

**SURVEYOR'S NOTES**

- ALL TITLE INFORMATION SHOWN ON THIS MAP HAS BEEN EXTRACTED FROM CHICAGO TITLE COMPANY OF WASHINGTON COMMITMENT NO. 0187036-16, UPDATED AND REVISED NOVEMBER 24, 2021. IN PREPARING THIS MAP, D.R. STRONG CONSULTING ENGINEERS, LLC HAS CONDUCTED NO INDEPENDENT TITLE SEARCH NOR IS D.R. STRONG CONSULTING ENGINEERS, LLC AWARE OF ANY TITLE ISSUES AFFECTING THE SURVEYED PROPERTY OTHER THAN THOSE SHOWN ON THE MAP AND DISCLOSED BY REFERENCED CHICAGO TITLE COMPANY OF WASHINGTON COMMITMENT. D.R. STRONG CONSULTING ENGINEERS, LLC HAS RELIED WHOLLY ON SAID CHICAGO TITLE COMPANY OF WASHINGTON REPRESENTATIONS OF THE TITLE'S CONDITION TO PREPARE THIS SURVEY AND THEREFORE D.R. STRONG CONSULTING ENGINEERS, LLC QUALIFIES THE MAP'S ACCURACY AND COMPLETENESS TO THAT EXTENT.
- THIS SURVEY REPRESENTS VISIBLE PHYSICAL IMPROVEMENT CONDITIONS EXISTING ON APRIL 13, 2023. ALL SURVEY CONTROL INDICATED AS "FOUND" WAS RECOVERED FOR THIS PROJECT ON APRIL 6, 2023 UNLESS NOTED OTHERWISE.
- PROPERTY AREA:  
PARCEL A = 7,999± SQUARE FEET (0.1836± ACRES)  
PARCEL B = 25,800± SQUARE FEET (0.5923± ACRES)
- ALL DISTANCES ARE IN U.S. SURVEY FEET.
- THIS IS A COMBINED FIELD TRAVERSE AND GLOBAL NAVIGATION SATELLITE SYSTEMS SURVEY. A TRIMBLE S7 ONE SECOND COMBINED ELECTRONIC TOTAL STATION AND A TRIMBLE R121 GLOBAL NAVIGATION SATELLITE SYSTEMS (GNSS) RECEIVER WERE USED TO MEASURE THE ANGULAR AND DISTANCE RELATIONSHIPS BETWEEN THE CONTROLLING MONUMENTATION AS SHOWN. CLOSURE RATIOS OF THE TRAVERSE MET OR EXCEEDED THOSE SPECIFIED IN WAC 332-130-090. ALL MEASURING INSTRUMENTS AND EQUIPMENT ARE MAINTAINED IN ADJUSTMENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
- RTK GNSS OBSERVATIONS WERE MADE ON 04/06/2023 UTILIZING THE WASHINGTON STATE REFERENCE NETWORK (WSRN). THE COMBINED GRID TO GROUND SCALE FACTOR USED IS 0.999986520.
- UTILITIES OTHER THAN THOSE SHOWN MAY EXIST ON THIS SITE. ONLY THOSE UTILITIES WITH EVIDENCE OF THEIR INSTALLATION VISIBLE AT GROUND SURFACE ARE SHOWN HEREON. UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE ONLY. UNDERGROUND CONNECTIONS ARE SHOWN AS STRAIGHT LINES BETWEEN SURFACE UTILITY LOCATIONS BUT MAY CONTAIN BENDS OR CURVES NOT SHOWN. SOME UNDERGROUND LOCATIONS SHOWN HEREON MAY HAVE BEEN TAKEN FROM PUBLIC RECORDS. D.R. STRONG CONSULTING ENGINEERS, INC. ASSUMES NO LIABILITY FOR THE ACCURACY OF PUBLIC RECORDS.
- THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD SURVEY.
- CONTOURS ARE DERIVED FROM DIRECT FIELD OBSERVATION. CONTOUR ACCURACY IS WITHIN ONE-HALF CONTOUR INTERVAL PER NATIONAL MAPPING STANDARDS.
- THIS SURVEY WAS PERFORMED IN SUPPORT OF ENGINEERING DESIGN.

**CONSTRUCTION SEQUENCE**

- ARRANGE AND ATTEND A PRECONSTRUCTION MEETING WITH THE CITY INSPECTOR.
- FLAG OR FENCE CLEARING LIMITS.
- CALL ONE-CALL UTILITY LOCATE SERVICE PRIOR TO ANY EXCAVATION WORK.
- GRADE INSTALL ROCK CONSTRUCTION ENTRANCE IF NECESSARY.
- INSTALL PERIMETER PROTECTION (SILT FENCE, BRUSH BARRIER, ETC.).
- CONSTRUCT RESIDENCE AND OTHER SITE IMPROVEMENTS.
- MAINTAIN EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OR COUNTY STANDARDS AND MANUFACTURER'S RECOMMENDATIONS.
- MAINTAIN ACCESS TO OFF-SITE ROADS AND DRIVEWAYS AT ALL TIMES DURING THE DURATION OF THE PROJECT.
- RELOCATE EROSION CONTROL MEASURES OR INSTALL NEW MEASURES SO THAT AS SITE CONDITIONS CHANGE THE EROSION AND SEDIMENT CONTROL IS ALWAYS IN ACCORDANCE WITH THE CITY TESC MINIMUM REQUIREMENTS.
- COVER ALL AREAS THAT WILL BE UNWORKED FOR MORE THAN SEVEN DAYS DURING THE DRY SEASON OR TWO DAYS DURING THE WET SEASON WITH STRAW, WOOD FIBER MULCH, COMPOST, PLASTIC SHEETING OR EQUIVALENT.
- STABILIZE ALL AREAS THAT REACH FINAL GRADE WITHIN SEVEN DAYS.
- SEED OR SOD ANY AREAS TO REMAIN UNWORKED FOR MORE THAN 30 DAYS.
- UPON COMPLETION OF THE PROJECT, ALL DISTURBED AREAS MUST BE STABILIZED AND BMPS REMOVED IF APPROPRIATE AFTER ACCEPTANCE BY INSPECTOR.

NW 1/4 SECTION 12, TOWNSHIP 24 N, RANGE 4E, W.M.

**2436 74TH AVE SE**

**LEGAL DESCRIPTION:**

PARCEL B:  
PARCEL B OF CITY OF MERCER ISLAND LOT LINE REVISION NO. SUB14-011, RECORDED UNDER RECORDING NUMBER 20150528900006, IN KING COUNTY WASHINGTON; SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

**REFERENCES:**

- PLAT - MCGILVRA'S ISLAND ADDITION, VOLUME 16, PAGE 58 OF PLATS.
- LOT LINE REVISION SUB14-011, RECORDING NO. 20150528900006.
- SURVEY - RECORDING NO. 8501049012.

**HORIZONTAL DATUM:**

WASHINGTON PLANE COORDINATE SYSTEM, NORTH ZONE. NAD83-2011 EPOCH 2010.00 (SEE SURVEY NOTE 6)

**VERTICAL DATUM:**

NAVD 88 PER GNSS OBSERVATION (SEE SURVEY NOTE 6)

**BENCHMARK:**

3.5" DIA. CONCRETE MONUMENT WITH 1/2" BRASS PLUG AND PUNCH IN MONUMENT CASE AT THE INTERSECTION OF SE 24TH ST. AND 74TH AVE SE. BENCHMARK IS TOP OF CONCRETE MONUMENT. ELEVATION = 155.20'

**P.E. CERTIFICATION FOR SECTION B:**

I HEREBY STATE THAT THIS CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN FOR 2430 74TH AVE SE HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE STANDARD OF CARE AND EXPERTISE WHICH IS USUAL AND CUSTOMARY IN THIS COMMUNITY FOR PROFESSIONAL ENGINEERS. I UNDERSTAND THAT THE CITY OF MERCER ISLAND DOES NOT AND WILL NOT ASSUME LIABILITY FOR THE SUFFICIENCY, SUITABILITY, OR PERFORMANCE OF CONSTRUCTION SWPPP BMPS PREPARED BY ME.

**TESC LEGEND:**

FOR ADDITIONAL TESC DETAILS REFER TO DOE 2012/ 2014 SWMMWW

- CL CONSTRUCTION LIMITS, TO BE FLAGGED OR FENCED WHEN NO SILT FENCE IS PROPOSED (BMP C103)
- SF SILT FENCE IS PROPOSED (BMP C233)
- CE STABILIZED CONSTRUCTION ENTRANCE (BMP C105)
- SSV STREET SWEEPING & VACUUMING
- IP INLET PROTECTION (BMP C220)
- DC DUST CONTROL (BMP C140)
- MU MULCHING, MATTING, & COMPOST BLANKETS (BMP C121, BMP C125)
- PS PERMANENT SEEDING AND PLANTING (BMP C120)
- SA POST-CONSTRUCTION SOIL QUALITY & DEPTH (BMP TS.13) SEE DETAIL ON SHEET C2
- CH CONCRETE HANDLING (BMP C151)
- PC PLASTIC COVERING (BMP C123)

**EARTHWORK VOLUME CALCULATIONS**

	CUT VOLUME (CU. YDS.)	FILL VOLUME (CU. YDS.)	NET VOLUME (CU. YDS.)
SITE 9		100	91 FILL

ALL VOLUMES ARE APPROXIMATE AND ARE PROVIDED FOR PERMITTING PURPOSES AND REPRESENT FINISH GRADE TO EXISTING GRADE AS SHOWN. CONTRACTOR SHALL RELY ON HIS/HER OWN ESTIMATES FOR DETERMINING ACTUAL EARTHWORK QUANTITIES. THE VOLUMES DO NOT INCLUDE STRIPPING, STRUCTURAL EXCAVATION, UTILITY EXCAVATION, EXPANSION/COMPACTION FACTOR OR ANY SOIL TYPE RESTRICTIONS.



**VICINITY MAP**  
SCALE 1" = 500'

**PROJECT CONTACTS:**

- PROPERTY OWNER/APPLICANT.....VANN LANZ  
.....LNL BUILDS, LLC.  
.....317 4TH STREET  
.....KIRKLAND, WA 98033  
.....(206) 499-1277  
.....VANN@LNLBUILDS.COM
- CIVIL ENGINEER/SURVEYOR.....D.R. STRONG CONSULTING ENGINEERS, INC.  
.....620 7TH AVENUE  
.....KIRKLAND, WASHINGTON 98033  
.....(425) 827-3063  
.....CONTACT: MAHER A. JOUDI, P.E.  
.....MAHER.JOUDI@DRSTRONG.COM
- GEOTECHNICAL ENGINEER.....GEENGINEERS, INC.  
.....8410 154TH AVE NE  
.....REDMOND, WASHINGTON 98052  
.....(425) 861-6000
- ENVIRONMENTAL ENGINEER.....ALTMANN OLIVER ASSOCIATES, LLC.  
.....PO BOX 578  
.....CARNATION, WA 98014  
.....(425) 333-4535  
.....CONTACT: JOHN ALTMANN  
.....JOHN@ALTOLIVER.COM
- ARBORIST.....DAVEY RESOURCE GROUP, INC.  
.....18809 10TH AVE NE  
.....SHORELINE, WA  
.....(253) 656-1650

**PROJECT DESCRIPTION:**

- SITE ADDRESS.....2436 74TH AVE SE  
TAX PARCEL NUMBER.....5315100455  
NUMBER OF LOTS.....1  
ZONING.....R-9.6  
SITE AREA.....25,799 S.F. (0.592 ACRES)  
GROSS PROJECT AREA.....6,561 S.F. (0.194 ACRES)  
PROPOSED IMPERVIOUS AREA.....3,418 S.F. (13.2%)  
OFFSITE IMPERVIOUS AREA.....478 S.F.  
REPLACED IMPERVIOUS AREA.....0 S.F. (0.0%)  
PROPOSED PERVIOUS AREA.....22,381 S.F. (66.7%)  
EXISTING LOT COVERAGE.....0 S.F. (0.0%)  
PROPOSED LOT COVERAGE.....2,616 S.F. (10.14%)  
NUMBER OF PARKING SPACES.....2 MIN.

**GRADING NOTE:**

TOTAL AREA TO BE DISTURBED ON-SITE...5,521 S.F.  
TOTAL AREA TO BE DISTURBED OFF-SITE...1,040 S.F.  
FILL SHALL CONSIST OF SUITABLE MATERIAL ORIGINATING FROM THE SITE OR FROM AN APPROVED SUPPLIER.

**CONSTRUCTION NOTES:**

- ALL UTILITIES TO BE DISCONNECTED OR REMOVED PRIOR TO THE START OF THE PROJECT. COORDINATE WITH UTILITY COMPANIES PRIOR TO DISCONNECTION OR REMOVAL.

