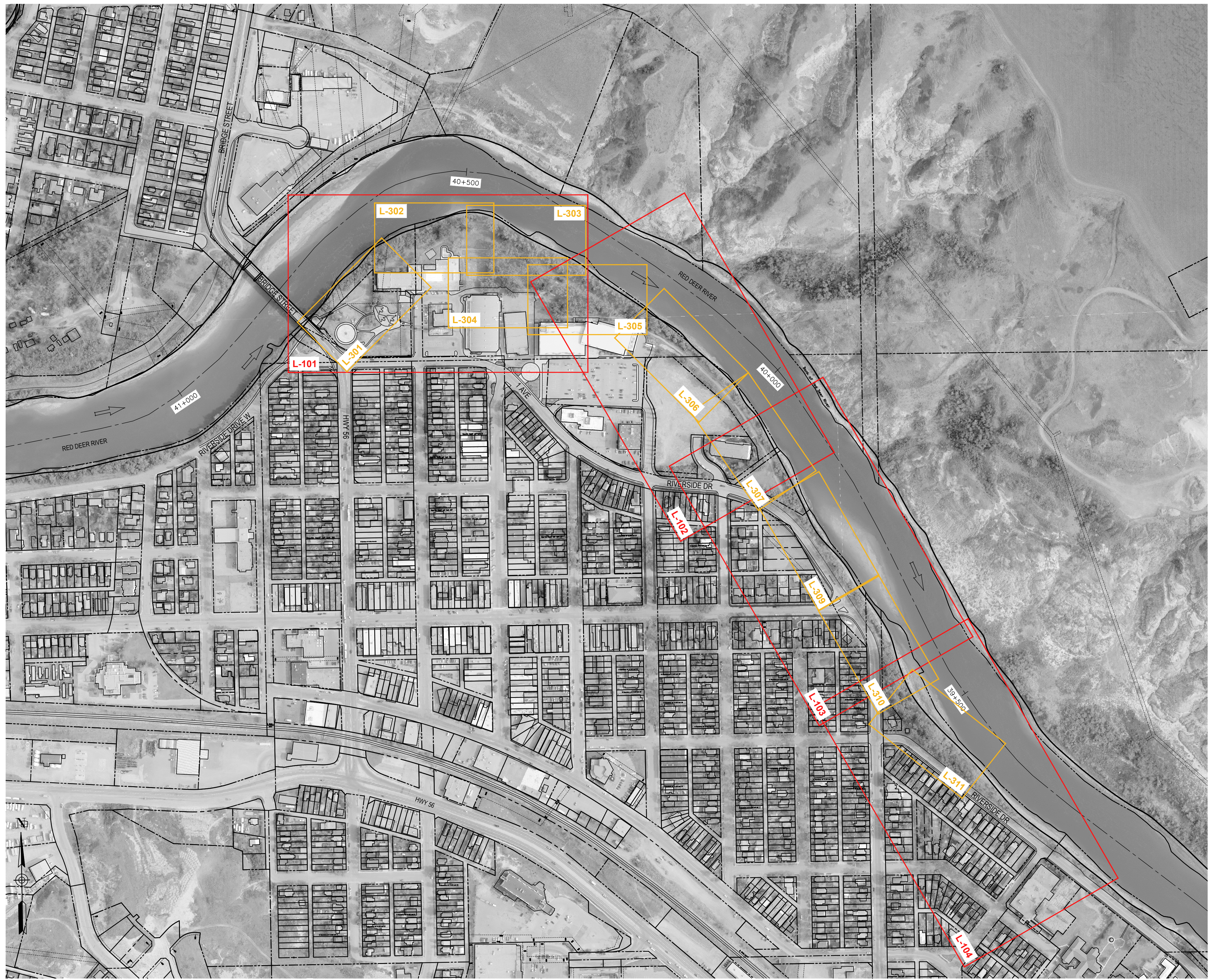


TOWN OF DRUMHELLER

DOWNTOWN DIKE LANDSCAPE TENDER PACKAGE

DRAWING LIST

DRAWING NO.	DRAWING TITLE
L-100	LANDSCAPE COVER SHEET & KEY PLAN
L-101	LANDSCAPE MASTER PLAN
L-102	LANDSCAPE MASTER PLAN
L-103	LANDSCAPE MASTER PLAN
L-104	LANDSCAPE MASTER PLAN
L-301	LAYOUT & GRADING PLAN
L-302	LAYOUT & GRADING PLAN
L-303	LAYOUT & GRADING PLAN
L-304	LAYOUT & GRADING PLAN
L-305	LAYOUT & GRADING PLAN
L-306	LAYOUT & GRADING PLAN
L-307	LAYOUT & GRADING PLAN
L-308	LAYOUT & GRADING PLAN
L-309	LAYOUT & GRADING PLAN
L-310	LAYOUT & GRADING PLAN
L-311	LAYOUT & GRADING PLAN
L-401	PLANTING PLAN
L-402	PLANTING PLAN
L-403	PLANTING PLAN
L-404	PLANTING PLAN
L-405	PLANTING PLAN
L-406	PLANTING PLAN
L-407	PLANTING PLAN
L-408	PLANTING PLAN
L-409	PLANTING PLAN
L-410	PLANTING PLAN
L-411	PLANT SCHEDULE, SEED MIXES & NOTES
L-501	IRRIGATION PLAN
L-502	IRRIGATION PLAN
L-801	LANDSCAPE SECTIONS
L-901	LANDSCAPE DETAILS
L-902	LANDSCAPE DETAILS
L-903	LANDSCAPE DETAILS
L-904	LANDSCAPE DETAILS
L-905	LANDSCAPE DETAILS
L-906	LANDSCAPE DETAILS
L-907	LANDSCAPE DETAILS



PLAN
Scale 1:3000



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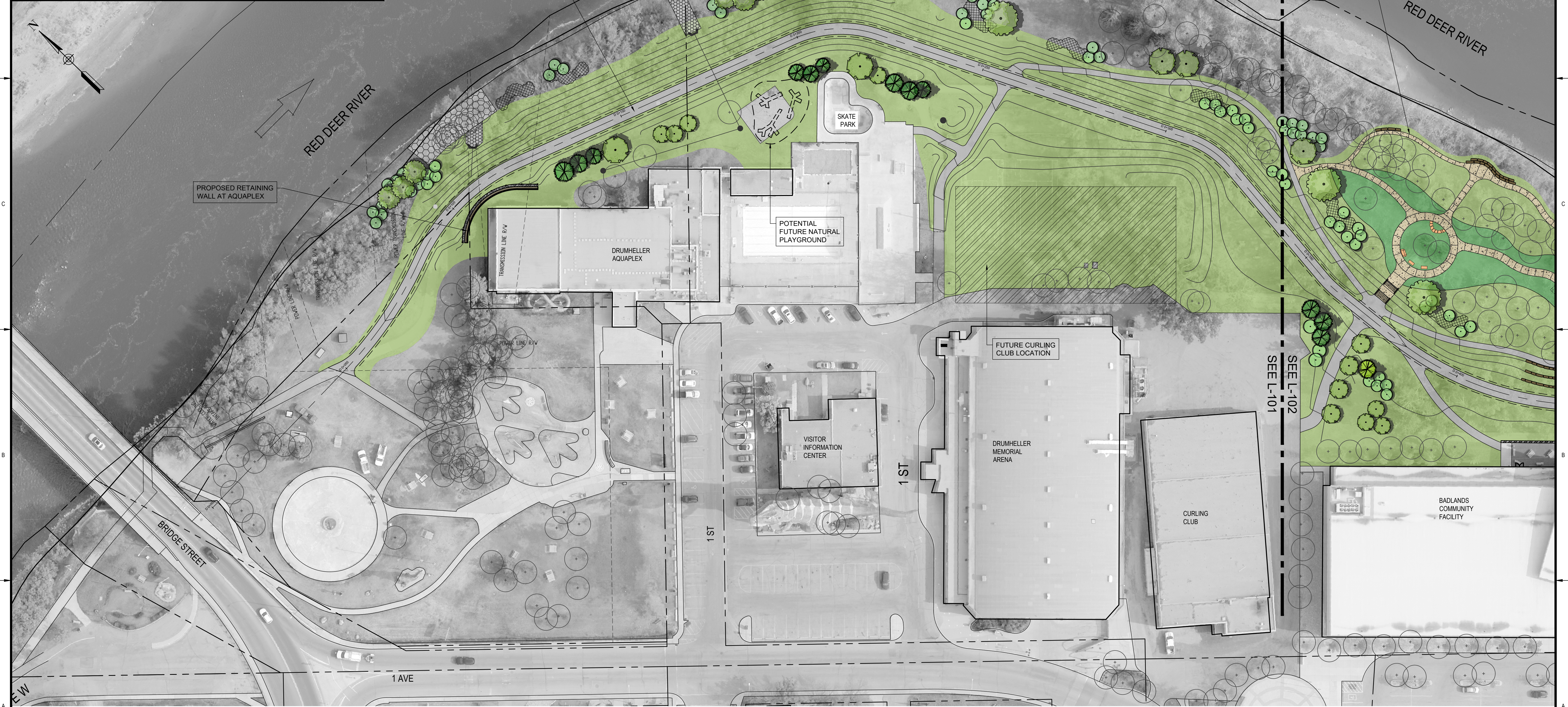
TOWN OF DRUMHELLER DOWNTOWN DIKE			
LANDSCAPE COVER SHEET & KEY PLAN			
Project No.	133142	Drawing No.	
Group	LANDSCAPE		
			Rev. L-100 0

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At Full Size, this border measures 520 mm x 800 mm

CONCEPT LEGEND

	ASPHALT PATHWAY		PROPOSED 60-70mm CAL. DECIDUOUS TREE
	GRAVEL PATHWAY		PROPOSED CONTAINER DECIDUOUS TREE
	CONCRETE PATH		PROPOSED CONIFEROUS TREE
	ROCK RIP RAP		PROPOSED SHRUB / SEEDLINGS
	PRECAST CONCRETE RETAINING WALL AND GUARDRAIL		MANICURED IRRIGATED SOD / OPEN LAWN
	ROCK BOULDER EDGER / BENCH WALL		NON-IRRIGATED SEEDED AREA



PLAN
Scale 1:500



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LANDSCAPE MASTER PLAN

Project No. **133142** Drawing No. **L-101** Rev. **0**
Group **LANDSCAPE**

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millimeters

CONCEPT LEGEND

	ASPHALT PATHWAY		PROPOSED 60-70mm CAL. DECIDUOUS TREE
	GRAVEL PATHWAY		PROPOSED CONTAINER DECIDUOUS TREE
	CONCRETE PATH		PROPOSED CONIFEROUS TREE
	ROCK RIP RAP		PROPOSED SHRUB / SEEDLINGS
	PRECAST CONCRETE RETAINING WALL AND GUARDRAIL		MANICURED IRRIGATED SOD / OPEN LAWN
	ROCK BOULDER EDGER / BENCH WALL		NON-IRRIGATED SEEDED AREA



PLAN
Scale 1:500



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LANDSCAPE MASTER PLAN

Project No. **133142** Drawing No. **L-102** Rev. **0**
Group **LANDSCAPE**

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 millimeters
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 2023/04/04

CONCEPT LEGEND

	ASPHALT PATHWAY		PROPOSED 60-70mm CAL. DECIDUOUS TREE
	GRAVEL PATHWAY		PROPOSED CONTAINER DECIDUOUS TREE
	CONCRETE PATH		PROPOSED CONIFEROUS TREE
	ROCK RIP RAP		PROPOSED SHRUB / SEEDLINGS
	PRECAST CONCRETE RETAINING WALL AND GUARDRAIL		MANICURED IRRIGATED SOD / OPEN LAWN
	ROCK BOULDER EDGER / BENCH WALL		NON-IRRIGATED SEEDED AREA



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
 DOWNTOWN DIKE**

LANDSCAPE MASTER PLAN

Project No. **133142** Drawing No. **L-103** Rev. **0**
 Group **LANDSCAPE**

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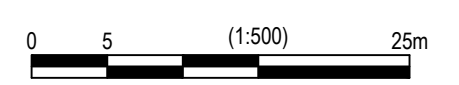
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CONCEPT LEGEND	
	ASPHALT PATHWAY
	GRAVEL PATHWAY
	CONCRETE PATH
	ROCK RIP RAP
	PRECAST CONCRETE RETAINING WALL AND GUARDRAIL
	ROCK BOULDER EDGER / BENCH WALL
	PROPOSED 60-70mm CAL. DECIDUOUS TREE
	PROPOSED CONTAINER DECIDUOUS TREE
	PROPOSED CONIFEROUS TREE
	PROPOSED SHRUB / SEEDLINGS
	MANICURED IRRIGATED SOD / OPEN LAWN
	NON-IRRIGATED SEEDED AREA



PLAN
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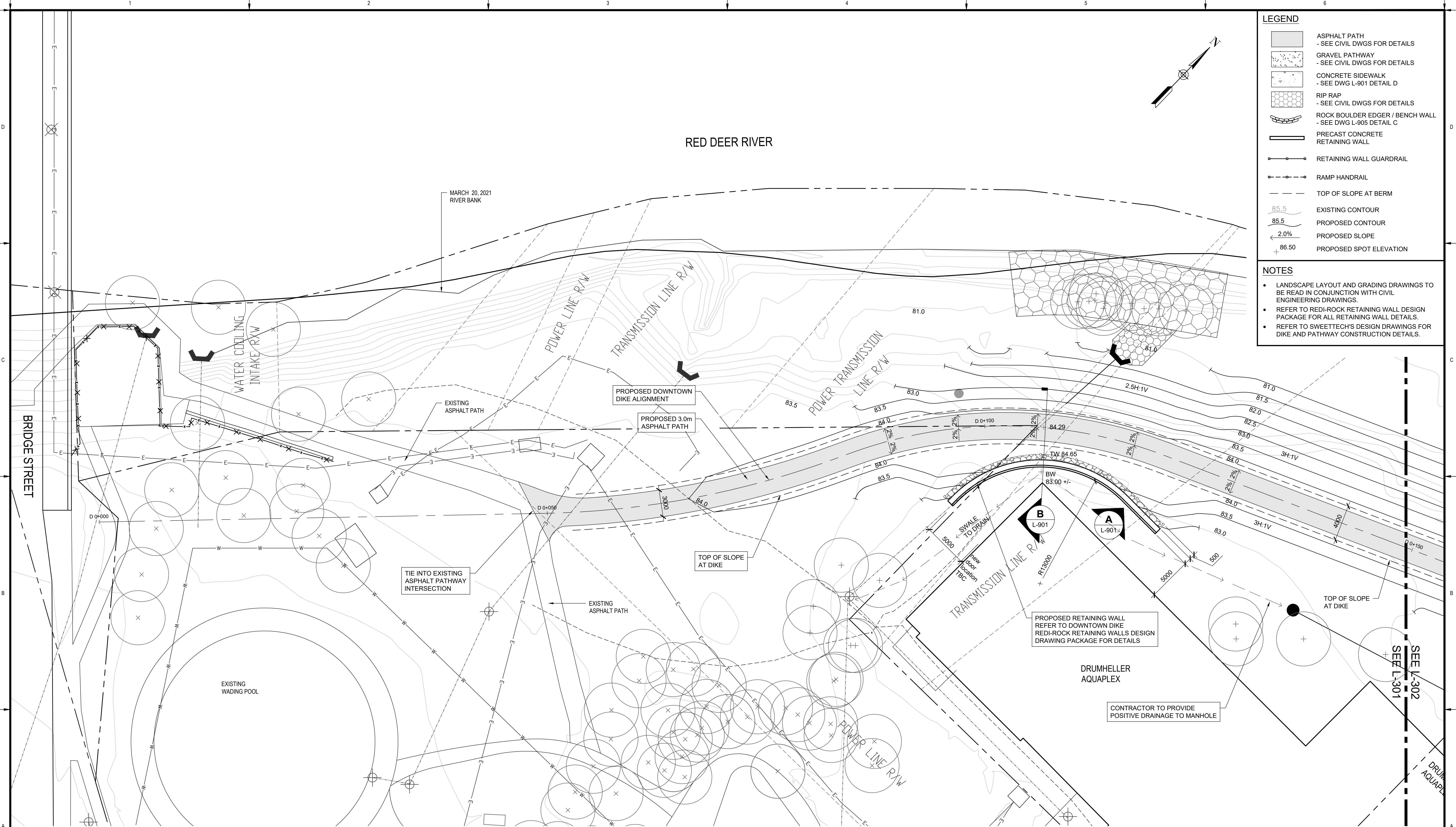
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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
 DOWNTOWN DIKE**

LANDSCAPE MASTER PLAN

Project No. **133142** Drawing No. **L-104** Rev. **0**
 Group **LANDSCAPE**



PLAN
Scale 1:200

LEGEND

- ASPHALT PATH
- SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY
- SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK
- SEE DWG L-901 DETAIL D
- RIP RAP
- SEE CIVIL DWGS FOR DETAILS
- ROCK BOULDER EDGER / BENCH WALL
- SEE DWG L-905 DETAIL C
- PRECAST CONCRETE RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- 85.5
EXISTING CONTOUR
- 85.5
PROPOSED CONTOUR
- 2.0%
PROPOSED SLOPE
- + 86.50
PROPOSED SPOT ELEVATION

- NOTES**
- LANDSCAPE LAYOUT AND GRADING DRAWINGS TO BE READ IN CONJUNCTION WITH CIVIL ENGINEERING DRAWINGS.
 - REFER TO RED-ROCK RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

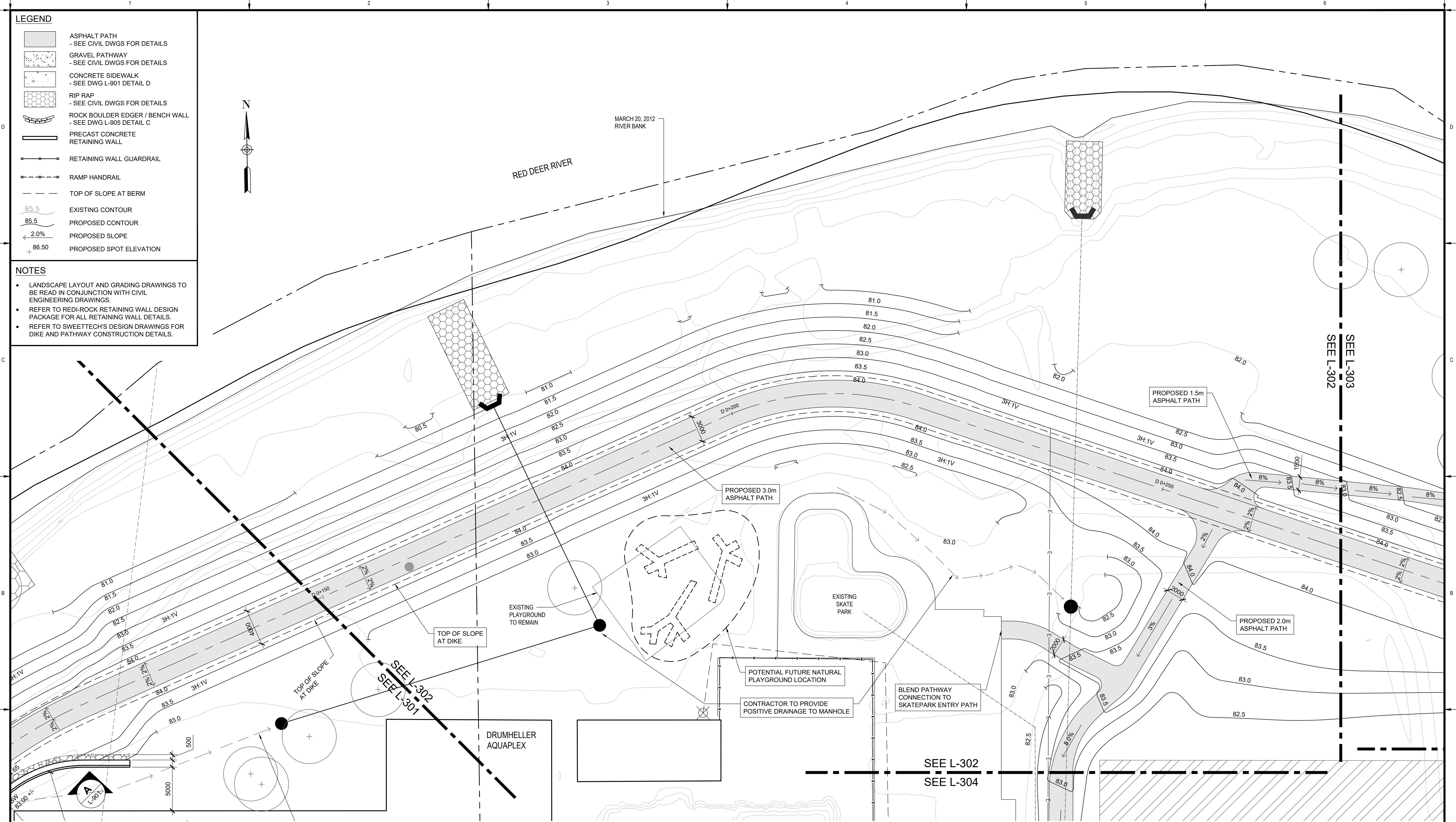
LAYOUT & GRADING PLAN

Project No. 133142 Drawing No. L-301 Rev. 0
 Group LANDSCAPE

LEGEND

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	GRAVEL PATHWAY - SEE CIVIL DWGS FOR DETAILS
	CONCRETE SIDEWALK - SEE DWG L-901 DETAIL D
	RIP RAP - SEE CIVIL DWGS FOR DETAILS
	ROCK BOULDER EDGER / BENCH WALL - SEE DWG L-905 DETAIL C
	PRECAST CONCRETE RETAINING WALL
	RETAINING WALL GUARDRAIL
	RAMP HANDRAIL
	TOP OF SLOPE AT BERM
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SLOPE
	PROPOSED SPOT ELEVATION

- NOTES**
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**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

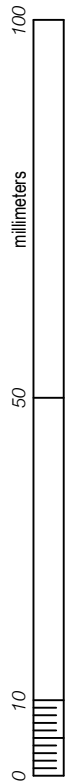
LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-302** Rev. **0**

Group **LANDSCAPE**

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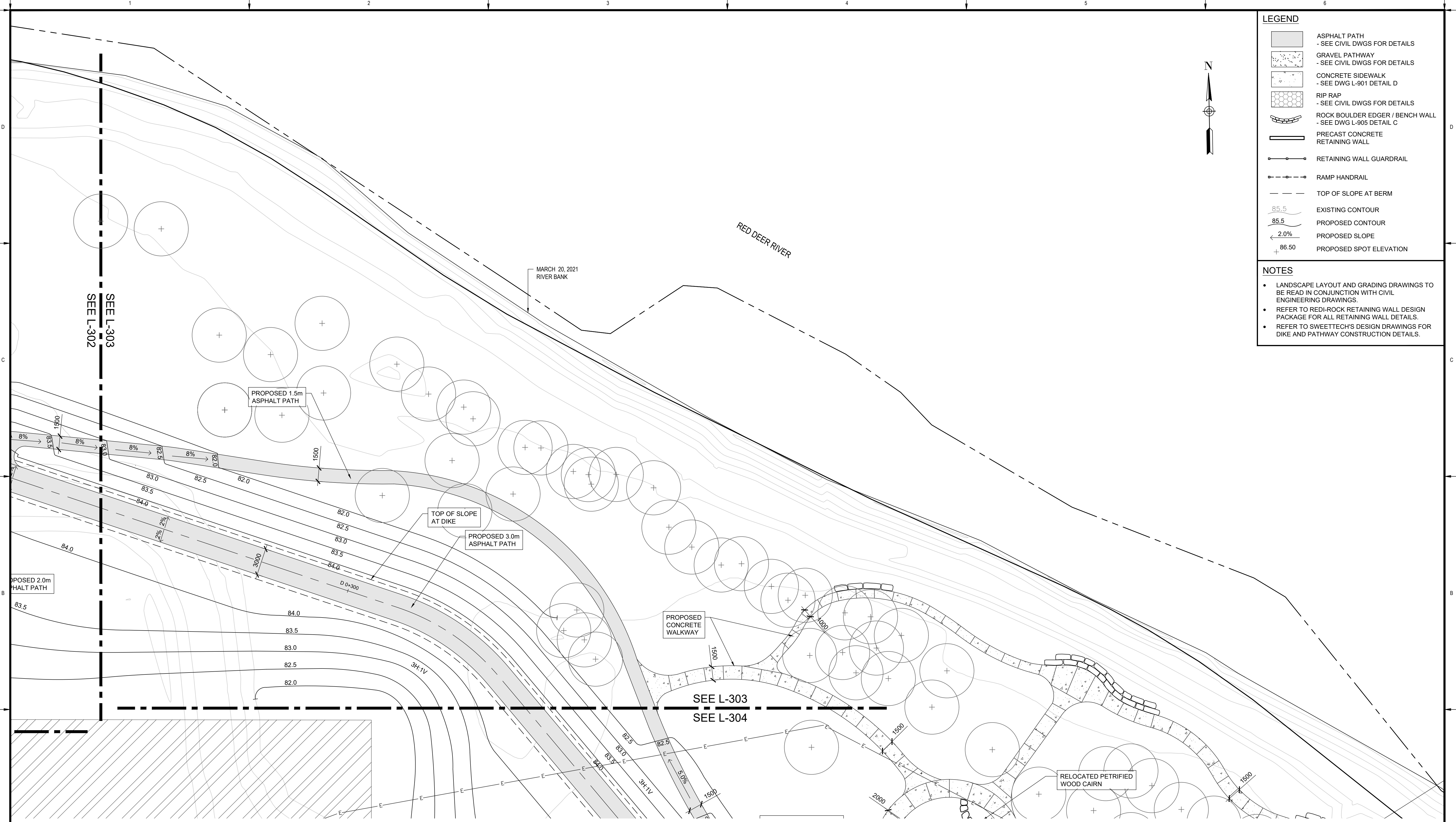
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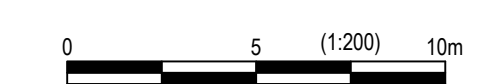
LEGEND

	ASPHALT PATH - SEE CIVIL DWGS FOR DETAILS
	GRAVEL PATHWAY - SEE CIVIL DWGS FOR DETAILS
	CONCRETE SIDEWALK - SEE DWG L-901 DETAIL D
	RIP RAP - SEE CIVIL DWGS FOR DETAILS
	ROCK BOULDER EDGER / BENCH WALL - SEE DWG L-905 DETAIL C
	PRECAST CONCRETE RETAINING WALL
	RETAINING WALL GUARDRAIL
	RAMP HANDRAIL
	TOP OF SLOPE AT BERM
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SLOPE
	PROPOSED SPOT ELEVATION

- NOTES**
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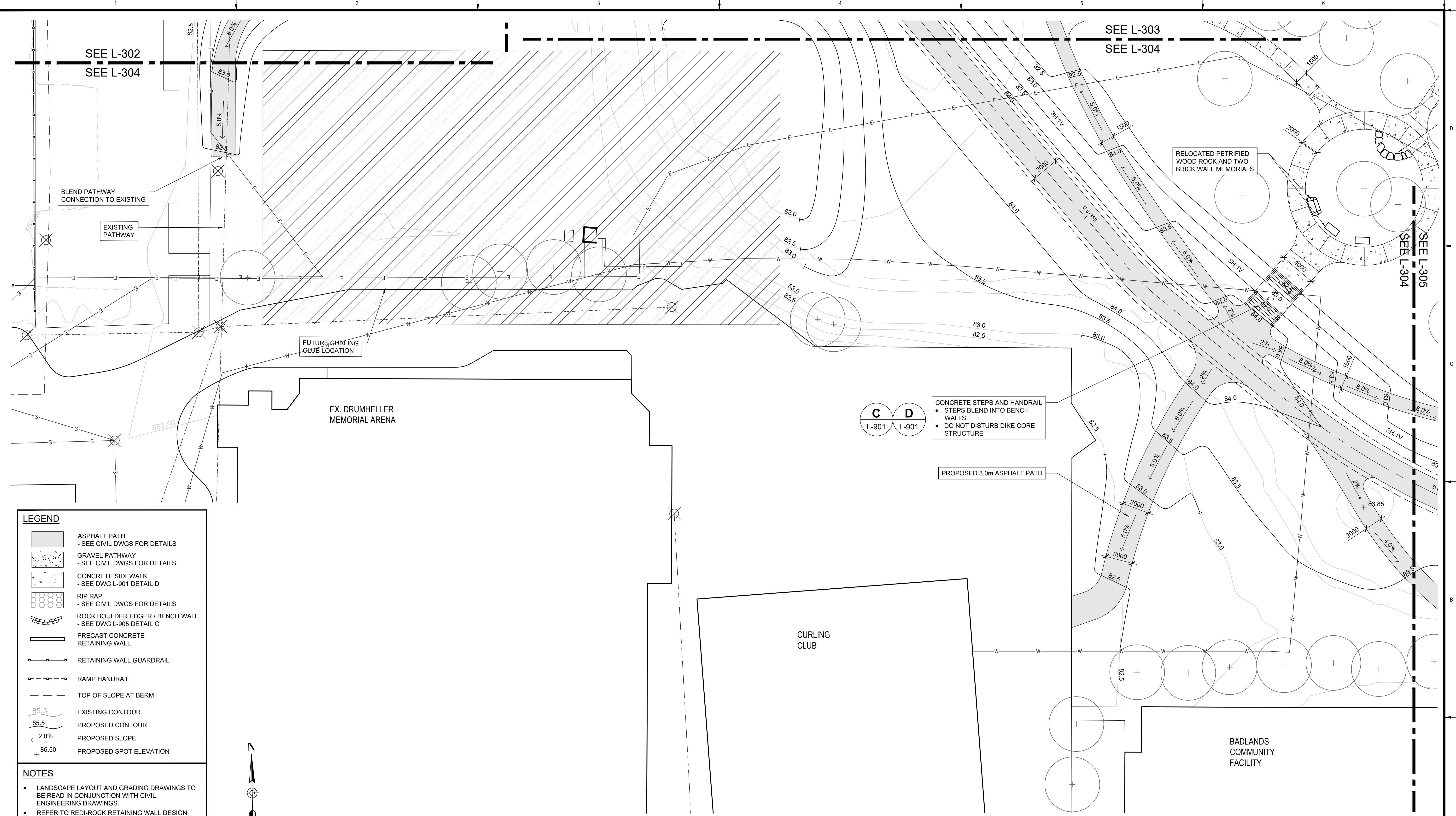
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**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-303** Rev. **0**

