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DEVELOPMENT REVIEW APPLICATION

For Office Use Only

STAFF CONTACT Ben Gardner	PROJECT NO(S). WRG-23-02/FMA-23-02	PRE-APPLICATION NO. PA-22-14
NON-REFUNDABLE FEE(S)	REFUNDABLE DEPOSIT(S) 1050 + 1700	TOTAL \$2,750.00

Type of Review (Please check all that apply):

- | | | |
|---|---|--|
| <input type="checkbox"/> Annexation (ANX) | <input type="checkbox"/> Historic Review | <input type="checkbox"/> Subdivision (SUB) |
| <input type="checkbox"/> Appeal and Review (AP) | <input type="checkbox"/> Legislative Plan or Change | <input type="checkbox"/> Temporary Uses |
| <input type="checkbox"/> Code Interpretation | <input type="checkbox"/> Lot Line Adjustment (LLA) | <input type="checkbox"/> Time Extension |
| <input type="checkbox"/> Conditional Use (CUP) | <input type="checkbox"/> Minor Partition (MIP) (Preliminary Plat or Plan) | <input type="checkbox"/> Variance (VAR) |
| <input type="checkbox"/> Design Review (DR) | <input type="checkbox"/> Modification of Approval | <input type="checkbox"/> Water Resource Area Protection/Single Lot (WAP) |
| <input type="checkbox"/> Tree Easement Vacation | <input type="checkbox"/> Non-Conforming Lots, Uses & Structures | <input type="checkbox"/> Water Resource Area Protection/Wetland (WAP) |
| <input type="checkbox"/> Final Plat or Plan (FP) | <input type="checkbox"/> Planned Unit Development (PUD) | <input checked="" type="checkbox"/> Willamette & Tualatin River Greenway (WRG) |
| <input checked="" type="checkbox"/> Flood Management Area | <input type="checkbox"/> Street Vacation | <input type="checkbox"/> Zone Change |

Pre-Application, Home Occupation, Sidewalk Use, Addressing, and Sign applications require different forms, available on the City website.

Site Location/Address:

18404 Old River Landing

Assessor's Map No.: 21E14AD

Tax Lot(s): 402

Total Land Area: 19,899 sq. ft.

Brief Description of Proposal:

Backyard landscaping improvements including a fire pit, seating wall, gravel paths, pavers, decking, planters, hot tub, bench, railing, and native plantings.

Applicant Name:

(please print) Clement Walsh
Address: Clement Walsh Landscape Architect, Inc.
1225 13th Street
City State Zip: West Linn, OR 97068

Phone: 503-726-6760

Email: clement@clementwalsh.com

Owner Name

(required) (please print) Matthew & Nancy Smith
Address: 18404 Old River Landing
City State Zip: West Linn, OR 97034

Phone: 360-250-2365

Email: smi7816@comcast.net

Consultant Name:

(please print) Rick Givens, Planning Consultant
Address: 28615 SW Paris Ave., Unit 110
City State Zip: Wilsonville, OR 97070

Phone: 503-351-8204

Email: rickgivens@gmail.com

- All application fees are non-refundable (excluding deposit). **Any overruns to deposit will result in additional billing.**
- The owner/applicant or their representative should be present at all public hearings.
- A decision may be reversed on appeal. The permit approval will not be effective until the appeal period has expired.
- Submit this form and supporting documents through the [Submit a Land Use Application](https://westlinnoregon.gov/planning/submit-land-use-application) web page:
<https://westlinnoregon.gov/planning/submit-land-use-application>

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. Acceptance of this application does not infer a complete submittal. 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 the initial application.

DocuSigned by:
Clement Walsh
Applicant's signature

3/20/2023

Date

DocuSigned by:

Nancy Smith
Owner's signature (required)

3/20/2023

Date



City of West Linn
Planning and Department

March 20, 2023

Smith Residence: 18404 Old River Landing Lake Oswego OR 97034

Summary of Submitted Materials

The development review application consists of the following documentation:

- Signed Building Permit Application.
- Summary of submitted materials.
- Rick Givens, Planning Consultant, Narrative.
- Site Plan, Sheet No.: S100.
- Centerline Concepts Land Surveying, Inc. Existing Conditions Map.
- Theta, LLC (Bruce D Goldson, Engineer) Report.
- Clement Walsh Landscape Architect, Inc, Existing Conditions, Sheet No.: E100.
- Clement Walsh Landscape Architect, Inc Landscape Plan, Sheet No.: L100.
- Landscape East and West, Deck Design.
- Landscape East and West, concrete slab, and base for hot tub.
- State of Oregon Building Code Division, Prescriptive Deck Code.

I trust that this application is complete. Please let me know if you require any additional information.

Many thanks,

Clement Walsh
Sincerely,

State of Oregon Professional Landscape Architect # LA 0957

HCA/Willamette River Protection Permit Application

Backyard Landscaping Improvements

18404 Old River Landing, West Linn, OR

Site Information

Site Location: 18404 Old River Landing

Tax Lot No.: 21E14AD00402

Site Area: 19,899 Square Feet +/-

Neighborhood: Robinwood Neighborhood Association

Comp. Plan: Low Density Residential

Zoning: Single-Family Residential Attached, R-10

Zoning Overlays: N/A

Applicable CDC Chapters: Chapter 11: Single-Family Residential Attached, R-10; Chapter 27: Flood Management Areas; Chapter 28: Willamette and Tualatin River Protection

Proposed Development

The subject property is located along the Willamette River and is developed with a single-family home. The rear yard of the home is improved with existing rear yard landscaping. The proposed development includes landscaping improvements that include construction of a fire pit, seating wall, gravel paths, pavers, decking, planters, hot tub, bench, railing, and native plantings. The rear yard of the subject property is located within the 100-year floodplain of the Willamette River and is within a Flood Management Area as well as a Habitat Conservation Area (HCA). The entire backyard of the property is in the Habitat Conservation Area. While many of the proposed improvements are allowed without a permit (pathway improvements, native landscaping improvements, etc.), the construction of a pad for the hot tub, new hot tub deck and new seating wall, require approval as a part of this application.



Figure 1: Vicinity Map

Compliance with Approval Criteria:

CHAPTER 11: SINGLE-FAMILY RESIDENTIAL ATTACHED, R-10

11.030 PERMITTED USES

The following are uses permitted outright in this zoning district:

- 1. Single-family attached or detached residential unit.*

Applicant Response: The subject property is developed with a single-family detached home, as permitted by the R-10 zone. The proposed improvements are to rear yard landscaping and are typical of what is permitted for single-family homes.

11.040 ACCESSORY USES

Accessory uses are allowed in this zone as provided by Chapter 34 CDC.

Applicant Response: Not applicable. No new accessory uses are proposed.

11.050 USES AND DEVELOPMENT PERMITTED UNDER PRESCRIBED CONDITIONS

Applicant Response: Not applicable. No uses allowed under prescribed conditions are proposed.

11.060 CONDITIONAL USES

Applicant Response: Not applicable. No conditional uses are proposed.

11.070 DIMENSIONAL REQUIREMENTS, USES PERMITTED OUTRIGHT AND USES PERMITTED UNDER PRESCRIBED CONDITIONS

Minimum yard dimensions or minimum building setbacks

Front yard	20 ft
Interior side yard	7.5 ft
Street side yard	15 ft
Rear yard	20 ft
Maximum lot coverage	35%

Applicant Response: All proposed structural improvements, including the hot tub and above-grade decking, and seating wall are located within the rear yard and meet permitted rear and side yard setbacks.

Chapter 27 – FLOOD MANAGEMENT AREAS

27.020 APPLICABILITY

A flood management area permit is required for all development in the Flood Management Area Overlay Zone. The standards that apply to flood management areas apply in addition to State or federal restrictions governing floodplains or flood hazard areas.

Applicant Response: Much of the landscaping involves plantings and pathway improvements that are allowed without review under this chapter. The proposed hot tub, deck and wall improvements are located within the Flood Management Area Overlay Zone and potentially impact the volume of the flood plain so the standards of this chapter apply.

27.060 APPROVAL CRITERIA

The Planning Director shall make written findings with respect to the following criteria when approving, approving with conditions, or denying an application for development in flood management areas:

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.

Applicant Response: Calculations of the volume of the proposed hot tub, deck and wall improvements have been prepared by Theta Engineering and are attached to this application. A compensating volume of existing rear yard soil is proposed to be removed, as discussed in the engineering analysis. This will ensure that there is no reduction of flood storage or conveyance capacity and there will be no increase in the design flood elevation.

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 the ordinary high water line shall not count toward compensating for fill.

Applicant Response: As discussed above and in the Theta Engineering analysis, the additional volume of the hot tub, deck and wall improvements will be offset with the removal of soil material. This will ensure that there is no net increase in volume of material within the flood plain. The area proposed for excavation to compensate for loss of flood volume is 328 square feet. The surface area of new structures in the flood plain is 344 square feet. The excavation area equates to 95.3 percent of fill area so the requirement to be less than 150% of the fill area

is met. Neither the proposed improvements nor the excavation area is located within the high-water line of the Willamette River.

C. Excavation to balance a fill shall be located on the same lot or 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.

Applicant Response: The proposed excavation is located on the same lot as the proposed hot tub, deck and wall improvements. This standard is met.

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.

Applicant Response: Not applicable. No structures intended for occupancy are proposed.

E. Temporary fills permitted during construction shall be removed.

Applicant Response: Not applicable. No temporary fills are proposed.

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.

Applicant Response: The required calculations, prepared by Bruce Goldson, P.E., a professional civil engineer licensed to practice in the State of Oregon, are included with this application. The calculations demonstrate that the proposed improvements will not result in any increase in the flood levels during a base flood event.

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.

Applicant Response: The design of the proposed hot tub, deck and walls have been reviewed by Theta Engineering.

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.

Applicant Response: Not applicable. No new culverts, stream crossings or transportation projects are proposed.

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.

Applicant Response: Not applicable. No detention facilities or listed structures are proposed.

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, 2005; Ord. 1635 § 15, 2014; Ord. 1636 § 25, 2014)

Applicant Response: Permits from federal or State agencies are not required for the proposed improvements. Local permits will be obtained for any improvements that require them.

27.070 CONSTRUCTION MATERIALS AND METHODS

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.

Applicant Response: The seating wall will be made of concrete, which is inherently flood resistant. The hot tub and deck will be installed to code to minimize potential for flood damage.

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.

Applicant Response: Electrical service and plumbing for the hot tub will be installed per code to prevent water from entering within the components during periods of flooding. No heating, ventilation, air conditioning or other services are proposed.

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

Applicant Response: No water service is 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.

Applicant Response: No changes to the home's sewer service are proposed.

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

Applicant Response: No on-site waste disposal system is proposed.

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

Applicant Response: The deck will be secured to concrete footings per code. The wall is concrete and does not require anchoring.

27.090 NON-RESIDENTIAL CONSTRUCTION

New construction and substantial improvement of any commercial, industrial, or other non-residential structure shall either have the lowest floor, including basement, elevated to at least one foot above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

Applicant Response: Not applicable. All of the proposed construction is typical accessory landscaping associated with an existing single-family home.

Chapter 28 – WILLAMETTE AND TUALATIN RIVER PROTECTION

28.030 APPLICABILITY

A. The Willamette and Tualatin River Protection Area is an overlay zone. The zone boundaries are identified on the City's zoning map, and include:

- 1. All land within the City of West Linn's Willamette River Greenway Area.*
- 2. All land within 200 feet of the ordinary low water mark of the Tualatin River, and all land within the 100-year floodplain of the Tualatin River.*
- 3. In addition to the Willamette Greenway and Tualatin River Protection Area boundaries, this chapter also relies on the HCA Map to delineate where development should or should not occur. Specifically, the intent is to keep out of, or minimize disturbance of, the habitat conservation areas (HCAs). Therefore, if all, or any part, of a lot or parcel is in the Willamette Greenway and Tualatin River Protection Area boundaries, and there are HCAs on the lot or parcel, a Willamette and Tualatin River Protection Area permit shall be required unless the development proposal is exempt per CDC 28.040.*

Applicant Response: The subject property fronts on the Willamette River and most of the rear yard is within the Willamette River Greenway Area. This chapter is applicable to the proposal.

B. At the confluence of a stream or creek with either the Tualatin or Willamette River, the standards of this chapter shall apply only to those portions of the lot or parcel fronting the river. Meanwhile, development in those portions of the property facing or adjacent to the stream or creek shall meet the transition, setbacks and other provisions of Chapter 32 CDC, Water Resource Area Protection.

Applicant Response: Not applicable. The property is not located at the confluence of a stream or creek with the Willamette River.

C. All uses permitted under the provisions of the underlying base zone and within the Willamette and Tualatin River Protection Area zone are allowed in the manner prescribed by the base zone subject to applying for and obtaining a permit issued under the provisions of this chapter unless specifically exempted per CDC [28.040](#).

Applicant Response: The proposed landscaping, deck and hot tub are all permitted in the R-10 zoning district as accessory uses to the single-family home. This application will demonstrate compliance with the provisions of Chapter 28.

D. The construction of a structure in the HCA or the expansion of a structure into the HCA when the new intrusion is closer to the protected water feature than the pre-existing structure. (Ord. 1576, 2008; Ord. 1604 § 21, 2011; Ord. 1636 § 26, 2014)

Applicant Response: The proposed improvements are within the HCA and extend farther towards the river than the existing home. Review for compliance with Chapter 28 is required.

28.050 PROHIBITED USES

Applicant Response: The proposed dock is not a prohibited use.

28.090 SUBMITTAL REQUIREMENTS: APPLICATION

A. An application for a protection area permit shall be initiated by the property owner or the owner's authorized agent. Evidence shall be provided to demonstrate that the applicant has the legal right to use the land above the OLW. The property owner's signature is required on the application form.

Applicant Response: The applicants are the owners of the subject property. They have completed and signed the City's land development application form.

B. A prerequisite to the filing of an application is a pre-application conference at which time the Planning Director shall explain the provisions of this chapter and provide appropriate forms as set forth in CDC [99.030\(B\)](#).

Applicant Response: A pre-application conference for the proposed use was held in May of last year (PA-22-14).

C. An application for a protection area permit shall include the completed application and:

- 1. Narrative which addresses the approval criteria of CDC [28.110](#).*
- 2. A site plan, with HCA boundaries shown and by low, moderate, high type shown (CDC [28.120](#)).*

3. *A grading plan if applicable (CDC [28.130](#)).*
4. *Architectural drawings if applicable (CDC [28.140](#)).*
5. *A landscape plan if applicable (CDC [28.150](#)).*
6. *A mitigation plan if applicable (CDC [28.160](#)).*

Applicant Response: This narrative addresses the criterial of CDC 28.110. A site plan is attached and shows HCA boundaries. A site grading plan, architectural drawings for the deck, and a landscape plan are included with this application packet.

D. The applicant shall pay the requisite fees.

Applicant Response: The required fees have been paid.

E. The applicant shall be responsible for, and shall apply for, all applicable State and/or federal permits.

Applicant Response: The proposed improvements involve less than 50 cubic yards of fill/removal and therefore do not require State or federal permits.

F. The applicant shall include a map, approved or acknowledged by DSL, of the preference rights and authorized areas if a water surface structure is proposed. (Ord. 1576, 2008; Ord. 1622 § 11, 2014)

Applicant Response: Not applicable. No water surface structures are proposed.

28.110 APPROVAL CRITERIA

No application for development on property within the protection area shall be approved unless the decision-making authority finds that the following standards have been met or can be met by conditions of approval. The development shall comply with the following criteria as applicable:

A. Development: All sites.

1. *Sites shall first be reviewed using the HCA Map to determine if the site is buildable or what portion of the site is buildable. HCAs shall be verified by the Planning Director per CDC [28.070](#) and site visit. Also, "tree canopy only" HCAs shall not constitute a development limitation and may be exempted per CDC [28.070\(A\)](#). The municipal code protection for trees and Chapters 55 and 85 CDC tree protection shall still apply.*

Applicant Response: The HCA affecting the subject property is shown on Figure 2, below. High Value HCA is shaded in red and Moderate Value is shaded in yellow. The property is developed with a single-family home. The proposed improvements involve only landscaping and outdoor improvements for the home's rear yard. A boat slip for the home is located on the river frontage, as shown on Figure 2.

Figure 2: HCA Overlay

The aerial photograph of the site shown below demonstrates that the HCA area is largely disturbed by the existing home and landscaping associated with it.



Figure 3: HCA Aerial Overlay

2. *HCAs shall be avoided to the greatest degree possible and development activity shall instead be directed to the areas designated "Habitat and Impact Areas Not Designated as HCAs," consistent with subsection (A)(3) of this section.*

Applicant Response: The disturbance of the HCA with improvements requiring approval will be minimal, involving only the pouring of a concrete seating area and a deck to the rear of the home for installation of a hot tub. These improvements are located in an area of the rear yard of the home that is already developed with landscaping and other features associated with the existing home.

3. *If the subject property contains no lands designated "Habitat and Impact Areas Not Designated as HCAs" and development within HCA land is the only option it shall be directed towards the low HCA areas first, then medium HCA areas and then to high HCA as the last choice. The goal is to, at best, avoid or, at least, minimize disturbance of the HCAs. (Water-dependent uses are exempt from this provision.)*

Applicant Response: The existing home is partially within the HCA and all of the rear yard area lies within HCA-designated area. The proposed improvements to pathways and landscape plantings of native materials are permitted without HCA review. The proposed deck and associated hot tub lie within the moderate HCA area. The proposed seating wall is just within the high value HCA area, but is very close to the existing terrace. There are no significant natural resources within the area that it is proposed to be installed. Further, as a low, concrete seating area that is only occasionally used, it will have minimal impact on the HCA.

4. *All development, including exempted activities of CDC [28.040](#), shall have approved erosion control measures per Clackamas County Erosion Prevention and Sediment Control Planning and Design Manual, rev. 2008, in place prior to site disturbance and be subject to the requirements of CDC [32.070](#) and [32.080](#) as deemed applicable by the Planning Director.*

Applicant Response: The only significant grading that will disturb the existing soil surface is for the area that will be used for providing additional flood storage in compensation for the volume of the new concrete, deck and hot tub to be placed within the 100-year floodplain. Erosion control measures will be installed prior to these site grading activities.

F. Access and property rights.

1. *Private lands within the protection area shall be recognized and respected.*

Applicant Response: Not applicable. All of the proposed project is located within the lot owned by the applicant.

2. *Where a legal public access to the river or elsewhere in the protection area exists, that legal public right shall be recognized and respected.*

Applicant Response: Not applicable. The project area is entirely within the residential lot that the applicant owns. There is no public access to the river through this lot.

3. *To construct a water-dependent structure such as a dock, ramp, or gangway shall require that all pre-existing legal public access or similar legal rights in the protection area be recognized and respected. Where pre-existing legal public access, such as below the OLW, is to be obstructed by, for example, a ramp, the applicant shall provide a reasonable alternate route around, over or under the obstruction. The alternate route shall be as direct as possible. The proposed route, to include appropriate height clearances under ramps/docks and specifications for safe passage over or around ramps and docks, shall be reviewed and approved by the Planning Director for adequacy.*

Applicant Response: Not applicable. No new water-dependent structures are proposed.

4. *Any public or private water-dependent use or facility shall be within established DSL-authorized areas.*

Applicant Response: Not applicable. No new water-dependent structures are proposed.

5. *Legal access to, and along, the riverfront in single-family residential zoned areas shall be encouraged and pursued especially when there are reasonable expectations that a continuous trail system can be facilitated. The City recognizes the potential need for compensation where nexus and proportionality tests are not met. Fee simple ownership by the City shall be preferred. The trail should be dimensioned and designed appropriate to the terrain it traverses and the user group(s) it can reasonably expect to attract. The City shall be responsible for signing the trail and delineating the boundary between private and public lands or access easements.*

Applicant Response: No public access to the river exists on the subject property or on adjacent residential lots. There is no opportunity for a trail along this stretch of the river because of existing residential development patterns. There are other public access points to the river elsewhere in this area.

I. *Docks and other water-dependent structures.*

Applicant Response: This subsection is not applicable. No new docks or water-dependent structures are proposed.

J. *Joint docks.*

Applicant Response: This subsection is not applicable. No new dock is proposed.

K. *Non-conforming docks and other water-related structures.* *Pre-existing non-conforming structures, including docks, ramps, boat houses, etc., as defined in this chapter may remain in place. Replacement in kind (e.g., replacement of decking and other materials) will be allowed provided the replacement meets the standards of this chapter. However, if any non-conforming structure that is damaged and destroyed or otherwise to be replaced to the extent that the rebuilding or replacing (including replacement in kind) would exceed 50 percent of the current replacement cost of the entire structure, the owner shall be required to meet all the standards of this chapter.*

Applicant Response: There is an existing dock and access ramp located on the subject property and its river frontage. The dock was legally permitted. No changes to the dock or the access ramp are proposed so it is not relevant to this application.