**SOIL AMENDMENT NOTE:**

AREA (A) ENCOMPASSES THE ENTIRE SITE OUTSIDE OF HARD SURFACES. SEE LANDSCAPE PLANS FOR TURF AND PLANTING BED AREAS. STOCKPILE SITE DUFF AND TOPSOIL FOR ALL DISTURBED PERVIOUS AREAS AND REAPPLY WITH SOIL AMENDMENT AFTER GRADING AND CONSTRUCTION. MINIMUM SCARIFICATION DEPTH 8-INCHES. PROVIDE A TOTAL OF 14.4 C.Y. OF AMENDMENT FOR AN AREA OF 2,665 S.F. (AREAS FOR TURF AND PLANTING BEDS TO BE DETERMINED)

**GENERAL EROSION CONTROL NOTES:**

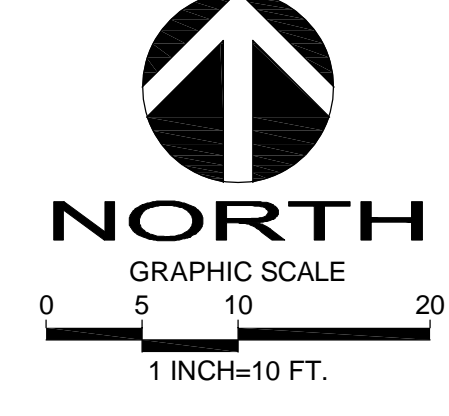
ALL DISTURBED AREAS SHALL BE STABILIZED USING TYPICAL TESC BMPS. THE LIMITS OF DISTURBANCE WILL BE DELINEATED WITH HIGH VISIBILITY CONSTRUCTION FENCING. DURING CONSTRUCTION SILT FENCES WILL BE PLACED DOWN SLOPE OF DISTURBED AREAS ALONG WITH STRAW MATTING, NETS, OR PLASTIC COVERING OVER EXPOSED SOIL OR STOCKPILES. TREES TO BE RETAINED WILL BE PROTECTED WITH HIGH VISIBILITY CONSTRUCTION FENCING.  
AT THE COMPLETION OF THE PROJECT ALL DISTURBED AREAS WILL BE STABILIZED WITH COMPOST AMENDED SOILS AND HYDROSEEDING OR SOD.  
EXPOSED SOILS SHALL BE WORKED DURING THE WEEK UNTIL THEY HAVE BEEN STABILIZED. SOIL STOCKPILES WILL BE LOCATED WITHIN THE DISTURBED AREA SHOWN ON THE SWPPP SITE MAP. SOIL EXCAVATED FOR THE FOUNDATION WILL BE BACKFILLED AGAINST THE FOUNDATION AND GRADED TO DRAIN AWAY FROM THE BUILDING. NO SOILS SHALL REMAIN EXPOSED AND UNWORKED FOR MORE THAN 7 DAYS FROM MAY 1 TO SEPTEMBER 30 OR MORE THAN 2 DAYS FROM OCTOBER 1 TO APRIL 30. ONCE THE DISTURBED LANDSCAPE AREAS ARE GRADED, THE GRASS AREAS WILL BE AMENDED USING BMP TS.13 POST-CONSTRUCTION SOIL QUALITY AND DEPTH. ALL STOCKPILES WILL BE COVERED WITH PLASTIC OR BURLAP IF LEFT UNWORKED.

**SHEET INDEX:**

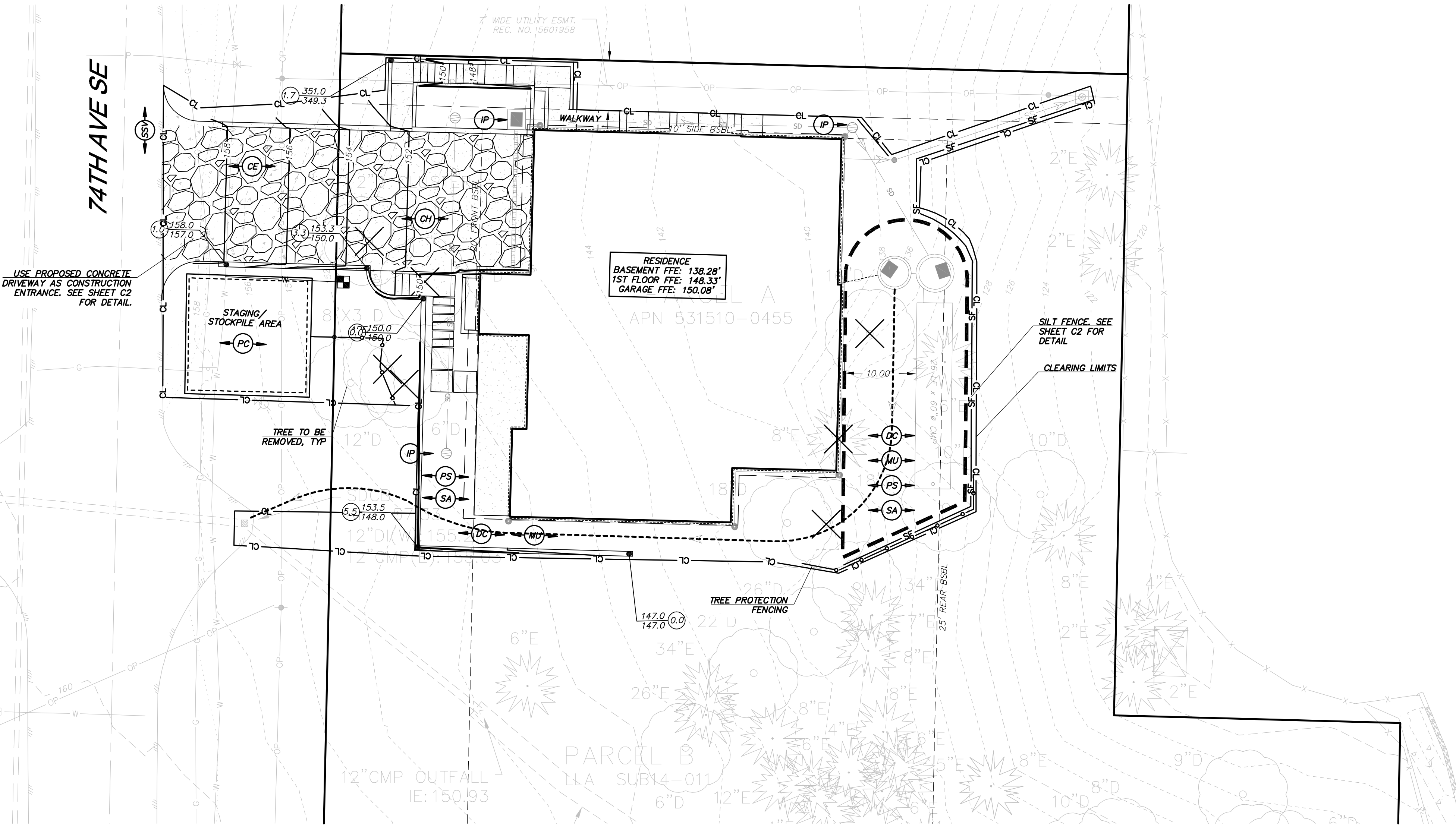
- C1 OF 6 COVER SHEET & T.E.S.C. PLAN
- C2 OF 6 T.E.S.C. NOTES & DETAILS
- C3 OF 6 TREE RETENTION PLAN
- C4 OF 6 TREE RETENTION PLAN
- C5 OF 6 STORM DRAINAGE PLAN
- C6 OF 6 NOTES & DETAILS

**BASIS OF BEARINGS:**

N 88°29'52" W BETWEEN THE MONUMENTS FOUND IN PLACE ALONG SE 24TH ST.



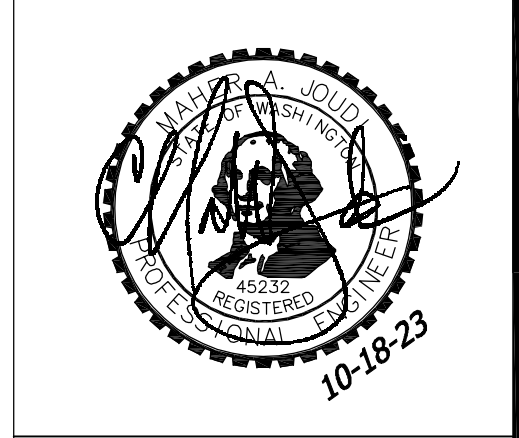
**Call 2 Working Days Before You Dig**  
**811**  
Utilities Underground Location Center  
(D.M.T.N.D.OR.WA)



**DRS**  
**D.R. STRONG CONSULTING ENGINEERS**  
ENGINEERS PLANNERS SURVEYORS  
620 - 7th AVENUE KIRKLAND, WA 98033  
O 425.827.3063 F 425.827.2423

**2430 74TH AVE SE**  
**COVER SHEET & T.E.S.C. PLAN**  
2436 74TH AVE SE  
MERCER ISLAND  
WASHINGTON 98040  
PARCEL NO. 5315100455

**VANN LANZ LNL BUILDS, LLC**  
317 4TH STREET  
KIRKLAND, WASHINGTON 98033  
206.499.1277

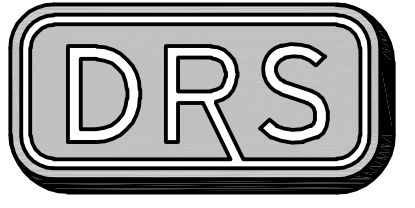


DATE	REVISION	INITIALS	COMMENTS
10.18.23			

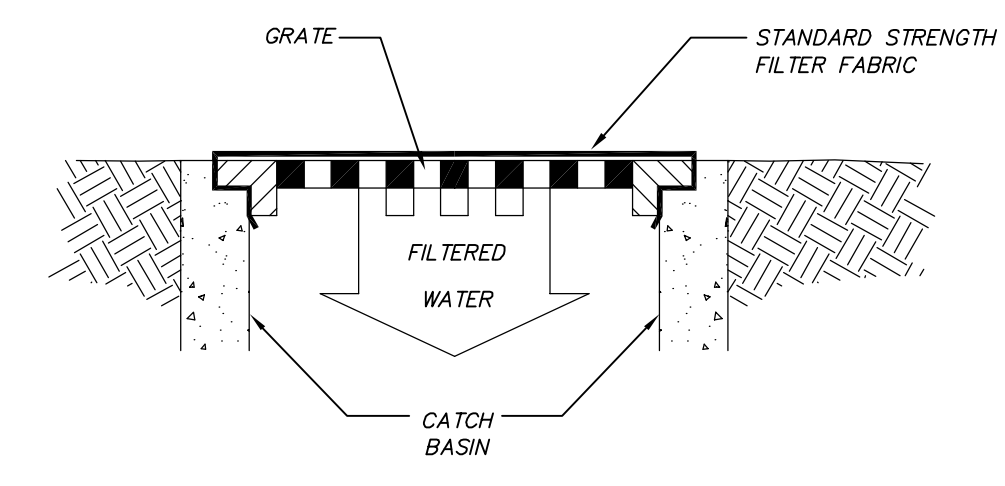
DRAFTED BY: RMF  
DESIGNED BY: RMF  
PROJECT ENGINEER: MAJ  
DATE: 9.26.23  
PROJECT NO.: 23001

DRAWING: C1  
SHEET: 1 OF 6

NW 1/4 SECTION 12, TOWNSHIP 24 N, RANGE 4E, W.M.  
**2436 74TH AVE SE**



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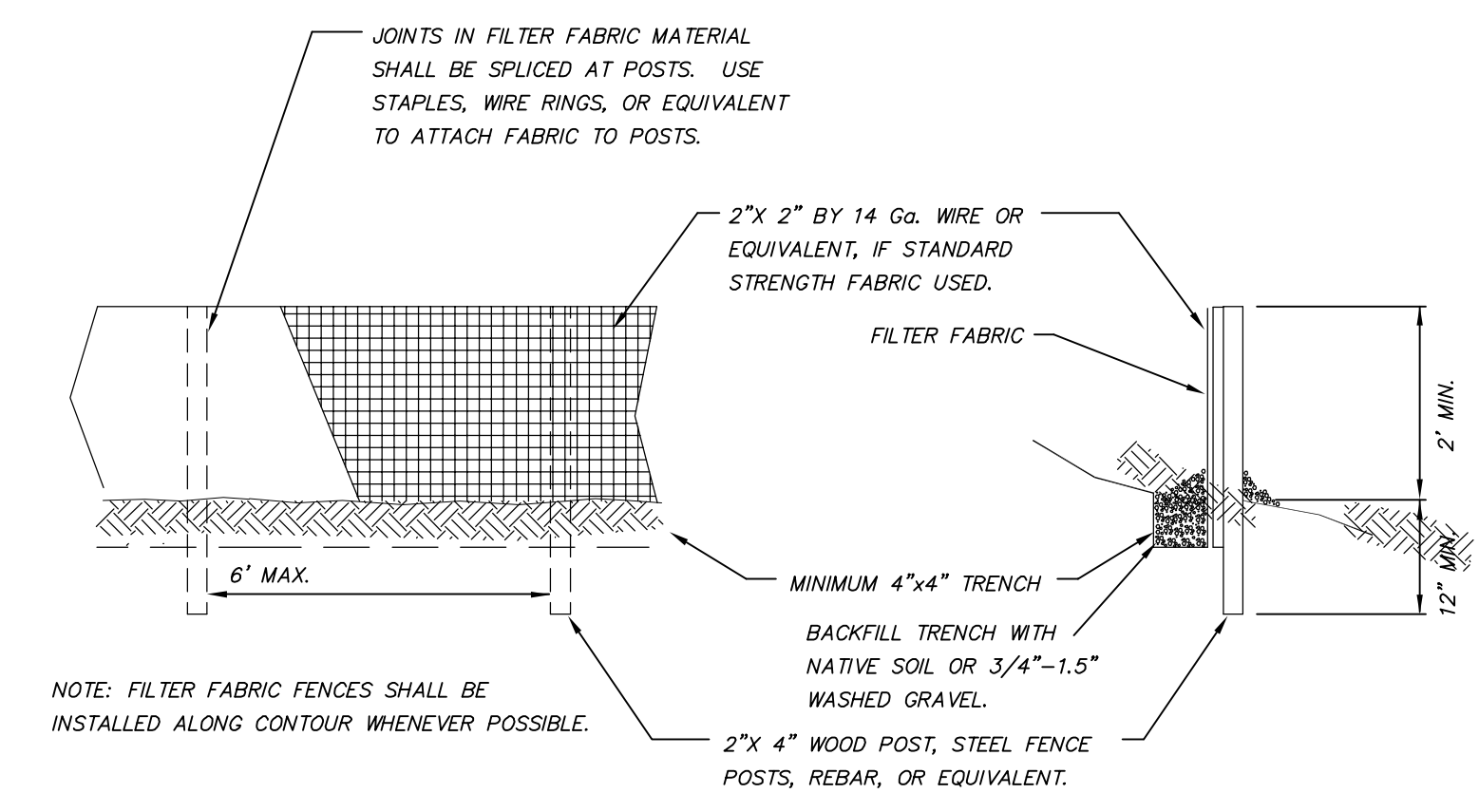


NOTE: ONLY TO BE USED WHERE PONDING OF WATER ABOVE THE CATCH BASIN WILL NOT CAUSE TRAFFIC PROBLEMS AND WHERE OVERFLOW WILL NOT RESULT IN EROSION OF SLOPES.

