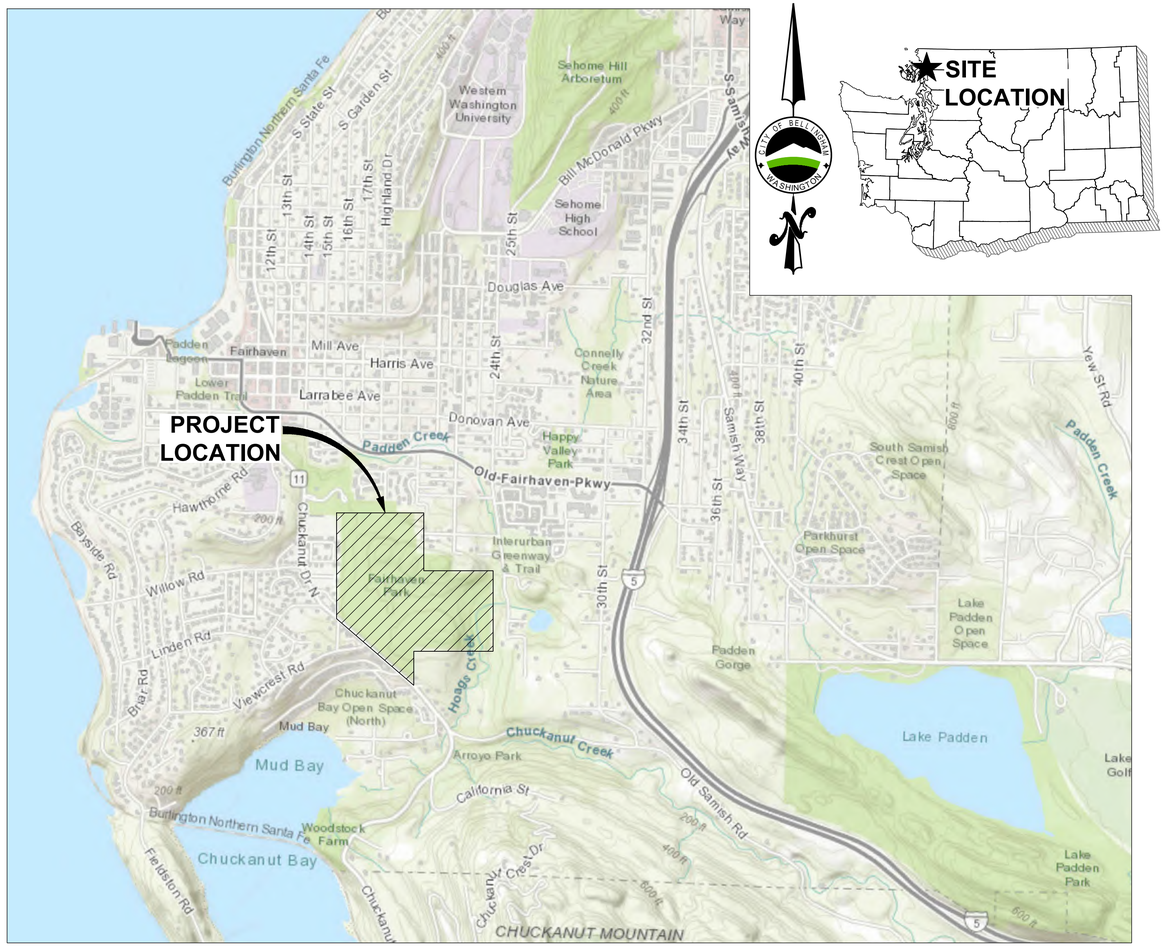
HUNDRED ACRE WOOD
PHASE 1B IMPROVEMENTS

CITY OF BELLINGHAM, WASHINGTON



VICINITY MAP

SCALE: 1"=1/4 MILE

CITY OFFICIALS:

KIM LUND
MAYOR

NICOLE OLIVER
DIRECTOR OF PARKS AND RECREATION

CITY COUNCIL:

HANNA STONE
HOLLY HUTHMAN
DAN HAMMILL
EDWIN 'SKIP' WILLIAMS
LISA ANDERSON
MICHAEL LILIQUEST
JACE COTTON

OWNER:

CITY OF BELLINGHAM WASHINGTON
PARKS AND RECREATION DEPARTMENT
210 LOTTIE ST
BELLINGHAM, WA 98225
PHONE: 360-778-7000
EMAIL: GAUSTIN@COB.ORG
CONTACT: GINA AUSTIN, PE

ENGINEER:

HERRERA ENVIRONMENTAL CONSULTANTS
1329 N STATE STREET, SUITE 200
BELLINGHAM, WA 98225
PHONE: (360) 398-5075
EMAIL: CMITCHELL@HERRERAINC.COM
CONTACT: COLLEEN MITCHELL, PE

LANDSCAPE ARCHITECT:

HERRERA ENVIRONMENTAL CONSULTANTS
1329 N STATE STREET, SUITE 200
BELLINGHAM, WA 98225
PHONE: (360) 398-5075
EMAIL: BALONZO@HERRERAINC.COM
CONTACT: BERNIE ALONZO, PLA

CITY PROJECT MANAGER:

CITY OF BELLINGHAM - PARKS AND DEVELOPMENT DIVISION
BELLINGHAM CITY HALL
210 LOTTIE STREET
BELLINGHAM, WA 98225
PHONE: (360) 778-7001
EMAIL: GAUSTIN@COB.ORG
CONTACT: GINA G. AUSTIN, P.E.,MSCE

SHEET INDEX

SITE AND PARCEL INFORMATION

PARCEL NUMBERS: 370212359328, 370212364207, 370212478165, 370212500214, 370212497234, 370212477313, 370212548098

SITE ADDRESS: 107 CHUCKANUT DRIVE NORTH, BELLINGHAM, WASHINGTON, 98225
TOTAL PARCEL AREA: 4,848,811 SF/111.3 ACRES

LEGAL DESCRIPTIONS:
370212359328: S 1/2 SW NE-SUBJ TO CONSERVATION ESMT REC AF 2020700109
370212364207: THAT PTN OF NW SE-OF SW SE LY NLY OF CHUCKANUT DR-SUBJ TO CONSERVATION ESMT REC AF 2020700109
370212478165: LOT B CHUCKANUT TRUST LLA AS REC BOOK 36 SHORT PLATS PG 18-EXC 51% OIL-MIN RTS AS RES AF 751229-SUBJ TO CONSERVATION ESMT REC AF 2020700109
370212500214: LOT A CHUCKANUT TRUST LLA AS REC BOOK 36 SHORT PLATS PG 18
370212497233: DIFFENBACHER'S ADD TO FAIRHAVEN LOTS 1 THRU 4-21 THRU 24 BLK 1-SUBJ TO CONSERVATION ESMT REC AF 2020700109
370212477313: DIFFENBACHER'S ADD TO FAIRHAVEN LOTS 5 THRU 20 BLK 1-SUBJ TO CONSERVATION ESMT REC AF 2020700109
370212548098: N 1/2 E 1/2 E 1/2 SE SE-THAT PTN OF SW SW SEC 7-37-3E LY WLY OF ABANDONED GREAT NORTHERN RR-SUBJ TO ESMT REC AF 1103936

SOUTH NEIGHBORHOOD LAND USE: AREAS 9A AND 12 (PUBLIC)

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COLLEEN E. MITCHELL — STATE OF WASHINGTON — 46997 — REGISTERED PROFESSIONAL ENGINEER

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	4		
	3		
	2		
	1		
Date	No	Revision	By

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
COVER

PLAN REF. NO.

SHEET 1 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DC\ACCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Cover.dwg
Plot Date: 2/5/2025 3:36 PM Cad User: Conan Witzel
Plot Style Table: ---- Plotter: None

ABBREVIATIONS

APPX	APPROXIMATELY
COB	CITY OF BELLINGHAM
CRZ	CRITICAL ROOT ZONE
DBH	DIAMETER AT BREAST HEIGHT
E	EAST, EASTING
FT	FEET/FOOT
HT	HEIGHT
IN	INCH/INCHES
MAX	MAXIMUM
MIN	MINIMUM
N	NORTH/NORTHING
NO	NUMBER
NTS	NOT TO SCALE
QTY	QUANTITY
REF	REFERENCE
S	SOUTH, SLOPE
ST	STREET
TYP	TYPICAL
WLT	WHATCOM LAND TRUST

SIGN TYPE SCHEDULE

S1 — 24" X 36" YOU ARE HERE SIGN

PHASE 1A SIGNAGE

NOTE AND DETAIL/SECTION REFERENCING

1 / C-1 — DETAIL REFERENCE NUMBER; DRAWING ON WHICH DETAIL IS SHOWN

DETAIL (1 / C-1)
SCALE: NTS

A / C-4 — SECTION REFERENCE LETTER; DRAWING ON WHICH SECTION IS SHOWN

A — SECTION REFERENCE LETTER WHEN SECTION IS ON SAME SHEET

SECTION/PROFILE (A / C-2)
SCALE: NTS

"-" INDICATES THAT THE DETAIL/SECTION IS SHOWN ON THE SAME SHEET

"TYP" INDICATES THAT THE DETAIL/SECTION IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED

"VAR" SPECIFIES THAT DETAIL/SECTION WAS TAKEN FROM VARIOUS DRAWINGS

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LEGEND

- RESTORED CRUSHED LIMESTONE TRAIL
- NEW CRUSHED LIMESTONE SURFACING
- COMPACTED EARTH TRAIL
- TRAIL WITH RAILROAD BALLAST
- TRAIL NARROWING
- BOARDWALK (SEE STRUCTURAL DRAWINGS)
- PHASE 1B DECOMMISSIONED TRAIL
- PLASTIC FENCING AND DECOMMISSIONING SIGN
- TWO RAIL FENCE
- PHASE 1A SIGNAGE
- WLT CONSERVATION EASEMENT
- PARCEL LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING TRAIL
- LIMITS OF DISTURBANCE
- OHW — ORDINARY HIGH WATER
- STREAM
- WETLAND/STREAM BUFFER
- XX — WETLAND (WITH LABEL)
- WETLAND PLANTING, SEE SHEET 11 FOR SCHEDULE
- BUFFER/UPLAND PLANTING, SEE SHEET 11 FOR SCHEDULE
- TRAIL EDGE PLANTING, SEE SHEET 11 FOR SCHEDULE
- PROPOSED TREES, SEE SHEET 11 FOR SCHEDULE
- EXISTING TREES

GENERAL NOTES

1. BEFORE WORK COMMENCES, CONTRACTOR AND PROJECT ENGINEER SHALL COMPLETE A SITE WALK AND VERIFY AND FLAG ALL WORK AREAS, DESIGNATED TURNAROUND AND STAGING AREAS, AND ACCEPTABLE TRAILS TO BE USED FOR CONSTRUCTION ACCESS.
2. NO FOOT TRAFFIC OR EQUIPMENT SHALL GO OUTSIDE OF THE FLAGGED WORK AREA TO AVOID COMPACTION AND DAMAGE TO SURROUNDING NATIVE VEGETATION.
3. ONLY HAND TOOLS AND APPROVED EQUIPMENT MAY BE USED FOR THIS WORK, TO AVOID ADDITIONAL IMPACTS TO THE EXISTING TRAIL AND SURROUNDING VEGETATION. NO LARGE MACHINERY MAY BE USED.
4. THERE IS A LOAD LIMITED, PEDESTRIAN BRIDGE STRUCTURE AT THE ENTRY TO THE SITE FROM FAIRHAVEN PARK. PRIOR TO MOBILIZING ANY EQUIPMENT, PREPARE AN EQUIPMENT LIST AND ACCESS PLAN, INCLUDING WEIGHTS, LOADING, AND PROPOSED CONSTRUCTION ACCESS ROUTES FOR EACH PIECE OF EQUIPMENT. REVIEW THE PLAN WITH THE OWNER AND/OR THE OWNERS REPRESENTATIVE. PROCEED TO MOBILIZE THE EQUIPMENT ONLY AFTER RECEIVING APPROVAL FROM THE OWNER AND/OR THE OWNER'S REPRESENTATIVE.
5. RESTORE ANY TRAILS OR NATIVE VEGETATION DAMAGED DURING CONSTRUCTION. TRAIL RESTORATION SHALL ONLY OCCUR WITHIN EXISTING TRAIL FOOTPRINT.
6. UNDERGROUND AND OVERHEAD UTILITIES HAVE NOT BEEN SURVEYED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT ALL UTILITY OWNERS FOR LOCATIONS AND TO FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO CONSTRUCTION. THE ONE-CALL NUMBER FOR UNDERGROUND UTILITIES IS 1-800-424-5555. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE INTEGRITY OF ALL EXISTING UTILITIES THROUGHOUT CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROMPTLY NOTIFY THE ENGINEER OF ANY CONFLICT WITH EXISTING UTILITIES.
7. TRAFFIC CONTROL PLANNING IS CONTRACTOR'S RESPONSIBILITY.
8. PROTECT ALL EXISTING PHASE 1A IMPROVEMENTS. IF EXISTING SITE IMPROVEMENTS INCLUDING PLANTINGS OR TRAILS ARE DAMAGED DURING CONSTRUCTION, CONTRACTOR SHALL RESTORE IMPACTED IMPROVEMENTS.
9. VERIFY ALL DIMENSIONS BEFORE WORK BEGINS. DEVIATIONS FROM WHAT IS SHOWN ON PLANS SHOULD BE BROUGHT TO THE CITY'S ATTENTION AND RESOLVED BEFORE WORK BEGINS

TRAIL CONSTRUCTION NOTES

1. TRAIL LOCATION FOR NEW TRAILS SHOWN ON PLANS IS APPROXIMATE. FINAL TRAIL ALIGNMENT AND LIMITS OF DISTURBANCE SHALL BE STAKED IN THE FIELD AND REVIEWED BY THE LANDSCAPE ARCHITECT AND A CERTIFIED ARBORIST. LAYOUT TRAIL AND PROPOSED LIMITS OF DISTURBANCE BASED ON THE FOLLOWING PARAMETERS:
   A. FOLLOW NATURAL TERRAIN AND CONTOURS TO MINIMIZE GRADING EXTENTS. TRAIL SLOPE SHOULD MAINTAIN SLOPES OF LESS THAN 1:12 WHERE FEASIBLE. TRAIL SLOPES NOT TO EXCEED 30% UNLESS APPROVED BY LANDSCAPE ARCHITECT.
   B. TRAIL ALIGNMENT SHALL MAINTAIN NATURAL DRAINAGE PATTERNS AND PREVENT SURFACE RUNOFF FROM BEING DIRECTED ONTO THE TRAIL. DRAINAGE FEATURES MUST BE PROTECTED DURING CONSTRUCTION.
   C. AVOID IMPACTS TO TREES GREATER THAN 6" DBH. AVOID IMPACTS TO CRITICAL ROOT ZONES (CRZ) WHEREVER FEASIBLE.
   D. ALIGN TRAIL CENTERLINE EQUIDISTANT BETWEEN TREES TO REMAIN TO MINIMIZE ROOT DISTURBANCE.
2. USE LIGHTWEIGHT EQUIPMENT OR HAND TOOLS FOR TRAIL CONSTRUCTION IN AREAS WITH SLOPES EXCEEDING 30% TO MINIMIZE GROUND DISTURBANCE AND COMPACTION.
3. CUTTING INTO SLOPES SHALL BE LIMITED IN AREAS WITH SLOPES OVER 30%. TRAIL CONSTRUCTION IN THESE AREAS SHALL BE COMPLETED USING FILL MATERIAL AND SHALL AVOID CUT OPERATIONS TO MINIMIZE DISTURBANCE AND MAINTAIN SLOPE STABILITY.
4. TRAIL CENTERLINE, LIMITS OF DISTURBANCE, ALL TREES PROPOSED FOR REMOVAL, AND ALL TREES THAT HAVE CRITICAL ROOT ZONES IMPACTED BY TRAIL GRADING SHALL BE FLAGGED FOR REVIEW BY THE LANDSCAPE ARCHITECT AND ARBORIST BEFORE WORK BEGINS. STAKE ALL TRAIL ELEMENTS AT LEAST TWO (2) WEEKS PRIOR TO CLEARING, GRADING, AND PAVING FOR REVIEW AND APPROVAL.
5. FIELD ADJUSTMENTS TO TRAIL ALIGNMENT, CENTERLINE, AND LIMITS OF DISTURBANCE MAY BE MADE BY THE LANDSCAPE ARCHITECT AND ARBORIST IN THE FIELD TO REDUCE TREE IMPACTS, AVOID CRZS, OR ACCOMMODATE SITE-SPECIFIC CONSTRAINTS.
6. PLANT MATERIALS WITHIN LIMIT OF DISTURBANCE MAY BE IDENTIFIED FOR SALVAGE AND RELOCATION AND SHALL BE FLAGGED DURING TRAIL ALIGNMENT REVIEW AND RELOCATED PER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
7. THE LANDSCAPE ARCHITECT AND ARBORIST MUST PERFORM A FINAL REVIEW OF FLAGGED ALIGNMENT, DISTURBANCE LIMITS, FLAGGED TREES, AND SALVAGEABLE PLANT MATERIALS BEFORE CLEARING, GRADING, OR PAVING BEGINS.
8. PROTECT ALL TREES, VEGETATION, AND EXISTING GRADES OUTSIDE THE APPROVED LIMITS OF DISTURBANCE. DISTURBANCE OR COMPACTION OUTSIDE FLAGGED AREAS IS PROHIBITED, AND ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES MUST BE REPAIRED.

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Plot Date: 2/5/2025 3:36 PM Cad User: Conan Witzel
Plot Style Table: ---- Plotter: None

Date	No	Revision	By
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	1		

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

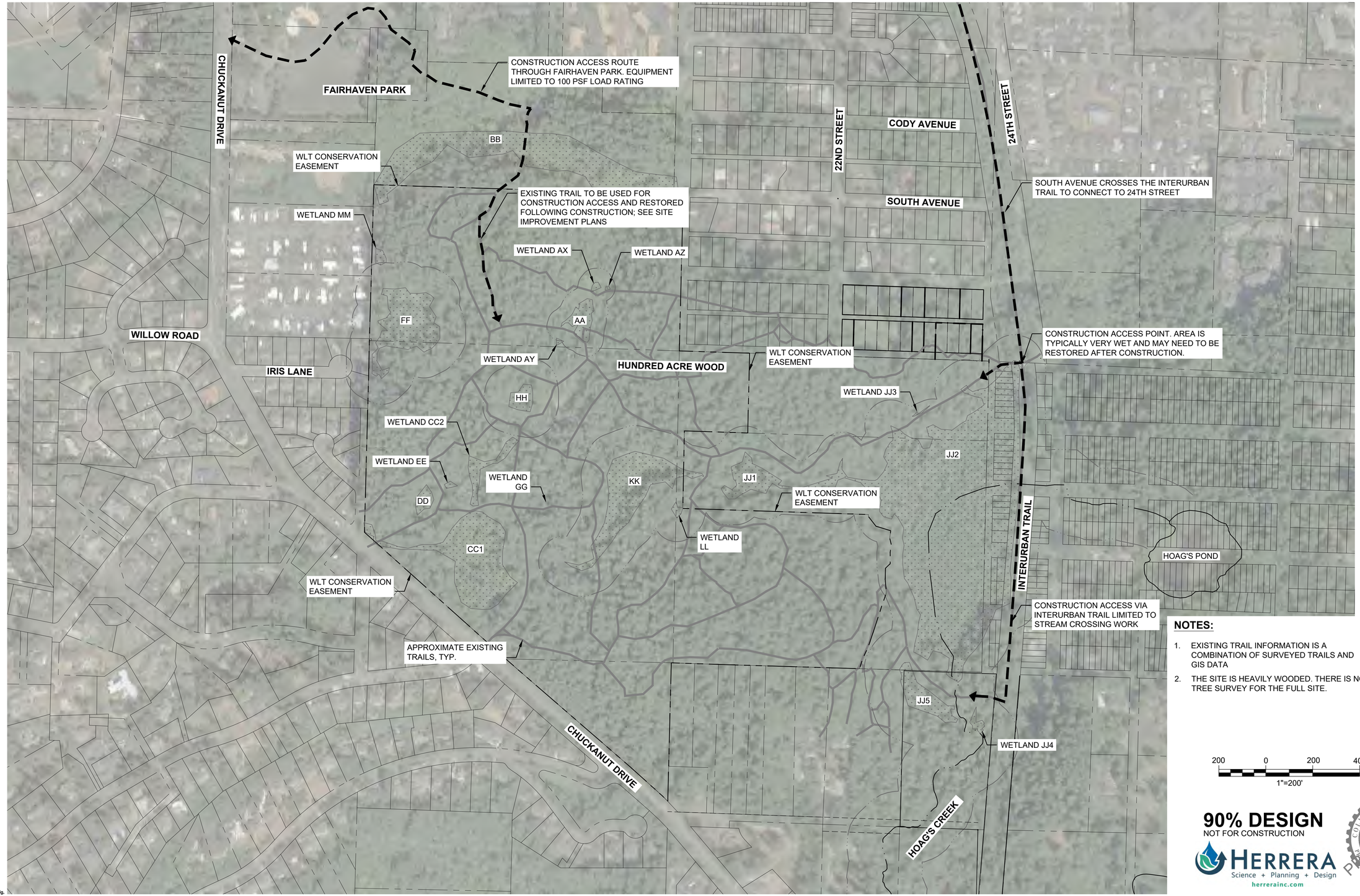
Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
LEGEND AND ABBREVIATIONS

PLAN REF. NO.