L. Roads, driveways, utilities, or passive use recreation facilities. Roads, driveways, utilities, public paths, or passive use recreation facilities may be built in those portions of HCAs that include wetlands, riparian areas, and water resource areas when no other practical alternative exists but shall use water-permeable materials unless City engineering standards do not allow that. Construction to the minimum dimensional standards for roads is required. Full mitigation and revegetation is required, with the applicant to submit a mitigation plan pursuant to CDC 32.070 and a revegetation plan pursuant to CDC 32.080. The maximum disturbance width for utility corridors is as follows:

- 1. For utility facility connections to utility facilities, no greater than 10 feet wide.*
- 2. For upgrade of existing utility facilities, no greater than 15 feet wide.*
- 3. For new underground utility facilities, no greater than 25 feet wide, and disturbance of no more than 200 linear feet of water quality resource area, or 20 percent of the total linear feet of water quality resource area, whichever is greater.*

Applicant Response: Not applicable. No such facilities, roads, driveways, or utilities are proposed.

M. Structures. All buildings and structures in HCAs and riparian areas, including all exterior mechanical equipment, should be screened, colored, or surfaced so as to blend with the riparian environment. Surfaces shall be non-polished/reflective or at least expected to lose their luster within a year. In addition to the specific standards and criteria applicable to water-dependent uses (docks), all other provisions of this chapter shall apply to water dependent uses, and any structure shall be no larger than necessary to accommodate the use.

Applicant Response: The deck and seating wall will be made of wood and concrete, respectively. These materials will blend with the natural area and its riparian environment.

N. Water-permeable materials for hardscapes. The use of water-permeable materials for parking lots, driveways, patios, and paths as well as flow-through planters, box filters, bioswales and drought tolerant plants are strongly encouraged in all "a" and "b" land classifications and shall be required in all "c" and "d" land classifications. The only exception in the "c" and "d" classifications would be where it is demonstrated that water-permeable driveways/hardscapes could not structurally support the axle weight of vehicles or equipment/storage load using those areas. Flow through planters, box filters, bioswales, drought tolerant plants and other measures of treating and/or detaining runoff would still be required in these areas.

Applicant Response: Not applicable. The proposed paths will be surfaced with sand-set pavers or gravel. These materials will allow water to percolate to the soil below.

O. Signs and graphics. No sign or graphic display inconsistent with the purposes of the protection area shall have a display surface oriented toward or visible from the Willamette or Tualatin River. A limited number of signs may be allowed to direct public access along legal routes in the protection area.

Applicant Response: Not applicable. No signs or graphics are proposed.

P. Lighting. Lighting shall not be focused or oriented onto the surface of the river except as required by the Coast Guard. Lighting elsewhere in the protection area shall be the minimum necessary and shall not create off-site glare or be omni-directional. Screens and covers will be required.

Applicant Response: Not applicable. No lighting is proposed.

Q. Parking. *Parking and unenclosed storage areas located within or adjacent to the protection area boundary shall be screened from the river in accordance with Chapter 46 CDC, Off-Street Parking, Loading and Reservoir Areas. The use of water-permeable material to construct the parking lot is either encouraged or required depending on HCA classification per CDC 28.110(N)(4).*

Applicant Response: Not applicable. No parking is proposed in conjunction with this application.

R. Views. *Significant views of the Willamette and Tualatin Rivers shall be protected as much as possible as seen from the following public viewpoints: Mary S. Young Park, Willamette Park, Cedar Oak Park, Burnside Park, Maddox Park, Cedar Island, the Oregon City Bridge, Willamette Park, and Fields Bridge Park.*

Where options exist in the placement of ramps and docks, the applicant shall select the least visually intrusive location as seen from a public viewpoint. However, if no options exist, then the ramp, pilings and dock shall be allowed at the originally proposed location.

Applicant Response: Not applicable. No significant view of the Willamette River would be impacted by the proposed improvements to the rear yard of the applicants' home.

S. Aggregate deposits. *Extraction of aggregate deposits or dredging shall be conducted in a manner designed to minimize adverse effects on water quality, fish and wildlife, vegetation, bank stabilization, stream flow, visual quality, noise and safety, and to promote necessary reclamation.*

Applicant Response: Not applicable. No extraction of aggregate or dredging is proposed.

T. Changing the landscape/grading.

1. *Existing predominant topographical features of the bank line and escarpment shall be preserved and maintained except for disturbance necessary for the construction or establishment of a water related or water dependent use. Measures necessary to reduce potential bank and escarpment erosion, landslides, or flood hazard conditions shall also be taken.*

Any construction to stabilize or protect the bank with rip rap, gabions, etc., shall only be allowed where there is clear evidence of erosion or similar hazard and shall be the minimum needed to stop that erosion or to avoid a specific and identifiable hazard. A geotechnical engineer's stamped report shall accompany the application with evidence to support the proposal.

Applicant Response: The only significant grading is in the vicinity of the hot tub deck and for the excavation needed to provide compensating volume for the small amount of fill of the hot tub and wall improvements. This grading is located near the existing home and will not have any impact on the riverbank. The bank along the property is rocky and not subject to erosion.

2. The applicant shall establish to the satisfaction of the approval authority that steps have been taken to minimize the impact of the proposal on the riparian environment (areas between the top of the bank and the low water mark of the river including lower terrace, beach and river edge).

Applicant Response: As noted above, the grading change is located near the existing home and well away from the river. The proposed grading will be protected with erosion control measures during construction and then planted so as to avoid erosion following construction.

3. The applicant shall demonstrate that stabilization measures shall not cause subsequent erosion or deposits on upstream or downstream properties.

Applicant Response: Please see the Theta Engineering plan/report for discussion of erosion control measures.

4. Prior to any grading or development, that portion of the HCA that includes wetlands, creeks, riparian areas and water resource area shall be protected with an anchored chain link fence (or approved equivalent) at its perimeter and shall remain undisturbed except as specifically allowed by an approved Willamette and Tualatin River Protection and/or water resource area (WRA) permit. Such fencing shall be maintained until construction is complete. That portion of the HCA that includes wetlands, creeks, riparian areas and water resource area shall be identified with City-approved permanent markers at all boundary direction changes and at 30- to 50-foot intervals that clearly delineate the extent of the protected area.

Applicant Response: No grading is located near the portion of the HCA that contains the river bank and natural riparian area. The erosion control measures proposed will ensure that the riparian area and riverbank are not impacted by this grading.

5. Full erosion control measures shall be in place and approved by the City Engineer prior to any grading, development or site clearing.

Applicant Response: The proposed erosion control measures will be submitted for review by the City Engineer approval and will be in place before associated grading/clearing begins.

U. Protect riparian and adjacent vegetation. Vegetative ground cover and trees upon the site shall be preserved, conserved, and maintained according to the following provisions:

Applicant Response: No development is proposed that will impact the riparian area and riverbank.

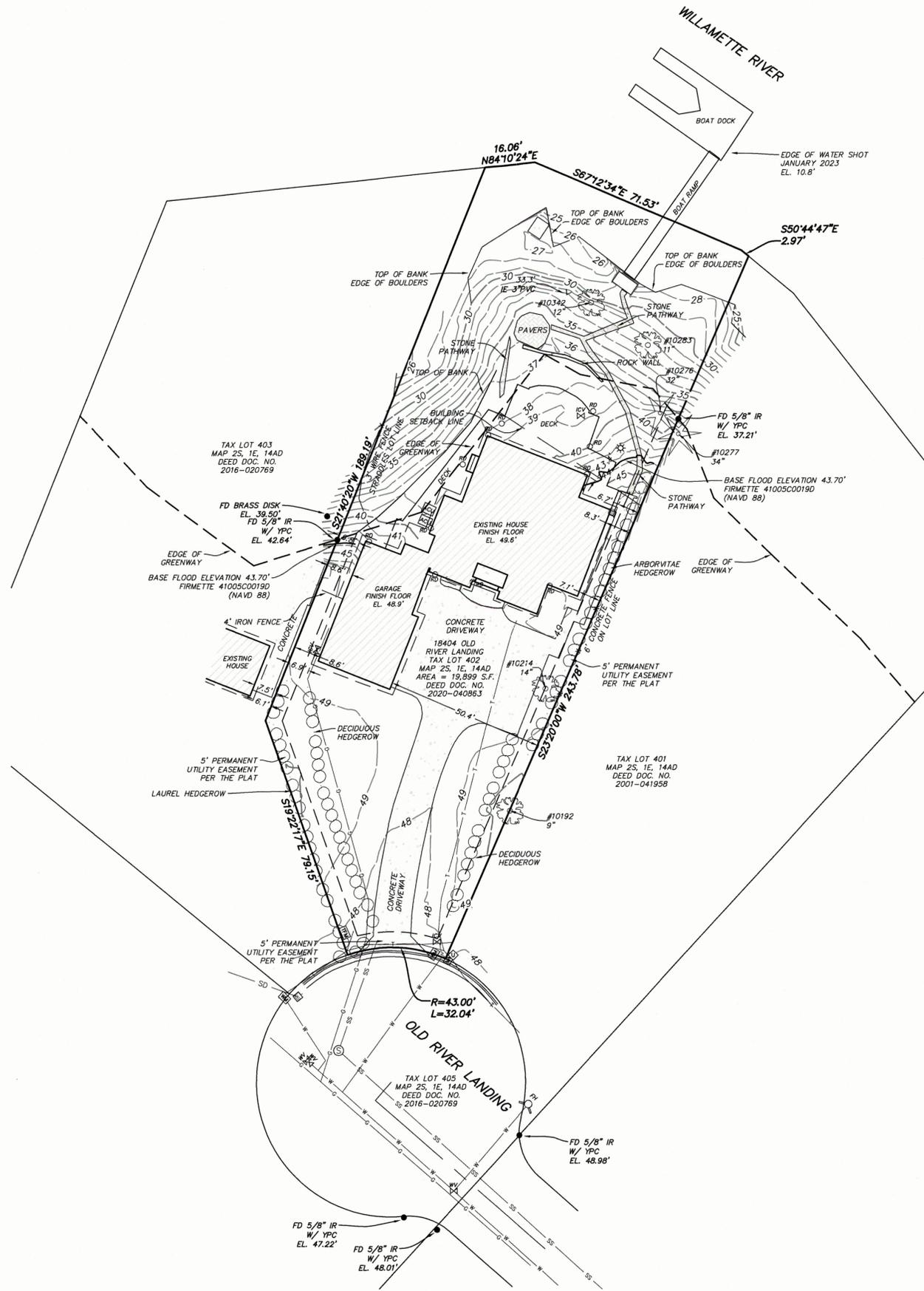
28.160 MITIGATION PLAN

If any HCA is permanently disturbed as a result of the proposed development of any uses or structures, the applicant shall prepare and implement a revegetation and mitigation plan pursuant to the provisions of CDC 32.070 and 32.080. (Ord. 1576, 2008)

Applicant Response: The plantings proposed on the landscape plan will serve as mitigation for the minimal impacts of this project.

EXISTING CONDITIONS MAP

TAX LOT 402, MAP 2S, 1E, 14AD
 LOCATED IN THE N.E. 1/4 SECTION 23, T.1N., R.1E., W.M.
 CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON
 JANUARY 27, 2023 SCALE 1"=20'



SURVEY NOTES:

THE DATUM FOR THIS SURVEY IS BASED UPON A STATIC GPS OBSERVATION OF LOCAL CONTROL POINTS, PROCESSED THROUGH OPUS. DATUM IS NAVD 88.

A TRIMBLE S6-SERIES ROBOTIC INSTRUMENT WAS USED TO COMPLETE A CLOSED LOOP FIELD TRAVERSE.

THE BASIS OF BEARINGS FOR THIS SURVEY IS PER MONUMENTS FOUND AND HELD PER THE PLAT OF "WILLAMETTE SHORES", RECORDS OF CLACKAMAS COUNTY.

THE PURPOSE OF THIS SURVEY IS TO RESOLVE AND DETERMINE THE PERIMETER BOUNDARY OF THE SUBJECT PROPERTY, TO SHOW ALL PERTINENT BOUNDARY ISSUES AND ENCROACHMENTS. NO PROPERTY CORNERS WERE SET IN THIS SURVEY.

NO WARRANTIES ARE MADE AS TO MATTERS OF UNWRITTEN TITLE, SUCH AS ADVERSE POSSESSION, ESTOPPEL, ACQUIESCENCE, ETC.

NO TITLE REPORT WAS SUPPLIED OR USED IN THE PREPARATION OF THIS MAP.

UTILITY NOTES:

THE UNDERGROUND UTILITIES AS SHOWN ON THIS MAP ARE SHOWN BASED ON A COMBINATION OF INFORMATION, INCLUDING VISIBLE ABOVE GROUND STRUCTURES, AVAILABLE AS BUILT AND GIS MAPPING FROM LOCAL JURISDICTIONS, AS WELL AS SURFACE MARKINGS BY ONE CALL TICKET NUMBER 22360690 DATED JANUARY 6, 2023.

THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.

THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

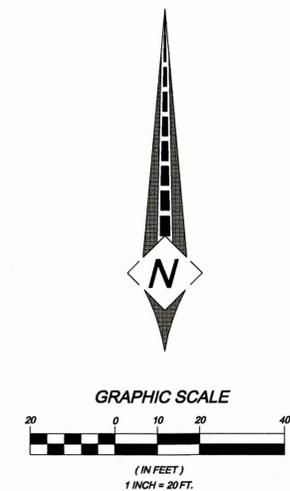
THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS TRACT. THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY SURVEYOR.

INVERT ELEVATIONS AND PIPE SIZES SHOWN ARE APPROXIMATE ONLY, BASED ON FIELD OBSERVATIONS AS WELL AS AVAILABLE AS-BUILT DATA. ALL PIPE SIZES SHALL BE FIELD VERIFIED BY THE OWNER, ENGINEER, CONTRACTOR, AND GOVERNING AGENCY PRIOR TO ANY CONSTRUCTION ACTIVITY. SURVEYOR DOES NOT WARRANT THE ACCURACY OF ANY PIPE SIZES SHOWN ON THIS SURVEY.

LEGEND:

Some Symbols shown may not be used on map

- | | |
|----------------------------|--------------------------|
| 12" DECIDUOUS TREE | SSP TRAFFIC SIGNAL POLE |
| 24" EVERGREEN TREE | UTILITY POLE |
| DEAD TREE | LIGHT POLE |
| STORM SEWER MANHOLE | GUY WIRE |
| CATCH BASIN | ELECTRIC BOX |
| CURB INLET | ELECTRIC METER |
| AREA DRAIN | TRANSFORMER |
| DITCH INLET | ELECTRIC RISER |
| SANITARY SEWER CLEANOUT | HEAT PUMP |
| SANITARY SEWER MANHOLE | GATE POST |
| FIRE HYDRANT | CABLE TV BOX |
| WATER MANHOLE | CABLE TV RISER |
| WATER METER | OVERHEAD LINE |
| WATER VALVE | GAS LINE |
| HOSE BIB | ELECTRICAL LINE |
| IRRIGATION CONTROL VALVE | COMMUNICATIONS LINE |
| GAS VALVE | SANITARY SEWER LINE |
| GAS METER | STORM DRAIN LINE |
| MAILBOX | WATER LINE |
| UTILITY RISER | FENCE LINE |
| UTILITY BOX | HANDRAIL |
| UTILITY LINE MARKER | HEDGEROW |
| TELEPHONE MANHOLE | CONCRETE |
| TELEPHONE RISER | GRAVEL |
| STORM OUTFALL | ASPHALT |
| SIGN | FD = FOUND |
| BOLLARD | IP = IRON PIPE |
| FOUND MONUMENT | IR = IRON ROD |
| DOWN SPOUT TO STORM SYSTEM | YPC = YELLOW PLASTIC CAP |
| DOWN SPOUT TO GROUND | ALC = ALUMINUM CAP |
| DOWN SPOUT TO OUTFALL | RPC = RED PLASTIC CAP |
| COLUMN | OPC = ORANGE PLASTIC CAP |



SIGNED ON: 3/10/23
REGISTERED PROFESSIONAL LAND SURVEYOR

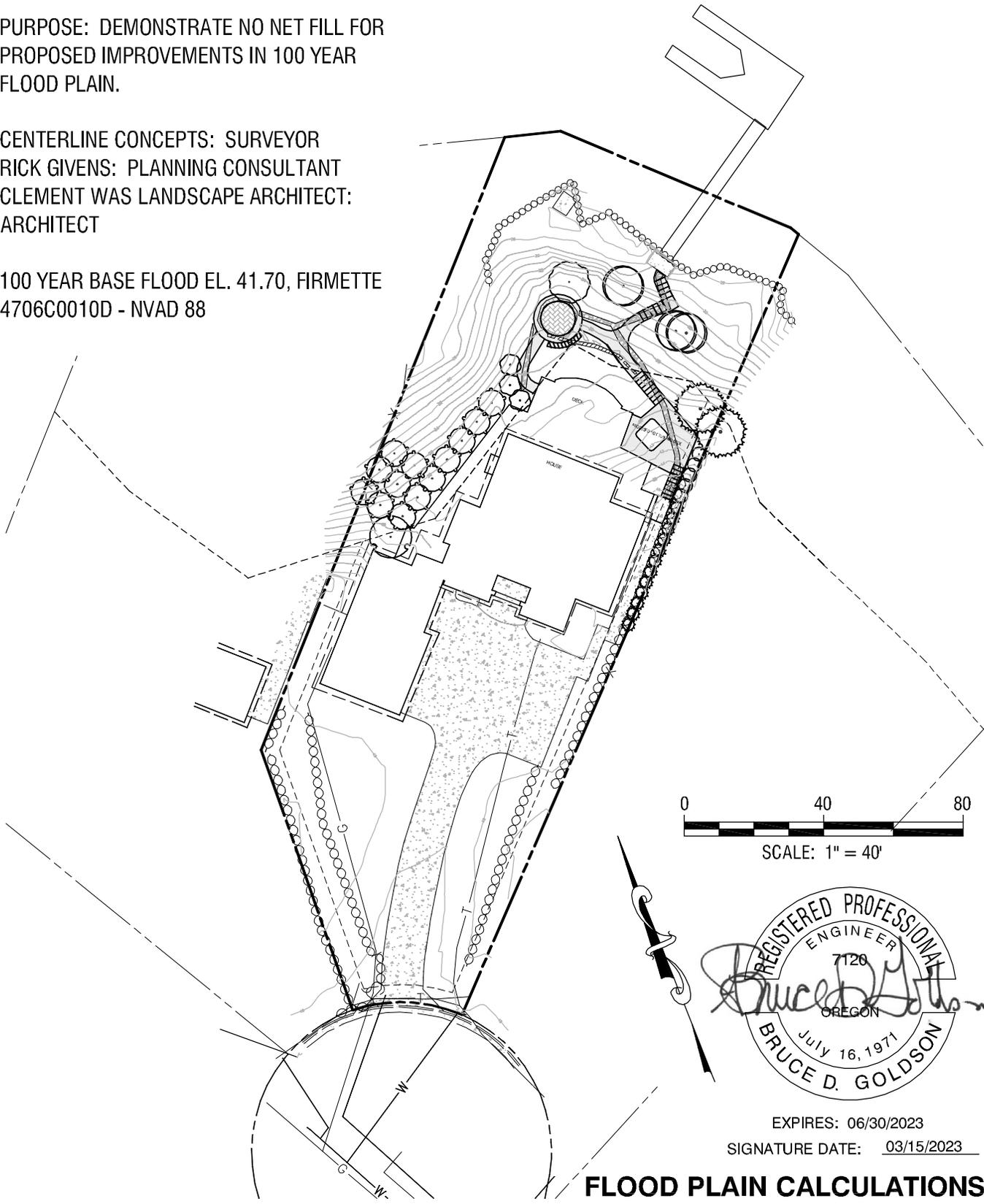
OREGON
 JULY 13, 2004
TOBY G. BOLDEN
 60377LS
 RENEWS: DECEMBER 31, 2023

CENTERLINE CONCEPTS
LAND SURVEYING, INC.
 19376 MOLALLA AVE., SUITE 120
 OREGON CITY, OREGON 97045
 PHONE 503.650.0188 FAX 503.650.0189

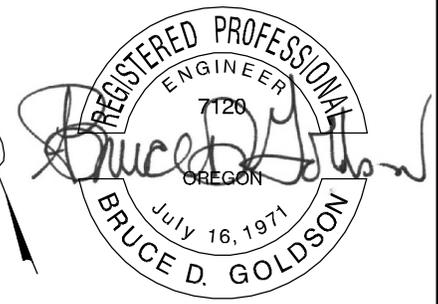
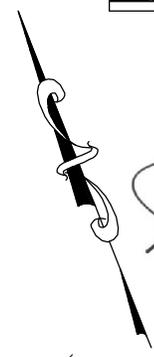
PURPOSE: DEMONSTRATE NO NET FILL FOR
PROPOSED IMPROVEMENTS IN 100 YEAR
FLOOD PLAIN.

