

Practice: 575 - Trails and Walkways

Scenario: #1 - Earth Trail

Scenario Description: Scenario Description: An earth trail is installed to facilitate the movement of people or off-road vehicles to protect ecologically sensitive, erosive and/or potentially erosive sites; provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations; or provide trails for recreational activities or access to recreation sites. Costs include excavation, shaping, and grading and all equipment, labor and incidental materials necessary to install the practice. Vegetation of areas disturbed by construction is included. This practice applies on all lands where management of human movement is needed to address soil erosion and water quality resource concerns. This practice also applies to a trail constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

Before Situation: The existing access to the site is located adjacent to a stream and needs to be moved to prevent erosion of materials into the stream. Only pedestrian access is needed. The trail has very limited usage and soils are suitable for an earthen surface.

After Situation: The typical trail will be a 6 foot wide 300 foot long, 1800 square foot lane of earth. Included is 11 CY of excavation on the trail, 1800 square foot of earthen (clay) surfacing spread 2" thick, and vegetation of 3600 square foot of disturbed areas (3 feet on each side of trail and 1800 SF of material removed from trail and spread). Stream Crossing (Code 578) will be used where the trail crosses a stream or shallow water area. Consider the use of water bars to control and direct water flow in the trail per the criteria in Access Road (Code 560). All culverts for drainage features will be applied under Structure for Water Control (Code 587). Use Diversion (Code 362) as appropriate.

Scenario Feature Measure: Area of trail

Scenario Unit: Square Foot

Scenario Typical Size: 1800

Total Scenario Cost: \$2,482.43

Scenario Cost/Unit: \$1.38

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Equipment Installation

Earthfill, Dumped and Spread	51	Earthfill, dumped and spread without compaction effort, includes equipment and labor	Cubic Yard	\$3.10	11	\$34.05
Earthfill, Roller Compacted	49	Earthfill, roller or machine compacted, includes equipment and labor	Cubic Yard	\$3.77	11	\$41.49
Excavation, Common Earth, side cast, small equipment	48	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic Yard	\$2.00	11	\$21.96
Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.08	\$1.01
Skidsteer, 80 HP	933	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$44.42	16	\$710.64
Truck, dump, 18 CY	1400	Dump truck for moving bulk material. Typically capacity is 25 ton or 18 cubic yards. Includes equipment only.	Hour	\$121.14	2	\$242.28
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	3	\$65.09

Materials

Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.12	\$13.59
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	3.2	\$2.33
One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	0.08	\$3.14
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	4	\$3.13
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	4	\$1.74
Straw	1237	Small grain straw (non organic and certified organic). Includes	Ton	\$122.89	0.16	\$19.66

		materials only.				
Three Species Mix, Cool Season, Introduced Perennial Grass	2315	Cool season, introduced grass mix. Includes material and shipping only.	Acre	\$46.58	0.08	\$3.73

Labor

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$29.32	18	\$527.81
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88
Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$30.84	4	\$123.37

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	2	\$509.54
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Practice: 575 - Trails and Walkways

Scenario: #2 - Vegetated Trail

Scenario Description: A vegetated trail is installed to facilitate the movement of animals, people, or off-road vehicles in order to provide or improve access to forage, water, working/handling facilities, and/or shelter; improve grazing efficiency and distribution; protect ecologically sensitive, erosive and/or potentially erosive sites; provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations; or provide trails for recreational activities or access to recreation sites. Costs include excavation, shaping, grading, surfacing material, and all equipment, labor and incidental materials necessary to install the practice. Vegetation of areas disturbed by construction is included. This practice applies on all lands where management of animal or human movement is needed to address soil erosion and water quality resource concerns. This practice also applies to a trail constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

Before Situation: The existing access to the site is located adjacent to a stream and needs to be moved to prevent erosion of materials into the stream. Only animal or ATV access is needed. The trail has very limited usage and soils are suitable for a vegetative surface.

After Situation: The typical trail is a 12 foot wide, 300 foot long, lane of vegetated earth. This scenario includes vegetation of 3600 square foot for surfacing and vegetation of 1800 square feet of disturbed areas beside the trail. Stream Crossing (Code 578) will be used where the trail crosses a stream or shallow water area. Consider the use of water bars to control and direct water flow in the trail per the criteria in Access Road (Code 560). All culverts for drainage features will be applied under Structure for Water Control (Code 587). Use Diversion (Code 362) to keep clean water away from the walkway, as appropriate. Use Fencing (Code 382) when needed to control animal movement. The vegetation of this trail will be designed in accordance with the criteria in Heavy Use Area Protection (Code 561) but all materials are included in this scenario.