**CATCH BASIN INLET FILTER**

**CATCH BASIN INSERT MAINTENANCE STANDARDS**

1. ANY ACCUMULATED SEDIMENT ON OR AROUND THE FILTER FABRIC PROTECTION SHALL BE REMOVED IMMEDIATELY. SEDIMENT SHALL NOT BE REMOVED WITH WATER, AND ALL SEDIMENT MUST BE DISPOSED OF AS FILL ON SITE OR HAULED OFF SITE.
2. ANY SEDIMENT IN THE CATCH BASIN INSERT SHALL BE REMOVED WHEN THE SEDIMENT HAS FILLED ONE-THIRD OF THE AVAILABLE STORAGE. THE FILTER MEDIA FOR THE INSERT SHALL BE CLEANED OR REPLACED AT LEAST MONTHLY.
3. REGULAR MAINTENANCE IS CRITICAL FOR BOTH FORMS OF CATCH BASINS PROTECTION. UNLIKE MANY FORMS OF PROTECTION THAT FAIL GRADUALLY, CATCH BASIN PROTECTION WILL FAIL SUDDENLY AND COMPLETELY IF NOT MAINTAINED PROPERLY.

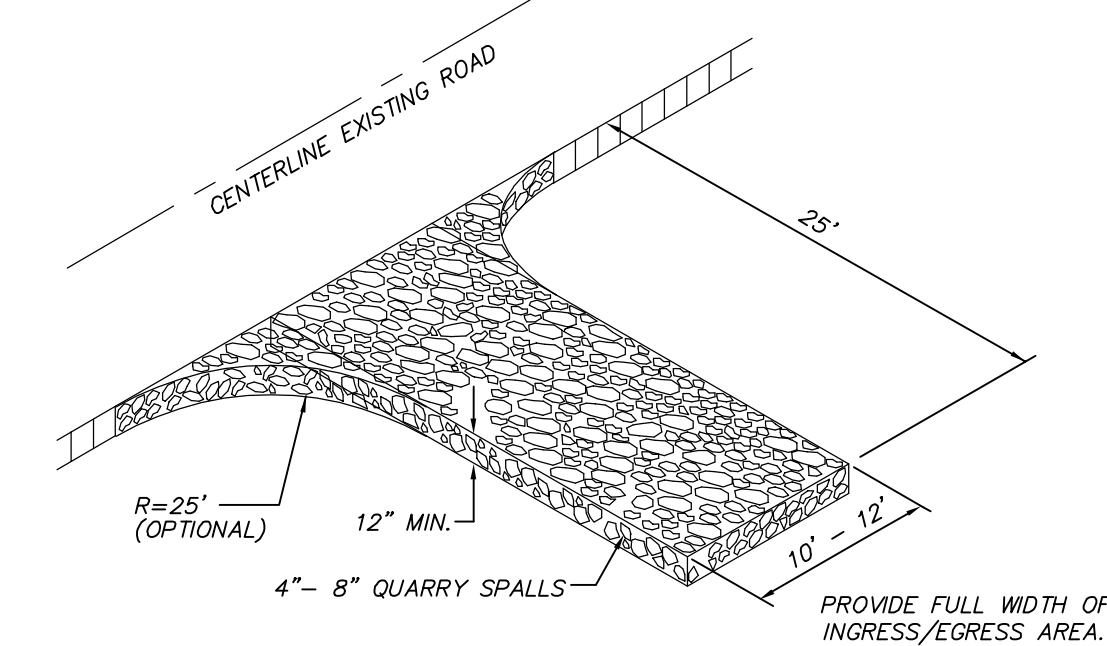


NOTE: FILTER FABRIC FENCES SHALL BE INSTALLED ALONG CONTOUR WHENEVER POSSIBLE.

**SILT FENCE DETAIL**

1. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY.
2. IF CONCENTRATED FLOWS ARE EVIDENT UPHILL OF THE FENCE, THEY MUST BE INTERCEPTED AND CONVEYED TO A SEDIMENT TRAP OR POND.
3. IT IS IMPORTANT TO CHECK THE UPHILL SIDE OF THE FENCE FOR SIGNS OF THE FENCE CLOGGING AND ACTING AS A BARRIER TO FLOW AND THEN CAUSING CHANNELIZATION OF FLOWS PARALLEL TO THE FENCE. IF THIS OCCURS, REPLACE THE FENCE OR REMOVE THE TRAPPED SEDIMENT.
4. SEDIMENT MUST BE REMOVED WHEN THE SEDIMENT IS 6 INCHES HIGH.
5. IF THE FILTER FABRIC (GEOTEXTILE) HAS DETERIORATED DUE TO ULTRAVIOLET BREAKDOWN, IT SHALL BE REPLACED.

NTS



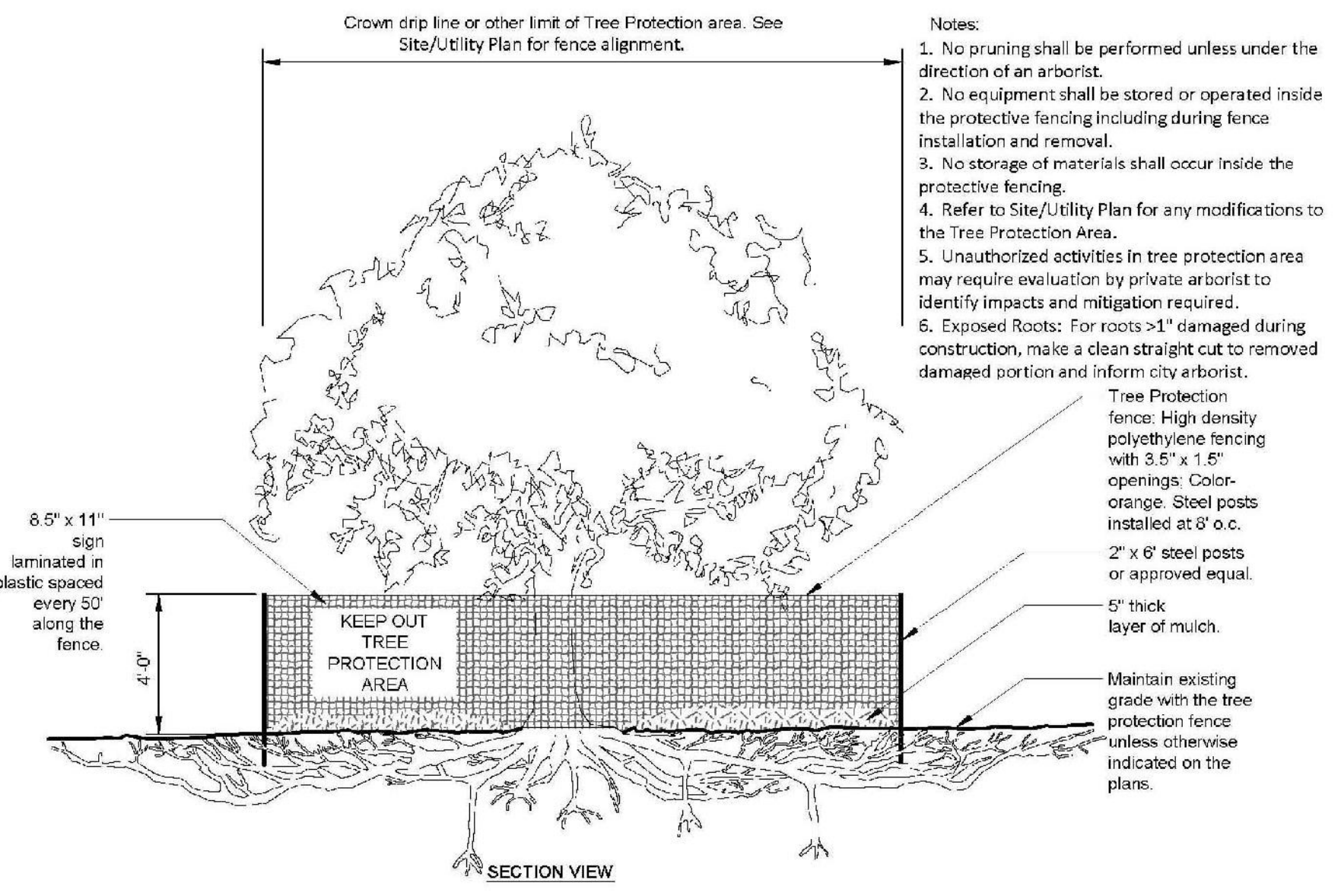
DRIVEWAYS SHALL BE PAVED TO THE EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY  
 IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD

**GRAVEL CONSTRUCTION ENTRANCE**

NTS

**EROSION AND SEDIMENT CONTROL NOTES:**

1. APPROVAL OF THIS EROSION AND SEDIMENT CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/ESC SUPERVISOR UNTIL ALL CONSTRUCTION IS APPROVED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED BY A CONTINUOUS LENGTH OF SURVEY TAPE (OR FENCING, IF REQUIRED) PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE CLEARING LIMITS SHALL BE PERMITTED. THE CLEARING LIMITS SHALL BE MAINTAINED BY THE APPLICANT/ESC SUPERVISOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED PRIOR TO OR IN CONJUNCTION WITH ALL CLEARING AND GRADING SO AS TO ENSURE THAT THE TRANSPORT OF SEDIMENT TO SURFACE WATERS, DRAINAGE SYSTEMS, AND ADJACENT PROPERTIES IS MINIMIZED.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND MODIFIED TO ACCOUNT FOR CHANGING SITE CONDITIONS (E.G. ADDITIONAL SUMP PUMPS, RELOCATION OF DITCHES AND SILT FENCES, ETC.).
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/ESC SUPERVISOR AND MAINTAINED TO ENSURE CONTINUED PROPER FUNCTIONING. WRITTEN RECORDS SHALL BE KEPT OF WEEKLY REVIEWS OF THE TESC FACILITIES DURING THE WET SEASON (OCT 1 TO APRIL 30) AND OF MONTHLY REVIEWS DURING THE DRY SEASON (MAY 1 TO SEPT. 30).
7. ANY AREAS OF EXPOSED SOILS, INCLUDING ROADWAY EMBANKMENTS, THAT WILL NOT BE DISTURBED FOR TWO DAYS DURING THE WET SEASON OR SEVEN DAYS DURING THE DRY SEASON SHALL BE IMMEDIATELY STABILIZED WITH THE APPROVED ESC METHODS (E.G., SEEDING, MULCHING, PLASTIC COVERING, ETC.).
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
9. ALL DISTURBED AREAS SHALL BE STABILIZED USING TYPICAL TESC BMP'S. THE LIMITS OF DISTURBANCE WILL BE DELINEATED WITH HIGH VISIBILITY CONSTRUCTION FENCING. DURING CONSTRUCTION SILT FENCES WILL BE PLACED DOWN SLOPE OF DISTURBED AREAS ALONG WITH STRAW MATTING, NETS, OR PLASTIC COVERING OVER EXPOSED SOIL OR STOCKPILES. TREES TO BE RETAINED WILL BE PROTECTED WITH HIGH VISIBILITY CONSTRUCTION FENCING.
10. ALL SOIL STOCKPILES TO BE COVERED WITH PLASTIC SHEETING UNTIL SUCH TIME THAT THE SOIL IS EITHER USED OR REMOVED. PILES SHOULD BE SITUATED AND LOCATED SUCH THAT SEDIMENT DOES NOT RUN INTO THE STREET OR ONTO ADJOINING PROPERTIES.
11. ALL EXPOSED SOIL AREAS SHALL BE COVERED OR PROTECTED USING AN APPROPRIATE BMP. STABILIZE DENUDED AREAS OF THE SITE BY MULCHING, SEEDING, PLANTING, OR SODDING.
12. ALL ADJACENT PROPERTIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY APPROPRIATE USE OF VEGETATION BUFFER STRIPS, SEDIMENT BARRIERS, OR FILTERS, DIKES, MULCHING, OR BY A COMBINATION OF THESE MEASURES AND OTHER APPROPRIATE BMP'S.
13. PROVIDE FOR PERIODIC STREET CLEANING TO REMOVE ANY SEDIMENT THAT MAY HAVE BEEN TRACKED OFF-SITE. SEDIMENT SHOULD BE REMOVED BY SHOVELING OR SWEEPING AND CAREFULLY REMOVED TO A SUITABLE DISPOSAL AREA WHERE IT WILL NOT BE RE-ERODED.
14. ALL INSTALLED EROSION AND SEDIMENT CONTROL BMP'S SHALL BE INSPECTED REGULARLY BY THE GENERAL CONTRACTOR ESPECIALLY AFTER ANY LARGE STORM. MAINTENANCE, INCLUDING REMOVAL AND PROPER DISPOSAL OF SEDIMENT SHOULD BE A NECESSARY TO INSURE THAT SEDIMENT AND EROSION IS CONTROLLED ON SITE.