Group **LANDSCAPE**

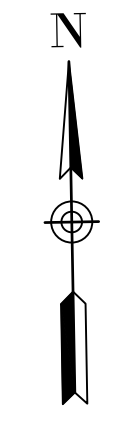


LEGEND

- ASPHALT PATH
- SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY
- SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK
- SEE DWG L-901 DETAIL D
- RIP RAP
- SEE CIVIL DWGS FOR DETAILS
- ROCK BOULDER EDGER / BENCH WALL
- SEE DWG L-905 DETAIL C
- PRECAST CONCRETE RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- 85.5 EXISTING CONTOUR
- 85.5 PROPOSED CONTOUR
- 2.0% PROPOSED SLOPE
- 86.50 PROPOSED SPOT ELEVATION

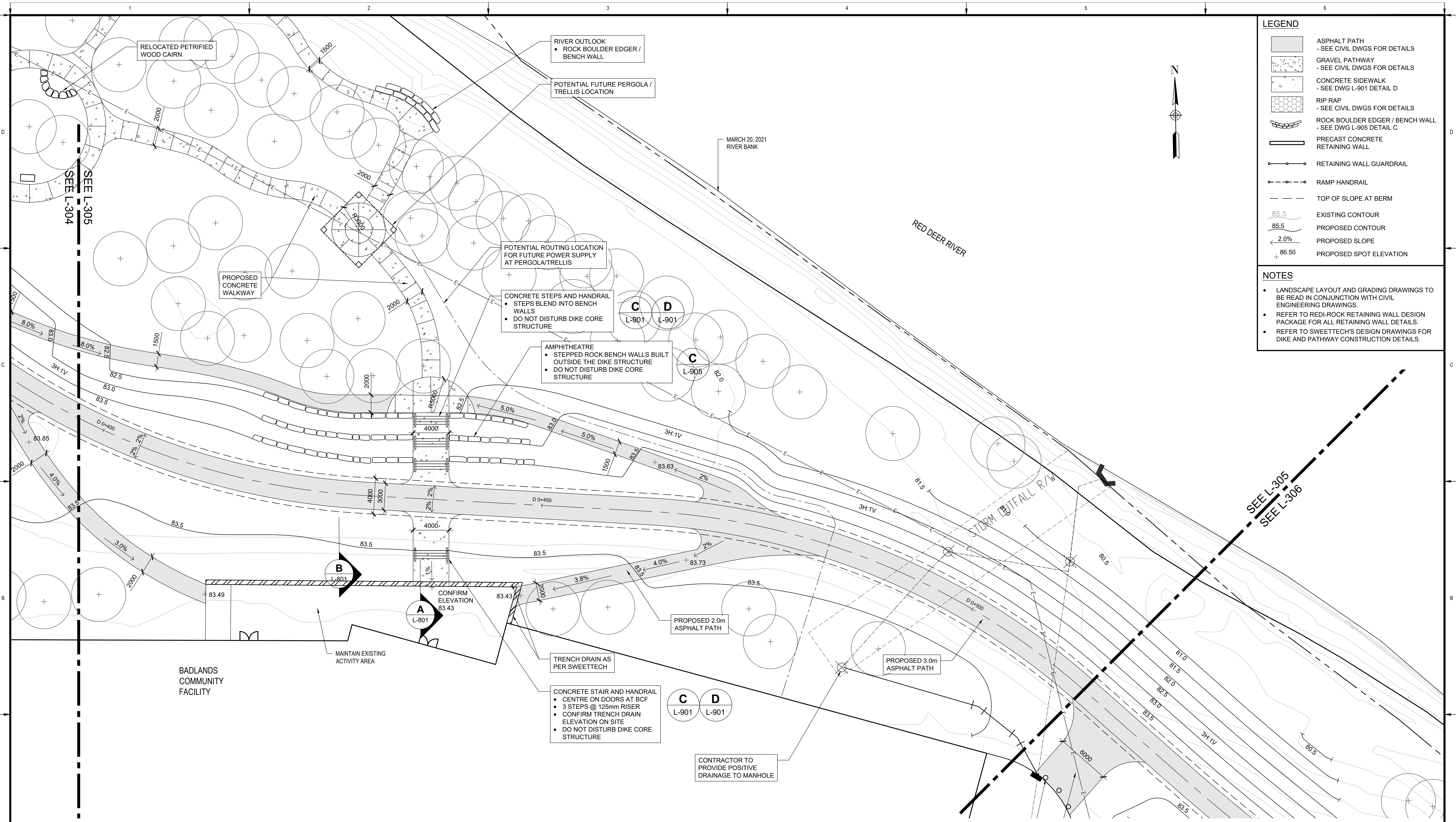
NOTES

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			Rev	Date	Des	Dwn	Chk	Description																					
0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER																								
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Project No.	133142	Drawing No.	L-304			0																							
Group	LANDSCAPE																												



LEGEND

- ASPHALT PATH - SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY - SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK - SEE DWG L-901 DETAIL D
- RIP RAP - SEE CIVIL DWGS FOR DETAILS
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- PRECAST CONCRETE RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION

NOTES

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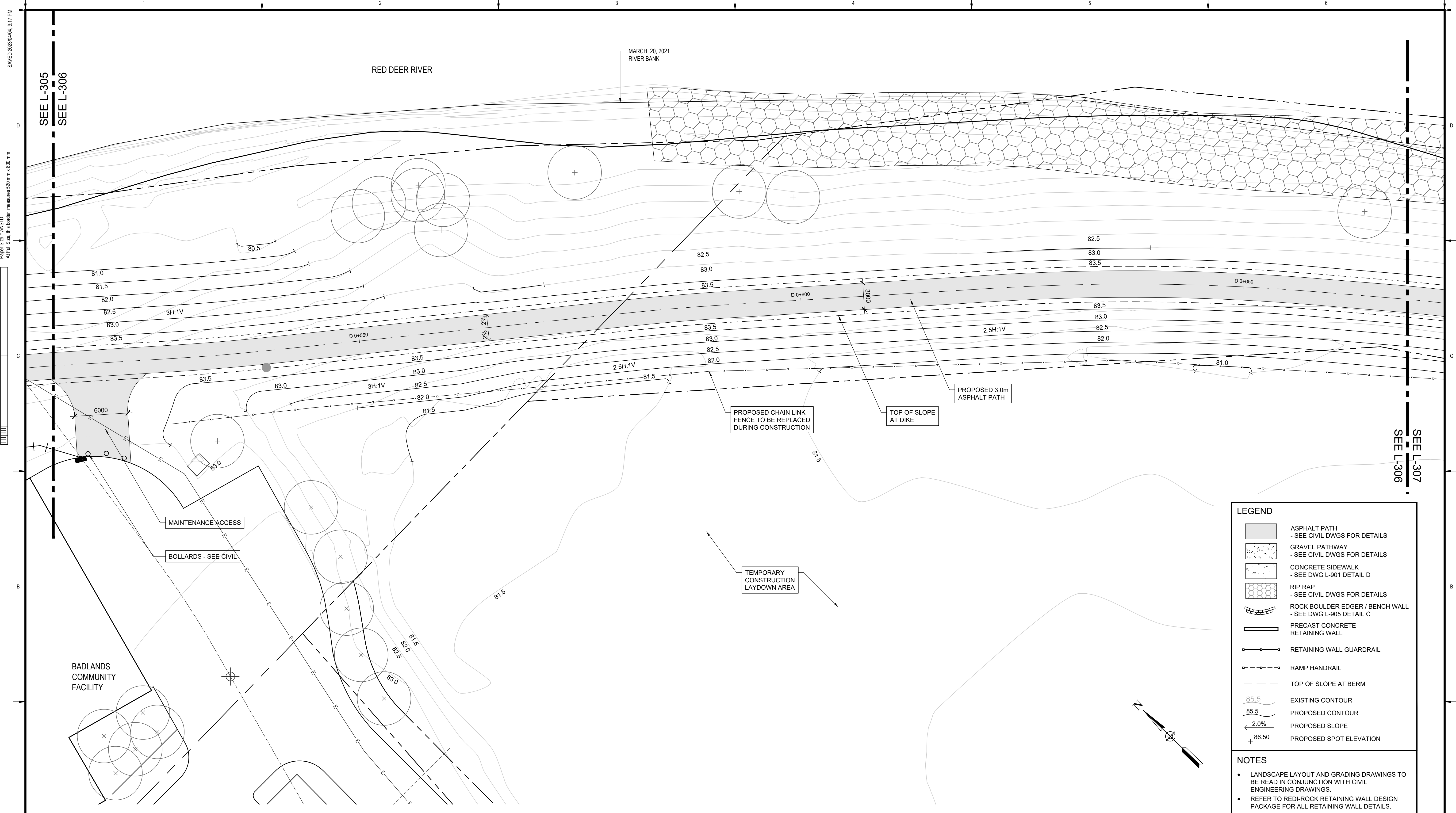
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**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-305** Rev. **0**

Group **LANDSCAPE**



1700
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 At Full Size, this border measures 520 mm x 800 mm
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LEGEND

	ASPHALT PATH - SEE CIVIL DWGS FOR DETAILS
	GRAVEL PATHWAY - SEE CIVIL DWGS FOR DETAILS
	CONCRETE SIDEWALK - SEE DWG L-901 DETAIL D
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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

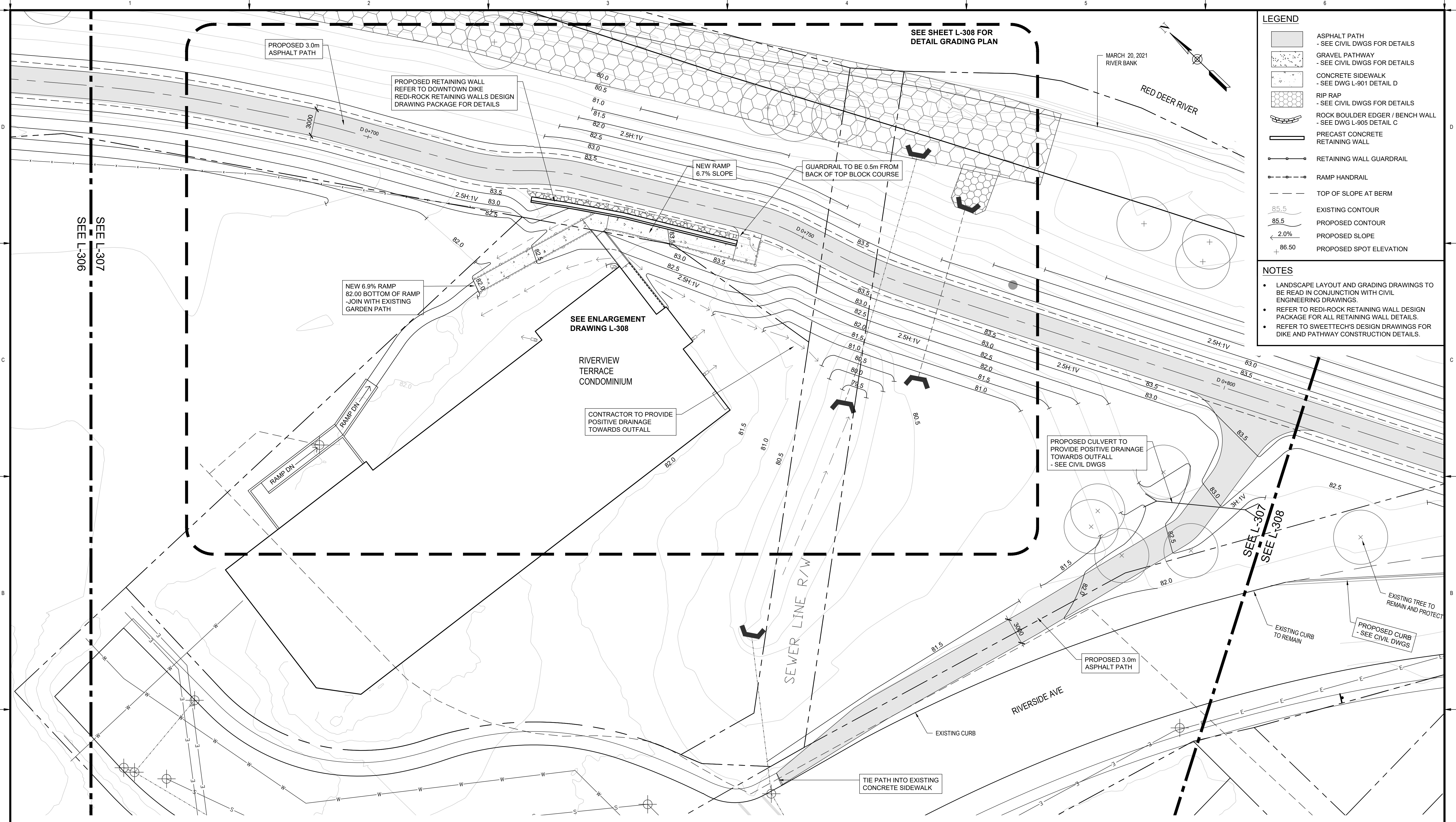
LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-306** Rev. **0**

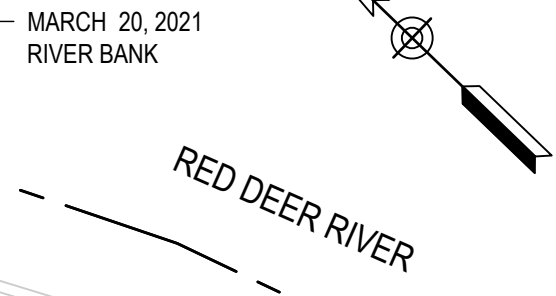
Group **LANDSCAPE**

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Paper Size = ANSI D
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SEE SHEET L-308 FOR
DETAIL GRADING PLAN



MARCH 20, 2021
RIVER BANK

LEGEND

- ASPHALT PATH
- SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY
- SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK
- SEE DWG L-901 DETAIL D
- RIP RAP
- SEE CIVIL DWGS FOR DETAILS
- ROCK BOULDER EDGER / BENCH WALL
- SEE DWG L-905 DETAIL C
- PRECAST CONCRETE
RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION

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SEE L-307
SEE L-306

NEW 6.9% RAMP
82.00 BOTTOM OF RAMP
JOIN WITH EXISTING
GARDEN PATH

PROPOSED RETAINING WALL
REFER TO DOWNTOWN DIKE
REDI-ROCK RETAINING WALLS DESIGN
DRAWING PACKAGE FOR DETAILS

SEE ENLARGEMENT
DRAWING L-308

RIVERVIEW
TERRACE
CONDOMINIUM

CONTRACTOR TO PROVIDE
POSITIVE DRAINAGE
TOWARDS OUTFALL

SEWER LINE R/W

PROPOSED CULVERT TO
PROVIDE POSITIVE DRAINAGE
TOWARDS OUTFALL
- SEE CIVIL DWGS

PROPOSED 3.0m
ASPHALT PATH

SEE L-307
SEE L-308

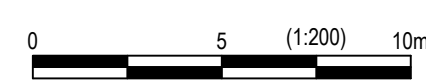
EXISTING TREE TO
REMAIN AND PROTECT

EXISTING CURB
TO REMAIN

PROPOSED CURB
- SEE CIVIL DWGS

TIE PATH INTO EXISTING
CONCRETE SIDEWALK

PLAN
Scale 1:200



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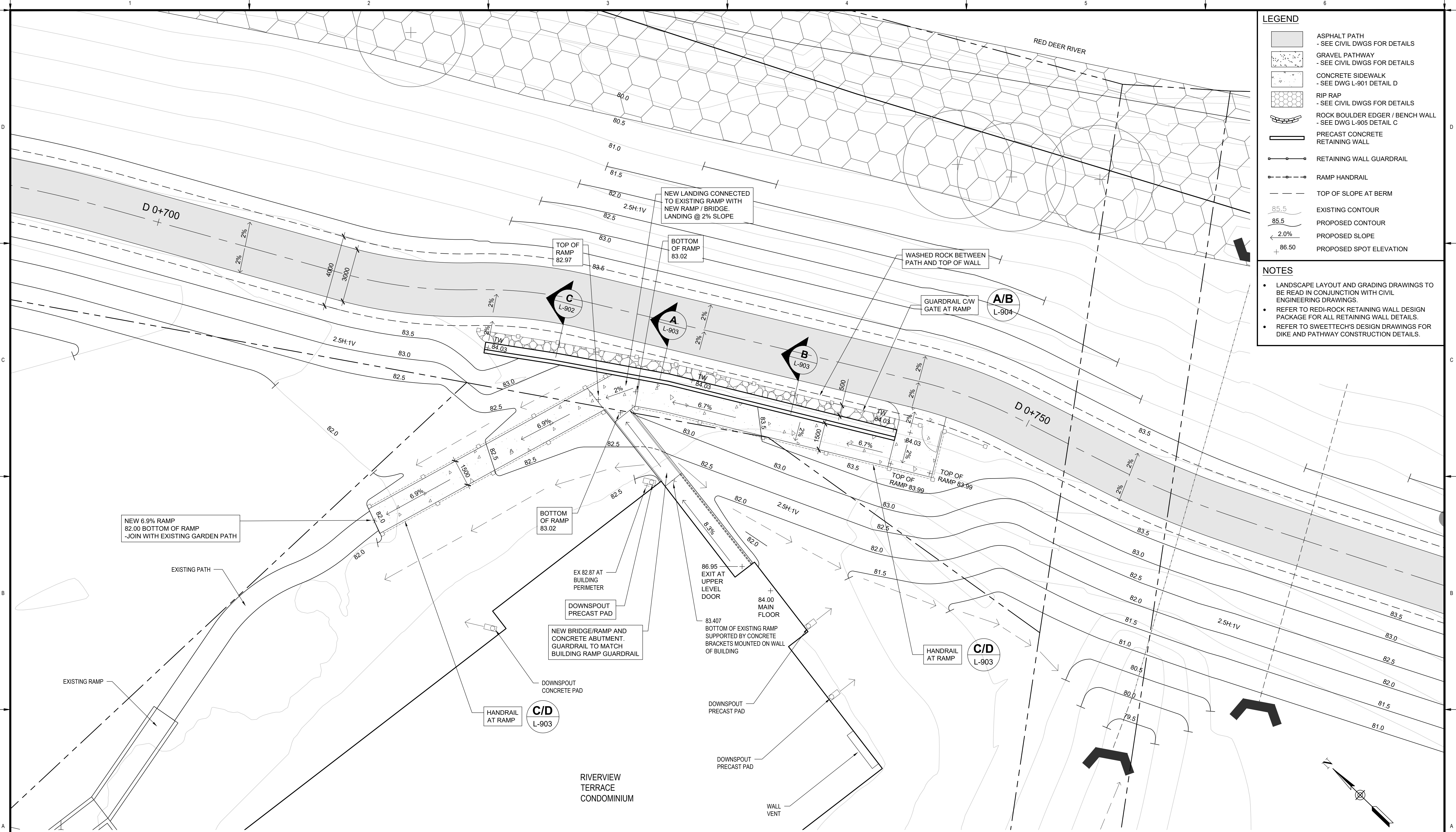
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**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-307** Rev. **0**

Group **LANDSCAPE**

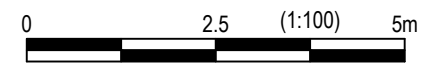


LEGEND

- ASPHALT PATH
- SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY
- SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK
- SEE DWG L-901 DETAIL D
- RIP RAP
- SEE CIVIL DWGS FOR DETAILS
- ROCK BOULDER EDGER / BENCH WALL
- SEE DWG L-905 DETAIL C
- PRECAST CONCRETE RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- 85.5
EXISTING CONTOUR
- 85.5
PROPOSED CONTOUR
- 2.0%
PROPOSED SLOPE
- 86.50
PROPOSED SPOT ELEVATION

- NOTES**
- LANDSCAPE LAYOUT AND GRADING DRAWINGS TO BE READ IN CONJUNCTION WITH CIVIL ENGINEERING DRAWINGS.
 - REFER TO RED-ROCK RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
 - REFER TO SWEETTECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.

PLAN
Scale 1:100



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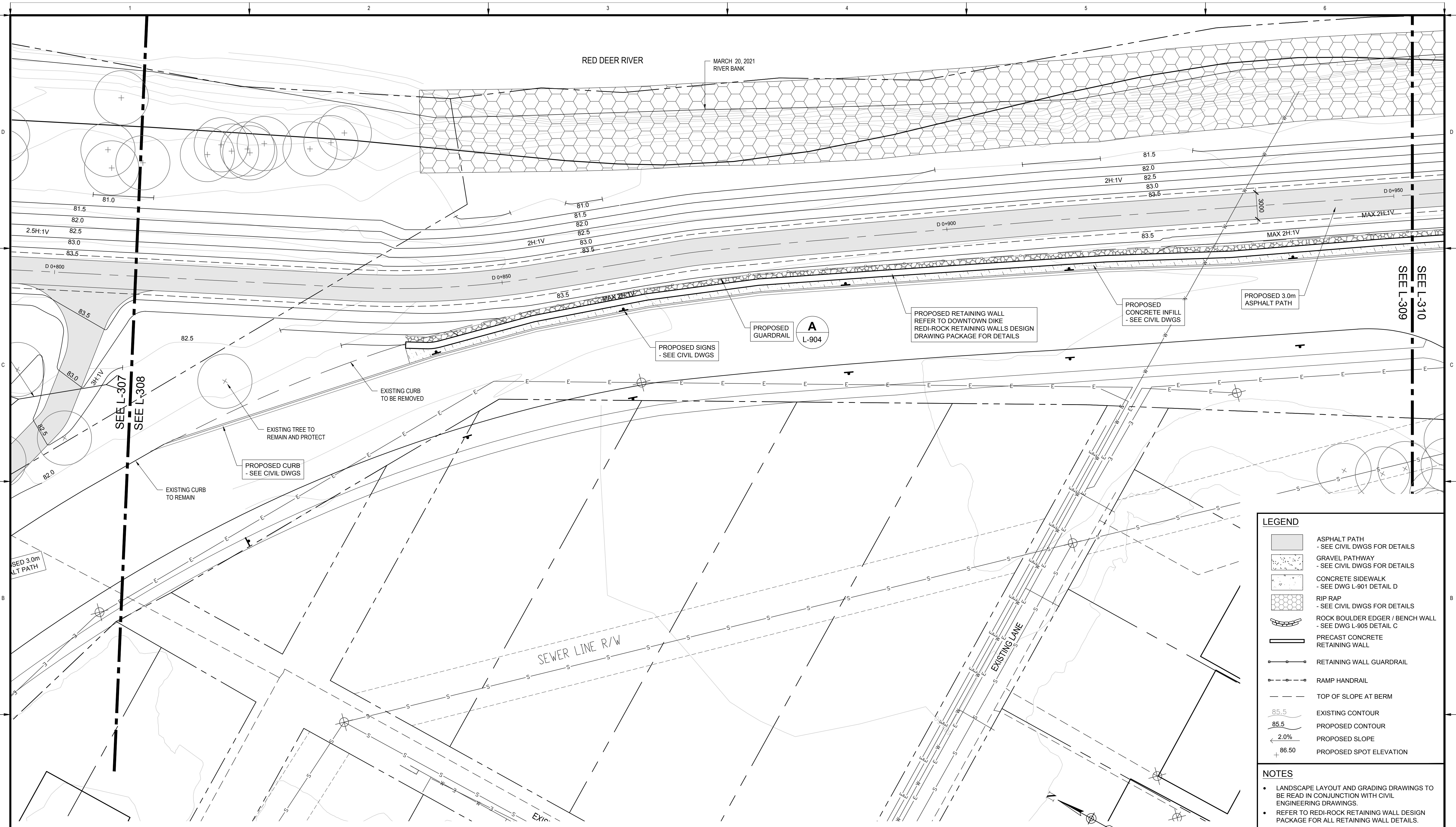
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Ernie J. Webster

Rev	Date	Des	Dwn	Chk	Description
0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

**LAYOUT & GRADING PLAN
RIVERVIEW TERRACE**

Project No. 133142
Group LANDSCAPE
Drawing No. L-308
Rev. 0



PLAN
Scale 1:200

LEGEND	
	ASPHALT PATH - SEE CIVIL DWGS FOR DETAILS
	GRAVEL PATHWAY - SEE CIVIL DWGS FOR DETAILS
	CONCRETE SIDEWALK - SEE DWG L-901 DETAIL D
	RIP RAP - SEE CIVIL DWGS FOR DETAILS
	ROCK BOULDER EDGER / BENCH WALL - SEE DWG L-905 DETAIL C
	PRECAST CONCRETE RETAINING WALL
	RETAINING WALL GUARDRAIL
	RAMP HANDRAIL
	TOP OF SLOPE AT BERM
	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SLOPE
	PROPOSED SPOT ELEVATION

- NOTES**
- LANDSCAPE LAYOUT AND GRADING DRAWINGS TO BE READ IN CONJUNCTION WITH CIVIL ENGINEERING DRAWINGS.
 - REFER TO REDI-ROCK RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
 - REFER TO SWEETTECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.



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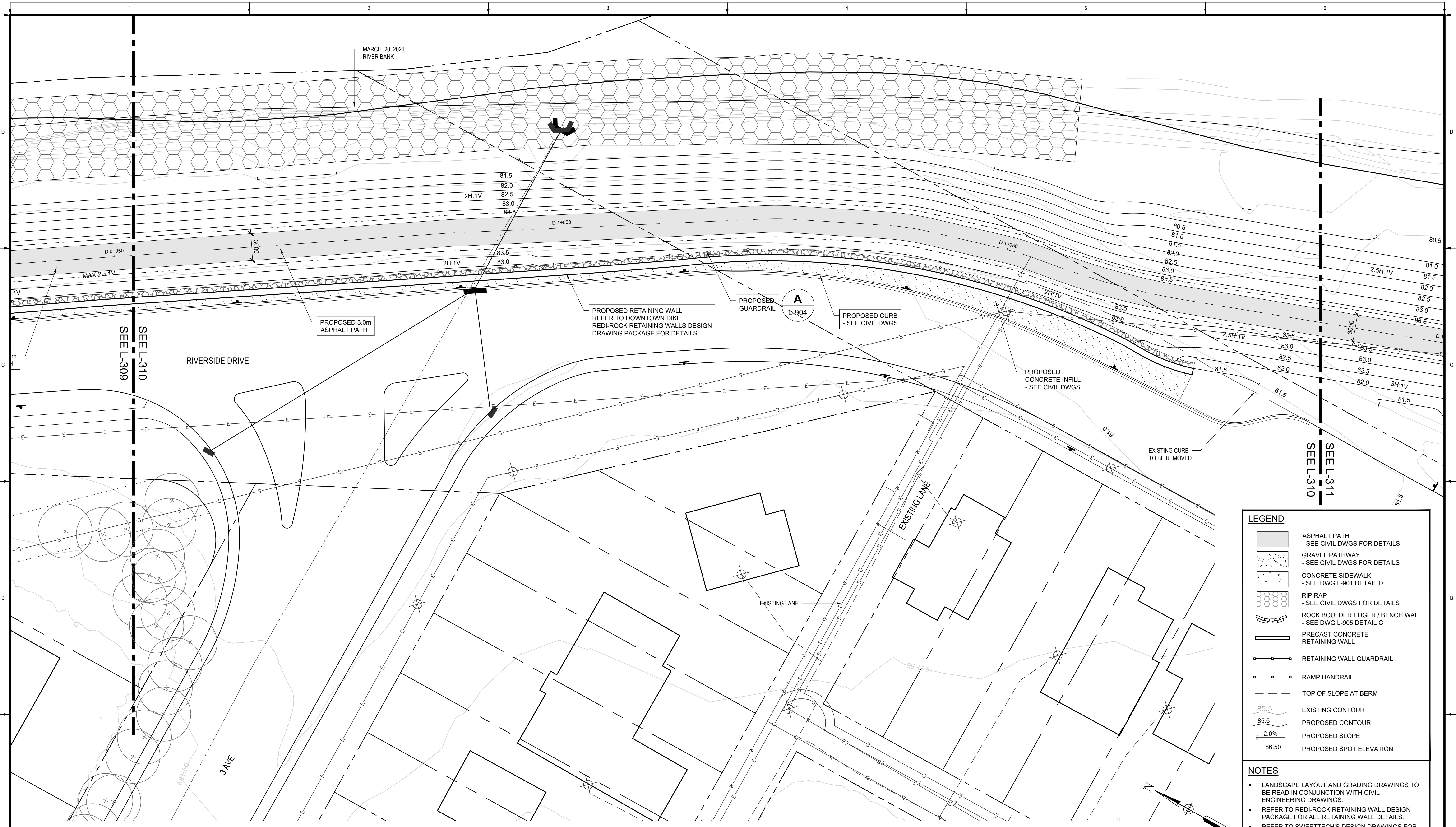
Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

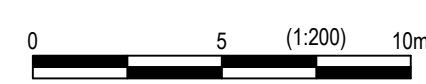
LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-309** Rev. **0**

Group **LANDSCAPE**



PLAN
Scale 1:200



LEGEND

- ASPHALT PATH
- SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY
- SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK
- SEE DWG L-901 DETAIL D
- RIP RAP
- SEE CIVIL DWGS FOR DETAILS
- ROCK BOULDER EDGER / BENCH WALL
- SEE DWG L-905 DETAIL C
- PRECAST CONCRETE RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION

NOTES

- LANDSCAPE LAYOUT AND GRADING DRAWINGS TO BE READ IN CONJUNCTION WITH CIVIL ENGINEERING DRAWINGS.
- REFER TO REDI-ROCK RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
- REFER TO SWEETECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.



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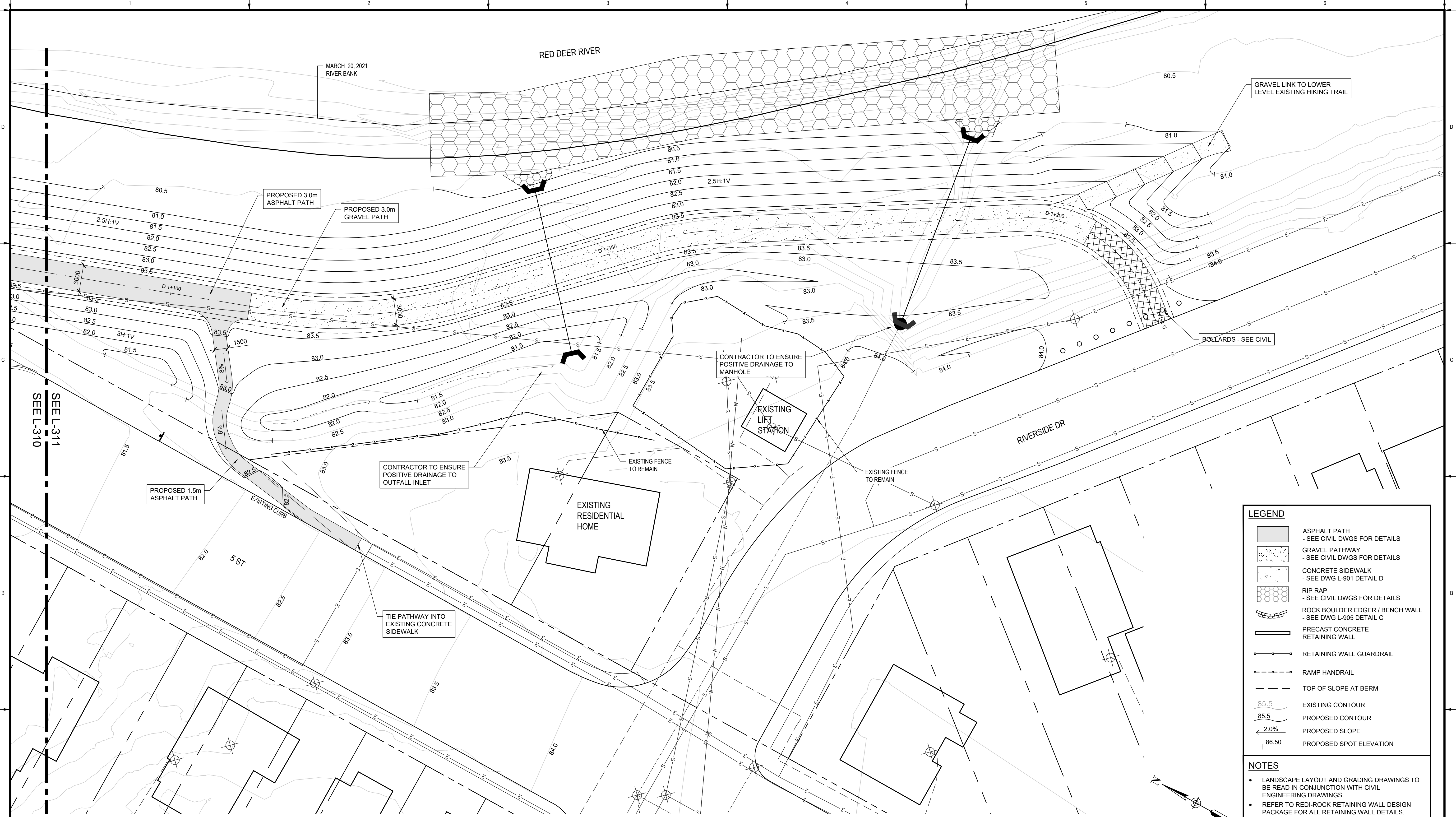
Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-310** Rev. **0**

Group **LANDSCAPE**



LEGEND

- ASPHALT PATH - SEE CIVIL DWGS FOR DETAILS
- GRAVEL PATHWAY - SEE CIVIL DWGS FOR DETAILS
- CONCRETE SIDEWALK - SEE DWG L-901 DETAIL D
- RIP RAP - SEE CIVIL DWGS FOR DETAILS
- ROCK BOULDER EDGER / BENCH WALL - SEE DWG L-905 DETAIL C
- PRECAST CONCRETE RETAINING WALL
- RETAINING WALL GUARDRAIL
- RAMP HANDRAIL
- TOP OF SLOPE AT BERM
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SLOPE
- PROPOSED SPOT ELEVATION

NOTES

- LANDSCAPE LAYOUT AND GRADING DRAWINGS TO BE READ IN CONJUNCTION WITH CIVIL ENGINEERING DRAWINGS.
- REFER TO REDI-ROCK RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
- REFER TO SWEETECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.

PLAN
Scale 1:200



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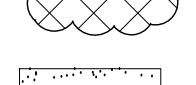
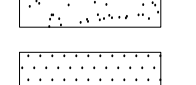
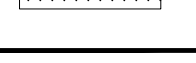
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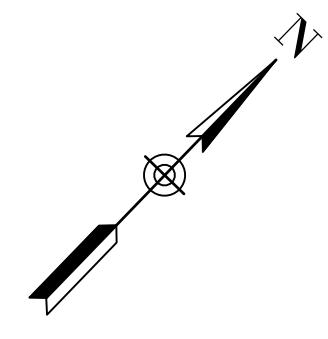
**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

LAYOUT & GRADING PLAN

Project No. **133142** Drawing No. **L-311** Rev. **0**
Group **LANDSCAPE**

LEGEND

-  EXISTING TREE
-  PROPOSED 50-80 mm CAL. DECIDUOUS TREE
-  PROPOSED CONIFEROUS TREE
-  PROPOSED CONTAINER DECIDUOUS TREE
-  PROPOSED SHRUB AND SEEDLING PLANTING BEDS
-  SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
-  MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL



RED DEER RIVER

MARCH 20, 2021 RIVER BANK

6 MANITOBA MAPLE #15 POT
 3 BLACK COTTONWOOD 70mm CAL.
 7 EASTERN COTTONWOOD #15 POT

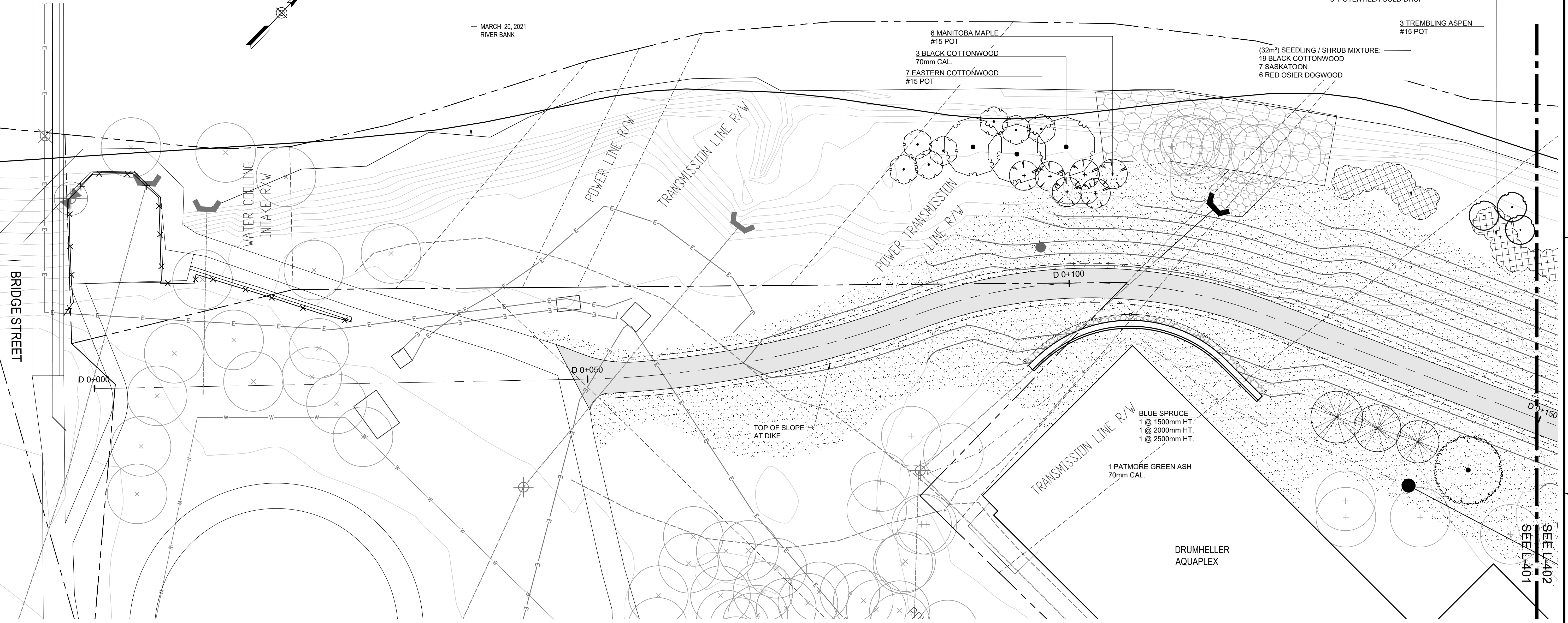
(32m²) SEEDLING / SHRUB MIXTURE:
 19 BLACK COTTONWOOD
 7 SASKATOON
 6 RED OSIER DOGWOOD

3 TREMBLING ASPEN #15 POT

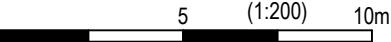
BLUE SPRUCE
 1 @ 1500mm HT.
 1 @ 2000mm HT.
 1 @ 2500mm HT.

1 PATMORE GREEN ASH 70mm CAL.

DRUMHELLER AQUAPLEX



PLAN
 Scale 1:200



SEE L/401
 SEE L/402



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**TOWN OF DRUMHELLER
 DOWNTOWN DIKE**

PLANTING PLAN

Project No. **133142** Drawing No. **L-401** Rev. **0**
 Group **LANDSCAPE**

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Paper Size = ANSI D
At Full Size, this border measures 520 mm x 800 mm

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millimeters

LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL



RED DEER RIVER
MARCH 20, 2012
RIVER BANK

- 5 TREMBLING ASPEN #15 POT
- (32m²) SEEDLING / SHRUB MIXTURE:
14 RED OSIER DOGWOOD
18 BUFFALO BERRY
- 2 MANITOBA MAPLE #15 POT
- 3 EASTERN COTTONWOOD #15 POT
- 3 BLACK COTTONWOOD 70mm CAL.
- 2 MANITOBA MAPLE #15 POT

- 2 TREMBLING ASPEN #15 POT
- 1 EASTERN COTTONWOOD 70mm CAL.
- 1 BLACK COTTONWOOD 70mm CAL.
- (32m²) SEEDLING / SHRUB MIXTURE:
10 BLACK COTTONWOOD
11 RED OSIER DOGWOOD
10 ABBOTSWOOD POTENTILLA
- 1 TREMBLING ASPEN #15 POT
- 8 MANITOBA MAPLE #15 POT

WHITE SPRUCE
1 @ 1500mm HT.
2 @ 2500mm HT.

3 SPRING SNOW FLOWERING CRABAPPLE
60mm CAL.

BLUE SPRUCE
1 @ 1500mm HT.
2 @ 2500mm HT.

1 THUNDERCHILD FLOWERING CRABAPPLE
60mm CAL.

1 PATMORE GREEN ASH
70mm CAL.

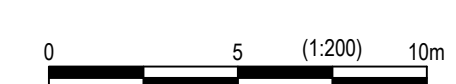
DRUMHELLER
AQUAPLEX

SEE L-402
SEE L-401

SEE L-402
SEE L-404

SEE L-403
SEE L-402

PLAN
Scale 1:200



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE
PLANTING PLAN**

Project No. 133142
Group LANDSCAPE
Drawing No. L-402
Rev. 0

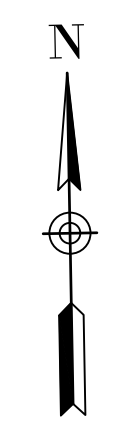
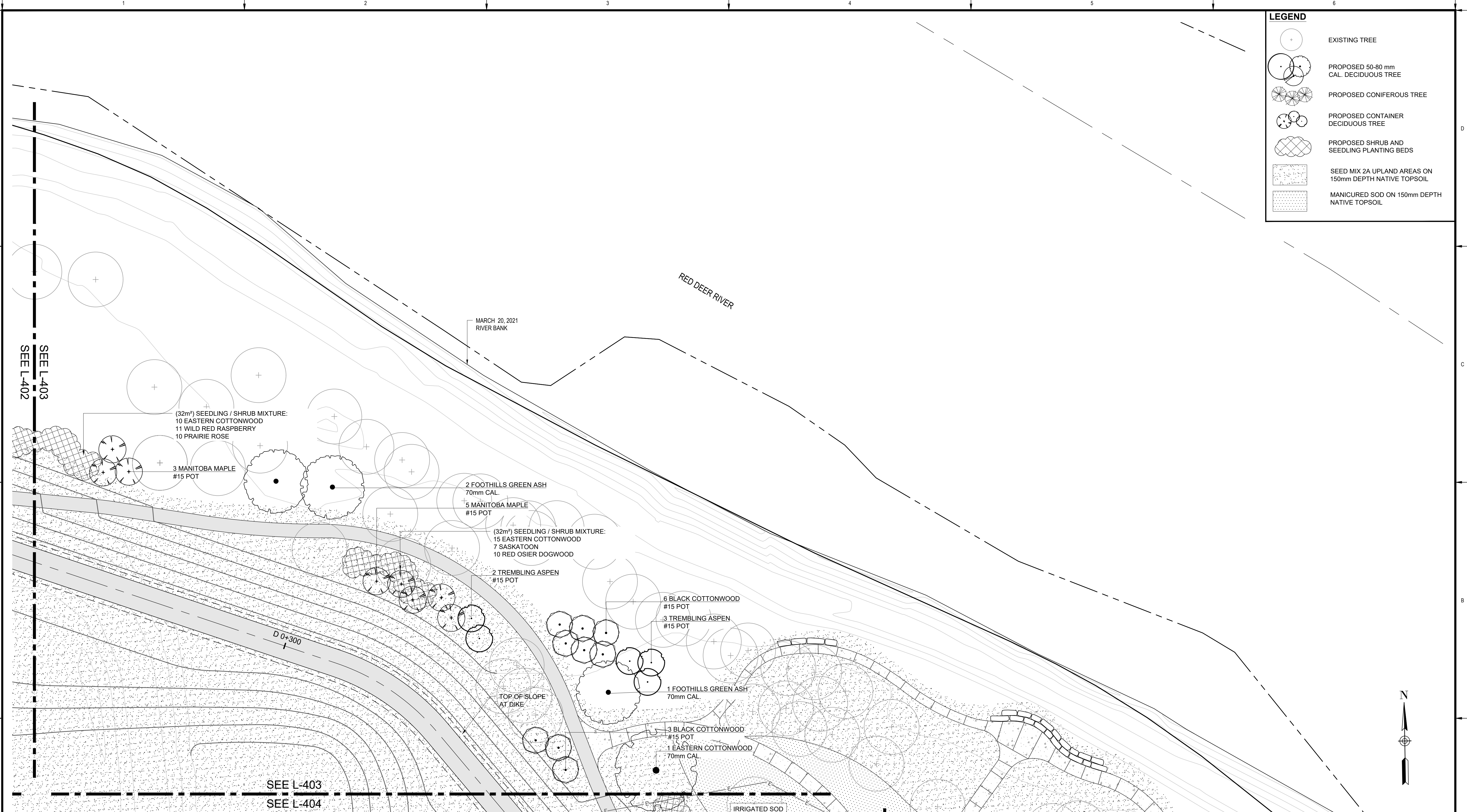
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millimeters
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At Full Size, this border measures 520 mm x 800 mm

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millimeters

LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL



PLAN
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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

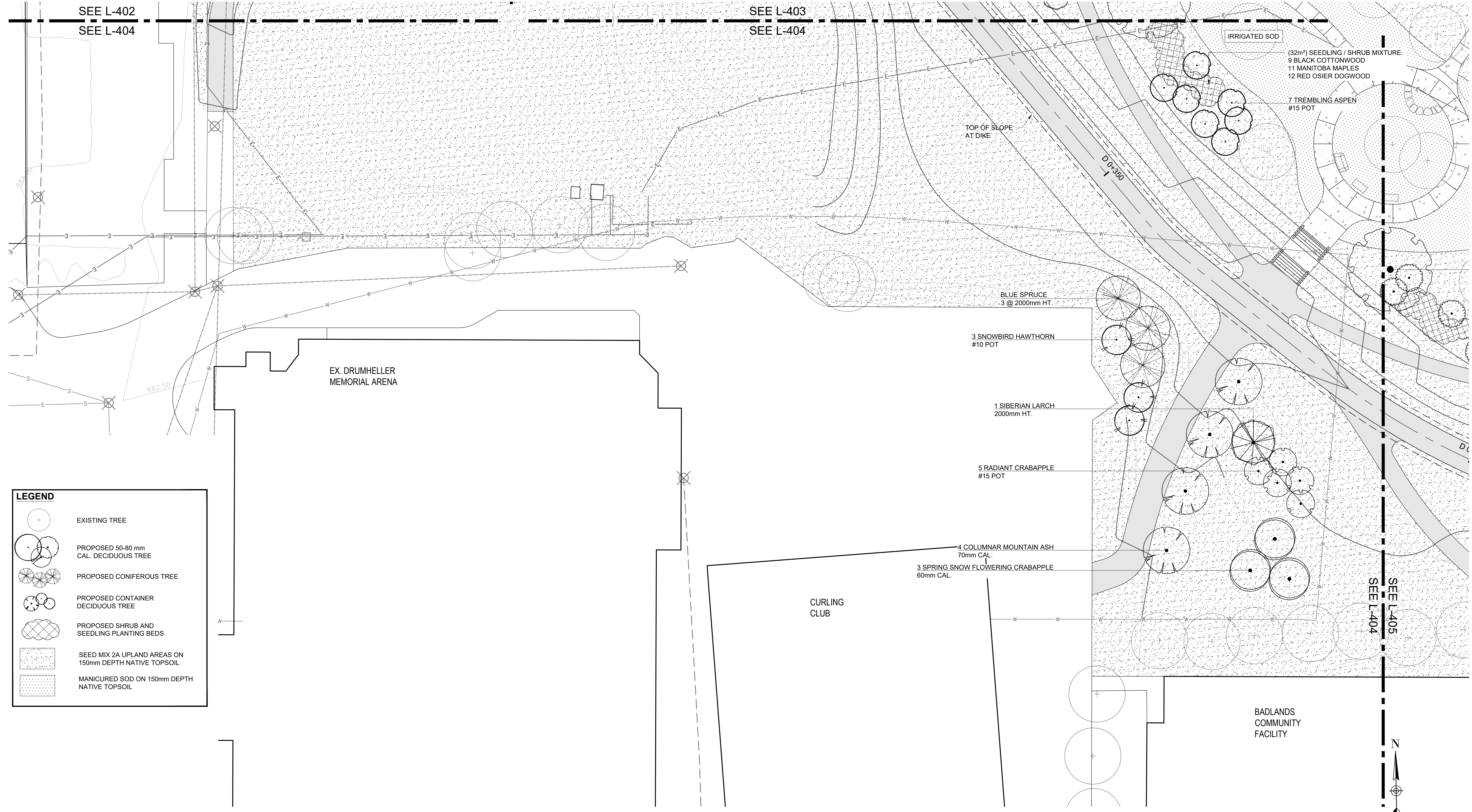
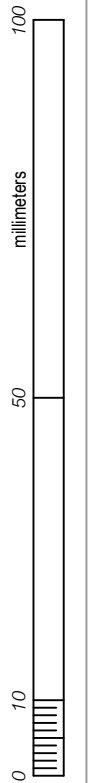
PLANTING PLAN

Project No. **133142** Drawing No. **L-403** Rev. **0**

Group **LANDSCAPE**

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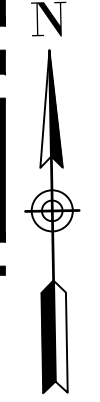
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LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL

PLAN
 Scale 1:200



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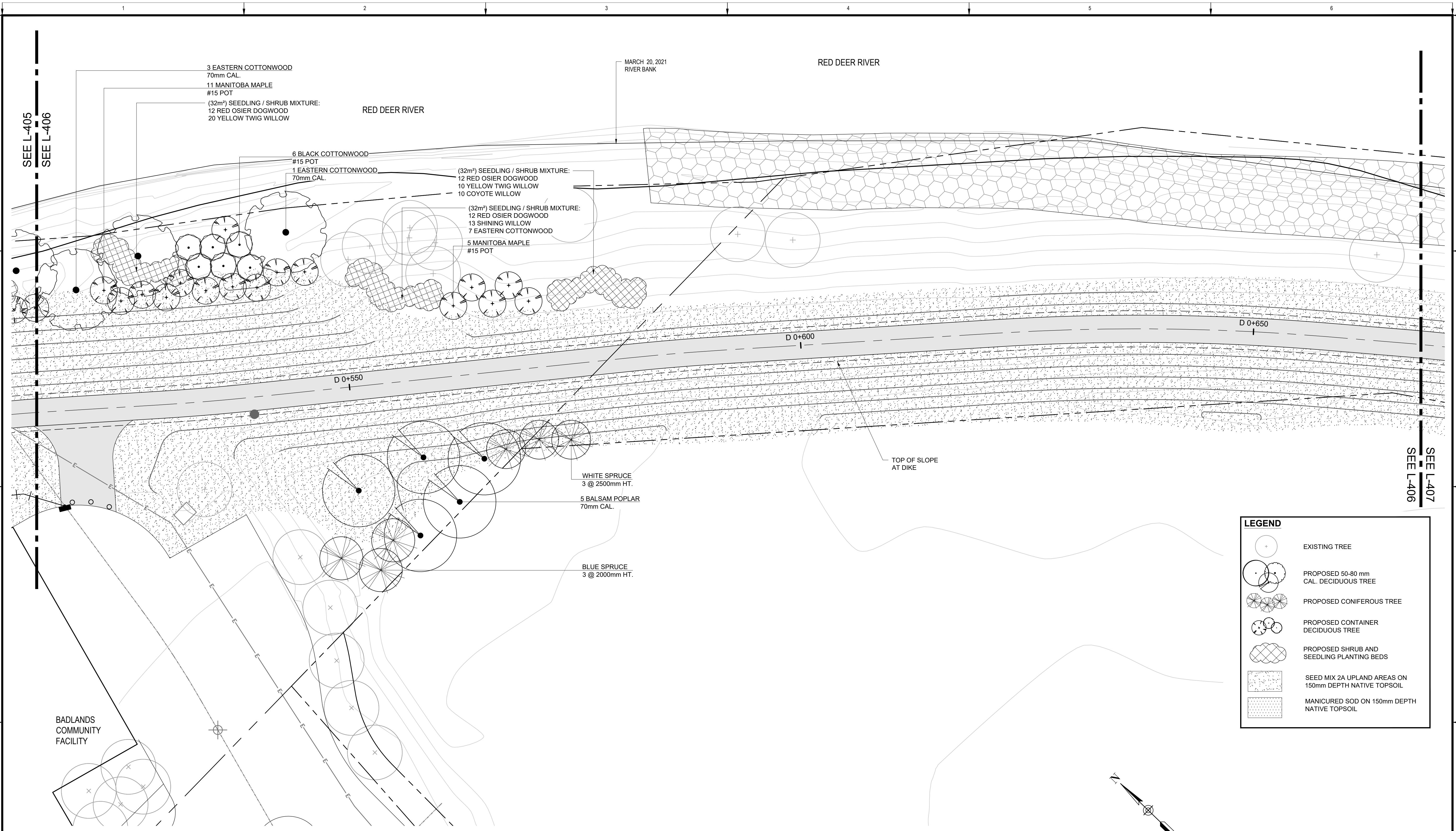
Rev	Date	Des	Dwn	Chk	Description
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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
 DOWNTOWN DIKE**

PLANTING PLAN

Project No. **133142** Drawing No. **L-404** Rev. **0**
 Group **LANDSCAPE**



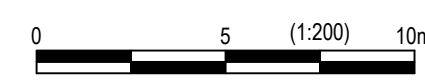
SEE L-405
SEE L-406

SEE L-407
SEE L-406

LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL

PLAN
Scale 1:200



BADLANDS
COMMUNITY
FACILITY



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

PLANTING PLAN

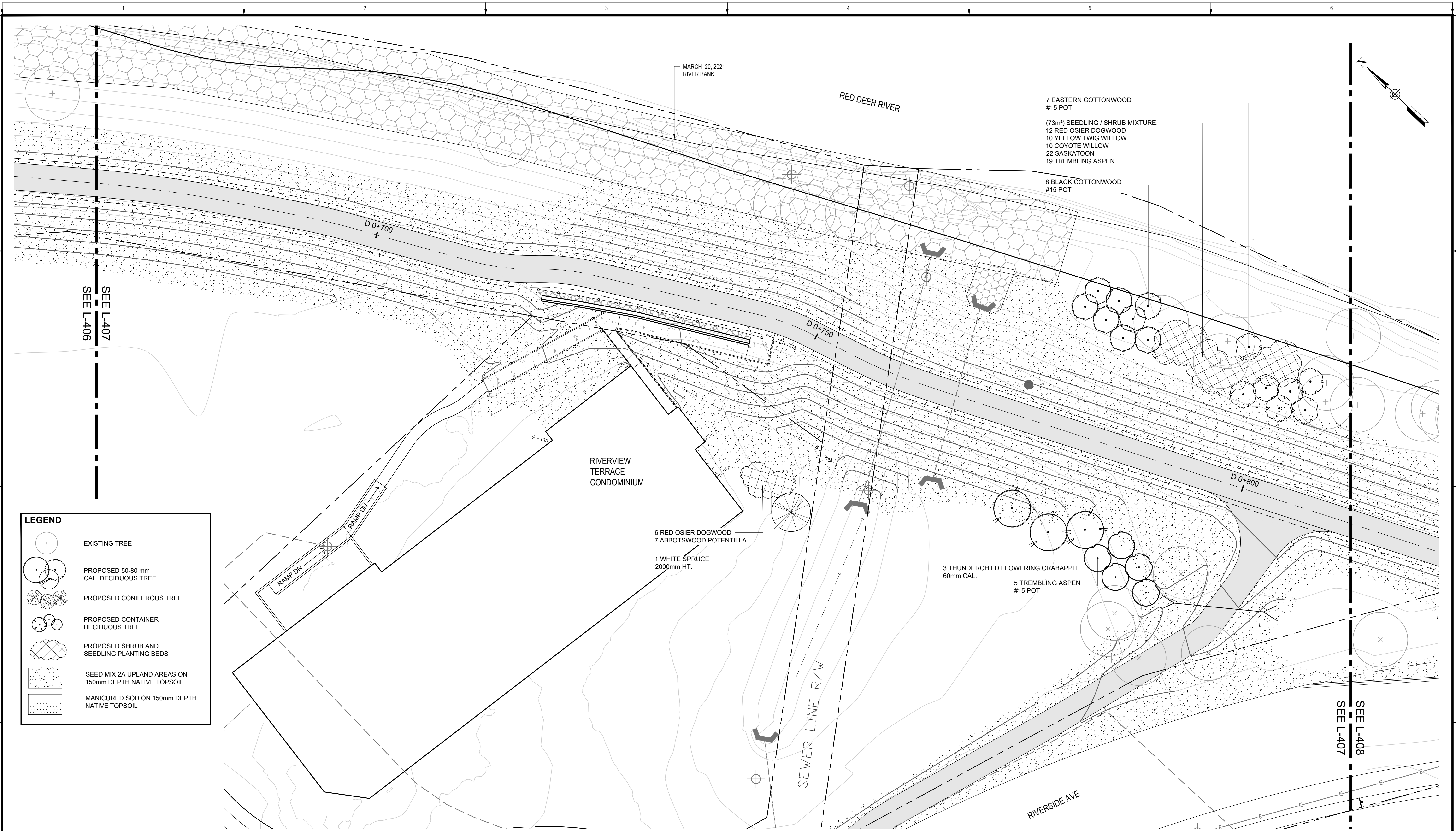
Project No. **133142** Drawing No. **L-406** Rev. **0**
Group **LANDSCAPE**

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0 10 50 100
millimeters

0 10 50 100
millimeters

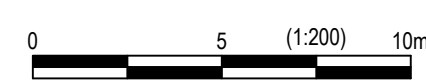
PLAN
Scale 1:200



LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL

PLAN
Scale 1:200



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

PLANTING PLAN

Project No. **133142** Drawing No. **L-407** Rev. **0**

Group **LANDSCAPE**

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Paper Size = ANSI D
At Full Size, this border measures 520 mm x 800 mm

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millimeters

A

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1

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6

(32m²) SEEDLING / SHRUB MIXTURE:
7 EASTERN COTTONWOOD
15 SASKATOON
10 YELLOW TWIG WILLOW
5 MANITOBA MAPLE
#15 POT

MARCH 20, 2021
RIVER BANK

RED DEER RIVER

D 0+950

D 0+900

D 0+850

+800





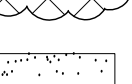
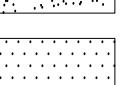

SEE L-407
SEE L-408

SEE L-408
SEE L-409

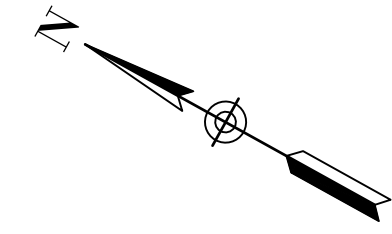
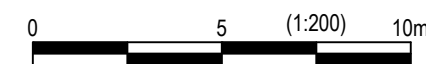
SEWER LINE R/W

EXISTING LANE

LEGEND

-  EXISTING TREE
-  PROPOSED 50-80 mm CAL. DECIDUOUS TREE
-  PROPOSED CONIFEROUS TREE
-  PROPOSED CONTAINER DECIDUOUS TREE
-  PROPOSED SHRUB AND SEEDLING PLANTING BEDS
-  SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
-  MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL

PLAN
Scale 1:200



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Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

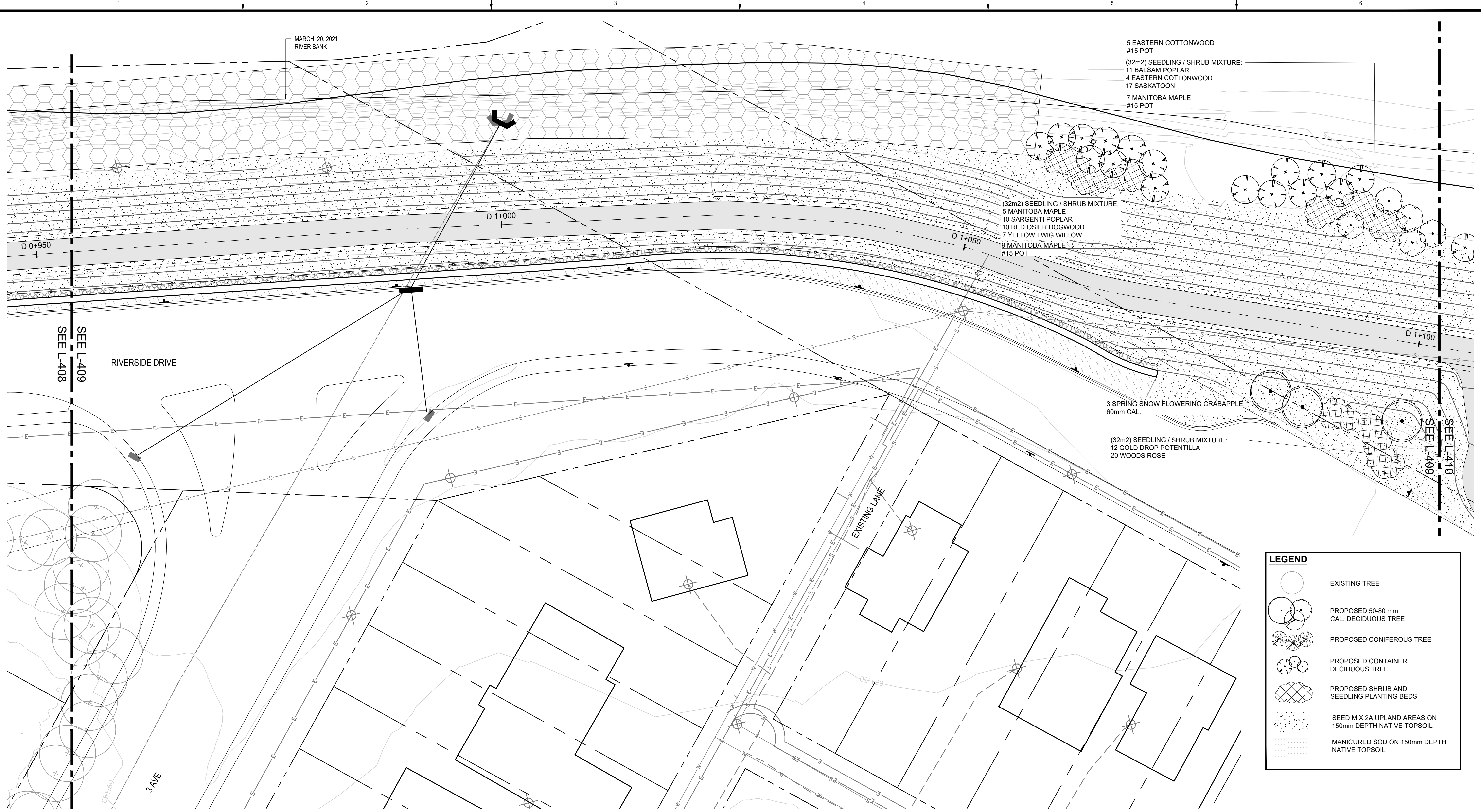
PLANTING PLAN

Project No. **133142** Drawing No. **L-408** Rev. **0**

Group **LANDSCAPE**

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millimeters
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At Full Size, this border measures 520 mm x 800 mm



5 EASTERN COTTONWOOD
#15 POT
(32m2) SEEDLING / SHRUB MIXTURE:
11 BALSAM POPLAR
4 EASTERN COTTONWOOD
17 SASKATOON
7 MANITOBA MAPLE
#15 POT

(32m2) SEEDLING / SHRUB MIXTURE:
5 MANITOBA MAPLE
10 SARGENTI POPLAR
10 RED OSIER DOGWOOD
7 YELLOW TWIG WILLOW
9 MANITOBA MAPLE
#15 POT

3 SPRING SNOW FLOWERING CRABAPPLE
60mm CAL.

(32m2) SEEDLING / SHRUB MIXTURE:
12 GOLD DROP POTENTILLA
20 WOODS ROSE

LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL

PLAN
Scale 1:200



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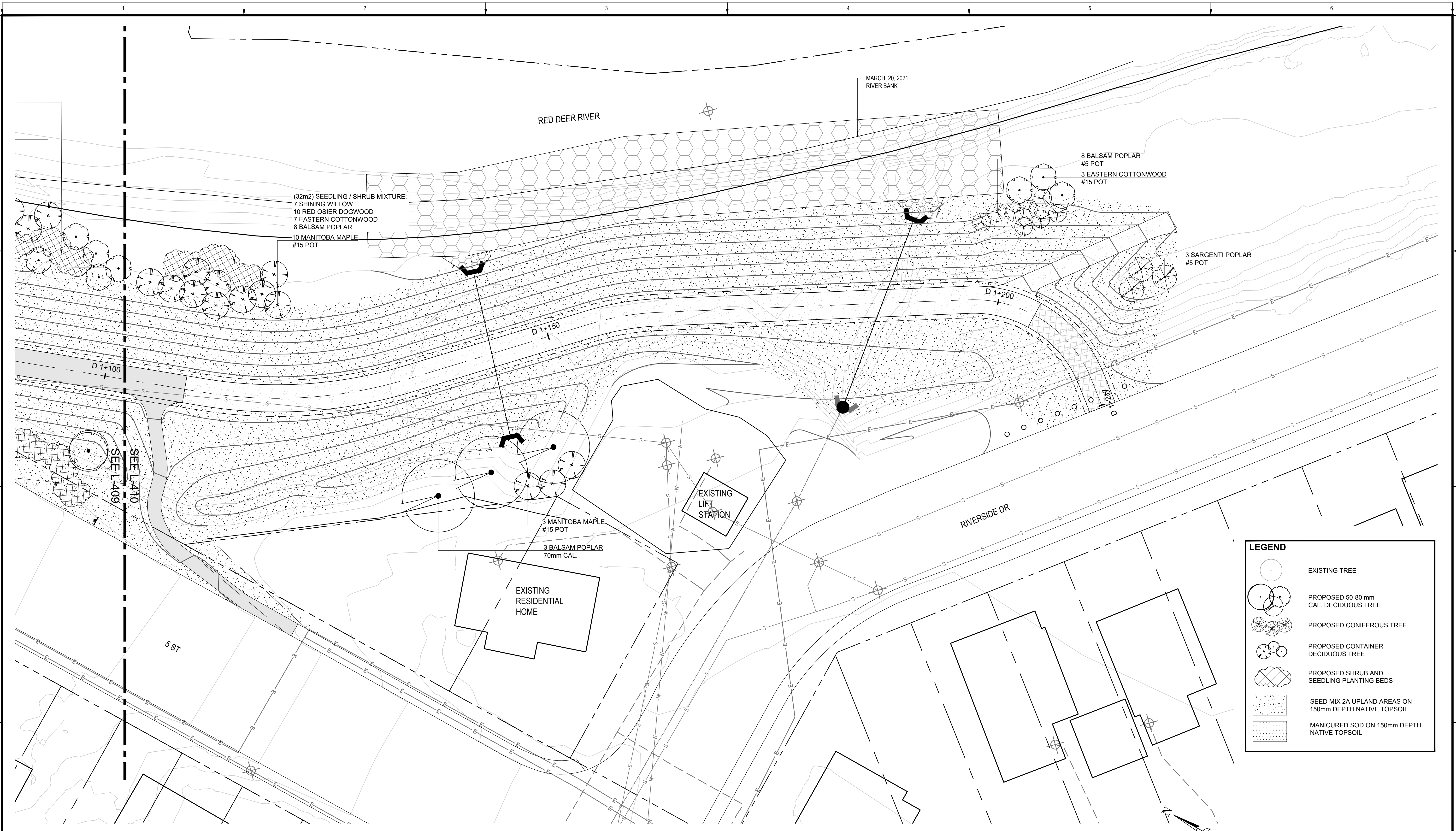
Rev	Date	Des	Dwn	Chk	Description
0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER

Rev	Date	Des	Dwn	Chk	Description

**TOWN OF DRUMHELLER
DOWNTOWN DIKE**

PLANTING PLAN

Project No. **133142** Drawing No. **L-409** Rev. **0**
Group **LANDSCAPE**



LEGEND

- EXISTING TREE
- PROPOSED 50-80 mm CAL. DECIDUOUS TREE
- PROPOSED CONIFEROUS TREE
- PROPOSED CONTAINER DECIDUOUS TREE
- PROPOSED SHRUB AND SEEDLING PLANTING BEDS
- SEED MIX 2A UPLAND AREAS ON 150mm DEPTH NATIVE TOPSOIL
- MANICURED SOD ON 150mm DEPTH NATIVE TOPSOIL

PLAN
Scale 1:200

0 5 (1:200) 10m



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The Alberta Association of Landscape Architects
Ernie J Webster

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**TOWN OF DRUMHELLER
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PLANTING PLAN

Project No. **133142** Drawing No. **L-410** Rev. **0**
Group **LANDSCAPE**

PLANT SCHEDULE			
CONIFEROUS TREES	COMMON NAME	SIZE	QTY
PICEA GLAUCA	WHITE SPRUCE	1500MM HT.	1
PICEA GLAUCA	WHITE SPRUCE	2000MM HT.	6
PICEA PUNGENS	COLORADO SPRUCE	1500MM HT.	2
PICEA PUNGENS	COLORADO SPRUCE	2000MM HT.	9
PICEA PUNGENS	COLORADO SPRUCE	3000MM HT.	1
TOTAL: 19			
DECIDUOUS TREES	COMMON NAME	SIZE	QTY
ACER NEGUNDO	MANITOBA MAPLE	70MM CAL.	1
FRAXINUS PENNSYLVANICA 'HEUVER'	FOOTHILLS GREEN ASH	70MM CAL.	3
FRAXINUS PENNSYLVANICA 'RUGBY'	PATMORE GREEN ASH	70MM CAL.	3
LARIX SIBIRICA	SIBERIAN LARCH	2000MM HT.	1
MALUS X 'SPRING SNOW'	SPRING SNOW FLOWERING CRABAPPLE	60MM CAL.	9
MALUS X 'THUNDERCHILD'	THUNDERCHILD FLOWERING CRABAPPLE	60MM CAL.	7
POPULUS BALSAMIFERA	BALSAM POPLAR	70MM CAL.	11
POPULUS BALSAMIFERA TRICHOCARPA	BLACK COTTONWOOD	70MM CAL.	7
POPULUS DELTOIDES	EASTERN COTTONWOOD	70MM CAL.	7
SORBUS X THURINGIACA 'FASTIGIATA'	COLUMNAR MOUNTAIN ASH	70MM CAL.	4
TOTAL: 53			
DECIDUOUS TREES - CONTAINER GROWN	COMMON NAME	SIZE	QTY
ACER NEGUNDO	MANITOBA MAPLE	#15 POT	84
CRATAEGUS X MORDENENSIS 'SNOWBIRD'	SNOWBIRD HAWTHORN	#10 POT	3
FRAXINUS PENNSYLVANICA 'RUGBY'	PRAIRIE SPIRE GREEN ASH	#15 POT	5
MALUS X 'RADIANT'	RADIANT CRABAPPLE	#15 POT	5
POPULUS BALSAMIFERA	BALSAM POPLAR	#5 POT	8
POPULUS BALSAMIFERA TRICHOCARPA	BLACK COTTONWOOD	#15 POT	23
POPULUS DELTOIDES	EASTERN COTTONWOOD	#15 POT	25
POPULUS SARGENTII	SARGENTI POPLAR	#5 POT	3
POPULUS TREMULOIDES	TREMBLING ASPEN	#15 POT	46
TOTAL: 202			
DECIDUOUS TREES - SEEDLINGS	COMMON NAME	SIZE	QTY
ACER NEGUNDO	MANITOBA MAPLE	SEEDLING	27
POPULUS BALSAMIFERA	BALSAM POPLAR	SEEDLING	19
POPULUS BALSAMIFERA TRICHOCARPA	BLACK COTTONWOOD	SEEDLING	27
POPULUS DELTOIDES	EASTERN COTTONWOOD	SEEDLING	59
POPULUS SARGENTII	SARGENTI POPLAR	SEEDLING	10
POPULUS TREMULOIDES	TREMBLING ASPEN	SEEDLING	18
TOTAL: 160			
DECIDUOUS SHRUBS	COMMON NAME	SIZE	QTY
AMALANCHIER ALNIFOLIA	SASKATOON	#2 POT	89
CORNUS SERICEA	RED OSIER DOGWOOD	#2 POT	148
CORNUS SERICEA 'FLAVIRAMEA'	YELLOW TWIG WILLOW	#2 POT	64
POTENTILLA FRUTICOSA 'ABBOTSWOOD'	ABBOTSWOOD POTENTILLA	#2 POT	7
POTENTILLA FRUTICOSA 'GOLD DROP'	GOLD DROP POTENTILLA	#2 POT	18
POTENTILLA FRUTICOSA 'PINK BEAUTY'	PINK BEAUTY BUSH CINQUEFOIL	#1 POT	7
PRUNUS VIRGINIANA	CHOKECHERRY	#2 POT	17
ROSA WOODSII ULTRAMONTANA	WOODS' ROSE	#2 POT	37
RUBUS PARVIFOLIUS	NATIVE RASPBERRY	#2 POT	16
SALIX EXIGUA	COYOTE WILLOW	#2 POT	31
SALIX LUCIDA	SHINING WILLOW	#2 POT	23
SPIRAEA X BUMALDA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	#1 POT	12
TOTAL: 469			

PLANTING NOTES

- ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE GUIDELINES AND SPECIFICATIONS OF DRUMHELLER VALLEY, THE DRUMHELLER VALLEY DOCUMENT, PRESERVING & ENHANCING THE URBAN FOREST: STANDARDS & TECHNIQUES AND AS PER PROJECT SPECIFIC PLANTING DETAILS LOCATED AT END OF DRAWING SET.
- PLANT MATERIAL LIST WAS PREPARED FOR ESTIMATING PURPOSES ONLY. CONTRACTOR SHALL MAKE THEIR OWN QUANTITY TAKE-OFFS USING DRAWINGS TO DETERMINE QUANTITIES, REPORTING PROMPTLY AND DISCREPANCIES WHICH MAY AFFECT BIDDING.
- THE OWNER'S REPRESENTATIVE WILL INSPECT PLANTS AT THE FOLLOWING STAGES: AT TIME OF DELIVERY PRIOR TO INSTALLATION, INSTALLED PLANTS BEFORE COMMENCEMENT OF MAINTENANCE PERIOD AND AT THE END OF MAINTENANCE PERIOD. NOTIFY OWNER'S REPRESENTATIVE 72 HOURS IN ADVANCE OF EACH REQUIRED INSPECTION. CONTRACTOR SHALL ENSURE REQUIRED PLANTS WILL BE AVAILABLE OR MEET SPECIFICATIONS BEFORE ARRANGING INSPECTION FOR SELECTION AND TAGGING OF PLANTS.
- ALL PLANT MATERIAL TO BE DISEASE FREE AND TRUE TO FORM. SPECIMEN GRADE SINGLE STEM STOCK - UNLESS NOTED OTHERWISE, PLANTS WILL BE REJECTED IF: SOIL BALLS HAVE BEEN CRACKED OR BROKEN BEFORE OR DURING PLANTING OR WHEN BURLAP ROPES REQUIRED IN CONNECTION WITH THEIR TRANSPLANTING HAVE BEEN REMOVED. DO NOT USE PLANTS DAMAGED DURING CONTACT WITH EQUIPMENT, OR PLANTS THAT ARE WILTED, WIND BURNED OR STRESSED. CONTRACTOR TO REPLACE DAMAGED OR REJECTED PLANTS AT NO ADDITIONAL COST TO OWNER.
- STAKE OUT LOCATIONS OF TREES, SHRUBS AND PLANTING BEDS AFTER THE COMPLETION OF THE DIKE GRADING. LOCATIONS OF ALL PLANTS SHALL BE REVIEWED AND APPROVED BY OWNER'S REPRESENTATIVE ON SITE BEFORE PLANTING. PLANTS INSTALLED WITHOUT REVIEW AND APPROVAL MAY REQUIRE TRANSPLANTING OR RELOCATION AS DIRECTED BY OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST.
- ENSURE ALL TREES AND SHRUBS ARE INSTALLED OUTSIDE OF DIKE EXTENTS - REFER TO CIVIL DRAWINGS, TYP.
- CONTRACTOR SHALL VERIFY THAT ALL MINIMUM CLEARANCES ARE PROVIDED BETWEEN PROPOSED TREES AND UNDERGROUND AND/OR OVERHEAD UTILITIES AS DEFINED BY THE LOCAL PARKS AND PLANNING DEPARTMENT.
- PART OF PLANT MATERIAL INSTALLATION SHALL INCLUDE SUFFICIENT PROTECTION TO PREVENT BARK AND TREE DAMAGE DUE TO FORAGING ANIMALS AND ANCHORING SYSTEM TO PREVENT ROOT BREAKAGE DUE TO STRONG WINDS. LANDSCAPE ARCHITECT NOT RESPONSIBLE FOR ANY DAMAGES THAT INCUR DUE TO IMPROPER INSTALLATION.
- DISTURBANCES TO ADJACENT AREAS SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.
- EROSION CONTROL MATTING REQUIRED ON ALL SLOPES GREATER THAN 3:1 THAT ARE INDICATED TO BE SEEDED.
 - SLOPES > 3:1 AND < 2:1 :
 - S150 STRAW FIBRE EROSION CONTROL MATTING WITH BIODEGRADABLE STAKES. REFER TO MANUFACTURERS SPECIFICATIONS FOR STAKING PATTERN.
 - SLOPES > 2:1 :
 - SC150 COCONUT AND STRAW FIBRE EROSION CONTROL MATTING WITH BIODEGRADABLE STAKES. REFER TO MANUFACTURERS SPECIFICATIONS FOR STAKING PATTERN.
- ALL DEVELOPMENT AND CONSTRUCTION ACTIVITIES WITHIN 6 METERS OF EXISTING VEGETATION MUST BE SUPERVISED BY AN ISA (INTERNATIONAL SOCIETY OF ARBORICULTURE) CERTIFIED ARBORIST.
- ALL PRUNING OF EXISTING VEGETATION MUST BE SUPERVISED BY AN ISA CERTIFIED ARBORIST.

Wet Tolerant Seed Mix 1 - Below 1:2-year high water mark - Application rate of 58 kg / ha.

BOTANICAL NAME	COMMON NAME	TARGET COVER	% OF SEED MIX (PLS)	Kg REQUIRED (PLS)
Deschampsia cespitosa	Tufted Hairgrass	25%	3%	1.97
Pascopyrum smithii / Agropyron smithii	Western Wheatgrass	20%	32%	18.60
Bromus carinatus	Mountain Brome	5%	10%	5.68
Elymus trachycaulus / Agropyron trachycaulum var.	Slender Wheatgrass	10%	11%	6.39
Elymus canadensis	Canada Wildrye	15%	23%	13.34
Sparina pectinata	Alkali Cordgrass	25%	21%	11.66

Cover crop for Wet Tolerant Seed Mix 1: Add a cover crop of Beckmannia Syzigachne (Slough Grass) at 5 kg / ha in areas of highwater erosion prone areas.

Upland Seed Mix 2A - Upland Areas - Application rate of 58 kg / ha.

BOTANICAL NAME	COMMON NAME	TARGET COVER	% OF SEED MIX (PLS)	Kg REQUIRED (PLS)
Elymus lanceolatus / Agropyron dasystachyum	Northern Wheatgrass	15%	16%	9.30
Pascopyrum smithii / Agropyron smithii	Western Wheatgrass	20%	30%	17.36
Elymus trachycaulus / Agropyron trachycaulum var.	Slender Wheatgrass	10%	10%	5.97
Bouteloua gracilis	Blue Grama	10%	2%	0.88
Elymus canadensis	Canada Wildrye	10%	14%	8.30
Nassella viridula / Stipa viridula	Green Needlegrass	25%	27%	15.82
Koeleria macrantha	Junegrass	10%	1%	0.58

Cover Crop for Upland Seed Mix 2: Add a cover crop of Lolium multiflorum (Annual Ryegrass) at 5 kg / ha for entirety of Upland Seed Mix areas.

Seed Mix 3 - Top of Berm - Application rate of 50 kg / ha.

BOTANICAL NAME	COMMON NAME	TARGET COVER	% OF SEED MIX (PLS)	Kg REQUIRED (PLS)
Elymus lanceolatus / Agropyron dasystachyum	Northern Wheatgrass	23%	46%	22.91
Pascopyrum smithii / Agropyron smithii	Western Wheatgrass	10%	23%	11.16
Bouteloua gracilis	Blue Grama	20%	6%	2.83
Hesperostipa comata / Stipa comata	Needle and Thread	2%	4%	2.13
Poa sandbergii	Sandberg Bluegrass	15%	6%	3.07
Nassella viridula / Stipa viridula	Green Needlegrass	5%	9%	4.24
Koeleria macrantha	Junegrass	23%	4%	2.13
Dalea purpurea	Purple Prairie Clover	2%	2%	1.02

Cover crop for Top of Berm Seed Mix 3: Add a cover crop of Lolium multiflorum (Annual Ryegrass) at 5 kg / ha for entirety of Top of Berm Seed Mix areas.

SEEDING NOTES

- ENSURE SEED MIXTURE IS FREE OF ANY WEED SEEDS LISTED AS "PROHIBITED NOXIOUS" OR "NOXIOUS" UNDER THE WEED CONTROL ACT AND SEEDS OF OTHER SPECIES THAT WILL INTERFERE WITH THE GROWTH OF THE SPECIFIED SEED MIXTURE.
- SOW AT THE RATE INDICATED WITH SEED MIXES, DURING CALM WEATHER AND WHEN SOIL MOISTURE CONTENT IS ADEQUATE FOR GERMINATION.
- FOR SLOPES 2:1 OR FLATTER AREAS TO BE SEEDED THAT ARE EASILY ACCESSIBLE APPLY SEED USING A MECHANICAL DRY SPREAD "BRILLION" SEEDER THAT PLACES SEED AT SPECIFIED DEPTH AND RATE AND ROLLS IN A SINGLE OPERATION.
- FOR STEEPER THAN 2:1 SLOPES OR SLOPES THAT ARE NOT EASILY ACCESSIBLE USE MANUALLY OPERATED BROADCAST SEEDER.
- SOW SEED IN TWO DIRECTIONS, 50% OF SEED IN ONE DIRECTION AND REMAINING 50% OF SEED AT RIGHT ANGLES TO FIRST SEEDING PATTERN, USING SAME METHOD OF SEEDING.
- COVER BROADCASTED SEED BY HAND RAKING AND ATV HARROWING-IN.
- OPTIMAL SEEDING PERIODS FOR NATIVE GRASSES:
 - MID TO LATE MAY, EARLY JUNE - NO LATER THAN JUNE 15TH.
 - LATE SEPTEMBER - AFTER FIRST HARD FROST WHEN PLANTS GO DORMANT. DO NOT SEED NEAR END OF SEASON UNTIL THE RISK OF SEED GERMINATION IS LOW. SEED THAT GERMINATES AND DOES NOT FULLY ESTABLISH PRIOR TO END OF GROWING SEASON WILL LIKELY NOT OVERWINTER.
- WATER THE SEEDED AREAS AFTER SEEDING TO ACHIEVE GERMINATION AND A UNIFORM STAND OF GRASS. THE OWNER WILL DETERMINE THE WATERING SCHEDULE AND WILL PROVIDE THE CONTRACTOR WITH AT LEAST 24 HOURS ADVANCE NOTICE TO COMMENCE WATERING SEEDED AREAS.
- APPLY WATER UNIFORMLY TO SEEDED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS AND TOPSOIL.
- MINIMIZE TRAVEL ON SEEDED SURFACES.
- USE WATERING EQUIPMENT AND TECHNIQUES AUTHORIZED BY THE OWNER.

SODDING NOTES

- SEE SPECIFICATIONS.
- ALL SODDED AREAS IN THE CENTRAL PARK AROUND BCF ARE TO BE IRRIGATED BY AN UNDERGROUND SPRINKLER SYSTEM AS PER DRAWINGS L-501 TO L-502.

Site Characteristics

Seeding Method	Broadcast
Habitat Type	Wetland
Natural Subregion	Dry Mixedgrass
Incorporation Method	ATV Harrow or hand rake
Depth of Incorporation	5cm to 10cm

Site Characteristics

Seeding Method	Broadcast
Habitat Type	Deciduous forest
Natural Subregion	Dry Mixedgrass
Incorporation Method	ATV Harrow or hand rake
Depth of Incorporation	5cm to 10cm

Site Characteristics

Seeding Method	Broadcast or manual
Habitat Type	Deciduous forest
Natural Subregion	Dry Mixedgrass
Incorporation Method	ATV Harrow or hand rake
Depth of Incorporation	5cm to 10cm

TREE PLANTING STRATEGY

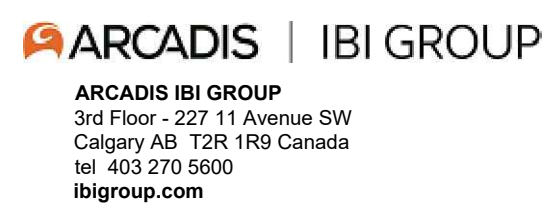
TOTAL NUMBER OF FAIR, GOOD AND VERY GOOD TREES TO BE REMOVED = 395
TOTAL NUMBER OF NEW TREES AND SHRUBS TO BE PLANTED IN LIEU OF REMOVALS = 1975

(As per the Town of Drumheller "Preserving and Enhancing The Urban Forest Standards and Techniques", where a 5:1 ratio of planting replacement is specified, for every 1 fair, good, or very good tree that is removed, 5 trees/shrubs will be planted)

TOTAL REPLACEMENT PLANTS = 903

BREAKDOWN:
MED-LARGE TREES (60-70mm CAL.) = 72 (8%)
SMALL CONTAINER GROWN TREES = 202 (22%)
SEEDLING TREES = 160 (18%)
SHRUBS = 469 (52%)

*OTHER POTENTIAL LOCATIONS FOR PLANTING TO BE COORDINATED WITH THE DOWNTOWN PLAZA PLANS



Rev	Date	Des	Dwn	Chk	Description
0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER

TOWN OF DRUMHELLER DOWNTOWN DIKE			
PLANT SCHEDULES, SEED MIXES & NOTES			
Project No.	133142	Drawing No.	
Group	LANDSCAPE		
			Rev. L-411 0

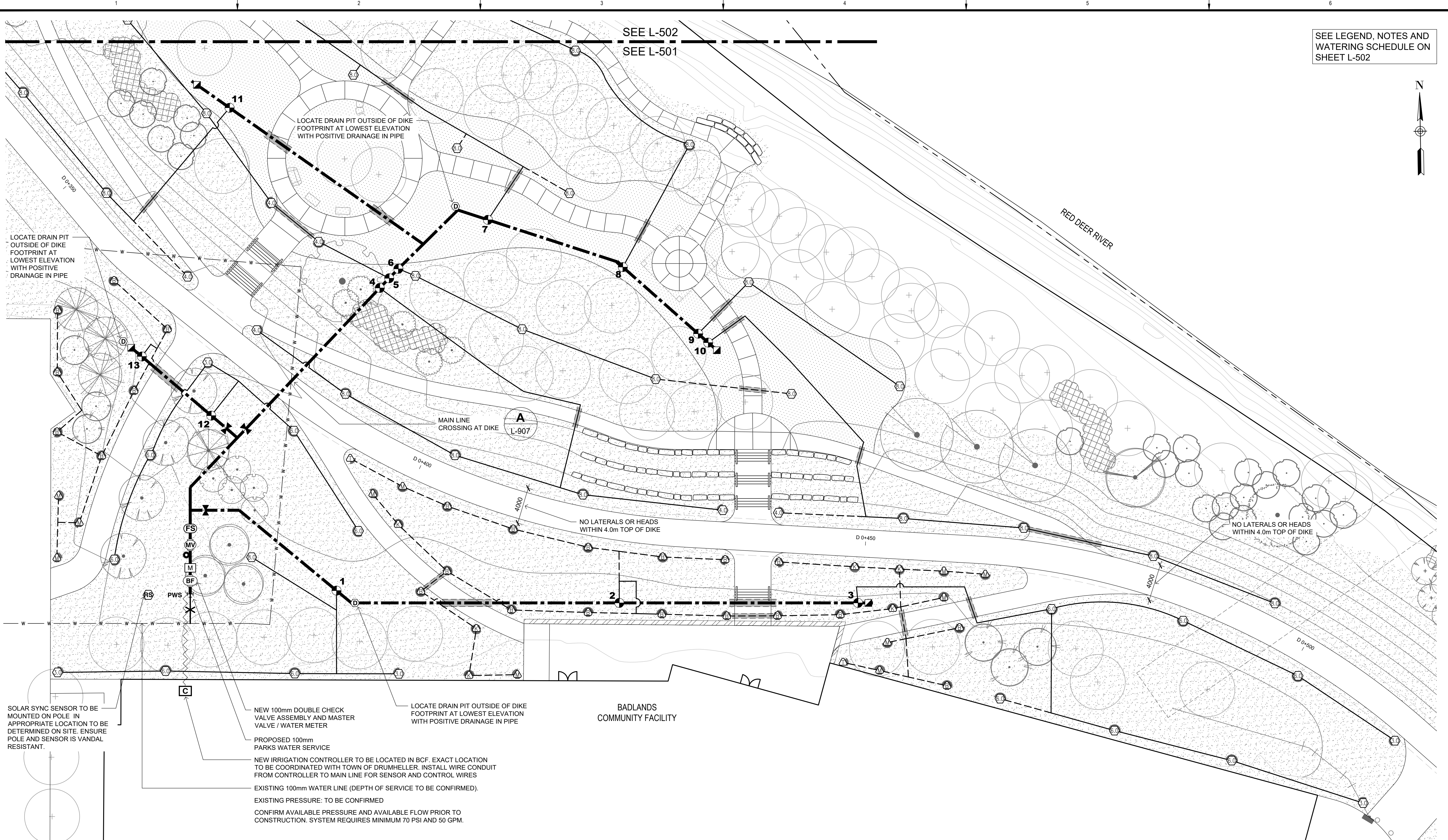
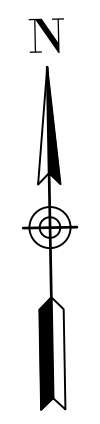
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SEE L-502
SEE L-501

SEE LEGEND, NOTES AND
WATERING SCHEDULE ON
SHEET L-502



SOLAR SYNC SENSOR TO BE MOUNTED ON POLE IN APPROPRIATE LOCATION TO BE DETERMINED ON SITE. ENSURE POLE AND SENSOR IS VANDAL RESISTANT.

NEW 100mm DOUBLE CHECK VALVE ASSEMBLY AND MASTER VALVE / WATER METER

PROPOSED 100mm PARKS WATER SERVICE

NEW IRRIGATION CONTROLLER TO BE LOCATED IN BCF. EXACT LOCATION TO BE COORDINATED WITH TOWN OF DRUMHELLER. INSTALL WIRE CONDUIT FROM CONTROLLER TO MAIN LINE FOR SENSOR AND CONTROL WIRES

EXISTING 100mm WATER LINE (DEPTH OF SERVICE TO BE CONFIRMED).

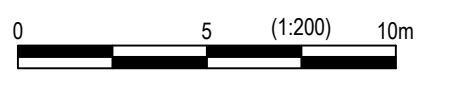
EXISTING PRESSURE: TO BE CONFIRMED

CONFIRM AVAILABLE PRESSURE AND AVAILABLE FLOW PRIOR TO CONSTRUCTION. SYSTEM REQUIRES MINIMUM 70 PSI AND 50 GPM.

LOCATE DRAIN PIT OUTSIDE OF DIKE FOOTPRINT AT LOWEST ELEVATION WITH POSITIVE DRAINAGE IN PIPE

BADLANDS
COMMUNITY FACILITY

PLAN
Scale 1:200



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Rev	Date	Des	Dwn	Chk	Description

TOWN OF DRUMHELLER DOWNTOWN DIKE	
IRRIGATION PLAN	
Project No. 133142	Drawing No. L-501
Group LANDSCAPE	Rev. 0

IRRIGATION SCHEDULE * PEAK LANDSCAPE ET(L) = 1.37"/WEEK

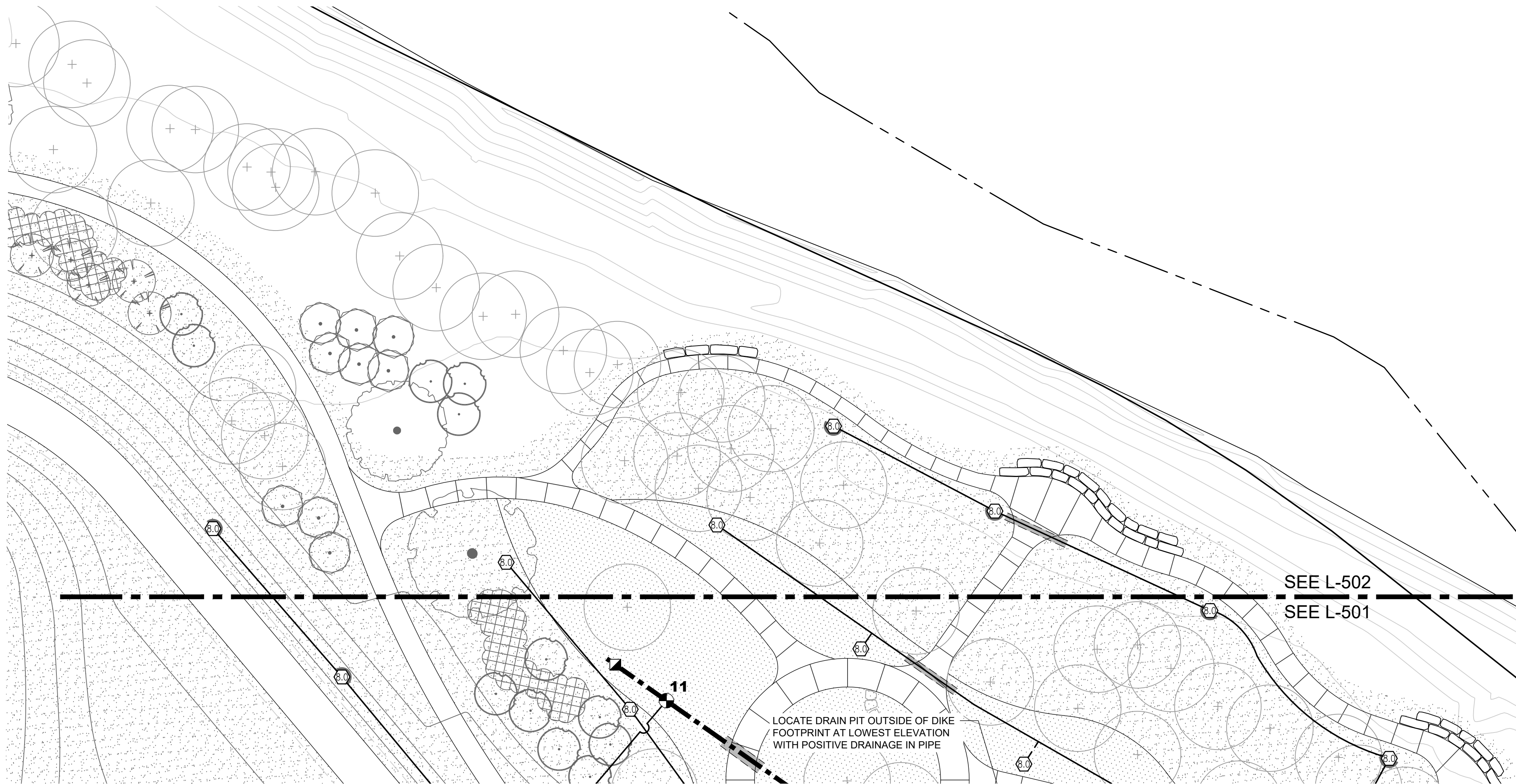
ZONE	VALVE SIZE	SPRINKLER HEAD TYPE	DESIGN PSI	PSI @ POC	FLOW (gpm)	PRECIP. RATE (in/hr)	SLOPE	DAYS OF THE WEEK	NO. OF CYCLES	CYCLE TIME (mins)	SOAK TIME (mins)
1	38mm	TURF ROTOR	50	61	27.9	0.66	4%	EVEN	2	24	30
2	38mm	TURF ROTARY	50	55	33.31	0.35	4%	EVEN	3	33	30
3	38mm	TURF ROTOR	50	69	44.7	0.75	4%	EVEN	2	21	30
4	38mm	TURF ROTOR	50	63	34.24	0.79	33%	EVEN	2	20	30
5	38mm	TURF ROTOR	50	60	25.68	0.52	2%	EVEN	2	31	30
6	38mm	TURF ROTOR	50	62	34.24	0.37	2%	EVEN	3	29	30
7	38mm	TURF ROTOR	50	62	34.24	0.37	2%	ODD	3	29	30
8	38mm	TURF ROTOR	50	64	34.24	0.76	2%	ODD	2	21	30
9	38mm	TURF ROTOR	50	60	17.12	0.40	2%	ODD	2	40	30
10	38mm	TURF ROTOR	50	66	38.52	0.78	33%	ODD	2	21	30
11	38mm	TURF ROTOR	50	65	29.96	0.74	33%	ODD	2	22	30
12	38mm	TURF ROTOR	50	63	28.69	0.65	6%	ODD	2	25	30
13	25mm	TURF ROTARY	50	51	12.06	0.35	10%	ODD	3	33	30

NOTES

- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONFORM TO CITY OF CALGARY PARKS STANDARD SPECIFICATIONS FOR LANDSCAPE CONSTRUCTION, CURRENT EDITION, EXCEPT WHERE NOTED ON DRAWING.
- THE IRRIGATION CONTRACTOR SHALL PERFORM A WATER PRESSURE TEST TO ENSURE MINIMUM 60PSI IS AVAILABLE. NOTIFY LANDSCAPE ARCHITECT IF PRESSURE IS NOT ADEQUATE.
- THE IRRIGATION CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES AND SERVICES PRIOR TO CONSTRUCTION.
- THE IRRIGATION PLAN IS DIAGRAMMATIC. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE PROPER SPACING AND COVERAGE. LOCATION OF IRRIGATION HEADS AND LINES ARE TO BE COORDINATED WITH TREE AND SHRUB PLANTING. TREE LOCATIONS TAKE PRECEDENCE.
- USE CAUTION WHEN INSTALLING IRRIGATION LINES NEAR EXISTING TREES. ROOTS ENCOUNTERED MUST BE PRUNED BY AN ISA ARBORIST.
- ALL SPRINKLERS SHALL BE ADJUSTED TO NOT SPRAY EXCESSIVELY ON ROADWAYS, PATHWAYS, BUILDINGS AND REAR LOTS.
- ALL IRRIGATION LINES CROSSING UNDER PATHWAYS TO BE ENCASED IN PVC C-900 SLEEVING THAT IS TWICE THE DIAMETER OF THE IRRIGATION PIPE. INSTALL ADJACENT WIRE CONDUIT WHERE REQUIRED.
- ALL SPRAY HEADS IN SHRUB BEDS ARE TO HAVE A POP-UP HEIGHT OF 300mm.
- HDPE FITTINGS TO CONFORM WITH CITY OF CALGARY SPECIFICATIONS.
- IRRIGATION CONTROLLER CABINET'S LOCATION TO BE INSPECTED AND APPROVED BY TOWN OF DRUMHELLER PRIOR TO INSTALLATION.
- EXISTING VISIBLE IRRIGATION HEADS, VALVES, PIPE TO BE REMOVED. ALL NEW EQUIPMENT TO BE INSTALLED WITH NEW IRRIGATION SYSTEM AND ANY EXISTING UNDERGROUND MAINLINE AND LATERAL PIPE TO BE ABANDONED.
- IRRIGATION PIPE INSTALLED WITHIN DIKE FOOTPRINT TO BE BURIED MAXIMUM 350mm DEPTH TO BOTTOM OF PIPE.

LEGEND

DESCRIPTION	QTY.	DETAIL
PROPERTY LINE		
PWS		
PROPOSED 100mm PARKS WATER SERVICE	1	A/L906
100mm POINT OF CONNECTION c/w DOUBLE CHECK VALVE ASSEMBLY, GATE VALVE SHUTOFF AND VALVE BOX.	1	B/L906 C/L907
WATER METER	1	
HUNTER ACC2 (A2C-1200-SS) CONTROLLER WITH 6-STATION PLUG-IN MODULES C/W ROAM XL REMOTE RECEIVER UNIT.		
• INCLUDE A2C-LTE CELLULAR COMMUNICATION MODULE FOR REMOTE MONITORING AND HIGH-FLOW ALARM NOTIFICATIONS. (REQUIRES SIM CARD & MONTHLY CELLULAR SUBSCRIPTION)	1	C/L906
• CONFIRM CONTROLLER MODEL, LOCATION AND CONFIGURATION WITH TOWN OF DRUMHELLER PARKS DEPARTMENT PRIOR TO INSTALLATION.		
HUNTER SOLAR SYNC SENSOR MOUNTED ON TIMBER POLE	1	
HUNTER FLOW-CLIK SENSOR W/ FCT-200 RECEPTACLE TEE	1	C/L907
MASTER VALVE: 75mm HUNTER IBV BRASS ELECTRIC CONTROL VALVE C/W CARSON 1324-12 VALVE BOX	1	C/L907
100mm BRASS ISOLATION GATE VALVE C/W VALVE BOX, LOCKING LID AND GRAVEL SUMP	3	E/L906
50mm COMPRESSOR CONNECTION IN VALVE BOX	1	D/L906
25mm RAIN BIRD QUICK COUPLER IN VALVE BOX	4	
MANUAL DRAIN VALVE AND DRAIN PIT LOCATED AS REQUIRED AT LOWEST RELATIVE GRADE TO ENSURE POSITIVE GRAVITY DRAINAGE	AS REQ'D	F/L906
RAIN BIRD EFB-CP ELECTRIC CONTROL VALVE C/W BRASS GATE VALVE AND CARSON 1220-12 VALVE BOX. HIDE IN SHRUB/CONIFER BED WHERE POSSIBLE AND AVOID DAMAGE TO EXISTING TREES. VALVE SIZE AS PER IRRIGATION SCHEDULE.	13	G/L906
ELECTRICAL WIRE TO POWER SOURCE. PLACE WIRES IN PVC CONDUIT WHEN ALIGNMENT DOES NOT FOLLOW MAINLINE PIPE.	AS REQ'D	
100mm HDPE PE4710 DR 11 160PSI MAIN LINE	220	
50mm HDPE PE 4710 DR 17 LATERAL PIPE	650	
25mm CSA SERIES 100 POLYETHYLENE LATERAL	310	
PVC SCH 40 SLEEVE C/W ADJACENT WIRE CONDUIT FOR MAINLINE CROSSINGS (EXCEPT AT DIKE CROSSING)	AS REQ'D	
HUNTER MP ROTATOR C/W PRS40 BODY & CHECK VALVE. 300mm POP-UP IN SHRUB BEDS. NOZZLE SIZE AS INDICATED ON DRAWING.		
- MP 1000 = M(90-210), L(210-270), O(360)	42	B/L907
- MP 2000 = K(90-210), G(210-270), R(360)		
- MP 3000 = B(90-210), Y(210-270), G(360)		
RAIN BIRD 6504-PC/FC-SS 06 ROTOR, 100mm POP-UP, STAINLESS STEEL RISER, ADJUSTABLE AND FULL CIRCLE. WITH REMOVABLE SEAL-A-MATIC CHECK VALVE. NOZZLE NUMBER AS NOTED ON DWG	50	B/L907



PLAN
Scale 1:200

CRITICAL ANALYSIS

Generated:	2023-04-03 13:52
P.O.C. NUMBER: 01	
Water Source Information:	
FLOW AVAILABLE	
Point of Connection Size:	100
Flow Available:	199.8 GPM
PRESSURE AVAILABLE	
Static Pressure at POC:	70 PSI
Pressure Available:	70 PSI
DESIGN ANALYSIS	
Maximum Station Flow:	44.7 GPM
Flow Available at POC:	199.8 GPM
Residual Flow Available:	155.1 GPM
Critical Station:	3
Design Pressure:	50 PSI
Friction Loss:	3.23 PSI
Fittings Loss:	0.32 PSI
Elevation Loss:	0 PSI
Loss through Valve:	0.94 PSI
Pressure Req. at Critical Station:	54.5 PSI
Loss for Fittings:	0.54 PSI
Loss for Main Line:	5.35 PSI
Loss for POC to Valve Elevation:	0.71 PSI
Loss for Backflow:	5.29 PSI
Loss for Master Valve:	2.5 PSI
Critical Station Pressure at POC:	68.9 PSI
Pressure Available:	70 PSI
Residual Pressure Available:	1.12 PSI

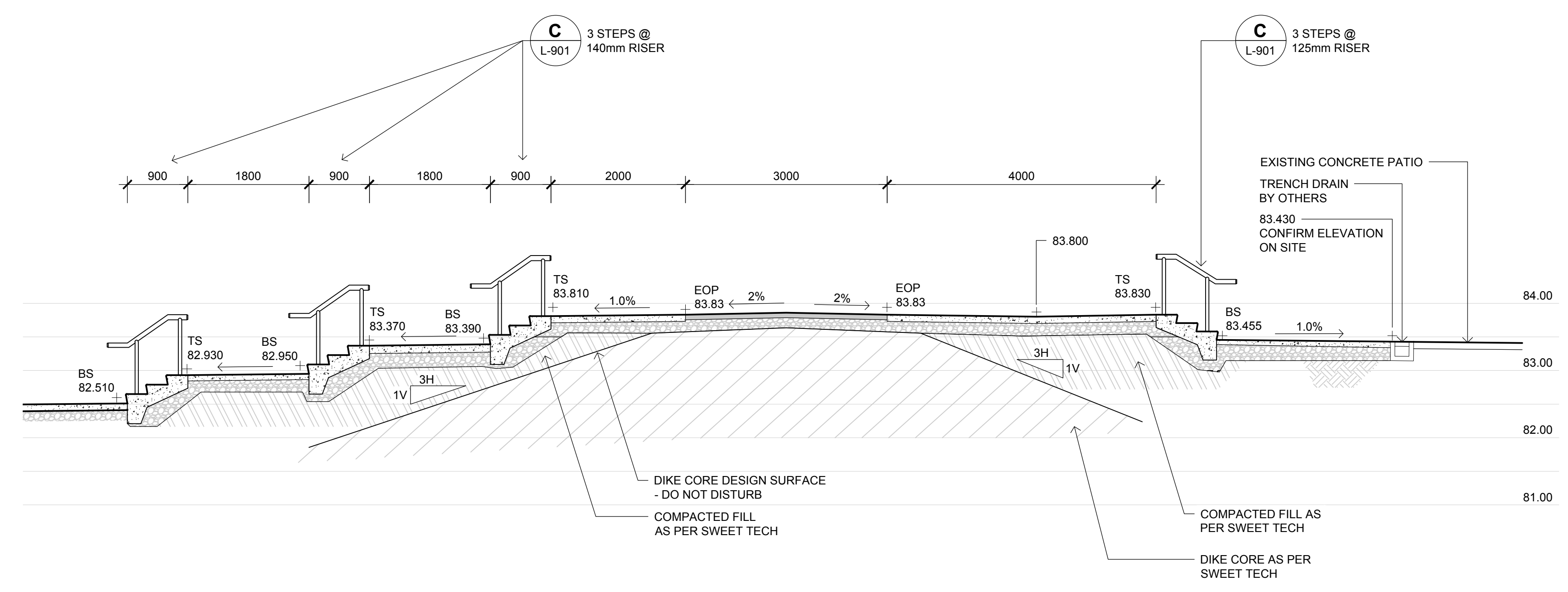


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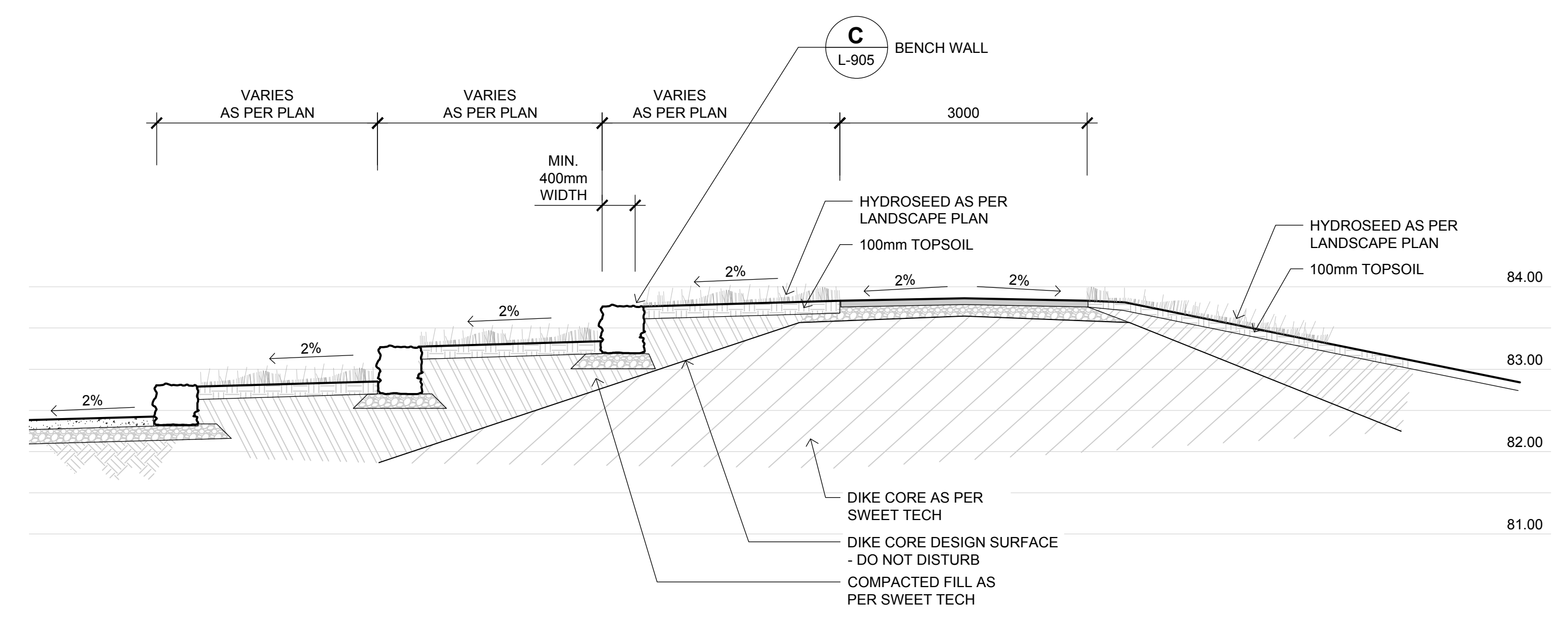


Rev	Date	Des	Dwn	Chk	Description
0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER

TOWN OF DRUMHELLER DOWNTOWN DIKE			
IRRIGATION PLAN			
Project No.	133142	Drawing No.	L-502
Group	LANDSCAPE	Rev.	0



A STAIRS AT DIKE
 L-801 1:50 SECTION



B AMPHITHEATRE AT DIKE
 L-801 1:50 SECTION



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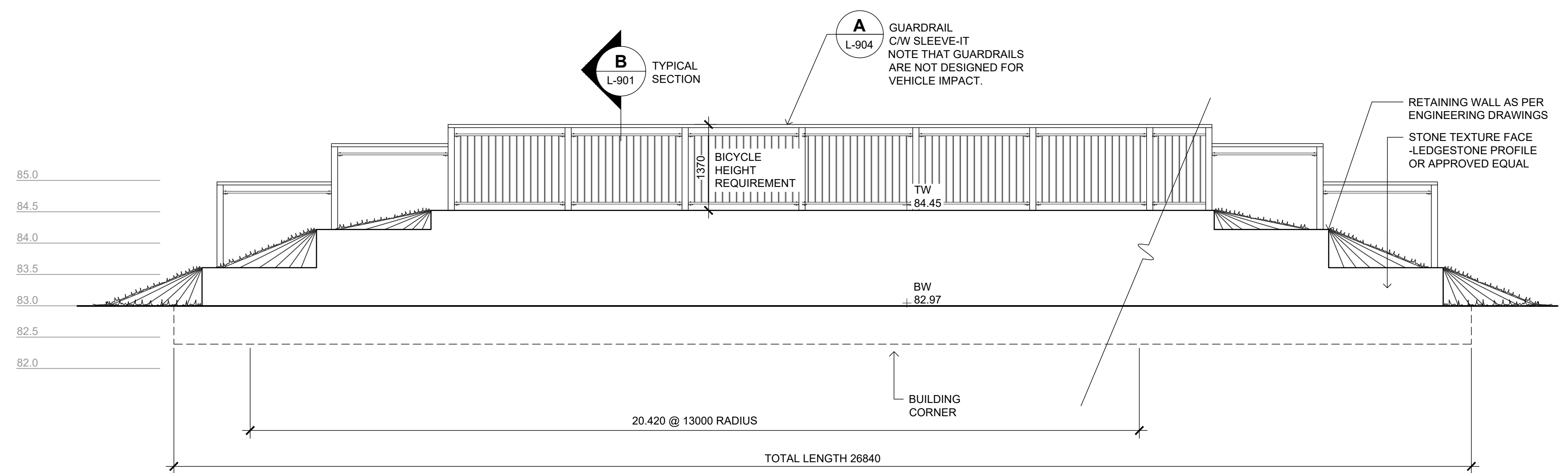
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0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER

Rev	Date	Des	Dwn	Chk	Description

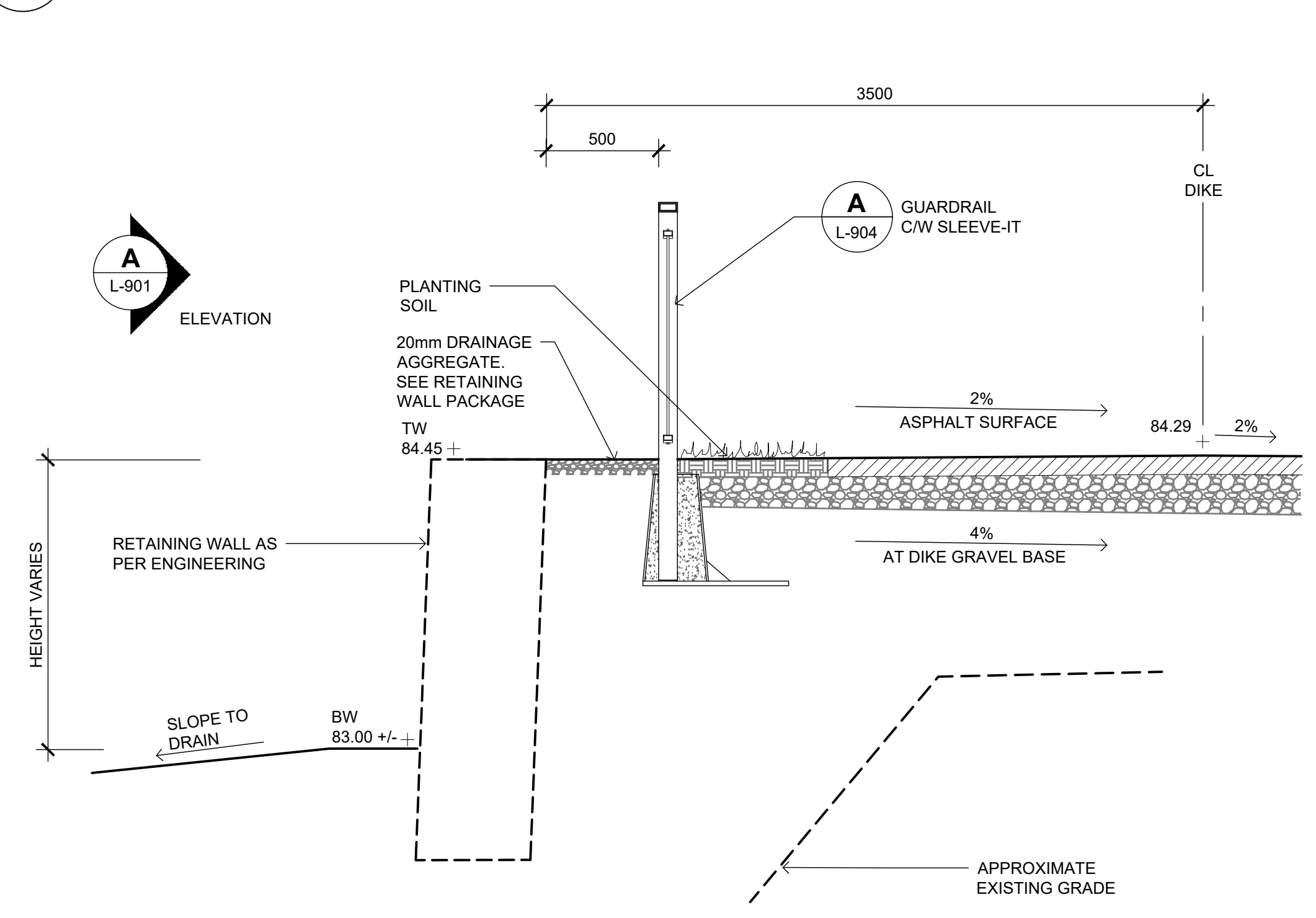
TOWN OF DRUMHELLER DOWNTOWN DIKE	
LANDSCAPE SECTIONS	
Project No. 133142	Drawing No. L-801
Group LANDSCAPE	Rev. 0

- NOTES**
- REFER TO SWEETECH RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
 - REFER TO SWEETECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.

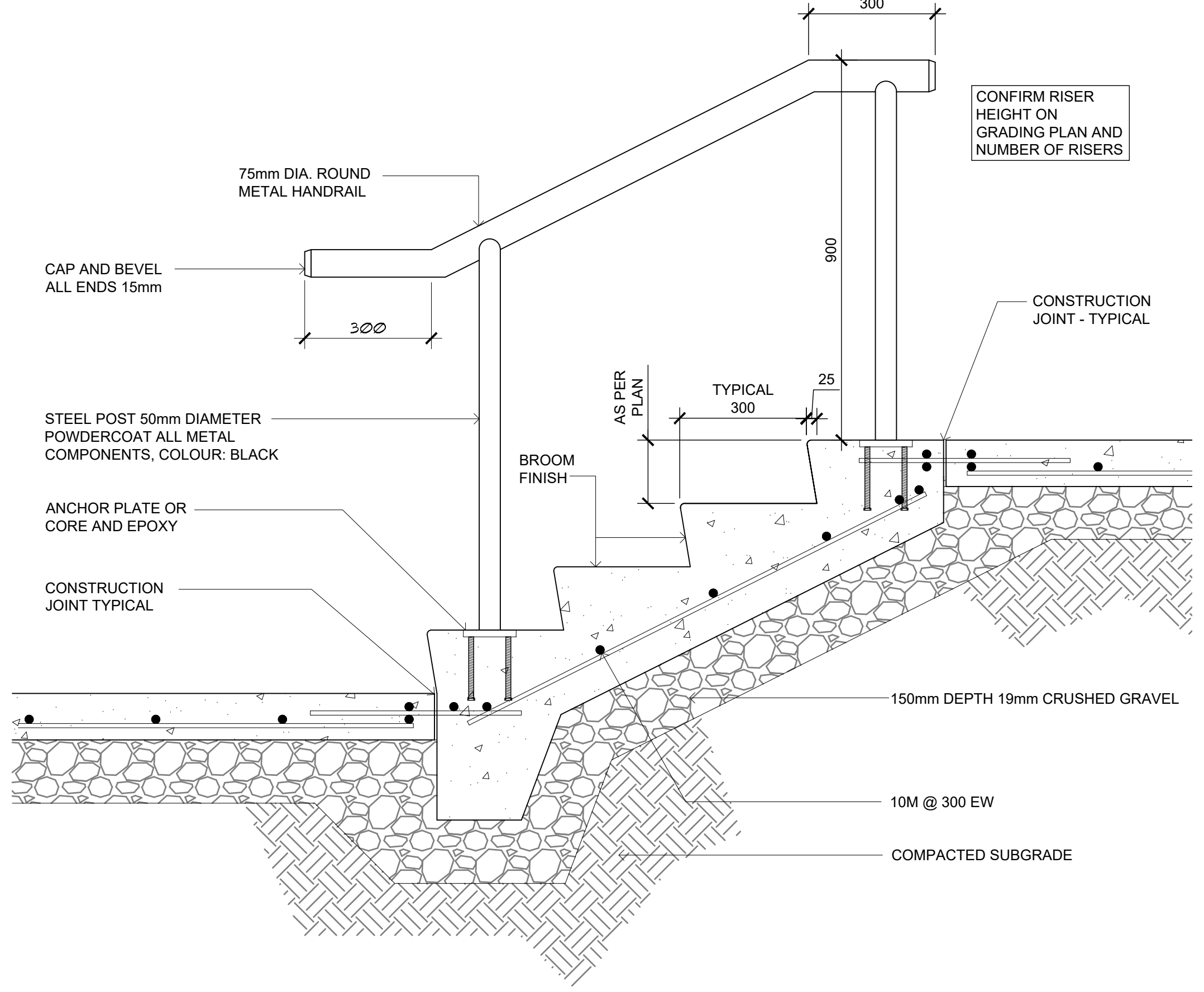


- REFER TO DOWNTOWN DIKE REDI-ROCK RETAINING WALLS DESIGN DRAWING PACKAGE FOR DETAILS
- ALL RETAINING WALLS, DRAINAGE LAYER, AND REINFORCED BACKFILL TO BE CERTIFIED BY A PROFESSIONAL ENGINEER AND GEOTECHNICAL CONSULTANT PRIOR TO CONSTRUCTION.
- IF SITE CONDITIONS OR WALL HEIGHTS VARY FROM TYPICAL SECTIONS, THE RETAINING WALL DETAIL IS TO BE REVIEWED, PRIOR TO CONSTRUCTION.
- ALL PRECAST CONCRETE BLOCKS TO HAVE STONE TEXTURED FACE. LEDGESTONE PROFILE OR APPROVED EQUAL.
- GUARDRAILS ARE DESIGNED FOR PEDESTRIAN/ BICYCLIST SAFETY AND NOT DESIGNED FOR VEHICLE IMPACT.

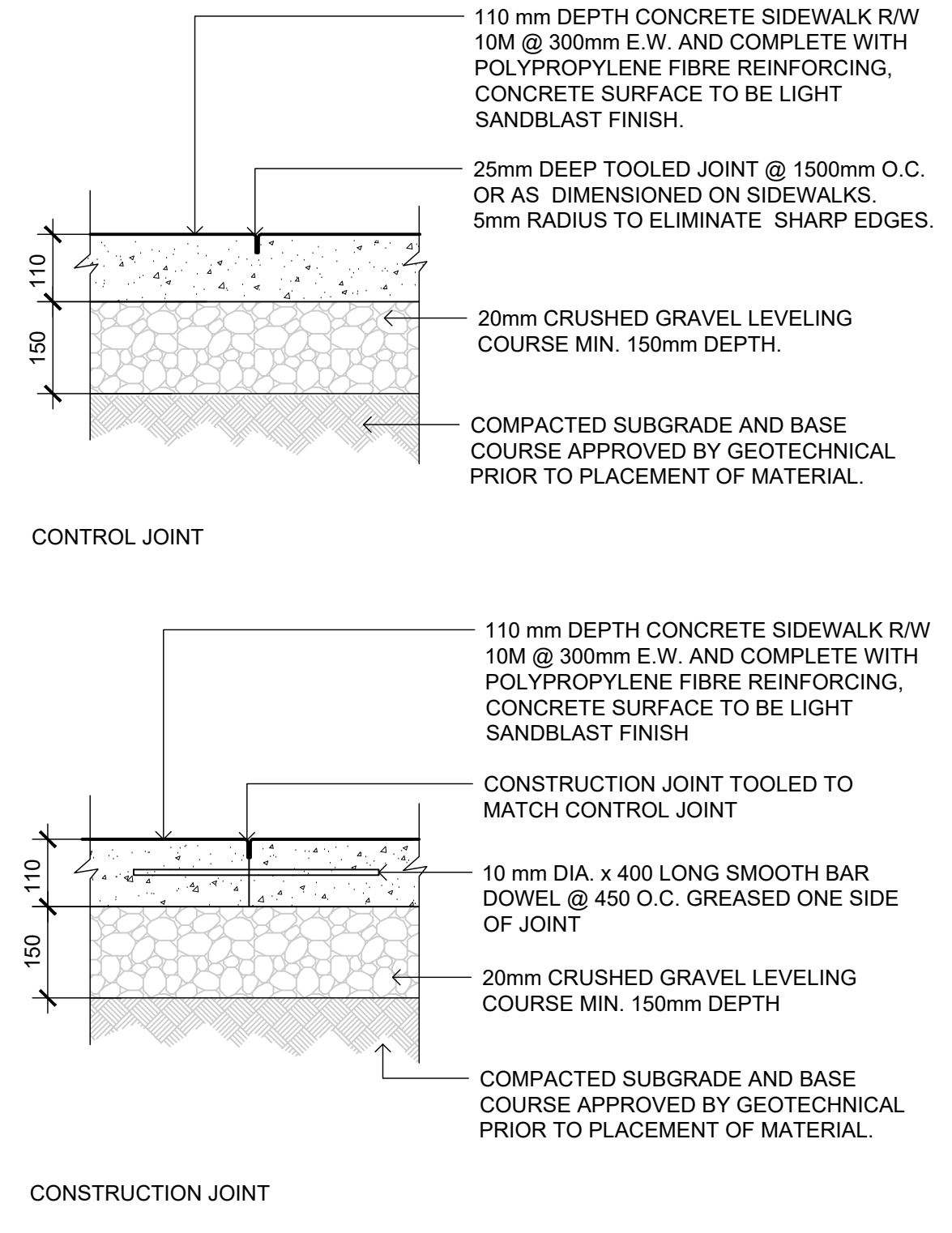
A AQUAPLEX RETAINING WALL
 L-901 1:50 EXPANDED ELEVATION



B TYPICAL WALL DETAIL AT AQUAPLEX
 L-901 1:25 SECTION



C TYPICAL CONCRETE STAIRS AND HANDRAIL
 L-901 1:10



D CONCRETE SIDEWALK
 L-901 SCALE 1:10



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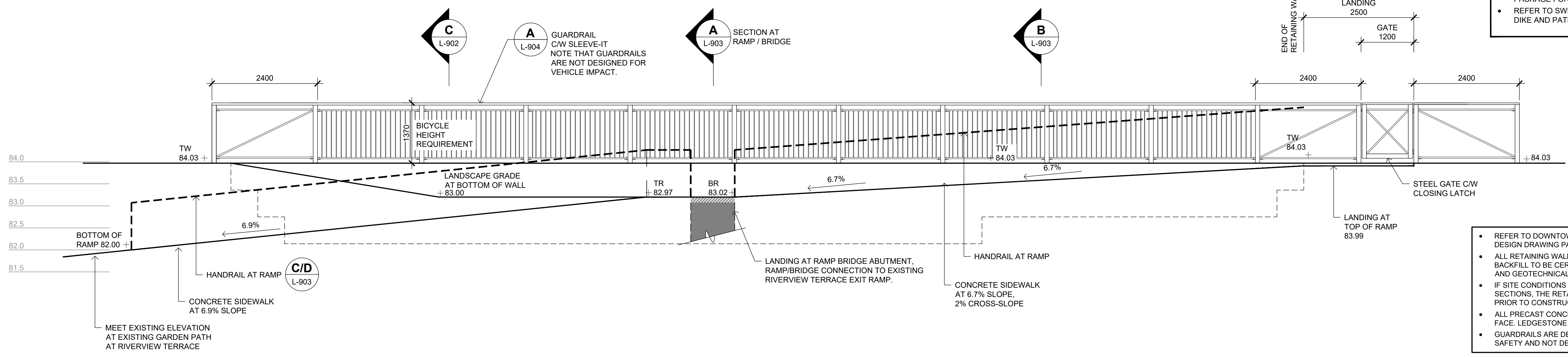
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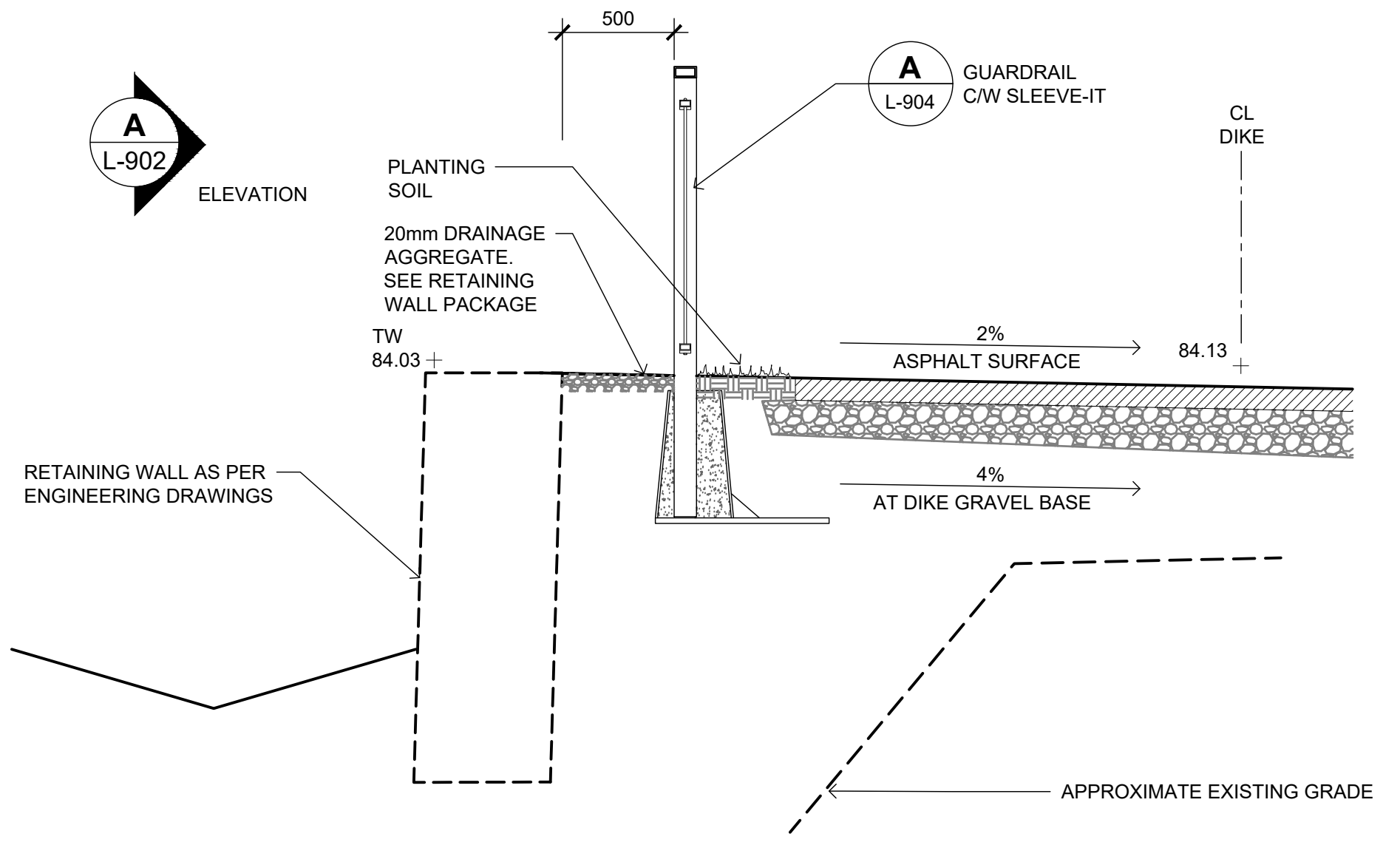
TOWN OF DRUMHELLER DOWNTOWN DIKE			
LANDSCAPE DETAILS			
Project No.	133142	Drawing No.	L-901
Group	LANDSCAPE	Rev.	0

- NOTES**
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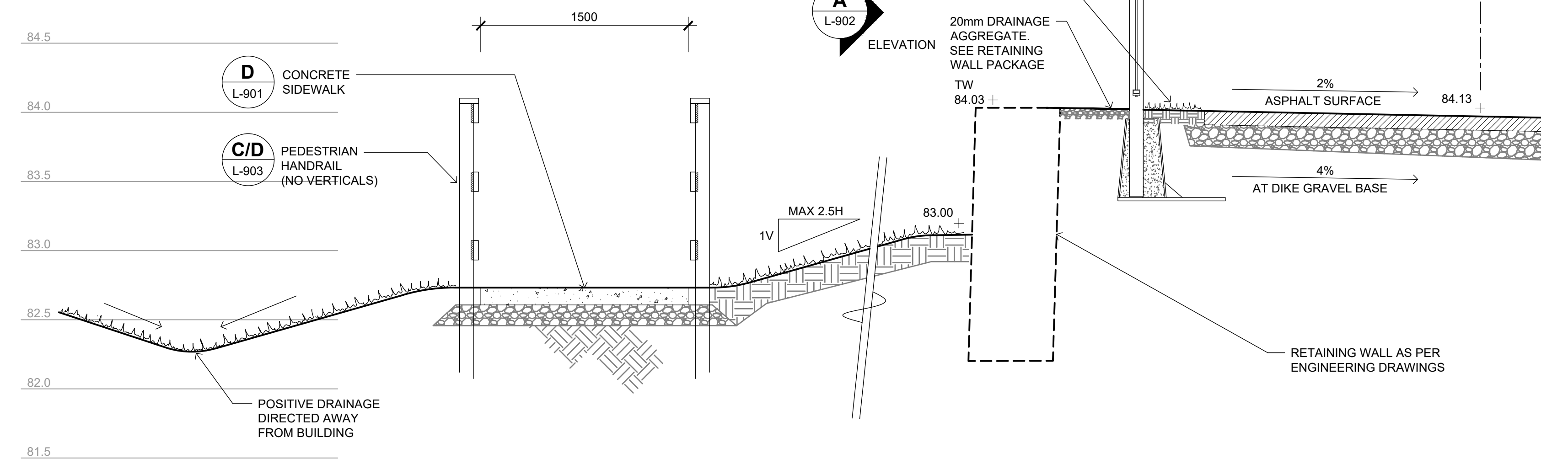


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A RIVERVIEW TERRACE RETAINING WALL
 L-902 1:50 EXPANDED ELEVATION



B TYPICAL WALL DETAIL AT RIVERVIEW TERRACE
 L-902 1:25 SECTION



C WALL AND RAMP AT RIVERVIEW TERRACE
 L-902 1:25 SECTION



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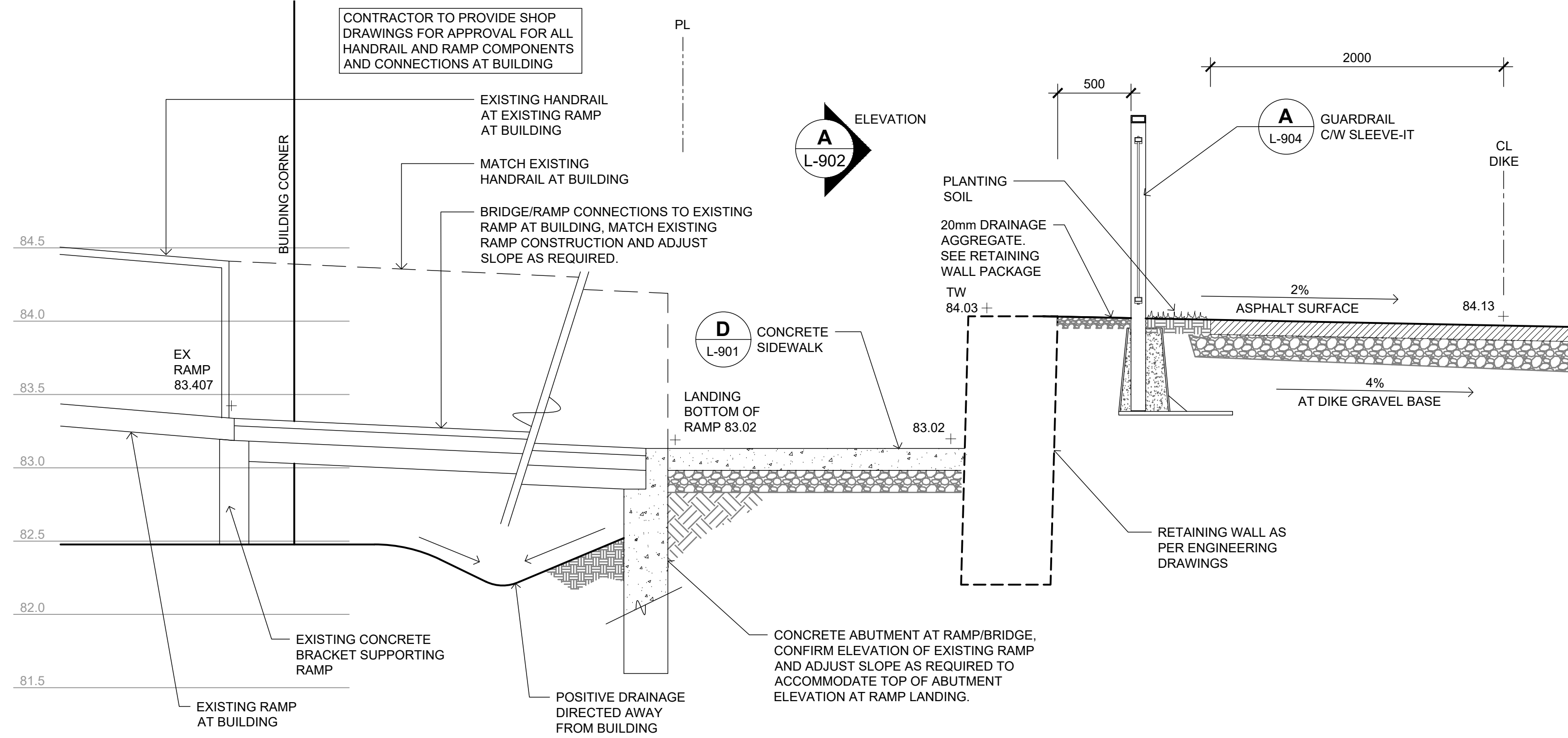
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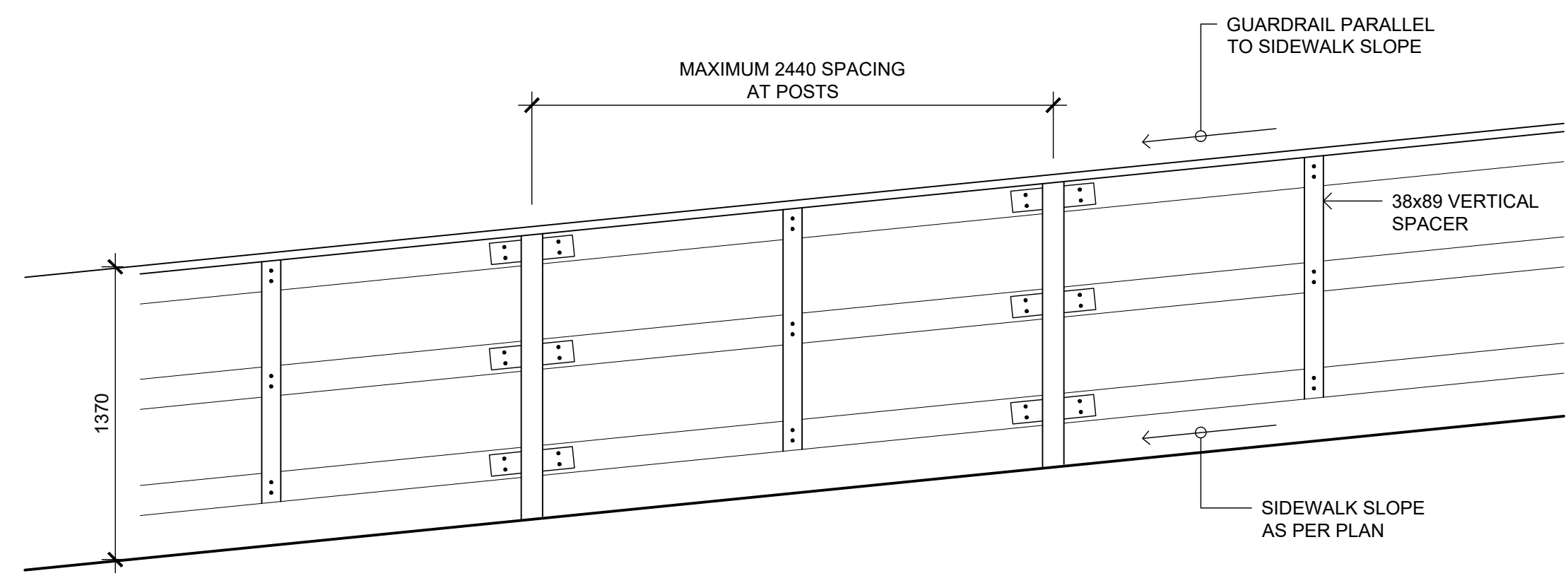
TOWN OF DRUMHELLER DOWNTOWN DIKE			
LANDSCAPE DETAILS			
Project No.	133142	Drawing No.	L-902
Group	LANDSCAPE	Rev.	0

1:25 SECTION
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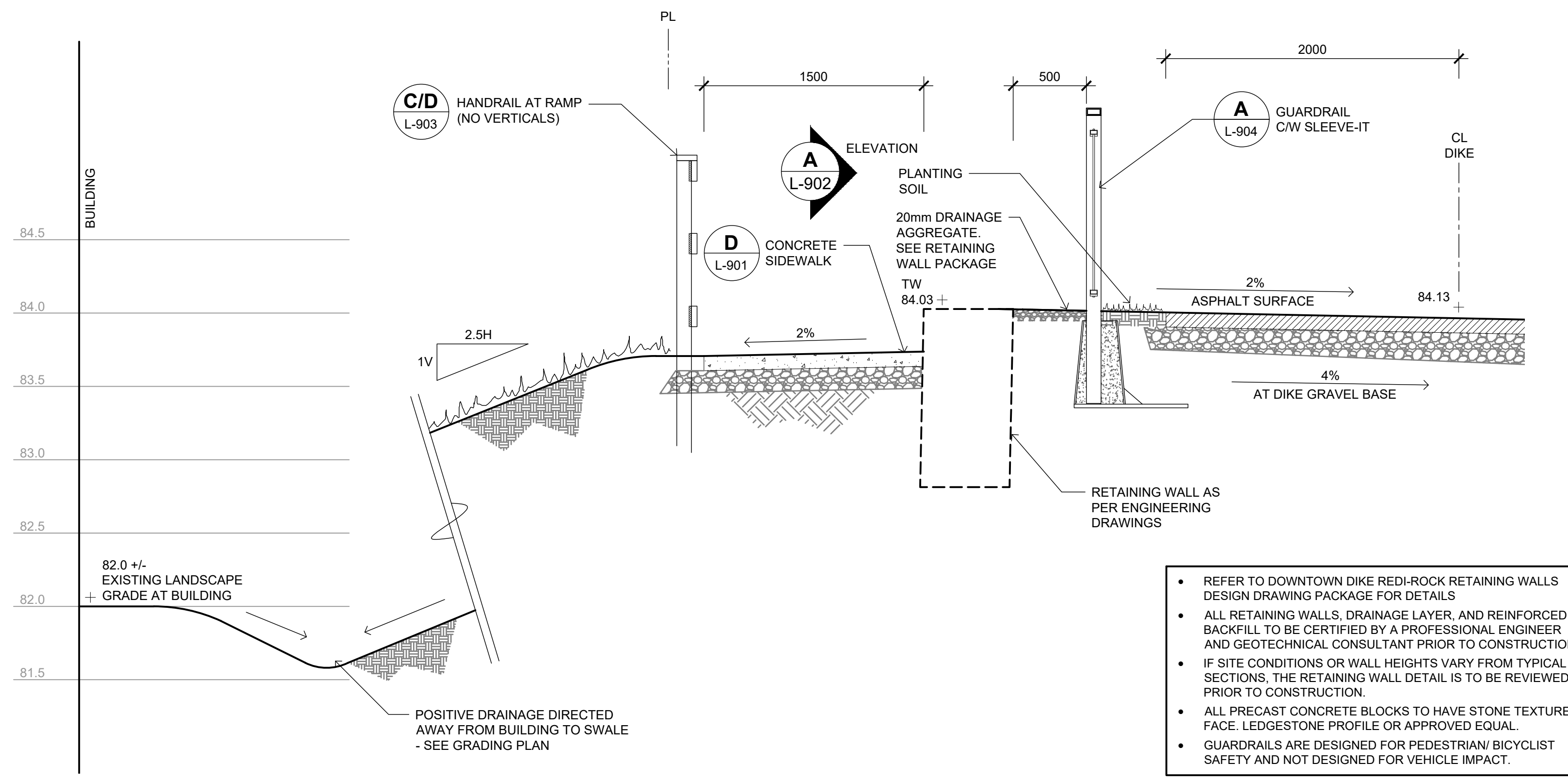
NOTES

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- REFER TO SWEETTECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.



A WALL AND RAMP AT RIVERVIEW TERRACE
L-903 1:25 SECTION

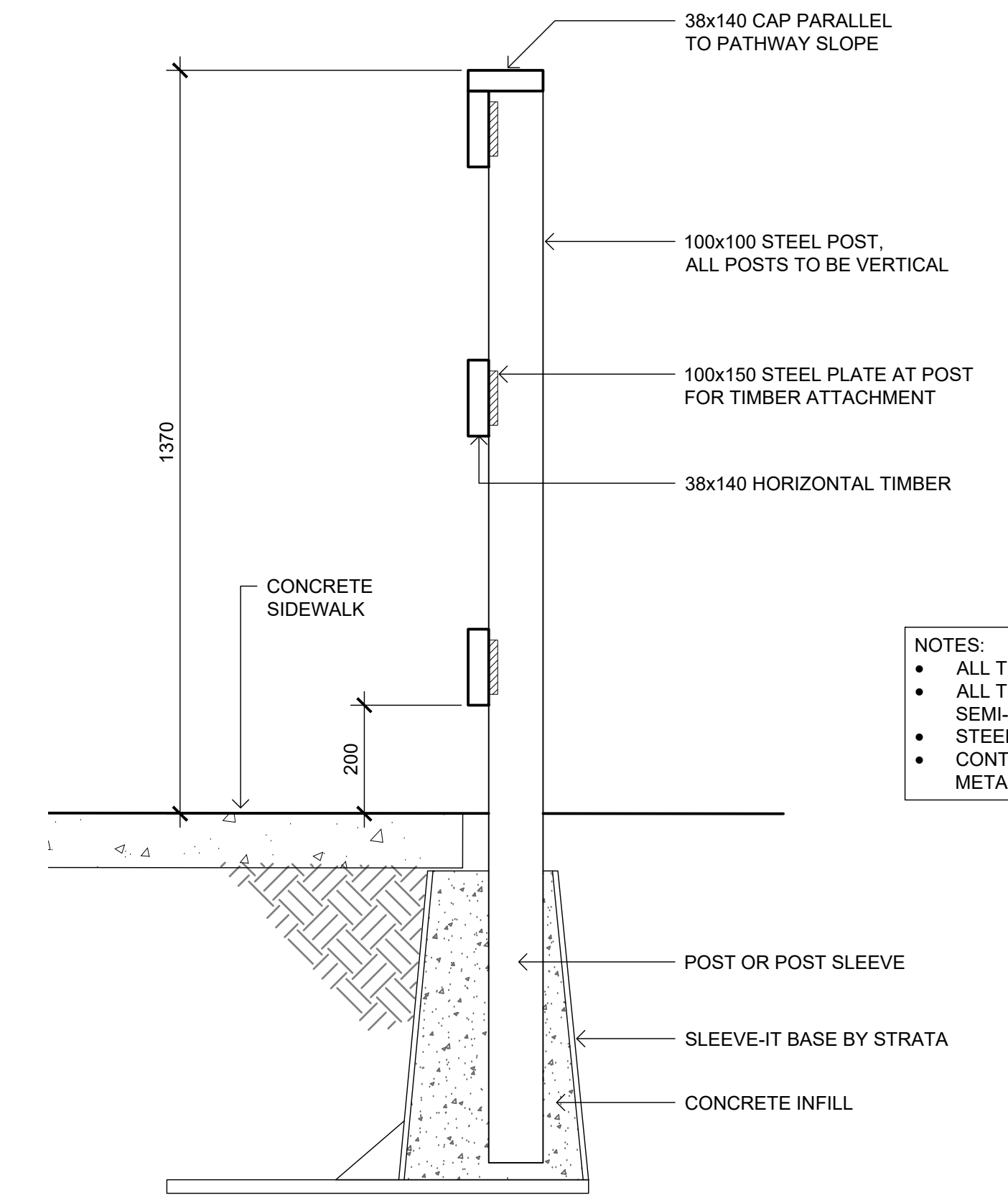
C HANDRAIL AT RAMP
L-903 1:25 ELEVATION



NOTES:

- REFER TO DOWNTOWN DIKE REDI-ROCK RETAINING WALLS DESIGN DRAWING PACKAGE FOR DETAILS
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B WALL AND RAMP AT RIVERVIEW TERRACE
L-903 1:25 SECTION



NOTES:

- ALL TIMBER TO BE PRESSURE TREATED
- ALL TIMBER FINISH TO BE TWO COATS SEMI-TRANSPARENT STAIN, COLOUR MEDIUM GREY
- STEEL POSTS, POWDER COAT FINISH, COLOUR BLACK
- CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL METAL COMPONENTS.

D HANDRAIL AT RAMP
L-903 1:10 SECTION



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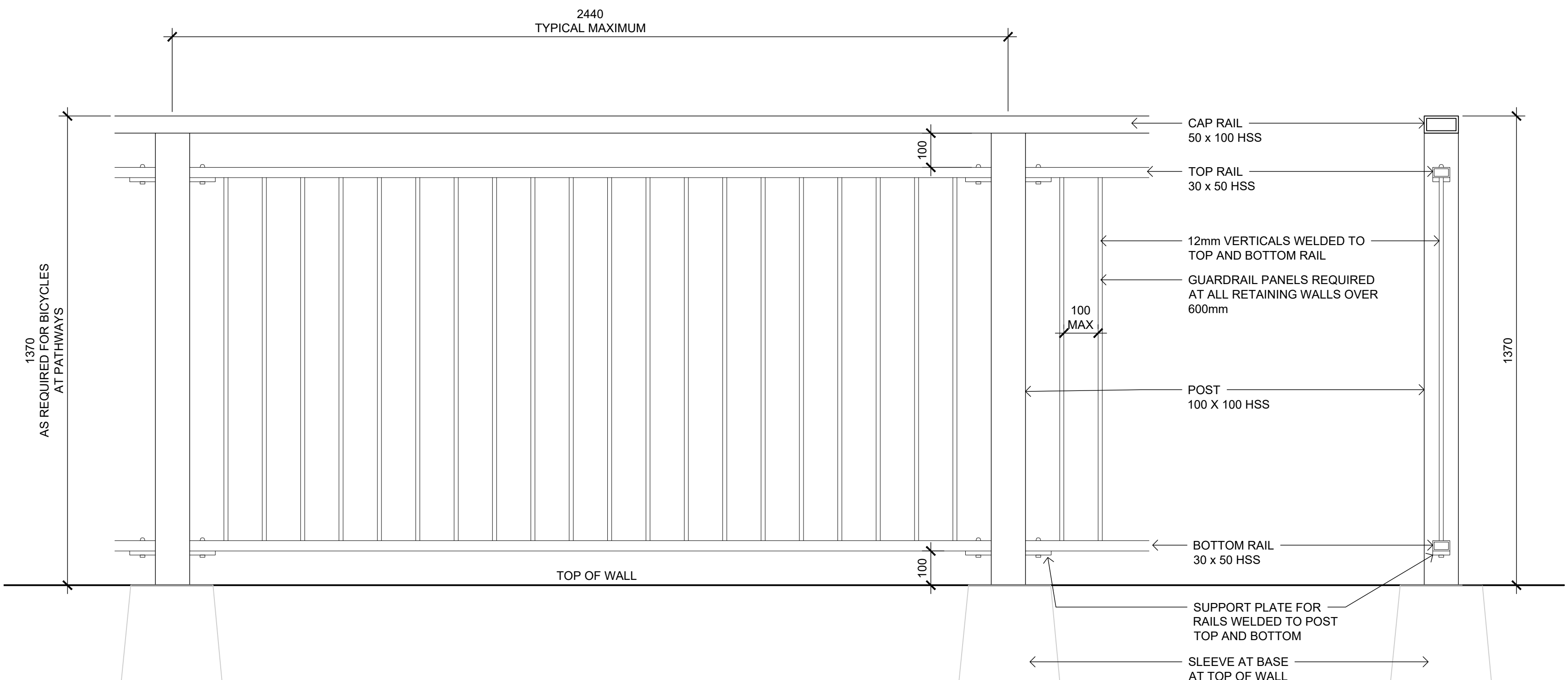
Rev	Date	Des	Dwn	Chk	Description

TOWN OF DRUMHELLER DOWNTOWN DIKE			
LANDSCAPE DETAILS			
Project No.	133142	Drawing No.	L-903
Group	LANDSCAPE	Rev.	0

1:10
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 At Full Size, this border measures 520 mm x 800 mm
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NOTES

- REFER TO SWEETTECH RETAINING WALL DESIGN PACKAGE FOR ALL RETAINING WALL DETAILS.
- REFER TO SWEETTECH'S DESIGN DRAWINGS FOR DIKE AND PATHWAY CONSTRUCTION DETAILS.

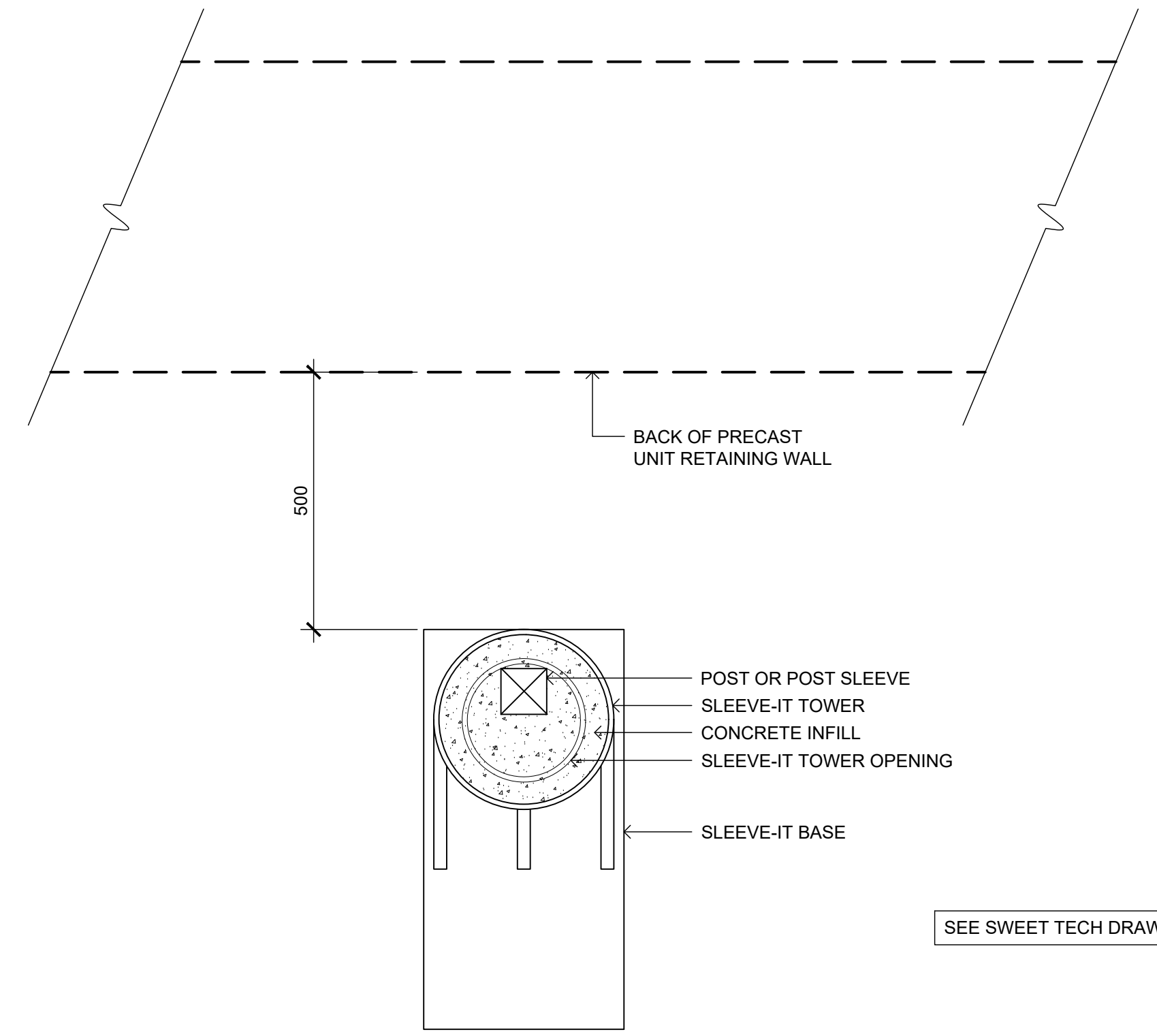
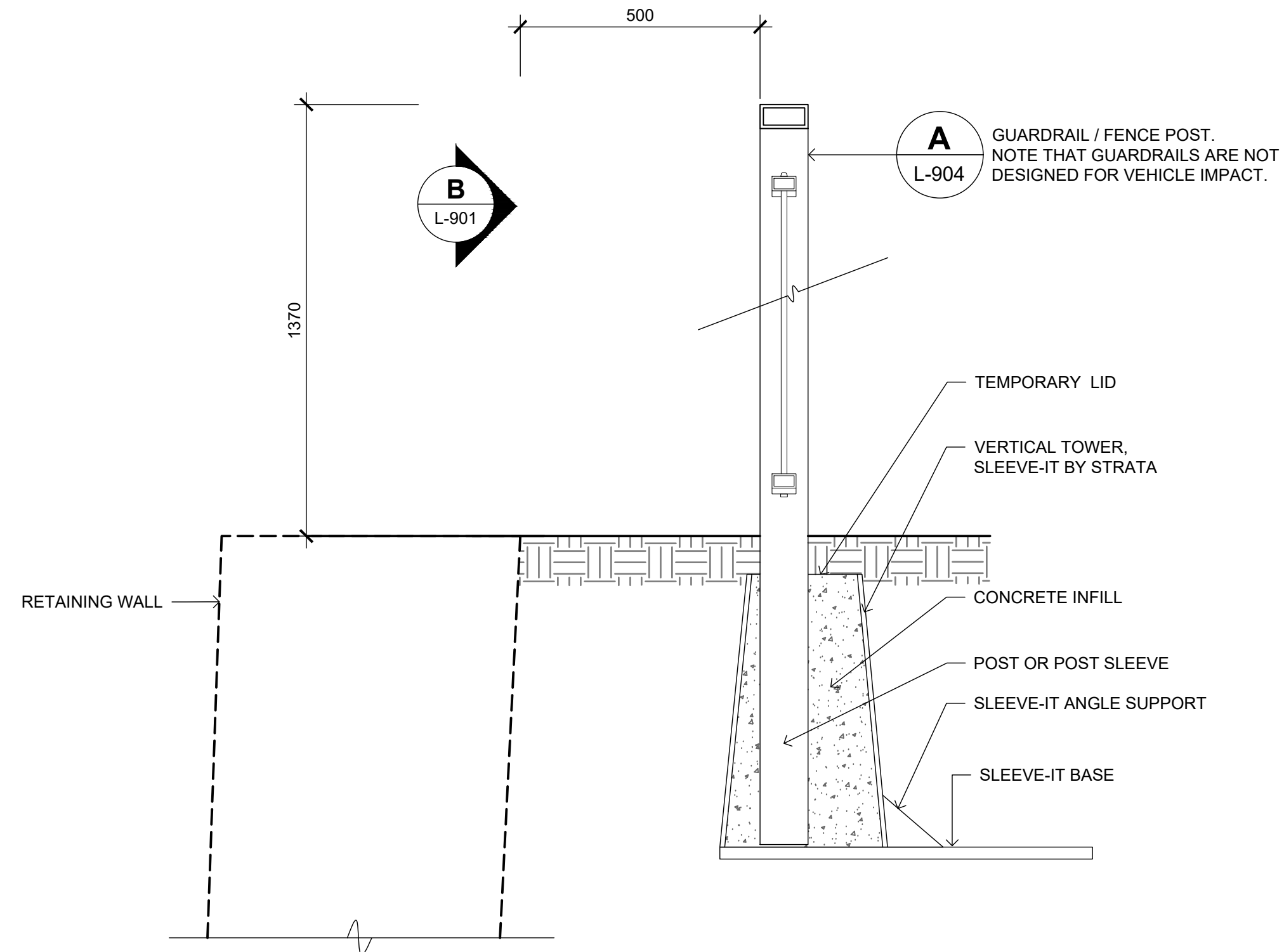


NOTES:

- ALL STEEL, POWDER COAT FINISH, COLOUR BLACK
- CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL METAL COMPONENTS.

A PEDESTRIAN GUARDRAIL AT WALLS OVER 1.0m HT.
L-904 1:10 ELEVATION

B PEDESTRIAN GUARDRAIL AT WALLS OVER 1.0m HT.
L-904 1:10 SECTION



C GUARDRAIL AT RETAINING WALL OVER 1.0 m HT.
L-904 SCALE 1:10



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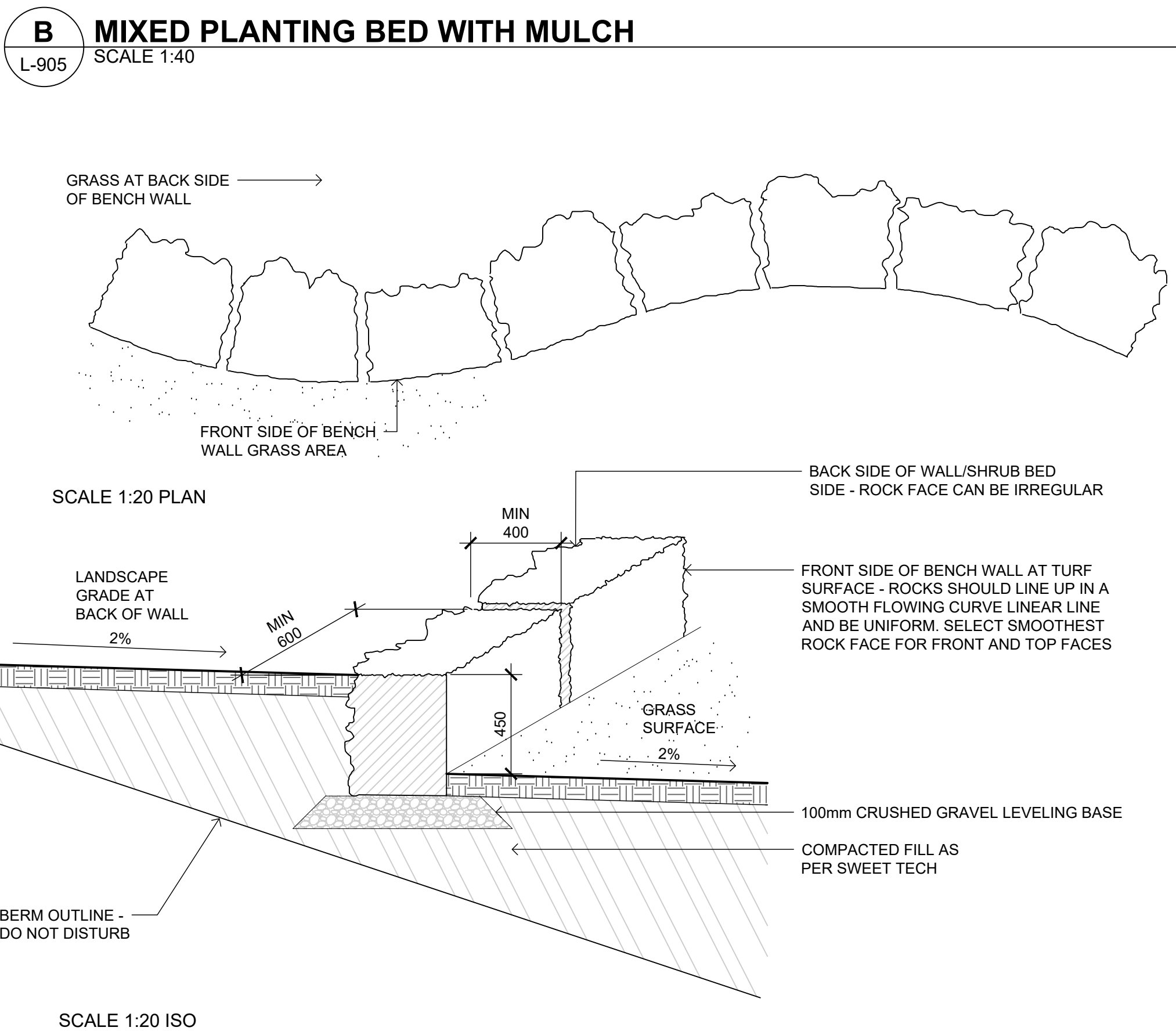
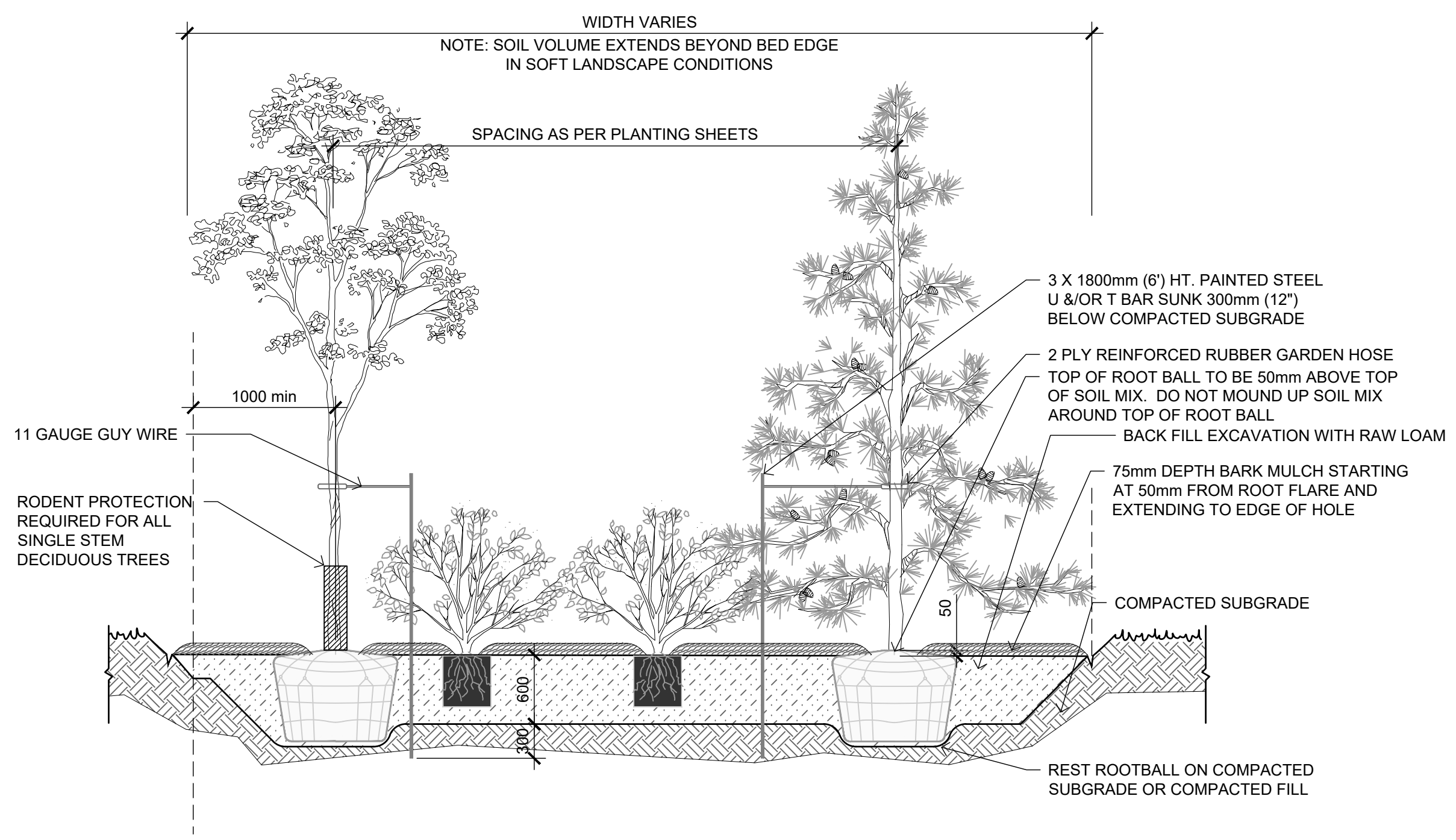
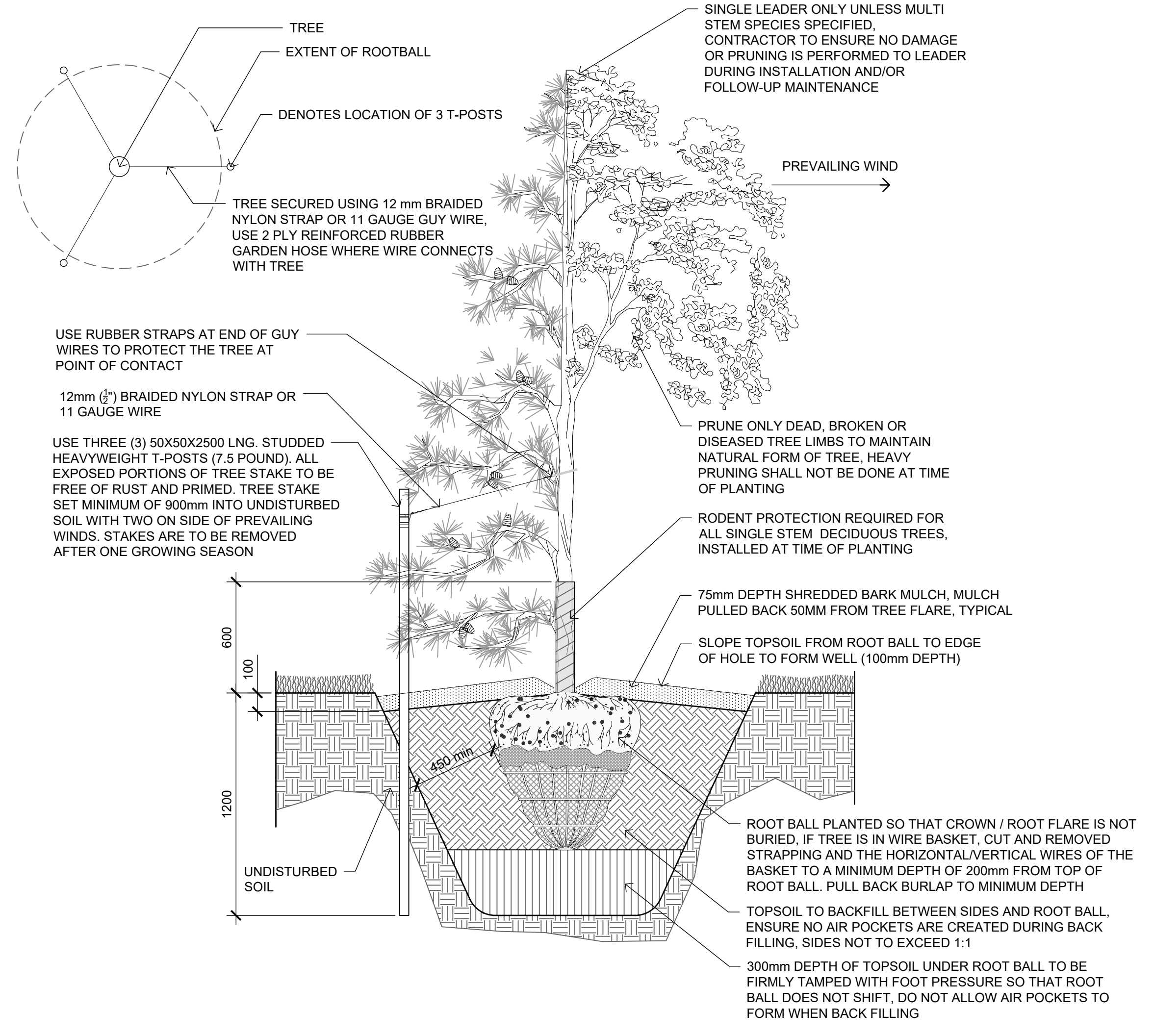
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Rev	Date	Des	Dwn	Chk	Description

TOWN OF DRUMHELLER DOWNTOWN DIKE			
LANDSCAPE DETAILS			
Project No.	133142	Drawing No.	L-904
Group	LANDSCAPE	Rev.	0

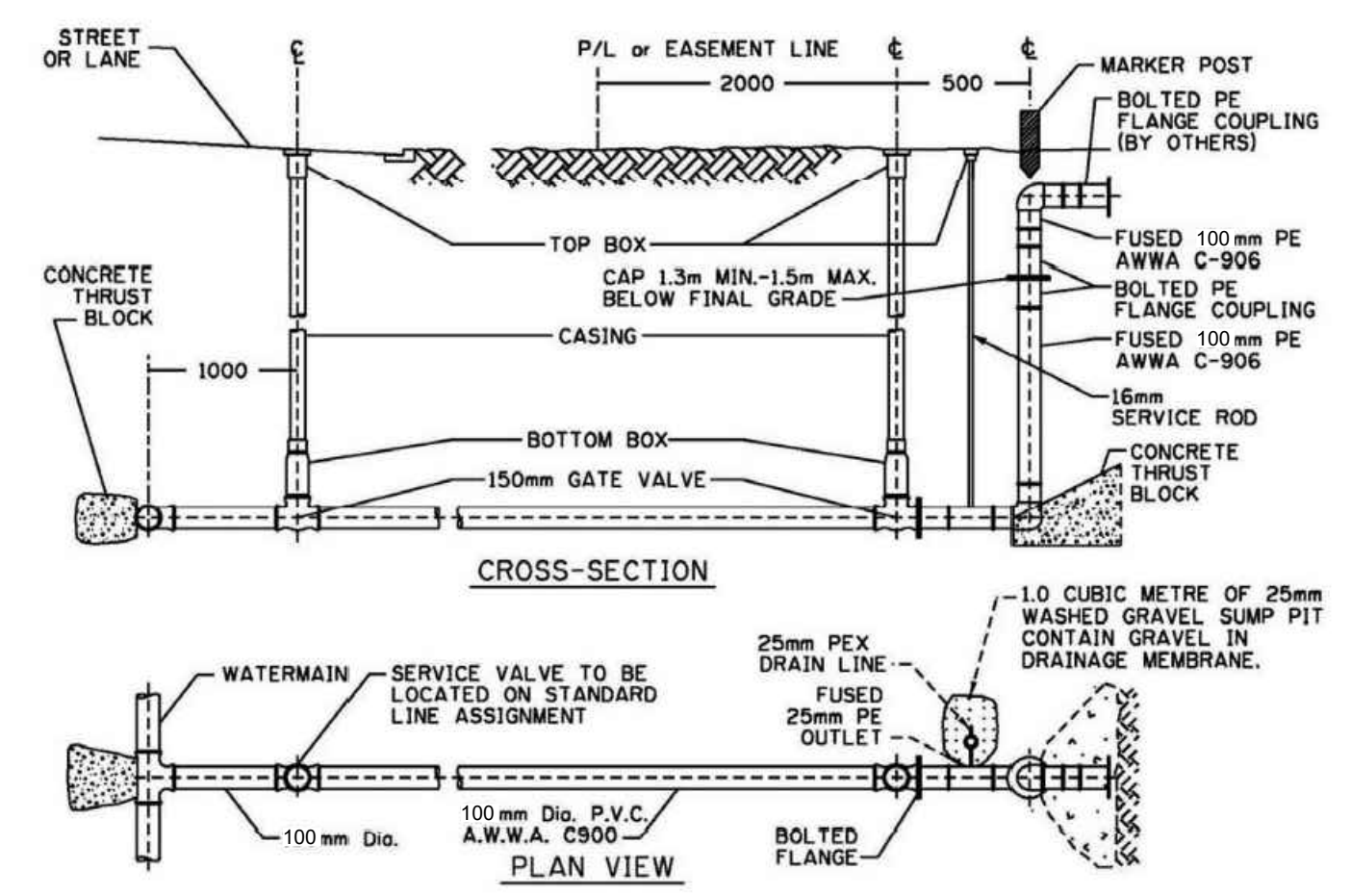


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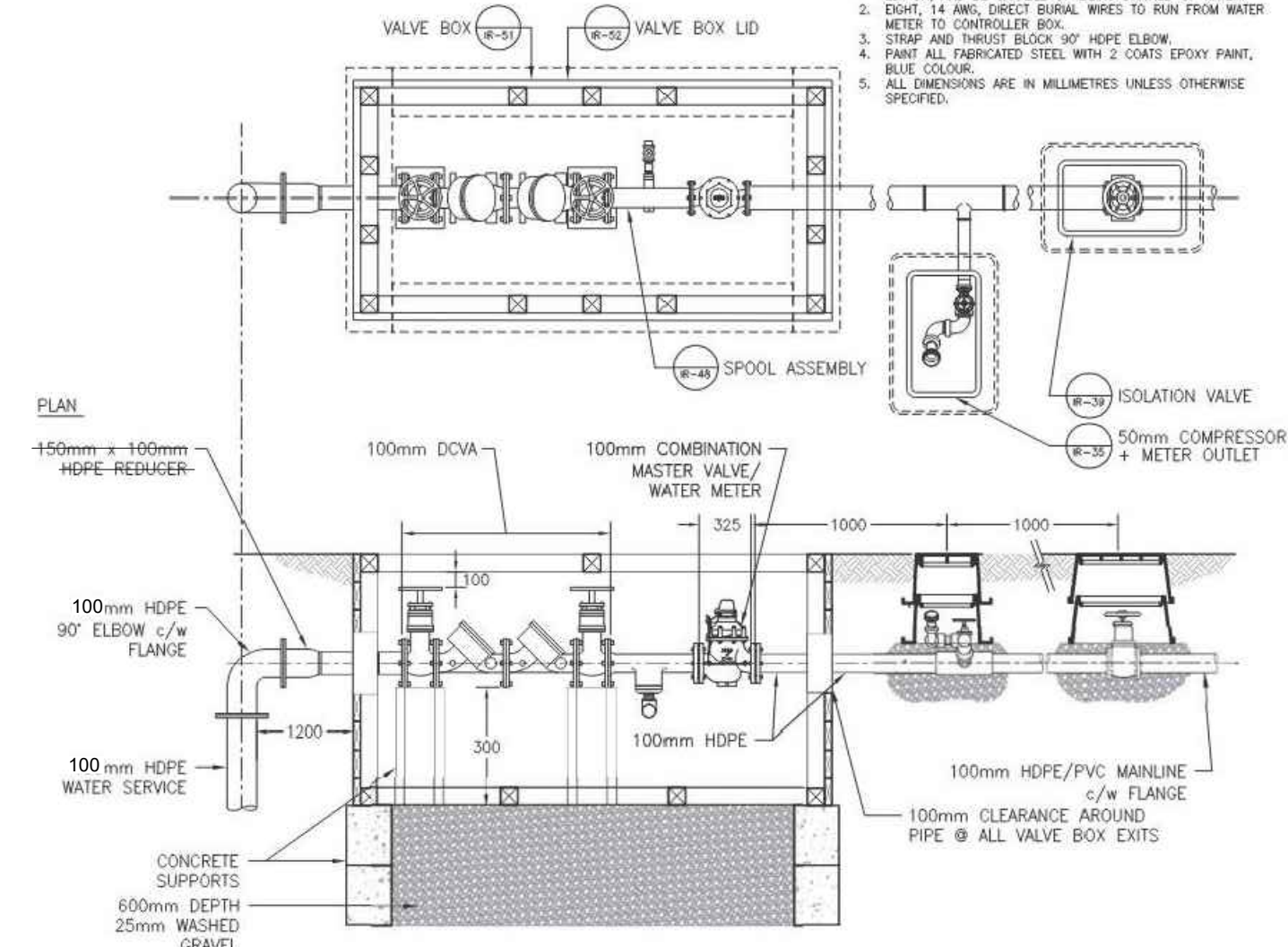
Rev	Date	Des	Dwn	Chk	Description	Rev	Date	Des	Dwn	Chk	Description
0	2023-04-05	EJW	MD	EJW	ISSUED FOR TENDER						

TOWN OF DRUMHELLER DOWNTOWN DIKE	
LANDSCAPE DETAILS	
Project No. 133142	Drawing No. L-905
Group LANDSCAPE	Rev. 0



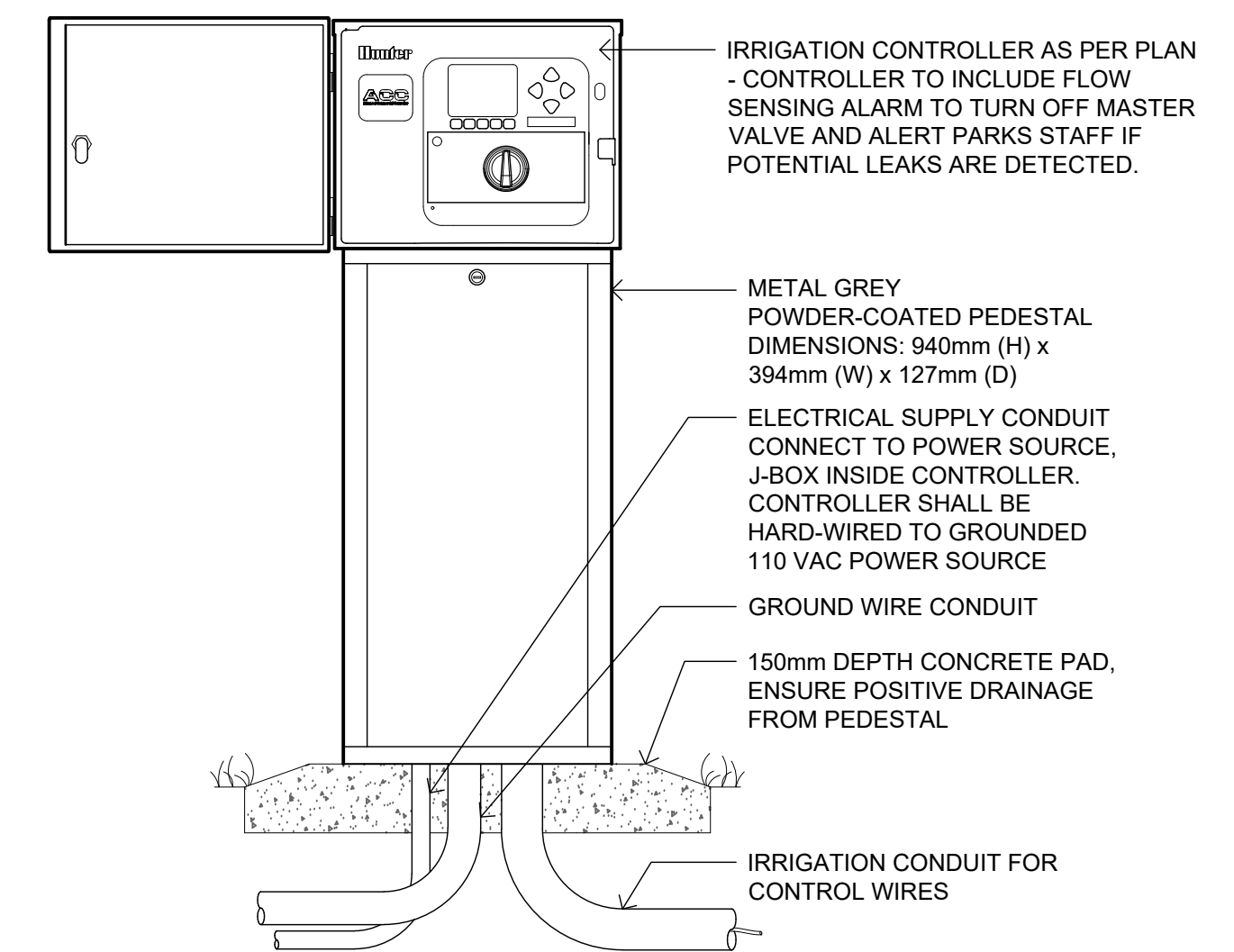
NOTES:
 1. Parks Water Service shall be installed in accordance to the City of Calgary Standard Specifications Waterworks Construction.
 2. For irrigation system design, consult latest City of Calgary, Park Development & Operations, Development Guidelines And Standard Specifications Landscape Construction.
 3. Call Park Development & Operations for inspection on Park Development & Operations Property.
 4. Drainage Membrane, see Sec. 320 Standard Specification Streets Construction.
 5. All dimensions are in millimeters unless otherwise noted.

A 100mm PARK WATER SERVICE
 L-906 NTS



NOTES:
 1. DOUBLE CHECK VALVE ASSEMBLY SHALL CONFORM TO CITY OF CALGARY WATERWORKS STANDARD SPECIFICATIONS, LATEST EDITION, AND BE CAPABLE OF BEING DRAINED BY WATER. DRAIN: 14 AWG, DIRECT BURIAL WIRES TO RUN FROM WATER METER TO CONTROLLER BOX.
 2. STRAP AND THRUST BLOCK 90° HDPE ELBOW.
 3. PAINT ALL THREADED STEEL WITH 2 COATS EPOXY PAINT, BLUE COLOUR.
 4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

B 100mm DOUBLE CHECK VALVE
 L-906 NTS



IRRIGATION CONTROLLER AS PER PLAN - CONTROLLER TO INCLUDE FLOW SENSING ALARM TO TURN OFF MASTER VALVE AND ALERT PARKS STAFF IF POTENTIAL LEAKS ARE DETECTED.

METAL GREY POWDER-COATED PEDESTAL DIMENSIONS: 940mm (H) x 394mm (W) x 127mm (D)

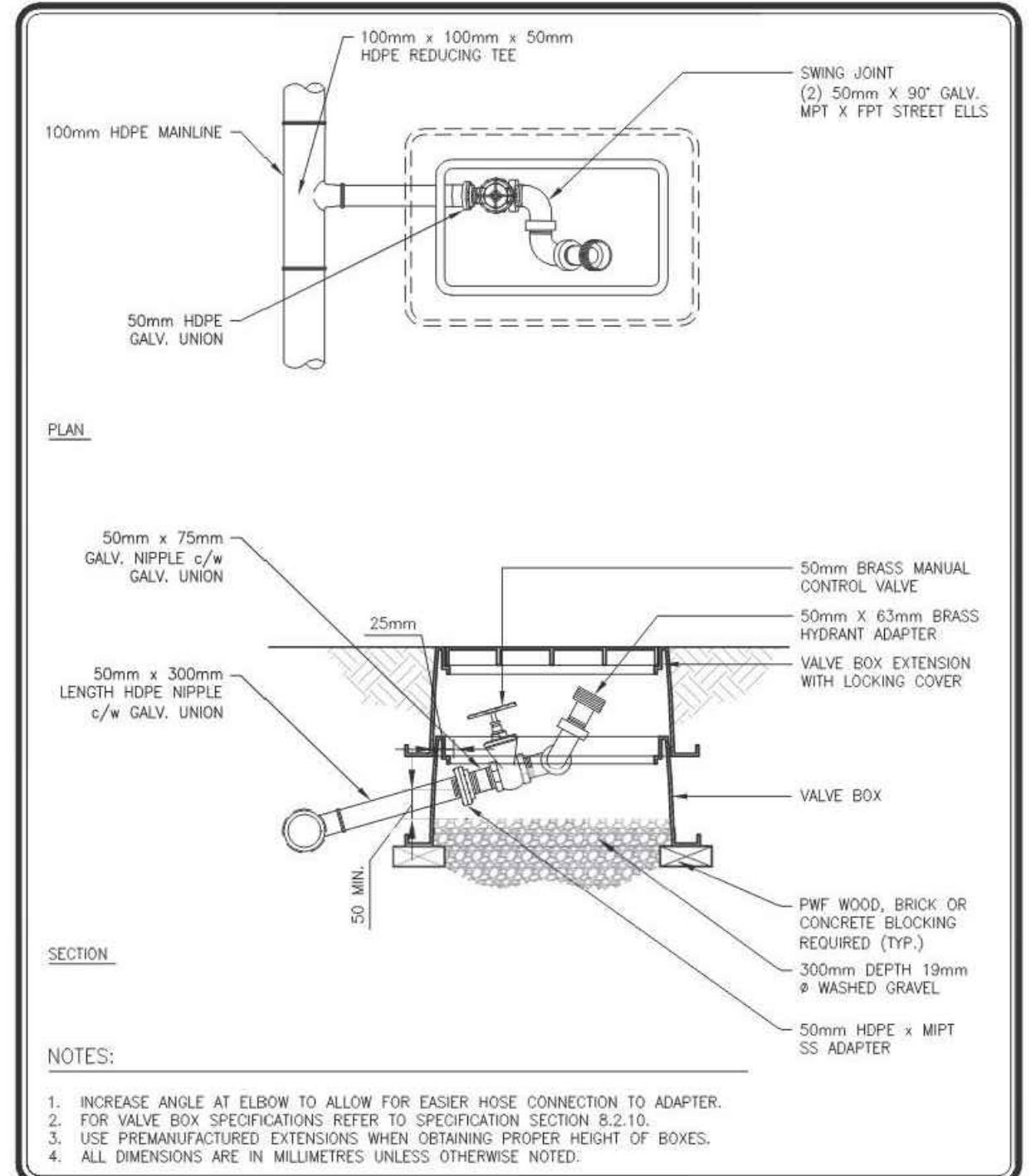
ELECTRICAL SUPPLY CONDUIT CONNECT TO POWER SOURCE. J-BOX INSIDE CONTROLLER. CONTROLLER SHALL BE HARD-WIRED TO GROUNDED 110 VAC POWER SOURCE

GROUND WIRE CONDUIT

150mm DEPTH CONCRETE PAD. ENSURE POSITIVE DRAINAGE FROM PEDESTAL

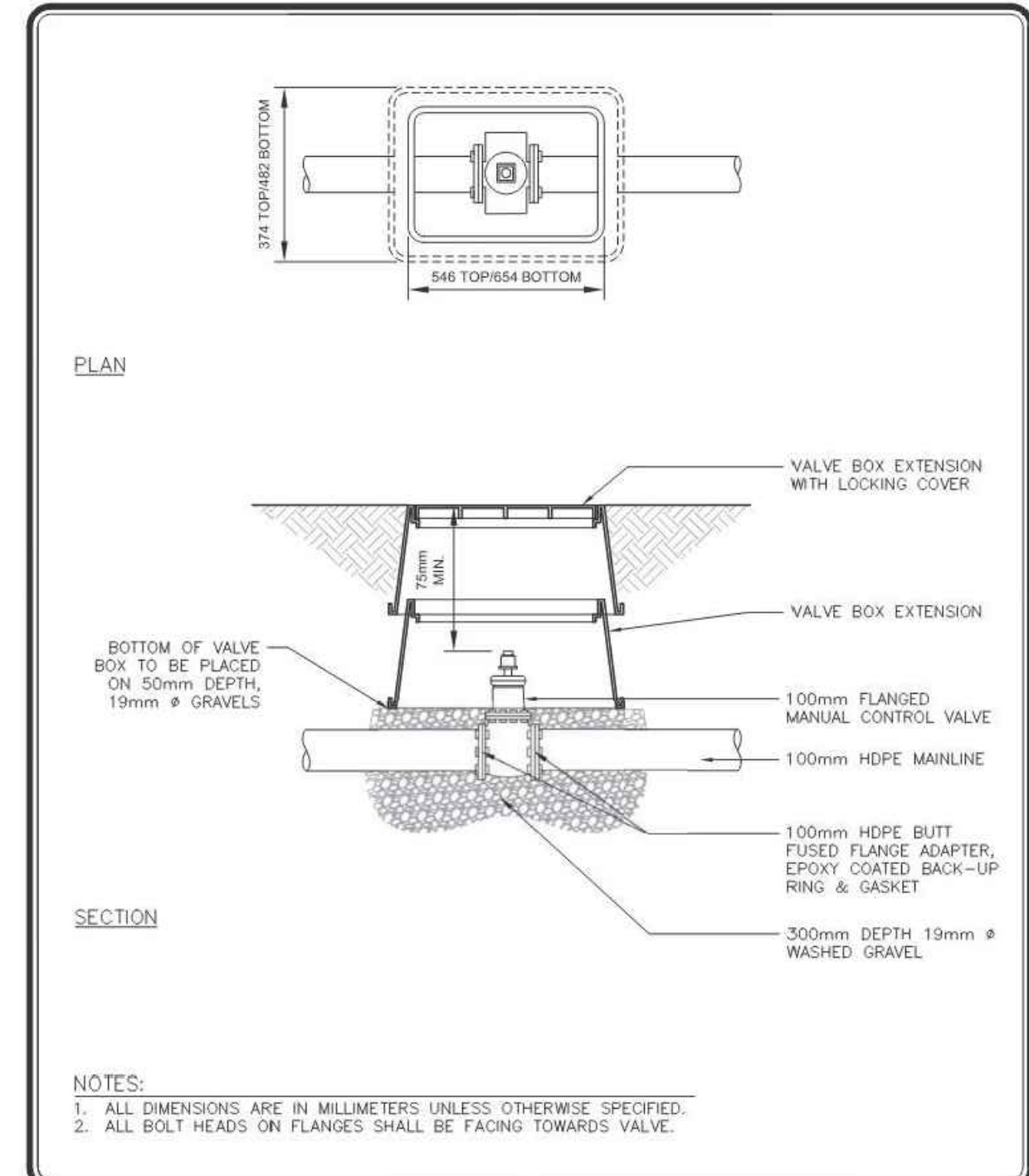
IRRIGATION CONDUIT FOR CONTROL WIRES

C IRRIGATION CONTROLLER
 L-906 SCALE 1:10



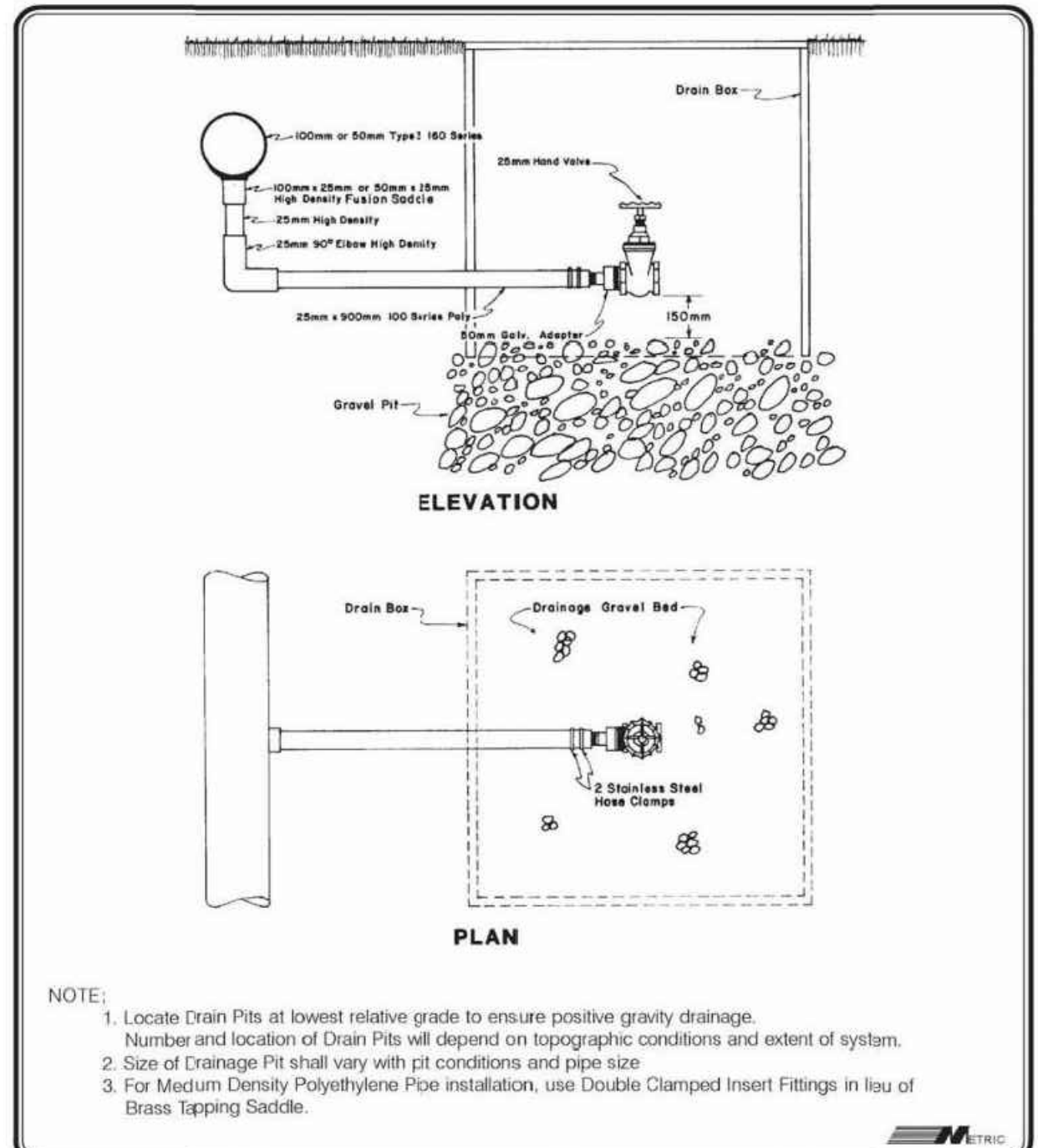
NOTES:
 1. INCREASE ANGLE AT ELBOW TO ALLOW FOR EASIER HOSE CONNECTION TO ADAPTER.
 2. FOR VALVE BOX SPECIFICATIONS REFER TO SPECIFICATION SECTION 8.2.10.
 3. USE PREMANUFACTURED EXTENSIONS WHEN OBTAINING PROPER HEIGHT OF BOXES.
 4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

D 50mm COMPRESSOR CONNECTION
 L-906 SCALE 1:10



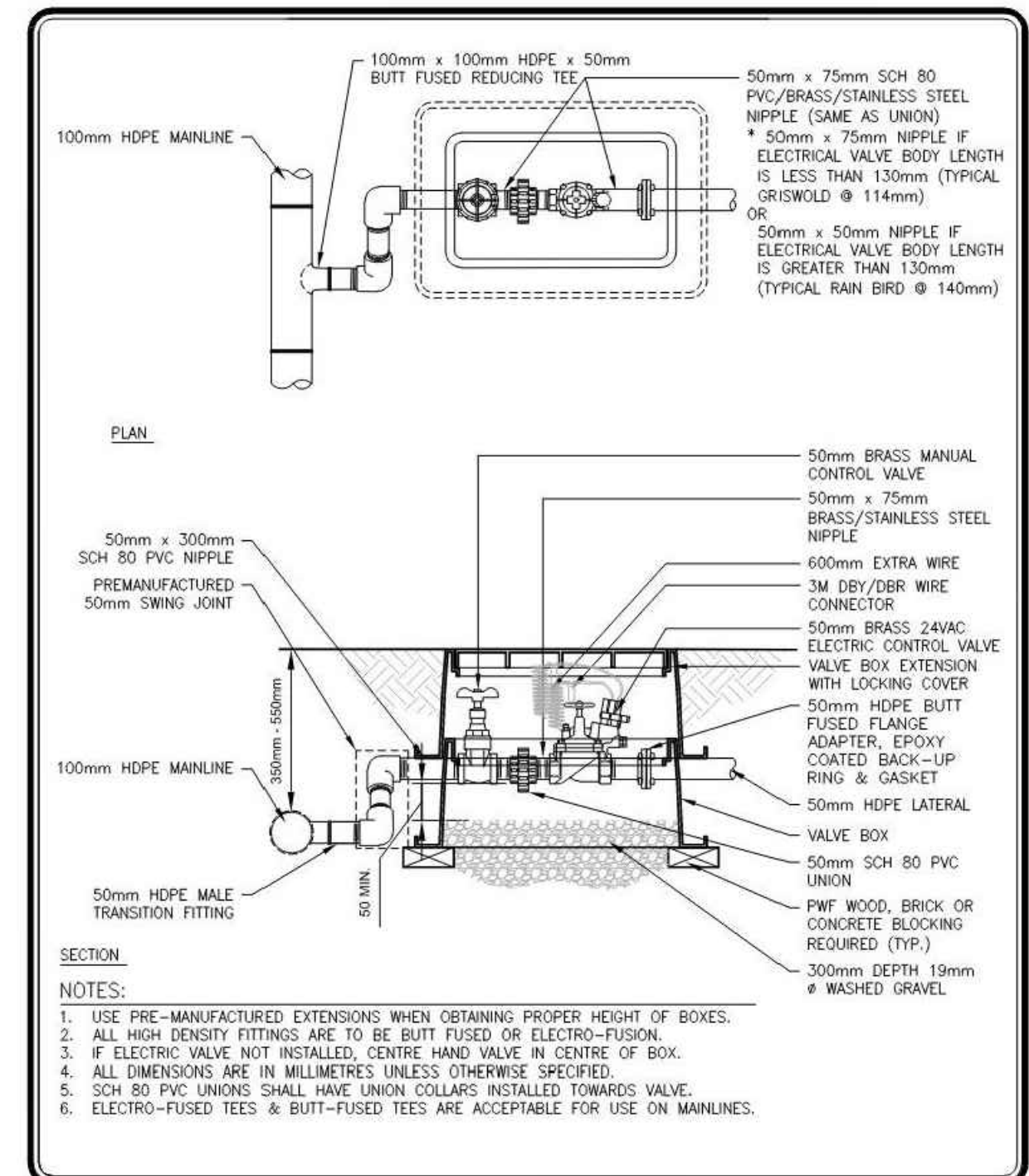
NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. ALL BOLT HEADS ON FLANGES SHALL BE FACING TOWARDS VALVE.

E 100mm ISOLATION VALVE
 L-906 NTS



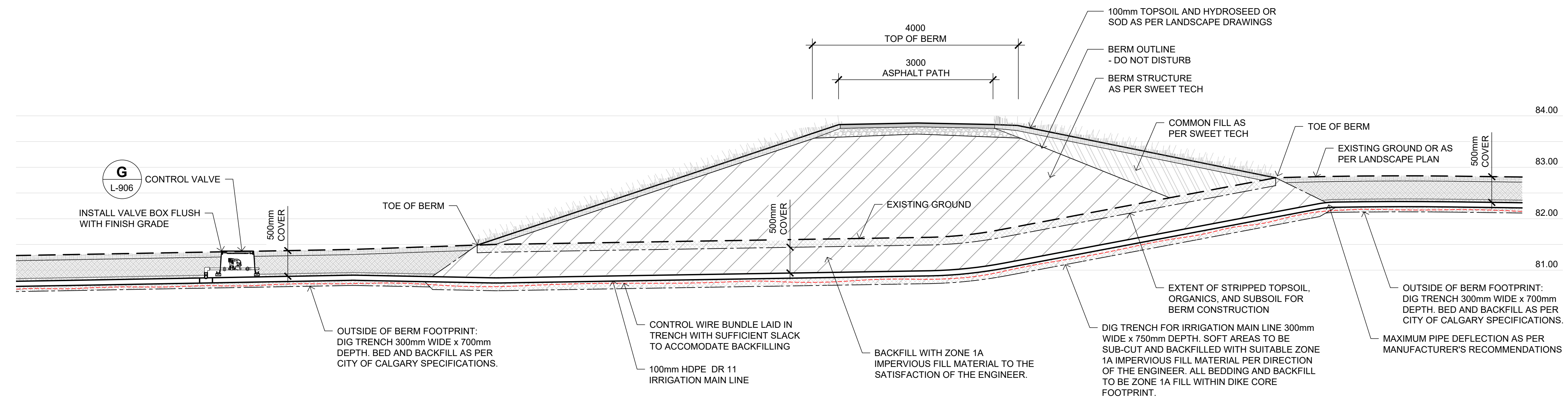
NOTE:
 1. Locate Drain Pits at lowest relative grade to ensure positive gravity drainage. Number and location of Drain Pits will depend on topographic conditions and extent of system.
 2. Size of Drainage Pit shall vary with pit conditions and pipe size.
 3. For Medium Density Polyethylene Pipe installation, use Double Clamped Insert Fittings in lieu of Brass Tapping Saddle.

F DRAIN PIT
 L-906 SCALE 1:10

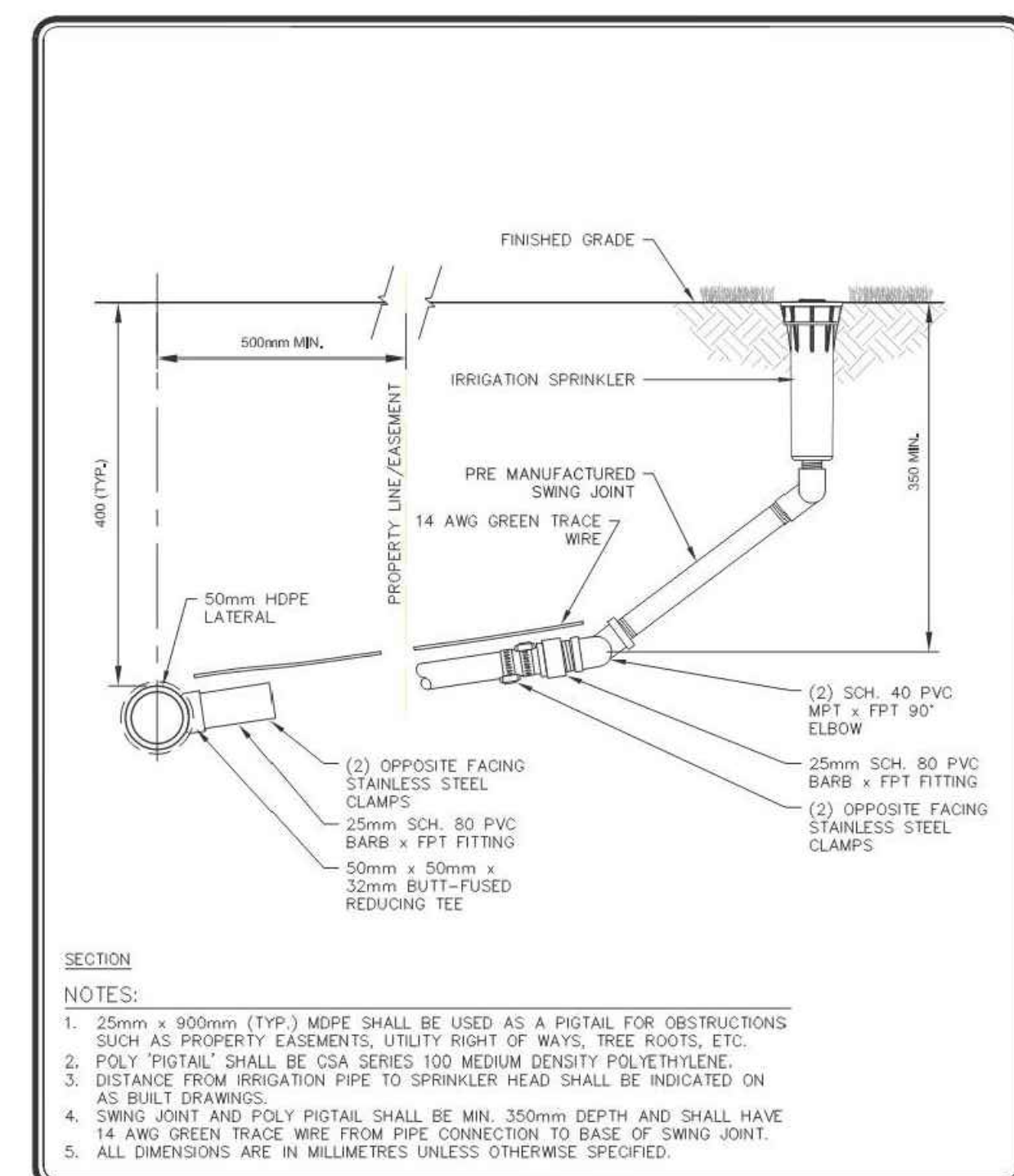


NOTES:
 1. USE PRE-MANUFACTURED EXTENSIONS WHEN OBTAINING PROPER HEIGHT OF BOXES.
 2. ALL HIGH DENSITY FITTINGS ARE TO BE BUTT FUSED OR ELECTRO-FUSION.
 3. IF ELECTRIC VALVE NOT INSTALLED, CENTRE HAND VALVE IN CENTRE OF BOX.
 4. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 5. SCH 80 PVC UNIONS SHALL HAVE UNION COLLARS INSTALLED TOWARDS VALVE.
 6. ELECTRO-FUSED TEES & BUTT-FUSED TEES ARE ACCEPTABLE FOR USE ON MAINLINES.

G ELECTRIC CONTROL VALVE
 L-906 SCALE 1:10

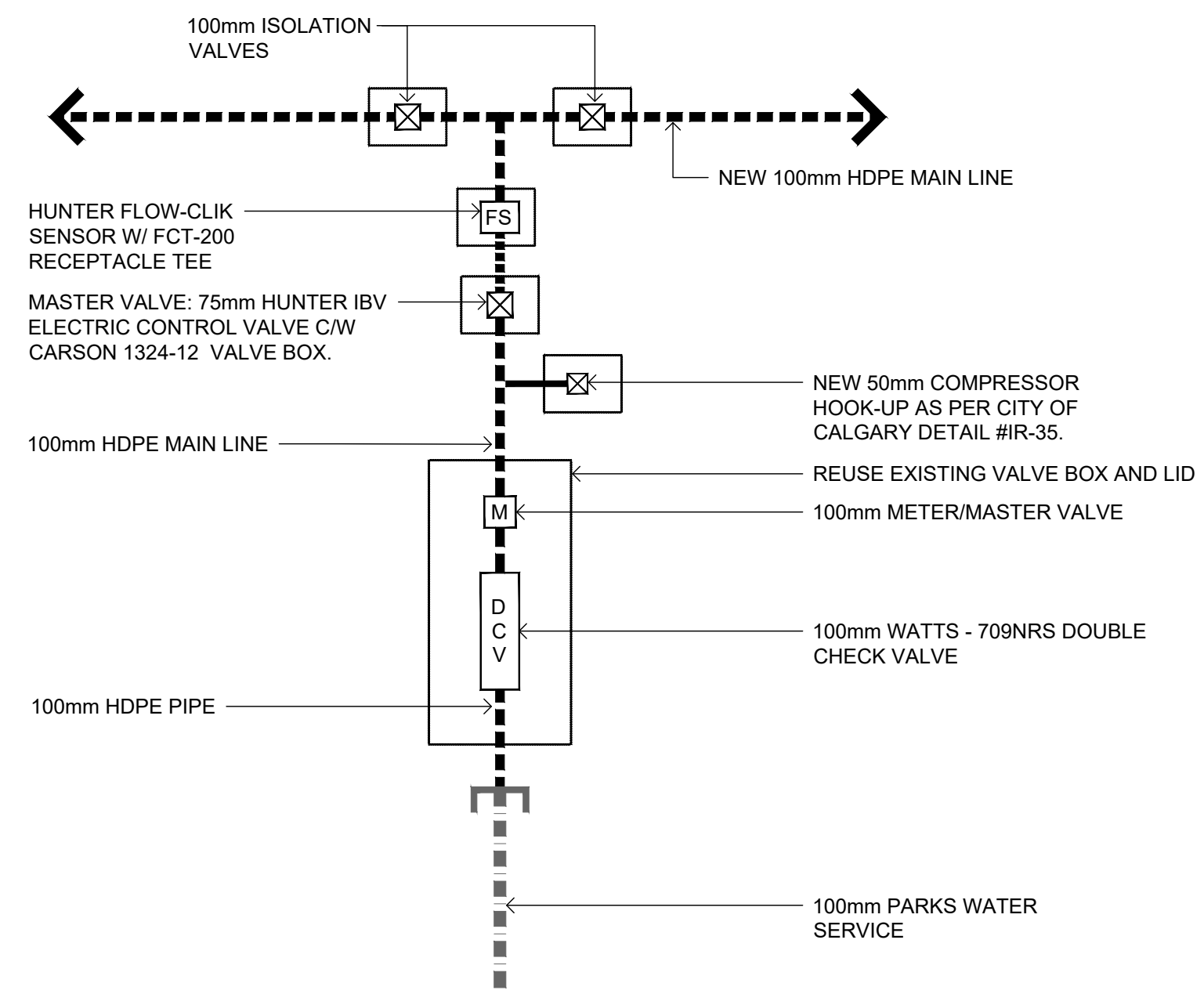


A PIPE CROSSING AT DIKE
 L-907 SCALE 1:50



	PROJECT TITLE	DRAWN BY	SCALE
	SPECIFICATIONS	TCP	N.T.S.
	SHEET TITLE	DATE	SHEET NO.
	PIGTAIL SWING JOINT FOR HDPE	2016/08	IR-11
	DESIGN BY	DATE	FILE NO.

B SWING JOINT
 L-907 SCALE 1:10



C POINT OF CONNECTION
 L-907 NTS



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TOWN OF DRUMHELLER DOWNTOWN DIKE			
LANDSCAPE DETAILS			
Project No.	133142	Drawing No.	
Group	LANDSCAPE		
		L-907	0