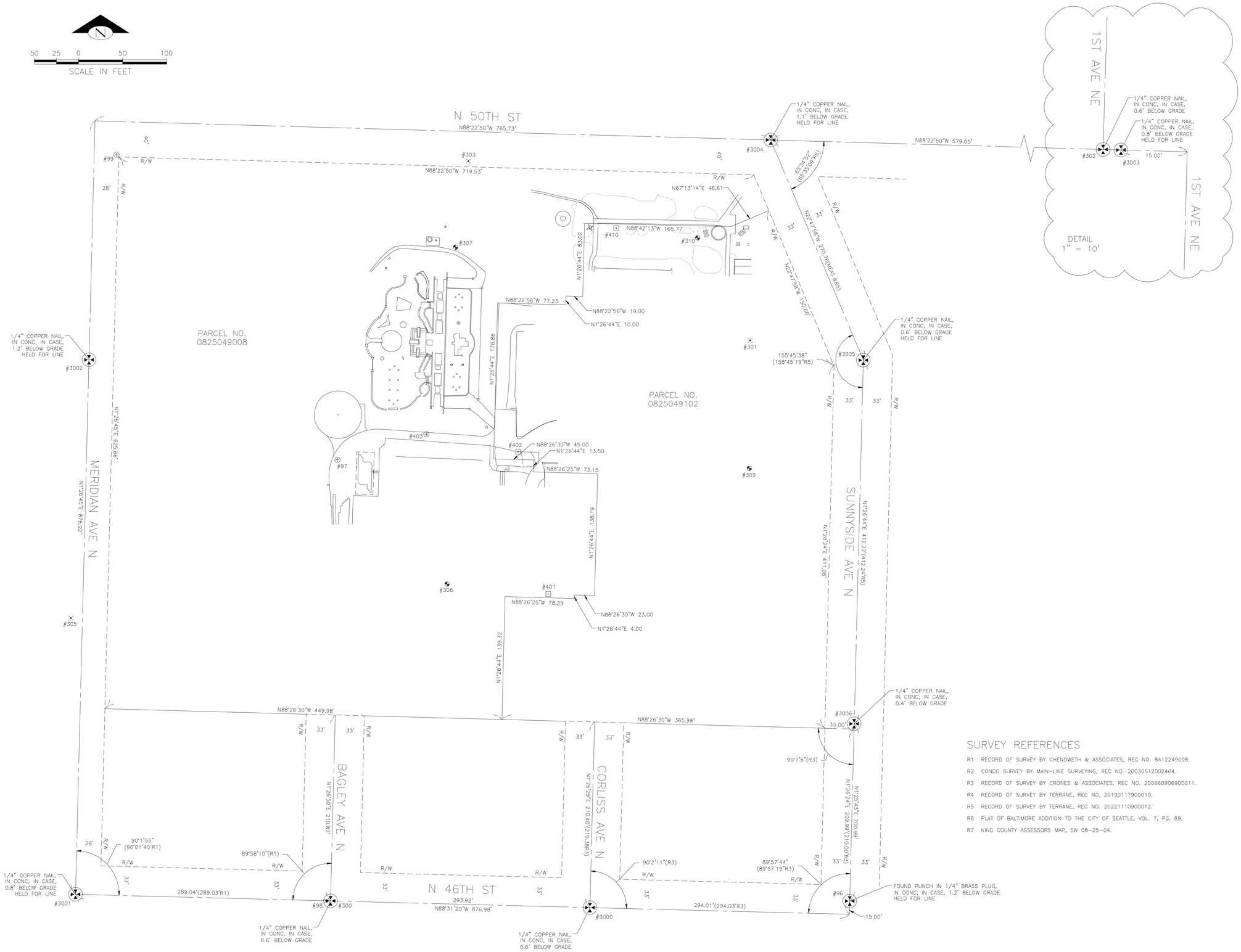


SURVEY REFERENCES

R1 RECORD OF SURVEY BY CHENOWETH & ASSOCIATES, REC NO. 8412249008.

R2 CONDO SURVEY BY MAIN-LINE SURVEYING, REC NO. 2003512002464.

R3 RECORD OF SURVEY BY CRONES & ASSOCIATES, REC NO. 200660906900011.

R4 RECORD OF SURVEY BY TERRANE, REC NO. 201901179000010.

R5 RECORD OF SURVEY BY TERRANE, REC NO. 20221110900012.

R6 PLAT OF BALTIMORE ADDITION TO THE CITY OF SEATTLE, VOL. 7, PG. 89.

R7 KING COUNTY ASSESSORS MAP, SW 08-25-04.

>>>>CAUTION - CALL 811<<<<
UTILITY NOTIFICATION CENTER BEFORE YOU DIG!
WWW.CALL811.COM

Also, verify all underground utilities not located by the 811 service by using a commercial location service and call SPR Inspection Request Line (206) 684-7034.

FOR REFERNCE ONLY

NO.	REVISION – AS BUILT	DATE
3		
2		
1		

REVIEWED:
PARK ENGINEER DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

DAVID EVANS AND ASSOCIATES INC.
14432 SE Eastgate Way, Suite 400
Bellevue Washington 98007
Phone: 425.519.6500

PRELIMINARY

Seattle Parks & Recreation

MERIDIAN PLAYGROUND

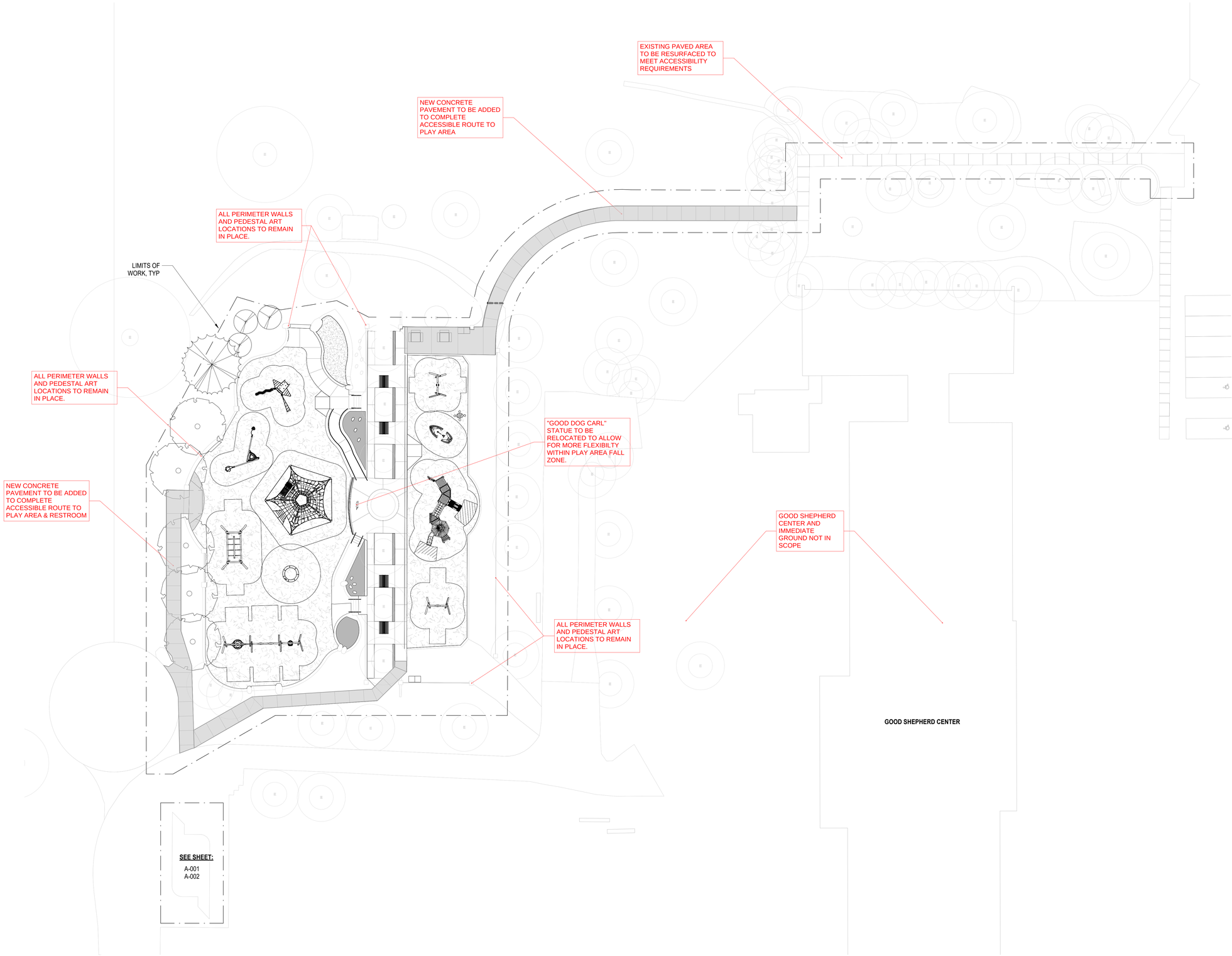
PLAY AREA RENOVATION

TOPOGRAPHIC SURVEY

FIELD CREW DVPO/SXBI/NXMA
DRAWN SASO
CHECKED MWFR
DATE 5/24/2024
SHEET 2 OF 6

ORDINANCE NO. ######
SPECIFICATION NO. ####
SCALE AS NOTED

####



A1 LANDSCAPE KEY PLAN Copy 2
1/16" = 1'-0"

0' 8' 16' 32'

PLAN NORTH

LANDMARKS

<<<CAUTION>>>
CALL 811 BEFORE YOU DIG!
WWW.CALL811.COM
ALSO, VERIFY ALL UNDERGROUND UTILITIES NOT LOCATED BY THE 811 SERVICE BY USING A COMMERCIAL LOCATION SERVICE AND CALL SPR INSPECTION REQUEST LINE (206) 684-7034.

NO.	REVISION - AS BUILT	DATE
7		
6		
5		
4		
3		
2	SDCI PERMIT 7074232-CN - RESPONSE	07/16/2025
1	SDCI PERMIT 7074232-CN	05/27/2025

REVIEWED: _____ PARK ENGINEER _____ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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STATE OF WASHINGTON · MARIEKE LACASSE · No. 965 EXP. 09/18/2025 · LICENSED LANDSCAPE ARCHITECT

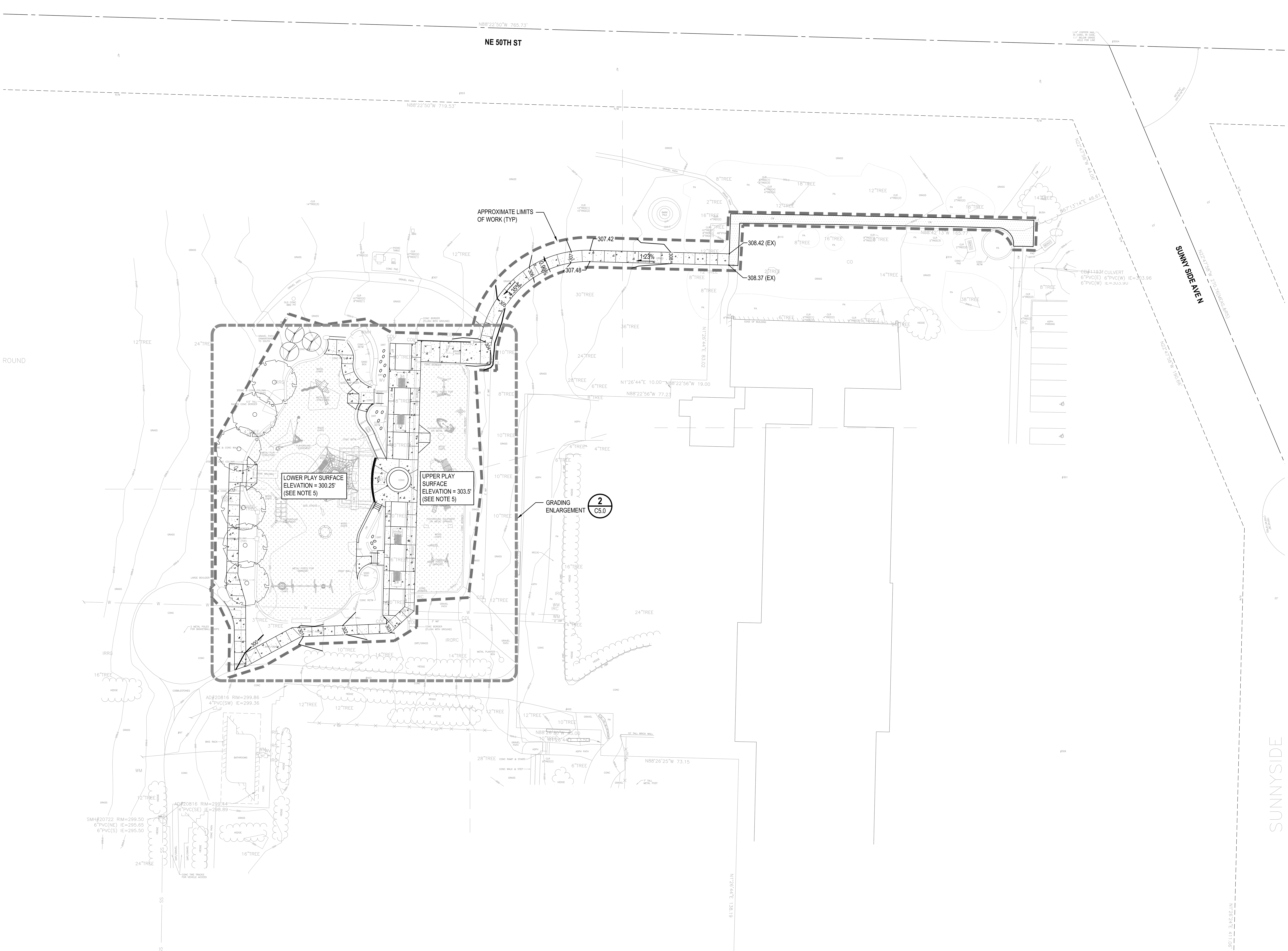
Seattle Parks & Recreation

MERIDIAN PLAY AREA RENOVATION & ADA MERIDIAN RR DESIGN

LANDMARKS EXHIBITS

DESIGNED TS
DRAWN SJ
CHECKED ML
ORDINANCE NO. #######
SCALE

DATE 07-30-2025
SHEET 3 OF 3
L-003
FOR PARK USE ONLY



NOTES

1. SAWCUT TO NEAREST CONCRETE JOINT.
2. PROJECT IS DESIGNED TO COMPLY WITH THE CITY OF SEATTLE 2024 STANDARD PLANS AND ALL CURRENT SEATTLE DEPARTMENT OF TRANSPORTATION (SDOT) POLICY MEMORANDUMS.
3. REPLACE ALL DAMAGED IRRIGATION STRUCTURES IN KIND AND PER DESIGN STANDARDS.
4. SEE LANDSCAPE PLANS FOR DIMENSIONING AND PAVEMENT SCORING.
5. PLAY SURFACE ELEVATION IS AN APPROXIMATE AVERAGE OF EACH PLAY AREA. SEE LANDSCAPE FOR PLAY SURFACE DETAILING.

LEGEND

Symbol	Description
	APPROXIMATE LIMITS OF WORK
XXX	MAJOR CONTOUR
XXX	MINOR CONTOUR
	GRADE BREAK
	SAWCUT
X.X%	SLOPE
XXX.XX	SPOT ELEVATION
	CONCRETE PAVEMENT - PEDESTRIAN (1 / C5.00)
	PLAY SURFACING. SEE LANDSCAPE PLANS FOR DETAILING
	SPOT REPAIR OF EXISTING PAVEMENT SEE LANDSCAPE
	TREE. SEE LANDSCAPE

PERMIT

<<<CAUTION>>>
CALL 811 BEFORE YOU DIG!
WWW.CALL811.COM

ALSO, VERIFY ALL UNDERGROUND UTILITIES NOT LOCATED BY THE 811 SERVICE BY USING A COMMERCIAL LOCATION SERVICE AND CALL SPR INSPECTION REQUEST LINE (206) 684-7034.