Scenario Feature Measure: Area of trail

Scenario Unit: Square Foot

Scenario Typical Size: 3600

Total Scenario Cost: \$1,298.00

Scenario Cost/Unit: \$0.36

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.18	\$20.39
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	4.8	\$3.50
One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	0.12	\$4.72
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	6	\$4.69
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	6	\$2.61
Straw	1237	Small grain straw (non organic and certified organic). Includes materials only.	Ton	\$122.89	0.24	\$29.49
Three Species Mix, Cool Season, Native Perennial Grass	2316	Cool season, native grass mix. Includes material and shipping only.	Acre	\$144.58	0.12	\$17.35

Labor

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$29.32	8	\$234.58
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88
Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$30.84	4	\$123.37

Equipment Installation

Seeding Operation, No Till/Grass Drill	960	No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs.	Acre	\$21.27	0.12	\$2.55
Skidsteer, 80 HP	933	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$44.42	8	\$355.32
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	4	\$86.78

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	1	\$254.77
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Practice: 575 - Trails and Walkways

Scenario: #3 - Reinforced Concrete Walkway

Scenario Description: Construct an reinforced concrete walkway on a gravel foundation to facilitate the movement of animals, people, or off-road vehicles to provide or improve access to forage, water, working/handling facilities, and/or shelter; improve grazing efficiency and distribution; protect ecologically sensitive, erosive and/or potentially erosive sites; provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations; or provide walkways for recreational activities or access to recreation sites. Costs include excavation, shaping, grading, reinforced concrete surfacing, vegetation of disturbed areas, and all equipment, labor and incidental materials necessary to install the practice. This practice applies on all lands where management of animal or human movement is needed to address soil erosion and water quality resource concerns. This practice applies to a walkway constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

Before Situation: A dairy operation moves cows from the pasture/loafing area to the milking parlor and back twice daily. The existing earthen path is covered in manure and is difficult to clean.

After Situation: The typical walkway is 12 foot wide and 300 foot long and is constructed of reinforced concrete. Approximately 1800 square feet of disturbed area along the walkway and 8500 square feet (4 inches deep) of spoil area will be vegetated. The walkway will require approximately 106 CY of excavation (9.5 inches deep), 62 CY of reinforced concrete (5.5 inches thick), and 45 CY gravel foundation (4 inches thick). Stream Crossing (Code 578) will be used when the walkway crosses a stream or shallow water area. Culverts for drainage features will be applied using Structure for Water Control (Code 587). Use Diversion (Code 362) to keep clean water away from the walkway, as appropriate. Fencing (Code 382) will be used when needed to control animal movement. The concrete surface material for the walkway will be designed in accordance with the criteria in Heavy Use Area Protection (Code 561) but all materials are included in this scenario.

Scenario Feature Measure: Area of Walkway

Scenario Unit: Square Foot

Scenario Typical Size: 3600

Total Scenario Cost: \$21,637.82

Scenario Cost/Unit: \$6.01

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Equipment Installation

Concrete, CIP, slab on grade, reinforced	37	Steel reinforced concrete formed and cast-in-placed as a slab on grade by chute placement. Typical strength is 3000 to 4000 psi. Includes materials, labor and equipment to transport, place and finish.	Cubic Yard	\$290.09	62	\$17,985.66
Dozer, 80 HP	929	Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$65.86	8	\$526.86
Excavation, Common Earth, side cast, small equipment	48	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic Yard	\$2.00	106	\$211.58
Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.3	\$3.77
Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.3	\$3.77
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	8	\$173.57

Materials

Aggregate, Gravel, Graded	46	Gravel, includes materials, equipment and labor to transport and place. Includes washed and unwashed gravel.	Cubic Yard	\$31.25	45	\$1,406.41
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.45	\$50.97
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	12	\$8.74
One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	0.3	\$11.79
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	15	\$11.72

Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	15	\$6.53
Straw	1237	Small grain straw (non organic and certified organic). Includes materials only.	Ton	\$122.89	0.6	\$73.73
Three Species Mix, Cool Season, Introduced Perennial Grass	2315	Cool season, introduced grass mix. Includes material and shipping only.	Acre	\$46.58	0.3	\$13.97

Labor

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$29.32	8	\$234.58
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88
Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$30.84	8	\$246.75

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	2	\$509.54
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Practice: 575 - Trails and Walkways

Scenario: #4 - Rock/Gravel on Geotextile, Walkway

Scenario Description: A walkway with a rock and/or gravel surface treatment over a geotextile fabric foundation will be installed to facilitate the movement of animals, people, or off-road vehicles to provide or improve access to forage, water, working/handling facilities, and/or shelter; improve grazing efficiency and distribution; protect ecologically sensitive, erosive and/or potentially erosive sites; provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations; or provide walkways for recreational activities or access to recreation sites. Costs include excavation, shaping, grading, rock and/or gravel, geotextile, vegetation of disturbed areas, and all equipment, labor and incidental materials necessary to install the practice. This practice applies on all lands where management of animal or human movement is needed to address soil erosion and water quality resource concerns. This practice applies to a walkway constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

Before Situation: A beef operation moves cattle between pastures frequently. The existing earthen path is eroding and muddy.

After Situation: The typical walkway is 12 foot wide and 300 foot long and is constructed of rock and/or gravel on a geotextile fabric foundation. The walkway will require approximately 67 CY of excavation, 67 CY of aggregate gravel, 460 SY of geotextile fabric (1.15 x 400 SY to account for overlap), and 7200 square feet of vegetation of the disturbed area (1800 square feet) and spoil area (5400 square feet). Stream Crossing (Code 578) will be used when the walkway crosses a stream or shallow water area. All culverts for drainage features will be applied under Structure for Water Control (Code 587). Consider the use of water bars to control and direct water flow in the walkway per the criteria in Access Road (Code 560). Use Diversion (Code 362) to keep clean water away from the walkway, as appropriate. Fencing (Code 382) will be used when needed to control animal movement. The surface material for the walkway will be designed in accordance with the criteria in Heavy Use Area Protection (Code 561) but all materials are included in this scenario.

Scenario Feature Measure: Area of Walkway

Scenario Unit: Square Foot

Scenario Typical Size: 3600

Total Scenario Cost: \$6,121.78

Scenario Cost/Unit: \$1.70

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

Aggregate, Gravel, Graded	46	Gravel, includes materials, equipment and labor to transport and place. Includes washed and unwashed gravel.	Cubic Yard	\$31.25	67	\$2,093.99
Geotextile, non-woven, heavy weight	1210	Non-woven greater than 8 ounce/square yard geotextile with staple anchoring. Materials and shipping only.	Square Yard	\$4.15	460	\$1,911.05
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.45	\$50.97
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	12	\$8.74
One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	0.3	\$11.79
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	15	\$11.72
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	15	\$6.53
Straw	1237	Small grain straw (non organic and certified organic). Includes materials only.	Ton	\$122.89	0.6	\$73.73
Three Species Mix, Cool Season, Introduced Perennial Grass	2315	Cool season, introduced grass mix. Includes material and shipping only.	Acre	\$46.58	0.3	\$13.97

Labor

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$29.32	8	\$234.58
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88

Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$30.84	8	\$246.75
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Equipment Installation

Dozer, 80 HP	929	Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$65.86	8	\$526.86
Earthfill, Dumped and Spread	51	Earthfill, dumped and spread without compaction effort, includes equipment and labor	Cubic Yard	\$3.10	67	\$207.37
Excavation, Common Earth, side cast, small equipment	48	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic Yard	\$2.00	67	\$133.73
Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.3	\$3.77
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	8	\$173.57

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	1	\$254.77
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Practice: 575 - Trails and Walkways

Scenario: #5 - Rock/Gravel in GeoCell on Geotextile, Walkway

Scenario Description: A walkway with rock and or gravel in a cellular containment grid on a geotextile fabric foundation surface treatment is installed to provide or improve access to forage, water, working/handling facilities, and/or shelter; improve grazing efficiency and distribution; protect ecologically sensitive, erosive and/or potentially erosive sites; provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations; or provide a walkway for recreational activities or access to recreation sites. Costs include excavation, shaping, grading, wood chip surfacing, vegetation of disturbed areas, and all equipment, labor and incidental materials necessary to install the practice. This practice applies on all lands where management of animal or human movement is needed to address soil erosion and water quality resource concerns. This practice applies to a walkway constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

Before Situation: A beef operation moves cattle between pastures frequently. The existing earthen path is eroding and muddy.

After Situation: The typical walkway is 12 foot wide and 300 foot long and is constructed of rock and/or gravel in a cellular containment grid on a geotextile fabric foundation surface treatment. The walkway will require 89 CY of gravel for surfacing with 4 inches in the geocell and 4 inches on top for protection. Approximately 1800 square feet of disturbed areas along the sides of the walkway and 3600 sf of spread spoil material (spread 4" deep) will be vegetated. The walkway consist of approximately 89 CY of excavation and 400 SY of 4 inch geocell on a 460 SY of geotextile fabric foundation (with 15% overlap). Stream Crossing (Code 578) will be used where the walkway crosses a stream or shallow water area. Consider the use of water bars to control and direct water flow in the trail per the criteria in Access Road (Code 560). All culverts for drainage features will be applied under Structure for Water Control (587). Use Diversion (Code 362) to keep clean water away from the walkway, as appropriate. Fencing (Code 382) will be used when needed to control animal movement. The surface material will be designed in accordance with the criteria in Heavy Use Area Protection (Code 561) but all materials are included in this scenario.

