASE Fb = 2600 ADJ Fb = 2994

Conditions

Min Bearing Area R1= 3.9 in² R2= 3.9 in²

Data

Beam Span	13.6 ft	Reaction 1	2947 #
Beam Wt per ft	5.34 #	Reaction 2	2947 #
Beam Weight	73 #	Maximum V	2947 #
Max Moment	10019 '#	Max V (Reduced)	2518 #
TL Max Defl	L / 180	TL Actual Defl	L / 227

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	41.13	20.78	0.72
Critical	40.15	11.52	0.91
Status	OK	OK	OK
Ratio	98%	55%	79%

Values

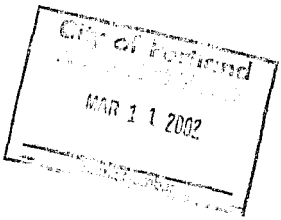
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2600	285	1.9	750
Base Adjusted	2994	328	1.9	750

Adjustments

CF Size Factor	1.001	
Cd Duration	1.15	1.15
Cr Repetitive		
Ch Shear Stress		
Cm Wet Use		

BeamChek has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 428 * A



8

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE GARAGE
CEILING JSTS

Date: 11/19/01 BeamChek 2.2

Choice 2x 8 DF-L #2 @ 24 In. oc — BASE Fb = 875 — ADJ Fb = 1389

Conditions Repetitive Use, '91 NDS
Min Bearing Area R1= 0.6 in² R2= 0.5 in²

Data

Beam Span	12.5 ft	Reaction 1	360 #
Beam Wt per ft	0 #	Reaction 2	285 #
Beam Weight	0 #	Maximum V	360 #
Max Moment	1082 '#	Max V (Reduced)	324 #
TL Max Defl	L / 180	TL Actual Defl	L / 385

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	13.14	10.88	0.39
Critical	9.36	4.45	0.83
Status	OK	OK	OK
Ratio	71%	41%	47%

Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc_L (psi)
Base Values	875	95	1.6	625
Base Adjusted	1389	109	1.6	625

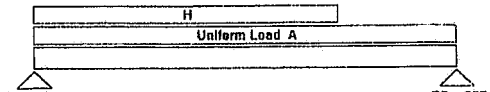
Adjustments

CF Size Factor	1.200	
Cd Duration	1.15	1.15
Cr Repetitive	1.15	
Ch Shear Stress		
Cm Wet Use		

The beam self-weight was not automatically added to the loads by BeamChek.

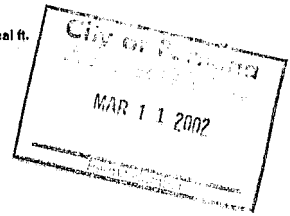
Loads Uniform TL: 30 = A

	Per Unif TL	Start	End
	H = 30	0	9.0



SPAN = 12.5 FT

Uniform and partial uniform loads are lbs per lineal ft.



9

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE GARAGE

MAIN BEAM Date: 11/19/01 BeamChek 2.2

Choice 5-1/8x 22-1/2 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2194

Conditions

Min Bearing Area R1= 12.7 in² R2= 12.7 in²

Data

Beam Span	27.5 ft	Reaction 1	8285 #
Beam Wt per ft	28.02 #	Reaction 2	8285 #
Beam Weight	771 #	Maximum V	8285 #
Max Moment	77243 '#	Max V (Reduced)	7558 #
TL Max Defl	L / 240	TL Actual Defl	L / 275

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	432.42	116.31	1.20
Critical	422.51	59.67	1.38
Status	OK	OK	OK
Ratio	98%	52%	87%

Values / *Adjustments*

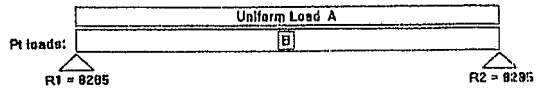
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2194	190	1.8	650
Cv Volume	0.914			
Cd Duration	1.00	1.00		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 360 = A

Point TL	Distance
B = 5900	13.75



SPAN = 27.5 FT

Uniform and partial uniform loads are lbs per lineal ft.

10

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE — MASTER DECK

ROOF BEAM — Date: 11/19/01 — BeamChek 2.2

Choice: 3-1/8x 12 GLB 24F-V4 DF/DF — BASE Fb = 2400 — ADJ Fb = 2760

Conditions

Min Bearing Area — R1= 2.3 in² R2= 2.3 in²

Data

Beam Span	20.0 ft	Reaction 1	1471 #
Beam Wt per ft	9.11 #	Reaction 2	1471 #
Beam Weight	182 #	Maximum V	1471 #
Max Moment	10216 '#	Max V (Reduced)	1392 #
TL Max Defl	L / 240	TL Actual Defl	L / 257

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	75.00	37.50	0.90
Critical	44.42	9.56	1.00
Status	OK	OK	OK
Ratio	59%	25%	90%

Values / *Adjustments*

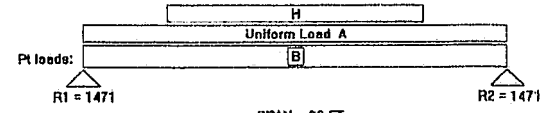
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2760	219	1.8	650
Cv Volume	1.000			
Cd Duration	1.15	1.15		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 70 = A

Point TL	Distance	Par Unif TL	Start	End
B = 1000	10.0	H = 30	4.0	16.0



SPAN = 20 FT

Uniform and partial uniform loads are lbs per lineal ft.