SHEET 2 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000



NOTES:

1. EXISTING TRAIL INFORMATION IS A COMBINATION OF SURVEYED TRAILS AND GIS DATA
2. THE SITE IS HEAVILY WOODED. THERE IS NO TREE SURVEY FOR THE FULL SITE.

200 0 200 400
1"=200'

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COLLEEN E. MITCHELL — STATE OF WASHINGTON — 46997 — REGISTERED PROFESSIONAL ENGINEER

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	4		
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	1		
Date	No	Revision	By

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
EXISTING CONDITIONS AND ACCESS

PLAN REF. NO.

SHEET 3 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DC\ACCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Existing Conditions.dwg
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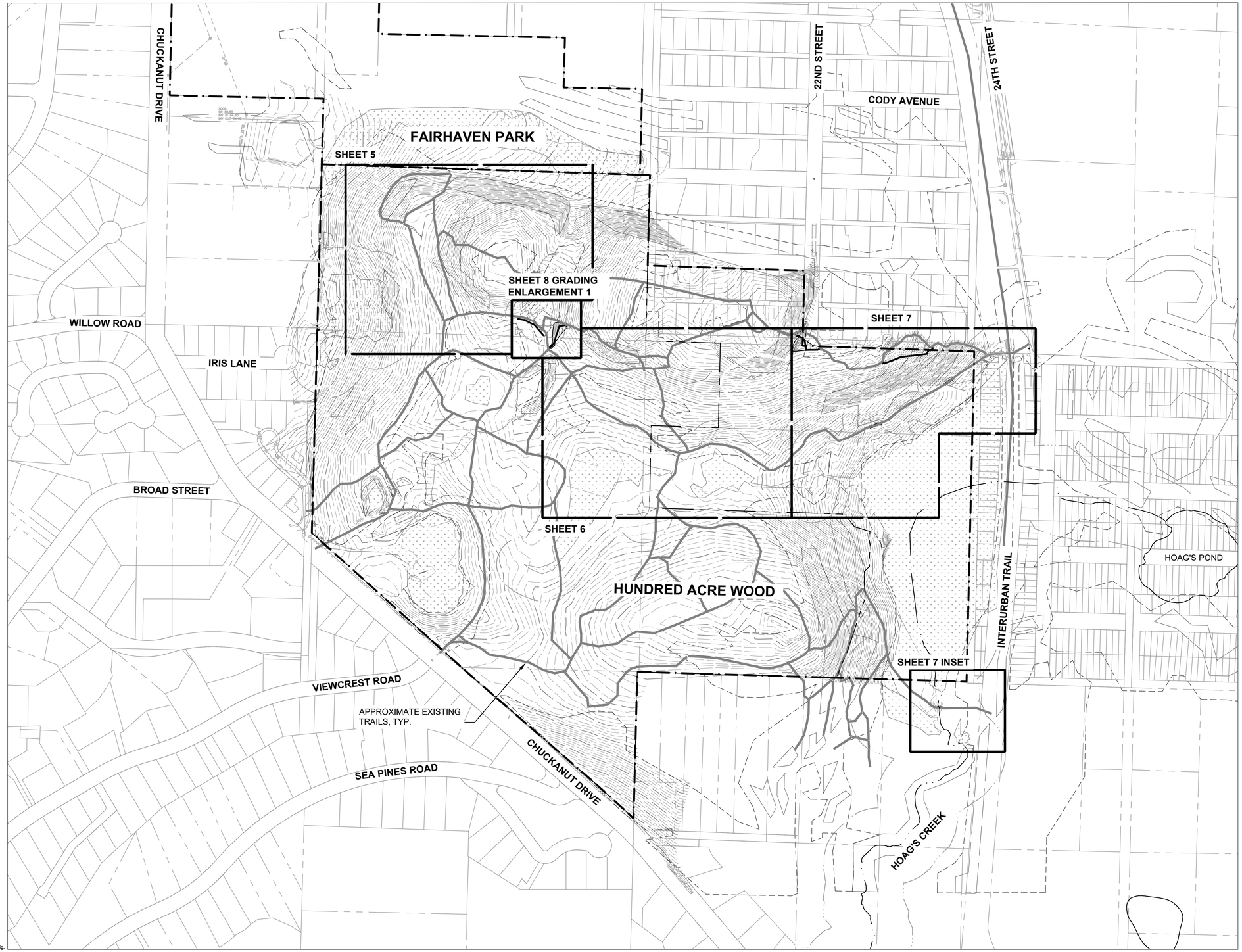

NOTES:

1. EXISTING TRAIL INFORMATION IS A COMBINATION OF SURVEYED TRAILS AND GIS DATA
2. CONTRACTOR TO FLAG ALL PROJECT WORK ELEMENTS FOR REVIEW BY THE PROJECT ENGINEER
3. BUFFER WIDTHS ARE NOT SHOWN FOR WETLANDS BB, MM, CC1, CC2, DD, EE, GG. FUTURE PHASES OF THE PROJECT MAY REQUIRE UPDATED DELINEATIONS, RATINGS, AND BUFFERS FOR THESE WETLANDS

200 0 200 400
1"=200'

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COLLEEN E. MITCHELL, STATE OF WASHINGTON, 46997, REGISTERED PROFESSIONAL ENGINEER

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	No	Revision	By
	4		
	3		
	2		
	1		
Date			

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS

KEY MAP

PLAN REF. NO.

SHEET 4 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

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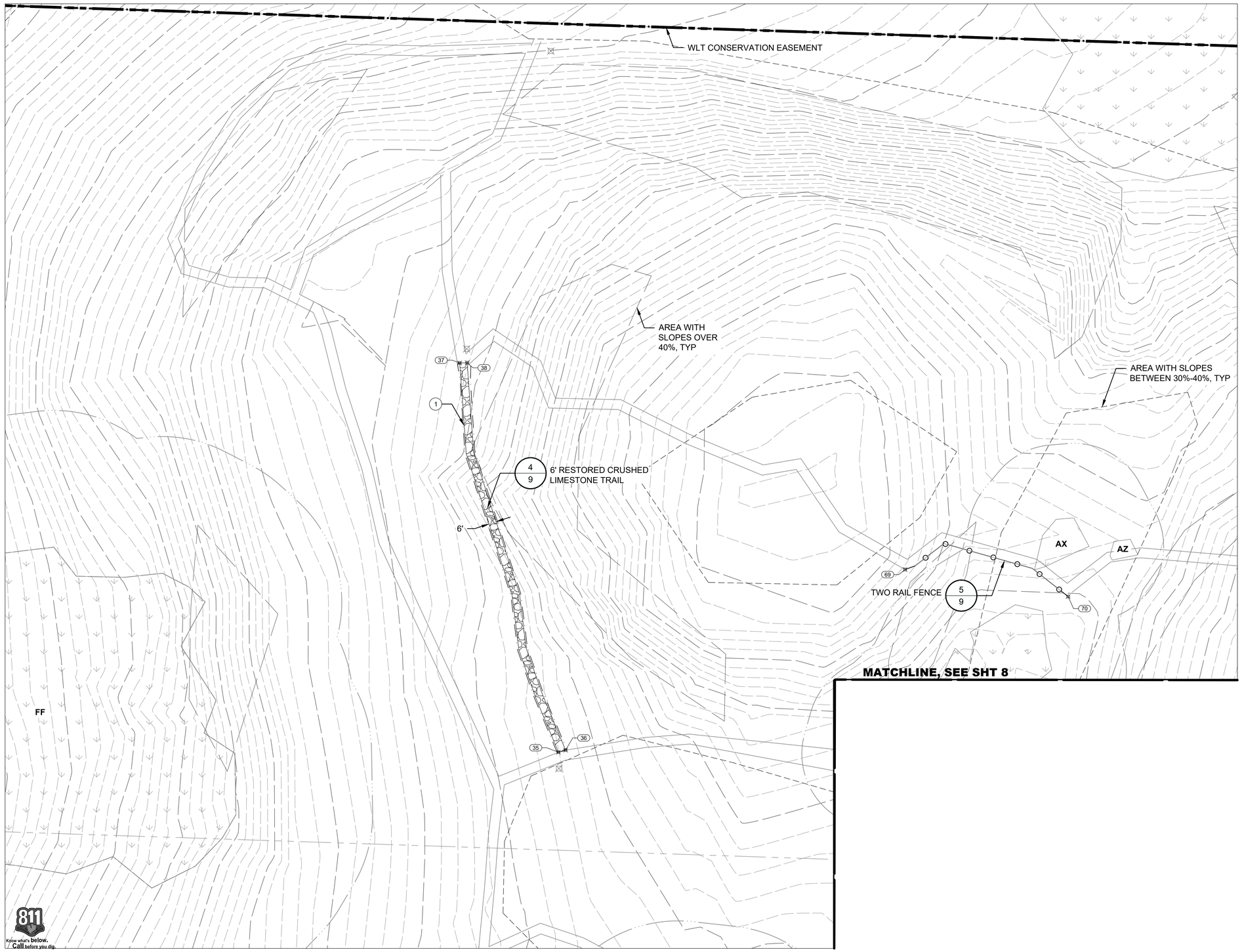

NOTES:

1. EXISTING TRAIL INFORMATION IS A COMBINATION OF SURVEYED TRAILS AND GIS DATA
2. CONTRACTOR TO FLAG ALL PROJECT WORK ELEMENTS FOR REVIEW BY THE PROJECT ENGINEER
3. SLOPE AREAS OF 30%-40% AND OVER 40% ARE APPROXIMATE AND BASED ON DATA PROVIDED BY THE CITY OF BELLINGHAM CITYIQ.

○ KEYNOTES

1. TRAIL TO BE USED FOR CONSTRUCTION ACCESS AND RESTORED WITH CRUSHED LIMESTONE FOLLOWING CONSTRUCTION.
2. PRESERVE AND PROTECT EXISTING CAREX OBNUPTA IN SOUTHEAST REGION OF WETLAND AA.

POINT TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
35	TRAIL	628284.29	1239265.14
36	TRAIL	628285.99	1239270.89
37	TRAIL	628597.48	1239185.69
38	TRAIL	628597.72	1239191.67
69	FENCE	628431.30	1239544.07
70	FENCE	628409.58	1239675.26

40 0 40 80
1"=40'

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COLLEEN E. MITCHELL
STATE OF WASHINGTON
46997
REGISTERED PROFESSIONAL ENGINEER
PRELIMINARY

Know what's below. Call before you dig.

Date	No	Revision	By
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PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
SITE IMPROVEMENTS PLAN 1

PLAN REF. NO.

SHEET 5 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

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Plot Date: 2/5/2025 3:37 PM Cad User: Conan Witzel
Plot Style Table: ---- Plotter: None

MATCHLINE, SEE SHT 8

1 & 2 / 9 BENCH WITH ARMS

AREA WITH SLOPES BETWEEN 30%-40%, TYP

AREA WITH SLOPES OVER 40%, TYP

WLT CONSERVATION EASEMENT

3 / 10 TRAIL NARROWING

AREA WITH SLOPES BETWEEN 30%-40%, TYP

TRAIL EDGE PLANTING SEE SHT 11 FOR SCHEDULE TYP

6'

1 / 10 6' TRAIL WITH RAILROAD BALLAST

4 / 10 RESTORED CRUSHED LIMESTONE TRAIL

3 / 10 TRAIL NARROWING

BENCH WITH ARMS 1 & 2 / 9

BUFFER/UPLAND PLANTING SEE SHT 11 FOR SCHEDULE TYP

1

8'

WETLAND PLANTING SEE SHT 11 FOR SCHEDULE TYP

KK

JJ1

1 / 10 TRAIL NARROWING

6' RESTORED CRUSHED LIMESTONE TRAIL 4 / 10

TRAIL NARROWING 3 / 10

JJ2

WLT CONSERVATION EASEMENT

LL

MATCHLINE, SEE SHT 7

NOTES:

1. EXISTING TRAIL INFORMATION IS A COMBINATION OF SURVEYED TRAILS AND GIS DATA
2. CONTRACTOR TO FLAG ALL PROJECT WORK ELEMENTS FOR REVIEW BY THE PROJECT ENGINEER
3. SLOPE AREAS OF 30%-40% AND OVER 40% ARE APPROXIMATE AND BASED ON DATA PROVIDED BY THE CITY OF BELLINGHAM CITYIQ
4. THE MAXIMUM PERMANENT BUFFER IMPACT IN WETLAND KK IS 54 SF.

○ KEYNOTES

1. WETLAND KK INCLUDES FAIRY SHRIMP HABITAT, LIMITED ENTRY IN THIS AREA FOR PLANTING ONLY.

POINT TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
41	TRAIL	627750.39	1240235.28
42	TRAIL	627744.78	1240237.37
43	TRAIL	627761.22	1240353.77
44	TRAIL	627755.37	1240352.22
45	TRAIL	627705.37	1240452.20
46	TRAIL	627710.38	1240455.49
47	TRAIL	627668.69	1240505.16
48	TRAIL	627675.33	1240506.20
49	TRAIL	627657.58	1240527.36
50	TRAIL	627663.39	1240528.72
65	FENCE	627719.26	1240152.94
66	FENCE	627728.01	1240163.27
67	FENCE	627595.04	1240089.75
68	FENCE	627542.92	1240083.33

40 0 40 80
1"=40'

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PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
SITE IMPROVEMENTS PLAN 2

PLAN REF. NO.

SHEET 6 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

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Plot Date: 2/5/2025 3:38 PM Cad User: Conan Witzel
Plot Style Table: ---- Plotter: None

MATCHLINE, SEE SHT 6

AREA WITH SLOPES BETWEEN 30%-40%, TYP

4' COMPACTED EARTH TRAIL (2/10)

4' COMPACTED EARTH TRAIL (2/10)

6' RESTORED CRUSHED LIMESTONE TRAIL (4/10)

AREA WITH SLOPES OVER 40%, TYP

APPX. 45 LF BOARDWALK, SEE STRUCTURAL SHEETS

8'

JJ3

AREA WITH SLOPES BETWEEN 30%-40%, TYP

JJ2

6' TRAIL WITH RAILROAD BALLAST (1/10)

TRAIL NARROWING (3/10)

6' TRAIL WITH RAILROAD BALLAST (1/10)

APPX. 50 LF BOARDWALK, SEE STRUCTURAL SHEETS

8'

6'

6' TRAIL NARROWING (3/10)

JJ2

WLT CONSERVATION EASEMENT

811 Know what's below. Call before you dig.

AREA WITH SLOPES BETWEEN 30%-40%, TYP

HOAG'S CREEK

CONSTRUCTION ACCESS VIA INTERURBAN TRAIL, LIMITED TO STREAM CROSSING WORK

PEDESTRIAN BRIDGE, SEE STRUCTURAL SHEETS AND NOTE 3

8'

3 / S1

150-FT STREAM BUFFER

JJ5

JJ4

AREA WITH SLOPES OVER 40%, TYP

40 0 40 80
1"=40'

40 0 40 80
1"=40'

NOTES:

1. EXISTING TRAIL INFORMATION IS A COMBINATION OF SURVEYED TRAILS AND GIS DATA
2. CONTRACTOR TO FLAG ALL PROJECT WORK ELEMENTS FOR REVIEW BY THE PROJECT ENGINEER
3. ALL PIN PILES FOR BRIDGE TO BE INSTALLED WITHIN FOOTPRINT OF EXISTING TRAIL
4. SLOPE AREAS OF 30%-40% AND OVER 40% ARE APPROXIMATE AND BASED ON DATA PROVIDED BY THE CITY OF BELLINGHAM CITYIQ

○ KEYNOTES

1. EXISTING CAREX OBNUPTA, PRESERVE AND PROTECT.
2. EXISTING RUBUS SPECTABILIS, PRESERVE AND PROTECT.
3. NEW 24" X 36" "YOU ARE HERE" SIGN

POINT TABLE

POINT #	DESCRIPTION	NORTHING	EASTING
3	TRAIL	628207.68	1240621.65
4	TRAIL	628209.04	1240625.49
5	TRAIL	628149.76	1240723.73
6	TRAIL	628145.75	1240728.06
7	TRAIL	628092.63	1240971.58
8	TRAIL	628095.17	1240974.97
9	TRAIL	628154.26	1241174.40
10	TRAIL	628157.40	1241177.94
11	TRAIL	628113.24	1241377.45
12	TRAIL	628107.98	1241380.39
13	TRAIL	628129.41	1241427.87
14	TRAIL	628123.42	1241428.03
15	TRAIL	627837.33	1240923.23
16	TRAIL	627831.27	1240925.29
17	TRAIL	627804.42	1240873.52
18	TRAIL	627809.57	1240870.45
19	TRAIL	627779.90	1240800.88
20	TRAIL	627772.86	1240799.91
21	TRAIL	627818.72	1240746.59
22	TRAIL	627824.87	1240748.21
55	TRAIL	627852.78	1240970.32
56	TRAIL	627845.20	1240972.89
57	TRAIL	628006.66	1241222.05
58	TRAIL	628000.23	1241226.81
59	TRAIL	628033.03	1241257.64
60	TRAIL	628026.60	1241262.40
61	TRAIL	626704.97	1241211.63
62	TRAIL	626712.94	1241210.96
63	TRAIL	626711.42	1241193.03
64	TRAIL	626703.45	1241193.70

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4		
3		
2		
1		
Date	No	Revision By

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

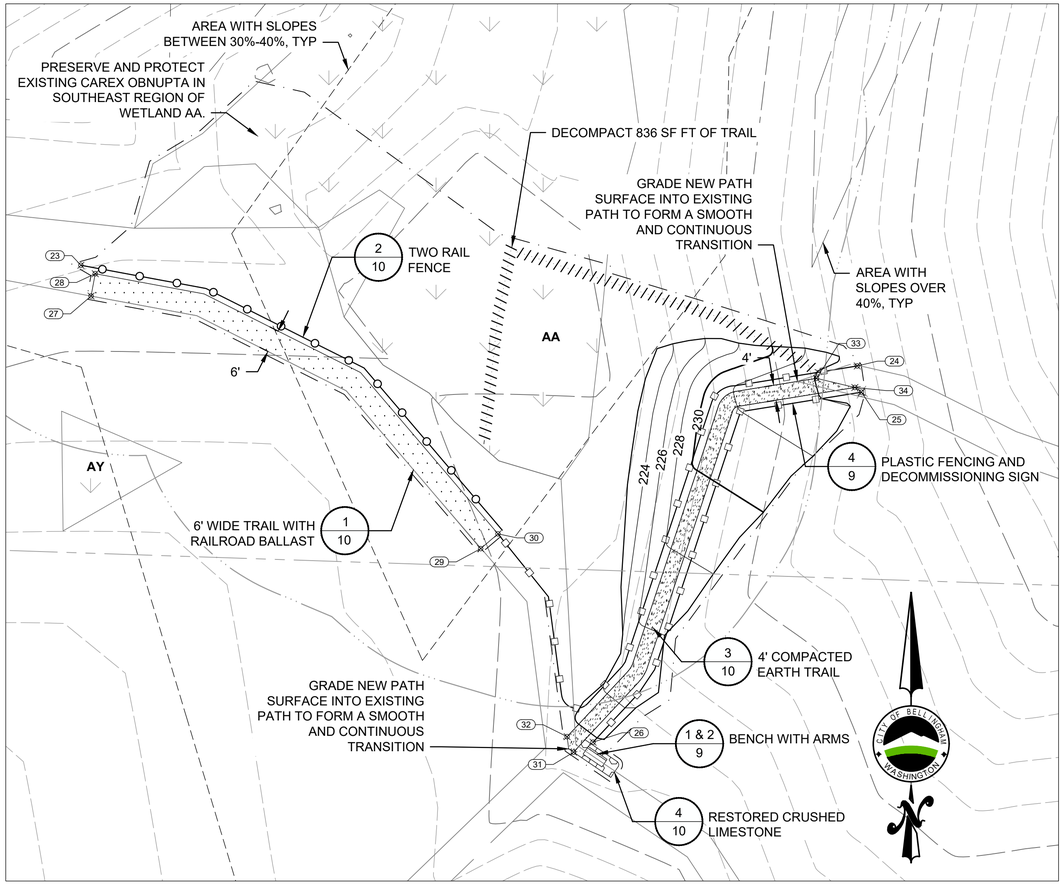
HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
SITE IMPROVEMENTS PLAN 3

PLAN REF. NO.