NO.	REVISION – AS BUILT	DATE
7		
6		
5		
4		
3		
2		
1		

REVIEWED: PARK ENGINEER DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

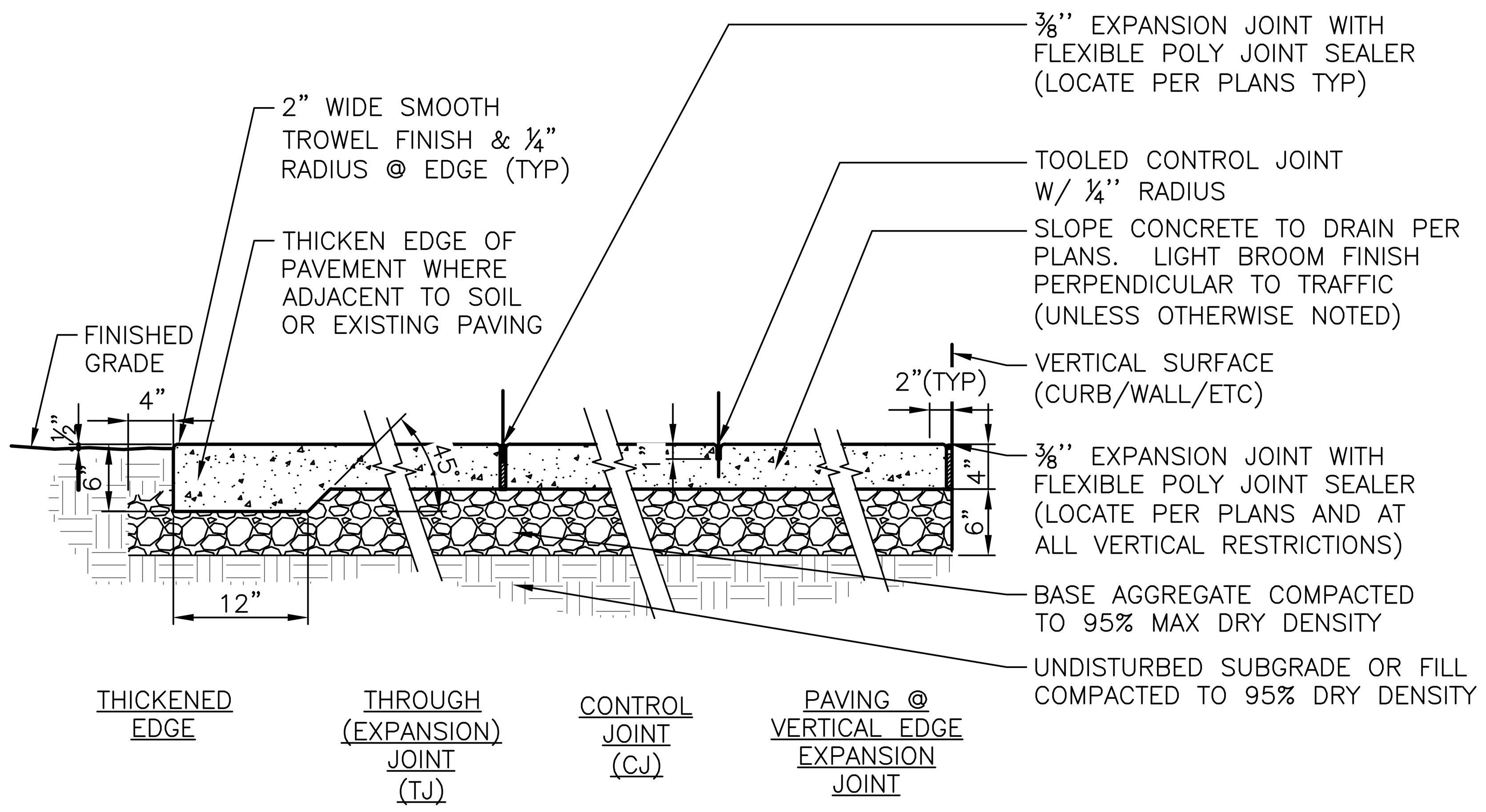
PUJA KASHYAP, STATE OF WASHINGTON, 41830, REGISTERED PROFESSIONAL ENGINEER
07/17/2025

Seattle Parks & Recreation

MERIDIAN PLAYGROUND
PLAY AREA IMPROVEMENTS
GRADING, STORM, & PAVING PLAN

DESIGNED EKD
DRAWN HS
CHECKED EKD
ORDINANCE NO.
SCALE 1" = 20'
DATE 07-16-2025
SHEET 11 OF 27
C3.0

REV DATE: NOV 2024



Seattle Parks & Recreation

CONCRETE PAVING WITH JOINTS

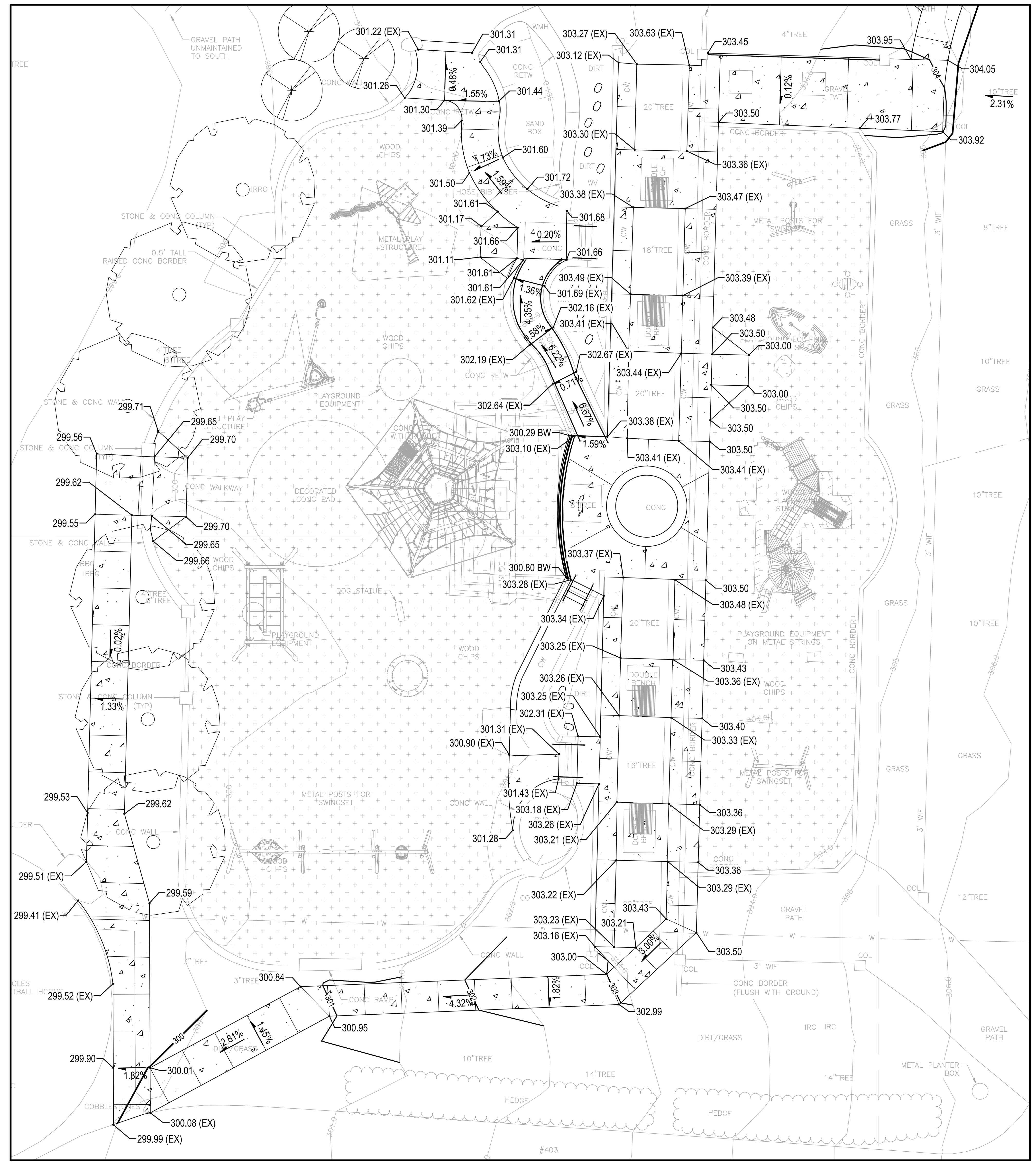
STD. DETAIL NO. 32 13 73

INTENDED PLOT SCALE: 1"=1'-0"

CONCRETE PAVEMENT - PEDESTRIAN

NTS

1 / C3.0



ENLARGEMENT PLAN

SCALE 1" = 10'

2 / C3.0

NORTH

PERMIT

0 10' 20' 40'
1 inch = 20 feet

<<<CAUTION>>>
CALL 811 BEFORE YOU DIG!
WWW.CALL811.COM

ALSO, VERIFY ALL UNDERGROUND UTILITIES NOT LOCATED BY THE 811 SERVICE BY USING A COMMERCIAL LOCATION SERVICE AND CALL SPR INSPECTION REQUEST LINE (206) 684-7034.

NO.	REVISION – AS BUILT		DATE
7			
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1			

REVIEWED:
PARK ENGINEER DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com

07/17/2025

Seattle Parks & Recreation

MERIDIAN PLAYGROUND

PLAY AREA IMPROVEMENTS

DETAILS

DESIGNED EKD
DRAWN HS
CHECKED EKD
ORDINANCE NO.
SCALE 1" = 20'

DATE 07-16-2025
SHEET 11 OF 27
C5.0

1 East Facing View of Playground

1/2" = 1'-0"

2 Playground Section

1" = 10'-0"

PERMIT

<<<CAUTION>>>
CALL 811 BEFORE YOU DIG!
WWW.CALL811.COM

ALSO, VERIFY ALL UNDERGROUND UTILITIES NOT LOCATED BY THE 811 SERVICE BY USING A COMMERCIAL LOCATION SERVICE AND CALL SPR INSPECTION REQUEST LINE (206) 684-7034.

NO.	REVISION - AS BUILT	DATE
7		
6		
5		
4		
3		
2	SDCI PERMIT 7074232-CN - RESPONSE	07/16/2025
1	SDCI PERMIT 7074232-CN	05/27/2025

REVIEWED: ______ PARK ENGINEER ______ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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STATE OF WASHINGTON
MARIEKE LACASSE
NO. 965 EXP. 08/18/2025
LICENSED LANDSCAPE ARCHITECT

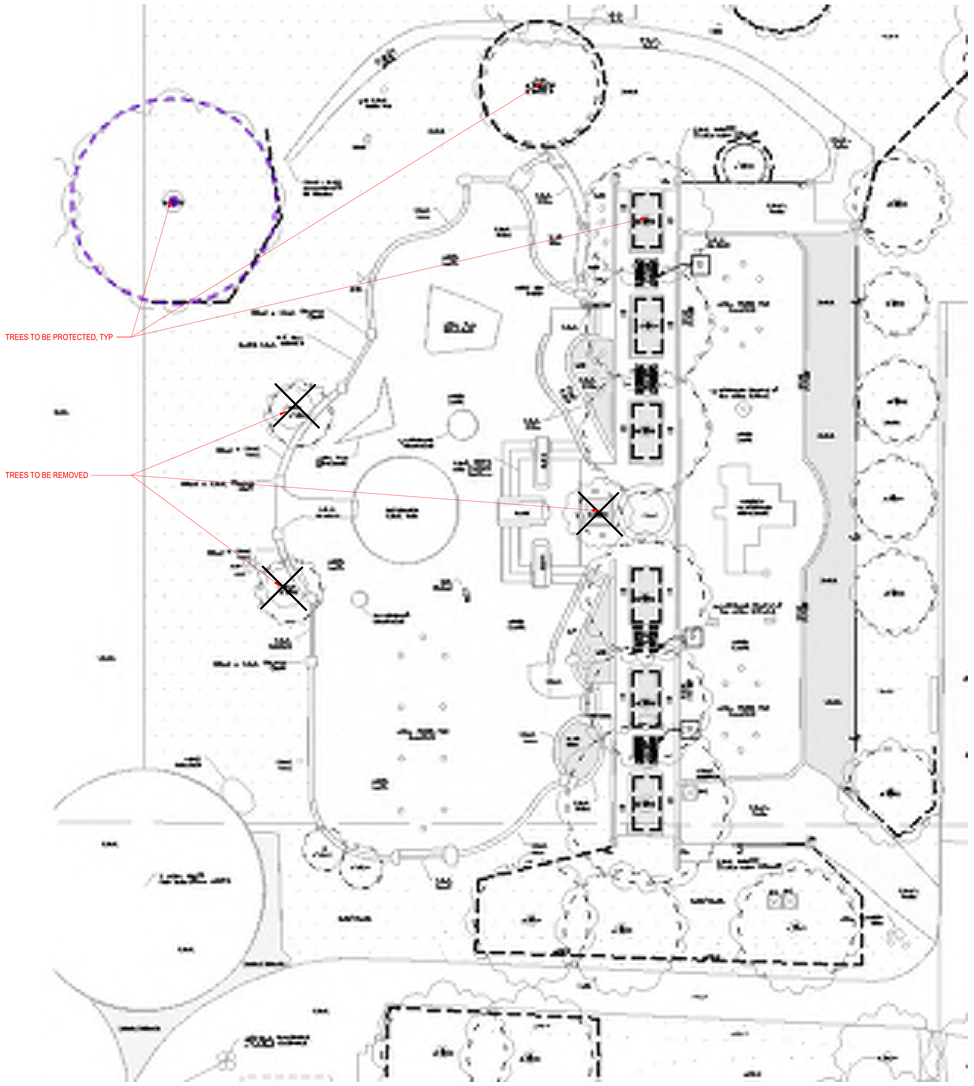
Seattle Parks & Recreation

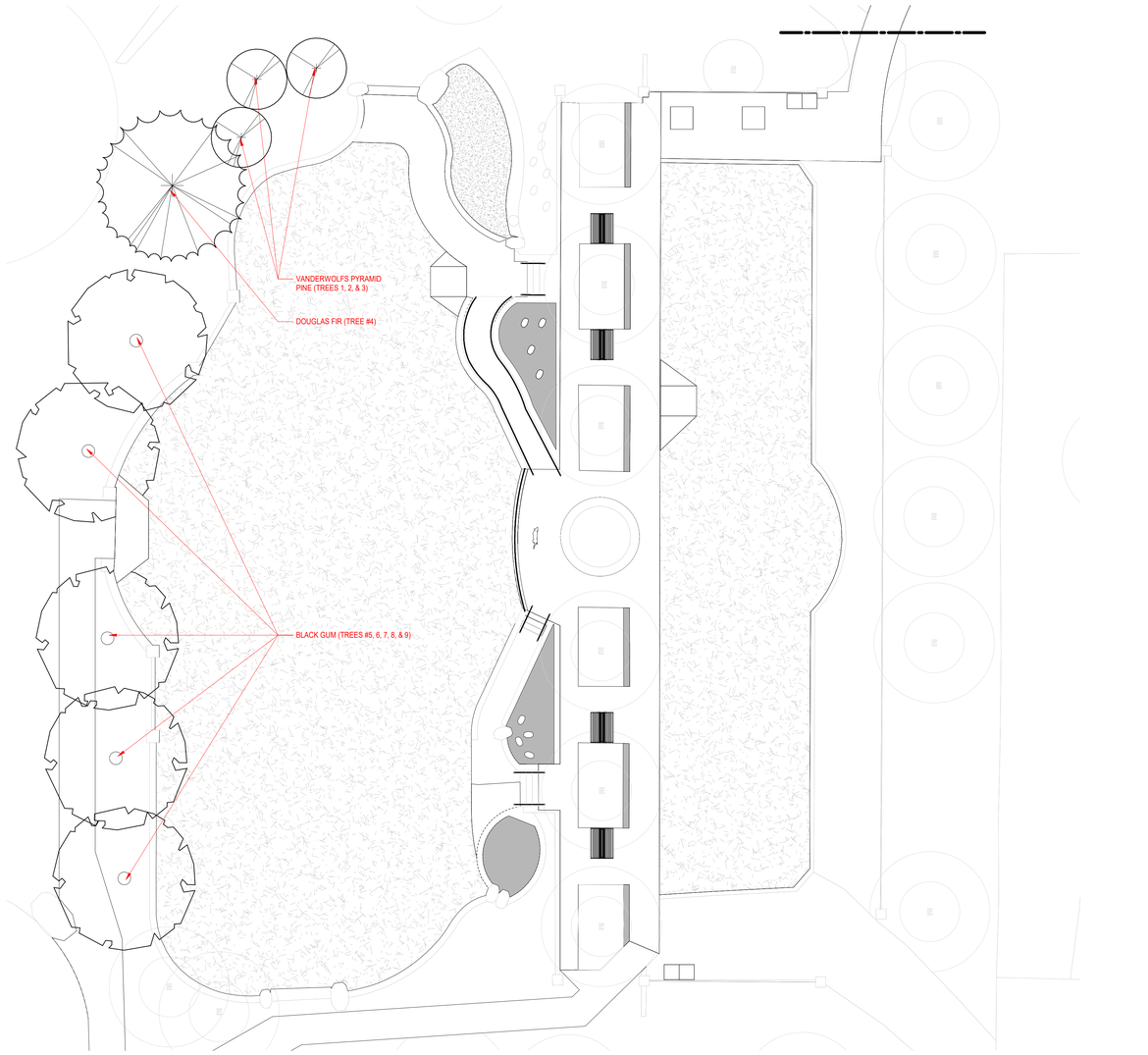
MERIDIAN PLAY AREA RENOVATION & ADA MERIDIAN RR DESIGN

LANDMARKS EXHIBITS

DESIGNED TS
DRAWN SJ
CHECKED ML
ORDINANCE NO. ######
SCALE

DATE 07-02-2025
SHEET ___ OF 28
L-001
FOR PARK USE ONLY





1 TREE LAYOUT PLAN
1" = 10'-0"


NYSSA SYLVATICA - BLACK GUM


PSUEDOTSUGA MENSIEZII - DOUGLAS FIR


PINUS FLEXILIS - VANDERWOLF'S PYRAMID PINE

TREE LIST:

TREE #1 - PINUS FLEXILIS 'VANDERWOLF'S PYRAMID
TREE #2 - PINUS FLEXILIS 'VANDERWOLF'S PYRAMID
TREE #3 - PINUS FLEXILIS 'VANDERWOLF'S PYRAMID
TREE #4 - PSEUDOTSUGA MENZIESII
TREE #5 - NYSSA SYLVATICA
TREE #6 - NYSSA SYLVATICA
TREE #7 - NYSSA SYLVATICA
TREE #8 - NYSSA SYLVATICA
TREE #9 - NYSSA SYLVATICA

PERMIT

<<<CAUTION>>>
CALL 811 BEFORE YOU DIG!
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ALSO, VERIFY ALL UNDERGROUND UTILITIES NOT LOCATED BY THE 811 SERVICE BY USING A COMMERCIAL LOCATION SERVICE AND CALL SPR INSPECTION REQUEST LINE (206) 684-7034.

NO.	REVISION - AS BUILT	DATE
7		
6		
5		
4		
3		
2	SDCI PERMIT 7074232-CN - RESPONSE	07/16/2025
1	SDCI PERMIT 7074232-CN	05/27/2025

REVIEWED: _____ PARK ENGINEER _____ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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STATE OF WASHINGTON · MARIEKE LACASSE · No. 985 EXP. 08/18/2025 · LICENSED LANDSCAPE ARCHITECT

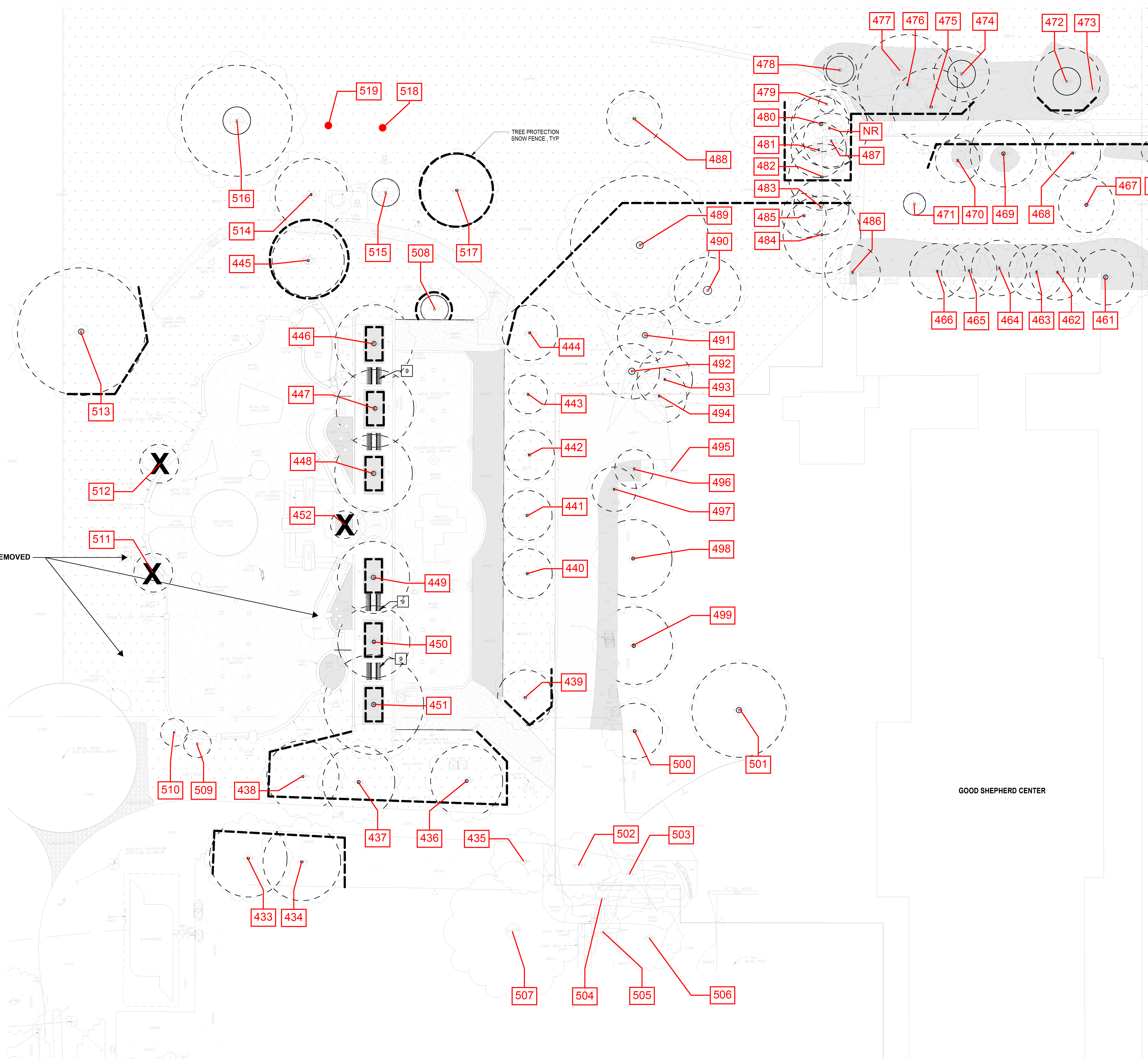
Seattle Parks & Recreation

MERIDIAN PLAY AREA RENOVATION & ADA MERIDIAN RR DESIGN

LANDMARKS EXHIBITS

DESIGNED TS
DRAWN SJ
CHECKED ML
DATE 07-02-2025
SHEET ____ OF 28
ORDINANCE NO. #######
SCALE
L-002
FOR PARK USE ONLY

Revision 1



Tree Solutions Inc.
Arborists: Charlie Vogelheim & Julian Garcia
206-528-4670

Tree Inventory Date:
2/15/2024 & 5/23/25

Regulated trees 1-inch diameter or greater on the site are identified with a number. This number corresponds with the metal tree tag unless otherwise noted.

Dripline measurements, species, and other tree specifics are listed in the tree table produced by Tree Solutions Inc.

Survey and site plans should be updated to include tree identifiers and accurate dripline data prior to any design related to tree protection.

Not on survey*: Marked with a red circle

Tree locations added to the survey are approximate and should be confirmed and added to the survey.

Tree Solutions Inc Consulting Arborists

Table of Trees
4920 Meridian Ave N, Seattle, WA

Arborist: Charlie Vogelheim, Julian Garcia
Date of Inventory: 2/15/2024, 5/23/25
Table Updated: 6/4/25

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.
DSH for multi-stem trees are noted as a single stem equivalent, calculated as specified in the Guide for Plant Appraisal, 10th Edition, published by the Council of Tree and Landscape Appraisers.
Tier is based on SMC 25.11 and Director's Rule 7-2023.
Fees-in-Lieu for removed trees are calculated using the methods defined in the SMC 25.11.115 (ordinance 126821).
Tree Protection Area is calculated as 10 times DSH or greater depending on tree species, health, and age.
Species tolerance to construction disturbance is from Trees and Development by Nelda Matheny and James Clark, published by the International Society of Arboriculture in 1998.
Letters are used to identify trees on neighboring properties with overhanging canopies.
Dripline is measured from the center of the tree to the outermost extent of the canopy.

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	Dripline Radius (feet) N	E	S	W	Tier 2 Threshold	Grove	Tier Level	Basic Tree Protection Area (feet)	Tree Protection Area (feet)	Proposed Action (Remove / Retain)	Replacement Trees Required	Notes
433	*Malus domestica*	Apple	15.8		Good	Good	21	21	21	21	20.0	Grove	2	16	13	Retain	-	
434	*Malus domestica*	Apple	15.3		Good	Good	19	19	19	19	20.0	Grove	2	15	13	Retain	-	Shade suppressed on south side.
435	*Malus domestica*	Apple	10.3		Good	Good	17	17	17	17	20.0		4	10	9	Retain	-	
436	*Malus domestica*	Apple	14.6		Good	Fair	18	18	18	18	20.0	Grove	2	15	12	Retain	-	Codominant at 5 feet with included bark, *Ganoderma* conk on east side.
437	*Malus domestica*	Apple	14.2	11.3, 8.6	Good	Good	22	22	22	22	20.0	Grove	2	14	12	Retain	-	
438	*Malus domestica*	Apple	11.0		Good	Good	22	22	22	22	20.0	Grove	2	11	9	Retain	-	Wound on west side.
439	*Malus sp.*	Crabapple	11.5	4.3, 4.5, 4.5, 7.6, 3.9	Good	Fair	15	15	15	15	20.0		4	11	10	Retain	-	Codominant at 3 feet, union with included bark.
440	*Malus sp.*	Crabapple	10.8	3.3, 4.2, 3.6, 4, 5.4, 5.5	Fair	Fair	13.5	13.5	13.5	13.5	20.0		4	11	9	Retain	-	Old *Ganoderma* conk on north side at base.
441	*Malus sp.*	Crabapple	9.8	5, 5.8, 5.3, 3.1	Fair	Good	16.5	16.5	16.5	16.5	20.0		4	10	8	Retain	-	Corrected lean to north.
442	*Malus sp.*	Crabapple	11.0	5.5, 8.6, 4.2	Good	Good	12	12	12	12	20.0		4	11	9	Retain	-	
443	*Malus sp.*	Crabapple	7.3	4.4, 3.4, 4.8	Good	Good	10	10	10	10	20.0		4	7	6	Retain	-	Several basal sprouts.
444	*Malus sp.*	Crabapple	12.1	3.8, 4.4, 4.2, 5.5, 8	Good	Good	19	19	19	19	20.0		3	12	10	Retain	-	Roots to north exposed and damaged by pedestrians.
445	*Malus domestica*	Apple	16.7	10, 10.3, 8.6	Good	Fair	14	14	14	14	20.0	Grove	2	17	14	Retain	-	Base and many stems have columns of decay. Advanced assessment recommended if retained.
446	*Acer campestre*	Hedge maple	20.6		Good	Good	19	19	19	19	24.0	Grove	2	21	17	Retain	-	Pavement uplift on east side, heavy foot traffic up to base, decay hollow on southeast side, strong reaction wood.
447	*Acer campestre*	Hedge maple	18.0		Good	Good	17.5	17.5	17.5	17.5	24.0	Grove	2	18	15	Retain	-	Heavy foot traffic around base, pavement uplift on east and west sides.
448	*Acer campestre*	Hedge maple	18.3		Good		19	19	19	19	24.0	Grove	2	18	15	Retain	-	Heavy pedestrian foot traffic around base, pavement uplift on east side.
449	*Acer campestre*	Hedge maple	21.0		Good	Fair	16	16	16	16	24.0	Grove	2	21	18	Retain	-	Large codominant branch at 8 feet, good union to northwest, heavy foot traffic around base, pavement uplift on east and west sides.
450	*Acer campestre*	Hedge maple	17.3		Good	Good	21	21	21	21	24.0	Grove	2	17	14	Retain	-	Heavy foot traffic around base, pavement uplift on east and west sides.
451	*Acer campestre*	Hedge maple	23.4		Good	Fair	28	28	28	28	24.0	Grove	2	23	20	Retain	-	Pavement uplift on east side, codominant at 6 feet, narrow union.
452	*Parrotia persica*	Persian ironwood	8.0		Good	Good	10.0	10.0	10.0	10.0	24.0		4	8	7	Remove	3	
454	*Cedrus deodara*	Deodar cedar	36.8		Good	Good	28.0	32.0	25.0	28.0	24.0	Grove	2	37	31	Retain	-	
455	*Planera aquatica*	Water elm	4.5	3, 3.3	Good	Good	6.0	10.0	9.0	5.0	24.0		-	4	4	Retain	-	Species may be inaccurate.
456	*Quercus muehlenbergii*	Chinkapin oak	5.6	4.4, 3.5	Good	Good	10.0	15.0	15.0	7.0	24.0		-	6	5	Retain	-	Bacterial leaf blight in lower canopy.
457	*Quercus muehlenbergii*	Chinkapin oak	7.4		Good	Fair	9.0	10.0	7.0	8.0	24.0		4	7	6	Retain	-	Sparse upper crown.
458	*Liquidambar styraciflua*	American sweetgum	17.6		Good	Good	12.0	10.0	14.0	12.0	24.0		3	18	15	Retain	-	
459	*Picea engelmannii*	Engelmann spruce	16.6		Good	Good	9.0	12.0	12.0	10.0	24.0	Grove	2	17	14	Retain	-	
460	*Buxus sempervirens*	Boxwood	2.1	1, 1.5, 1	Good	Good	5.0				24.0		-	2	2	Retain	-	
461	*Arbutus menziesii*	Pacific madrone	21.6		Good	Good	17.0	18.0	16.0	9.0	6.0	Grove	2	22	18	Retain	-	Base of tree is in contact with building wall on west side, asymmetric crown to southeast.
462	*Pieris japonica*	Japanese adromeda	4.5		Good	Good	11.0	6.0	3.0	5.0	24.0		-	5	4	Retain	-	
463	*Rhododendron sp.*	Tree rhododendron	7.4	5.1, 5.4	Good	Good	9.0	11.0	3.0	11.0	24.0		4	7	6	Retain	-	
464	*Pieris japonica*	Japanese adromeda	3.7	3, 2, 1	Good	Good	8.0	4.0	3.0	4.0	24.0		-	4	3	Retain	-	
465	*Pieris japonica*	Japanese adromeda	7.0	4.4, 2.5, 4.8	Good	Good	8.0	10.0	3.0	5.0	24.0		4	7	6	Retain	-	
466	*Rhododendron sp.*	Tree rhododendron	7.0		Good	Good	9.0	8.0	2.0	5.0	24.0		4	7	6	Retain	-	
467	*Quercus garryana*	Garry oak	15.5		Good	Good	18.0	21.0	23.0	22.0	6.0	Grove	2	16	13	Retain	-	Dead wood in lower crown, parts up to 2-inches diameter.
468	*Crataegus monogyna*	Common hawthorn	11.4	6.6, 5.8, 7.3	Good	Good	12.0	16.0	10.0	16.0	-		4	11	10	Retain	-	Codominant from base, southeastern stem appears to be root stock of common hawthorn, northwest stem is different *Crataegus* species.
469	*Quercus robur*	English oak	19.5		Good	Good	18.0	15.0	23.0	21.0	24.0	Grove	2	20	16	Retain	-	Bacterial leaf blight in lower canopy.
470	*Salix sp.*	Willow species	7.3		Poor	Fair	0.0	0.0	24.0	18.0	8.0		4	7	6	Retain	-	Strong phototrophic lean to northwest, extreme leaf curling and dieback of foliage made species unidentifiable.
471	*Quercus rubra*	Red oak	1.0		Good	Good	3.0	9.0	8.0	6.0	24.0		-	1	1	Retain	-	
472	*Corylus colurna*	Turkish hazelnut	13.7		Good	Good	17.0	17.0	18.0	15.0	24.0	Grove	2	14	11	Retain	-	Some insect damage.
473	*Amelanchier alnifolia*	Serviceberry	5.7	2.8, 3.5, 3.6	Fair	Good	5.0	0.0	5.0	3.0	6.0		-	6	5	Retain	-	Sparse foliage, extreme insect damage.
474	*Pinus ponderosa*	Ponderosa pine	20.4		Good	Good	19.0	14.0	19.0	13.0	24.0	Grove	2	20	17	Retain	-	Somewhat sparse canopy, good shoot extension.
475	*Quercus sp*	Oak	16.3		Good	Good	9.0	15.0	17.0	16.0	24.0	Grove	2	16	14	Retain	-	Phototrophic lean to the south, some foliar disease on lower crown.
476	*Taxus baccata*	English yew	14.3	5.8, 5.8, 4.7, 3.2, 2, 2.5, 7, 3.8, 5.5	Good	Good	17.0	18.0	16.0	14.0	24.0	Grove	2	14	12	Retain	-	