CENTERLINE CONCEPTS: SURVEYOR
RICK GIVENS: PLANNING CONSULTANT
CLEMMENT WAS LANDSCAPE ARCHITECT:
ARCHITECT

100 YEAR BASE FLOOD EL. 41.70, FIRMETTE
4706C0010D - NVAD 88



SCALE: 1" = 40'



EXPIRES: 06/30/2023

SIGNATURE DATE: 03/15/2023

FLOOD PLAIN CALCULATIONS SITE PLAN

2023-458

Theta, llc

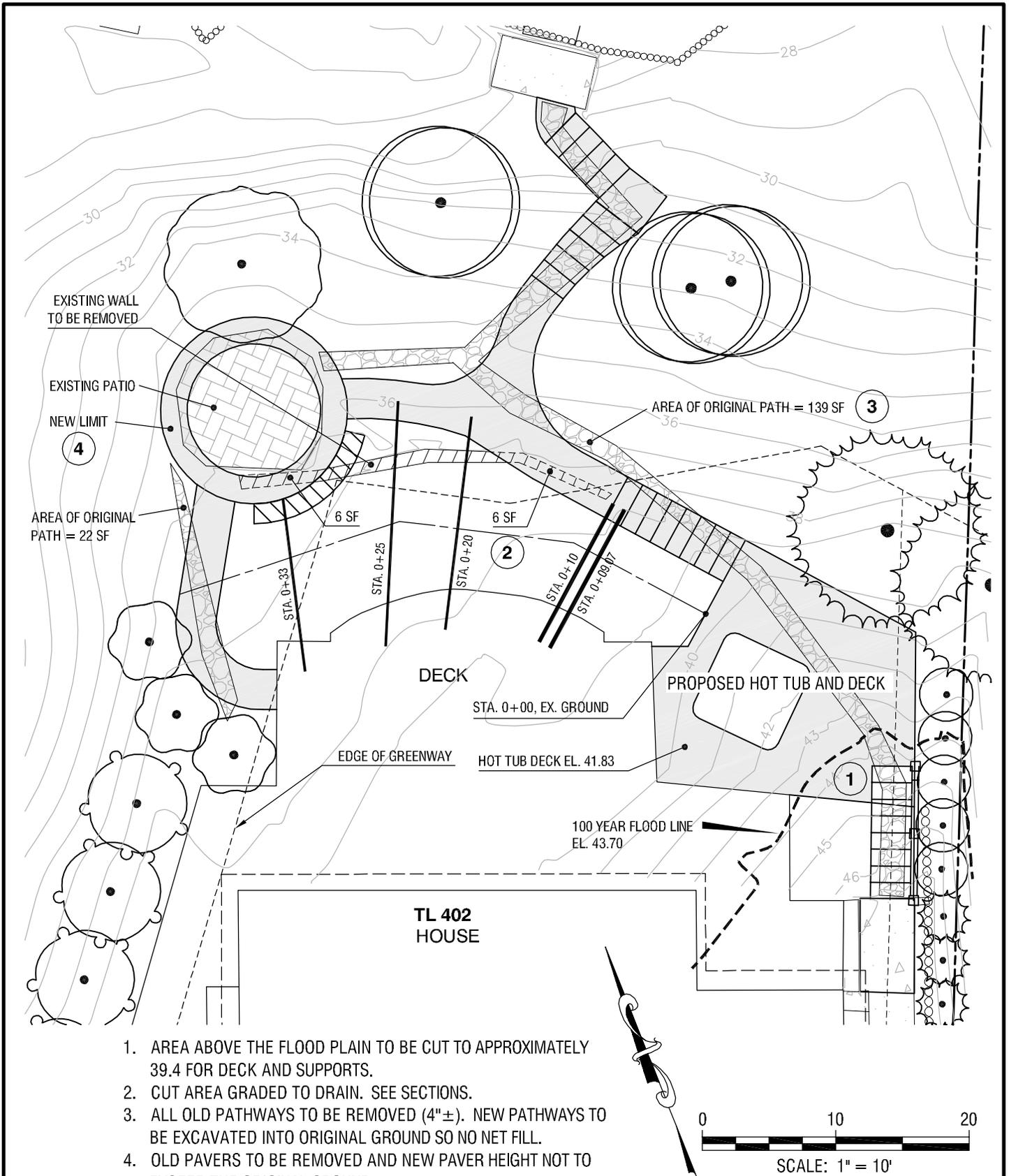
ENGINEERING - SURVEYING - PLANNING

PO Box 1345
West Linn, Oregon 97035

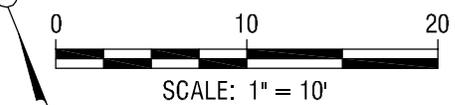
503-481-8822
email: thetaeng@comcast.net

18404 Old River Landing
West Linn, Oregon

1
7



1. AREA ABOVE THE FLOOD PLAIN TO BE CUT TO APPROXIMATELY 39.4 FOR DECK AND SUPPORTS.
2. CUT AREA GRADED TO DRAIN. SEE SECTIONS.
3. ALL OLD PATHWAYS TO BE REMOVED (4"±). NEW PATHWAYS TO BE EXCAVATED INTO ORIGINAL GROUND SO NO NET FILL.
4. OLD PAVERS TO BE REMOVED AND NEW PAVER HEIGHT NOT TO EXCEED THE ORIGINAL GROUND.



PROPOSED

2023-458

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email: thetaeng@comcast.net

18404 Old River Landing
West Linn, Oregon

GRADING CALCULATIONS

STATION	DISTANCE	CUT	AVE. CUT	VOLUME
0+00		0		
	9.07		2	18.1
0+09.7		4		
	0.93		4.5	4.2
0+10		5		
	10		6.5	65
0+20		8		
	5		7.5	37.5
0+25		7		
	8		5.5	44
0+33		4		
	5.4		2	10.8
0+33.4		0		
				179.5 C.F.

VOLUME ELEMENTS IN FLOOD PLAIN

1. CONCRETE FOOTINGS - 15.6 C.F.
2. 4 x 8 FRAME - 11.9 C.F.
3. 2 x 8 JOICE - 23.1 C.F.
4. BAMBOO DECKING - 15.2 C.F.
5. HOT TUB AND SUPPORT - 240 C.F.

TOTAL - 305.8 C.F.

REPLACEMENT VOLUME

1. GRADING AREA - 179.6 C.F.
 2. EXCAVATION ABOVE 100 YEAR - 159.0 C.F.
 3. REMOVAL OF EXISTING PATHWAY (0.33") - 57.0 C.F.
- TOTAL - 395.6 C.F.

FILL IMPACT TO THE 100 YEAR AREA IS 305.8 C.F. AND
THE REPLACEMENT AREA IS 395.6 C.F.

2023-458

CALCULATIONS AND SUMMARY

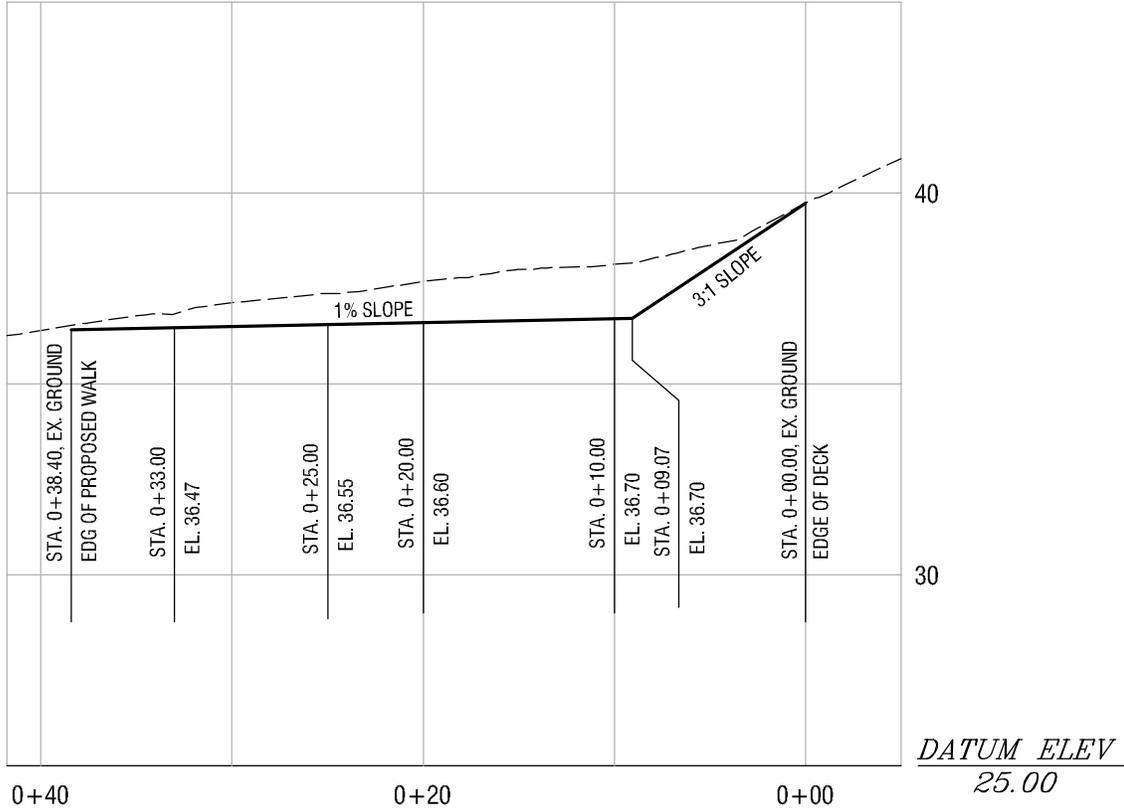
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503-481-8822
email: thetaeng@comcast.net

18404 Old River Landing
West Linn, Oregon



EXISTING GROUND PROFILE

SCALE: 1" = 10' HORIZONTAL
1" = 5' VERTICAL

2023-458

**PROFILE FOR GRADING
SEE NOTE 2, SHEET 2**

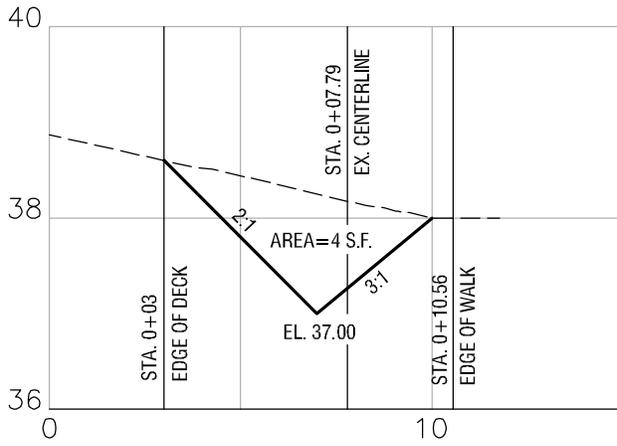
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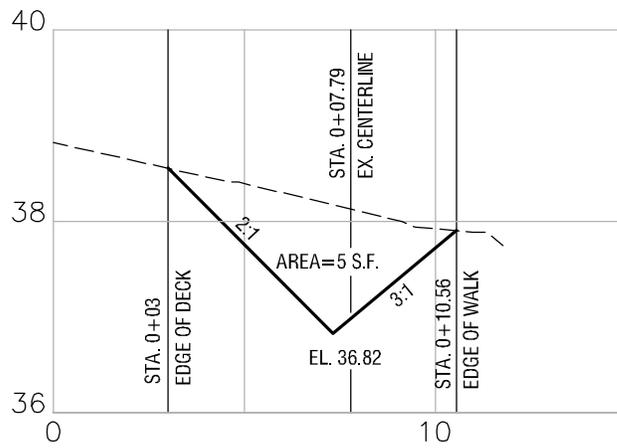
503-481-8822
email: thetaeng@comcast.net

18404 Old River Landing
West Linn, Oregon



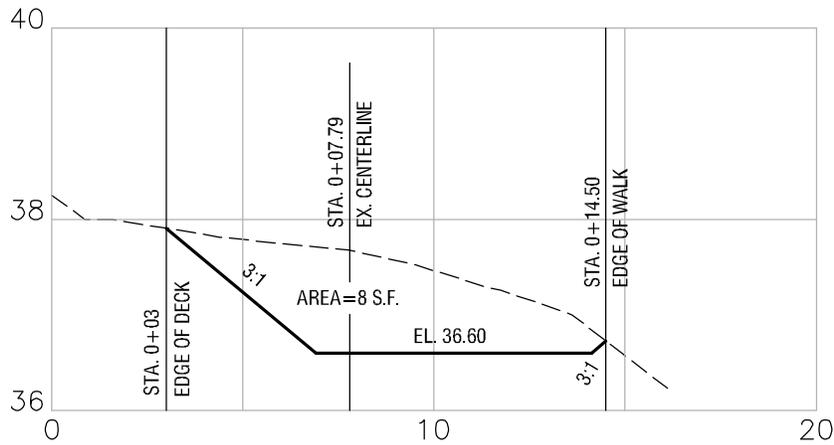
STA. 0+09.07 SECTION

SCALE: 1" = 5' HORIZONTAL
1" = 2' VERTICAL



STA. 0+10 SECTION

SCALE: 1" = 5' HORIZONTAL
1" = 2' VERTICAL



STA. 0+20 SECTION

SCALE: 1" = 5' HORIZONTAL
1" = 2' VERTICAL

**GRADING SECTIONS
SEE NOTE 2, SHEET 2**

2023-458

Theta, llc

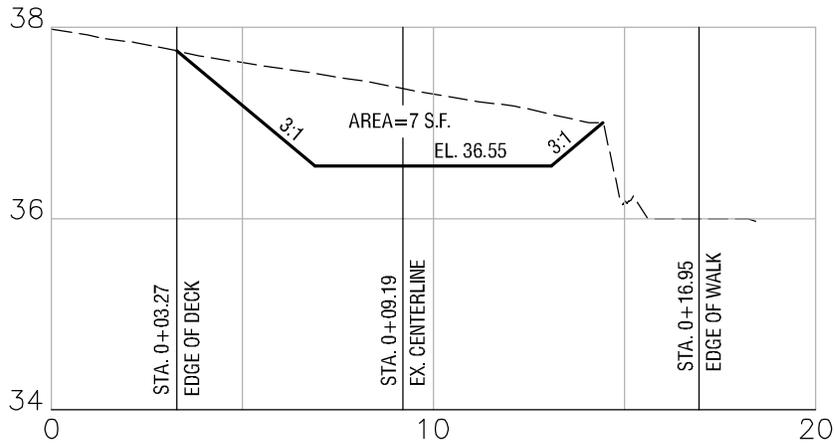
ENGINEERING - SURVEYING - PLANNING

PO Box 1345
West Linn, Oregon 97035

503-481-8822
email: thetaeng@comcast.net

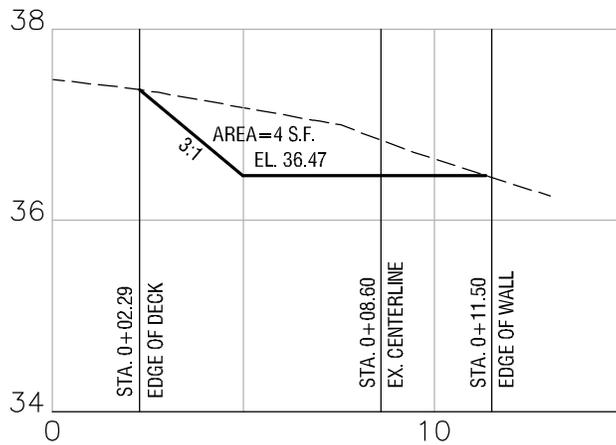
**18404 Old River Landing
West Linn, Oregon**

**5
7**



STA. 0+25 SECTION

SCALE: 1" = 5' HORIZONTAL
 1" = 2' VERTICAL



STA. 0+33 SECTION

SCALE: 1" = 5' HORIZONTAL
 1" = 2' VERTICAL

2023-458

**GRADING SECTIONS
 SEE NOTE 2, SHEET 2**

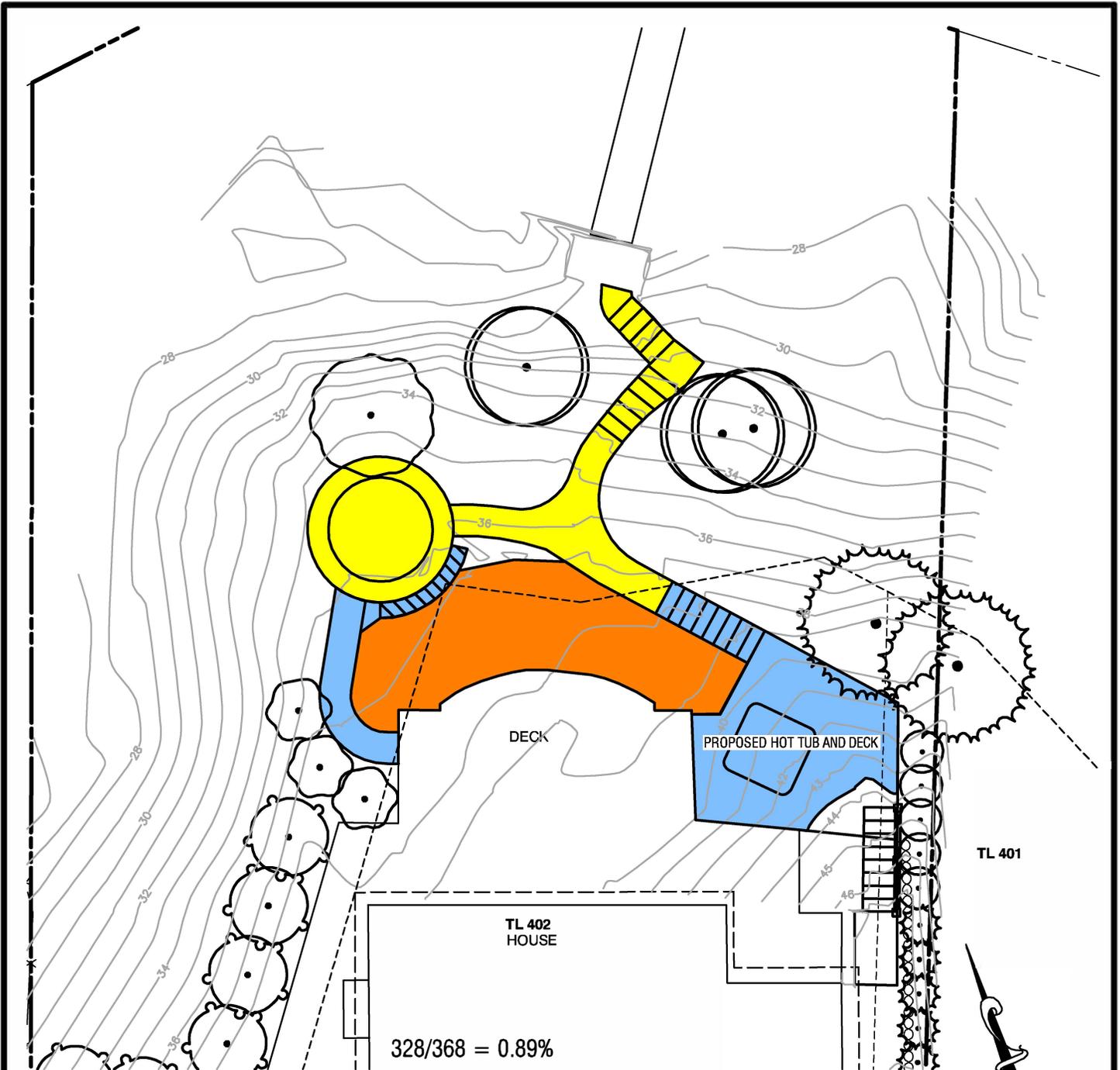
Theta, llc

ENGINEERING - SURVEYING - PLANNING

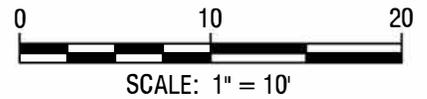
PO Box 1345
 West Linn, Oregon 97035

503-481-8822
 email: thetaeng@comcast.net

18404 Old River Landing
 West Linn, Oregon



- AREA OF NEW STRUCTURES IN FLOOD PLAIN
AREA = 368 S.F.
- AREA OF ADDITIONAL STORAGE
AREA = 328 S.F.
- AREA OF NEW STRUCTURES IN FLOOD PLAIN
WITH NO CHANGE IN VOLUME
AREA = 344 S.F.



2023-458

AREA CALCULATION

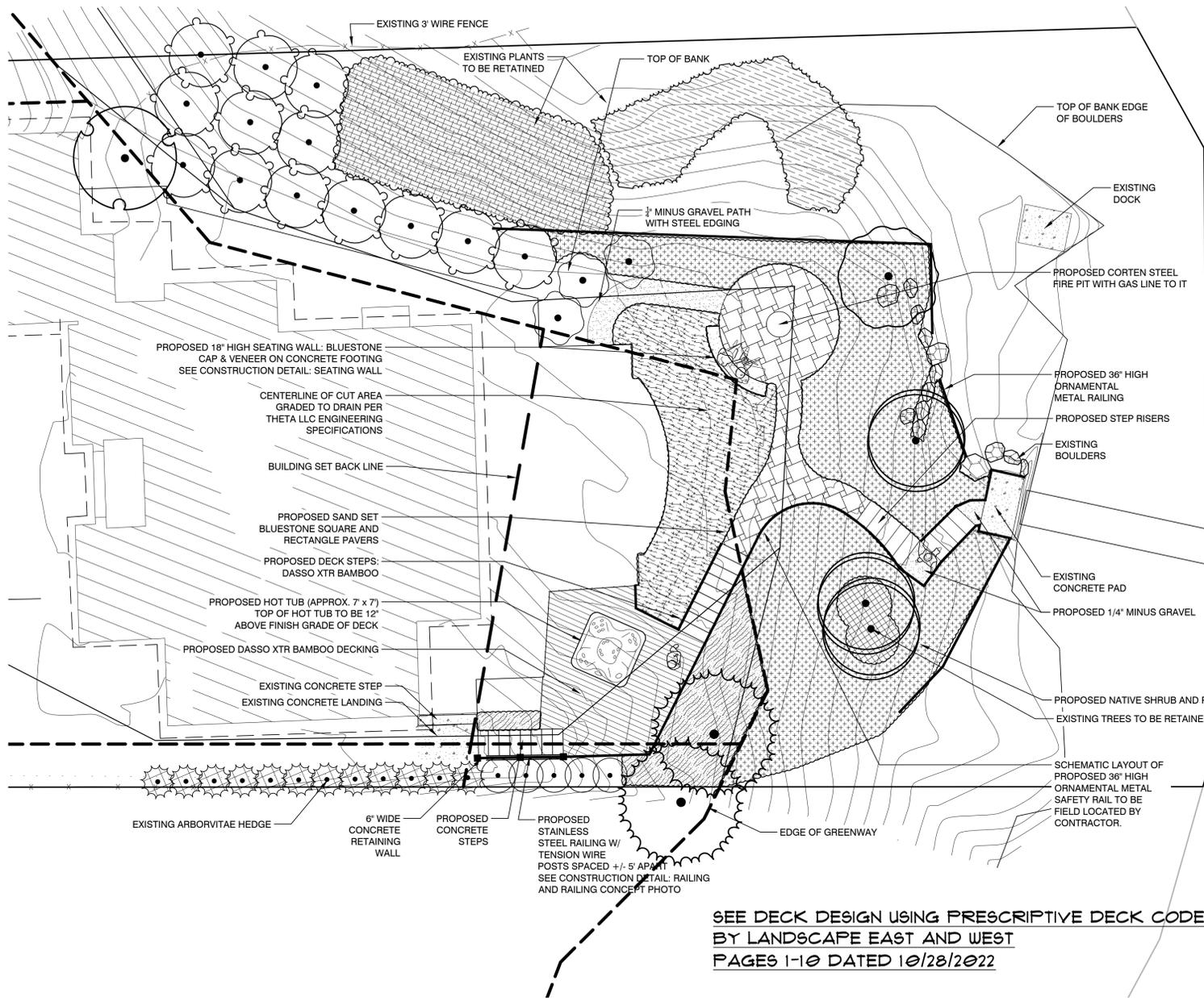
Theta, llc

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West Linn, Oregon 97035

503-481-8822
email: thetaeng@comcast.net

18404 Old River Landing
West Linn, Oregon



SEE DECK DESIGN USING PRESCRIPTIVE DECK CODE
BY LANDSCAPE EAST AND WEST
PAGES 1-10 DATED 10/28/2022

GENERAL NOTES:

- This is a Schematic/Conceptual Drawing. Property lines, house layout, structures, trees, and the landscape layout represented on this plan are conceptual in nature.
- Location of existing trees shall be verified in the field by the contractor prior to commencement of work.
- Contractor is to notify the landscape architect or owner's representative:
 - of any discrepancies or conflicts with existing conditions prior to commencement of any work
 - of any site changes that may be detrimental to plant health or cause future problems.
 - if specified materials or methods are not consistent with local climate and/or practices.

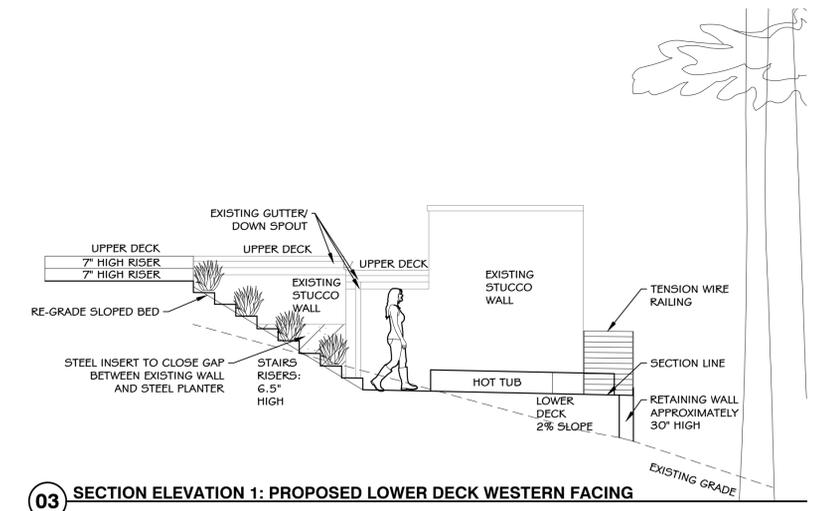
SCHEDULE

- NATIVE PLANTING
- ORNAMENTAL PLANTING
- NATIVE SWALE PLANTING
- EXISTING TREES TO BE RETAINED
- ROCK WALL w/ EXISTING STONE FROM SITE
- 1/4 MINUS w/ STEEL EDGING
- CAST-IN-PLACE CONCRETE
- SAND-SET PAVERS
- DASSO XTR BAMBOO DECKING

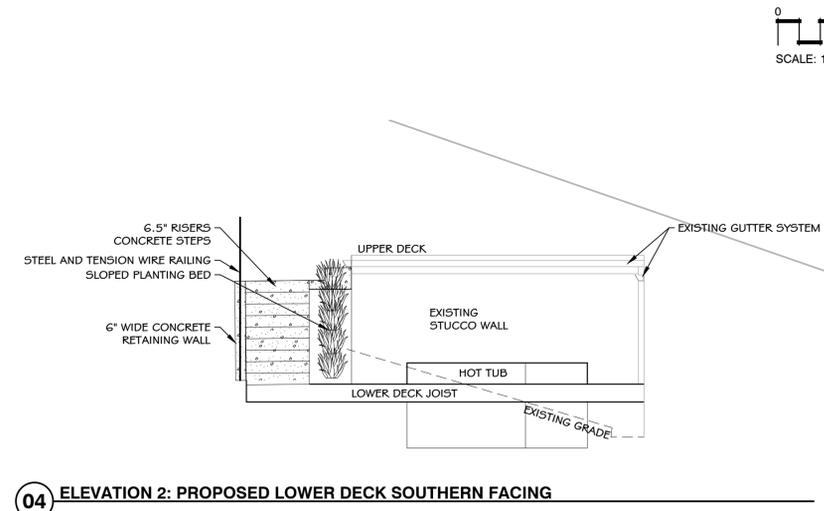
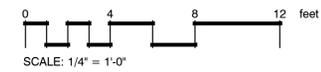


01 LANDSCAPE PLAN

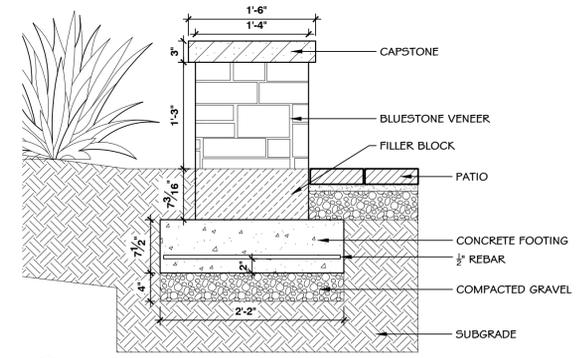
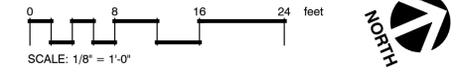
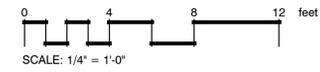
02 CONCEPT PHOTO: DECK RAILING - STEEL AND TENSION WIRE



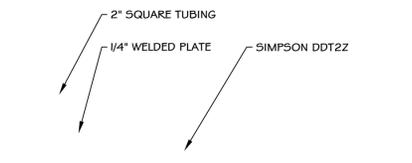
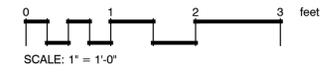
03 SECTION ELEVATION 1: PROPOSED LOWER DECK WESTERN FACING



04 ELEVATION 2: PROPOSED LOWER DECK SOUTHERN FACING



05 CONSTRUCTION DETAIL: SEATING WALL



06 CONSTRUCTION DETAIL: DECK RAILING
NOT TO SCALE

NO.	DATE	REVISIONS

REGISTERED
957
Clement M. Walsh
OREGON
11/30/2023
LANDSCAPE ARCHITECT

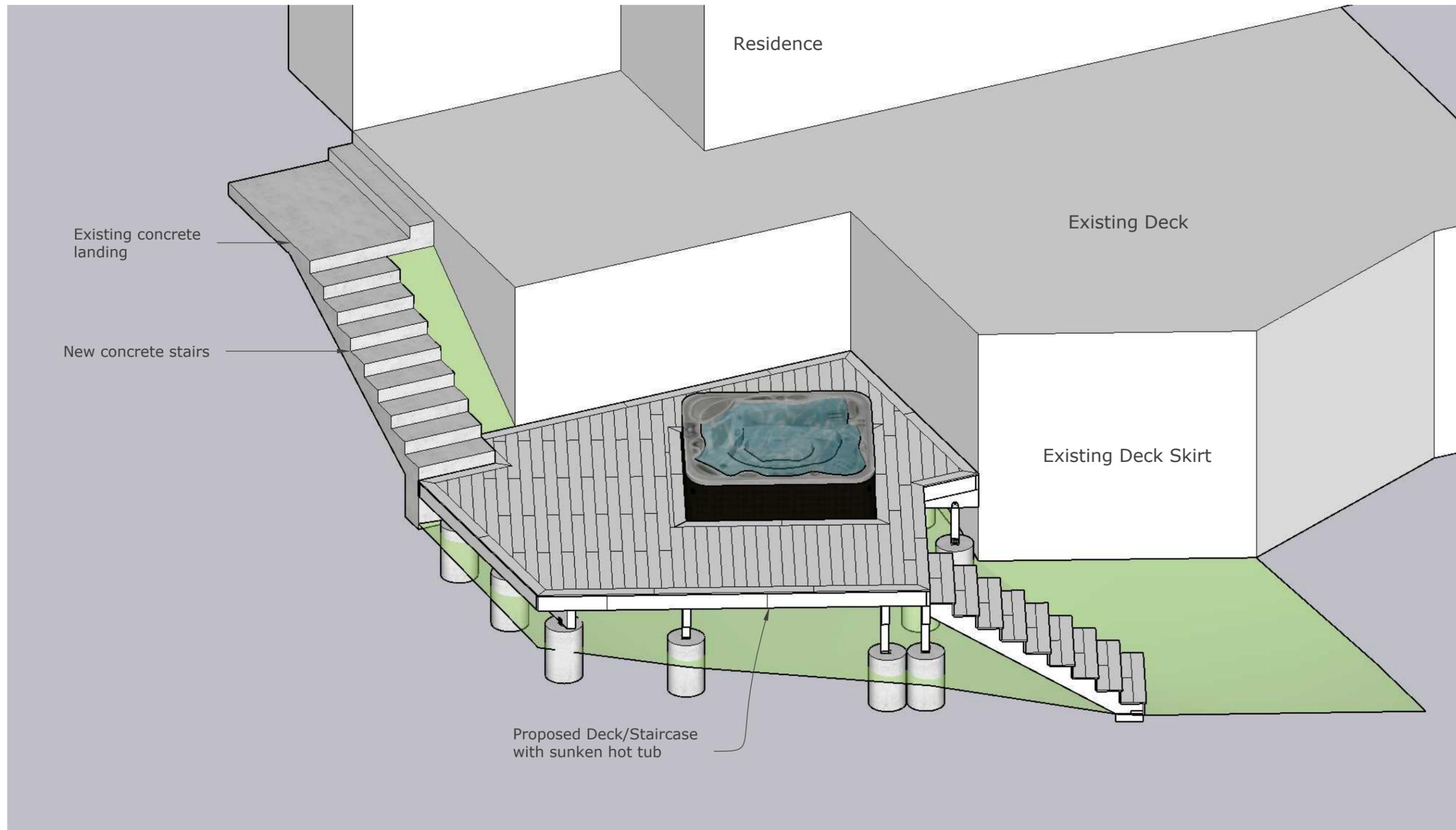
Clement Walsh
Landscape Architect Inc.

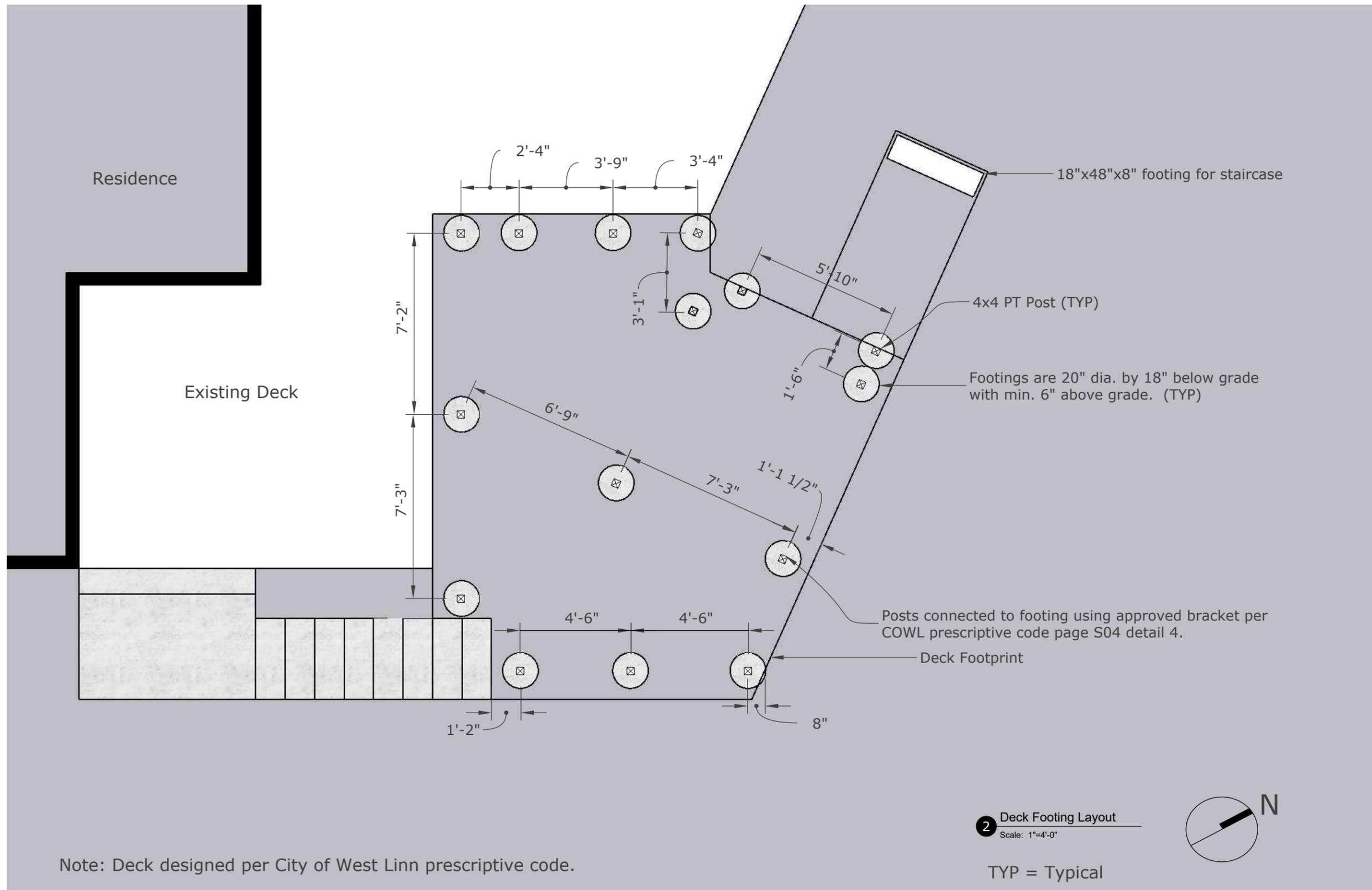
SMITH RESIDENCE
18404 Old River Landing
West Linn, OR 97034

LANDSCAPE PLAN

DATE: 2023.03.21
SCALE: NOTED
DRAWN: JK
CHECKED: CW
SHEET NO.

L100
1 of 1

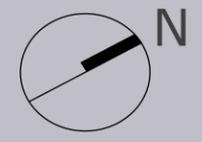




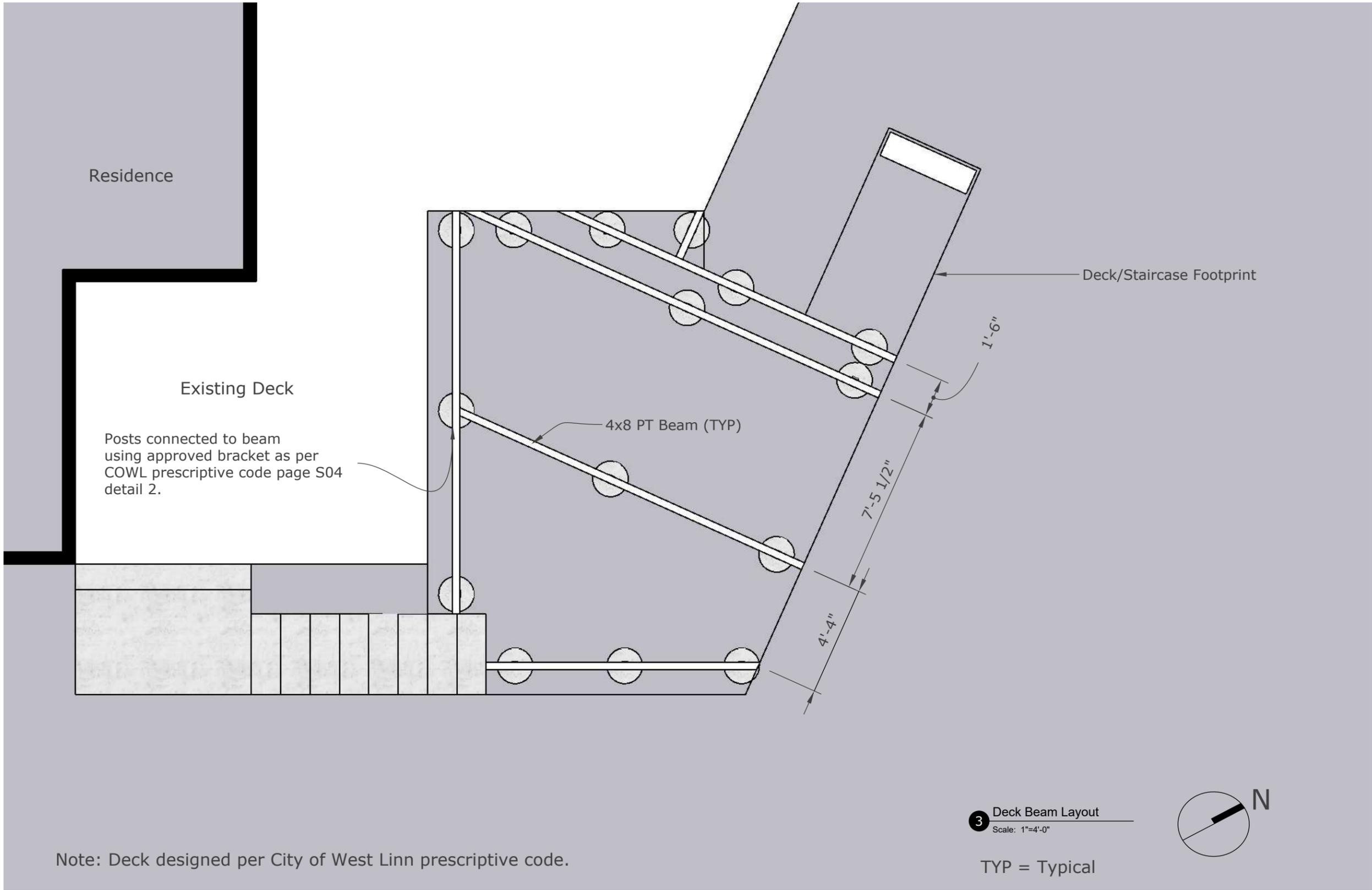
Note: Deck designed per City of West Linn prescriptive code.

