



**Building Permit Application**  
**City of Portland, Oregon - Bureau of Development Services**  
 1900 SW 4th Avenue, Portland, Oregon 97201 • 503-823-7310 • TTY 503-823-6868 • www.portlandoregon.gov/bds

1942

13-191396-PS

**Type of work**

New construction  Addition/alteration/replacement  
 Demolition  Other:

**Category of construction**

1 & 2 family dwelling  Commercial/industrial  Accessory building  
 Multifamily  Master builder  Other:

**Job site information and location**

Job no.: \_\_\_\_\_ Job address: 7089 N. Wellesley Ave  
 City/State/ZIP: Portland OR 97203  
 Suite/bldg./apt. no.: \_\_\_\_\_ Project name: Shanks & Tigges Backyard  
 Cross street/directions to job site: N. Stafford St.  
 \_\_\_\_\_ INIE 17BA #3100  
 Subdivision: College Crest Lot no. 9 Tax map/parcel no. ↗

**Description of work**

Backyard landscape & hardscape improvements:  
 new exterior egress stairs & door to basement,  
 stair cover, sunken patio w/ new hot tub, new  
 patio and walkways, new sport court and hammock  
 arbor, and footings for future patio cover

**Property owner**  **Tenant**

Name: Colleen Tigges E-mail: ctigges@comcast.net  
 Address: 7089 N. Wellesley Ave  
 City/State/ZIP: Portland OR 97203  
 Phone: 503-282-0486 FAX: NA

**Owner installation:** This installation is being made on property that I own, which is not intended for sale, lease, rent, or exchange.

Owner signature: Colleen L Tigges Date: 8/12/13

**Contractor**

Business name: Metropolitan E-mail: metroconstruction7@  
 Address: 3170 NW Quartz Pl. Construction & Remodeling Comcast.net  
 City/State/ZIP: Camas, WA 98607  
 Phone: 503-784-5143 FAX: 360-834-3026  
 CCB lic. no. 159084  
 Authorized signature: Don Shanks  
 Print name: Don Shanks Date: 8-12-13

**Applicant**  **Contact Person**

Business name: NA  
 Contact name: Susan Shanks  
 Address: 7089 N. Wellesley Ave  
 City/State/ZIP: Portland OR 97203  
 Phone: 503-282-0486 FAX: NA  
 E-mail: Susanpshanks@gmail.com  
 Authorized signature: SJ Sh  
 Print name: Susan P. Shanks Date: Aug 12, 2013

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

**Office Use Only**

Permit no: \_\_\_\_\_  
 Date received: \_\_\_\_\_  
 By: \_\_\_\_\_

**Required Data: One and Two Family Dwelling**

Permit fees\* are based on the value of the work performed. Indicate the value (rounded to the nearest dollar) of all equipment, materials, labor, overhead, and the profit for the work indicated on this application.

Valuation:	\$24,000
Number of bedrooms:	NA
Number of bathrooms:	NA
Total number of floors:	NA
New dwelling area:	NA square feet
Garage/carport area:	NA square feet
Covered porch area:	NA square feet
Deck area:	NA square feet
Other structure area:	117 (stair cover) square feet

**Required Data: Commercial Use**

Permit fees\* are based on the value of the work performed. Indicate the value (rounded to the nearest dollar) of all equipment, materials, labor, overhead, and the profit for the work indicated on this application.

Valuation:	
Existing building area:	square feet
New building area:	square feet
Number of stories:	
Type of construction:	
Occupancy groups	
Existing:	
New:	

**Notice**

All contractors and subcontractors are required to be licensed with the Oregon Construction Contractors Board under ORS 701 and may be required to be licensed in the jurisdiction in which work is being performed.

**Statement of Fact:** I certify that the facts and information set forth in this application are true and complete to the best of my knowledge. I understand that any falsification, misrepresentation or omission of fact (whether intentional or not) in this application or any other required document, as well as any misleading statement or omission, may be cause for revocation of permit and/or certificate of occupancy, regardless of how or when discovered.

I acknowledge that work related to this Building Permit Application may be subject to regulations governing the handling, removal and/or disposal of asbestos and/or lead-based paint. JS (initials)

**Building Permit Fees\***

Please refer to fee schedule

Fees due upon application	
Amount received	
Date received	

Residential Combo permit subcontractor submittals only can be faxed to 503-823-7693 or e-mailed to BDSSublabels@portlandoregon.gov.



# City of Portland, Oregon - Bureau of Development Services

1900 SW Fourth Avenue • Portland, Oregon 97201 • 503-823-7300 • www.portlandonline.com/bds



## Simple Site Erosion Control Requirements Form

Project or Permit Number 13-191896-RS  
 Project Address 7089 N. Wellesley Ave, Portland OR 97203  
 Name of Responsible Party (print) Susan P. Shanks  
 Day Phone 503-282-0486 FAX NA email susanpshanks@gmail.com

**Erosion control inspections are required and it is your responsibility to request these inspections.**

Erosion control measures are required on this site. Because of the size and slope, a drawn plan is not required. Erosion Control Measures and inspections are required prior to beginning foundation excavation. This form may only be used for simple sites:

1. Flat (less than 10% slope before development)
2. More than 50 feet from a wetland or waterbody
3. Outside an environmental or greenway zone
4. Less than 10,000 sq. ft. of ground disturbance
5. Not a land division of 10,000 sq. ft. or more

This is an agreement that the applicant and/or responsible parties will use erosion control during this project as required. The applicant and/or responsible party must sign this form to comply with Section 10.40.020 of the Code. Details for the measures outlined below are located in the City of Portland Erosion Control Manual, available at either the Development Services Center or on our Web site at [www.portlandonline.com/bds](http://www.portlandonline.com/bds)

	Minimum Erosion Control Requirements	Additional Requirements
1.	Temporary sediment control (silt fences, bio-filter bags or fiber rolls, storm drain inlet protection).	Prevent the transport of sediment from the site (Manual Sections 2-2 and 4-2) Call for #200 inspection. These items must be provided even with undisturbed vegetative buffers as allowed by manual.
2.	Stabilize access points by installing a gravel construction entrance. Do not use rock or dirt ramps in the gutter, use a wood ramp if needed to get over curb.	Limit construction vehicle access, whenever possible, to one route. Stabilize access points. Provide street cleaning by sweeping or shoveling any sediment that may have been tracked out. Place sediment in a suitable disposal area where it will not erode again. (Manual Sections 2-2 and 4-1)
3.	Stabilize all soils, including stockpiles that are temporarily exposed. Use one or more of the temporary soil stabilization Best Management Practices (BMP's): temporary grasses, mulch applications, erosion blankets, plastic sheeting, plus dust control measures.	Soil Stabilization (Manual Sections 2-2 and 4-4)
4.	Maintain erosion controls identified in requirements 1 through 3 above according to specifications prescribed in manual.	Inspect and maintain required erosion and sediment controls to ensure continued performance of their intended function. (Manual Chapters 4 and 5)
5.	Comply with the necessary development activity controls, including controls for fuel spill control, waste removal, concrete waste management or painting preparation.	During construction, prevent the introduction of pollutants in addition to sediment into stormwater. (Manual Section 5)
6.	Use one or more of the following to permanently stabilize soils before final building inspection: Permanent vegetative cover, mulch applications or application of sod.	After construction but before project completion, permanently stabilize all exposed soils that have been disturbed during construction. (Manual Sections 4-4)
7.	Prevent sediment from entering all storm drains, including ditches, which receive runoff from the disturbed area	Remove temporary drain inlet protection measures after final site clean-up. Call for #210 inspection.
8.	Post signage on-site that identifies the City's Erosion Control complaint number	The sign will be provided upon approval of the pre-construction inspection. It must be maintained on-site until the final inspection.