Tree Solutions, Inc.
2940 Westlake Ave. N #200 Seattle, WA 98109
Page 1 of 2
www.treesolutions.net
206-528-4670

Tree Solutions Inc Consulting Arborists

Table of Trees
4920 Meridian Ave N, Seattle, WA

Arborist: Charlie Vogelheim, Julian Garcia
Date of Inventory: 2/15/2024, 5/23/25
Table Updated: 6/4/25

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	W	Tier 2 Threshold	Grove	Tier Level	Basic Tree Protection Area (feet)	Tree Protection Area (feet)	Proposed Action (Remove / Retain)	Replacement Trees Required	Notes
477	*Aria edulis*	Whitebeam	13.5	3.4, 4, 5.6, 7.1, 8.5	Good	Good	15.0	10.0	15.0	25.0	0.0	Grove	2	13	11	Retain	-	Phototropic lean to northwest.
478	*Pinus ponderosa*	Ponderosa pine	8.2		Good	Good	10.0	2.0	7.0	11.0	24.0		4	8	7	Retain	-	
479	*Buxus sempervirens*	Boxwood	2.5		Good	Good	8.0				24.0		-	3	2	Retain	-	
480	*Quercus sp*	Oak	18.1		Fair	Good	20.0	18.0	26.0	21.0	24.0	Grove	2	18	15	Retain	-	480-484 are same oak species, small leaves, sparse canopy, tree appears stressed.
481	*Quercus sp*	Oak	14.8	6.6, 8.5, 10.2	Good	Good	5.0	22.0	15.0	21.0	24.0	Grove	2	15	12	Retain	-	
482	*Quercus sp*	Oak	11.5		Good	Good	10.0	10.0	11.0	15.0	24.0		4	12	10	Retain	-	
483	*Quercus sp*	Oak	14.2		Good	Good	8.0	19.0	12.0	15.0	24.0	Grove	2	14	12	Retain	-	
484	*Quercus sp*	Oak	8.5		Good	Fair	11.0	15.0	10.0	15.0	24.0		4	9	7	Retain	-	Sparse foliage.
485	*Kalopanax septemlobus*	Castor aralia	6.4		Good	Good	10.0	3.0	9.0	13.0	24.0		4	6	5	Retain	-	Swept base and corrected phototrophic lean to northwest.
486	*Thuja occidentalis*	Arborvitae	11.0	7.5, 8	Good	Good	3.0	2.0	5.0	9.0	24.0		4	11	9	Retain	-	Corrected phototrophic lean to west.
487	*Taxus baccata*	English yew	2.0		Good	Good	6.0	3.0	4.0	3.0	24.0		-	2	2	Retain	-	
488	*Ilex aquifolium*	English holly	18.5	10.6, 3, 12, 7, 2.5, 2, 4	Good	Good	12.0	12.0	12.0	12.0	-	Grove	2	18	15	Retain	-	
489	*Acer platanoides*	Norway maple	30.5		Good	Good	35.0	26.0	21.0	30.0	24.0	Grove	2	31	25	Retain	-	Surface roots, codominant at 6 feet with good unions.
490	*Acer macrophyllum*	Bigleaf maple	42.1		Fair	Fair	26.0	37.0	35.0	27.0	24.0	Grove	2	42	35	Retain	-	*Ganoderma* conks on northwest side and southeast side, recommended advanced assessment, deadwood up to 6-inches diameter in canopy, ivy growing out of codominant union at 12 feet.
491	*Thuja plicata*	Western redcedar	21.0		Good	Excellent	18.0	16.0	15.0	20.0	24.0	Grove	2	21	18	Retain	-	
492	*Thuja plicata*	Western redcedar	31.1		Good	Good	13.0	17.0	19.0	23.0	24.0	Grove	2	31	26	Retain	-	Codominant at 20 feet.
493	*Cornus nuttallii*	Pacific dogwood	5.6		Poor	Poor	0.0	0.0	12.0	0.0	6.0		-	6	5	Retain	-	Tree is nearly dead, 10% of foliage remaining, dead parts up to 3-inches diameter.
494	*Betula pendula*	European white birch	8.0		Fair	Fair	3.0	10.0	15.0	2.0	24.0		4	8	7	Retain	-	Corrected phototrophic lean to south, dead top symptomatic of bronze birch borer.
495	*Chamaecyparis obtusa*	Hinoki cypress	3.0		Good	Good	5.0	5.0	5.0	5.0	24.0		-	3	3	Retain	-	
496	*Morus alba*	Common mulberry	5.4	4.5, 3	Good	Fair	10.0	9.0	8.0	12.0	24.0		-	5	5	Retain	-	Stump sprout.
497	*Magnolia tripetala*	Umbrella magnolia	6.0		Good	Good	12.0	11.0	12.0	13.0	24.0		4	6	5	Retain	-	
498	*Crataegus monogyna*	Common hawthorn	12.9		Good	Good	17.0	12.0	15.0	20.0	-		3	13	11	Retain	-	
499	*Crataegus monogyna*	Common hawthorn	18.0		Good	Good	18.0	12.0	24.0	20.0	-		3	18	15	Retain	-	
500	*Crataegus monogyna*	Common hawthorn	14.2		Good	Good	12.0	13.0	14.0	16.0	-		3	14	12	Retain	-	
501	*Betula pendula*	European white birch	28.2		Good	Good	24.0	12.0	28.0	25.0	24.0		2	28	24	Retain	-	Some dieback in upper crown, possible symptoms of early bronze birch borer.
502	*Malus domestica*	Apple	12.4		Good	Good	16.0	12.0	15.0	12.0	20.0		3	12	10	Retain	-	
503	*Pinus bungeana*	Lacebark pine	8.0		Good	Good	12.0	12.0	12.0	12.0	24.0		4	8	7	Retain	-	
504	*Thuja occidentalis*	Arborvitae	9.9	5.9, 5.6, 5.6	Good	Good	5.0	5.0	5.0	5.0	24.0		4	10	8	Retain	-	Wound on northside with good reaction wood.
505	*Thuja occidentalis*	Arborvitae	14.5	10, 10.5	Good	Good	5.0	5.0	5.0	5.0	24.0		3	15	12	Retain	-	Wound on northside with good reaction wood.
506	*Amelanchier alnifolia*	Serviceberry	6.0		Good	Good	10.0	10.0	10.0	10.0	6.0		2	6	5	Retain	-	
507	*Acer platanoides*	Norway maple	30.8		Fair	Fair	24.0	27.0	29.0	17.0	24.0		2	31	26	Retain	-	*Kretzschmaria deusta* fruiting body on west side.
508	*Malus domestica*	Apple	5.4		Fair	Good	9.0	9.0	9.0	9.0	20.0		-	5	5	Retain	-	Weak shoot extension.
509	*Malus domestica*	Crabapple	3.0		Fair	Good	4.0	4.0	4.0	4.0	20.0		-	3	3	Retain	-	Weak shoot extension.
510	*Malus domestica*	Crabapple	3.0		Fair	Good	4.0	4.0	4.0	4.0	20.0		-	3	3	Retain	-	Weak shoot extension.
511	*Malus domestica*	Crabapple	5.5		Fair	Good	8.0	10.0	8.0	7.0	20.0		-	6	5	Remove	3	
512	*Malus domestica*	Crabapple	4.8		Fair	Good	6.0	8.0	7.0	4.0	20.0		-	5	4	Remove	3	
513	*Malus domestica*	Apple	27.7		Good	Good	27.0	20.0	20.0	20.0	20.0		2	28	23	Retain	-	History of children climbing.
514	*Malus domestica*	Apple	11.7	9.5, 6.9	Good	Good	15.0	10.0	10.0	10.0	20.0		4	12	10	Retain	-	
515	*Malus domestica*	Apple	13.8	8.6, 8.2, 7	Good	Fair	10.0	13.0	14.0	10.0	20.0		3	14	11	Retain	-	Decay hollows in western stem, good reaction wood.
516	*Malus domestica*	Apple	26.8		Good	Fair	23.0	11.0	24.0	16.0	20.0		2	27	22	Retain	-	Some wounds with decay on lateral branches.
517	*Malus domestica*	Apple	13.2	10, 7.5	Good	Poor	18.0	10.0	0.0	14.0	20.0		3	13	11	Retain	-	Prostrate to northwest, western stem had partial failure.
518	*Malus domestica*	Apple	7.5		Good	Fair	9.0	5.0	5.0	9.0	20.0		4	8	6	Retain	-	Decay hollow at 3 feet.
519	*Malus domestica*	Apple	11.9	10.5, 5.5	Good	Fair	5.0	12.0	10.0	8.0	20.0		4	12	10	Retain	-	Codominant at 1 foot in east-west orientation.

Tree Solutions, Inc.
2940 Westlake Ave. N #200 Seattle, WA 98109
Page 2 of 2
www.treesolutions.net
206-528-4670

PERMIT

1 ARBORIST REPORT
1/16" = 1'-0"

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NO.	REVISION - AS BUILT	DATE
7		
6		
5		
4		
3		
2	SDCI PERMIT 7074232-CN - RESPONSE	07/16/2025
1	SDCI PERMIT 7074232-CN	05/27/2025

REVIEWED:
PARK ENGINEER DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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STATE OF WASHINGTON
MARIEKE LACASSE
NO. 865 EXP. 08/18/2025
LICENSED LANDSCAPE ARCHITECT

Seattle Parks & Recreation

MERIDIAN PLAY AREA RENOVATION & ADA MERIDIAN RR DESIGN

ARBORIST REPORT

DESIGNED TS
DRAWN SJ
CHECKED ML
ORDINANCE NO. ######
SCALE

DATE 07-02-2025
SHEET 16 OF 28
L1.2
FOR PARK USE ONLY

Double Swing Combination
NRO912

Item no. NRO912-1101	
General Product Information	
Dimensions LxWxH	26'0"x6'9"x9'4"
Age group	2 - 12
Play capacity (users)	9
Color options	

Of all the play activities, swinging is a favorite: children love it, as it can be done individually and together. This Double Swing Combination swing set combines that joy and adds the possibility of different body positions and group sizes with two single swing seats and one nest swing seat. This is a great place to play, for all ages, for hours and even days. Swinging, apart from being great fun, trains the children's ABCs: agility, balance and coordination, as well as their spatial awareness. These motor skills are crucial to being able to judge distances and navigate spaces safely. Swings allow for standing sitting, lying – and not least, jumping off. Apart from the motor skills training, this trains the arm, leg and core muscles. The jumping off strengthens bone density – the majority of which is built up during the first years of life.

1 / 02/13/2025

Data is subject to change without prior notice.

1 CUSTOM SWING
12" = 1'-0"

2 PAVO - EXISTING EQUIPMENT
12" = 1'-0"

Kids Table with 4 Sitting Poles
NRO212

Item no. NRO212-0501	
General Product Information	
Dimensions LxWxH	4'9"x4'1"x1'8"
Age group	6m - 5
Play capacity (users)	4
Color options	

The round Kids Table with 4 Sitting Poles is a fun meeting point where imaginative play can continue. Children can play house or restaurant, or line up and sort items found or brought to the playground. In addition to functions as seats, the Sitting Poles are good for leaning on, stepping on, or jumping off!

1 / 12/10/2024

Data is subject to change without prior notice.

3 KIDS TABLE
12" = 1'-0"

Forest Lake Boat without Floor
NRO520

Item no. NRO520-1021	
General Product Information	
Dimensions LxWxH	4'9"x10'11"x8'2"
Age group	2 - 5
Play capacity (users)	8
Color options	

The Forest lake boat without floor is a role play invitation like few others. The ship theme encourages hours of play, uniting children around a fantastic play starter theme: sailing off into unknown land. The seat in the rear and the turnable steering wheel add to imagination. The binoculars add to the nautical theme. These elements, apart from offering response and variety in tactile stimulation, evoke the sense of wonder. They spark imagination and dramatic play. Dramatic play and role play function as children's way of playing through experiences they don't fully understand or that fascinate them. When doing so, they train their communication and language skills. Communication and turn-taking skills are also trained. These help children avoid physical conflict. Eventually it will stimulate the ability to form friendships. The open sides allow play for all abilities.

1 / 12/10/2024

Data is subject to change without prior notice.

4 FOREST LAKE
12" = 1'-0"

Nereide
GXY963

Item no. GXY963010-3717	
General Product Information	
Dimensions LxWxH	13'2"x20'7"x10'3"
Age group	5 - 12
Play capacity (users)	6
Color options	

Wild, wild whirls! The amazing Nereide attracts tweens and teens immediately. Thanks to its varied activities and spaciousness, everyone can be part of play on Nereide. The spinning activities are great fun. They train the motor skills ABC of agility, balance and coordination. The sense of balance is the foundation for all other motor skills and makes it possible for humans to manage the world securely. In the early teenage years, the sense of balance needs extra attention due to the rapid physical growth. The Satellite and Musca spinners whirl around when tweens use their muscles and coordination to rotate smoothly. To create a smooth rotation on the Satellite Spinner, users need to consider gravity. This is great for the understanding of rotation principles. The Musca spinner holds many, encouraging cooperation and turn-taking skills.

1 / 12/10/2024

Data is subject to change without prior notice.

5 NEIRRIDE - EXISTING EQUIPMENT
12" = 1'-0"

Cocowave Rope Pendulum Swing
NRO915

Item no. NRO915-1001	
General Product Information	
Dimensions LxWxH	18'6"x10'9"x12'9"
Age group	5 - 12
Play capacity (users)	8
Color options	

The size and appearance of the Robinia Cocowave Pendulum Swing is an irresistible invitation for all children to play. With its robust, oblong coconut rope, the Robinia Cocowave Pendulum Swing allows for swinging from a seated, lying or standing position. The thrill of swinging – mildly or wildly – is for bigger groups, of different sizes, ages and physical abilities. It takes teamwork to make the swing move, and this stimulates important social-emotional skills. Apart from being fun, swinging on the Cocowave swing also trains muscles and important motor skills, such as balance, coordination and sense of space. These are important to train vestibular skills that matter profoundly for many real life situations, including navigating traffic safely. The exciting, challenging feeling of speed and height stimulates children's self-esteem, risk management and other important social-emotional life skills.

1 / 01/31/2025

Data is subject to change without prior notice.

6 COCO WAVE
12" = 1'-0"

Supernova
GXY960

Item no. GXY960012-3417	
General Product Information	
Dimensions LxWxH	6'10"x6'10"x2'4"
Age group	5 - 12
Play capacity (users)	8
Color options	

The large, slanting, rotating ring with 7 divided areas motivates children to explore Supernova's countless play options: turning, spinning, balancing – seated, lying, standing, alone or with friends. The 7 areas of the ring inspire a multitude of different games-with-rules. The many play opportunities and the open ground level design makes it possible for all abilities to be included in play. Rough-and-tumble play is on, and the pushing of the ring and running train the children's arm and leg muscles and cardio. The jumping on and off of the rotating ring builds bone density. The Supernova trains the sense of balance and space, which is crucial for being able to sit still or navigate traffic safely. Children help one another and invent games. These stimulate the child's social-emotional skills and cognition, empathy, cooperation skills and logical thinking.

