

NATIVE GRASS SEED MIX - TYPICAL

GRASS SEED MIX TO BE BROADCAST OVER ALL TOPSOIL AREAS AND REMEDIATION AREA WHERE NECESSARY - TYPICAL REFER TO SPECIFICATIONS FOR SEEDING RATE

SEED MIX COMPOSITION:

- 17% CANADA WILDRIE
- 10% SLENDER WHEATGRASS
- 12% MOUNTAIN BROME
- 24% NORTHERN WHEATGRASS
- 33% WESTERN WHEATGRASS
- 1% BLUE GRAMA
- 3% JUNEGRASS

PLANTING AREA DESCRIPTIONS:

LOWER RIPARIAN AREA:
THIS IS THE PLANTING AREA BETWEEN THE 1:2 YEAR FLOOD LEVEL AND THE AVERAGE WINTER ICE LEVEL. THIS IS THE ICE SCOUR ZONE

MID-RIPARIAN AREA:
THIS IS THE PLANTING AREA BETWEEN THE AVERAGE WINTER ICE LEVEL AND THE TOP OF THE RIP-RAP

EMBANKMENT AREA:
THIS IS THE PLANTING ZONE BETWEEN THE TOP OF RIP-RAP AND THE TOP OF THE BANK.

TOP OF BANK AREA:
THIS IS THE PLANTING ZONE THAT RUNS ALONG THE TOP OF THE RIVER BANK

GENERAL NOTES:

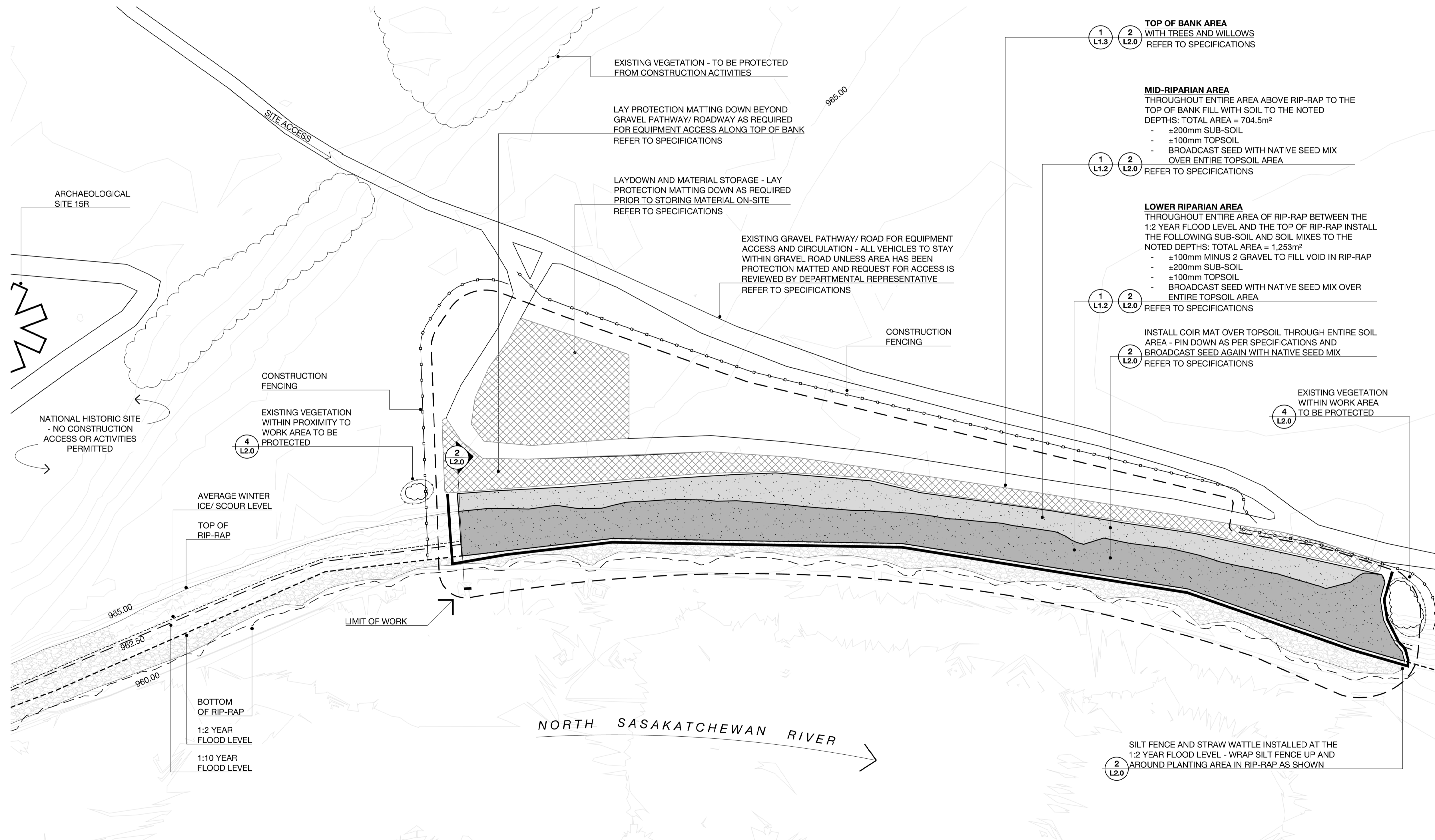
1. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES AND PROTECTING SAME FROM DAMAGE DURING CONSTRUCTION. CONTACT ALBERTA ONE-CALL AT 1-800-242-3447.
2. COMMENCEMENT OF WORK INDICATES ACCEPTANCE OF SITE CONDITIONS.
3. ALL DIMENSIONS TO BE CONFIRMED AND VERIFIED ON SITE PRIOR TO CONSTRUCTION. CONTRACTOR TO REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE.
4. SITE CLEAN-UP IS INCIDENTAL TO THE WORK.
5. CONTRACTOR TO COORDINATE AND ATTEND ALL INSPECTIONS AND APPROVALS REQUIRED BY THE OWNER AND OTHERS.
6. LANDSCAPE PLANS PREPARED USING SURVEY PROVIDED BY PARKS CANADA - SURVEY WAS CONDUCTED BETWEEN AUGUST 13 -26, 2018.