**You must request a preconstruction erosion control inspection prior to construction. Call 503-823-7000 and request a #200 inspection using your IVR number.**

I agree to meet each requirement and use appropriate erosion control measures as outlined above to prevent erosion and sedimentation from leaving the site of project/permit number referenced. I understand that all inspections are still required, and that failure to install or maintain adequate measures may result in a re-inspection fees or additional fines. A permanent erosion control inspection #210 will be required prior to a final building inspection.

Signature of Responsible Party  Date Aug 12, 2013  
 Property Owner or Owner's Agent

**NEW WORK NOTES:**

1. DOMINION SLATE 6x6 PAVERS BY MUTUAL MATERIALS.
2. LARGE BASALT PAVING SLABS, MIN SIZE 18" IN ONE DIRECTION. TIGHT SET IN SAND BED.
3. GLACIER SLATE 24 X 24 PRESSED PAVER SLABS, COLOR CHARCOAL BY MUTUAL MATERIALS.
4. FULL HEIGHT EXTERIOR GYP. BD. WALL.
5. ROOF OUTLINE ABOVE.
6. CLEARSTORY ROOF OUTLINE ABOVE.
7. 8" POURED CONCRETE WALL & COLUMN.
8. 8" POURED CONCRETE WALL.
9. PAVER SLAB STEPS.
10. POURED CONCRETE STEPS & SLAB ON GRADE.
11. INSTALL OWNER FURNISHED SPA AS PER MANUFACTURE RECOMMENDATIONS.
12. INSTALL 110 DUPLEX OUT FOR SPA, COORDINATE EXACT LOCATION WITH EXISTING SPA.
13. FURNISH & INSTALL NEW DOOR TO BASEMENT AT EXISTING WINDOW, CORD. WITH OWNER FOR SPECIFICATION.
14. FUTURE NEW EGRESS WINDOW AT EXISTING BASEMENT WINDOW OPENING.
15. BELOW GRADE EGRESS WINDOW REQUIRED CLEARANCE.
16. CONCRETE SLAB WITH SCORE JOINTS SEE DETAIL 5/L3, SLOPE TO DRAIN MIN. 2%.
17. EXISTING DECK STEPS TO REMAIN, CLEAN, PRESSURE WASH.
18. FURNISH & INSTALL GALVANIZED METAL GRATE OVER EXISTING WINDOW WELL.
19. METAL SCREENS FURNISHED & INSTALLED BY BACCA METAL WORKS, TYP. OF THREE.
20. 5"x5"x12" CONCRETE FOOTINGS FOR METAL SCREENS.
21. CURB STONE BORDER @ REAR YARD PATH ONLY.
22. REPAIR EXIST. CONC. SLAB EDGING, EXTEND AS SHOWN.
23. TOPOS AT 1'-0" INTERVALS, TYP.
24. REGRADE EXISTING LAWN TO A 2% SLOPE, USE DIRT FROM SPA EXCAVATION. NOTIFY L.A. IF EXCAVATED FILL IS UNSUITABLE FOR RE-USE.
25. NEW LANDSCAPE MOUNDS, USE DIRT FROM SPA EXCAVATION.
26. EXISTING DOWN SPOUT & HOSE BIBB TO REMAIN, PROTECT DURING CONSTRUCTION.
27. NEW FENCE LOCATION, MATCH EXISTING FENCE.
28. RESURFACE EXISTING DRIVEWAY.
29. NEW CONCRETE SPORT COURT.

**GENERAL NOTES:**

1. LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR EXISTING CONDITIONS SURVEY, THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, INCLUDING LOCATION OF PROPERTY LINES, PRIOR TO BEGINNING ANY WORK. REPORT ANY DISCREPANCIES TO THE OWNER IMMEDIATELY.
  2. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES, LINES, PIPES, VAULTS, OR BOXES PRIOR TO EXCAVATION. ANY DAMAGE TO ANY KNOWN EXISTING UTILITY ELEMENTS SHALL BE REPAIRED PROPERLY AND IMMEDIATELY AT THE CONTRACTORS EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER.
  3. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING THE DESIGN, CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTICE.
  4. PRIOR TO REMOVING ANY EXISTING FEATURES, CONTRACTOR SHALL REVIEW EXTENT OF DEMOLITION WITH OWNER.
  5. CONTRACTOR SHALL PROTECT ALL EXISTING FEATURES TO REMAIN FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE TO EXISTING FEATURES DESIGNATED TO REMAIN I.E. CURBS, WALKS, PLANT MATERIAL, LAWN OR FENCES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
  6. CONTRACTOR SHALL REMOVE FROM THE SITE AND LEGALLY DISPOSE OF ALL DEBRIS AND EXCAVATED MATERIAL NOT REQUIRED FOR FILL. NO RUBBISH OR DEBRIS SHALL BE BURIED ON THE SITE.
- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST ADOPTED EDITIONS OF THE RESIDENTIAL SPECIALTY CODE, 2011 EDITION, CABO ONE & TWO FAMILY DWELLING CODE AND ALL OTHER LOCAL AND STATE CODES AND ORDINANCES AND REGULATIONS.

**PHASING NOTES:**

- PHASE 1 TO INCLUDE ALL WORK EXCEPT MAIN PATIO COVER AND CLEAR STORY CONSTRUCTION. INCLUDE COLUMN FOUNDATIONS FOR FUTURE STRUCTURE.
- PHASE 2 TO INCLUDE MAIN PATIO STRUCTURE COVER AND CLEAR STORY CONSTRUCTION.

**ELECTRICAL NEW WORK NOTES:**

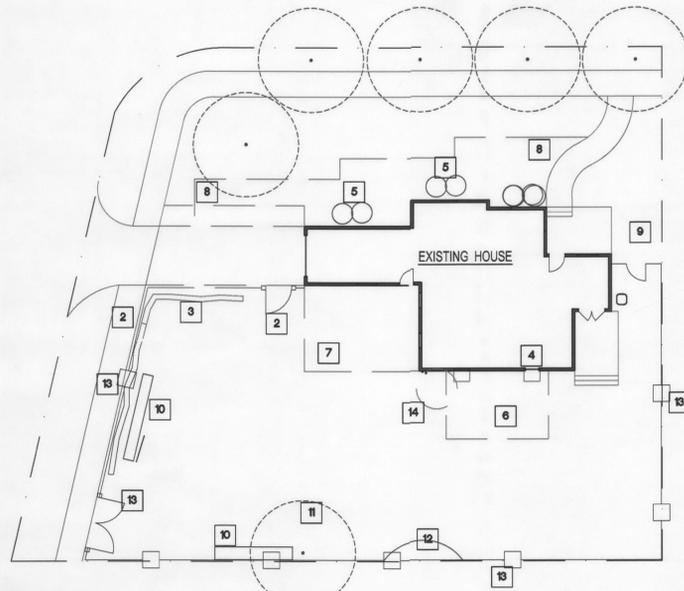
1. INSTALL NEW 110 DUPLEX @ 42" ABOVE FINISH FLOOR.
2. INSTALL NEW JUNCTION BOXES @ 6'8" AFF FOR FUTURE LIGHTING IN FUTURE PATIO STRUCTURE.
3. EXISTING UPGRADED ELECTRICAL BOX IN BASEMENT.
4. INSTALL NEW 110 DUPLEX FOR SPA, COORDINATE WITH EXISTING SPA FOR EXACT LOCATION.
5. INSTALL NEW 110 DUPLEX @ 24" AFF.