1 / 12/13/2024

Data is subject to change without prior notice.

7 SUPERNOVA - EXISTING EQUIPMENT
12" = 1'-0"

Spellbound Shack
NRC200201

Item no. NRC200201-1021	
General Product Information	
Dimensions LxWxH	28'1"x21'2"x15'2"
Age group	2 - 5
Play capacity (users)	21
Color options	

The activity-packed Spellbound Shack offers rich play experiences that make children return for more play again and again. The slide towers offer each their level of play: one low with lots of room for socializing, also on the double slide, and one high, with a challenging, inclined climb to enter and a fast, steep descent to egress. These towers are connected by an open rope bridge that offers a thrilling feeling of height.

The climbing, crawling, balancing, and sliding all train children's sense of balance and cross-coordination. These motor skills are foundational for all other movement skills, and they influence children's confidence in moving and their courage to take on new challenges. Additionally, the play activities train muscles and conditions. The social-emotional benefits of the spacious platforms and steps are many: allowing children significant and challenging media to play benefits their social skills for life as they train their abilities to negotiate, cooperate, and make friends.

1 / 02/20/2025

Data is subject to change without prior notice.

8 SPELL BOUND
12" = 1'-0"

Jungle Dome
NRO836

Item no. NRO836-1201	
General Product Information	
Dimensions LxWxH	29'8"x29'9"x19'7"
Age group	5 - 12
Play capacity (users)	50
Color options	

The Jungle Explorer Dome is an irresistible play adventure. Children of all ages and abilities will find a wealth of diverse play activities to venture into, and they will want to explore the swaying, bouncy feel of the nets, ropes and climbers again and again. The top net is a destination in its own right, offering plenty of meeting points for the brave climbers. The view through the transparent meshes to the ground add to the feeling of thrill and achievement. Ground level swaying seats invite group meetings, thus training important social skills such as turn-taking and negotiation. The vertical, horizontal and inclined climbs in the Jungle Explorer Dome builds a feeling of achievement and they also build important motor skills, such as sense of balance and space, that help children navigate obstacles safely. These greatly promote physical activity for all ability levels, and train muscles.

1 / 02/12/2025

Data is subject to change without prior notice.

9 ROBINIA SENSORY DOME
12" = 1'-0"

10 PLAY FOOTING DETAIL
12" = 1'-0"

PERMIT

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NO.	REVISION - AS BUILT	DATE
7		
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2	SDCI PERMIT 7074232-CN - RESPONSE	07/16/2025
1	SDCI PERMIT 7074232-CN	05/27/2025

REVIEWED: ______ PARK ENGINEER ______ DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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Seattle Parks & Recreation

MERIDIAN PLAY AREA RENOVATION & ADA MERIDIAN RR DESIGN

PLAY EQUIPMENT DETAILS

DESIGNED TS
DRAWN SJ
CHECKED ML
ORDINANCE NO. ######
SCALE

DATE 07-02-2025
SHEET 22 OF 28
L4.1
FOR PARK USE ONLY

Tree Solutions Inc
Consulting Arborists

Project No. TS - 9261

Arborist Report

To:	Seattle Parks and Recreation
Site:	Meridian Park Playground - 4920 Meridian Ave N, Seattle, WA 98103
Re:	Pre-Construction Arborist Report
Date:	June 4, 2025
Project Arborists:	Charlie Vogelheim ISA Certified Arborist PN-9375A ISA Qualified Tree Risk Assessor Julian Garcia ISA Certified Arborist PN-9969A
Referenced:	"Meridian Play Area Renovation & ADA" design plan (GGLO, 6/4/2025) Tree Protection Plan
Attached:	Updated Table of Trees Updated Tree Site Map Steel Plate Specifications

Summary

I assessed 86 trees[1] adjacent to future planned improvements in Meridian Park. Of these, 69 were regulated by Seattle Department of Construction and Inspections (SDCI) with a diameter at standard height (DSH) of 6-inches or greater.

There were 2 tree groves[2] on-site. Trees 12-inches DSH or greater comprising a tree grove are regulated as tier 2 trees.

Of the trees on-site, 35 met the criteria of tier 2 per the definition in Seattle Director's Rule 07-2024.

I reviewed the design plan (GGLO, 6/4/25) for tree retention feasibility and protection measures. If the proposed plans are implemented, then three on-site trees (trees 452, 511, and 512) will require removal. One of the trees planned for removal is a tier 4 tree and the other two are less than 6-inches and unregulated by SDCI.

[1] Trees with diameter at standard height (DSH) ≥1"

[2] Tree grove is eight or more trees each with a DSH of ≥12 inches with continuously overlapping canopies (SMC 25.11.130), excluding certain species and trees growing entirely in "the public place", also known as the right-of-way.

Tree removals on publicly owned property require a replacement ratio at 1:3[3]. Nine trees will need to be replaced for removing three trees.

All retained trees will require tree protection measures.

Assignment and Scope of Work

This report documents the visit by Charlie Vogelheim of Tree Solutions Inc. on February 15, 2024 and on May 22, 2025 to the above referenced site. We were asked to complete a tree assessment by Seattle Parks and Recreation in preparation for improvements to the playground structure.

Observations

Site

The assessed trees were adjacent to the play structure in Meridian Park as well as west and north of the Good Shepherd Center building in the Wallingford neighborhood of Seattle, WA. The assessed trees were on King County parcel 0825049008, which is owned and managed by the City of Seattle Department of Parks and Recreation (DPR). There were walkways, play areas, a bathroom structure, picnic tables, benches, and shelter areas adjacent to the trees inventoried.

According to the Seattle Department of Construction and Inspections (SDCI) GIS map there are no environmentally critical areas on-site.

Trees

The trees near the play area were mostly mature apples and mid-aged crabapples (*Malus sp.*) and hedge maples (*Acer campestre*). Several of the trees were growing adjacent to concrete pavement and were causing uplift and cracking to pavement. Maple trees directly adjacent to and among play structures had wounds and soil compaction from people frequently walking on the root flare and soil around the trees.

The trees adjacent to Good Shepherd Center included various oaks (*Quercus* spp.), small trees and shrubs, and conifers. The landscape is well established and maintained, and many of the trees are growing adjacent to the building and pathways.

All data for individual trees are listed in the attached Table of Trees and include species, tree diameter at standard height (DSH), dripline measurements, health and structural condition, tier and grove status, notes and locations. We collected approximate GPS locations for each tree. I have included an updated annotated tree protection plan with tree locations to serve as the Tree Site Map.

We identified 2 tree groves on-site. A tree grove is eight or more trees each with a DSH of ≥12 inches with continuously overlapping canopies (SMC 25.11.130). Trees 12-inches DSH or greater comprising a tree grove are regulated as tier 2 trees.

[3] Seattle Executive Order 2023-23

Tree 490
Tree 490 is a 42.1 inch DSH tier 2 bigleaf maple (*Acer macrophyllum*) in fair health and structural condition. I observed artist's conks (*Ganoderma sp.*) on the northwest and southeast sides, which indicate that internal decay is present inside the trunk. There were also dead branches up to 4-inches diameter in the canopy. Since this tree is adjacent to the building and areas where people frequently congregate, I recommend having the tree assessed for risk with advanced assessment such as a micro-resistance drill. Tree Solutions Inc. can provide these services upon request.

Municipal Regulations

Tree Regulations
Seattle Department of Construction and Inspections (SDCI) regulates all trees on private property. It also regulates all trees on publicly owned property such as city parks; although it does not regulate trees in the public ROW where trees are managed and regulated by SDOT.

Private Property & Publicly Owned Property (SDCI)
Seattle Municipal Code (SMC) classifies trees in these areas under a four-tiered system, based on tree size and species.

Table 1. Tree Classifications (SMC 25.11.050)

Tree category	Definitions	During development – Related to SDCI permit	Not part of a SDCI permit application
Tier 1	Includes • heritage trees	May not be removed unless deemed hazardous or in need of emergency action*.	May not be removed unless deemed hazardous or in need of emergency action*.
Tier 2	Includes • trees ≥ 24 in DSH • trees in groves • trees < 24" for tree species listed in Director's Rule 07-2023	May be approved for removal as part of overall development permit.	May not be removed unless deemed hazardous or in need of emergency action.
Tier 3	Includes • all other trees ≥ 12" DSH not considered Tier 2 trees	May be approved for removal as part of overall development permit.	May not be removed unless deemed hazardous or in need of emergency action.
Tier 4	Includes • all other trees > 6" DSH	May be approved for removal as part of overall development permit.	May not be removed unless deemed hazardous or in need of emergency action.

*Documentation is required for all hazardous and emergency removals.

Trees approved for removal may only be removed by an SDCI Registered Tree Service Provider.

Additionally, pruning on these trees must be conducted by an SDCI Registered Service Provider (SMC 25.11.130) and be commercial tree work must be reported prior to pruning.

Reportable work includes:

- Removal of any Tier 1, Tier 2, Tier 3, or Tier 4 tree,
- Removal of live branches 4-inches in diameter or greater,
- Pruning, or the removal of live roots 2-inches in diameter or greater, and
- Removal of live branches constituting 25 percent or more of a tree's foliage-bearing area (excluding trees cultivated for fruit production or trees managed as hedges).

The registered tree service provider must create a public notice that is posted to the SDCI website at least three full business days before any reportable work is done or six full business days prior to any tree removal work. Notice must be posted on-site while the work is occurring.

Tree Protection

Private Property Trees (SDCI)
A tree protection area (TPA) is required for all tier 1, 2, and 3 trees that are proposed for retention. This is a protection zone surrounding a tree where excavation, access and material storage cannot occur (SMC 25.11.030). Tree protection areas are also required for trees (tier 1, 2, 3) growing adjacent to the project with canopies and/or roots extending into the project area. TPAs are determined using a multiplier of trunk diameter based on the International Society of Arboriculture's Best Management Practices Managing Trees During Site Development and Construction Third Edition.

BTPAs and TPAs are listed in the attached Table of Trees.

Tree protection measures (see Appendix F) should be implemented during construction and are intended to help maintain soil integrity (reduce soil compaction), limit root loss, protect overhead canopy, and maintain tree health. These measures can include (but are not limited to) mulching, temporary irrigation, soil protection, construction monitoring by the project arborist and tree protection fencing. The location of tree protection fencing should be along the edges of the TPA. Once in place, the fence should not be moved unless the project arborist is present.

Tree Replacement Requirements

Private Property (SMC 25.11.090)
SDCI requires one tree replacement for each Tier 1, 2 and 3 tree removed (SMC 25.11.090). Replacement tree species must have a mature canopy that is proportional to the one removed. If on-site replanting is not feasible, the applicant may pay a fee-in-lieu.

This is also applicable to trees on publicly owned property (not ROW trees).

Public ROW (Executive Order 2023-23)
Executive Order 2023-23 outlines replacement requirements for trees on publicly owned property (including both those regulated by SDCI and SDOT). It states "within Seattle, a minimum of three tree replacements must be planted for each healthy, site appropriate tree removed from public property".

This requirement is reduced to 2 replacements for tree removals dead, hazardous, or not appropriate for the site.

The order requires replacement trees be planted within 2 years of the tree removal and that the new plantings have a robust maintenance plan for at least 5 years.

It does not specify location or species requirements, but emphasizes planting appropriate tree species, as large as is feasible.

Publicly Owned Property (SMC 25.11.090 and Executive Order 2023-23)
Tree removals on publicly owned property (non-ROW) such as Seattle's public parks or property owned by the Department of Finance and Administrative Services, are subject to both replacement requirements. All parks trees must have 3:1 replacement ratio, one of which should be planted per SDCI requirements if tier 3 or greater.

A summary of these requirements is listed in **Table 2** below.

Table 2. Replanting Requirements / Fee In-Lieu

Tree Category	Replacement (Qty) Per Removed Tree	Replacement Requirements		Payment In-Lieu Amount
Tier 1 and Tier 2 if LARGER than 24" DSH	1	5-yr maintenance & monitoring period	OR	$17.87 / in^2 of tree removed, not less than $8,080
Tier 1 and Tier 2 if SMALLER than 24" DSH	1	5-yr maintenance & monitoring period	OR	$8,080 per tree
Tier 3	1	5-yr maintenance & monitoring period	OR	$2,833 per tree
Tier 4	0			none
ROW & Publicly Owned Property	3			not applicable

Payment In-Lieu fees are defined in Director's Rule 8-2023.
Survival rates after 5 years must be 100% if only 1 replacement tree is required, and 80% if more than 1 is required.
Replacement requirements for private trees must be a minimum of 3:1 replacements: removals per Executive Order 2023-2.

Discussion – Construction Impacts

Proposed Plans
I reviewed the "Meridian Play Area Renovation & ADA" design plan (GGLO, 6/4/25) for tree retention feasibility and protection measures. The proposed plans intend to make improvements to the play area and its surrounding infrastructure and to create more accessible ADA compliant pathways.

Removals
Trees 452, 511, and 512 will require removal if the proposed plans are implemented. Tree 452 is a tier 4 tree and 511 and 512 are not regulated by SDCI. They are all on publicly owned property and therefore require three replacement trees each for a total of nine trees.

All replacement trees are subject to the requirements outline in SMC 25.11.090.

Tree Protection

Appendix F includes specifications for tree protection that should be followed for the duration of this project. The following are specific recommendations for reducing impacts to trees onsite based on a review of the provided plans.

Filter Fabric Fencing

Plans include a detail for required filter fabric which requires digging a 4-inch by 4-inch trench for the fence, however the TESC plans do not indicate the locations of the fencing. In TPAs of retained trees, filter fencing should not be installed into the ground. Filter fencing within or at the edge of the TPA of retained trees shall be installed in a manner that does not sever roots. Fencing shall be installed so that filter fencing sits on the ground and is weighed in place by sandbags or gravel.

Hedge maples within play area (trees 446-451)

Plans call for the removal and replacement of concrete around the six hedge maples in the middle of the playground. These maples had surface roots and the existing concrete around these maples was showing uplift. It is likely that roots of these trees are in contact with the pavement and so removal of the existing pavement will need to be done carefully to reduce wounding to the roots.

Details for replacement pavement notes that 4 inches of concrete will be placed on top of 3 inches of subgrade. Any necessary excavation for the subgrade should be done by hand or with pneumatic air and/or vac-truck as to not injure the roots. Encountered roots should be retained and if possible be included in sub grade. Roots may be shaved down if necessary. Bolting a steel plate to the top of the root beneath the sidewalk will prevent the root from causing further uplift. Attached are specifications for this method. An arborist should be present to monitor demolition and excavation within the TPAs of these trees.

Trees adjacent to north walkway (trees 444, 483, 482, & 489)

Plans call for the installation of a concrete pathway that connects the northeast parking lot to the playground area which will pass through the TPAs of several trees including trees 444, 483, 482, and 489. Details indicate that a minimum of seven inches of grading is necessary for the installation of subgrade and concrete for this pathway. Excavation for subgrade within TPAs should be done with alternative methods, ideally hand-dug or with a pneumatic excavator. Encountered roots should be retained and if possible be included in any necessary sub grade. Roots may be shaved down if necessary. Bolting a steel plate to the top of the root beneath the sidewalk will prevent the root from causing further uplift. Attached are specifications for this method. An arborist should be present to monitor demolition and excavation.

Recommendations

Planning Phase

- Follow all requirements outlined in SMC 25.11.060 [4] for site planning.

[4] Seattle Municipal Code 25.11.060. Requirements for Trees when Development is Proposed

- Include tree IDs, BTPAs, TPAs, and an 'X' over tree removals on Tree Protection Plan, TESC or TVSPP.
- Add tree protection specifications to all permitting drawings and construction plans.
- Add callouts / notes to plan set that specify monitoring by project arborist within the TPA of retained trees.
- Have tree 490 assessed for risk with a microresistance drill or other form advanced assessment.

Construction Phase

- Have the project arborist present at pre-construction meeting on site to discuss tree protection.
- Maintain fencing and signage at edge of tree protection area for the duration of the project.
- Mulch trees BEFORE construction.
- Irrigate trees DURING and AFTER construction.
- Hire a Registered SDCI Tree Service Provider to perform all pruning, which should follow the methods outlined in ANSI A300 standards.[5]

Post-Construction

- Plant tree replacements.
- Maintain and water replacement trees. Replace failed plantings.

