Landscape EAST & WEST 8850 SE 76th Drive Portland, OR 97206

Date: July 20, 2010

To: Planning Director
City of West Linn, Oregon

Subject: **Narrative response, Flood Management Area Permit**
Installation of attached roof structure above existing patio located at 18444 Nixon Avenue.

Project Details

The applicant Landscape East and West Inc. proposes a roof extension of the existing house over the existing rear patio. Proposed planning for construction does not intend to increase or alter the existing patio shape or square footage. Per City GIS this area of the property is located in the FEMA 100-year floodplain.

While a separate overlay, the Willamette River Greenway overlay, covers part of the lot further east along the river, the proposed development is not in this part of the lot and is not in a Metro-designated habitat conservation area. Therefore a Willamette River Greenway Permit appears unnecessary.

The part of the property where development is proposed is within the transition area of the wetland downhill by the river as well. The site plan submitted with this application shows that there is not an increase in patio square feet nor alterations to existing conditions of the original building permit. Existing concrete patio and the proposed structure over concrete patio, both are exempt from the Water Resource Area permit because these involve no further encroachment into the transition area.

27.060 And response

A. Development, excavation, and fill shall be performed in a manner to maintain or increase flood storage and conveyance capacity and not increase design flood elevations.

(Construction for this project will not generate any excavation storage or fill.)

B. No net fill increase in any floodplain is allowed. All fill placed in a floodplain shall be balanced with an equal amount of soil material removal. Excavation areas shall not exceed fill areas by more than 50 percent of the square footage. Any excavation below bankful stage shall not count toward compensating for fill.

(Construction for this project will not generate any excavation storage or fill to affect the floodplain.)

27.060 And response continued.

C. Excavation to balance a fill shall be located on the same parcel as the fill unless it is not reasonable or practicable to do so. In such cases, the excavation shall be located in the same drainage basin and as close as possible to the fill site, so long as the proposed excavation and fill will not increase flood impacts for surrounding properties as determined through hydrologic and hydraulic analysis.

(Construction for this project will not generate any excavation storage or fill to affect the floodplain.)

D. Minimum finished floor elevations must be at least one foot above the design flood height or highest flood of record, whichever is higher, for new habitable structures in the flood area.

(The project proposes a covered structure over the existing exterior concrete patio without side walls and is not designed to be habitable as an extension of the interior of the home.)

E. Temporary fills permitted during construction shall be removed.

(Contractor will comply.)

F. Prohibit encroachments, including fill, new construction, substantial improvements, and other development in floodways unless certification by a professional civil engineer licensed to practice in the state of Oregon is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(Construction for this project will not generate any excavation storage or fill to affect the floodplain and natural flood process.)

G. All proposed improvements to the floodplain or floodway which might impact the flood carrying capacity of the river shall be designed by a professional civil engineer licensed to practice in the state of Oregon.

(Construction for this project will not generate any excavation storage or fill to affect the floodplain and natural flood process.)

H. New culverts, stream crossings, and transportation projects shall be designed as balanced cut and fill projects or designed not to significantly raise the design flood elevation. Such projects shall be designed to minimize the area of fill in flood management areas and to minimize erosive velocities. Stream crossings shall be as close to perpendicular to the stream as practicable. Bridges shall be used instead of culverts wherever practicable.

(There are no new culverts proposed for the project.)

27.060 And response continued.

I. Excavation and fill required for the construction of detention facilities or structures, and other facilities, such as levees, specifically shall be designed to reduce or mitigate flood impacts and improve water quality. Levees shall not be used to create vacant buildable land

(Construction for this project will not generate any excavation storage or fill to affect the floodplain and natural flood process.)

J. The applicant shall provide evidence that all necessary permits have been obtained from those Federal, State, or local governmental agencies from which prior approval is required. (ORD 1522)

(Contractor will comply.)

27.070 And response

A. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage using methods and practices that minimize flood damage.

(Contractor will comply.)

B. Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and/or otherwise elevated or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(Contractor will comply. Electrical recessed can lighting and light switch are the only proposed changes to existing conditions.)

C. New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.

(Contractor will comply, none proposed.)

D. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(Contractor will comply, none proposed.)

27.070 And response continued.

E. On site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(Contractor will comply, none proposed.)

F. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure.

(Contractor will comply, none proposed.)

27.080 And response

A. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated to at least one foot above the base flood elevation.

(The project proposes a covered structure over the existing exterior concrete patio without side walls. The proposed structure is not designed to be a substantial improvement of the residential structure insofar that the main structural elements are on the exterior of the residential structure and the floor of the project area is the existing concrete patio. The existing patio grade is approximately 40' above river level.)

B. Fully enclosed areas below the lowest floor that are subject to flooding are prohibited, or shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a professional civil engineer or architect licensed to practice in the state of Oregon, and must meet or exceed the following minimum criteria:

1. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
2. The bottom of all openings shall be no higher than one foot above grade.
3. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry or exit of floodwaters.
4. Fully enclosed areas below the base flood elevation shall only be used for parking, access, and limited storage.
5. Service equipment (e.g., furnaces, water heaters, washer/dryers, etc.) is not permitted below the base flood elevation.
6. All walls, floors, and ceiling materials located below the base flood elevation must be unfinished and constructed of materials resistant to flood damage.

(The project proposes a covered structure over the existing exterior concrete patio without side walls and does not include any enclosed areas that could allow entry of flood waters into the proposed or existing residential structure.)

27.080 And response continued.

C. Crawlspaces. Crawlspaces are a commonly used method of elevating buildings in Special Flood Hazard Areas (SFHAs) to or above the Base Flood Elevation (BFE), and are allowed subject to the following requirements:

1. The building is subject to the Flood-Resistant Construction provisions of the Oregon Residential Specialty Code.

2. They shall be designed by a professional engineer or architect licensed to practice in the State of Oregon to meet the standards contained in the most current Federal Emergency Management Agency's (FEMA) Technical Bulletin.

3. The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

4. Flood vent openings shall be provided on at least two sides that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. The total area of the flood vent openings must be no less than 1 square inch for each square foot of enclosed area. The bottom of each flood vent opening can be no more than 1 foot above the lowest adjacent exterior grade. For guidance on flood openings, see FEMA Technical Bulletin 1-93, Openings in Foundation Walls.

5. Portions of the building below the BFE must be constructed with materials resistant to flood damage. This includes not only the foundation walls (studs and sheathing), but also any, joists, insulation, or other materials that extend below the BFE. For more detailed guidance on flood-resistant materials see FEMA Technical Bulletin 2-93, Flood-Resistant Materials Requirements.

6. Utility systems within the crawlspace must be elevated above BFE or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions. Ductwork, in particular, must either be placed above the BFE or sealed from floodwaters. For further guidance on the placement of building utility systems in crawlspaces, see FEMA 348, Protecting Building Utilities from Flood Damage. Flood-resistant materials and utilities, access, and ventilation openings in crawlspaces are further addressed in this bulletin.

7. The interior grade of a crawlspace below the BFE must not be more than 2 feet below the lowest adjacent exterior grade (LAG).

8. The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed 4 feet at any point. This limitation will also prevent these crawlspaces from being converted into habitable spaces.

9. There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. Possible options include natural drainage through porous, well-drained soils and drainage systems such as low-point drains perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity.

10. The velocity of floodwaters at the site should not exceed 5 feet per second for any crawlspace. For velocities in excess of 5 feet per second, other foundation types should be used.

11. For more detailed information refer to FEMA Technical Bulletin 11-01 or the most current edition.

12. The use of below grade crawlspaces to elevate the building to 1-ft. above the BFE may cause an increase in flood insurance premiums which, are beyond the control of the City.
(ORD. 1565)

(Response on page 6)

27.080 (C) response continued.

(The project does not propose any crawlspaces and Contractor will coordinate with structural engineer to ensure proposed structure is designed to the Flood-Resistant Construction provisions of the Oregon Residential Specialty Code as they apply to this exterior structure.)

D. A poured slab placed over fill can be used to elevate the lowest floor of a structure above the base flood elevation. However, when a building site is filled, it is still in the floodplain and no basements are permitted.

(Project construction does not propose any changes to existing patio finished grade. Finished grade is approximately 40' above river level.)

E. Placing a structure on piers, piles, and posts is allowed provided supporting members are designed to resist hydrostatic and hydrodynamic forces.

(Project construction does propose to have wood 6"x6" posts supporting the structure to be elevated on 2'x2' concrete piers 36" above existing patio grade. Structural engineer will design supporting members to be resistant of hydrostatic and hydrodynamic forces.)

Thank you for taking the time to review this Flood Management Area Permit. Please direct any correspondence in regards to this permit to the two listed project representatives.

Primary Contact:
Bjorn Nordquist
Project Manager
503-256-5302
Landscape East & West
8850 SE 76th Drive
Portland, OR 97206

Assistant Contact:
Matthew Magana
Project permit coordinator
503-984-6204
20195 S Criswell Rd.
Oregon City, OR 97045

DEVELOPMENT REVIEW APPLICATION

MI -10-18

TYPE OF REVIEW (Please check all boxes that apply):

[ ]	Annexation	[ ]	Non-Conforming Lots, Uses & Structures
[ ]	Appeal and Review *	[ ]	One-Year Extension *
[ ]	Conditional Use	[ ]	Planned Unit Development
[x]	Design Review	[ ]	Pre-Application Meeting *
[ ]	Easement Vacation	[ ]	Quasi-Judicial Plan or Zone Change
[ ]	Extraterritorial Ext. of Utilities	[ ]	Street Vacation
[ ]	Final Plat or Plan	[ ]	Subdivision
[x]	Flood Plain Construction	[ ]	Temporary Uses *
[ ]	Hillside Protection and Erosion Control	[ ]	Tualatin River Greenway
[ ]	Historic District Review	[ ]	Variance
[ ]	Legislative Plan or Change	[ ]	Water Resource Area Protection/Wetland
[ ]	Lot Line Adjustment * /**	[ ]	Willamette River Greenway
[ ]	Minor Partition (Preliminary Plat or Plan)	[ ]	Other/Misc

Home Occupation, Pre-Application, Sidewalk Use Application *, Permanent Sign Review *, Temporary Sign Application require different application forms available in the forms and application section of the City Website or at City Hall.

TOTAL FEES/DEPOSIT _____

Craig, Joyce Jacobsen 18444 Nixon Ave West Linn, OR

OWNER (PRINT)	ADDRESS	CITY	ZIP	PHONE & /OR E-MAIL
Landscape East & West	8850 SE 76th Drive	Portland, OR		(503) 256-5302

APPLICANT(PRINT)	ADDRESS	CITY	ZIP	PHONE &/OR E-MAIL
eM Design Inc.	20195 S. Criswell Rd	Oregon City, OR		(503) 984-6204

CONSULTANT(PRINT)	ADDRESS	CITY	ZIP	PHONE &/OR E-MAIL

SITE LOCATION/ADDRESS 18444 Nixon Ave, West Linn, OR

Assessor's Map No.: 21E13CD00601 **Tax Lot(s):** _____ **Total Land Area:** .6 acre

1. **All application fees are non-refundable (excluding deposit).**
2. **The owner/applicant or their representative should be present at all public hearings.**
3. **A denial or approval may be reversed on appeal. No permit will be in effect until the appeal period has expired.**
4. **Four (4) complete hard-copy sets (single sided) of application materials must be submitted with this application. One (1) complete set of digital application materials must also be submitted on CD in PDF format.**
   *** No CD required / ** Only one copy needed**

The undersigned property owner(s) hereby authorizes the filing of this application, and authorizes on site review by authorized staff. I hereby agree to comply with all code requirements applicable to my application.

SIGNATURE OF PROPERTY OWNER(S)

X _____ **Date** _____

SIGNATURE OF APPLICANT(S)

X Matthew Magana **Date** July 21, 2010

ACCEPTANCE OF THIS APPLICATION DOES NOT INFER A COMPLETE SUBMITTAL. THE APPLICANT WAIVES THE RIGHT TO THE PROVISIONS OF ORS 94.020. ALL AMENDMENTS TO THE COMMUNITY DEVELOPMENT CODE AND TO OTHER REGULATIONS ADOPTED AFTER THE APPLICATION IS APPROVED SHALL BE ENFORCED WHERE APPLICABLE. APPROVED APPLICATIONS AND SUBSEQUENT DEVELOPMENT IS NOT VESTED UNDER THE PROVISIONS IN PLACE AT THE TIME OF INTIAL APPLICATION.

CONTACT: PLANNING AND BUILDING; 22500 SALAMO RD #1000; WEST LINN, OR 97068; PHONE: 656-4211 FAX: 656-4106
PLANNING@WESTLINNOREGON.GOV

CITY OF WEST LINN
22500 Salamo Rd.
West Linn, OR. 97068
(503) 656-4211

PLANNING RECEIPT
Receipt: # 935903
Date : 07/22/2010
Project: #MI-10-18
BY: JN

NAME : LANDSCAPE EAST & WEST

ADDRESS : PO BOX 430

CITY/STATE/ZIP: CLACKAMAS OR 97015

PHONE # : 256-5302

SITE ADD. : **18444 NIXON AVE**

TYPE I HOME OCCUPATIONS		HO	$
PRE-APPLICATIONS	Level I ( ), Level II ( )	DR	$
HISTORIC REVIEW	Residential Major ( ), Minor ( ), New ( )	DR	$
	Commercial Major ( ), Minor ( ), New ( )		
SIGN PERMIT	Face ( ), Temporary ( ), Permanent ( )	DR	$
SIDEWALK USE PERMIT		DR	$
APPEALS	Plan. Dir. Dec. ( ), Subdivsion ( ), Plan Comm./City Coun. ( ), Nbhd ( )	DR	$
LOT LINE ADJUSTMENT		LA	$
CITY/METRO BUSINESS LICENSE		BL	$

The following items are paid by billing against the up-front deposit estimate. If the amount of time billed to your project exceeds the amount coverered by the deposit, additional payment may be required.

DESIGN REVIEW	Class I ( ), Class II ( )			RD	$
VARIANCE	Class I ( ), Class II ( )			RD	$
SUBDIVISION	Standard ( ), Expedited ( )			RD	$
ANNEXATION	"Does Not Include Election Cost"			RD	$
CONDITIONAL USE				RD	$
ZONE CHANGE				RD	$
MINOR PARTITION				RD	$
MISCELLANEOUS PLANNING				RD	$ 1050.00
Boundry Adjustments	( )				
Modification to approval	( )	Water Resource Area Protection	(X)		
Code Amendments	( )				
Comp. Plan Amendments	( )	Street Vacations	( )		
Temporary Permit Admin.	( )	Easement Vacations	( )		
Temporary Permit Council	( )	Will. River Greenway	( )		
Flood Management	( )	Tualatin River Grwy.	( )		
Inter-Gov. Agreements N/C	( )	Street Name Change	( )		
Alter Non-Conforming Res.	( )	Code Interpretations	( )		
Alter Non-Conforming Comm.	( )	Type II Home Occ.	( )		
Measure 37 Claims	( )	Planned Unit Dev. PUD	( )		
TOTAL REFUNDABLE DEPOSIT				RD	$ 1050.00
GENERAL MISCELLANEOUS Type:				PM	$

TOTAL Check # 21630 Credit Card ( ) Cash ( ) $ 1050.00

WILLAMETTE RIVER

Approximately 125'
from property line to rivers edge

99.57'

6' rear set-back

proposed covered structure

124.36'

6' side set-back

gravel driveway

6' side set-back

electrical

gas

cable

20' front set back

71.67'

277.19'

PROJECT:

JACOBSEN RESIDENCE

18444 NIXON AVE
WEST LINN, OR

SHEET NAME:

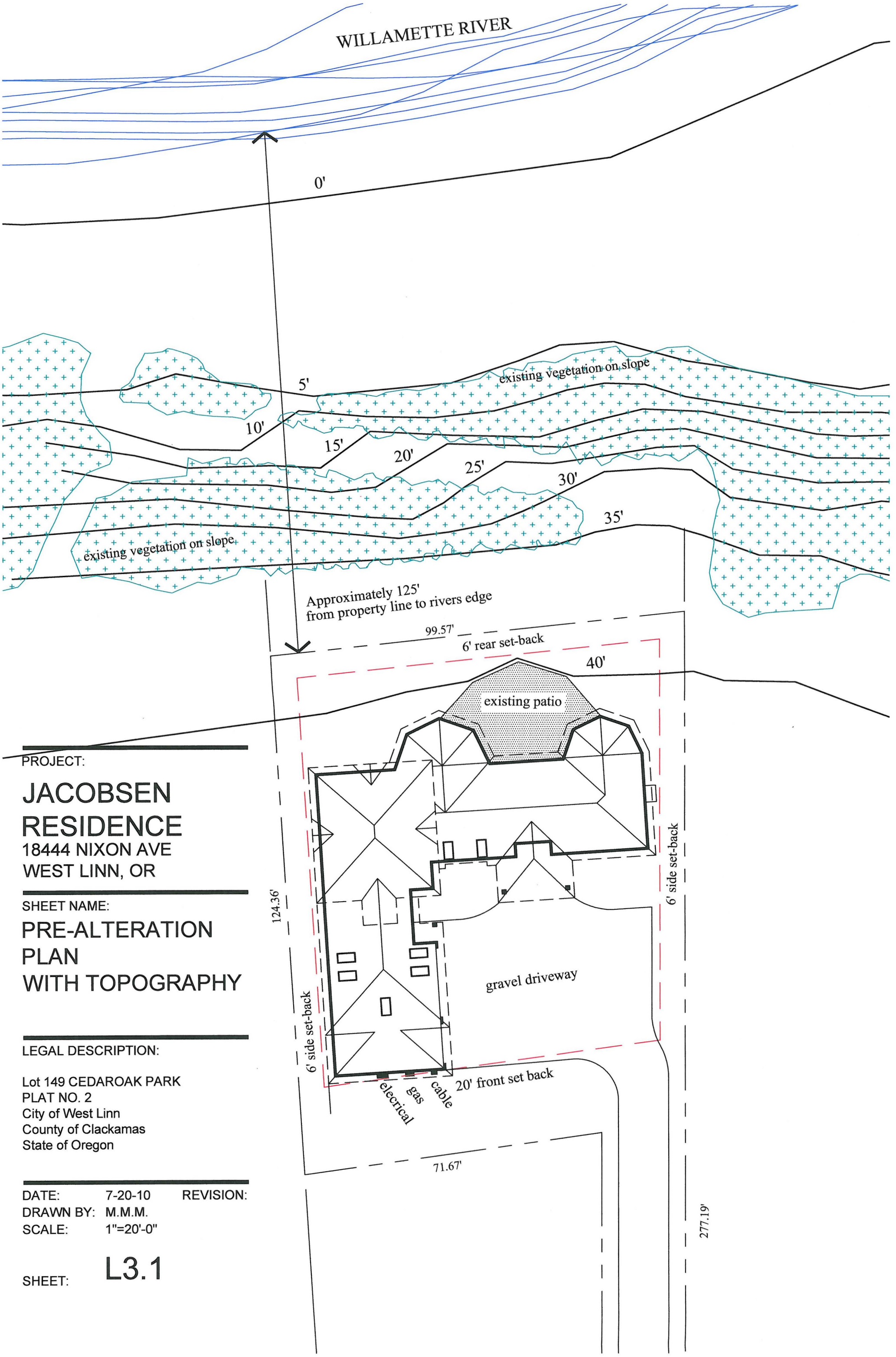
SITE PLAN

LEGAL DESCRIPTION:

Lot 149 CEDAROAK PARK
PLAT NO. 2
City of West Linn
County of Clackamas
State of Oregon

DATE:	5-18-10	REVISION:
DRAWN BY:	M.M.M.	7-20-10
SCALE:	1"=20'-0"	

SHEET: L3.0



PROJECT:

JACOBSEN RESIDENCE

18444 NIXON AVE
WEST LINN, OR

SHEET NAME:

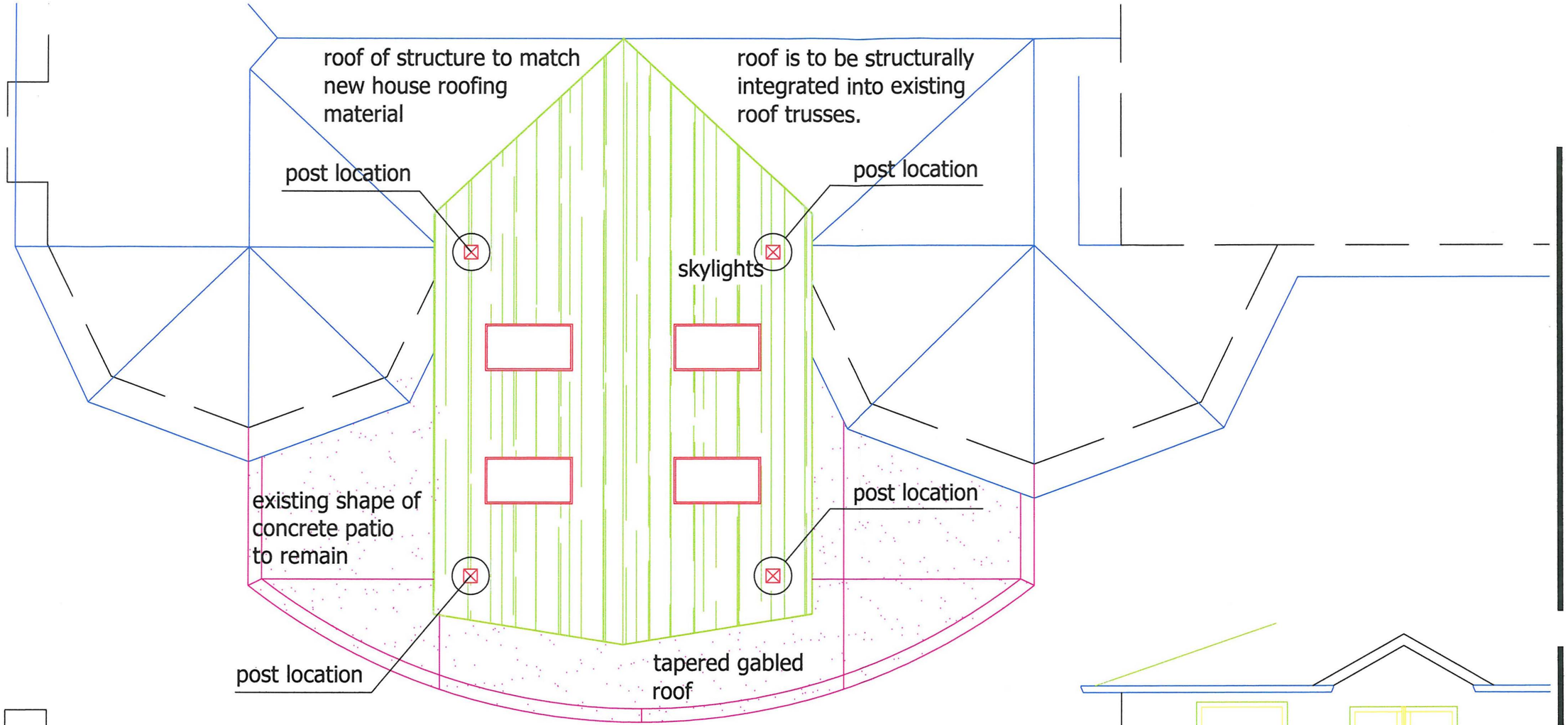
PRE-ALTERATION PLAN WITH TOPOGRAPHY

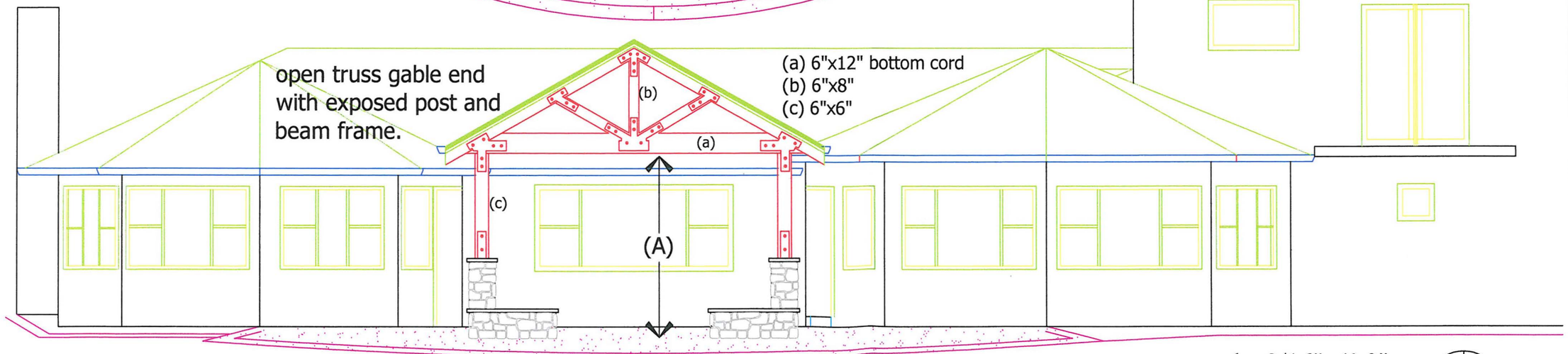
LEGAL DESCRIPTION:

Lot 149 CEDAROAK PARK
PLAT NO. 2
City of West Linn
County of Clackamas
State of Oregon

DATE: 7-20-10 REVISION:
DRAWN BY: M.M.M.
SCALE: 1"=20'-0"

SHEET: L3.1





masonry seat wall and post base foundation is typical of all concept options

(A) height from the bottom of truss to top of concrete patio is approximately 9'-3"

scale: 3/16"=1'-0"

0 5' 10'

N

PROJECT:
JACOBSEN RESIDENCE
18444 NIXON AVE
WEST LINN, OR

SHEET NAME:
ATTACHED STRUCTURE CONCEPT

DATE: 3-17-10
DRAWN BY: M.M.M.
SCALE: 3/16"=1'-0"
REVISION:

SHEET: L1.0

existing shape of concrete patio to remain

outline of proposed structure

concrete pavers

gravel pathway

wood shed

Herb garden

screens to support berries or beans

vegetable garden 14'x24'

vegetable garden 14'x24'

cut flower garden

existing vegetation

existing vegetation

existing vegetation

N

scale: 1/8"=1'-0"

0 5' 10'

TREE	Common Name / Botanical:	Size:
	Compact Tanyosho Pine Pinus densiflora 'Umbraculifera Compacta'	4'-5' HT
	Syringa vulgaris 'Angel White' Angel White Lilac	6'-8' HT

SHRUB	Common Name / Botanical:	Size:
	Northern Sea Oats / Chasmanthium latifolium	2gal
	Dense Spreading Yew / Taxus x media 'Densiformis'	5gal
	Sword fern / Polystichum munitum	2gal.
	Dwarf English Boxwood / Buxus sempervirens 'Suffruticosa'	5gal
	Longleaf Mahonia / Mahonia nervosa	2gal
	Burkwood Viburnum / Viburnum X burkwoodii	5gal
	Purity Pieris / Pieris japonica 'Purity'	5gal
	Purple Gem Rhododendron / Rhododendron x Purple Gem	5gal
	Evergreen huckleberry / Vaccinium ovatum	5gal
	Red flowering currant / Ribes sanguineum	5gal
	Blue Spruce Stonecrop / Sedum reflexum 'Blue Spruce'	1gal

PROJECT:

JACOBSEN RESIDENCE

18444 NIXON AVE
WEST LINN, OR

SHEET NAME:

LANDSCAPE PLANTING PLAN

DATE: 3-17-10
DRAWN BY: M.M.M.
SCALE: 1/8"=1'-0"
REVISION: 5-25-10

SHEET: L2.1