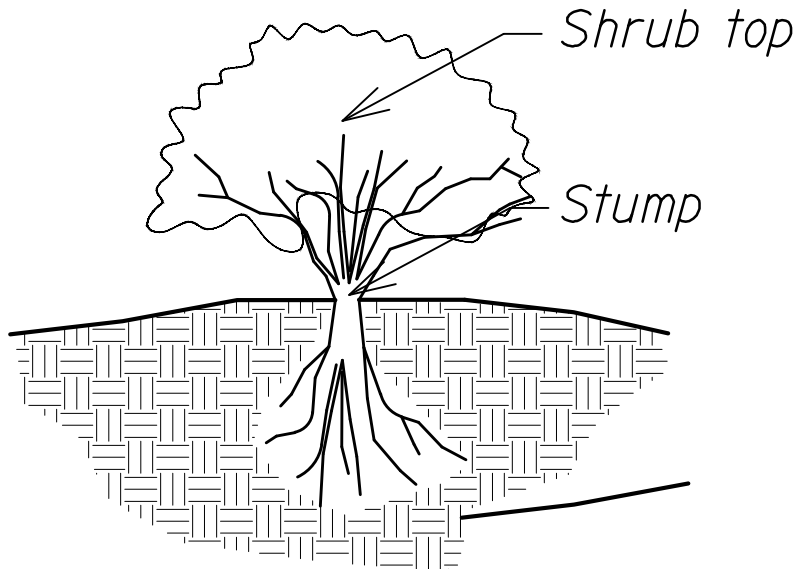
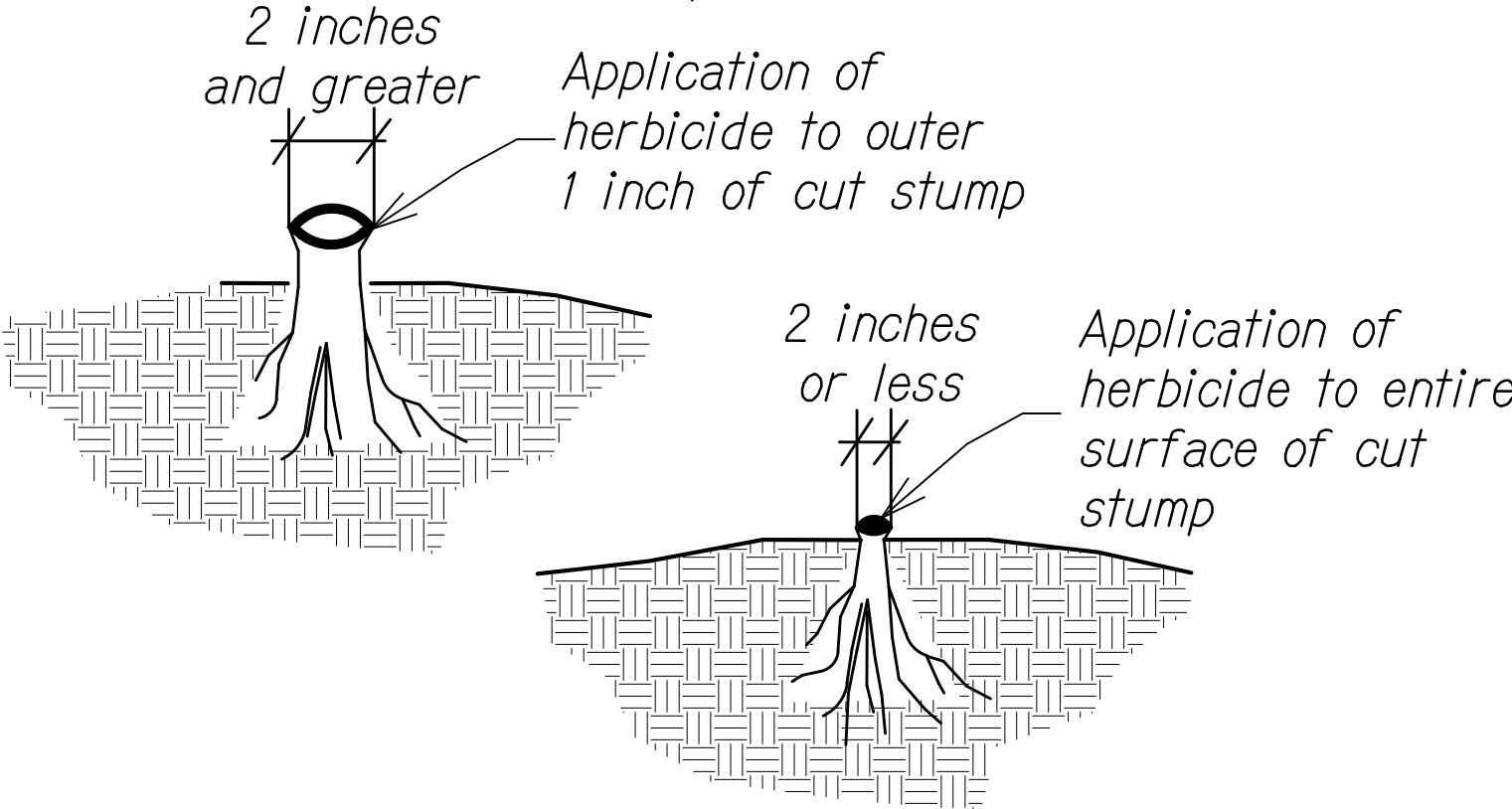