Respectfully submitted,

Charlie Vogelheim,
Consulting Arborist

[5] Accredited Standards Committee A300 (ASC 300). ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning). Londonderry: Tree Care Industry Association, 2017.

Appendix A **Glossary**

ANSI A300: Standards for Tree Care. American National Standards Institute (ANSI).

Diameter at Standard height (DSH): diameter of the tree trunk measured 54 inches (4.5 feet) above grade. (SMC 25.11.130)

Dripline: an area encircling the base of a tree, the minimum extent of which is delineated by a vertical line extending from the outer limit of a tree's branch tips down to the ground. The dripline may be irregular in shape to reflect the variation in branch outer limits. (SMC 25.11.130)

Feeder Root Zone: an area encircling the base of a tree equal to twice the diameter of the dripline (SMC 25.11.130)

Interior Critical Root Zone (ICRZ): inner critical root zone radius equals ½ of the dripline radius no work may occur within a SDOT street tree's inner critical root zone without specific authorization from SDOT Urban Forestry. If more than 30 percent of the dripline area is impacted by construction activities, a site review by SDOT Urban Forestry is required. All areas to be impacted by construction activities must be shown on the plan and reviewed prior to construction. (Standard Plan 133)

ISA: International Society of Arboriculture

Regulated Tree: A tree required by municipal code to be identified in an arborist report (SMC 25.11.130).

Tier 1 tree: A heritage tree. A heritage tree is a tree or group of trees as defined in Title 15 (SMC 25.11.130)

Tier 2 tree: Any tree that is 24 inches in diameter at standard height or greater, tree groves, each tree comprising a tree grove, and specific tree species below 24 inches in diameter at standard height as provided by Director's Rule 7-2023 "Designation of Tier 2 Trees". (SMC 25.11.130)

Tier 3 tree: Any tree that is 12 inches in diameter at standard height or greater but less than 24 inches in diameter at standard height and is not defined as a Tier 1 or Tier 2 tree. (SMC 25.11.130)

Tier 4 tree: Any tree that is 6 inches or greater in diameter at standard height but less than 12 inches in diameter at standard height and is not defined as a Tier 1 or Tier 2 tree. (SMC 25.11.130)

Tree Protection Area (TPA): the area surrounding a tree defined by a specified distance, in which excavation and other construction-related activities must be avoided unless approved by the (SDCI) Director. The TPA is variable depending on species, age and health of the tree, soil conditions, and proposed construction. (SMC 25.11.130)

Tree Protection Area, Basic (BTPA): the area surrounding a tree defined by a specified distance, in which excavation and other construction-related activities must be avoided unless approved by the (SDCI) Director. This area is delineated using a radius that is equal to one foot for every inch DSH of the tree. (SMC 25.11.130)

Tree Service Provider: means any person or entity engaged in commercial tree work. (SMC 25.11.130)

Visual Tree Assessment (VTA): method of evaluating structural defects and stability in trees by noting the pattern of growth. Developed by Claus Mattheck (Harris, *et al* 1999)

Appendix B **References**

Accredited Standards Committee A300 (ASC 300). *ANSI A300 (Part 1) Tree, Shrub, and Other Woody Plant Management – Standard Practices (Pruning)*. Londonderry: Tree Care Industry Association, 2017.

Council of Tree and Landscape Appraisers, *Guide for Plant Appraisal, 10th Edition, Second Printing*. Atlanta, GA: The International Society of Arboriculture (ISA), 2019.

Harrell, B. *Executive Order 2023-03: One Seattle Tree Plan: Growing and Fostering an Equitable tree Canopy on Public Land*. City of Seattle, 2023.

Matheny, N., E. Smiley, R. Gilpin, R. Hauer. *Best Management Practices – Managing Trees During Site Development and Construction, Third Edition*. International Society of Arboriculture (ISA), 2023.

Mattheck, Claus and Helge Breloer, *The Body Language of Trees.: A Handbook for Failure Analysis*. London: HMSO, 1994.

Seattle Municipal Code 25.09.070. Standards for Trees and Vegetation in Critical Areas.

Seattle Municipal Code 25.11.050. General Provisions for Regulated Tree Categories

Seattle Municipal Code 25.11.060. Requirements for Trees When Development is Proposed

Seattle Municipal Code 25.11.070. Tree Protection on Sites Undergoing Development in Neighborhood Residential, Low-rise, Midrise, and Seattle Mixed Zones

Seattle Municipal Code 25.11.080. Tree Protection on sites in Major Institution Overlay Districts

Seattle Municipal Code 25.11.090. Tree Replacement, Maintenance, and Site Restoration

Seattle Municipal Code 25.11.100 Tree Service Provider Registration

Seattle Department of Transportation. "Street Tree Manual". City of Seattle, 2014.

Standard Plans for Municipal Construction. Plan sheets 132a, 132b, 133. City of Seattle, 2023.

Standard Specifications for Roads, Bridges, and Municipal Construction. Section 8-01.3(2)B. City of Seattle, 2023.

Torgelson, N. "*Director's Rule 7-2023 - Designation of Tier-2 Trees*". Seattle, WA, 2023.

Torgelson, N. "*Director's Rule 8-2023 - Payment in Lieu of Tree Replacement Pursuant to the Tree Protection Code*". Seattle, WA, 2023.

Appendix C **Photographs**

Photo 1. Crabapple tree 442 in a line of similar species. This tree is the typical size and structure of the other trees of this species onsite.

Photo 2. Hedge maple tree 448, with surface roots and compacted soil. This is typical for trees of similar species within the play area. Removal of adjacent pavement should be done carefully and under arborist supervision.

Photo 3. Bigleaf maple tree 490 has *Ganoderma* conks on the northwest and southeast sides of the trunk, which are a sign of internal decay in the trunk. I recommend an advanced assessment to determine its structural condition and safety.

Appendix D **Assumptions & Limiting Conditions**

1 Consultant assumes that the site and its use do not violate, and is in compliance with, all applicable codes, ordinances, statutes or regulations.

2 The consultant may provide a report or recommendation based on published municipal regulations. The consultant assumes that the municipal regulations published on the date of the report are current municipal regulations and assumes no obligation related to unpublished city regulation information.

3 Any report by the consultant and any values expressed therein represent the opinion of the consultant, and the consultant's fee is in no way contingent upon the reporting of a specific value, a stipulated result, the occurrence of a subsequent event, or upon any finding to be reported.

4 All photographs included in this report were taken by Tree Solutions, Inc. during the documented site visit, unless otherwise noted. Sketches, drawings and photographs (included in, and attached to, this report) are intended as visual aids and are not necessarily to scale. They should not be construed as engineering drawings, architectural reports or surveys. The reproduction of any information generated by architects, engineers or other consultants and any sketches, drawings or photographs is for the express purpose of coordination and ease of reference only. Inclusion of such information on any drawings or other documents does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.

5 Unless otherwise agreed, (1) information contained in any report by consultant covers only the items examined and reflects the condition of those items at the time of inspection; and (2) the inspection is limited to visual examination of accessible items without dissection, excavation, probing, climbing, or coring.

6 These findings are based on the observations and opinions of the authoring arborist, and do not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described and assessed.

7 Measurements are subject to typical margins of error, considering the oval or asymmetrical cross-section of most trunks and canopies.

8 Tree Solutions did not review any reports or perform any tests related to the soil located on the subject property unless outlined in the scope of services. Tree Solutions staff are not and do not claim to be soils experts. An independent inventory and evaluation of the site's soil should be obtained by a qualified professional if an additional understanding of the site's characteristics is needed to make an informed decision.

9 Our assessments are made in conformity with acceptable evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.

Appendix E **Methods**

Measuring

Tree diameter at standard height (DSH) is measured at 54 inches (4.5 feet) above grade. If a tree had multiple stems, each stem was measured individually, and a single stem equivalent was calculated as the root of the sum of each diameter squared (example with 3 stems: DSH = square root [$(stem)^2 + (stem)^2 + (stem)^2$]. A multi-stem tree is regulated based on this single-stem equivalent diameter value. Because this value is calculated in the office following field work, some trees in our data set may have diameters smaller than 6 inches. These trees are included in the tree table for informational purposes only and not factored into tree totals discussed in this report.

Tagging

Each tree was tagged with a circular aluminum tag at eye level. Each tree was assigned a numerical identifier on our map and in our tree table, corresponding to this tree tag. Alphabetical identifiers were used for trees off-site when applicable.

Trees growing in the ROW planting strips have previously been identified by the Seattle Department of Transportation (SDOT) and been given an identification (ID) number by that department with the prefix TRE. Those trees were not tagged by Tree Solutions Inc.

Evaluating

Tree health and structure was assessed utilizing visual tree assessment (VTA) methods. The basis behind VTA is the identification of symptoms, which the tree produces in reaction to a weak spot or area of mechanical stress. A tree reacts to mechanical and physiological stresses by growing more vigorously to re-enforce weak areas, while depriving less stressed parts. An understanding of the uniform stress allows the arborist to make informed judgments about the condition of a tree.

Rating

Tree health ratings take into consideration crown indicators such as foliar density, size, color, stem and shoot extensions. Tree structure ratings take into consideration form, as well as structural defects (including past damage and decay). Tree Solutions has adapted our ratings based on the Purdue University Extension formula values for health condition (*Purdue University Extension bulletin FNR-473-W - Tree Appraisal*). These values are a general representation used to assist arborists in assigning ratings.

Health

Excellent - Perfect specimen with excellent form and vigor, well-balanced crown. Normal to exceeding shoot length on new growth. Leaf size and color normal. Trunk is sound and solid. Root zone undisturbed. No apparent pest problems. Long safe useful life expectancy for the species.

Good - Imperfect canopy density in few parts of the tree, up to 10% of the canopy. Normal to less than ¾ typical growth rate of shoots and minor deficiency in typical leaf development. Few pest issues or damage, and if they exist they are controllable or tree is reacting appropriately. Normal branch and stem development with healthy growth. Safe useful life expectancy typical for the species.

Fair - Crown decline and dieback up to 30% of the canopy. Leaf color is somewhat chlorotic/necrotic with smaller leaves and “off” coloration. Shoot extensions indicate some stunting and stressed growing conditions. Stress cone crop clearly visible. Obvious signs of pest problems contributing to lesser condition, control might be possible. Some decay areas found in main stem and branches. Below average safe useful life expectancy

Poor - Lacking full crown, more than 50% decline and dieback, especially affecting larger branches. Stunting of shoots is obvious with little evidence of growth on smaller stems. Leaf size and color reveals overall stress in the plant. Insect or disease infestation may be severe and uncontrollable. Extensive decay or hollows in branches and trunk. Short safe useful life expectancy.

Structure

Excellent - Root plate undisturbed and clear of any obstructions. Trunk flare has normal development. No visible trunk defects or cavities. Branch spacing/structure and attachments are free of any defects.

Good - Root plate appears normal, with only minor damage. Possible signs of root dysfunction around trunk flare. Minor trunk defects from previous injury, with good closure and less than 25% of bark section missing. Good branch habit; minor dieback with some signs of previous pruning. Codominant stem formation may be present, requiring minor corrections.

Fair - Root plate reveals previous damage or disturbance. Dysfunctional roots may be visible around the main stem. Evidence of trunk damage or cavities, with decay or defects present and less than 30% of bark sections missing on trunk. Co-dominant stems are present. Branching habit and attachments indicate poor pruning or damage, which requires moderate corrections.

Poor - Root plate disturbance and defects indicate major damage, with girdling roots around the trunk flare. Trunk reveals more than 50% of bark section missing. Branch structure has poor attachments, with several structurally important branches dead or broken. Canopy reveals signs of damage or previous topping or lion-tailing, with major corrective action required.

Appendix F **Tree Protection Specifications**

The following is a list of protection measures which should be employed before, during, and after construction to ensure the long-term viability of retained trees. This specification can be copied onto the site plan or into contract documents.

1. **Project Arborist:** The project arborists shall at minimum have an International Society of Arboriculture (ISA) Certification and ISA Tree Risk Assessment Qualification.
2. **Tree Protection Area (TPA):** TPA is the area surrounding a tree defined by a specified distance, in which excavation and other construction-related activities must be avoided unless approved by the Director (SMC 25.11.130).
3. **Tree Protection Fencing:** Tree protection fencing shall consist of 6-foot-tall chain-link fencing installed at the edge of the TPA as approved by the project arborist and City of Seattle. Fence posts shall be driven into the ground or bolted to existing hardscape surfaces at 8-foot maximum intervals. Fencing must be installed prior to demolition or ground disturbance and be kept in place for the duration of construction.
    a. Where trees are being retained as a group the fencing shall encompass the entire area including all landscape beds or lawn areas associated with the group.
    b. Per arborist approval, TPA fencing may be placed at the edge of existing hardscape within the TPA to allow for staging and traffic.
    c. Where work is planned within the TPA, install fencing at edge of TPA and move to limits of disturbance at the time that the work within the TPA is planned to occur. This ensures that work within the TPA is completed to specification.
    d. Where trees are protected at the edge of the project boundary, construction limits fencing shall be incorporated as the boundary of tree protection fencing.
4. **Access Beyond Tree Protection Fencing:** The project manager or project arborist shall be present when tree protection areas are accessed.
5. **Tree Protection Signage:** Tree protection signage shall be affixed to fencing every 20 feet. Signage shall be fluorescent, at least 2’ x 2’ in size. Signage must include all information in the PDF located here: http://www.seattle.gov/Documents/Departments/SDCI/Codes/TreeProtectionAreaSign.pdf in addition to the contact information for the project manager and instructions for gaining access to the area.
6. **Filter / Silt Fencing:** Filter / silt fencing within or at the edge of the TPA of retained trees shall be installed in a manner that does not sever roots. Install so that filter / silt fencing sits on the ground and is weighed in place by sandbags or gravel. Do not trench to insert filter / silt fencing into the ground.
7. **Monitoring:** The project arborist shall monitor all ground disturbance at the edge of or within the TPA.
8. **Soil Protection:** Retain existing paved surfaces within or at the edge of the TPA for as long as possible. No parking, foot traffic, materials storage, or dumping (including excavated soils) are allowed within the TPA. Heavy machinery shall remain outside of the TPA. Access to the tree protection area will be granted under the supervision of the project arborist. If the project arborist allows, heavy machinery can enter the area if soil is protected from the load. Acceptable methods of soil protection include placing 3/4-inch plywood over 6 inches of wood chip mulch, or use of AlturnaMats® (or equivalent product approved by the project arborist). Compaction of soils within the TPA must not occur.
9. **Soil Remediation:** Soil compacted within the TPA of retained trees shall be remediated using pneumatic air excavation according to a specification produced by the project arborist.

10. **Canopy Protection**: Where fencing is installed at the limits of disturbance within the TPA, canopy management (pruning or tying back) shall be conducted to ensure that vehicular traffic does not damage canopy parts. Exhaust from machinery shall be located 5 feet outside the dripline of retained trees. No exhaust shall come in contact with foliage for prolonged periods of time.
11. **Duff/Mulch:** Apply 6 inches of arborist wood chip mulch or hog fuel over bare soil within the TPA to prevent compaction and evaporation. TPA shall be free of invasive weeds to facilitate mulch application. Keep mulch 1 foot away from the base of trees and 6 inches from retained understory vegetation. Retain and protect as much of the existing duff and understory vegetation as possible.
12. **Excavation:** Excavation done within the TPA shall use alternative methods such as pneumatic air excavation or hand digging. If heavy machinery is used, use flat front buckets with the project arborist spotting for roots. When roots are encountered, stop excavation and cleanly sever roots. The project arborist shall monitor all excavation done within the TPA.
13. **Fill:** No fill is to be placed within the TPA of retained trees without the approval of the project arborist.
14. **Root Pruning:** Limit root pruning to the extent possible. All roots shall be pruned with a sharp saw making clean cuts. Do not fracture or break roots with excavation equipment.
15. **Root Moisture:** Root cuts and exposed roots shall be immediately covered with soil, mulch, or clear polyethylene sheeting and kept moist. Water to maintain moist condition until the area is back filled. Do not allow exposed roots to dry out before replacing permanent back fill.
16. **Hardscape Removal:** Retain hardscape surfaces for as long as practical. Remove hardscape in a manner that does not require machinery to traverse newly exposed soil within the TPA. Where equipment must traverse the newly exposed soil, apply soil protection as described in section 8. Replace fencing at edge of TPA if soil exposed by hardscape removal will remain for any period of time.
17. **Tree Removal:** All trees to be removed that are located within the TPA of retained trees shall not be ripped, pulled, or pushed over. The tree should be cut to the base and the stump either left in place or ground out. A flat front bucket can also be used to sever roots around all sides of the stump, or the roots can be exposed using hydro or air excavation and then cut before removing the stump.
18. **Irrigation:** Retained trees with soil disturbance within the TPA will require supplemental water from June through September. Acceptable methods of irrigation include drip, sprinkler, or watering truck. Trees shall be watered three times per month during this time.
19. **Pruning:** Pruning required for construction and safety clearance shall be done with a pruning specification provided by the project arborist in accordance with American National Standards Institute ANSI-A300 2017 Standard Practices for Pruning. Pruning shall be conducted or monitored by an arborist with an ISA Certification.
20. **Plan Updates:** All plan updates or field modifications that result in impacts within the TPA or change the retained status of trees shall be reviewed by the senior project manager and project arborist prior to conducting the work.
21. **Materials:** Contractor shall have the following materials on-site and available for use during work in the TPA:
    - **Sharp and clean bypass hand pruners**
    - **Sharp and clean bypass loppers**
    - **Sharp hand-held root saw**
    - **Reciprocating saw with new blades**
    - **Shovels**
    - **Trowels**
    - **Clear polyethylene sheeting**
    - **Burlap**
    - **Water**

Tree Solutions Inc
Consulting Arborists

Table of Trees

4920 Meridian Ave N, Seattle, WA

Arborist: Charlie Vogelheim, Julian Garcia
Date of Inventory: 2/15/2024, 5/23/25
Table Updated: 6/4/25

DSH (Diameter at Standard Height) is measured 4.5 feet above grade, or as specified in the Guide for Plant Appraisal, 10th Edition , published by the Council of Tree and Landscape Appraisers.
DSH for multi-stem trees are noted as a single stem equivalent, calculated as specified in the Guide for Plant Appraisal, 10th Edition , published by the Council of Tree and Landscape Appraisers.
Tier is based on SMC 25.11 and Director's Rule 7-2023.
Fees-in-Lieu for removed trees are calculated using the methods defined in the SMC 25.11.115 (ordinance 126821).
Tree Protection Area is calculated as 10 times DSH or greater depending on tree species, health, and age.
Species tolerance to construction disturbance is from Trees and Development by Nelda Matheny and James Clark, published by the International Society of Arboriculture in 1998.
Letters are used to identify trees on neighboring properties with overhanging canopies.
Dripline is measured from the center of the tree to the outermost extent of the canopy.

							Dripline Radius (feet)											
Tree ID	**Scientific Name**	**Common Name**	**DSH** (inches)	**DSH Multistem**	**Health Condition**	**Structural Condition**	**N**	**E**	**S**	**W**	**Tier 2 Threshold**	**Grove**	**Tier Level**	**Basic Tree Protection Area** (feet)	**Tree Protection Area** (feet)	**Proposed Action (Remove / Retain)**	**Replacement Trees Required**	**Notes**
433	*Malus domestica*	Apple	15.8		Good	Good	21	21	21	21	*20.0*	Grove	2	16	13	Retain	-	
434	*Malus domestica*	Apple	15.3		Good	Good	19	19	19	19	*20.0*	Grove	2	15	13	Retain	-	Shade suppressed on south side.
435	*Malus domestica*	Apple	10.3		Good	Good	17	17	17	17	*20.0*		4	10	9	Retain	-	
436	*Malus domestica*	Apple	14.6		Good	Fair	18	18	18	18	*20.0*	Grove	2	15	12	Retain	-	Codominant at 5 feet with included bark, *Ganoderma* conk on east side.
437	*Malus domestica*	Apple	14.2	11.3, 8.6	Good	Good	22	22	22	22	*20.0*	Grove	2	14	12	Retain	-	
438	*Malus domestica*	Apple	11.0		Good	Good	22	22	22	22	*20.0*	Grove	2	11	9	Retain	-	Wound on west side.
439	*Malus sp.*	Crabapple	11.5	4.3, 4.5, 4.5, 7.6, 3.9	Good	Fair	15	15	15	15	*20.0*		4	11	10	Retain	-	Codominant at 3 feet, union with included bark.
440	*Malus sp.*	Crabapple	10.8	3.3, 4.2, 3.6, 4, 5.4, 5.5	Fair	Fair	13.5	13.5	13.5	13.5	*20.0*		4	11	9	Retain	-	Old *Ganoderma* conk on north side at base.
441	*Malus sp.*	Crabapple	9.8	5, 5.8, 5.3, 3.1	Fair	Good	16.5	16.5	16.5	16.5	*20.0*		4	10	8	Retain	-	Corrected lean to north.
442	*Malus sp.*	Crabapple	11.0	5.5, 8.6, 4.2	Good	Good	12	12	12	12	*20.0*		4	11	9	Retain	-	
443	*Malus sp.*	Crabapple	7.3	4.4, 3.4, 4.8	Good	Good	10	10	10	10	*20.0*		4	7	6	Retain	-	Several basal sprouts.
444	*Malus sp.*	Crabapple	12.1	3.8, 4.4, 4.2, 5.5, 8	Good	Good	19	19	19	19	*20.0*		3	12	10	Retain	-	Roots to north exposed and damaged by pedestrians.
445	*Malus domestica*	Apple	16.7	10, 10.3, 8.6	Good	Fair	14	14	14	14	*20.0*	Grove	2	17	14	Retain	-	Base and many stems have columns of decay. Advanced assessment recommended if retained.
446	*Acer campestre*	Hedge maple	20.6		Good	Good	19	19	19	19	*24.0*	Grove	2	21	17	Retain	-	Pavement uplift on east side, heavy foot traffic up to base, decay hollow on southeast side, strong reaction wood.
447	*Acer campestre*	Hedge maple	18.0		Good	Good	17.5	17.5	17.5	17.5	*24.0*	Grove	2	18	15	Retain	-	Heavy foot traffic around base, pavement uplift on east and west sides.
448	*Acer campestre*	Hedge maple	18.3		Good		19	19	19	19	*24.0*	Grove	2	18	15	Retain	-	Heavy pedestrian foot traffic around base, pavement uplift on east side.
449	*Acer campestre*	Hedge maple	21.0		Good	Fair	16	16	16	16	*24.0*	Grove	2	21	18	Retain	-	Large codominant branch at 8 feet, good union to northwest, heavy foot traffic around base, pavement uplift on east and west sides.
450	*Acer campestre*	Hedge maple	17.3		Good	Good	21	21	21	21	*24.0*	Grove	2	17	14	Retain	-	Heavy foot traffic around base, pavement uplift on east and west sides.
451	*Acer campestre*	Hedge maple	23.4		Good	Fair	28	28	28	28	*24.0*	Grove	2	23	20	Retain	-	Pavement uplift on east side, codominant at 6 feet, narrow union.
452	*Parrotia persica*	Persian ironwood	8.0		Good	Good	10.0	10.0	10.0	10.0	*24.0*		4	8	7	Remove	3	
454	*Cedrus deodara*	Deodar cedar	36.8		Good	Good	28.0	32.0	25.0	28.0	*24.0*	Grove	2	37	31	Retain	-	
455	*Planera aquatica*	Water elm	4.5	3, 3.3	Good	Good	6.0	10.0	9.0	5.0	*24.0*		-	4	4	Retain	-	Species may be inaccurate.
456	*Quercus muehlenbergii*	Chinkapin oak	5.6	4.4, 3.5	Good	Good	10.0	15.0	15.0	7.0	*24.0*		-	6	5	Retain	-	Bacterial leaf blight in lower canopy.
457	*Quercus muehlenbergii*	Chinkapin oak	7.4		Good	Fair	9.0	10.0	7.0	8.0	*24.0*		4	7	6	Retain	-	Sparse upper crown.
458	*Liquidambar styraciflua*	American sweetgum	17.6		Good	Good	12.0	10.0	14.0	12.0	*24.0*		3	18	15	Retain	-	
459	*Picea engelmanii*	Engelmann spruce	16.6		Good	Good	9.0	12.0	12.0	10.0	*24.0*	Grove	2	17	14	Retain	-	
460	*Buxu sempervirens*	Boxwood	2.1	1,1.5, 1	Good	Good	5.0				*24.0*		-	2	2	Retain	-	
461	*Arbutus menziesii*	Pacific madrone	21.6		Good	Good	17.0	18.0	16.0	9.0	*6.0*	Grove	2	22	18	Retain	-	Base of tree is in contact with building wall on west side, asymmetric crown to southeast.
462	*Pieris japonica*	Japanese adromeda	4.5		Good	Good	11.0	6.0	3.0	5.0	*24.0*		-	5	4	Retain	-	
463	*Rhododendron sp.*	Tree rhododendron	7.4	5.1, 5.4	Good	Good	9.0	11.0	3.0	11.0	*24.0*		4	7	6	Retain	-	
464	*Pieris japonica*	Japanese adromeda	3.7	3, 2, 1	Good	Good	8.0	4.0	3.0	4.0	*24.0*		-	4	3	Retain	-	
465	*Pieris japonica*	Japanese adromeda	7.0	4.4, 2.5, 4.8	Good	Good	8.0	10.0	3.0	5.0	*24.0*		4	7	6	Retain	-	
466	*Rhododendron sp.*	Tree rhododendron	7.0		Good	Good	9.0	8.0	2.0	5.0	*24.0*		4	7	6	Retain	-	
467	*Quercus garryana*	Garry oak	15.5		Good	Good	18.0	21.0	23.0	22.0	*6.0*	Grove	2	16	13	Retain	-	Dead wood in lower crown, parts up to 2-inches diameter.
468	*Crataegus monogyna*	Common hawthorn	11.4	6.6, 5.8, 7.3	Good	Good	12.0	16.0	10.0	16.0	-		4	11	10	Retain	-	Codominant from base, southeastern stem appears to be root stock of common hawthorn, northwest stem is different *Crataegus* species.
469	*Quercus robur*	English oak	19.5		Good	Good	18.0	15.0	23.0	21.0	*24.0*	Grove	2	20	16	Retain	-	Bacterial leaf blight in lower canopy.
470	*Salix sp.*	Willow species	7.3		Poor	Fair	0.0	0.0	24.0	18.0	*8.0*		4	7	6	Retain	-	Strong phototrophic lean to northwest, extreme leaf curling and dieback of foliage made species unidentifiable.
471	*Quercus rubra*	Red oak	1.0		Good	Good	3.0	9.0	8.0	6.0	*24.0*		-	1	1	Retain	-	
472	*Corylus colurna*	Turkish hazelnut	13.7		Good	Good	17.0	17.0	18.0	15.0	*24.0*	Grove	2	14	11	Retain	-	Some insect damage.
473	*Amelanchier alnifolia*	Serviceberry	5.7	2.8, 3.5, 3.6	Fair	Good	5.0	0.0	5.0	3.0	*6.0*		-	6	5	Retain	-	Sparse foliage, extreme insect damage.
474	*Pinus ponderosa*	Ponderosa pine	20.4		Good	Good	19.0	14.0	19.0	13.0	*24.0*	Grove	2	20	17	Retain	-	Somewhat sparse canopy, good shoot extension.
475	*Quercus sp*	Oak	16.3		Good	Good	9.0	15.0	17.0	16.0	*24.0*	Grove	2	16	14	Retain	-	Phototrophic lean to the south, some foliar disease on lower crown.
476	*Taxus baccata*	English yew	14.3	5.8, 5.8, 4.7, 3.2, 2, 2.5, 7, 3.8, 5.5	Good	Good	17.0	18.0	16.0	14.0	*24.0*	Grove	2	14	12	Retain	-	

Tree Solutions Inc
Consulting Arborists

Table of Trees

4920 Meridian Ave N, Seattle, WA

Arborist: Charlie Vogelheim, Julian Garcia
Date of Inventory: 2/15/2024, 5/23/25
Table Updated: 6/4/25

Tree ID	Scientific Name	Common Name	DSH (inches)	DSH Multistem	Health Condition	Structural Condition	N	E	S	W	Tier 2 Threshold	Grove	Tier Level	Basic Tree Protection Area (feet)	Tree Protection Area (feet)	Proposed Action (Remove / Retain)	Replacement Trees Required	Notes
477	*Aria edulis*	Whitebeam	13.5	3.4, 4, 5.6, 7.1, 8.5	Good	Good	15.0	10.0	15.0	25.0	*0.0*	Grove	2	13	11	Retain	-	Phototrophic lean to northwest.
478	*Pinus ponderosa*	Ponderosa pine	8.2		Good	Good	10.0	2.0	7.0	11.0	*24.0*		4	8	7	Retain	-	
479	*Buxu sempervirens*	Boxwood	2.5		Good	Good	8.0				*24.0*		-	3	2	Retain	-	
480	*Quercus sp*	Oak	18.1		Fair	Good	20.0	18.0	26.0	21.0	*24.0*	Grove	2	18	15	Retain	-	480-484 are same oak species, small leaves, sparse canopy, tree appears stressed.
481	*Quercus sp*	Oak	14.8	6.6, 8.5, 10.2	Good	Good	5.0	22.0	15.0	21.0	*24.0*	Grove	2	15	12	Retain	-	
482	*Quercus sp*	Oak	11.5		Good	Good	10.0	10.0	11.0	15.0	*24.0*		4	12	10	Retain	-	
483	*Quercus sp*	Oak	14.2		Good	Good	8.0	19.0	12.0	15.0	*24.0*	Grove	2	14	12	Retain	-	
484	*Quercus sp*	Oak	8.5		Good	Fair	11.0	15.0	10.0	15.0	*24.0*		4	9	7	Retain	-	Sparse foliage.
485	*Kalopanax septemlobus*	Castor aralia	6.4		Good	Good	10.0	3.0	9.0	13.0	*24.0*		4	6	5	Retain	-	Swept base and corrected phototrophic lean to northwest.
486	*Thuja occidentalis*	Arborvitae	11.0	7.5, 8	Good	Good	3.0	2.0	5.0	9.0	*24.0*		4	11	9	Retain	-	Corrected phototrophic lean to west.
487	*Taxus baccata*	English yew	2.0		Good	Good	6.0	3.0	4.0	3.0	*24.0*		-	2	2	Retain	-	
488	*Ilex aquifolium*	English holly	18.5	10.6, 3, 12, 7, 2.5, 2, 4	Good	Good	12.0	12.0	12.0	12.0	-	Grove	2	18	15	Retain	-	
489	*Acer platanoides*	Norway maple	30.5		Good	Good	35.0	26.0	21.0	30.0	*24.0*	Grove	2	31	25	Retain	-	Surface roots, codominant at 6 feet with good unions.
490	*Acer macrophyllum*	Bigleaf maple	42.1		Fair	Fair	26.0	37.0	35.0	27.0	*24.0*	Grove	2	42	35	Retain	-	*Ganoderma* conks on northwest side and southeast side, recommended advanced assessment, deadwood up to 4-inches diameter in canopy, ivy growing out of codominant union at 12 feet.
491	*Thuja plicata*	Western redcedar	21.0		Good	Excellent	18.0	16.0	15.0	20.0	*24.0*	Grove	2	21	18	Retain	-	
492	*Thuja plicata*	Western redcedar	31.1		Good	Good	13.0	17.0	19.0	23.0	*24.0*	Grove	2	31	26	Retain	-	Codominant at 20 feet.
493	*Cornus nuttallii*	Pacific dogwood	5.6		Poor	Poor	0.0	0.0	12.0	0.0	*6.0*		-	6	5	Retain	-	Tree is nearly dead, 10% of foliage remaining, dead parts up to 3-inches diameter.
494	*Betula pendula*	European white birch	8.0		Fair	Fair	3.0	10.0	15.0	2.0	*24.0*		4	8	7	Retain	-	Corrected phototrophic lean to south, dead top symptomatic of bronze birch borer.
495	*Chamaecyparis obtusa*	Hinoki cypress	3.0		Good	Good	5.0	5.0	5.0	5.0	*24.0*		-	3	3	Retain	-	
496	*Morus alba*	Common mulberry	5.4	4.5, 3	Good	Fair	10.0	9.0	8.0	12.0	*24.0*		-	5	5	Retain	-	Stump sprout.
497	*Magnolia tripetala*	Umbrella magnolia	6.0		Good	Good	12.0	11.0	12.0	13.0	*24.0*		4	6	5	Retain	-	
498	*Crataegus monogyna*	Common hawthorn	12.9		Good	Good	17.0	12.0	15.0	20.0	-		3	13	11	Retain	-	
499	*Crataegus monogyna*	Common hawthorn	18.0		Good	Good	18.0	12.0	24.0	20.0	-		3	18	15	Retain	-	
500	*Crataegus monogyna*	Common hawthorn	14.2		Good	Good	12.0	13.0	14.0	16.0	-		3	14	12	Retain	-	
501	*Betula pendula*	European white birch	28.2		Good	Good	24.0	12.0	28.0	25.0	*24.0*		2	28	24	Retain	-	Some dieback in upper crown, possible symptoms of early bronze birch borer.
502	*Malus domestica*	Apple	12.4		Good	Good	16.0	12.0	15.0	12.0	*20.0*		3	12	10	Retain	-	
503	*Pinus bungeana*	Lacebark pine	8.0		Good	Good	12.0	12.0	12.0	12.0	*24.0*		4	8	7	Retain	-	
504	*Thuja occidentalis*	Arborvitae	9.9	5.9, 5.6, 5.6	Good	Good	5.0	5.0	5.0	5.0	*24.0*		4	10	8	Retain	-	Wound on northside with good reaction wood.
505	*Thuja occidentalis*	Arborvitae	14.5	10, 10.5	Good	Good	5.0	5.0	5.0	5.0	*24.0*		3	15	12	Retain	-	Wound on northside with good reaction wood.
506	*Amelanchier alnifolia*	Serviceberry	6.0		Good	Good	10.0	10.0	10.0	10.0	*6.0*		2	6	5	Retain	-	
507	*Acer platanoides*	Norway maple	30.8		Fair	Fair	24.0	27.0	29.0	17.0	*24.0*		2	31	26	Retain	-	*Kretzschmaria deusta* fruiting body on west side.
508	*Malus domestica*	Apple	5.4		Fair	Good	9.0	9.0	9.0	9.0	*20.0*		-	5	5	Retain	-	Weak shoot extension.
509	*Malus domestica*	Crabapple	3.0		Fair	Good	4.0	4.0	4.0	4.0	*20.0*		-	3	3	Retain	-	Weak shoot extension.
510	*Malus domestica*	Crabapple	3.0		Fair	Good	4.0	4.0	4.0	4.0	*20.0*		-	3	3	Retain	-	Weak shoot extension.
511	*Malus domestica*	Crabapple	5.5		Fair	Good	8.0	10.0	8.0	7.0	*20.0*		-	6	5	Remove	3	
512	*Malus domestica*	Crabapple	4.8		Fair	Good	6.0	8.0	7.0	4.0	*20.0*		-	5	4	Remove	3	
513	*Malus domestica*	Apple	27.7		Good	Good	27.0	20.0	20.0	20.0	*20.0*		2	28	23	Retain	-	History of children climbing.
514	*Malus domestica*	Apple	11.7	9.5, 6.9	Good	Good	15.0	10.0	10.0	10.0	*20.0*		4	12	10	Retain	-	
515	*Malus domestica*	Apple	13.8	8.6, 8.2, 7	Good	Fair	10.0	13.0	14.0	10.0	*20.0*		3	14	11	Retain	-	Decay hollows in western stem, good reaction wood.
516	*Malus domestica*	Apple	26.8		Good	Fair	23.0	11.0	24.0	16.0	*20.0*		2	27	22	Retain	-	Some wounds with decay on lateral branches.
517	*Malus domestica*	Apple	13.2	10, 7,5	Good	Poor	18.0	10.0	0.0	14.0	*20.0*		3	13	11	Retain	-	Prostrate to northwest, western stem had partial failure.
518	*Malus domestica*	Apple	7.5		Good	Fair	9.0	5.0	5.0	9.0	*20.0*		4	8	6	Retain	-	Decay hollow at 3 feet.
519	*Malus domestica*	Apple	11.9	10.5, 5.5	Good	Fair	5.0	12.0	10.0	8.0	*20.0*		4	12	10	Retain	-	Codominant at 1 foot in east-west orientation.

Tree Solutions Inc
Consulting Arborists

Steel Plates Over Roots - Installation Specification

1. Materials
   A. Steel Plates
      1. Minimum 10-gauge thickness
   B. Lag Screws
      1. Minimum 3/8-inch diameter and long enough to fully penetrate the root.
   C. Bolts, Nuts
      1. Minimum 3/8-inch diameter bolt and associated nut
   D. Gravel
      1. Angular gravel with no fines of a size necessary for the type of paving being used.
2. Methods
   A. Pavement Removal
      1. Existing Pavement must be removed by hand or using a small excavator with a flat front bucket, working slowly to avoid damage to roots.
         a. When feasible, an arborist should be on-site to monitor and guide the excavation.
      2. Excavators used for pavement removal must remain on existing pavement. If an excavator must work from areas without pavement, soil must be protected. A minimum of 6-inches of wood chip mulch over the soil and 1-inch-thick steel plates for heavy machinery, or 6 inches of wood chips and/or 1-inch-thick plywood for light machinery. AlturnaMats® or arborist approved equivalent may also be used for soil protection.
      3. At no time may an excavator traverse unprotected soil within the dripline of retained trees.
   B. Root Excavation
      1. Root excavation must occur by hand or with pneumatic air excavation. Hydro-vac excavation may not be used due to the high risk of stripping bark off roots planned for retention.
      2. Cover roots which will be exposed for more than 8 hours with wet burlap or wood chip mulch to prevent desiccation.
   C. Root Shaving/Planing
      1. Only roots greater than 3-inches in diameter and interfering with new pavement may be shaved.
      2. Up to one-third of the root diameter may be shaved without ISA Certified Arborist consultation.
      3. Up to one-half of the root diameter may be shaved with ISA Certified Arborist Consultation and approval.
      4. Shaving of roots must occur using a sharp planing tool, sharp debarking tool, or chainsaw.
   D. Steel Plate Installation - (on shaved or unshaved roots)
      1. Drill pilot holes through steel plates and roots 3-inches diameter and greater.
      2. Attach steel plates to roots using specified lag screws.
      3. Roots smaller than 3-inches diameter can have steel plates installed above and below the root and the steel plates bolted together with the specified bolts and nuts.
   E. Gravel Placement
      1. Install gravel between and over steel plates to obtain the grades necessary for paving.
   F. Pavement Installation
      1. Install pavement directly over steel plates or gravel as necessary.

References:

Mann, Gordon, RCA. Sidewalk and Root Conflicts: Mitigating the Conflict - An Overview. Accessed on Municipal Research and Services Center (MRSC) website at: http://mrsc.org/getmedia/4DD1A628-BD5A-49E3- B1EE-3D09525F63BE/m58mannmade.aspx

Tree Solutions Inc.
Arborists: Charlie Vogelheim & Julian Garcia
206-528-4670

Tree Inventory Date:
2/15/2024 & 5/23/25

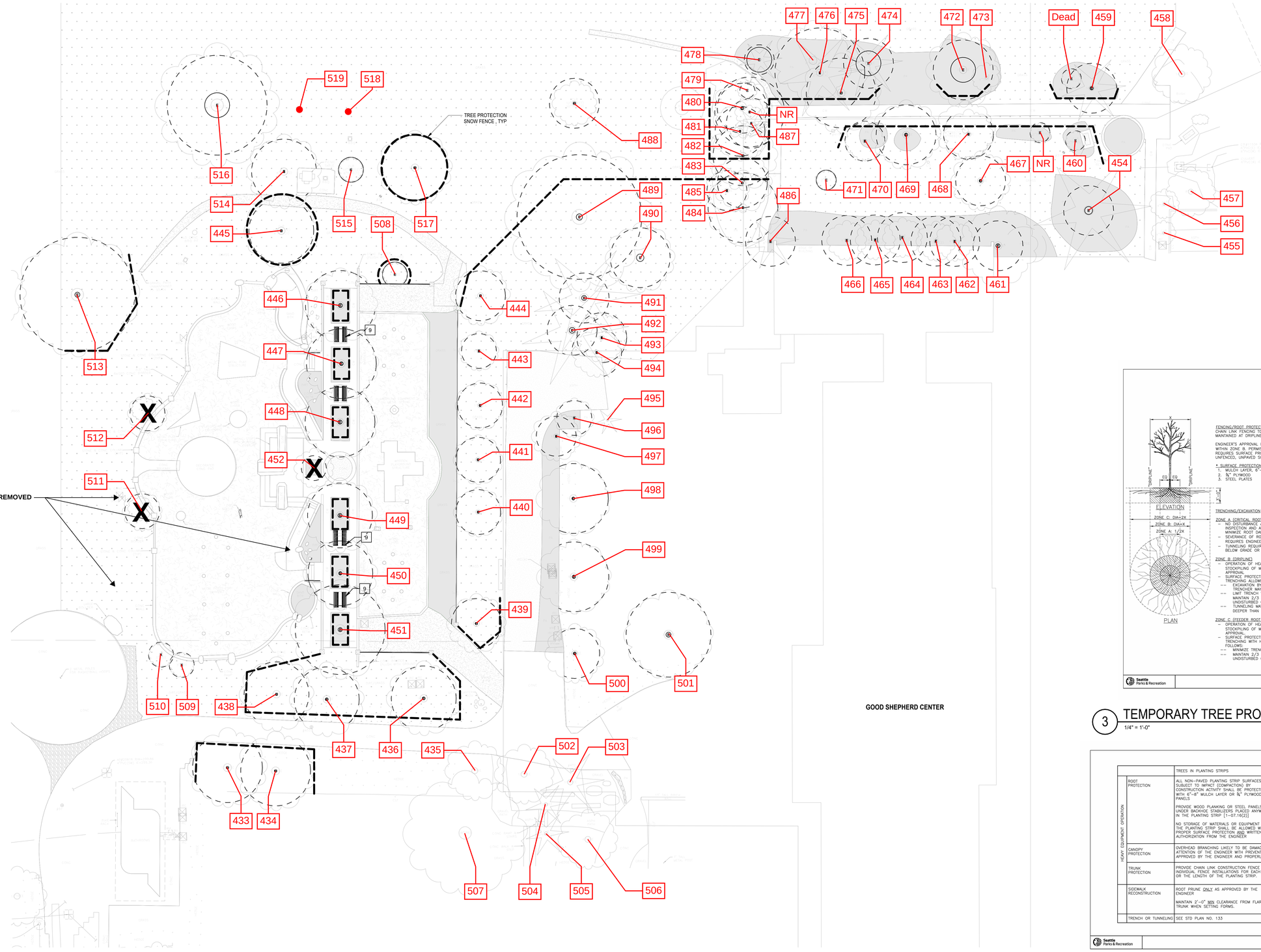
Regulated trees 1-inch diameter or greater on the site are identified with a number. This number corresponds with the metal tree tag unless otherwise noted.

Dripline measurements, species, and other tree specifics are listed in the tree table produced by Tree Solutions Inc.

Survey and site plans should be updated to include tree identifiers and accurate dripline data prior to any design related to tree protection.

Not on survey*: Marked with a red circle

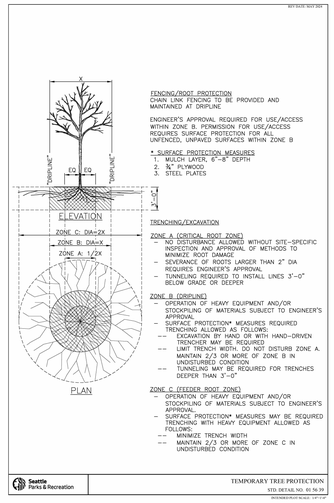
**Tree locations added to the survey are approximate and should be confirmed and added to the survey.*



1 TREE PROTECTION PLAN
1/16" = 1'-0"

0' 8' 16' 32'

PLAN NORTH



3 TEMPORARY TREE PROTECTION
1/4" = 1'-0"

		TREES IN PLANTING STRIPS	TREES IN TREE PITS
HEAVY EQUIPMENT OPERATION	ROOT PROTECTION	ALL NON-PAVED PLANTING STRIP SURFACES SUBJECT TO IMPACT (COMPACTION) BY CONSTRUCTION ACTIVITY SHALL BE PROTECTED WITH 6"-8" MULCH LAYER OR ¾" PLYWOOD PANELS PROVIDE WOOD PLANKING OR STEEL PANELS UNDER BACKHOE STABILIZERS PLACED ANYWHERE IN THE PLANTING STRIP [1-07.16(2)] NO STORAGE OF MATERIALS OR EQUIPMENT IN THE PLANTING STRIP SHALL BE ALLOWED WITHOUT PROPER SURFACE PROTECTION AND WRITTEN AUTHORIZATION FROM THE ENGINEER	RETAIN EXISTING PAVING DURING CONSTRUCTION SCHEDULE PAVEMENT REPLACEMENT TO MINIMIZE EXPOSURE OF SURFACE ROOTS TO CONSTRUCTION EQUIPMENT DAMAGE, COMPACTION, ETC. EXPOSURE FOR LONGER THAN 48 HOURS REQUIRES MULCH APPLICATION
	CANOPY PROTECTION	OVERHEAD BRANCHING LIKELY TO BE DAMAGED BY EQUIPMENT OPERATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER WITH PREVENTIVE MEASURES (PRUNING OR TIE-BACK OF BRANCHES) APPROVED BY THE ENGINEER AND PROPERLY EXECUTED BEFORE COMMENCEMENT OF THE WORK	
	TRUNK PROTECTION	PROVIDE CHAIN LINK CONSTRUCTION FENCE IN INDIVIDUAL FENCE INSTALLATIONS FOR EACH TREE OR THE LENGTH OF THE PLANTING STRIP.	PROVIDE 5'-0" MIN HEIGHT FENCE INSTALLATIONS FOR EACH TREE TO ENCLOSE ENTIRE TREE PIT OPENING.
	SIDEWALK RECONSTRUCTION	ROOT PRUNE ONLY AS APPROVED BY THE ENGINEER MAINTAIN 2'-0" MIN CLEARANCE FROM FLARE OF TRUNK WHEN SETTING FORMS.	PROVIDE 5'-0"X5'-0" OR 4'-0"X6'-0" (24 SQ FT MIN) TREE PITS IN NEW SIDEWALK FOR NEW TREES. TREE PIT SIZE FOR EXISTING TREES SHALL BE ELONGATED (8'-0" TO 12'-0"+). PITS MAY BE REQUIRED TO MINIMIZE ROOTS IMPACTS WHILE MAINTAINING REQUIRED SIDEWALK WIDTH
	TRENCH OR TUNNELING	SEE STD PLAN NO. 133	

Seattle Parks & Recreation
TEMPORARY TREE PROTECTION NOTES
STD. DETAIL NO. 01 56 39

2 TREE PROTECTION NOTES
1/4" = 1'-0"

PROVIEW #4

<<<CAUTION>>>
CALL 811 BEFORE YOU DIG!
WWW.CALL811.COM
ALSO, VERIFY ALL UNDERGROUND UTILITIES NOT LOCATED BY THE 811 SERVICE BY USING A COMMERCIAL LOCATION SERVICE AND CALL SPR INSPECTION REQUEST LINE (206) 684-7034.

NO.	REVISION - AS BUILT	DATE
7		
6		
5		
4		
3		
2		
1		

REVIEWED: _____ _____
PARK ENGINEER DATE

All work done in accordance with the City of Seattle Standard Plans and Specifications in effect on the date shown above, and supplemented by Special Provisions.

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Seattle Parks & Recreation

MERIDIAN PLAYGROUND
PLAY AREA IMPROVEMENTS
TREE PROTECTION PLAN

DESIGNED TS
DRAWN SJ
CHECKED ML
ORDINANCE NO. #######
SCALE

DATE 02-21-2025
SHEET 4 OF 12
L-101
FOR PARK USE ONLY