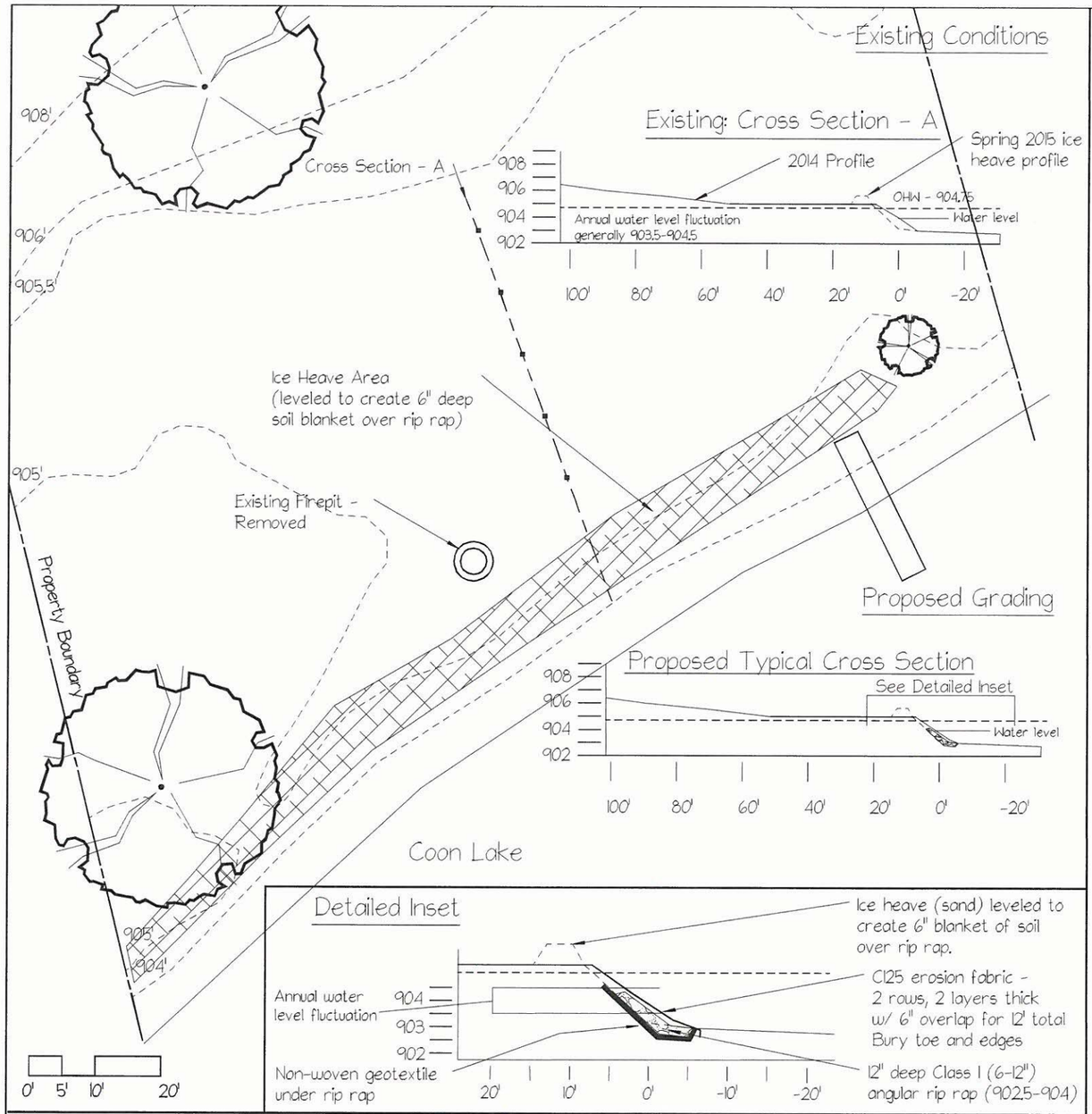
Existing Conditions



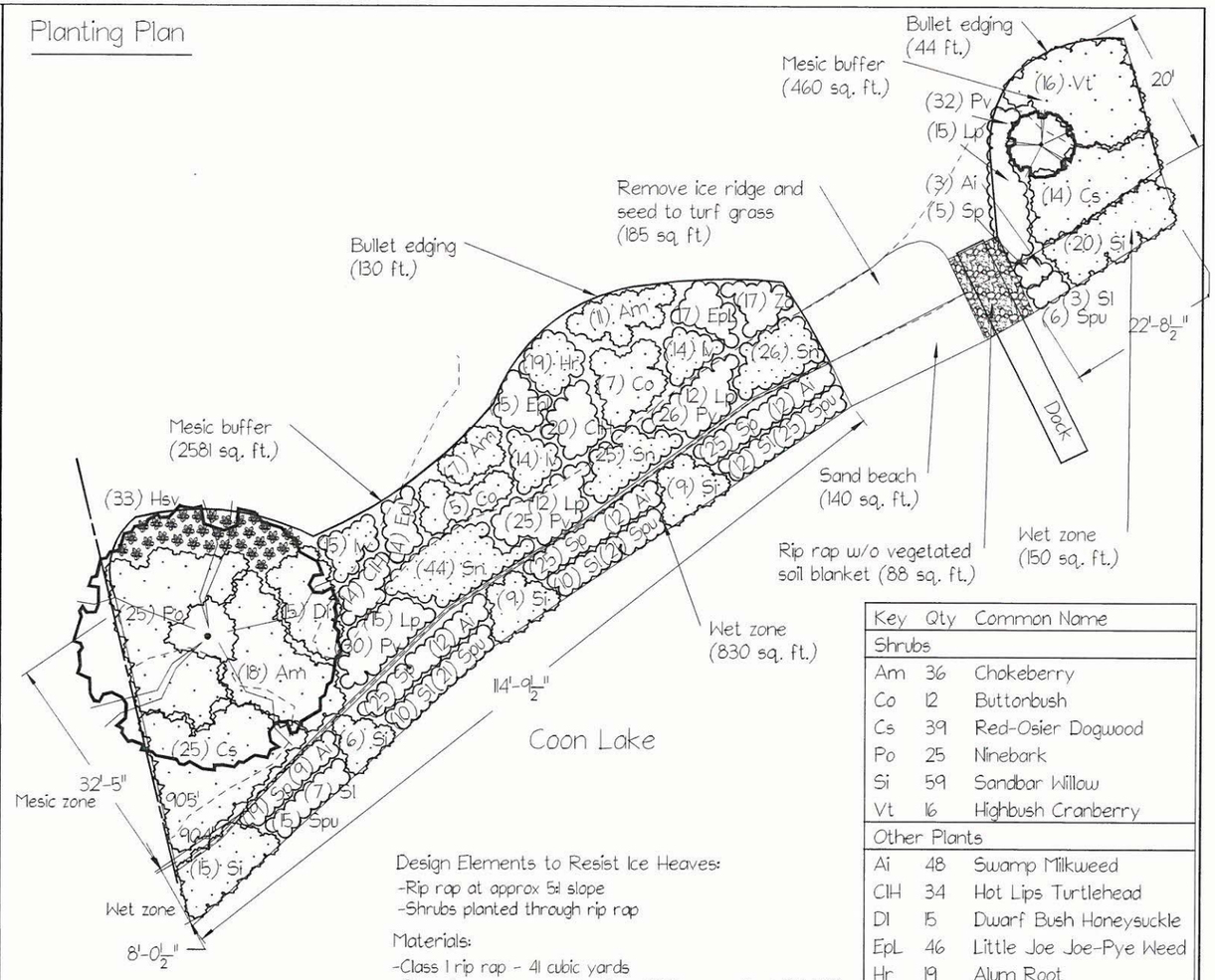
Existing: Cross Section - A

Proposed Grading

Proposed Typical Cross Section

Detailed Inset

Planting Plan



Key	Qty	Common Name
Shrubs		
Am	36	Chokeberry
Co	12	Buttonbush
Cs	39	Red-Osier Dogwood
Po	25	Ninebark
Si	59	Sandbar Willow
Vt	16	Highbush Cranberry
Other Plants		
Ai	48	Swamp Milkweed
ClH	34	Hot Lips Turtlehead
Dl	15	Dwarf Bush Honeysuckle
EpL	46	Little Joe Joe-Pye Weed
Hr	19	Alum Root
Hsv	33	Varigated Hosta
Iv	43	Northern Blue Flag Iris
Lp	54	Thick Spike Blazing Star
Pv	113	Switch Grass
Sl	42	Arrowhead
Sn	95	Indian Grass
Sp	99	Prairie Cordgrass
Spu	88	Three Square Bulrush
Za	17	Golden Alexanders

Design Elements to Resist Ice Heaves:
- -Rip rap at approx 5:1 slope
- -Shrubs planted through rip rap

Materials:
- -Class I rip rap - 41 cubic yards
- -Class 4 non-woven geotextile - 1400 square feet (10'x140')
- -C125 erosion fabric - 3640 square feet (13'x140'x2 layers)
- -Double shredded hardwood mulch - 19 cubic yards
- -Dormant willow stakes - 59
- -Bare root shrubs - 100
- -Plugs - 191 wildflowers, 395 grasses
- -4" pots - 143
- -Potted shrubs - 28
- -Bullet edging - 174'

Mesic zone - vegetated buffer with double shredded hardwood mulch

Wet zone - geotextile, vegetated rip rap, soil blanket, and double layered C125 erosion fabric

Installation Instructions:
- -Verify property boundaries and project extend with landowner
- -Install project during low water to minimize work within standing water
- -Treat turf in mulched buffer area with aquatic safe glyphosate herbicide two weeks prior to installation
- -Create 12" deep trench along toe of slope ensuring slope is no steeper than 3:1
- -Install type 4 non-woven geotextile in trench extending 8' upslope
- -Install 12" Class I angular rip rap (6-12") over geotextile
- -Push ice heave soil over rip rap at least 6" thick
- -Compact and use water to get soil to settle into rock voids
- -Install two rows of C125 erosion fabric over soil and rip rap to top of slope (6" overlap for total width of 12')
- -C125 should be in a double layer secured with biodegradable stakes
- -Install bullet edging along perimeter of buffer planting area flush with ground level
- -Spread double shredded hardwood mulch 2" thick over treated turf

Fortified Shoreline Buffer

Randy Karger
3340 183rd Ave NE East Bethel, MN

Funded By: Sunrise River WMO & the Clean Water Fund
Designed By: Chris Lord, District Manager
Anoka Conservation District (ACD)
Reviewed By: Jann Ahr
Review Date: 7-8-15

PAGE 9 of 9
DATE June-2015
SCALE Varies
ORIGINAL 11" x 17"

Planting Instructions:
- -Evenly distribute plants within planting zone
- -Modify plant quantities to take advantage of volume discounts
- -Grasses and forbs planted at 18" average spacing
- -Shrubs planted at average 36" spacing except willows at 24" average spacing
- -Dormant willow stakes 1-2" diameter 4' long planted through rip rap and geotextile in late fall
- -Repair all areas of damaged sod affected during construction.
- -Gently break rootballs (DO NOT PLANT BOUND ROOTBALL)
- -Ensure plants get 1" of water per week for first growing season.
- -Weed and replace plants as needed.
- -Install wildlife and goose deterant throughout planting area until plants are established (plastic snow fence)
- -Install wave break (plastic construction fence)
- -Call ACD with any questions 763-434-2030