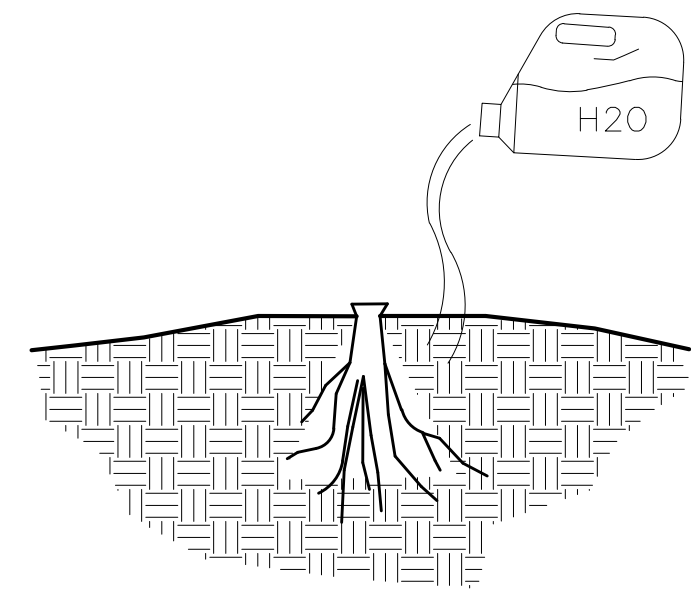
1 Use a chainsaw to remove shrub top of gorse plant exposing cut stump surface within 6 inches from the ground. remove and bag shrub top.



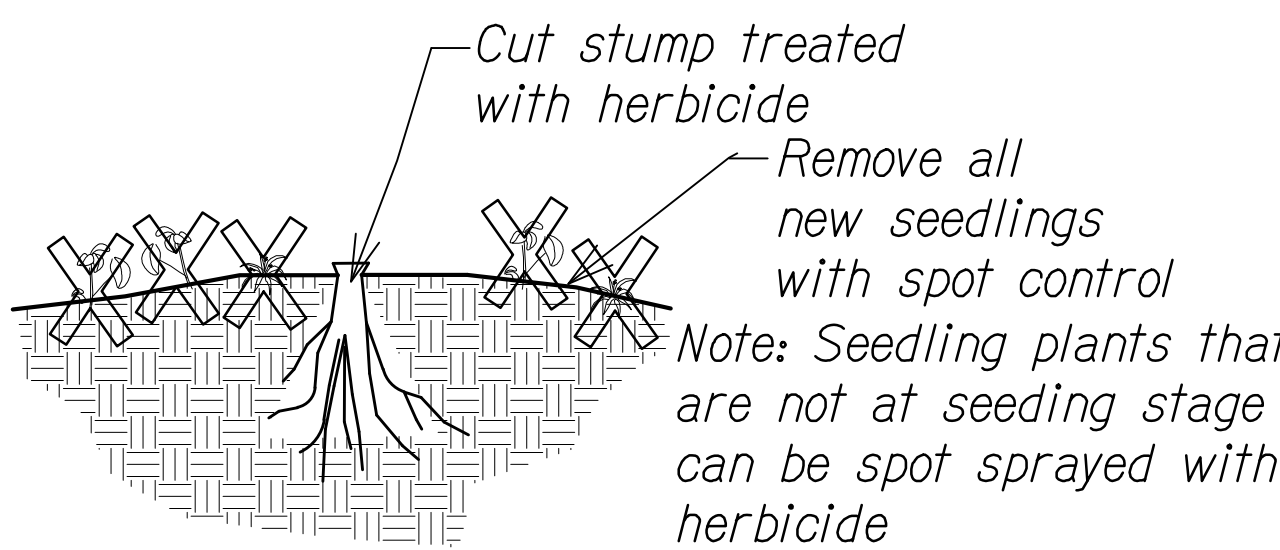
2 Apply chemical herbicide to cut stump surface. for stumps less than 2 inches in diameter, apply herbicide to the entire cut stump surface. For cut stumps greater than 2 inches in diameter, apply herbicide to the outer 1 inch of the cut stump.