**LEGEND:**

- JUNCTION BOX
- ⊕ 110V DUPLEX OUTLET
- # NEW WORK NOTE
- ⊠ DEMOLITION WORK NOTE
- ⚡ ELECTRICAL NEW WORK NOTE

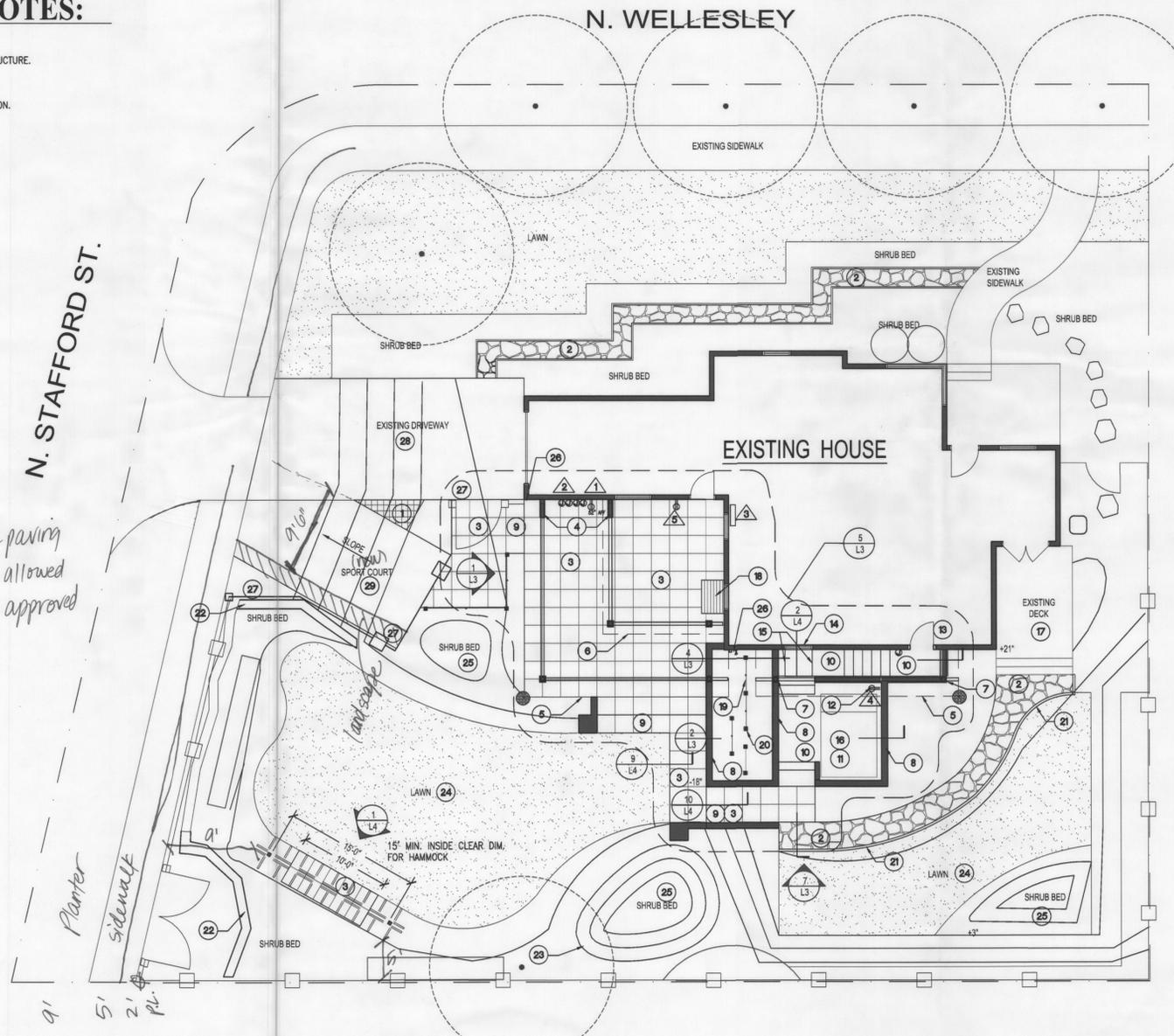
**DEMOLITION NOTES:**

1. NOT USED.
2. REMOVE PORTION OF EXISTING FENCE, SALVAGE EXISTING GATE & BOARDS FOR REUSE.
3. REMOVE PORTION OF EXISTING CONC SLAB EDGING, SALVAGE PIECES FOR REUSE.
4. REMOVE EXISTING BASEMENT WINDOW & BOTH CONCRETE WALLS, CORD. WITH NEW WORK.
5. REMOVE EXISTING RHODODENDRONS.
6. EXCAVATE AS REQUIRED FOR WALLS & EGRESS STAIR, STORE CUT ON SITE TO BE USED AT A LATER DATE.
7. REMOVE EXISTING SLAB ON GRADE & EXISTING PATIO COVER
8. REMOVE PORTION OF EXISTING LAWN, CORD. WITH NEW WORK.
9. SALVAGE FLAGSTONE WALKWAY FOR REUSE.
10. EXISTING HEDGE TO REMAIN.
11. EXISTING TREE TO REMAIN.
12. EXISTING BAMBOO TO REMAIN.
13. EXISTING FENCE TO REMAIN.
14. RELOCATE EXISTING PLANT.



**DEMOLITION PLAN**

SCALE 1/16" = 1'-0"



**LAYOUT PLAN**

SCALE 1/8" = 1'-0"

**SHANKS & TIGGES  
RESIDENTIAL LANDSCAPE  
IMPROVEMENTS  
7089 N. WELLESLEY  
PORTLAND, OR 97203  
FOR CONSTRUCTION 9 JULY 2013**

City of Portland  
Bureau of  
Development Services  
Approved by  
Planning and Zoning Review

By *S. Allen* Date *8/13/13*

**SCHULTZ + LONG**  
LANDSCAPE ARCHITECTURE LLC AND GARDEN DESIGN  
office 503.794.9070  
cell 971.212.6609  
www.schultzlong.com  
17551 NE Wells Vista Dr. Portland, OR 97207