Scenario Feature Measure: Area of Walkway

Scenario Unit: Square Foot

Scenario Typical Size: 3600

Total Scenario Cost: \$18,220.39

Scenario Cost/Unit: \$5.06

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

Aggregate, Gravel, Graded	46	Gravel, includes materials, equipment and labor to transport and place. Includes washed and unwashed gravel.	Cubic Yard	\$31.25	89	\$2,781.57
GeoCell, 4"	1054	4-inch thick cellular confinement system, three-dimensional, expandable panels made from high-density polyethylene (HDPE), polyester or another polymer material. Includes materials, labor and equipment for the geocell only, does not include backfill	Square Yard	\$27.61	400	\$11,044.26
Geotextile, non-woven, heavy weight	1210	Non-woven greater than 8 ounce/square yard geotextile with staple anchoring. Materials and shipping only.	Square Yard	\$4.15	460	\$1,911.05
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.45	\$50.97
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	12	\$8.74
One Species, Cool Season, Annual Grass or Legume	2311	Cool season annual grass or legume. Includes material and shipping only.	Acre	\$39.29	0.3	\$11.79
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	15	\$11.72
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	15	\$6.53
Straw	1237	Small grain straw (non organic and certified organic). Includes materials only.	Ton	\$122.89	0.6	\$73.73
Three Species Mix, Cool Season, Introduced Perennial Grass	2315	Cool season, introduced grass mix. Includes material and shipping only.	Acre	\$46.58	0.3	\$13.97

Labor

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$29.32	8	\$234.58
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General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88
Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$30.84	8	\$246.75

Equipment Installation

Dozer, 80 HP	929	Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$65.86	8	\$526.86
Earthfill, Dumped and Spread	51	Earthfill, dumped and spread without compaction effort, includes equipment and labor	Cubic Yard	\$3.10	89	\$275.47
Excavation, Common Earth, side cast, small equipment	48	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic Yard	\$2.00	89	\$177.64
Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.3	\$3.77
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	8	\$173.57

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	2	\$509.54
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Practice: 575 - Trails and Walkways

Scenario: #6 - Bituminous Concrete Pavement, Walkway

Scenario Description: Layout and construct a bituminous concrete pavement surface treatment on aggregate gravel foundation walkway to facilitate the movement of animals, people, or off-road vehicles to provide or improve access to forage, water, working/handling facilities, and/or shelter, Improve grazing efficiency and distribution, and/or protect ecologically sensitive, erosive and/or potentially erosive sites, pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations, provide walkways for recreational activities or access to recreation sites and address the resource concerns of soil erosion and water quality degradation. Costs include excavation, shaping, grading, bituminous concrete pavement surfacing, vegetation of disturbed areas, all equipment, labor and incidental materials necessary to install the practice. Bituminous concrete is not recommended for animal applications.

Before Situation: This practice applies on all lands where management of animal or human movement is needed to address soil erosion and water quality resource concerns. This practice applies to a trails or walkways constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

After Situation: The typical walkway will be a 6 foot wide 300 foot long, 1800 square foot of bituminous concrete pavement on aggregate gravel foundation. All excavation, grading and shaping necessary to provide a smooth permanent travel surface for livestock or people is included. Included is vegetation of 1800 square feet of disturbed areas. The walkway consist of approximately 45 CY of excavation, 1800 square feet bituminous concrete pavement, with a 22 CY gravel foundation. Stream Crossing (Code 578) will be used where the trail or lane crosses streams or shallow water areas. Consider the use of water bars to control and direct water flow in the trail. All culverts for drainageways will be applied under Structure for Water Control (587). Use Access Road (Code 560) and Diversion (362) as appropriate. Fencing (Code 382) will be used when needed to control animal movement. The surface material for a trail of walkway will be designed in accordance with the criteria in Heavy Use Area Protection (Code 561) but all materials are included in this scenario.

