

# DAWN DRIVE LANDSLIDE STABILIZATION SE 36T STREET AND DAWN DRIVE - MERCER ISLAND, WASHINGTON

**WORK DESCRIPTION:**

WORK TO CONSIST OF REMOVING UNSTABLE SOILS BELOW EXISTING ROADWAY, EXCAVATION OF KEY BENCHES AT THE TOE OF THE SLOPE, BACKFILLING EXCAVATION WITH QUARRY SPALLS, LANDSCAPE RESTORATION, AND PAVING REPAIR.

**SITE INFORMATION:**

PROJECT ADDRESS: DAWN DRIVE & S.E. 46TH STREET, MERCER ISLAND, WASHINGTON  
TAX PARCEL: TRACT A, 192300TR-A  
TOTAL PARCEL AREA: 0.97 ACRES

**CONTACT INFORMATION:**

OWNER: DAWN DRIVE ASSOCIATION

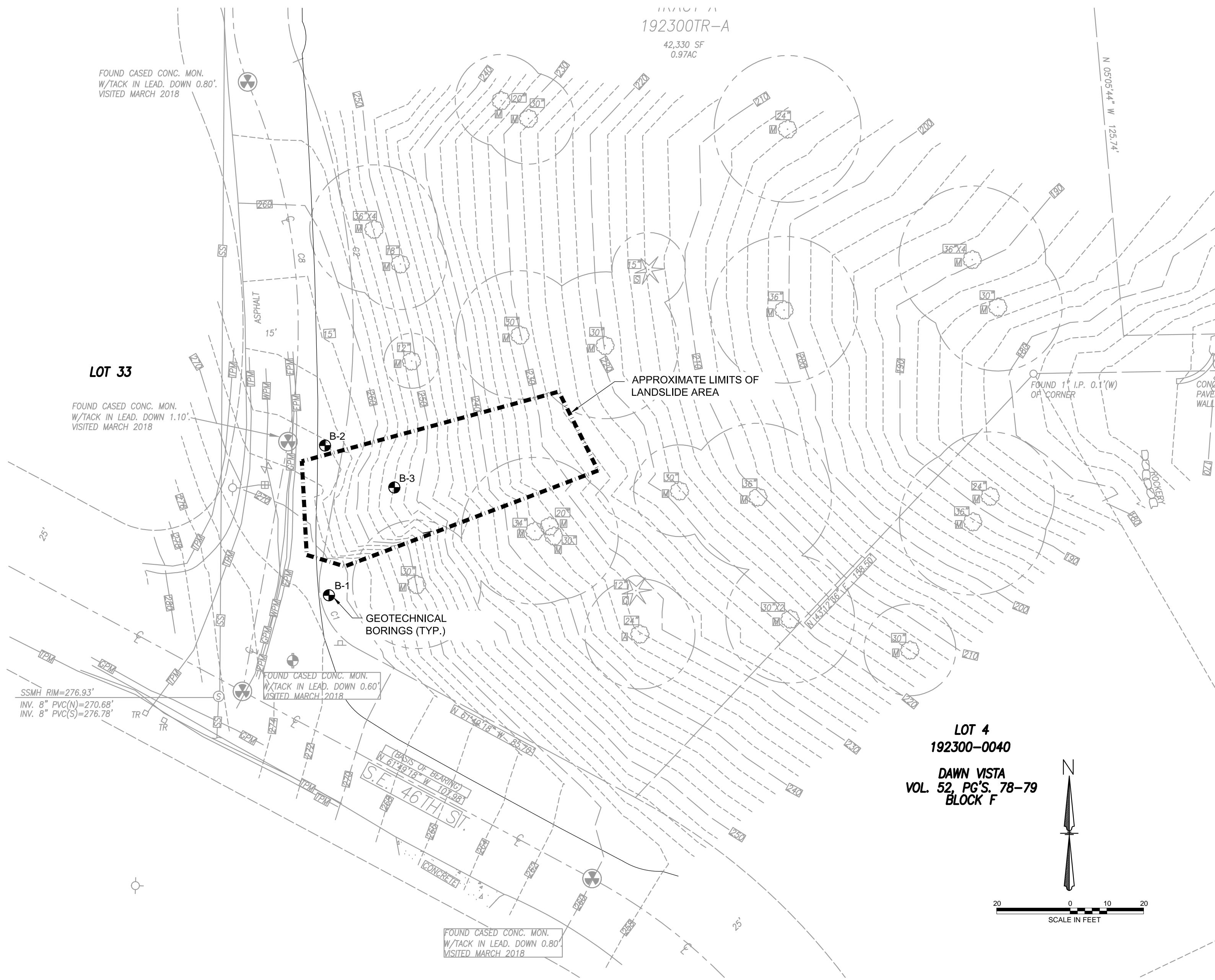
OWNERS REP/APPLICANT:  
ZIPPER GEO ASSOCIATES, LLC  
19019 36TH AVE. WEST, SUITE E  
LYNNWOOD, WA 98036  
ROB ROSS, P.E. 425-582-9928

GEOTECHNICAL ENGINEER:  
ZIPPER GEO ASSOCIATES

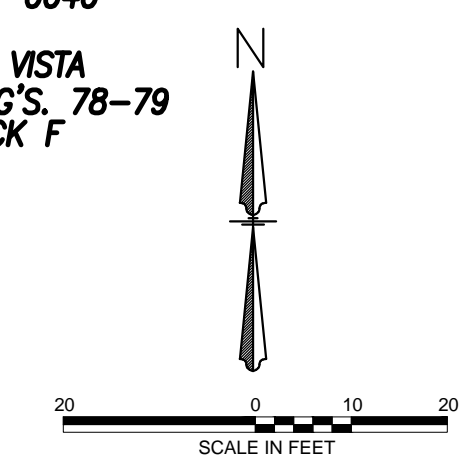
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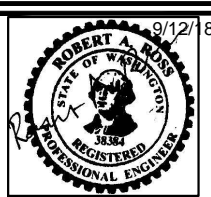
LANDSLIDE STABILIZATION PLANS

- C1.0 - COVER SHEET
- C2.0 - TESC PLAN
- C3.0 - PHASE 1 GRADING PLAN
- C3.1 - FINAL GRADING PLAN
- C3.2 - RESTORATION PLAN



**LOT 4**  
**192300-0040**  
**DAWN VISTA**  
**VOL. 52, PG'S. 78-79**  
**BLOCK F**



SUBMITTAL RECORD		DESIGNED: RAR DRAWN: RAR CHECKED: TAJ SCALE: AS NOTED DATE: 6-19-18 JOB NO.: 1961.01 PLOT DATE: 9/12/18 LAST EDIT: Rob			<b>ZGA</b> Zipper Geo Associates, LLC Geotechnical and Environmental Consultants 19019 36th Avenue West, Suite E   Lynnwood, WA 98036 PH: (425) 582-9928   Fax: (425) 582-9930   www.zippergeo.com	DAWN DRIVE LANDSLIDE STABILIZATION DAWN DRIVE AND SE 46TH STREET MERCER ISLAND, WASHINGTON <b>COVER SHEET AND SITE PLAN</b>	DRAWING
NO.	DATE	BY	DESCRIPTION				<b>C10</b> SHEET 1 OF 6

TEMPORARY EROSION AND SEDIMENT CONTROL GENERAL NOTES

PART 1 - GENERAL

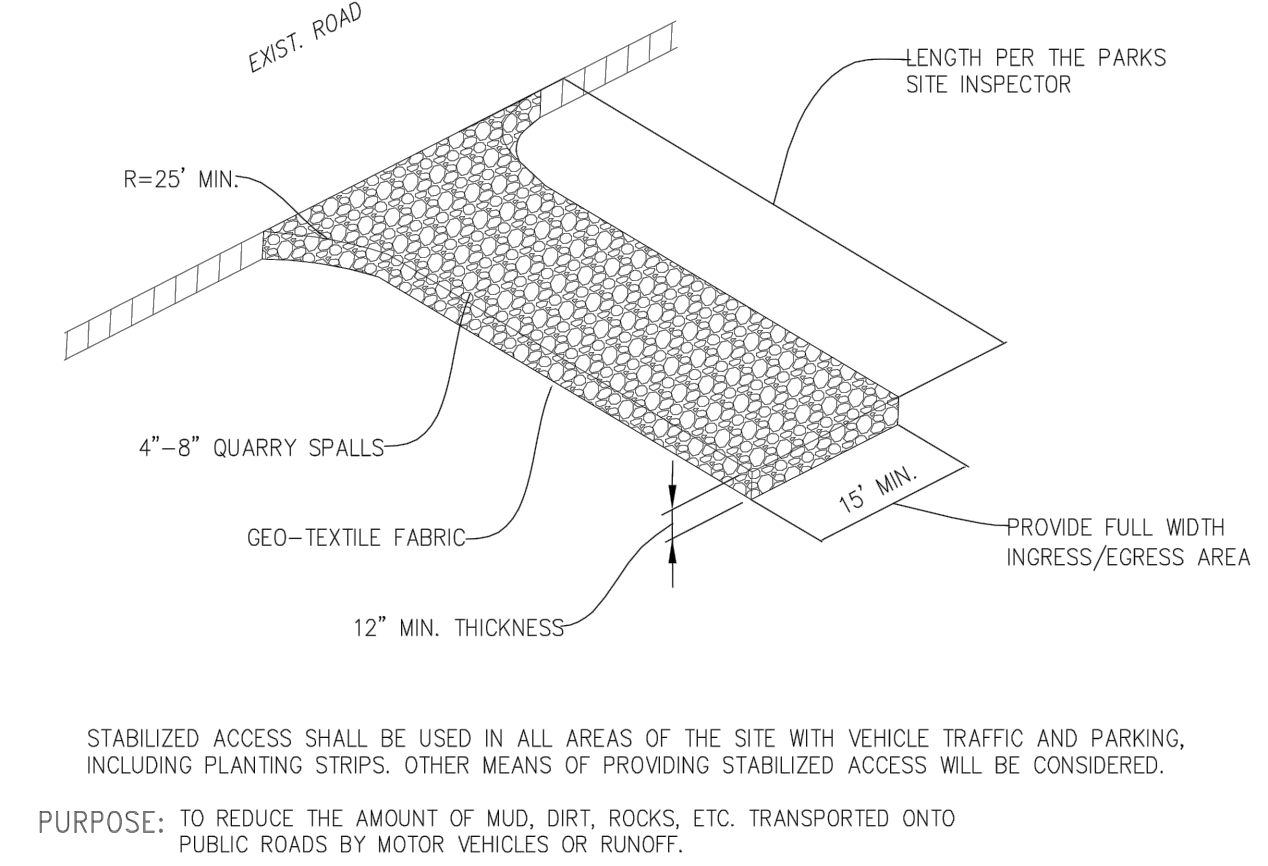
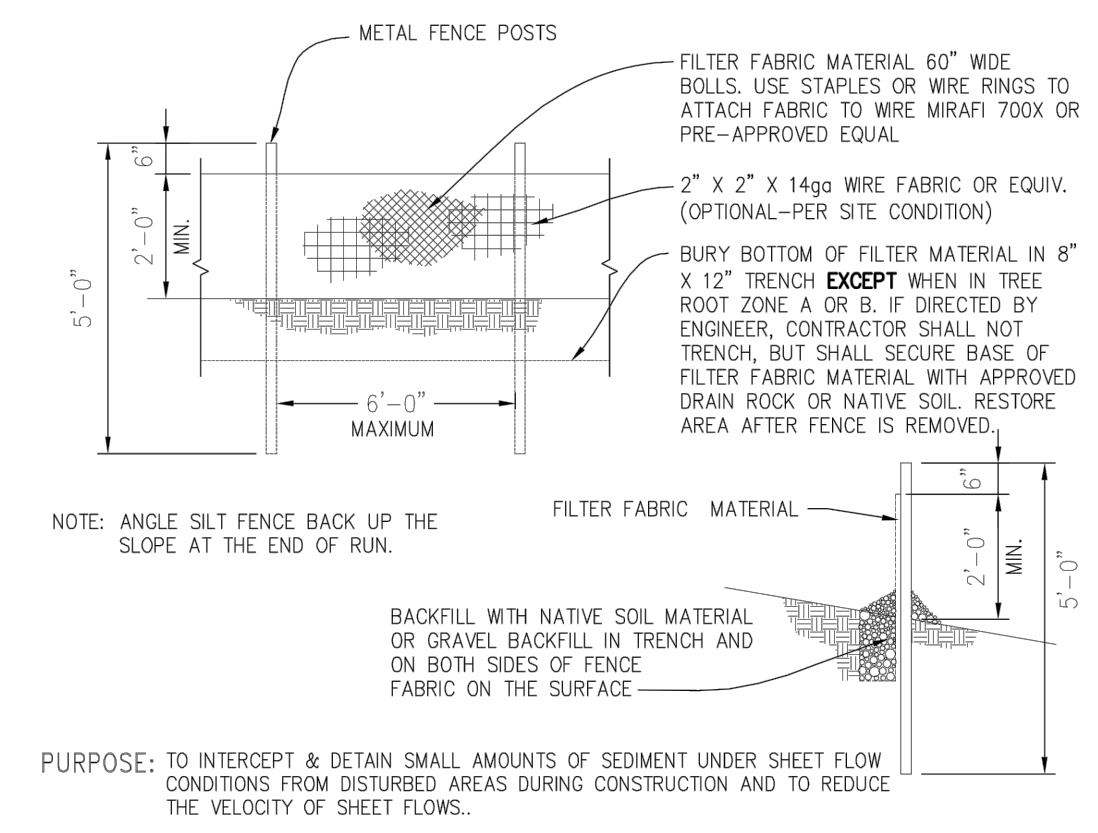
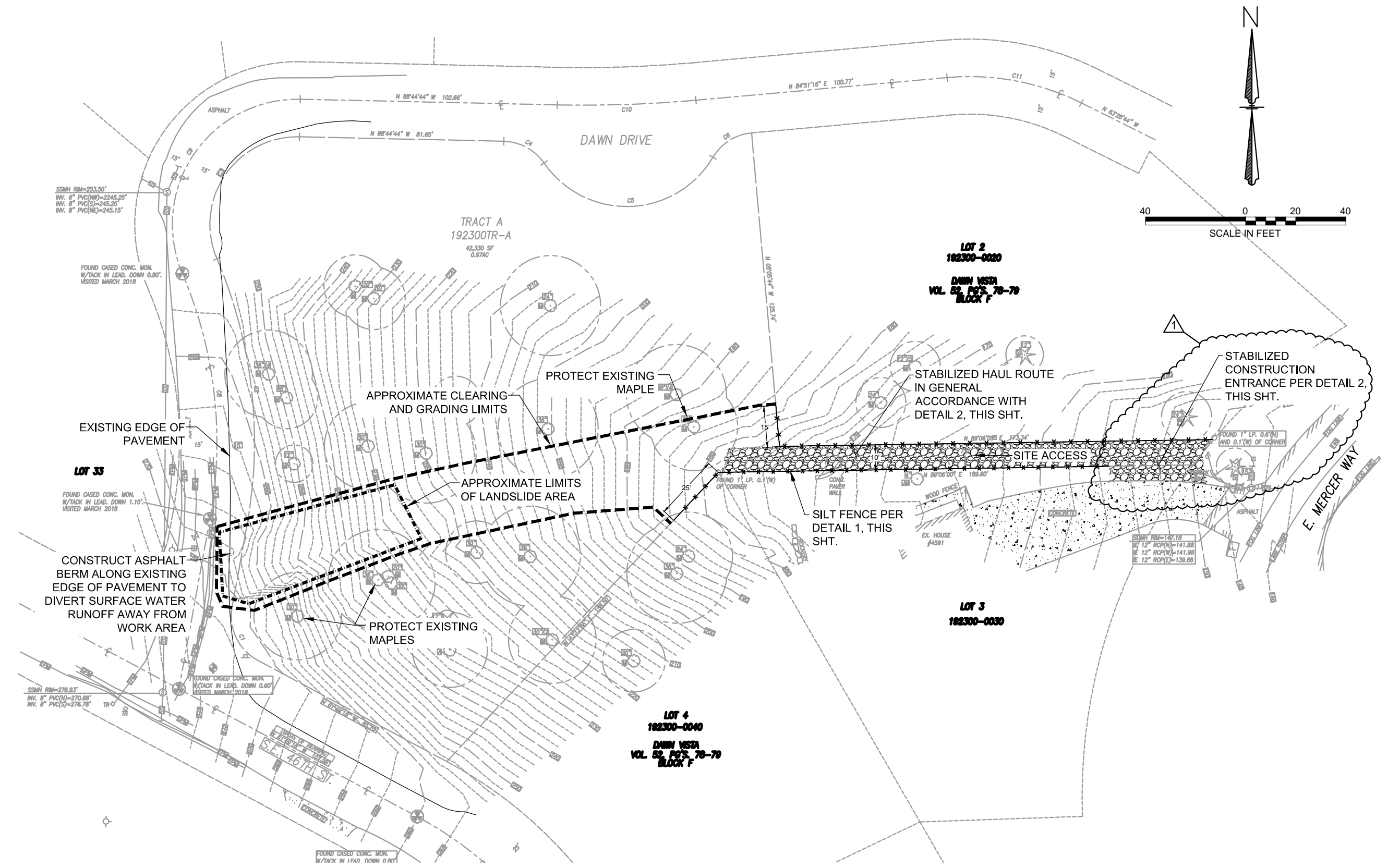
- THE SUCCESS OF THIS PROJECT IS HIGHLY DEPENDANT ON CONTROL OF SURFACE WATER RUNOFF INTO THE WORK AREA TO PREVENT EROSION AND FURTHER DESTABILIZATION OF THE SLOPE.
- GRADING FOR THIS PROJECT WILL REQUIRE CREATING A TEMPORARY SLOPE CUT THAT EXTENDS DOWN FROM THE EDGE OF DAWN DRIVE. THE EXPOSED CUT MUST BE PROTECTED FROM EXPOSURE TO DIRECT RAINFALL AND SURFACE WATER RUNOFF TO THE EXTENT POSSIBLE DURING CONSTRUCTION. IF WET WEATHER IS EXPECTED (DEFINED AS FORECAST RAINFALL GREATER THAN 0.25 INCHES IN A 12 HOUR PERIOD), AT THE END OF EACH WORK DAY, THE SLOPE SHALL BE COVERED WITH ANCHORED PLASTIC SHEETING. AREAS OF THE SITE THAT WILL BE UN-WORKED FOR MORE THAN TWO DAYS SHOULD BE COVERED WITH ANCHORED PLASTIC SHEETING. DEPENDING ON THE CONSTRUCTION PROGRESS, THERE MAY BE A NEED TO TEMPORARILY DELAY WORK AT THE SITE IF HEAVY RAINFALL IS FORECAST. TEMPORARY WORK DELAYS DURING CONSTRUCTION WILL BE EVALUATED ON A CASE-BY-CASE BASIS THROUGH OBSERVATION OF SITE CONDITIONS BY ZIPPER GEO ASSOCIATES IN COORDINATION WITH THE CONTRACTOR.
- CONSTRUCTION EROSION CONTROL MEASURES MUST BE IN PLACE AND APPROVED BY THE ENGINEER AND CITY PRIOR TO ANY EARTH DISTURBANCE.