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE ENTRY PORCH

DECK BEAM Date: 11/19/01 BeamChek 2.2

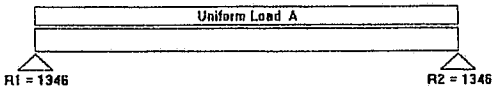
Choice	4x 12 DF-L #2			BASE Fb = 875	ADJ Fb = 1107
Conditions	Wet Use, '91 NDS				
	Min Bearing Area	R1= 3.2 in²	R2= 3.2 in²		
Data	Beam Span	20.0 ft	Reaction 1	1346 #	
	Beam Wt per ft	9.57 #	Reaction 2	1346 #	
	Beam Weight	191 #	Maximum V	1346 #	
	Max Moment	6728 '#	Max V (Reduced)	1220 #	
	TL Max Defl	L / 240	TL Actual Defl	L / 297	

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	73.83	39.38	0.81
Critical	72.94	17.26	1.00
Status	OK	OK	OK
Ratio	99%	44%	81%

		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Values	Base Values	875	95	1.6	625
	Base Adjusted	1107	106	1.4	419
Adjustments	CF Size Factor	1.100			
	Cd Duration	1.15	1.15		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use	1.00	0.97	0.90	0.67

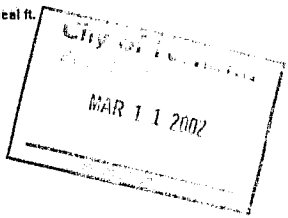
BeamChek has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 125 = A



SPAN = 20 FT

Uniform and partial uniform loads are lbs per lineal ft.



12

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE KITCHEN / NOOK
FLUSH CL'G BM

Date: 1/03/02 BeamChek 2.2

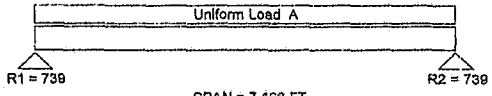
Choice	4x 8 DF-L #2			BASE Fb = 875	ADJ Fb = 1138
Conditions	'91 NDS				
	Min Bearing Area	R1= 1.2 in²	R2= 1.2 in²		
Data	Beam Span	7.17 ft	Reaction 1	739 #	
	Beam Wt per ft	6.17 #	Reaction 2	739 #	
	Beam Weight	44 #	Maximum V	739 #	
	Max Moment	1323 '#	Max V (Reduced)	614 #	
	TL Max Defl	*L / 180*	*TL Actual Defl*	*L / >1000*	

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	30.66	25.38	0.07
Critical	13.96	9.70	0.48
Status	OK	OK	OK
Ratio	46%	38%	14%

		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Values	Base Values	875	95	1.6	625
	Base Adjusted	1138	95	1.6	625
Adjustments	CF Size Factor	1.300			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

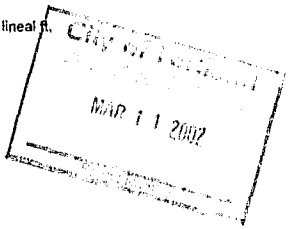
BeamChek has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 200 = A



SPAN = 7.166 FT

Uniform and partial uniform loads are lbs per lineal ft.



15

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE MASTER SUITE

FLUSH CL'G BM — Date: 1/03/02 — BeamChek 2.2

Choice	(3) 2x 12 DF-L #2	BASE Fb = 875	ADJ Fb = 875
Conditions	'91 NDS		
	Min Bearing Area	R1= 1.5 in² R2= 3.1 in²	

Data				
	Beam Span	15.0 ft	Reaction 1	926 #
	Beam Wt per ft	12.3 #	Reaction 2	1918 #
	Beam Weight	185 #	Maximum V	1918 #
	Max Moment	5522 '#	Max V (Reduced)	1844 #
	TL Max Defl	L / 240	TL Actual Defl	L / 613

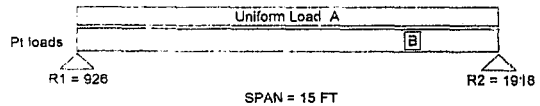
Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	94.92	50.63	0.29
Critical	75.72	29.11	0.75
Status	OK	OK	OK
Ratio	80%	58%	39%

		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Values	Base Values	875	95	1.6	625
	Base Adjusted	875	95	1.6	625
Adjustments	CF Size Factor	1.000			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads — Uniform TL: 67 = A

Point TL	Distance
B = 1654	12.0



SPAN = 15 FT

Uniform and partial uniform loads are lbs per lineal ft.

14

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE NOOK

FL. BM UNDER BATH-2 TUB — Date: 1/03/02 — BeamChek 2.2

Choice	2x 12 DF-L #2	BASE Fb = 875 ADJ Fb = 875
Conditions	'91 NDS	
	Min Bearing Area R1= 2.3 in² R2= 2.3 in²	

Data

Beam Span	3.0 ft	Reaction 1	1431 #
Beam Wt per ft	4.1 #	Reaction 2	1431 #
Beam Weight	12 #	Maximum V	1431 #
Max Moment	1073 '#	Max V (Reduced)	537 #
TL Max Defl	L / 240	TL Actual Defl	L / >1000

Attributes

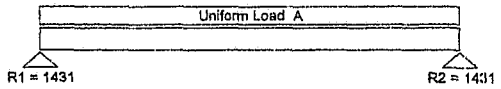
	Section (in³)	Shear (in²)	TL Defl (in)
Actual	31.64	16.88	0.01
Critical	14.72	8.47	0.15
Status	OK	OK	OK
Ratio	47%	50%	4%

Values / *Adjustments*

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	875	95	1.6	625
Base Adjusted	875	95	1.6	625
CF Size Factor	1.000			
Cd Duration	1.00	1.00		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 950 = A



SPAN = 3 FT

Uniform and partial uniform loads are lbs per lineal ft

15

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE KITCHEN
FLOOR JSTS UNDER BATH-2

Date: 1/03/02 BeamChek 2.2

Choice	2x 12 DF-L #2 @ 16 in. oc		BASE Fb = 875	ADJ Fb = 1006
Conditions	Repetitive Use, '91 NDS			
	Min Bearing Area	R1= 1.2 in² R2= 0.9 in²		
Data	Beam Span	15.0 ft	Reaction 1	767 #
	Beam Wt per ft	0 #	Reaction 2	567 #
	Beam Weight	0 #	Maximum V	767 #
	Max Moment	2408 '#	Max V (Reduced)	704 #
	TL Max Defl	L / 240	TL Actual Defl	L / 474

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	31.64	16.88	0.38
Critical	28.72	11.12	0.75
Status	OK	OK	OK
Ratio	91%	66%	51%

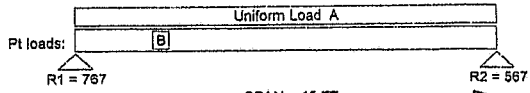
Values		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
	Base Values	875	95	1.6	625
	Base Adjusted	1006	95	1.6	625
Adjustments	CF Size Factor	1.000			
	Cd Duration	1.00	1.00		
	Cr Repetitive	1.15			
	Ch Shear Stress				
	Cm Wet Use				

The beam self-weight was not automatically added to the loads by BeamChek.

Loads

Uniform TL: 67 = A

Point TL	Distance
B = 333	3.0



SPAN = 15 FT

Uniform and partial uniform loads are lbs per lineal ft.

16

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE NOOK / FAMILY
FLUSH BM

Date: 1/03/02 BeamChek 2.2

Choice	3-1/8x 10-1/2 GLB 24F-V4 DF/DF	BASE Fb = 2400	ADJ Fb = 2400

Conditions

Min Bearing Area R1= 3.0 in² R2= 2.2 in²

Data

Beam Span	14.0 ft	Reaction 1	1970 #
Beam Wt per ft	7.97 #	Reaction 2	1460 #
Beam Weight	112 #	Maximum V	1970 #
Max Moment	9687 '#	Max V (Reduced)	1905 #
TL Max Defl	L / 240	TL Actual Defl	L / 264

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	57.42	32.81	0.64
Critical	48.44	15.04	0.70
Status	OK	OK	OK
Ratio	84%	46%	91%

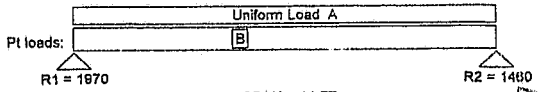
		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Values	Base Values	2400	190	1.8	650
	Base Adjusted	2400	190	1.8	650
Adjustments	Cv Volume	1.000			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 67 = A

Point TL	Distance
B = 2381	5.5



SPAN = 14 FT

Uniform and partial uniform loads are lbs per lineal ft.

17

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE NOOK / FAMILY
FLUSH BM

Date: 1/03/02 BeamChek 2.2

Choice 5-1/8x 15 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2321

Conditions

Min Bearing Area R1= 6.9 in² R2= 4.5 in²

Data

Beam Span	23.5 ft	Reaction 1	4482 #
Beam Wt per ft	18.68 #	Reaction 2	2897 #
Beam Weight	439 #	Maximum V	4482 #
Max Moment	23733 '#	Max V (Reduced)	4284 #
TL Max Defl	L / 240	TL Actual Defl	L / 258

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	192.19	76.88	1.09
Critical	122.72	33.82	1.17
Status	OK	OK	OK
Ratio	64%	44%	93%

Values / *Adjustments*

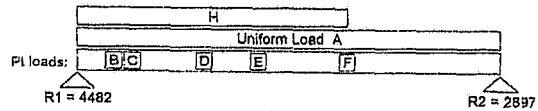
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2321	190	1.8	650
Cv Volume	0.967			
Cd Duration	1.00	1.00		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

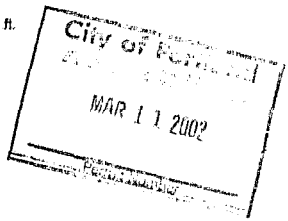
Uniform TL: 20 = A

Point TL	Distance	Par Unif TL	Start	End
B = 1200	2.0	H = 120	0	15.0
C = 150	3.0			
D = 1000	7.0			
E = 150	10.0			
F = 2170	15.0			



SPAN = 23.5 FT

Uniform and partial uniform loads are lbs per lineal ft.



18

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE KITCHEN / BACK HALL / PANTRY
HEADER

Date: 1/03/02 BeamChek 2.2

Choice	4x 10 DF-L #2	BASE Fb = 875	ADJ Fb = 1050
Conditions	'91 NDS		
	Min Bearing Area R1= 4.0 in² R2= 9.5 in²		

Data

Beam Span	5.0 ft	Reaction 1	2512 #
Beam Wt per ft	7.87 #	Reaction 2	5952 #
Beam Weight	39 #	Maximum V	5952 #
Max Moment	3790 '#	Max V (Reduced)	1870 #
TL Max Defl	L / 240	TL Actual Defl	L / >1000

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	49.91	32.38	0.06
Critical	43.31	29.53	0.25
Status	OK	OK	OK
Ratio	87%	91%	22%

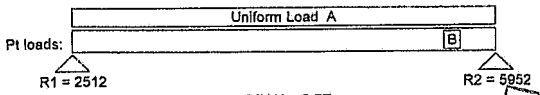
		Fb (psi)	Fv (psi)	E (psi x mil)	Fc_l (psi)
Values	Base Values	875	95	1.6	625
	Base Adjusted	1050	95	1.6	625
Adjustments	CF Size Factor	1.200			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 825 = A

Point TL	Distance
B = 4300	4.5



SPAN = 5 FT

Uniform and partial uniform loads are lbs per lineal ft.