Scenario Feature Measure: Area of Walkway

Scenario Unit: Square Foot

Scenario Typical Size: 1800

Total Scenario Cost: \$6,187.78

Scenario Cost/Unit: \$3.44

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

Aggregate, Gravel, Graded	46	Gravel, includes materials, equipment and labor to transport and place. Includes washed and unwashed gravel.	Cubic Yard	\$31.25	22	\$687.58
Asphalt, pavement	1867	Bituminous Concrete, includes materials, equipment and labor for 4" layer, base not included.	Square Foot	\$2.30	1800	\$4,142.84
Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.32	\$36.25
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	8.4	\$6.12
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	10.5	\$8.20
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	10.5	\$4.57
Straw	1237	Small grain straw (non organic and certified organic). Includes materials only.	Ton	\$122.89	0.42	\$51.61
Three Species Mix, Cool Season, Native Perennial Grass	2316	Cool season, native grass mix. Includes material and shipping only.	Acre	\$144.58	0.21	\$30.36

Labor

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$29.32	1	\$29.32
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88
Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$30.84	8	\$246.75

Equipment Installation

Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.21	\$2.64
Skidsteer, 80 HP	933	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$44.42	8	\$355.32
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	8	\$173.57

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	1	\$254.77
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Practice: 575 - Trails and Walkways

Scenario: #7 - Wood Chips, Walkway

Scenario Description: Layout and construct a wood chip surface treatment on a earthen foundation walkway to facilitate the movement of people to provide or improve access to forage, water, working/handling facilities, and/or shelter; improve grazing efficiency and distribution; protect ecologically sensitive, erosive and/or potentially erosive sites; provide pedestrian or off-road vehicle access to agricultural, construction, or maintenance operations; provide walkways for recreational activities or access to recreation sites; and address the resource concerns of soil erosion and water quality degradation. Costs include excavation, shaping, grading, wood chip surfacing, vegetation of disturbed areas, and all equipment, labor and incidental materials necessary to install the practice. Wood chips and other mulches are not recommended as a surface treatment for animal or vehicular applications.

Before Situation: This practice applies on all lands where management of animal or human movement is needed to address soil erosion and water quality resource concerns. This practice applies to a trails or walkways constructed for use by off-road vehicles, such as All-Terrain Vehicles or snowmobiles, which are not designed for use on public roads. It does not apply to roads constructed for movement of equipment or vehicles. Use NRCS Conservation Practice Standard Access Road (Code 560).

After Situation: The typical walkway will be a 6 foot wide 300 foot long, 1800 square foot of wood chip surface treatment on earthen foundation. All excavation, grading and shaping necessary to provide a smooth permanent travel surface for livestock or people is included. Included is vegetation of 1800 square foot of disturbed areas along the sides of the trail and 5389 sf of spoil material. The walkway consist of approximately 34 CY of excavation, 1800 square feet of wood chip surfacing. Stream Crossing (Code 578) will be used where the trail or lane crosses streams or shallow water areas. Consider the use of water bars to control and direct water flow in the trail. All culverts for drainageways will be applied under Structure for Water Control (Code 587). Use Access Road (Code 560) and Diversion (Code 362) as appropriate. The surface material for a trail of walkway will be designed in accordance with the criteria in Heavy Use Area Protection (Code 561) but all materials are included in this scenario.

Scenario Feature Measure: Area of Walkway

Scenario Unit: Square Foot

Scenario Typical Size: 1800

Total Scenario Cost: \$1,960.81

Scenario Cost/Unit: \$1.09

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
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Materials

Lime, ENM	75	Fertilizer: Limestone Spread on field.	Ton	\$113.27	0.26	\$29.45
Nitrogen (N), Ammonium Nitrate	69	Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.73	6.8	\$4.95
Phosphorus, P2O5	73	Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.78	8.5	\$6.64
Potassium, K2O	74	K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed.	Pound	\$0.44	8.5	\$3.70
Straw	1237	Small grain straw (non organic and certified organic). Includes materials only.	Ton	\$122.89	0.34	\$41.78
Three Species Mix, Cool Season, Native Perennial Grass	2316	Cool season, native grass mix. Includes material and shipping only.	Acre	\$144.58	0.17	\$24.58

Labor

Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.85	8	\$182.82
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$19.74	8	\$157.88

Equipment Installation

Aggregate, Wood Chips	1098	Includes materials, equipment and labor	Cubic Yard	\$21.27	34	\$723.21
Seeding Operation, Broadcast, Ground	959	Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs.	Acre	\$12.57	0.17	\$2.14
Skidsteer, 80 HP	933	Skidsteer loader with horsepower range of 60 to 90. Equipment and	Hour	\$44.42	8	\$355.32

		power unit costs. Labor not included.				
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$21.70	8	\$173.57

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$254.77	1	\$254.77
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