**SHANKS-TIGGES RESIDENCE  
LAYOUT & DEMOLITION PLAN  
7089 N. WELLESLEY  
PORTLAND, OR 97203**

REVIEW  
5-23-13 11:00 AM  
SET  
10-14-13 10:00 AM  
FOR CONSTRUCTION  
7-9-13 10:00 AM



DESIGNED | TKL/RPS  
CHECKED | RPS  
DRAWN | TKL  
DATE | 23 MAY 2013  
LAYOUT & DEMO PLAN

**L1**

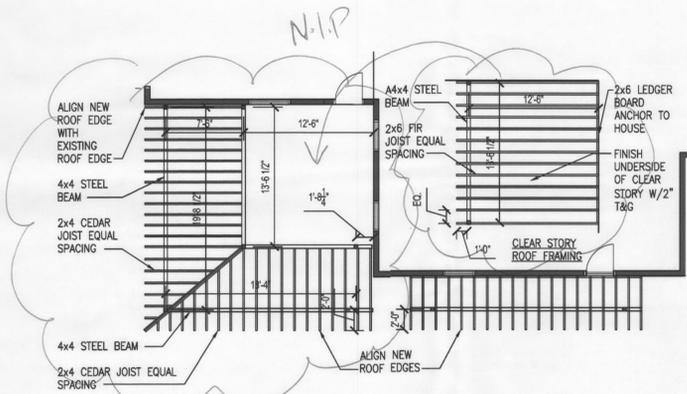
13-191896-RS

2

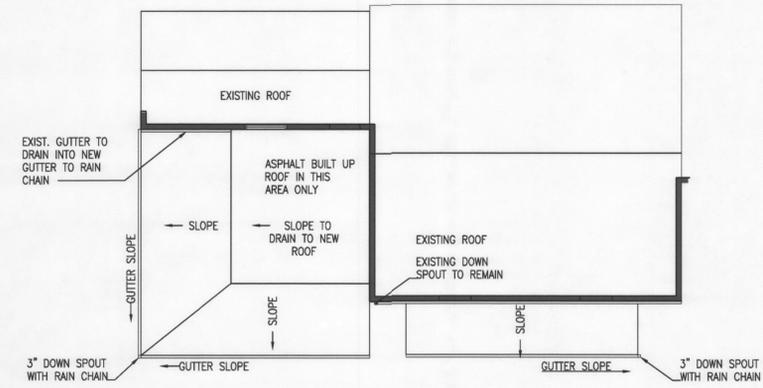




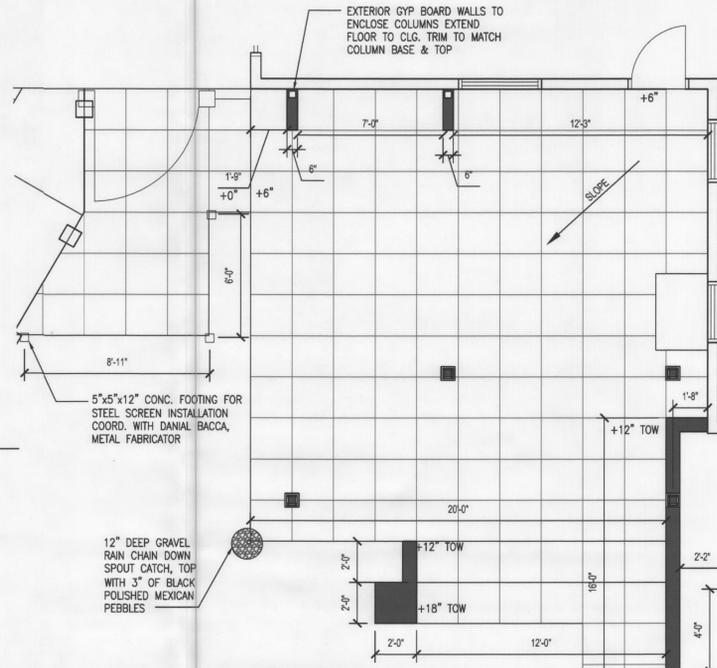
**1 NORTH ELEVATION**  
L3 SCALE: 1/4" = 1'-0"



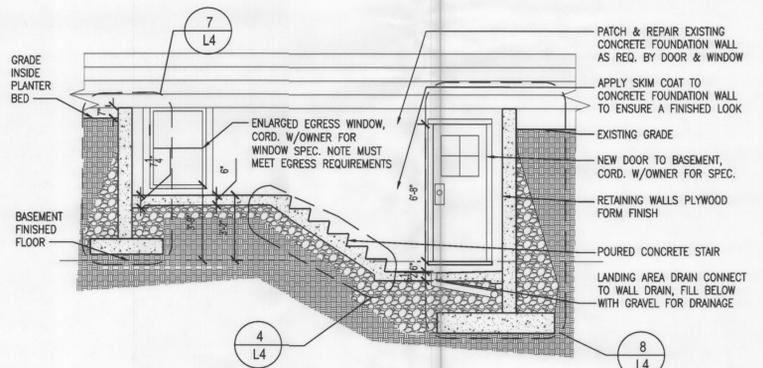
**3 ROOF FRAMING PLAN**  
L3 SCALE: 1/8" = 1'-0"



**6 ROOF PLAN**  
L3 SCALE: 1/8" = 1'-0"



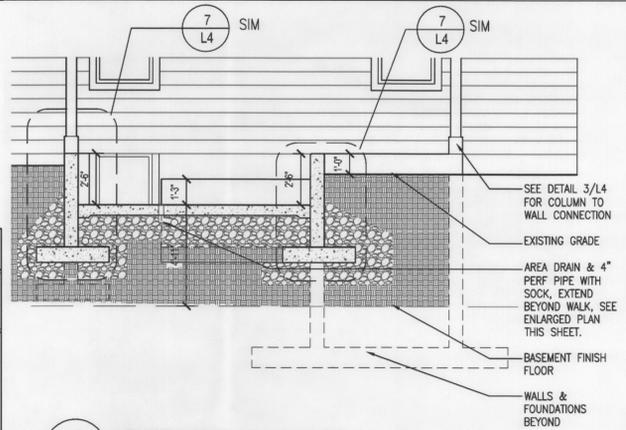
**2 SECTION @ SPA LEVEL**  
L3 SCALE: 1/4" = 1'-0"



**4 SECTION @ STAIRWELL**  
L3 SCALE: 1/4" = 1'-0"



**7 WEST ELEVATION**  
L3 SCALE: 1/4" = 1'-0"



**5 ENLARGED PATIO, EGRESSES STAIR & SPA PATIO**  
L3 SCALE: 1/4" = 1'-0"

- NOTES:**
- ELEVATIONS ARE ASSUMED BASED ON SITE MEASUREMENTS, NO SURVEY HAS BEEN COMPLETED.
  - CONTRACTOR TO FIELD VERIFY ALL SPOT ELEVATIONS, TOW ELEVATIONS, & STAIR RISERS PRIOR TO CONSTRUCTION. NOTIFY LA OF DISCREPANCIES.
  - SILL HEIGHT AT EGRESSES WINDOW NOT TO EXCEED 44" ABOVE FINISH FLOOR AS REQUIRED BY CODE.
  - STAIR #1 6 RISERS @ 7.33", 11" TREAD. CONTRACTOR TO FIELD VERIFY, ADJUST AS REQ. USING STAIR FORMULA (2xRISER)+(1xTREAD) = 25"-26".
  - STAIR #2 & 3; 3 & 5 RISERS @ 7.475", 11" TREAD. CONTRACTOR TO FIELD VERIFY, ADJUST USING ABOVE STAIR FORMULA.

**SCHULTZ + LONG**  
LANDSCAPE ARCHITECTURE LLC AND GARDEN DESIGN  
office 503.794.9070  
cell 971.212.6609  
www.schultzandlong.com  
17551 SW 10th Ave Ste 10, Portland, OR 97207  
residential commercial public

**SHANKS-TIGGES RESIDENCE  
ENLARGED PLAN & ELEVATIONS**  
7089 N. WELLESLEY  
PORTLAND, OR 97203

City of Portland  
Development Services Bureau  
Permit Number  
AUG 13 2013

5-23-13	100% REVIEW
6-14-13	BID SET
7-9-13	FOR CONSTRUCTION

REGISTERED  
552  
TERRY W. MATHIAS  
LANDSCAPE ARCHITECT  
OREGON  
05-14-04

DESIGNED | TKL/RPS  
CHECKED | RPS  
DRAWN | TKL  
DATE | 23 MAY 2013

DECK ELEV. & DETAILS

**L3**

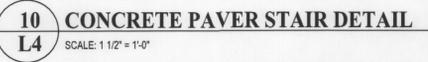
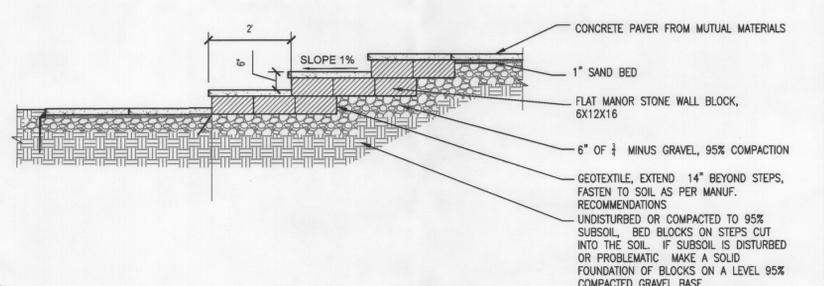
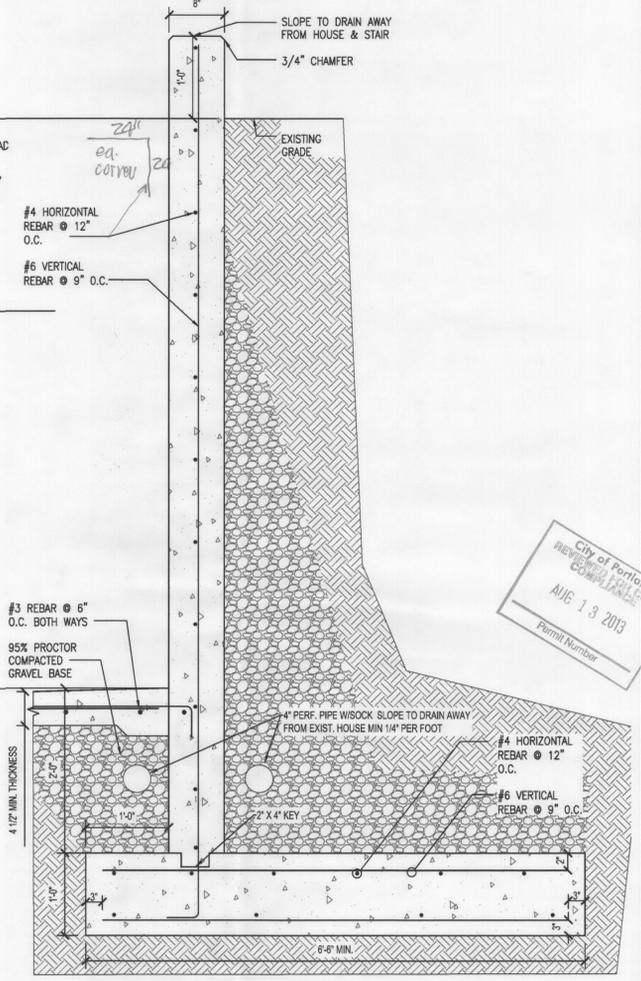
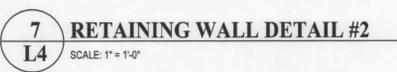
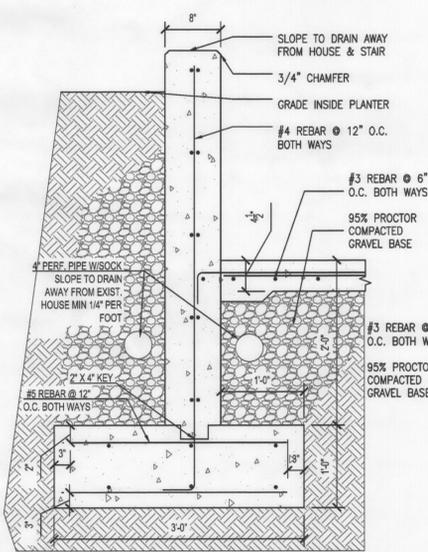
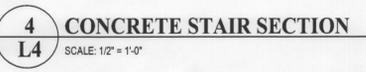
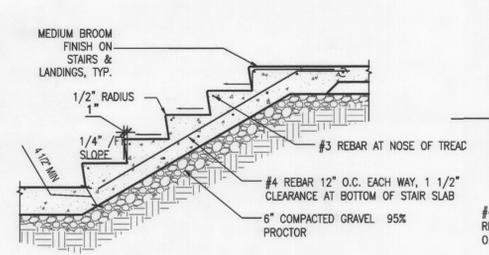
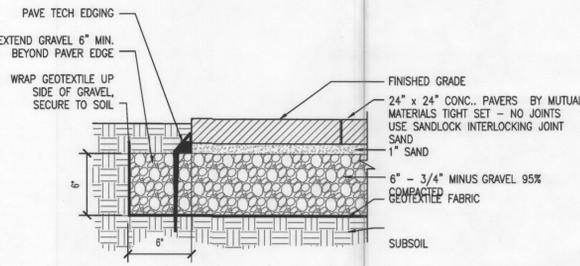
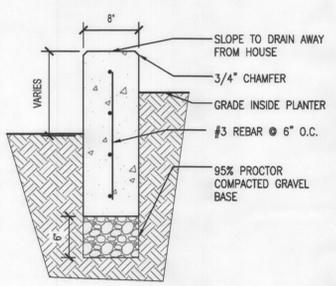
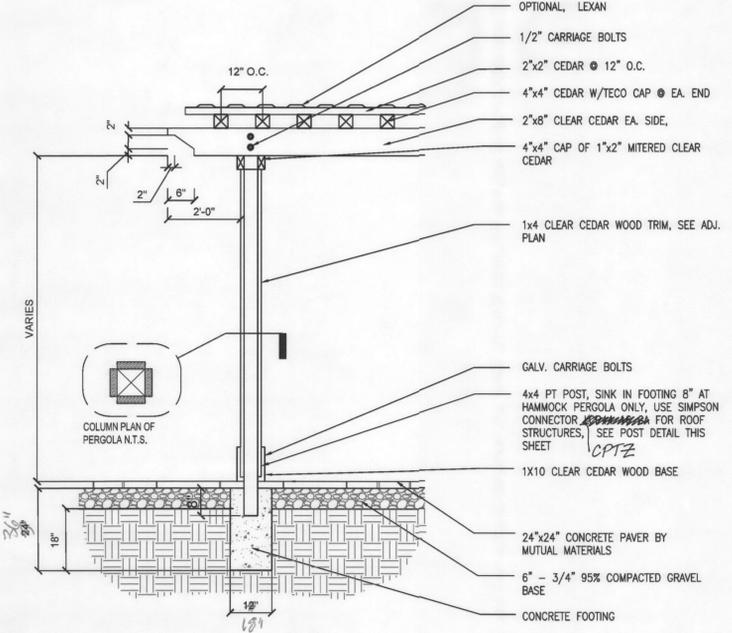
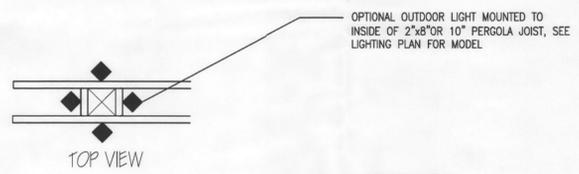
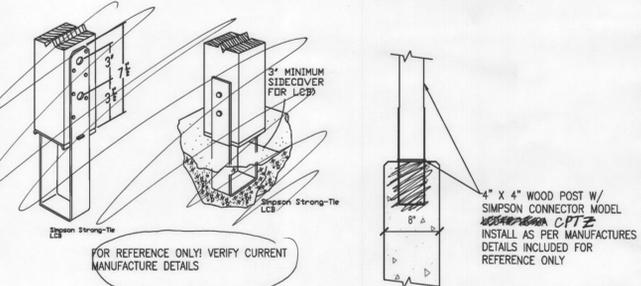
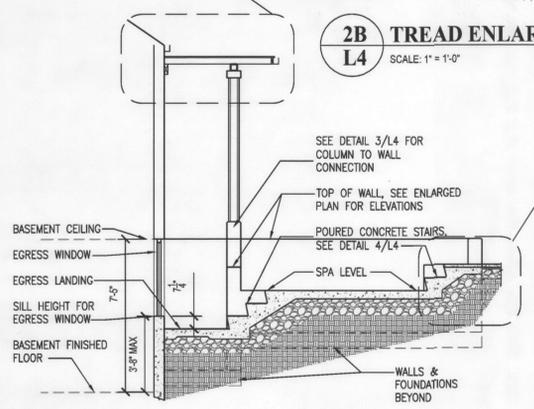
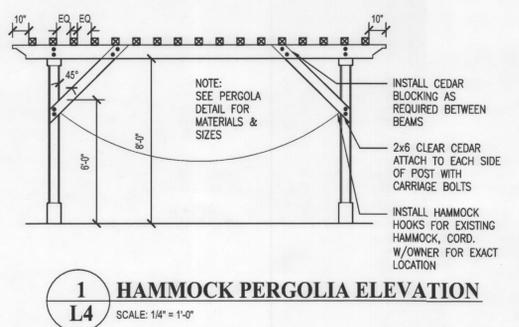
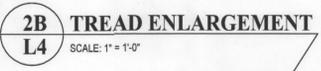
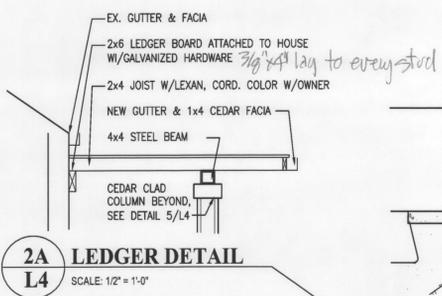
5-23-13	100% REVIEW
6-14-13	BID SET
7-9-13	FOR CONSTRUCTION



DESIGNED | TKL/RPS  
 CHECKED | RPS  
 DRAWN | TKL  
 DATE | 23 MAY 2013

DECK ELEV. & DETAILS

**L4**



# IRRIGATION SPECIFICATIONS

## PART 1 GENERAL

- 1.01 SUMMARY**
- A. This Section includes:
1. This Work consists of providing complete, operational, automatically controlled drip landscape irrigation system.

- 1.02 REFERENCES**
- A. Applicable provisions of the following standards shall apply to the Work of this Section, except as modified herein, and are hereby made a part of these Contract Specifications to the extent required:

- ASTM D1785 Poly (Vinyl Chloride) (PVC) Compound and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds  
 ASTM D2464 Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80  
 ASTM D2466 Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40  
 ASTM D2564 Solvent Cements for Poly (Vinyl Chloride) Plastic Pipe

## 1.03 SYSTEM DESCRIPTION

- A. Design Requirements:
1. Layout of the system is design build. Irrigation system shall consist spray zones for lawn and drip irrigation for planting/shrub beds. If materials other than those specified in the Contract Documents are proposed, the Landscape Architect shall determine whether such materials or methods are a suitable or equal substitute.
  2. Pipe sizing shall be as needed to keep water velocity at or below 5 feet per second.
  3. Separate zones for shrub and tree plantings and seeded areas. Do not combine plant types for irrigation zones. Use triangular head layout for spray irrigation and for drip line.
  4. Pipe sizing and length shall be as needed to achieve minimum pressure for worst case spray nozzle of 30 PSI.
- B. Performance Requirements: A minimum of 95 percent of head to head coverage is required without over spray onto paved areas or structures.
- C. Minimum pressure requirement per zone is 40 PSI.

## 1.04 SUBMITTALS

- A. The following shall be submitted:
1. Prior to beginning the installation Work on irrigation system, test the dynamic (working) water pressure and available flow at the point of connection. Notify Landscape Architect if sufficient pressure to operate a system does not exist.
  2. Prior to beginning the installation Work on irrigation system submit proposed design layout locations, and controller location for approval by Landscape Architect.
  3. Operation and Maintenance Data shall include:
    - a. An irrigation plan "zone map" indicating, by different colors (four alternating colors minimum), the areas of coverage for each control valve. Indicate the number and locations of each control valve. The number shall correspond to that on the controller for that valve.
    - b. An Automatic Controller timing schedule, for new added zones only, indicating on a weekly basis the day, time and duration of watering for each control valve/zone.
    - c. Operation and maintenance guide for the entire system and for each element of the system. Include instructions for system winterization and activation.

## 1.05 QUALITY CONTROL

- A. This Work shall be performed by an experienced irrigation system installer, possessing the equipment, expertise, and personnel to successfully perform the Work in a timely manner and as specified.
- B. The Contractor shall have a current valid license for landscape contracting/installations with the state of Oregon.
- C. The Contractor shall have a minimum of five years experience with irrigation installation projects of similar size and scope.

## 1.06 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be stored on site only in areas pre-approved. Storage areas shall be kept safe, orderly and clean of debris.
- B. Care shall be exercised in handling, loading and storing all materials. Pipe shall be stored in areas long enough to allow pipe to lay flat and straight.
- C. Damaged pipe shall be replaced, or the damaged areas cut out.

## 1.07 PROJECT CONDITIONS

- A. The Work shall be performed under environmental conditions suitable for the completion of the tasks being undertaken.
- B. Work shall not be performed if the temperature is below 35 degrees F or if the soil is saturated as to not support a worker or itself.

## PART 2 PRODUCTS

### 1.01 MATERIALS

- A. PVC pipe shall be polyvinyl chloride plastic (PVC) 1220, Type 1, normal impact, I.P.S., N.S.F. approved. All main line and lateral line pipe shall be Schedule 40 PVC pipe and shall conform to ASTM D1784-09, ASTM D1785, and PS22-70. All PVC pipe shall be new, defect free, and continuously and permanently marked with the manufacturer's name or trademark, size, schedule and type of pipe.

- B. All nipples shall be standard weight Schedule 80, with molded threads.
- C. Pipe fittings shall conform to the following:
1. For PVC plastic pipe: solvent welded socket type fittings, ASTM D2466, PVC pipe fitting, Schedule 40.
  2. For PVC Plastic Pipe Threaded Fitting: ASTM D2464, PVC pipe fitting, Schedule 80.
  3. For polyethylene pipe utilized for surface installation, plastic insert fittings for polyethylene (PE) pipe, manufactured from Type I PVC, cell classification 12454-B and shall conform to ASTM D2609, as manufactured by Lasco Fittings, Inc. or approved equal. Self-tapping saddles shall meet ASTM D2239, as manufactured by Blazing Products, Inc. or approved equal.

- D. Joining materials and accessories shall conform to the following:
1. PVC Solvent Cement: N.S.F. approved solvent for PVC through 4 inch, meeting requirements of ASTM D2464.
  2. PVC Primer and Cleaner: Compatible for use with the solvent cement utilized and PVC pipe.
  3. Teflon Tape Sealer: 1/2 inch wide.
  4. Stainless Steel Hose Clamps for Insert Barbed Fittings for Surface Installed Polyethylene Pipe: Ideal 68 series as manufactured by Tridon, Inc. or approved equal.

- E. Remote Control Valves:
1. Remote control valves shall be RainBird DV series valve, size as required by system layout. Install as per manufacturer recommendations.
- F. Spray heads and nozzles:
1. Sprinkler heads shall be installed to achieve 95% head to head coverage. Spray heads shall be Hunter MP Rotator or RainBird MPR Nozzles. Use triangular layout for sprinkler heads, refer to manufacturer specifications for flow rates.
- G. Drip Irrigation:
1. RainBird Xorigation Drip System install as per manufacturer recommendations.

- H. Tree Irrigation:
1. Irrigate new trees with RainBird RWS, root watering system. Install as per manufacturer recommendations.
- I. Irrigation Controller:
1. The controller shall be RainBird ESP Modular Series. Coordinate with owner for final location.
- J. Irrigation wires, cables and connectors shall conform to the following:
1. Remote control valve wires shall be single strand insulated copper wire designed for 24 volts or greater, Type UF, Underwriter's Lab (UL) approved for direct burial in NEC Class II circuits. Size of wires shall be 14 gauge. Common wires for the remote control valve shall be white in color. Remote control pilot wires shall be red in color. One extra wire shall be yellow in color and the other shall be black in color.
  2. Electrical connectors shall be watertight 3M DBY/DBR or approved equal.
  3. Electrical conduit and fittings are to be Schedule 80, rigid, extra-heavy wall polyvinyl chloride (PVC) conduit as specified by Underwriters Laboratories Standard UL-651. The conduit is to meet the specifications included in the NEMA Standard Specifications TC-2 for electrical plastic conduit EPC-80.

- K. Other materials shall conform to the following:
1. Drain rock/pea gravel, washed round river stone 1/2\_ to 1/8\_ inch size, free of fines.
  2. Staples for Surface Installed Polyethylene Pipe: 12 inch minimum long jute staples. Submit sample to Owner for approval.
  3. Other materials, not specifically shown or specified but required for complete and proper installation, as selected by Contractor subject to the approval of the Landscape Architect. Submit substitution requests for approval prior to purchasing equipment/material.
- L. M. Main and Lateral Piping:
1. The piping system shall be laid out in accordance with approved plan as submitted by the landscape contractor.
  2. Pipe shall be laid and permanent connections made in accordance with proper practices and manufacturer's recommendations.
  3. All non-threaded joints shall be solvent welded. Teflon tape shall be used to seal all threaded joints, except for Marlex-type fittings.
  4. PVC pipe shall be joined in dry weather or undercover and at temperatures above 40 degrees F in strict accordance with the manufacturer's instructions. Clean and dry jointing areas of the pipe and deburr the pipe ends and fittings before joining.
  5. Joints shall be allowed to cure for at least 24 hours at a temperature above 40 degrees F prior to testing.

- M. Sleeves:
1. Contractor shall furnish and install sleeves as required to install the irrigation system. Sleeves shall be Schedule 40 and extend 12" beyond pavement on each side.
- N. Irrigation Wiring:
1. Place control wires in sleeves or conduits under all paving and when not in common trench with main line or lateral lines.
  2. Make all wire terminal connections and splices moisture-proof using specified electrical connectors. Provide a minimum of 1 foot of coiled slack between all wire splices.
  3. Sharp bends or kinks in the wiring shall not be permitted.
  4. For all wires, provide 18 inches loop of extra wire, neatly coiled around a 1 inch mandrel in all valve box.

- O. Automatic Control Valves:
1. Automatic control valves shall be installed in ground cover/shrub planting areas complete with the valve boxes as specified.
  2. Main line extension shall be thoroughly flushed before installing the valves.

- P. Sprinklers & Drip tubing:
1. Lines shall be flushed before installing the sprinklers and again before installing heads and nozzles.

## PART 3 EXECUTION

### 1.01 EXAMINATION

- A. The areas and conditions under which Work of this Section is to be performed shall be examined by the landscape Contractor prior to beginning work. Conditions detrimental to timely and proper completion of the Work shall be corrected. If detrimental conditions arise after the beginning of work, the Work shall not proceed until unsatisfactory conditions are corrected.

### 1.02 PREPARATION

- A. Protection:
1. Protection shall be provided for system components at all times. Rock, gravel, debris, and other foreign materials shall be kept from entering the piping, valves, sprinklers, and other components. Openings in valves, lines and sprinklers shall be capped or covered when they are exposed and connections are not complete or sprinkler heads are not in place.
  2. Surface Preparation: Prior to beginning irrigation installation work, finish grading shall be established and planting bed outlines laid out and approved by the Landscape Architect.

### 1.03 INSTALLATION

- A. General:
1. Comply with the requirements of the Uniform Plumbing Code, all other applicable codes and as required by local jurisdiction.

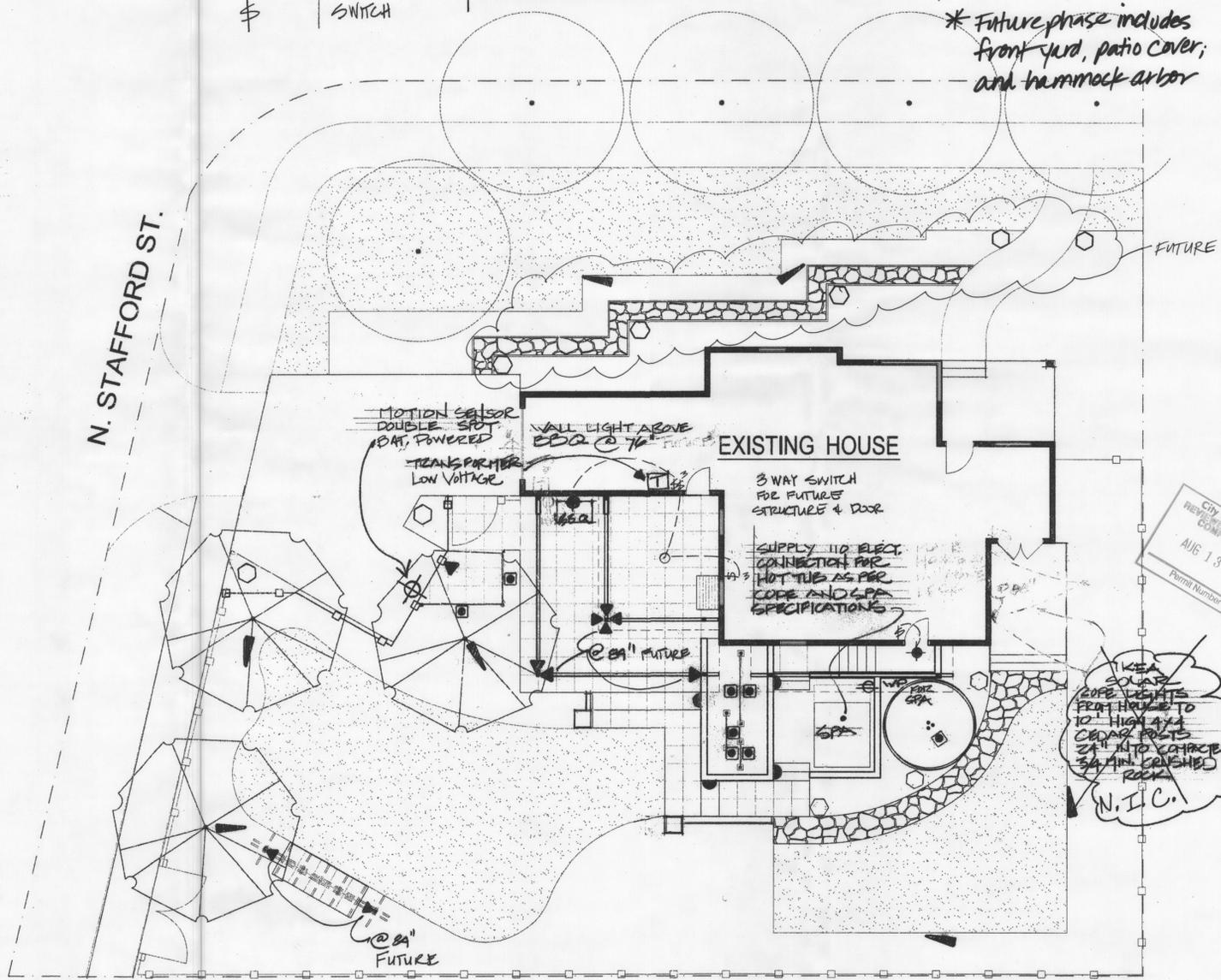
### 1.04 FIELD QUALITY CONTROL

- A. Flushing:
1. Main Lines: All main lines shall receive at least one fully open flushing.
  2. Lateral Lines: All lateral lines shall receive at least one fully open flushing before placing sprinklers. Flushing shall be sufficient to remove any debris. Additional flushing shall be provided as needed to clear lines of debris.
- B. Tests and Inspections:
1. The Owner shall be notified in writing and by phone at least 3 working days prior to a scheduled date for all tests and required inspections. Conduct tests in the presence of the Owner or his designated representative. Test times and dates shall be set to meet the Owner's schedule as close as possible to the date requested.
  2. System Pressure Test:
    - a. Main Line and Valve Testing:
      - 1) Purge all main supply lines of air and test the main lines and valves with a static water pressure of at least 125 psi for 60 minutes. Two pressure gauges and connections shall be provided where approved. Tests, which show pressure loss exceeding 5 psi at any time during the test period, shall be considered as failed. Corrections shall be made and systems retested, as specified, until approved.
      - 2) A constant pressure of 100 psi shall be maintained for a period of 2 hours. Tests that show a loss exceeding 5 psi during the test period shall be considered as failed.
    - b. Lateral Line Testing: Prior to installation of spray heads, purge all lateral lines of air and test at ambient static water pressure. Lateral lines will be visually checked by the Landscape Architect for leakage. Corrections shall be made and the system retested as specified, until approved.
    - c. The Owner or Landscape Architect shall be notified and be present during the entire test period.
    - d. The system shall be tested as a whole by complete zones, unless specific parts have been approved for testing by the Owner.
  3. Operational Head Coverage Test:
    - a. An operational head coverage test shall be performed prior to planting operations, after the hydrostatic tests are complete, trench backfill is placed, sprinkler heads are installed and adjusted, all automatic controls are set, and the system is fully operational. Head coverage shall be observed during this test. Operational tests shall be witnessed and approved by the Owner or Landscape Architect.
    - b. After failing components are corrected, the Contractor shall notify the Owner and repeat the inspection tests.
  5. Corrections shall be made to the system as directed by the Owner within 5 days of failure notice.

# LIGHTING LEGEND & NOTES:

NOTE: DISCUSS LIGHTING CONTROLS W/OWNER

SYMBOL	DESCRIPTION	LIGHT	CURRENT PHASE	FUTURE PHASE *
	9	PR4200 LED ABS PATH LIGHT	5	5
	8	5W5271 LED WELL LIGHT	8	8
	10	SL4250 LED STEP LIGHT	1	9
	7	SP2216 LED SPOT LIGHT	5	2
	4	SL4243 LED STEP LIGHT	4	
		ALL LIGHT VISTA PROFESSIONAL OUTDOOR LIGHTING WWW.VISTAPRO.COM		
		WALL LIGHT (BBQ + BASEMENT DOOR)	2	
		BATTERY POWERED MOTION SENSOR SPOT @ SPOT CT.	1	
		N. WELLESLEY		
		SWITCH		



# LIGHTING LAYOUT PLAN

SCALE 1/8" = 1'-0"

NORTH

SCHULTZ + LONG  
 LANDSCAPE ARCHITECTURE LLC  
 GARDEN DESIGN

office 503.794.9070  
 cell 971.212.6609  
 www.schultzlong.com  
 1751 10th Ave SE, Portland, OR 97207

SHANKS-TIGGES RESIDENCE  
 LIGHTING LAYOUT PLAN &  
 IRRIGATION SPECS  
 7089 N. WELLESLEY  
 PORTLAND, OR 97203

City of Portland  
 RECEIVED COMMUNITY REVIEW  
 AUG 13 2013  
 Permit Number

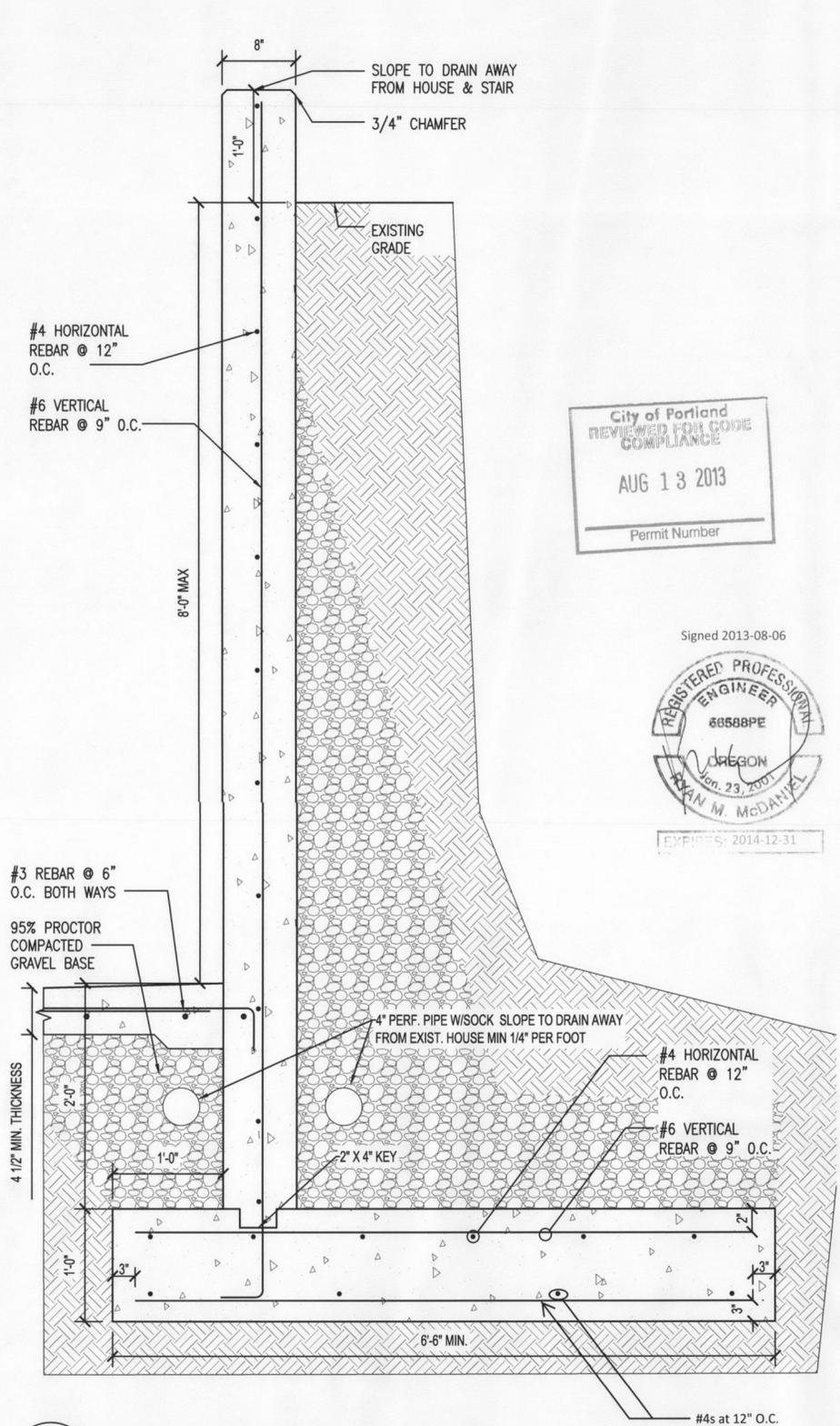
15-23-13 100% REVIEW

REGISTERED  
 552  
 THERESA KIM LONG  
 OREGON  
 05-14-04  
 LANDSCAPE ARCHITECT

DESIGNED | TKL/RPS  
 CHECKED | RPS  
 DRAWN | TKL  
 DATE | 23 MAY 2013

LIGHTING PLAN

L5



City of Portland  
 REVIEWED FOR CODE COMPLIANCE  
 AUG 13 2013  
 Permit Number

Signed 2013-08-06  
 REGISTERED PROFESSIONAL ENGINEER  
 86588PE  
 OREGON  
 Jan. 23, 2001  
 KIM M. Mc DANIEL  
 EXPIRES: 2014-12-31

**8** RETAINING WALL DETAIL #3  
**L4** SCALE: 1" = 1'-0"