19

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT CONWAY RESIDENCE FAMILY
FL BM UNDER BR-2, BATH-2

Date: 1/03/02 BeamChek 2.2

Choice 5-1/8x 10-1/2 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2400

Conditions

Min Bearing Area R1= 4.9 in² R2= 3.9 in²

Data

Beam Span	16.0 ft	Reaction 1	3190 #
Beam Wt per ft	13.08 #	Reaction 2	2514 #
Beam Weight	209 #	Maximum V	3190 #
Max Moment	13359 '#	Max V (Reduced)	3047 #
TL Max Defl	L / 240	TL Actual Defl	L / 248

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	94.17	53.81	0.78
Critical	66.80	24.06	0.80
Status	OK	OK	OK
Ratio	71%	45%	97%

Values

	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2400	190	1.8	650

Adjustments

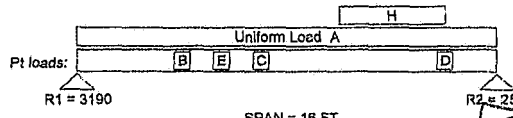
Cv Volume	1.000	
Cd Duration	1.00	1.00
Cr Repetitive		
Ch Shear Stress		
Cm Wet Use		

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 150 = A

Point TL	Distance	Par Unif TL	Start	End
B = 1200	4.0	H = 50	10.0	14.0
C = 500	7.0			
D = 245	14.0			
E = 950	5.5			



SPAN = 16 FT

Uniform and partial uniform loads are lbs per lineal ft

20

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE FAMILY
FL BM UNDER BR-2 DOOR

Date: 1/03/02 BeamChek 2.2

Choice 3-1/8x 10-1/2 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2400

Conditions

Min Bearing Area R1= 3.3 in² R2= 1.8 in²

Data

Beam Span	16.0 ft	Reaction 1	2325 #
Beam Wt per ft	7.97 #	Reaction 2	1175 #
Beam Weight	128 #	Maximum V	2325 #
Max Moment	8763 '#	Max V (Reduced)	2259 #
TL Max Defl	L / 240	TL Actual Defl	L / 244

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	57.42	32.81	0.79
Critical	43.82	17.84	0.80
Status	OK	OK	OK
Ratio	76%	54%	99%

Values / *Adjustments*

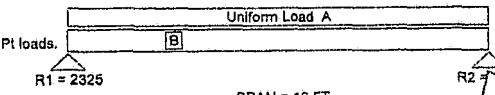
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2400	190	1.8	650
Cv Volume	1.000			
Cd Duration	1.00	1.00		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 67 = A

Point TL	Distance
B = 2300	4.0



SPAN = 16 FT

Uniform and partial uniform loads are lbs per lineal ft.

21

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE FAMILY
FLUSH BM ABOVE

Date: 1/03/02 BeamChek 2.2

Choice 5-1/8x 15 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2400

Conditions

Min Bearing Area R1= 10.4 in² R2= 12.8 in²

Data

Beam Span	15.5 ft	Reaction 1	6784 #
Beam Wt per ft	18.68 #	Reaction 2	8339 #
Beam Weight	290 #	Maximum V	8339 #
Max Moment	31442 '#	Max V (Reduced)	8166 #
TL Max Defl	L / 240	TL Actual Defl	L / 329

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	192.19	76.88	0.57
Critical	157.21	64.47	0.77
Status	OK	OK	OK
Ratio	82%	84%	73%

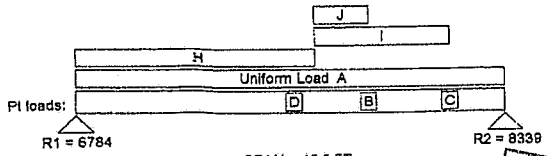
		Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Values	Base Values	2400	190	1.8	650
	Base Adjusted	2400	190	1.8	650
Adjustments	Cv Volume	1.000			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 120 = A

Point TL	Distance	Par Unif TL	Start	End
B = 1175	10.5	H = 570	0	8.5
C = 2514	13.5	I = 670	8.5	13.5
D = 840	7.75	J = 125	8.5	10.5



SPAN = 15.5 FT

Uniform and partial uniform loads are lbs per lineal ft.

22

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE — DINING / FOYER

HEADER — Date: 11/19/01 — BeamChek 2.2

Choice: 3-1/8x15 GLB 24F-V4 DF/DF or 5 1/8 x 13 1/2 — BASE Fb = 2400 — ADJ Fb = 2400

Conditions

Min Bearing Area — R1= 9.1 in² R2= 11.2 in²

Data

Beam Span	12.0 ft	Reaction 1	5888 #
Beam Wt per ft	11.39 #	Reaction 2	7288 #
Beam Weight	137 #	Maximum V	7288 #
Max Moment	20108 '#	Max V (Reduced)	5252 #
TL Max Defl	L / 240	TL Actual Defl	L / 424

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	117.19	46.88	0.34
Critical	100.54	41.54	0.60
Status	OK	OK	OK
Ratio	86%	89%	57%

Values / *Adjustments*

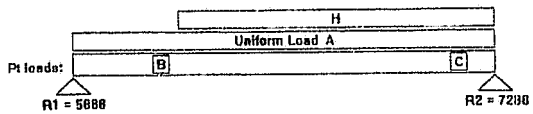
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc_L (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2400	190	1.8	650
Cv Volume	1.000			
Cd Duration	1.00	1.00		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 490 = A

Point TL	Distance	Par Unif TL	Start	End
B = 1000	2.5	H = 600	3.0	12.0
C = 750	11.0			



SPAN = 12 FT

Uniform and partial uniform loads are lbs per lineal ft.

23

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE GARAGE
9' DOOR HEADER

Date: 1/03/02 BeamChek 2.2

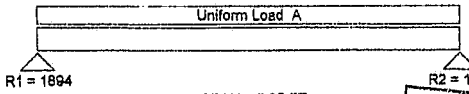
Choice	4x 12 DF-L #2			BASE Fb = 875	ADJ Fb = 963
Conditions	'91 NDS				
	Min Bearing Area	R1= 3.0 in²	R2= 3.0 in²		
Data	Beam Span	9.25 ft	Reaction 1	1894 #	
	Beam Wt per ft	9.57 #	Reaction 2	1894 #	
	Beam Weight	89 #	Maximum V	1894 #	
	Max Moment	4380 '#	Max V (Raduced)	1510 #	
	TL Max Defl	L / 240	TL Actural Defl	L / >1000	

Attributes	Section (in³)	Shear (in²)	TL Defl (in)
Actual	73.83	39.38	0.10
Critical	54.61	23.85	0.46
Status	OK	OK	OK
Ratio	74%	61%	22%

		Fb (psi)	Fv (psi)	E (psi x mil)	Fc_⊥ (psi)
Values	Base Values	875	95	1.6	625
	Base Adjusted	963	95	1.6	625
Adjustments	CF Size Factor	1.100			
	Cd Duration	1.00	1.00		
	Cr Repetitive				
	Ch Shear Stress				
	Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads Uniform TL: 400 = A



Uniform and partial uniform loads are lbs per lineal ft.

24

MITCHELL IMLAY
* Designer *

GROVE DEVELOPMENT, CONWAY RESIDENCE LIVING / FOYER
OPENING HEADER

Date: 1/03/02 BeamChek 2.2

Choice 5-1/8x 13-1/2 GLB 24F-V4 DF/DF BASE Fb = 2400 ADJ Fb = 2400

Conditions

Min Bearing Area R1= 13.4 in² R2= 15.4 in²

Data

Beam Span	14.0 ft	Reaction 1	8700 #
Beam Wt per ft	16.81 #	Reaction 2	10036 #
Beam Weight	235 #	Maximum V	10036 #
Max Moment	31101 '#	Max V (Reduced)	8667 #
TL Max Defl	L / 240	TL Actual Defl	L / 281

Attributes

	Section (in³)	Shear (in²)	TL Defl (in)
Actual	155.67	69.19	0.60
Critical	155.60	68.42	0.70
Status	OK	OK	OK
Ratio	100%	99%	85%

Values / *Adjustments*

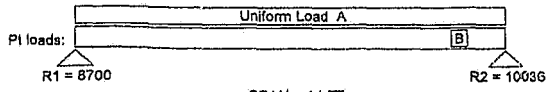
	Fb (psi)	Fv (psi)	E (psi x mil)	Fc⊥ (psi)
Base Values	2400	190	1.8	650
Base Adjusted	2400	190	1.8	650
Cv Volume	1.000			
Cd Duration	1.00	1.00		
Cr Repetitive				
Ch Shear Stress				
Cm Wet Use				

BeamChek has automatically added the beam self-weight into the calculations.

Loads

Uniform TL: 1200 = A

Point TL	Distance
B = 1700	12.5

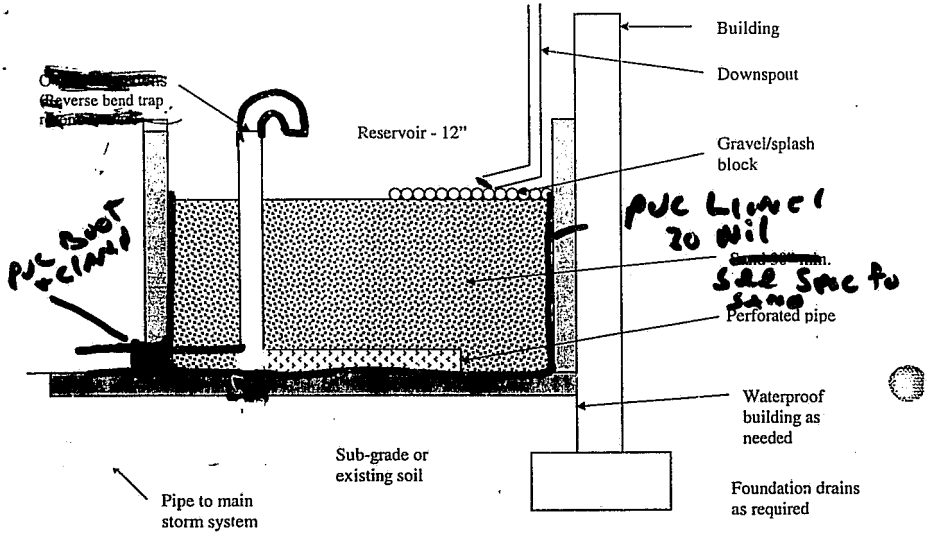


SPAN = 14 FT

Uniform and partial uniform loads are lbs per lineal ft

Simplified Approach Design Criteria

Sand Filter



Section Not to Scale

Description

There are two filter options. One is designed with an impervious bottom or is placed on an impervious surface. It can be used for NRCS soil types C and D. Some infiltration can be allowed if geotechnical issues are addressed by a qualified professional. The other option, for soils A and B, allows filtered water to infiltrate the ground. For both options, pollutant reduction is achieved as the water filters through the sand; flow control is obtained by storing the water in a reservoir above the sand. Filters may be constructed in-ground or above grade.