SHEET 7 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DCA\CCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Overall Site Plan.dwg
Plot Date: 2/5/2025 3:38 PM Cad User: Conan Witzel
Plot Style Table: ---- Plotter: None

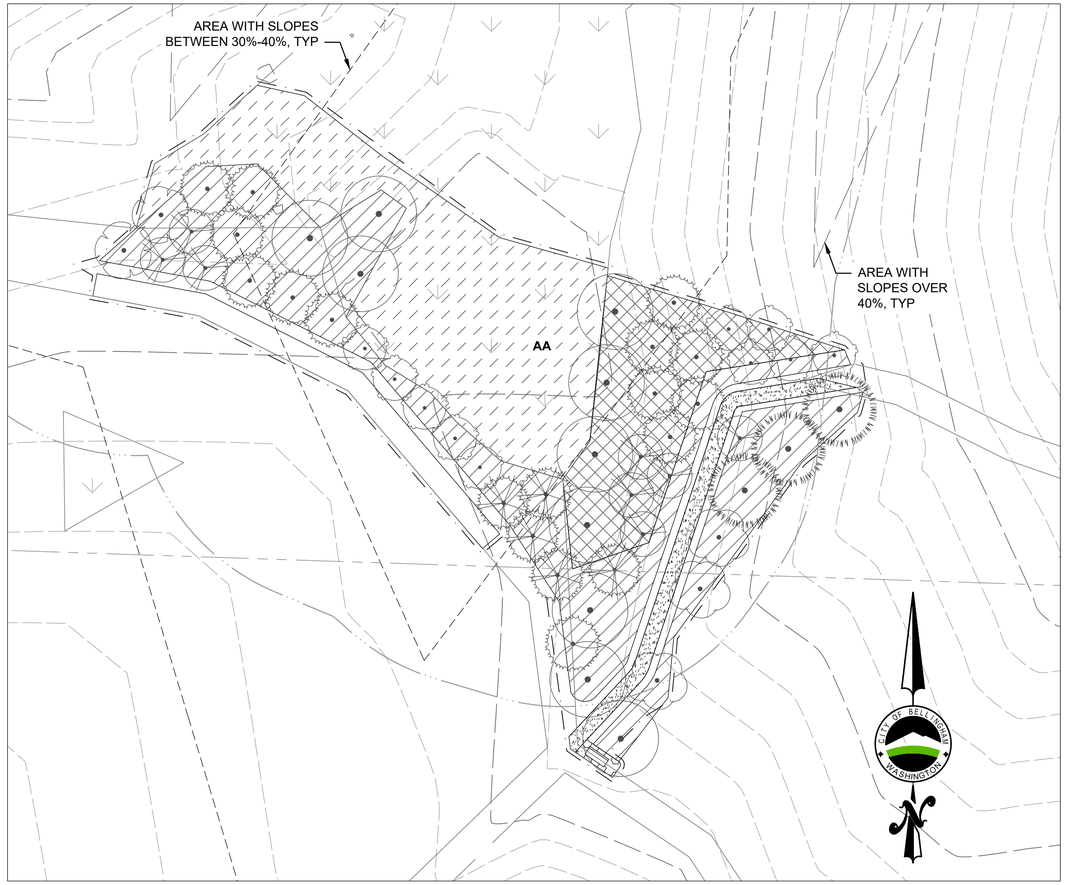


GRADING ENLARGEMENT

SCALE: 1" = 20'

1/4

POINT TABLE			
POINT #	DESCRIPTION	NORTHING	EASTING
23	FENCE	628273.33	1239506.87
24	FENCE	628246.75	1239711.78
25	FENCE	628239.84	1239712.90
26	FENCE	628147.46	1239642.06
27	TRAIL	628265.20	1239509.55
28	TRAIL	628271.10	1239510.65
29	TRAIL	628198.55	1239612.39
30	TRAIL	628202.44	1239616.96
31	TRAIL	628144.81	1239636.92
32	TRAIL	628148.91	1239635.21
33	TRAIL	628243.49	1239701.04
34	TRAIL	628241.08	1239711.16



PLANTING ENLARGEMENT

SCALE: 1" = 20'

2/4

PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME
TREES		
	ACER CIRCINATUM	VINE MAPLE
	ACER MACROPHYLLUM	BIG LEAF MAPLE
	CORNUS NUTTALLII	PACIFIC DOGWOOD
	POPULUS BALSAMIFERA	BALSAM POPLAR
	PSEUDOTSUGA MENZIESII	DOUGLAS FIR
	RHAMNUS PURSHIANA	CASCARA

SYMBOL	BOTANICAL NAME	COMMON NAME
TREES		
	THUJA PLICATA	WESTERN RED CEDAR
	TSUGA HETEROPHYLLA	WESTERN HEMLOCK

- WETLAND PLANTING, SEE SHEET 11 FOR SCHEDULE
- BUFFER/UPLAND PLANTING, SEE SHEET 11 FOR SCHEDULE
- TRAIL EDGE PLANTING, SEE SHEET 11 FOR SCHEDULE

NOTES:

1. EXISTING TRAIL INFORMATION IS A COMBINATION OF SURVEYED TRAILS AND GIS DATA
2. CONTRACTOR TO FLAG ALL PROJECT WORK ELEMENTS FOR REVIEW BY THE PROJECT ENGINEER
3. THE MAXIMUM PERMANENT BUFFER IMPACT IN THE WETLAND AA BUFFER IS 408 SF AND THE MAXIMUM TEMPORARY BUFFER IMPACT IS 2,661 SF.
4. SEE SHEET 2 FOR TRAIL CONSTRUCTION NOTES.
5. SLOPE AREAS OF 30%-40% AND OVER 40% ARE APPROXIMATE AND BASED ON DATA PROVIDED BY THE CITY OF BELLINGHAM CITYIQ

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COLLEEN E. MITCHELL, STATE OF WASHINGTON, 46997, REGISTERED PROFESSIONAL ENGINEER

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No	Date	Revision	By
4			
3			
2			
1			

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
GRADING ENLARGEMENTS

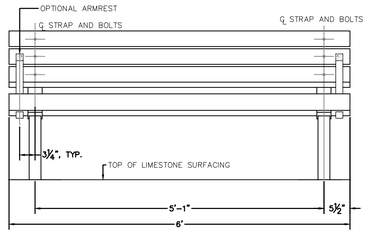
PLAN REF. NO.

SHEET 8 OF 19

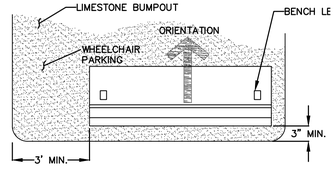
CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DC\ACCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Overall Site Plan.dwg
Plot Date: 2/5/2025 3:39 PM
Plot Style Table: ----
Cad User: Conan Witzel
Plotter: None

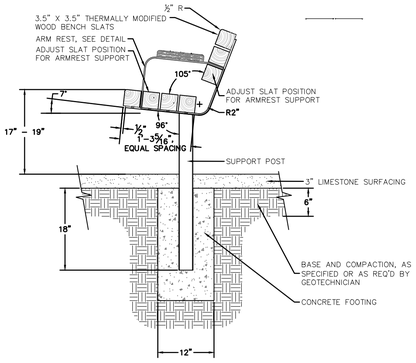
NOTES:
A. ALL STEEL SHALL BE A36 STRUCTURAL UNLESS NOTED OTHERWISE.
B. ALL STEEL SHALL BE SAND-BLASTED CLEAN, AND PRE-WASHED WITH AN IRON PHOSPHATE POWDER WASH, DRIED, PRIMED WITH ZINC PRIMER, AND POWDER COATED BLACK BAKED AT 400 DEGREES FOR NO LESS THAN 45 MINUTES, UNLESS NOTED OTHERWISE NOTED.
C. ALL FASTENERS SHALL BE GALVANIZED.
D. MOUNT ONLY ON CONCRETE FOOTING.
E. STEEL ELEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE.
F. SEE DETAIL 2 FOR OPTIONAL ARMREST.



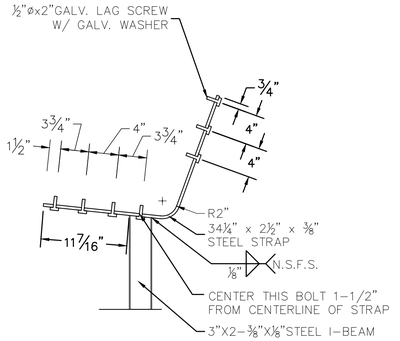
ELEVATION



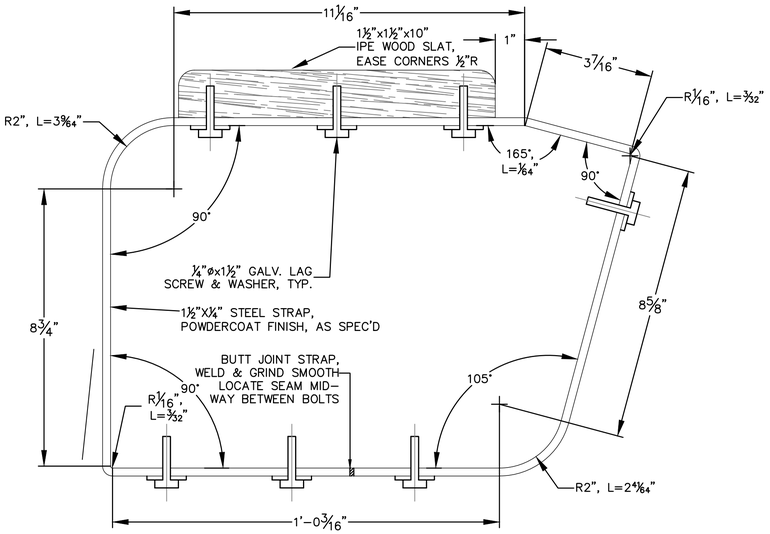
BENCH W/ LIMESTONE PAD



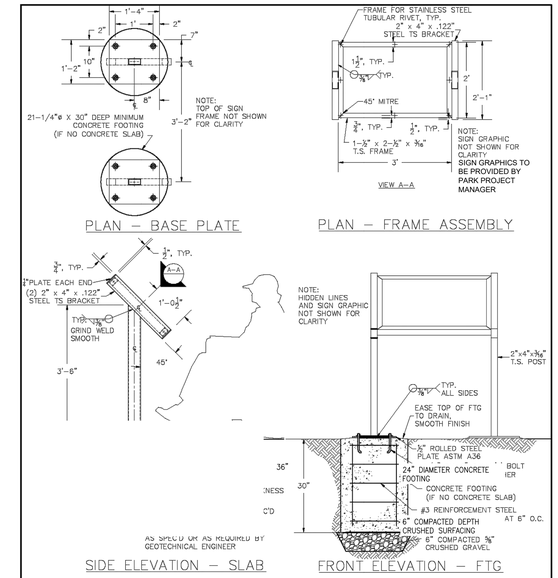
SIDE SECTION



ELEVATION—STEEL



DETAIL—OPTIONAL ARMREST



NOTES:
A. PROVIDE CUSTOM FABRICATED SIGN FRAME SHOWN OR PROVIDE PREFABRICATED "LOW PROFILE" SIGN AS MANUFACTURED BY PANNIER 1-800-544-8428, OR EQUIVALENT. PROVIDE SHOP DRAWINGS FOR FABRICATED SIGN FOR PREAPPROVAL.
B. IF CUSTOM FABRICATED, ALL STEEL SHALL BE A36 STRUCTURE UNLESS NOTED OTHERWISE.
C. IF CUSTOM FABRICATED, ALL STEEL SHALL BE SAND-BLASTED CLEAN, AND PRE-WASHED WITH AN IRON PHOSPHATE POWDERWASH, DRIED, PRIMED WITH ZINC PRIMER, AND POWDER COATED BLACK AND BAKED AT 400 DEGREES FOR NO LESS THAN 45 MINUTES, UNLESS NOTED OTHERWISE.
D. ALL FASTENERS SHALL BE GALVANIZED.
E. MOUNT ONLY ON CONCRETE SLAB OR FOOTING.
F. IF CUSTOM FABRICATED, ALL STEEL ELEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AISC CODE OF STANDARD PRACTICE.
G. ALUMINUM SIGN BLANK & APPLIED VINYL GRAPHICS PROVIDED BY OWNER, ATTACH SIGN TO FRAME WITH STAINLESS STEEL ⅛" ø RIVETS.

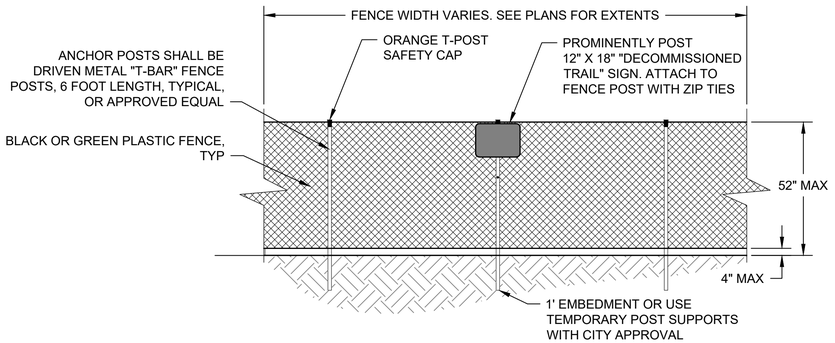
PRAB APPROVAL 01/13/2010

PARKS AND RECREATION DESIGN AND DEVELOPMENT February 19, 2010	CITY OF BELLINGHAM TRAILHEAD/INTERPRETIVE SIGN Scale: 1/2" = 1'-0"	DRAWING 10430.06

BENCH ON CRUSHED LIMESTONE PAD 1
SCALE: NTS

OPTIONAL ARMREST FOR BENCH 2
SCALE: NTS

24" x 36" "YOU ARE HERE" SIGN 3
SCALE: NTS



NOTES:

1. FENCE MATERIAL SHALL BE BLACK OR GREEN POLYETHYLENE AND SUPPORTED BY T-BAR METAL FENCE POSTS SPACED A MAXIMUM OF 8 FEET APART.
2. FINAL LOCATIONS OF FENCE TO BE VERIFIED IN THE FIELD
3. SEE PLANS FOR LOCATIONS OF DECOMMISSIONED TRAIL SIGNS.
4. LEAVE 16" MINIMUM GAPS BETWEEN FENCE POSTS AND TREES TO AVOID ANIMAL ENTRAPMENT

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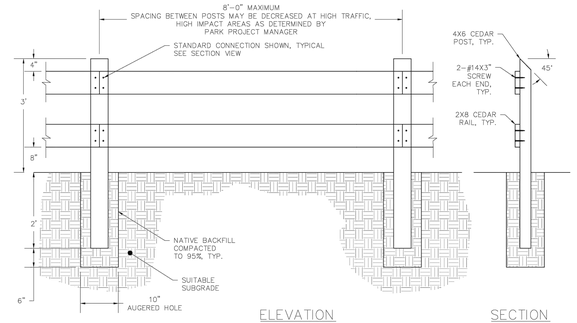
PLASTIC FENCING AND TRAIL DECOMMISSIONING SIGN 4
SCALE: NTS

PARKS AND RECREATION DESIGN AND DEVELOPMENT OCTOBER 25, 2022

CITY OF BELLINGHAM TWO RAIL FENCE SCALE: NTS

DRAWING 2840.06



NOTES:
A. TWO RAIL FENCE SHALL BE INSTALLED AS DIRECTED BY PARK PROJECT MANAGER TO DELINEATE BOUNDARIES WHERE NEEDED AND SHALL NOT BE USED AS A GUARDRAIL OR FOR FALL PROTECTION. BOUNDARIES INCLUDE PROPERTY, WETLANDS AND OTHER GENERAL AREAS WHERE A VISUAL BARRIER IS NEEDED.
B. TWO RAIL FENCE SHALL BE USED ADJACENT TO FLAT TERRAIN (3:1 SLOPES OR FLATTER) OR IN LOCATIONS WHERE FALL PROTECTION IS NOT NEEDED.
C. LUMBER GRADE SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS.
D. ALL FASTENERS AND HARDWARE SHALL BE SUITABLE FOR WOOD TYPE, GRADING, AND OUTDOOR APPLICATIONS.
E. REFERENCE PARK STANDARD FOR WOOD PEDESTRIAN GUARDRAILS WHERE FALL PROTECTION IS NEEDED.

TWO RAIL FENCE 5
SCALE: NTS

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	No	Revision	By	Date
	4			
	3			
	2			
	1			

PROJECT ENGINEER	C. MITCHELL
DESIGNED/DRAWN	D. ANSLOW
INSPECTOR	
PARKS DIRECTOR	N. OLIVER
PARKS ENGINEER	G.AUSTIN
PARKS PLANNER	P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

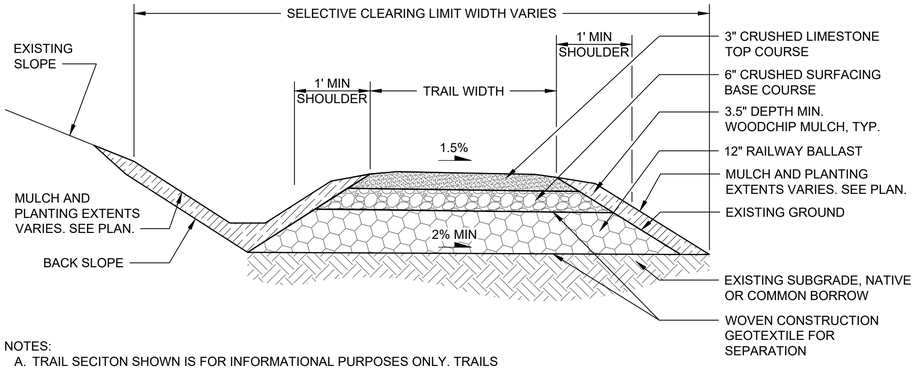
SCALE: Horiz. AS SHOWN; Vert. AS SHOWN
DATUM: NAD 83/98 NAVD 88
Job. No. ____ Date 02/07/2025 Field Bk. ____

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
SITE DETAILS 1

PLAN REF. NO. ____
SHEET 9 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DCACCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Trail Details.dwg
Plot Date: 2/5/2025 3:39 PM Cad User: Conan Witzel
Plot Style Table: (HEC-23).ctb Plotter: _AutoCAD PDF (General Documentation).pc3



NOTES:

A. TRAIL SECITON SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. TRAILS THOURGH WETLANDS REQUIRE SITE SPECIFIC DESIGN AND PERMIT APPROVALS.
B. WHERE TRAIL IS LOCATED OVER BURIED UTILITIES, THE ENTIRE TRENCH SHALL BE BACKFILLED WITH IMPORTED GRAVEL AND COMPACTED TO 95% MAXIMUM DENSITY.
C. SECTION SHOWN IS FOR TYPICAL CONDITIONS. TRAILS MAY BE ODIFIED TO ACCOMMODATE SITE SPECIFIC REQUIREMENTS.
D. DRAINAGE DITCH PARALLEL TO TRAIL MAY BE REQUIRED FOR STORMWATER DESIGN. MINIMUM WIDTH OF DITCH IS 13 FT OR AS APPROVED BY PARKS AND RECREATION. BANK SLOPE EACH SIDE OF CENTERLINE OF DITCH WITH MAX SIDE SLOPES OF 4H:1V
E. CRUSHED SURFACING BASE COURSE DEPTH AND SIZE OF AGGREGATE SHOWN IS MINIMUM REQUIREMENT. ACTUAL SIZE AGGREGATE MAY VARY PER SITE SPECIFIC CONDITIONS.
F. STAKE ALIGNMENT AND CLEARING LIMITS IN THE FIELD PRIOR TO CLEARING. VIOLATORS WILL BE FINED.
G. SUBGRADE COMPACTION MUST BE CERTIFIED BY A GEOTECHNICAL ENGINEER.

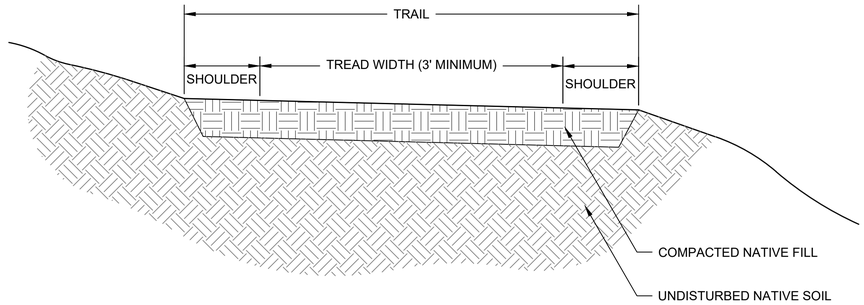
TRAIL WITH RAILROAD BALLAST

SCALE: NTS

1

TRAIL NOTES:

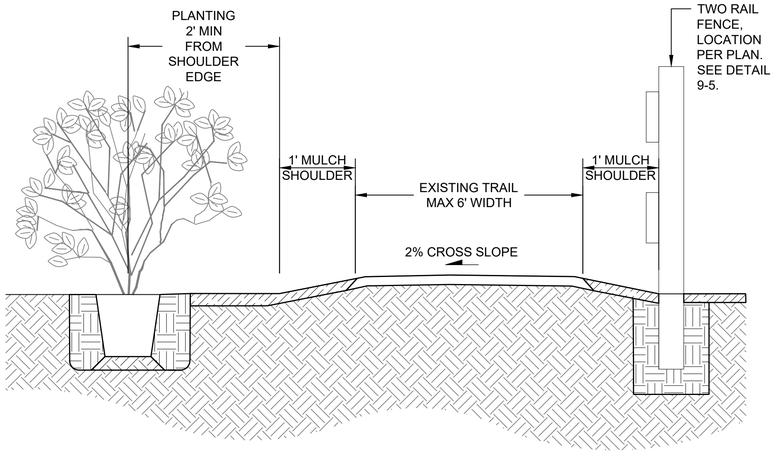
1. THE TRAIL IS COMPOSED OF THE TREAD (WALKING SURFACE) AND SHOULDERS.
2. COMPACT TREAD TO 95% DENSITY.
3. THE PREFERRED RUNNING SLOPE OF THE TRAIL IS 2-12%. THE MAXIMUM RUNNING SLOPE OF THE TRAIL IS 20%.
4. PREFERRED CROSS SLOPE TREAD IS 2%, MAXIMUM CROSS SLOPE TREAD IS 5%.
5. THE TREAD SHALL BE 3-4 FEET WIDE. SHOULDERS SHALL BE 1-2 FEET WIDE. MAXIMUM TRAIL WIDTH SHALL BE 6 FEET.
6. FIELD FIT TRAIL TO FOLLOW EXISTING TRAIL ALIGNMENT. MINIMIZE IMPACTS TO EXISTING TREES AND THEIR CRITICAL ROOT ZONES (CRZ), AND PROTECT EXISTING NATIVE VEGETATION TO THE MAXIMUM EXTENT FEASIBLE.
7. NO GRADING OR OTHER IMPACTS SHALL OCCUR IN WETLANDS.
8. FLAG ALL PROPOSED TRAIL ALIGNMENTS (MAXIMUM EXTENTS OF TRAILS AND SHOULDERS) FOR REVIEW AND ACCEPTANCE BY PROJECT ENGINEER PRIOR TO PROCEEDING WITH TRAIL CONSTRUCTION.
9. NATIVE SOILS ON SITE ARE COHESIVE AND MOISTURE SENSITIVE. COMPACTING THIS MATERIAL AND MAINTENANCE OF THIS MATERIAL WILL REQUIRE SPECIAL ATTENTION.



COMPACTED EARTH TRAIL

SCALE: NTS

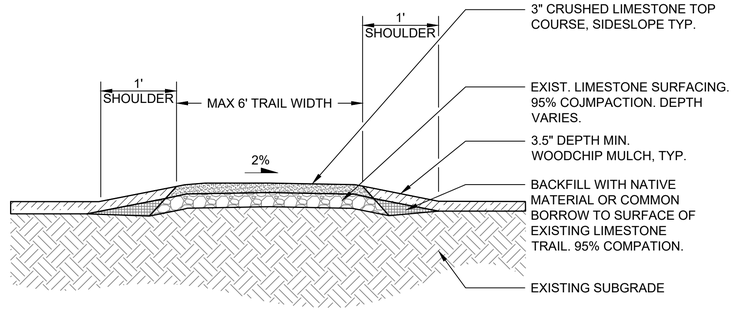
2



TRAIL NARROWING

SCALE: NTS

3



NOTES:

TO PREPARE EXISTING TRAIL SURFACE FOR LIMESTONE TOPPING MATERIAL, REMOVE ALL DEBRIS, LOOSE MATERIAL, VEGETATION, AND ORGANIC MATTER FROM THE EXISTING TRAIL SURFACE TO ENSURE A CLEAN WORKING AREA. FILL ANY RUTS OR ERODED AREAS WITH MATCHING LIMESTONE MATERIAL TO CREATE LEVEL BASE. COMPACT REPAIRS TO MATCH THE SURROUNDING SURFACE. SCARIFY THE TOP 1-2 INCHES OF THE EXISTING LIMESTONE SURFACE.

RESTORED CRUSHED LIMESTONE TRAIL

SCALE: NTS

4

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COLLEEN E. MITCHELL — STATE OF WASHINGTON — 46997 — REGISTERED PROFESSIONAL ENGINEER

	No	Revision	By
	4		
	3		
	2		
	1		
Date			

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS

SITE DETAILS 2

PLAN REF. NO.

SHEET 10 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DC\ACCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Trail Details.dwg
Plot Date: 2/5/2025 3:39 PM Cad User: Conan Witzel
Plot Style Table: (HEC-23).ctb Plotter: _AutoCAD PDF (General Documentation).pc3

PLANT SCHEDULE HUNDRED ACRE WOODS

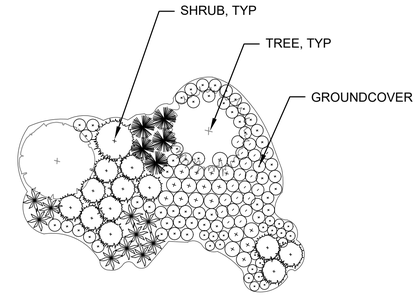
SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	WIS	
TREES							
	ACE CIR	8	ACER CIRCINATUM	VINE MAPLE	5 GAL.	FAC	
	ACE MAC	10	ACER MACROPHYLLUM	BIG LEAF MAPLE	5 GAL.	FACU	
	COR NUT	3	CORNUS NUTTALLII	PACIFIC DOGWOOD	5 GAL.	FACU	
	POP POP	10	POPULUS BALSAMIFERA	BALSAM POPLAR	5 GAL.		
	PSE DOU	5	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	6` HT.	FACU	
	RHA PER	2	RHAMNUS PURSHIANA	CASCARA	5 GAL.	FAC	
	THU PLI	13	THUJA PLICATA	WESTERN RED CEDAR	6` HT.	FAC	
	TSU HET	3	TSUGA HETEROPHYLLA	WESTERN HEMLOCK	6` HT.	FACU	

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	WIS	SPACING
SHRUB AREAS							
		4,794 SF	WETLAND PLANTING ASSUMING SELECTIVE CLEARING AND REPLANTING OF 10% OF TOTAL AREA.				
	ATH FIL	4	ATHYRIUM FILIX-FEMINA	COMMON LADY FERN	1 GAL.	FAC	0.7% @ 36" o.c.
	CAR DEW	5	CAREX DEWEYANA	DEWEY'S SEDGE	1 GAL.	FAC	1% @ 36" o.c.
	CAR OBN	5	CAREX OBNUPTA	SLOUGH SEDGE	10" PLUG	OBL	1% @ 36" o.c.
	DES CES	5	DESCHAMPSIA CESPITOSA	TUFTED HAIR GRASS	10" PLUG		1% @ 36" o.c.
	DRY FOR	2	DRYOPTERIS FORMOSANA	FORMOSA WOOD FERN	1 GAL.	FACW	0.3% @ 36" o.c.
	HYD TEN	3	HYDROPHYLLUM TENUIPES	PACIFIC WATERLEAF	1 GAL.	FAC	0.3% @ 24" o.c.
	MAI DIL	3	MAIANTHEMUM DILATATUM	FALSE LILY-OF-THE-VALLEY	1 GAL.	FAC	0.3% @ 24" o.c.
	OEN SAR	3	OENANTHE SARMENTOSA	WATER PARSLEY	1 GAL.	OBL	0.3% @ 24" o.c.
	PHY CAP	1	PHYSOCARPUS CAPITATUS	PACIFIC NINEBARK	2 GAL.	FACW	0.8% @ 72" o.c.
	ROS NUT	2	ROSA NUTKANA	NOOTKA ROSE	1 GAL.	FAC	0.7% @ 48" o.c.
	ROS PIS	2	ROSA PISOCARPA	CLUSTERED WILD ROSE	1 GAL.	FAC	0.7% @ 48" o.c.
	RUB SPE	1	RUBUS SPECTABILIS	SALMONBERRY	2 GAL.	FAC	0.8% @ 72" o.c.
	SAL LUC	1	SALIX LUCIDA	PACIFIC WILLOW	1 GAL.	FACW	0.5% @ 60" o.c.
	SAS SIT	1	SALIX SITCHENSIS	SITKA WILLOW	1 GAL.	FACW	0.5% @ 60" o.c.
	SCI MIC	3	SCIRPUS MICROCARPUS	SMALL-FRUITED BULRUSH	10" PLUG	OBL	0.6% @ 36" o.c.
	TOL MEN	6	TOLMIEA MENZIESII	PIGGY-BACK PLANT	1 GAL.	FAC	0.5% @ 24" o.c.
		23,005 SF	TRAIL EDGE PLANTING ASSUMING SELECTIVE CLEARING AND REPLANTING OF 50% OF TOTAL AREA.				
	ATH FIL	211	ATHYRIUM FILIX-FEMINA	COMMON LADY FERN	1 GAL.	FAC	8% @ 36" o.c.
	GAU SHA	211	GAULTHERIA SHALLON	SALAL	1 GAL.	FACU	8% @ 36" o.c.
	MAH NER	265	MAHONIA NERVOSA	OREGON GRAPE	1 GAL.	FACU	10% @ 36" o.c.
	POL MUN	265	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GAL.	FACU	10% @ 36" o.c.
	ROS PIS	74	ROSA PISOCARPA	CLUSTERED WILD ROSE	1 GAL.	FAC	5% @ 48" o.c.
	RUB THI	26	RUBUS PARVIFLORUS	THIMBLEBERRY	2 GAL.	FACU	4% @ 72" o.c.
	VAC OVA	74	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	2 GAL.	FACU	5% @ 48" o.c.
		8,056 SF	UPLAND/BUFFER PLANTLIST ASSUMING SELECTIVE CLEARING AND REPLANTING OF 20% OF TOTAL AREA.				
	ATH FIL	5	ATHYRIUM FILIX-FEMINA	COMMON LADY FERN	1 GAL.	FAC	0.6% @ 36" o.c.
	BLE SPI	12	BLECHNUM SPICANT	DEER FERN	1 GAL.	FAC	0.6% @ 24" o.c.
	COR STO	3	CORNUS STOLONIFERA	RED TWIG DOGWOOD	1 GAL.	FAC	1.2% @ 60" o.c.
	COR WES	2	CORYLUS CORNUTA	WESTERN HAZELNUT	1 GAL.		0.8% @ 72" o.c.
	DIC WES	11	DICENTRA FORMOSA	WESTERN BLEEDING-HEART	1 GAL.	FACU	0.5% @ 24" o.c.
	GAU SHA	12	GAULTHERIA SHALLON	SALAL	1 GAL.	FACU	1.2% @ 36" o.c.
	HOL DIS	1	HOLODISCUS DISCOLOR	OCEANSPRAY	2 GAL.	FACU	0.7% @ 72" o.c.
	MAH AQ2	4	MAHONIA AQUIFOLIUM	OREGON GRAPE	1 GAL.	FACU	0.5% @ 36" o.c.
	MAH NER	10	MAHONIA NERVOSA	OREGON GRAPE	1 GAL.	FACU	1% @ 36" o.c.
	OEM CER	3	OEMLERIA CERASIFORMIS	OSOBERRY	2 GAL.	FACU	1.5% @ 72" o.c.
	POL MUN	13	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	1 GAL.	FACU	1.4% @ 36" o.c.
	RIB SAN	3	RIBES SANGUINEUM	RED FLOWERING CURRANT	2 GAL.	FACU	1.2% @ 72" o.c.
	ROS NUT	3	ROSA NUTKANA	NOOTKA ROSE	1 GAL.	FAC	0.6% @ 48" o.c.
	ROS PIS	3	ROSA PISOCARPA	CLUSTERED WILD ROSE	1 GAL.	FAC	0.6% @ 48" o.c.
	RUB THI	3	RUBUS PARVIFLORUS	THIMBLEBERRY	2 GAL.	FACU	1% @ 72" o.c.
	RUB SPE	3	RUBUS SPECTABILIS	SALMONBERRY	2 GAL.	FAC	1.2% @ 72" o.c.
	SAM RED	3	SAMBUCUS RACEMOSA	RED ELDERBERRY	2 GAL.	FACU	1% @ 72" o.c.
	SPI DOU	2	SPIRAEA DOUGLASII	WESTERN SPIREA	2 GAL.	FACW	0.8% @ 72" o.c.
	SYM ALB	3	SYMPHORICARPOS ALBUS	COMMON WHITE SNOWBERRY	1 GAL.	FACU	0.8% @ 48" o.c.
	TEL GRA	16	TELLIMA GRANDIFLORA	FRINGECUP	1 GAL.	FACU	0.8% @ 24" o.c.
	VAC OVA	11	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	2 GAL.	FACU	2% @ 48" o.c.

811 Know what's below. Call before you dig.

PLANTING NOTES:

1. WETLAND BOUNDARIES NEAR TRAILS AND PLANTING AREAS SHALL BE FLAGGED IN FIELD AND APPROVED BY BIOLOGIST PRIOR TO PLANTING.
2. BORDERS OF PLANTING AREAS SHALL BE FLAGGED IN FIELD AND APPROVED BY LANDSCAPE ARCHITECT ONSITE PRIOR TO PLANTING.
3. WEED CONTROL SHALL OCCUR PRIOR TO PLANT INSTALLATION.
4. BIOLOGIST OR LANDSCAPE ARCHITECT SHALL INSPECT SOIL PREPARATION PRIOR TO PLANT INSTALLATION.
5. CONTAINER AND PLUG PLANTING SHALL TAKE PLACE BETWEEN OCTOBER 1 AND MARCH 1.
4. NO PLANTING SHALL OCCUR IN SNOW OR ICE OR WHEN THE GROUND IS FROZEN.
5. PLANT SUBSTITUTIONS ARE SUBJECT TO APPROVAL BY BIOLOGIST, LANDSCAPE ARCHITECT, OR PROJECT REPRESENTATIVE FAMILIAR WITH SPECIFIED PLANT MATERIAL AND EXPERIENCE ON SIMILAR PROJECTS.
6. ONLY PLANTS FROM THE WETLAND PLANTING LIST SHALL BE PLANTED IN THE WETLANDS.
7. PLANTS SHALL NOT BE PLANTED BELOW THE ORDINARY HIGH WATER ELEVATION.
8. PLANTS SHALL BE TAGGED OR MARKED FOR IDENTIFICATION WHEN DELIVERED.
9. BIOLOGIST OR LANDSCAPE ARCHITECT SHALL INSPECT ALL PLANT MATERIAL UPON EACH DAY OF DELIVERY.
10. PROVIDE HEALTHY STOCK, GROWN FROM SEED IN A NURSERY, FREE OF DIE-BACK, DISEASE, INSECTS, EGGS, BORES, AND LARVAE. PLANTS SHALL HAVE A ROOT SYSTEM, STEM, AND BRANCH FORM THAT WILL NOT RESTRICT NORMAL GROWTH, STABILITY AND HEALTH FOR THE EXPECTED LIFE OF THE PLANT. ALL PLANTS WITH DAMAGED ROOTS, LEADERS, OR BRANCHES SHALL BE REJECTED. ROOTBOUND AND J-ROOTED PLANTS WILL BE REJECTED. PLANTS THAT CONTAIN INVASIVE SPECIES OR WEEDS SHALL BE REJECTED.
11. KEEP PLANTS PROTECTED UNTIL THE ACTUAL TIME OF PLANTING. DO NOT LEAVE THE PLANT MATERIAL EXPOSED TO WIND, SNOW, OR ALLOW IT TO DRY OUT BEFORE PLANTING. ANY PLANT FOUND DRYING FROM SAID EXPOSURE SHALL BE REJECTED IMMEDIATELY AND REPLACED AT CONTRACTOR'S COST.
12. PLANTING WITHIN BUFFER PLANTING AREA SHALL BE INSTALLED AFTER WEED REMOVAL IN BARE AREAS BETWEEN EXISTING NATIVE VEGETATION. PROTECT EXISTING NATIVE VEGETATION DURING PLANTING.
13. PLANTING HOLES MAY BE PRE-DUG ON THE DAY OF PLANT INSTALLATION. ALL HOLES MUST BE FILLED IN AT THE END OF EACH PLANTING DAY. NO HOLES MAY BE LEFT OPEN OR UNATTENDED IN ORDER TO AVOID TRIPPING AND WILDLIFE HAZARDS.
14. DECOMPACTION METHODS MAY INCLUDE USE OF A GAS-POWERED AUGER, AIR SPADE AND/ OR HAND TOOLS
15. DECOMPACT AN AREA 2X GREATER THAN THE PLANT AND ADD IN A THREE INCH LAYER OF COMPOST TO THE TOP 6" OF PLANTING SOIL, PER PLANTING DETAILS.
16. AVOID DECOMPACTION WITHIN CRITICAL ROOT ZONE, WITH THE EXCEPTION OF AREAS APPROVED BY LANDSCAPE ARCHITECT. SEE DETAIL DEFINING CRITICAL ROOT ZONES ON SHEET 12.
17. MULCH ALL PLANTS ACCORDING TO PLANTING DETAILS. MULCH SHALL BE PLACED AT A 3-INCH DEPTH. PULL MULCH AWAY FROM BASE OF PLANTS, STEMS, AND SHOOTS SO THAT MULCH IS NOT TOUCHING BASE OF PLANTS. DO NOT COVER EXISTING NATIVE VEGETATION WITH MULCH.
18. THOROUGHLY WATER ALL PLANTED AREAS IMMEDIATELY AFTER PLANTING. WATER FOR OPTIMAL GROWTH DURING DRY PERIODS DURING PLANT ESTABLISHMENT. SEE CONTRACT SPECIFICATIONS.
19. MINIMIZE IMPACTS TO EXISTING WETLANDS. KEEP CONSTRUCTION EQUIPMENT SUCH AS EXCAVATORS OUT OF WETLAND BOUNDARIES. AVOID IMPACTS TO NATIVE VEGETATION WITH EQUIPMENT.



PLANTING LAYOUT NOTES:

1. PLANT GROUNDCOVERS, SHRUBS, AND TREES AS SHOWN ON PLAN. GROUNDCOVERS AND SHRUBS SHALL BE IN CLUSTERS OF UNEVEN NUMBERS (E.G. THREE, FIVE, SEVEN, ETC.)
2. PLANTS SHALL BE ARRANGED SO THAT AS THEY MATURE, THEY GROW IN TO MASSINGS AND FULLY COVER THE SOIL SURFACE.
3. PROVIDE A 3 FOOT RADIUS MULCH-ONLY AREA AROUND EACH TREE AND A 2 FOOT RADIUS MULCH-ONLY AREA AROUND EACH SHRUB.

DETAIL - PLANTING LAYOUT

SCALE: NTS

1

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COLLEEN E. MITCHELL, STATE OF WASHINGTON, 46997, REGISTERED PROFESSIONAL ENGINEER

Date	No	Revision	By
	4		
	3		
	2		
	1		

PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
PLANTING SCHEDULE AND NOTES

PLAN REF. NO.

SHEET 11 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

Path: C:\Users\CWitzel\DC\ACCDocs\Herrera Environmental\Hundred Acre Wood Phase 1B\Project Files\Sheet\Planting Details.dwg
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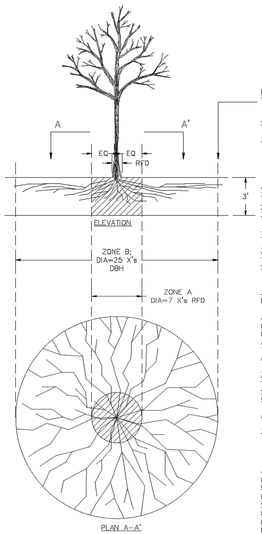


FENCING/ROOT PROTECTION
1. PAINT OR STAKE FENCE ALIGNMENT OUTSIDE ZONE B FOR APPROVAL BY THE OWNER BEFORE INSTALLATION.
2. TREE PROTECTION FENCE SHALL BE PROVIDED AND MAINTANED AS SHOWN ON THE PLANS.
3. OWNER'S APPROVAL IS REQUIRED FOR USE/ACCESS WITHIN ZONE B. PERMISSION FOR USE/ACCESS REQUIRES SURFACE PROTECTION FOR ALL UNFENCED, UNPAVED SURFACES WITHIN ZONE B*.

* SURFACE PROTECTION MEASURES
1. MULCH LAYER, 6"-8" DEPTH
2. 3/4" PLYWOOD
3. STEEL PLATES

TRENCHING/EXCAVATION

ZONE A (CRITICAL ROOT ZONE)
1. MEASURED: 7 X's THE ROOT FLARE DIAMETER (RFD)
2. NO DISTURBANCE ALLOWED WITHOUT SITE-SPECIFIC OWNER'S INSPECTION AND APPROVAL OF METHODS TO MINIMIZE ROOT DAMAGE
3. SEVERANCE OF ROOTS LARGER THAN 2" DIA REQUIRES OWNER'S APPROVAL
4. IF TREE ROOTS 2" IN DIAMETER OR MORE WILL BE CUT, SCORED, OR GOUGED BY CONTRACT DIGGING, THE CONTRACTOR SHALL CONTACT THE OWNER ABOUT ALTERNATIVE GRADING, DEEPER EXCAVATION, OR TUNNELING. THE OWNER MAY CONSULT WITH A CERTIFIED ARBORIST IN THIS INSTANCE.

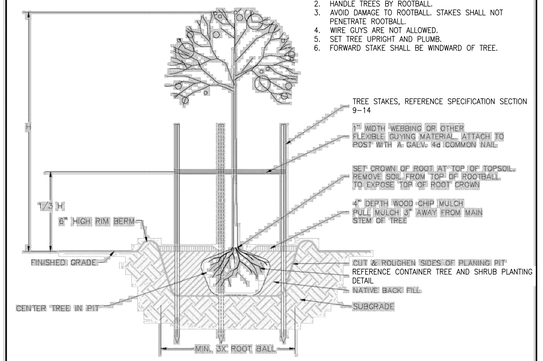
ZONE B (TREE PROTECTION ZONE)
1. MEASURED: 25 X's DBH (DIAMETER BREAST HEIGHT)
2. OPERATION OF HEAVY EQUIPMENT AND/OR STOCKPILING OF MATERIALS SUBJECT TO ENGINEERS APPROVAL IN ADVANCE. SURFACE PROTECTION* MEASURES AREA REQUIRED
3. THE OWNER MAY ALLOW TRENCHING AS FOLLOWS:
   - EXCAVATION BY HAND OR WITH HAND-DRIVEN TRENCHER MAY BE REQUIRED. OTHER EQUIPMENT MAY BE USED AS APPROVED IN ADVANCE BY THE OWNER.
   - LIMIT TRENCH WIDTH. DO NOT DISTURB ZONE A
4. MAINTAIN 2/3 OR MORE OF ZONE B IN UNDISTURBED CONDITION
5. TUNNELING IS REQUIRED WHEN INSTALLING UTILITY LINES 3'-0" OR BELOW AND WHERE TREE ROOTS OVER 2" DIAMETER WILL BE OTHERWISE CUT, SCORED, OR GOUGED BY DIGGING.
6. IF TREE ROOTS 2" IN DIAMETER OR MORE WILL BE CUT, SCORED, OR GOUGED BY CONTRACT DIGGING, THE CONTRACTOR SHALL CONTACT THE OWNER ABOUT ALTERNATIVE GRADING, DEEPER EXCAVATION, OR TUNNELING. THE OWNER MAY CONSULT WITH A CERTIFIED ARBORIST IN THIS INSTANCE.

DAMAGED OR DESTROYED PLANT REPLACEMENT
1. SEE SECTION 02231 OF THE SPECIFICATIONS

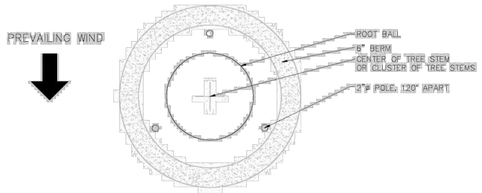
PARKS AND RECREATION DESIGN AND DEVELOPMENT DECEMBER 5, 2011	CITY OF BELLINGHAM TREE PROTECTION DETAIL SCALE: NTS	DRAWING 02950.07

DETAIL - CRITICAL ROOT ZONE AREA 1
SCALE: NTS

NOTES:
1. THIS DETAIL APPLIES TO DECIDUOUS AND CONIFEROUS TREE PLANTING IN AREAS THAT ARE SLOPED LESS THAN 10%.
2. HANDLE TREES BY ROOTBALL.
3. AVOID DAMAGE TO ROOTBALL. STAKES SHALL NOT PENETRATE ROOTBALL.
4. WIRE GUYS ARE NOT ALLOWED.
5. SET TREE UPRIGHT AND PLUMB.
6. FORWARD STAKE SHALL BE WINDWARD OF TREE.



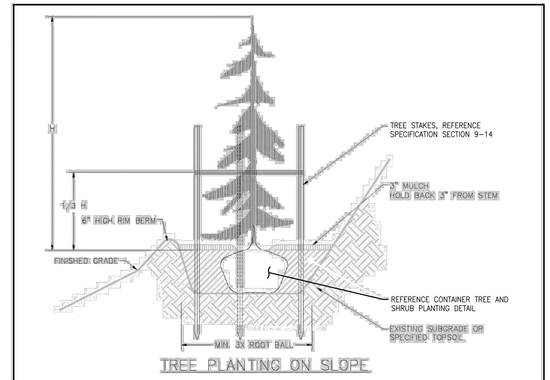
SECTION — TREE PLANTING IN OPEN AREA



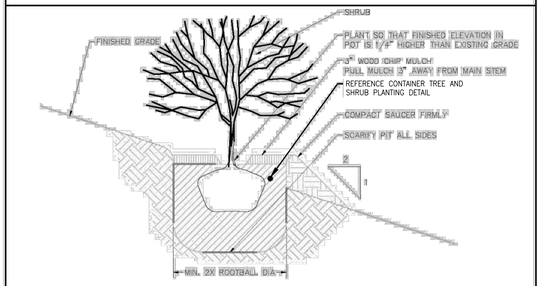
PLAN

PARKS AND RECREATION DESIGN AND DEVELOPMENT DECEMBER 19, 2011	CITY OF BELLINGHAM TREE PLANTING IN OPEN AREAS	DRAWING 02950.01

DETAIL - TREE STAKING 2
SCALE: NTS



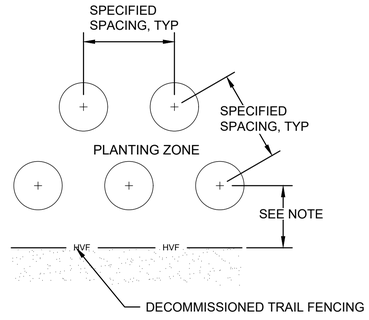
TREE PLANTING ON SLOPE



SHRUB PLANTING ON SLOPE

PARKS AND RECREATION DESIGN AND DEVELOPMENT December 6, 2007	CITY OF BELLINGHAM TREE AND SHRUB PLANTING ON SLOPES	DRAWING 02950.04

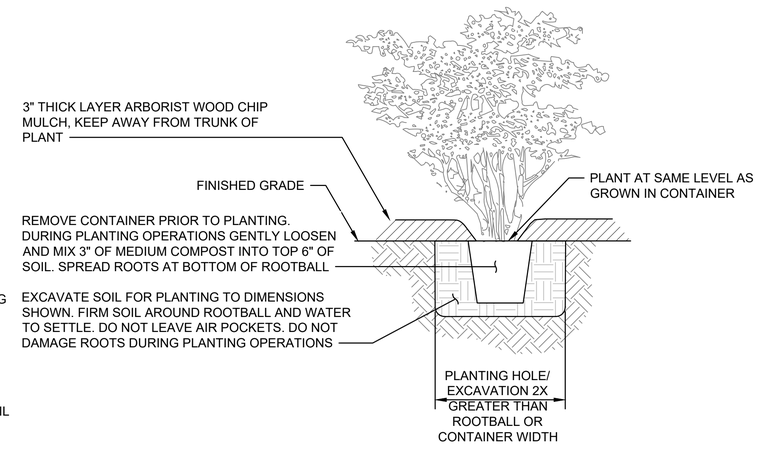
DETAIL - TREE AND SHRUB PLANTING ON SLOPES 4
SCALE: NTS



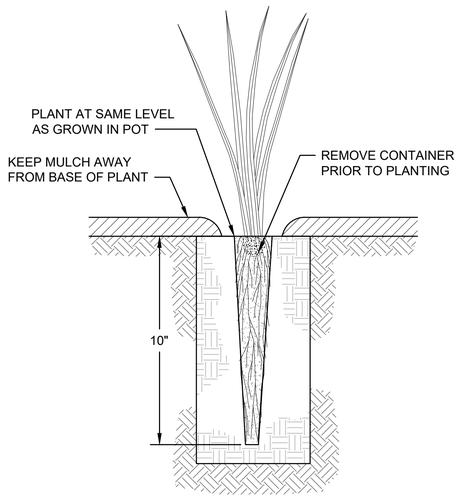
NOTES:

1. ALL TREE AND SHRUB PLANTING SHALL HAVE A SETBACK MINIMUM OF 24 INCHES FROM DECOMMISSIONED TRAIL FENCING. TREES SHALL HAVE A MINIMUM SETBACK OF 10 FEET FROM TRAIL INTERSECTIONS.

DETAIL - PLANT SPACING 4
SCALE: NTS



DETAIL - CONTAINER TREE AND SHRUB PLANTING 5
SCALE: NTS



DETAIL - 10" DEEP ROOT PLUG PLANTING 6
SCALE: NTS

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COLLEEN E. MITCHELL — STATE OF WASHINGTON — 46997 — REGISTERED PROFESSIONAL ENGINEER

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PROJECT ENGINEER C. MITCHELL
DESIGNED/DRAWN D. ANSLOW
INSPECTOR

PARKS DIRECTOR N. OLIVER
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P. GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE: Horiz. AS SHOWN; Vert. AS SHOWN
DATUM: NAD 83/98, NAVD 88
Job. No.
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
PLANTING DETAILS 1

PLAN REF. NO.
SHEET 12 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

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Plotter: _AutoCAD PDF (General Documentation).pc3

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS

107 Chuckanut Dr N
Bellingham, WA 98225

90% DESIGN

02/07/2025

TYPICAL ABBREVIATIONS

AB	ANCHOR BOLT
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
ALT	ALTERNATE
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASD	ALLOWABLE STRESS DESIGN
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAILING
BOT	BOTTOM
BP	BASE PLATE
BRB	BUCKLING RESTRAINED BRACES
BRG	BEARING
BTWN	BETWEEN
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION/CONTROL JOINT
CL	CENTERLINE
CLR	CLEAR
CLT	CROSS-LAMINATED TIMBER
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
D	DEEP
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DF	DOUGLAS-FIR
DIAG	DIAGONAL
DIAPH	DIAPHRAGM
DIM	DIMENSION
DL	DEAD LOAD
DT	DRAG TRUSS
(E)	EXISTING
EA	EACH
EL OR ELEV	ELEVATION
EMBED	EMBEDMENT
EN	EDGE NAILING
ENGR	ENGINEER
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIV	EQUIVALENT
EXP	EXPANSION
EXT	EXTERIOR
FDN	FOUNDATION
FF	FINISH FLOOR
FFE	FINISH FLOOR ELEVATION
FLR	FLOOR
F/O	FACE OF
FS	FAR SIDE
FT	FEET
FTG	FOOTING
FT-LB	FOOT POUNDS

GA	GAGE/GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GC	GENERAL CONTRACTOR
GLC	GLUE LAMINATED COLUMN
GLB	GLUE LAMINATED BEAM
GR	GRADE
GT	GIRDER TRUSS
GWB	GYPSUM WALL BOARD
HDR	HEADER
HD	HOLDOWN
HF	HEM-FIR
HGR	HANGER
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
ICF	INSULATED CONCRETE FORM
IN	INCHES
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIPS = 1000 LBS
KSI	KIPS PER SQUARE INCH
L	ANGLE
LBS (or LB)	POUNDS (or POUND)
LFRS	LATERAL FORCE RESISTING SYSTEM
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONGIT	LONGITUDINAL
LSH	LONG SIDE HORIZONTAL
LSL	LAMINATED STRAND LUMBER
LVL	LAMINATED VENEER LUMBER
MB	MACHINE BOLT
MTL	METAL
MWFRS	MAIN WIND FORCE RESISTING SYSTEM
NS	NEAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
OPP	OPPOSITE
PAF	POWER ACTUATED FASTENER
PCF	POUNDS PER CUBIC FOOT
PEMB	PRE-ENGINEERED METAL BUILDING
PERP	PERPENDICULAR
PL	PLATE
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PT	POST-TENSIONED
PT	PRESSURE TREATED
RT	ROOF TRUSS

SEOR	STRUCTURAL ENGINEER OF RECORD
SF	SQUARE FEET
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHTG	SHEATHING
SIM	SIMILAR
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
SW	SHEAR WALL
T&B	TOP & BOTTOM
T&G	TONGUE AND GROOVE
T/O	TOP OF
TRANSV	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WIDE
W/	WITH
W/O	WITHOUT
WHS	WELDED HEADED STUD
WP	WORK POINT
WTS	WELDED THREADED STUD
WWF	WELDED WIRE FABRIC

SHEET INDEX	
SHEET #	**SHEET NAME**
S0.00	STRUCTURAL COVER SHEET
S0.01	STRUCTURAL GENERAL NOTES
S0.02	STRUCTURAL GENERAL NOTES
S1.01	OVERALL SITE PLAN
S2.01	ENLARGED FRAMING PLANS
S5.01	STRUCTURAL DETAILS

GRAPHIC SYMBOL LEGEND

SURFACE PATTERNS PLAN (UNO)
- OVERFRAMING
- BLOCKED DIAPHRAGM
- PLYWOOD
- TOP OF WALL (ALL MATERIALS)
- HIDDEN WALL/COLUMN BELOW (ALL MATERIALS)
- CMU WALL **(ELEVATION SURFACE)**

CUT PATTERNS SECTION (UNO)
- CONCRETE
- BRICK VENEER
- STEEL
- GROUT
- STRUCTURAL FOAM
- EARTH - COMPACT FILL
- SAND - LEAN FILL

CUT PATTERNS PLAN ONLY (UNO)
- CONCRETE WALL OR COLUMN
- WOOD/CFS SHEAR WALL
- CMU WALL **(SECTION OR PLAN)**
- WOOD/CFS STUD WALL **(SECTION OR PLAN)**

EXISTING & BY OTHERS SECTION (UNO)
- EARTH
- GRAVEL
- INSULATION
- MECH UNIT **(SECTION OR PLAN)**
- CONSTRUCTION ELEMENTS **(SECTION OR PLAN)**
- HIDDEN CONSTRUCTION ELEMENTS BELOW OR BEYOND **(SECTION OR PLAN)**
- EXISTING SCOPE **(SECTION OR PLAN)**
- EXISTING FRAMING **(PLAN ONLY)**
- HIDDEN EXISTING FRAMING BELOW **(PLAN ONLY)**

- WOOD COLUMN (CUT)
- WOOD BLOCKING (CUT)
- WOOD COLUMN (BELOW)
- STEEL HSS COLUMN (CUT)
- STEEL HSS COLUMN (BELOW)
- STEEL WIDE FLANGE COLUMN (CUT)
- STEEL WIDE FLANGE COLUMN (BELOW)
- SIMPSON TENSION TIE HOLDOWN — HDU#
- CONCRETE COLUMN TYPE — C#
- NUMBER OF KINGS PLUS TRIMMERS — #K+#T
- FOOTING STEP — HIGH SIDE
- DECK SPAN
- EXTENT

- SHEATHING SPAN
- SLOPE PER ARCH — SURFACE SLOPE PER ARCHITECT
- JOIST SPAN
- DETAIL REFERENCE # / S### — **SECTION CALLOUT** — SHEET REFERENCE #
- DETAIL REFERENCE # / S### — **ELEVATION CALLOUT** — SHEET REFERENCE #
- DETAIL REFERENCE # / S### — **DETAIL CALLOUT** — SHEET REFERENCE #

90% DESIGN

LUND OPSAHL

FOR COORDINATION

Date	No	Revision	By
	4		
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	1		

PROJECT ENGINEER Designer
DESIGNED/DRAWN Author
INSPECTOR

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PARKS ENGINEER G.AUSTIN
PARKS PLANNER P.GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
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NAVD 88

Job. No. 24-063-01
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S0.00 STRUCTURAL COVER SHEET

PLAN REF. NO.

SHEET 13 OF 18

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

GENERAL REQUIREMENTS

SUMMARY OF WORK
PROJECT CONSISTS OF NEW CONSTRUCTION OF BOARDWALK AND BRIDGE AS SHOWN ON THESE CONTRACT DOCUMENTS USED IN COORDINATION WITH THE LANDSCAPE ARCHITECT AND OTHER DISCIPLINE'S DOCUMENTS.

GOVERNING CODE
ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2021 INTERNATIONAL BUILDING CODE AND LOCAL JURISDICTION AMENDMENTS.

REFERENCE TO ASTM AND OTHER STANDARDS SHALL REFER TO THE LATEST EDITION DESIGNATED BY IBC CHAPTER 35. REFER TO THE SPECIFICATIONS FOR INFORMATION IN ADDITION TO THAT COVERED BY THESE STRUCTURAL NOTES AND DRAWINGS.

DOCUMENTS
STRUCTURAL DOCUMENTS SHALL BE USED IN CONJUNCTION WITH LANDSCAPE ARCHITECT DOCUMENTS FOR ALL BIDDING AND CONSTRUCTION.

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. TYPICAL DETAILS AND GENERAL NOTES SHALL APPLY EVEN IF NOT SPECIFICALLY DENOTED ON PLANS, UNO. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE SER.

EXISTING STRUCTURAL INFORMATION, DESIGNATED AS (E) ON THE STRUCTURAL DRAWINGS, HAS BEEN COMPILED FROM INFORMATION FURNISHED BY VARIOUS SOURCES AND IS NOT NECESSARILY FIELD-VERIFIED BY THE ENGINEER. DIMENSIONS RELATING TO EXISTING STRUCTURES ARE INTENDED FOR USE AS GUIDELINES ONLY; ALL DIMENSIONS SHALL BE FIELD-VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION. NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.

THESE CONTRACT DOCUMENTS AND ANY MATERIALS USED IN PREPARATION OF THEM, INCLUDING CALCULATIONS, ARE THE EXCLUSIVE PROPERTY OF THE SER AND CAN BE REPRODUCED ONLY WITH THE PERMISSION OF THE SER.

WARRANTY
THE SER HAS USED THAT DEGREE OF CARE AND SKILL ORDINARILY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY MEMBERS OF THE PROFESSION IN THIS LOCALE AND NO OTHER WARRANTY, EITHER EXPRESSED OR IMPLIED, IS MADE IN CONNECTION WITH RENDERING PROFESSIONAL SERVICES.

OWNER RESPONSIBILITY
THE OWNER SHALL RETAIN A SPECIAL INSPECTOR TO PERFORM THE SPECIAL INSPECTION REQUIREMENTS REQUIRED BY THE BUILDING OFFICIAL AND AS OUTLINED IN THE SPECIAL INSPECTION SECTION BELOW.

DESIGN CRITERIA

BUILDING CATEGORY
STRUCTURAL RISK CATEGORY II
IMPORTANCE FACTORS FOR SNOW AND SEISMIC ARE LISTED WITH THE LOADING CRITERIA.