2 Deck Footing Layout
Scale: 1"=4'-0"

TYP = Typical



Footing Plan



Residence

Existing Deck

Posts connected to beam using approved bracket as per COWL prescriptive code page S04 detail 2.

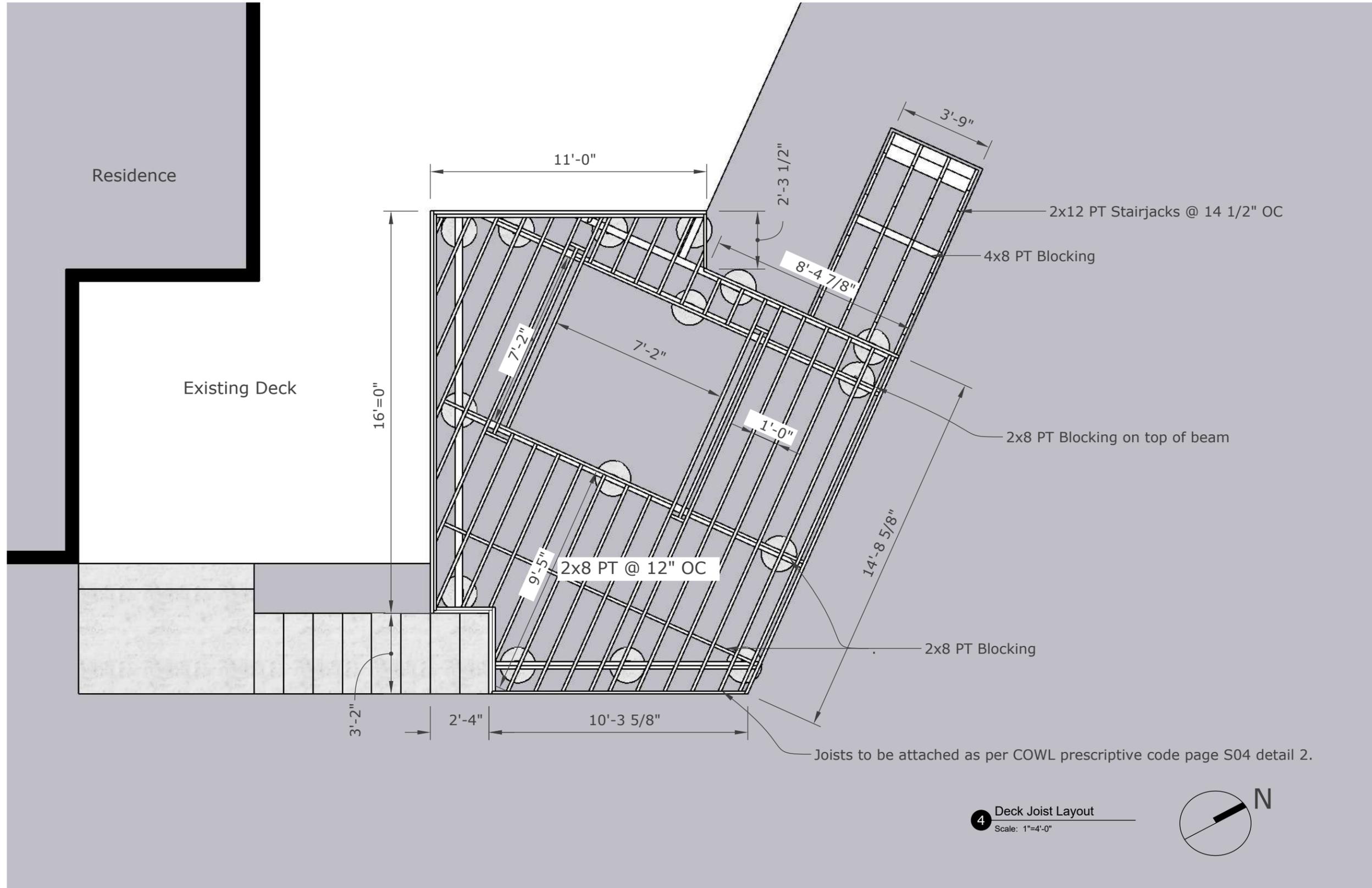
4x8 PT Beam (TYP)

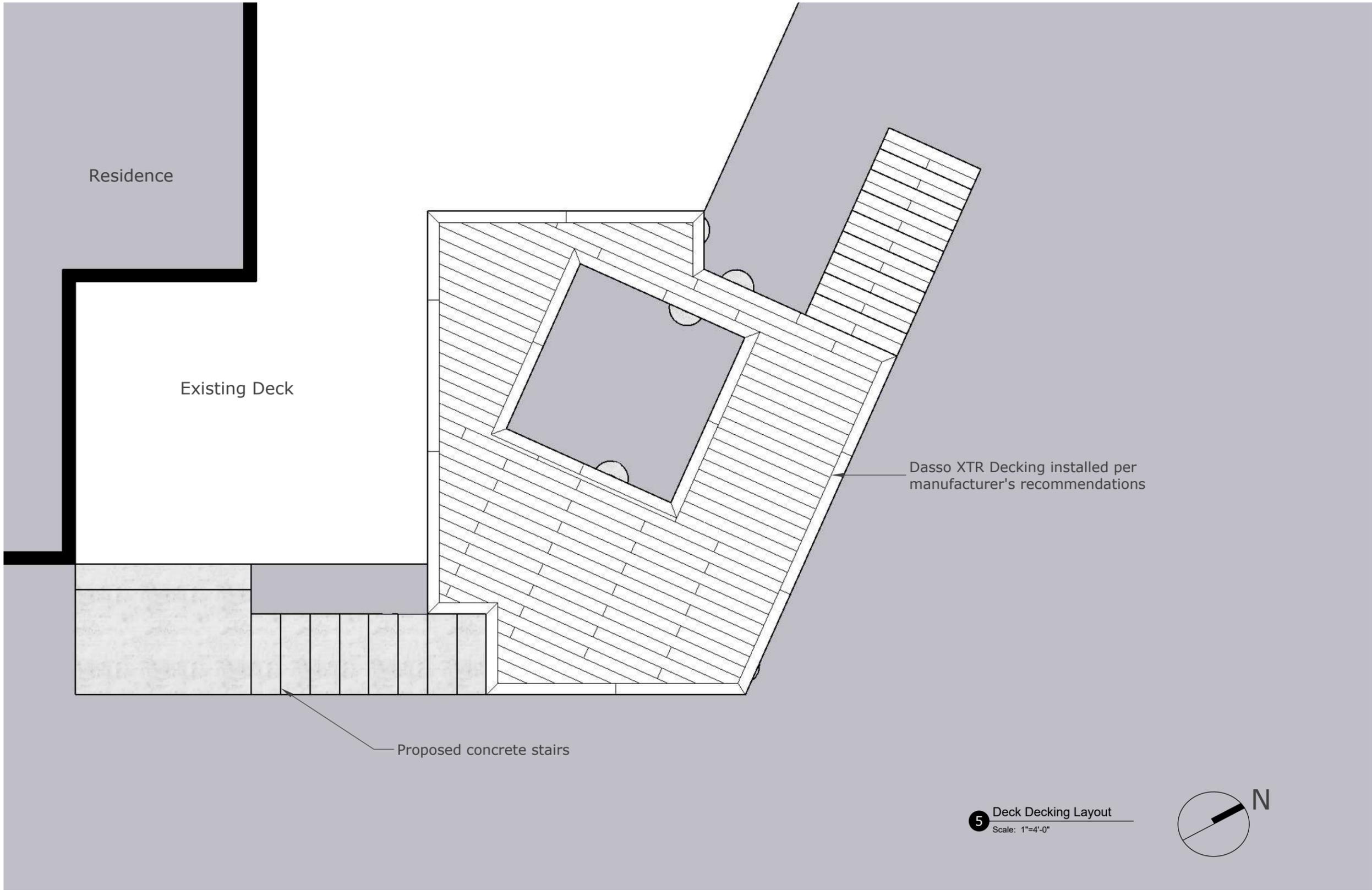
Deck/Staircase Footprint

3 Deck Beam Layout
Scale: 1"=4'-0"

TYP = Typical

Note: Deck designed per City of West Linn prescriptive code.





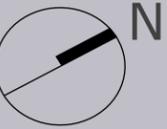
Residence

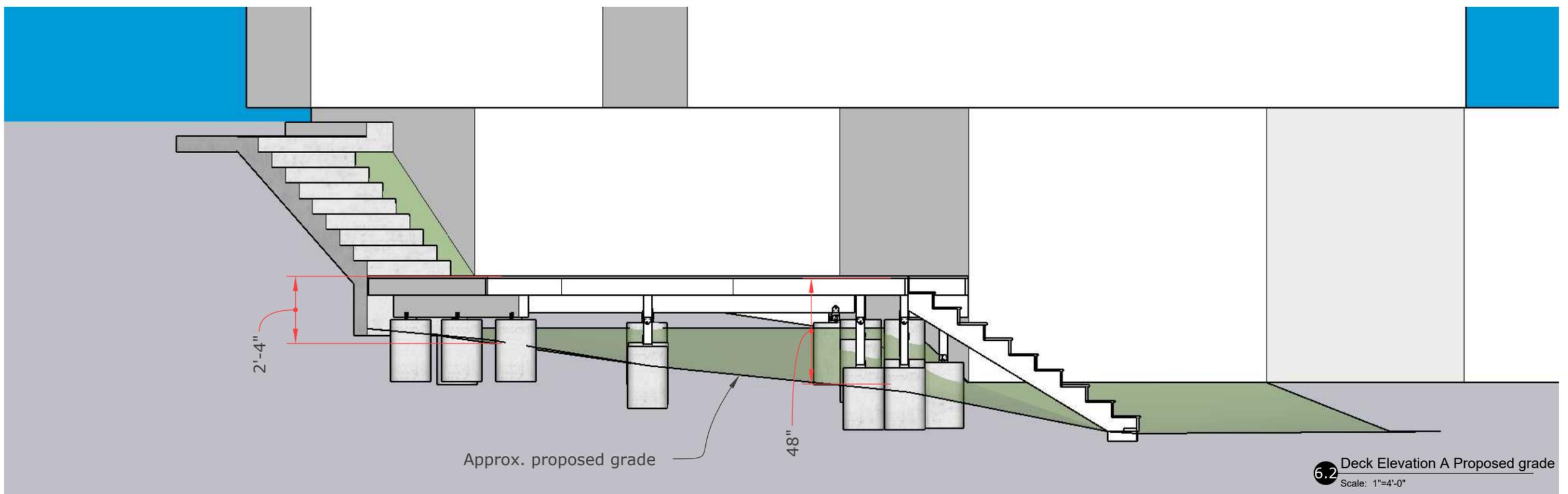
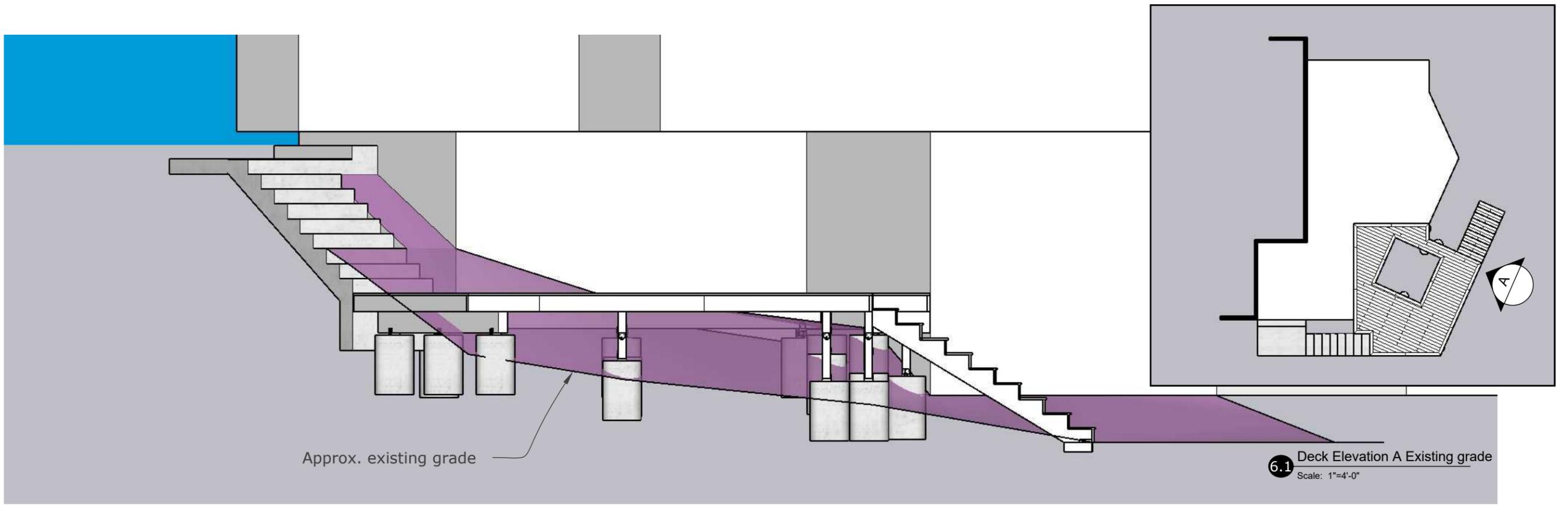
Existing Deck

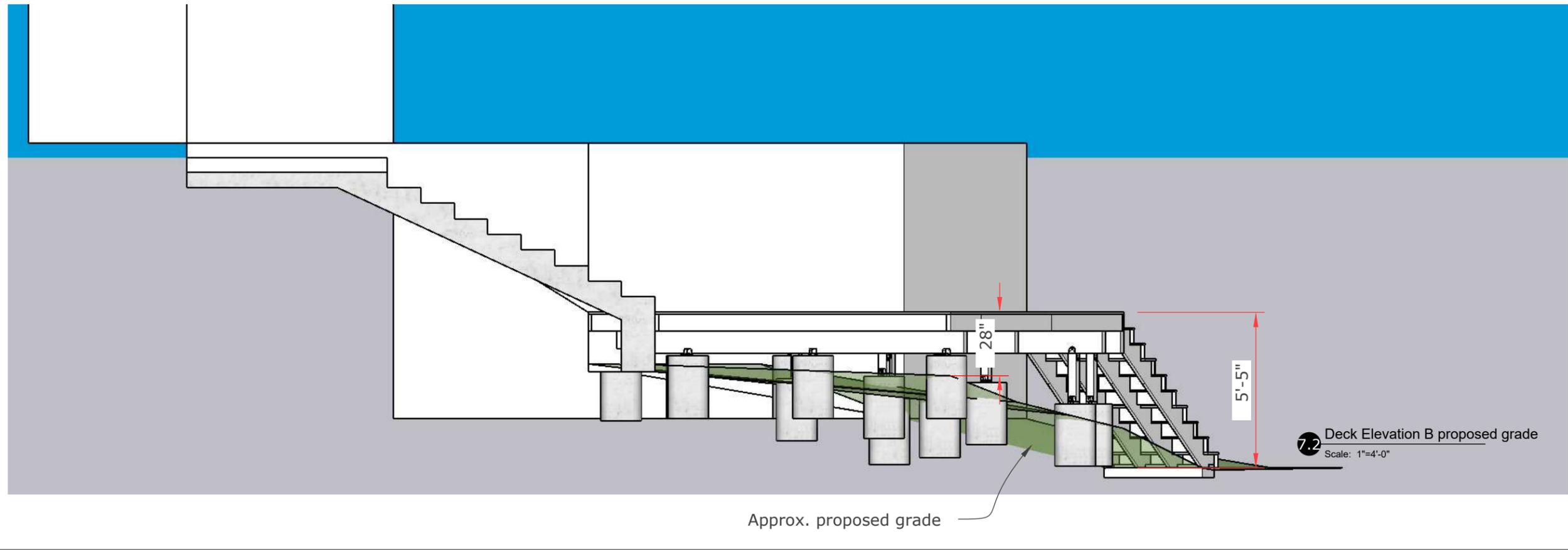
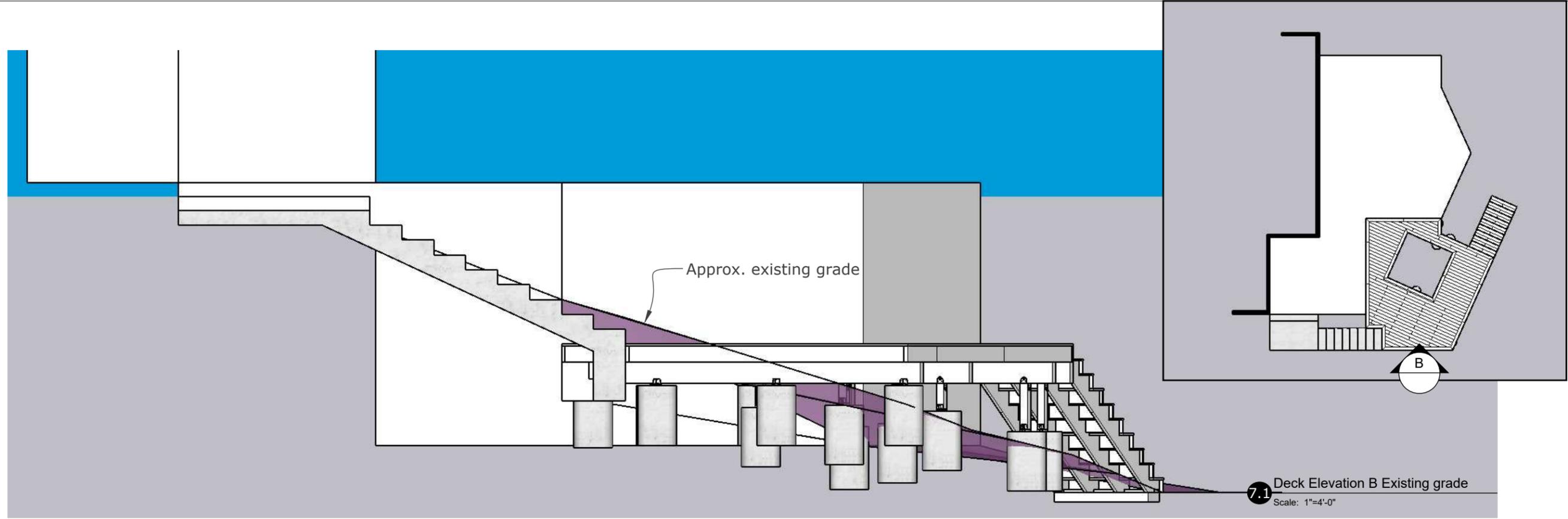
Dasso XTR Decking installed per manufacturer's recommendations