- THE IMPLEMENTATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THE TESC FACILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS APPROVED AND SITE IS PERMANENTLY STABILIZED.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE PUBLIC DRAINAGE SYSTEM. AS CONSTRUCTION PROGRESSES AND UNEXPECTED (SEASONAL) CONDITIONS DICTATE, MORE TEMPORARY SEDIMENTATION COLLECTION FACILITIES MAY BE REQUIRED TO PREVENT VIOLATING APPLICABLE WATER STANDARDS. THEREFORE, DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE CONTRACTOR TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THEIR ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
- THE TESC FACILITIES SHOWN ON THESE PLANS AND MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL DEMOLITION, CLEARING, AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE, ENTER THE DRAINAGE SYSTEM, OR VIOLATE APPLICABLE WATER STANDARDS.
- NO SEDIMENT SHALL BE TRACKED INTO THE STREET OR ONTO PAVED SURFACES. SEDIMENT SHALL BE REMOVED FROM TRUCKS AND EQUIPMENT PRIOR TO LEAVING THE SITE. IN THE EVENT OF FAILURE OF THE EROSION CONTROL SYSTEM RESULTING IN SEDIMENT BEING TRACKED ONTO PAVED SURFACES, THE CONTRACTOR SHALL IMMEDIATELY IMPLEMENT MEASURES TO CORRECT THE SITUATION, AND VACUUM STREET SWEEPING SHALL BE EMPLOYED ON AN EMERGENCY BASIS. IF VACUUM STREET SWEEPING VEHICLES ARE UTILIZED, THEY SHALL BE OF THE TYPE THAT ACTUALLY REMOVES THE SEDIMENT FROM THE PAVEMENT. WASHING OF THE STREETS WILL NOT BE ALLOWED WITHOUT PRIOR SNOHOMISH COUNTY APPROVAL.
- AREAS NOT WORKED FOR MORE THAN 2 DAYS SHALL BE COVERED WITH ANCHORED PLASTIC SHEETING.
- NO SEDIMENT SHALL BE ALLOWED TO ENTER ANY CATCH BASIN WITHIN THE SITE, OR ADJACENT PROPERTIES. IN THE EVENT OF A FAILURE OF THE TESC PLAN THAT RESULTS IN SEDIMENT ENTERING A CATCH BASIN, THE CONTRACTOR SHALL REMOVE ALL SUCH SEDIMENT IMMEDIATELY.
- DISTURBED SOILS THAT ARE EXPOSED TO SURFACE RUNOFF SHALL BE IMMEDIATELY STABILIZED WITH TESC MEASURES AND APPROVED BY THE ENGINEER AND CITY.
- THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
- CATCH BASINS IN THE STREET SHALL BE INSPECTED BY THE CONTRACTOR DAILY. WATER LEAVING THE SITE DURING CONSTRUCTION, INCLUDING WATER CARRIED BY TRUCKS, SHALL BE CLEAN. THE CONTRACTOR SHALL CLEAN CITY CATCH BASINS AND IMPLEMENT EXTRA SEDIMENTATION CONTROL MEASURES IF NECESSARY AND AS DIRECTED BY THE SNOHOMISH COUNTY INSPECTOR/DOE INSPECTOR AT NO ADDITIONAL EXPENSE TO OWNER.
- THE TESC FACILITIES SHALL BE MAINTAINED UNTIL PERMANENT EROSION CONTROL (PAVING, STRUCTURE, REVEGETATION WITH TREES, SHRUBS, GROUND COVER, ETC.) PER THE APPROVED PLANS IS IN PLACE.

PART 1 - GENERAL CONT.

- DESIGN, PREPARE AND OBTAIN PERMITS FOR TEMPORARY DEWATERING, TREAT AND DISPOSE OF WATER FROM TEMPORARY DEWATERING IN ACCORDANCE WITH DOE REQUIREMENTS.
- PROTECT STOCKPILES FROM WET WEATHER AND CONTAMINATION FROM OTHER SOURCES. PROVIDE DUST CONTROL MEASURES AND STOCKPILE PROTECTION IN ACCORDANCE THESE PLANS. STOCKPILES THAT BECOME UNSUITABLE DUE TO LACK OF PROTECTION MEASURES SHALL BE PROPERLY DISPOSED OF AND REPLACED AT CONTRACTOR'S EXPENSE.
- WHERE SEEDING FOR TEMPORARY EROSION CONTROL IS USED, FAST GERMINATING GRASSES SHALL BE APPLIED AT AN APPROPRIATE RATE.
- WHERE STRAW MULCH FOR TEMPORARY EROSION CONTROL IS USED, IT SHALL BE APPLIED AT A MINIMUM THICKNESS OF TWO INCHES.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL MEANS AND METHODS AND SEQUENCING OF TESC MEASURES AND ENSURING WATER QUALITY REQUIREMENTS ARE MET.

PART 2 - TEMPORARY EXCAVATION STABILITY

- TEMPORARY EXCAVATION SLOPE STABILITY IS A FUNCTION OF MANY FACTORS, INCLUDING: GROUNDWATER SEEPAGE, THE TYPE AND DENSITY OF THE VARIOUS SOIL STRATA, THE DEPTH OF CUT; SURCHARGE LOADINGS ADJACENT TO THE EXCAVATION, AND THE LENGTH OF TIME THE EXCAVATION REMAINS OPEN.
- AS THE CONTRACTOR CONTINUOUSLY PRESENT AT THE SITE AND ABLE TO CONTINUOUSLY OBSERVE SITE CONDITIONS, THE CONTRACTOR SHOULD BE RESPONSIBLE FOR MAINTENANCE OF SAFE SLOPES AND WORKER SAFETY. WE RECOMMEND THE CONTRACTOR CONTINUOUSLY OBSERVE TEMPORARY EXCAVATIONS FOR INDICATIONS OF INSTABILITY SUCH AS SOIL SLUMPS, GROUNDWATER SEEPAGE AT THE SURFACE OF THE SLOPE, AND CRACKS OR DOWN SETTING OF THE GROUND SURFACE AT THE TOP OF THE SLOPE OR ALONG ANY PORTION OF THE SLOPE. IF SIGNS OF INSTABILITY ARE OBSERVED, THE CONTRACTOR SHALL STOP WORK AND CONTACT ZIPPER GEO ASSOCIATES IMMEDIATELY FOR FURTHER OBSERVATION AND RECOMMENDATIONS.
- ZIPPER GEO ASSOCIATES (ZGA) SHALL PROVIDE PERIODIC OBSERVATION OF THE TEMPORARY EXCAVATION AS IT PROCEEDS. ZGA SHALL OBSERVE THE SITE AND TEMPORARY EXCAVATIONS IMMEDIATELY AFTER A RAINFALL EVENT TOTALLY 0.5 INCHES OR MORE IN A 24 HOUR PERIOD.



SUBMITTAL RECORD		DESCRIPTION
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6/18/18	RAR	DRAFT FINAL DESIGN

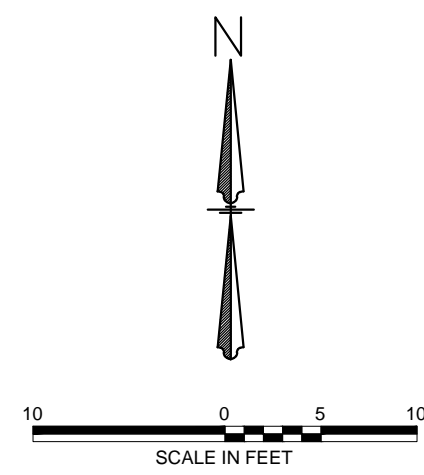
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DRAWN: RAR	JOB NO. 1961.01
CHECKED: TAJ	PLOT DATE: 9/12/18
SCALE: AS NOTED	LAST EDIT: Rob

**ZGA** Zipper Geo Associates, LLC  
 Geotechnical and Environmental Consultants  
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**DAWN DRIVE LANDSLIDE STABILIZATION**  
 DAWN DRIVE AND SE 46TH STREET  
 MERCER ISLAND, WASHINGTON

**TESC PLAN**

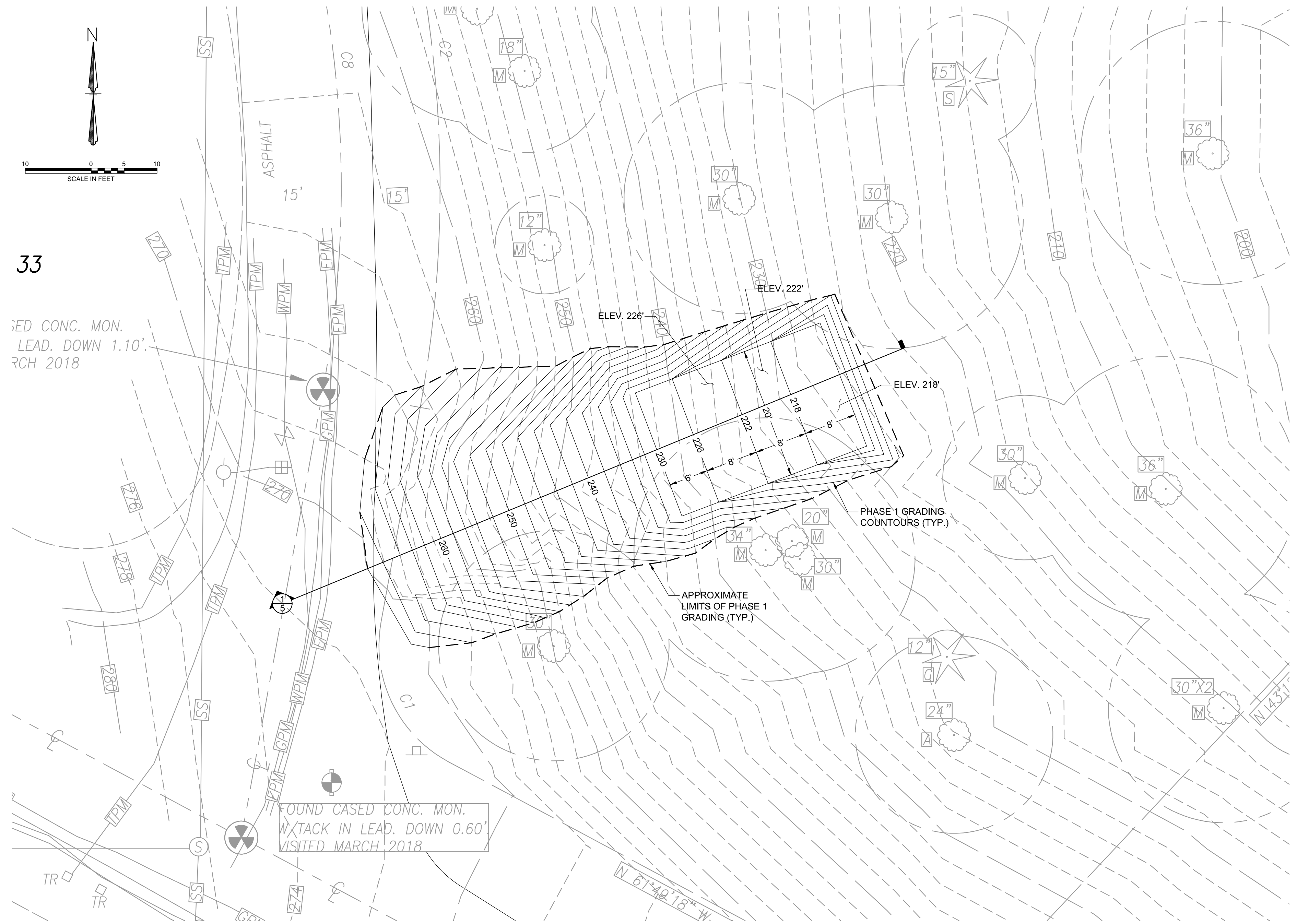
DRAWING	C20
SHEET	2
OF	6



33

SED CONC. MON.  
LEAD. DOWN 1.10'  
RCH 2018

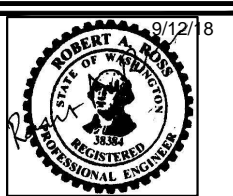
FOUND CASED CONC. MON.  
W/TACK IN LEAD. DOWN 0.60'  
VISITED MARCH 2018



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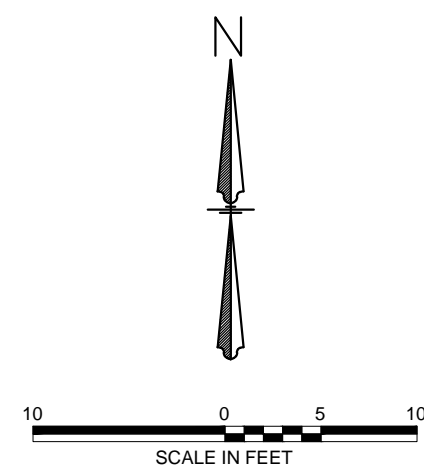


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DAWN DRIVE LANDSLIDE STABILIZATION  
DAWN DRIVE AND SE 46TH STREET  
MERCER ISLAND, WASHINGTON  
**PHASE 1 GRADING PLAN**

DRAWING  
**C3.0**  
SHEET  
**3**  
OF  
6

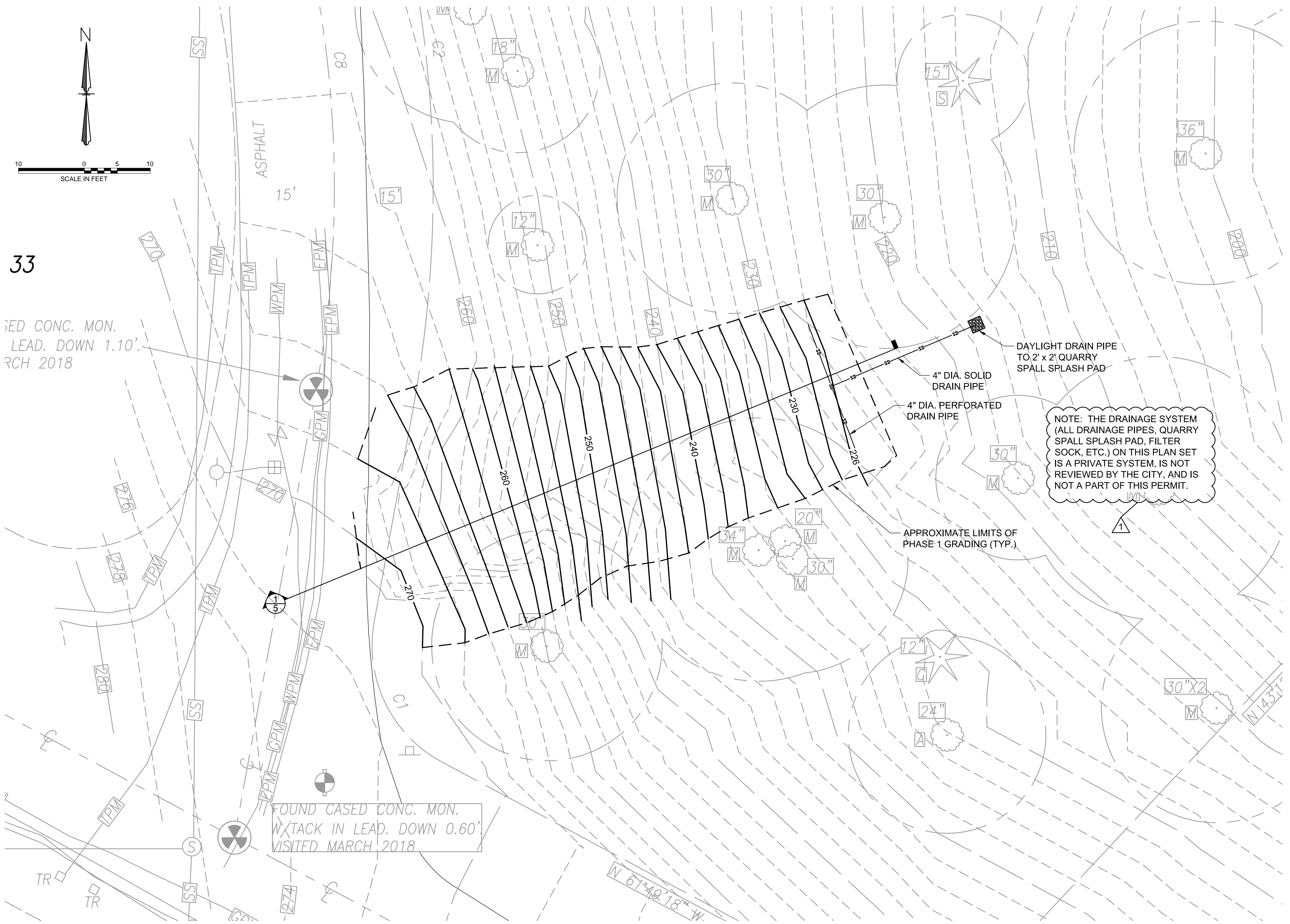




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SED CONC. MON.  
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RCH 2018

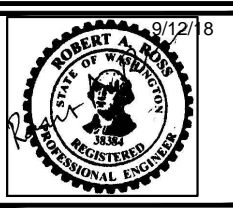
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W/TACK IN LEAD. DOWN 0.60'  
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NOTE: THE DRAINAGE SYSTEM (ALL DRAINAGE PIPES, QUARRY SPALL SPLASH PAD, FILTER SOCK, ETC.) ON THIS PLAN SET IS A PRIVATE SYSTEM, IS NOT REVIEWED BY THE CITY, AND IS NOT A PART OF THIS PERMIT.

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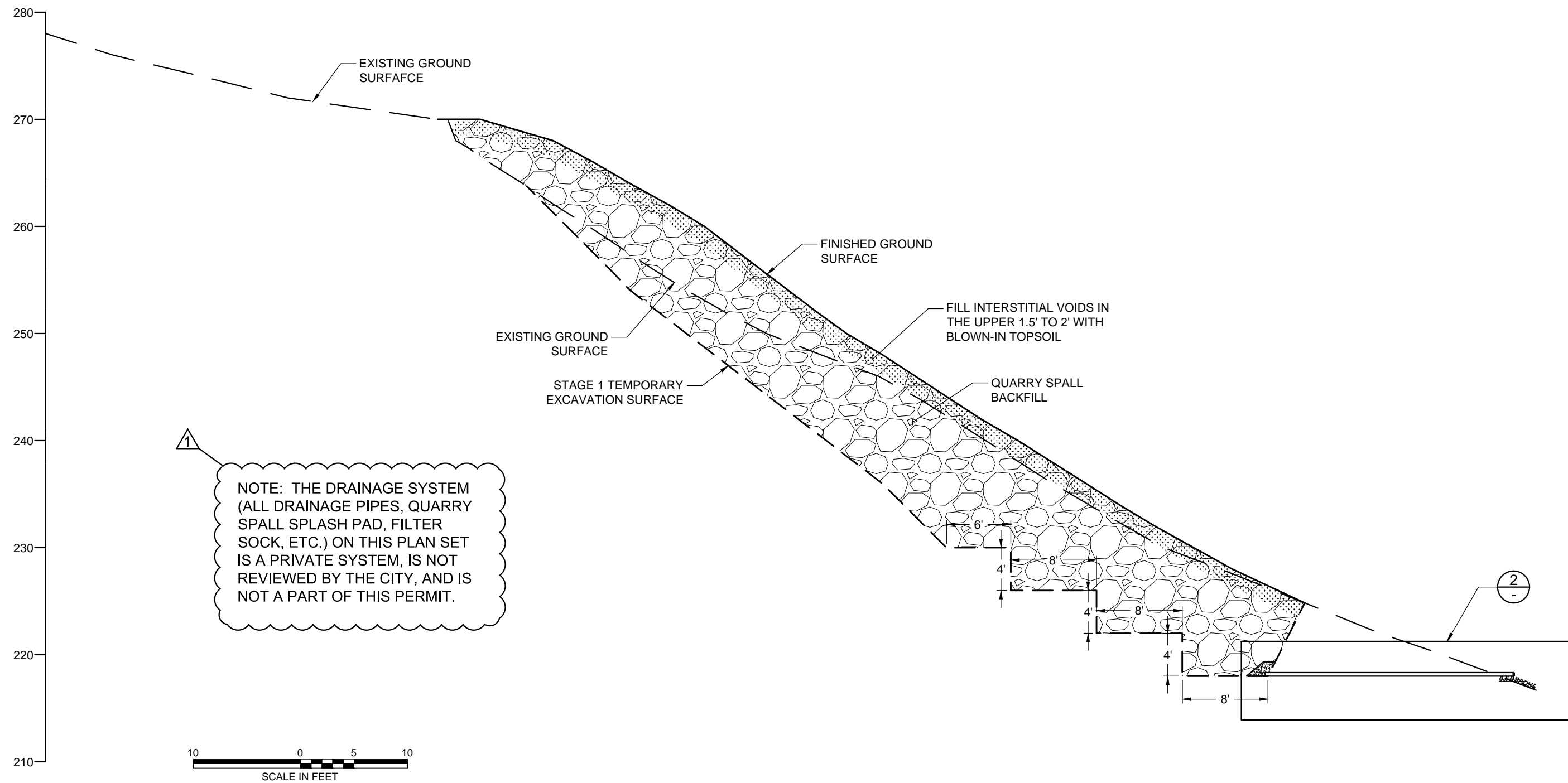


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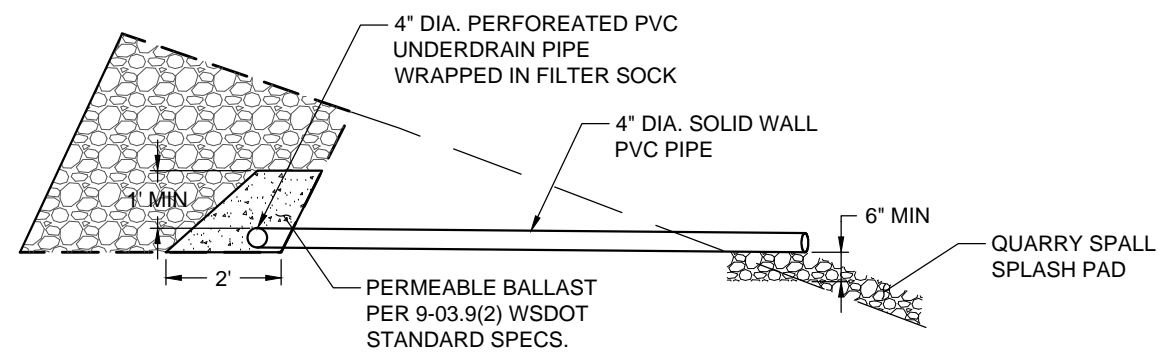
DAWN DRIVE LANDSLIDE STABILIZATION  
DAWN DRIVE AND SE 46TH STREET  
MERCER ISLAND, WASHINGTON  
**FINAL GRADING AND DRAINAGE PLAN**

DRAWING	C3.1
SHEET	4
OF	6

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1 SECTION  
3,4

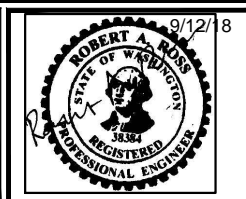


2 DETAIL  
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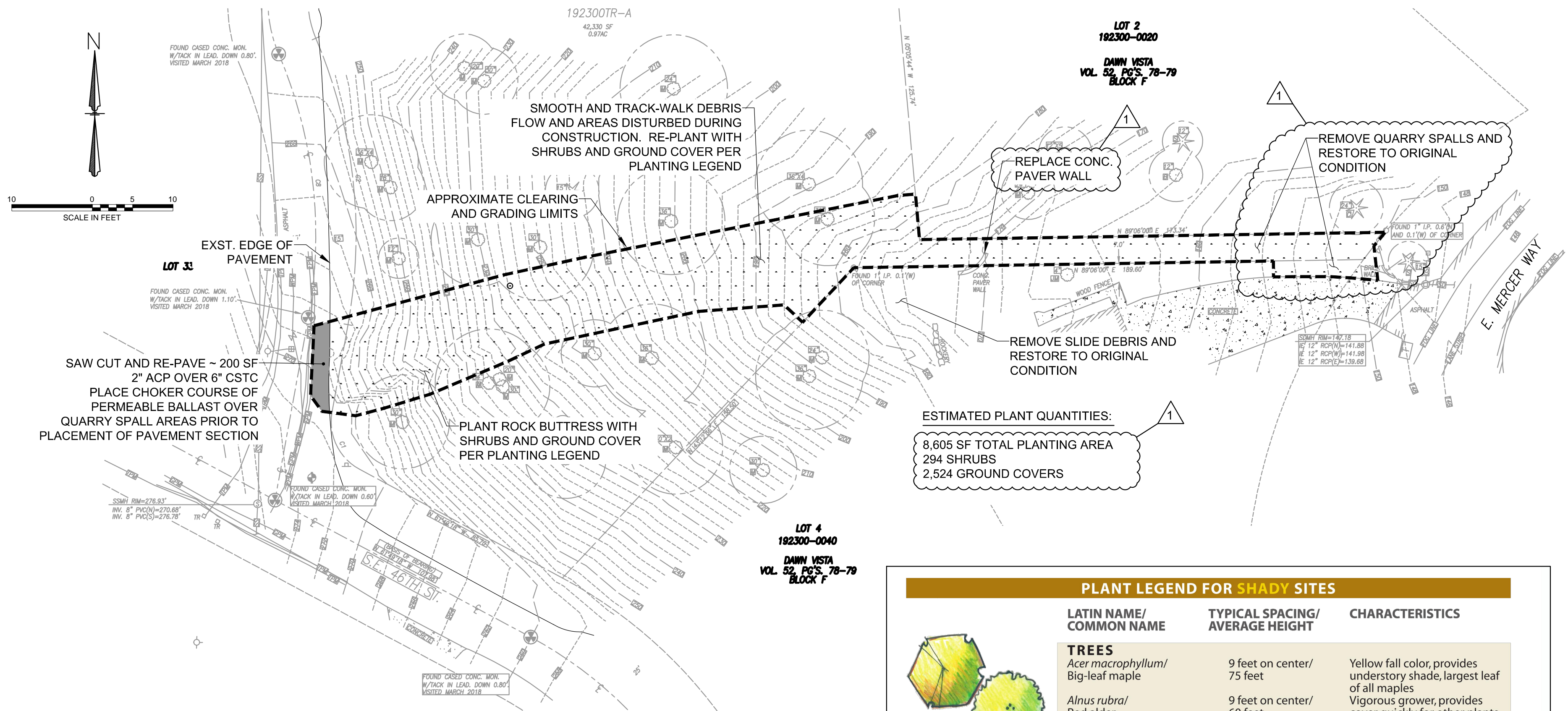
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C3.2

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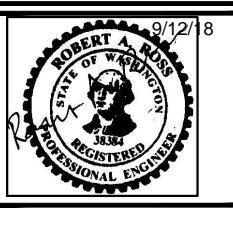




PLANT LEGEND FOR SHADY SITES		
LATIN NAME/ COMMON NAME	TYPICAL SPACING/ AVERAGE HEIGHT	CHARACTERISTICS
<b>TREES</b>		
<i>Acer macrophyllum</i> / Big-leaf maple	9 feet on center/ 75 feet	Yellow fall color, provides understory shade, largest leaf of all maples
<i>Alnus rubra</i> / Red alder	9 feet on center/ 60 feet	Vigorous grower, provides cover quickly for other plants
<i>Thuja plicata</i> / Western red cedar	9 feet on center/ 150 feet	Fragrant, adaptable to many sites
<b>SHRUBS</b>		
<i>Acer circinatum</i> / Vine maple	4.5 feet on center/ 20 feet	Bright red fall color, small understory tree, grows well in shade
<i>Amelanchier alnifolia</i> / Western serviceberry	4.5 feet on center/ 20 feet	Fragrant flowers, edible red to purple berries
<i>Corylus cornuta</i> / Beaked hazelnut	6 feet on center/ 11 feet	Edible acorn, wildlife food, small understory tree, yellowish fall color
<i>Oemleria cerasiformis</i> / Osoberry	4.5 feet on center/ 10 feet	Berries attract birds, first shrub to leaf out in spring
<i>Sambucus racemosa</i> / Red elderberry	4 feet on center/ 15 feet	Edible berries, fast grower, graceful form with age
<b>GROUNDCOVERS &amp; PERENNIALS</b>		
<i>Arctostaphylos uva-ursi</i> / Kinnikinnick	*24 in. on center/ 6-8 in.	Evergreen groundcover, great for rockeries and full sun areas
<i>Asarum caudatum</i> / Wild ginger	*24 in. on center/ 6-8 in.	Tough groundcover, great for planting under shrubs and trees
<i>Polystichum munitum</i> / Sword fern	*24 in. on center/ 5 feet once mature	Semi-evergreen fern, highly adaptable

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**RESTORATION PLAN**

DRAWING	C33
SHEET	6
OF	6

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