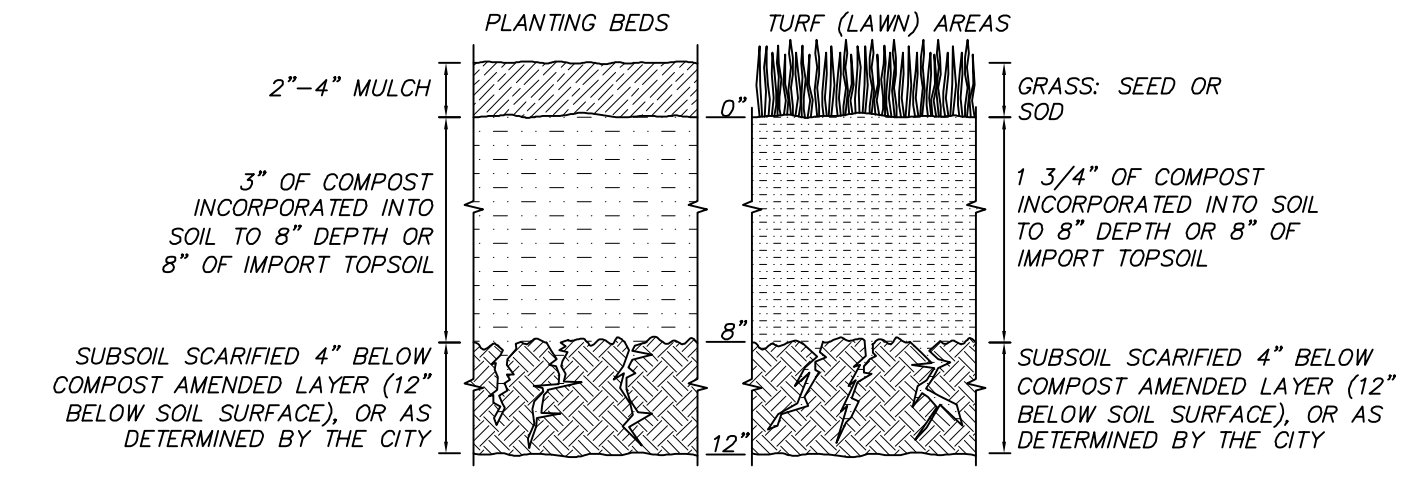


**TREE PROTECTION DETAIL**

- Notes:
1. No pruning shall be performed unless under the direction of an arborist.
  2. No equipment shall be stored or operated inside the protective fencing including during fence installation and removal.
  3. No storage of materials shall occur inside the protective fencing.
  4. Refer to Site/Utility Plan for any modifications to the Tree Protection Area.
  5. Unauthorized activities in tree protection area may require evaluation by private arborist to identify impacts and mitigation required.
  6. Exposed Roots: For roots >1" damaged during construction, make a clean straight cut to removed damaged portion and inform city arborist.

Tree Protection fence: High density polyethylene fencing with 3.5' x 1.5' openings. Color: orange. Steel posts installed at 8' o.c.  
 2" x 6" steel posts or approved equal.  
 5" thick layer of mulch.  
 Maintain existing grade with the tree protection fence unless otherwise indicated on the plans.

NTS



**SOIL AMENDMENT**

PER BMP TS.13

NTS

**SOIL AMENDMENT NOTES**

- \*SOIL RETENTION: RETAIN, IN AN UNDISTURBED STATE, THE DUFF LAYER AND NATIVE TOPSOIL TO THE MAXIMUM EXTENT PRACTICABLE. IN ANY AREAS REQUIRING GRADING REMOVE AND STOCKPILE THE DUFF LAYER AND TOPSOIL ON SITE IN A DESIGNATED, CONTROLLED AREA, NOT ADJACENT TO PUBLIC RESOURCES AND CRITICAL AREAS, TO BE REAPPLIED TO OTHER PORTIONS OF THE SITE WHERE FEASIBLE.
- \*SOIL QUALITY: ALL AREAS SUBJECT TO CLEARING AND GRADING THAT HAVE NOT BEEN COVERED BY IMPERVIOUS SURFACE, INCORPORATED INTO A DRAINAGE FACILITY OR ENGINEERED AS STRUCTURAL FILL OR SLOPE SHALL, AT PROJECT COMPLETION, DEMONSTRATE THE FOLLOWING:
1. A TOPSOIL LAYER WITH A MINIMUM ORGANIC MATTER CONTENT OF 10% DRY WEIGHT IN PLANTING BEDS, AND 5% ORGANIC MATTER CONTENT IN TURF AREAS, AND A PH FROM 6.0 TO 8.0 OR MATCHING THE PH OF THE UNDISTURBED SOIL. THE TOPSOIL LAYER SHALL HAVE A MINIMUM DEPTH OF EIGHT INCHES EXCEPT WHERE TREE ROOTS LIMIT THE DEPTH OF INCORPORATION OF AMENDMENTS NEEDED TO MEET THE CRITERIA. SUBSOILS BELOW THE TOPSOIL LAYER SHOULD BE SCARIFIED AT LEAST 4 INCHES WITH SOME INCORPORATION OF THE UPPER MATERIAL TO AVOID STRATIFIED LAYERS, WHERE FEASIBLE.
  2. MULCH PLANTING BEDS WITH 2-4 INCHES OF ORGANIC MATERIAL.
  3. USE COMPOST AND OTHER MATERIALS THAT MEET THESE ORGANIC CONTENT REQUIREMENTS:
    - A. THE ORGANIC CONTENT FOR "PRE-APPROVED" AMENDMENT RATES CAN BE MET ONLY USING COMPOST MEETING THE COMPOST SPECIFICATION FOR BIODEGRADATION (BMP TS.30). WITH THE EXCEPTION THAT THE COMPOST MAY HAVE UP TO 35% BIOSOLIDS OR MANURE. THE COMPOST MUST ALSO HAVE AN ORGANIC MATTER CONTENT OF 40% TO 65% AND A CARBON TO NITROGEN RATIO BELOW 25:1. THE CARBON TO NITROGEN RATIO MAY BE AS HIGH AS 35:1 FOR PLANTINGS COMPOSED ENTIRELY OF PLANTS NATIVE TO THE PUGET SOUND LOWLANDS REGION.
    - B. CALCULATED AMENDMENT RATES MAY BE MET THROUGH USE OF COMPOSTED MATERIAL MEETING (A) ABOVE, OR OTHER ORGANIC MATERIALS AMENDED TO MEET THE CARBON TO NITROGEN RATIO REQUIREMENTS, AND NOT EXCEEDING THE CONTAMINANT LIMITS IDENTIFIED IN TABLE 220-B. TESTING PARAMETERS, IN WAC 173-350-220.
- \*IMPLEMENTATION OPTIONS: THE SOIL QUALITY DESIGN GUIDELINES LISTED ABOVE CAN BE MET BY USING ONE OF THE METHODS LISTED BELOW:
1. LEAVE UNDISTURBED NATIVE VEGETATION AND SOIL, AND PROTECT FROM COMPACTION DURING CONSTRUCTION.
  2. AMEND EXISTING SITE TOPSOIL OR SUBSOIL EITHER AT DEFAULT "PRE-APPROVED" RATES, OR AT CUSTOM CALCULATED RATES BASED ON TESTS OF THE SOIL AND AMENDMENT.
  3. STOCKPILE EXISTING TOPSOIL DURING GRADING, AND REPLACE IT PRIOR TO PLANTING. STOCKPILED TOPSOIL MUST ALSO BE AMENDED IF NEEDED TO MEET THE ORGANIC MATTER OR DEPTH REQUIREMENTS, EITHER AT A DEFAULT "PRE-APPROVED" RATE OR AT A CUSTOM CALCULATED RATE.
  4. IMPORT TOPSOIL MIX OF SUFFICIENT ORGANIC CONTENT AND DEPTH TO MEET THE REQUIREMENTS.
- MORE THAN ONE METHOD MAY BE USED ON DIFFERENT PORTIONS OF THE SAME SITE. SOIL THAT ALREADY MEETS THE DEPTH AND ORGANIC MATTER QUALITY STANDARDS, AND IS NOT COMPACTED, DOES NOT NEED TO BE AMENDED.
- MAINTENANCE:  
 \*ESTABLISH SOIL QUALITY AND DEPTH TOWARD THE END OF CONSTRUCTION AND ONCE ESTABLISHED, PROTECT FROM COMPACTION, SUCH AS FROM LARGE MACHINERY USE, AND FROM EROSION.  
 \*PLANT VEGETATION AND MULCH THE AMENDED SOIL AREA AFTER INSTALLATION.  
 \*LEAVE PLANT DEBRIS OR ITS EQUIVALENT ON THE SOIL SURFACE TO REPLENISH ORGANIC MATTER.  
 \*REDUCE AND ADJUST, WHERE POSSIBLE, THE USE OF IRRIGATION, FERTILIZERS, HERBICIDES AND PESTICIDES, RATHER THAN CONTINUING TO IMPLEMENT FORMERLY ESTABLISHED PRACTICES.

2430 74TH AVE SE

T.E.S.C. NOTES & DETAILS  
 2436 74TH AVE SE  
 MERCER ISLAND  
 WASHINGTON 98040  
 PARCEL NO. 5315100455

VANN LANZ  
 LNL BUILDS, LLC

317 4TH STREET  
 KIRKLAND, WASHINGTON 98033  
 206-499-1277



APR MAJ

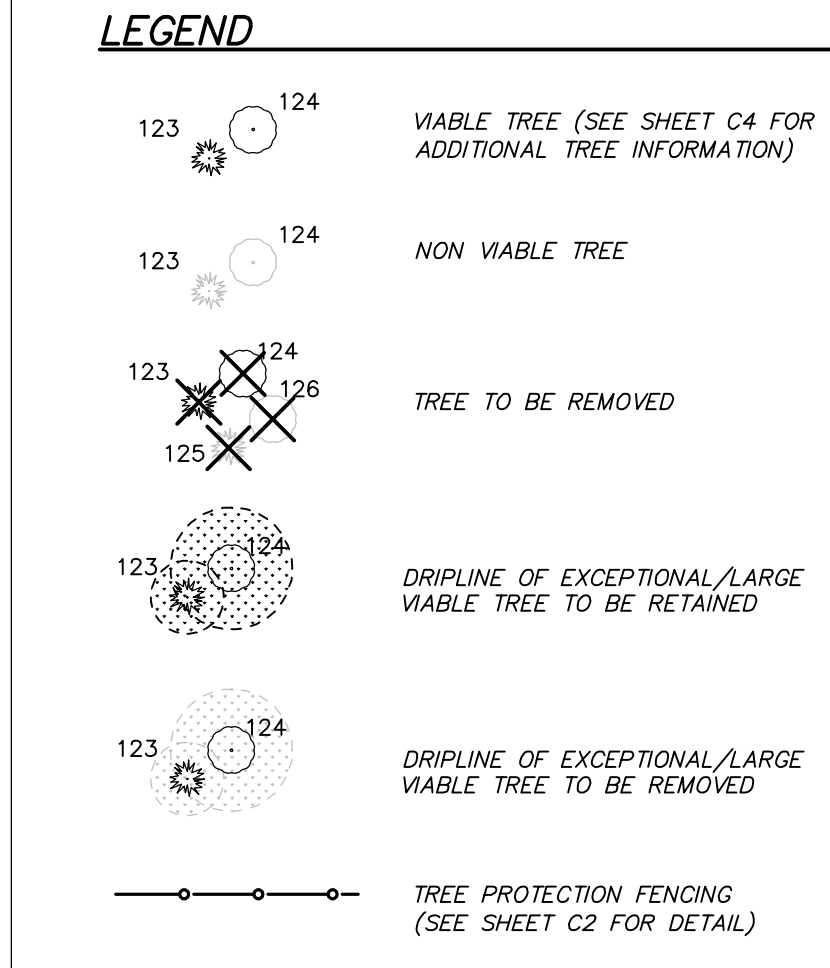
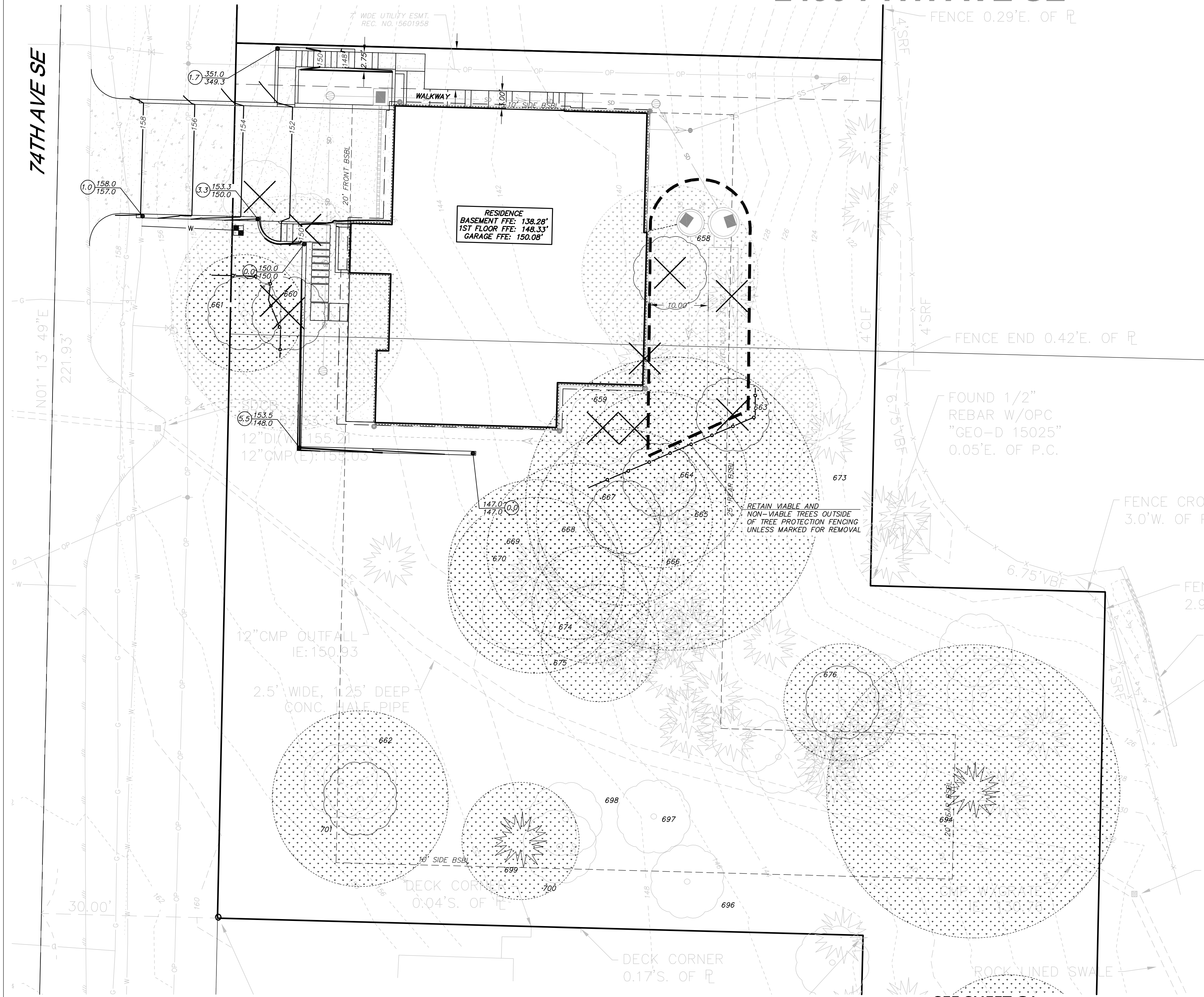
REVISION  
 INTAKE COMMENTS  
 DATE 10.18.23

DRAFTED BY: RMF  
 DESIGNED BY: RMF  
 PROJECT ENGINEER: MAJ  
 DATE: 9.26.23  
 PROJECT NO.: 23001

DRAWING: C2  
 SHEET: 2 OF 6

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 Utilities Underground Location Center  
 (D,MT,ND,OR,WA)

NW 1/4 SECTION 12, TOWNSHIP 24 N, RANGE 4E, W.M.  
**2436 74TH AVE SE**



**TREE RETENTION CALCULATION**

TOTAL NUMBER OF EXCEPTIONAL TREES:		16	
TOTAL LARGE TREES:		11	
TOTAL VIALBE ONSITE TREES:		27	
REQUIRED: 30% VIALBE TREES:		8	
PROPOSED VIALBE TREES RETAINED:		24	

Tree ID	Species	MICC Status	DBH (in)	Height (ft)	Condition	Preservation Priority	Canopy Notes	Trunk Notes	Root Notes	Parcel #	
690	Willow (Salix spp.)	n/a (condition)	19	65	10	Dying	4	50% dead branches	Decay, cavity	53151 00455	
691	Maple, Bigleaf (Acer macrophyllum)	Large	13	65	15	Fair	2	Deadwood, onside d to the east	Slight lean to the east	Blackberry, ivy, horsetail	53151 00455
692	Cedar, Western-red (Thuja plicata)	n/a (condition)	15	65	5	Dead	4			53151 00455	
693	Maple, Bigleaf (Acer macrophyllum)	Large	12	65	15	Fair	2	Full crown		Blackberry, ivy, horsetail	53151 00455

**SEE SHEET C4**

694	Cottonwood, Black (Populus trichocarpa)	Large	33	100	25	Fair	3	failures, may not be practical		Blackberry, ivy, horsetail	53151 00455	
695	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	37	25	5	Dead	4			Multistem, snag	53151 00455	
696	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	22	25	5	Dead	4			M snag	53151 00455	
697	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	22	75	15	Poor	4	broken branches, recently exposed		Lean to the south, ivy	Saturated soil, blackberry, ivy	53151 00455

Tree ID	Species	MICC Status	DBH (in)	Height (ft)	Avg. Canopy Radius (ft)	Condition	Preservation Priority	Canopy Notes	Trunk Notes	Root Notes	Parcel #
676	Maple, Bigleaf (Acer macrophyllum)	Large	10	60	10	Fair	2	Sparse, major deadwood, poor structure	Slight lean	Steep slope	53151 00455
677	Cedar, Western-red (Thuja plicata)	Exceptional	35	80	15	Very Poor	3	Sparse, heavy ivy, signs of stress	Heavy ivy	Ivy, blackberry, steep slope	53151 00455
678	Cottonwood, Black (Populus trichocarpa)	n/a (condition)	18	60	10	Very Poor	4	Sparse, heavy ivy, signs of stress, hanging deadwood	Heavy ivy	Ivy, blackberry, steep slope	53151 00455
679	Alder, Red (Alnus rubra)	n/a (condition)	14	60	10	Very Poor	4	Sparse, heavy ivy, signs of stress, hanging deadwood	Heavy ivy	Ivy, blackberry, steep slope	53151 00455
680	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	14	60	10	Very Poor	4	Oneside d N, minor deadwood	Codominant stem, inclusion, lean to west	Ivy, blackberry, steep slope	53151 00455
681	Alder, Red (Alnus rubra)	n/a (condition)	10	60	5	Very Poor	4	Ivy, serious decline	Heavy ivy, cavity, seam	Ivy, blackberry, steep slope	53151 00455
682	Alder, Red (Alnus rubra)	n/a (condition)	14	40	5	Very Poor	4	Ivy, serious decline	Heavy ivy,	Ivy, blackberry, steep slope	53151 00455
683	Alder, Red (Alnus rubra)	Large	12	60	10	Fair	3	Ivy, signs of stress	Heavy ivy, poor structure	Ivy, blackberry, steep slope	53151 00455
684	Cedar, Western-red (Thuja plicata)	Large	25	70	15	Fair	2	Sparse,	Codominant stem,		53151 00455
685	Cedar, Western-red (Thuja plicata)	Large	12	70	15	Fair	2	Sparse,			53151 00455
686	Cedar, Western-red (Thuja plicata)	Large	20	70	20	Fair	2	Sparse,	Codominant stem, poor structure, wishbone union at base		53151 00455
687	Cherry (Prunus spp.)	n/a (condition)	11	25	5	Very Poor	4	Sparse, deadwood	Codominant stem, poor structure, flaking bark		53151 00455
688	Willow (Salix spp.)	Exceptional	12	50	10	Poor	3	Sparse, deadwood, onside d to the north.		Twisted, leaning to the north	53151 00455
689	Alder, Red (Alnus rubra)	n/a (condition)	18	65	10	Dying	4	Sparse, deadwood		Flaking bark, decay	53151 00455



**2430 74TH AVE SE**  
 TREE RETENTION PLAN  
 2436 74TH AVE SE  
 MERCER ISLAND  
 WASHINGTON 98040  
 PARCEL NO. 5315100455

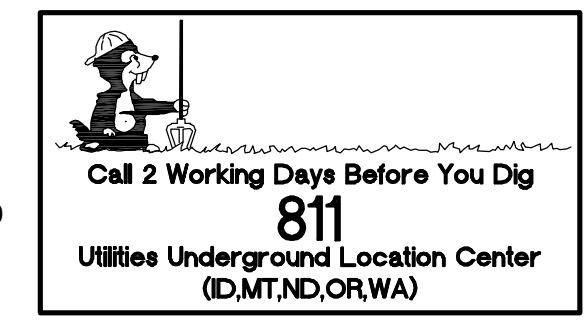
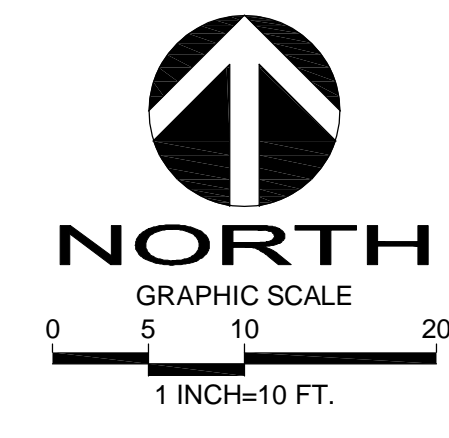
**VANN LANZ LNL BUILDS, LLC**  
 317 4TH STREET  
 KIRKLAND, WASHINGTON 98033  
 206.499.1277



DATE: 10.18.23  
 REVISION: IN TAKE COMMENTS

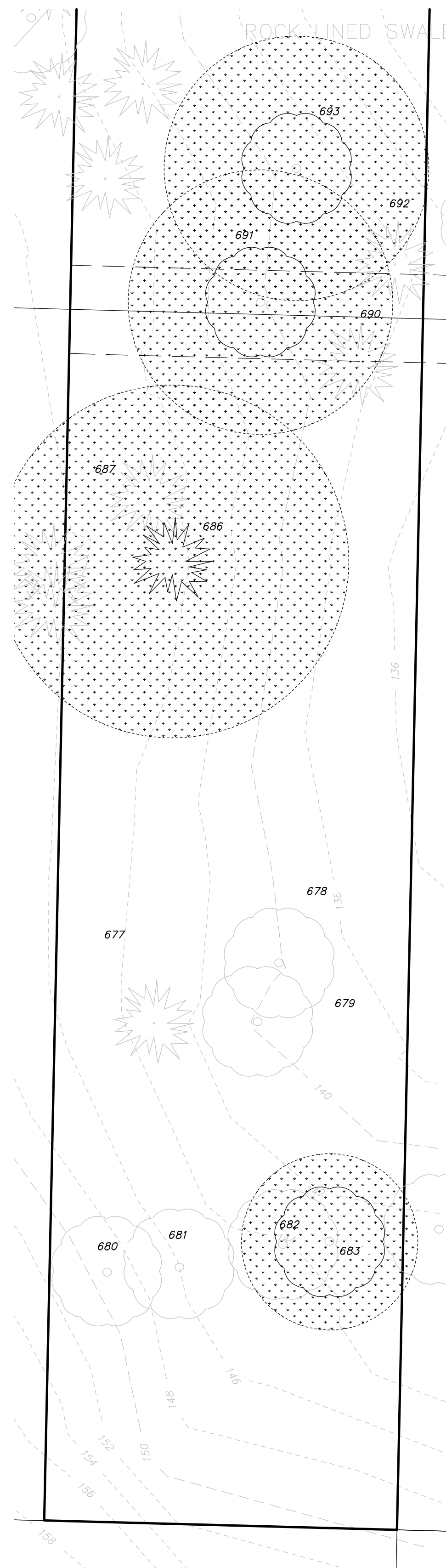
APR MAJ

DRAFTED BY: RMF  
 DESIGNED BY: RMF  
 PROJECT ENGINEER: MAJ  
 DATE: 9.26.23  
 PROJECT NO.: 23001  
 DRAWING: C3  
 SHEET: 3 OF 6



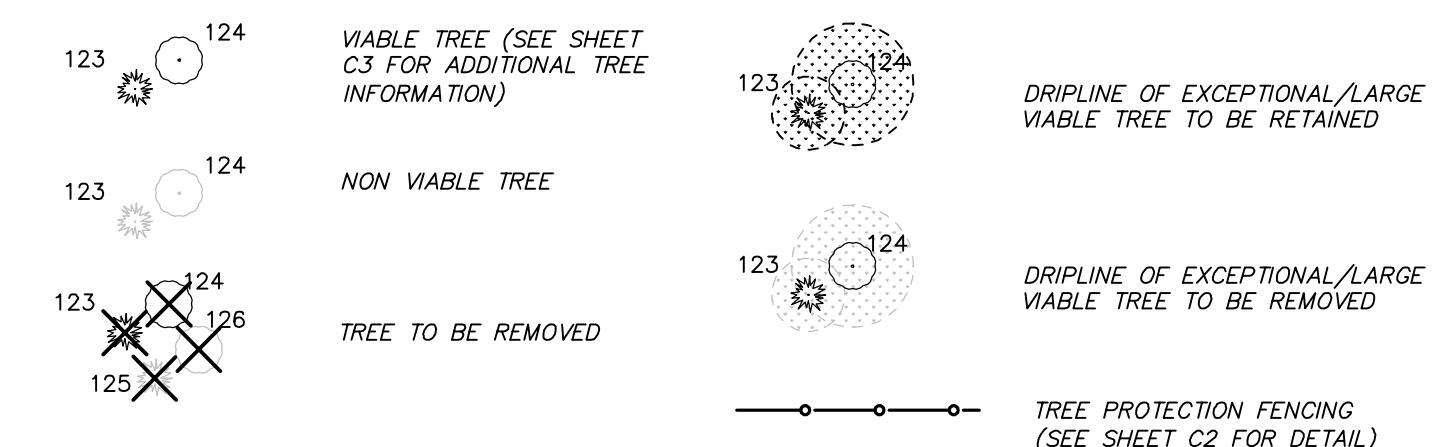
# 2436 74TH AVE SE

SEE SHEET C3



Tree ID	Species	MICC Status	DBH (in)	Height (ft)	Avg. Canopy Radius (ft)	Condition	Preservation Priority	Canopy Notes	Trunk Notes	Root Notes	Parcel #
661	Willow (Salix spp.)	Exceptional	14	55	10	Fair	3	Minor deadwood, broken branches, very poor structure	Poor structure	Steep slope, blackberry, large surface roots	53151 00455
662	Maple, Bigleaf (Acer macrophyllum)	Large	21	60	20	Poor	3	Onesided to the E, major deadwood, cavity,	Ivy, 4 stems, stump sprouts, decay,	Steep slope, blackberry, stump sprout	53151 00455
663	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	20	80	15	Fair	2	Onesided to S, major deadwood	Straight	Steep slope, blackberry	53151 00455
664	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	27	80	15	Fair	2	Full, major deadwood	Straight	Steep slope, blackberry	53151 00455
665	Cottonwood, Black (Populus trichocarpa)	Exceptional	37	80	25	Fair	2	Full, minor deadwood	Codominant stem at 6 ft, large inclusion, ivy	Steep slope, blackberry, large surface roots	53151 00455
666	Cottonwood, Black (Populus trichocarpa)	n/a (condition)	24	80	15	Very Poor	4	Onesided to NW, major deadwood, serious decline	Lean to NW	Steep slope, blackberry, large surface roots	53151 00455
667	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	29	80	15	Fair	2	Full canopy, major deadwood	Relatively straight, defect free,	Steep slope, blackberry, large surface roots	53151 00455
657	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	14	50	5	Dead	4	Dead	Ivy, cavity	Steep slope, blackberry	53151 00458
658	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	22	75	15	Fair	2	Full,	Many large burls, poor structure	Steep slope, blackberry	53151 00455
659	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	18	55	15	Poor	4	Onesided to the S, major deadwood	Ivy, cavity	Steep slope, blackberry	53151 00455
660	Willow (Salix spp.)	Exceptional	16	55	10	Fair	3	Minor deadwood, broken branches, very poor structure	3 stems,	Steep slope, blackberry	53151 00455

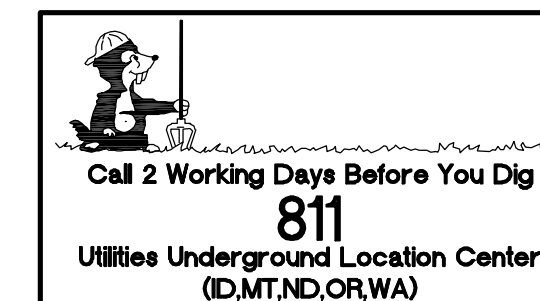
**LEGEND**



Tree ID	Species	MICC Status	DBH (in)	Height (ft)	Avg. Canopy Radius (ft)	Condition	Preservation Priority	Canopy Notes	Trunk Notes	Root Notes	Parcel #
668	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	22	80	15	Fair	3	Onesided to the north	Significant lean north	Steep slope, blackberry, large surface roots	53151 00455
669	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	30	80	15	Fair	2	Full canopy	Joined at base with adjacent tree	Steep slope, blackberry, large surface roots	53151 00455
670	Cottonwood, Black (Populus trichocarpa)	Exceptional (Grove)	24	80	15	Fair	2	Onesided to east	Joined at base with adjacent tree	Steep slope, blackberry, large surface roots	53151 00455
671	Maple, Bigleaf (Acer macrophyllum)	Exceptional (Grove)	15	65	15	Poor	3	Sparse canopy, signs of stress, 5% brown foliage	Poor structure, codominant stem	Steep slope, blackberry, raised root collar, multiple trees from same point	53151 00455
673	Maple, Bigleaf (Acer macrophyllum)	Exceptional (Grove)	12	65	10	Poor	3	Onesided to the W, major deadwood, ivy	Heavy ivy	Steep slope, blackberry	53151 00455
674	Cedar, Western-red (Thuja plicata)	Exceptional (Grove)	10	60	10	Fair	2	Suppressed, sparse		Steep slope	53151 00455
675	Cedar, Western-red (Thuja plicata)	Exceptional (Grove)	12	60	10	Fair	2	Suppressed, sparse		Steep slope	53151 00455
698	Maple, Bigleaf (Acer macrophyllum)	n/a (condition)	20	75	15	Poor	4	Large deadwood, onesided south,	Lean to the south, ivy, large basal cavity, multistem at base	Saturated soil, blackberry, ivy	53151 00455
699	Cedar, Western-red (Thuja plicata)	Large	13	35	10	Good	2	Full canopy	Interesting structure, swooping	Saturated soil, blackberry, ivy	53151 00455
700	Cottonwood, Black (Populus trichocarpa)	n/a (condition)	21	75	10	Poor	4	Large deadwood, 5 large broken stubs	Ivy	Saturated soil, blackberry, ivy	53151 00455
701	Cedar, Western-red (Thuja plicata)	Large	24	50	15	Good	2	Suppressed		Steep slope, blackberry, stump sprout	53151 00455

**TREE RETENTION CALCULATION**

TOTAL NUMBER OF EXCEPTIONAL TREES:	16
TOTAL LARGE TREES:	11
TOTAL VISIBLE TREES:	27
REQUIRED: 30% VISIBLE TREES:	8
PROPOSED VISIBLE TREES RETAINED:	23



**DRS**  
**D.R. STRONG**  
 CONSULTING ENGINEERS  
 ENGINEERS PLANNERS SURVEYORS  
 620 - 7th AVENUE KIRKLAND, WA 98033  
 O 425.827.3065 F 425.827.2423

**2430 74TH AVE SE**  
 TREE RETENTION PLAN  
 2436 74TH AVE SE  
 MERCER ISLAND  
 WASHINGTON 98040  
 PARCEL NO. 5315100455

**VANN LANZ**  
 LNL BUILDS, LLC  
 317 4TH STREET  
 KIRKLAND, WASHINGTON 98033  
 206.499.1277



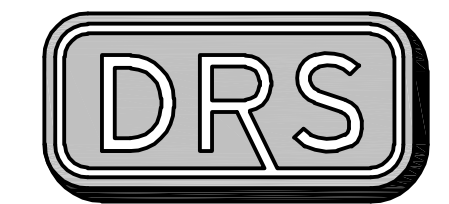
APR  
 MAJ

DATE: 10.18.23  
 REVISION: INTAKE COMMENTS

DRAFTED BY: RMF  
 DESIGNED BY: RMF  
 PROJECT ENGINEER: MAJ  
 DATE: 9.26.23  
 PROJECT NO.: 23001

DRAWING: C4  
 SHEET: 4 OF 6

NW 1/4 SECTION 12, TOWNSHIP 24 N, RANGE 4E, W.M.  
**2436 74TH AVE SE**



**D.R. STRONG**  
 CONSULTING ENGINEERS  
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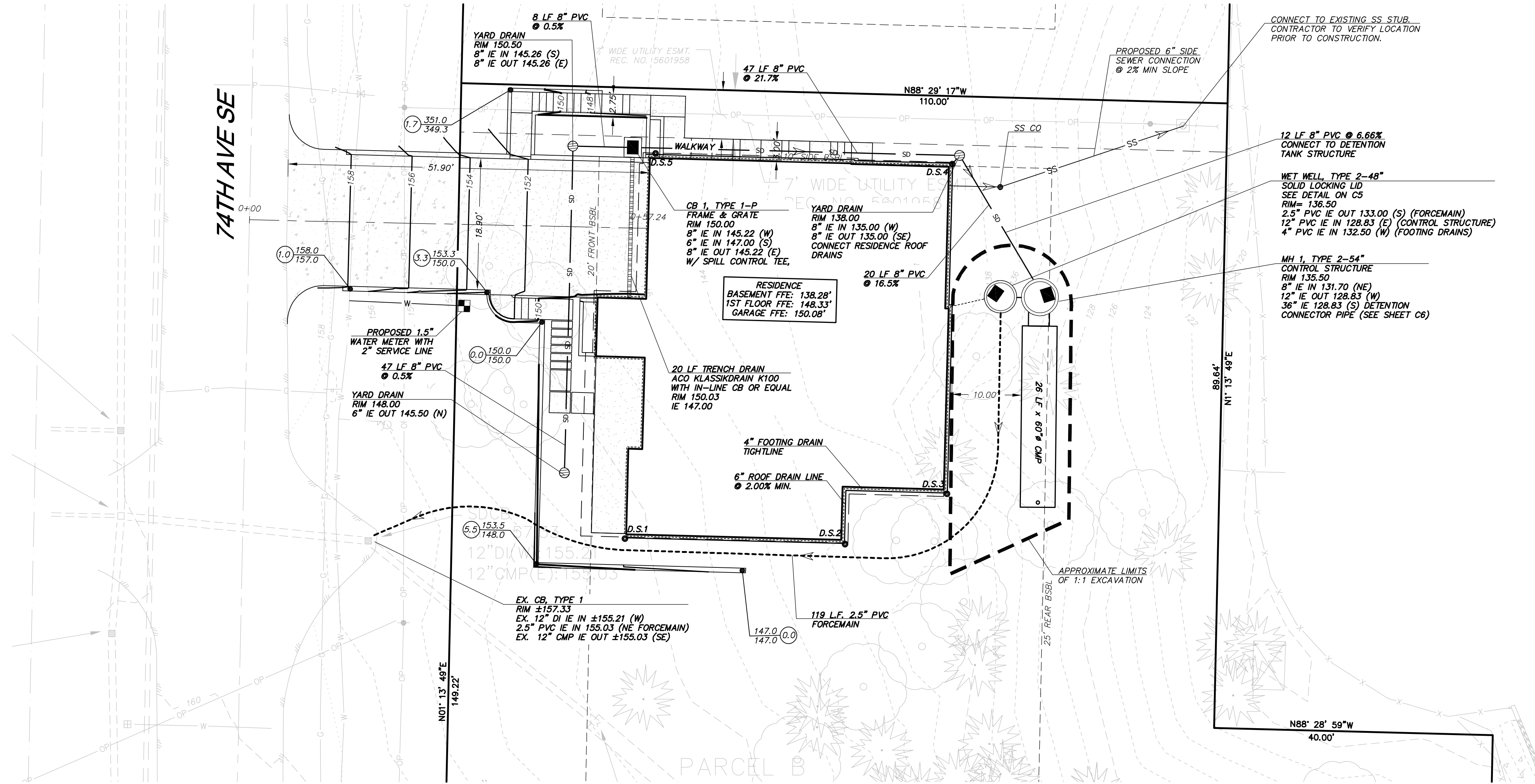
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2430 74TH AVE SE

GRADING & UTILITIES PLAN  
 2436 74TH AVE SE  
 MERCER ISLAND  
 WASHINGTON 98040  
 PARCEL NO. 5315100455

VANN LANZ  
 LNL BUILDS, LLC

317 4TH STREET  
 KIRKLAND, WASHINGTON 98033  
 206-489-1277



**GENERAL NOTES:**

- SITE PLAN PROVIDED BY CLIENT ON JANUARY 5, 2023.
- WALL/ FOOTING/ LAWN UNDERDRAIN DRAINAGE SYSTEM AND ROOF DOWNSPOUT SYSTEM SHALL NOT BE INTERCONNECTED UNLESS SUCH CONNECTION IS MADE AT LEAST ONE FOOT BELOW THE WALL/FOOTING/ UNDERDRAIN DRAINAGE SYSTEM AND DOWN SLOPE OF THE WALL/BUILDING FOUNDATION AND DOWNSTREAM OF THE DETENTION TANK.
- EXISTING UTILITY LOCATIONS SHOWN HEREON ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT VERTICAL AND HORIZONTAL LOCATION OF ALL EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING CONSTRUCTION. NO REPRESENTATION IS MADE THAT ALL EXISTING UTILITIES ARE SHOWN HEREON. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR UTILITIES SHOWN, OR NOT SHOWN IN THEIR PROPER LOCATION.
- CONTRACTOR SHALL POT-HOLE LOCATION OF EXISTING UTILITIES TO BE RECONNECTED PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS.
- CONTRACTOR TO VERIFY CONDITION AND GOOD WORKING ORDER OF ALL EXISTING UTILITIES TO BE RECONNECTED OR RE-USED PRIOR TO START OF CONSTRUCTION.
- SOILS ON THE SITE CONSISTS OF KITSAP SILT LOAM (kpb) PER THE NRCS WEB SOIL SURVEY.
- ROOF DRAINS SHALL BE 4" OR 6" PVC AS SHOWN AND HAVE A MINIMUM SLOPE OF 2.00%.
- ALWAYS CALL 811 TWO WORKING DAYS BEFORE YOU DIG.

**FIRE SPRINKLER NOTE:**

NFPA 13R FIRE SPRINKLER SYSTEM IN COMPLIANCE WITH NFPA 13R AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

**FIRE ALARM NOTE:**

A NFPA 72 - CHAPTER 29 MONITORED FIRE ALARM SYSTEM IN COMPLIANCE WITH NFPA 72 AND COMI STANDARDS SHALL BE INSTALLED THROUGHOUT THE RESIDENCE. A SEPARATE FIRE PERMIT IS REQUIRED.

**LAWN AND LANDSCAPE AREA NOTE:**

THE LAWN AND LANDSCAPE AREAS ARE REQUIRED TO PROVIDE POST-CONSTRUCTION SOIL QUALITY AND DEPTH IN ACCORDANCE WITH BMP 15.3. THE PROJECT CIVIL ENGINEER MUST PROVIDE A LETTER OF CERTIFICATION TO ENSURE THAT THE LAWN AND LANDSCAPE AREAS ARE MEETING THE POST-CONSTRUCTION SOIL QUALITY AND DEPTH REQUIREMENTS SPECIFIED ON THE APPROVED PLAN SET PRIOR TO FINAL INSPECTION OF THE PROJECT.

**AREA BREAKDOWN:**

LOT SIZE: 25,799 S.F. (0.592 AC.)

EX. HARD SURFACES ON LOT: 0 S.F.

NEW HARD SURFACES ON LOT:

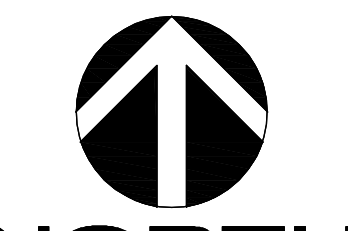
MAIN HOUSE ROOF: 2,616 S.F.  
 DRIVEWAY: 532 S.F.  
 WALKS & PATIOS: 270 S.F.  
 TOTAL NEW ON LOT: 3,418 S.F. (13.2%)  
 NEW HARD SURFACES: 3,418 S.F.  
 LOT PERVIOUS: 22,381 S.F.  
 OFFSITE DRIVEWAY: 478 S.F.  
 TOTAL PROJECT HARD SURFACES: 3,896 S.F.  
 TOTAL P.G.I.S.: 1,010 S.F.

**DOWNSPOUT ELEVATIONS**

DOWNSPOUT #	INVERT ELEV.
1	145.00
2	140.84
3	135.53
4	135.04
5	142.55

**UTILITY LEGEND:**

- SD PROPOSED STORM LINE
- C PROPOSED COMMUNICATION LINE
- W PROPOSED WATER LINE
- P PROPOSED POWER LINE
- SS PROPOSED SEWER LINE



**NORTH**  
 GRAPHIC SCALE  
 0 5 10 20  
 1 INCH = 10 FT.

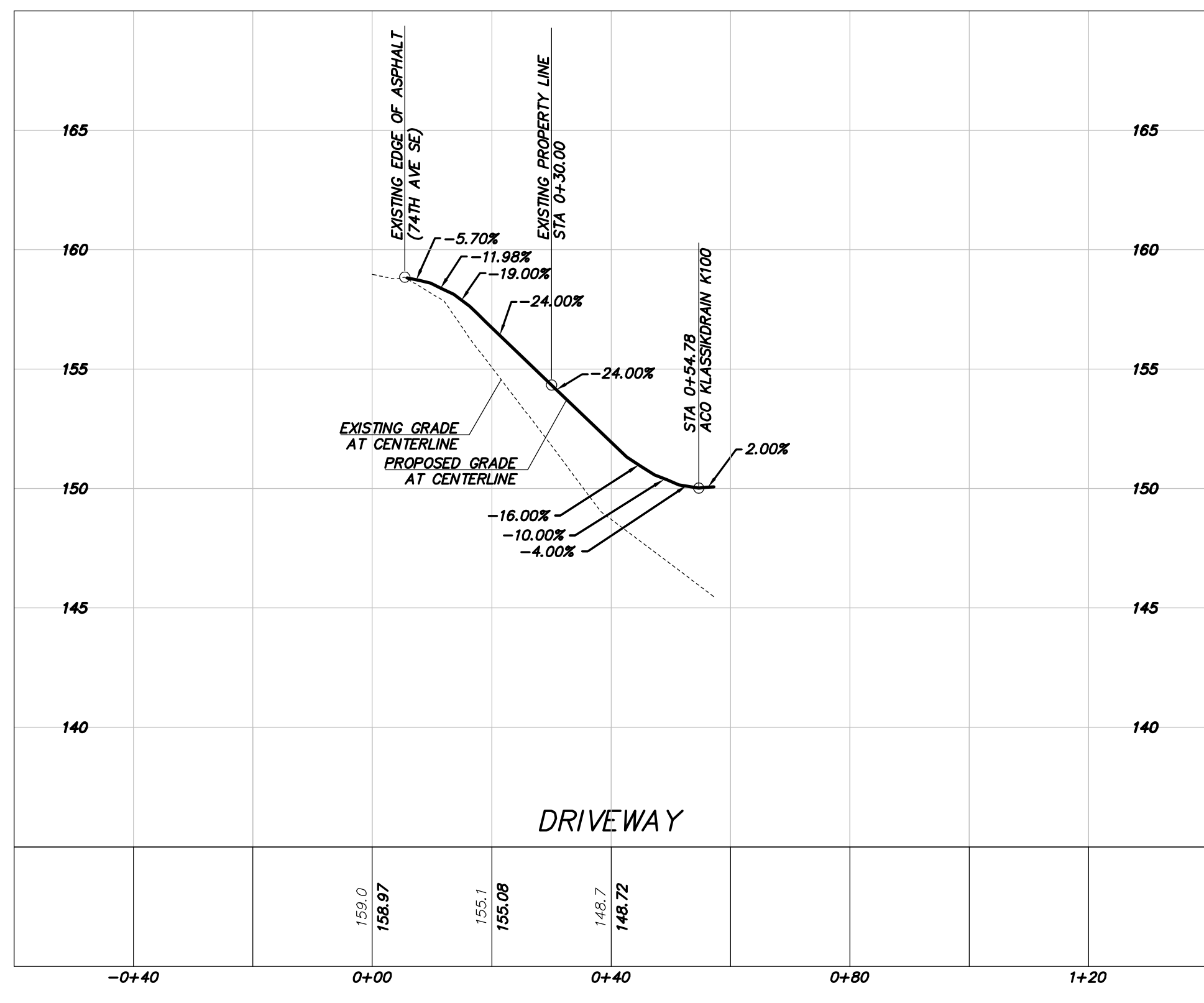
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 Utilities Underground Location Center  
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 Call 2 Working Days Before You Dig



DATE	REVISION	INTAKE COMMENTS
APR 10, 2023	MAJ	

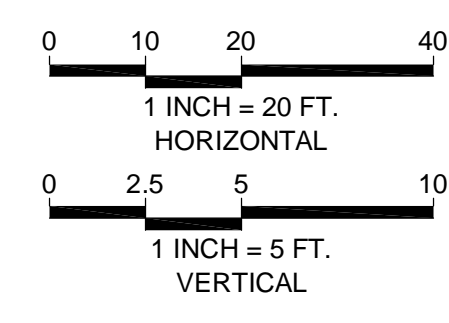
DRAFTED BY: RMF  
 DESIGNED BY: RMF  
 PROJECT ENGINEER: MAJ  
 DATE: 9.26.23  
 PROJECT NO.: 23001

DRAWING: C5  
 SHEET: 5 OF 6



**Table 1**  
 ON-SITE DETENTION DESIGN FOR PROJECTS BETWEEN 500 SF AND 9,500 SF NEW PLUS REPLACED IMPERVIOUS SURFACE AREA

New and Replaced Impervious Surface Area (sf)	Detention Pipe Diameter (in)	Detention Pipe Length (ft)		Lowest Orifice Diameter (in) <sup>(a)</sup>		Distance from Outlet Invert to Second Orifice (ft)		Second Orifice Diameter (in)	
		B soils	C soils	B soils	C soils	B soils	C soils	B soils	C soils
500 to 1,000 sf	36"	30	22	0.5	0.5	2.2	2.0	0.5	0.8
	48"	18	11	0.5	0.5	3.3	3.2	0.9	0.8
	60"	11	7	0.5	0.5	4.2	3.4	0.5	0.6
1,001 to 2,000 sf	36"	66	43	0.5	0.5	2.2	2.3	0.9	1.4
	48"	34	23	0.5	0.5	3.2	3.3	0.9	1.2
	60"	22	14	0.5	0.5	4.3	3.6	0.9	0.9
2,001 to 3,000 sf	36"	90	66	0.5	0.5	2.2	2.4	0.9	1.9
	48"	48	36	0.5	0.5	3.1	2.8	0.9	1.5
	60"	30	20	0.5	0.5	4.2	3.7	0.9	1.1
3,001 to 4,000 sf	36"	120	78	0.5	0.5	2.4	2.2	1.4	1.6
	48"	62	42	0.5	0.5	2.8	2.9	0.8	1.3
	60"	42	26	0.5	0.5	3.8	3.9	0.9	1.3



NW 1/4 SECTION 12, TOWNSHIP 24 N, RANGE 4E, W.M.  
**2436 74TH AVE SE**



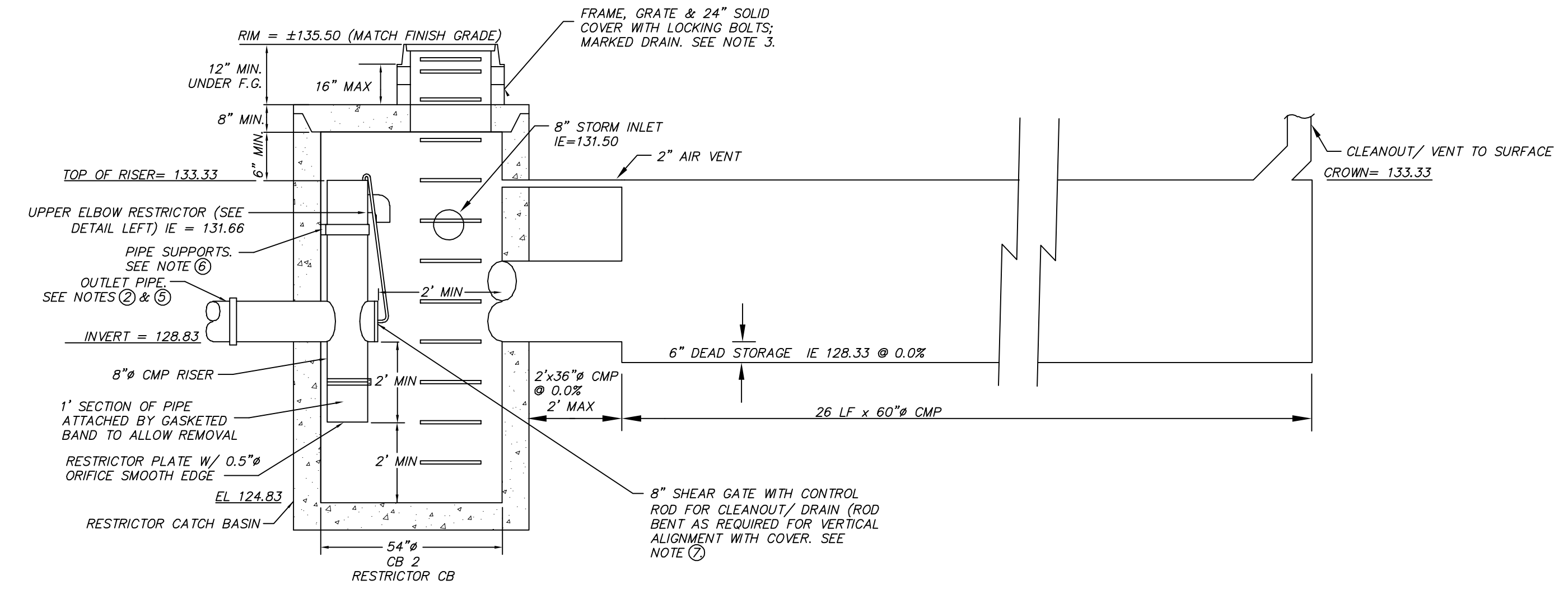
**D.R. STRONG**  
 CONSULTING ENGINEERS  
 ENGINEERS PLANNERS SURVEYORS  
 620 - 7th AVENUE KIRKLAND, WA 98033  
 O 425.827.3063 F 425.827.2423

**STANDARD DETENTION SYSTEM NOTES:**

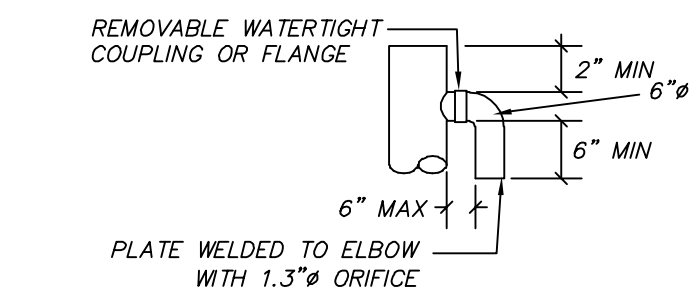
- CALL DEVELOPMENT SERVICES (206-275-7605) 24 HOURS IN ADVANCE FOR A DETENTION SYSTEM INSPECTION BEFORE BACKFILLING AND FOR FINAL INSPECTIONS.
- RESPONSIBILITY FOR OPERATION AND MAINTENANCE OF DRAINAGE SYSTEMS ON PRIVATE PROPERTY IS RESPONSIBILITY OF THE PROPERTY OWNER. MATERIAL ACCUMULATED IN THE STORAGE PIPE MUST BE REMOVED FROM CATCH BASINS TO ALLOW PROPER OPERATION. THE OUTLET CONTROL ORIFICE MUST BE KEPT OPEN AT ALL TIMES.
- PIPE MATERIAL, JOINT, AND PROTECTIVE TREATMENT SHALL BE IN ACCORDANCE WITH SECTION 7.04 AND 9.05 OF THE WSDOT STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION, LATEST VERSION. SUCH MATERIALS INCLUDE THE FOLLOWING: LINED CORRUGATED POLYETHYLENE PIPE (LOPE), ALUMINIZED TYPE 2 CORRUGATED STEEL PIPE AND PIPE ARCH (MEETS AASHTO DESIGNATIONS M274 AND M36), CORRUGATED OR SPIRAL RIB ALUMINUM PIPE, OR REINFORCED CONCRETE PIPE. CORRUGATED STEEL PIPE IS NOT ALLOWED.
- FOOTING DRAINS SHALL NOT BE CONNECTED TO THE DETENTION SYSTEM.

**RESTRICTOR CATCH BASIN NOTES:**

- USE A MINIMUM OF A 72 IN. DIAM. TYPE 2 CATCH BASIN WHEN CONNECTING PIPE MATERIAL IS CONCRETE OR LOPE. A 54 IN. DIAM. TYPE 2 CATCH BASIN MAY BE USED FOR OTHER CIRCULAR SINGLE WALL PIPE (SUCH AS CORRUGATED ALUMINUM PIPE).
- OUTLET PIPE: MIN. 6 INCH.
- METAL PARTS: CORROSION RESISTANT NON-GALVANIZED PARTS PREFERRED. GALVANIZED PIPE PARTS TO HAVE ASPHALT TREATMENT.
- FRAME AND LADDER OR STEPS OFFSET SO:
  - CLEANOUT GATE IS VISIBLE FROM TOP;
  - CLUMP-DOWN SPACE IS CLEAR OF RISER AND CLEANOUT GATE;
  - FRAME IS CLEAR OF CURB.
- IF METAL OUTLET PIPE CONNECTS TO CEMENT CONCRETE PIPE, OUTLET PIPE TO HAVE SMOOTH O.D. EQUAL TO CONCRETE PIPE I.D. LESS 1/4 IN.
- PROVIDE AT LEAST ONE 3 X 0.090 GAUGE SUPPORT BRACKET ANCHORED TO CONCRETE WALL WITH 5/8 IN. STAINLESS STEEL EXPANSION BOLTS OR EMBEDDED SUPPORTS 2 IN. INTO CATCH BASIN WALL (MAXIMUM 3"-0" VERTICAL SPACING).
- THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION Z0324; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B. THE LIFT HANDLE SHALL BE MADE OF SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION). IT MAY BE SOLID ROD OR HOLLOW TUBING, WITH ADJUSTABLE HOOK AS REQUIRED. A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE RISER MOUNTING FLANGE AND THE GATE FLANGE. INSTALL THE GATE SO THAT THE LEVEL-LINE MARK IS LEVEL WHEN THE GATE IS CLOSED. THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED FOR PROPER FIT. ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL.
- THE UPPER CATCH BASIN IS REQUIRED IF THE LENGTH OF THE DETENTION PIPE IS GREATER THAN 50 FEET.



**DETENTION TANK & RESTRICTOR CB**



**ELBOW RESTRICTOR DETAIL**

**DETENTION TANK PUMP SYSTEM NOTES:**

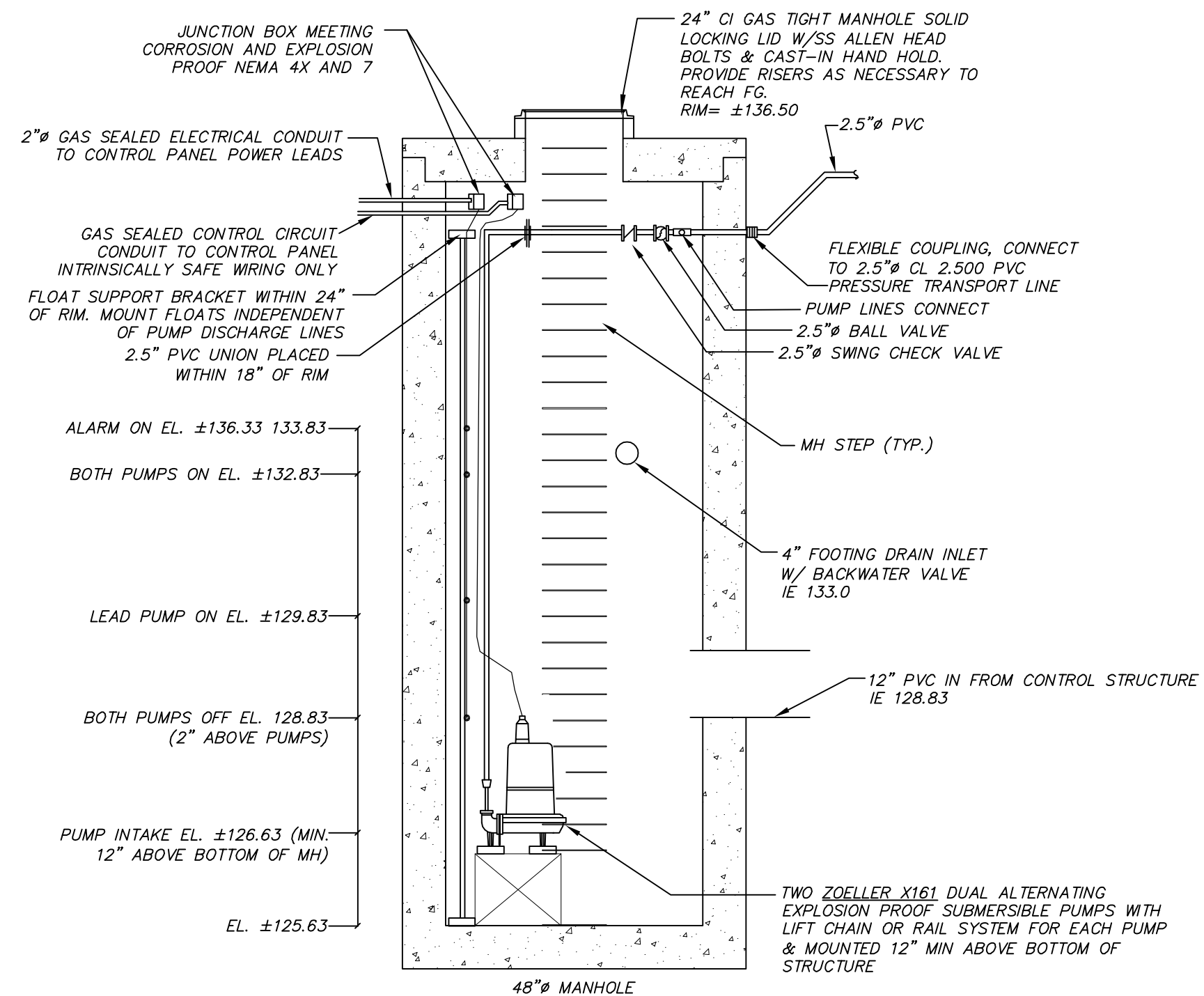
- THERE IS A TOTAL OF 28.40 FT. OF ELEVATION HEAD FROM THE PUMP TO CB 2 AND 30.9 FT. OF TON THROUGH THE PIPE AND FITTINGS AT 29 GPM.
- PUMP LINE SHALL BE CLASS 200 PVC AND MEET THE REQUIREMENTS OF ASTM D2241 SDR-21.
- EACH PUMP SHALL PROVIDE 29 GPM @ 30.9 FT. OF HEAD.
- PUMPS SHALL OPERATE IN AN "ON-DEMAND" CONFIGURATION, WITH EACH PUMP ALTERNATELY SELECTED BY THE CONTROL PANEL AS THE "LEAD PUMP" OR "LAG PUMP". CONTROLS FOR EACH PUMP SHALL INCLUDE: PUMP ON; PUMP OFF; HIGH WATER LEVEL ALARM.
- DUPLEX CONTROL PANEL SHALL HAVE AUDIO/VISUAL ALARM ON SEPARATE CIRCUITS AND BE MOUNTED IN DIRECT LINE OF SIGHT OF THE PUMP ACCESS LID.
- PROVIDE LIFT CHAIN OR RAIL SYSTEM FOR PUMP ACCESS.
- FLOATS/ PUMP CONTROL SWITCHES SHALL BE MOUNTED INDEPENDENT OF THE PUMP AND TRANSPORT LINES.
- THE STORMWATER PUMPING SYSTEM SHALL BE OWNED, OPERATED, MAINTAINED, REPAIRED, AND REPLACED (AS NEEDED) BY PROPERTY OWNER(S) SERVED BY SUCH SYSTEM.
- PROPERTY OWNER(S) SHALL BE RESPONSIBLE FOR ANY/ALL CLAIMS FOR INJURIES AND DAMAGE DUE TO THE OPERATION OR NON-OPERATION OF THE PUMP SYSTEM AND EMERGENCY OVERFLOW.
- IT IS HIGHLY RECOMMENDED THAT THE PUMP AND PUMP CONTROLS ARE RATED FOR CLASS 1 DIVISION 1 ENVIRONMENT (EXPLOSION PROOF).
- IT IS HIGHLY RECOMMENDED THAT AUTOMATIC EMERGENCY BACKUP POWER GENERATOR BE PROVIDED FOR PUMP AND ALARM CIRCUITS (BY OTHERS).
- IT IS HIGHLY RECOMMENDED THAT THE PROPERTY OWNER(S) CONTRACT WITH A PRIVATE SECURITY/ MONITORING SERVICE TO MONITOR AND TROUBLESHOOT THE PUMP SYSTEM IN THE EVENT OF A TOTAL SYSTEM FAILURE (E.G., POWER OUTAGE AND GENERATOR FAILURE).

**PUMP SYSTEM OPERATION AND MAINTENANCE:**

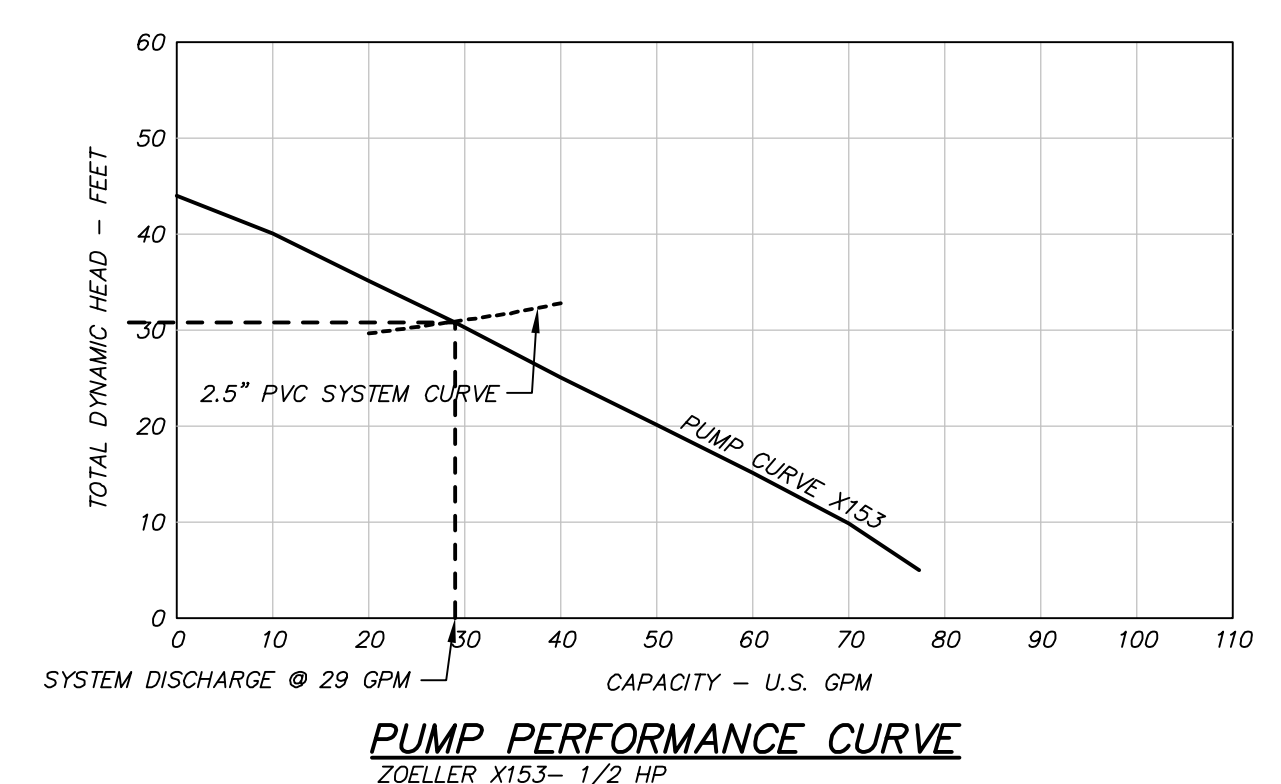
**SYSTEM OPERATION:**  
 IN A PUMP-TO-GRAVITY STORMWATER SYSTEM, A PUMP IS USED TO CONVEY STORMWATER COLLECTED IN A PUMP CHAMBER (WET WELL) TO THE APPROVED DISCHARGE LOCATION. THE WET WELL CONTAINS A PUMP OPERATING IN AN "ON-DEMAND" CONFIGURATION. THIS SYSTEM CONTAINS MINIMAL EMERGENCY STORAGE IN THE EVENT OF A SYSTEM FAILURE. A 2.5-INCH DIAMETER FORCE MAIN FROM THE WET WELL DISCHARGES TO A YARD DRAIN LOCATED AT THE EASTERN PROPERTY LINE OF THE LOT. THE DISCHARGE PIPE IN THE YARD DRAIN INCLUDES A DOWN ELBOW TO PROVIDE ENERGY DISSIPATION.

**CONTROLS FOR THE PUMP INCLUDE:** PUMP ON; PUMP OFF; AND HIGH WATER LEVEL ALARM. WHEN STORMWATER IN THE WET WELL RISES TO THE LEVEL OF THE "ON" FLOAT SETTING, THE PUMP IS ACTIVATED AND PUMPS THE LEVEL OF THE STORMWATER DOWN UNTIL IT REACHES THE "OFF" FLOAT SETTING. IF THE WATER LEVEL EXCEEDS THE "ALARM" LEVEL, A RED LIGHT AND AN AUDIBLE BUZZER WILL TURN ON AT THE CONTROL PANEL. PRESSING THE "SILENCE" BUTTON ON THE CONTROL PANEL WILL ONLY SILENCE THE AUDIBLE ALARM AND IS NOT A SOLUTION TO THE ALARM CONDITION. THE ALARM LIGHT WILL REMAIN LIT UNTIL THE ALARM CONDITION HAS BEEN RESOLVED. WE RECOMMEND THAT THE CONTROL PANEL BE EQUIPPED FOR REMOTE MONITORING BY A PRIVATE O&M FIRM TO ENSURE RESOLUTION OF ALARM CONDITIONS IN A TIMELY MANNER. CODE REQUIRES THAT THE PUMP AND ALARM BE ON DIFFERENT CIRCUITS SO THAT IF THE PUMP BREAKER TRIPS, THE ALARM CAN STILL OPERATE.

**RECOMMENDED MAINTENANCE:**  
 THE PUMP SHOULD BE SUBMERGED DURING NORMAL OPERATION BECAUSE HEAT GENERATED BY THE PUMP IS DISSIPATED IN THE SURROUNDING WATER. OTHERWISE, THE PUMP COULD BURN OUT IF ALLOWED TO OPERATE IN A NON-SUBMERGED CONDITION. CHECK TO SEE THAT THE FLOAT SWITCHES ARE CLEAN AND FREE IN THEIR MOVEMENTS, AND TEST THE HIGH ALARM FLOAT BY LIFTING IT, OR BY PUSHING DOWN ON THE LOW ALARM FLOAT (IF PRESENT). IF THE ALARM DOES NOT SOUND AND THE CIRCUIT BREAKER IS NOT TRIPPED, CONTACT A QUALIFIED ELECTRICIAN FOR SERVICING. PERFORM FLOAT TESTING QUARTERLY DURING THE FIRST YEAR OF OPERATION, THEN AT SEMI-ANNUALLY THEREAFTER.



**WET WELL 1**



**PUMP PERFORMANCE CURVE**  
 ZOELLER X153- 1/2 HP

2430 74TH AVE SE

NOTES AND DETAILS  
 2436 74TH AVE SE  
 MERCER ISLAND  
 WASHINGTON 98040  
 PARCEL NO. 5315100455

VANN LANZ  
 LNL BUILDS, LLC

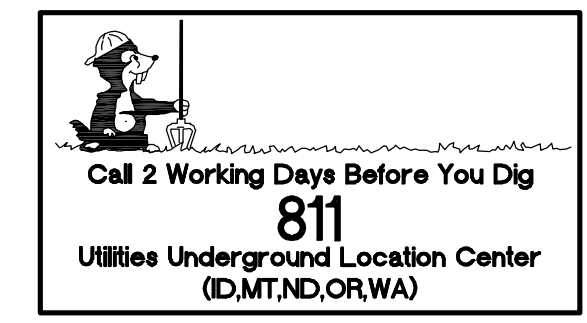
317 4TH STREET  
 KIRKLAND, WASHINGTON 98033  
 206-489-1277



APR  
 MAJ

REVISION  
 INTAKE COMMENTS  
 DATE  
 10.18.23

DRAFTED BY: RMF  
 DESIGNED BY: RMF  
 PROJECT ENGINEER: MAJ  
 DATE: 9.26.23  
 PROJECT NO.: 23001



DRAWING: C6  
 SHEET: 6 OF 6