General specifications (Acceptable soils types A, B, C, or D, with limitations)

There are numerous design variations allowed for these filters. Filters shall drain within 2-3 hour after a storm event. Sand shall have a minimum infiltration rate of 5"/hr. The structural elements of the planters shall be stone, concrete, brick, wood, or other durable material. Treated wood shall not leach out any toxic chemicals. Where conditions allow (acceptable soil type and land use), the filter may be constructed without an impervious bottom.

Operations and Maintenance Agreement

For the Stormwater Treatment/CD Sand Filter

1. Grove Development Inc.(Contractor)
S.W. Cameron St.S
~~Lot 5, Homestead Plats~~ LUR-01-00410 MP Parcel #3
Portland, Multnomah County, Oregon

2. The stormwater (I.E.) Raindrains will be piped directly to a Sand Filter (type CD, with impervious bottom), and treated water will then be piped to the storm drain system in the street.
General specifications for the Sand Filter:
The walls of the Sand Filter reservoir will consist of a minimum 6" concrete x 42" high. The walls will sit upon a 4" concrete slab, and the entire Sand Filter will be set into the existing grade with the upper side approx. 1" above finish grade and the downhill side to be approx. 1" above finish grade.
The sand used shall have a minimum infiltration rate of 5" per Hr.
An overflow device shall be incorporated into the outflow pipe so any overflow is directed onto the overflow pipe distribution area.

3. Maintenance of Sand Filter and Rain Drain lines

a)	Remove any vegitation from top surface of sand	Once per Year
b)	Clean out any trash (i.e. Leaves etc.)	Twice per Year
c)	Test overflow pipe for proper drainage	Once per Year
d)	Remove any sedimentation @ inflow pipe	Once per Year
e)	Check after storm event	As needed

4. The property owner will be liable to maintain or replace Stormwater Quality Facility @ their own expense.

City of Portland
MAR 11 2002

IN WITNESS WHEREOF, the party hereto executed this Agreement on
12/28/01, 2001.

BY _____

SUBSCRIBED AND SWORN TO before me this_____day of_____,2001

_____
NOTARY PUBLIC OF OREGON
*My commision expires:*_____

Simplified Approach for Stormwater Management Facilities

The city has produced this form to assist with a quick and simple approach to manage stormwater quality and flow control on projects.
Application of these facilities using the specified sizing factor is required for use of this form.
These facilities, when designed according to the required criteria, are considered to cover both quality and flow.
Alternative design and sizing will not be considered under this simple approach.

INSTRUCTIONS

1. Enter square footage of non-mitigated impervious area (total impervious site area or, from the Mitigation Form, Box C) in Box 1 at the bottom of column 1.

2. Select the desired management measure(s). In Column 1, enter the amount of impervious area that will be managed by the facility(ies).

3. Add all facility impervious areas in column 1 and enter in Box 2. Note Box 1 and Box 2 areas must be equal.

4. Multiply the unmitigated sf in column 1 by the sizing factor in column 2 for each facility.

5. Use the required facility surface area sf in column 3 to design the facility(s).

6. Go to the "Simplified Approach Design Requirements" for facility descriptions and other requirements.

Facility	Column 1 Impervious Area		Column 2 Sizing Factor		Column 3 Surface Area	
Landscape Swale	_____	sf x	0.05	=		sf
Vegetative Filter	_____	sf x	0.065	=		sf
Stormwater Planter	_____	sf x	0.045	=		sf
Landscape Infiltration	_____	sf x	0.04	=		sf
Sand Filter	3225	sf x	0.045	=	14'6" x 10'	sf
*East Side Soakage Trench	_____	sf x	0.05	=		sf
*West Side Soakage Trench	_____	sf x	0.075	=		sf

Total Areas _____ Box 2

Total non-mitigated impervious area _____ Box 1
Total impervious area on the site, or the amount of non-mitigated impervious area in Box C, Form MIT

City of Portland
APPROVED
MAR 11 2002
Permit Number

* Soakage Trenches are sized for stormwater disposal and water quality, and therefore cannot be reduced in size with mitigation.
Revised September 1, 2000

Form MIT

Revised September 1, 2000

Impervious Surface Mitigation Measures

Instructions

1. Enter square footage of all impervious site elements in Box A.

2. Enter square footage of each proposed mitigation measure in the appropriate box under Column 1.

3. Add the surface areas (square footage) of all the mitigation measures in Column 1. Enter the total in Box B.

4. Subtract the amount in Box B from amount in Box A and enter in Box C.

5. If the Amount in Box C is under 500 square-feet, there are no further requirements for water quality or flow management. Submit this filled-out form with the permit application, and show all mitigation measures used on the building plan. **Stop Here.**

6. If the Amount in Box C is over 500 square-feet, Form SIM can be used to manage stormwater from the remaining impervious surfaces, or Chapters 5.0 and 6.0 of the Stormwater Manual can be used to engineer a stormwater management facility.

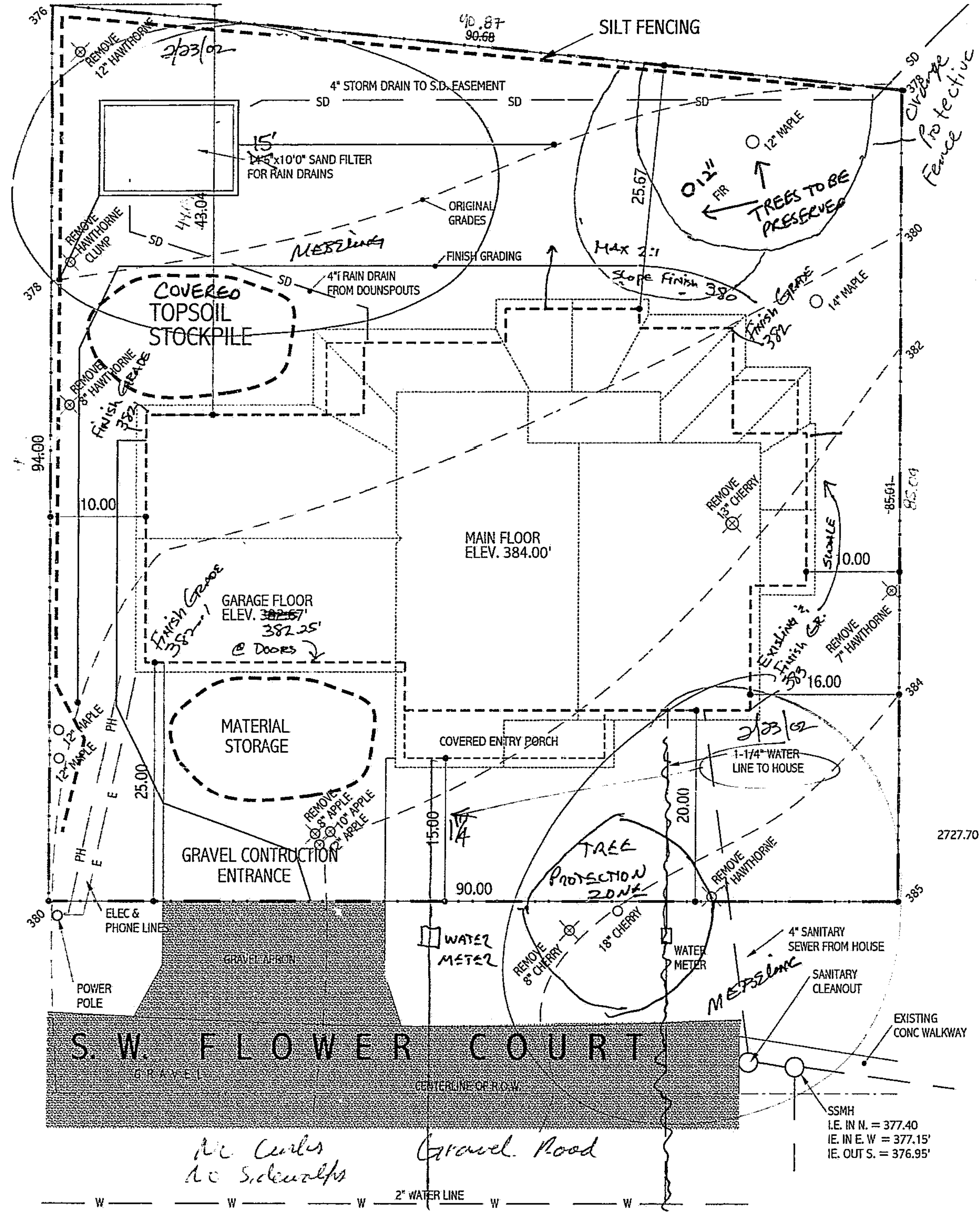
Enter site impervious area (sf) into Box A _____ **Box A**

Proposed Mitigation Measure	Column 1 Surface Area	Unit
Eco-roof		sf
Roof Garden		sf
Landscape Planter		sf
Stormwater Planter [planter sf x 20 = surface area sf[1]]		sf
Porous Pavement		sf
New Evergreen Trees (200 sf per tree)		sf
New Deciduous Trees (100 sf per tree)		sf
Existing Evergreen Trees[2] (One-half area of total tree canopy left in place)		sf
Existing Deciduous Trees[2] (One-half area of total tree canopy left in place)		sf

Mitigated Impervious Area **Box B** _____ sf

Unmitigated Impervious Area **Box C** _____ sf

1 These planters manage runoff from an impervious area 20 times the size of the surface area of the planter.
2 Half credit is given unless tree will cover impervious surfaces. To get full credit, tree must be outside of environmental zones.



EROSION CONTROL SITE PLAN

SCALE 1" = 10'-0"

LOT No. 3

S.W. FLOWER COURT

CITY OF PORTLAND

MULTNOMAH COUNTY

OREGON

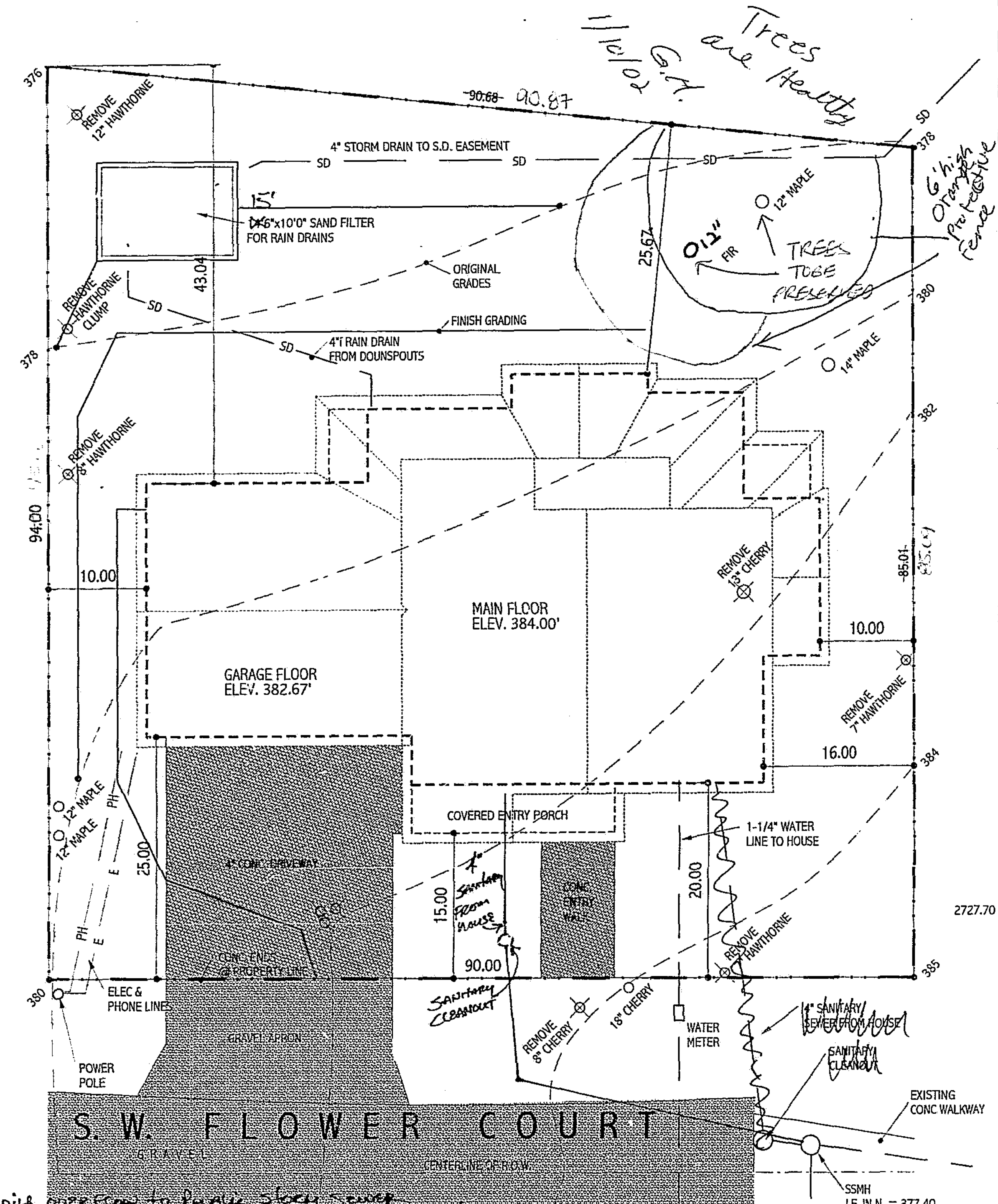
Access via unimproved Gravel Road.

No work in the Public Right-of-way.

BTED/SSM

City of Portland
Office of Planning and Development Review
Planning and Zoning Review
By SPDal Date 01/10/02
Approved for Building Permit Purposes

01-176348 RS



DISPOSE OF STORM WATER ON PROPERTY AS PRESCRIBED BY OPDR, PLUMBING DIVISION

w/ overflow to Public Storm Sewer
Separate Permit Required
No Curbs
No Sidewalks
Gravel Rd

SEPARATE SEWER CONNECTION PERMIT REQUIRED. CONNECTION IS IN THE PUBLIC RIGHT OF WAY

2" WATER LINE

City of Portland
APPROVED
MAR 1 1 2002
Permit Number

TREE COVERAGE REQUIRED

2" PER 1,000 SQ. FT. =	17" TOTAL REQUIRED
EXISTING TREES REMAINING	24" DIAMETER
NEW TREES	NON-REQUIRED

DRAINAGE NOTES

SLOPE DRIVEWAY TO DRAIN ONTO LANDSCAPING @ EITHER SIDE OF DRIVEWAY

CONNECT ALL RAIN DRAINS TO STORM DRAIN SYSTEM

City of Portland
Office of Planning and Development Review
Planning and Zoning Review
By SR Date 01/10/02
Approved for Building Permit Purposes

01-176348 RS

SITE PLAN

NORTH

SCALE 1" = 10'-0"
LOT No. 3
S.W. FLOWER COURT
CITY OF PORTLAND
MULTNOMAH COUNTY
OREGON

FLATWORK AREA

NOTE: AREAS INDICATED ARE BEYOND ROOF OVERHANGS

DRIVEWAY AREA	573 SQUARE FEET
WALKWAY AREA	105 SQUARE FEET
TOTAL AREA	6,78 SQUARE FEET

LOT COVERAGE

LOT AREA	~~8,080~~ 8,104 SQUARE FEET
BUILDING AREA (INCLUDING OVERHANGS)	2,727 SQUARE FEET

LOT COVERAGE CALCULATION
2,727 SQ.FT. / ~~8,080~~ 8,104 SQ.FT. = 34%

DRIVEWAY CALCULATIONS

FRONT YARD AREA =	1,800 SQ. FT.
DRIVEWAY IN FRONT YARD AREA (MAX. ALLOWED = 36' WIDE = 40%)	470 SQ.FT. = 26%