LEGEND:

- LIMIT OF WORK
- - - TREE PROTECTION FENCING
- [Cross-hatched] PROTECTION MATTING
- [Dotted] EXISTING CLASS 2 RIP-RAP
- 965.00 EXISTING CONTOURS
- [Cloud-like] EXISTING VEGETATION
- SILT FENCE, STRAW WATTLE AND BEAVER FENCING
- [Light grey] MID-RIPARIAN AREA
- [Dark grey] LOWER RIPARIAN AREA

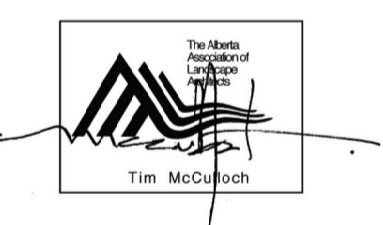
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No.	Date	Revision	By	App.
1	2019-08-21	TENDER		

PARKS CANADA AGENCY



Project
ROCKY MOUNTAIN HOUSE BANK RE-VEGETATION

Drawing
SOIL PLACEMENT AND SEEDING PLAN

Drawn	AL	Approved	TMC
Checked	AL	Job Number	5001
Date	FEB.28, 2019	Sheet	
Scale	1:1000		L1.1

1 LAYOUT ENLARGEMENT PLAN - SOIL PLACEMENT AND SEEDING
L1.1 1:400

PLANT GROUP QTY:

GROUP A - 20 SHRUBS
 GROUP B - 40 SHRUBS
 GROUP C - 20 SHRUBS
 GROUP D - 40 SHRUBS
 GROUP E - 40 SHRUBS
 GROUP F - 40 SHRUBS
 GROUP G - 20 SHRUBS
 GROUP H - 40 SHRUBS
 GROUP J - 40 SHRUBS
 GROUP K - 20 SHRUBS
 GROUP L - 20 SHRUBS

TOTAL = 340

PLANT SCHEDULE (FOR L1.2)

TREES, SHRUBS AND PERENNIALS					
TOTAL QTY	% PER GROUP	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
LOWER RIPARIAN AREA (RIP-RAP ICE SCOUR ZONE) - 131 TOTAL PLANTS					
31	25%	<i>Salix exigua</i>	Sandbar Willow	1 gal.	Container
50	37.5%	<i>Scirpus microcarpus</i>	Small-fruited Bulrush	250 cc	Container
50	37.5%	<i>Glyceria grandis</i>	Tall Manna Grass	250 cc	Container
MID-RIPARIAN AREA (ABOVE RIP-RAP ICE SCOUR ZONE) - 340 TOTAL PLANTS					
17	5%	<i>Salix exigua</i>	Sandbar Willow	1 gal.	Container
17	5%	<i>Salix macellinan</i>	Willow Sp.	1 gal.	Container
34	10%	<i>Salix petiolaris</i>	Basket Willow	1 gal.	Container
34	10%	<i>Cornus stolonifera</i>	Dogwood	1 gal.	Container
34	10%	<i>Elaeagnus commutata</i>	Wolf Willow	1 gal.	Container
51	15%	<i>Betula occidentalis</i>	River Birch	1 gal.	Container
34	10%	<i>Populus balsamifera</i>	Balsam Poplar	1 gal.	Container
68	20%	<i>Symphoricarpos occidentalis</i>	Buckbrush	1 gal.	Container
51	15%	<i>Salix bebbiana</i>	Bebb's Willow	1 gal.	Container

- PLANTING NOTES:**
- ALL PLANTING LAYOUT SHALL BE APPROVED ON-SITE BY DEPARTMENTAL REPRESENTATIVE PRIOR TO INSTALLATION. CONTRACTOR TO NOTIFY REPRESENTATIVE MINIMUM 2 WORKING DAYS PRIOR.
 - CONTRACTOR TO CONFIRM QUANTITIES AND SHALL REPORT PROMPTLY ANY DISCREPANCIES.
 - DISTURBANCES TO ADJACENT AREAS SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENTAL REPRESENTATIVE.
 - REFER TO SPECIFICATIONS FOR MATERIALS, TECHNIQUES AND PROCEDURES.
 - FOR QUANTITIES OF EACH SHRUB SPECIES IN PLANT GROUPS NOTED - CALCULATE THE NUMBER REQUIRED BASED ON THE PERCENTAGE REQUIRED PER GROUP. EACH GROUP WILL HAVE ALL THE SHRUB SPECIES REPRESENTED.

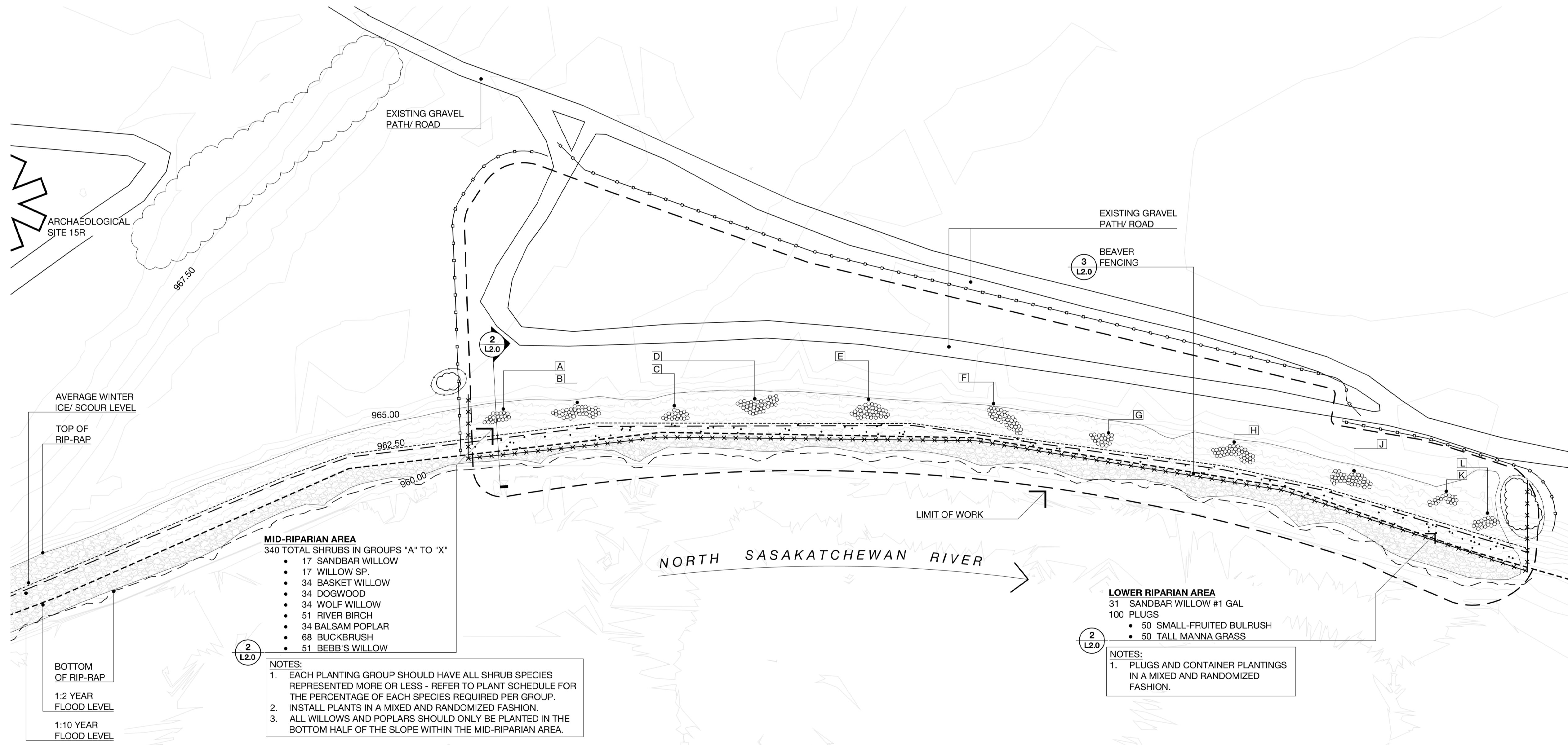
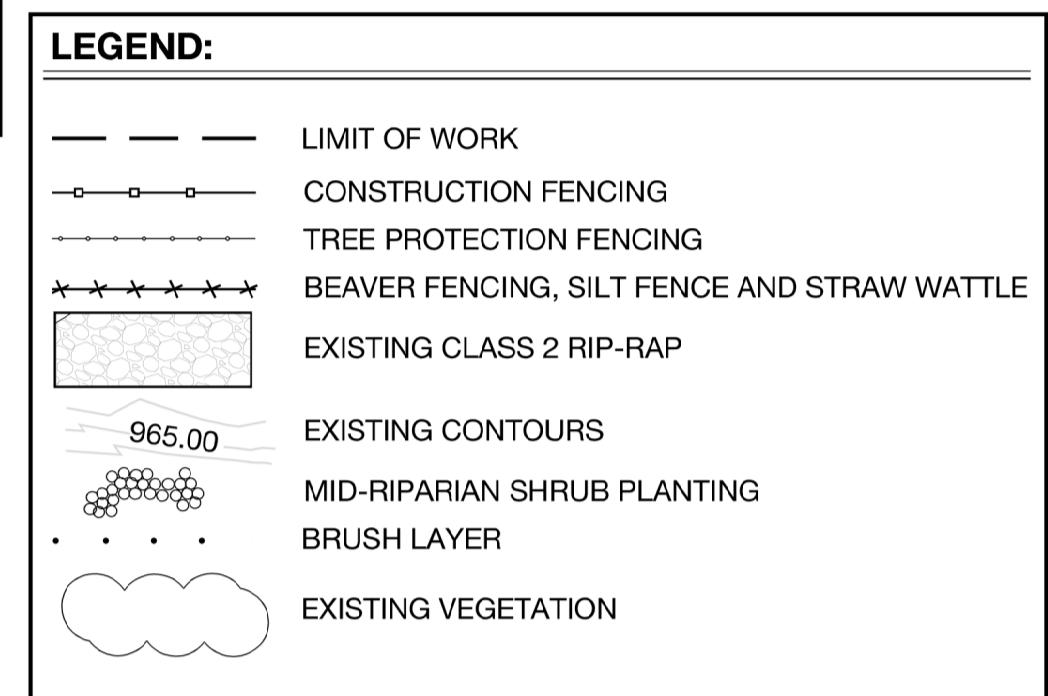
PLANTING AREA DESCRIPTIONS:

LOWER RIPARIAN AREA:
THIS IS THE PLANTING AREA BETWEEN THE 1:2 YEAR FLOOD LEVEL AND THE AVERAGE WINTER ICE LEVEL. THIS IS THE ICE SCOUR ZONE

MID-RIPARIAN AREA:
THIS IS THE PLANTING AREA BETWEEN THE AVERAGE WINTER ICE LEVEL AND THE TOP OF THE RIP-RAP

EMBANKMENT AREA:
THIS IS THE PLANTING ZONE BETWEEN THE TOP OF RIP-RAP AND THE TOP OF THE BANK.

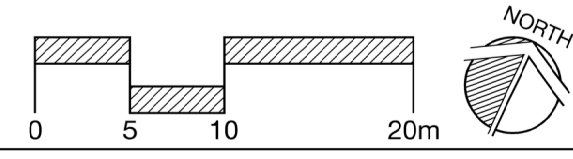
TOP OF BANK AREA:
THIS IS THE PLANTING ZONE THAT RUNS ALONG THE TOP OF THE RIVER BANK



- MID-RIPARIAN AREA**
340 TOTAL SHRUBS IN GROUPS "A" TO "X"
- 17 SANDBAR WILLOW
 - 17 WILLOW SP.
 - 34 BASKET WILLOW
 - 34 DOGWOOD
 - 34 WOLF WILLOW
 - 51 RIVER BIRCH
 - 34 BALSAM POPLAR
 - 68 BUCKBRUSH
 - 51 BEBB'S WILLOW
- NOTES:**
- EACH PLANTING GROUP SHOULD HAVE ALL SHRUB SPECIES REPRESENTED MORE OR LESS - REFER TO PLANT SCHEDULE FOR THE PERCENTAGE OF EACH SPECIES REQUIRED PER GROUP.
 - INSTALL PLANTS IN A MIXED AND RANDOMIZED FASHION.
 - ALL WILLOWS AND POPLARS SHOULD ONLY BE PLANTED IN THE BOTTOM HALF OF THE SLOPE WITHIN THE MID-RIPARIAN AREA.

- LOWER RIPARIAN AREA**
31 SANDBAR WILLOW #1 GAL
100 PLUGS
- 50 SMALL-FRUITED BULRUSH
 - 50 TALL MANNA GRASS
- NOTES:**
- PLUGS AND CONTAINER PLANTINGS IN A MIXED AND RANDOMIZED FASHION.

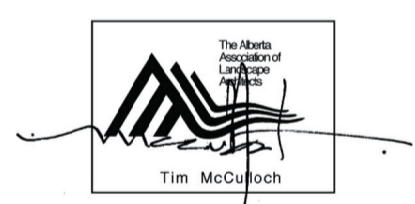
1 LAYOUT ENLARGEMENT PLAN - RIP-RAP PLANTING
L1.2 1:400



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1	2019-08-21	TENDER		
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PARKS CANADA AGENCY



ROCKY MOUNTAIN HOUSE BANK RE-VEGETATION

PLANTING PLAN LOWER AND MID-RIPARIAN AREAS

Drawn	AL	Approved	TMC
Checked	AL	Job Number	5001
Date	FEB. 28, 2019	Sheet	
Scale	1:1000		

L1.2

PLANT GROUP QUANTITIES:

EMBANKMENT AREA:	TOP OF BANK AREA:	TOP OF BANK AREA:
GROUP AA - 20 SHRUBS	NO TREES + WILLOWS	WITH TREES + WILLOWS
GROUP AB - 20 SHRUBS	GROUP BA - 60 SHRUBS	GROUP BD - 40 SHRUBS
GROUP AC - 20 SHRUBS		GROUP BE - 20 SHRUBS
GROUP AD - 20 SHRUBS	TOTAL = 60	GROUP BF - 20 SHRUBS
GROUP AE - 20 SHRUBS		GROUP BG - 40 SHRUBS
GROUP AF - 40 SHRUBS		GROUP BH - 20 SHRUBS
GROUP AG - 20 SHRUBS		
GROUP AH - 20 SHRUBS		TOTAL = 180
TOTAL = 180		

PLANTING AREA DESCRIPTIONS:

LOWER RIPARIAN AREA:
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MID-RIPARIAN AREA:
THIS IS THE PLANTING AREA BETWEEN THE AVERAGE WINTER ICE LEVEL AND THE TOP OF THE RIP-RAP

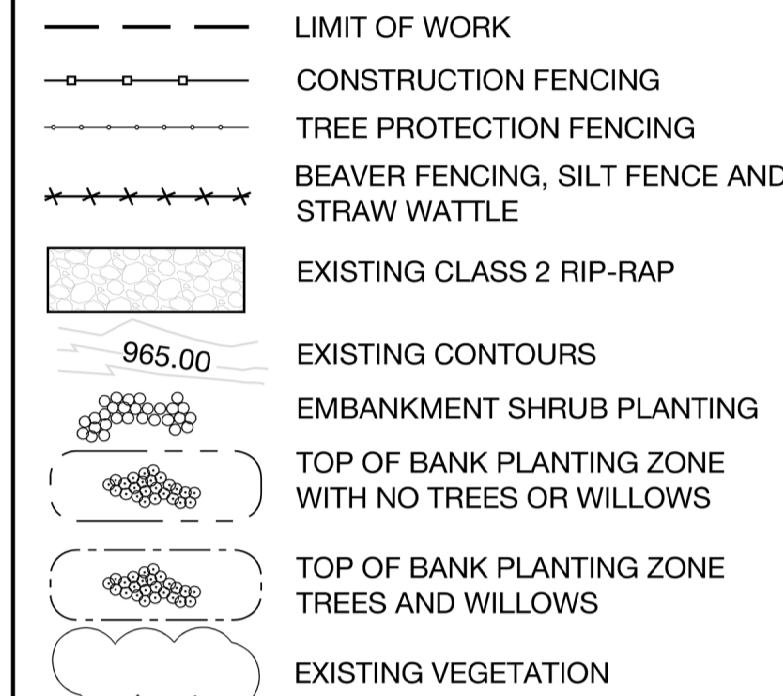
EMBANKMENT AREA:
THIS IS THE PLANTING ZONE BETWEEN THE TOP OF RIP-RAP AND THE TOP OF THE BANK.

TOP OF BANK AREA:
THIS IS THE PLANTING ZONE THAT RUNS ALONG THE TOP OF THE RIVER BANK

PLANTING NOTES:

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LEGEND:

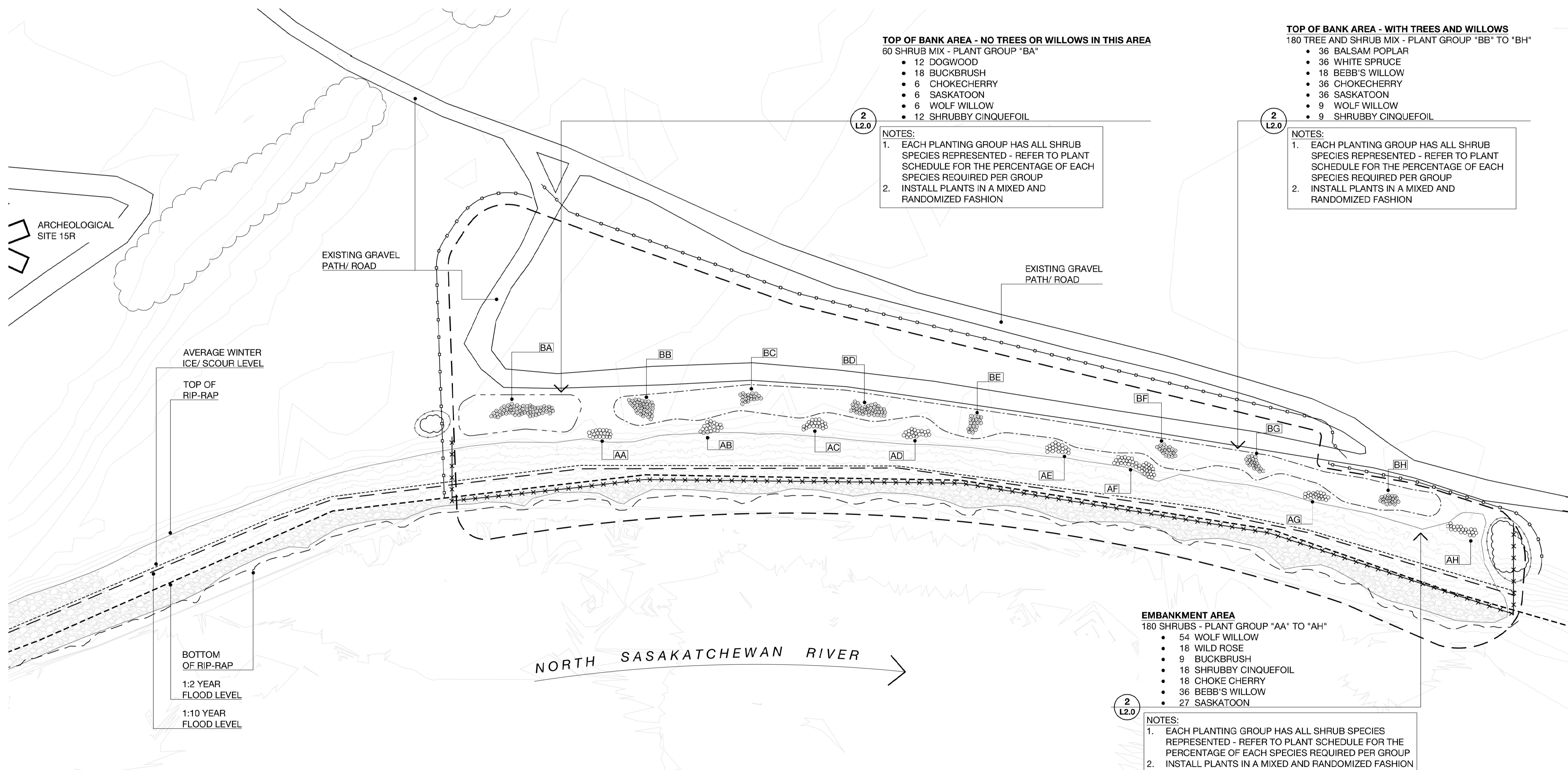


PLANT SCHEDULE (FOR L1.3)

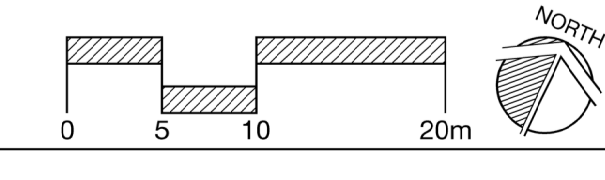
TOTAL QTY	% PER GROUP	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
TREES, SHRUBS AND PERENNIALS					
EMBANKMENT AREA: 180 TOTAL PLANTS					
54	30%	<i>Elaeagnus commutata</i>	Wolf Willow	1 gal.	Container
18	10%	<i>Rosa woodsii</i>	Wild Rose	1 gal.	Container
9	5%	<i>Symphoricarpos occidentalis</i>	Buckbrush	1 gal.	Container
18	10%	<i>Potentilla fruticosa</i>	Shrubby Cinquefoil	1 gal.	Container
18	10%	<i>Prunus virginiana</i>	Western Chokecherry	1 gal.	Container
36	20%	<i>Salix bebbiana</i>	Bebb's Willow	1 gal.	Container
27	15%	<i>Amelanchier alnifolia</i>	Saskatoon	1 gal.	Container
TOP OF BANK AREA - WITH TREES AND WILLOWS: 180 TOTAL PLANTS					
36	20%	<i>Populus balsamifera</i>	Balsam Poplar	2 gal.	Container
36	20%	<i>Picea glauca</i>	White Spruce	2 gal.	Container
18	10%	<i>Salix bebbiana</i>	Bebb's Willow	1 gal.	Container
36	20%	<i>Prunus virginiana</i>	Western Chokecherry	1 gal.	Container
36	20%	<i>Amelanchier alnifolia</i>	Saskatoon	2 gal.	Container
9	5%	<i>Elaeagnus commutata</i>	Wolf Willow	1 gal.	Container
9	5%	<i>Potentilla fruticosa</i>	Shrubby Cinquefoil	1 gal.	Container
TOP OF BANK AREA - NO TREES OR WILLOWS: 60 TOTAL PLANTS					
12	20%	<i>Cornus stolonifera</i>	Dogwood	1 gal.	Container
18	30%	<i>Symphoricarpos occidentalis</i>	Buckbrush	1 gal.	Container
6	10%	<i>Prunus virginiana</i>	Western Chokecherry	1 gal.	Container
6	10%	<i>Amelanchier alnifolia</i>	Saskatoon	2 gal.	Container
6	10%	<i>Elaeagnus commutata</i>	Wolf Willow	1 gal.	Container
12	20%	<i>Potentilla fruticosa</i>	Shrubby Cinquefoil	1 gal.	Container

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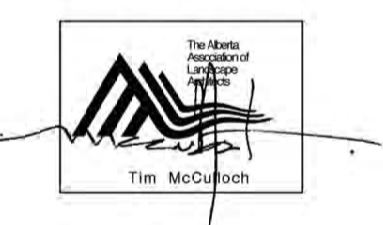


1 LAYOUT ENLARGEMENT PLAN - EMBANKMENT AND TOP OF BANK PLANTING
L1.3 1:400



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PARKS CANADA AGENCY

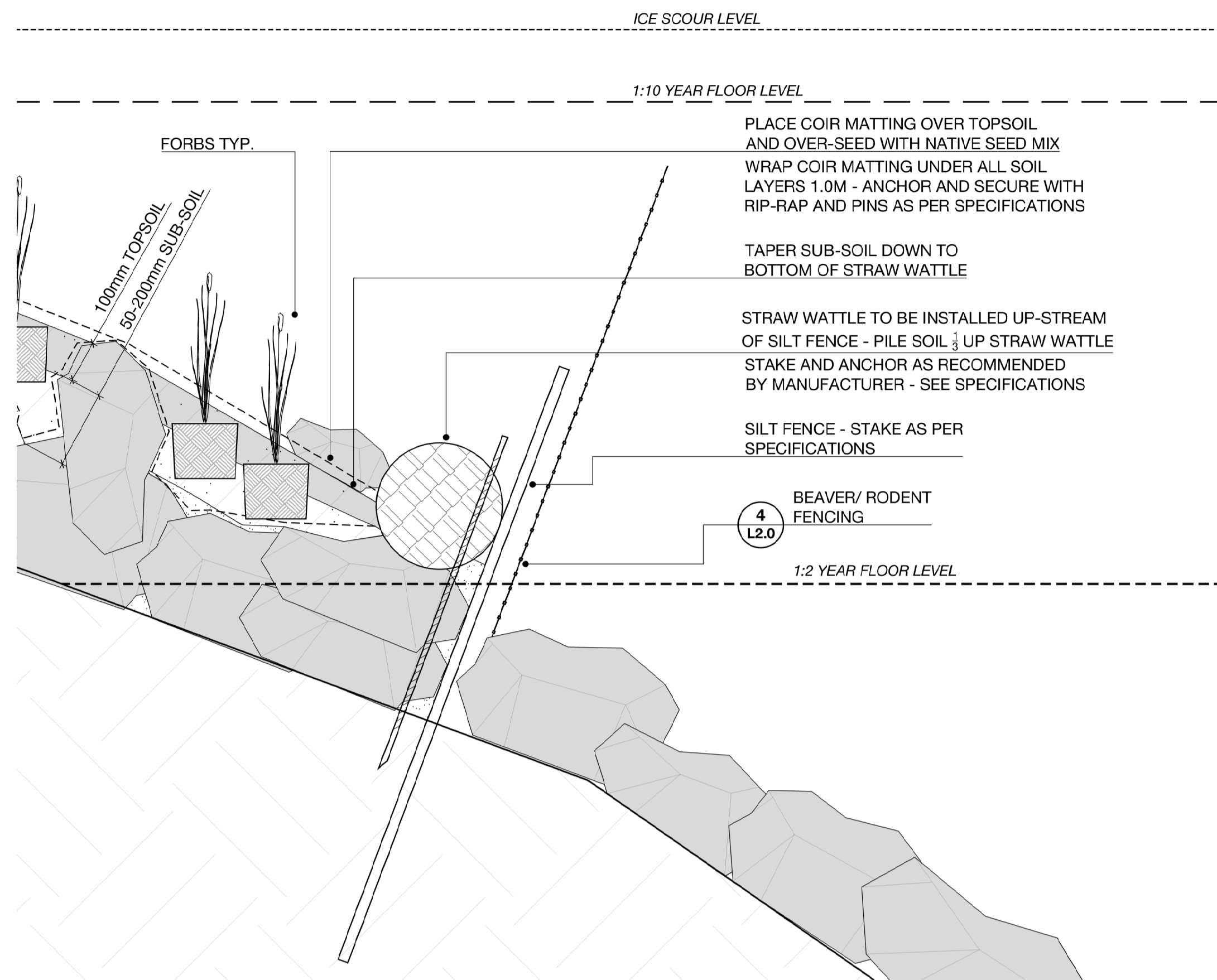


ROCKY MOUNTAIN HOUSE BANK RE-VEGETATION

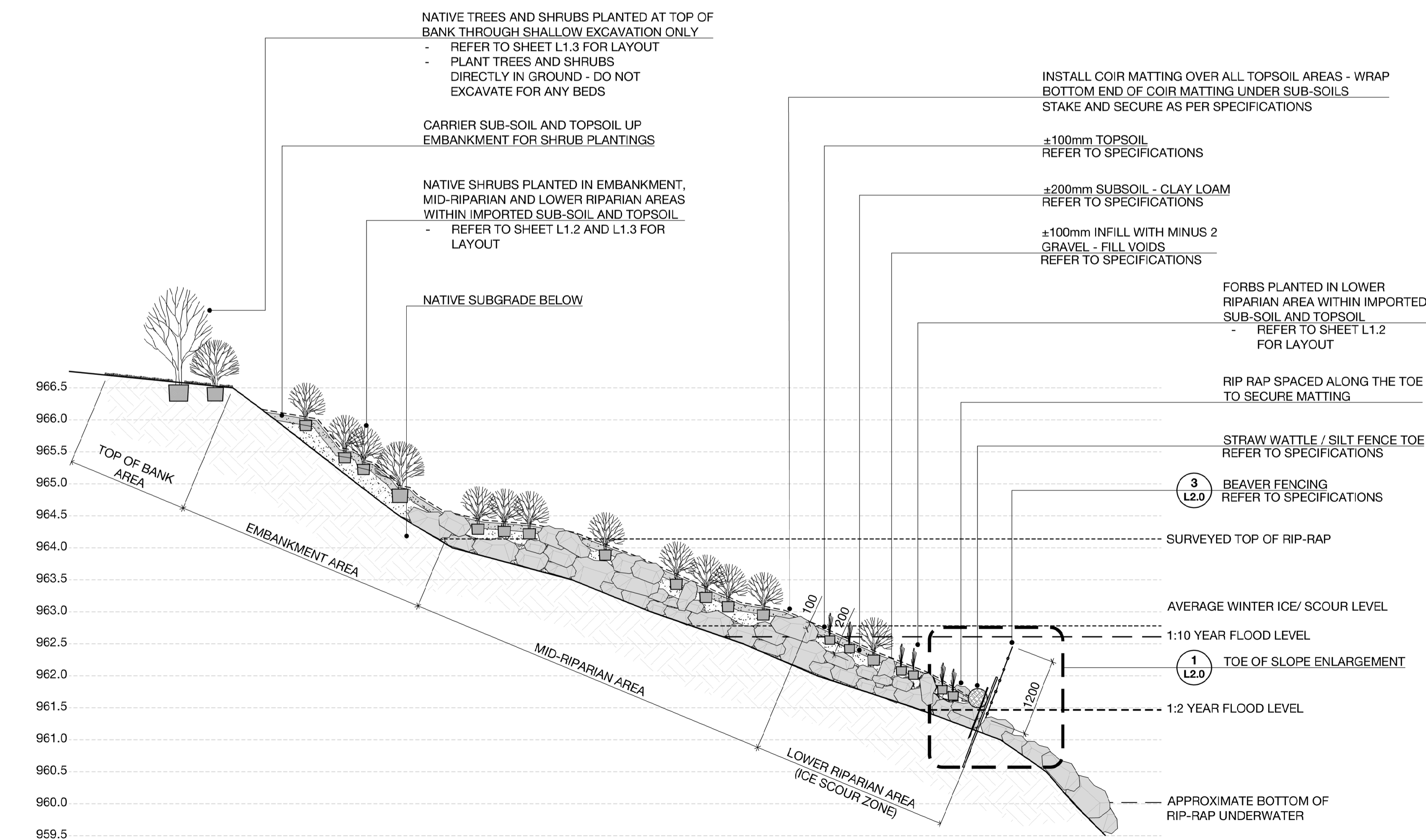
PLANTING PLAN EMBANKMENT AND TOP OF BANK AREAS

Drawn	AL	Approved	TMC
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Date	FEB.28, 2019	Sheet	
Scale	1:1000		

L1.3



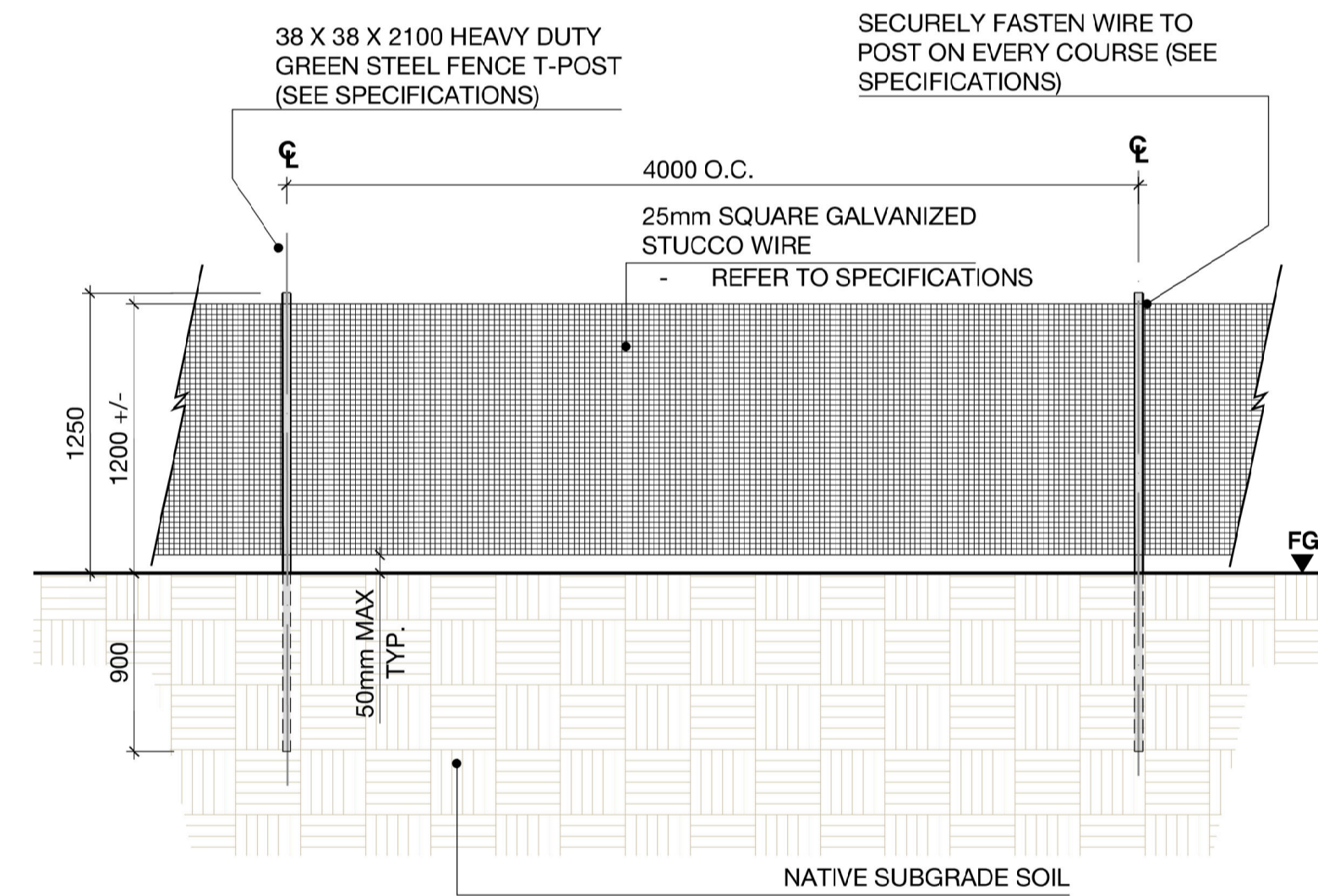
1 TOE OF SLOPE ENLARGEMENT
L2.0 1:10



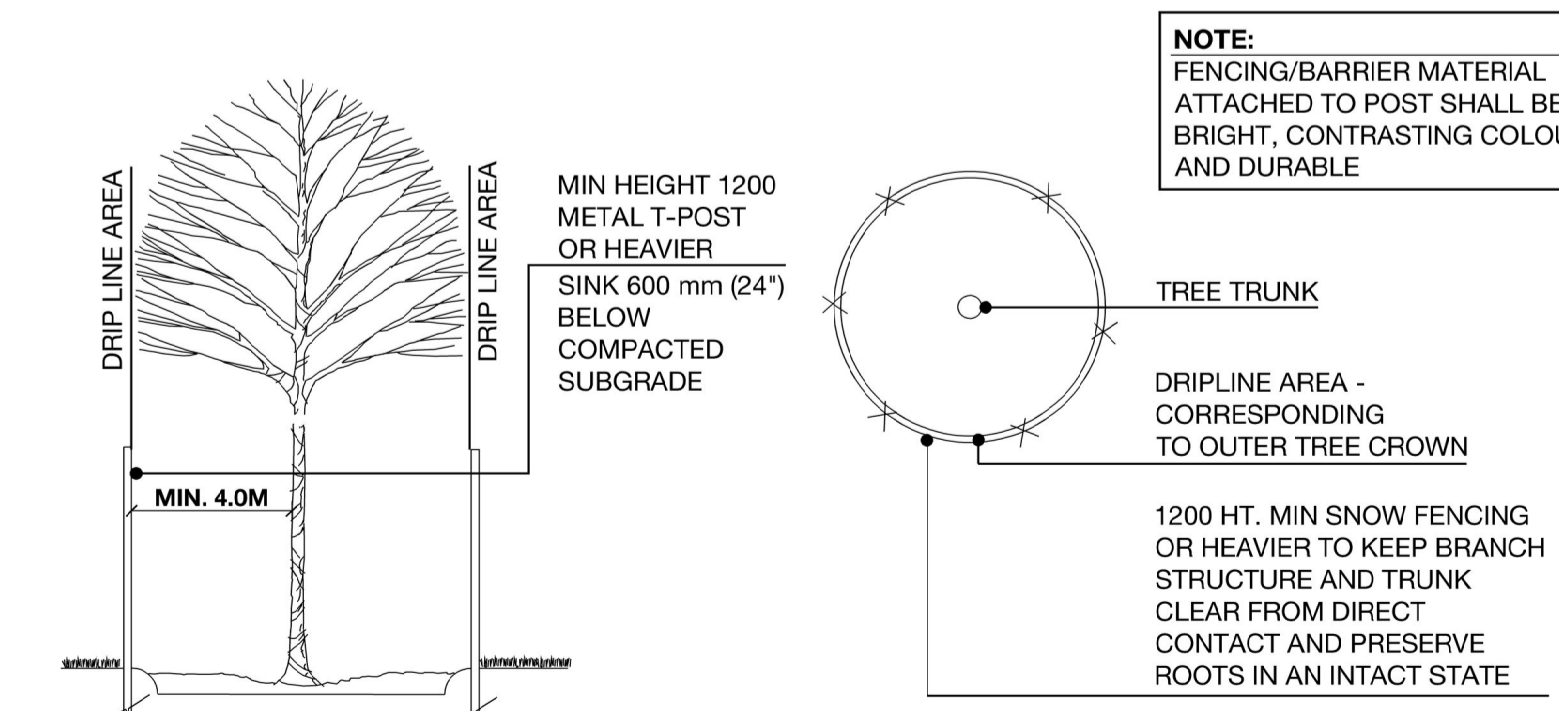
2 NORTHEAST SEGMENT - SECTION
L2.0 1:50

BEAVER PROTECTION FENCING NOTES:

- BEAVER FENCING TO RUN THE FULL LENGTH OF RIP-RAP AS INDICATED ON LAYOUT - SHEET L1.2.
- BEAVER FENCING TO BE INSTALLED DOWN-STREAM OF SILT FENCE.
- WRAP BEAVER FENCING UP THE RIP-RAP AND EMBANKMENT AREA TO CONTAIN PLANTINGS AS INDICATED ON DRAWINGS.
- OVERLAP ENDS OF WIRE MESH AND SECURELY TIE TOGETHER.
- ALL T-BAR POSTS TO BE INSTALLED STRAIGHT AND PLUMB.



3 BEAVER PROTECTION FENCING
L2.0 1:30 (NORTH SEGMENT ONLY)



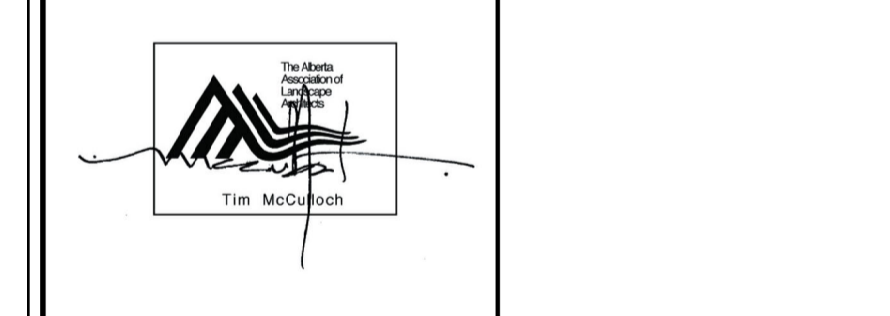
4 TREE PROTECTION FENCING
L2.0 1:25

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CARSON + McCULLOCH
Tamas Conservation Services Ltd

Project
ROCKY MOUNTAIN HOUSE BANK RE-VEGETATION

Drawing
SECTIONS AND DETAILS

Drawn	AL	Approved	TMC
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