3 Apply one deep watering around stump area to encourage seed germination.

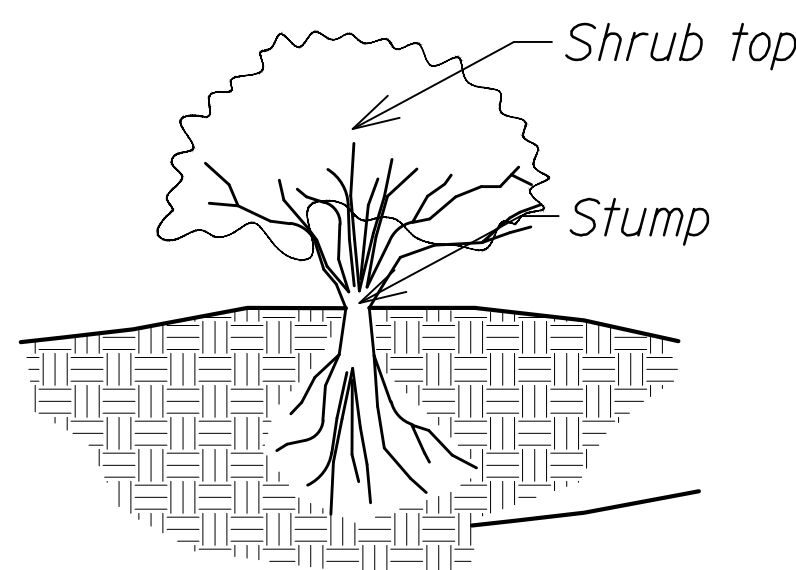


4 Conduct spot control of seedlings during 90 days maintenance period.

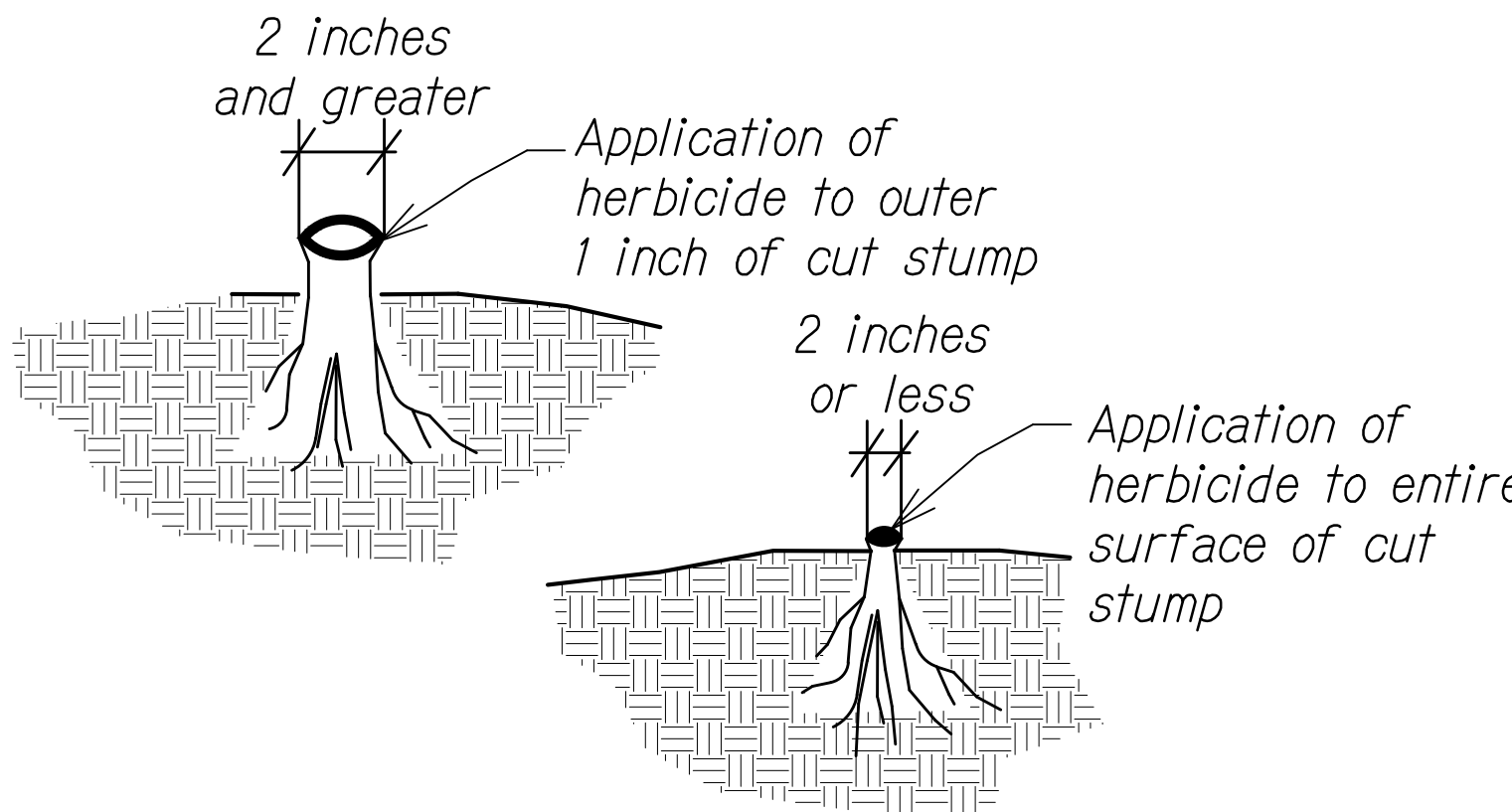


1 Gorse Removal
Scale: N.T.S.

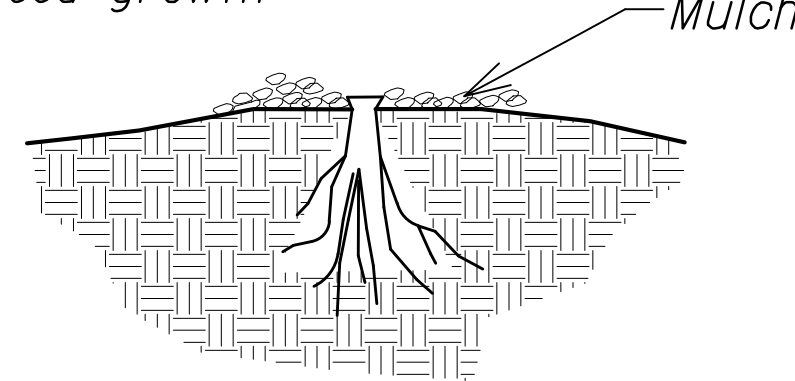
1 Use a chainsaw to cut and remove shrub top of plant exposing cut stump surface within 6 inches from the ground.



2 Apply chemical herbicide to cut stump surface. for stumps less than 2 inches in diameter, apply herbicide to the entire cut stump surface. For cut stumps greater than 2 inches in diameter, apply herbicide to the outer 1 inch of the cut stump.



3 Mulch stumps and apply to reduce weed growth



2 Pine and Eucalyptus Removal
Scale: N.T.S.

Invasive Plant Removal General Notes:

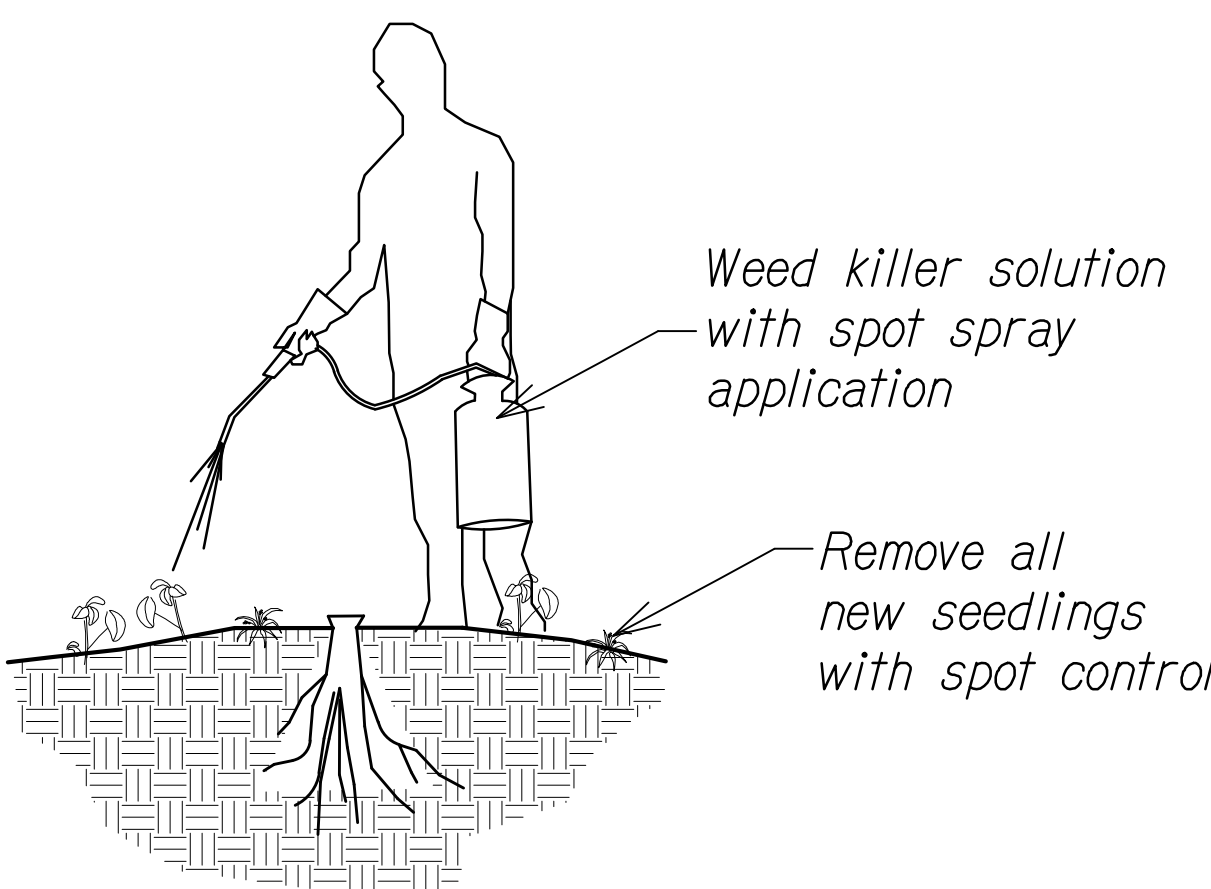
1. Invasive plants listed for removal shall be completely removed from the project area prior to the beginning of the 90 calendar day maintenance period. Area will be maintained free of targeted invasive plants during the maintenance period and shall be 100% free of the target invasive plants at the end of the 90 calendar day maintenance period and prior to project turn over.
2. Trees and shrubs designated to be cut and mulched shall be mulched on site, with mulch stored in approved location, to be used for planting operations.
3. Plant removal and control shall be done by approved methods only, per the plan and specifications.
4. The Contractor's attention is directed to the following Sections of the Special Provisions: Subsection 107.06 - Contractor Duty Regarding Public Convenience; Subsection 107.12 - Protection of Persons and Property; and Section 645 - Work Zone Traffic Control.
5. Invasive plants will be cut using handheld equipment, herbicides applied to kill the root zone, and the invasive plants removed from the project area.

Gorse Removal Notes:

1. During Gorse removal process, minimize soil disturbances to decrease spread of seed beds and germination. No excavation or grading.
2. For larger clusters of Gorse, use a mulcher. Do not directly uproot individual or plant clusters. Apply chemical herbicide to cut stump's surface after tree and or shrub has been cut, bagged, and removed.
3. For small isolated clusters, use a root extracting tool, hand cutting with heavy loopers, chainsaw, or pole saw to remove plants when soil is wet. Apply chemical herbicide to cut stump's surface after tree and or shrub has been cut, bagged, and removed.

Targeted Invasive Plant List

Common Name	Botanical Name	Control Method	Treatment
1. Gorse	<i>Ulex europaeus</i>	cut/treat/bag/remove	Garlon-3M on cut stump
2. Pine	<i>Pinus spp.</i>	cut/treat/mulch	Garlon-3M on cut stump
3. Eucalyptus	<i>Eucalyptus spp.</i>	cut/treat/mulch	Garlon-3M on cut stump
4. Fire Weed	<i>Senecio madagascariensis</i>	spot control	Spot spray w/ weed killer



3 Spot Control
Scale: N.T.S.

ORIGINAL SURVEY PLOTTED BY: _____ DATE: _____
PLAN DRAWN BY: _____
NOTE BOOK TRACED BY: _____
DESIGNED BY: _____
QUANTITIES BY: _____
No. _____

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HIGHWAYS DIVISION

REMOVAL NOTES

HALEAKALA CRATER ROAD
LANDSCAPE RESTORATION
Federal-Aid Project No. STP-0378(004)
Scale: As Noted Date: Aug. 2021

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION AND CONSTRUCTION OF THIS PROJECT WILL BE UNDER MY OBSERVATION.
(REC. 16-1153 DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS)