



TREE PROTECT PLAN

for

PALINDROME WILSONVILLE LP.

for the

WILSONVILLE TOD PROJECT

9699 SW BARBER STREET,
WILSONVILLE, OR 97070

Submitted by

Peter van Oss PN-8145A

Date Tuesday, July 25, 2023

Teragan and Associates, Inc.™
Arboricultural Consultants
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City of Wilsonville
Exhibit B4 DB23-0011

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Summary

Teragan and Associates has been contracted with Palindrome Wilsonville Limited Partnership to provide arboricultural consulting services. This report is the tree protection plan for the proposed multiuse development project located at 9699 SW Barber Street, Wilsonville, OR 97070. The site is currently a vacant lot that abuts the Wilsonville Transit Center. The lot is treed with a mixture of younger landscape trees and established mature Douglas-firs (*Pseudotsuga menziesii*). Most of the trees will be in the footprint of the proposed development and are proposed for removal. The three large Douglas-firs, trees #5, #26, and #27, are proposed to be retained. The retention of the trees will be challenging and the protection measures in this report must be adhered to. Failure to adhere to the protection mitigation in this report may make the trees hazardous due to root impacts and will result in the removal of the three (3) trees. This tree plan meets and exceeds the criterion set forth in the City of Wilsonville Code – Chapter 4.610.40 – Type C Permit.

Background

The plans propose the development of a multiuse property at the Wilsonville Transit Center. The lot is currently a vacant treed lot. Most trees are in the footprint of the proposed development and/or will be impacted extensively outside of acceptable thresholds and are proposed for removal. There are three (3) trees that are proposed for retention. Given the topography difference of the property and the surrounding area, retention of the trees will require alternative construction methods.

Tree Inventory

I completed the inventory during the site visit on June 2, 2023. The tree diameters were recorded using a diameter tape. The health and conditions of the trees are determined by the plant species profiles compared to the current condition the trees present. Attributes that can negatively impact the ratings are growing conditions, bark inclusions, broken branches, poor vigor...etc. All trees are tagged with aluminum tags that have the corresponding numbers scribed on them except for trees that were not accessible due to accessibility restrictions.

Rating Category	Condition Components			
	Health	Structure	Form	
Excellent	High vigor and nearly perfect health with little or no twig dieback, discoloration, or defoliation	Nearly ideal and free of defects	Nearly ideal for the species. Generally symmetric. Consistent with the intended use.	Healthy trees that will live to maturity
Good	Vigor is normal for the species. No significant damage due to diseases or pests. Any twig dieback, defoliation, or discoloration is minor	Well developed structure. Defects are minor and can be corrected.	Minor asymmetries/deviations from species norm. Mostly consistent with the intended use. Function and aesthetics are not compromised	
Fair	Reduced Vigor. Damage due to insects or diseases may be significant and associated with defoliation but is not likely to be fatal. Twig dieback, defoliation, discoloration, and/or dead branches may comprise up to 50% of the crown.	A single defect of a significant nature or multiple moderate defects. Defects are not practical to correct or would require multiple treatments over several years.	Major asymmetries/deviations from species norm and/or aesthetics are compromised.	
Poor	Unhealthy and declining in appearance. Poor vigor. Low foliage density and poor foliage color are present. Potentially fatal pest infestation. Extensive twig and/or branch dieback.	A single serious defect to multiple significant defects. Recent change in tree orientation. Observed structural problems cannot be corrected. Failure may occur at any time.	Largely asymmetric. Abnormal. Detracts from intended use and/or aesthetics to a significant degree.	Trees that are likely to fail in the near future
Very Poor	Poor vigor. Appears to be dying and in the last stages of life. Little live foliage.	Single or multiple severe defects. Failure is probable or imminent.	Visually unappealing. Provides little or no function in the landscape.	
Dead/Dying				

Table from the 'Guide for Plant Appraisal, 10th Edition'

Purpose and Use of the Report

The purpose of this report is to establish a narrative for the removal of the trees and tree protection measures that will need to be adhered to during the construction project to ensure a positive outcome of the retention efforts. This report may be used by the owner to establish communications between the city planning department, the contractors, and sub-contractors regarding the tree protection efforts of the project.

Limits of the Report

The trees were visually assessed from the ground only, no tools were used to assess any of the tree parts. The point data was collected with the use of a Trimble DA-2 GNSS receiver and ArcGIS Software. The data was not collected by a licensed surveyor. The GPS accuracy was 3.6-feet at the time of the data collection. The plans provided in this report should not be used for architectural, engineering, or construction purposes. The plans in this report are meant as reference only.

Observations

The trees proposed for retention are located on a property that is currently a vacant lot and it is fair to assume that they have not been maintained in recent years. It is recommendable to prune the trees to remove any deadwood prior to the start of the project given the proximity of the site improvements and the intended use of the property within the dripline of the retained trees.

The property has a significant topographical difference between the public sidewalk south, east, and north of the property itself. The trees proposed to be retained are much lower than the surrounding paving. The site plans provided by YBA Architects, labeled A080, show that site improvements are proposed well within the tree protection zones of the retained trees. It will be extremely important to minimize the grade changes within the tree protection zones as much as possible, and to work with the tree roots in terms of site improvement placement. The success of the tree retention will depend on the impacts the trees receive. If the trees are significantly impacted, they may experience bio-mechanical strength loss and become hazardous. If the trees are impacted too significantly, the trees will need to be removed for safety reasons.

Site Specific Tree Protection

Before Construction Begins

It is recommended that the site improvements are staked out by the surveyor to show the extent of the proposed improvements. The improvements closest to the retained trees are recommended to be explored with the use of pneumatic excavation to locate the roots of the trees. The roots should be recorded and mapped indicating the size of the roots and their depths. Foreseeable impacts from the development should be considered and a decision should be made if retention of the trees is achievable. Alternative construction methods should be incorporated if it is determined that the trees could be retained, e.g., bridging and gapping the foundation to allow for the roots to remain or permeable “floating” paving surfaces.

Since the trees have not been maintained, it is recommended that the trees are pruned to mitigate hanging broken branches, and deadwood. Deadwood and broken branches could pose a risk to persons working or otherwise being present within the dripline of the trees.

The initial fencing shall be placed as shown in appendix C – Tree Protection indicated by the blue fencing symbol. The project arborist shall discuss the tree protection approaches with the contractors and sub-contractors before work commences within the tree protection zones. The fencing shall only be moved to allow the site improvements within the tree protection zones after the project arborist has agreed to the final fencing placement location in writing.

Given the difficulty of the retention efforts, it may be recommendable to bond the trees with the use of *The Guide for Plant Appraisal, 10th Edition, Revised* in case of malicious and/or accidental damaging of the trees that results in the removal of the trees.

During Construction

Trees that are retained should be protected at the recommended distance of 12 inches per diameter inch of the trees. This means that the soil disturbance should be 12 inches per diameter inch away from the tree in circumference of the tree unless the project arborist approves of- and supervises the ground disturbing activities.

Fill and/or cutting of grades should be less than four inches. Any fill greater than four inches will result in soil compaction and is likely to result in tree mortality. It is recommended that the flatwork is installed as close to the existing grade as possible and that the materials used are permeable to ensure that the hydrology of the property does not significantly change. Any roots greater than two inches in diameter should be retained and the site improvements should be altered to allow for the roots to remain with the existing soil functionable.

Since root impacts are likely, it is recommended that the project arborist monitors the trees for changes in health and condition. Plant health care and/or watering should be prescribed as needed if the trees show signs of decline.

The attached existing conditions plan provided has been marked up to scale. The blue circles indicate the tree protection zone at 12X the diameter and the orange circles indicate the critical root zones at 6X the tree diameter.

Additional Tree Protection Mitigation in Appendix E

Conclusion

My professional opinion is that the location of the development should be staked out and exploratory pneumatic excavation should be performed prior to the start of the project. The foreseeable impacts must be considered to determine if retention of trees #5, #26, and #27 is feasible. If the determination is that the trees can be retained with the use of alternative construction methods, close collaboration with the project arborist will be needed to ensure that retention efforts are successful. The tree protection measures set forth in this tree plan can suffice in the protection of the trees during construction. It is important to adhere to the standards in this report to ensure that the retention goals are successful.

Please feel free to contact me with any questions or concerns.

Sincerely,

Peter van Oss

Peter van Oss | Senior Associate

ISA Certified Arborist PN-8145A

Tree Risk Assessment Qualified

ASCA Member

Enclosures:

- Appendix A: Certification of Performance
- Appendix B: Assumptions and Limiting Conditions
- Appendix C: Site Plan Fencing Placement and Proposed Removals
- Appendix D: Inventory
- Appendix E: Tree Protection Standards

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Appendix A: Certification of Performance

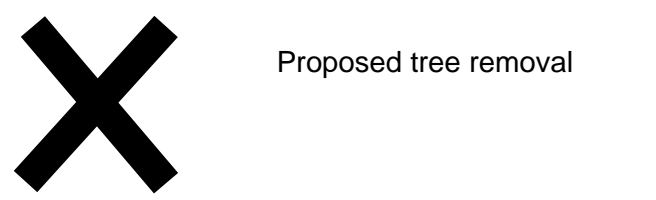
I, Peter van Oss, certify that:

- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately. The extent of the evaluation or appraisal is stated in the attached report and the Terms of the Assignment.
- I have no current or prospective interest in the vegetation or the property that is subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions and conclusions stated herein are my own and are based on current professional procedures and facts.
- My analysis, opinions and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated in the report.
- My compensation is not contingent upon reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member of, and certified as an arborist by the ISA. I have been involved in the arboricultural field in a full- time capacity for a period of 17 years.

Appendix B: Assumptions and Limiting Conditions

1. A field examination of the site was made. My observations and conclusions are as of that date.
2. Care has been taken to obtain all information from a reliable source, however the arborist can neither guarantee nor be responsible for accuracy of information provided by others.
3. Unless stated otherwise, information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection. The inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee that problems or deficiencies of the subject tree may not arise in the future.
4. This report and any values/opinions expressed herein represents my opinion as an arborist. Inaction on the part of those receiving the report is not the responsibility of the arborist.
5. Loss or alteration of this report invalidates the entire report.
6. Any legal description provided to the consultant/ appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
7. The consultant/ appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment for such services.
8. Possession of this report does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written consent of the consultant/ appraiser.

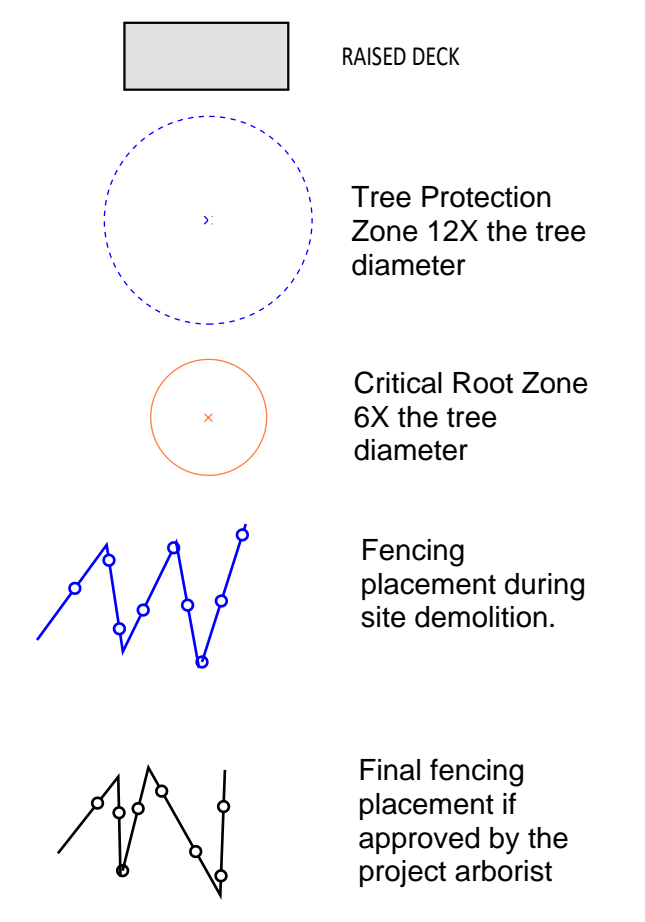


ObjectID	Common and Scientific Name	DBH	Condition	Health	Condition	Structure	Field Notes / Comments
1	Zelkova (Zelkova serrata)	11	Good	Good			
2	sweet cherry (Prunus avium)	15	Good	Good			invasive/nuisance
3	Douglas-Fir (Pseudotsuga menziesii)	12	Excellent	Excellent			
4	red pine (Pinus resinosa)	10	Fair	Good			
5	Douglas-Fir (Pseudotsuga menziesii)	21	Excellent	Excellent			approximately 2 feet lower than sidewalk
6	Zelkova (Zelkova serrata)	9	Fair	Fair			center stem dead, large decay pockets on trunk
7	Zelkova (Zelkova serrata)	12	Excellent	Good			low canopy over road
8	Zelkova (Zelkova serrata)	11	Excellent	Good			low canopy over road
9	Zelkova (Zelkova serrata)	11	Excellent	Good			low canopy over road
10	Zelkova (Zelkova serrata)	12	Poor	Fair			low canopy over road
11	Zelkova (Zelkova serrata)	12	Good	Good			low canopy over road
12	Zelkova (Zelkova serrata)	9	Excellent	Good			
13	Douglas-Fir (Pseudotsuga menziesii)	14	Good	Fair			sap ooze from lower portion of trunk
14	English-hawthorn (Crataegus monogyna)	15	Very Poor	Very Poor			80% crown die back
15	Douglas-Fir (Pseudotsuga menziesii)	10	Excellent	Excellent			
16	red pine (Pinus resinosa)	15	Good	Fair			codominant at 3 feet
17	Zelkova (Zelkova serrata)	7	Fair	Fair			30% crown die back
18	Douglas-Fir (Pseudotsuga menziesii)	13	Good	Good			snow/ice damaged branches
19	Douglas-Fir (Pseudotsuga menziesii)	9	Good	Good			snow/ice damaged branches
20	Zelkova (Zelkova serrata)	10	Good	Fair			twig die back
21	Zelkova (Zelkova serrata)	8	Good	Good			
22	Douglas-Fir (Pseudotsuga menziesii)	12	Good	Good			
23	Zelkova (Zelkova serrata)	10	Good	Good			
24	Norway-maple (Acer platanoides)	19	Good	Good			leaning trunk, small deadwood
25	English-hawthorn (Crataegus monogyna)	8	Dead	Dead			
26	Douglas-Fir (Pseudotsuga menziesii)	37	Good	Good			small to medium deadwood throughout crown (shading)
27	Douglas-Fir (Pseudotsuga menziesii)	43	Good	Good			small to medium deadwood throughout crown (shading)

Trees that are removed which share tree protection zones with retained trees shall be removed by means of felling.

Appendix C - Tree Removals

SITE PLAN LEGEND

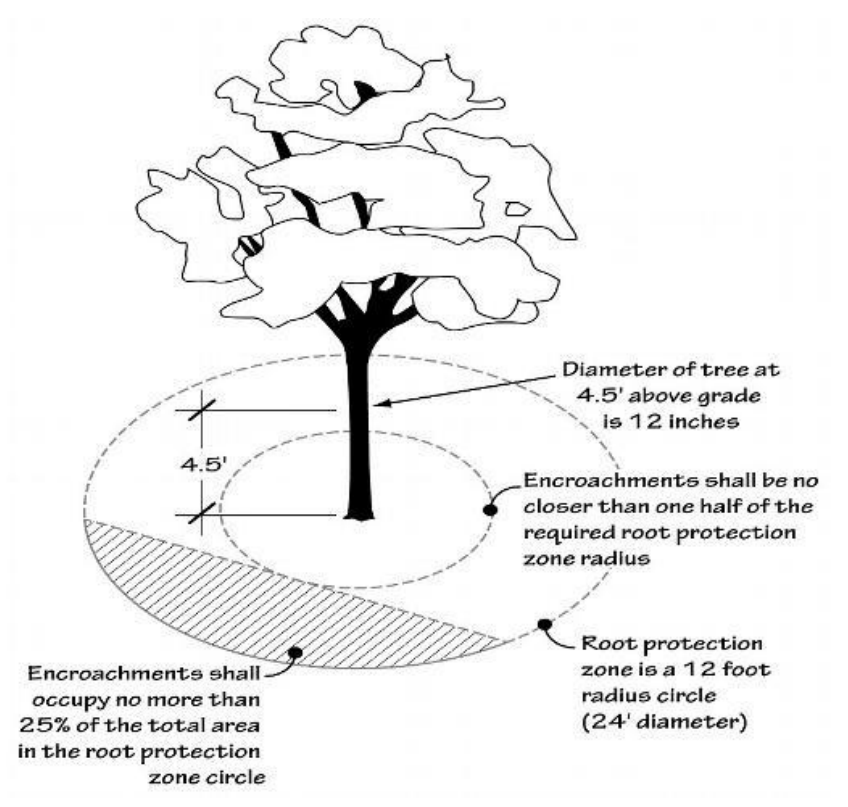
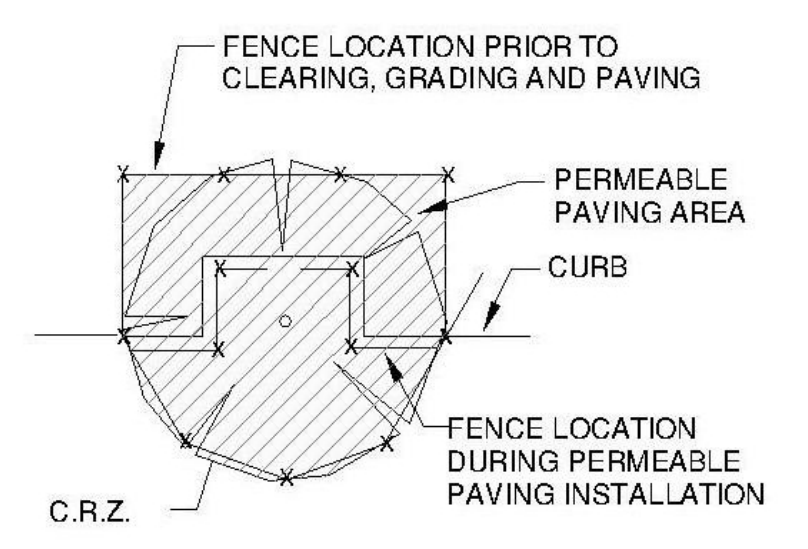
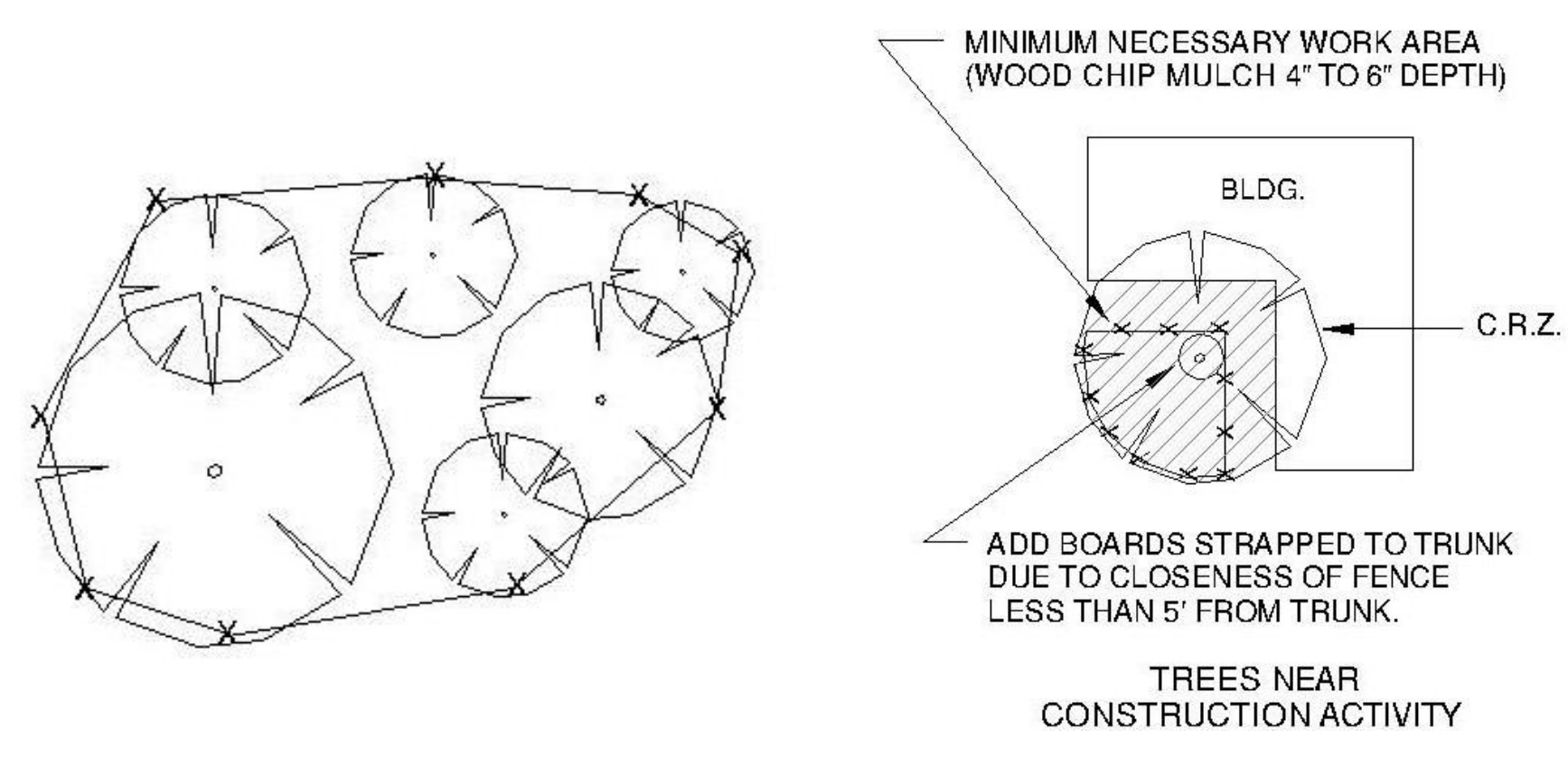
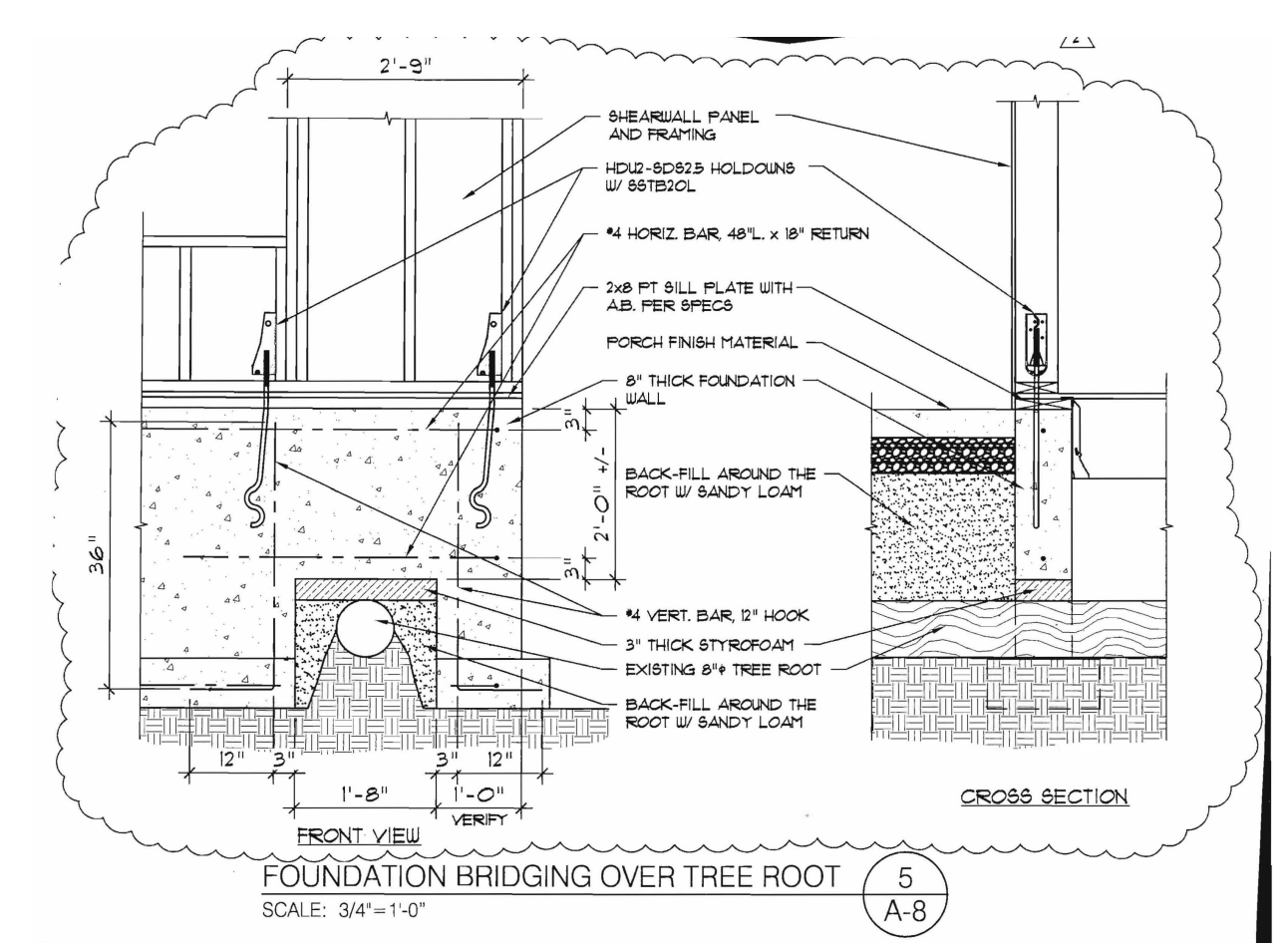


KEY NOTES

- 1 ADA PARKING STALL
- 2 TRASH/RECYCLING PICKUP ZONE
- 3 SHORT-TERM BICYCLE PARKING
- 4 BASKETBALL COURT / RESIDENT LOADING ZONE
- 5 CHILDREN'S PLAY AREA
- 6 CAFE SEATING ON RAISED DECK
- 7 RESIDENT AMENITY SPACE ON RAISED DECK
- 8 STORMWATER PLANTER
- 9 BENCH SEATING
- 10 CRITICAL ROOT ZONE AT TREE TO REMAIN
- 11 DOG RUN
- 12 PERMEABLE PAVERS
- 13 AT-GRADE PLANTER

GENERAL NOTES - SITE PLAN

1. FIELD VERIFY ALL INFORMATION PRIOR TO CONSTRUCTION. IF SITE CONDITIONS VARY FROM CONTRACT DOCUMENTS, NOTIFY ARCHITECT IN WRITING IMMEDIATELY.



GROUP OF TREES

BUS TURNAROUND

WILSONVILLE COMMUNITY SHARING

ONE-WAY DRIVE AISLE

SW BARBER ST

SMART TRANSIT

27
RESIDENT AMENITY ROOM

26
CAFE / TAPROOM

5

Appendix C - Tree Protection

STAMP

FOR REFERENCE ONLY

SHEET REVISION NO.	REVISION EVENT	REVISION DATE

TRUE NORTH PLAN NORTH
WILSONVILLE TOD

PALINDROME COMMUNITIES
ISSUANCE
100% SCHEMATIC DESIGN
PROJECT NUMBER
220120
DATE
06/05/23
FULL SHEET SIZE
30 X 42
DRAWING TITLE
ARCHITECTURAL SITE PLAN

SHEET NUMBER
A080

Inventory by:
Peter van Oss
Certified Arborist #PN-8145A
Inventory Date:
06/02/2023



Appendix D - Inventory
7/24/2023

ObjectID	Common and Scientific Name	DBH	Condition Health	Condition Structure	Bird nest present	Tree Details	Crown Radius	Status	Field Notes/ Comments
1	Zelkova (Zelkova serrata)	11	Good	Good	No	Included Bark	17	Remove	
2	sweet cherry (Prunus avium)	15	Good	Good	No		15	Remove	invasive/nuisance
3	Douglas-fir (Pseudotsuga menziesii)	12	Excellent	Excellent	No		12	Remove	
4	red pine (Pinus resinosa)	10	Fair	Good	No	boring insects present	8	Remove	
5	Douglas-fir (Pseudotsuga menziesii)	21	Excellent	Excellent	No		15	Protected	approximately 2 feet lower than sidewalk
6	Zelkova (Zelkova serrata)	9	Fair	Fair	No	Included Bark	15	Remove	center stem dead. large decay pockets on trunk
7	Zelkova (Zelkova serrata)	12	Excellent	Good	No	Included Bark	17	Remove	low canopy over road
8	Zelkova (Zelkova serrata)	11	Excellent	Good	No	Included Bark	17	Remove	low canopy over road
9	Zelkova (Zelkova serrata)	11	Excellent	Good	No	Included Bark	17	Remove	low canopy over road
10	Zelkova (Zelkova serrata)	12	Poor	Fair	No	large area of damaged bark from car accident.	17	Remove	low canopy over road
11	Zelkova (Zelkova serrata)	12	Good	Good	No	small deadwood	17	Remove	low canopy over road
12	Zelkova (Zelkova serrata)	9	Excellent	Good	No	Included Bark	10	Remove	
13	Douglas-fir (Pseudotsuga menziesii)	14	Good	Fair	No	Broken Branches	12	Remove	sap ooze from lower portion of trunk
14	English-hawthorn (Crataegus leavigata)	15	Very Poor	Very Poor	No	large deadwood	12	Remove	80% crown die back
15	Douglas-fir (Pseudotsuga menziesii)	10	Excellent	Excellent	No		10	Remove	
16	red pine (Pinus resinosa)	15	Good	Fair	No	Codominant Tree	8	Remove	codominant at 3 feet
17	Zelkova (Zelkova serrata)	7	Fair	Fair	No	Included Bark	7	Remove	30% crown die back
18	Douglas-fir (Pseudotsuga menziesii)	13	Good	Good	No	Broken Branches	15	Remove	snow/ice damaged branches
19	Douglas-fir (Pseudotsuga menziesii)	9	Good	Good	Yes	Broken Branches	15	Remove	snow/ice damaged branches
20	Zelkova (Zelkova serrata)	10	Good	Fair	Yes	Included Bark	15	Remove	twig die back
21	Zelkova (Zelkova serrata)	8	Good	Good	No	Included Bark	15	Remove	
22	Douglas-fir (Pseudotsuga menziesii)	12	Good	Good	Yes	Broken Branches	15	Remove	
23	Zelkova (Zelkova serrata)	10	Good	Good	Yes	Included Bark	17	Remove	
24	Norway-maple (Acer platanoides)	19	Good	Good	No		25	Remove	leaning trunk. small deadwood
25	English-hawthorn (Crataegus leavigata)	8	Dead					Remove	
26	Douglas-fir (Pseudotsuga menziesii)	37	Good	Good	No		20	Protected	small to medium deadwood throughout crown (shading)
27	Douglas-fir (Pseudotsuga menziesii)	43	Good	Good	No		20	Protected	small to medium deadwood throughout crown (shading)

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Appendix E: Tree Protection Specifications

It is critical that the following steps be taken to ensure that they are retained and protected.

Before Construction Begins

1. **Notify all contractors of the tree protection procedures.** For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection. It can only take one mistake with a misplaced trench or other action to destroy the future of a tree.
 - 1.1. Hold a Tree Protection meeting with all contractors to fully explain the goals of tree protection.
 - 1.2. Have all subcontractors sign memoranda of understanding regarding the goals of tree protection. Memoranda to include penalty for violating tree protection plan. Penalty to equal appraised value of tree(s) within the violated tree protection zone per the current Trunk Formula Method as outlined by the Council of Tree & Landscape Appraisers current edition of the *Guide for Plant Appraisal*.
2. **Migratory Bird Act of 1918.** If trees are removed between Feb 1 – Aug 1, the trees shall be inspected for the presence of active bird nests. If active nests are present, the proper steps shall be taken to ensure compliance with the Federal Law. Nests with young shall be preserved and a buffer must be created in accordance with the species. If active nests must be moved, a plan prepared by a certified biologist must be enacted and executed under the supervision of the biologist.
3. **Fencing.**
 - 3.1. Establish fencing around each tree or grove of trees to be retained as shown on the tree protection site plan.
 - 3.2. The fencing is to be put in place before the ground is cleared to protect the trees and the soil around the trees from any disturbance at all. The exception is if trees are to be removed that are located within the tree protection zones, they should be removed prior to installing the tree protection fencing without the use of mechanized wheeled or tracked equipment.
 - 3.3. Fencing is to be placed at the edge of the root protection zone as shown on the Tree Protection Plan (Appendix C). Root protection zones are established by the project arborist based on the needs of the site and the tree to be protected.
 - 3.4. “Protection fencing consisting of a minimum 6-foot-high metal chain-link fencing, secured with 8-foot metal posts shall be established at the edge of the root protection zone and permissible encroachment area on the development site. If construction fencing is used it is recommended that the panels are secured to prevent movement of the fencing during construction.
 - 3.5. Fencing is to remain in the position that is established by the project arborist and not to be moved without written permission from the project arborist until the end of the project after the final inspection has been completed.
4. **Signage**
 - 4.1. All tree protection fencing should have signage clearly indicating that the area is a vegetation protection zone (Signage provided with the tree protection application).
 - 4.2. Signage should be placed as to be visible from all sides of a tree protection area and spaced every 35 feet.

During Construction

5. Protection guidelines within the Root Protection Zone

- 5.1. No traffic shall be allowed within the root protection zone. No vehicle, heavy equipment, or even repeated foot traffic.
- 5.2. No storage of materials including but not limited to soil, construction material, or waste from the site.
- 5.3. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
- 5.4. Construction trailers are not to be parked / placed within the root protection zone without written clearance from the project arborist.
- 5.5. No vehicles shall be allowed to park within the root protection areas.
- 5.6. No activity shall be allowed that will cause soil compaction within the root protection zone.
- 5.7. The use of straw wattles is strongly recommended instead of silt fencing to avoid the need for trenching within the root protection zones.

6. Landscaping

- 6.1. Landscaping within the tree protection zones at a distance of 12X the diameter of the tree may commence after approval from the project arborist.
- 6.2. Inground irrigation systems must be avoided, and it is recommended that only above ground irrigation systems are used. Temporary systems and/or drip irrigation are preferred.
- 6.3. Any hardscapes within the tree protection zones shall be approved by the project arborist prior to soil disturbance taking place.
- 6.4. Landscape vegetation can be installed inside of the tree protection zones by pocket planting only. It is not recommended that soils are amended unless laboratory testing indicates that soil amelioration is needed.
- 6.5. No more than 4" of fill is allowed within the tree protection zone measured at a distance of 12X the diameter in circumference of the trees. No more than 25% of the tree protection zone may be impacted without the consent of the project arborist.
- 6.6. It is highly recommended that nutrient rich mulch or arborist woodchips are used in the planter areas. The material may be enriched with nitrogen to enhance the nutrient uptake by the soils.
7. **Tree protection.** Retained trees shall be protected from any cutting, skinning, or breaking of branches, trunks, or roots.
8. **Root pruning.** The roots that are to be cut from existing trees that are to be retained, the project consulting arborist shall be notified to evaluate, document, and oversee the proper cutting of roots with sharp cutting tools. Cut roots are to be immediately covered with soil or mulch to prevent them from drying out.
9. **Grade changes.** No grade change should be allowed within the root protection zone.
10. **Root protection zone changes.** Any necessary deviation of the root protection zone shall be cleared by the project consulting arborist in writing.
11. **Watering.** Provide water to trees during the summer months as needed. Tree(s) that will have had root system(s) cut back will need supplemental water to overcome the loss of ability to absorb necessary moisture during the summer months.
12. **Utilities.** Any necessary passage of utilities through the root protection zone shall be by means of tunneling under roots by hand digging or boring.
13. **Re-inspection of fencing.** Tree protection fencing is subject to inspection by the city. The project arborist highly recommends monthly inspections of tree protection fencing to ensure compliance with the permit and protection of the trees.

After Construction

14. Fences are to remain standing until the final inspection has been completed by the city for the project.
15. Provide for or ensure that adequate drainage will occur around the retained trees.
16. Pruning of the existing trees should be completed as one of the last steps of the landscaping process before the final placement of trees, shrubs, ground covers, mulch, or turf.
17. Trees that are retained may need to be fertilized as called for by the project arborist if acceptable thresholds are exceeded. Lab analysis may be required.
18. The existing trees should be monitored for decline for a period of three years post construction. Proper care should be prescribed if the trees start to show signs of stress.

If there are any questions or concerns regarding the proper protection of the trees during the construction process, contact the project arborist.



MEMORANDUM

DATE: Monday, November 6, 2023
TO: Tim Schneider | YBA Architects
FROM: Peter van Oss, ASCA RCA #826 | ISA Certified Arborist, PN-8145A
RE: Tree protection for the civil plan set at the Wilsonville TOD project.

Introduction

Teragan & Associates, Inc. was contacted by Tim Schneider, to assess the final plans for the Wilsonville TOD project that is proposed at 9699 SW Barber Street, Wilsonville, Oregon. The plans indicate that three larger diameter Douglas-firs (*Pseudotsuga menziesii*) are proposed to be retained during this project.

The site is planned and designed with the retention of the trees in mind. Some questions arose by the City of Wilsonville planning department during the planning meeting, and I was asked to review the latest plans and provide my professional opinion. This memorandum states the conclusions of my findings regarding the proposed site development.

Observations

The plans for the Wilsonville TOD project include the retention of three larger diameter Douglas-fir trees, specifically trees #5, #26, and #27. Careful consideration has been given to designing the site improvements in a way that will promote the long-term health and survival of these trees. I have reviewed the plans and provided feedback to minimize the impact on the root systems of the trees.

Discussion and Recommendations

The proposed improvements within the tree protection zones of the trees are designed to minimize root impacts as much as possible. The decking around tree #5 can be installed at the existing ground level and the footings can be located between the roots of the trees to ensure that impacts are within acceptable limits.

Most of the proposed site improvements within the tree protection zones of trees #26 and #27 consist of permeable materials installed close to the existing grade. Using permeable materials will minimize the impact on soil hydrology. According to the provided plans, the encroachments of the foundation footings and impervious materials are within acceptable thresholds. Page L2 – level 1 materials shows the approximate percentages of the encroachments. The impervious materials and foundation footings within the tree protection zones of the retained trees are as follows:

- Tree #5: bicycle parking and sidewalk, totaling 10% of the total tree protection zone.
- Tree #26: parking exit, totaling 10% of the total tree protection zone.
- Tree #27: foundation and walkway, totaling 26% of the total tree protection zone.

Although the encroachment on tree #26 is slightly higher than the acceptable threshold, alternative construction methods can be used to minimize root impacts. The roots of the trees can be incorporated into the crawl space of the structure by bridging or gapping the roots, which will allow them to remain and reduce the overall percentage of impacts.

There is a gravel walkway planned within the critical root protection zone of the trees, and Geo Cell materials can be used to minimize soil compaction. The Geo Cell materials allow for the gravel path to be installed at the existing ground level without the need for compaction or additional edging materials.

The area underneath the dripline of the trees is planned to be covered with wood chips, which will provide beneficial nutrients to the soil and benefit the trees. Based on the review of the plans, the following recommendations are made:

- Explore the ground disturbing impacts of the proposed site improvements using pneumatic excavation before starting the project. This will allow for adjustments to be made, if necessary, particularly in relation to foundation footings and pier locations to accommodate the root systems of the trees.
- Place the tree protection fencing in phases throughout the project. Start by placing the fencing at the edge of the tree protection zones at the beginning of the project and during grading. This will clearly mark the protected area and set the standard for tree protection on-site.
- Any work in the tree protection zones of the trees must be approved and supervised by the project arborist.

Conclusion

Based on my observations and the information provided, it is my professional opinion that the proposed plans can be completed while retaining the three trees. It is imperative that the tree protection plan recommendations are adhered to during the project. The special considerations in this memorandum must be incorporated into the tree protection plan as well.

If you have any further questions or require additional information, please do not hesitate to contact me.

Sincerely,

Peter van Oss

Peter van Oss | Senior Associate

 RCA #826
Registered Consulting Arborist*

Member, American Society of Consulting Arborists

ISA Certified Arborist PN-8145A

ISA Tree Risk Assessment Qualified

E: peter@teragan.com | C: 971-231-4044

Enclosures:

Appendix A Assumptions and Limitations
Appendix B Certification of Performance
Appendix C Site Map with Recommendations

Appendix A - Assumptions and Limitations

1. A field examination of the site was made. My observations and conclusions are as of that date.
2. Care has been taken to obtain all information from a reliable source, however the arborist can neither guarantee nor be responsible for accuracy of information provided by others.
3. Unless stated otherwise, information contained in this report covers only those trees that were examined and reflects the condition of those trees at the time of inspection. The inspection is limited to visual examination of the subject trees without dissection, excavation, probing, or coring. There is no warranty or guarantee that problems or deficiencies of the subject tree may not arise in the future.
4. This report and any values/opinions expressed herein represents my opinion as an arborist. Inaction on the part of those receiving the report is not the responsibility of the arborist.
5. Loss or alteration of this report invalidates the entire report.
6. Any legal description provided to the consultant/ appraiser is assumed to be correct. Any titles and ownerships to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. All property is appraised or evaluated as though free and clear, under responsible ownership and competent management.
7. The consultant/ appraiser shall not be required to give testimony or attend court by reason of this report unless subsequent contractual arrangements are made, including payment for such services.
8. Possession of this report does not imply right of publication or use for any other purpose by any other than the person to whom it is addressed, without the prior expressed written consent of the consultant/ appraiser.

Appendix B - Certification of Performance

I, Peter van Oss, certify that:

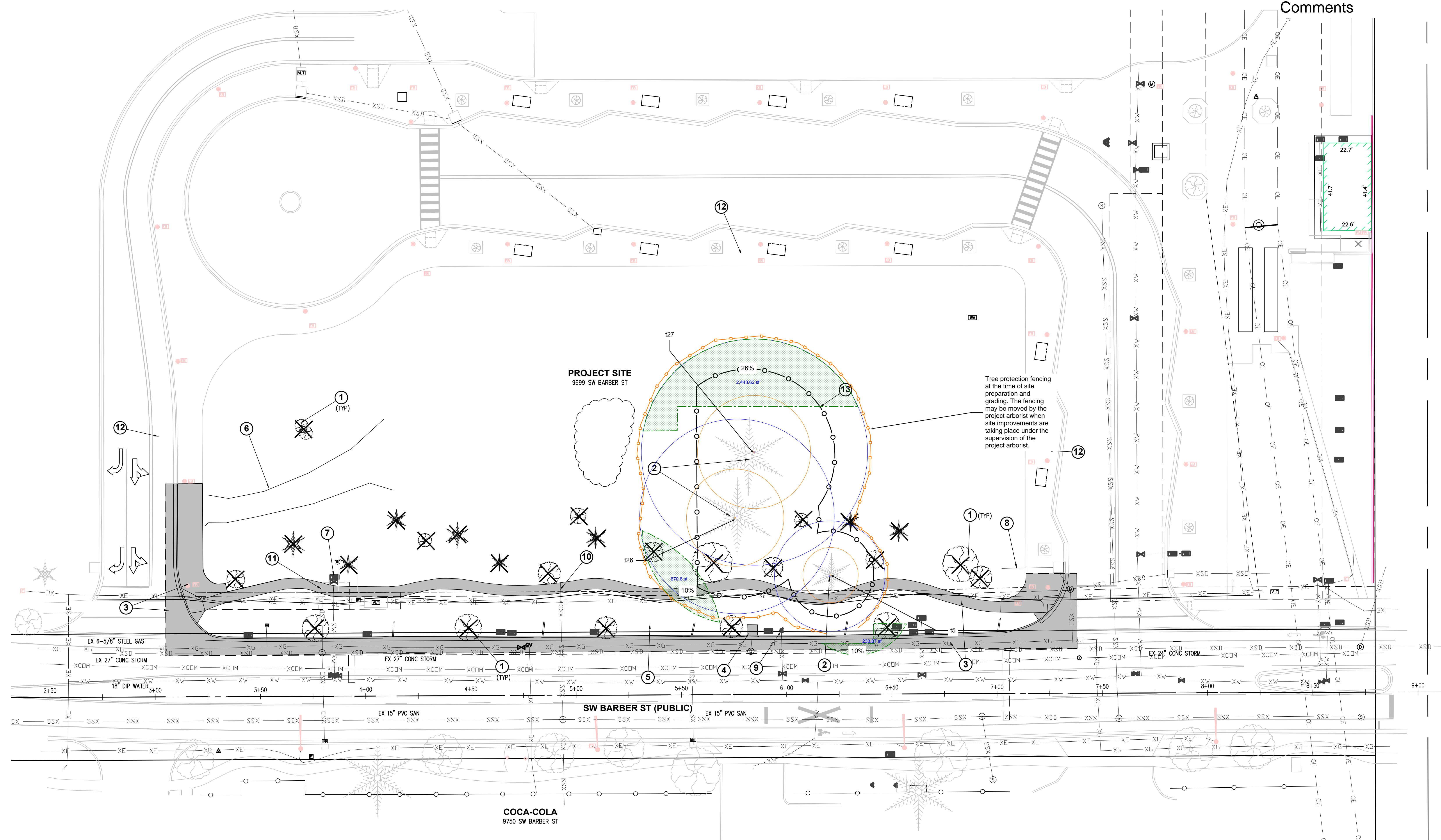
- I have personally inspected the trees and the property referred to in this report and have stated my findings accurately. The extent of the evaluation or appraisal is stated in the attached report and the Terms of the Assignment.
- I have no current or prospective interest in the vegetation or the property that is the subject of this report and have no personal interest or bias with respect to the parties involved.
- The analysis, opinions and conclusions stated herein are my own and are based on current professional procedures and facts.
- My analysis, opinions and conclusions were developed, and this report has been prepared according to commonly accepted arboricultural practices.
- No one provided significant professional assistance to me, except as indicated in the report.
- My compensation is not contingent upon reporting of a predetermined conclusion that favors the cause of the client or any other party nor upon the results of the assessment, the attainment of stipulated results, or the occurrence of any subsequent events.

I further certify that I am a member of, and certified as, an arborist by the ISA. I have been involved in the arboricultural field in a full-time capacity for a period of 17 years.

Peter van Oss | Senior Associate

 RCA #826
Registered Consulting Arborist*

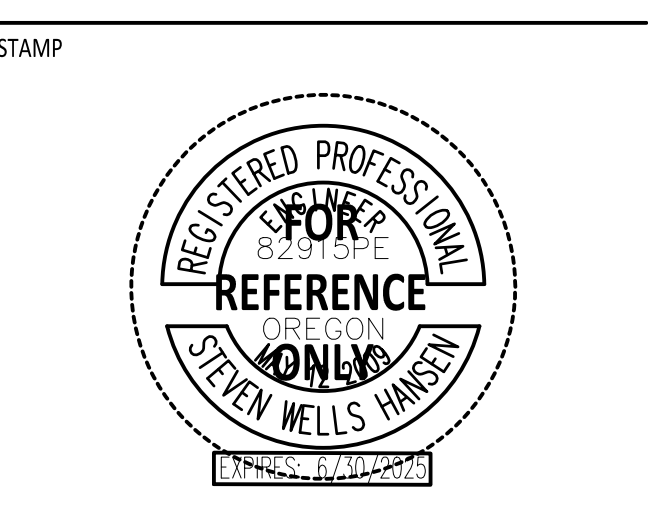
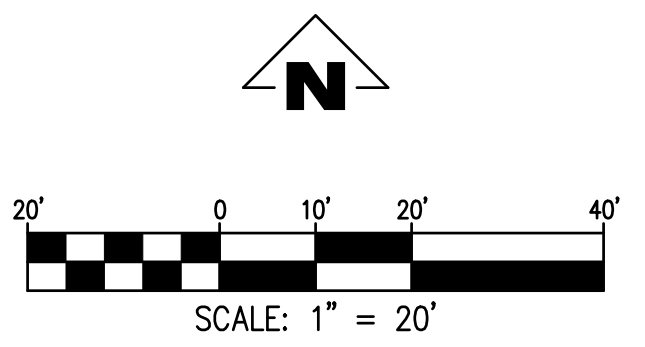
Member, American Society of Consulting Arborists
ISA Certified Arborist PN-8145A
ISA Tree Risk Assessment Qualified
E: peter@teragan.com | C: 971-231-4044



- DEMOLITION NOTES**
- 1 EXISTING TREE TO BE REMOVED AND DISPOSED OF OFF SITE.
 - 2 EXISTING TREE TO REMAIN AND BE PROTECTED.
 - 3 SAWCUT AND REMOVE EXISTING SIDEWALK, CURB AND GUTTER
 - 4 EXISTING INLET TO BE REMOVED. EXISTING INLET LEAD TO BE CAPPED AND ABANDONED
 - 5 EXISTING STORMWATER PLANTER SYSTEM TO BE DEMOLISHED, INCLUDING CURB INLETS, IRRIGATION SYSTEM, AND IRRIGATION CONTROL VALVES
 - 6 EXISTING GRAVEL DRIVEWAY TO BE REMOVED
 - 7 EXISTING WATERLINE AND STRUCTURES TO BE DEMOLISHED AND CAPPED AT PROPERTY LINE
 - 8 EXISTING STORM LINE TO BE CAPPED AND ABANDONED
 - 9 EXISTING HYDRANT TO REMAIN AND BE PROTECTED
 - 10 EXISTING SANITARY SEWER LATERAL TO REMAIN AND BE PROTECTED
 - 11 EXISTING STORM DRAIN LATERAL TO REMAIN AND BE PROTECTED/
 - 12 EXISTING SIDEWALK TO REMAIN AND BE PROTECTED
 - 13 INSTALL TREE PROTECTIVE FENCING. ROOT PROTECTION ZONE FENCING CONSISTING OF SIX-FOOT METAL CHAIN-LINK FENCE SECURED WITH 8-FOOT METAL POSTS IN THE GROUND MUST BE PLACED ALONG THE EDGE OF THE ROOT PROTECTION ZONE.

GENERAL NOTES:

1. SEE ARBORIST REPORT & TREE PROTECTION PLAN BY PETER VAN OSS OF TERAGAN & ASSOCIATES, INC. "WILSONVILLE TOD PROJECT" DATED JULY 25, 2023, FOR MORE INFORMATION ON TREE PROTECTION



SHEET REVISION NO.	REVISION EVENT	REVISION DATE

TRUE NORTH PLAN NORTH

WILSONVILLE TOD

PALINDROME COMMUNITIES

ISSUANCE
LAND USE REVIEW

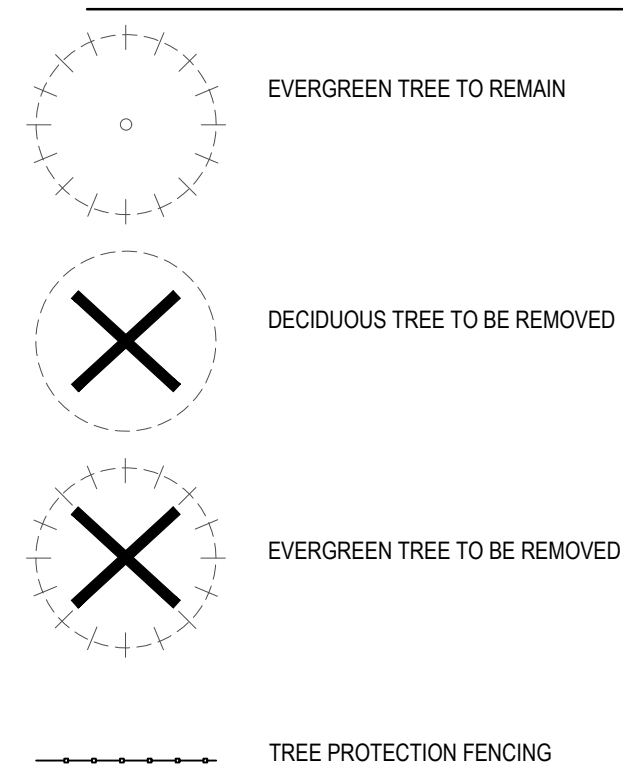
PROJECT NUMBER
220120

DATE
08/18/23

FULL SHEET SIZE
30 X 42

DRAWING TITLE
EXISTING CONDITIONS AND DEMOLITION PLAN

EXISTING TREE LEGEND



EXISTING TREE SCHEDULE

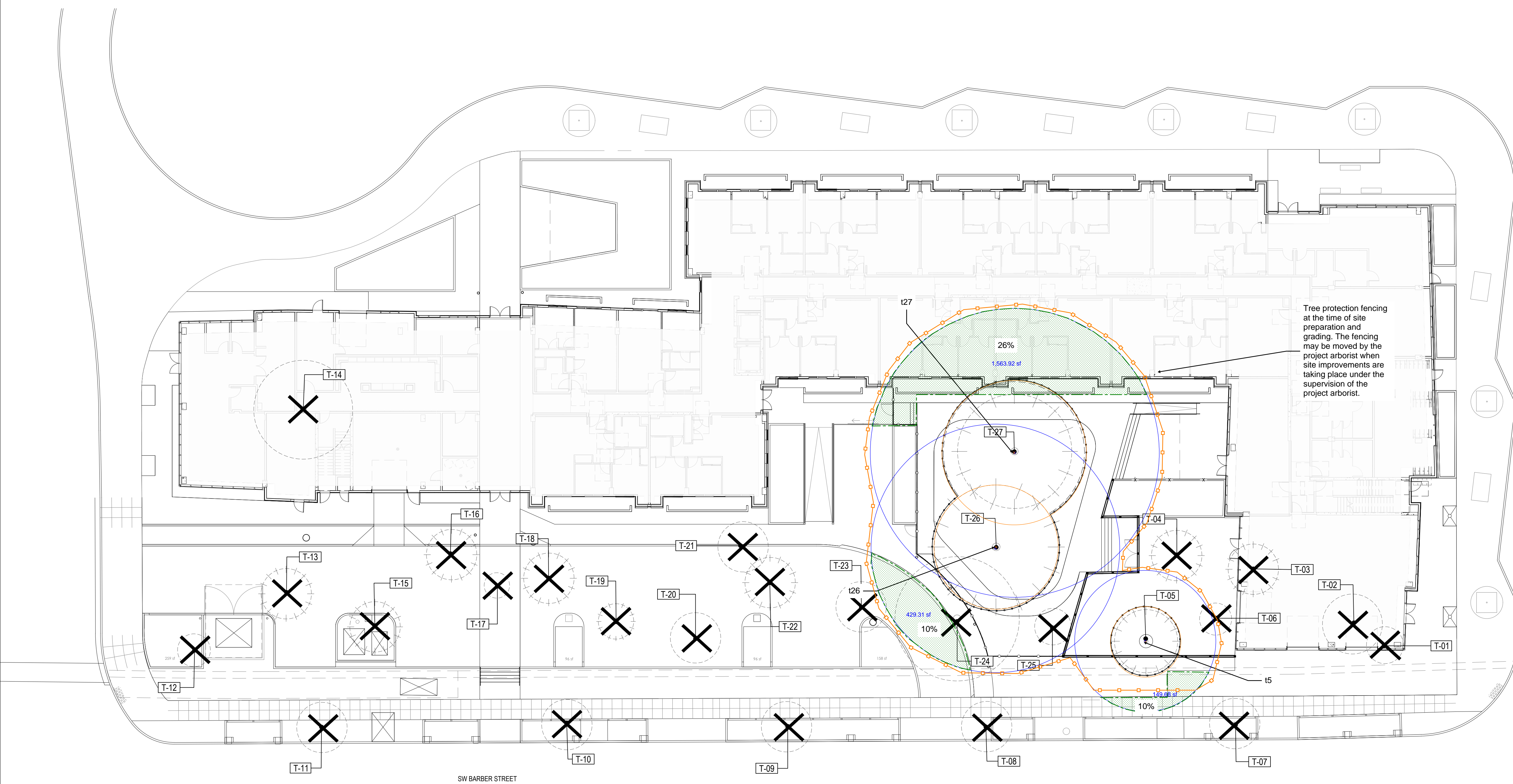
SYMBOL	DESCRIPTION	DBH	ACTION	CONDITION	TREE CREDITS	HEALTH
T-01	ZELKOVA SERRATA	11"	REMOVE			GOOD
T-02	PRUNUS AVIUM	15"	REMOVE	NUISANCE		GOOD
T-03	PSEUDOTSUGA MENZIESII	12"	REMOVE			EXCELLENT
T-04	PINUS RESINOSA	10"	REMOVE			FAIR
T-05	PSEUDOTSUGA MENZIESII	21"	PROTECT	2-FOOT LOWER THAN SIDEWALK	3 CREDITS	EXCELLENT
T-06	ZELKOVA SERRATA	9"	REMOVE	CENTER STEM DEAD		FAIR
T-07	ZELKOVA SERRATA	12"	REMOVE	LOW CANOPY		EXCELLENT
T-08	ZELKOVA SERRATA	11"	REMOVE	LOW CANOPY		EXCELLENT
T-09	ZELKOVA SERRATA	11"	REMOVE	LOW CANOPY		EXCELLENT
T-10	ZELKOVA SERRATA	12"	REMOVE	LOW CANOPY		POOR
T-11	ZELKOVA SERRATA	12"	REMOVE	LOW CANOPY		GOOD
T-12	ZELKOVA SERRATA	9"	REMOVE			EXCELLENT
T-13	PSEUDOTSUGA MENZIESII	14"	REMOVE	SAP Ooze		GOOD
T-14	CRATAEGUS MONOGYNA	15"	REMOVE	80% CROWN DIE BACK		VERY POOR
T-15	PSEUDOTSUGA MENZIESII	10"	REMOVE			EXCELLENT
T-16	PINUS RESINOSA	15"	REMOVE	CODOMINATE AT 3'		GOOD
T-17	ZELKOVA SERRATA	7"	REMOVE	30% CROWN DIE BACK		FAIR
T-18	PSEUDOTSUGA MENZIESII	13"	REMOVE	SNOW/ICE DAMAGED BRANCHES		GOOD
T-19	PSEUDOTSUGA MENZIESII	9"	REMOVE	SNOW/ICE DAMAGED BRANCHES		GOOD
T-20	ZELKOVA SERRATA	10"	REMOVE	TWIG DIE BACK		GOOD
T-21	ZELKOVA SERRATA	8"	REMOVE			GOOD
T-22	PSEUDOTSUGA MENZIESII	12"	REMOVE			GOOD
T-23	ZELKOVA SERRATA	10"	REMOVE			GOOD
T-24	ACER PLATANOIDES	19"	REMOVE	LEANING		GOOD
T-25	CRATAEGUS MONOGYNA	8"	REMOVE	DEAD		DEAD
T-26	PSEUDOTSUGA MENZIESII	37"	PROTECT	DEAD WOOD IN CROWN	5 CREDITS	GOOD
T-27	PSEUDOTSUGA MENZIESII	43"	PROTECT	DEAD WOOD IN CROWN	5 CREDITS	GOOD

TREE PROTECTION NOTES

- A. PROTECT ALL TREES INDICATED TO REMAIN, INCLUDING BARK AND ROOT ZONES.
- B. FENCING SHALL BE INSTALLED PER THE TREE PROTECTION PLAN. FINAL LAYOUT SHALL BE REVIEWED AND APPROVED BY THE PROJECT ARBORIST AND/OR LANDSCAPE ARCHITECT.
- C. ALL WORK WITHIN THE TREE PROTECTION ZONE SHALL BE PERFORMED WITH HANDHELD TOOLS OR AIR SPADE.
- D. EXCAVATION WITHIN THE TREE PROTECTION ZONE SHALL BE PERFORMED WITH HANDHELD TOOLS OR AIR SPADE. EXCAVATE THE MINIMUM AMOUNT NECESSARY TO ACCOMPLISH PURPOSE FOR EXCAVATION. ROOTS OVER 4" DIAMETER SHALL BE CUT BY THE PROJECT ARBORIST.
- E. THE FOLLOWING IS PROHIBITED WITHIN THE ROOT PROTECTION ZONE OF EACH TREE OR OUTSIDE THE LIMITS OF THE DEVELOPMENT IMPACT AREA:
 - GROUND DISTURBANCE OR CONSTRUCTION ACTIVITY INCLUDING VEHICLE OR EQUIPMENT ACCESS (BUT EXCLUDING ACCESS ON EXISTING STREETS OR DRIVEWAYS)
 - STORAGE OF EQUIPMENT OR MATERIALS INCLUDING SOIL, TEMPORARY OR PERMANENT STOCKPILING, PROPOSED BUILDINGS, IMPERVIOUS SURFACES, UNDERGROUND UTILITIES, EXCAVATION OR FILL, TRENCHING OR OTHER WORK ACTIVITIES
- F. PROTECTIVE FENCE SHALL BE INSTALLED BEFORE ANY GROUND DISTURBING ACTIVITIES INCLUDING CLEARING AND GRADING, OR CONSTRUCTION STARTS, AND SHALL REMAIN IN PLACE UNTIL FINAL INSPECTION.
- G. SIGNAGE DESIGNATING THE PROTECTION ZONE AND PENALTIES FOR VIOLATIONS SHALL BE SECURED IN A PROMINENT LOCATION ON EACH PROTECTION FENCE.
- H. TREE PROTECTION ZONE SHALL REMAIN FREE OF ALL CHEMICALLY INJURIOUS MATERIALS AND LIQUIDS.

MAINTENANCE NOTES FOR EXISTING TREES

- A. WASH OFF FOULAGE WHICH BECOMES SOILED DURING CONSTRUCTION.
- B. WATER TREES AND OTHER VEGETATION WHICH ARE TO REMAIN AS NECESSARY TO MAINTAIN THEIR HEALTH DURING THE COURSE OF THE WORK. RATE AND FREQUENCY OF APPLICATION TO BE DETERMINED BY PROJECT ARBORIST.
- C. ALL PRUNING SHALL BE PERFORMED BY A CURRENT ARBORIST LICENSED WITHIN THE STATE/COUNTY/CITY WHERE THE WORK IS TO BE COMPLETED.

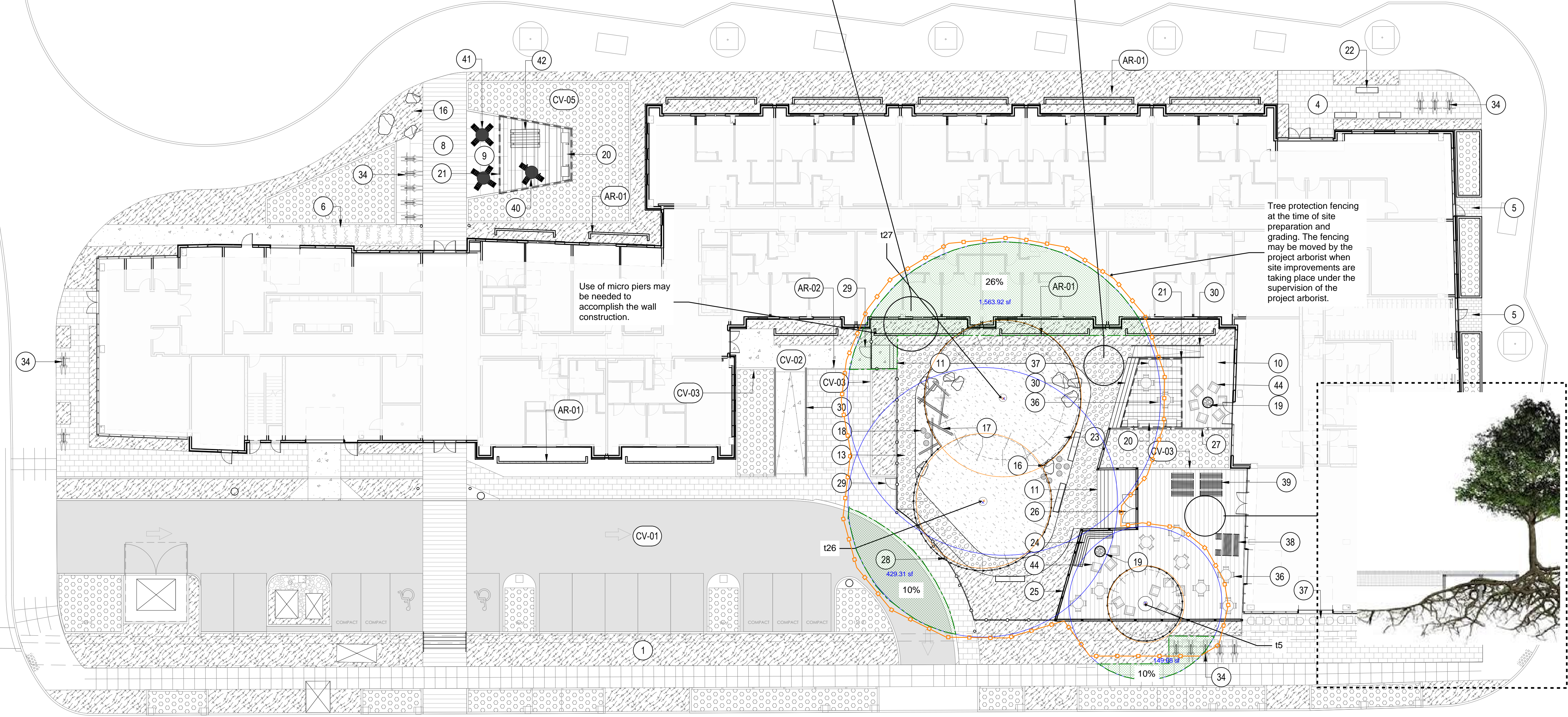
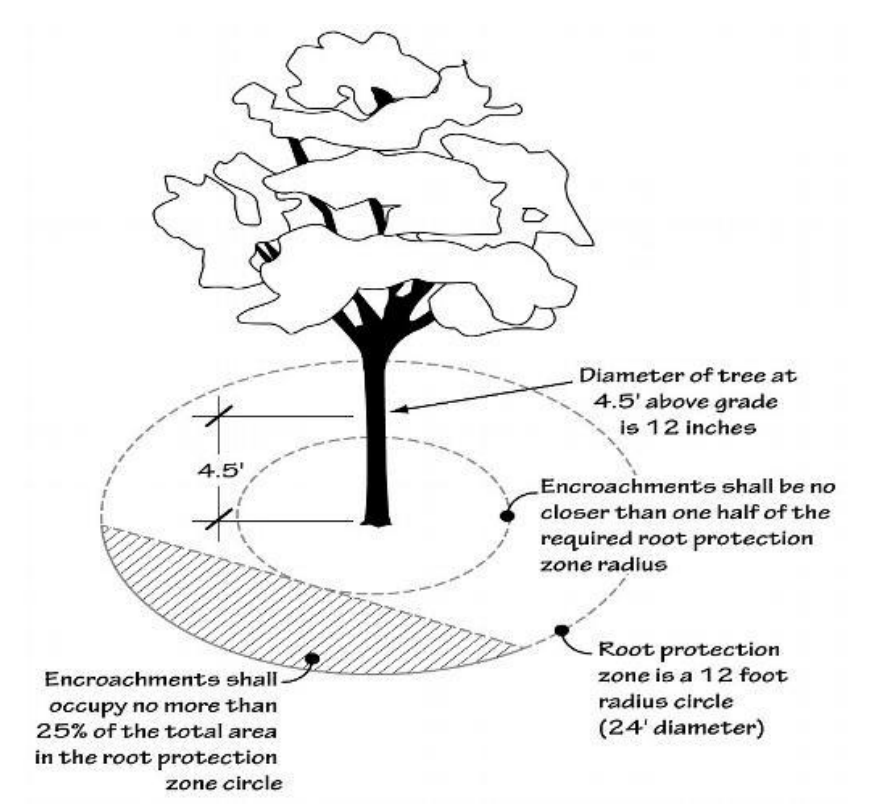
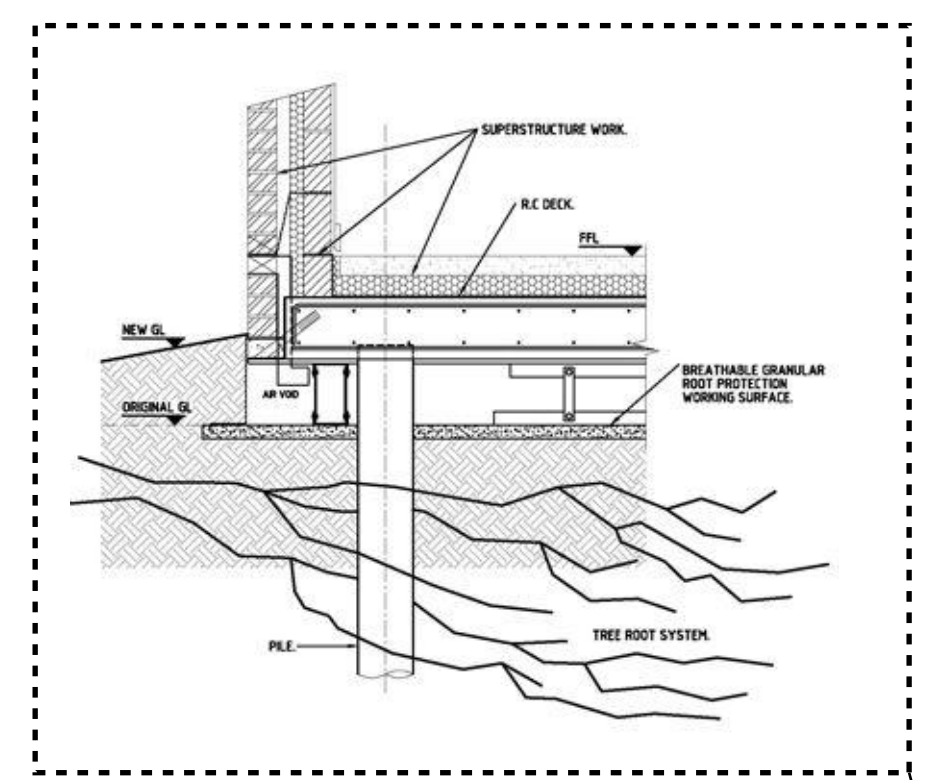
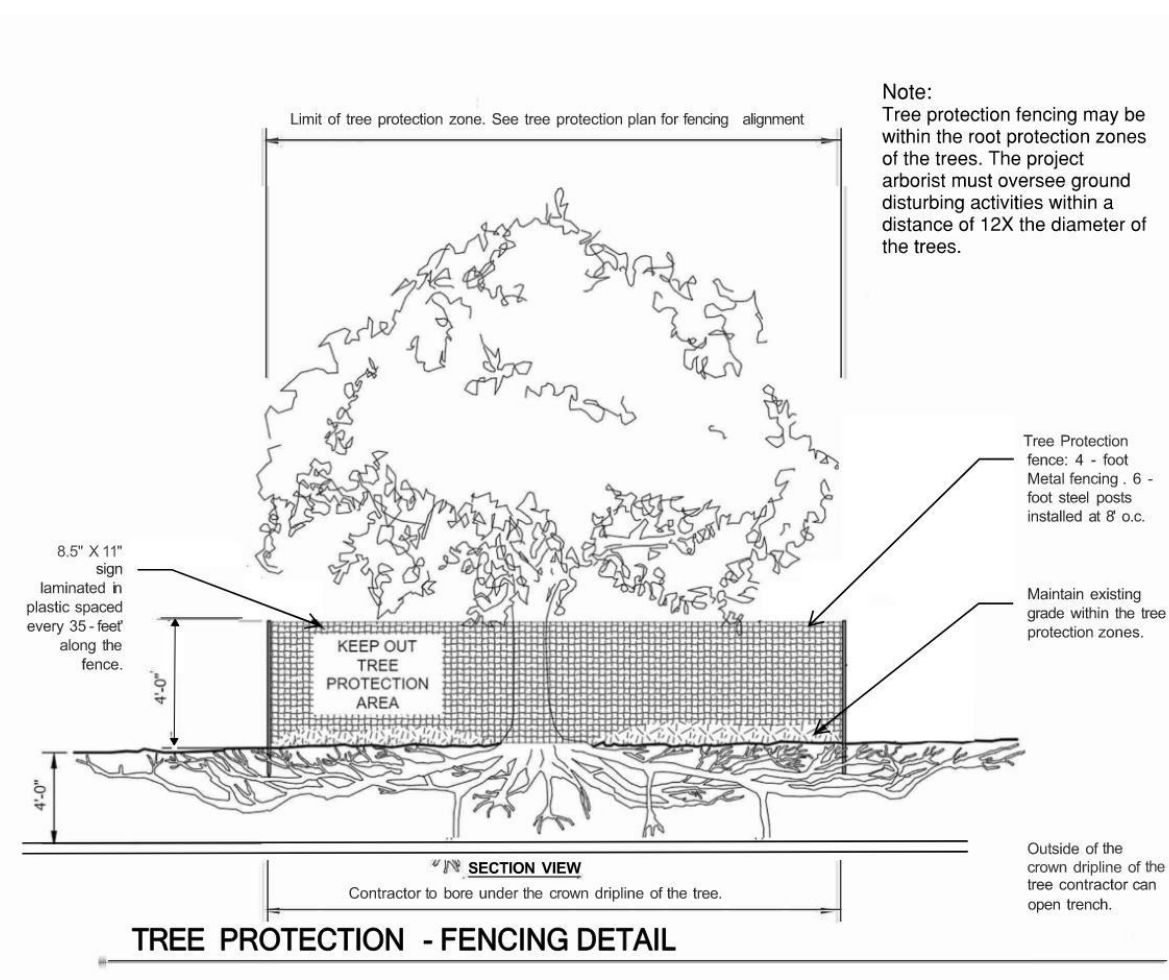


FOR REFERENCE ONLY

SHEET	REVISION	REVISION
REVISION NO.	EVENT	DATE

REFERENCE NOTES SCHEDULE

SYMBOL	DESCRIPTION
1	PLANTING AREA, TYP. SEE LANDSCAPE DRAWINGS / DETAILS / SPECS
4	PAVER TYPE I - PERMEABLE BELGARD AQUA LINE 3x12 COLOR: DARK CHARCOAL
5	PAVER TYPE II WAUSAU TILE EXPRESSIONS 6x16 COLOR: DARK CHARCOAL
6	PAVER TYPE II WAUSAU TILE EXPRESSIONS 24x48 COLOR: DARK CHARCOAL
8	CONCRETE SURFACING TYPE II COLORED / STAMPED CONCRETE
9	CONCRETE SURFACING TYPE III COLORED CONCRETE
10	CEDAR OR THERMALLY MODIFIED WOOD POST AND BEAM DECKING. CONCRETE CAST-IN-PLACE FOOTINGS OR HELICAL PIER AND DECK FOOTING
11	STAIRS TO MATCH DECKING
12	AGGREGATE SURFACING TYPE I 3/4-INCH GRAY RIVER COBBLE
13	AGGREGATE SURFACING TYPE II DECOMPOSED GRANITE
15	CEDAR PLAY CHIPS
16	LANDSCAPE BOULDERS CAMAS GRAY BASALT, ANGULAR APPEARANCE
17	WEATHERIZED LOGS PINNED TOGETHER AND TO GROUND
18	WEATHERIZED 16-18 INCH ROUND LOG PLACED ON END
19	FIRE TABLE, TYP. SEE CIVIL DRAWINGS FOR PROPANE HOOK UP SEE ELECTRICAL DRAWINGS FOR ELECTRICAL HOOKUP
20	BBO ENCLOSURE - CONCRETE COUNTER TOP AND THERMALLY MODIFIED WOOD CLADDING SEE CIVIL FOR PROPANE HOOKUP SEE ELECTRICAL FOR ELECTRICAL HOOKUP
21	POLYGON TRELLIS CEDAR LATH ON STEEL FRAME
22	FIR LOG BENCH 24" DIA. 6-FOOT LONG
23	FIR LOG BENCH 24" DIA. 8-FOOT LONG
24	CUSTOM CORNER BENCH CEDAR SLATS ON METAL FRAME
25	KNOTWOOD ALUMINUM FENCE, SO. BLACK POSTS, 6" WIDE, WOODGRAIN COLORED, VERTICAL SLATS, W/ 1" GAPS
26	KNOTWOOD ALUMINUM FENCE, GATE TO MATCH FENCE, ONE-WAY OPEN WITH INTERIOR LOCKING MECHANISM
27	6.5" TALL KNOTWOOD ALUMINUM FENCE, 4" SO. POSTS WITH 6" WIDE, HORIZONTAL SLATS, WOODGRAIN COLORED
28	42" CUSTOM METAL PICKET FENCING POWDER-COATED BLACK
29	42" CUSTOM METAL PICKET GATE, GATE TO MATCH FENCE, ONE-WAY OPEN WITH RESIDENT PASS-CARD MECHANISM
30	CUSTOM METAL RAILING TO MATCH PICKET FENCING, ADA COMPLIANT
33	TREE GRATE CITY STANDARD 4' X 6'
34	BIKE RACK HUNTCO RAMBLER - FLAT PROFILE, BLACK
36	GROSFFLEX 38" ROUND PEDESTAL TABLE AND MOVEABLE CHAIRS - COLORS TBD
37	GROSFFLEX 28" SQUARE BAR HEIGHT TABLE AND BACKED BAR STOOLS - COLORS TBD
38	DUMOR 6" STEEL AND IPE ADA PICNIC TABLE WITH ONE BENCH AND TWO STOOLS FRAME COLOR TBD
39	DUMOR 6" STEEL AND IPE ADA PICNIC TABLE WITH TWO BENCHES - FRAME COLOR TBD
40	DUMOR 42" ROUND STEEL ADA TABLE WITH THREE ATTACHED SEATS - COLOR TBD
41	DUMOR 42" ROUND STEEL TABLE WITH FOUR ATTACHED SEATS - COLOR TBD
42	DUMOR 6" ALUMINUM PICNIC TABLE WITH ATTACHED BENCHES - COLOR TBD
43	DUMOR 6" ALUMINUM ADA PICNIC TABLE WITH ATTACHED BENCHES - COLOR TBD
44	LOUNGE CHAIR
AR-01	SEE ARCHITECTURAL DRAWINGS / DETAILS / SPECS DESCRIPTION 18" CONCRETE WALL, TYP
AR-02	METAL FENCE & MOVEABLE GATES SEE ARCHITECTURE
CV-01	SEE CIVIL DRAWINGS / DETAILS / SPECS DESCRIPTION ASPHALT PAVING
CV-02	CONCRETE SURFACING TYPE I
CV-03	RAISED CONCRETE PLANTER



SW BARBER STREET

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	HT	CAL	WATER NEEDS
AC	ACER CIRCINATUM / VINE MAPLE STORMWATER TREE / MULTI STEM (3 STEM MIN)	B&B	5'-6"	1" CAL	MOD.	
AV	ACER CIRCINATUM / VINE MAPLE MULTI-STEM (3-5 STEM)	B&B	8'-10"		MOD.	
AG	ACER NIGRUM 'GREENCOLUMN' / GREENCOLUMN BLACK MAPLE	B&B	10'	2" CAL	MOD.	
AB	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE STORMWATER / PARKING TREE	B&B	1.75' CAL		MOD.	
AF	ACER RUBRUM 'FRANKSRED' / RED SUNSET® MAPLE STORMWATER TREE	B&B	2" CAL		MOD.	
CM	CUPRESSUS SEMPERVIRENS 'MONSHEL' / TINY TOWER® ITALIAN CYPRESS	B&B	5'-6"		MOD.	
FL	FRAXINUS LATIFOLIA / OREGON ASH	B&B	2" CAL		MOD.	
MU	MAGNOLIA VIRGINIANA 'JIM WILSON' / MOONGLOW® SWEETBAY MAGNOLIA	B&B	8'-10"	1.75' CAL	MOD.	
PO	PSEUDOTSUGA MENZIESII / DOUGLAS FIR MITIGATION TREE	B&B	8'-10"		MOD.	
PY	PYRUS CALLERYANA 'CHANTICLEER' / CHANTICLEER CALLERY PEAR	B&B	1.75' CAL		MOD.	
OK	QUERCUS ROBUR X ALBA 'JFS-KW1Q' / STREETSPIRE® OAK	B&B	10'	2" CAL	MOD.	
RP	RHAMNUS PURSHIANA / CASCARA	B&B	1.75' CAL		MOD.	
SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE	HT	WATER NEEDS	
CR	CHOISYA TERNATA 'AZTEC PEARL' / AZTEC PEARL MEXICAN ORANGE	3 GAL	2'-3'		MOD.	
EJ	EJONYMUS JAPONICUS 'GREEN SPIRE' / GREEN SPIRE JAPANESE EJONYMUS	5 GAL	4'-5'		MOD.	
HI	HYDRANGEA ARBORESCENS 'NCHAS' / INVINCIBELLE® WEE WHITE HYDRANGEA	3 GAL			MOD.	
HL	HYDRANGEA MACROPHYLLA 'HORTMAV' / SEASIDE SERENADE® MARTHA'S VINEYARD HYDRANGEA	2 GAL			MOD.	
LO	LEUCOTHOE FONTANESIANA 'LITTLE FLAMES' / LEAFSCAPE LITTLE FLAMES LEUCOTHOE	2 GAL			MOD.	
LI	LOROPETALUM CHINENSE RUBRUM 'KIROBUI' / CHERISE CHARM™ FRINGE FLOWER	2 GAL			MOD.	
LS	LOROPETALUM CHINENSE RUBRUM 'SUZANNE' / SUZANNE FRINGE FLOWER	3 GAL	3'-4'		MOD.	
MX	MAHONIA X 'SOFT CARESS' / SOFT CARESS MAHONIA	3 GAL	2'-3'		MOD.	
PO	PHYSCARPUS OPULIFOLIUS 'SMPFBLR' / GINGER WINE® NINEBARK	3 GAL			MOD.	
PL	PRUNUS LAUROCERASUS 'OTTO LUYKEN' / OTTO LUYKEN ENGLISH LAUREL	3 GAL	2'-3'		MOD.	
RH	RHOODODENDRON X 'HARDY GARDENIA' / SNOWBALL AZALEA	2 GAL			MOD.	
SD	SPIRAEA JAPONICA 'TRACY' / DOUBLE PLAY BIG BANG® SPIREA	3 GAL	3'-4'		MOD.	

STORMWATER FACILITY PLANTING TYPES I & II

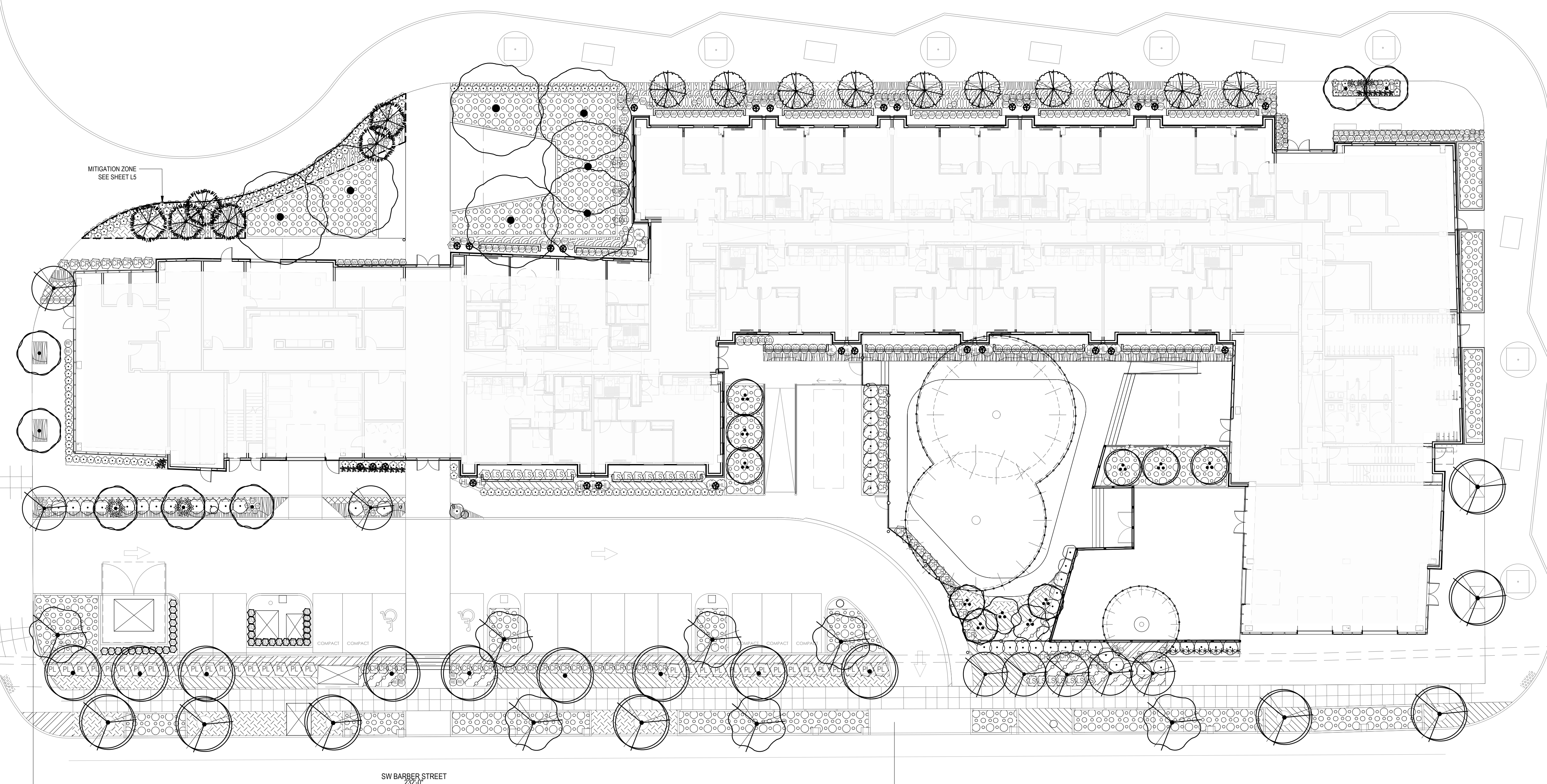
HERBACEOUS PLANTS - 115 PLANTS PER 100SF	SIZE	HEIGHT	SPACING	WATER NEEDS
CAREX OSHIMENSIS 'EVERGLOW' / EVERCOLOR® EVERGLOW JAPANESE SEDGE	1 GAL	1' 0"	1' 0"	LOW
CAREX RUPESTRIS / CURLY SEDGE	1 GAL	1' 0"	1' 0"	LOW
CAREX TESTACEA 'PRAIRIE FIRE' / PRAIRIE FIRE ORANGE SEDGE	1 GAL	1' 0"	1' 0"	LOW
JUNCUS PATENS 'ELK BLUE' / SPREADING RUSH	1 GAL	1' 0"	1' 0"	LOW
SHRUBS / GROUNDCOVER - 4 PER 100SF	SIZE	HEIGHT	SPACING	WATER NEEDS
CORNUS SERICEA 'KELSEY' / KELSEY'S DWARF RED TWIG DOGWOOD	1 GAL	2' 0"		LOW
MAHONIA AQUIFOLIUM / OREGON GRAPE	1 GAL	3' 0"		LOW
PHYSCARPUS CAPITATUS 'PACIFIC NINEBARK'	1 GAL	3' 0"		LOW
POLYSTICHUM MUNITUM / WESTERN SWORD FERN	1 GAL	2' 0"		LOW
LARGE SHRUBS / SMALL TREES - 3 PER 100SF	SIZE	HEIGHT	SPACING	WATER NEEDS
SALIX PURPUREA 'NANA' / DWARF PURPLE OSIER WILLOW	3 GAL	2'-6"	6' 0"	LOW
SPIRAEA DOUGLASHI / WESTERN SPIREA	1 GAL	2'-6"	4' 0"	LOW
VBURNUM EDDLE / HIGHBUSH CRANBERRY	1 GAL	2'-6"	4' 0"	LOW

STORMWATER FACILITY PLANTING TYPE II - TREES

TREES	BOTANICAL / COMMON NAME	SIZE	HT	CAL	WATER NEEDS
AC	ACER CIRCINATUM / VINE MAPLE STORMWATER TREE / MULTI STEM (3 STEM MIN)	B&B	5'-6"	1" CAL	MOD.
AB	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE STORMWATER / PARKING TREE	B&B	1.75' CAL		MOD.
AF	ACER RUBRUM 'FRANKSRED' / RED SUNSET® MAPLE STORMWATER TREE	B&B	2" CAL		MOD.

GROUND COVERS

CODE	BOTANICAL / COMMON NAME	SIZE	HT	APP	SPACING	WATER NEEDS
APUJ	ARCTOSTAPHYLOS UVA-URSI / KINKINNICK	1 GAL			18" o.c.	LOW
COEE	CAREX OSHIMENSIS 'EVERGLOW' / EVERCOLOR® EVERGLOW JAPANESE SEDGE	1 GAL			18" o.c.	MOD.
COEV	CAREX OSHIMENSIS 'EVERLITE' / EVERCOLOR® EVERLITE JAPANESE SEDGE	1 GAL			12" o.c.	MOD.
DCNL	DESCHAMPSIA CESPITOSA 'NORTHERN LIGHTS' / NORTHERN LIGHTS TUFTED HAIR GRASS	1 GAL			12" o.c.	MOD.
LMPE	LIRIOPE MISCARI 'EXC 052' / PURPLE EXPLOSION™ LILYTURF	1 GAL			12" o.c.	LOW
LLBM	LOMANDRA LONGIFOLIA 'LM300' / BREEZE™ MAT RUSH	1 GAL			18" o.c.	LOW
MRDS	MAHONIA REPENS 'MONRWS' / DARKSTAR® CREEPING OREGON GRAPE	1 GAL			24" o.c.	LOW
ORTA	ORHIOPOGON FORMOSANUM / TAIWAN MONDO GRASS	1 GAL			12" o.c.	LOW
PAHG	PENNISETUM ALOPECUROIDES 'HAMELN' / HAMELN FOUNTAIN GRASS	1 GAL			18" o.c.	LOW
PALG	PENNISETUM ALOPECUROIDES 'JUS JOMMENIK' / LUMEN GOLD™ DWARF FOUNTAIN GRASS	1 GAL			24" o.c.	LOW



FOR REFERENCE ONLY

SHEET REVISION NO.	REVISION EVENT	REVISION DATE

LAND USE SUMMARY

PROJECT INFORMATION		PROPOSED USES		OFF-STREET PARKING (4.155(.03))	
SITE ADDRESS:	9749 SW Barber St, Wilsonville OR 97070	MULTI-FAMILY RESIDENTIAL	121 UNITS	RESIDENTIAL (MULTIFAMILY):	QTY. 121 UNITS
TAXLOT ID:	31W148 00703	COMMERCIAL TENANTS (ASSUMED):		COMMERCIAL (EXCLUDES SMART TRANSIT CENTER):	REQ. NONE
RECORD NUMBER:	5020822	FOOD BANK	~1,600 SF		PROVIDED 7
GROSS SITE AREA:	60,695 SF (~1.39 ACRES)	CAFE/TAPROOM	~2,150 SF	ADA STALLS:	2
		SMART TRANSIT CENTER	~1,150 SF	STANDARD STALLS (INCLUDES ADA):	9
				COMPACT (40% MAX):	5
BASE ZONE:	PLANNED DEVELOPMENT INDUSTRIAL (PDI)	REQUIRED BICYCLE PARKING (4.155(.04))			
MINIMUM LOT SIZE:	NO LIMIT	RESIDENTIAL:	QTY. 121 UNITS	REQ. 121	PROVIDED 130
MAXIMUM LOT COVERAGE:	NO LIMIT	COMMERCIAL:	3,750 SF	2	20
FRONT YARD SETBACK:	30'	LOCATED IN INTERNAL BIKE ROOMS:			
REAR AND SIDE YARD SETBACK:	30'	EXTERIOR/SITE:			
OVERLAY ZONES:	LIGHTING ZONE 2 (L22)	LONG-TERM PARKING SPACES:	50%	62	130
BUILDING DATA:	5 STORIES, 80'-8" BUILDING HEIGHT				
	TYPE VIA OVER TYPE (A CONSTRUCTION)				
GROSS AREA:	~133,575 GSF				
NET RENTABLE:	~106,025 SF				
BUILDING FOOTPRINT:	~28,711 SF				
COMMERCIAL USE:	~4,903 SF				
RESIDENTIAL USE:	~128,675 SF				
DENSITY:	~87 UNITS/ACRE				
		LANDSCAPE AREA (4.176(.09))	REQ. 15% GROSS SITE AREA (9,104 SF)	PROVIDED 16,079 SF	

KEY NOTES

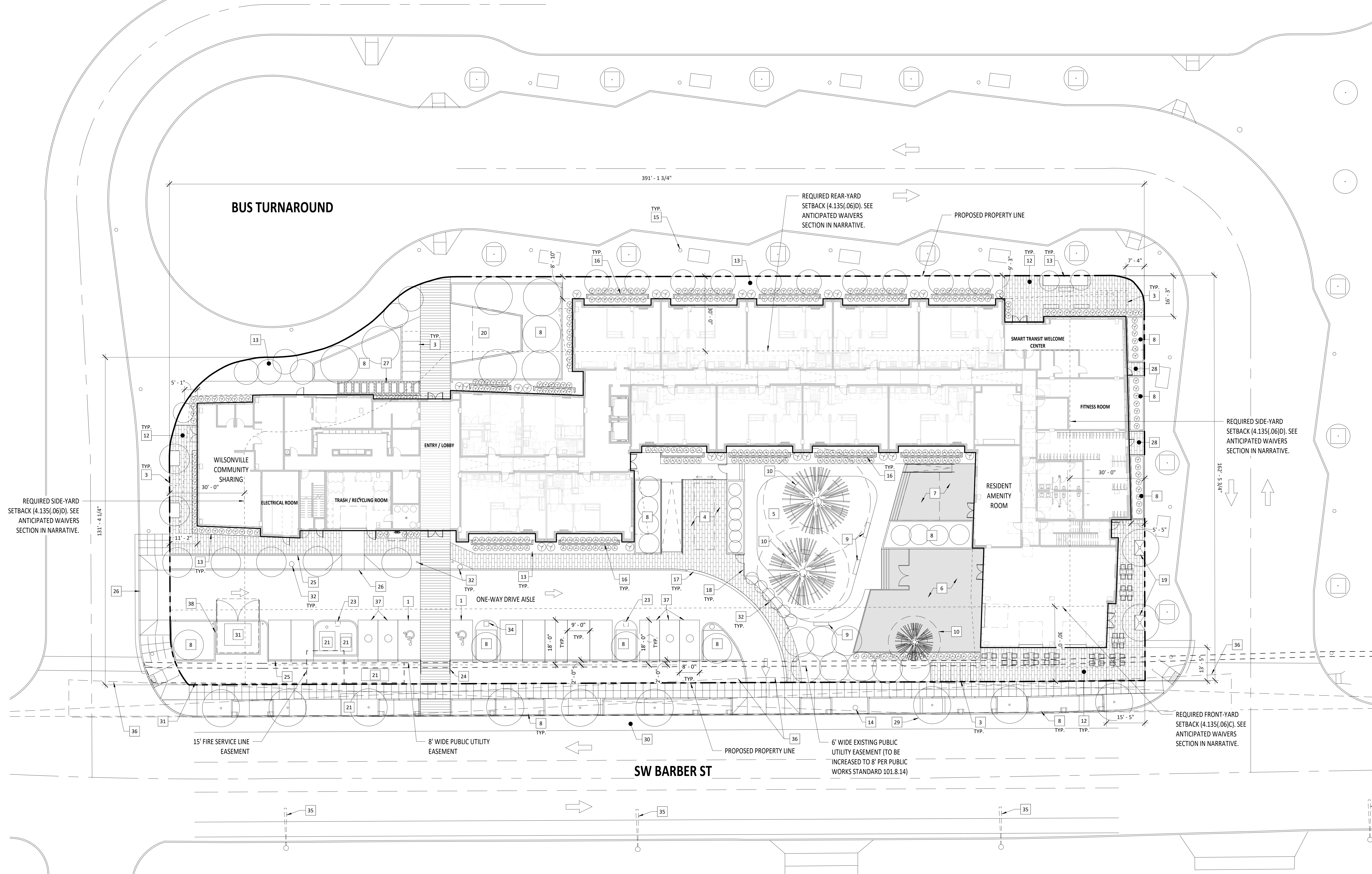
- ADA PARKING STALL
- TRASH/RECYCLING PICKUP ZONE
- SHORT-TERM BICYCLE PARKING HOOP (2'X6' ZONE WITH 5' DEEP ACCESS BEHIND) - SEE LANDSCAPE DRAWINGS
- RESIDENT LOADING ZONE
- NATURAL PLAY AREA - SEE LANDSCAPE DRAWINGS
- CAFE SEATING ON RAISED DECK - SEE LANDSCAPE
- RESIDENT AMENITY SPACE ON RAISED DECK - SEE LANDSCAPE
- STORMWATER PLANTER - SEE CIVIL DRAWINGS
- BENCH SEATING - SEE LANDSCAPE DRAWINGS
- CRITICAL ROOT ZONE AT TREE TO REMAIN
- PERMEABLE PAVERS - SEE LANDSCAPE DRAWINGS
- AT-GRADE PLANTER - SEE LANDSCAPE DRAWINGS
- EXISTING FIRE HYDRANT
- EXISTING STREET LIGHT
- 18" TALL BOARD-FORMED CONCRETE WALL AT GROUND FLOOR UNITS
- ROLLED CURB
- FENCE - SEE LANDSCAPE DRAWINGS
- TREE GRATE - SEE LANDSCAPE DRAWINGS
- RESIDENT PLAZA/BBQ AREA - SEE LANDSCAPE DRAWINGS
- UTILITY VAULT - SEE CIVIL DRAWINGS
- FUTURE EV CHARGING STATION LOCATION, REFER TO ELECTRICAL
- STEPS WITH 1-1/2" DIA STEEL, POWDERCOATED HANDRAILS
- LOW RETAINING WALL/CURB - SEE CIVIL DRAWINGS
- CURB CUT - SEE CIVIL DRAWINGS
- PRECAST CONCRETE PAVERS WITH GRAVEL INFILL
- NON-PERMEABLE PAVERS - SEE LANDSCAPE
- STREET TREE - SEE CIVIL & LANDSCAPE DRAWINGS
- EXISTING BIKE LANE
- PGE VAULT AND SURFACE-MOUNTED TRANSFORMER
- EXTERIOR LIGHTING - SEE SHEET A003
- SLIDING STEEL GATE/GUARDRAIL AT LOADING DOCK. PROVIDE STEEL ANGLE EMBED AT CONCRETE LEDGE AND BUMPER GUARDS BELOW.
- DUAL-HEAD EV CHARGING STATION - SEE ELECTRICAL DRAWINGS
- STORMWATER PLANTER - SEE CIVIL DRAWINGS
- CLEAR VISION AREA COMPLYING WITH PUBLIC WORKS STANDARD 2012.22
- COMPACT PARKING STALL
- 48" TALL FENCE SCREENING ELECTRICAL TRANSFORMER. TO BE MADE OF STEEL STUD FRAMING AND CEMENTITIOUS PLANK SIDING. GATE TO FULLY OPEN TO PROVIDE 10' ACCESS CLEARANCE AT TRANSFORMER

GENERAL NOTES - SITE PLAN

- FIELD VERIFY ALL INFORMATION PRIOR TO CONSTRUCTION. IF SITE CONDITIONS VARY FROM CONTRACT DOCUMENTS, NOTIFY ARCHITECT IN WRITING IMMEDIATELY.

SITE PLAN LEGEND

RAISED DECK



STAMP

FOR REFERENCE ONLY

SHEET REVISION NO.	REVISION EVENT	REVISION DATE

TRUE PLAN NORTH NORTH

WILSONVILLE TOD

PALINDROME COMMUNITIES

ISSUANCE
100% DESIGN DEVELOPMENT

PROJECT NUMBER
220120

DATE
10/6/23

FULL SHEET SIZE
30 X 42

DRAWING TITLE
LAND USE SITE PLAN

1 SITE PLAN (LU)
A001 1/16" = 1'-0"

SHEET NUMBER
A001