

			LEGEND:		
	EXISTING:			PROP	OSED:
RED DEER RIVER &	_		DOWNTOWN DIKE &	-	
DIKE &			RETAINING WALL	-	
PROPERTY LINES			EDGE OF PAVEMENT	-	<del></del>
SURVEYED BANK LINES			TOP OF SLOPE	-	<del></del>
JERSEY BARRIER			TOE OF SLOPE	-	<del></del>
WATER MAIN			MINOR CONTOURS	-	
GAS MAIN			MAJOR CONTOURS	_	
SANITARY SEWER MAIN	-	sss	SWALE	-	<del></del>
STORM SEWER MAIN			STM PIPE	_	
ELECTRICAL LINES	-	— E——— E———	CATCH BASIN	_	_
TELUS LINES			MANHOLE	_	•
FENCE	- —	xx	OUTFALL	_	<b>—</b>
PATHWAY					
MANHOLE	_	0			
CATCH BASIN	_		PROPOSED DOWNTOWN DIKE FOOTPRINT	_	
STREET LIGHT	_	<del>-</del> \$-	FOOTFRINI		<del></del>
PEDESTAL	_		TOP SOIL/ORGANICS STRIPPING LII	MITS -	
OUTFALL	_	<b>—</b> t	TDAIL DEGLAMATION		
ALBERTA SURVEY CONTROL MARKER	-	ASCM No.	TRAIL RECLAMATION	_	
BENCH	_		CONSTRUCTION LAYDOWN	_	
TABLE	_		CDDAY DADIV CONICTDUCTION		77/77
SIGNAGE	_	•	SPRAY PARK CONSTRUCTION (NOT IN THIS CONTRACT)	_	
PETRIFIED WOOD	_		DD DEINEODOED TUDE		
TRASH CAN	-		PR. REINFORCED TURF	_	
ATCO MONITORING WELL	-	<b>→</b> 17-5			

Table 1: Flood Frequency Estimates for Red Deer River near Drumheller (NHC 2020)							
Return Period	Return Period Naturalized Peak Instanteous Discharge (m³/s) Regulated Peak Insta						
1:100	2260	1850					
1:5	807	542					
1:2	448	330					

## **CONSTRUCTION NOTES:**

## **GENERAL:**

- 1.ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO PROJECT SPECIFICATIONS, AND RELEVANT ALBERTA TRANSPORTATION CIVIL WORKS MASTER SPECIFICATIONS, UNLESS NOTED OTHERWISE. WHEN A CONFLICT BETWEEN SPECIFICATIONS ARISES, DISCUSS ANY UNCERTAINTIES WITH THE ENGINEER PRIOR TO CONSTRUCTION AND/OR INSTALLATION.
- 2.TOPOGRAPHIC SURVEY IS PROVIDED ON AN AS-IS BASIS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM INDEPENDENT PRE AND POST DISTURBANCE SURVEY FOR THE PURPOSES OF CONSTRUCTION LAYOUT AND QUANTITY RECONCILIATION AS APPLICABLE TO EXECUTE AND RECORD PROGRESS OF THE WORKS.
- 3.ALL AFFECTED RESIDENTS AND BUSINESSES SHALL BE NOTIFIED IN WRITING A MINIMUM OF 7 BUSINESS DAYS PRIOR TO ANY SCHEDULED ACCESS AND/OR SERVICE DISRUPTIONS.
- 4.CONTRACTOR SHALL PREPARE A TRAFFIC MANAGEMENT PLAN AND PEDESTRIAN MANAGEMENT PLAN (I.E. TRAIL DETOUR PLAN) TO ADDRESS CONSTRUCTION IMPACTS.
- 5.DURING CONSTRUCTION, ENSURE ALL OH&S REGULATIONS ARE FOLLOWED, CONTRACTOR SHALL PROVIDE THE ENGINEER WITH ALBERTA OCCUPATIONAL HEALTH AND SAFETY REPORTS, IF APPLICABLE.
- 6.SITE SECURITY IS THE RESPONSIBILITY OF THE PRIME CONTRACTOR. THE ENGINEER IS NOT RESPONSIBLE FOR SECURITY IN, ON, OR ABOUT THE PROJECT SITE, NOR FOR CONTRACTOR COMPLIANCE. 7.ENSURE THE CURRENT MUNICIPAL OH&S GROUND DISTURBANCE PRACTICE AND PROCEDURES ARE FOLLOWED. CONTACT ALBERTA ONE CALL FOR EXTERNAL UTILITY LOCATES AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- 8.CONFIRM ALL EXISTING SERVICES, CONNECTIONS AND CROSSING POINTS AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION ON ANY SUCH ITEM. NOTIFY THE ENGINEER SHOULD CONFLICTS BE FOUND.
- 9.TEMPORARY SIGNAGE AND FENCING MAINTENANCE DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR.
- 10. ADJUST ALL EXISTING AND NEW APPURTENANCES TO MEET THE FINAL DESIGN GRADES.
- 11.RESTORE ALL THE AREAS AFFECTED BY CONSTRUCTION WORKS TO THEIR ORIGINAL CONDITION OR BETTER. 12. THE NEW, EAST CANTATA LOT PROPERTY LINE CORRESPONDS TO THE LAND SIDE TOE OF DIKE THROUGH THE CANALTA LOT.
- 13. THE CONTRACTOR IS ADVISED THAT SOME OF THE CONSTRUCTION WORKS ARE STILL PENDING REGULATORY APPROVALS/PERMITS. HOLD POINTS ARE INDICATED ON THE IFC DRAWINGS FOR THESE. THE CONTRACTOR SHALL COORDINATE CLOSELY WITH THE ENGINEER ON THESE WORKS, AS APPROVALS/PERMITS MUST BE IN PLACE PRIOR TO CONSTRUCTION OF THESE ITEMS OR ACTIVITIES.

## ENVIRONMENTAL:

- 1.THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH REGULATORY APPROVALS/PERMIT CONDITIONS, PARTICULARLY PERMITS UNDER THE WATER ACT AND FISHERIES ACT. A COPY OF ALL APPROVALS/PERMITS SHALL BE MAINTAINED ON-SITE DURING ALL CONSTRUCTION ACTIVITIES.
- 2.USE BEST MANAGEMENT PRACTICES (BMP), IN ACCORDANCE WITH ALBERTA BMP GUIDELINES AND REGULATIONS, DURING CONSTRUCTION. ADJUST WORK ACTIVITIES DURING PERIODS OF PRECIPITATION AND/OR SNOWMELT TO MITIGATE AGAINST SEDIMENT RELEASE TO THE STORM DRAIN SYSTEM OR NATURAL WATER BODIES INCLUDING THE RED DEER RIVER. NO MUD TRACKING ON TO NEARBY ROADWAYS IS PERMITTED.
- THE MINIMUM BMP'S TO CONSIDER ARE:
  - CONTRACTOR SHALL PREPARE AND SUBMIT AN ECO PLAN FOR APPROVAL PRIOR TO CONSTRUCTION. CONTRACTOR TO ADHERE TO ECO PLAN THROUGHOUT CONSTRUCTION.
- ADHERE TO ALL APPLICABLE REGULATORY PERMITS, APPROVALS, AND CONDITIONS.
- INSPECT ALL EQUIPMENT DAILY FOR FLUID LEAKS AND REPAIR AS NEEDED.
- ENSURE SPILL PROTECTION MEASURES ARE IN PLACE DURING REFUELLING OF EQUIPMENT.
- KEEP A SPILL KIT ON SITE AT ALL TIMES.
- CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN FROM DAMAGE DURING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF A POSSIBLE CONFLICT IS FOUND.
- CONTRACTOR TO COMPLETE BIRD NEST AND WILDLIFE SWEEP PRIOR TO REMOVING ANY TREES ON SITE IF REQUIRED BY REGULATORY ACT. ADDITIONAL NEST SWEEPS MAY BE REQUIRED IF PRESCRIBED BY PROJECT BIOLOGIST.

# UTILITIES:

- 1.LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES SHOWN ON DRAWINGS ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE TO DETERMINE EXACT LOCATION AND ELEVATION PRIOR TO CONSTRUCTION.
- 2.THE CONTRACTOR IS WARNED THAT CONFLICTS WITH EXISTING UTILITY SERVICES MAY EXIST. PRIOR TO BEGINNING ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT ALL APPROPRIATE UTILITY COMPANIES FOR LINE LOCATIONS, AND CONTRACTOR SHALL THEN LOCATE ALL UTILITIES (INCLUDING DEPTH). SWEETTECH ENGINEERING CONSULTANTS ASSUMES NO RESPONSIBILITY FOR UTILITY LOCATIONS. ANY CONFLICTS WITH THE CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY SO THAT MITIGATION OF CONFLICTS WITH THESE EXISTING UTILITIES CAN BE CONSIDERED.
- 3.ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. UTILITIES THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER OR ENGINEER.
- 4.ENSURE ALL EXISTING WATER SYSTEMS REMAIN IN USE DURING CONSTRUCTION.
- 5.IF GAS MAINS ARE PRESENT WITHIN PROJECT AREA, APEX UTILITIES AND OH&S REGULATIONS SHALL BE FOLLOWED. APEX UTILITIES REPRESENTATIVE MAY BE REQUIRED TO BE PRESENT WHEN WORKING ADJACENT TO GAS MAINS (ESPECIALLY HIGH
- 6.IF ATCO ELECTRIC UTILITIES ARE FOUND WITHIN THE PROJECT AREA, THE CONTRACTOR SHALL PROVIDE 72 HOURS NOTICE PRIOR TO EXCAVATION. A REPRESENTATIVE FROM ATCO WILL BE SCHEDULED TO BE PRESENT DURING EXCAVATION.
- 7. WHERE HEAVY WORK IS REQUIRED WITHIN THE EXCAVATION ZONE SURROUNDING UTILITY POLES, AND A POLE HOLD IS REQUIRED, THE CONTRACTOR MUST BE AUTHORIZED AND BE ABLE TO PULL A LIVE LINE PERMIT.

- 1. SCALE NOTATIONS INDICATED ARE BASED ON AN ANSI D DRAWING FORMAT, & COLOUR PRINTED.
- 2.EXISTING GROUND CONTOURS FROM HUNTER WALLACE SURVEYS LTD. RECEIVED ON JANUARY 18TH 2023.
- 3.2019 AERIAL IMAGERY PROVIDED BY DRUMHELLER RESILIENCY AND FLOOD MITIGATION OFFICE.
- 4.PROJECT COORDINATE SYSTEM NAD83-3TM114.
- 5.RED DEER RIVER BANK LINE PROVIDED BY HUNTER WALLACE SURVEYS LTD. 6. RIVER STATIONING PROVIDED BY NORTHWEST HYDRAULIC CONSULTANTS.
- 7.UTILITIES PROVIDED BY DRUMHELLER RESILIENCY AND FLOOD MITIGATION OFFICE.

# **SURVEY CONTROL**

PROJECT HORIZONTAL DATUM IS GRID FOR ALBERTA NAD83, 3 DEGREE ZONE. CENTRE AT 114° WEST (CANA83-3TM114). ALL ELEVATIONS ARE SHOWN IN METRES TO CANADIAN GEODETIC VERTICAL DATUM 1928 (CGVD28) CONFIRMED BY TIES TO ALBERTA SURVEY CONTROL MARKERS (ASCM) IN THE

417469 5703757.371 90303.534 684.371 ASC 639732 5703923.309 90272.646 681.725 ASC	639732	5703923.309	90272.646	681.725	DESC ASCM ASCM ASCM ASCM ASCM
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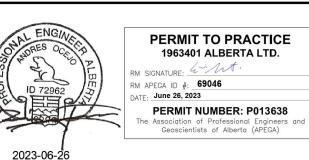
DRAWING	S ABBREVIATIONS		
APPROX FB ELEV DWG  © TYP SPMDD OMC C/W W/ PE INV STM SAN PR. EX. MIN MAX TBD TBC	APPROXIMATELY FREEBOARD ELEVATION DRAWING CENTRE LINE TYPICAL STANDARD PROCTOR MAXIMUM DRY DENSITY OPTIMUM MOISTURE CONTENT COMES WITH WITH POLYETHYLENE INVERT STORM SANITARY PROPOSED EXISTING MINIMUM MAXIMUM TO BE DETERMINED TO BE CONFIRMED	DR ST AVE STA IFT HW RS D PVI BVCS BVCE EVCS EVCE LVC	DRIVE STREET AVENUE STATION ISSUED FOR TENDER HEAD WALL RIVER STATION DIKE STATION POINT OF VERTICAL INFLECTION BEGINNING VERTICAL CURVE STATION BEGINNING VERTICAL CURVE ELEVATION END VERTICAL CURVE STATION END VERTICAL CURVE ELEVATION LENGTH OF VERTICAL CURVE

THIS DRAWING IS PREPARED FOR THE SOLE USE OF THE TOWN OF DRUMHELLER

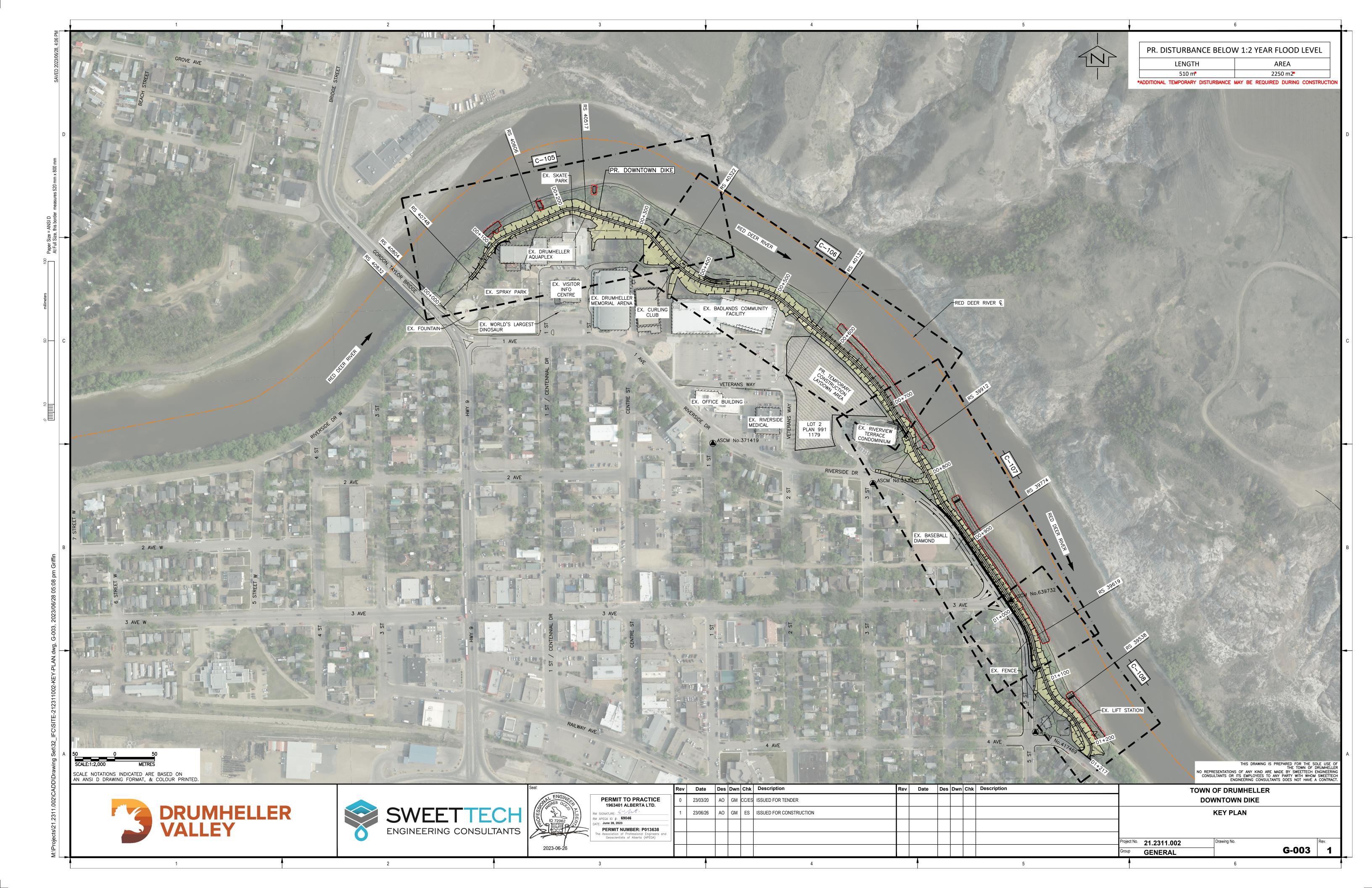
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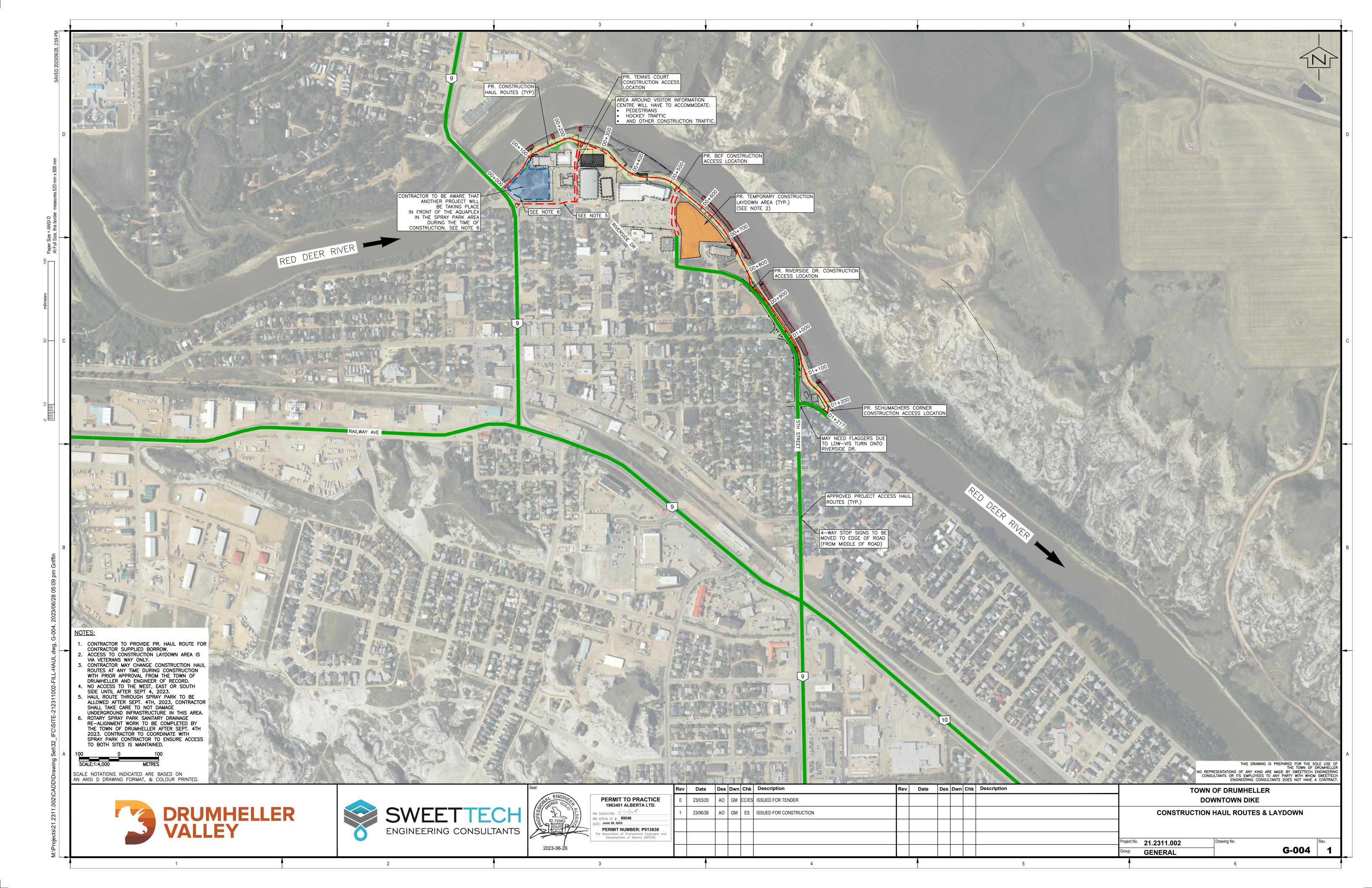