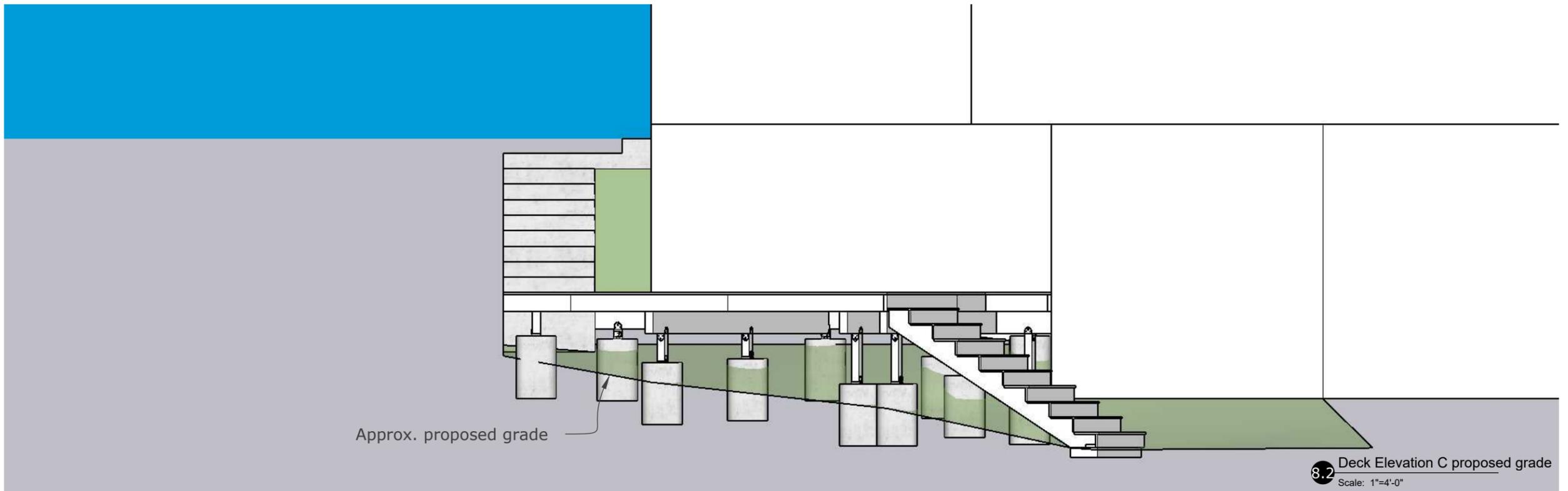
Proposed concrete stairs

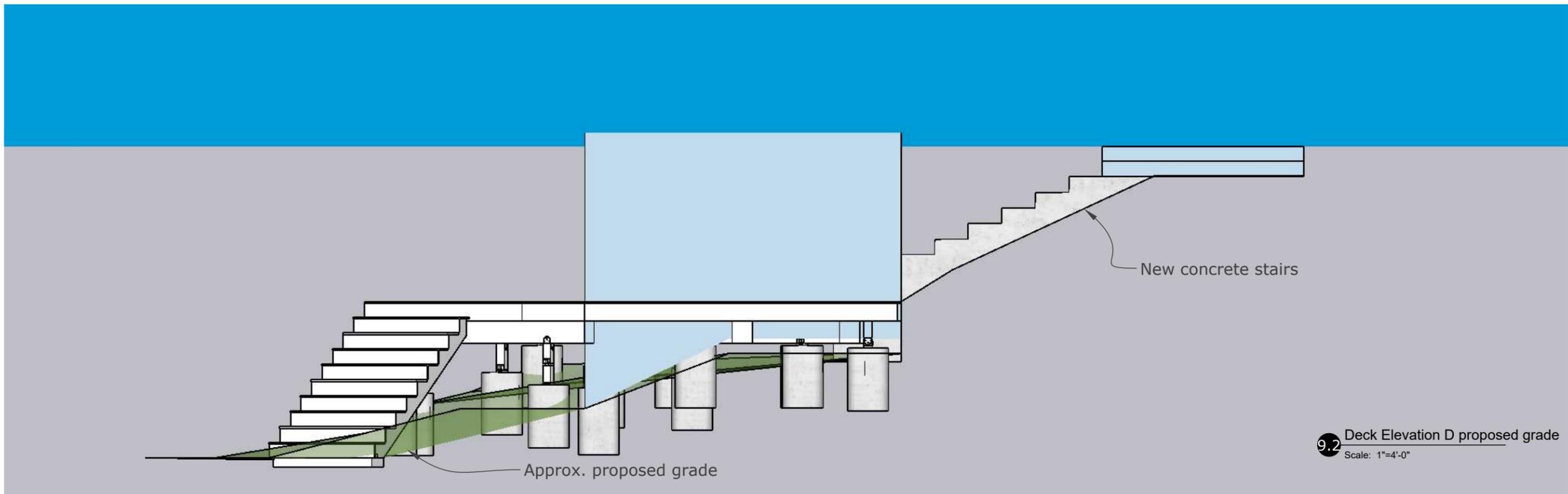
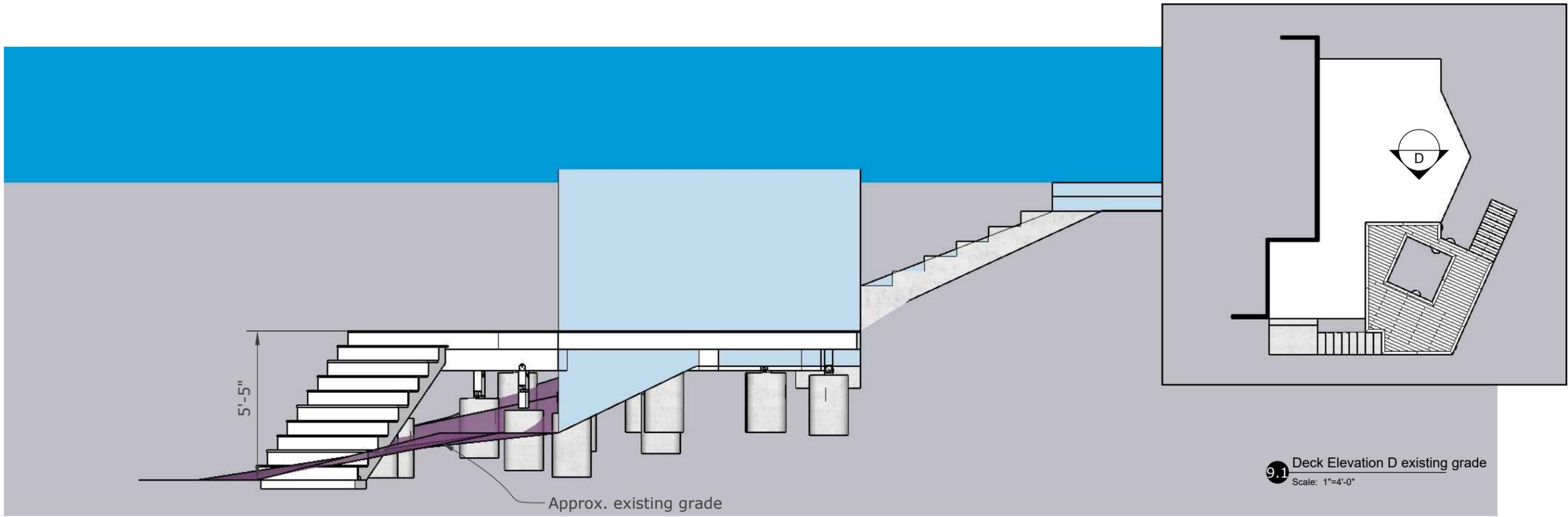
5 Deck Decking Layout
Scale: 1"=4'-0"

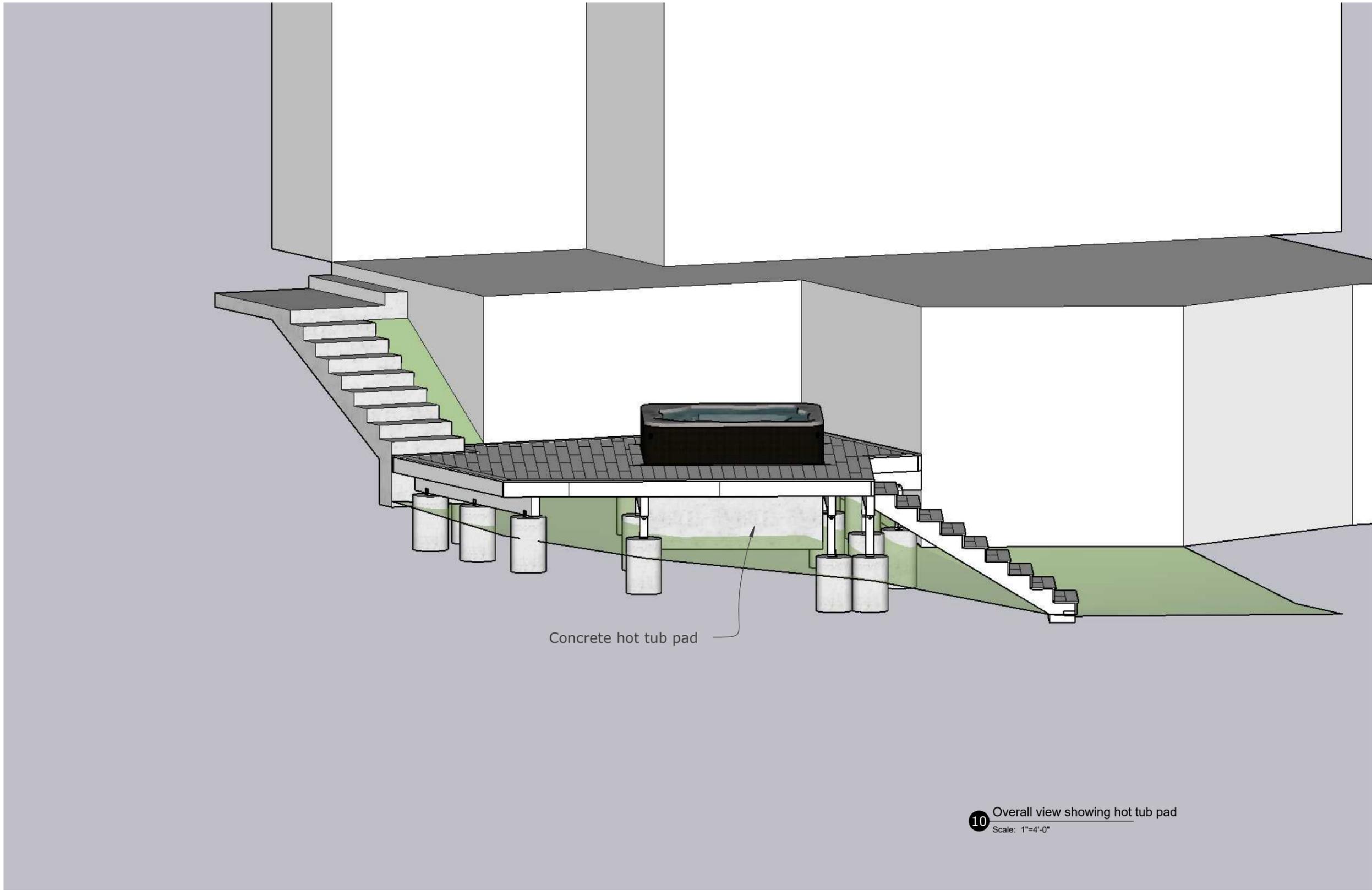








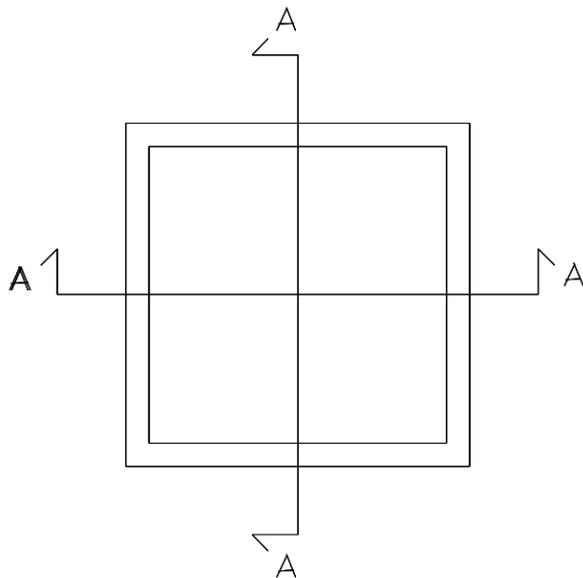




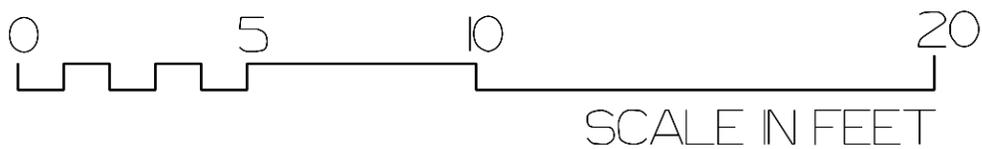
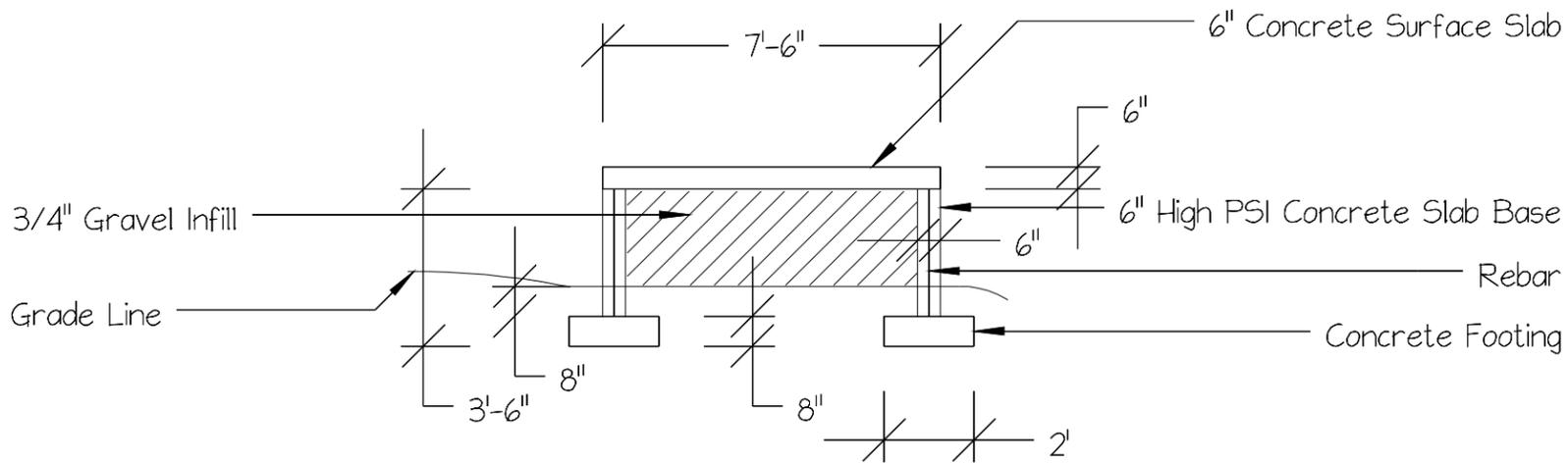
Concrete hot tub pad

10 Overall view showing hot tub pad
Scale: 1"=4'-0"

Smith Concrete Slab and Base for Hot Tub



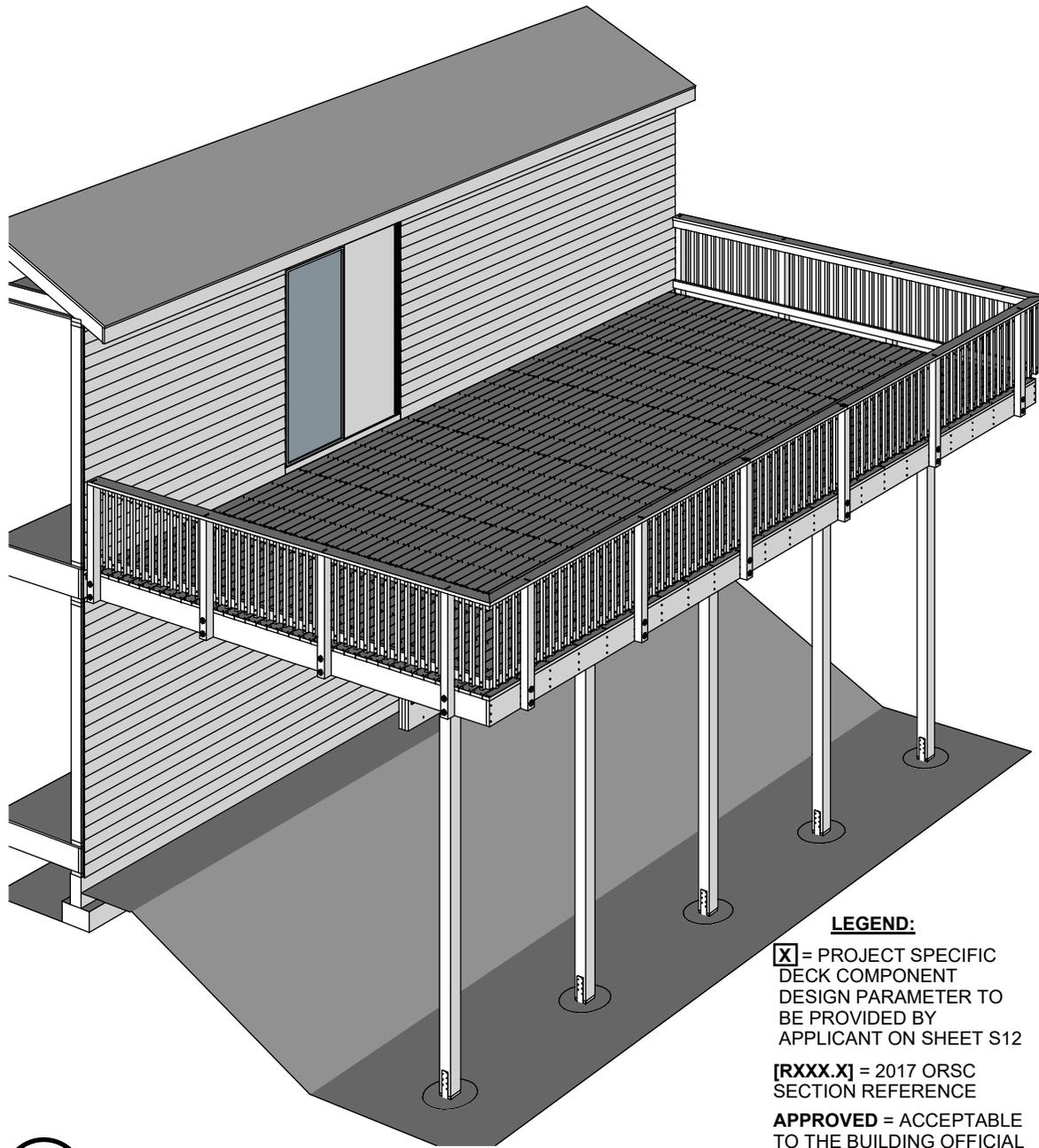
Section A:



Nancy Smith
18404 Old River Landing
West Linn, OR 97034

SCALE 1"=4'
DATE
DRAWING #

 Landscape East & West



LEGEND:

[X] = PROJECT SPECIFIC DECK COMPONENT DESIGN PARAMETER TO BE PROVIDED BY APPLICANT ON SHEET S12

[RXXX.X] = 2017 ORSC SECTION REFERENCE

APPROVED = ACCEPTABLE TO THE BUILDING OFFICIAL [R202]

GENERAL NOTES

SCOPE

SINGLE LEVEL EXTERIOR DECKS ATTACHED TO THE EXTERIOR WALL OF A ONE- OR TWO-FAMILY DWELLING.

APPLICABLE BUILDING CODE

2017 OREGON RESIDENTIAL SPECIALTY CODE (ORSC).

LIMITATIONS OF USE

USE OF AND ANY MODIFICATIONS TO THESE READY-BUILD PLANS IS SUBJECT TO REVIEW AND APPROVAL BY THE BUILDING DEPARTMENT HAVING JURISDICTION.

- A. ULTIMATE WIND SPEED: 105-135MPH
- B. WIND EXPOSURE CATEGORY: B, C, OR D
- C. SEISMIC DESIGN CATEGORY: C, D₁, OR D₂
- D. GROUND SNOW LOAD: < 40 PSF

DECKS SUPPORTING LARGE CONCENTRATED LOADS SUCH AS HOT TUBS ARE BEYOND THE SCOPE OF THIS DOCUMENT.

APPLICANT SHALL USE THE CODE PRESCRIBED TABLES CONTAINED HEREIN AND RECORD THEIR PROJECT SPECIFIC DESIGN PARAMETERS (**[X]**) ON SHEET **S12** PRIOR TO PERMIT APPLICATION.

FOUNDATION

FOOTINGS SHALL BEAR ON NATIVE, INORGANIC, UNDISTURBED SOIL BELOW EXISTING GRADE. CONCRETE STRENGTH SHALL BE 3,000 PSI IN MODERATE WEATHERING REGIONS AND 3,500 PSI IN SEVERE WEATHERING REGIONS (SEE DETAIL 1/S11) [R301.2 AND R402.2].

WOOD FRAMING

ALL WOOD SHALL BE *APPROVED* NATURALLY DURABLE OR PRESSURE-PRESERVATIVE-TREATED (R317.1). ALL WOOD IN CONTACT WITH THE GROUND, OR EMBEDDED IN CONCRETE SHALL BE *APPROVED* PRESSURE-PRESERVATIVE-TREATED WOOD SUITABLE FOR GROUND CONTACT USE (R317.1.2). ALL CUTS SHALL BE FIELD TREATED WITH COPPER NAPHTHENATE (2% COPPER) [R402.1.2].

FASTENERS, ANCHORS, AND CONNECTORS

FASTENERS SHALL BE HOT-DIPPED GALVANIZED, STAINLESS STEEL, OR *APPROVED* FOR USE WITH PRESERVATIVE-TREATED LUMBER. COATING TYPES FOR FRAMING ANCHORS SHALL BE IN ACCORDANCE WITH MFR'S RECOMMENDATIONS (SHALL BE PROVIDED WITH SUBMITTAL) [R317.3].

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 MARCH, 2018

REVISIONS

NO.	DATE

General Notes

READY-BUILD PLAN PROGRAM

PRESCRIPTIVE DECK

2017 ORSC

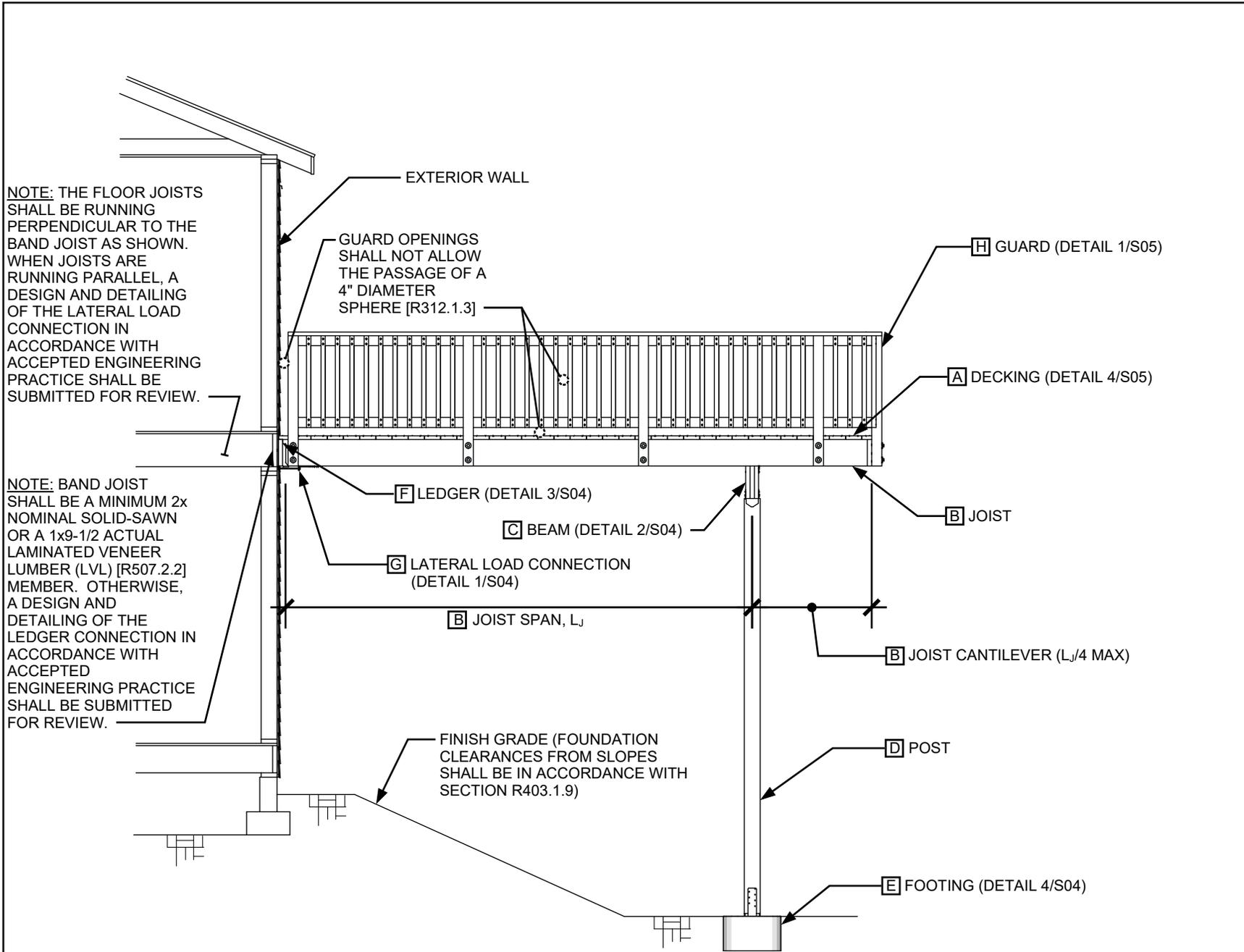
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 MARCH, 2018

REVISIONS
 NO. DATE

NO.	DATE

Elevation

S02



1 Side Elevation
 S02 NTS

READY-BUILD PLAN PROGRAM

PRESCRIPTIVE DECK

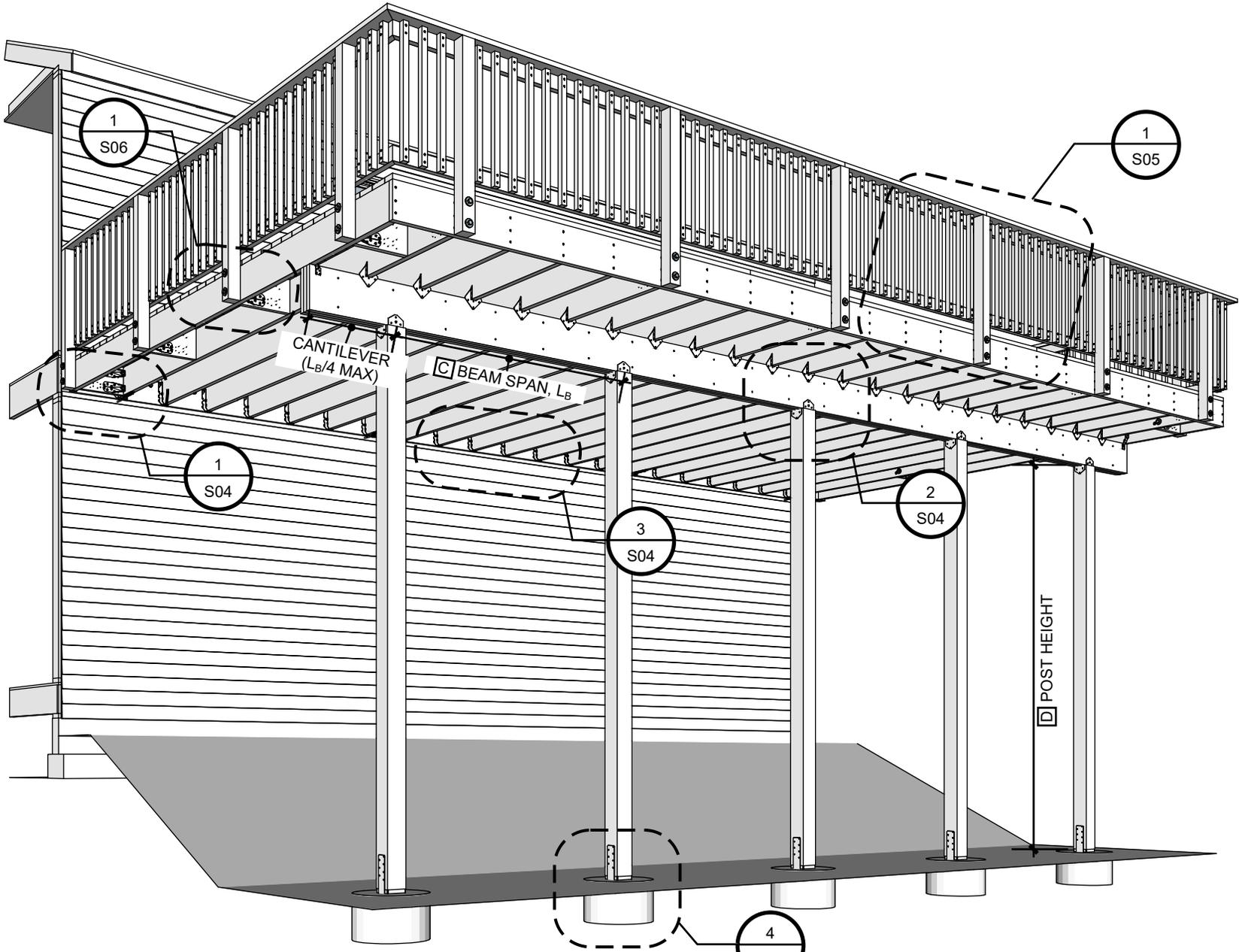
2017 ORSC

EFFECTIVE
 MARCH, 2018

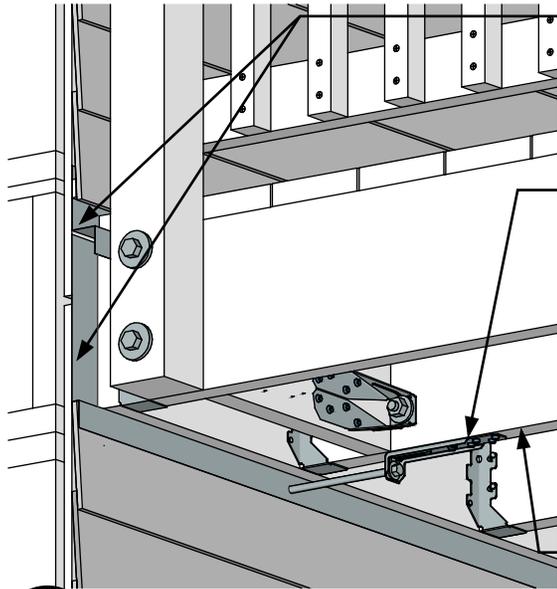
REVISIONS	
NO.	DATE

Perspective

S03



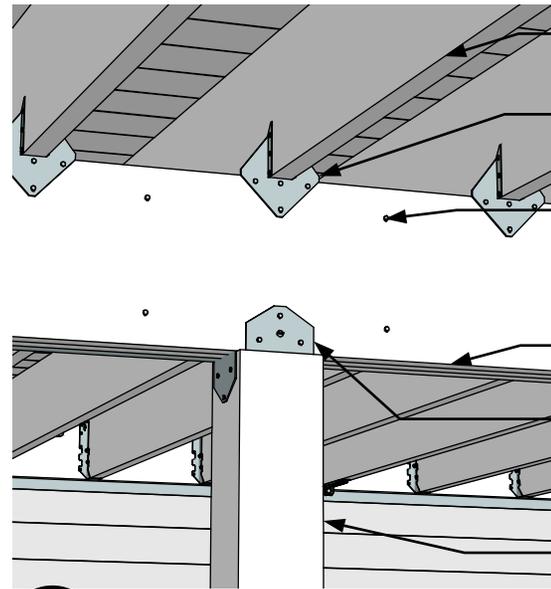
1 Deck Perspective
 S03 NTS



CORROSION-RESISTANT FLASHING INSTALLED IN SHINGLE-FASHION FOR WATER TIGHTNESS WHERE DECK MEETS EXTERIOR WALL [R703.4]

G HOLD-DOWN DEVICE WITH MIN 750 LB. CAPACITY AT 4 LOCATIONS, EVENLY DISTRIBUTED ALONG DECK AND ONE WITHIN 24" OF EACH END OF THE LEDGER. DEVICE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS [R507.2.4]. SEE DETAIL 2/S06 FOR ALTERNATE CONNECTION

B DECK JOIST PER DETAIL 2/S07



B DECK JOIST PER DETAIL 1/S07, TYP

APPROVED JOIST TO BEAM CONNECTOR [R507.7]

BEAM PLIES SHALL BE FASTENED WITH (2) ROWS OF 10D NAILS MIN AT 16" O.C. ALONG EACH EDGE [R507.6]

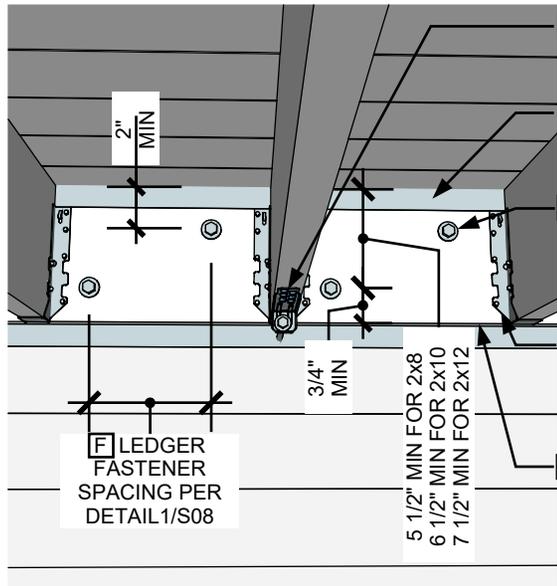
C DECK BEAM PER DETAIL 1/S09

APPROVED BEAM TO POST CONNECTOR [R507.7.1]. SEE DETAIL 3/S06 FOR ALTERNATE CONNECTION

D DECK POST PER DETAIL 2/S09

1 Lateral load connection
S04 NTS

2 Joist to beam and beam to post connection
S04 NTS



G LATERAL LOAD CONNECTION PER DETAIL 1/S04 OR 2/S06

FLASHING BETWEEN DECK AND EXTERIOR WALL PER DETAIL 1/S04

F DECK LEDGER FASTENING PER DETAILS 1/S08 AND 2/S08, STAGGERED AS SHOWN

APPROVED JOIST HANGER WITH DEPTH NOT LESS THAN 60% OF JOIST DEPTH [R507.7 AND R507.5.1]

F DECK LEDGER (2x8 MINIMUM) PER DETAIL 1/S12 EQUAL TO OR GREATER THAN THE DECK JOIST DEPTH

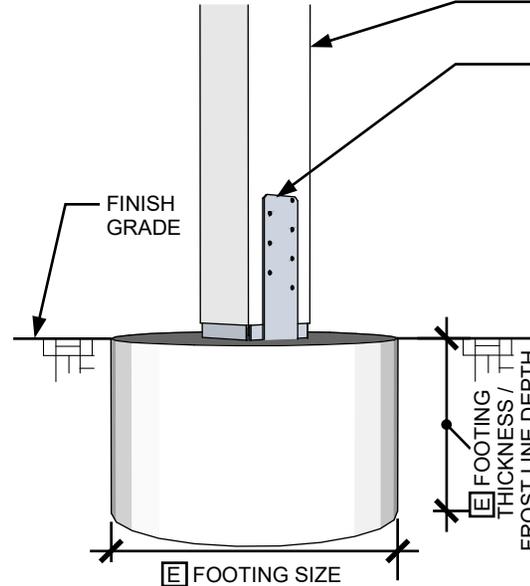
2" MIN

3/4" MIN

5 1/2" MIN FOR 2x8
6 1/2" MIN FOR 2x10
7 1/2" MIN FOR 2x12

F LEDGER FASTENER SPACING PER DETAIL 1/S08

3 Ledger connection
S04 NTS



D DECK POST PER DETAIL 2/S09

APPROVED POST TO FOOTING CONNECTOR INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS [R507.8.1]

FINISH GRADE

E FOOTING THICKNESS / FROST LINE DEPTH

E FOOTING SIZE PER 1/S10

NOTE: SEE DETAIL 4/S06 FOR ALTERNATE POST TO FOOTING CONNECTIONS

4 Post to footing connection
S04 NTS

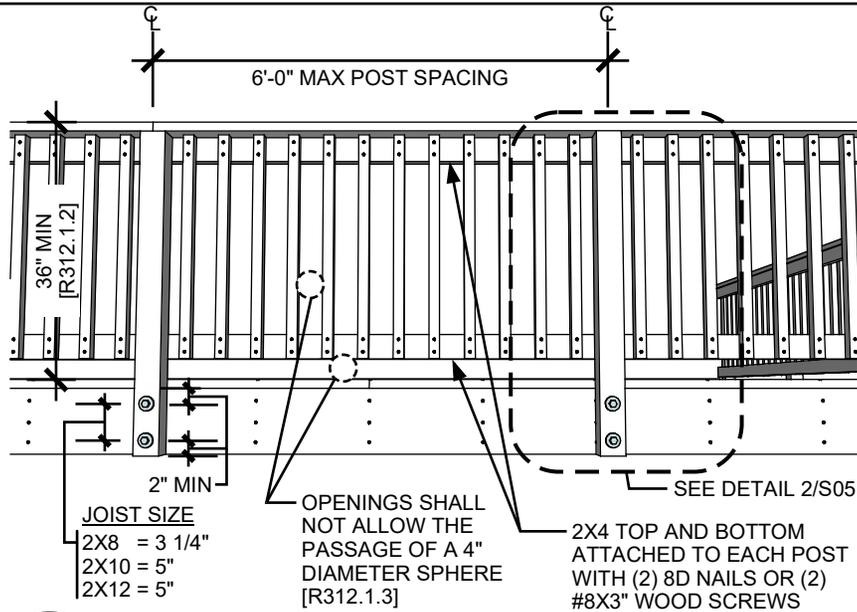
EFFECTIVE
MARCH, 2018

REVISIONS
NO. DATE

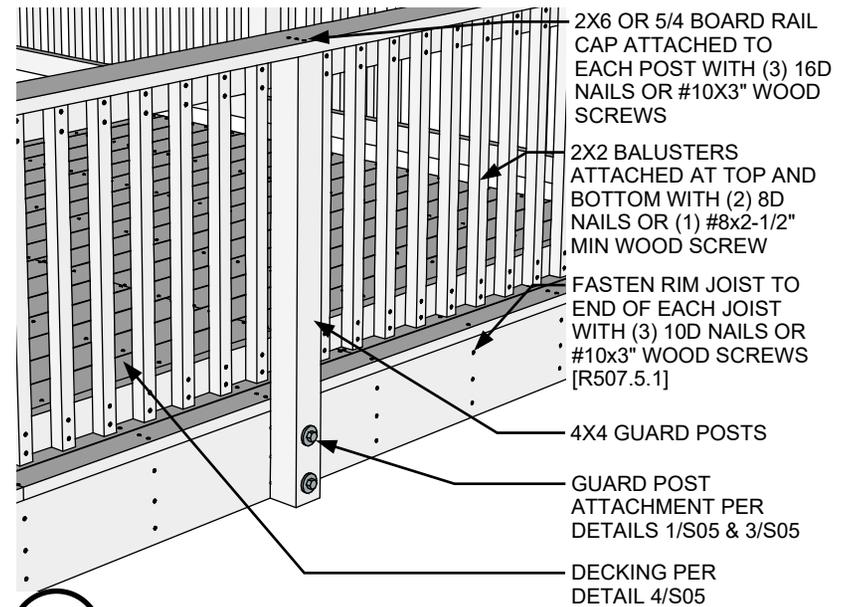
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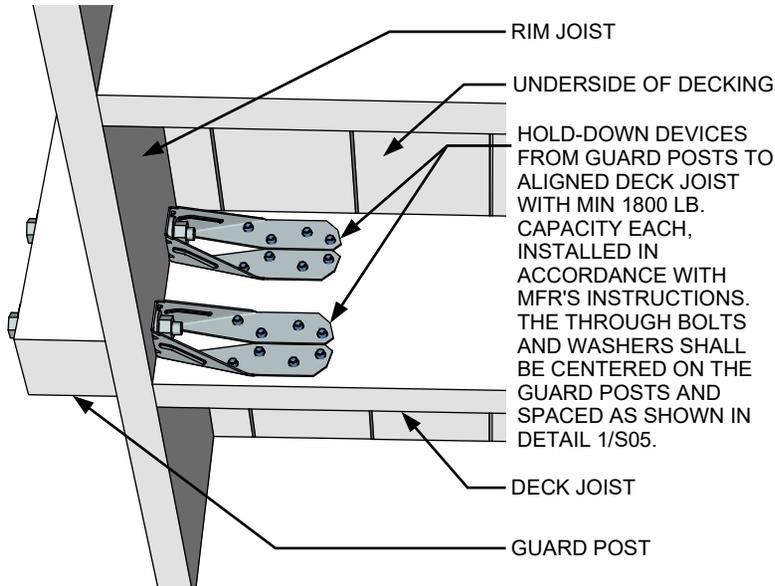
S04



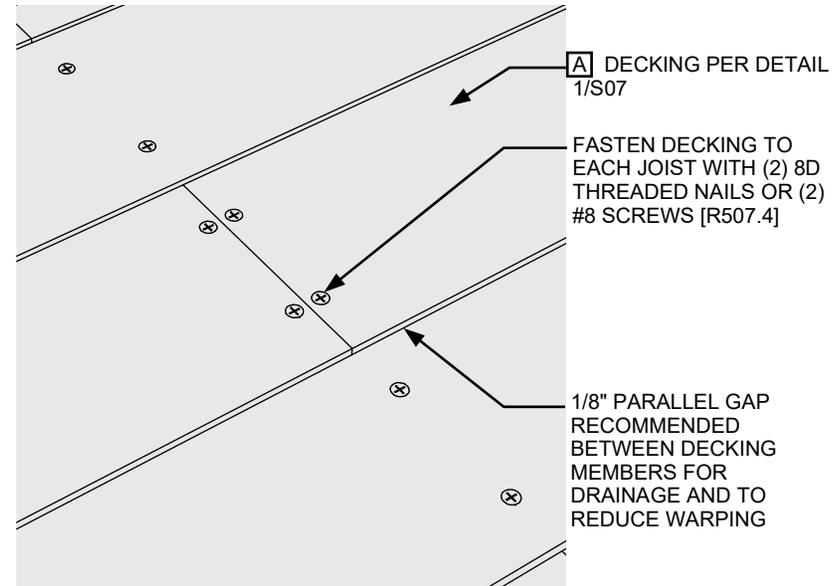
1 Deck guard
 S05 NTS



2 Deck guard
 S05 NTS



3 Guard post to joist connection
 S05 NTS



4 Decking connection
 S05 NTS

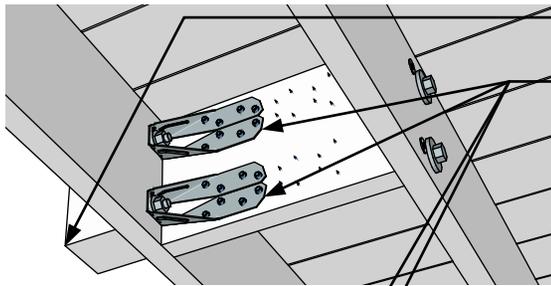
EFFECTIVE
 MARCH, 2018

REVISIONS
 NO. DATE

NO.	DATE

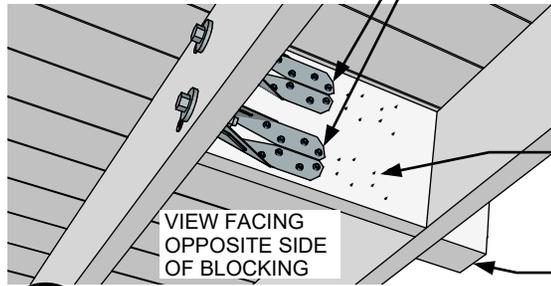
Details

S05



GUARD POST

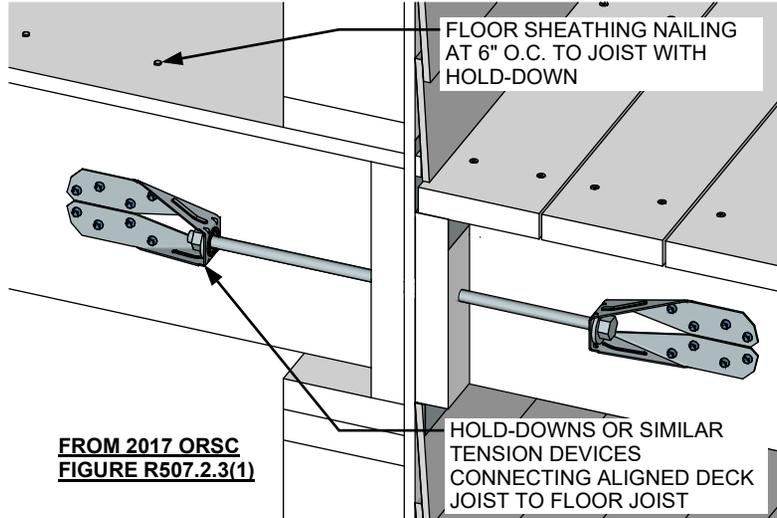
HOLD-DOWN DEVICES FROM GUARD POSTS TO ALIGNED BLOCKING AND FROM ALIGNED BLOCKING TO ADJACENT JOIST WITH MIN 1800 LB. CAPACITY EACH, INSTALLED IN ACCORDANCE WITH MFR'S INSTRUCTIONS. THE THROUGH BOLTS AND WASHERS SHALL BE CENTERED ON THE GUARD POSTS AND SPACED AS SHOWN IN DETAIL 1/S05.



ATTACH ALIGNED BLOCKING TO JOISTS WITH (2) 10d THREADED NAILS OR WOOD SCREWS EACH END

VIEW FACING OPPOSITE SIDE OF BLOCKING

GUARD POST

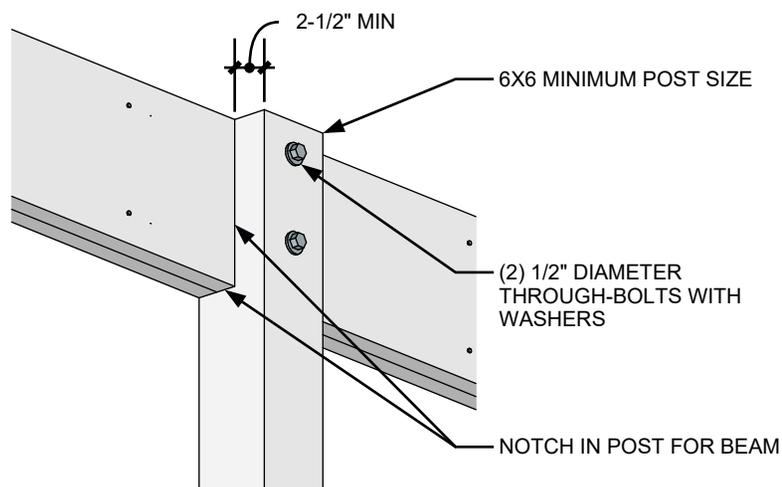


FROM 2017 ORSC FIGURE R507.2.3(1)

NOTE: HOLD-DOWN TENSION DEVICES PER THIS DETAIL SHALL HAVE 1,500 LB. MINIMUM CAPACITY, BE INSTALLED IN NOT LESS THAN TWO LOCATIONS, AND BE WITHIN 24 INCHES OF EACH END OF DECK.

1 Guard post to blocking connection
S06 NTS

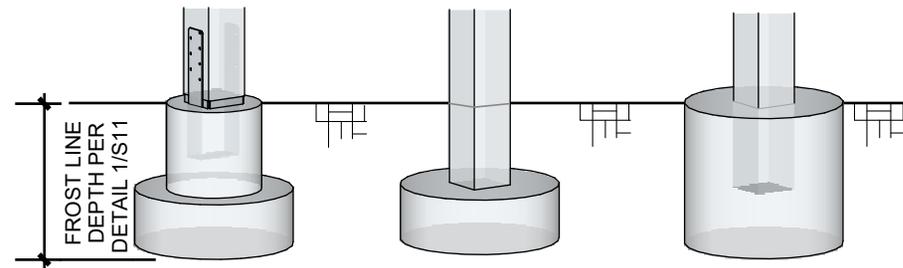
2 Alternate deck attachment for lateral loads
S06 NTS



FROM 2017 ORSC FIGURE R507.7.1

NOTE: ALL BOLTS SHALL HAVE WASHERS UNDER THE HEAD AND NUT.

3 Alternate beam to post connection
S06 NTS



FROM 2017 ORSC FIGURE R507.8.1

NOTE: POSTS SHALL BE RESTRAINED TO PREVENT LATERAL DISPLACEMENT AT THE BOTTOM OF SUPPORT. SUCH RESTRAINT SHALL BE PROVIDED BY MANUFACTURED CONNECTORS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS OR A MINIMUM POST EMBEDMENT OF 12 INCHES IN SURROUNDING SOILS OR CONCRETE.

4 Alternate post to footing connections
S06 NTS

EFFECTIVE
MARCH, 2018

REVISIONS	
NO.	DATE

Details

S06

**FROM 2017 ORSC TABLE R507.4
JOIST SPACING**

DECKING TYPE AND NOMINAL SIZE	MAXIMUM ON-CENTER JOIST SPACING (in.)	
	Perpendicular to joist	Diagonal to joist ^a
5/4-inch-thick wood	16	12
2-inch-thick wood	24	16
Plastic composite ^b	Per decking manufacturer	Per decking manufacturer

- a. Maximum angle of 45 degrees from perpendicular for wood deck boards.
 b. Plastic composite deck materials shall comply with the requirements of ASTM D7032 and Section R507.3.

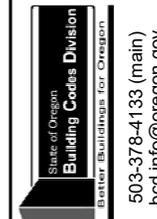
1
S07 NTS Maximum Joist Spacing Table (from 2017 ORSC Table R507.4)

JOIST SPANS, L_J (ft.-in.)

SPECIES ^a	SIZE	SPACING OF DECK JOISTS WITH NO CANTILEVER ^b (in.)			SPACING OF DECK JOISTS WITH CANTILEVER (in.)		
		12	16	24	12	16	24
Douglas Fir- Larch, Hem-Fir, Spruce-Pine-Fir	2x6	9-6	8-8	7-2	6-3	6-3	6-3
	2x8	12-6	11-1	9-1	9-5	9-5	9-1
	2x10	15-8	13-7	11-1	13-7	13-7	11-1
	2x12	18-0	15-9	12-10	18-0	15-9	12-10
Redwood, Western Cedars, Ponderosa Pine, Red Pine	2x6	8-10	8-0	7-0	5-7	5-7	5-7
	2x8	11-8	10-7	8-8	8-6	8-6	8-6
	2x10	14-11	13-0	10-7	12-3	12-3	10-7
	2x12	17-5	15-1	12-4	16-5	15-1	12-4

- a. No. 2 grade.
 b. Cantilevered spans not exceeding the nominal depth of the joist are considered "with no cantilever" for this table.

2
S07 NTS Maximum Joist Spans Table From (from 2017 ORSC Table R507.5)



READY-BUILD PLAN PROGRAM

PRESCRIPTIVE DECK

2017 ORSC

EFFECTIVE
MARCH, 2018

REVISIONS

NO.	DATE

Tables

S07

LEDGER CONNECTION TO BAND JOIST^a

CONNECTION DETAILS	JOIST SPAN (ft.), L _J						
	≤ 6	≤ 8	≤ 10	≤ 12	≤ 14	≤ 16	≤ 18
	ON-CENTER SPACING OF FASTENERS (in.)						
1/2-inch diameter lag screw with 1/2-inch maximum sheathing ^{b, c}	30	23	18	15	13	11	10
1/2-inch diameter through bolt with 1/2-inch maximum sheathing ^c	36	36	34	29	24	21	19
1/2-inch diameter through bolt with 1-inch maximum sheathing ^d	36	36	29	24	21	18	16

- a. Ledgers shall be flashed with approved corrosion-resistant flashing applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components in accordance with Section R703.4.
- b. The tip of the lag screw shall fully extend beyond the inside face of the band joist.
- c. Sheathing shall be wood structural panel or solid sawn lumber.
- d. Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard, lumber, or foam sheathing. Up to 1/2-inch thickness of stacked washers shall be permitted to substitute for up to 1/2-inch of allowable sheathing thickness where combined with wood structural panel or lumber sheathing.

1 Minimum Ledger Connection Table (from 2017 ORSC Table R507.2)
S08 NTS

PLACEMENT OF LAG SCREWS AND THROUGH BOLTS IN LEDGERS AND BAND JOISTS

MINIMUM END AND EDGE DISTANCES AND SPACING BETWEEN ROWS (in.)				
	TOP EDGE	BOTTOM EDGE	CUT ENDS	ROW SPACING
LEDGER ^a	2 ^d	3/4	2 ^b	1 5/8 ^b
BAND JOIST ^c	3/4	2	2 ^b	1 5/8 ^b

- a. Lag screws or bolts shall be staggered from the top to the bottom along the horizontal run of the deck ledger in accordance with detail 3/S04.
- b. Maximum of 5 inches.
- c. For engineered rim joists, the manufacturer's recommendations shall govern.
- d. The minimum distance from bottom row of lag screws or bolts to the top edge of the ledger shall be in accordance with detail 3/S04.

2 Ledger Fasteners Placement Table (from 2017 ORSC Table R507.2.1)
S08 NTS

EFFECTIVE
MARCH, 2018

REVISIONS

NO.	DATE

Tables

S08

BEAM SPANS^a, L_B (ft.-in.)

SPECIES ^b	SIZE ^c	DECK JOIST SPAN, L _J , (ft.)						
		≤ 6	≤ 8	≤ 10	≤ 12	≤ 14	≤ 16	≤ 18
Douglas Fir-Larch, Hem-Fir, Spruce-Pine-Fir, Redwood, Western Cedars, Ponderosa Pine, Red Pine	3x6 or 2-2x6	5-5	4-8	4-2	3-10	3-6	3-1	2-9
	3x8 or 2-2x8	6-10	5-11	5-4	4-10	4-6	4-1	3-8
	3x10 or 2-2x10	8-4	7-3	6-6	5-11	5-6	5-1	4-8
	3x12 or 2-2x12	9-8	8-5	7-6	6-10	6-4	5-11	5-7
	4x6	6-5	5-6	4-11	4-6	4-2	3-11	3-8
	4x8	8-5	7-3	6-6	5-11	5-6	5-2	4-10
	4x10	9-11	8-7	7-8	7-0	6-6	6-1	5-8
	4x12	11-5	9-11	8-10	8-1	7-6	7-0	6-7
	3-2x6	7-4	6-8	6-0	5-6	5-1	4-9	4-6
	3-2x8	9-8	8-6	7-7	6-11	6-5	6-0	5-8
	3-2x10	12-0	10-5	9-4	8-6	7-10	7-4	6-11
	3-2x12	13-11	12-1	10-9	9-10	9-1	8-6	8-1

- a. Beams supporting deck joists from one side only (with optional joist cantilever).
- b. No. 2 grade.
- c. Beam depth shall be greater than or equal to depth of joists with a flush beam condition.

1 Maximum Beam Spans Table (from 2017 ORSC Table R507.6)
 S09 NTS

POST HEIGHT

SPECIES ^b	DECK POST SIZE	HEIGHT ^a (ft.)
Douglas Fir-Larch, Hem-Fir, Spruce-Pine-Fir, Redwood, Western Cedars, Ponderosa Pine, Red Pine	4x4	8
	4x6	8
	6x6	14

- a. Measured to the underside of the beam.
- b. No. 2 grade.

2 Maximum Post Height Table (from 2017 ORSC Table R507.8)
 S09 NTS



READY-BUILD PLAN PROGRAM

PRESCRIPTIVE DECK

2017 ORSC

EFFECTIVE
MARCH, 2018

REVISIONS

NO.	DATE

Tables

S09

FOOTING DIMENSIONS^a

BEAM SPAN (ft), L _B	JOIST SPAN (ft.), L _J	ROUND FOOTING DIAMETER (in.)	SQUARE FOOTING WIDTH (in.)	MINIMUM FOOTING THICKNESS ^b (in.)
≤ 6	≤ 10	18	16	8
	≤ 14	21	19	8
	≤ 18	24	21	10
≤ 8	≤ 10	20	18	8
	≤ 14	24	22	10
	≤ 18	27	24	11
≤ 10	≤ 10	23	20	9
	≤ 14	27	24	11
≤ 12	≤ 10	25	22	10
≤ 14	≤ 10	27	24	11

- a. Assumes 1,500 psf soil bearing capacity per Section R401.4.1.
 b. In accordance with Section R403.1.4, footings shall be placed not less than 12 inches below the finished grade on undisturbed ground surface and shall extend below the frost line depth specified in Table R301.2(1). Coordinate footing thickness with post base manufacturer installation instructions.

1 Minimum Footing Sizes Table (Ref 2017 ORSC Section R403)
 S10 NTS



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READY-BUILD PLAN PROGRAM

PRESCRIPTIVE DECK

2017 ORSC

EFFECTIVE
 MARCH, 2018

REVISIONS	
NO.	DATE

Tables

S10

**2017 ORSC TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA^{g,h}**

COUNTY	GROUND SNOW LOAD ^a = 36 psf	ULTIMATE DESIGN WIND SPEED	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE		
				Weathering ^d	Frost line depth (inches)	Decay
Baker	3,200	Note b	Note c	Severe	24	Slight
Benton	400	Note b	Note c	Moderate	12	Moderate
Clackamas	500	Note b	Note c	Moderate	12	Moderate
Clatsop	400	Note b	Note c	Moderate	12	Moderate
Columbia	400	Note b	Note c	Moderate	12	Moderate
Coos	400	Note b	Note c	Moderate	12	Moderate
Crook	4,100	Note b	Note c	Severe	18	Slight
Curry	400	Note b	Note c	Moderate	12	Moderate
Deschutes	4,000	Note b	Note c	Severe	18	Slight
Douglas	1,500	Note b	Note c	Moderate	18	Moderate
Gilliam	3,000	Note b	Note c	Severe	24	Moderate
S.45.5°N		Note b	Note c			
N.45.5°N		Note b	Note c			
Grant	4,100	Note b	Note c	Severe	24	Slight
Harney	4,100	Note b	Note c	Severe	24	Moderate
Hood River	Note e	Note b	Note c	Severe	24	Moderate
Jackson	2,000	Note b	Note c	Moderate	18 ^f	Slight
Jefferson	4,100	Note b	Note c	Severe	18	Moderate
Josephine	4,100	Note b	Note c	Moderate	18 ^f	Moderate
Klamath	4,000	Note b	Note c	Severe	24	Moderate
Lake	4,200	Note b	Note c	Severe	24	Slight
Lane	500	Note b	Note c	Moderate	12	Moderate
Lincoln	400	Note b	Note c	Moderate	12	Moderate
Linn	700	Note b	Note c	Moderate	12	Moderate
Malheur	3,400	Note b	Note c	Severe	24	Slight
Marion	500	Note b	Note c	Moderate	12	Moderate
Morrow	3,000	Note b	Note c	Severe	24	Slight
S.45.5°N		Note b	Note c			
N.45.5°N		Note b	Note c			
Multnomah	500	Note b	Note c	Moderate	18	Moderate
Polk	400	Note b	Note c	Moderate	12	Moderate
Sherman	2,000	Note b	Note c	Severe	24	Slight
S.45.5°N		Note b	Note c			
N.45.5°N		Note b	Note c			
Tillamook	400	Note b	Note c	Moderate	12	Moderate
Umatilla	3,000	Note b	Note c	Severe	24	Slight
S.45.5°N		Note b	Note c			
N.45.5°N		Note b	Note c			
Union	3,000	Note b	Note c	Severe	24	Slight
Wallowa	3,000	Note b	Note c	Severe	24	Slight
Wasco	2,000	Note b	Note c	Severe	24	Slight
S.45.5°N		Note b	Note c			
N.45.5°N		Note b	Note c			
Washington	400	Note b	Note c	Moderate	12	Moderate
Wheeler	4,100	Note b	Note c	Severe	24	Slight
Yamhill	400	Note b	Note c	Moderate	12	Moderate

- a. For locations with elevation higher than the listed values or for a possible reduction in minimum design roof snow load from 25 psf to 20 psf, refer to the Snow Load Analysis for Oregon (including the ground snow load maps) published by the Structural Engineers Association of Oregon in 2007, in conjunction with the 2010 Oregon Snow Load Map update and Interim Guidelines for Snow Load Determination for the State of Oregon, published in 2011.
- b. Refer to Figure R301.2(4) for mapped Ultimate Design Wind Speeds. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- c. Refer to Figure R301.2(2) for mapped Seismic Design Categories.
- d. A severe classification is where weather conditions result in significant snowfall combined with extended periods during which there is little or not natural thawing causing de-icing salts to be used extensively.
- e. For elevations below 500 feet, the ground snow load is 50 psf. Above 500 feet, see Note a.
- f. The frost line depth below 2,500 feet in Jackson and Josephine Counties is 12 inches.
- g. See Section R301.2 and R322 for establishment of flood hazard design criteria.
- h. See Section R327 for establishment of wildfire hazard design criteria.



READY-BUILD PLAN PROGRAM
PRESCRIPTIVE DECK
2017 ORSC

EFFECTIVE
MARCH, 2018

REVISIONS	
NO.	DATE

Tables

S11

EFFECTIVE
 MARCH, 2018

REVISIONS

NO.	DATE

Project Specific
 Information

S12

A DECKING [R507.4]:

size: 2x five-quarter
 material: preservative-treated plastic composite naturally durable (e.g. cedar)
 orientation: perpendicular to joists diagonal to joists

B JOISTS [R507.5]:

size: 2x6 2x8 2x10 2x12
 spacing: 12 in. 16 in. 24 in.
 span, L_J: 9 ft. - 5 in.
 cantilever: 1 ft. - 1 in. (L_J/4 MAX)
 rim joist: 2x6 2x8 2x10 2x12 not applicable

C BEAMS [R507.6]:

plies: 1 2 3
 size: 2x6 2x8 2x10 2x12 4x6 4x8 4x10 4x12 __x__
 span, L_B: 5 ft. - 6 in.
 cantilever: 1 ft. - 0 in. (L_B/4 MAX)

D POSTS [R507.8]:

size: 4x4 4x6 6x6 __x__
 height: 0 ft. - 6 in.

E FOOTINGS [R507.8.1]:

size: 20 in. square round
 thickness: 24 in.

F LEDGER [R507.2]: None (detached)

size: 2x8 2x10 2x12
 fastener: 1/2" through-bolt 1/2" lag screw code-compliant alternate (attach report)
 fastener spacing: ___ in. on-center

G LATERAL LOAD CONNECTION [R507.2.4]: None (detached)

(4) 750 pound hold-down tension devices (detail 1/S04)
 (2) 1,500 pound hold-down tension devices (detail 2/S06)
 code-compliant alternate (attach report)

H GUARDRAIL POST ATTACHMENT [R301.5]:

details 1-3/S05 & 1/S06
 code-compliant alternate (attach detail).

NOTE: THE PERMIT APPLICANT SHALL PROVIDE THE PROJECT SPECIFIC DESIGN BY CHECKING THE APPLICABLE BOXES AND ENTERING THE APPROPRIATE INFORMATION ABOVE PRIOR TO PERMIT APPLICATION.

1 Project Specific Information
 S12 NTS