LIVE LOADS
LIVE LOADS INDICATED WITH * ARE REDUCIBLE PER IBC

BRIDGE AND BOARDWALK	100 PSF
AASHTO H-5 TRUCK	10,000 LB VEHICLE

LIVE LOADS - SNOW
NUMBERING BELOW IS PER IBC SECTION 1603.1.3:
1. FLAT-ROOF SNOW LOAD: P_f = 25 PSF
2. SNOW EXPOSURE FACTOR: C_e = 1.0
3. SNOW IMPORTANCE FACTOR: I_s = 1.0
4. THERMAL FACTOR: C_t = 1.1

LATERAL LOADS - WIND
NUMBERING BELOW IS PER IBC SECTION 1603.1.4:
1. ULTIMATE DESIGN WIND SPEED (3-SECOND GUST): V_{ult} = 98 MPH
   NOMINAL DESIGN WIND SPEED: V_{asd} = 76 MPH
2. RISK CATEGORY: II
3. WIND EXPOSURE: B

ADDITIONAL INFO:
6. TOPOGRAPHIC FACTOR: K_{zt} = 1.0
7. DIRECTIONALITY FACTOR: K_d = 0.85
8. GROUND ELEVATION FACTOR: K_e = 1.0
9. ENCLOSURE CLASSIFICATION: OPEN
10. GUST EFFECT FACTOR: G = 0.85
11. DESIGN BASE SHEAR: V = 17.8 PSF
12. ANALYSIS PROCEDURE: DIRECTIONAL

LATERAL LOADS - EARTHQUAKE
NUMBERING BELOW IS PER IBC SECTION 1603.1.5:
1. RISK CATEGORY: II
2. SEISMIC IMPORTANCE FACTOR: I_e = 1.0
3. MAPPED SPECTRAL RESPONSE ACCELERATION PARAMETERS: S_S = 1.015 G; S_1 = 0.357 G
4. SITE CLASS: D; F_A = 1.2; F_V = 1.94
5. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS: S_{DS} = 0.812 G; S_{D1} = 0.462 G
6. SEISMIC DESIGN CATEGORY: D
7. BASIC SEISMIC FORCE-RESISTING SYSTEMS:
   VERTICAL ELEMENTS: ALL OTHER SELF SUPPORTING STRUCTURES NOT SIMILAR TO BUILDINGS DETAILED PER ASCE 7-16,15.6.3;
8. DESIGN BASE SHEAR: 17.5 PSF (BOARDWALK); 26.0 PSF (BRIDGE)
9. SEISMIC RESPONSE COEFFICIENT: C_S = 0.65
10. RESPONSE MODIFICATION COEFFICIENT: R = 1.25
11. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE

ADDITIONAL ITEMS:
BUILDING LOCATION: 48.7155°N, 122.5004°W
REDUNDANCY FACTORS:
NORTH/SOUTH DIRECTION = 1.0
EAST/WEST DIRECTION = 1.0

CONTRACTOR PERFORMANCE REQUIREMENTS

DESIGN DOCUMENTS
CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ALL CONDITIONS AT THE JOB SITE, INCLUDING BUILDING AND SITE CONDITIONS BEFORE COMMENCING WORK, AND BE RESPONSIBLE FOR SAME. ALL DISCREPANCIES SHALL BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING WITH WORK. ANY ERRORS, AMBIGUITIES AND/OR OMISSIONS IN THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY, IN WRITING. NO WORK IS TO BE STARTED BEFORE CORRECTION IS MADE.

CONTRACTOR SHALL VERIFY AND/OR COORDINATE ALL DIMENSIONED OPENINGS AND SLAB EDGES SHOWN ON THE CONTRACT DOCUMENTS. SOME DIMENSIONS, OPENINGS AND EMBEDDED ITEMS ARE SHOWN ON THE STRUCTURAL DRAWINGS. OTHERS MAY BE REQUIRED. REFER TO ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF CURBS, EQUIPMENT PADS, WALL AND FLOOR OPENINGS, ARCHITECTURAL TREATMENT, EMBEDS REQUIRED FOR ARCHITECTURAL ITEMS AND DIMENSIONS. REFER TO MECHANICAL, PLUMBING, ELECTRICAL AND FIRE PROTECTION DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS FOR DUCTS, PIPING, CONDUITS, ETC. SUBMIT OPENINGS TO ARCHITECT FOR REVIEW.

DO NOT SCALE DRAWINGS. USE ONLY FIELD VERIFIED DIMENSIONS. WHEN ELECTRONIC PLAN FILES ARE PROVIDED FOR THE CONTRACTOR'S DETAILING CONVENIENCE, IT SHALL BE NOTED THAT THE ELECTRONIC FILES ARE NOT GUARANTEED TO BE DIMENSIONALLY ACCURATE. THE CONTRACTOR USES THEM AT THEIR OWN RISK. THE PUBLISHED PAPER DOCUMENTS ARE THE CONTROLLING CONTRACT DOCUMENTS. ELECTRONIC FILES OF DETAIL SHEETS AND NOTES WILL NOT BE PROVIDED.

CONTRACTOR-INITIATED CHANGES
CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT FOR REVIEW AND ACCEPTANCE PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.

INSPECTIONS
THE CONTRACTOR SHALL COORDINATE WITH THE BUILDING DEPARTMENT FOR ALL BUILDING DEPARTMENT REQUIRED INSPECTIONS.

TEMPORARY SHORING AND BRACING
THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS REQUIRED UNTIL ALL PERMANENT CONNECTIONS AND STIFFENING HAVE BEEN INSTALLED. THE CONTRACTOR IS RESPONSIBLE FOR THE STRENGTH AND STABILITY OF ALL PARTIALLY COMPLETED STRUCTURES INCLUDING BUT NOT LIMITED TO CONCRETE OR MASONRY WALLS, STEEL FRAMING AND ERECTION AIDS. THE CONTRACTOR SHALL, AT THEIR DISCRETION, EMPLOY THE AID OF A LICENSED STRUCTURAL ENGINEER TO DESIGN ALL TEMPORARY BRACING AND SHORING NECESSARY TO COMPLETE THE WORK DESCRIBED IN THESE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED SAFETY STANDARDS, SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED IN PERFORMING THEIR WORK. FOR CONCRETE CONSTRUCTION REFER TO ACI 318 - SECTION 26.11.2 "REMOVAL OF FORMWORK".

SAFETY PROCEDURES
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTOR'S WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES TO THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.

SHOP DRAWINGS AND SUBMITTALS

SHOP DRAWING & SUBMITTAL REVIEW (INCLUDING DEFERRED STRUCTURAL COMPONENTS)
THE CONTRACTOR MUST REVIEW AND STAMP THE SHOP DRAWINGS & SUBMITTALS FOR REVIEW. SER WILL ONLY REVIEW SUBMITTALS FOR ITEMS SHOWN ON SER DOCUMENTS. SUBMITTALS FOR DEFERRED STRUCTURAL COMPONENTS WILL RECEIVE CURSORY REVIEW BY SER FOR LOADS IMPOSED ON PRIMARY STRUCTURE. SER WILL REVIEW SHOP DRAWINGS FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE STRUCTURAL CONTRACT DOCUMENTS. REVIEW OF SUBMITTALS DOES NOT CONSTITUTE APPROVAL OR ACCEPTANCE OF UNAUTHORIZED DEVIATION FROM CONTRACT DOCUMENTS.

CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

CONTRACTOR RESPONSIBLE FOR:
- REVIEWING, APPROVING, STAMPING AND SIGNING SUBMITTALS PRIOR TO SUBMITTAL TO ARCHITECT AND SER
- TIMING SUBMITTALS TO ALLOW TWO WEEKS OF REVIEW TIME FOR THE SER AND TIME FOR CORRECTIONS AND/OR RESUBMITTAL
- CONFORMANCE TO REQUIREMENTS OF THE CONTRACT DOCUMENTS
- DIMENSIONS AND QUANTITIES
- VERIFYING INFORMATION TO BE CONFIRMED OR COORDINATED
- INFORMATION SOLELY FOR FABRICATION, SAFETY, MEANS, METHODS, TECHNIQUES AND SEQUENCES OF CONSTRUCTION
- COORDINATION OF ALL TRADES

RESUBMITTALS SHALL BE CLOUDED AND DATED FOR ALL CHANGES TO THE SUBMITTAL. ONLY CLOUDED PORTIONS OF RESUBMITTAL WILL BE REVIEWED AND SER'S REVIEW STAMP APPLIES TO ONLY THESE AREAS.

SUBSTITUTIONS
SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING PRIOR TO SUBMITTAL OF SHOP DRAWINGS. SHOP DRAWINGS BEARING SUBSTITUTIONS WILL BE REJECTED. SUBMIT ENGINEERING DATA TO SUBSTANTIATE THE EQUIVALENCE OF THE PROPOSED ITEMS. THE SER'S BASIC SERVICES CONTRACT DOES NOT INCLUDE REVIEW OF SUBSTITUTIONS THAT REQUIRE RE-ENGINEERING OF THE ITEM OR ADJACENT STRUCTURE. NOR DOES THE SER'S CONTRACT COVER EXCESSIVE REVIEW OF PROPOSED SUBSTITUTIONS. THE FEES FOR MAKING THESE REVIEWS AND/OR REDESIGN SHALL BE PAID BY THE CONTRACTOR. REVIEWS AND APPROVALS SHALL NOT BE MADE UNTIL AUTHORIZATION IS RECEIVED.

SUBMITTALS
SHOP DRAWINGS AND MATERIAL SUBMITTALS SHALL BE SUBMITTED TO THE ARCHITECT AND SER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR THE FOLLOWING STRUCTURAL ITEMS. SUBMITTALS SHALL INCLUDE ONE REPRODUCIBLE AND ONE COPY; REPRODUCIBLE WILL BE MARKED AND RETURNED. IF DEVIATIONS, DISCREPANCIES, OR CONFLICTS BETWEEN SHOP DRAWINGS SUBMITTALS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER SHOP DRAWING SUBMITTALS ARE PROCESSED BY THE SER, THE CONTRACT DOCUMENTS CONTROL AND SHALL BE FOLLOWED.

- CONSTRUCTION SEQUENCE DESCRIPTION
- CONTRACTOR QUALITY CONTROL TESTING PROCEDURES WHEN REQUIRED IN SPECIFICATIONS
- FABRICATION SHOP AISC CERTIFICATION
- STRUCTURAL STEEL REGISTRATION/CERTIFICATION OR QUALITY CONTROL INSPECTION RECORDS
- STRUCTURAL STEEL SHOP AND ERECTION DRAWINGS
- WELDING PROCEDURE SPECIFICATIONS
- DEFERRED STRUCTURAL COMPONENTS LISTED BELOW

CERTIFICATE OF CONFORMANCE FOR WELDING MATERIAL, INCLUDING SUPPLEMENTAL NOTCH

SHOP DRAWINGS AND SUBMITTALS (CONT'D)

DEFERRED STRUCTURAL COMPONENTS
COMPONENTS REFERRED TO AS DEFERRED STRUCTURAL COMPONENTS SHALL COMPLY WITH THESE NOTES. THESE ELEMENTS HAVE NOT BEEN PERMITTED UNDER THE BASE BUILDING APPLICATION. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT THE COMPONENT SYSTEM DOCUMENTS TO THE BUILDING OFFICIAL FOR APPROVAL. THE DOCUMENTS SHALL BE STAMPED AND SIGNED BY AN ENGINEER LICENSED BY THE STATE WHERE THE PROJECT IS LOCATED. THE DEFERRED STRUCTURAL COMPONENTS SHALL NOT BE INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN APPROVED BY THE BUILDING OFFICIAL.

PRIOR TO BUILDING DEPARTMENT SUBMITTAL, THE DEFERRED STRUCTURAL COMPONENTS SUBMITTALS SHALL RECEIVE CURSORY REVIEW BY SER FOR LOADS IMPOSED ON PRIMARY STRUCTURE AND GENERAL CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT AND GENERAL COMPLIANCE WITH THE INFORMATION GIVEN IN THE STRUCTURAL CONTRACT DOCUMENTS. REVIEW OF SUBMITTALS DOES NOT CONSTITUTE APPROVAL OR ACCEPTANCE OF UNAUTHORIZED DEVIATION FROM CONTRACT DOCUMENTS. SUBMITTALS OF CONTRACTOR-DESIGNED COMPONENTS SHALL INCLUDE THE DESIGNING PROFESSIONAL ENGINEER'S STAMP AND SIGNATURE, AS NOTED ABOVE. THE SUBMITTAL SHALL BE APPROVED BY THE COMPONENT VENDOR PRIOR TO REVIEW BY THE SER. THE DESIGNING PROFESSIONAL IS RESPONSIBLE FOR CODE CONFORMANCE AND ALL NECESSARY CONNECTIONS NOT SPECIFICALLY CALLED OUT ON ARCHITECTURAL OR STRUCTURAL CONTRACT DOCUMENTS.

SUBMITTALS SHALL INCLUDE DETAILS OF CONNECTIONS TO PRIMARY STRUCTURE THAT INDICATE MAGNITUDE AND DIRECTION OF ALL LOADS IMPOSED AT POINT OF CONNECTION. DESIGN CRITERIA SHALL BE PROVIDED WITH SUBMITTAL AND CALCULATIONS SHALL BE MADE AVAILABLE UPON REQUEST.

THE FOLLOWING LIST INCLUDES THE ITEMS THAT ARE DEFINED AS DEFERRED STRUCTURAL COMPONENTS. REFER TO OTHER DISCIPLINE'S CONTRACT DOCUMENTS FOR ADDITIONAL DEFERRED COMPONENTS THAT MAY REQUIRE STRUCTURAL DESIGN AND DETAILS. CONNECTIONS OF THESE ELEMENTS SHALL NOT INDUCE TORSION ON STRUCTURAL MEMBERS. DEFERRED STRUCTURAL COMPONENTS SHALL BE MANUFACTURED, DELIVERED, HANDLED, STORED, AND FIELD ERECTED IN CONFORMANCE WITH INSTRUCTIONS PREPARED BY THE COMPONENT VENDOR.

DEFERRED STRUCTURAL COMPONENTS:
- FRP GRATING AND CONNECTIONS

INSPECTIONS & STRUCTURAL OBSERVATIONS

INSPECTIONS BY BUILDING OFFICIAL
THE BUILDING OFFICIAL, UPON NOTIFICATION, SHALL MAKE STRUCTURAL INSPECTIONS AS REQUIRED BY LOCAL ORDINANCE. THE INSPECTION BY THE BUILDING OFFICIAL PER IBC SECTION 110 WILL BE SEPARATE FROM, AND IN ADDITION TO, THE STRUCTURAL OBSERVATION(S) AND SPECIAL INSPECTION(S) MENTIONED SUBSEQUENTLY.

STRUCTURAL OBSERVATION
WHERE REQUIRED BY IBC SECTION 1704.6 THE OWNER OR THE OWNER'S AUTHORIZED AGENT SHALL EMPLOY A STRUCTURAL OBSERVER TO PERFORM STRUCTURAL OBSERVATIONS. STRUCTURAL OBSERVATION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS OR SPECIAL INSPECTIONS REQUIRED BY THE BUILDING CODE AND MENTIONED HEREIN. THE STRUCTURAL OBSERVER SHALL BE ONE OF THE FOLLOWING INDIVIDUALS: THE SER, OR A REGISTERED DESIGN PROFESSIONAL DESIGNATED BY THE SER.

AT THE CONCLUSION OF THE WORK INCLUDED IN THE PERMITTED CONTRACT DOCUMENTS, THE STRUCTURAL OBSERVER SHALL SUBMIT TO THE BUILDING OFFICIAL A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND SHALL IDENTIFY ANY REPORTED DEFICIENCIES THAT, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.

THE FOLLOWING LIST INCLUDES THE ITEMS REQUIRING STRUCTURAL OBSERVATION:

STEEL:
- STEEL FLOOR FRAMING

SPECIAL INSPECTIONS
A SPECIAL INSPECTOR SHALL BE HIRED BY THE OWNER TO PERFORM THE FOLLOWING SPECIAL INSPECTIONS PER IBC SECTION 1704. SEE THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS FOR SPECIAL INSPECTION AND TESTING. THE ARCHITECT, STRUCTURAL ENGINEER, AND BUILDING DEPARTMENT SHALL BE FURNISHED WITH COPIES OF ALL INSPECTION REPORTS AND TEST RESULTS.

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A SEISMIC FORCE RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM, OR COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE WRITTEN STATEMENT SHALL BE IN ACCORDANCE WITH IBC SECTION 1704.4.

SEE IBC CHAPTER 17: "SPECIAL INSPECTIONS AND TESTS" FOR MORE DETAILED REQUIREMENTS.

SPECIAL INSPECTIONS AND TESTS OF DRIVEN DEEP FOUNDATION ELEMENTS (PER IBC 1705.7)

VERIFICATION AND INSPECTION	FREQUENCY		REFERENCE
	CONT.	PERIODIC	
VERIFY ELEMENT MATERIALS, SIZES, AND LENGTHS TO COMPLY WITH THE REQUIREMENTS	X		
DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	X		
OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	X		
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT	X		
FOR STEEL ELEMENTS: PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1705.2	IN ACCORDANCE WITH SECTION 1705.2		

INSPECTIONS & STRUCTURAL OBSERVATIONS (CONT'D)

SPECIAL INSPECTIONS OF STRUCTURAL STEEL CONSTRUCTION OTHER THAN SEISMIC LATERAL FORCE RESISTING SYSTEMS (PER IBC 1705.2.1)

VERIFICATION AND INSPECTION	QC	QA	REFERENCE
INSPECTION OF FABRICATOR'S QUALITY CONTROL PROCEDURES	P	P	IBC 1704.2.5 AISC 360-N.2
REVIEW OF MATERIAL TEST REPORTS AND CERTIFICATIONS LISTED IN AISC SECTION N3.2	P	P	AISC 360-N.5.2 AWS D1.1
INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS	P	P	AISC 360-N.5.8
INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL	O	O	AISC 360-N.5.8
NON-DESTRUCTIVE TESTING OF WELDED JOINTS			AISC 360-N5.5 AWS D1.1

P - PERFORM O - OBSERVE

90% DESIGN

LUND OPSAHL

FOR COORDINATION

	4		
	3		
	2		
	1		
Date	No	Revision	By

PROJECT ENGINEER K. ROLLINS
DESIGNED/DRAWN D. GENSON
INSPECTOR

PARKS DIRECTOR
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P.GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No. 24-063-01
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S0.01 STRUCTURAL GENERAL NOTES

PLAN REF. NO.

SHEET 14 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

GEOTECHNICAL

GENERAL CRITERIA
ALLOWABLE PILE BEARING IS ASSUMED AND THEREFORE MUST BE VERIFIED BY A GEOTECHNICAL INSPECTOR OR THE BUILDING OFFICIAL. IF SOILS ARE FOUND TO BE OTHER THAN ASSUMED, NOTIFY THE STRUCTURAL ENGINEER FOR POSSIBLE FOUNDATION REDESIGN.

UNLESS NOTED OTHERWISE, PILES SHALL BE CENTERED BELOW BEAMS.

EXISTING UTILITIES
THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION, SHORING, PILE DRIVING, OR PIER DRILLING. ANY UTILITY INFORMATION SHOWN ON THE PLANS AND DETAILS ARE APPROXIMATE AND NOT VERIFIED BY THE SER. CONTRACTOR IS TO PROVIDE PROTECTION OF ANY UTILITIES OR UNDERGROUND STRUCTURES DURING CONSTRUCTION.

PILES AND PIERS GENERAL CRITERIA
PILE OR PIER LENGTHS INDICATED ON DRAWINGS ARE ESTIMATED; ACTUAL LENGTH SHALL BE DETERMINED IN FIELD BY GEOTECHNICAL INSPECTOR. FOR BIDDING PURPOSES, THE CONTRACTOR SHALL PROVIDE AN ADD/DEDUCT VALUE PER FOOT OF PILE/PIER LENGTH. THIS VALUE SHALL BE APPLIED TO VARIATIONS IN ACTUAL LENGTHS AS COMPARED TO ESTIMATED LENGTHS.

THE CONTRACTOR SHALL DETERMINE THE LOCATION OF ALL ADJACENT UNDERGROUND UTILITIES PRIOR TO DRIVING OPERATIONS. HOLE DRILLING SHALL BE PERFORMED WITHOUT LOSS OF GROUND AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES.

PILE OR PIER TYPES OTHER THAN THOSE INDICATED ON THE DRAWINGS MAY BE SUBMITTED AS A SUBSTITUTION. OPTIONAL PILES MUST BE SUPPORTED ON THE SAME SOIL STRATA AS THE PILES SHOWN ON THE DRAWINGS. IF THE CONFIGURATION OF THE PILES IS DIFFERENT FROM THE CONTRACT DOCUMENTS, THE MODIFICATION TO THE PILE CAPS MUST ALSO BE DESIGNED BY THE CONTRACTOR AND SUBMITTED WITH THE SUBSTITUTION. A 2-WEEK MINIMUM TIME ALLOWANCE MUST BE MADE FOR THE ENGINEER TO REVIEW ALL OPTIONAL PILE AND PILE-CAP DESIGN.

INSPECTIONS SHALL BE MADE BY THE GEOTECHNICAL INSPECTOR PER IBC TABLE 1705.7.

PIN PILES
PIN PILES SHALL BE 2" DIAMETER X-STRONG SCHEDULE 80 PIPE AND DEVELOP 3 TONS BEARING CAPACITY.

PILES SHALL BE ZINC-PLATED (GALVANIZED) BY THE HOT-DIPPED GALVANIC METHOD (OR PRE-APPROVED EQUIVALENT). ANY SURFACE WHERE THE COATING HAS BEEN REMOVED OR DAMAGED MUST BE BRUSHED AND RE-COATED IN CLEAN, DRY FIELD CONDITIONS WITH AN APPROVED ZINC-BASED ANTI-CORROSION COATING.

PIN PILES SHALL BE DRIVEN TO REFUSAL IN BEARING STRATA. FOR 2" PIN PILES, REFUSAL SHALL BE DEFINED AS LESS THAN 1" PENETRATION IN 60 SECONDS DURING CONTINUOUS DRIVING WITH A 90 LB JACKHAMMER UNDER THE FULL EFFORT OF THE OPERATOR. THE MAXIMUM PILE ECCENTRICITY SHALL BE 4" UNLESS NOTED OTHERWISE AS 'BATTERED' ON THE PLANS FOR LATERAL RESISTANCE. A MINIMUM OF 3% OF THE PILES SHALL RECEIVE AN ASTM STANDARD D-1143 QUICK LOAD TEST.

BATTERED PILES SHALL BE BATTERED 1:4 AT 2" PILES. PROVIDE PIPE SLEEVE COMPRESSION COUPLERS AS NEEDED AT PILE SPLICES. PILE PLACEMENT SHALL BE WITHIN A 2" TOLERANCE AT THE TOP OF THE PILE.

STRUCTURAL STEEL

REFERENCE STANDARDS
STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITIONS OF THE AISC SPECIFICATIONS AND CODES. "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" ANSI/AISC 360, "SPECIFICATION FOR STRUCTURAL JOINTS USING HIGH-STRENGTH BOLTS" AISC 348 AND "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" AISC 303 AMENDED BY THE DELETION OF PARAGRAPH 4.4.1.

FABRICATORS
FABRICATORS FOR STRUCTURAL STEEL MUST HAVE A QUALITY ASSURANCE PROGRAM IN PLACE. THE QUALITY ASSURANCE PROGRAM MUST MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING METHODS:

- REGISTRATION IN THE WASHINGTON ASSOCIATION OF BUILDING OFFICIALS (WABO) STEEL FABRICATOR REGISTRATION PROGRAM
- PARTICIPATION IN THE AISC QUALITY CERTIFICATION PROGRAM, DESIGNATED AS AN AISC CERTIFIED PLANT, CATEGORY BU.
- MEETING THE REQUIREMENTS OF AISC 360 FOR STRUCTURAL STEEL BUILDINGS, CHAPTER N AND SUBMITTING PLAN DOCUMENTATION TO THE AUTHORITY HAVING JURISDICTION, THE ENGINEER OF RECORD, AND THE OWNER OR OWNER'S DESIGNEE. QUALITY ASSURANCE REQUIREMENTS OF STEEL CONSTRUCTION FOR WIND AND SEISMIC (AISC 341, CHAPTER J) SHALL BE INCLUDED AS REQURED IN SPECIAL INSPECTION SECTION OF THE GENERAL NOTES, WHERE APPLICABLE.

FABRICATOR FOR STRUCTURAL STEEL MUST BE REGISTERED AND APPROVED TO PERFORM WORK WITHOUT SPECIAL INSPECTION. AT COMPLETION OF FABRICATION, THE FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.

FINISHING
THE TERMS FINISH, FINISH COLUMN, FINISHING, MILLED, MILLED SURFACE OR MILLING ARE INTENDED TO INCLUDE SURFACES WHICH HAVE BEEN ACCURATELY SAWED OR FINISHED TO A TRUE PLANE AS DEFINED BY AISC.

GRIND SURFACE VALUE EQUAL TO OR LESS THAN 1,000 AS DEFINED BY ANSI B46.2 (4-INCH AND THINNER).

STEEL COATINGS AND PROTECTION
COATINGS AND PROTECTION (WEATHER, FIRE, CORROSION, ETC.) SHALL BE AS SPECIFIED BY THE ARCHITECT. GALVANIZED STEEL MEMBERS SHALL CONFORM TO ASTM A-123 AND GALVANIZED STEEL HARDWARE SHALL CONFORM TO ASTM A-153. GUIDELINES OUTLINED IN ASTM A-384 SHALL BE FOLLOWED IN ORDER TO SAFEGUARD AGAINST WARPING AND DISTORTION DURING HOT-DIP GALVANIZING OF STEEL ASSEMBLIES. STEEL ANCHORS AND TIES EMBEDDED IN CONCRETE AND MASONRY SHALL BE LEFT UNPAINTED.

CORROSION CONTROL
ALL STEEL NOTED AS GALVANIZED AND ANY STEEL IN GROUND CONTACT OR WITHIN 6-INCHES OF GRADE SHALL BE ZINC-PLATED (GALVANIZED) BY THE HOT-DIPPED GALVANIC METHOD (OR PRE-APPROVED EQUIVALENT), EXCEPT WHERE SUCH STEEL IS TO BE FULLY ENCASED IN CONCRETE. FURTHERMORE, ANY SURFACE WHERE THE COATING HAS BEEN REMOVED OR DAMAGED MUST BE BRUSHED AND RE-COATED IN CLEAN, DRY FIELD CONDITIONS WITH AN APPROVED ZINC-BASED ANTI-CORROSION COATING EXCEPT WHERE SUCH AREA IS TO BE ENCASED IN CONCRETE.

SHOP PAINTING
ALL STEEL TO BE SHOP PRIMED. STEEL FIRE PROOFED OR ENCASED WITH CONCRETE NEED NOT BE PAINTED. ALL OTHER STEEL SHALL BE GIVEN ONE COAT OF SHOP PAINT, IN ACCORDANCE WITH SECTION M3 OF THE AISC "SPECIFICATION" AND SECTION 6.5 OF THE AISC "CODE", UNLESS NOTED OTHERWISE. THE SURFACE PREPARATION OF THE STRUCTURAL STEEL PRIOR TO PAINTING SHALL BE IN ACCORDANCE WITH THE SPECIFIC PAINT MANUFACTURER'S PUBLISHED RECOMMENDATIONS. STRUCTURAL JOINTS AND FAYING SURFACES WHICH ARE TO BE CONNECTED BY MEANS OF WELDS OR BOLTS SHALL NOT BE PAINTED UNTIL ALL WELDS AND BOLTS ARE INSTALLED, INSPECTED AND APPROVED. PAINT SHALL BE HELD BACK 3" FROM THE FAYING SURFACE OR THE JOINT TO BE WELDED.

STRUCTURAL STEEL MEMBERS
STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS (UNLESS OTHERWISE SHOWN ON PLANS):

STRUCTURAL STEEL MEMBER SPECIFICATIONS TABLE

TYPE OF MEMBER	ASTM SPECIFICATION	Fy
WEATHERING STEEL ROLLED WIDE-FLANGE SHAPES	A847	50 KSI
WEATHERING STEEL SQUARE AND RECTANGULAR HSS	A847	50 KSI
WEATHERING STEEL CHANNELS, ANGLES	A588	50 KSI
WEATHERING STEEL PLATE	A242	50 KSI
COMMON BOLTS	A307, GRADE A	-
STRUCTURAL FRAMING BOLTS	A325, TYPE 1	-
HEX NUTS	A563	-
FLAT CIRCULAR WASHERS	F436	-
SQUARE OR RECTANGULAR BEVELED WASHERS	F436	-

STEEL FRAMING
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ERECTION AIDS AND JOINT PREPARATIONS THAT INCLUDE, BUT ARE NOT LIMITED TO: ERECTION ANGLES, LIFT HOLES, AND OTHER AIDS; WELDING PROCEDURES; REQUIRED ROOT OPENINGS; ROOT FACE DIMENSIONS; GROOVE ANGLES; BACKING BARS; COPES; SURFACE ROUGHNESS VALUES; AND TAPERS OF UNEQUAL PARTS.

STRUCTURAL STEEL (CONT'D)

WELDING
ALL WELDING SHALL BE IN CONFORMANCE WITH AISC AND AWS STANDARD AND SHALL BE PERFORMED BY AWS/WABO CERTIFIED WELDERS USING E70XX ELECTRODES IN ACCORDANCE WITH AWS D1.1. ONLY PREQUALIFIED WELDS, AS DEFINED BY AWS, SHALL BE USED.

SHOP DRAWINGS SHALL SHOW ALL WELDING WITH AWS D1.4 SYMBOLS. WELDS SHOWN ON THE DRAWINGS ARE THE MINIMUM SIZES. INCREASE WELD SIZE TO AWS MINIMUM SIZES, BASED ON PLATE THICKNESS. MINIMUM WELDING SHALL BE 3/16" UNO. FILLER METAL WITH A SPECIFIED MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LB AT 0°F OR LOWER SHALL BE USED AT COMPLETE-JOINT-PENETRATION GROOVE WELDS. WELDS DESIGNATED AS DEMAND CRITICAL SHALL BE MADE WITH FILLER METALS MEETING THE REQUIREMENTS SPECIFIED IN AWS D1.8 CLAUSE 6.3.

WELDING PROCEDURES SHALL BE SUBMITTED TO THE OWNER'S TESTING AGENCY FOR REVIEW PRIOR TO COMMENCEMENT OF FABRICATION OR ERECTION. ALL COMPLETE-PENETRATION WELDS SHALL BE ULTRASONICALLY TESTED UPON COMPLETION OF THE CONNECTION EXCEPT PLATE LESS THAN OR EQUAL TO 1/4" THICK SHALL BE MAGNETIC PARTICLE TESTED. COMPLETE PENETRATION WELDS ON PLATES LESS THAN OR EQUAL TO 1/4" SHALL BE MAGNETIC PARTICLE TESTED.

FIELD WELDS SHOWN ARE ENGINEER'S RECOMMENDATION. CONTRACTOR IS RESPONSIBLE FOR ACTUAL WELDS USED TO SUPPORT SPECIFIC MEANS AND METHODS.

WELDING GALVANIZED STEEL
WELDING OF GALVANIZED STEEL SHALL CONFORM TO AWS SPECIFICATION D-19.0. WELDED AREAS OF GALVANIZED STEEL SHALL BE TOUCHED UP IN CONFORMANCE WITH ASTM A-780.

BOLTS
ALL HIGH-STRENGTH BOLTS, NOT PART OF THE SEISMIC LOAD RESISTING SYSTEM (SLRS), NEED ONLY BE TIGHTENED TO SNUG-TIGHT (ST) CONDITIONS, DEFINED AS THE TIGHTNESS THAT EXISTS WHEN ALL PLIES IN A JOINT ARE IN FIRM CONTACT. THIS MAY BE ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH. ALL BOLT HOLES SHALL BE STANDARD SIZE, UNLESS NOTED OTHERWISE. ALL ASTM A-307 BOLTS SHALL BE PROVIDED WITH LOCK WASHERS UNDER NUTS OR SELF-LOCKING NUTS.

WOOD

MATERIAL CRITERIA
FRAMING LUMBER SHALL BE KILN DRIED OR MC-19 (UNLESS MORE STRINGENT CRITERIA ARE REQUIRED IN THESE NOTES OR ON THE DRAWINGS) AND GRADED AND MARKED IN CONFORMANCE WITH THE LATEST WCLIB "STANDARD GRADING RULES NO. 17 FOR WEST COAST LUMBER". FRAMING LUMBER TO BE FINISHED LUMBER, NOT ROUGH CUT. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:

WOOD STANDARDS

MEMBER	GRADE	MOISTURE CONTENT
6x TREATED POSTS	DF #2	MC19
3x AND 4x TREATED RAIL FRAMING	DF #2	MC19
3x CEDAR TOP RAIL	ALASKA YELLOW CEDAR	MC19

MOISTURE CONTENT AND CARE OF MATERIAL DURING CONSTRUCTION
THE CONTRACTOR SHALL TAKE MEASURES TO MINIMIZE EXPOSURE OF SAWN LUMBER AND ENGINEERED WOOD PRODUCTS TO MOISTURE DURING CONSTRUCTION. EXCESSIVE CHANGES IN MOISTURE CONTENT DURING CONSTRUCTION MAY RESULT IN SWELLING AND SHRINKAGE OF A SINGLE STORY LEVEL IN THE MAGNITUDE OF 1/2".

TREATED WOOD
ALL WOOD FRAMING IN DIRECT CONTACT WITH CONCRETE OR MASONRY, EXPOSED TO WEATHER, OR THAT REST ON EXTERIOR FOUNDATION WALLS AND ARE LOCATED WITHIN 8" OF EARTH, SHALL BE PRESSURE-TREATED WITH AN APPROVED PRESERVATIVE PER IBC SECTION 2303.1.9. CUT OR DRILLED SECTIONS OF TREATED MATERIAL SHALL BE TREATED WITH AN APPROVED PRESERVATIVE PER IBC SECTION 2303.1.9. SEE IBC SECTION 2304.12 FOR ADDITIONAL REQUIREMENTS.

FASTENERS
FASTENERS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS, UNLESS NOTED OTHERWISE. SPLITTING SHALL BE AVOIDED AT ALL WOOD FASTENERS:

BOLTS	NDS SECTION 12.1.3
LAG SCREWS	NDS SECTION 12.1.4
WOOD SCREWS	NDS SECTION 12.1.5
NAILS	NDS SECTION 12.1.6
WOOD-TO-WOOD CONNECTION BOLTS	ASTM A307
STEEL-TO-WOOD CONNECTION BOLTS	ASTM A307
ANCHOR RODS (7" EMBED MIN)	ASTM F1554 GRADE 36 WITH THREADED ENDS AND WELDED NUT AT END (PROVIDE HIGHER GRADE AT HOLDOWN RODS WHERE INDICATED)

THRU-BOLT AND ANCHOR ROD HOLES SHALL BE AT LEAST 1/32" BUT NO MORE THAN 1/16" LARGER THAN BOLT/ROD DIAMETER. CLEARANCE HOLES FOR LAG SCREW SHANKS SHALL HAVE THE SAME DIAMETER AS THE LAG SHANK AND THE SAME PENETRATION DEPTH AS THE LENGTH OF THE UNTHREADED SHANK. LEAD HOLES FOR THREADED PORTION OF LAG SCREWS SHALL HAVE A DIAMETER OF 55 TO 60% OF LAG SCREW SHANK DIAMETER AND SHALL EXTEND THE LENGTH OF THE THREADED PORTION OF THE LAG SCREW. FASTENERS EXPOSED TO EARTH, WEATHER OR LOCATED IN PRESSURE PRESERVATIVE OR FIRE RETARDANT TREATED WOOD SHALL COMPLY WITH THE CRITERIA LISTED IN THE "METAL PRODUCTS IN CONTACT WITH TREATED LUMBER" SECTION.

WOOD

FRAMING CONNECTORS
TIMBER CONNECTORS CALLED OUT BY LETTERS AND NUMBERS SHALL BE "STRONG-TIE" BY THE SIMPSON STRONG-TIE COMPANY. EQUIVALENT DEVICES BY OTHER MANUFACTURERS MAY BE SUBSTITUTED, PROVIDED THEY HAVE ICC APPROVAL FOR EQUAL OR GREATER LOAD CAPACITIES.

ALL CONNECTORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE NUMBER AND SIZE OF FASTENERS AS SPECIFIED BY MANUFACTURER. ALL SHIMS SHALL BE SEASONED AND DRIED AND THE SAME GRADE (MINIMUM) AS MEMBERS CONNECTED. ALL NAILS SHALL BE AS CALLED OUT IN THE "FASTENERS" SECTION OF THIS SHEET, UNLESS NOTED OTHERWISE. ALL BOLTS IN WOOD MEMBERS SHALL CONFORM TO ASTM A307. PROVIDE WASHERS UNDER THE HEADS AND NUTS OF ALL BOLTS AND LAG SCREWS BEARING ON WOOD. WHERE CONNECTOR STRAPS CONNECT TWO MEMBERS, PLACE ONE-HALF OF THE NAILS OR BOLTS IN EACH MEMBER.

METAL PRODUCTS IN CONTACT WITH TREATED LUMBER
SIMPSON HARDWARE IN CONTACT WITH ACQ, CA, OR CBA PRESSURE-PRESERVATIVE TREATED WOOD SHALL HAVE A ZMAX FINISH (G185 HDG PER ASTM A653) OR SHALL BE POST HOT-DIP GALVANIZED (PER ASTM A123 FOR CONNECTORS AND ASTM A153 FOR FASTENERS) UNLESS NOTED OTHERWISE. EXCEPTION: TYPE 304 OR 316 STAINLESS STEEL CONNECTORS AND FASTENERS ARE REQUIRED FOR THE FOLLOWING APPLICATIONS:

- ACQ, CA, OR CBA TREATMENTS WITH AMMONIA WHERE MEMBERS ARE USED IN EXTERIOR APPLICATIONS.
- ALL ACZA TREATMENTS
- RETENTION LEVELS GREATER THAN 0.40 PCF FOR ACQ, 0.41 PCF FOR CBA-A, OR 0.21 PCF FOR CA-B TREATMENTS.

STAINLESS STEEL CONNECTORS REQUIRE MATCHING STAINLESS STEEL FASTENERS. ZMAX AND POST HOT-DIP GALVANIZED CONNECTORS REQUIRE FASTENERS GALVANIZED PER ASTM A153. THRU-BOLTS AND ANCHOR RODS USED IN DRY CONDITIONS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55 MINIMUM. SEE IBC SECTION 2304.10.5.2 AND "FRAMING CONNECTORS" SECTION ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.

90% DESIGN

LUND OPSAHL

FOR COORDINATION

Date	No	Revision	By
	4		
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PROJECT ENGINEER K. ROLLINS
DESIGNED/DRAWN D. GENSON
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CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No. 24-063-01
Date 02/07/2025
Field Bk.

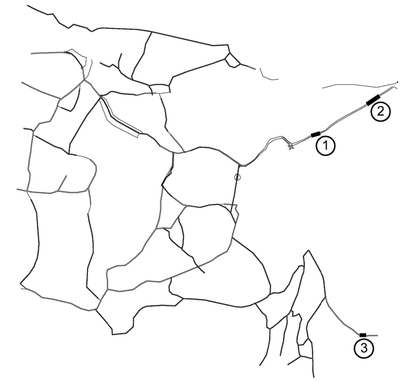
HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S0.02 STRUCTURAL GENERAL NOTES

PLAN REF. NO.

SHEET 15 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000

1 OVERALL SITE PLAN
SCALE : 1" = 100'-0"



KEY PLAN

NOTE:
REFER TO CIVIL AND LANDSCAPE PLANS FOR SITE FEATURES AND GRADING.

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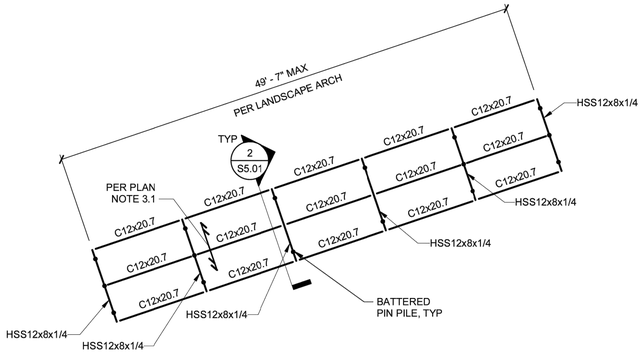
HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S1.01 OVERALL SITE PLAN

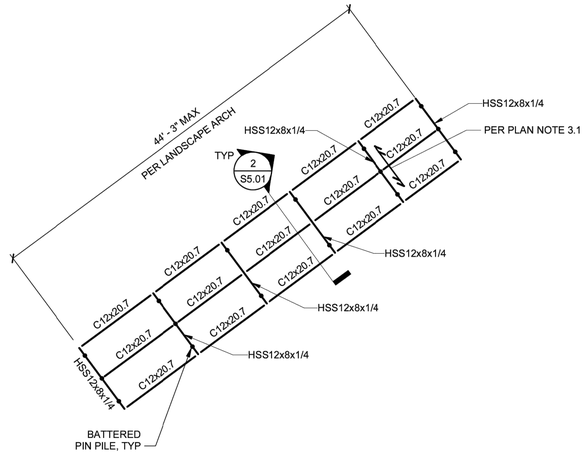
PLAN REF. NO.

SHEET 16 OF 19

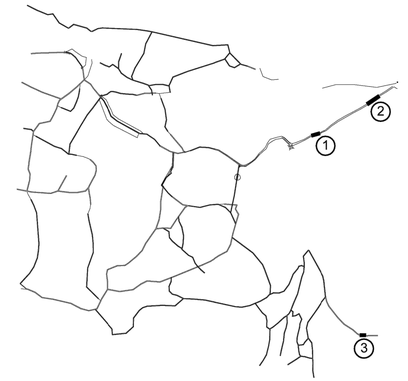
CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000



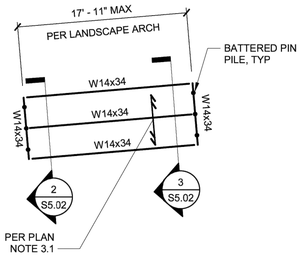
1 BOARDWALK PARTIAL PLAN 1
SCALE : 1/8" = 1'-0"



2 BOARDWALK PARTIAL PLAN 2
SCALE : 1/8" = 1'-0"



KEY PLAN



3 BRIDGE PARTIAL PLAN
SCALE : 1/8" = 1'-0"

FRAMING PLAN NOTES

1. **GENERAL**
   - 1.1. REFERENCE FLOOR ELEVATION SHALL BE PER LANDSCAPE ARCHITECT, UNO.
   - 1.2. REFER TO LANDSCAPE ARCHITECT DRAWINGS FOR BOARDWALK ALIGNMENT AND DIMENSIONS NOT SHOWN.
   - 1.3. REFER TO STRUCTURAL GENERAL NOTES FOR ADDITIONAL REQUIREMENTS.
   - 1.4. EXISTING CONDITIONS ARE ASSUMED AND MUST BE VERIFIED BY THE CONTRACTOR. WHERE DISCOVERED CONDITIONS VARY FROM THOSE SHOWN ON PLANS, CONTRACTOR SHALL CONTACT THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
2. **PILES AND GRADE BEAMS**
   - 2.1. ALL STEEL PILES SHALL BE 2"Ø X-STRONG WITH MINIMUM 3 TON CAPACITY.
   - 2.2 BOARDWALK STEEL PILE GROUPS TO BE SPACED 10'-0" OC MAXIMUM.
3. **FLOORS**
   - 3.1. FLOOR SHALL BE 2" DURAGRID HD-4000 GRATING BY STRONGWELL OR APPROVED EQUAL. FLOOR TO BE ADA COMPLIANT.
   - 3.2. REFER TO TYPICAL STEEL FRAMING DETAILS.
   - 3.3. BEAMS TO BE WEATHERING STEEL.

FRAMING PLAN LEGEND

- STEEL PILE (BELOW)
- BEAM/JOIST
- DECK SPAN

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PROJECT ENGINEER K. ROLLINS
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DEPARTMENT OF PARKS AND RECREATION

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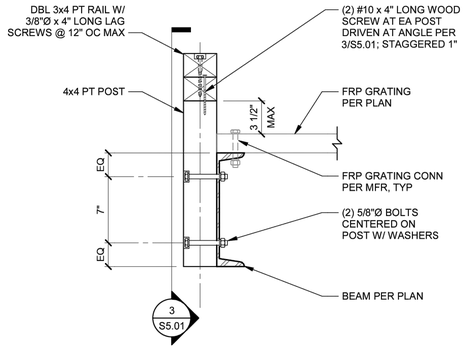
HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S2.01 ENLARGED FRAMING PLANS

PLAN REF. NO.

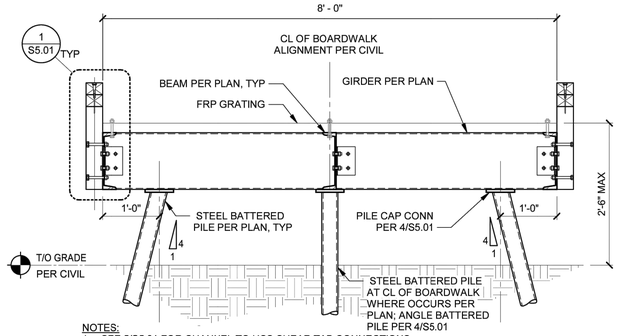
SHEET 17 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000



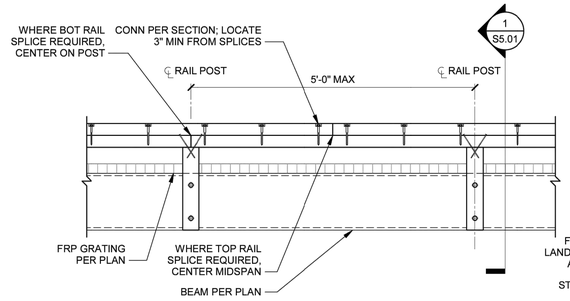
NOTES:
1. DAP BOLTS 3/4" MAX. DAP LAG SCREWS 1/2" MAX.

1 BOARDWALK CANE RAIL SECTION
Scale: 1 1/2" = 1'-0"



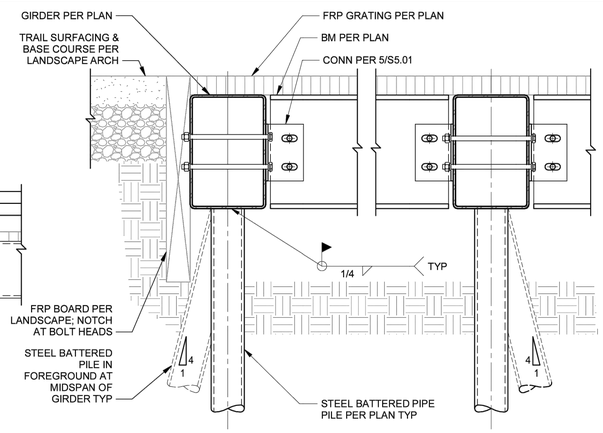
NOTES:
1. SEE 5/S5.01 FOR CHANNEL TO HSS SHEAR TAB CONNECTIONS.

2 TYPICAL BOARDWALK SECTION
Scale: 3/4" = 1'-0"

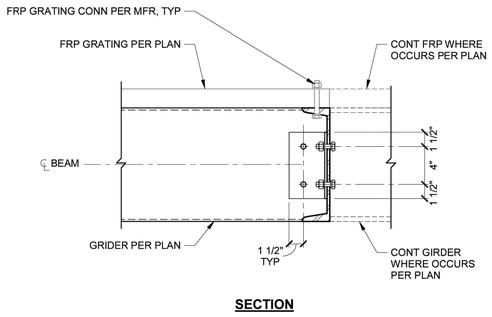


NOTES:
DAP BOLTS 3/4" MAX. DAP LAG SCREWS 1/2" MAX.

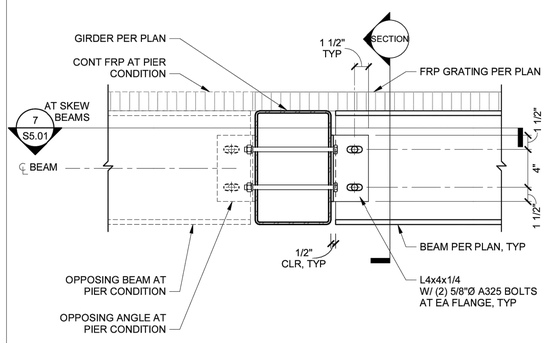
3 BOARDWALK CANE RAIL ELEVATION
Scale: 3/4" = 1'-0"



4 TYPICAL BOARDWALK ABUTMENT DETAIL
SCALE : 1 1/2" = 1'-0"

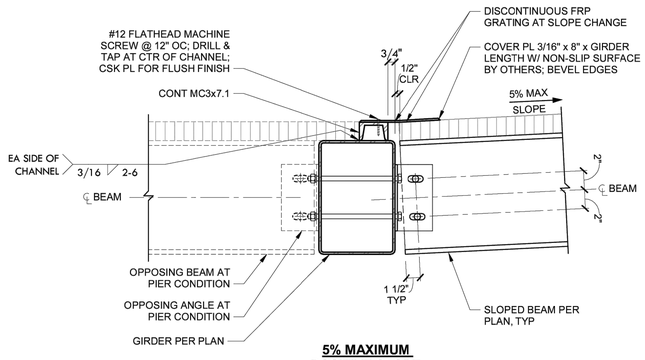


SECTION

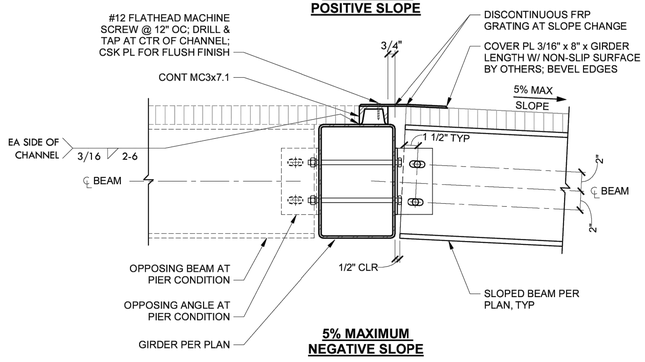


NOTES:
1. SEE 6/S5.01 FOR SLOPED BEAM CONDITION.
2. SEE 7/S5.01 FOR SKEWED BEAM CONDITION.
3. HORIZONTAL LONG SLOTTED HOLES IN ANGLE AT CONNECTION TO BEAM.

5 TYPICAL BEAM TO GIRDER CONNECTION
SCALE : 1 1/2" = 1'-0"



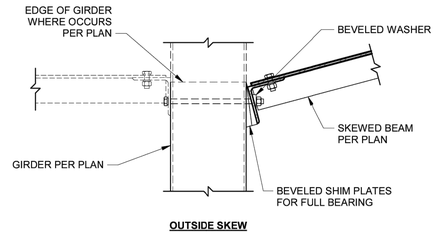
5% MAXIMUM POSITIVE SLOPE



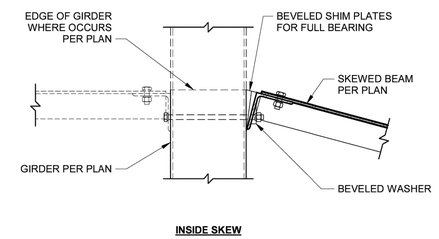
5% MAXIMUM NEGATIVE SLOPE

NOTES:
1. SEE 5/S5.01 FOR CALLOUTS IN COMMON.
2. DETAIL MAY BE USED AT ANY BEAM TO GIRDER CONNECTION AS REQUIRED BY SITE TOPOGRAPHY.
3. HORIZONTAL LONG SLOTTED HOLES IN ANGLE AT CONNECTION TO BEAM.

6 SLOPED BEAM TO GIRDER CONNECTION
SCALE : 1 1/2" = 1'-0"



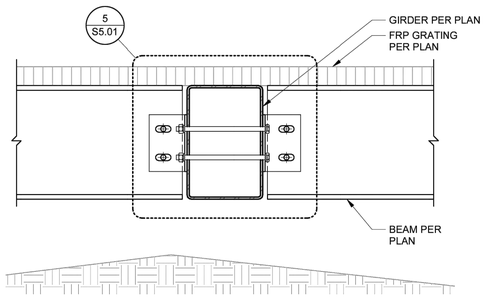
OUTSIDE SKEW



INSIDE SKEW

NOTES:
1. SEE 5/S5.01 FOR CALLOUTS IN COMMON.
2. DETAIL MAY BE USED AT ANY BEAM TO GIRDER CONNECTION AS REQUIRED BY SITE PATH.
3. HORIZONTAL LONG SLOTTED HOLES IN ANGLE AT CONNECTION TO BEAM

7 SKEWED BEAM TO GIRDER CONNECTION
SCALE : 1 1/2" = 1'-0"



10 TYPICAL PIER DETAIL
SCALE : 1 1/2" = 1'-0"

90% DESIGN

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Date	No	Revision	By

PROJECT ENGINEER K. ROLLINS
DESIGNED/DRAWN D. GENSON
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CITY OF BELLINGHAM, WASHINGTON
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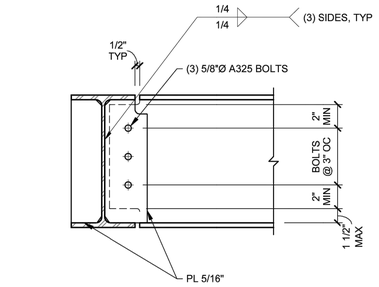
HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S5.01 STRUCTURAL DETAILS

PLAN REF. NO.

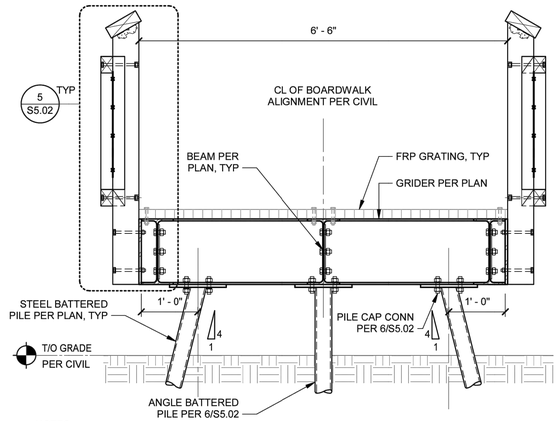
SHEET 18 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000



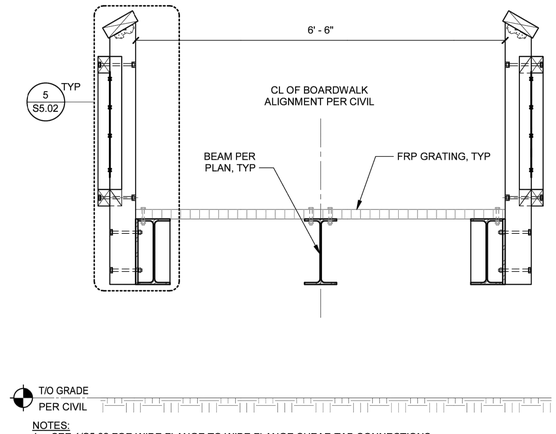
NOTES:
1. SEE LEGEND SHOWN ON PLANS FOR BEAM CONNECTION DESIGNATIONS
2. SEE PLANS FOR BEAM SIZES AND SPECIAL CONNECTIONS WHERE NOTED
3. HORIZONTAL SHORT SLOTTED HOLES (SSL) MAY BE USED IN SHEAR TABS AT CONTRACTORS OPTION, UNO
4. ALL BOLTED CONNECTIONS SHALL BE INSPECTED PER IBC 1705.12.1

1 TYPICAL BEAM SHEAR TAB CONNECTION
SCALE : 1 1/2" = 1'-0"



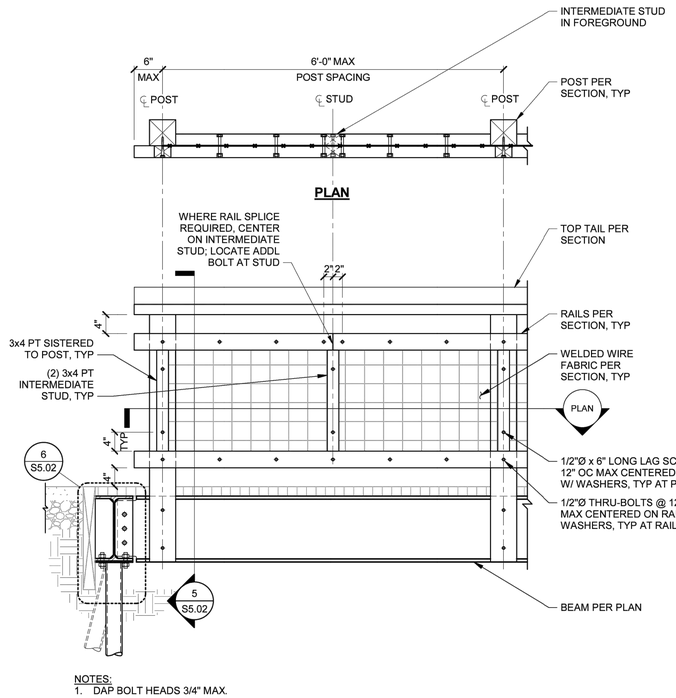
NOTES:
1. SEE 1/S5.02 FOR WIDE FLANGE TO WIDE FLANGE SHEAR TAB CONNECTIONS.

2 TYPICAL BRIDGE SECTION
SCALE : 3/4" = 1'-0"



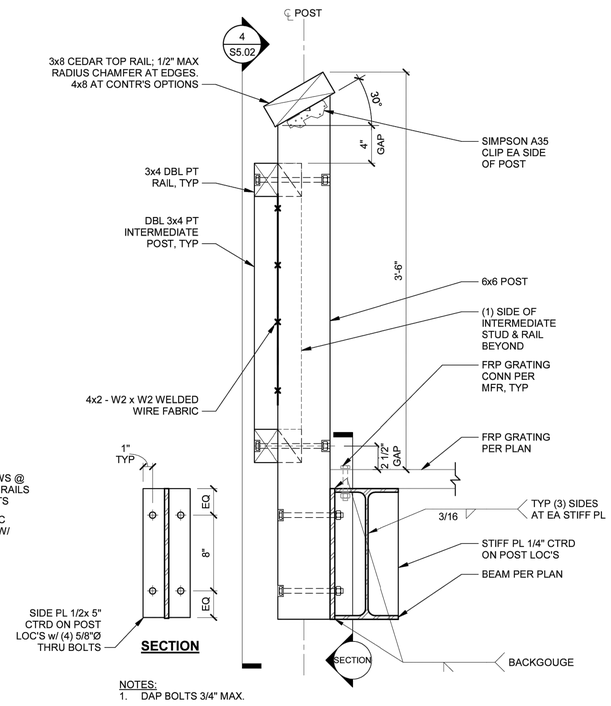
NOTES:
1. SEE 1/S5.02 FOR WIDE FLANGE TO WIDE FLANGE SHEAR TAB CONNECTIONS.

3 TYPICAL BRIDGE SECTION
SCALE : 3/4" = 1'-0"



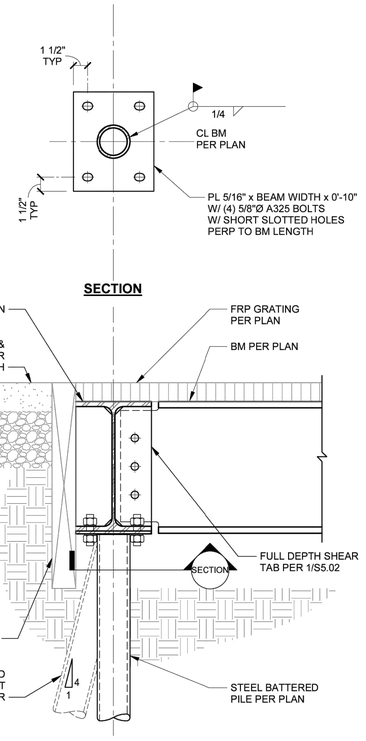
NOTES:
1. DAP BOLT HEADS 3/4" MAX.

4 BRIDGE WOOD HANDRAIL ELEVATION
SCALE : 3/4" = 1'-0"



NOTES:
1. DAP BOLTS 3/4" MAX.

5 BRIDGE WOOD HANDRAIL SECTION
SCALE : 1 1/2" = 1'-0"



NOTES:
1. PROVIDE SHORT SLOTTED HOLES IN BEAM ORIENTED ALONG BEAM LENGTH.
2. ALL BOLTED CONNECTIONS SHALL BE INSPECTED PER IBC 1705.12.1
3. IN LIEU OF BOLTED CONNECTION, WELDING SIM 4/S5.01 IS ACCEPTABLE AT CONTRACTOR'S OPTION.

6 BRIDGE PILE CAP CONNECTION
SCALE : 1 1/2" = 1'-0"

90% DESIGN

LUND OPSAHL

FOR COORDINATION

	4		
	3		
	2		
	1		
Date	No	Revision	By

PROJECT ENGINEER Designer
DESIGNED/DRAWN Author
INSPECTOR

PARKS DIRECTOR
PARKS ENGINEER G.AUSTIN
PARKS PLANNER P.GILL

CITY OF BELLINGHAM, WASHINGTON
DEPARTMENT OF PARKS AND RECREATION

SCALE
Horiz. AS SHOWN
Vert. AS SHOWN

DATUM
NAD 83/98
NAVD 88

Job. No. 24-063-01
Date 02/07/2025
Field Bk.

HUNDRED ACRE WOOD - PHASE 1B IMPROVEMENTS
S5.02 STRUCTURAL DETAILS

PLAN REF. NO.

SHEET 19 OF 19

CONTACT PERSON: GINA AUSTIN, PE, PROJECT ENGINEER AT 360-778-7000