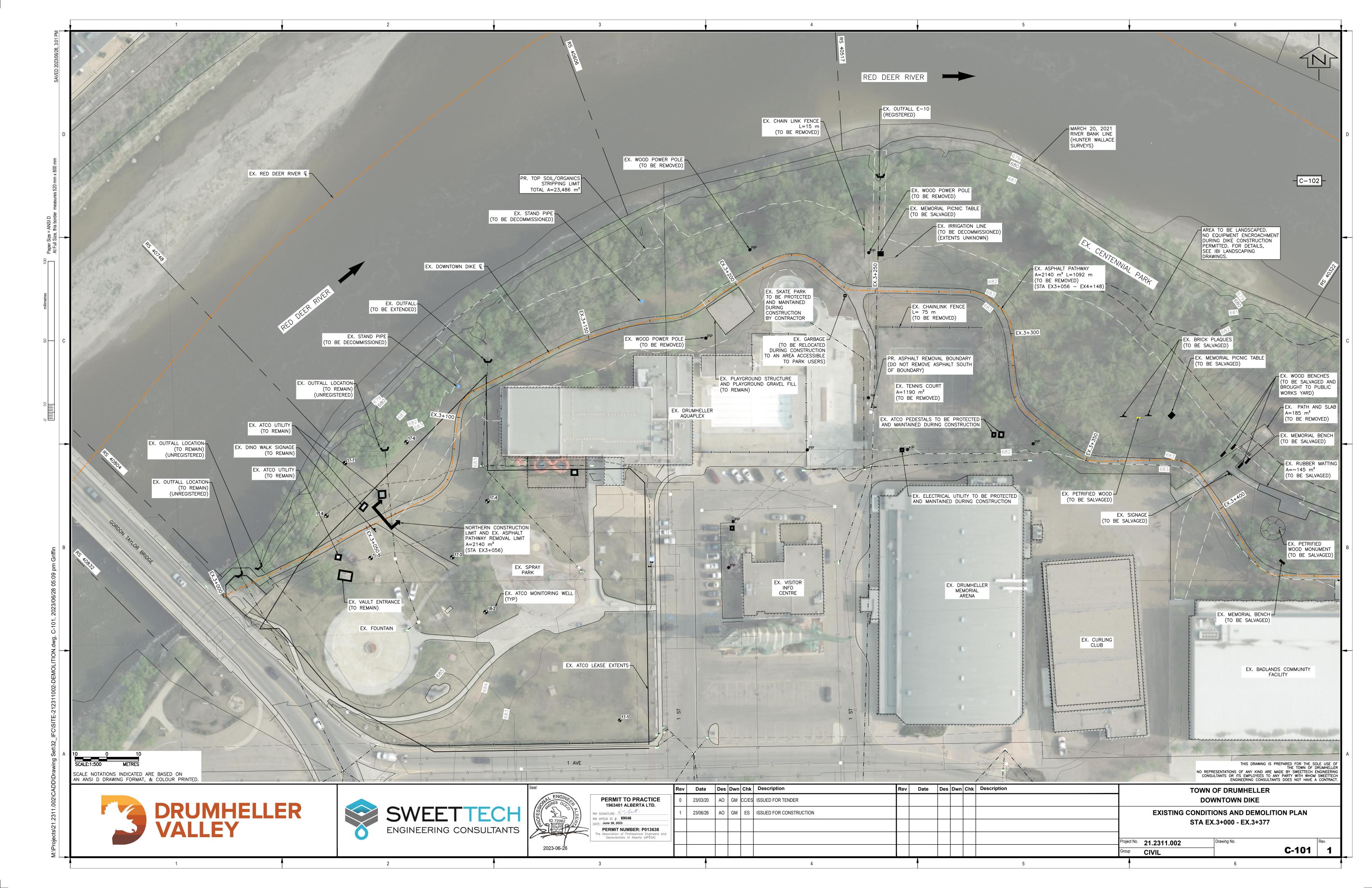


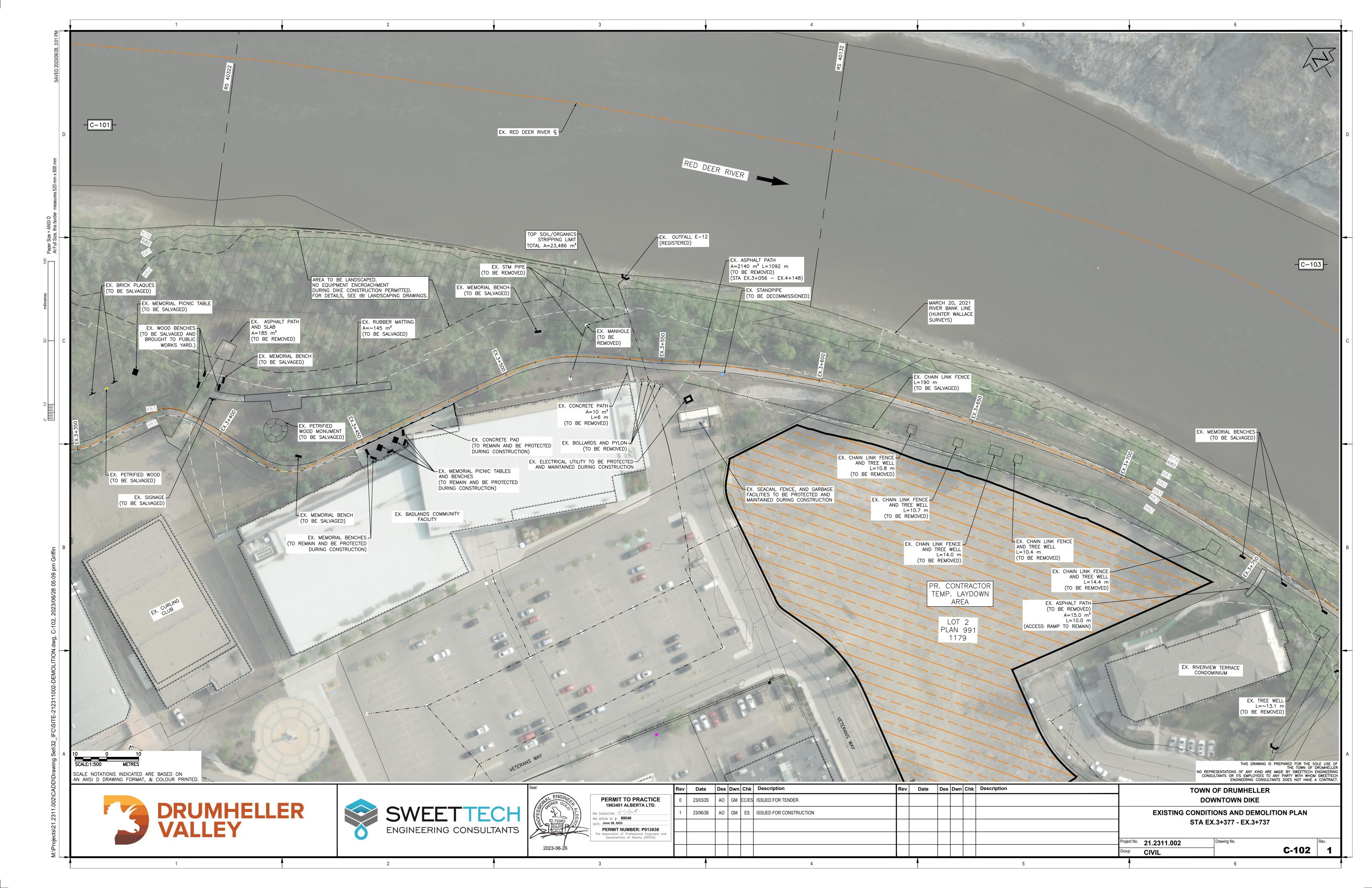


													NO REPRI CONSU	ESENTATIONS OF ANY KIND ARE MADE BY SWEETTECH I ILTANTS OR ITS EMPLOYEES TO ANY PARTY WITH WHOM ENGINEERING CONSULTANTS DOES NOT HAVE A	ENGINEERING
v	Date	Des	Dwn	Chk	Description	Rev	Date	Des	Dwn	Chk	k Description		TOWN	OF DRUMHELLER	
)	23/03/20	AO	GM	CC/ES	ISSUED FOR TENDER								DOV	VNTOWN DIKE	
	23/06/26	AO	GM	ES	ISSUED FOR CONSTRUCTION								LEGEND, CONS	STRUCTION NOTES, AND	
													SUR	VEY CONTROL	
4												Project No.	21.2311.002	Drawing No.	Rev.
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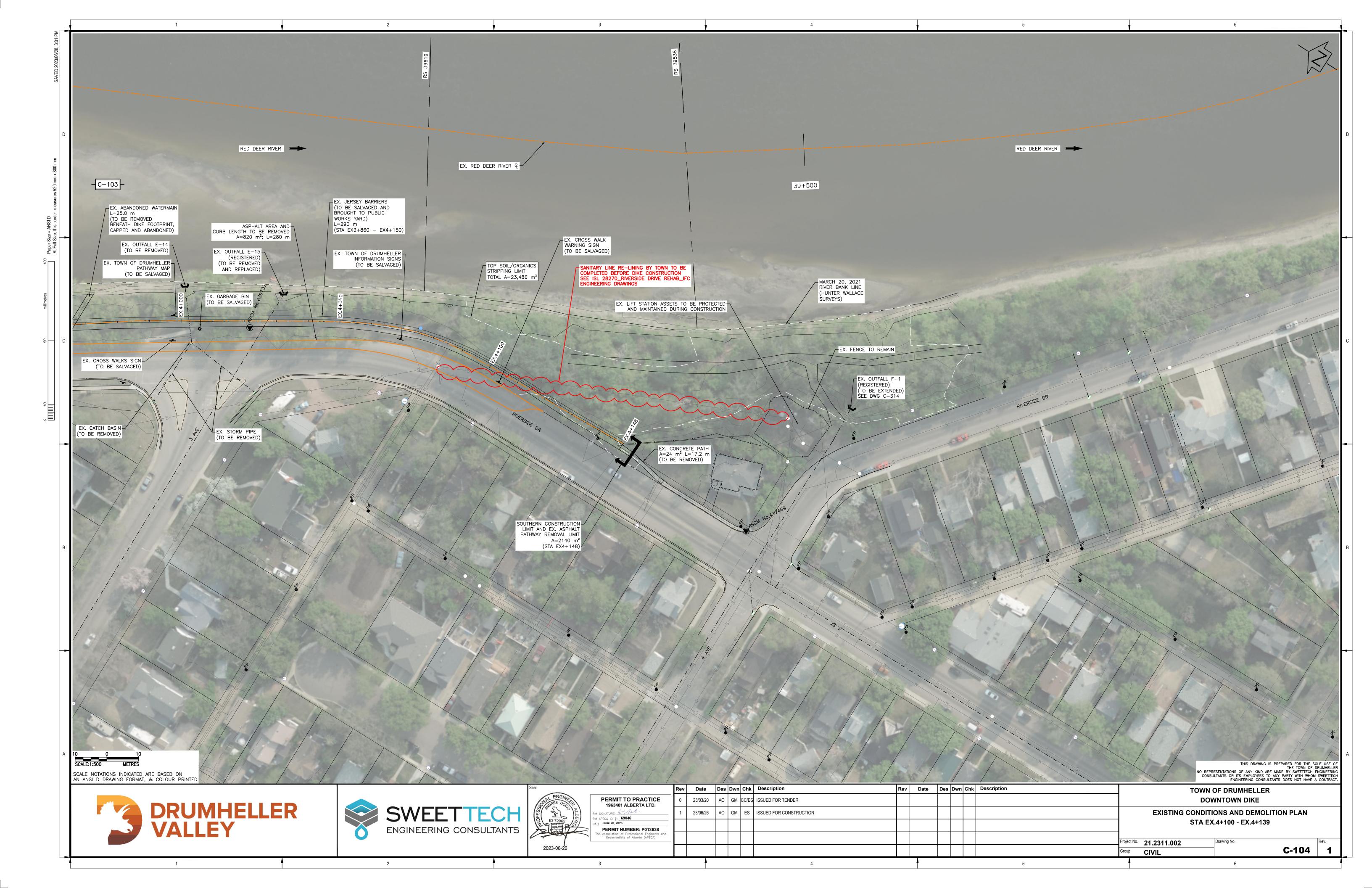


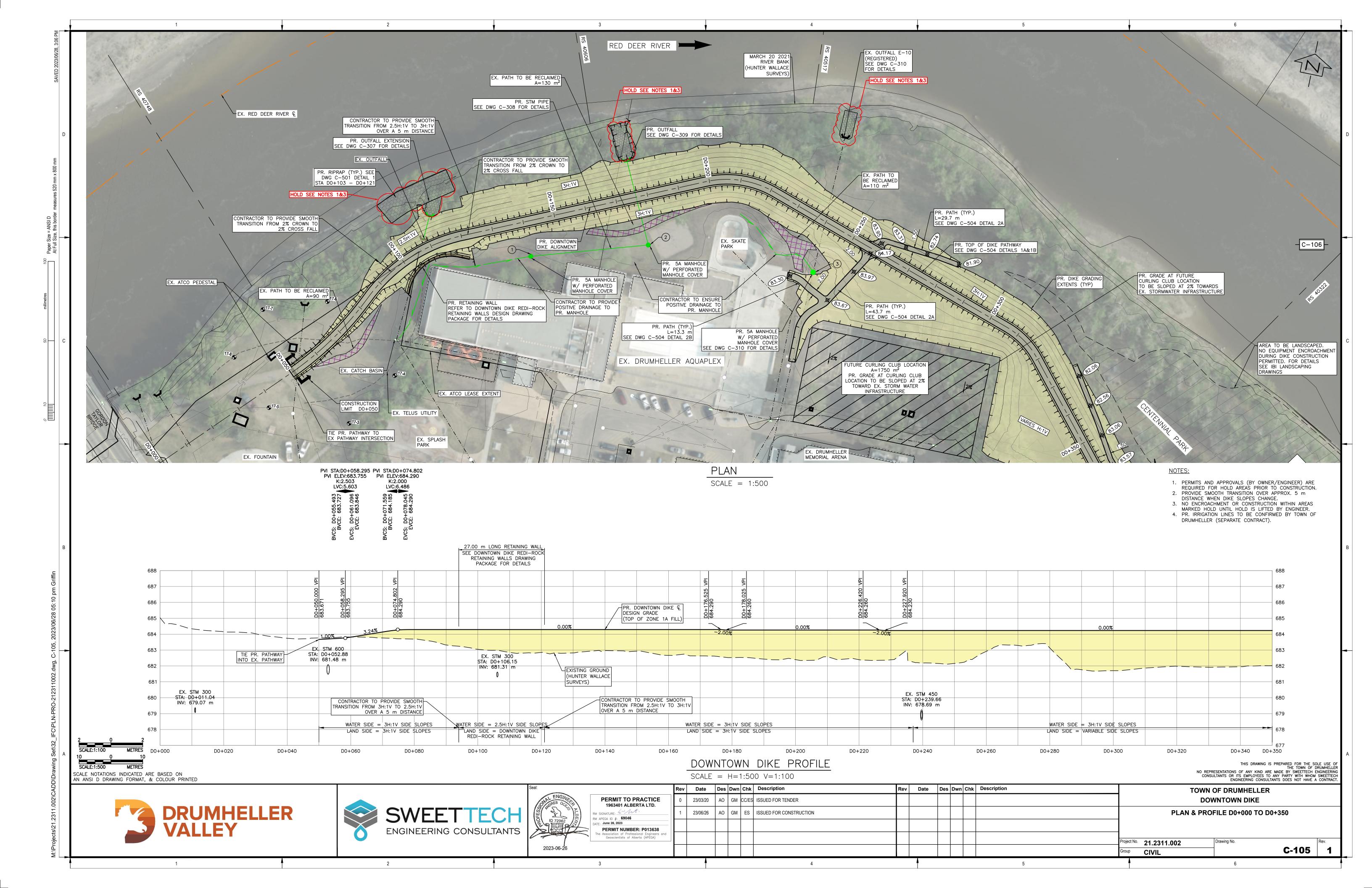


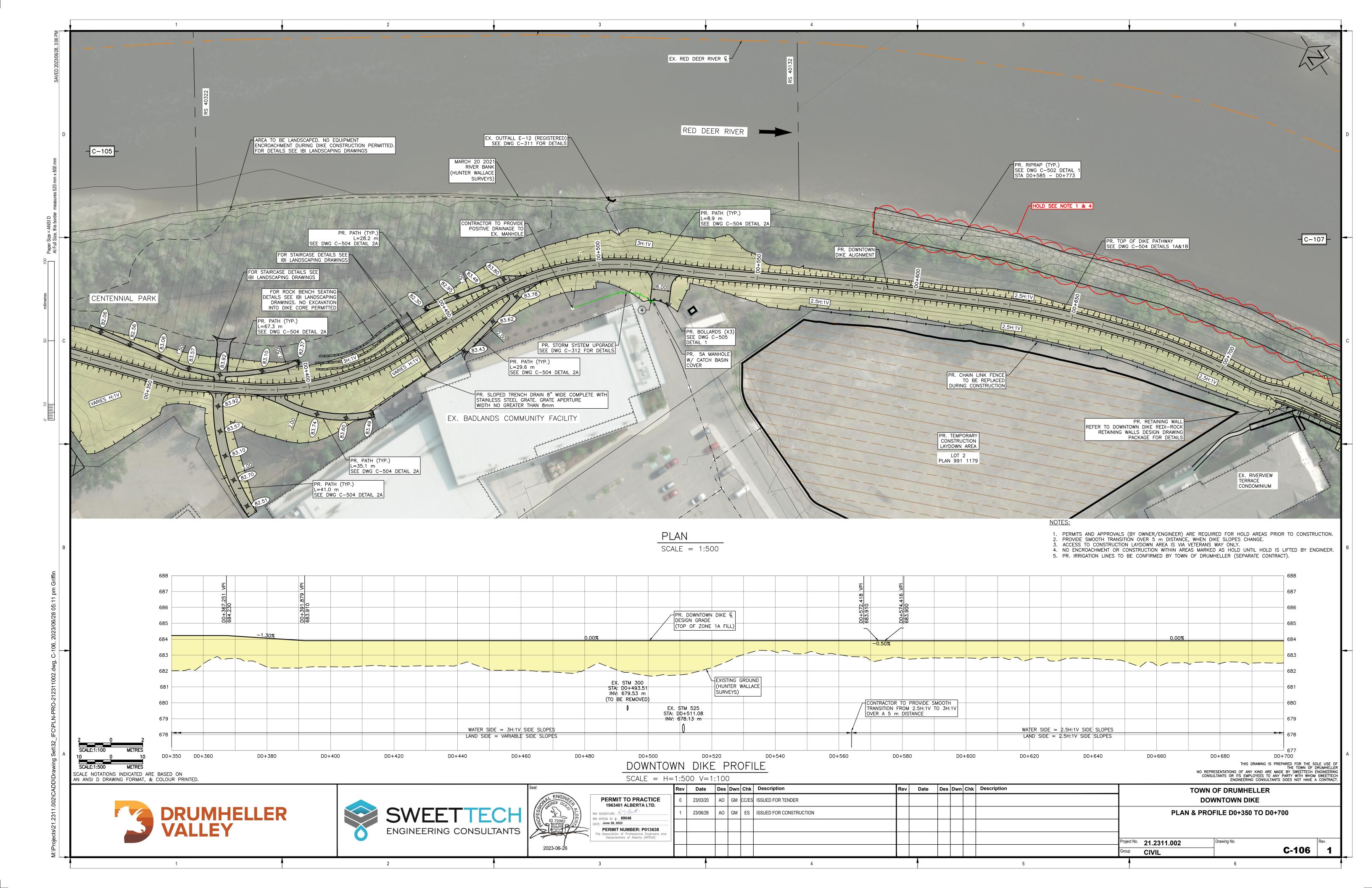


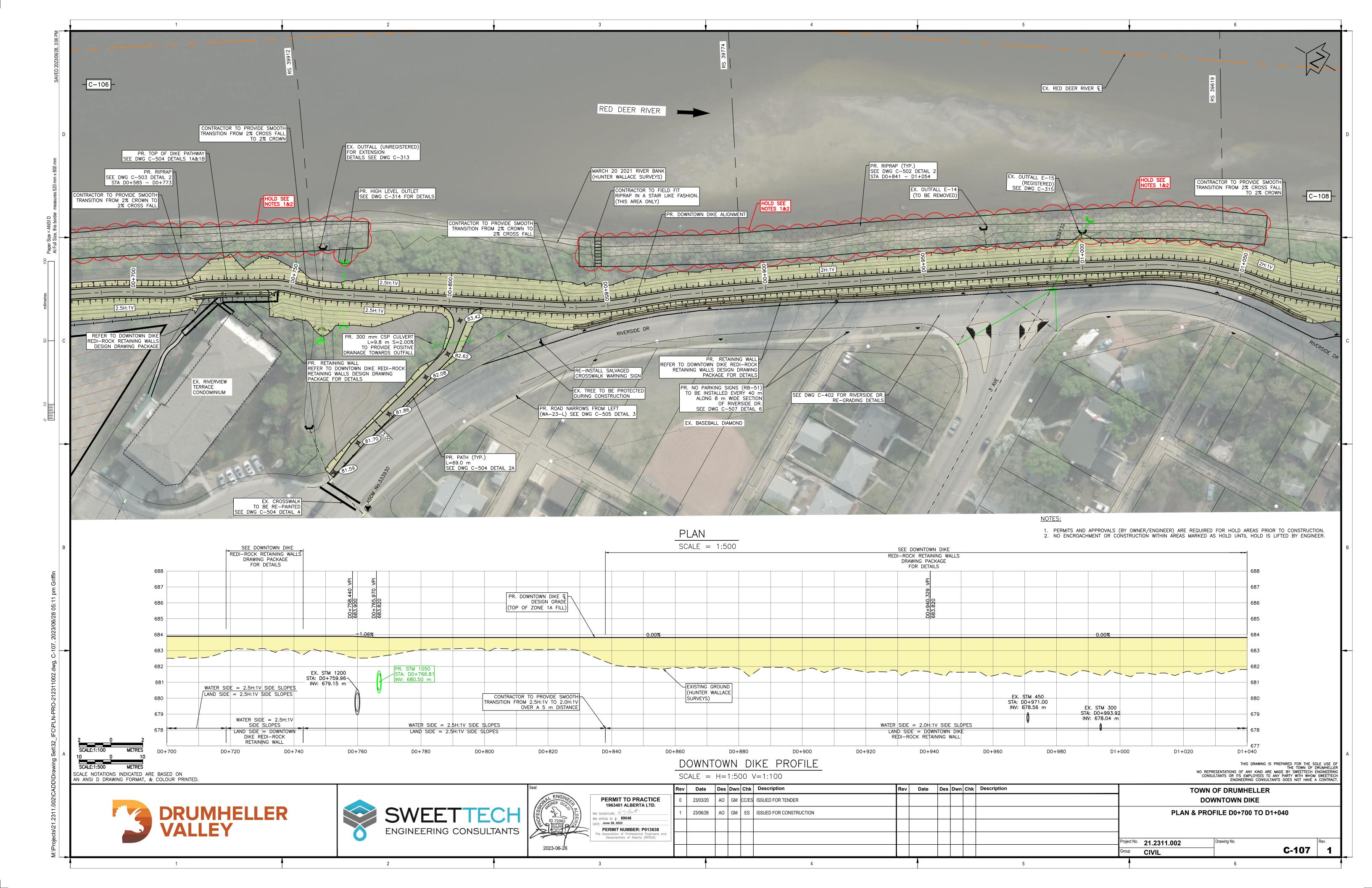


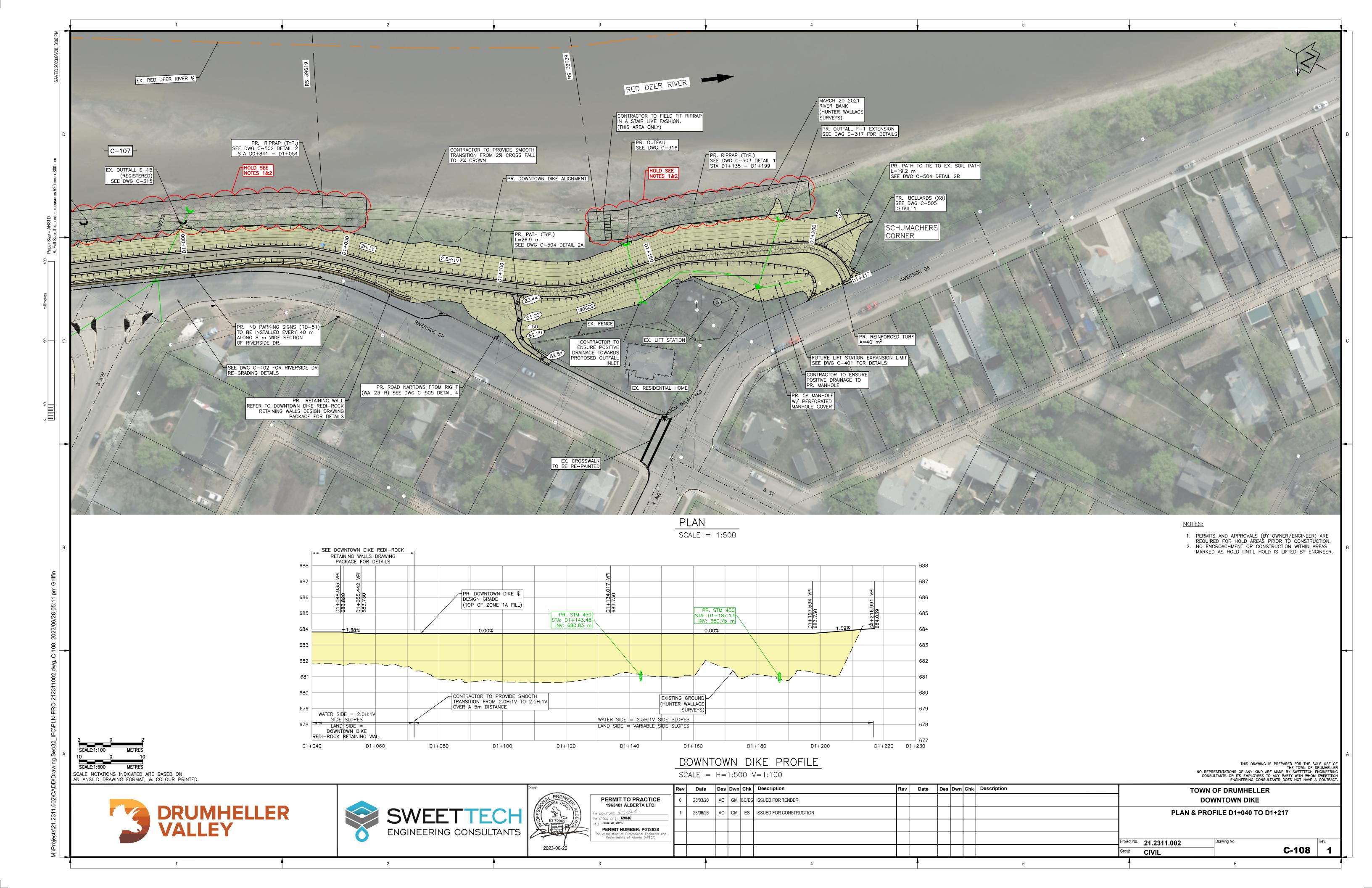


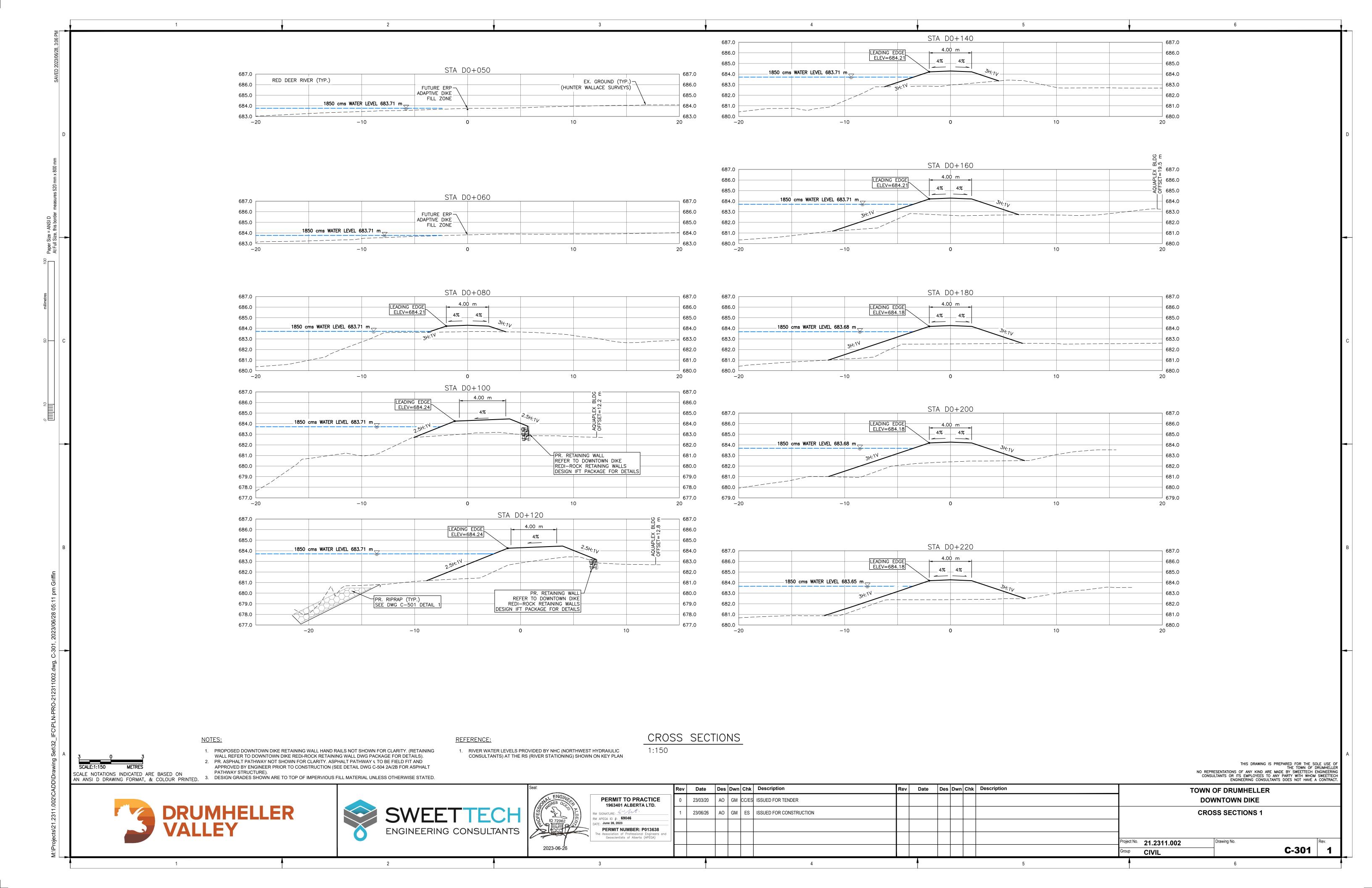


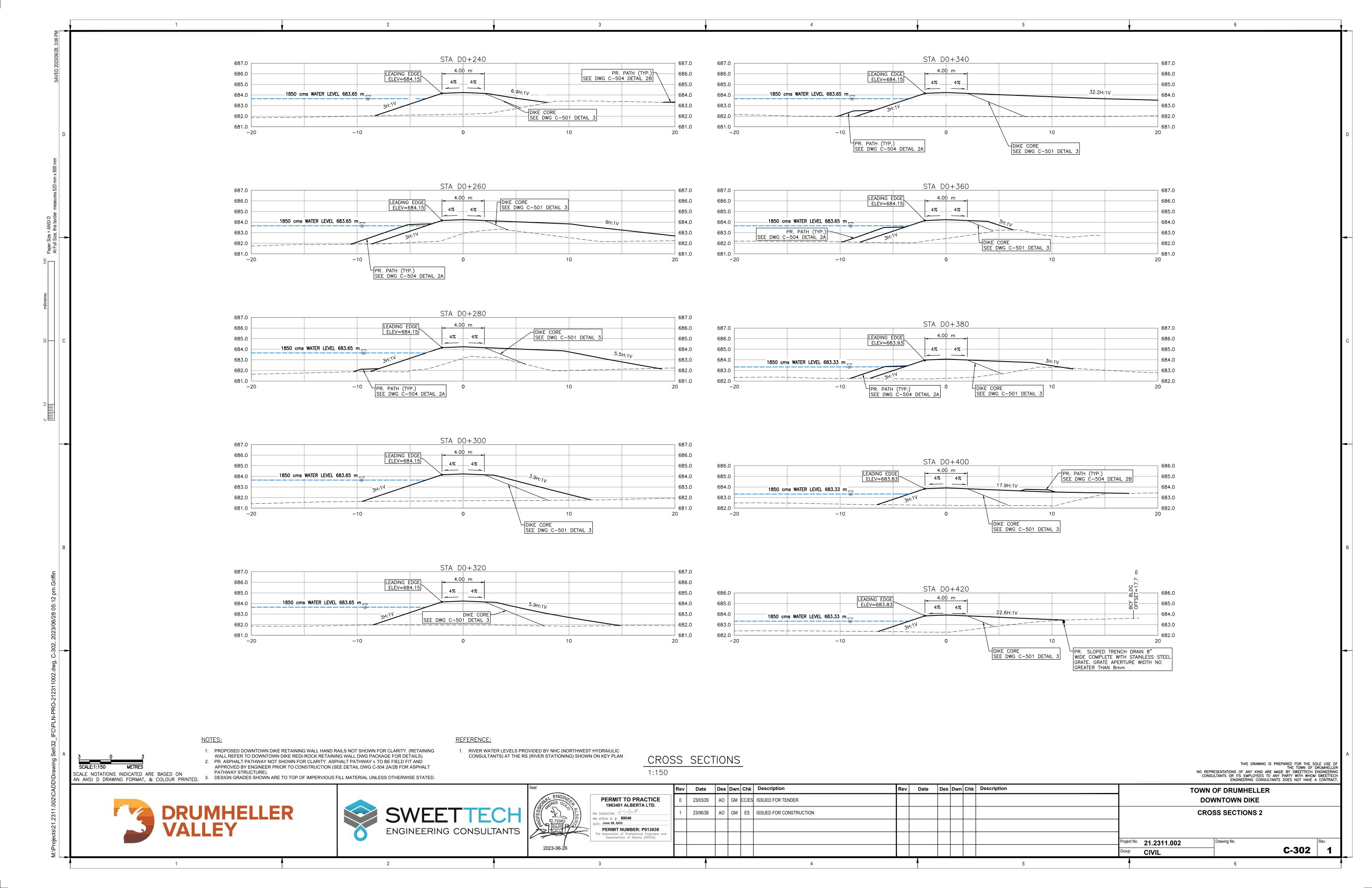


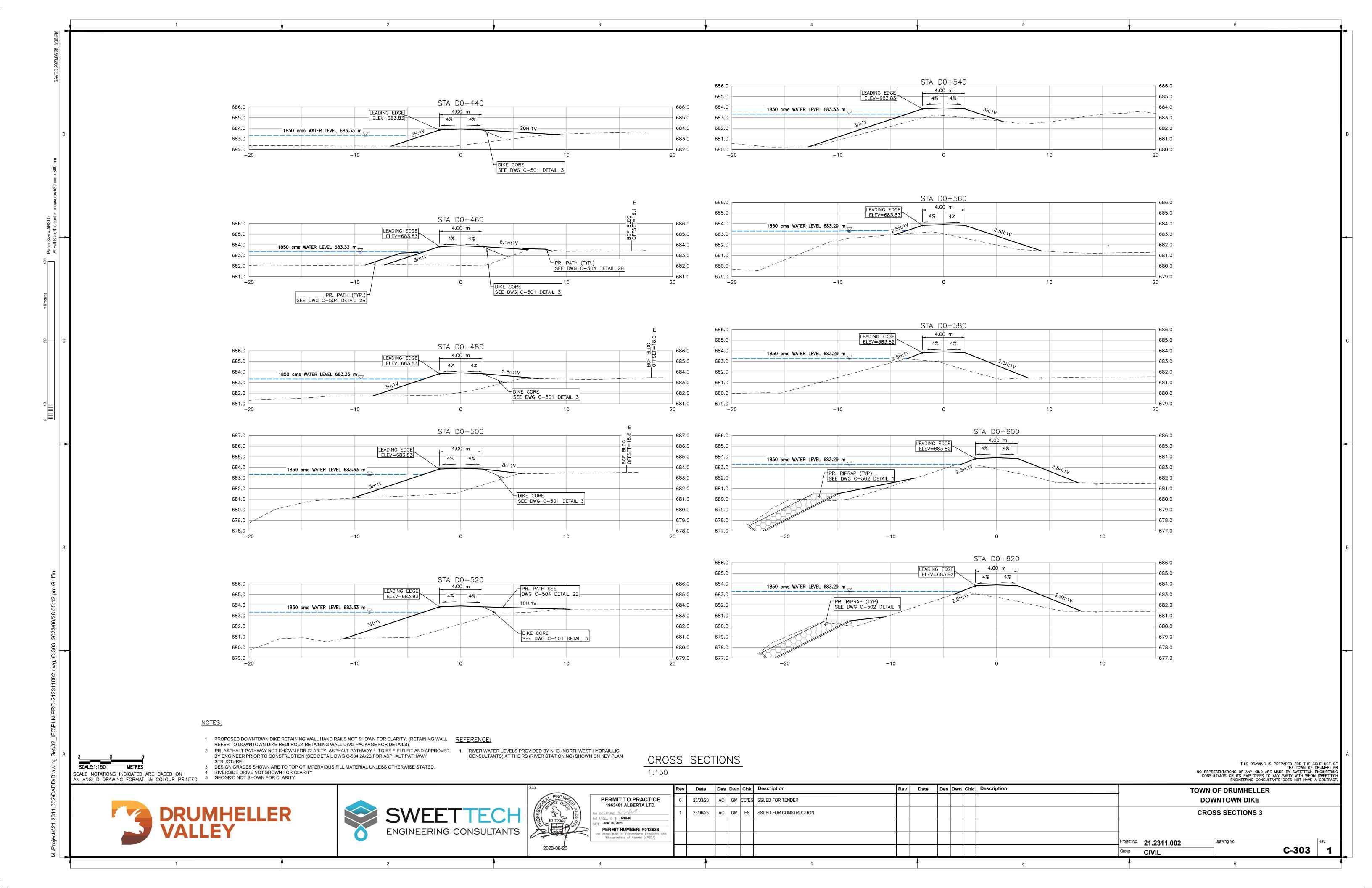


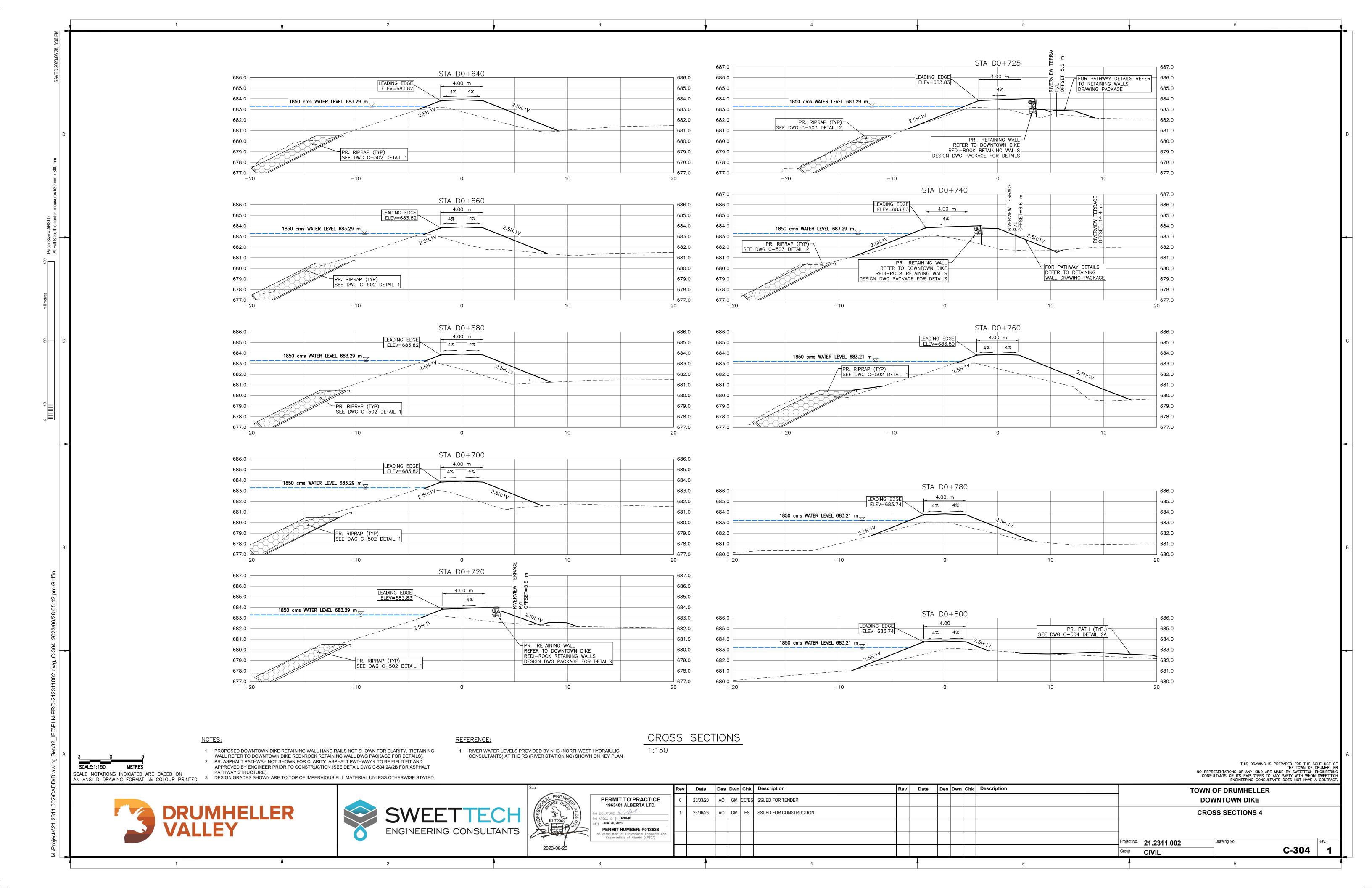


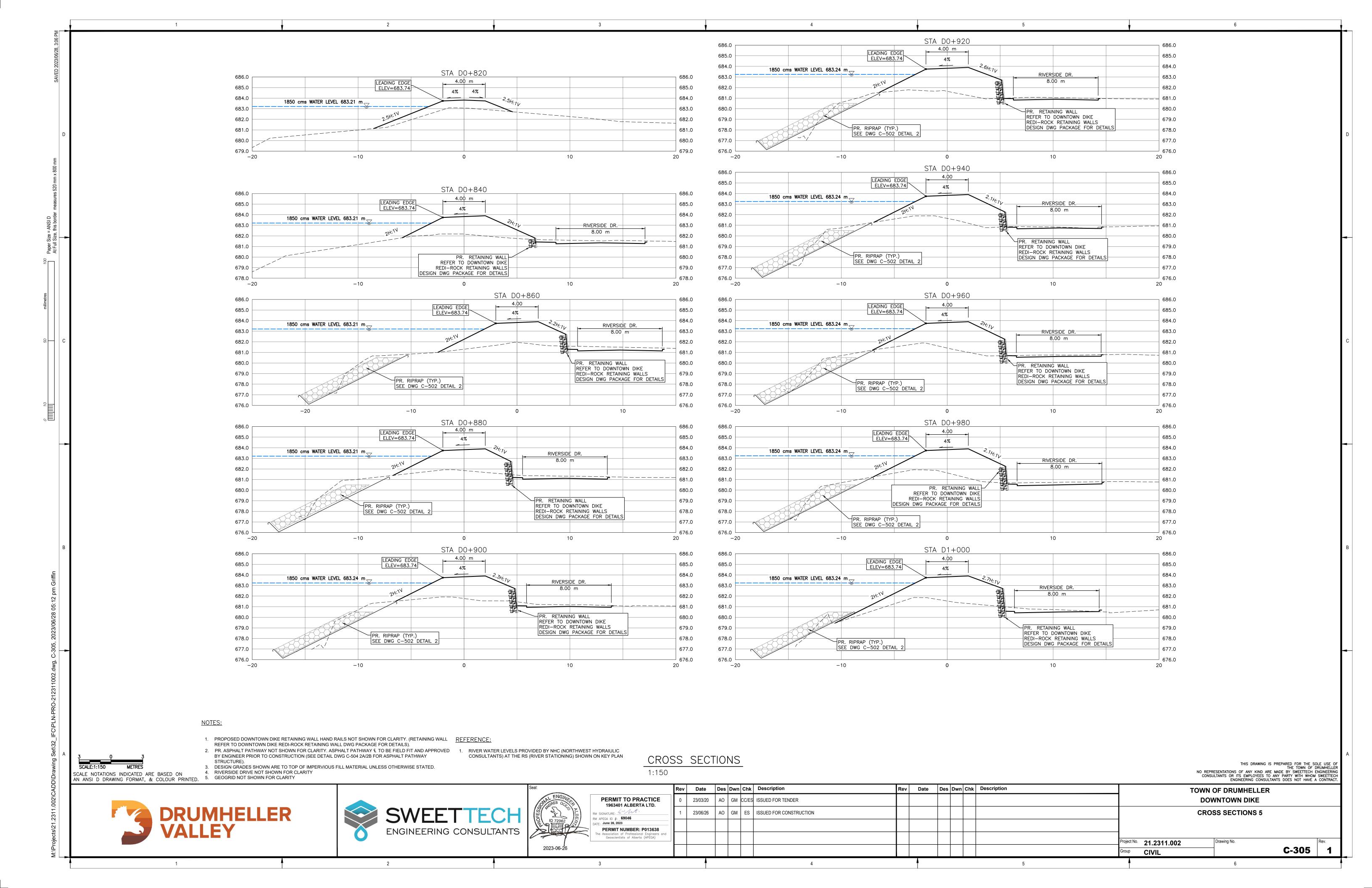


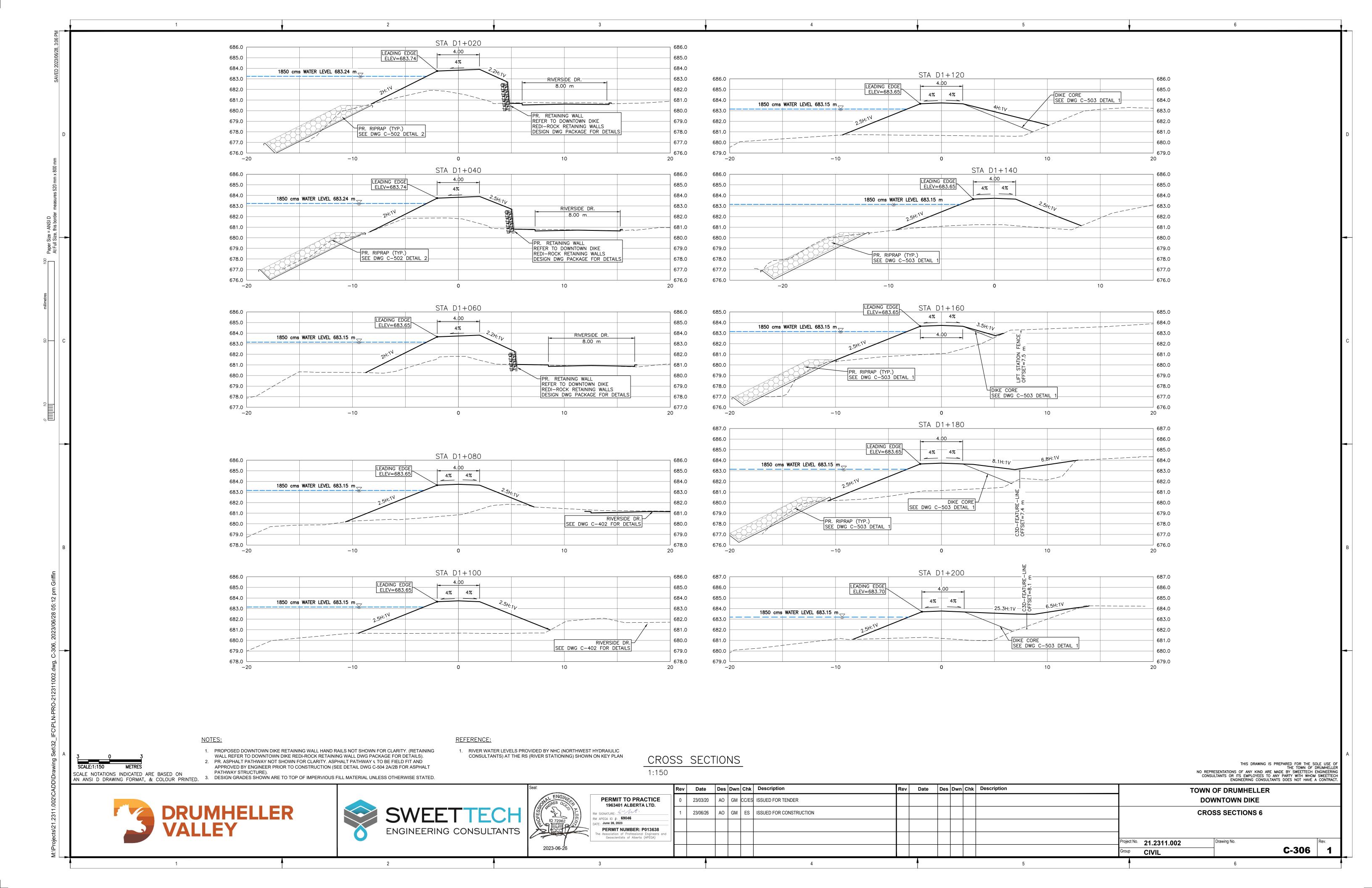


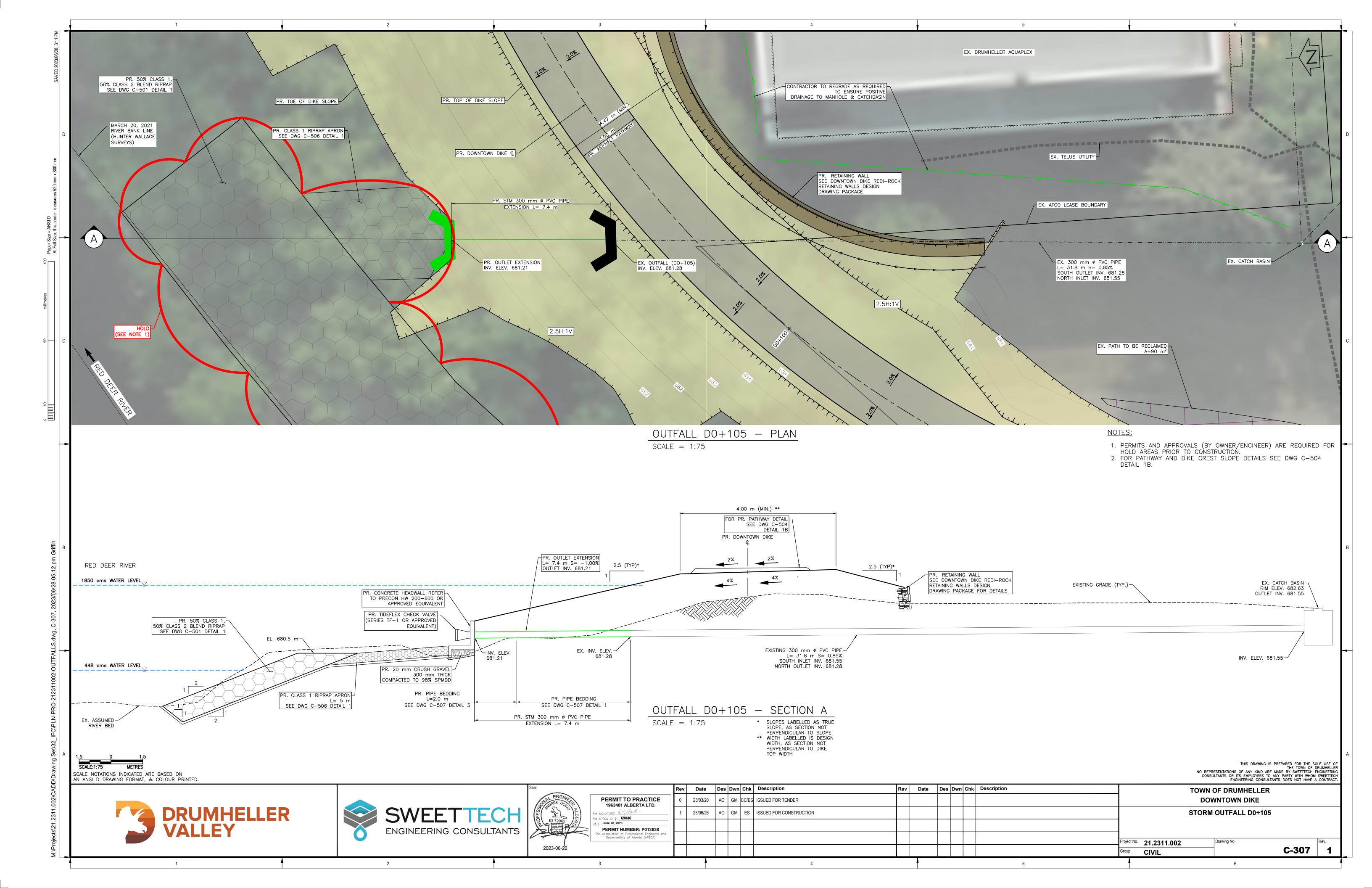


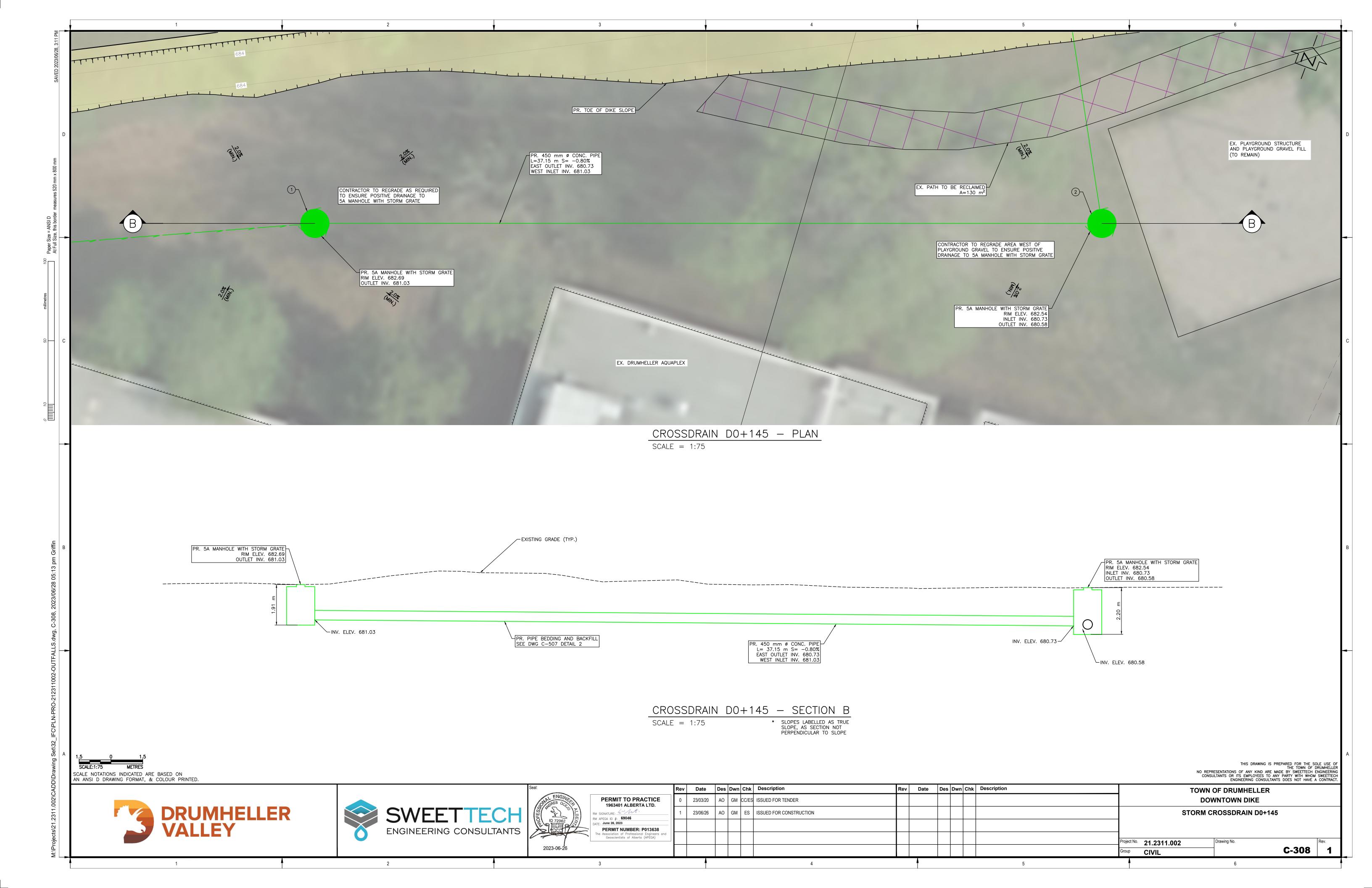


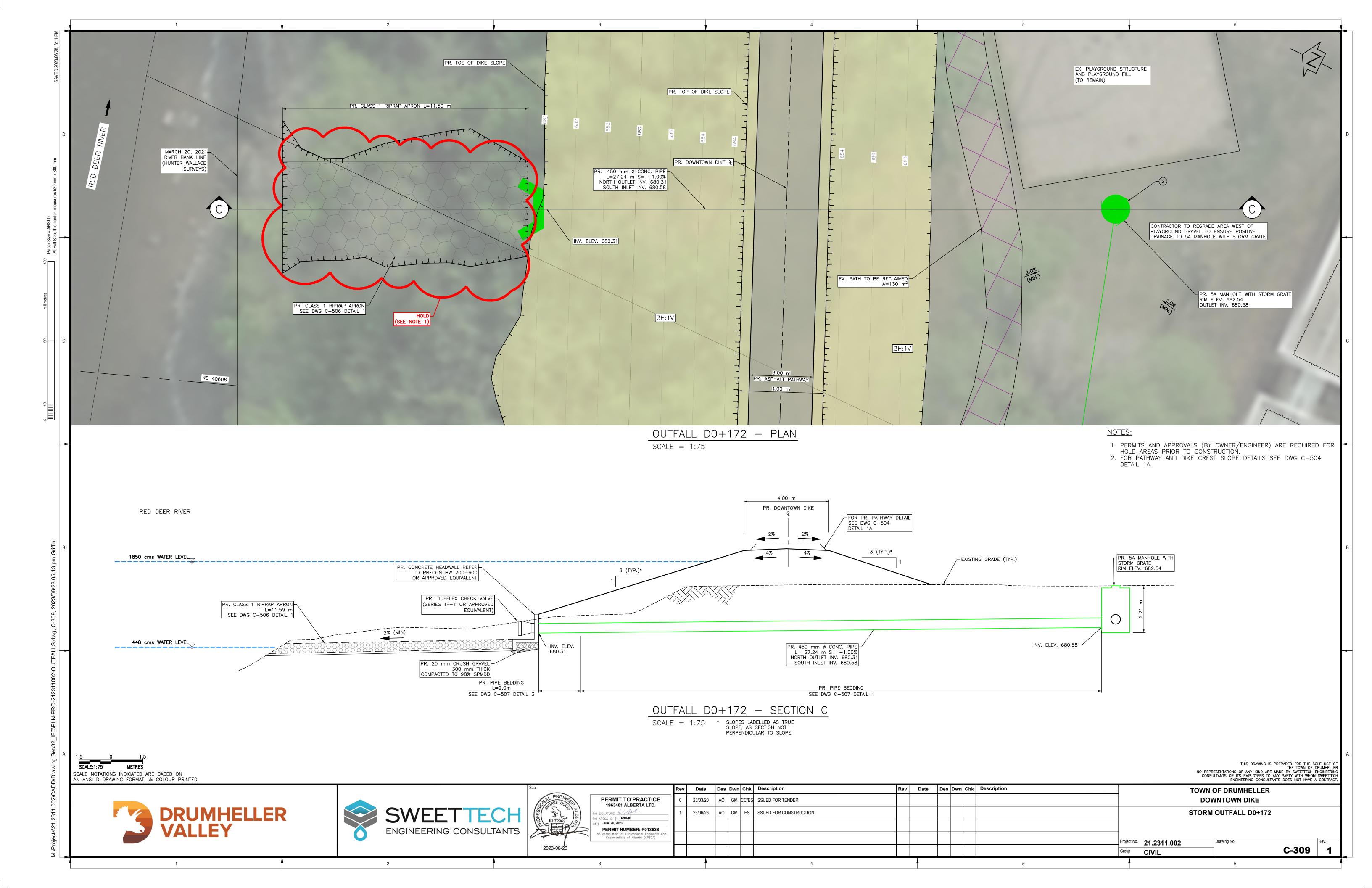


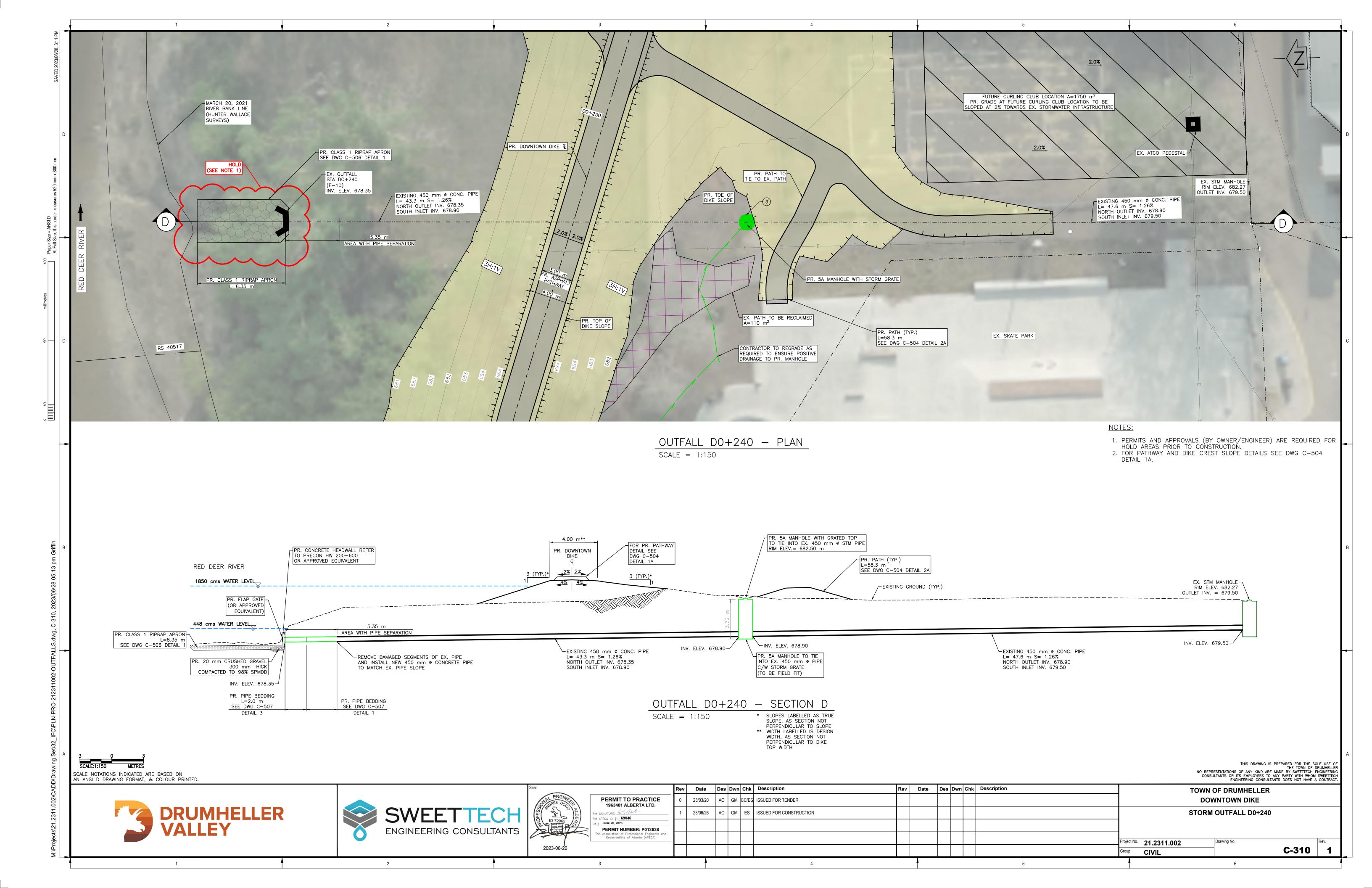


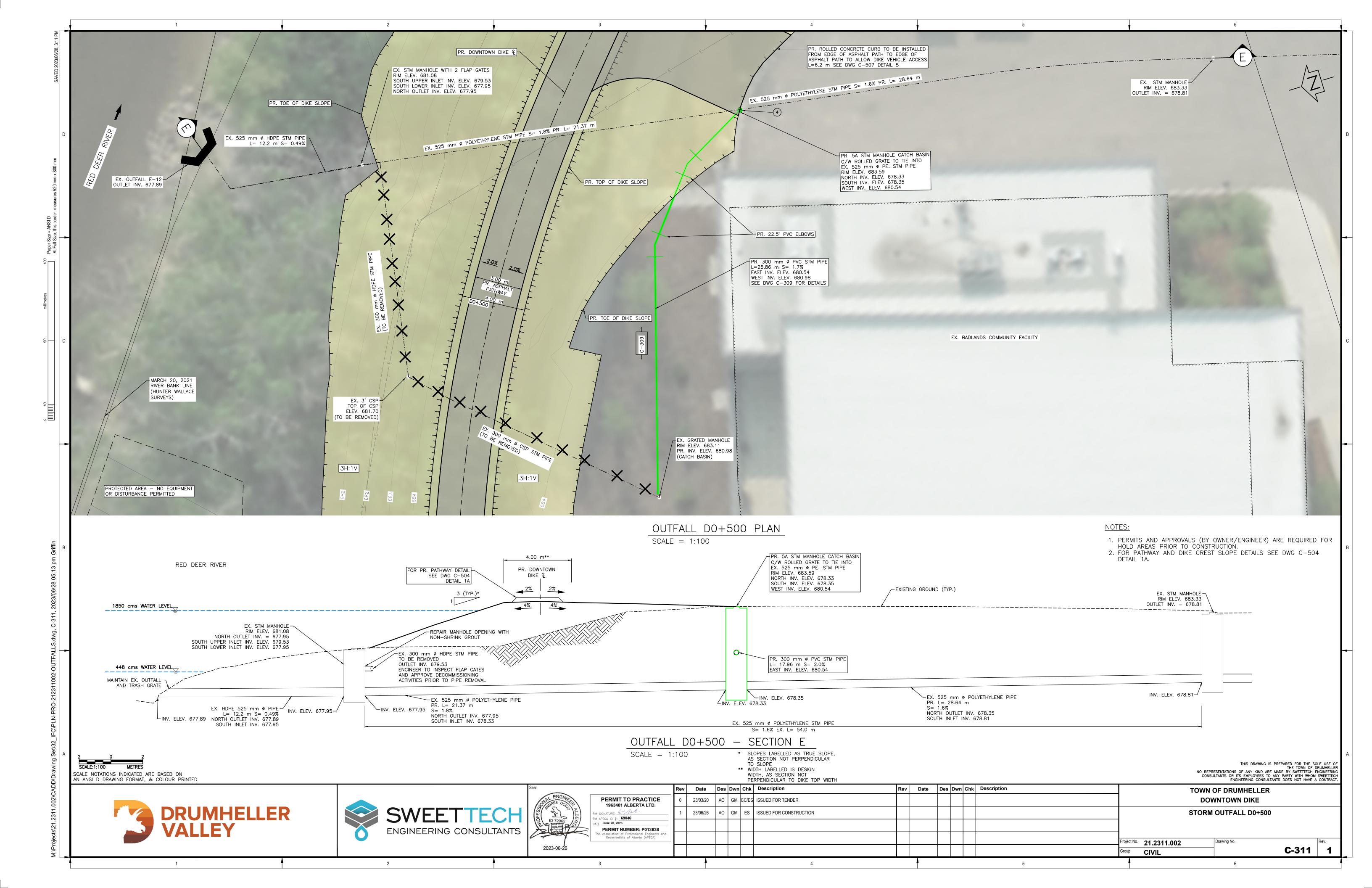


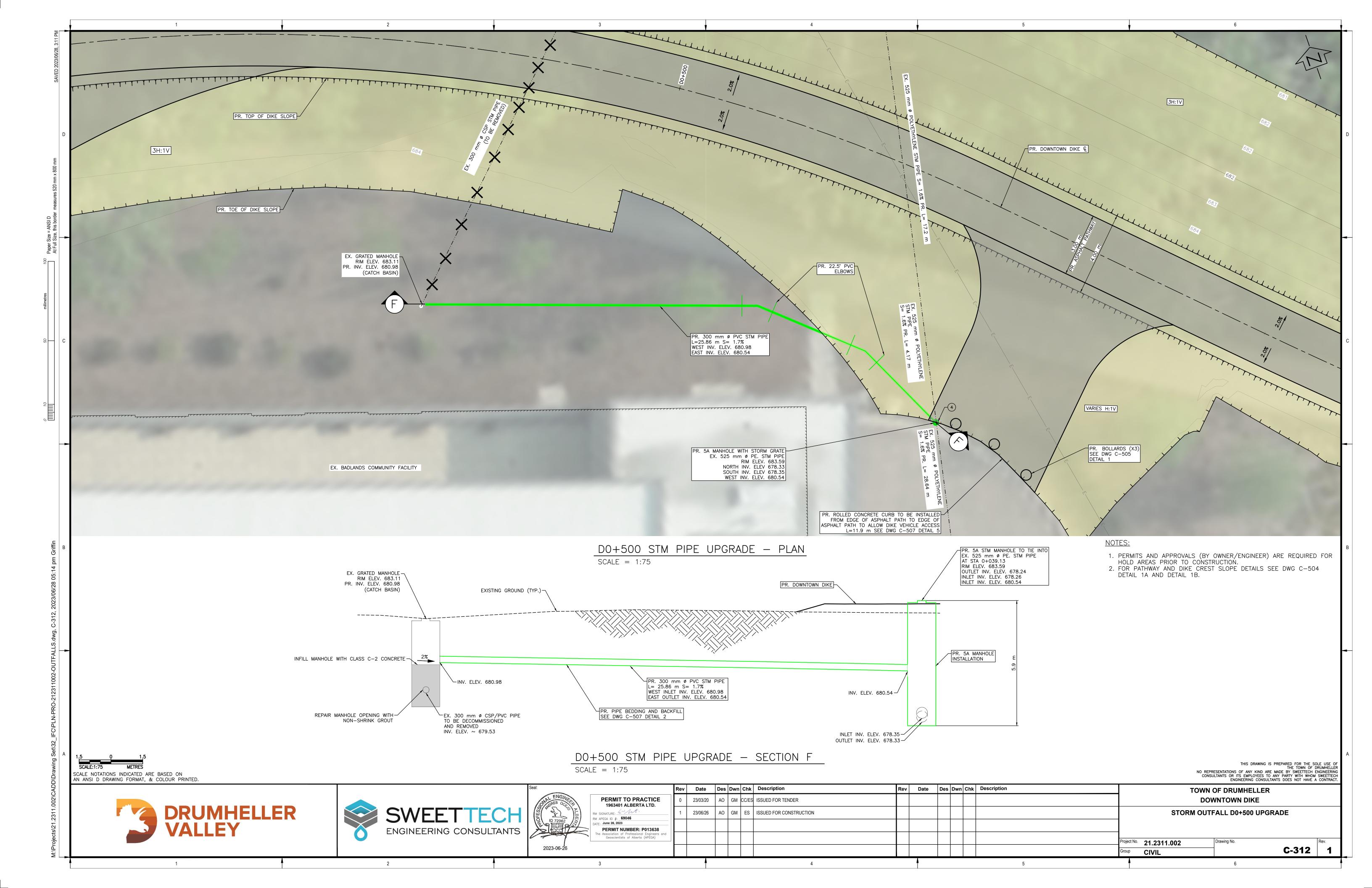


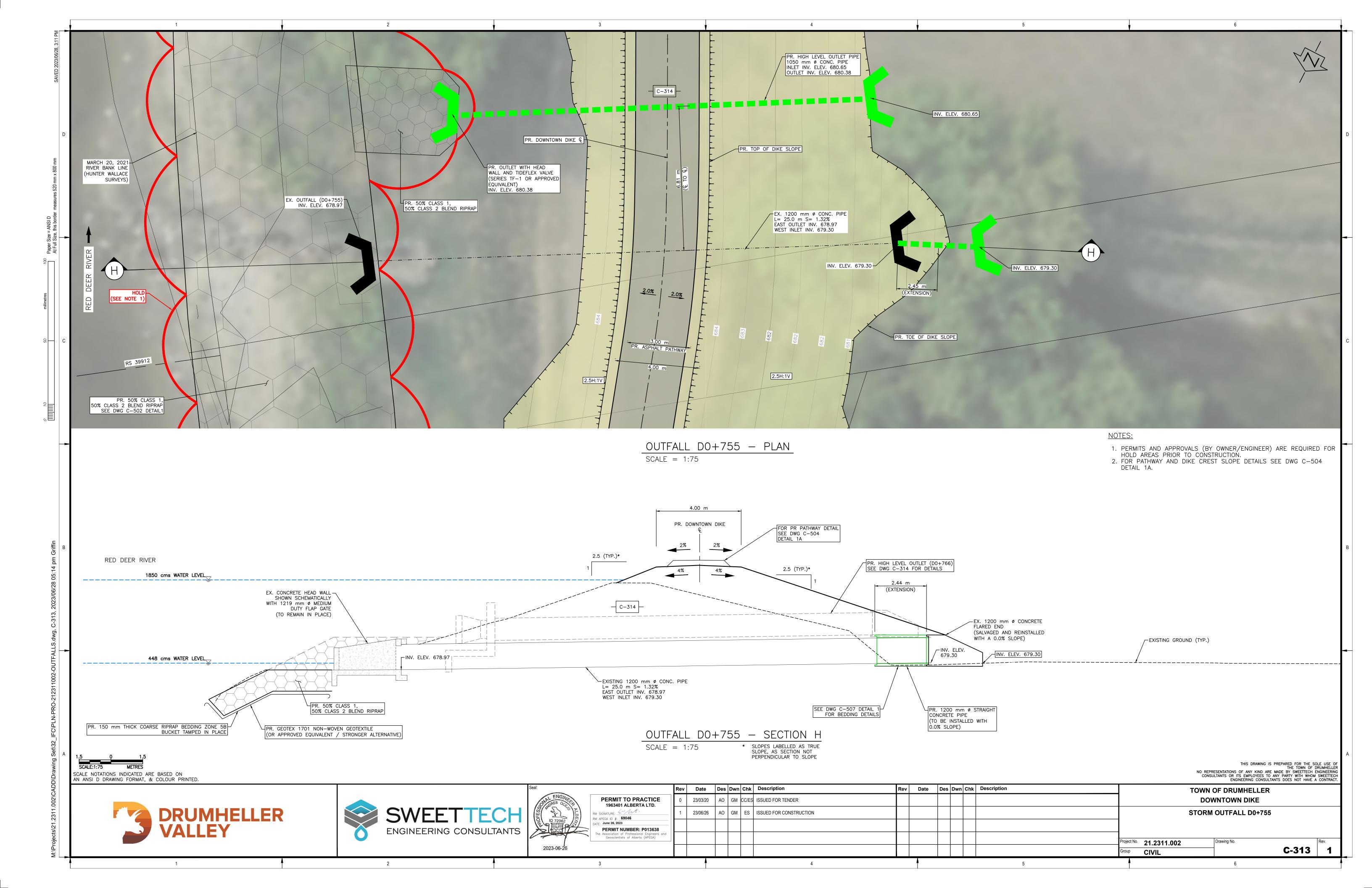


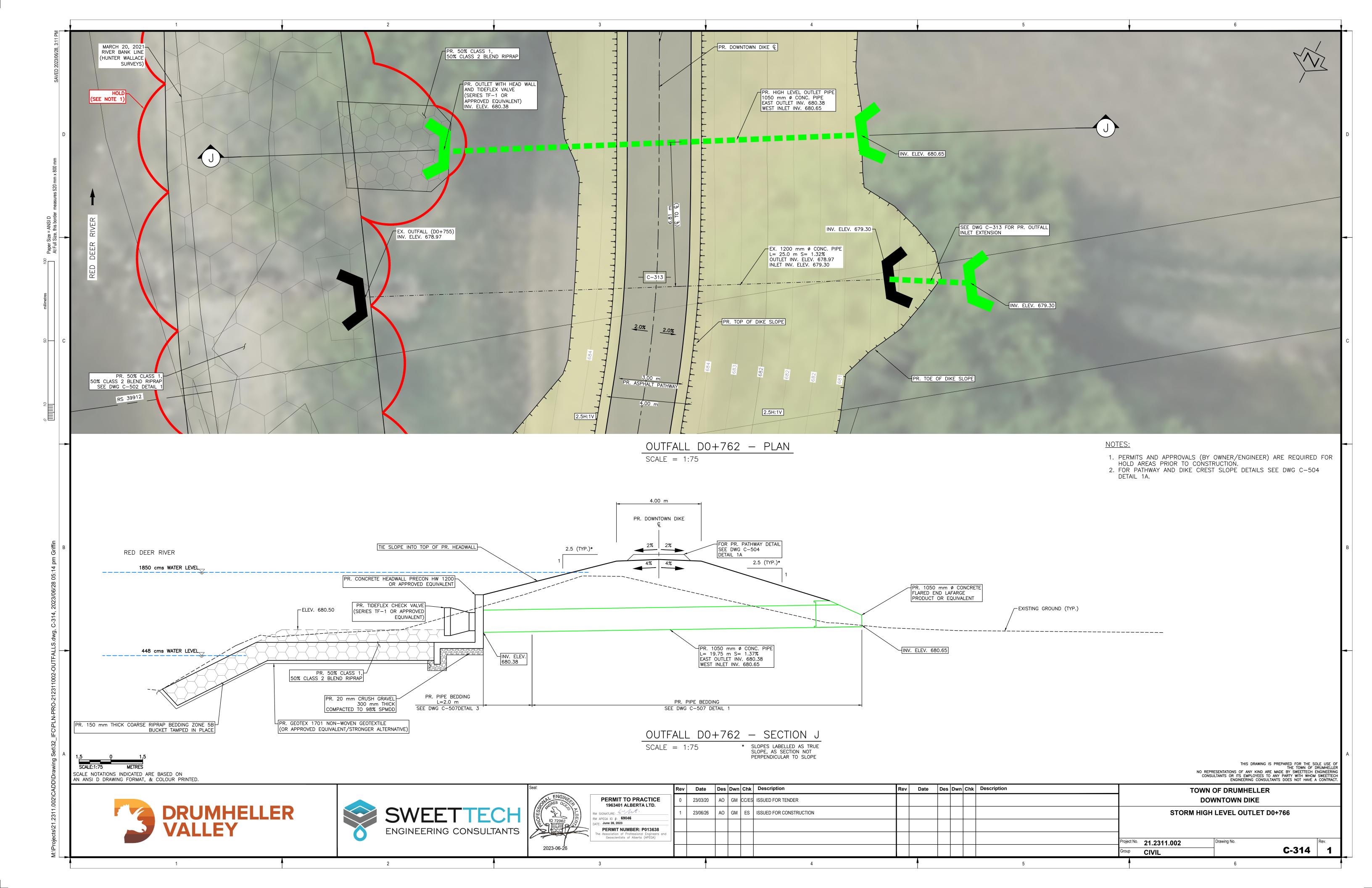


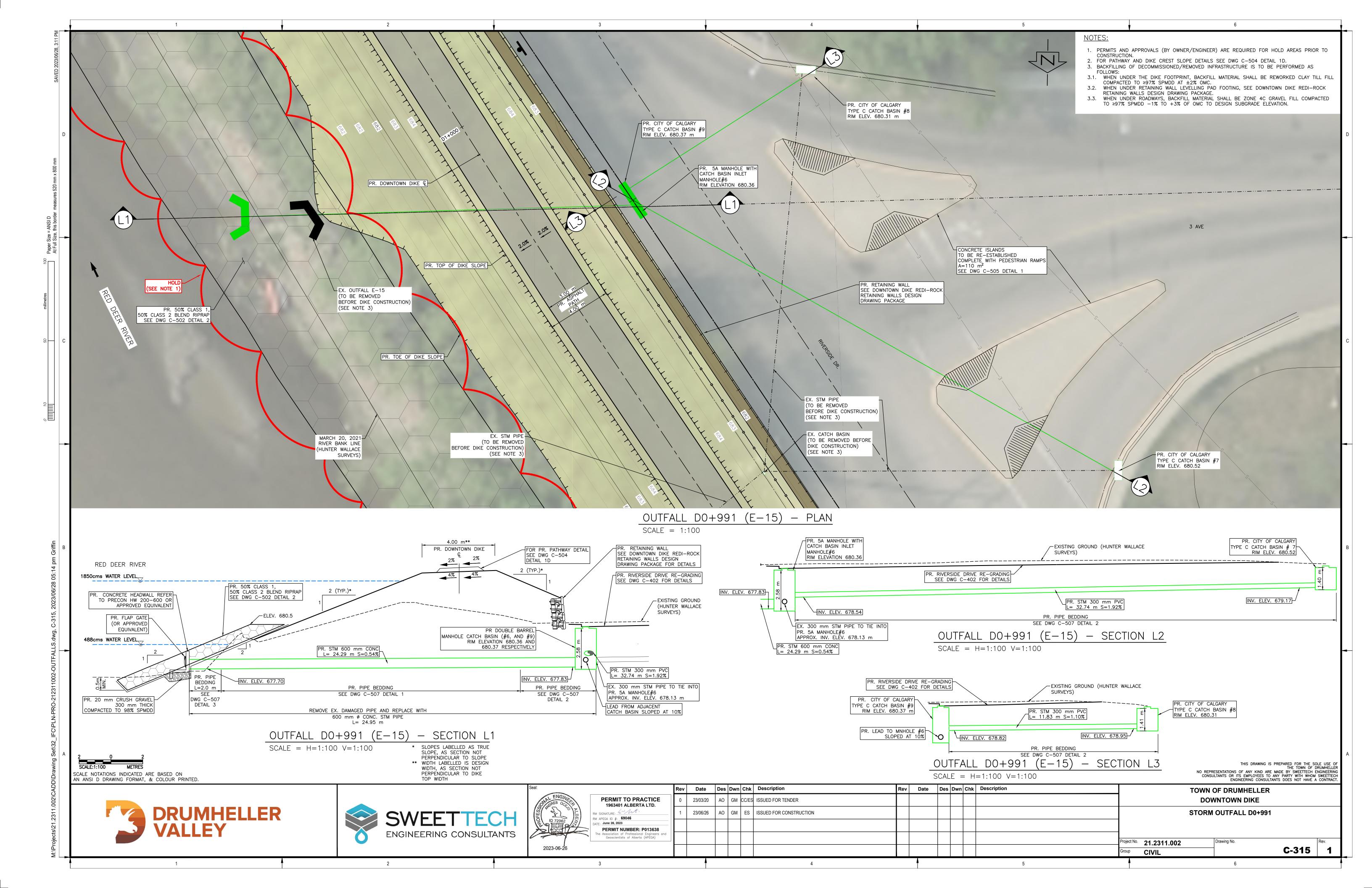


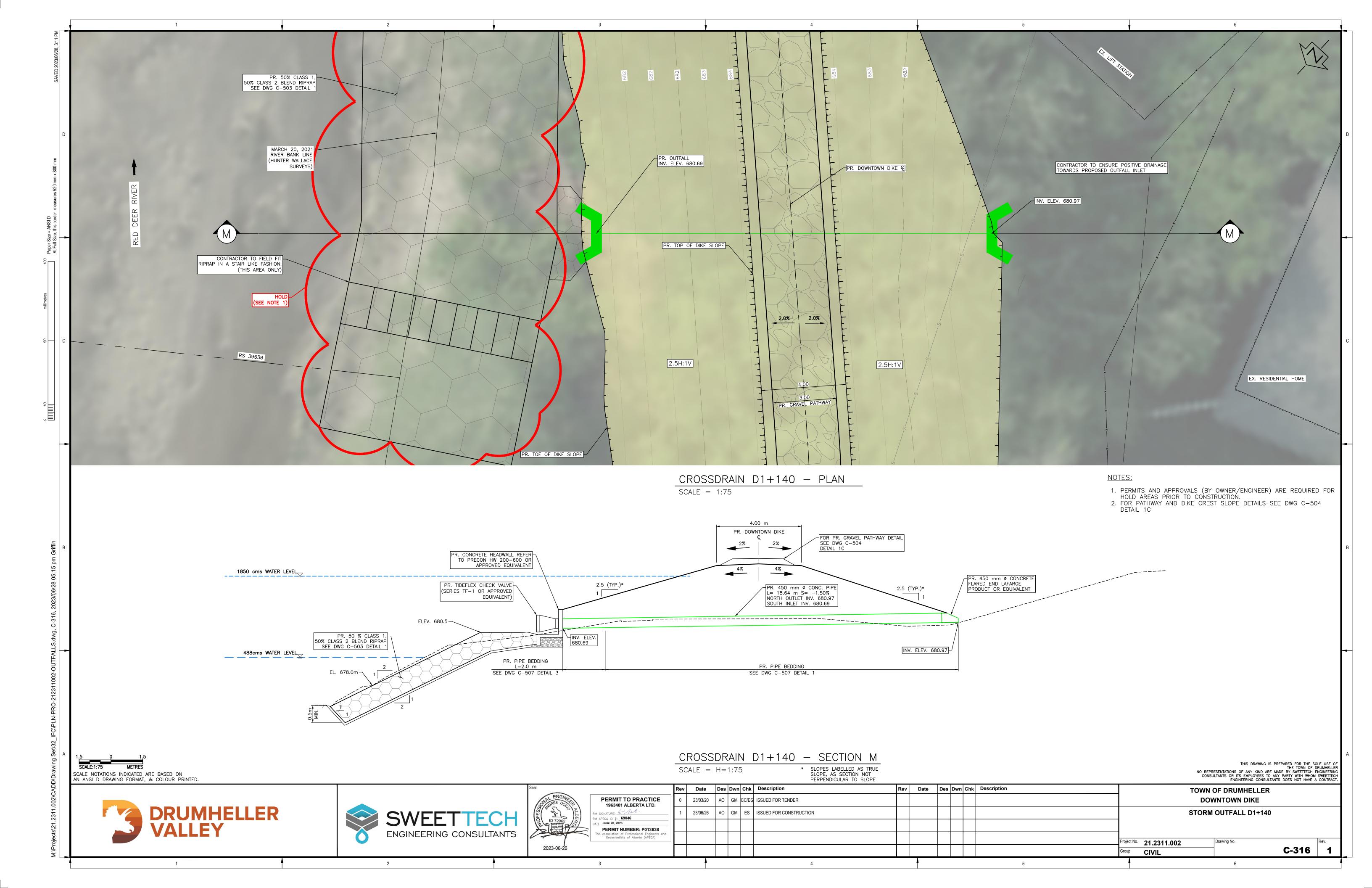


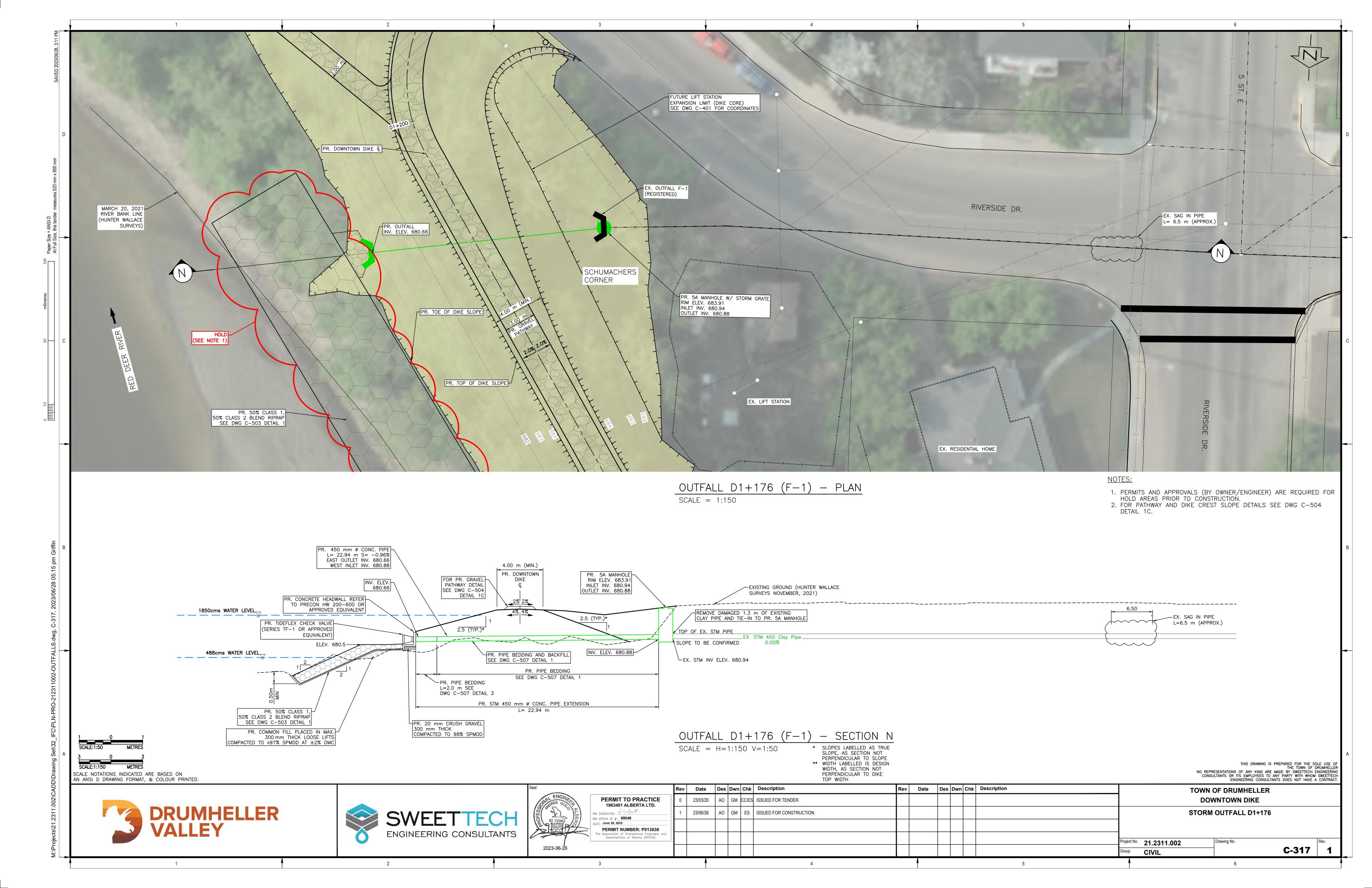


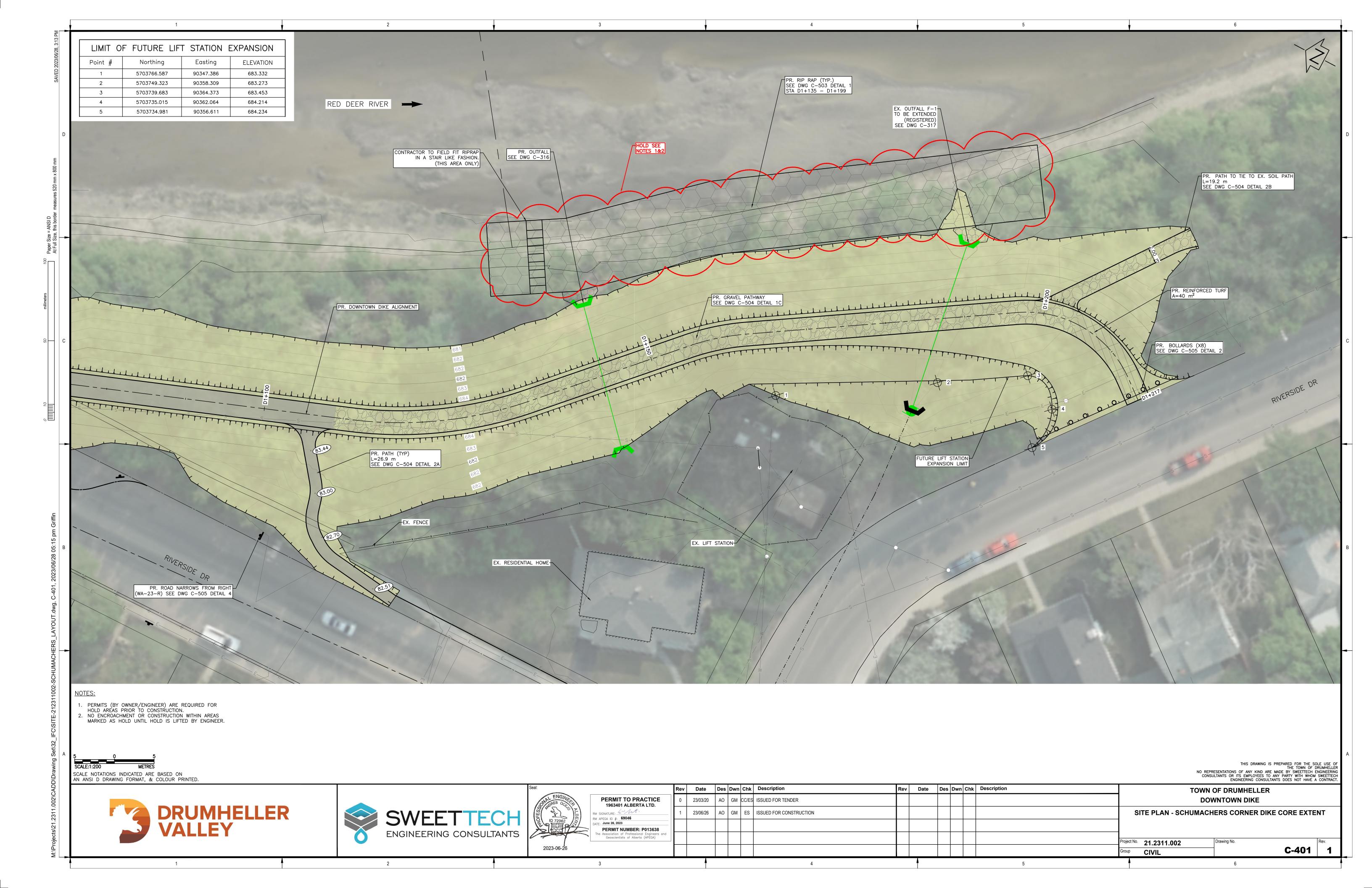


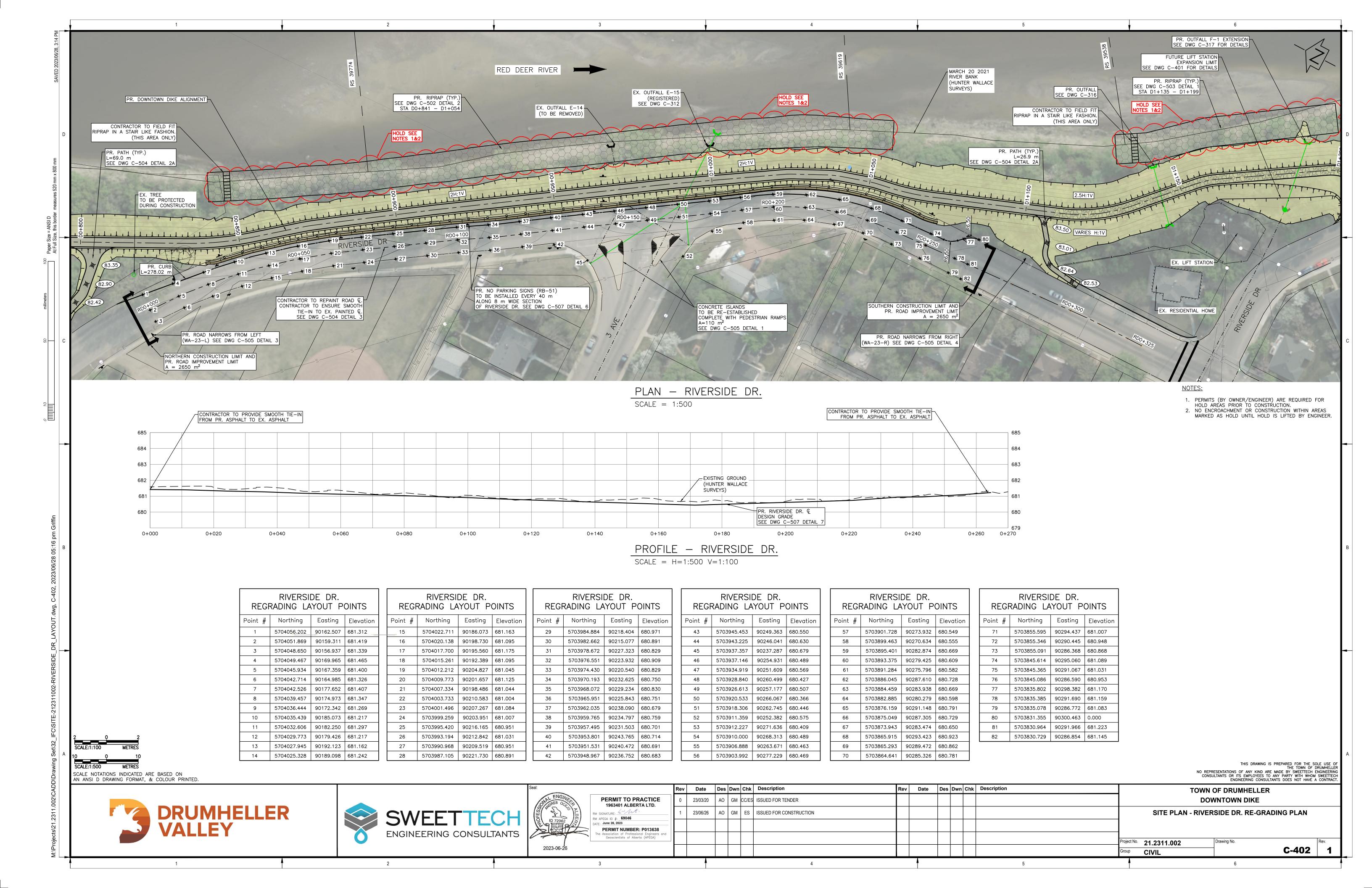


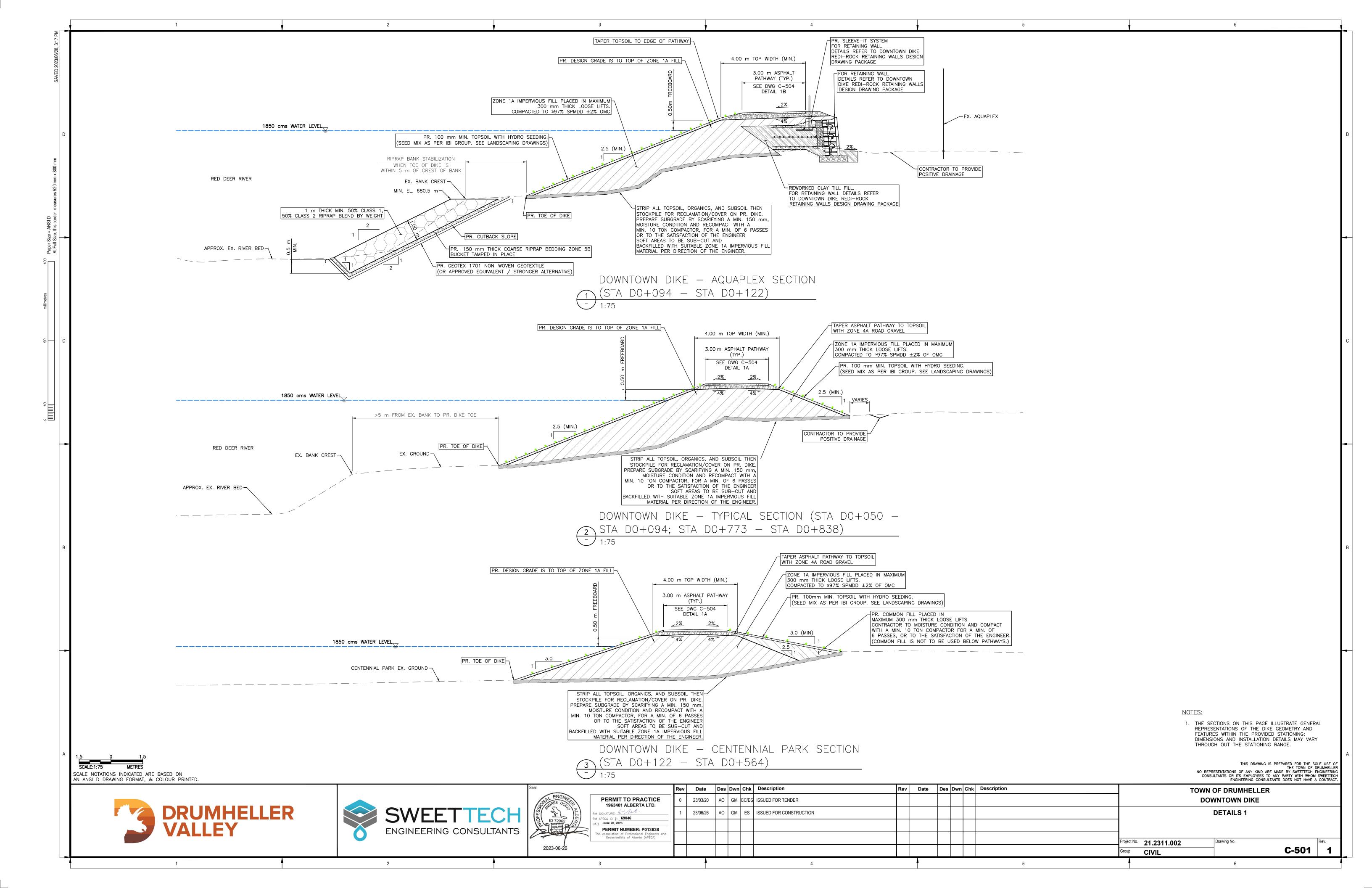


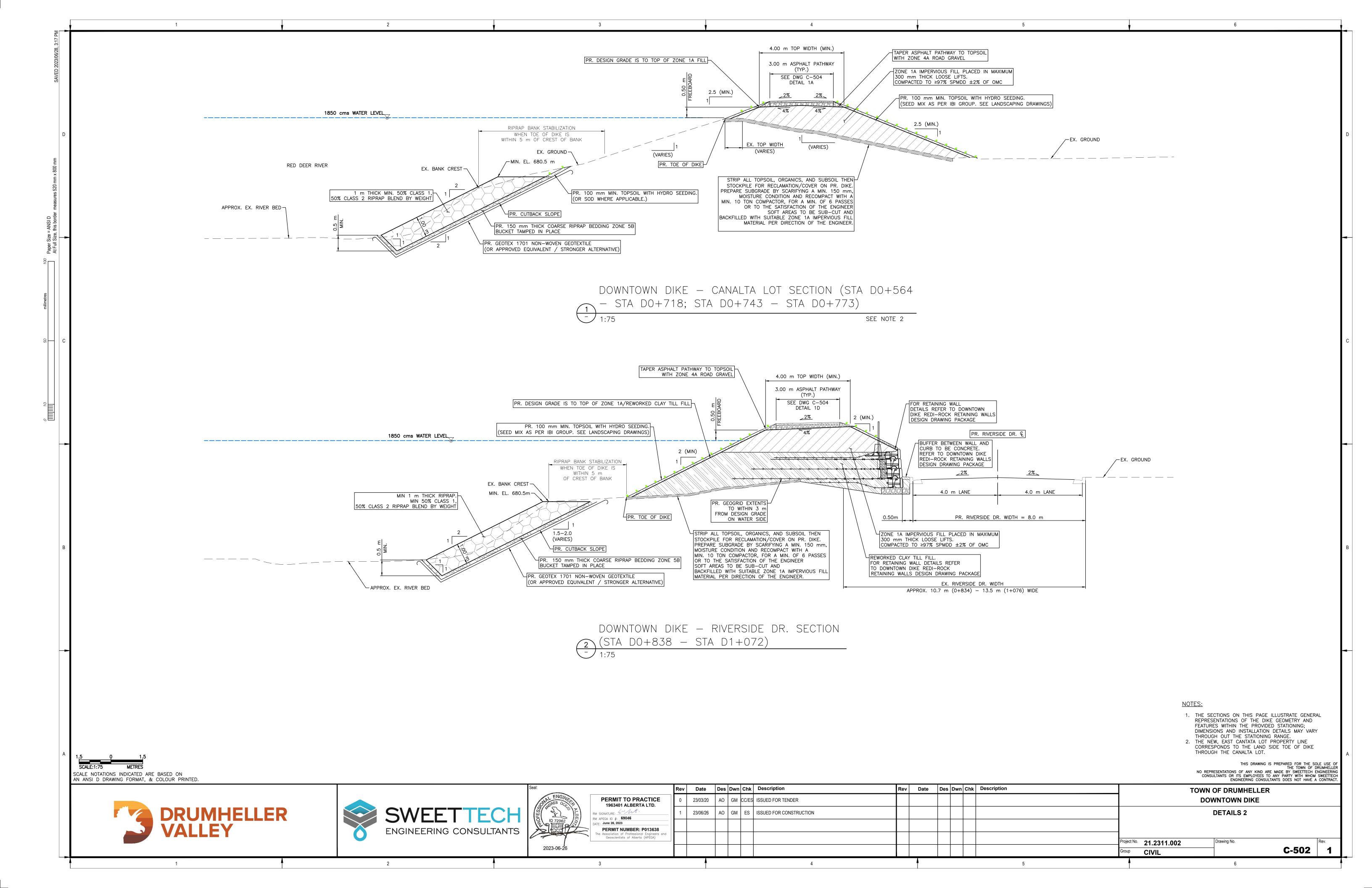


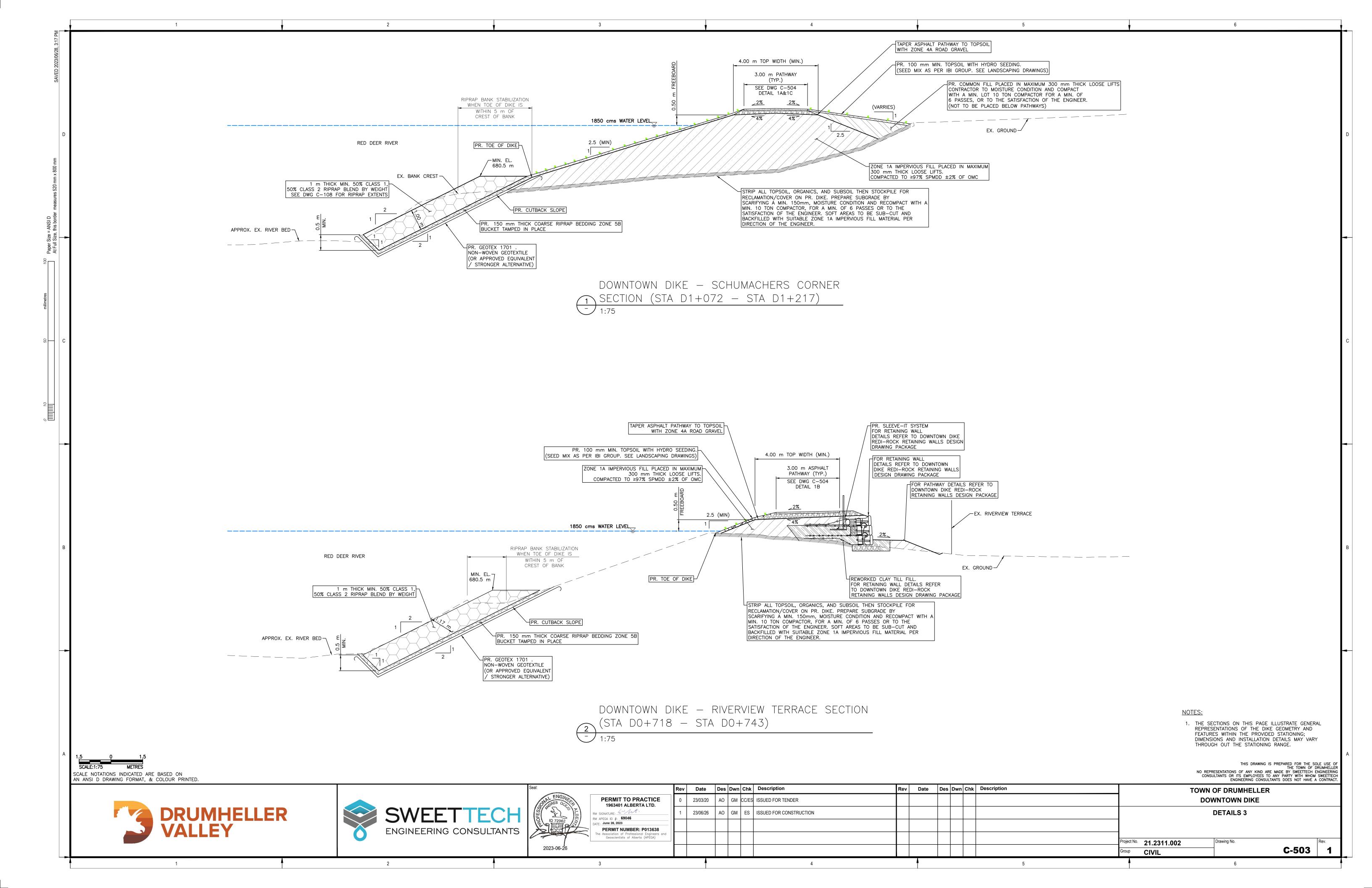


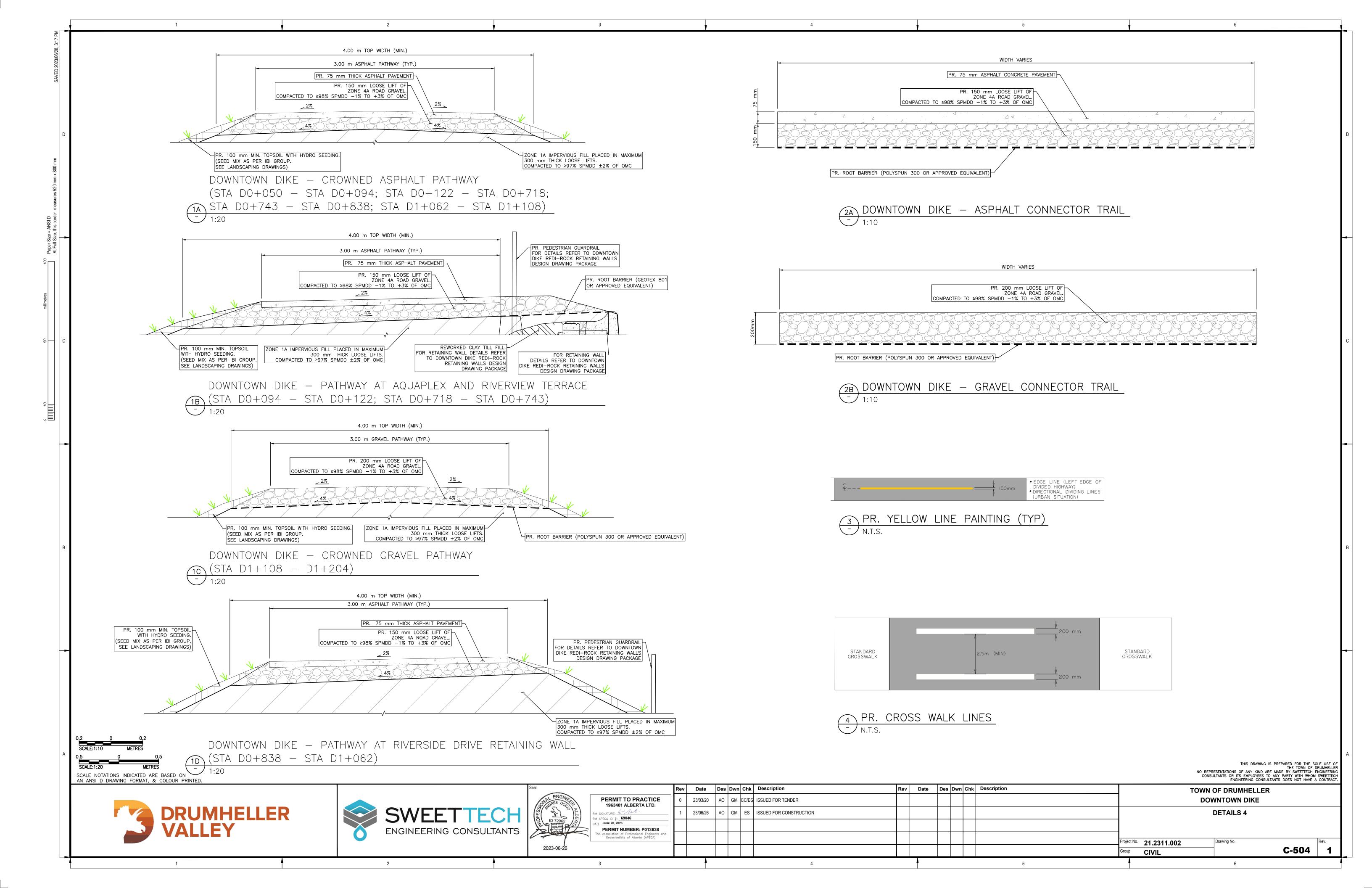




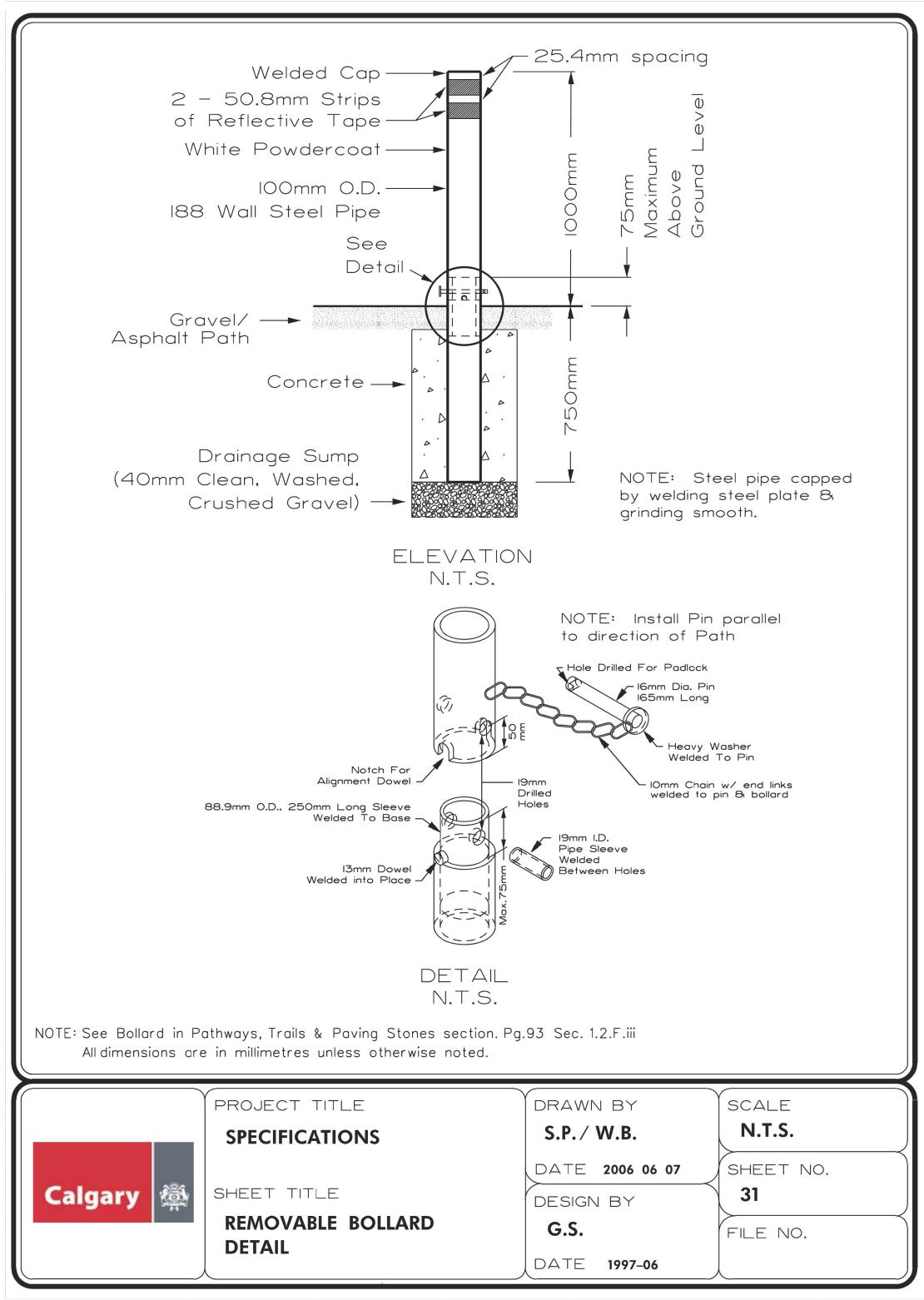








**Detail Sheet 31: Bollards - Removable** 



**ROAD NARROWS FROM LEFT** 

**WA-23-T** 



SECTION F	EFERENCE		)
DIMENSIONS (mm)		DIMENSIONS (mm) 750 X 750	
ENLARGEME	ENT FACTOR	7.5 X	
	COL	OUR	Government
BACKGROUND	BORDER	MESSAGE / SYMBOL	of Alberta
YELLOW	BLACK	BLACK	Transportation

SIGN - ROAD NARROWS FROM LEFT

**ROAD NARROWS FROM RIGHT** 

**WA-23-T** 



SECTION R	EFERENCE		
DIMENSIO	DIMENSIONS (mm) 750 X 750		
ENLARGEME	NT FACTOR	7.5 X	] _
	COL	OUR	Government
BACKGROUND	BORDER	MESSAGE / SYMBOL	of Alberta
YELLOW	BLACK	BLACK	Transportation

SIGN - ROAD NARROWS FROM RIGHT

CIVIL

THIS DRAWING IS PREPARED FOR THE SOLE USE OF THE TOWN OF DRUMHELLER NO REPRESENTATIONS OF ANY KIND ARE MADE BY SWEETTECH ENGINEERING CONSULTANTS OR ITS EMPLOYEES TO ANY PARTY WITH WHOM SWEETTECH ENGINEERING CONSULTANTS DOES NOT HAVE A CONTRACT.

C-505

**TOWN OF DRUMHELLER** DOWNTOWN DIKE

Rev Date Des Dwn Chk Description Rev Date Des Dwn Chk Description AO GM CC/ES ISSUED FOR TENDER AO GM ES ISSUED FOR CONSTRUCTION **DETAILS 5** oject No. **21.2311.002** 

DIKE ACCESS BOLLARDS

N.T.S.

DRUMHELLER VALLEY



