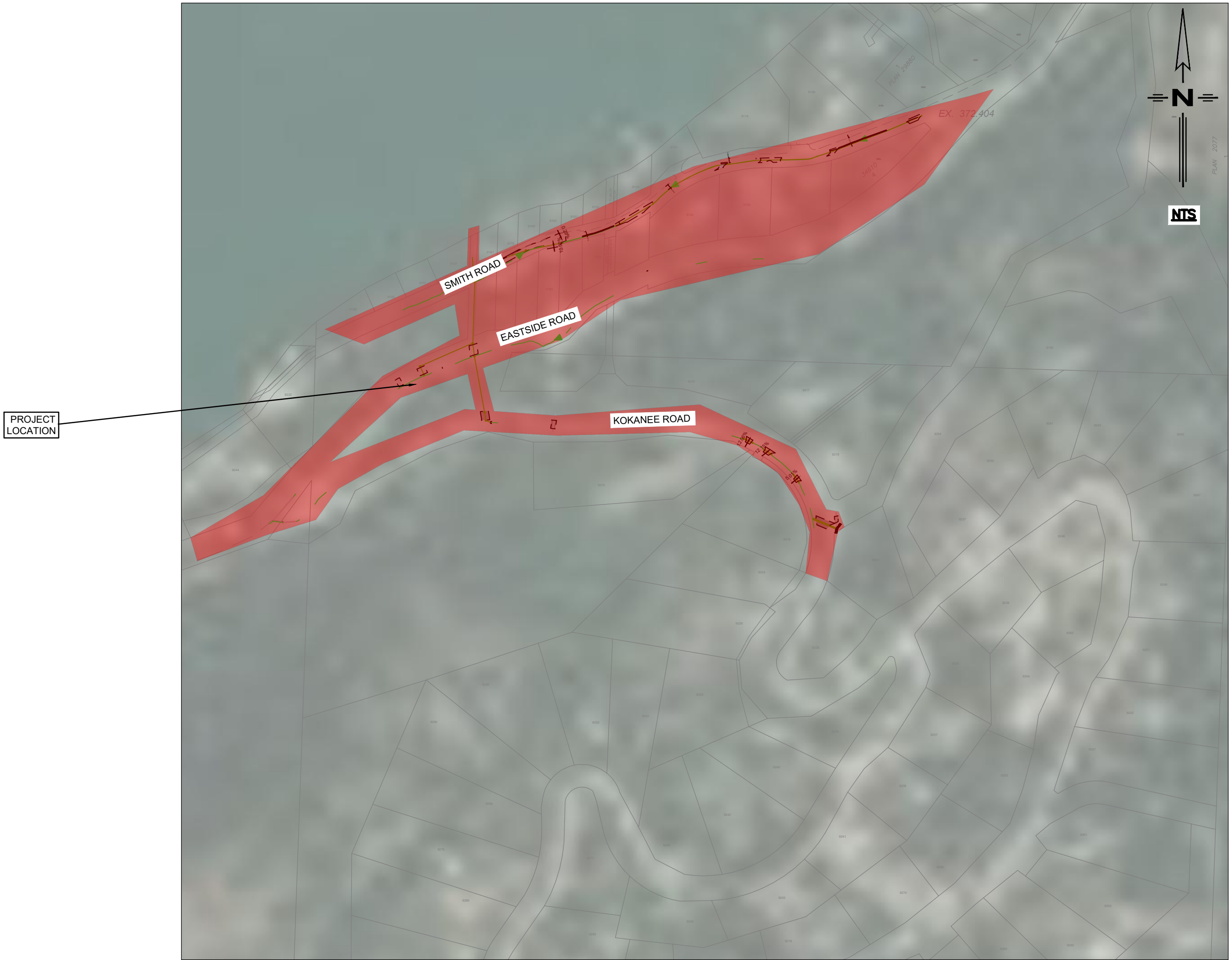


SOUTH BASIN DRAINAGE IMPROVEMENTS SMITH/EASTSIDE/KOKANEE ROAD

RE-ISSUED FOR CONSTRUCTION

COV PROJECT NO.: 25-10-INF

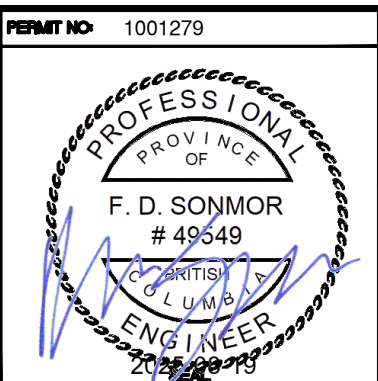
LEL PROJECT NO.: 173-11



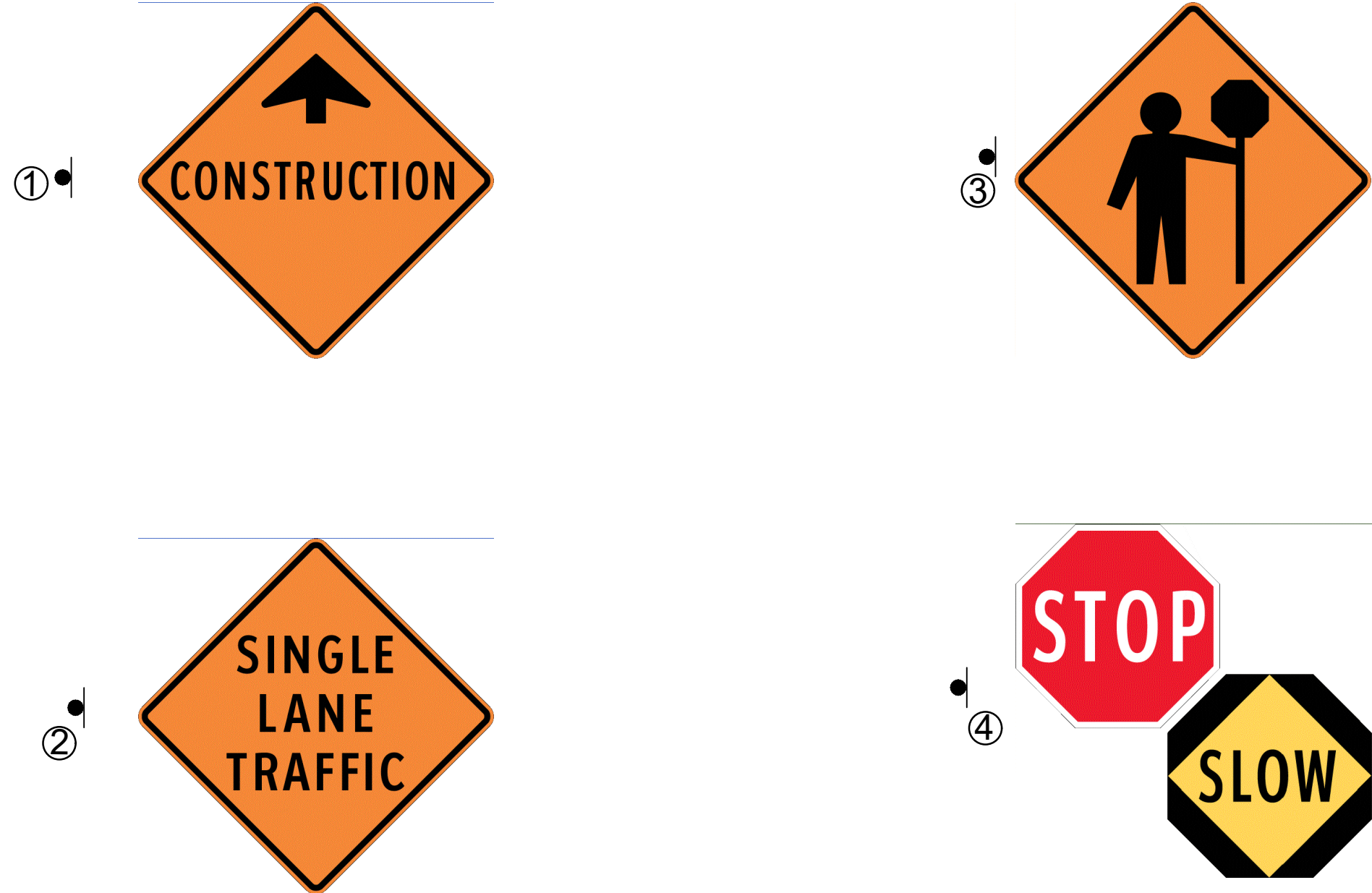
DRAWING INDEX:

- C000 – COVER SHEET
- C101 – KEY PLAN
- C102 – TRAFFIC MANAGEMENT PLAN
- C103 – EROSION AND SEDIMENT PLAN
- C104 – OVERALL STORM CATCHMENT PLAN
- C105 – OVERALL STORM PLAN & BOREHOLE LOG
- C201 – KOKANEE ROAD PLAN–PROFILE STA: 0+000 TO 0+380
- C202 – KOKANEE ROAD PLAN–PROFILE STA: 0+380 TO 0+600
- C203 – EASTSIDE ROAD PLAN–PROFILE STA: 0+070 TO 0+380
- C204 – EASTSIDE ROAD PLAN–PROFILE STA: 0+380 TO 0+670
- C205 – SMITH ROAD PLAN–PROFILE STA: 0+080 TO 0+380
- C206 – SMITH ROAD PLAN–PROFILE STA: 0+380 TO 0+680
- C207 – ROW PLAN–PROFILE STA: 0+000 TO 0+200
- C301 – KOKANEE ROAD CROSS SECTIONS
- C302 – KOKANEE ROAD CROSS SECTIONS
- C303 – EASTSIDE ROAD CROSS SECTIONS
- C304 – EASTSIDE ROAD CROSS SECTIONS
- C305 – SMITH ROAD CROSS SECTIONS
- C306 – SMITH ROAD CROSS SECTIONS
- C501 – CONSTRUCTION DETAILS
- C801 – CONSTRUCTION NOTES & STORM CALCULATIONS TABLE

REVISION INFORMATION					DESCRIPTION
REV. No.	DATE	DESIGNED	DRAWN	CHECKED	
1	2025/01/09	FDS	DLP	BTL	ISSUED FOR TENDER
2	2025/01/24	FDS	DLP	BTL	RE-ISSUED FOR TENDER
3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION

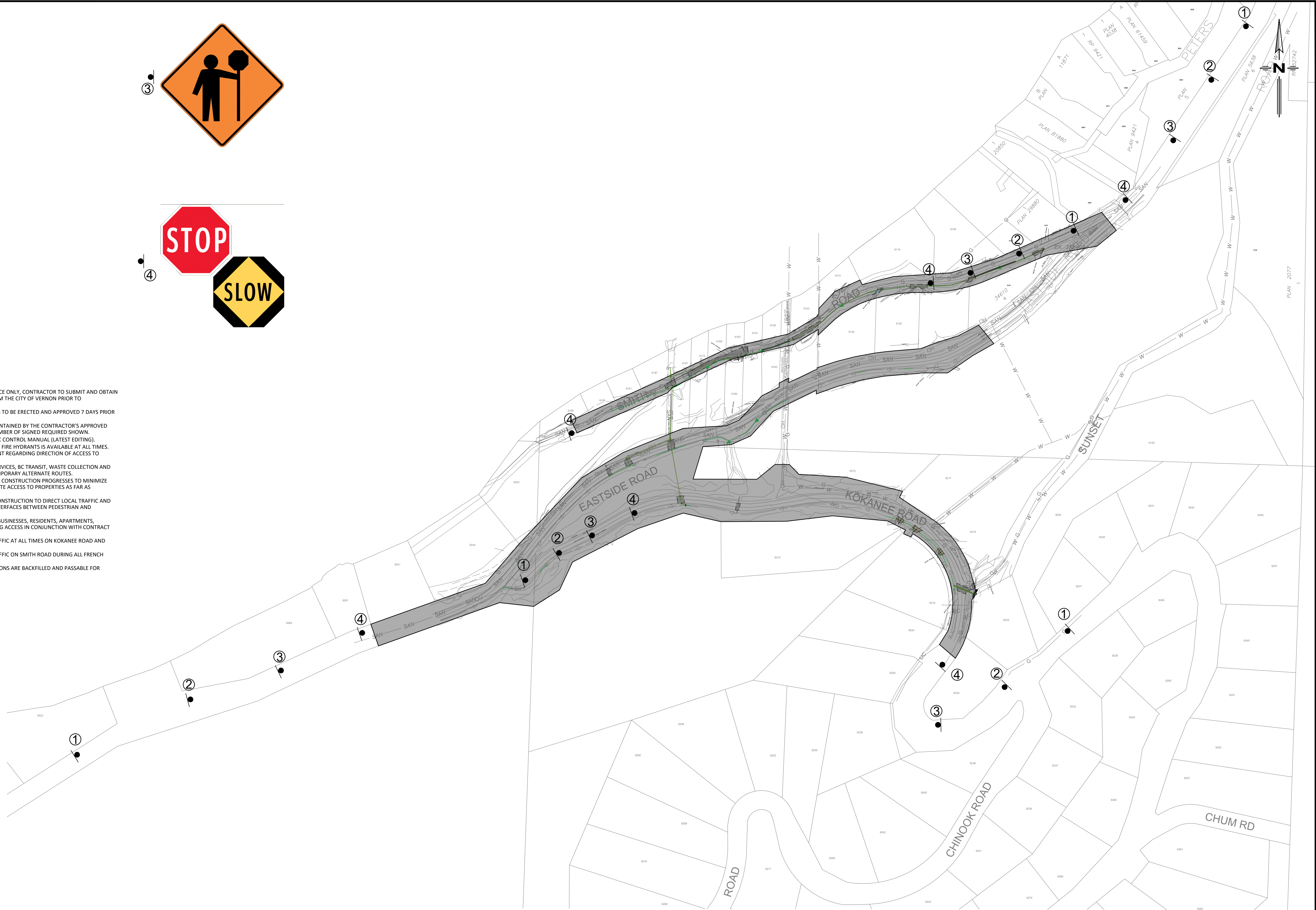


SCALE H:N/A	SOUTH BASIN DRAINAGE IMPROVEMENTS COVER SHEET	DRAWING NUMBER C000
SHEET 1 OF 21		

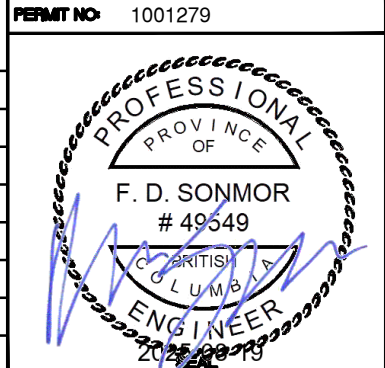


NOTES:

1. TRAFFIC MANAGEMENT PLAN IS FOR REFERENCE ONLY. CONTRACTOR TO SUBMIT AND OBTAIN APPROVED TRAFFIC MANAGEMENT PLAN FROM THE CITY OF VERNON PRIOR TO CONSTRUCTION.
2. ALL TRAFFIC AND PEDESTRIAN CONTROL SIGNS TO BE ERECTED AND APPROVED 7 DAYS PRIOR TO START OF CONSTRUCTION.
3. ALL SIGNS TO BE SUPPLIED, ERECTED AND MAINTAINED BY THE CONTRACTOR'S APPROVED TRAFFIC MANAGEMENT PLAN. MINIMUM NUMBER OF SIGNED REQUIRED SHOWN.
4. SPACING OF SIGNS TO BE AS PER MOTI TRAFFIC CONTROL MANUAL (LATEST EDITING).
5. CONTRACTOR TO ENSURE ACCESS TO EXISTING FIRE HYDRANTS IS AVAILABLE AT ALL TIMES. CONTRACTOR TO LIAISE WITH FIRE DEPARTMENT REGARDING DIRECTION OF ACCESS TO HYDRANTS.
6. CONTRACTOR TO LIAISE WITH EMERGENCY SERVICES, BC TRANSIT, WASTE COLLECTION AND SCHOOL BUSES FOR ACCESS TO AREA AND TEMPORARY ALTERNATE ROUTES.
7. DETOUR ROUTES SIGNAGE TO BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MINIMIZE INCONVENIENCE TO MOTORISTS AND FACILITATE ACCESS TO PROPERTIES AS FAR AS PRACTICALLY POSSIBLE.
8. FLAGGERS REQUIRED AT ALL TIMES DURING CONSTRUCTION TO DIRECT LOCAL TRAFFIC AND PEDESTRIANS. FLAGGERS REQUIRED AT ALL INTERFACES BETWEEN PEDESTRIAN AND CONSTRUCTION OPERATIONS.
9. CONSTRUCTION TO LIAISE DAILY WITH LOCAL BUSINESSES, RESIDENTS, APARTMENTS, BUILDINGS AND CONDO BUILDINGS REGARDING ACCESS IN CONJUNCTION WITH CONTRACT ADMINISTRATOR AND THE CITY OF VERNON.
10. CONTRACTOR TO MAINTAIN SINGLE-LANE TRAFFIC AT ALL TIMES ON KOKANEE ROAD AND EASTSIDE ROAD.
11. CONTRACTOR TO MAINTAIN SINGLE-LANE TRAFFIC ON SMITH ROAD DURING ALL FRENCH DRAIN AND SURFACE WORKS.
12. CONTRACTOR TO ENSURE ALL OPEN EXCAVATIONS ARE BACKFILLED AND PASSABLE FOR RESIDENTIAL TRAFFIC AT END OF DAY.



REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
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4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



SCALE
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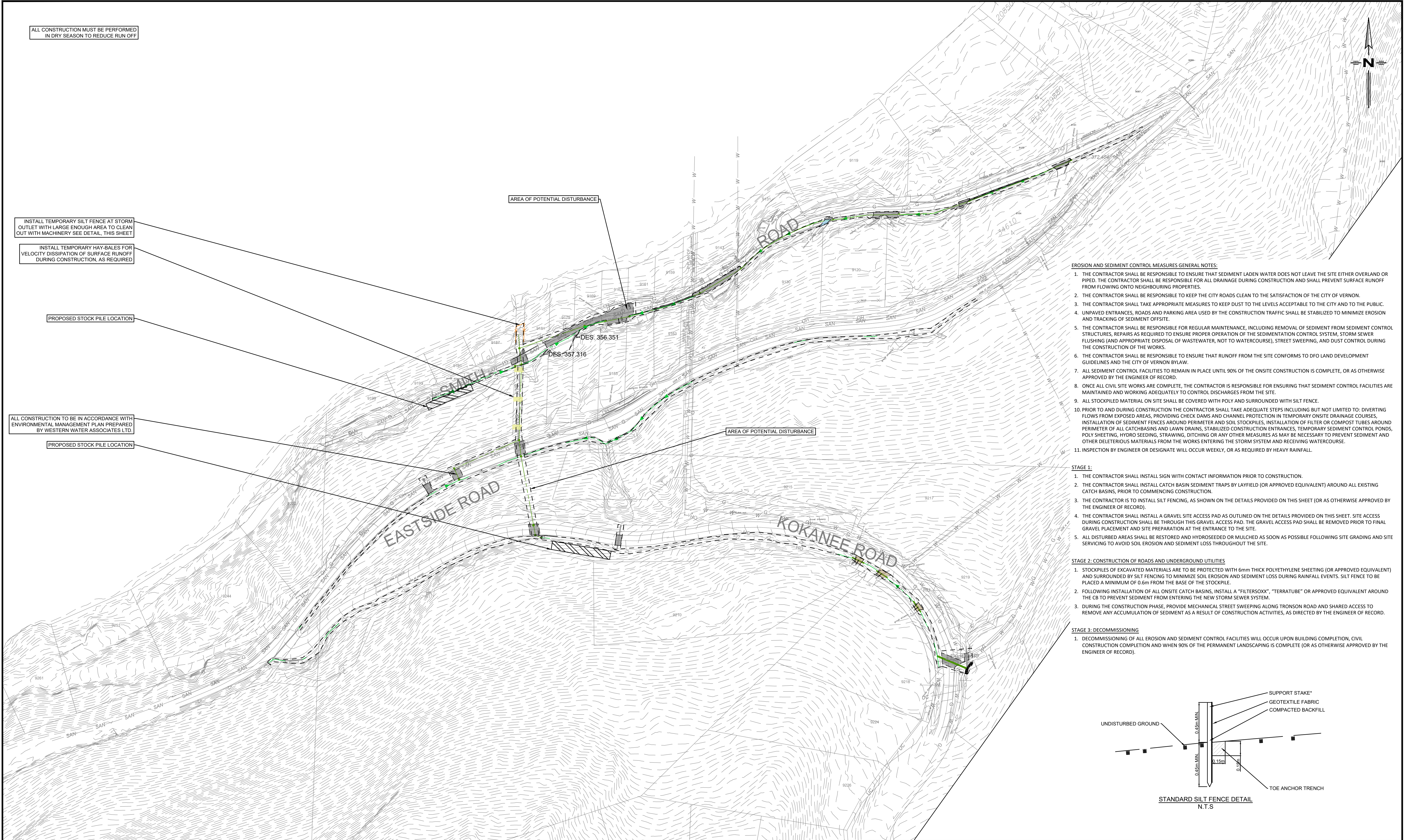
SHEET
3 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
TRAFFIC MANAGEMENT PLAN

DRAWING NUMBER
C102

Z:\Projects\173\11 - North & South Basin Drainage Improvements\1 - Civil Engineering\Drawings\1 - Design\South Basin\173-11 - SouthBasinSmithRoad - DSN - 2024-12-02.dwg

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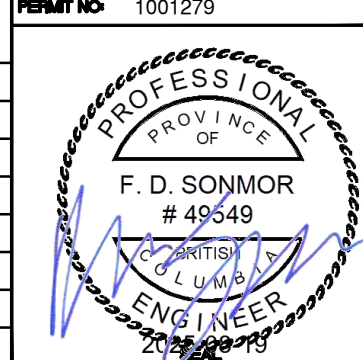
- EROSION AND SEDIMENT CONTROL MEASURES GENERAL NOTES:
1. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT SEDIMENT LADEN WATER DOES NOT LEAVE THE SITE EITHER OVERLAND OR PIPED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DRAINAGE DURING CONSTRUCTION AND SHALL PREVENT SURFACE RUNOFF FROM FLOWING ONTO NEIGHBOURING PROPERTIES.
 2. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THE CITY ROADS CLEAN TO THE SATISFACTION OF THE CITY OF VERNON.
 3. THE CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO KEEP DUST TO THE LEVELS ACCEPTABLE TO THE CITY AND TO THE PUBLIC.
 4. UNPAVED ENTRANCES, ROADS AND PARKING AREA USED BY THE CONSTRUCTION TRAFFIC SHALL BE STABILIZED TO MINIMIZE EROSION AND TRACKING OF SEDIMENT OFFSITE.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REGULAR MAINTENANCE, INCLUDING REMOVAL OF SEDIMENT FROM SEDIMENT CONTROL STRUCTURES, REPAIRS AS REQUIRED TO ENSURE PROPER OPERATION OF THE SEDIMENTATION CONTROL SYSTEM, STORM SEWER FLUSHING (AND APPROPRIATE DISPOSAL OF WASTEWATER, NOT TO WATERCOURSE), STREET SWEEPING, AND DUST CONTROL DURING THE CONSTRUCTION OF THE WORKS.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT RUNOFF FROM THE SITE CONFORMS TO DFO LAND DEVELOPMENT GUIDELINES AND THE CITY OF VERNON BYLAW.
 7. ALL SEDIMENT CONTROL FACILITIES TO REMAIN IN PLACE UNTIL 90% OF THE ONSITE CONSTRUCTION IS COMPLETE, OR AS OTHERWISE APPROVED BY THE ENGINEER OF RECORD.
 8. ONCE ALL CIVIL SITE WORKS ARE COMPLETE, THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT SEDIMENT CONTROL FACILITIES ARE MAINTAINED AND WORKING ADEQUATELY TO CONTROL DISCHARGES FROM THE SITE.
 9. ALL STOCKPILED MATERIAL ON SITE SHALL BE COVERED WITH POLY AND SURROUNDED WITH SILT FENCE.
 10. PRIOR TO AND DURING CONSTRUCTION THE CONTRACTOR SHALL TAKE ADEQUATE STEPS INCLUDING BUT NOT LIMITED TO: DIVERTING FLOWS FROM EXPOSED AREAS, PROVIDING CHECK DAMS AND CHANNEL PROTECTION IN TEMPORARY ONSITE DRAINAGE COURSES, INSTALLATION OF SEDIMENT FENCES AROUND PERIMETER AND SOIL STOCKPILES, INSTALLATION OF FILTER OR COMPOST TUBES AROUND PERIMETER OF ALL CATCHBASINS AND LAWN DRAINS, STABILIZED CONSTRUCTION ENTRANCES, TEMPORARY SEDIMENT CONTROL PONDS, POLY SHEETING, HYDRO SEEDING, STRAWING, DITCHING OR ANY OTHER MEASURES AS MAY BE NECESSARY TO PREVENT SEDIMENT AND OTHER DELETERIOUS MATERIALS FROM THE WORKS ENTERING THE STORM SYSTEM AND RECEIVING WATERCOURSE.
 11. INSPECTION BY ENGINEER OR DESIGNATE WILL OCCUR WEEKLY, OR AS REQUIRED BY HEAVY RAINFALL.

- STAGE 1:
1. THE CONTRACTOR SHALL INSTALL SIGN WITH CONTACT INFORMATION PRIOR TO CONSTRUCTION.
 2. THE CONTRACTOR SHALL INSTALL CATCH BASIN SEDIMENT TRAPS BY LAYFIELD (OR APPROVED EQUIVALENT) AROUND ALL EXISTING CATCH BASINS, PRIOR TO COMMENCING CONSTRUCTION.
 3. THE CONTRACTOR IS TO INSTALL SILT FENCING, AS SHOWN ON THE DETAILS PROVIDED ON THIS SHEET (OR AS OTHERWISE APPROVED BY THE ENGINEER OF RECORD).
 4. THE CONTRACTOR SHALL INSTALL A GRAVEL SITE ACCESS PAD AS OUTLINED ON THE DETAILS PROVIDED ON THIS SHEET. SITE ACCESS DURING CONSTRUCTION SHALL BE THROUGH THIS GRAVEL ACCESS PAD. THE GRAVEL ACCESS PAD SHALL BE REMOVED PRIOR TO FINAL GRAVEL PLACEMENT AND SITE PREPARATION AT THE ENTRANCE TO THE SITE.
 5. ALL DISTURBED AREAS SHALL BE RESTORED AND HYDROSEED OR MULCHED AS SOON AS POSSIBLE FOLLOWING SITE GRADING AND SITE SERVICING TO AVOID SOIL EROSION AND SEDIMENT LOSS THROUGHOUT THE SITE.

- STAGE 2: CONSTRUCTION OF ROADS AND UNDERGROUND UTILITIES
1. STOCKPILES OF EXCAVATED MATERIALS ARE TO BE PROTECTED WITH 6mm THICK POLYETHYLENE SHEETING (OR APPROVED EQUIVALENT) AND SURROUNDED BY SILT FENCING TO MINIMIZE SOIL EROSION AND SEDIMENT LOSS DURING RAINFALL EVENTS. SILT FENCE TO BE PLACED A MINIMUM OF 0.6m FROM THE BASE OF THE STOCKPILE.
 2. FOLLOWING INSTALLATION OF ALL ONSITE CATCH BASINS, INSTALL A "FILTERSOX", "TERRATUBE" OR APPROVED EQUIVALENT AROUND THE CB TO PREVENT SEDIMENT FROM ENTERING THE NEW STORM SEWER SYSTEM.
 3. DURING THE CONSTRUCTION PHASE, PROVIDE MECHANICAL STREET SWEEPING ALONG TRONSON ROAD AND SHARED ACCESS TO REMOVE ANY ACCUMULATION OF SEDIMENT AS A RESULT OF CONSTRUCTION ACTIVITIES, AS DIRECTED BY THE ENGINEER OF RECORD.

- STAGE 3: DECOMMISSIONING
1. DECOMMISSIONING OF ALL EROSION AND SEDIMENT CONTROL FACILITIES WILL OCCUR UPON BUILDING COMPLETION, CIVIL CONSTRUCTION COMPLETION AND WHEN 90% OF THE PERMANENT LANDSCAPING IS COMPLETE (OR AS OTHERWISE APPROVED BY THE ENGINEER OF RECORD).

REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
1	2025/01/09	FDS	DLP	BTL	ISSUED FOR TENDER
2	2025/01/24	FDS	DLP	BTL	RE-ISSUED FOR TENDER
3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



SCALE
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SHEET
4 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS

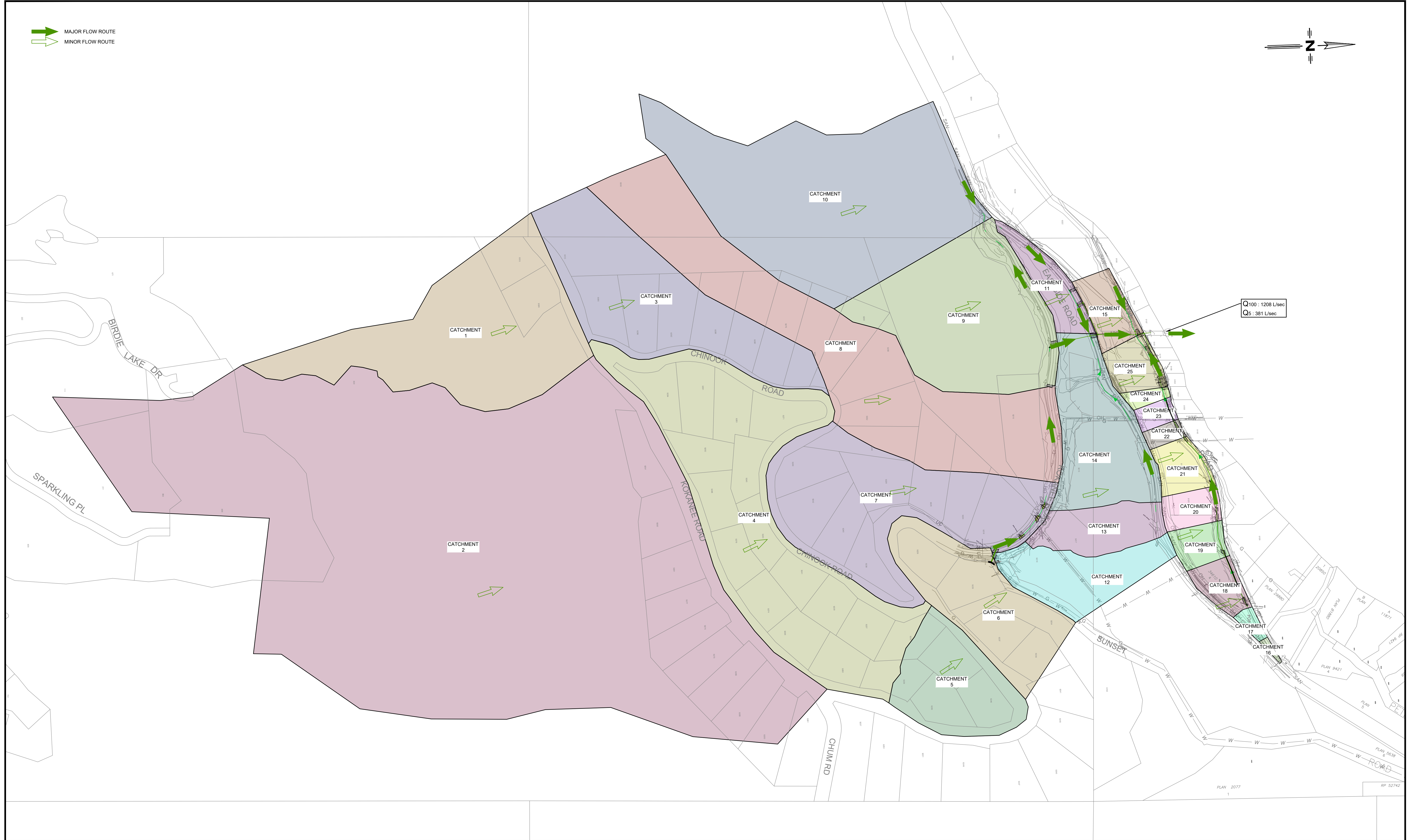
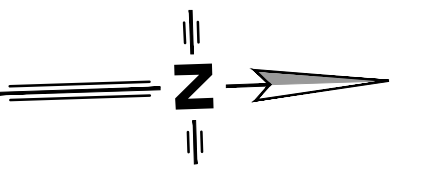
EROSION AND SEDIMENT PLAN

DRAWING NUMBER
C103

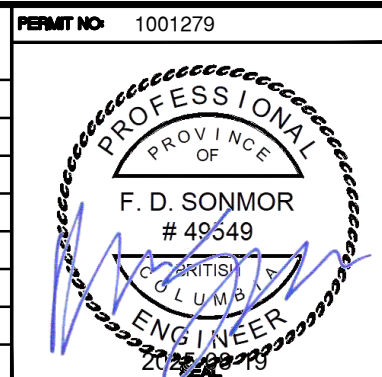
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19.08.2025

MAJOR FLOW ROUTE
MINOR FLOW ROUTE



REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
1	2025/01/09	FDS	DLP	BTL	ISSUED FOR TENDER
2	2025/01/24	FDS	DLP	BTL	RE-ISSUED FOR TENDER
3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



SCALE
H:1:2500

SHEET
5 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
OVERALL STORM
CATCHMENT PLAN

DRAWING NUMBER
C104

Z:\Projects\173\11 - North & South Basin Drainage Improvements\1 - Civil Engineering\Drawings\1 - Design\South Basin\173-11 - SouthBasinSmithRoad - DSN - 2024-12-02.dwg

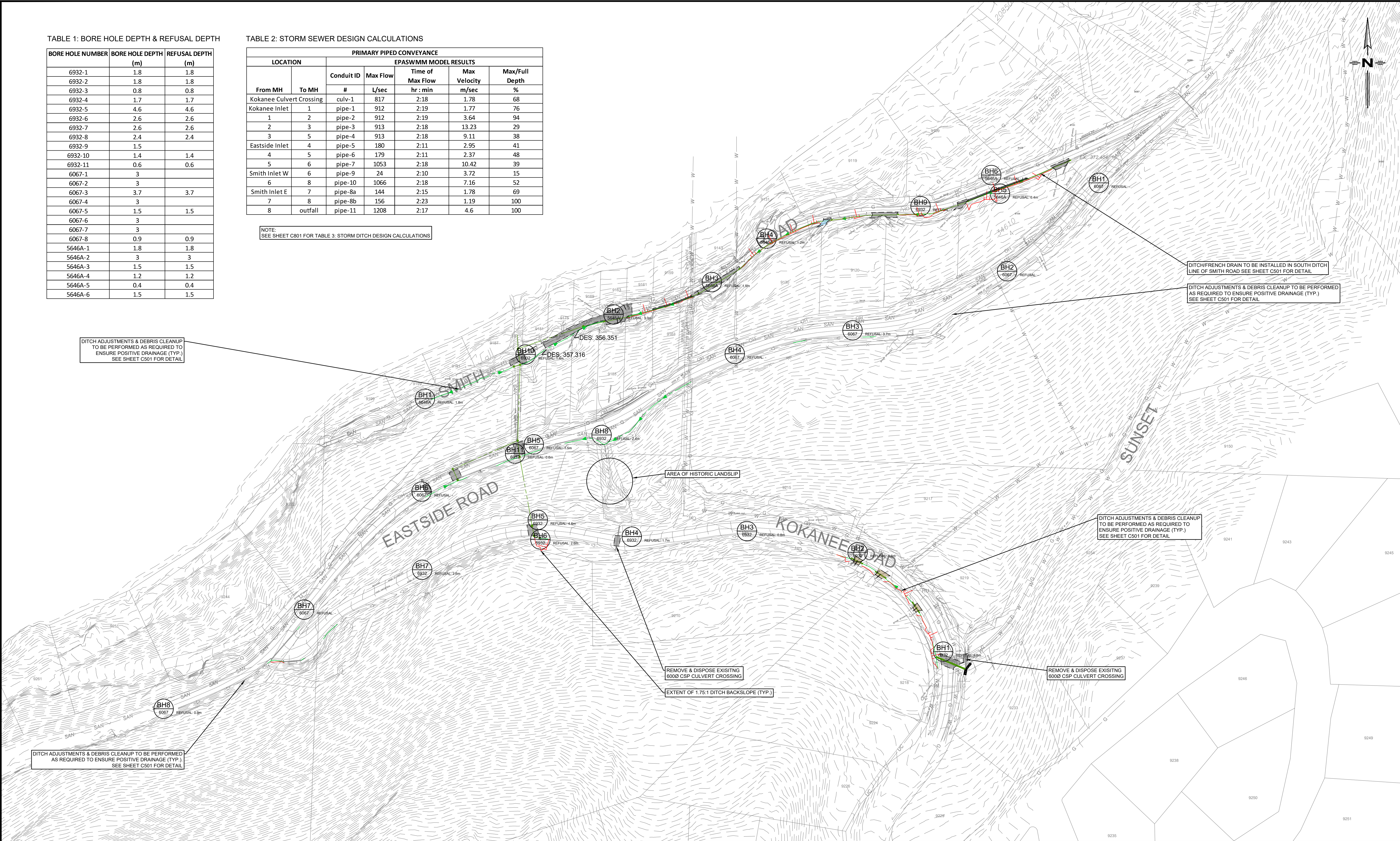
TABLE 1: BORE HOLE DEPTH & REFUSAL DEPTH

BORE HOLE NUMBER	BORE HOLE DEPTH (m)	REFUSAL DEPTH (m)
6932-1	1.8	1.8
6932-2	1.8	1.8
6932-3	0.8	0.8
6932-4	1.7	1.7
6932-5	4.6	4.6
6932-6	2.6	2.6
6932-7	2.6	2.6
6932-8	2.4	2.4
6932-9	1.5	
6932-10	1.4	1.4
6932-11	0.6	0.6
6067-1	3	
6067-2	3	
6067-3	3.7	3.7
6067-4	3	
6067-5	1.5	1.5
6067-6	3	
6067-7	3	
6067-8	0.9	0.9
5646A-1	1.8	1.8
5646A-2	3	3
5646A-3	1.5	1.5
5646A-4	1.2	1.2
5646A-5	0.4	0.4
5646A-6	1.5	1.5

TABLE 2: STORM SEWER DESIGN CALCULATIONS

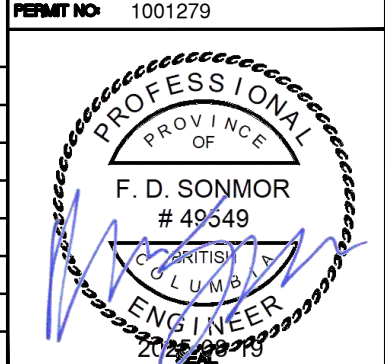
PRIMARY PIPED CONVEYANCE						
LOCATION		EPASWMM MODEL RESULTS				
From MH	To MH	Conduit ID	Max Flow	Time of Max Flow	Max Velocity	Max/Full Depth
		#	L/sec	hr : min	m/sec	%
Kokanee Culvert Crossing		culv-1	817	2:18	1.78	68
Kokanee Inlet	1	pipe-1	912	2:19	1.77	76
1	2	pipe-2	912	2:19	3.64	94
2	3	pipe-3	913	2:18	13.23	29
3	5	pipe-4	913	2:18	9.11	38
Eastside Inlet	4	pipe-5	180	2:11	2.95	41
4	5	pipe-6	179	2:11	2.37	48
5	6	pipe-7	1053	2:18	10.42	39
Smith Inlet W	6	pipe-9	24	2:10	3.72	15
6	8	pipe-10	1066	2:18	7.16	52
Smith Inlet E	7	pipe-8a	144	2:15	1.78	69
7	8	pipe-8b	156	2:23	1.19	100
8	outfall	pipe-11	1208	2:17	4.6	100

NOTE:
SEE SHEET C801 FOR TABLE 3: STORM DITCH DESIGN CALCULATIONS



REV. No.	DATE	DESIGNED	DRAWN	CHECKED
1	2025/01/09	FDS	DLP	BTB
2	2025/01/24	FDS	DLP	BTB
3	2025/03/06	FDS	DLP	BTB
4	2025/05/01	FDS	PJD	BTB
5	2025/08/19	FDS	DLP	BTB

DESCRIPTION	
1	ISSUED FOR TENDER
2	RE-ISSUED FOR TENDER
3	RE-ISSUED FOR TENDER
4	RE-ISSUED FOR TENDER
5	ISSUED FOR CONSTRUCTION



SCALE
H:1:1250

SHEET
6 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS

OVERALL STORM PLAN & BORE HOLE LOG

DRAWING NUMBER
C105

EXISTING UTILITY ELEVATIONS PROVIDED FOR INFORMATION ONLY. CONTRACTOR TO CONFIRM PRIOR TO CONSTRUCTION

EASTSIDE ROAD

KOKANEE ROAD

gravel driveway

OH

SAN

SHOULDER

edge of asphalt

road centerline

0+000

EX 575mm Ø STM CSP - 27.72m @ 3.98%

EX 575mm Ø STM CSP - 12.40m @ 2.26%

600mm Ø STM UR-PVC - 7.30m @ 2.00%

600mm Ø STM DR11 HDPE - 40.00m @ 2.00%

MH 2

(KOKANEE INLET)

MH 1

1500Ø PRECAST MANHOLE c/w VENTING, GRATED LID & FLOW DIRECTING BAFFLES

600mm Ø STM CSP - 4.13m @ 2.11%

0+200

0+250

0+300

17.4m @ 8.46%

CONTRACTOR TO REVIEW ALL MANHOLE LOCATIONS TO DETERMINE IF INSTALLATION REQUIRED THE USE OF TRENCH BOXES (TYP.)

1200Ø PRECAST MANHOLE c/w VENTING

REMOVE & REPLACE ASPHALT AS PER ROAD PAVEMENT RESTORATION AND KEY-IN DETAIL, SHEET C501

SUPPLY & INSTALL HEADWALL INLET STRUCTURE AS PER KOKANEE HEADWALL INLET STRUCTURE DETAIL, SHEET C501

CONTRACTOR TO REVIEW ALL INLET STRUCTURE TO DETERMINE IF INSTALLATION REQUIRES THE USE OF TRENCH BOXES (TYP.)

DITCH ADJUSTMENTS & DEBRIS CLEANUP TO BE PERFORMED AS REQUIRED TO ENSURE POSITIVE DRAINAGE (TYP.) SEE SHEET C501 FOR DETAIL

EXISTING GAS MAIN - CONTRACTOR TO CONFIRM LOCATION & DEPTH PRIOR TO CONSTRUCTION

EXISTING WATER MAIN - CONTRACTOR TO CONFIRM LOCATION & DEPTH PRIOR TO CONSTRUCTION

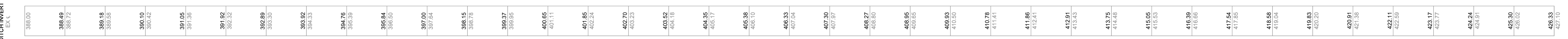
REMOVE & REPLACE ASPHALT AS PER ROAD PAVEMENT RESTORATION AND KEY-IN DETAIL, SHEET C501

REMOVE & DISPOSE EXISTING 600Ø CULVERT

GEO TECHNICAL ENGINEER TO CONFIRM ALL MAXIMUM ALLOWABLE PERMANENT CUT SLOPE ANGLES MIN. 1.75H : 1V (TYP.)

9210

N



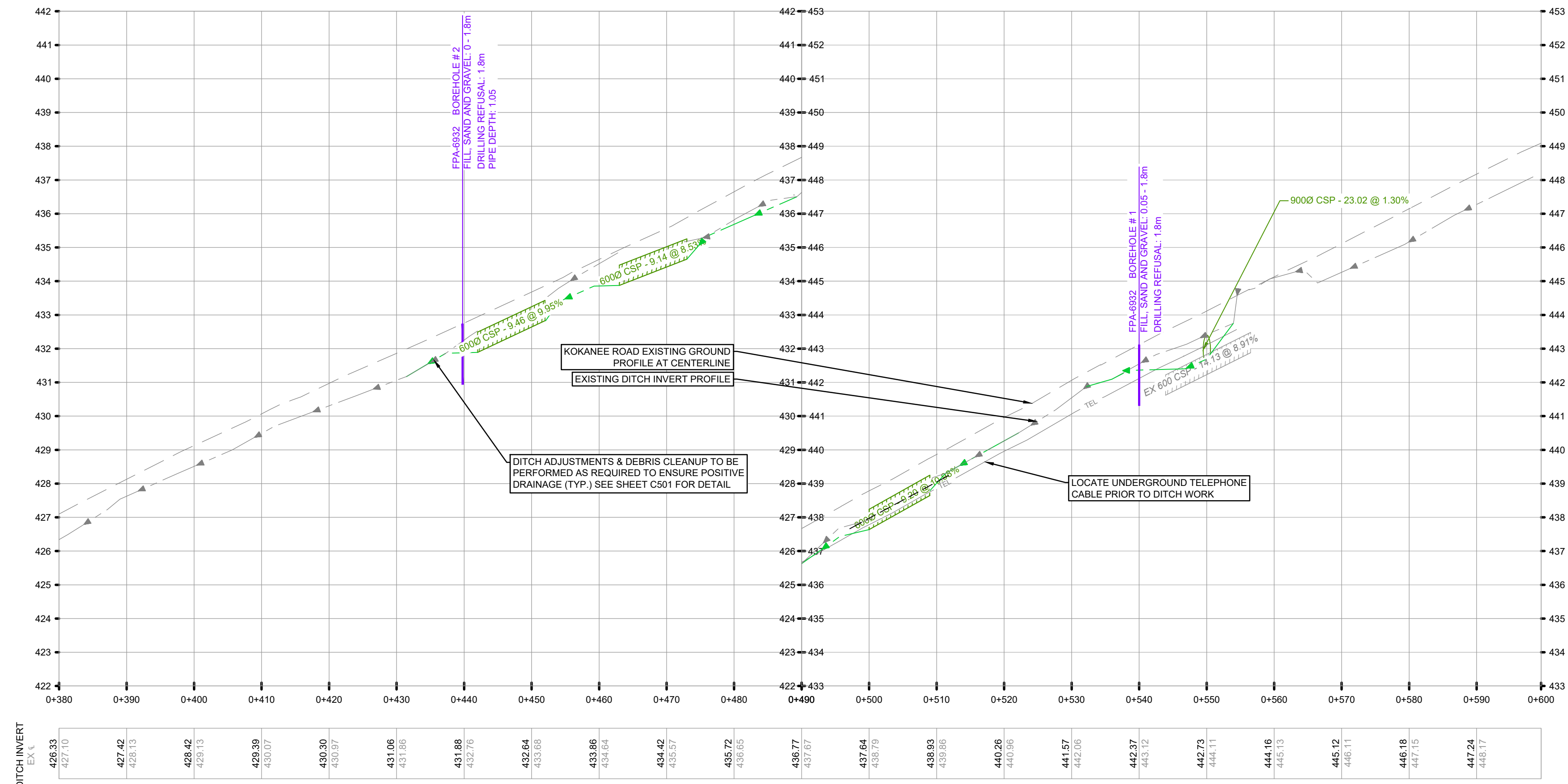
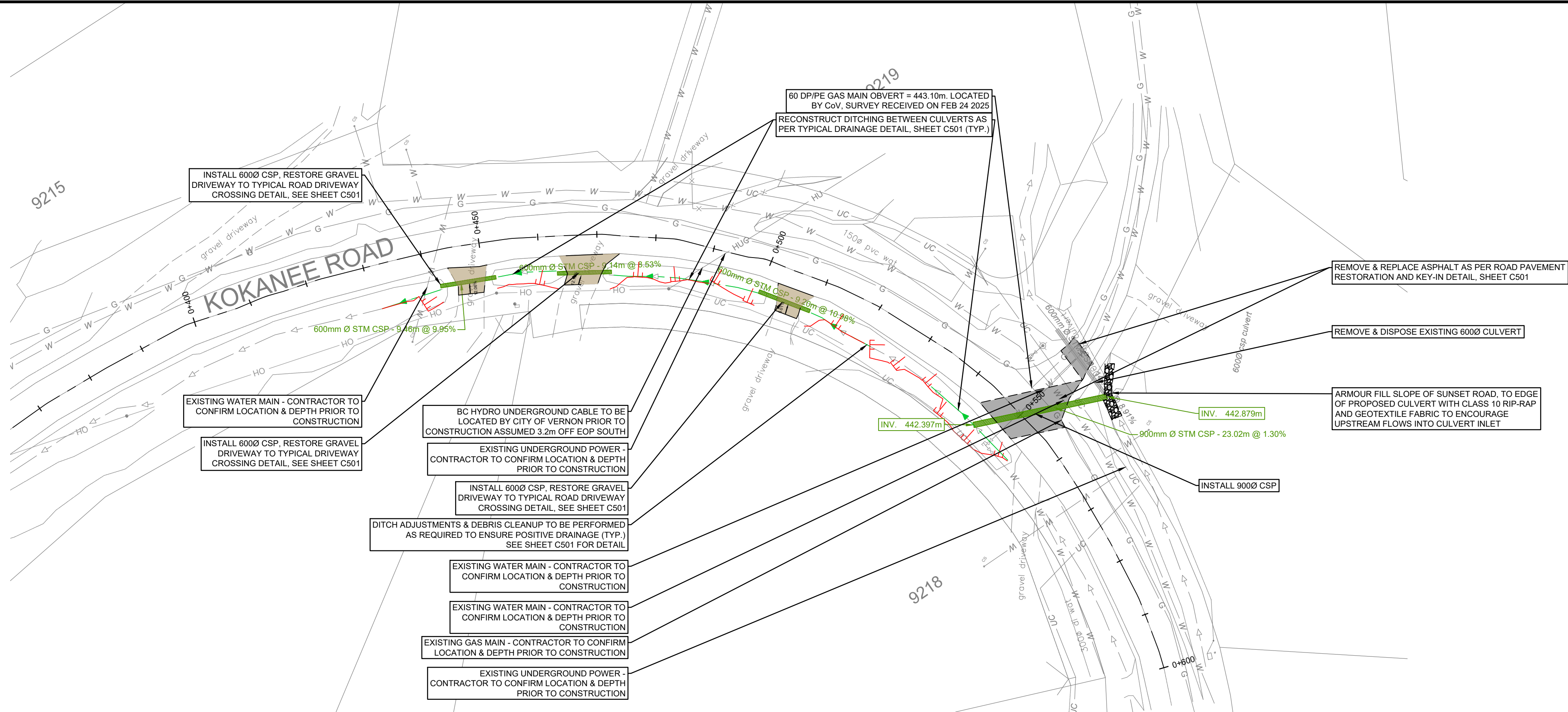
PERMIT NO: 1001279

PROFESSIONAL
OF
F. D. SONMOR
49649
CARTIST
COLUMBIA
ENGINEER
7-22-2009



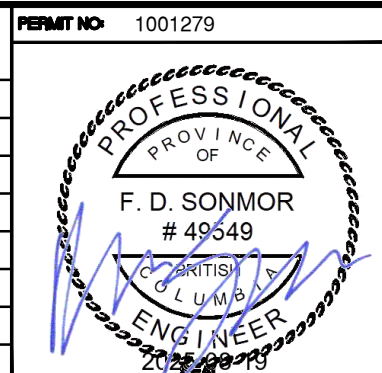
DRAWING NUMBER
C201

EXISTING UTILITY ELEVATIONS PROVIDED FOR INFORMATION ONLY. CONTRACTOR TO CONFIRM PRIOR TO CONSTRUCTION



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2	2025/01/24	FDS	DLP	BTL
3	2025/03/06	FDS	DLP	BTL
4	2025/05/01	FDS	PJD	BTL
5	2025/08/19	FDS	DLP	BTL

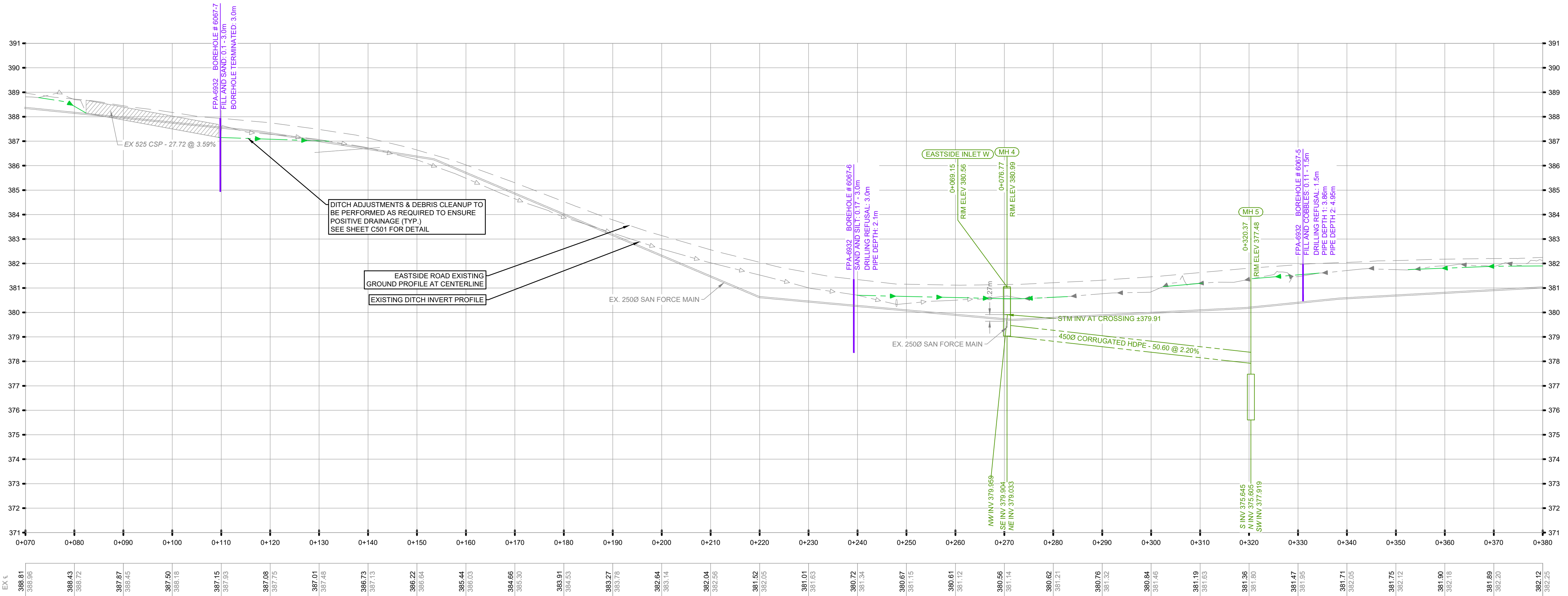
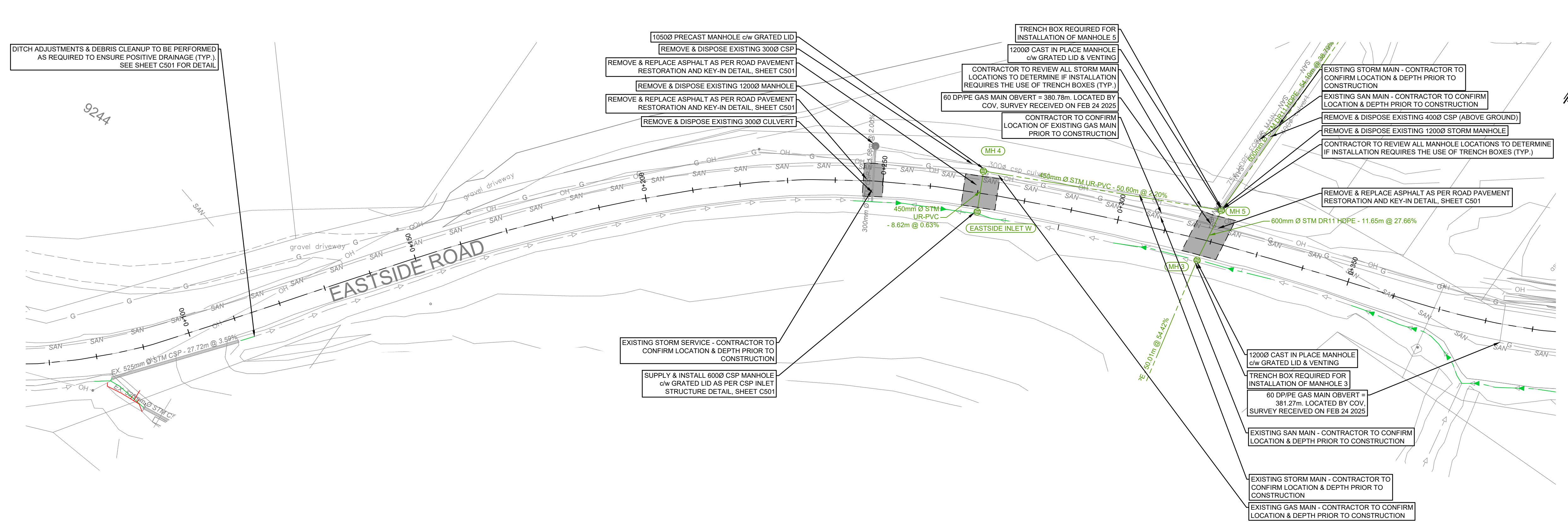
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ISSUED FOR TENDER
RE-ISSUED FOR TENDER
RE-ISSUED FOR TENDER
RE-ISSUED FOR TENDER
ISSUED FOR CONSTRUCTION



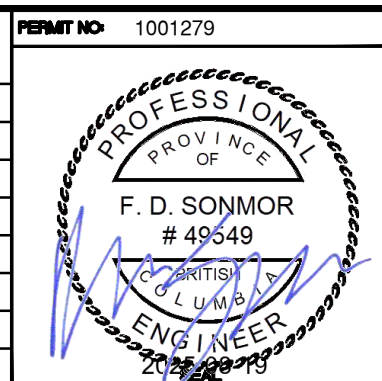
SCALE
H: 1:500
V: 1:100
SHEET
8 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
KOKANEE ROAD PLAN-PROFILE
STA: 0+380 TO 0+600
DRAWING NUMBER
C202

EXISTING UTILITY ELEVATIONS PROVIDED FOR INFORMATION ONLY. CONTRACTOR TO CONFIRM PRIOR TO CONSTRUCTION



REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
1	2025/01/09	FDS	DLP	BTL	ISSUED FOR TENDER
2	2025/01/24	FDS	DLP	BTL	RE-ISSUED FOR TENDER
3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



SCALE
H: 1:500
V: 1:100
SHEET
9 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
EASTSIDE ROAD PLAN-PROFILE STA: 0+070 TO 0+380
DRAWING NUMBER
C203

Z:\Projects\173\11 - North & South Basin Drainage Improvements\1 - Civil Engineering\Drawings\1 - Design\South Basin\173-11 - SouthBasinSmithRoad - DSN - 2024-12-02.dwg

19.08.2025

EXISTING UTILITY ELEVATIONS PROVIDED
FOR INFORMATION ONLY. CONTRACTOR TO
CONFIRM PRIOR TO CONSTRUCTION

60 DPIPE GAS MAIN OBVERT = 381.27m. LOCATED
BY COV. SURVEY RECEIVED ON FEB 24 2025

60 DPIPE GAS MAIN OBVERT = 381.75m. LOCATED
BY COV. SURVEY RECEIVED ON FEB 24 2025

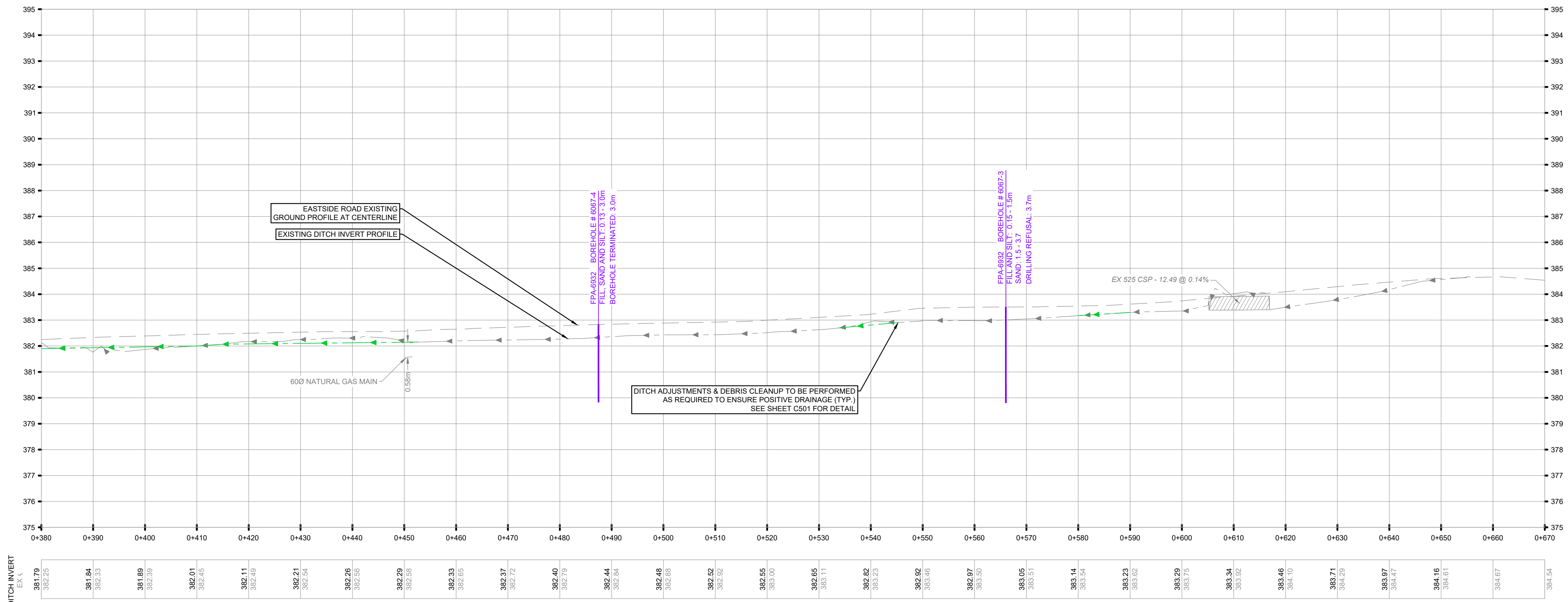
EXISTING STORM MAIN - CONTRACTOR TO
CONFIRM LOCATION & DEPTH PRIOR TO
CONSTRUCTION

60 DPIPE GAS MAIN OBVERT = 381.51m. LOCATED
BY COV. SURVEY RECEIVED ON FEB 24 2025

DITCH ADJUSTMENTS & DEBRIS CLEANUP TO BE PERFORMED
AS REQUIRED TO ENSURE POSITIVE DRAINAGE (TYP.)
SEE SHEET C501 FOR DETAIL

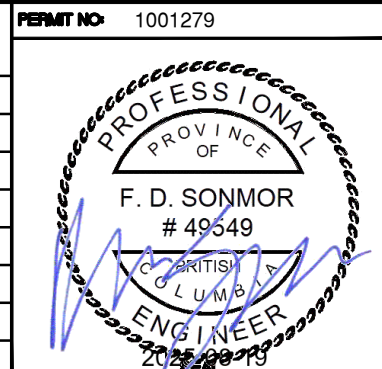
EXISTING WATER MAIN - CONTRACTOR TO CONFIRM
LOCATION & DEPTH PRIOR TO CONSTRUCTION

EXISTING GAS MAIN - CONTRACTOR TO CONFIRM
LOCATION & DEPTH PRIOR TO CONSTRUCTION



REV. No.	DATE	DESIGNED	DRAWN	CHECKED
1	2025/01/09	FDS	DLP	BTL
2	2025/01/24	FDS	DLP	BTL
3	2025/03/06	FDS	DLP	BTL
4	2025/05/01	FDS	PJD	BTL
5	2025/08/19	FDS	DLP	BTL

DESCRIPTION
ISSUED FOR TENDER
RE-ISSUED FOR TENDER
RE-ISSUED FOR TENDER
RE-ISSUED FOR TENDER
ISSUED FOR CONSTRUCTION



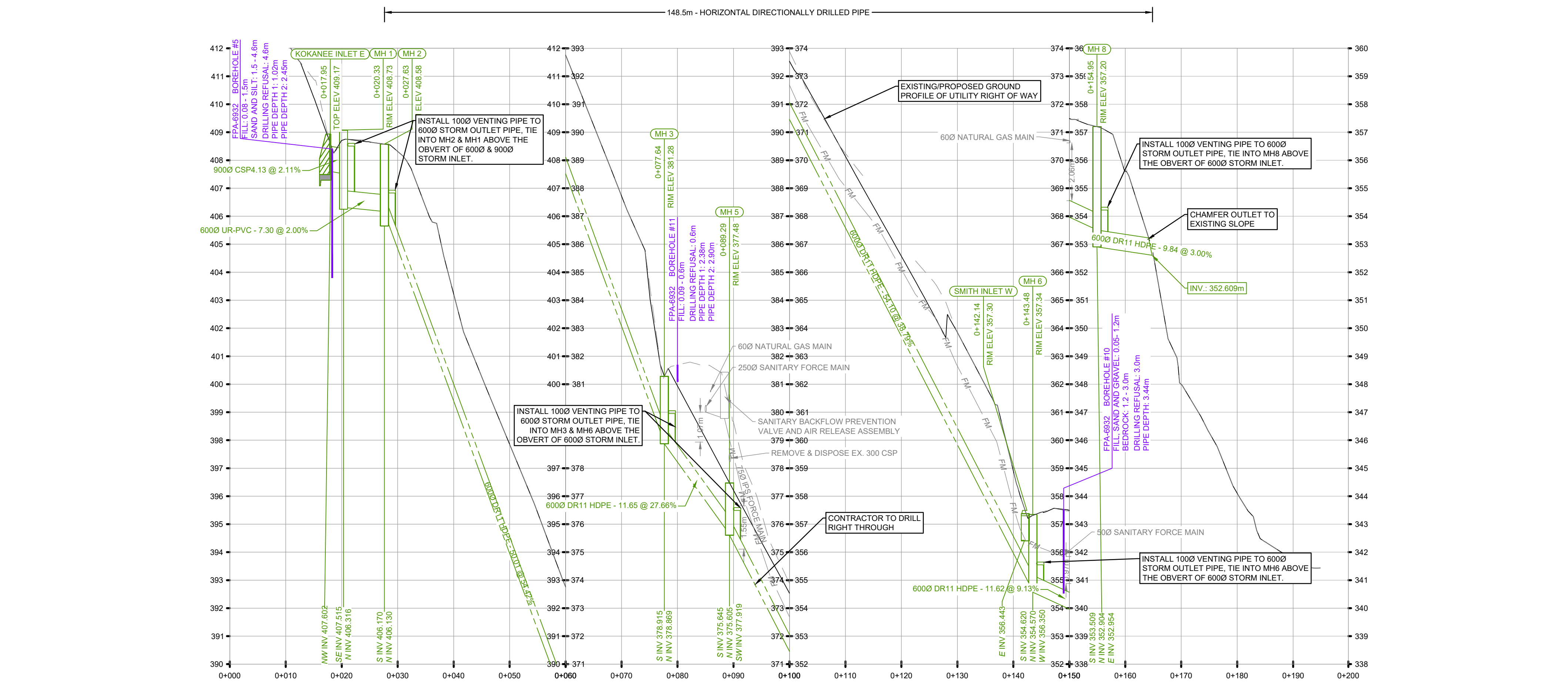
SCALE
H: 1:500
V: 1:100

SHEET
10 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
EASTSIDE ROAD PLAN-PROFILE STA: 0+380 TO 0+670

DRAWING NUMBER
C204

DRAWING NUMBER
C206



ISSUE / REVISION INFORMATION	REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
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	3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
	4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
	5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION

PERMIT NO.: 1001279

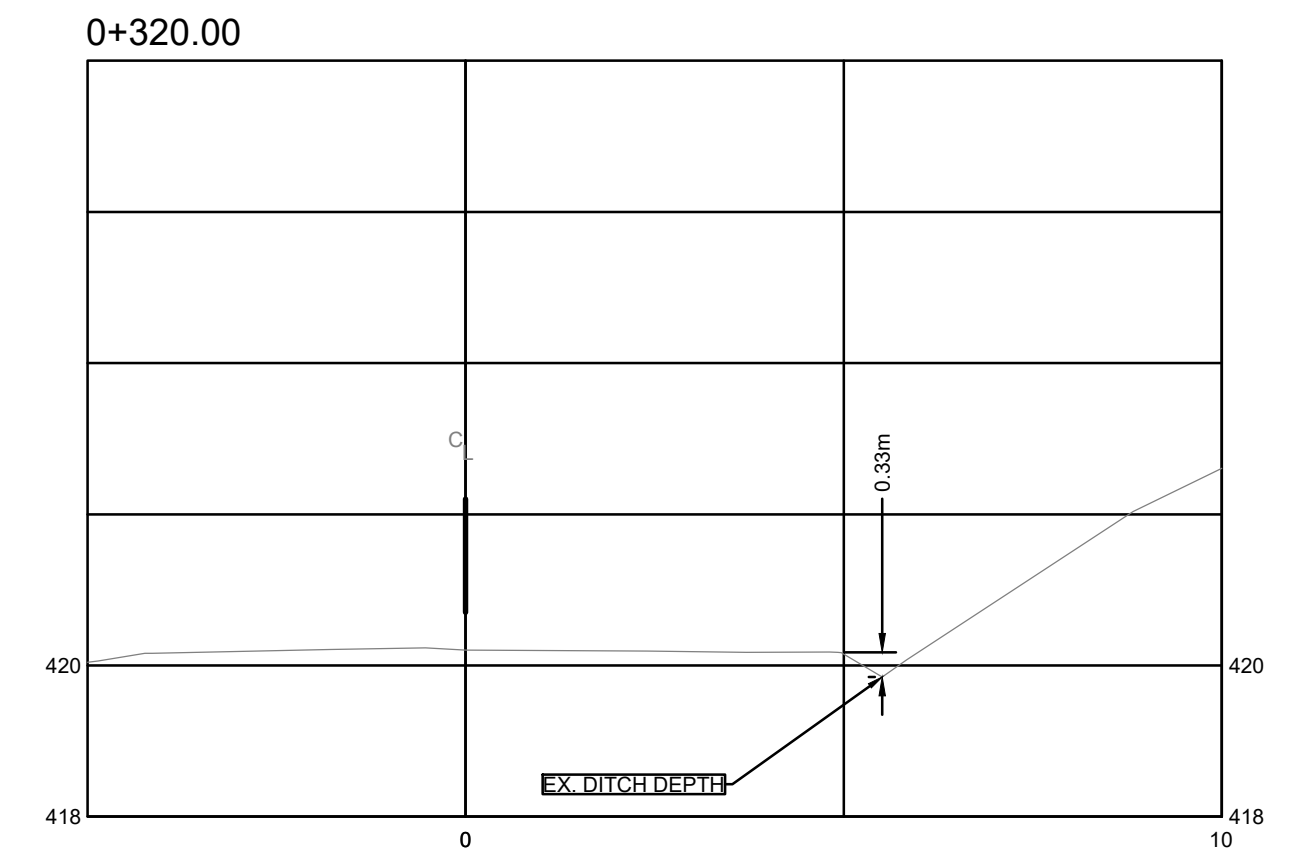
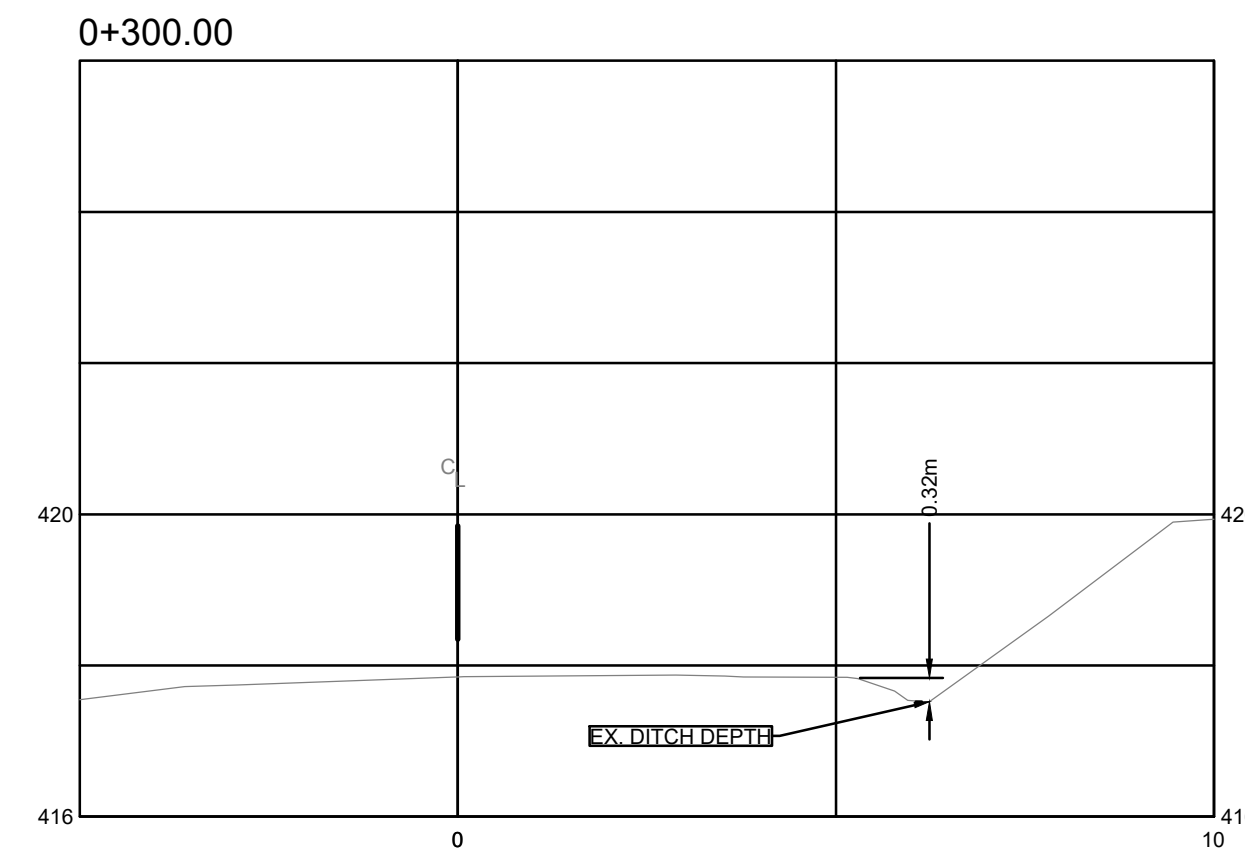
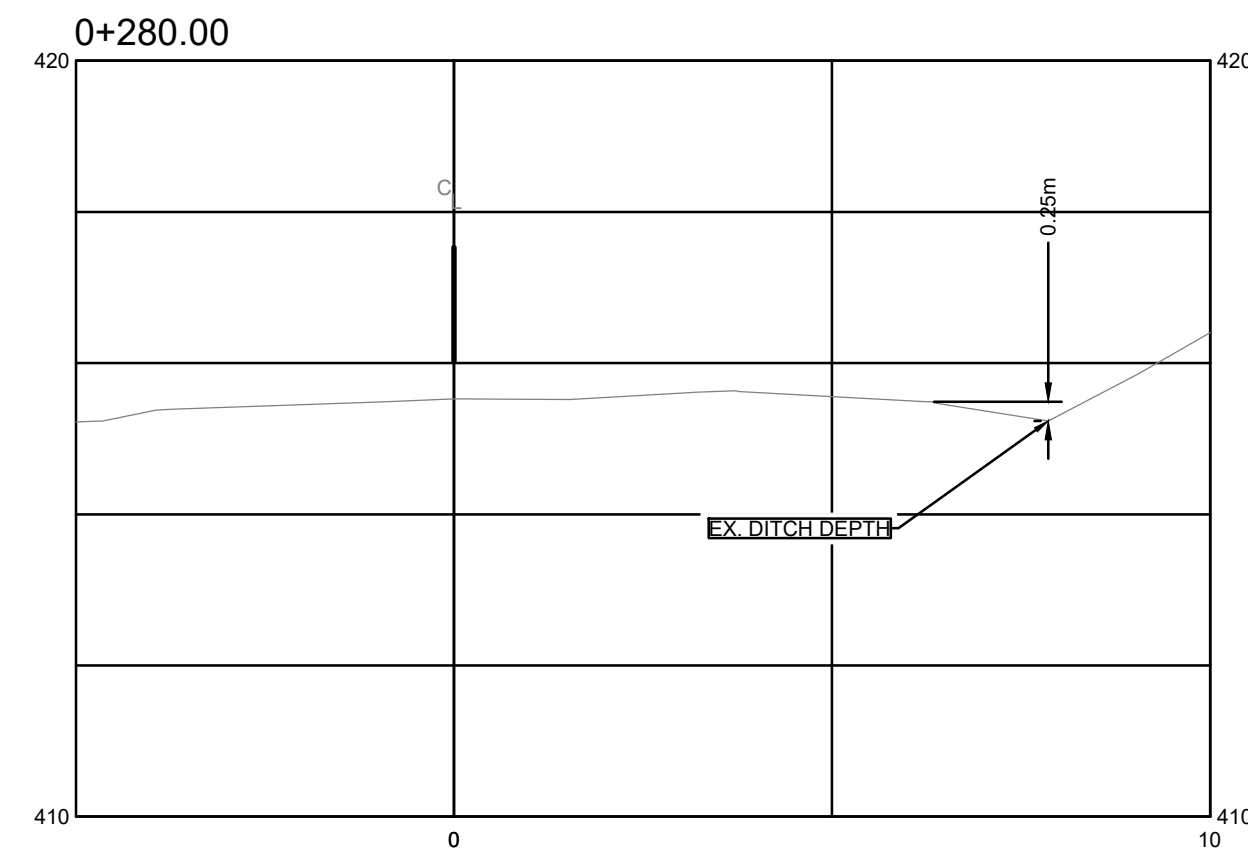
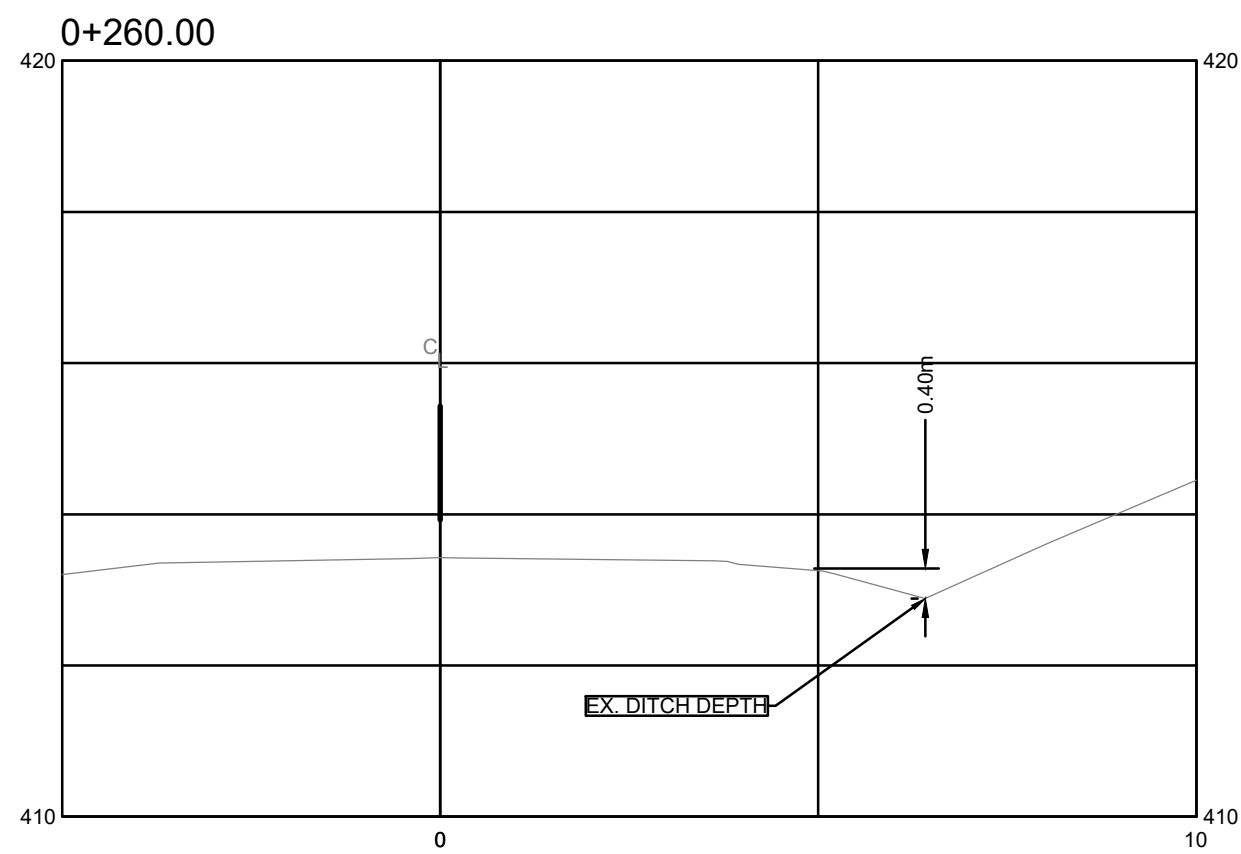
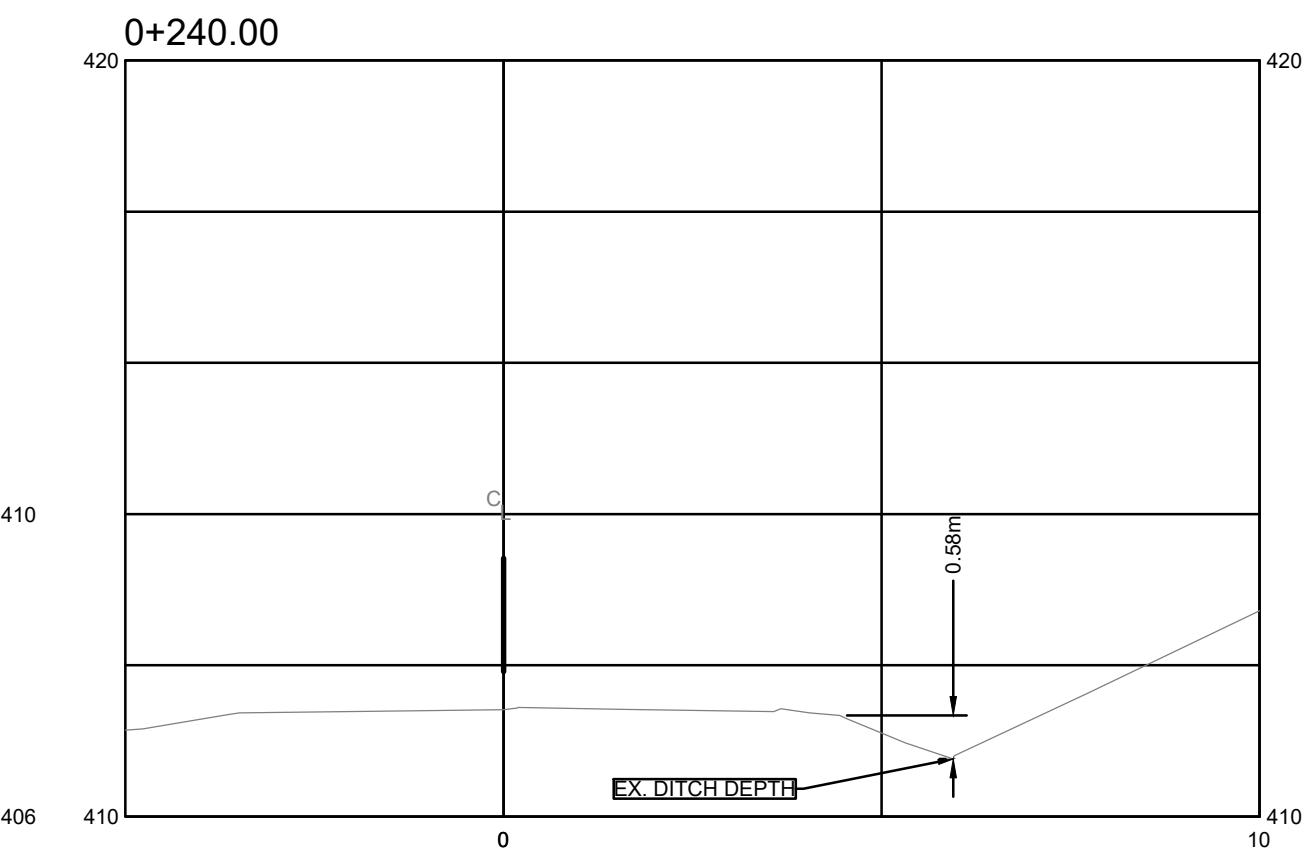
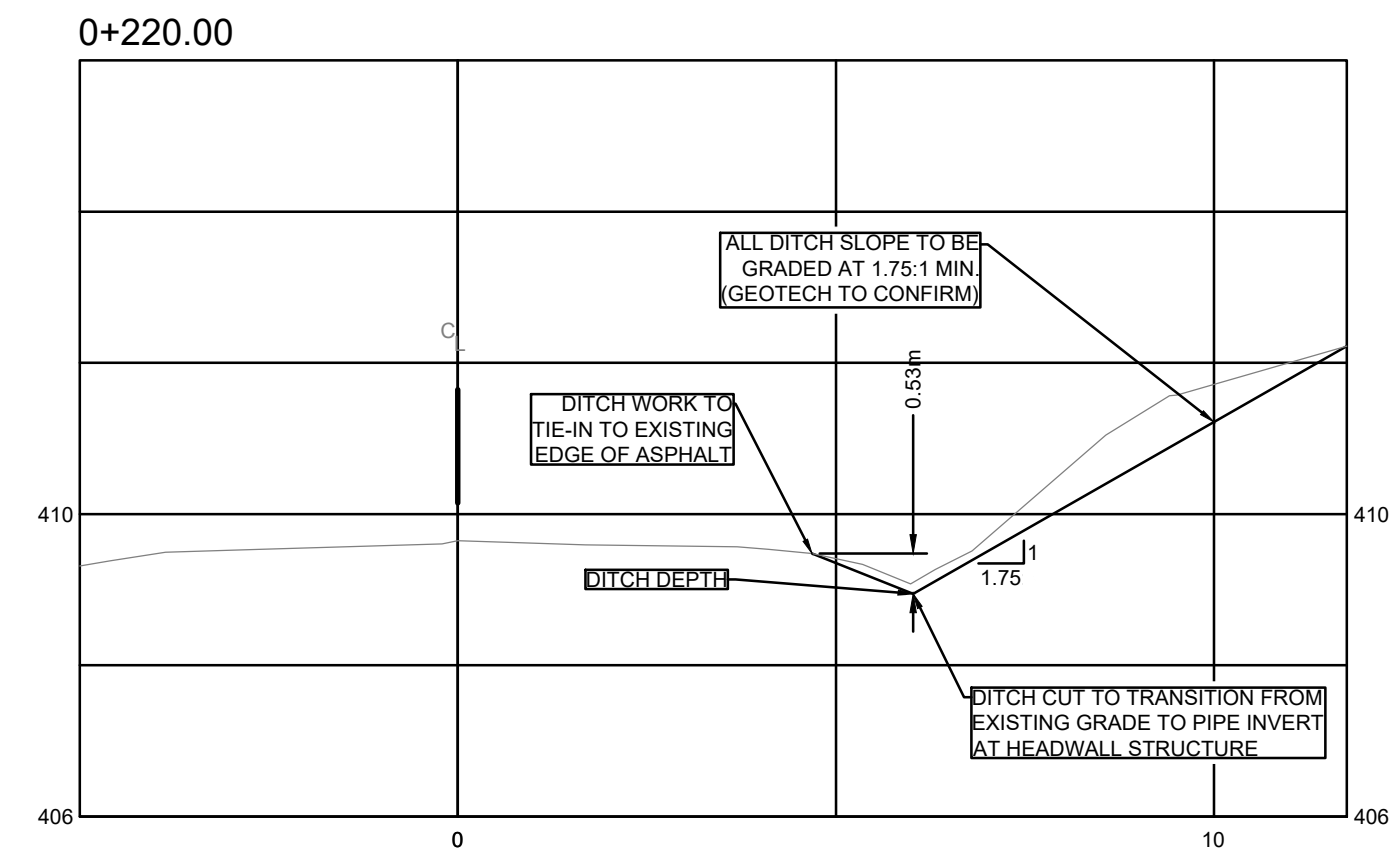
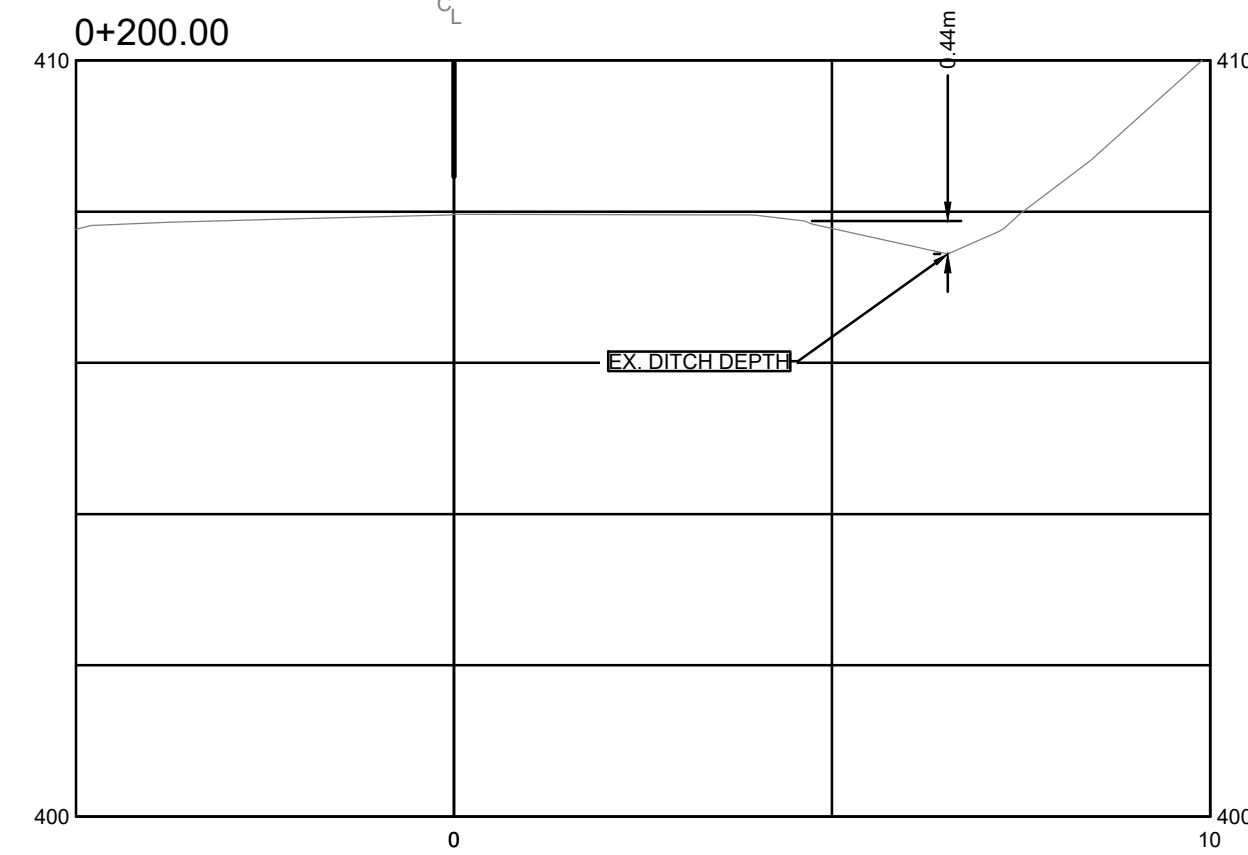
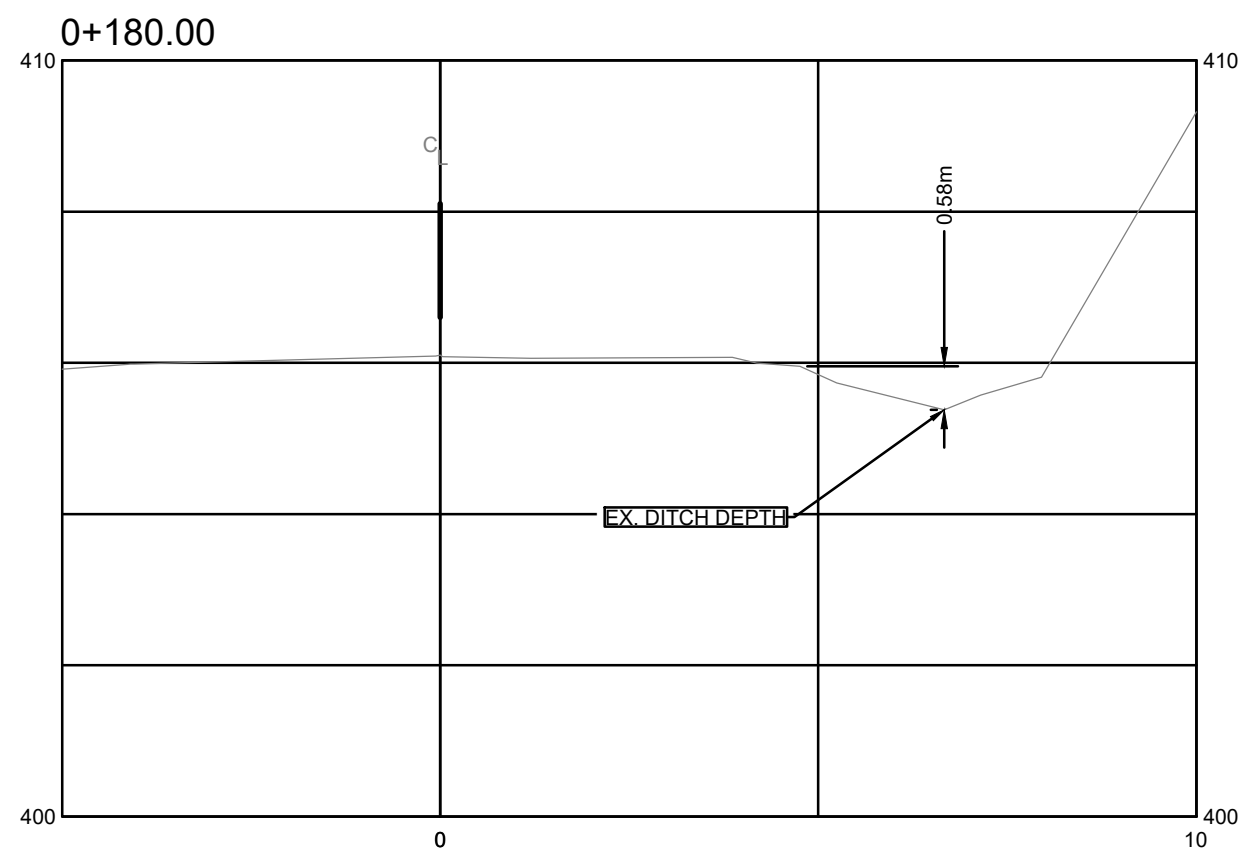
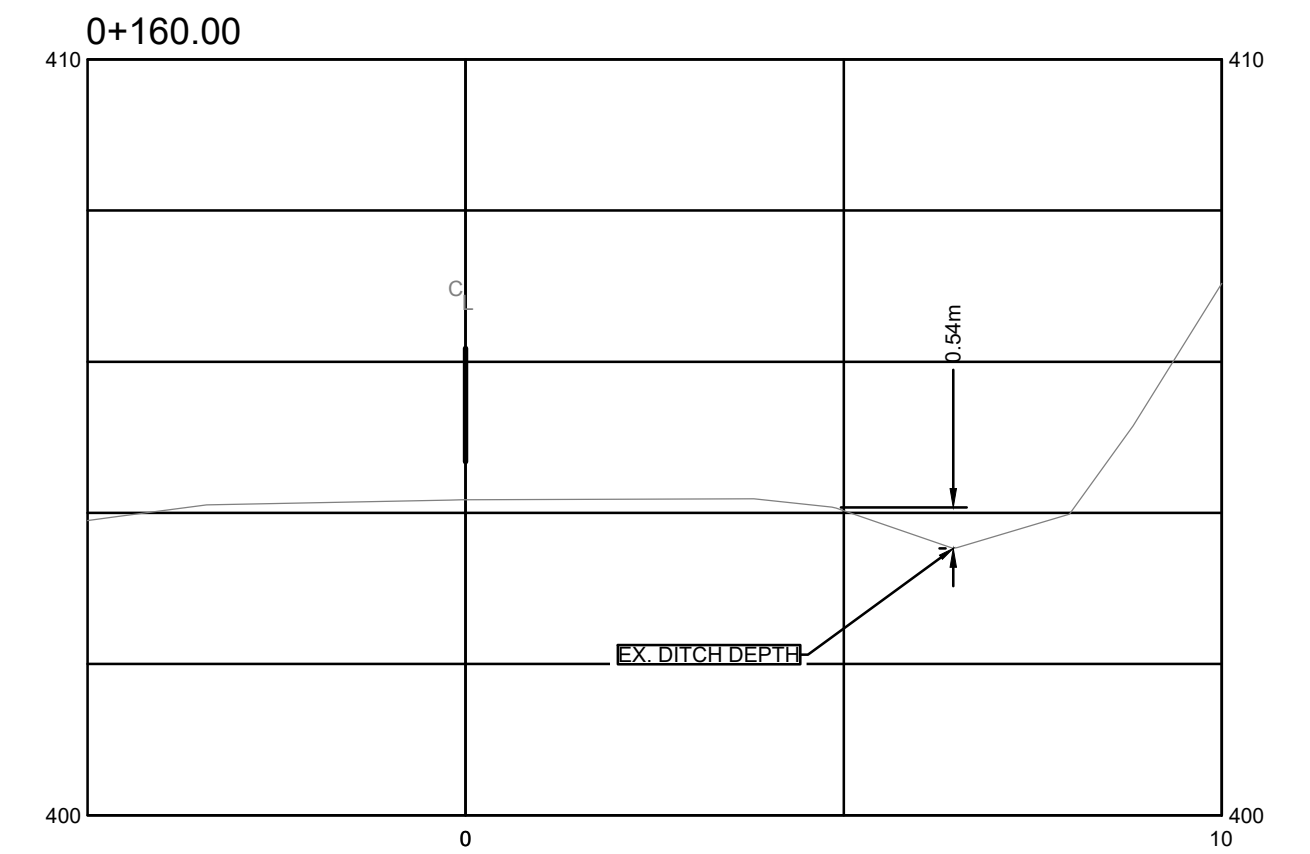
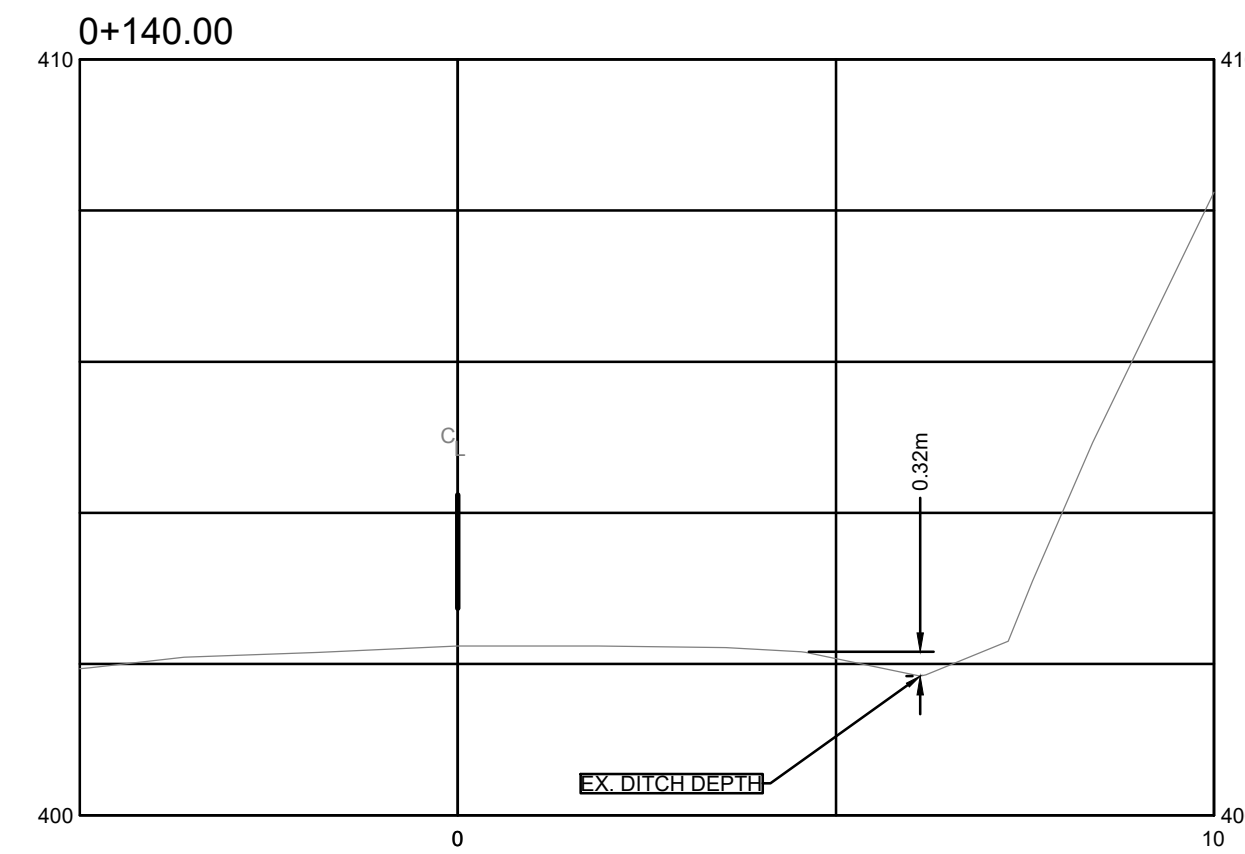
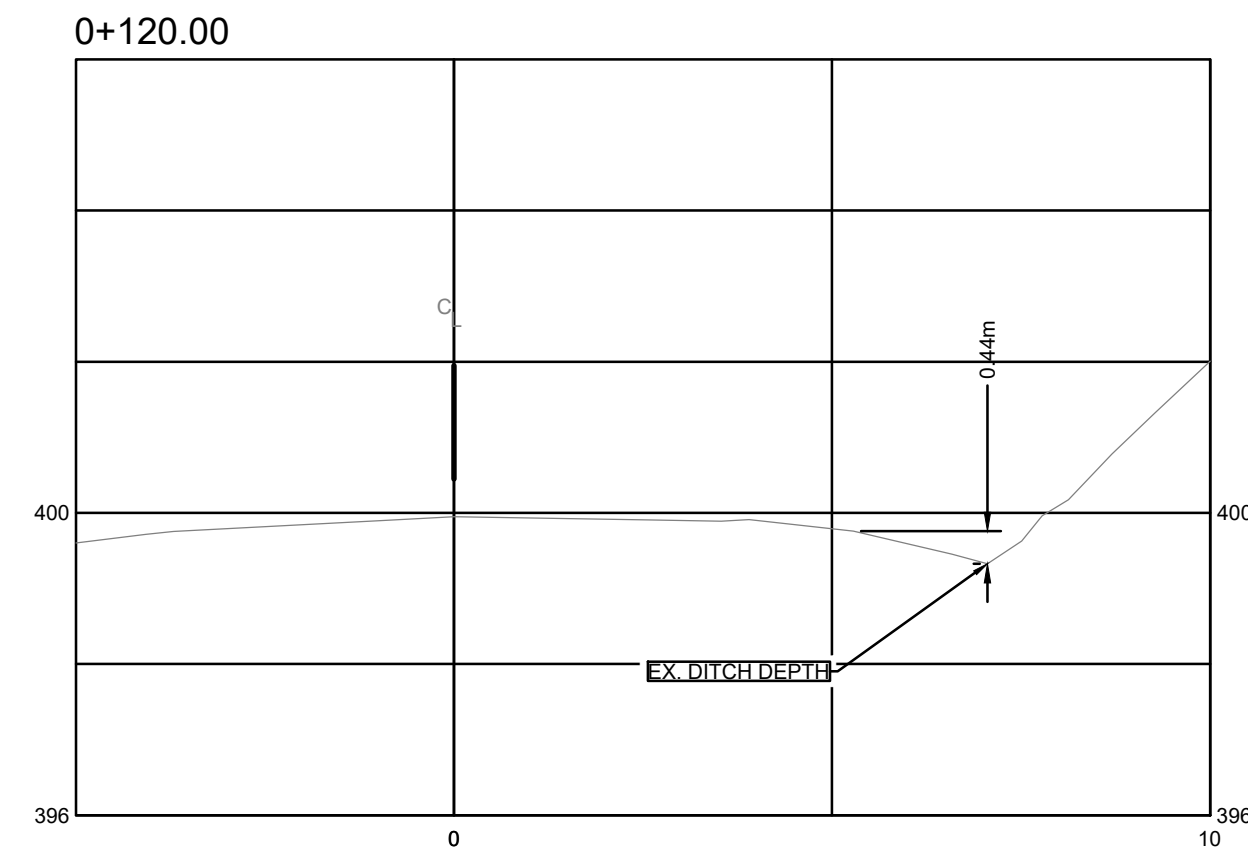
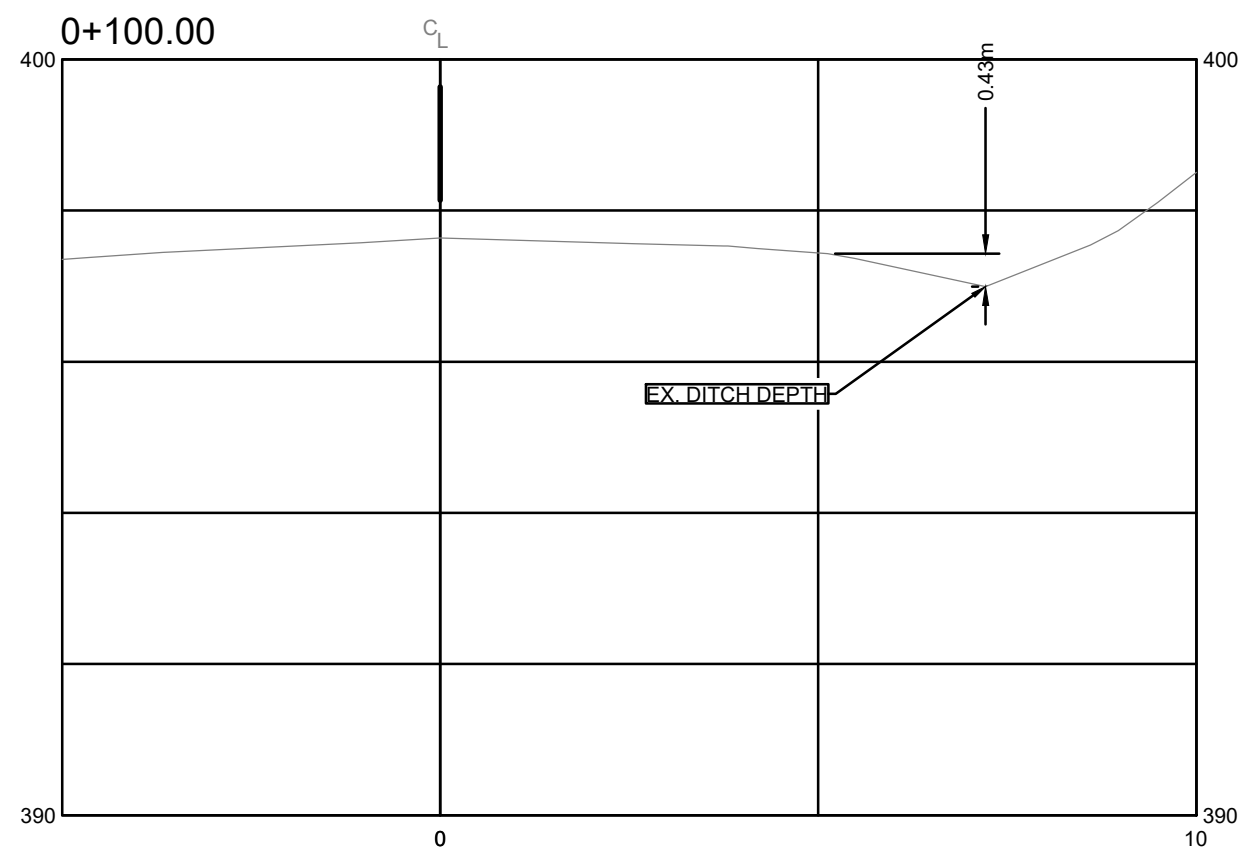
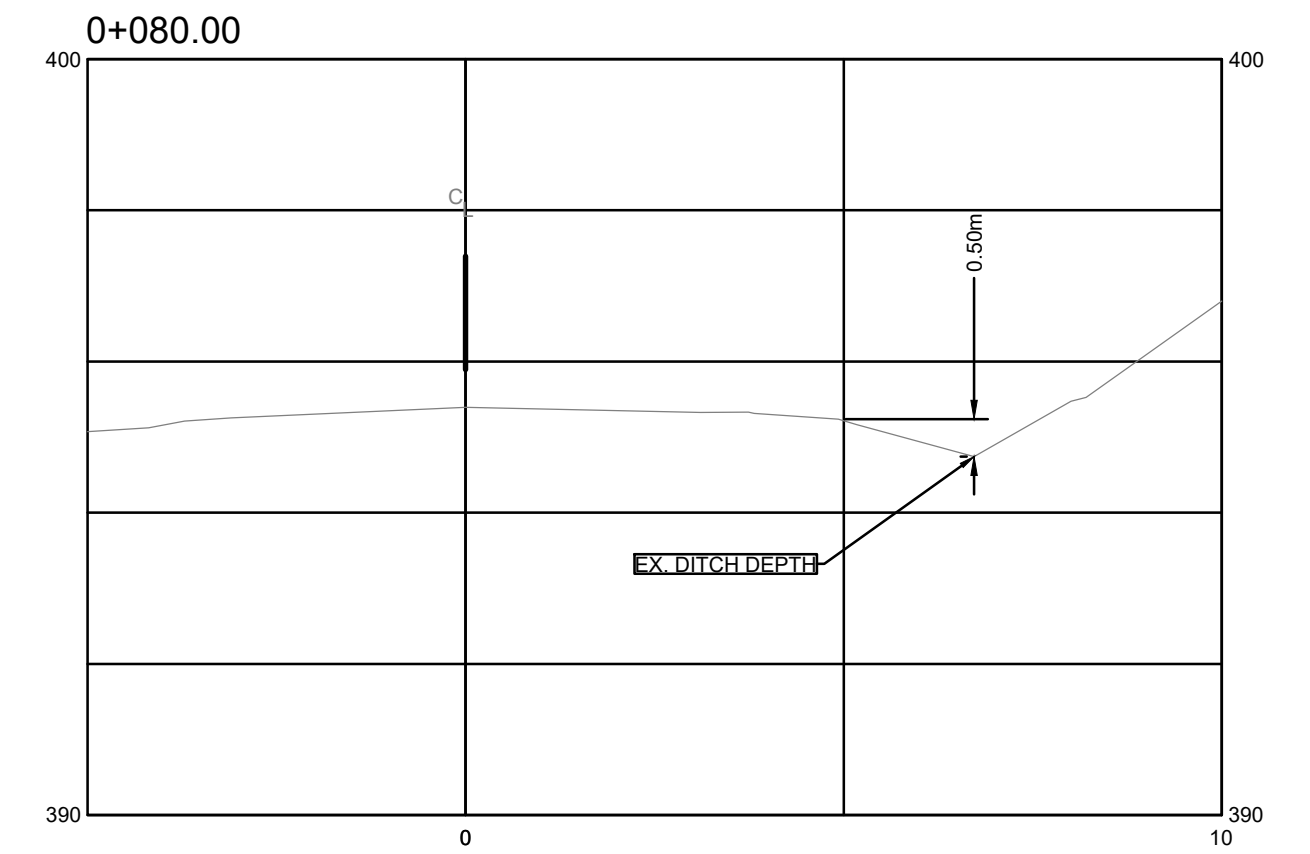
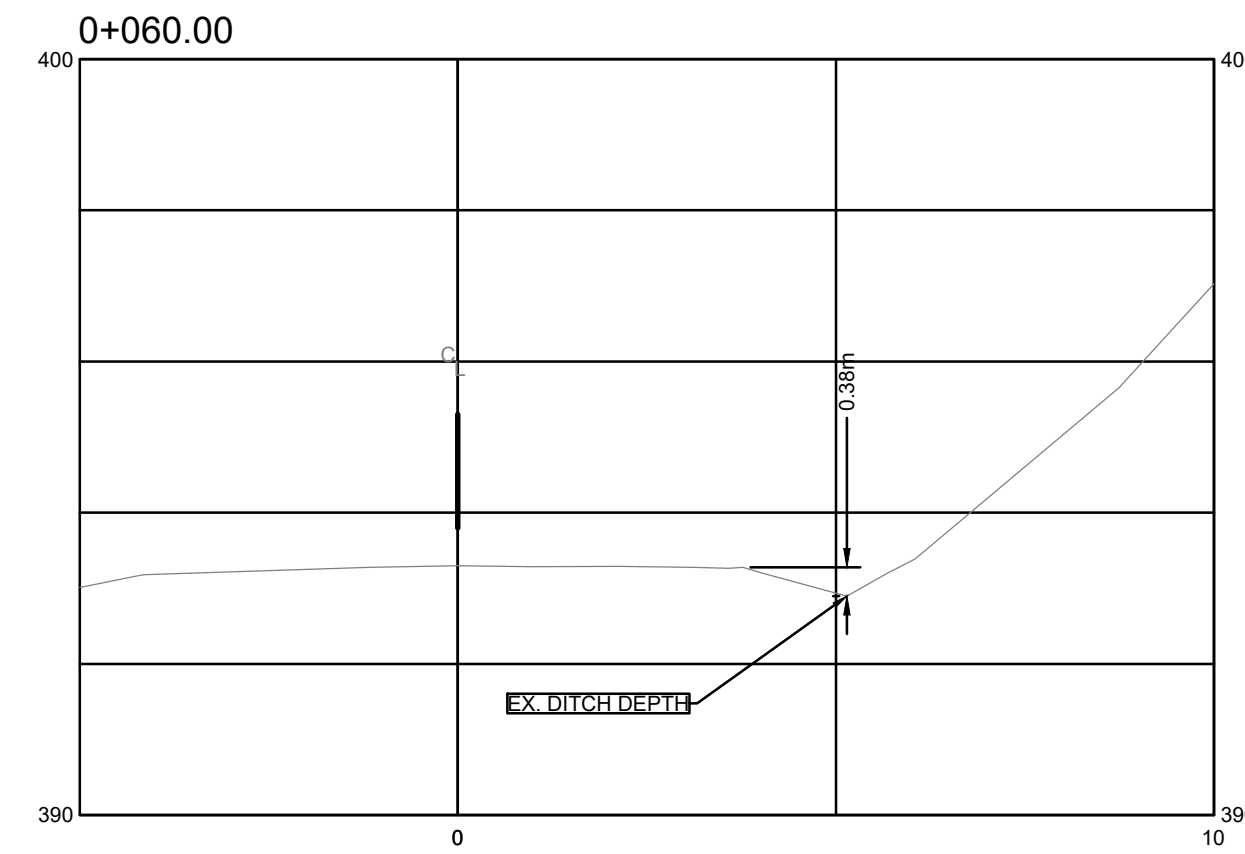
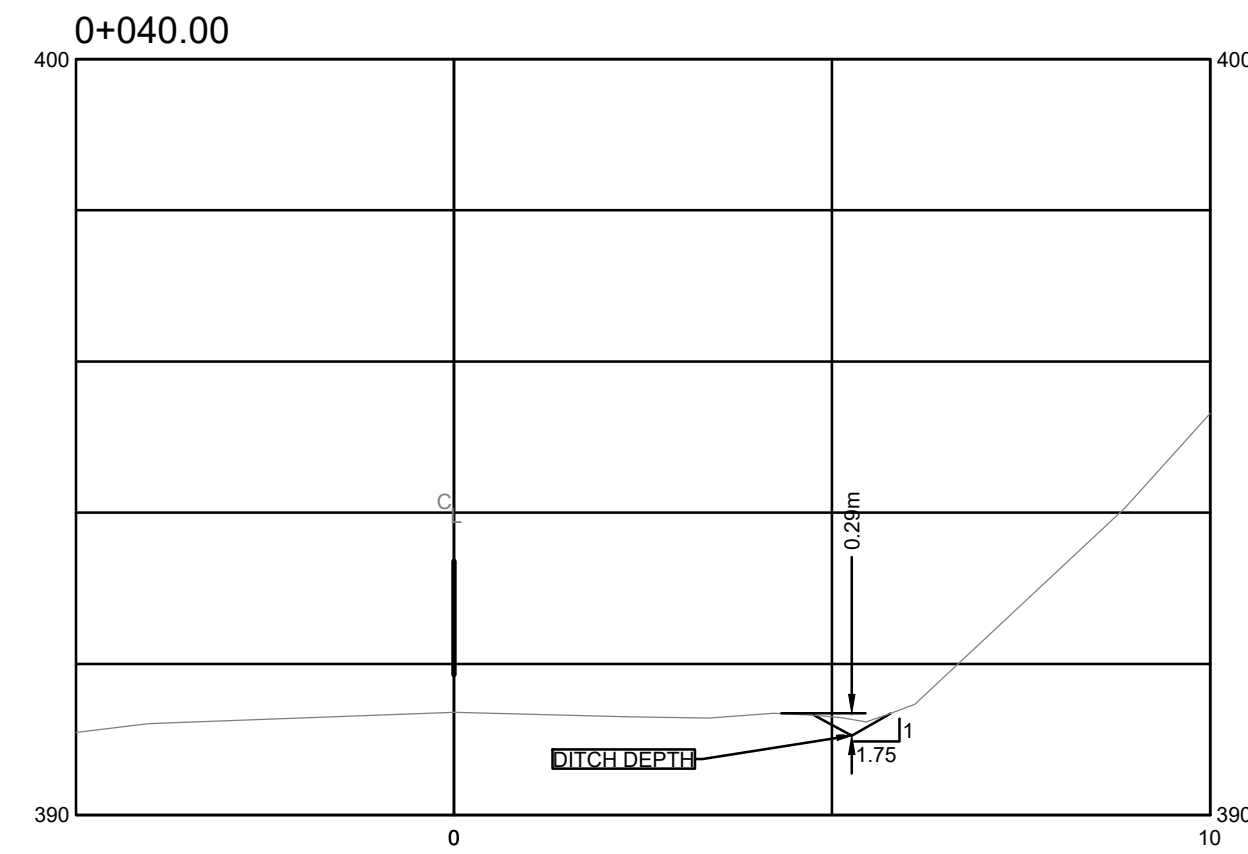
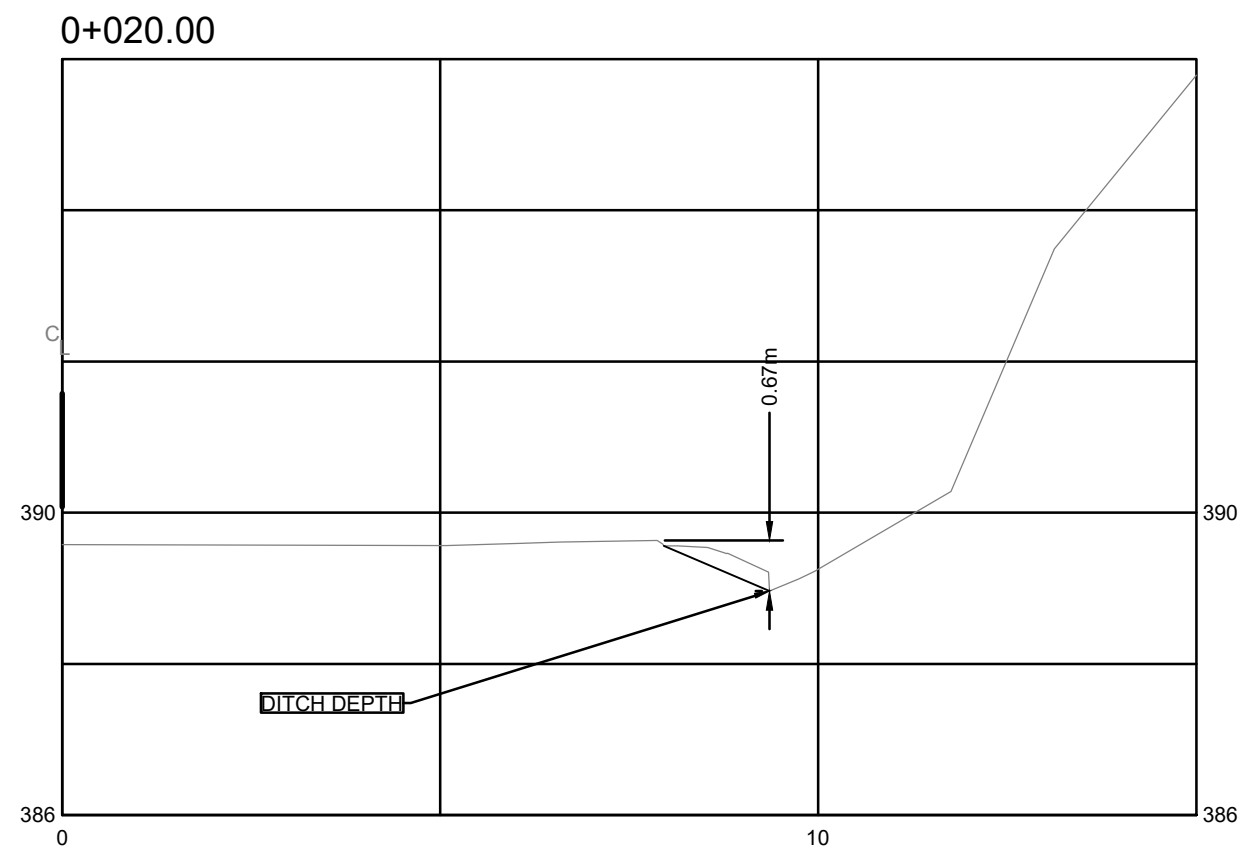
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SCALE H: 1:500 V: 1:100	SOUTH BASIN DRAINAGE IMPROVEMENTS ROW PLAN-PERFILE STA: 0+000 TO 0+200
SHEET 13 OF 21	

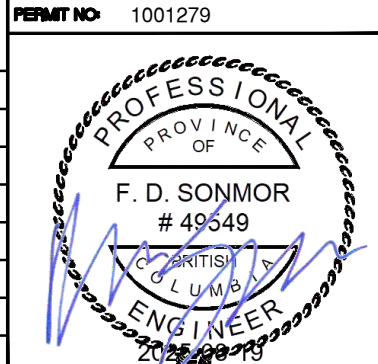
DRAWING NUMBER
C207

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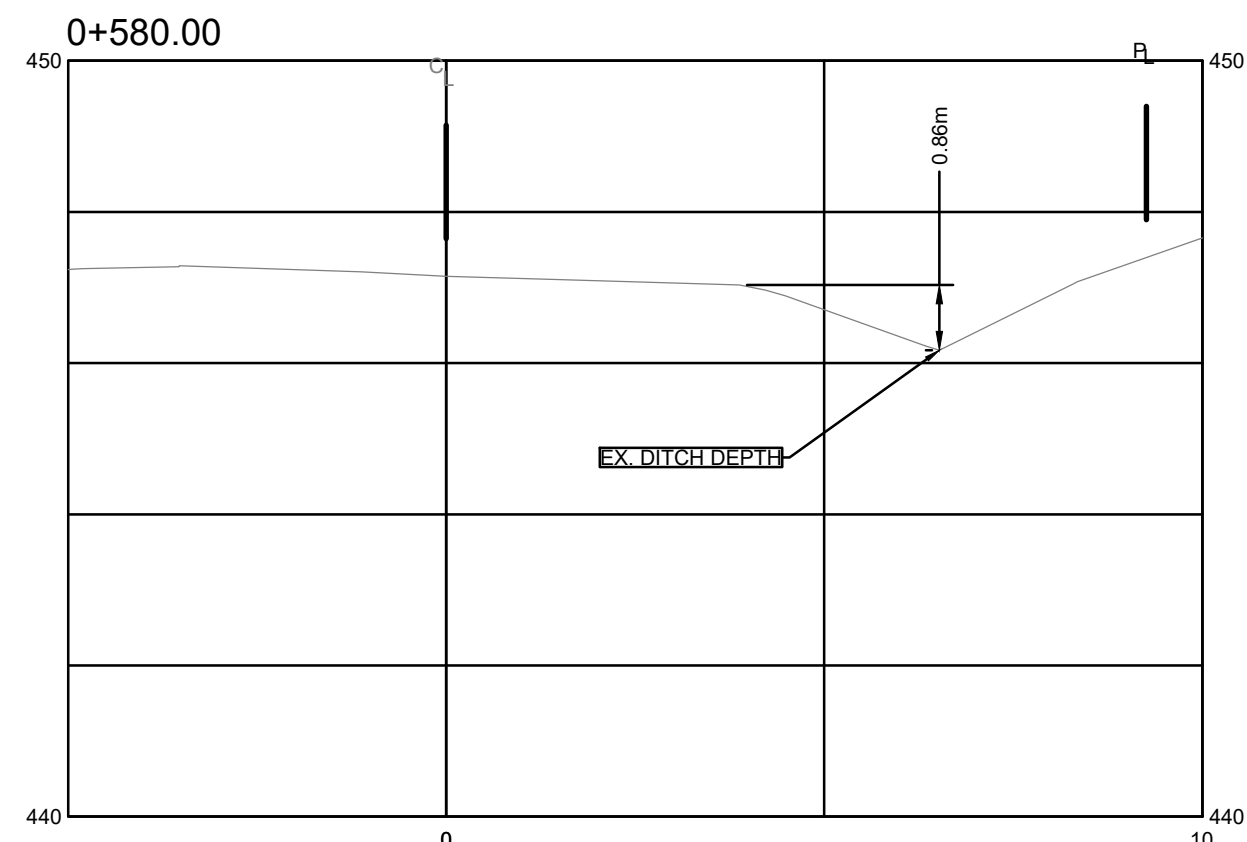
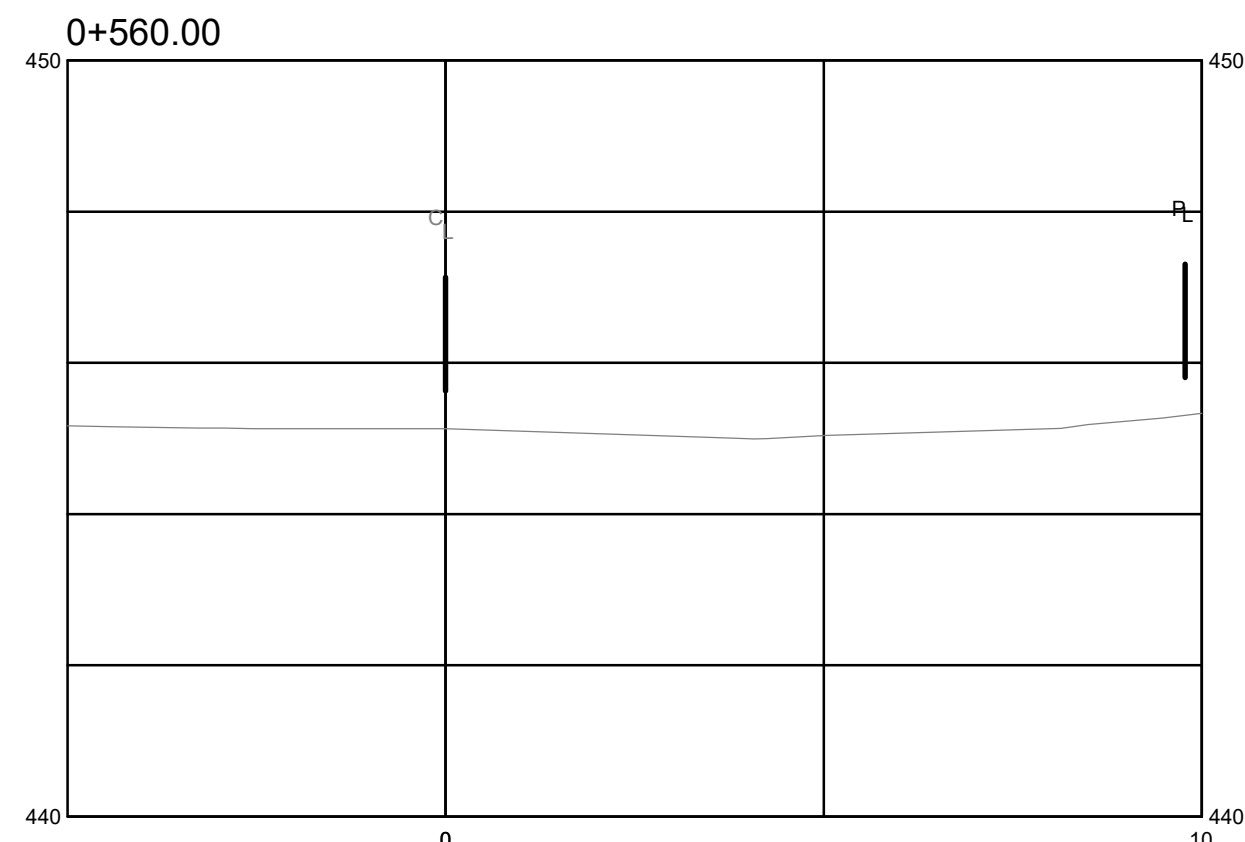
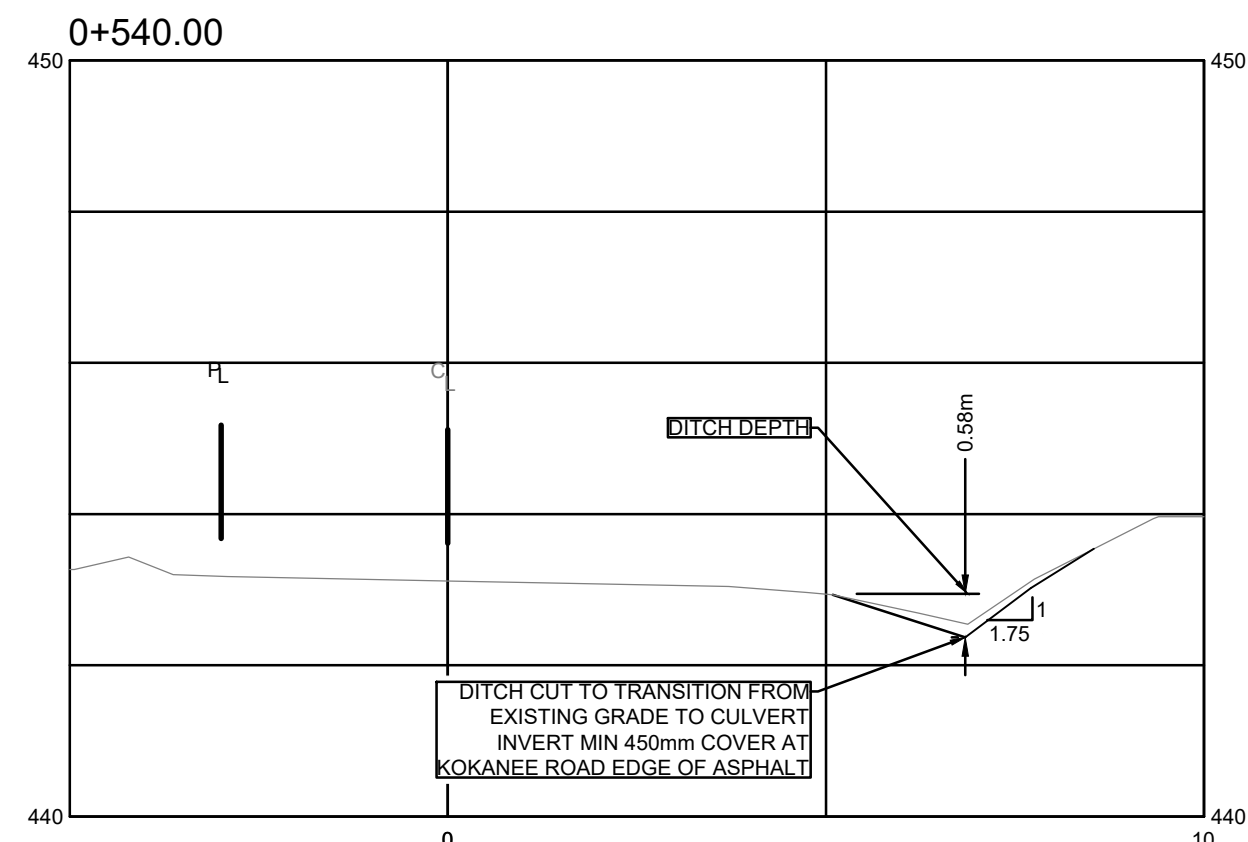
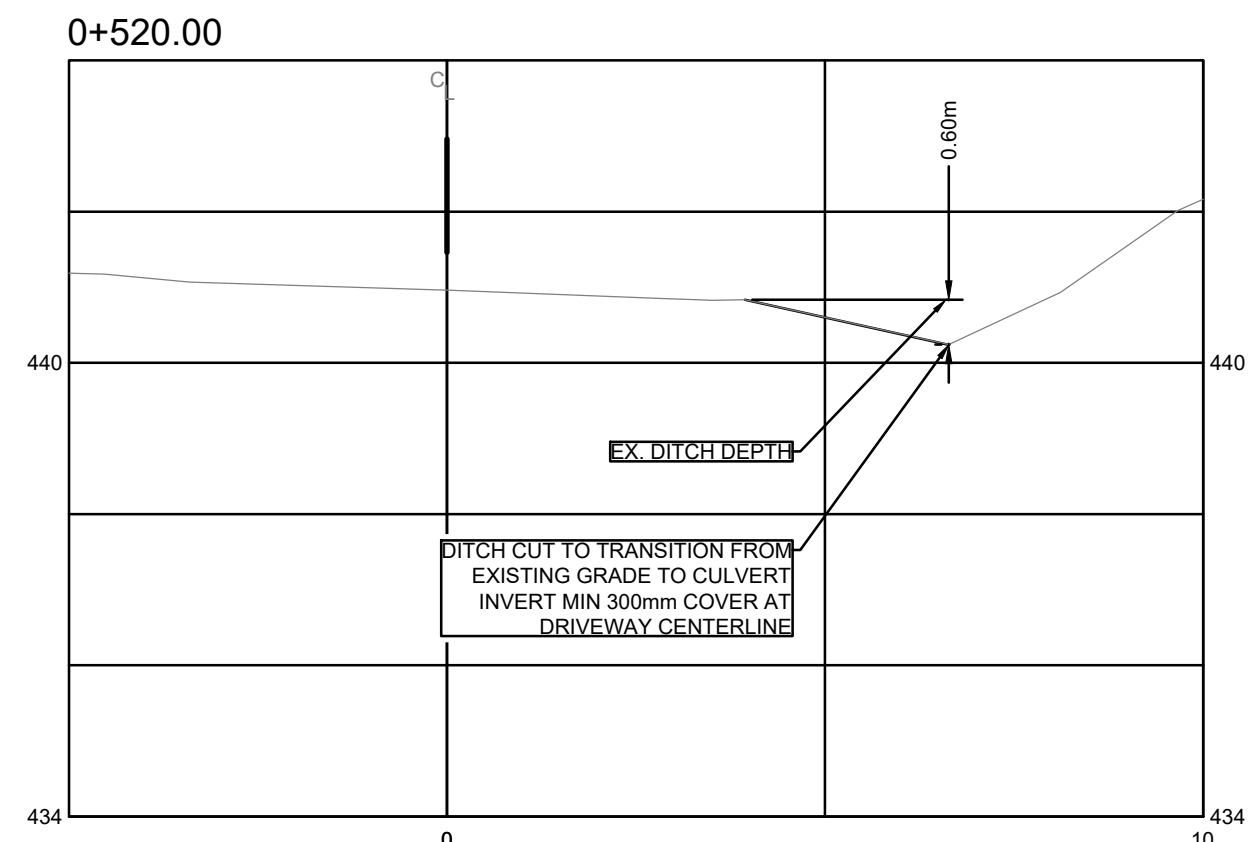
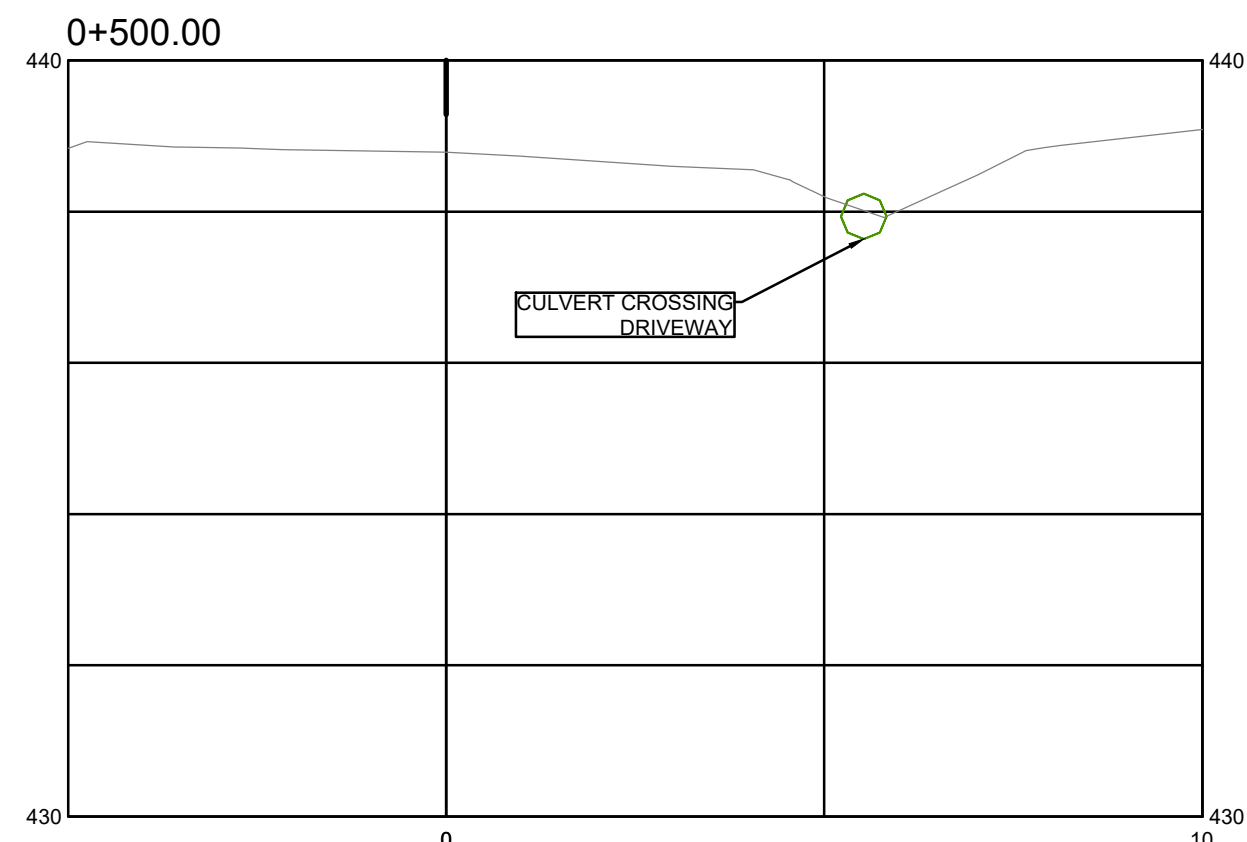
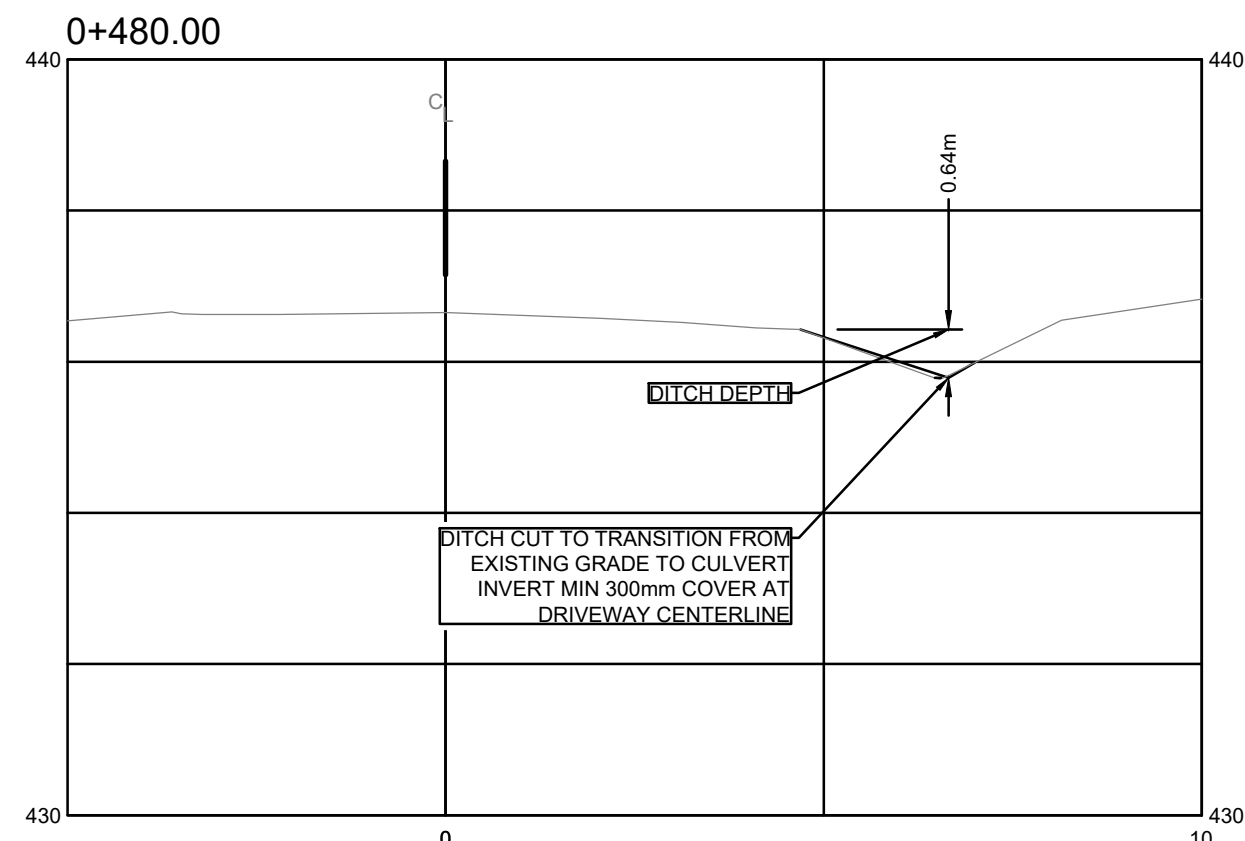
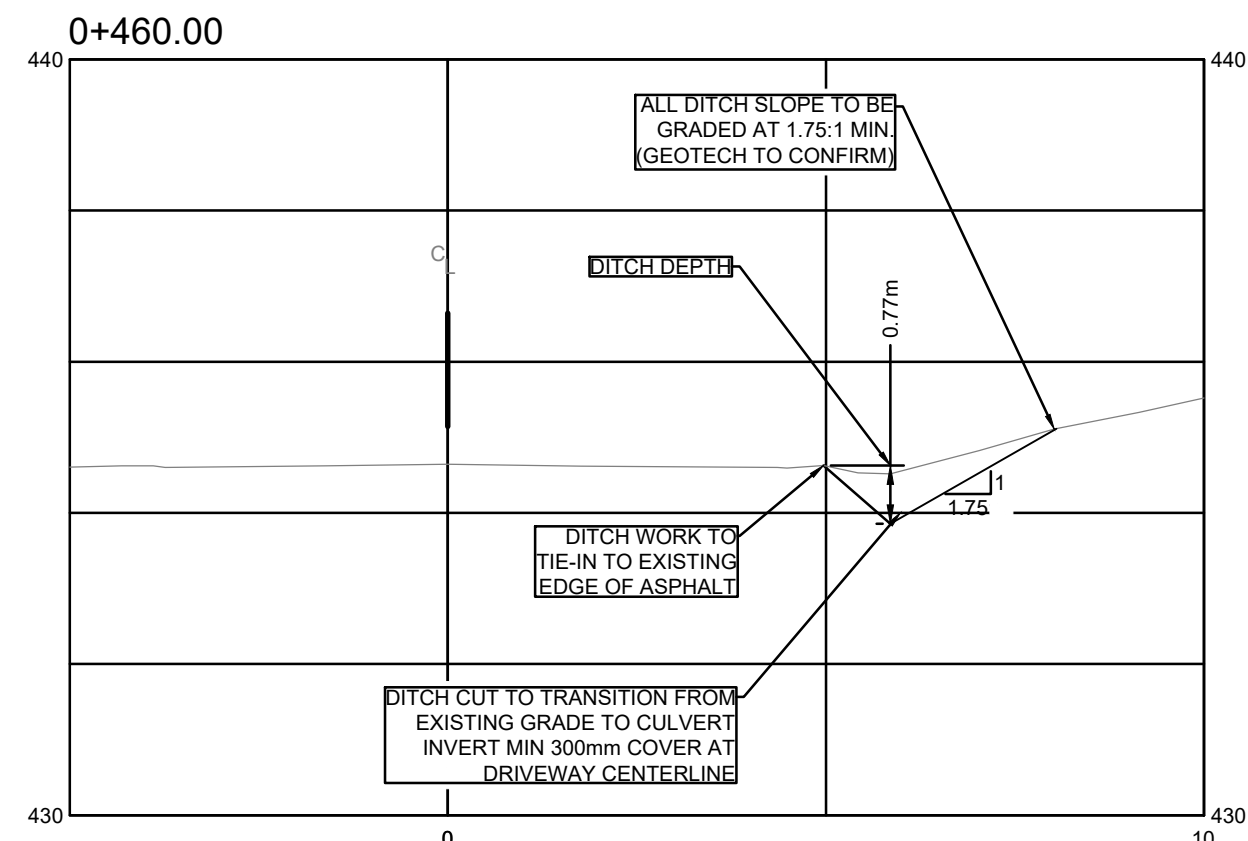
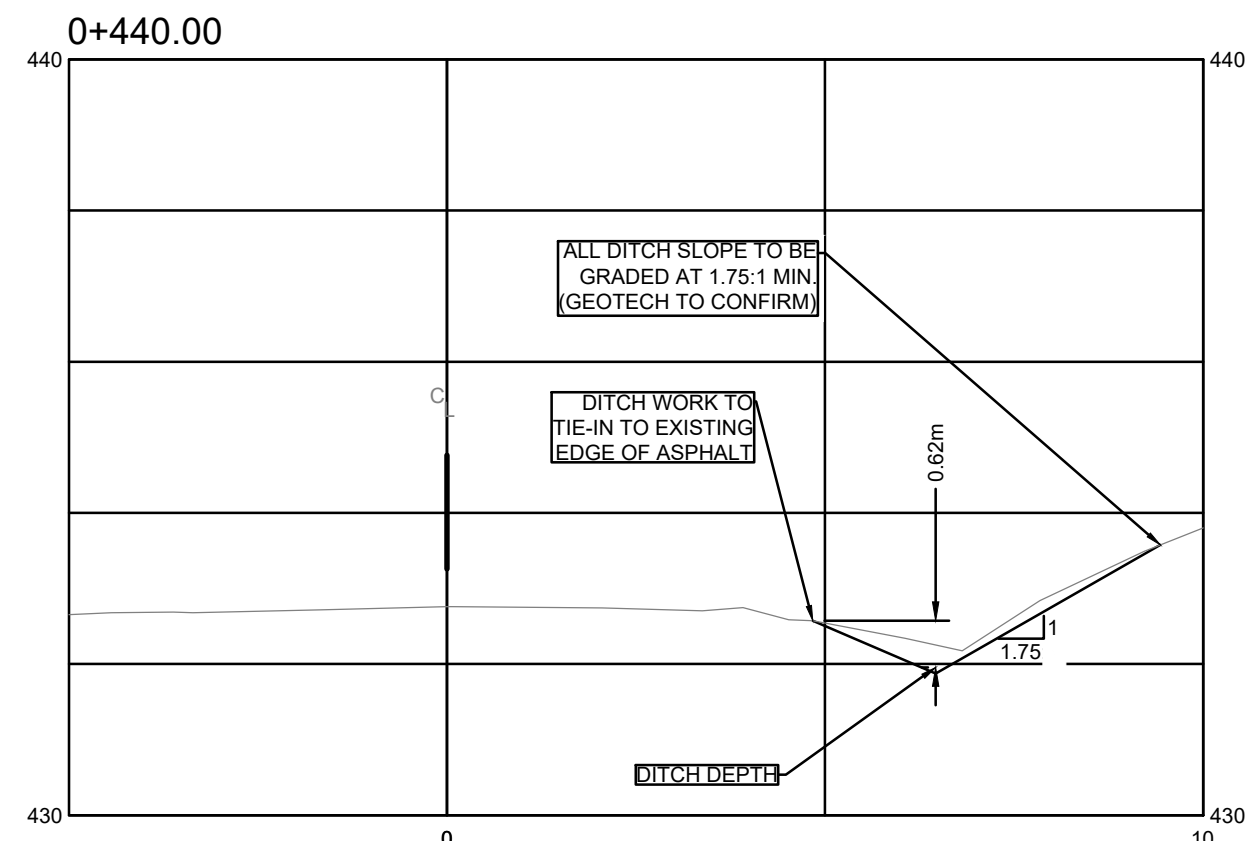
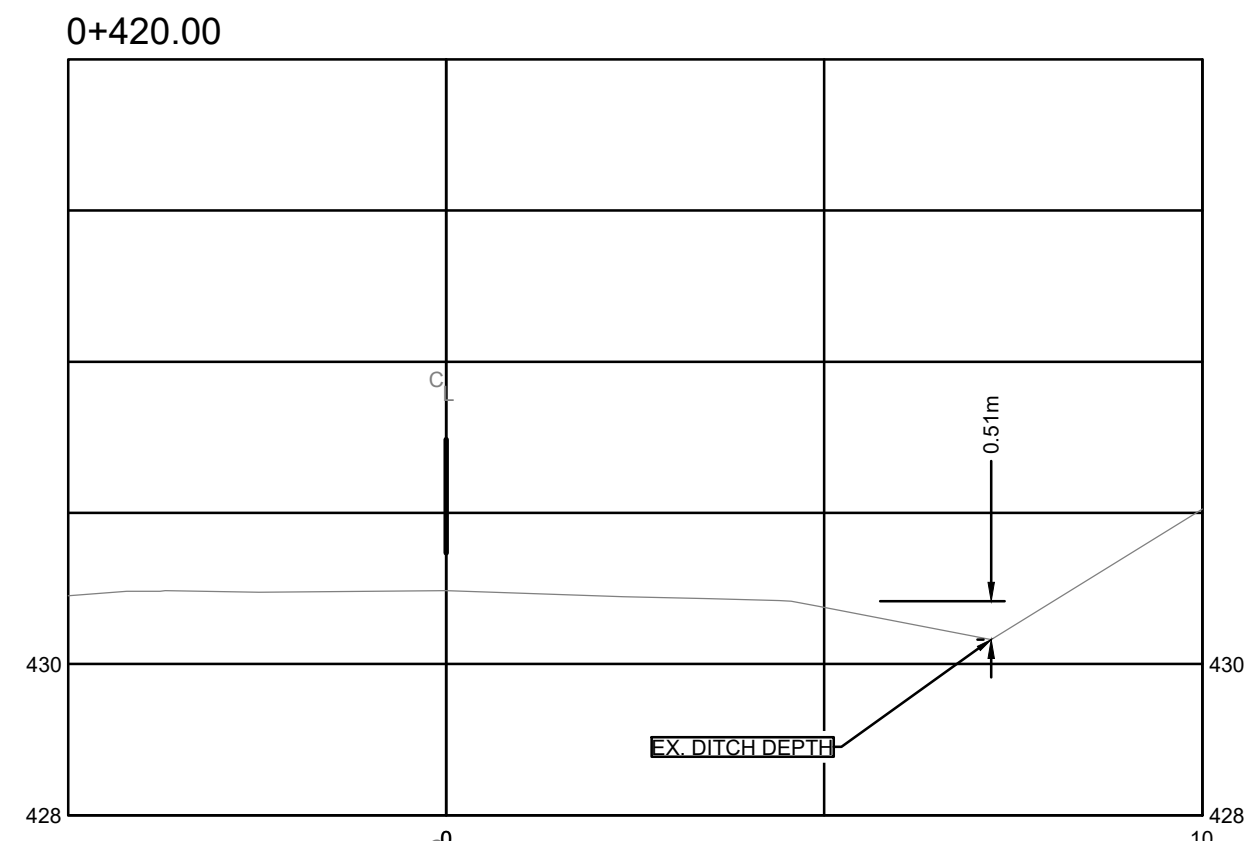
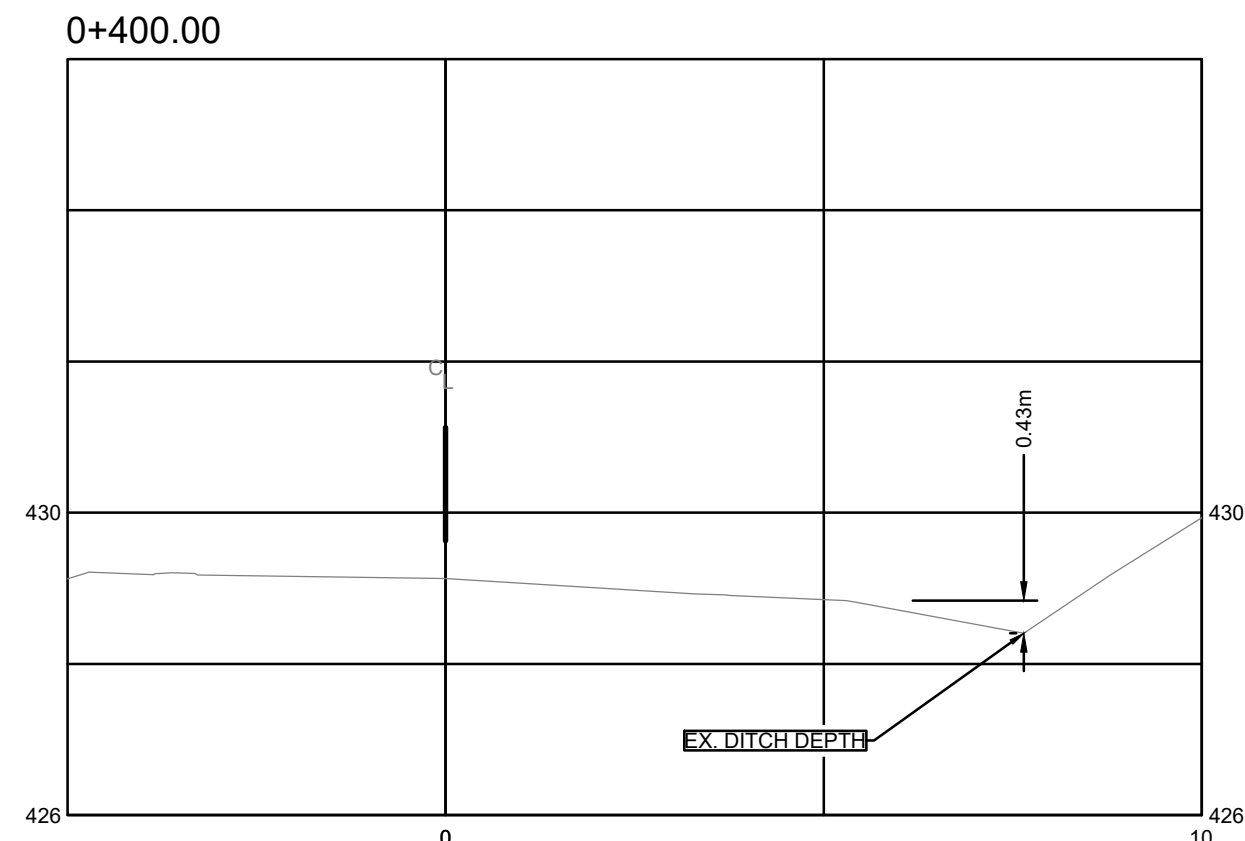
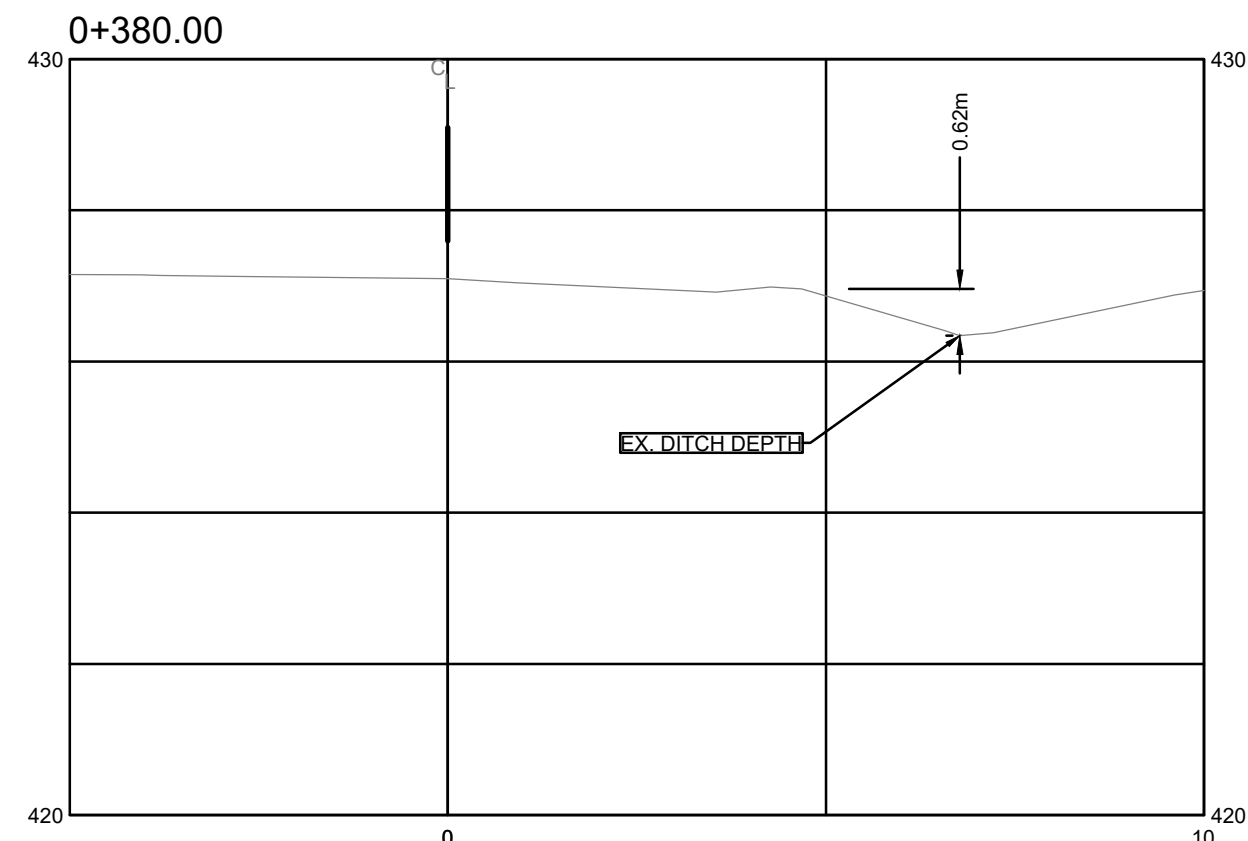
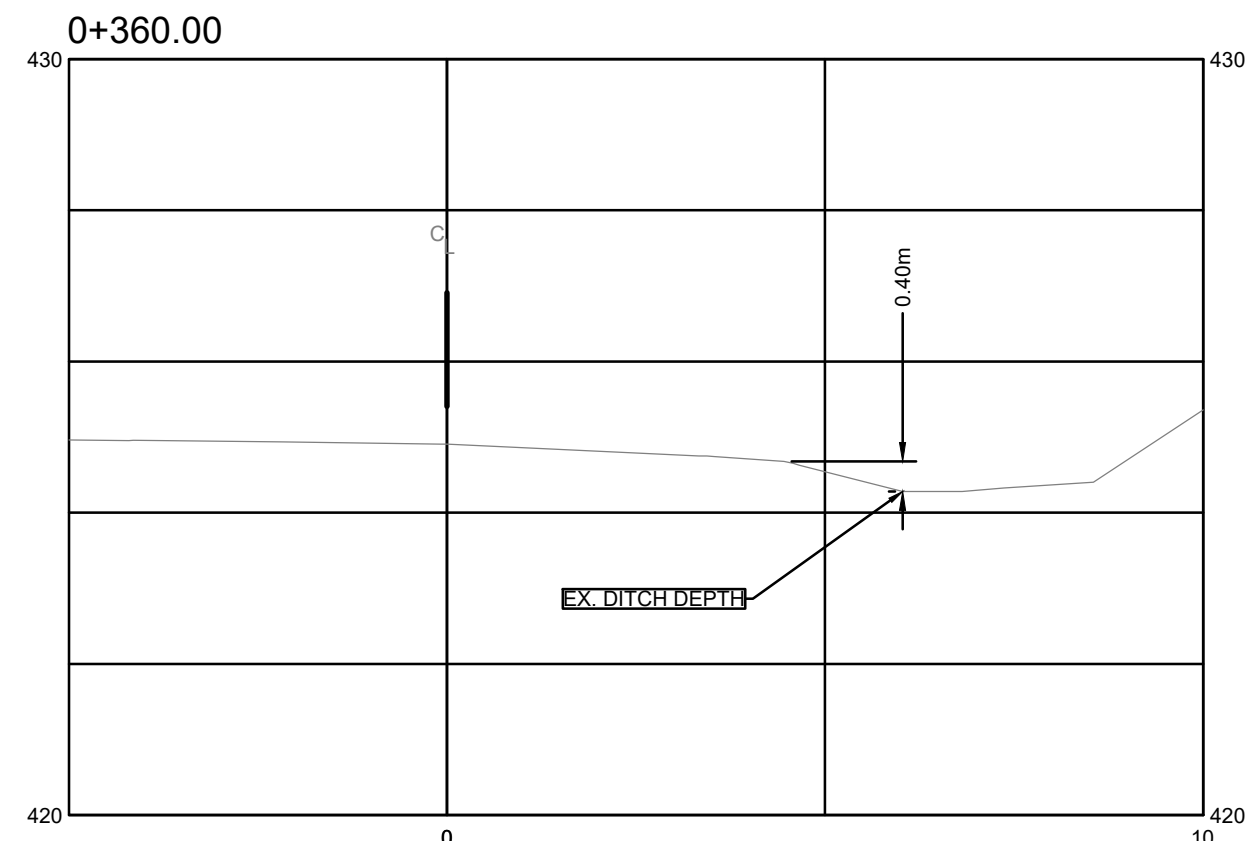
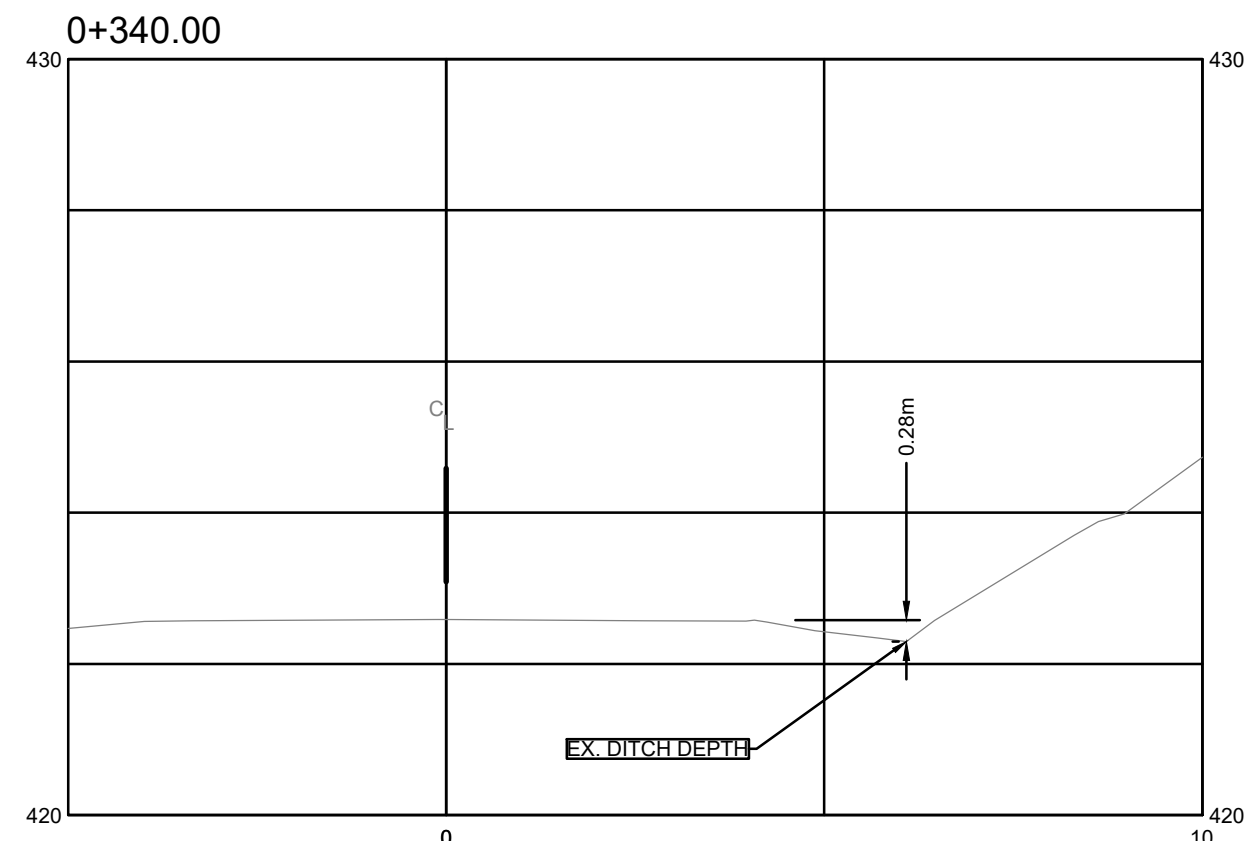
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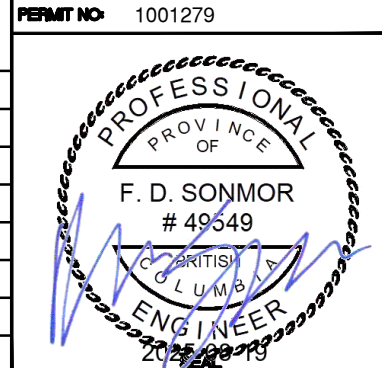
REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
1	2025/01/09	FDS	DLP	BTL	ISSUED FOR TENDER
2	2025/01/24	FDS	DLP	BTL	RE-ISSUED FOR TENDER
3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



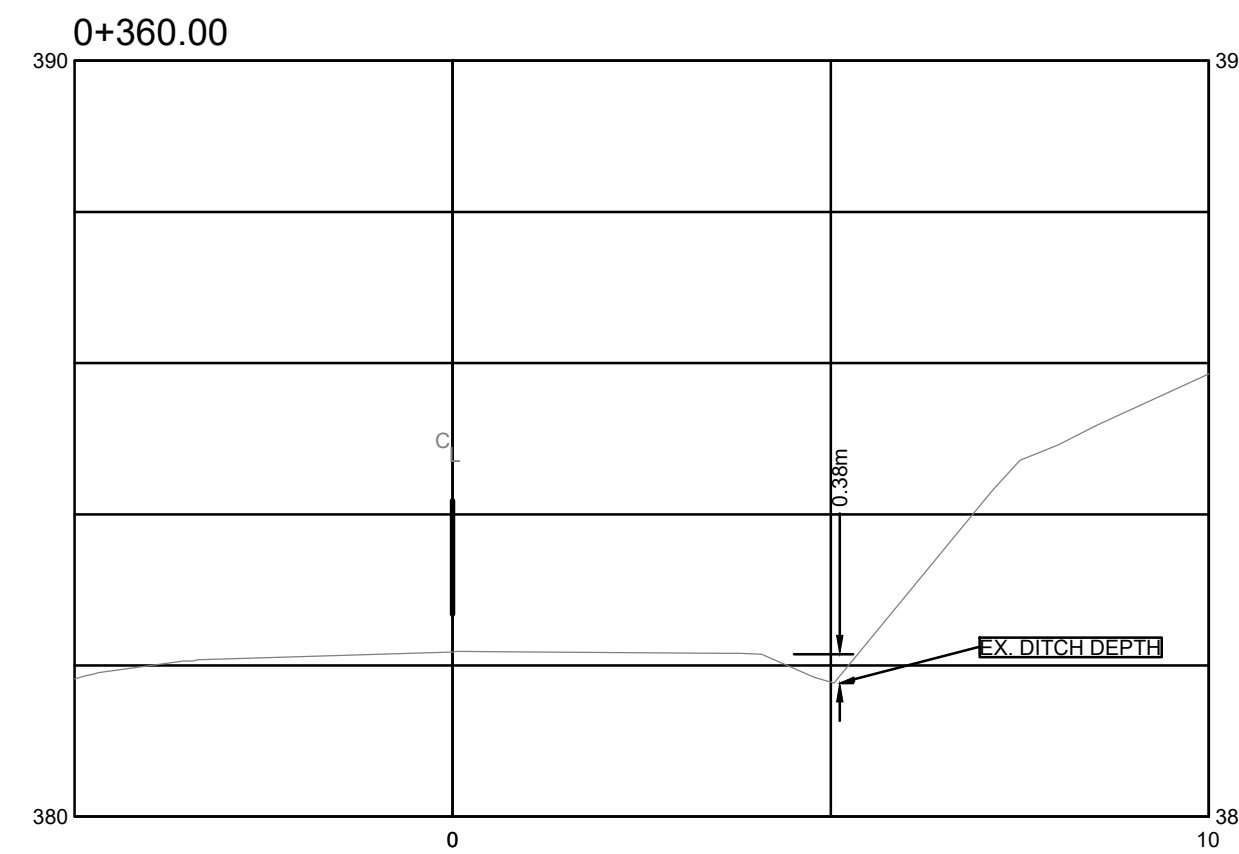
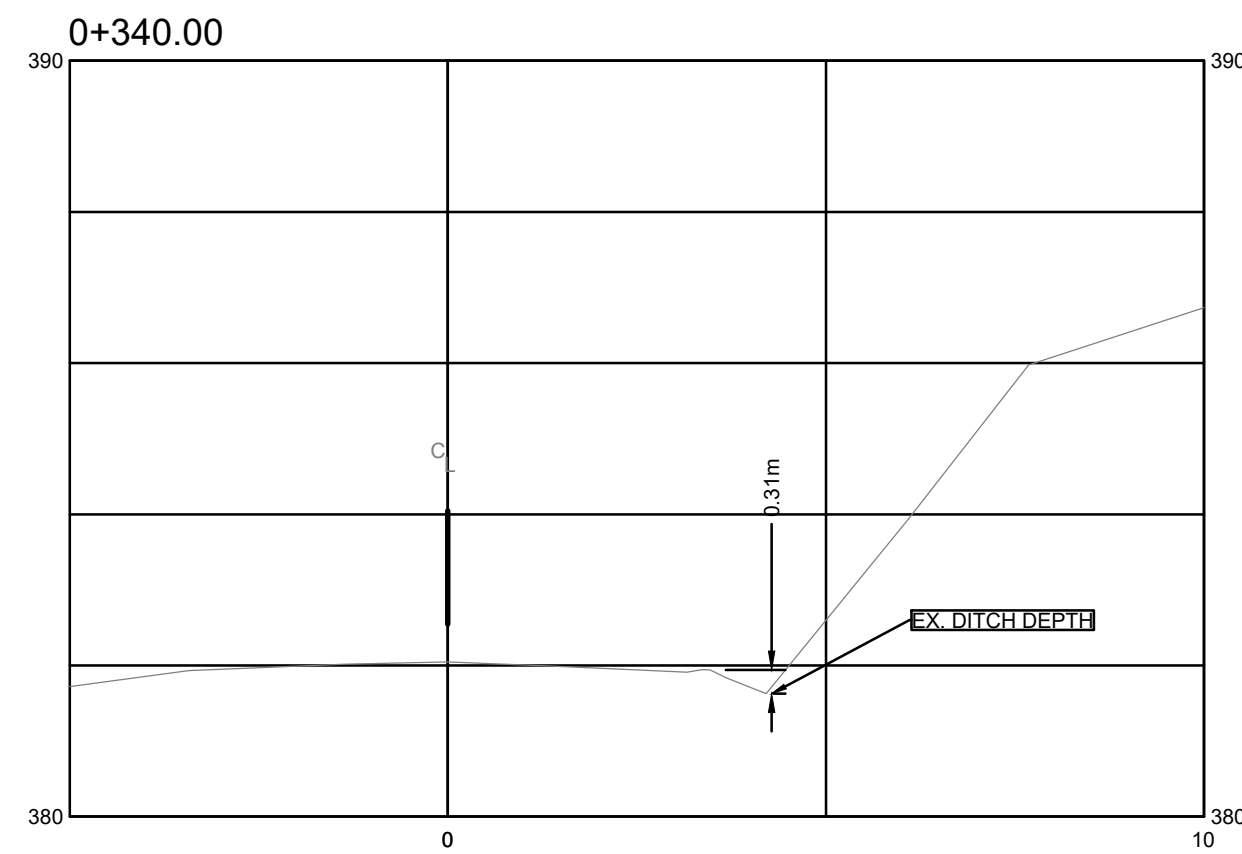
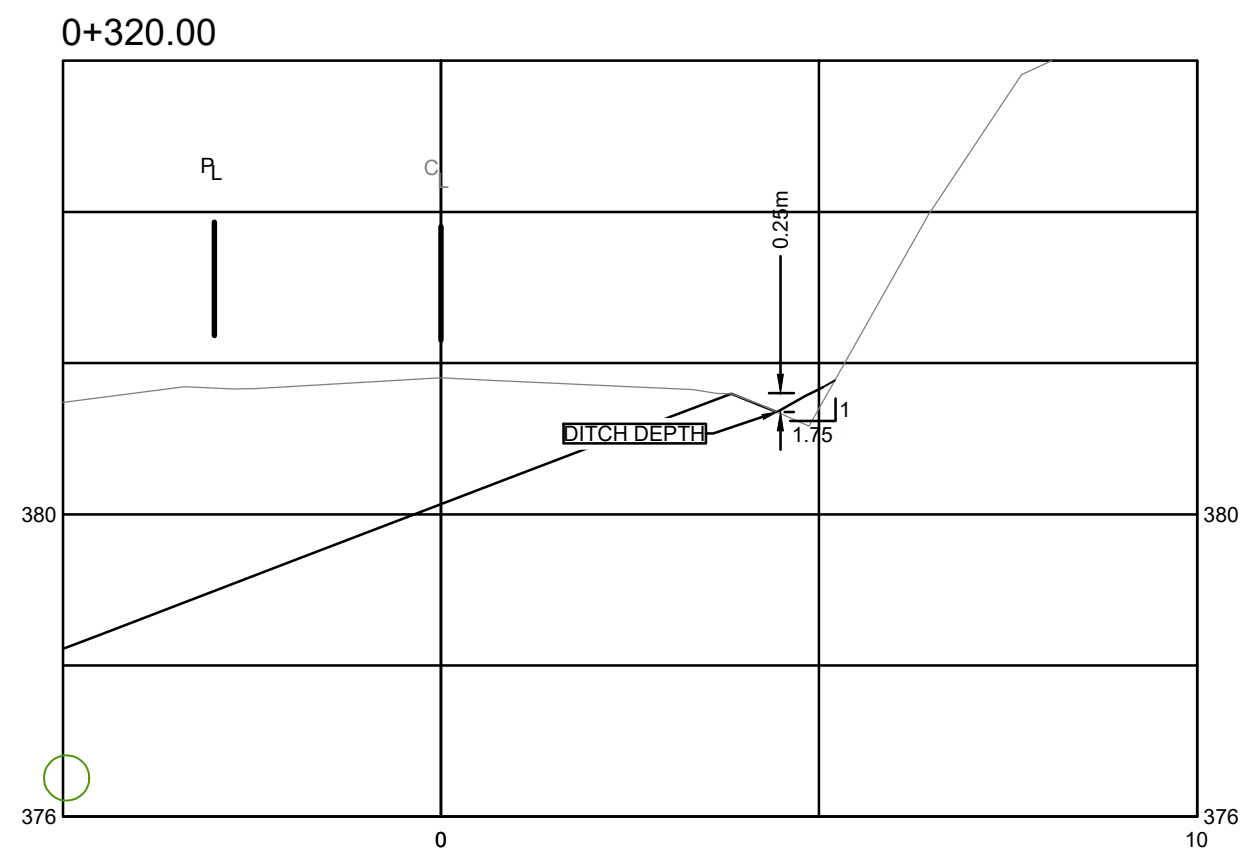
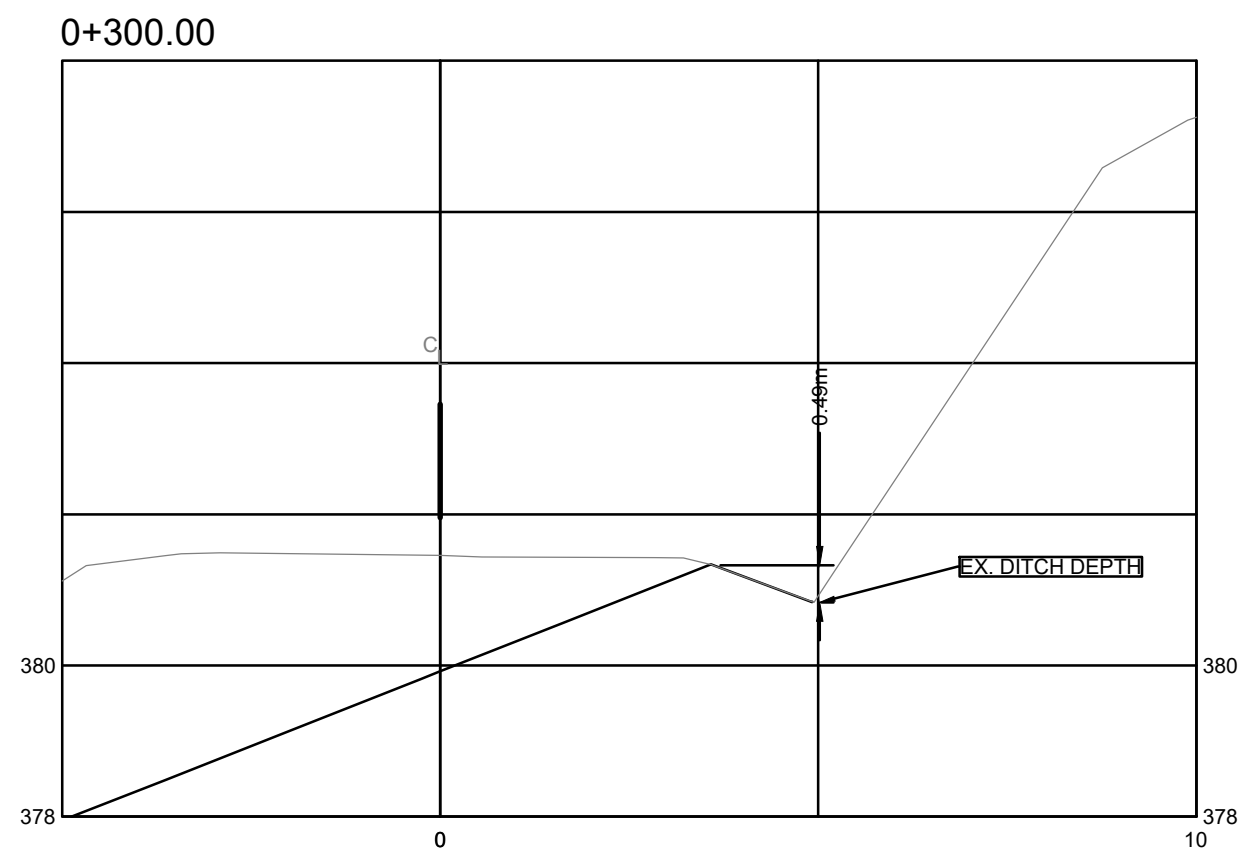
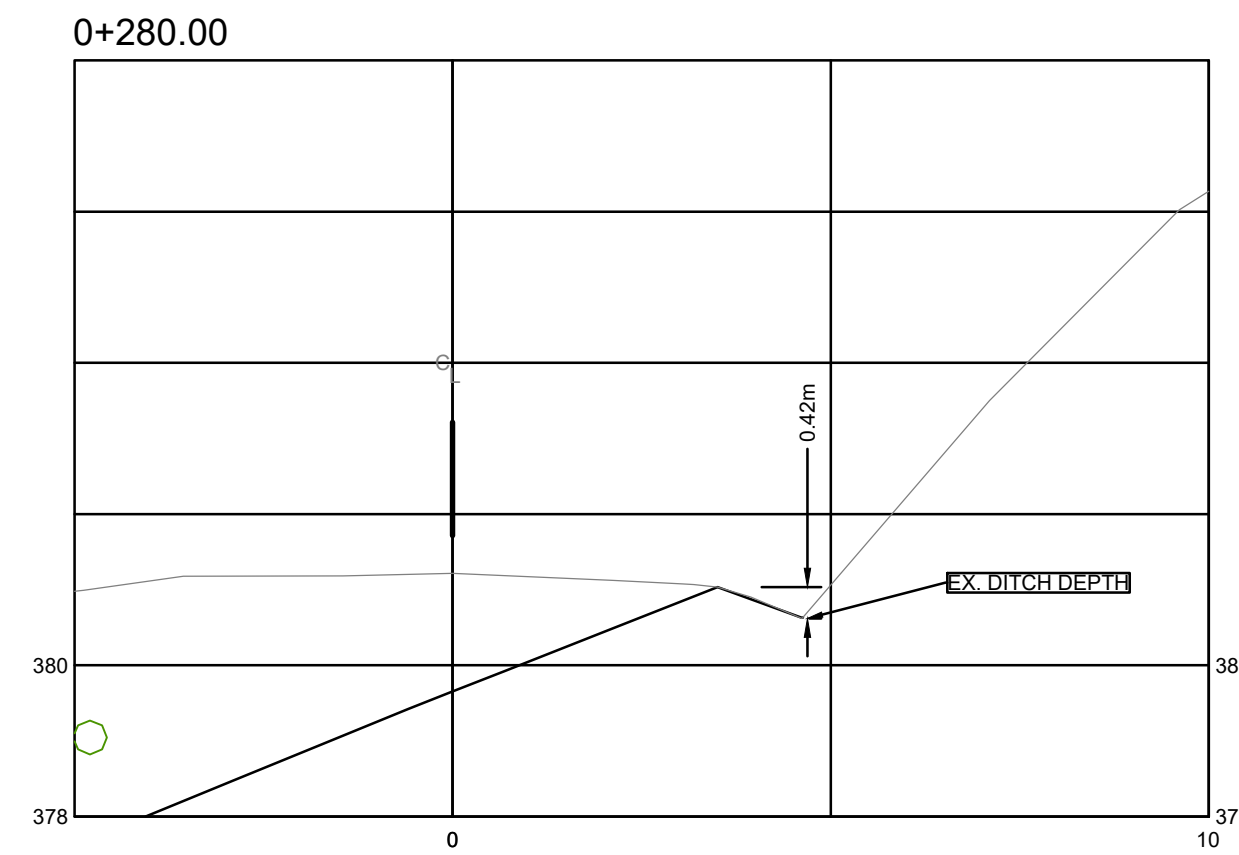
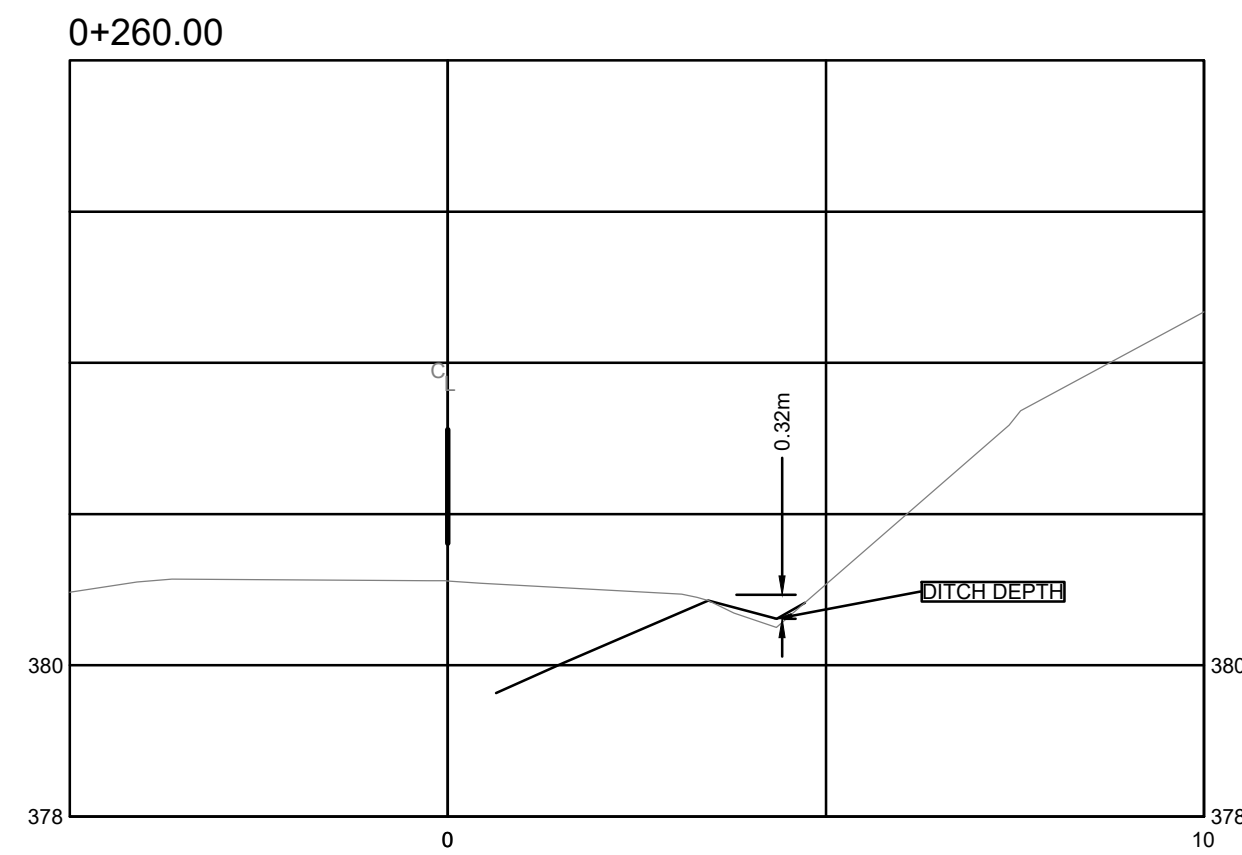
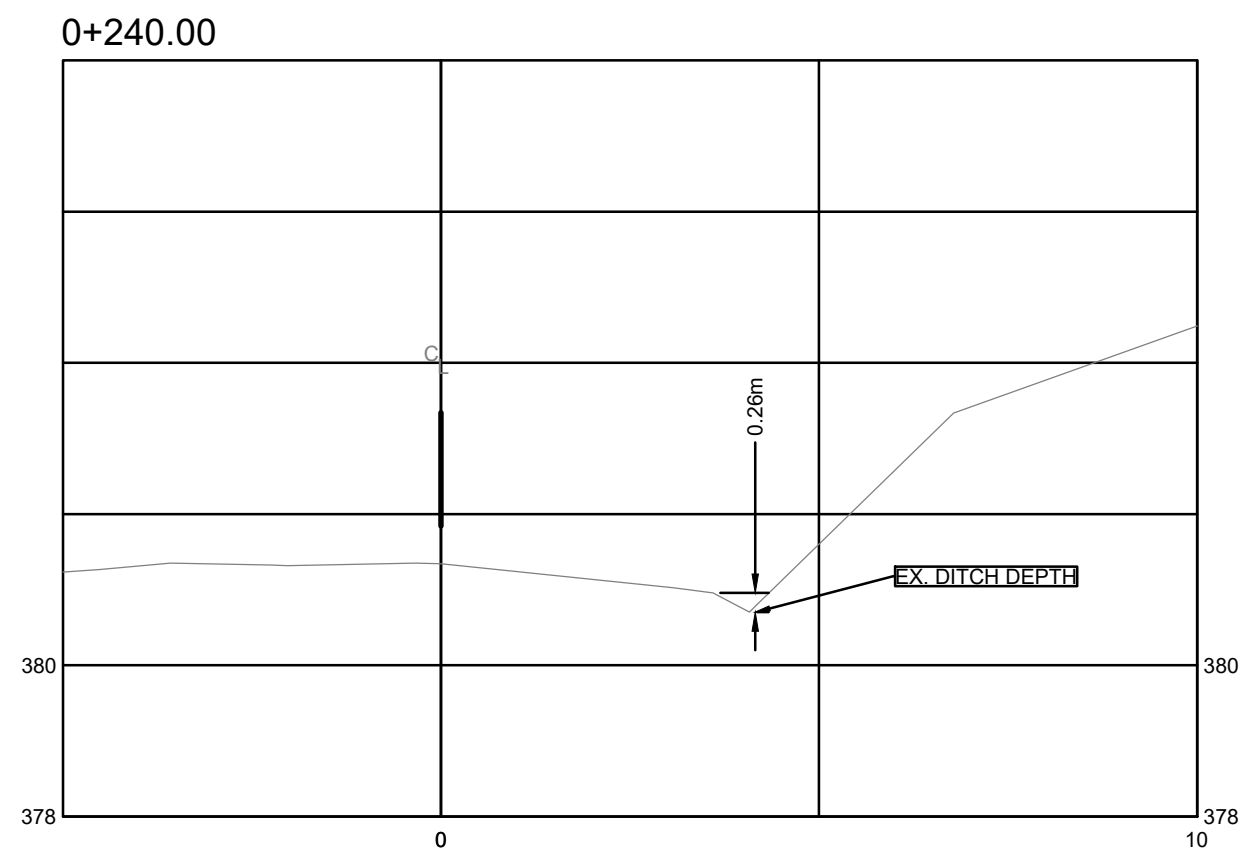
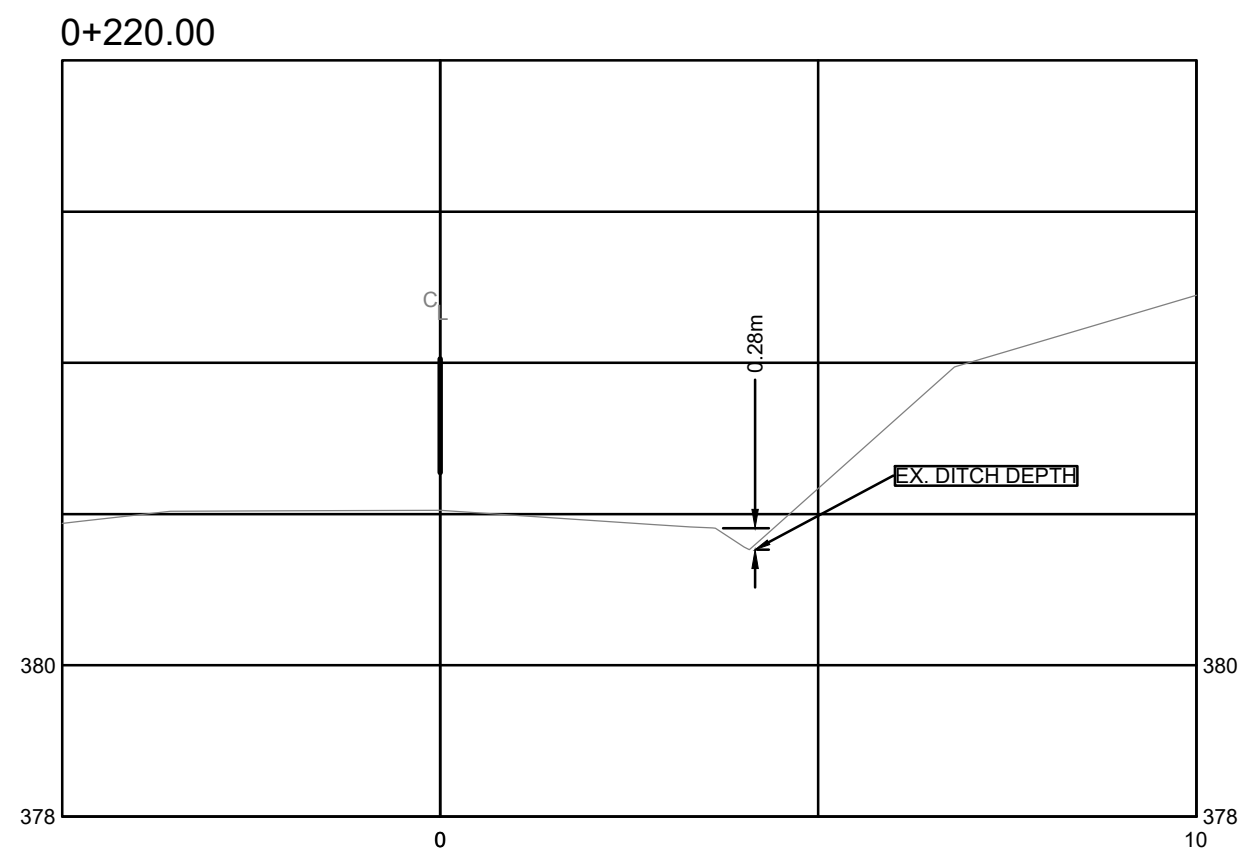
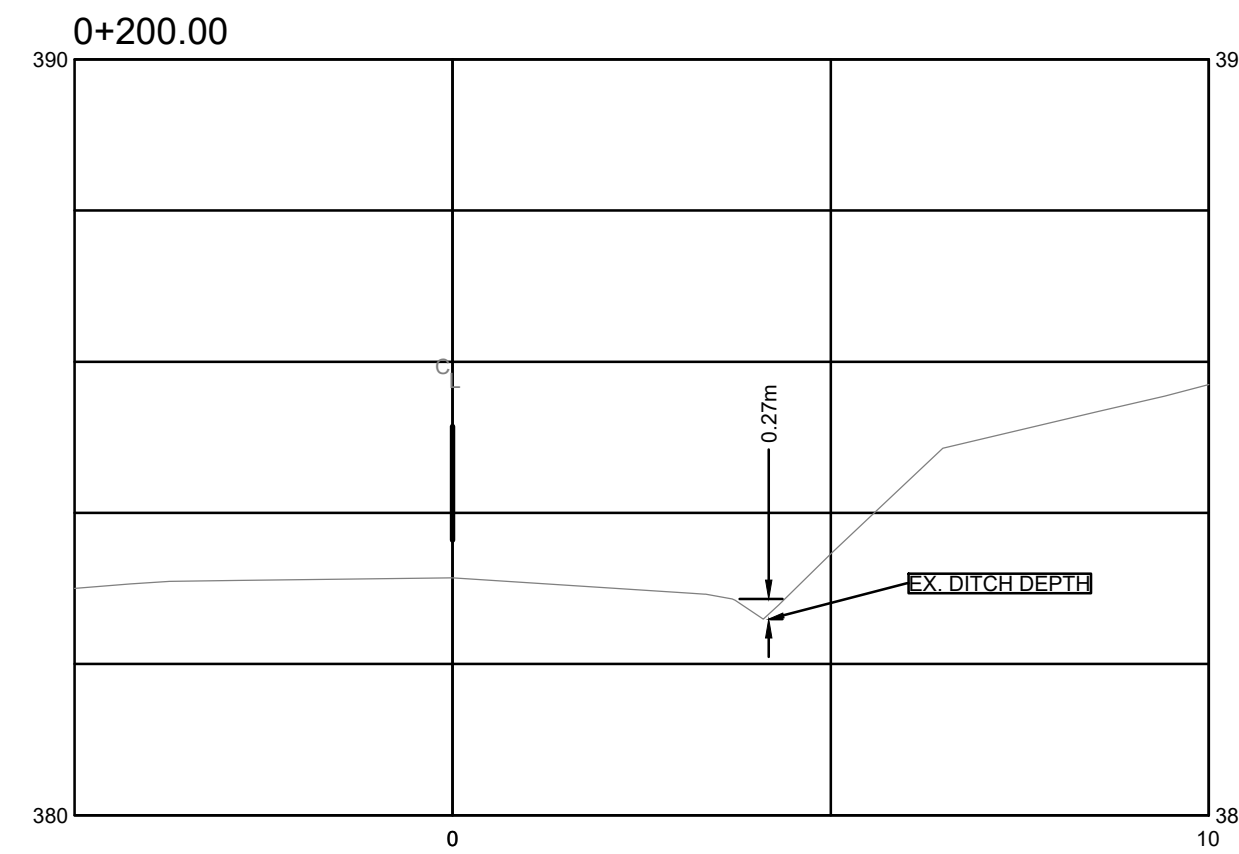
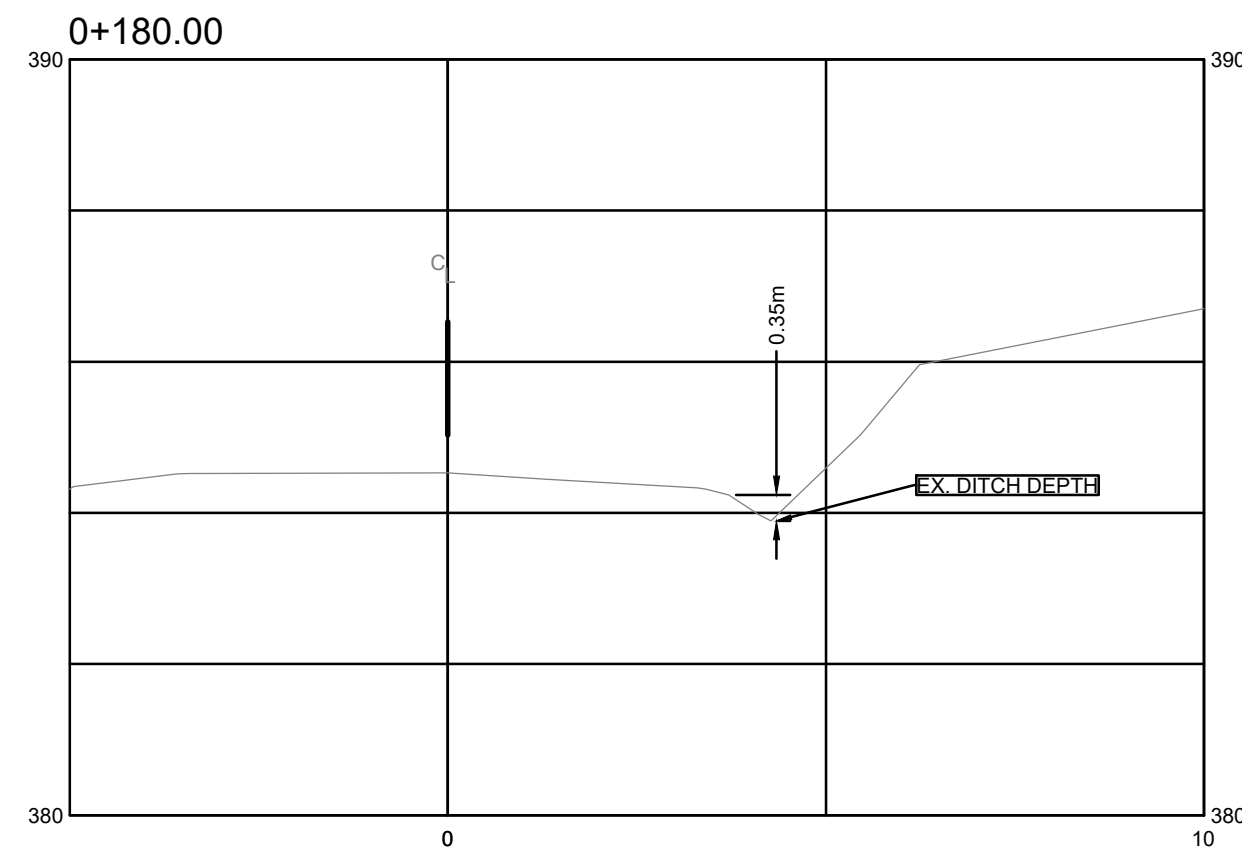
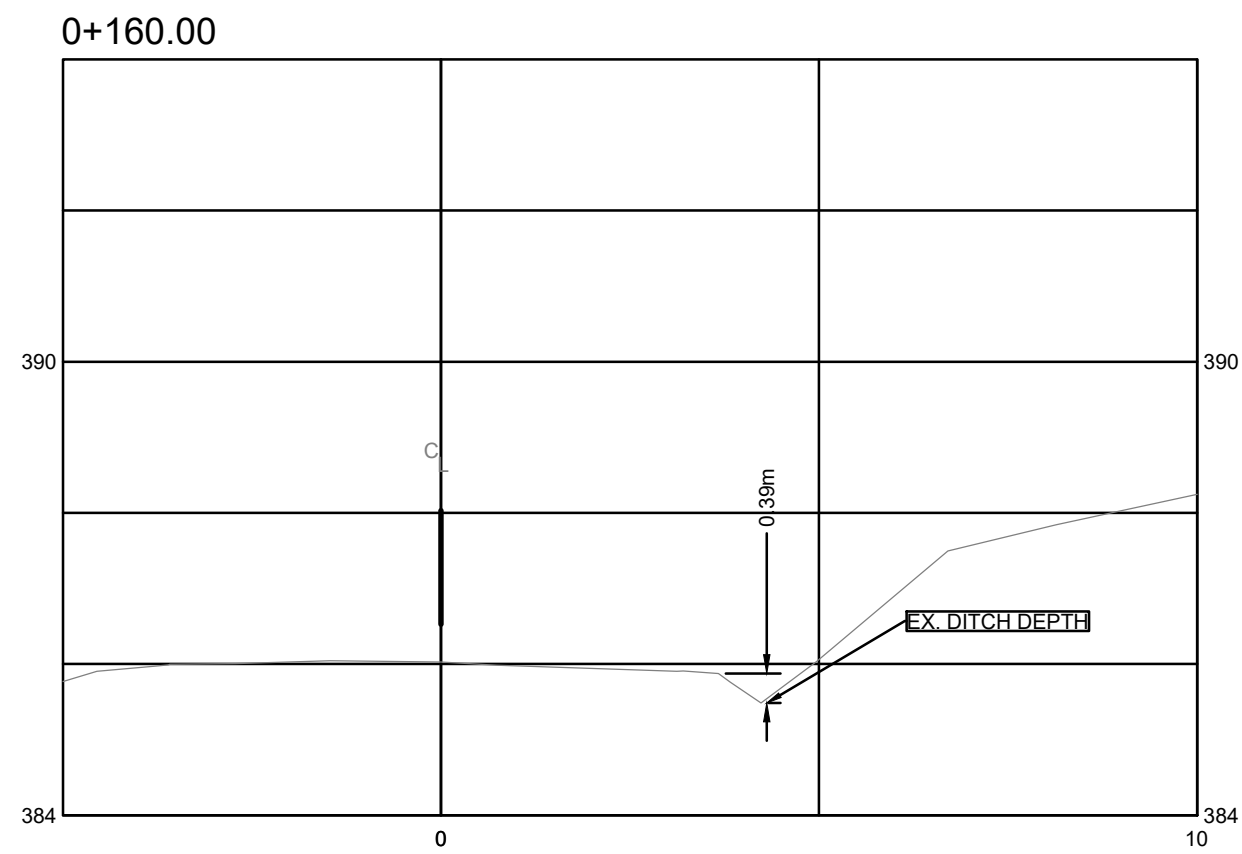
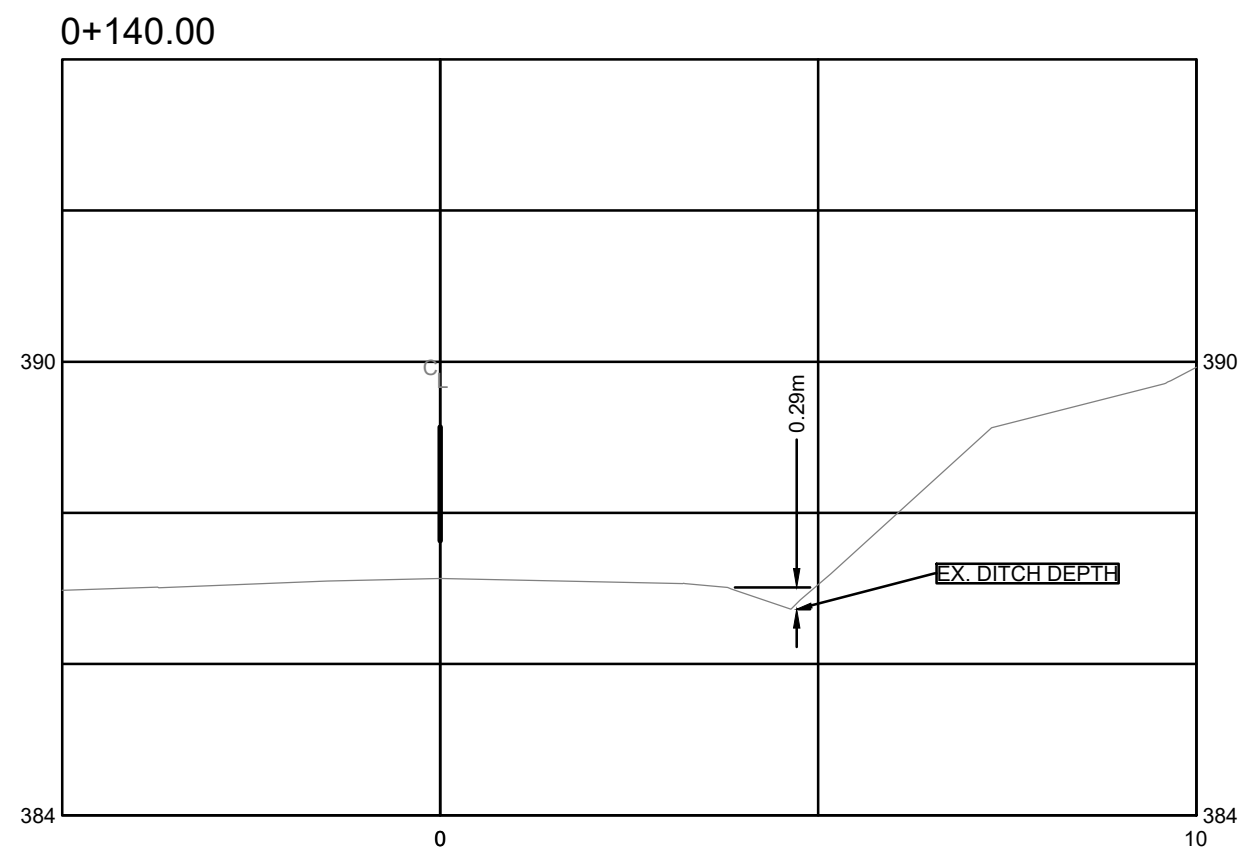
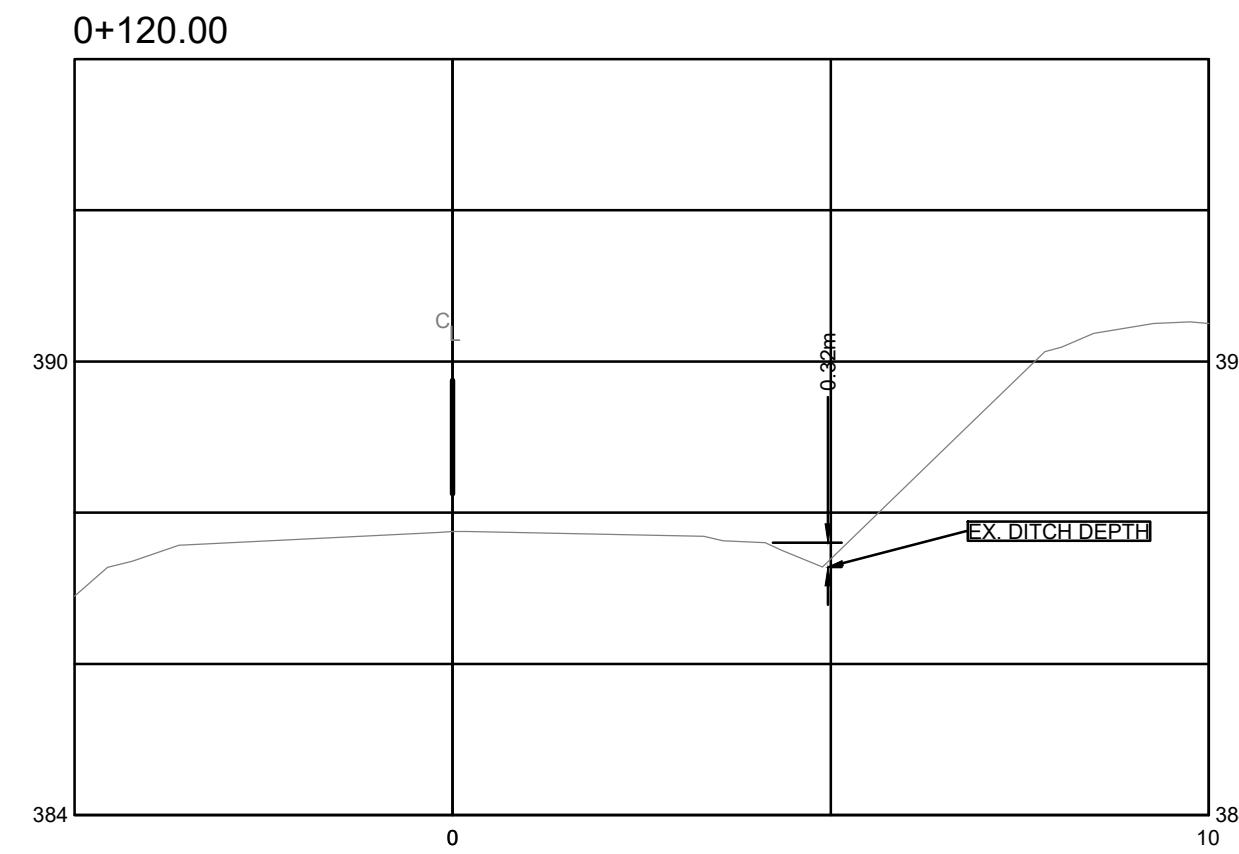
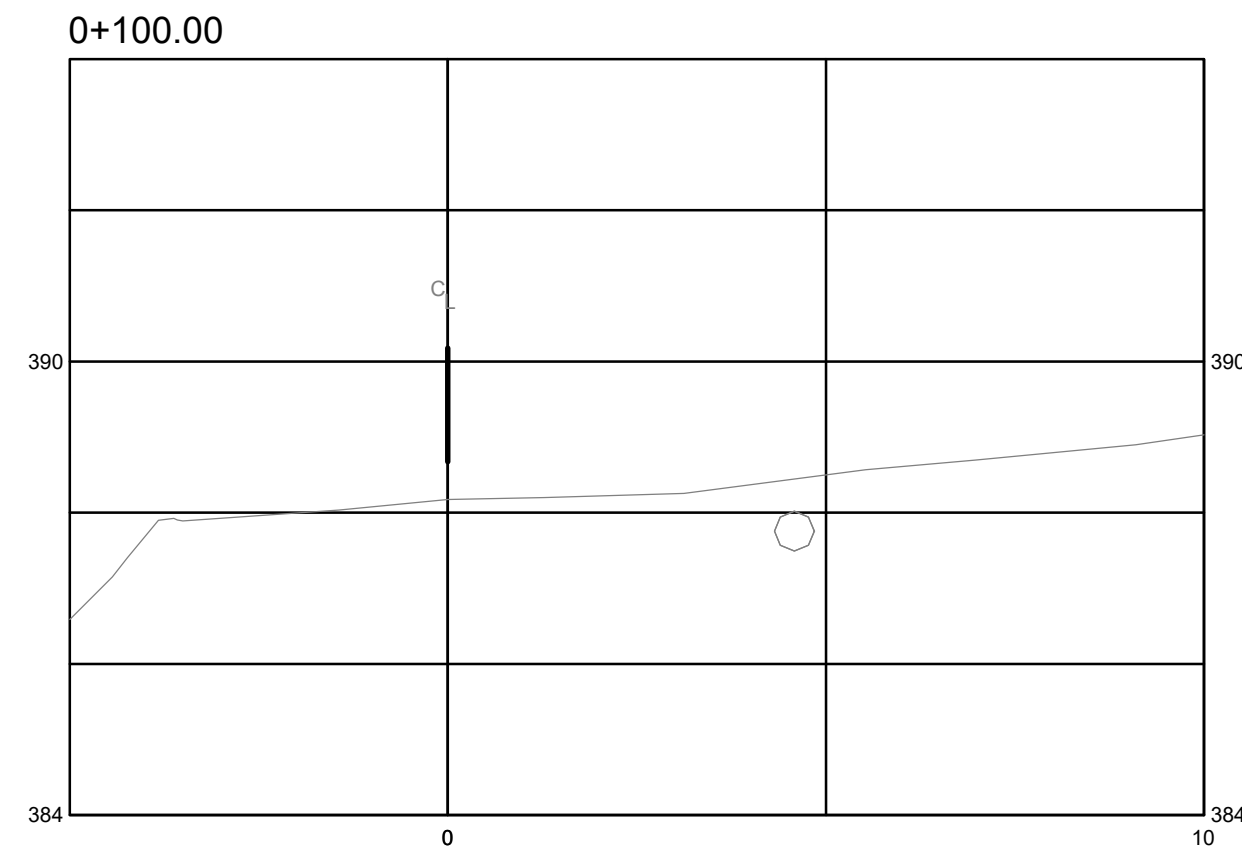
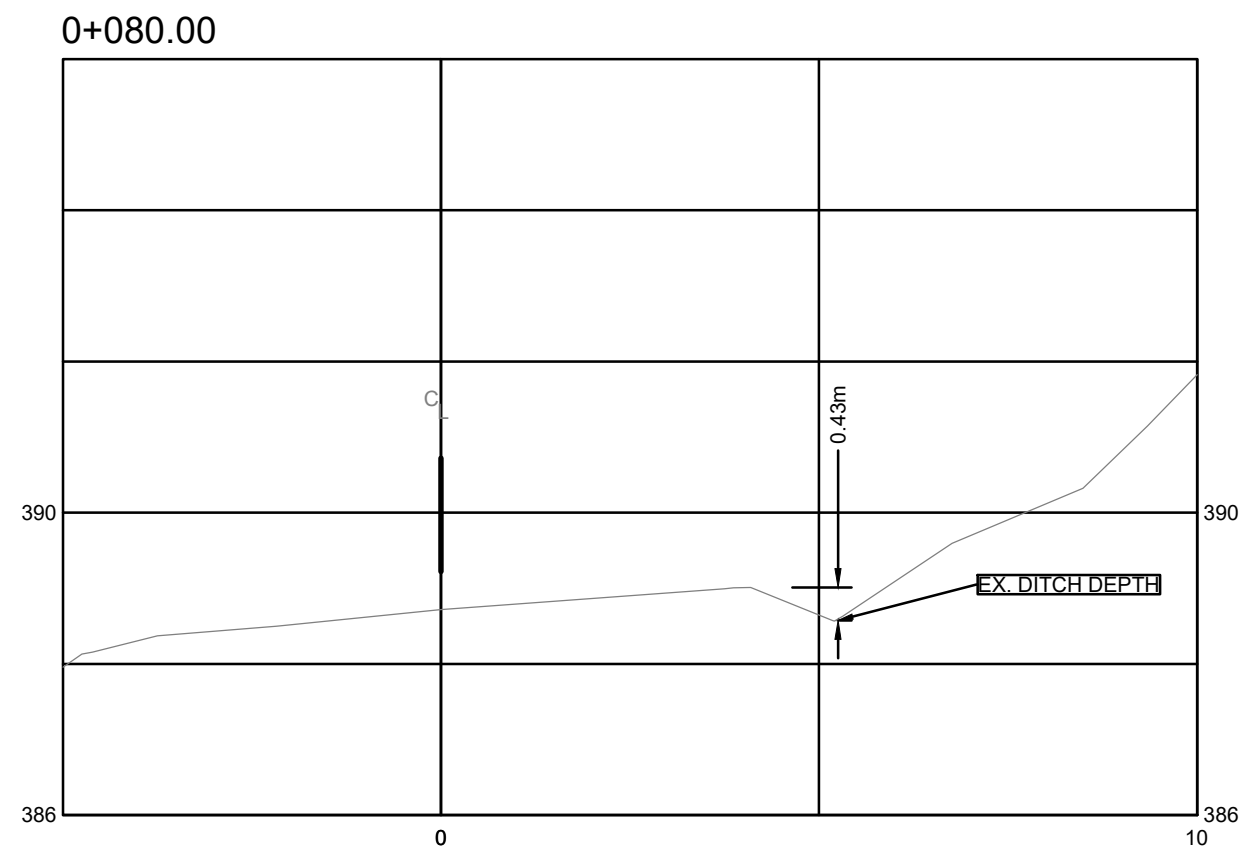
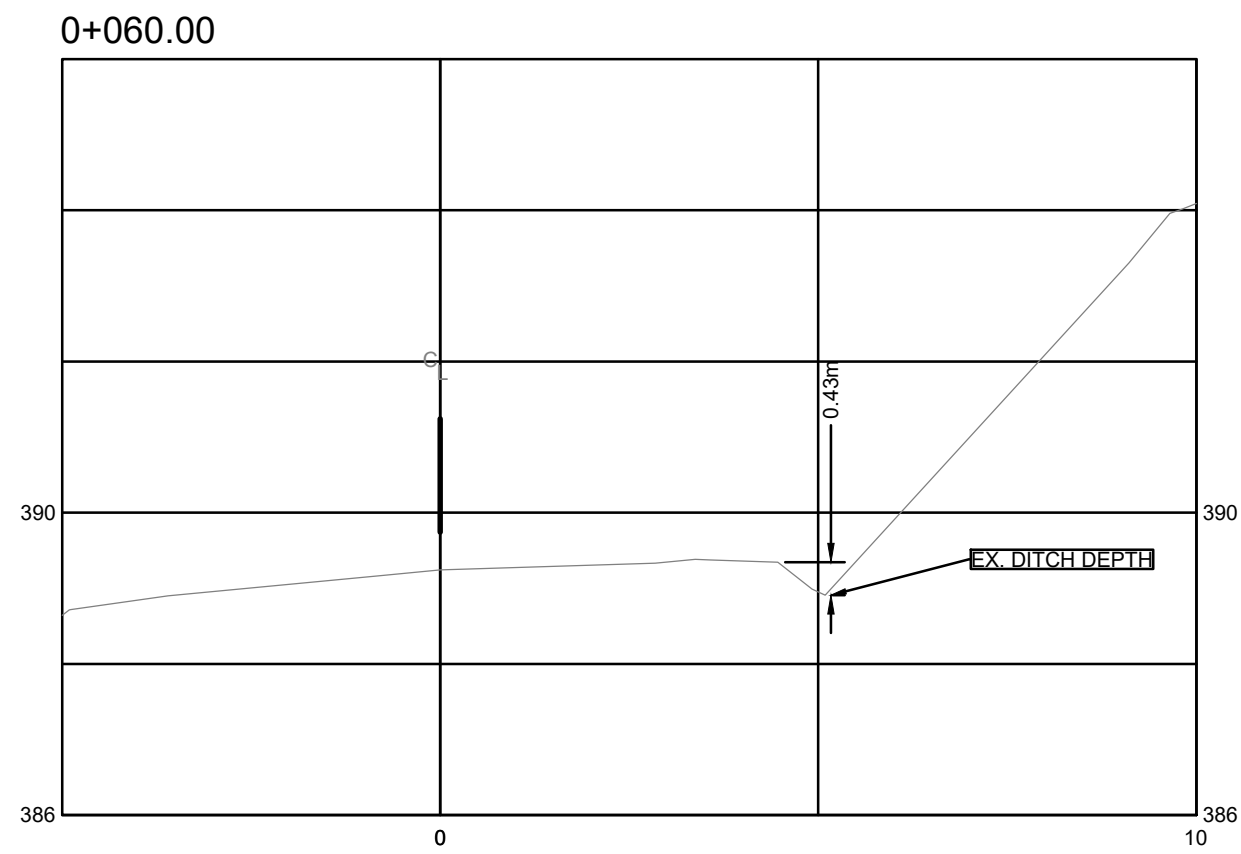
SCALE H: 1:250 V: 1:250	SOUTH BASIN DRAINAGE IMPROVEMENTS KOKANEE ROAD CROSS SECTIONS	DRAWING NUMBER C301
SHEET 14 OF 21		



REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
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2	2025/01/24	FDS	DLP	BTL	RE-ISSUED FOR TENDER
3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION

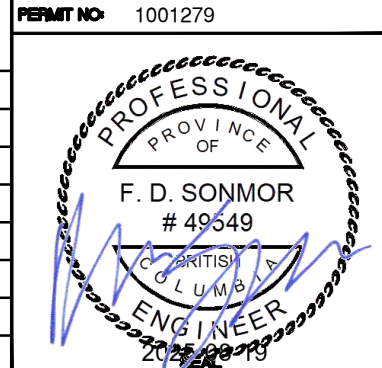


SCALE H: 1:100 V: 1:100	SOUTH BASIN DRAINAGE IMPROVEMENTS KOKANEE ROAD CROSS SECTIONS
SHEET 15 OF 21	DRAWING NUMBER C302



REV. No.	DATE	DESIGNED	DRAWN	CHECKED
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2	2025/01/24	FDS	DLP	BTL
3	2025/03/06	FDS	DLP	BTL
4	2025/05/01	FDS	PJD	BTL
5	2025/08/19	FDS	DLP	BTL

DESCRIPTION
ISSUED FOR TENDER
RE-ISSUED FOR TENDER
RE-ISSUED FOR TENDER
RE-ISSUED FOR TENDER
ISSUED FOR CONSTRUCTION



SCALE
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V: 1:100

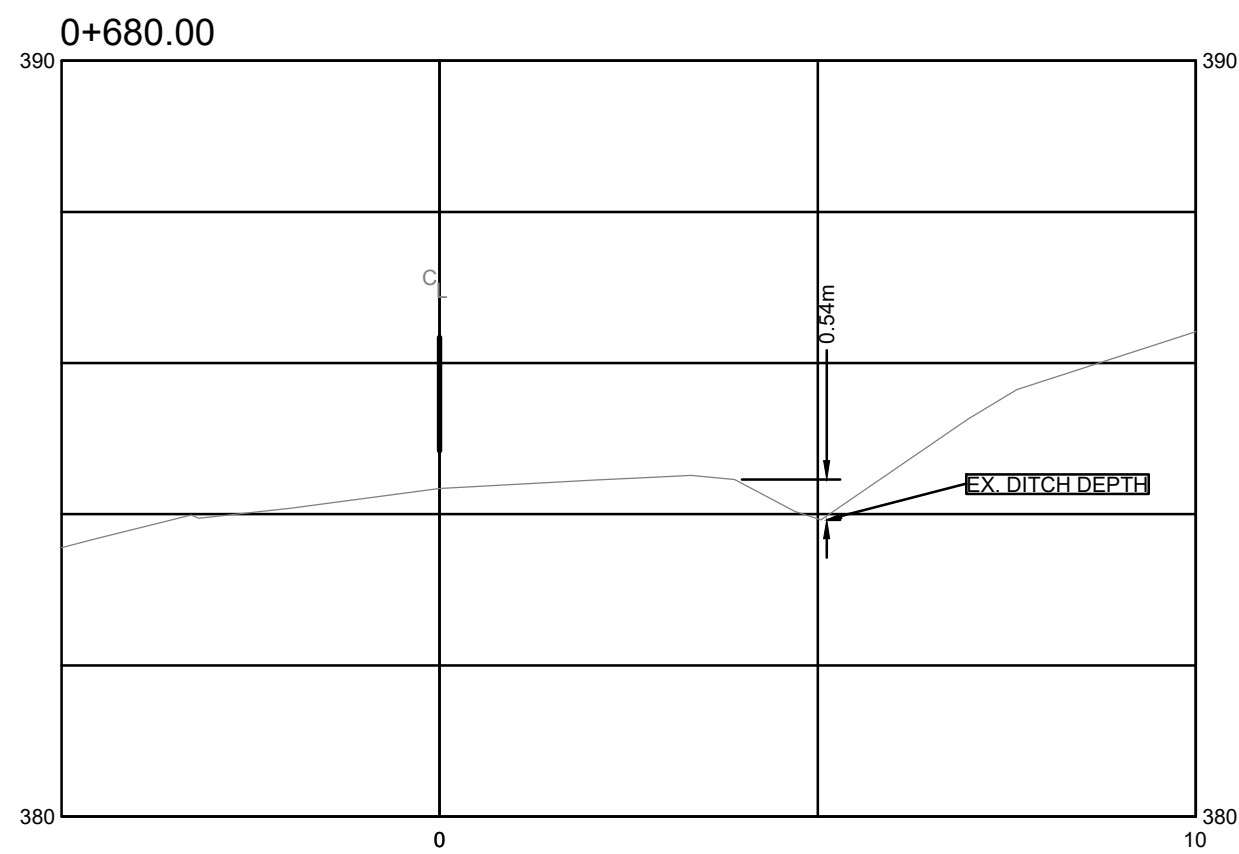
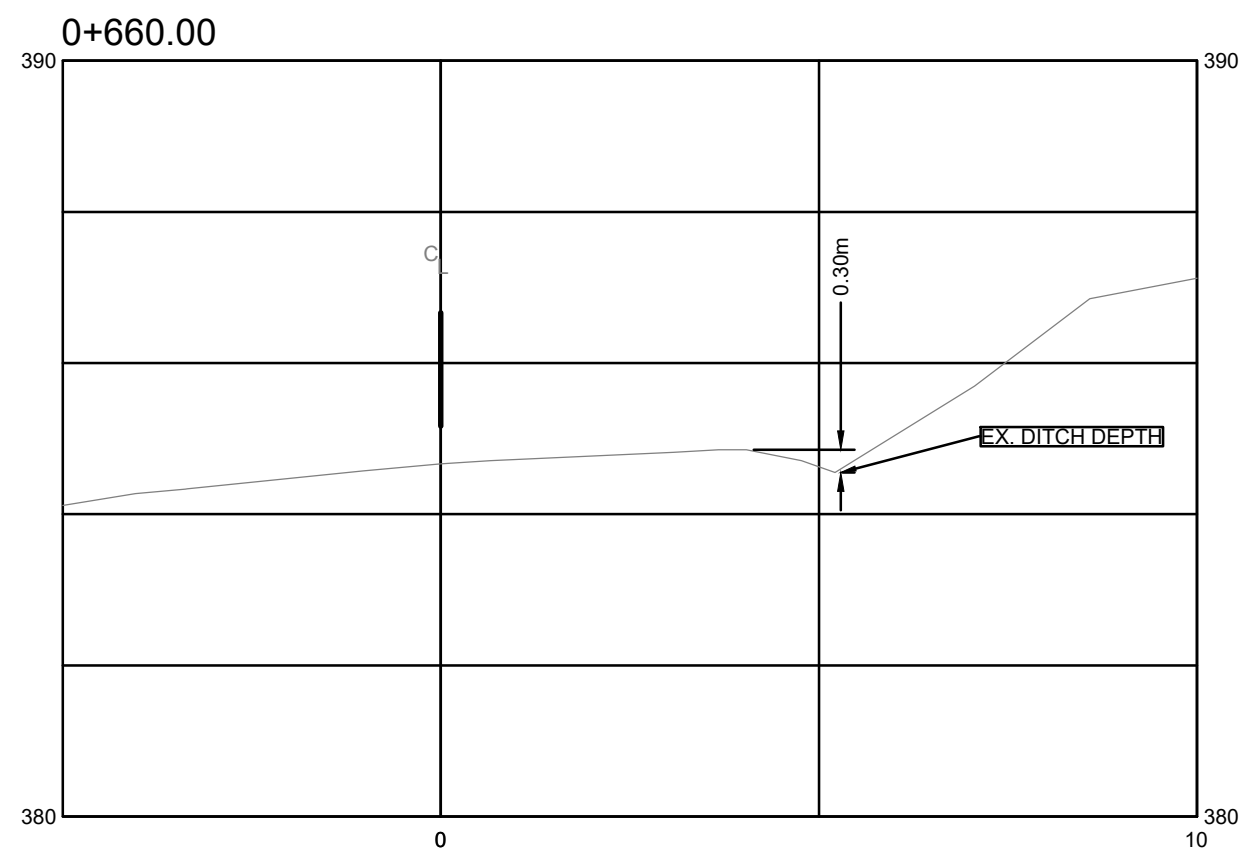
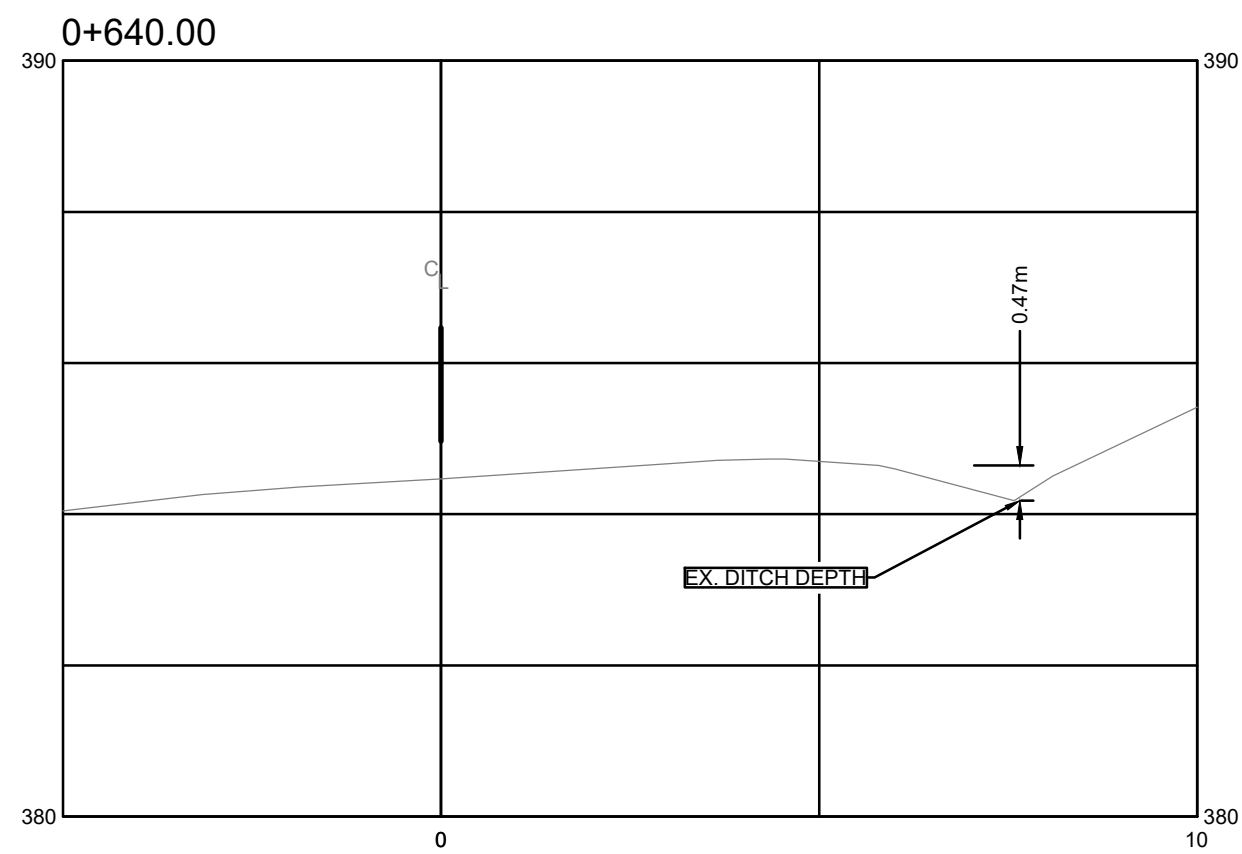
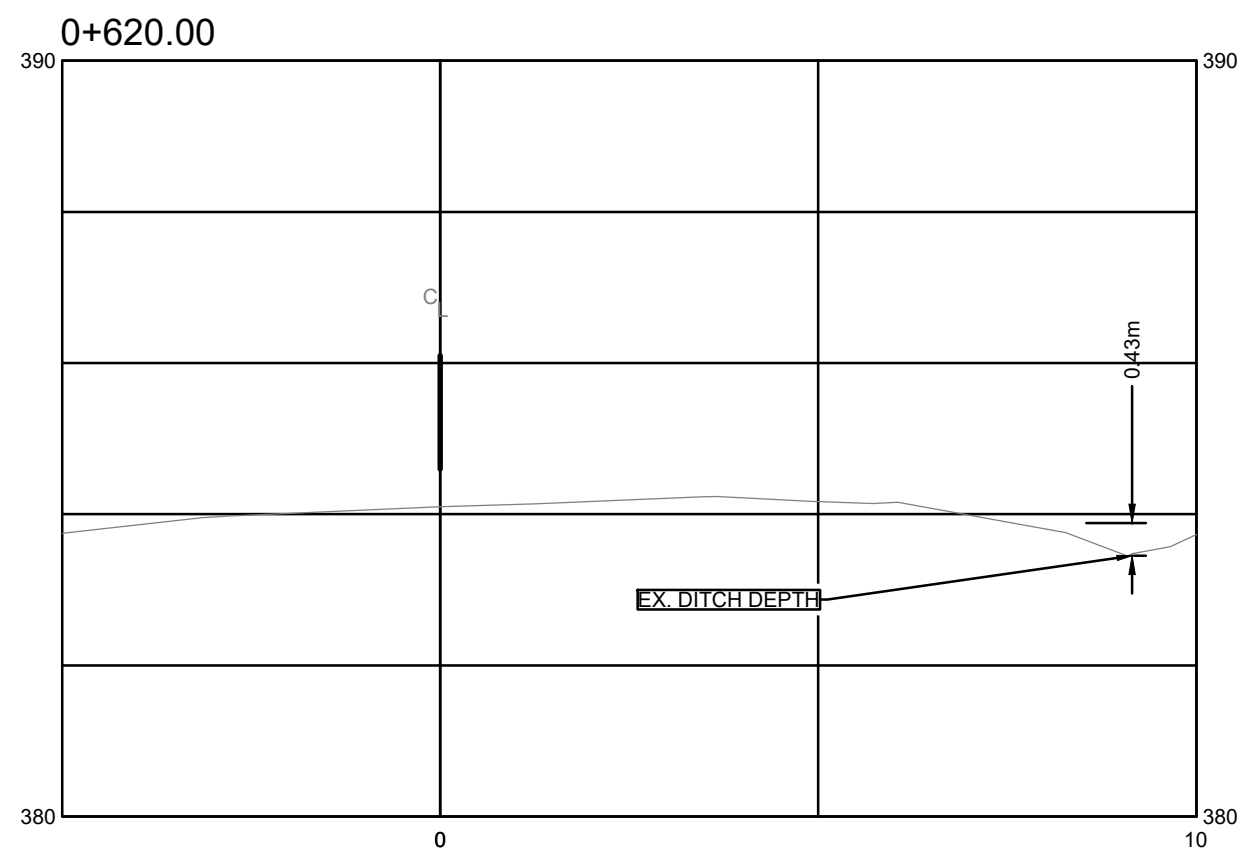
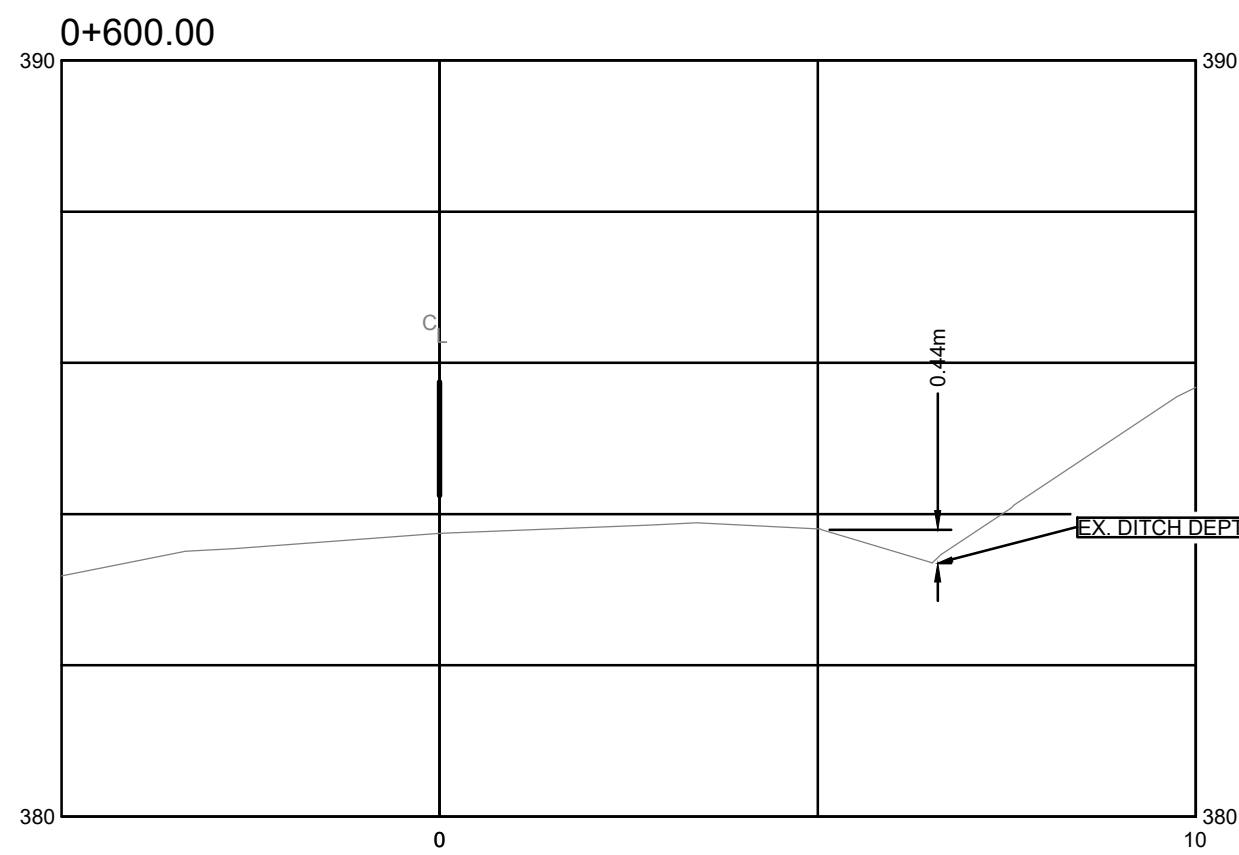
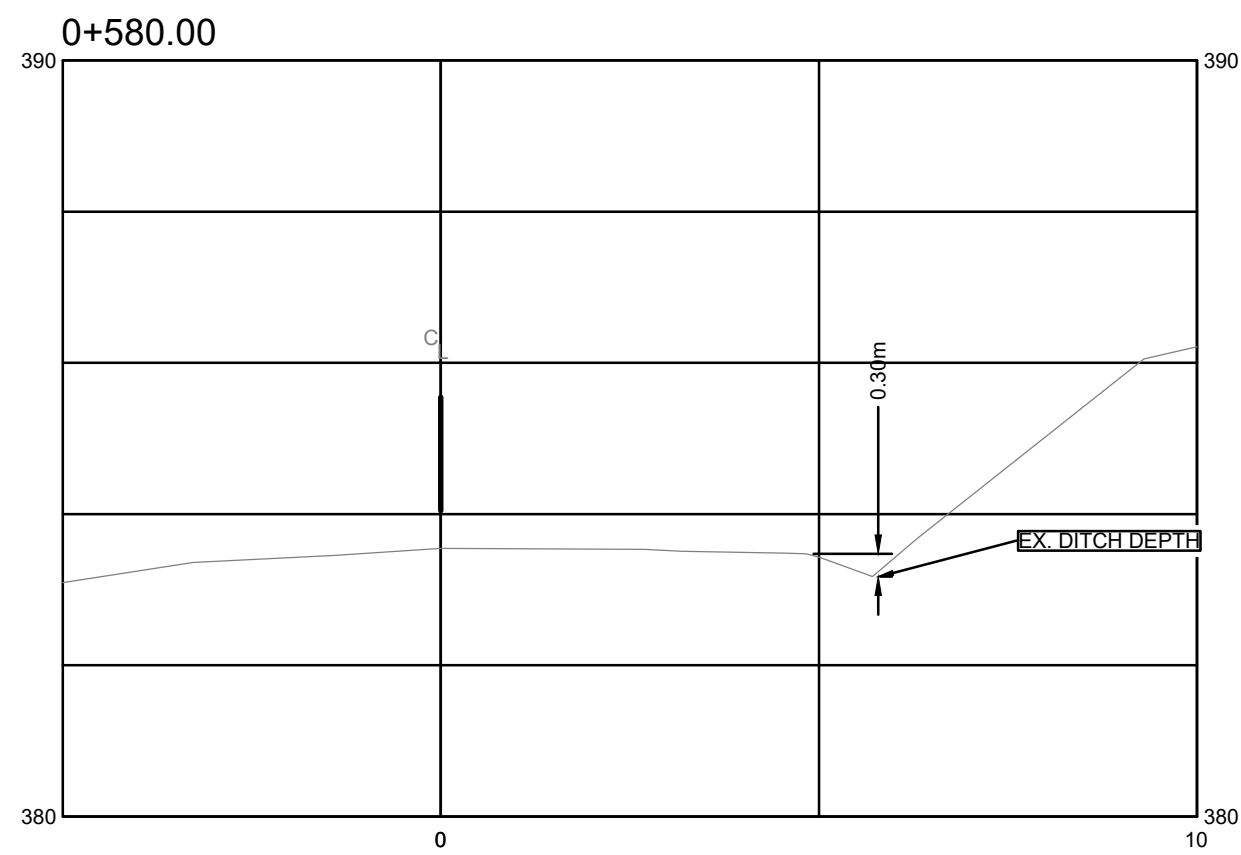
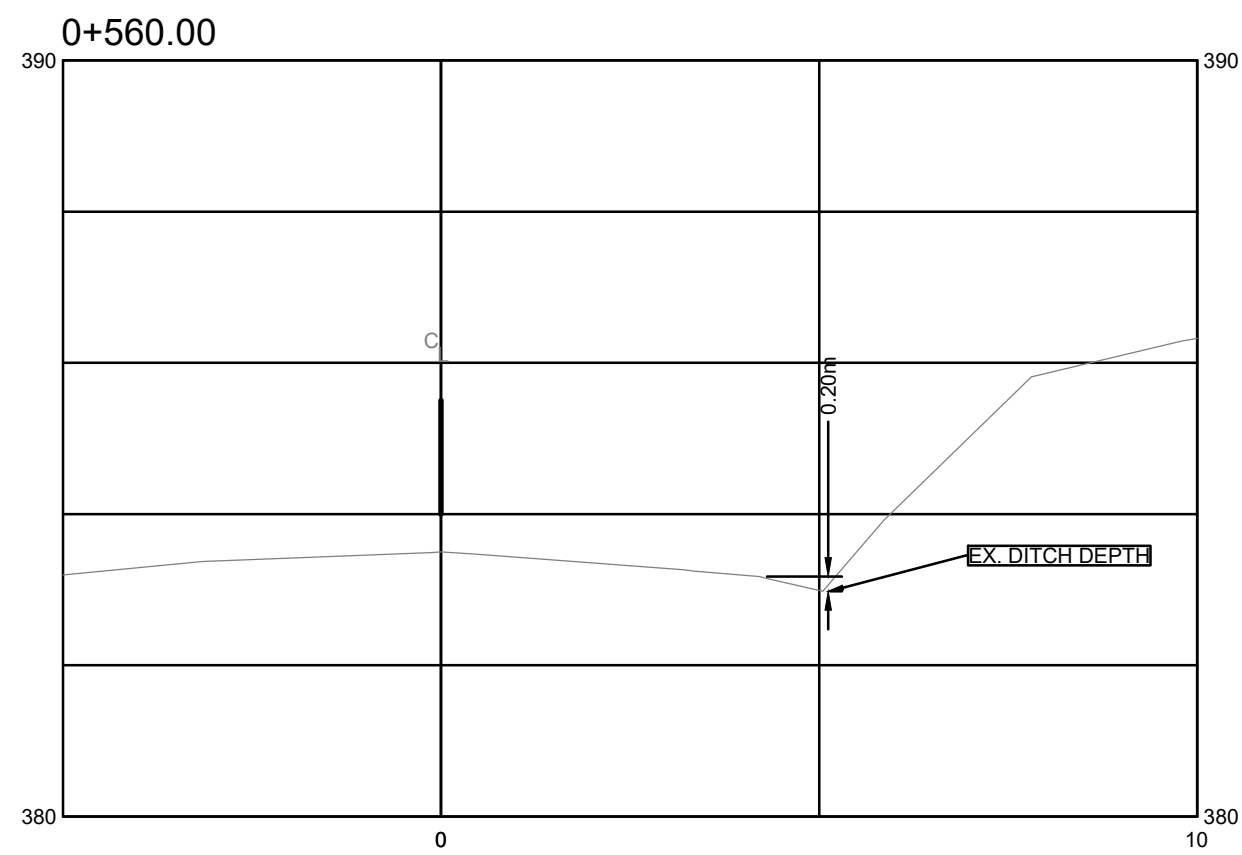
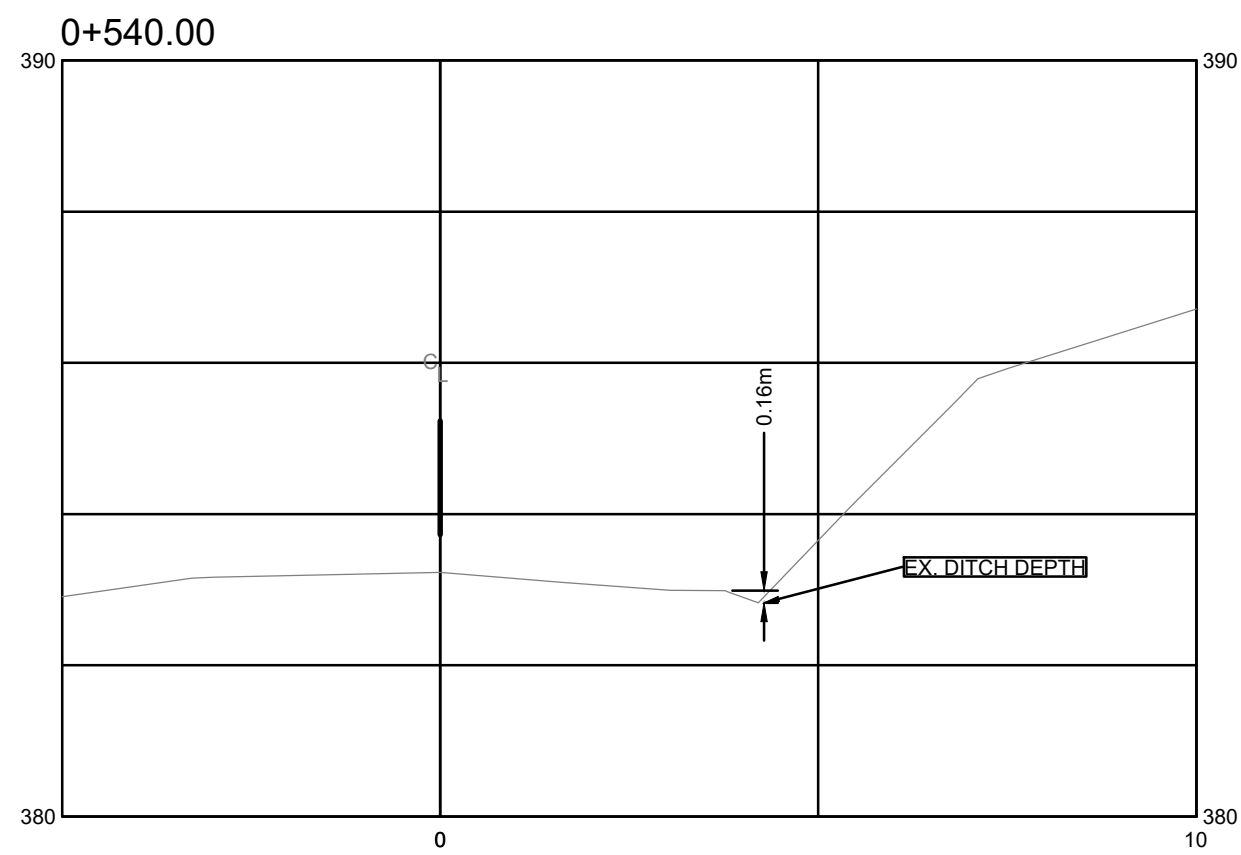
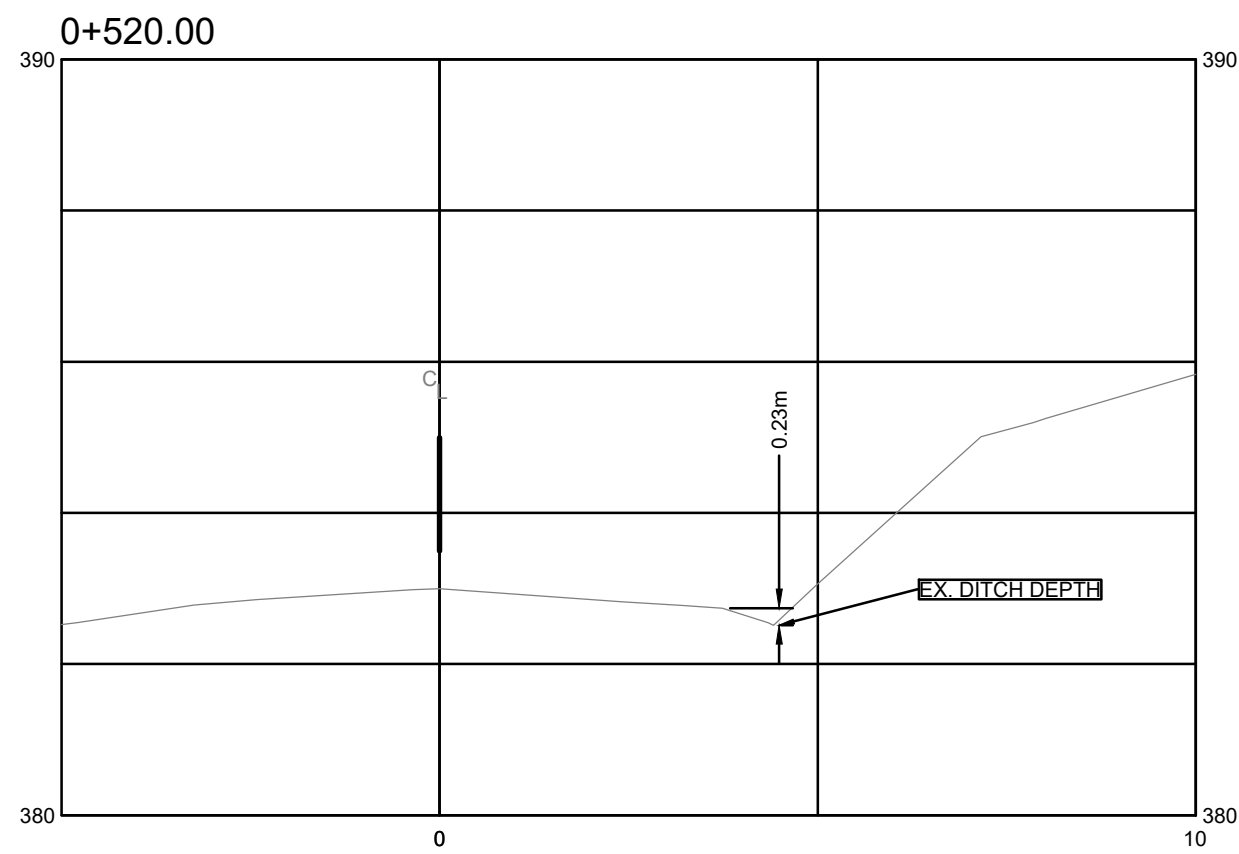
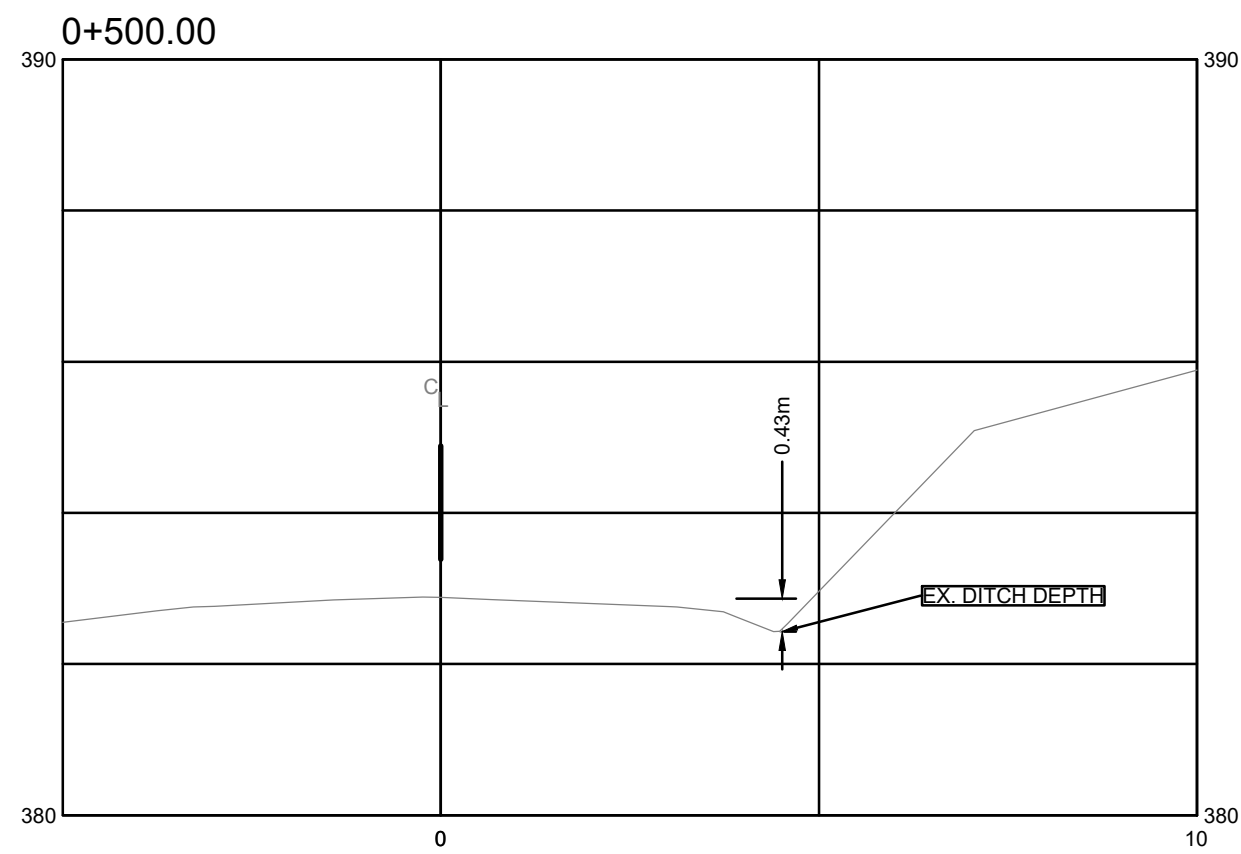
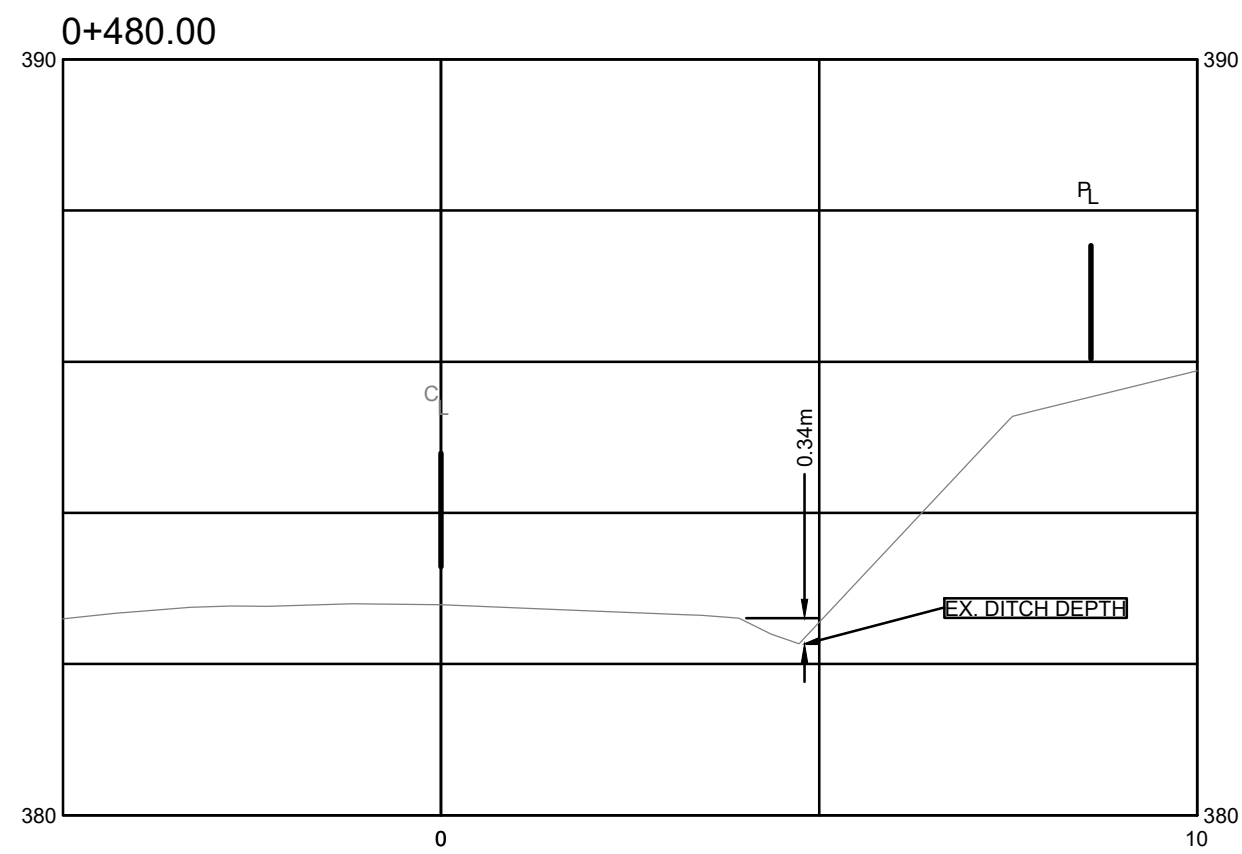
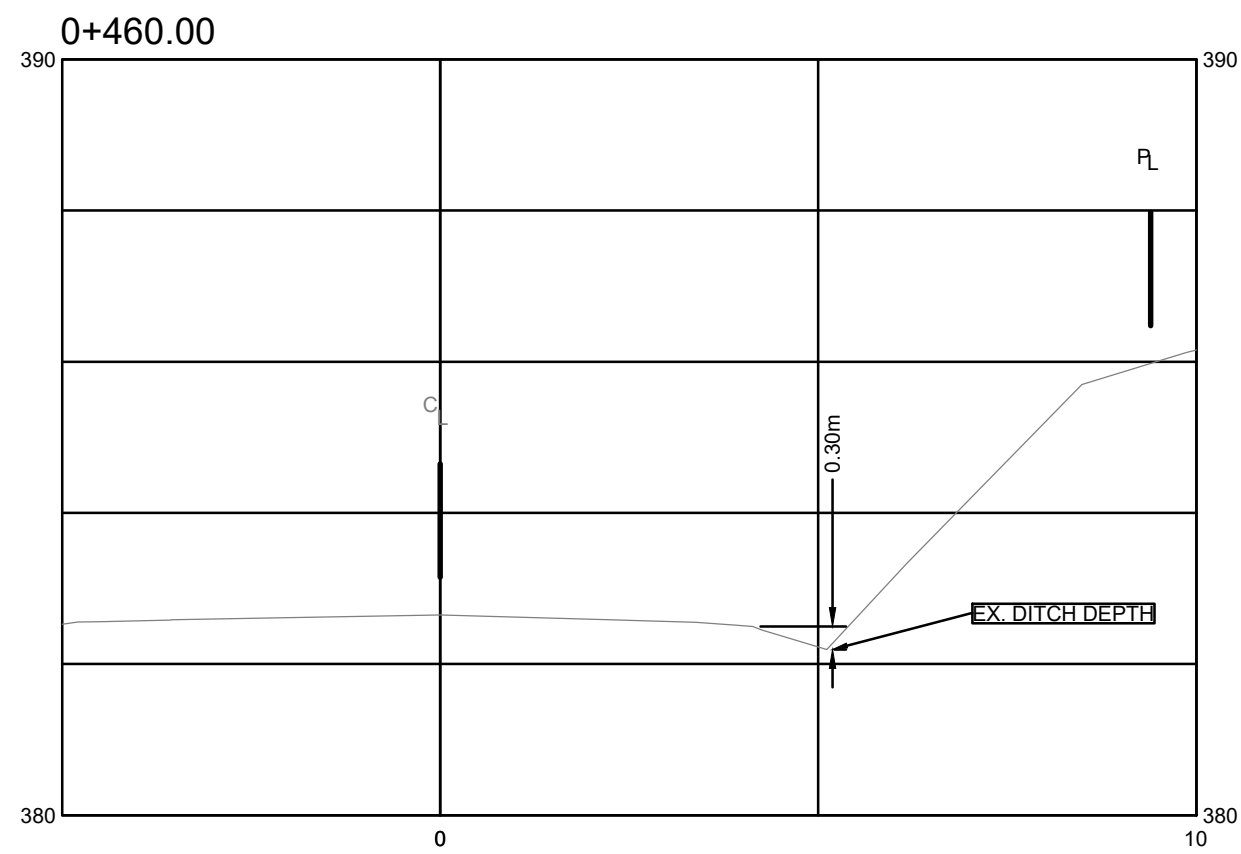
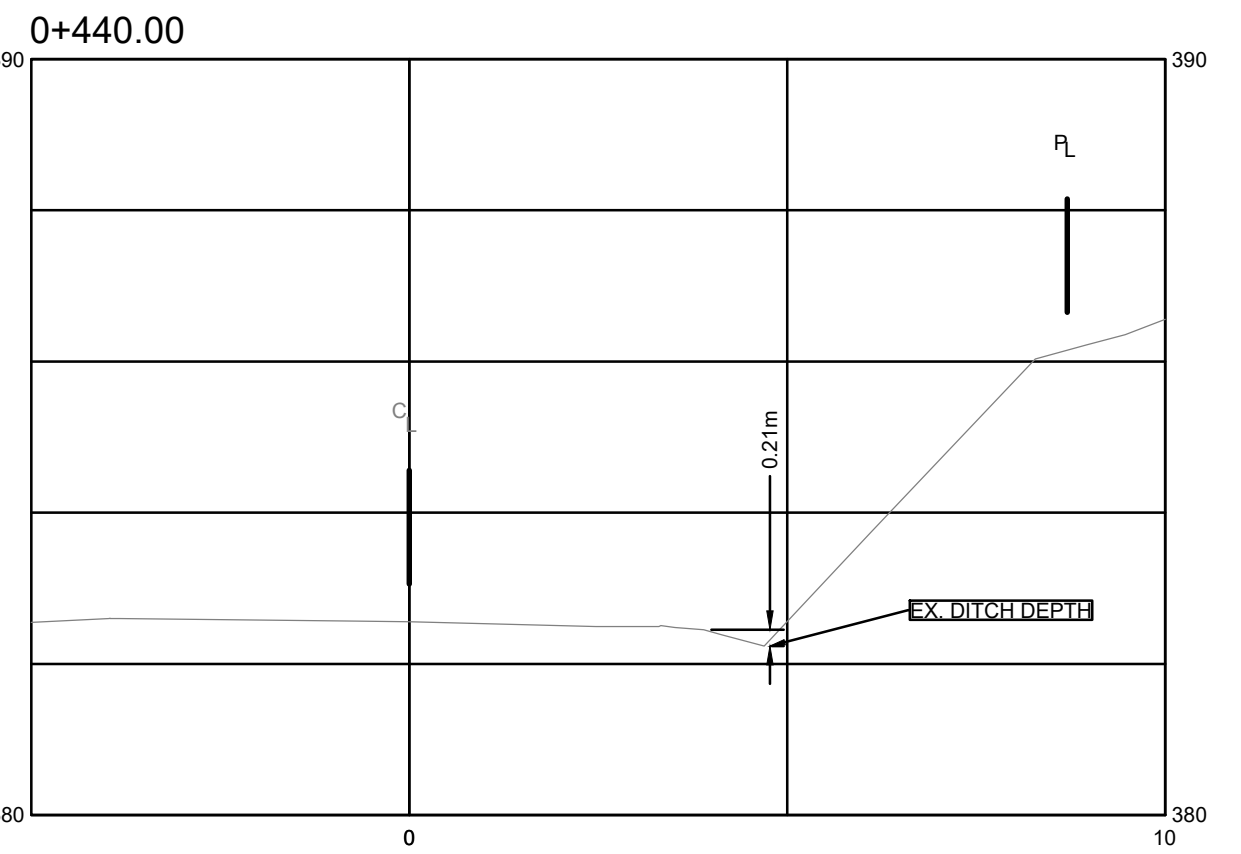
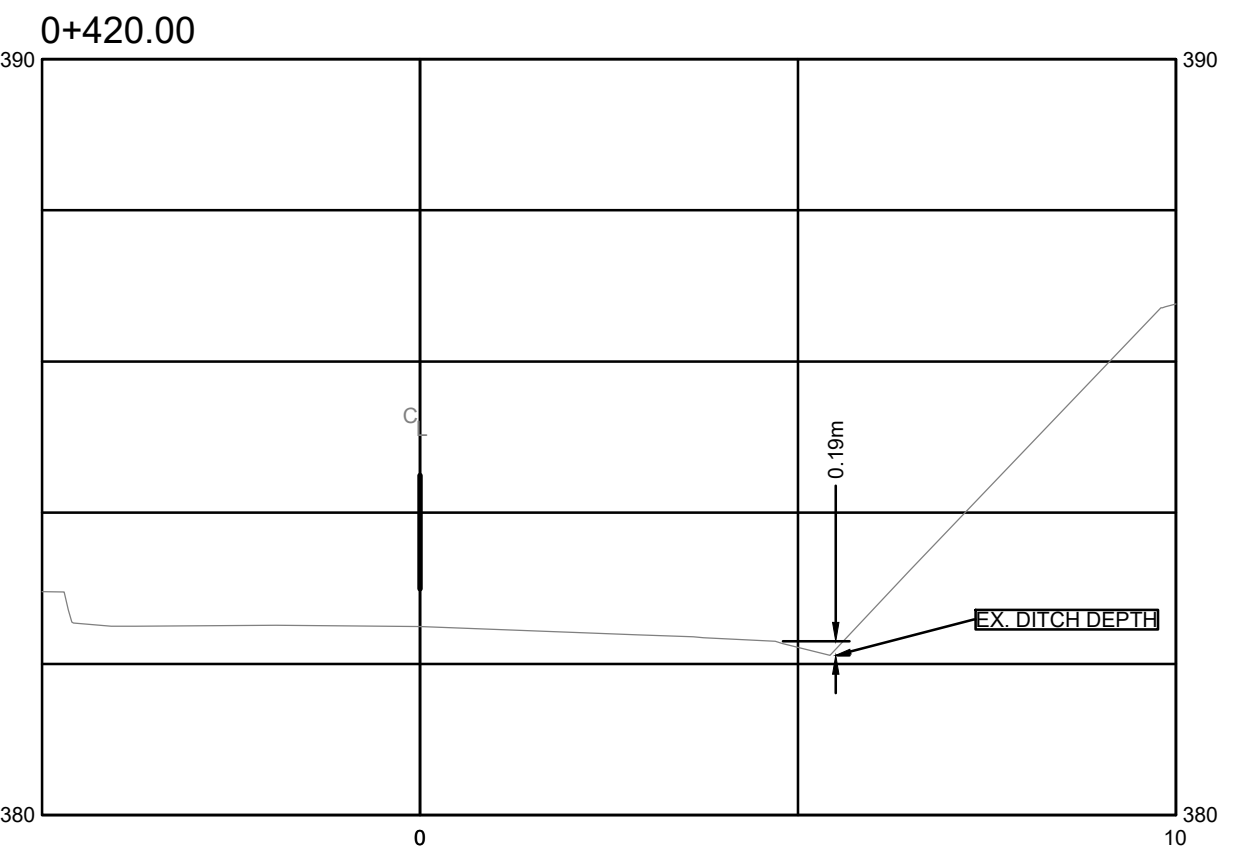
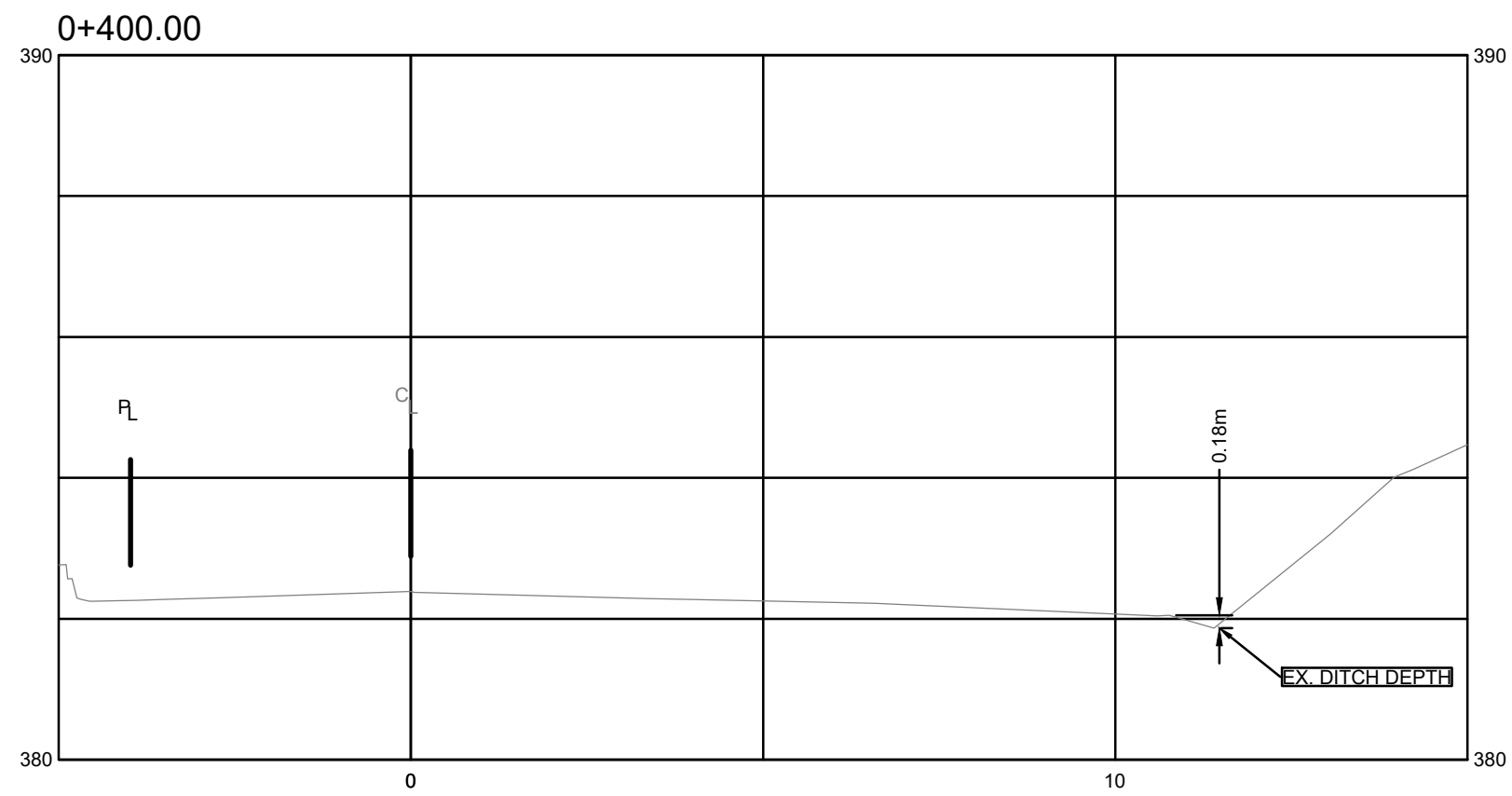
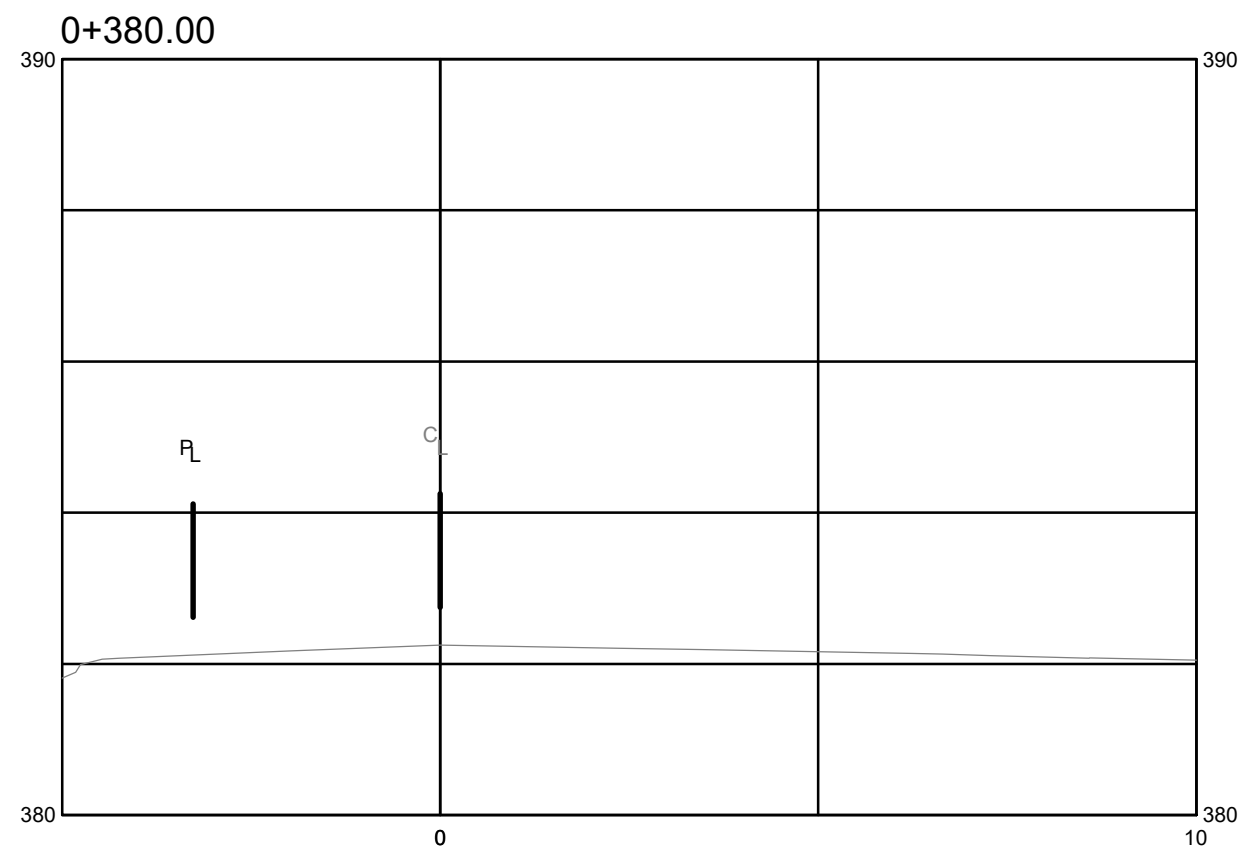
SHEET
16 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
EASTSIDE ROAD CROSS SECTIONS

DRAWING NUMBER
303

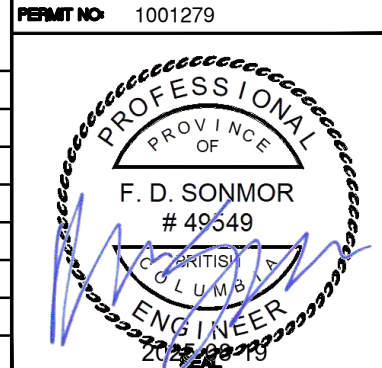
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19.08.2025



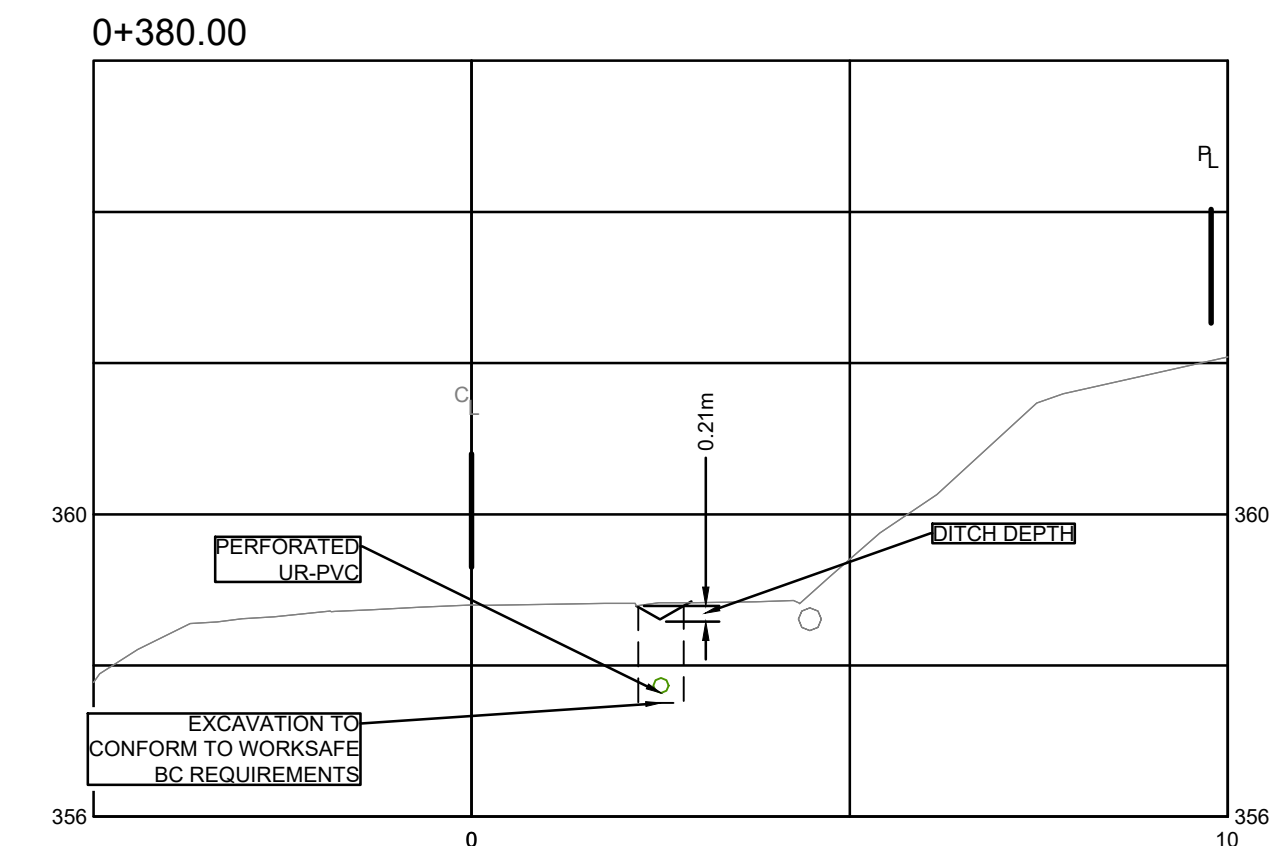
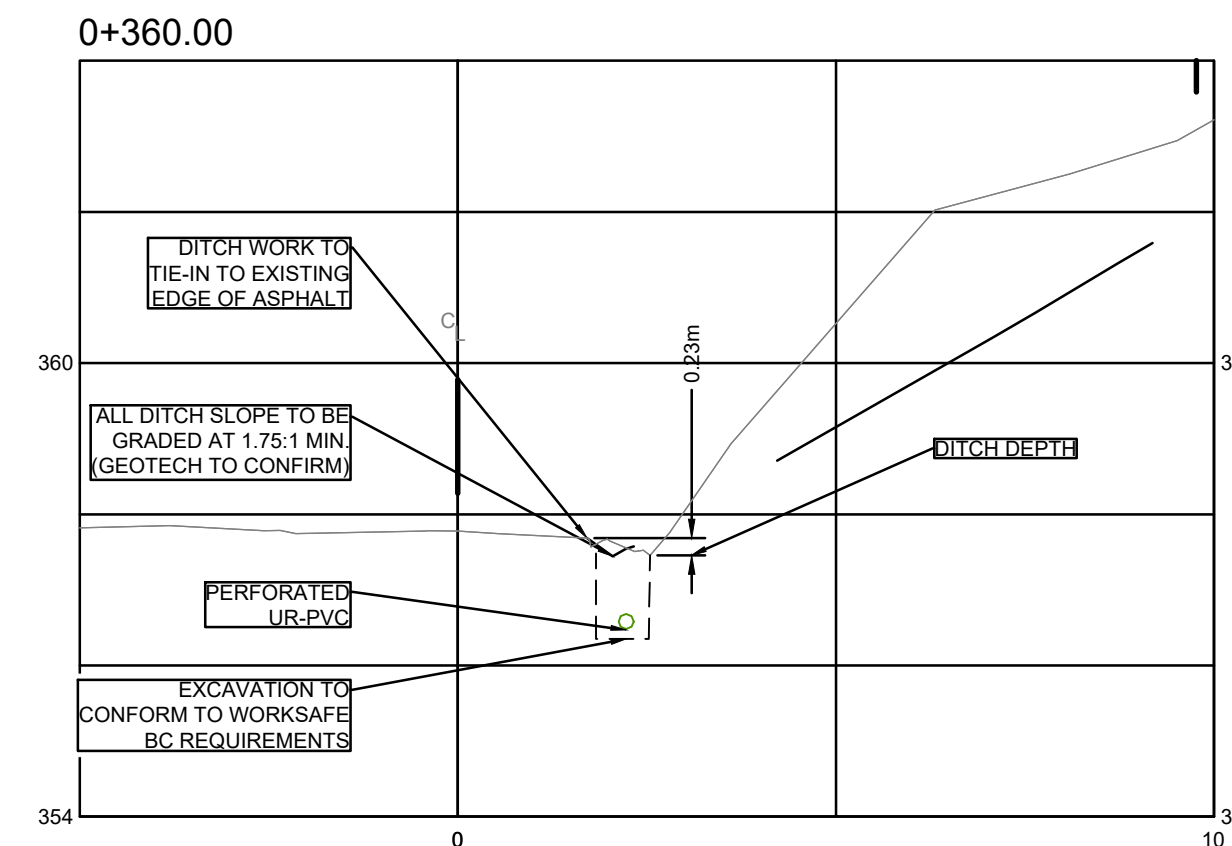
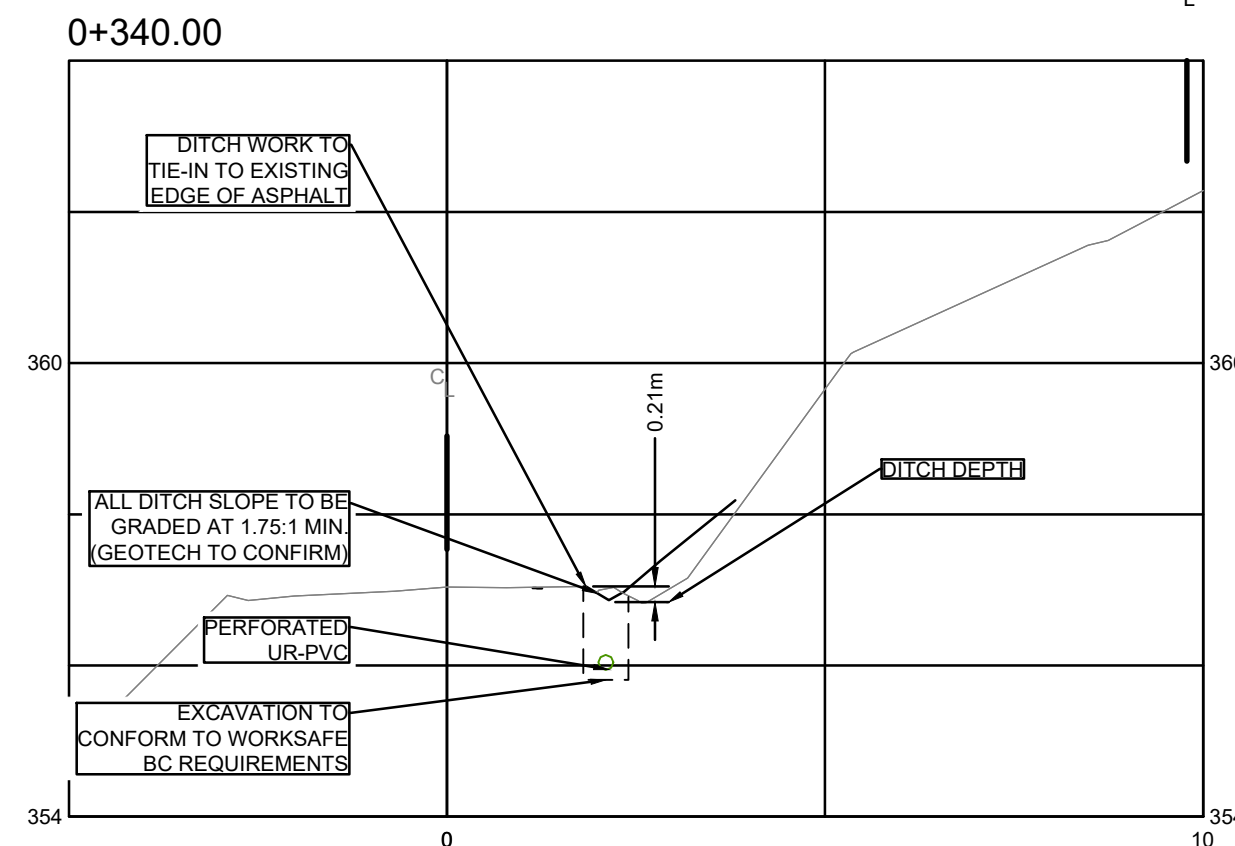
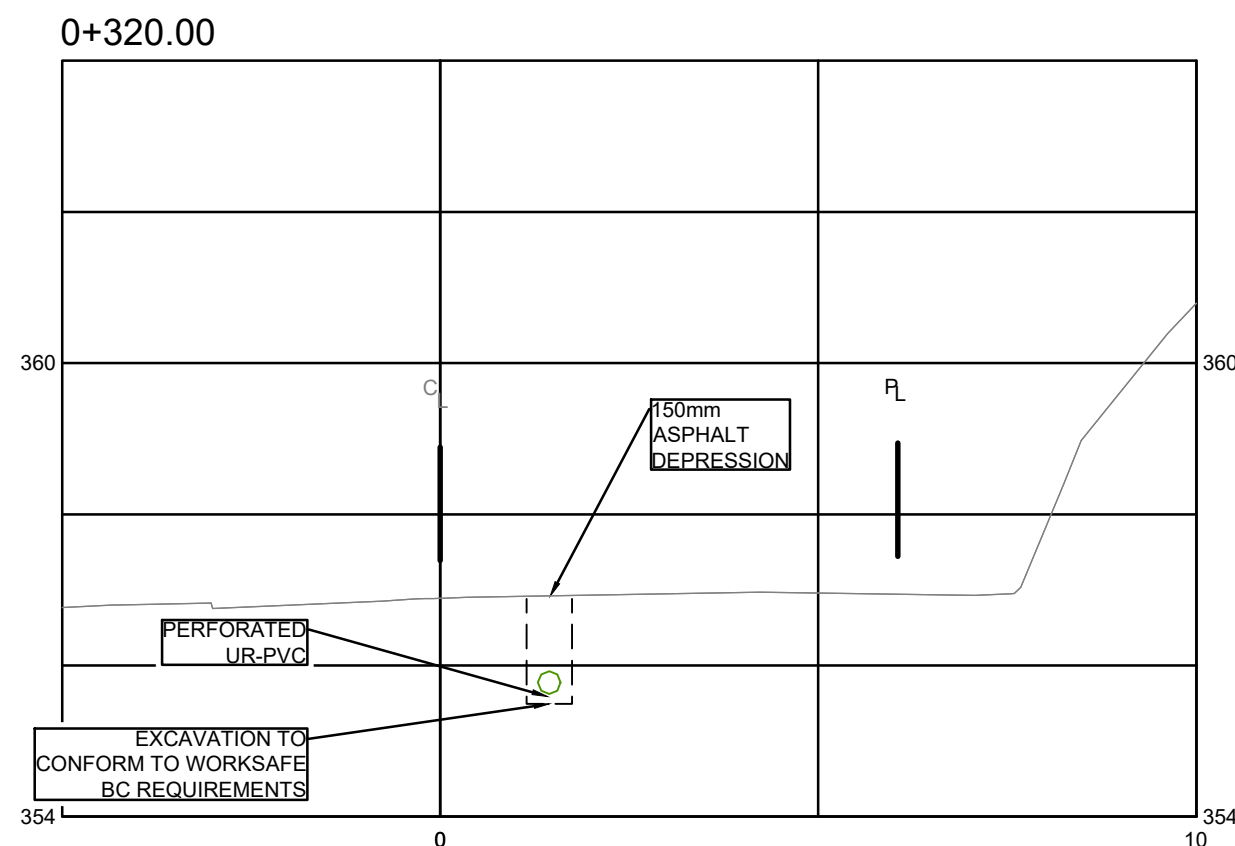
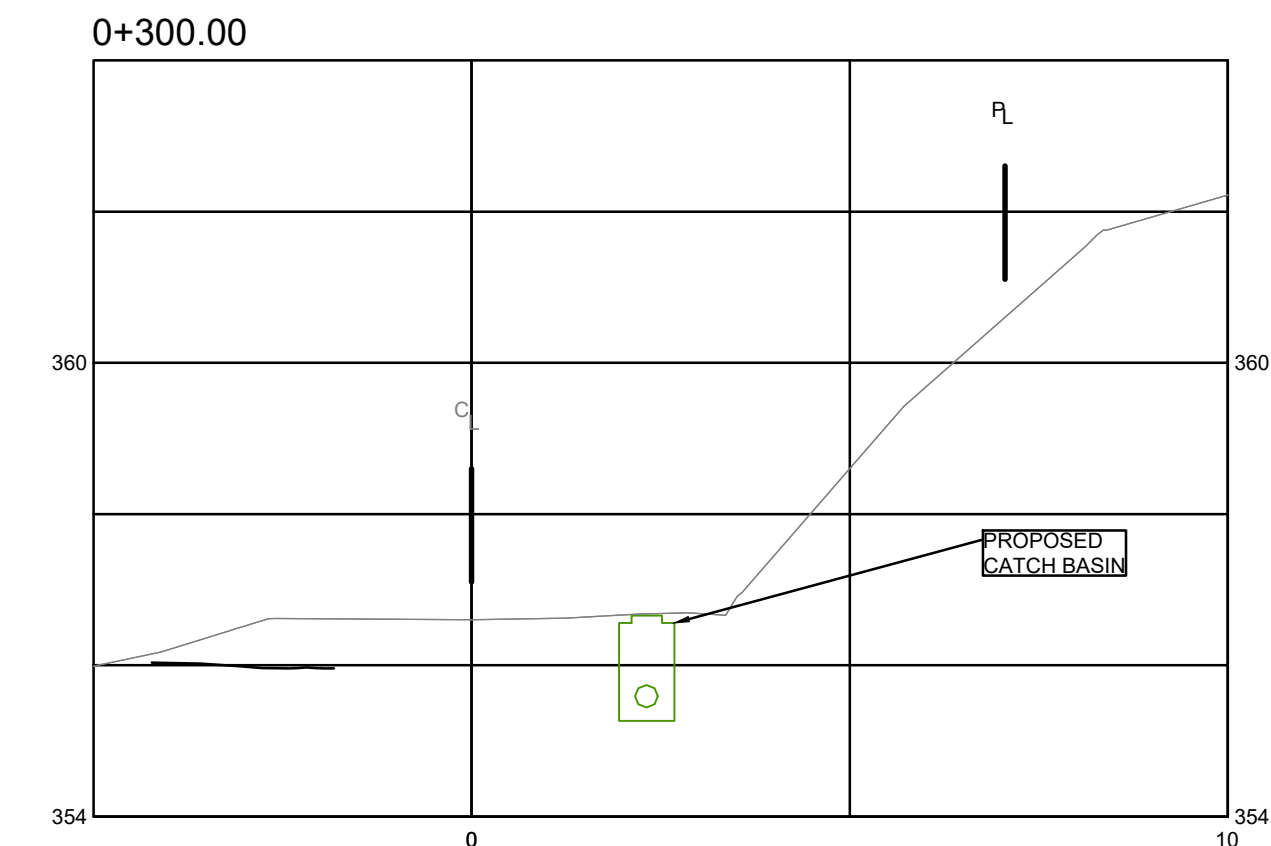
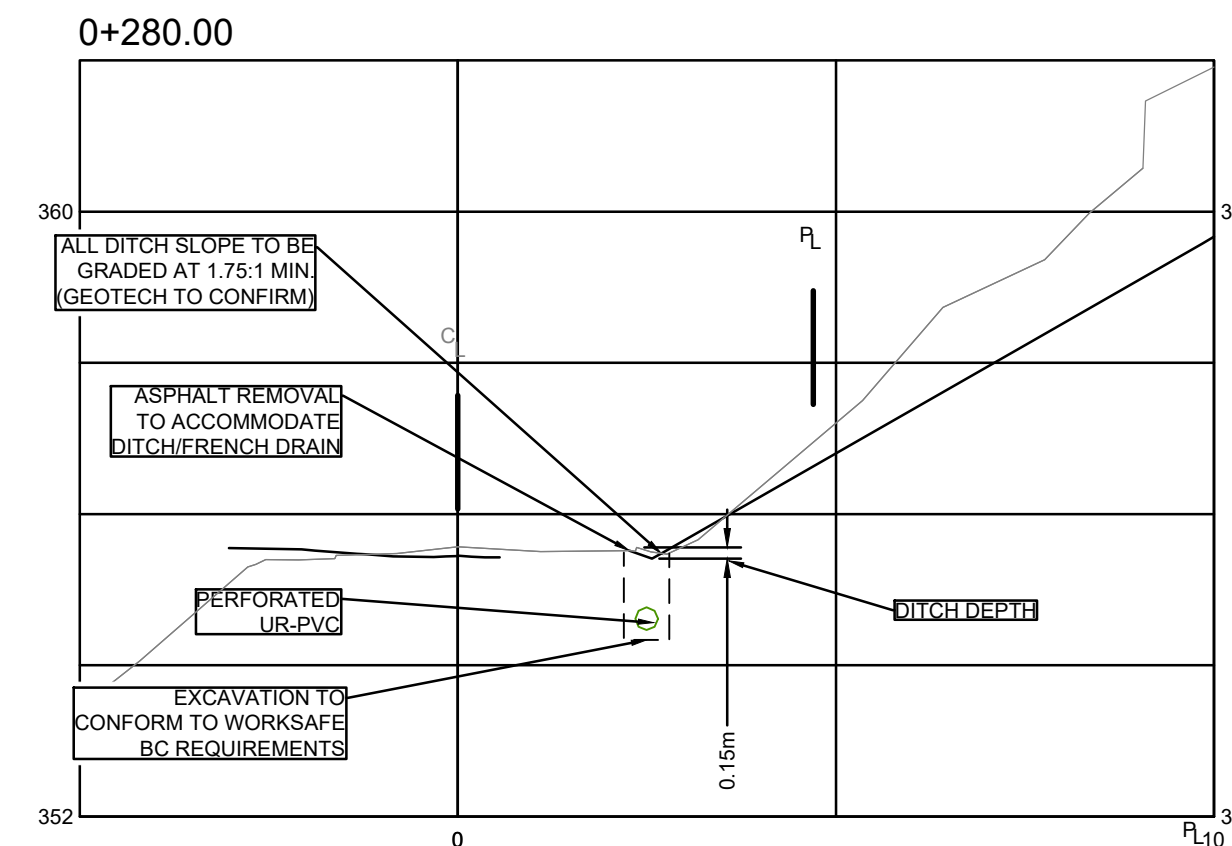
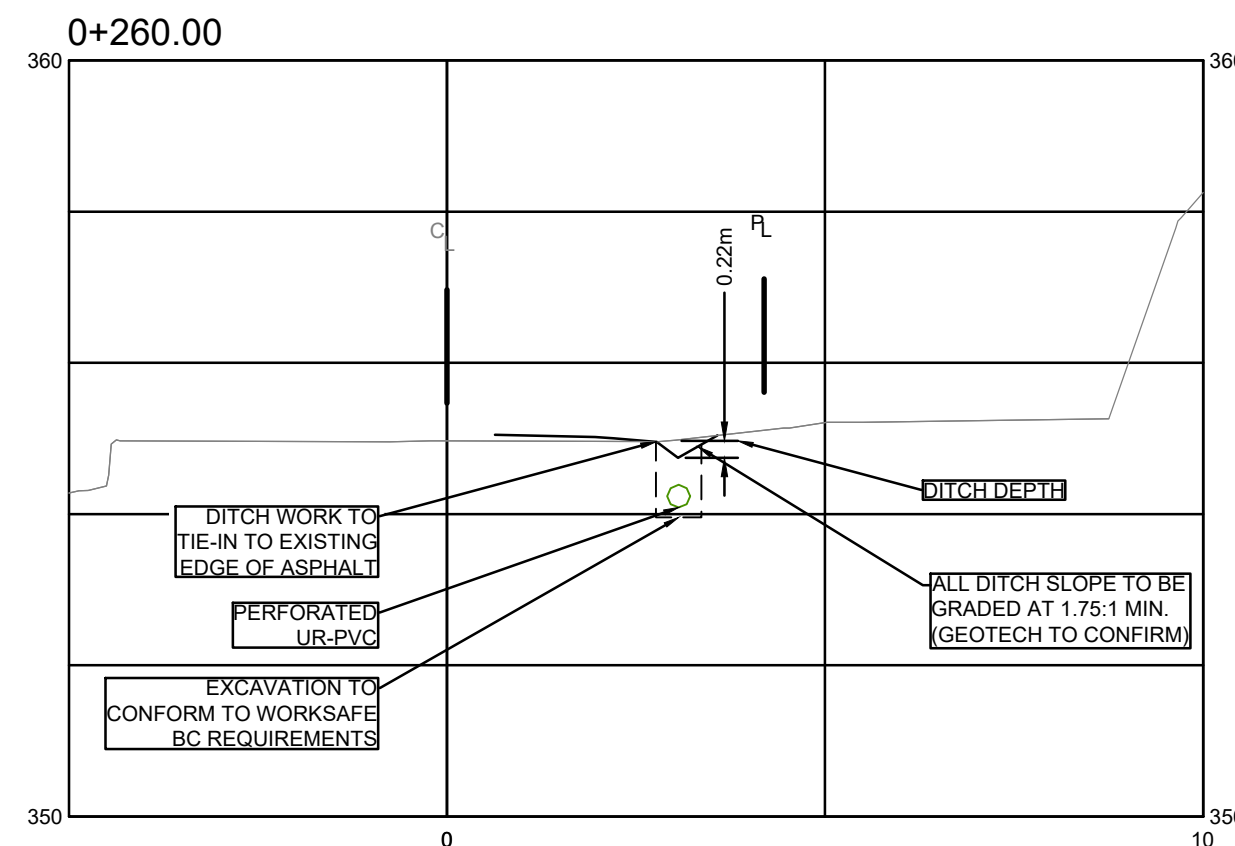
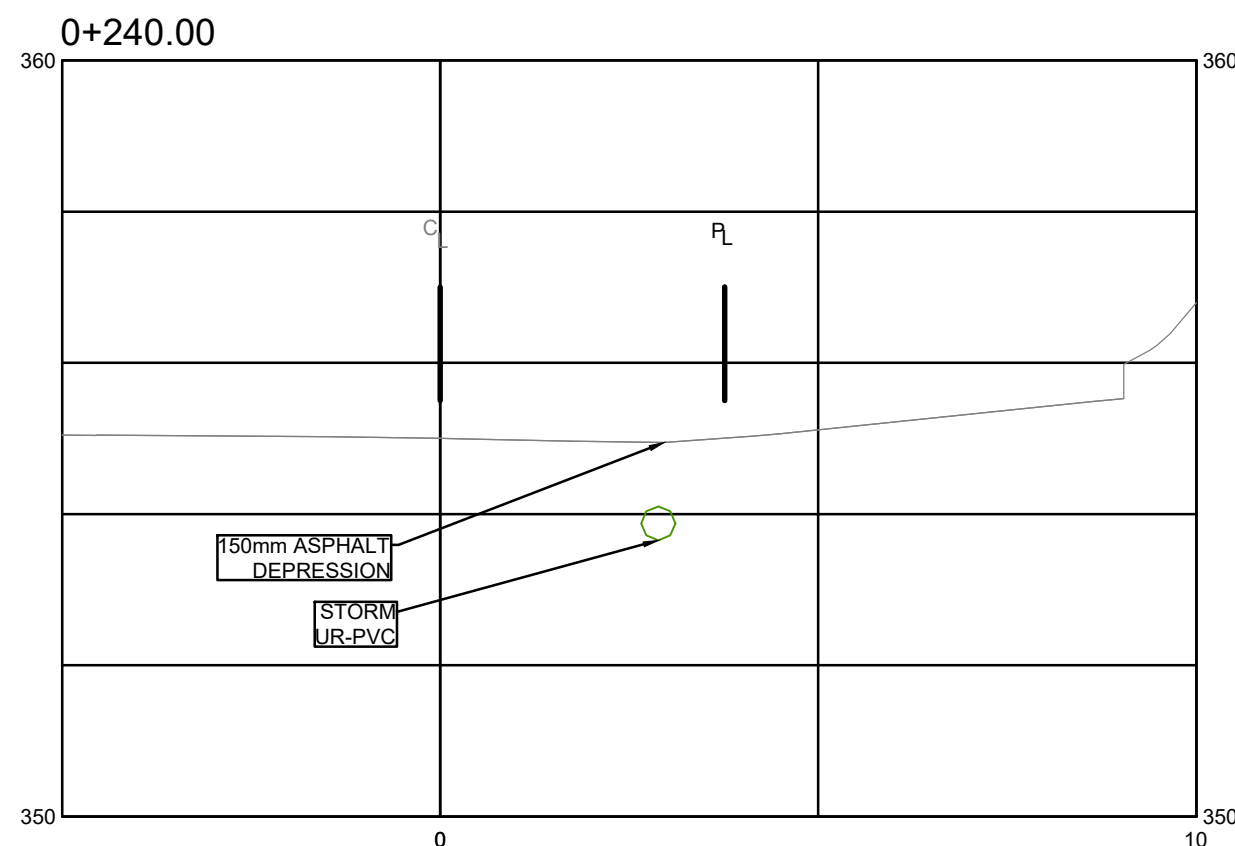
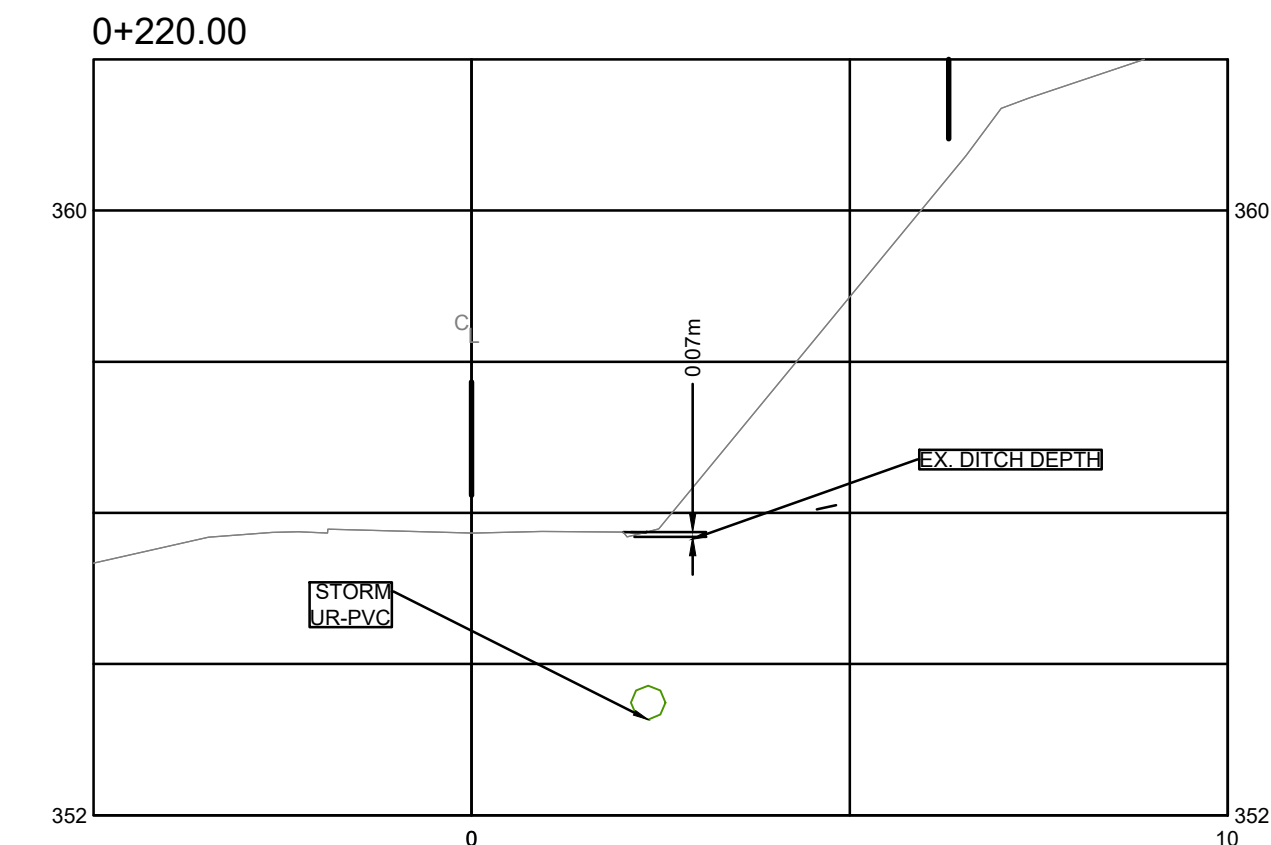
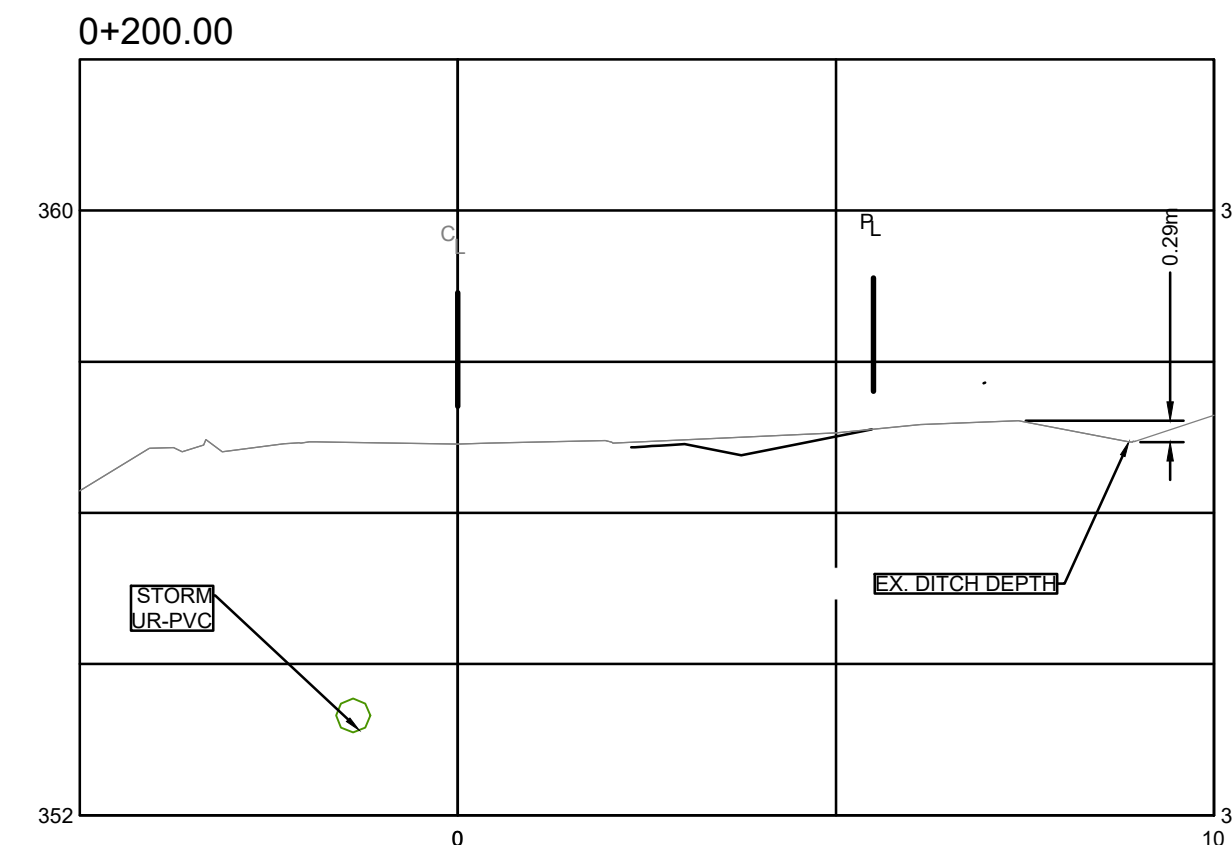
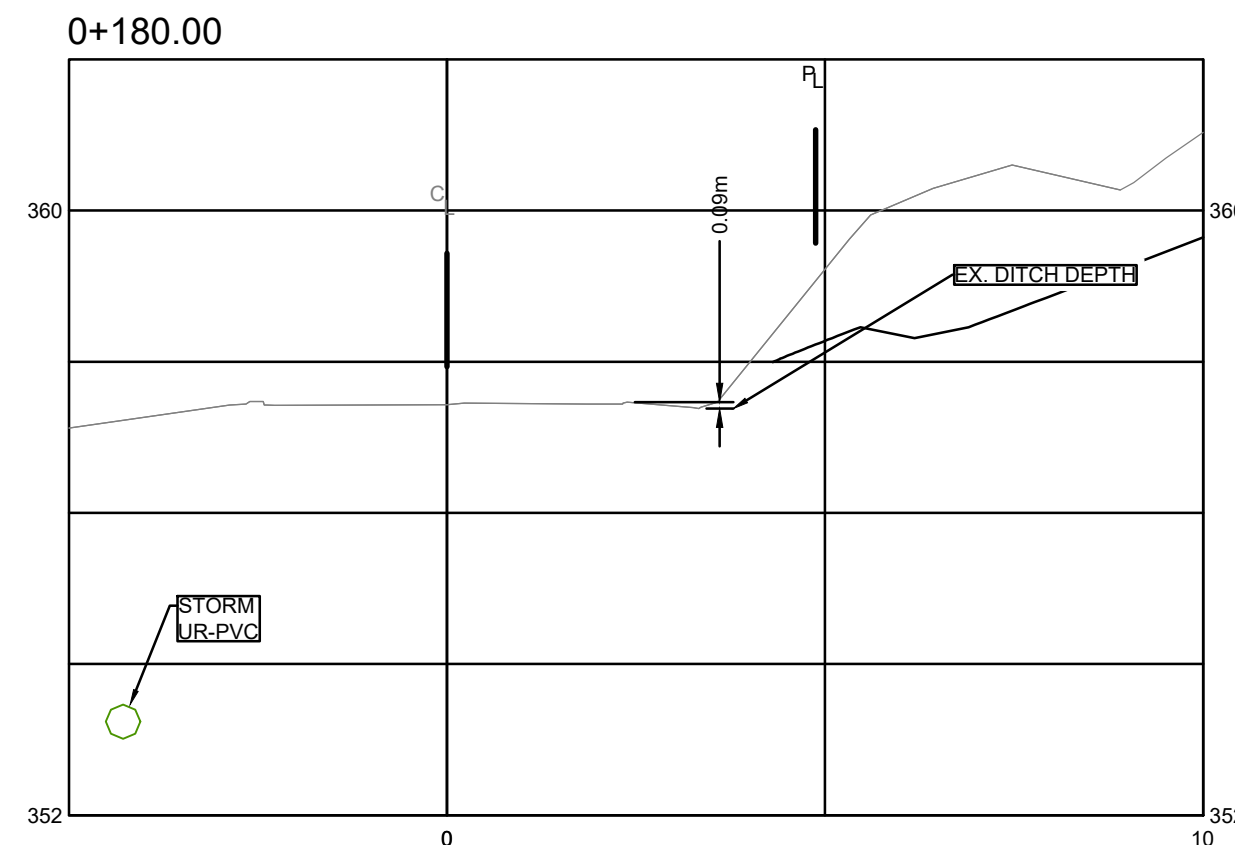
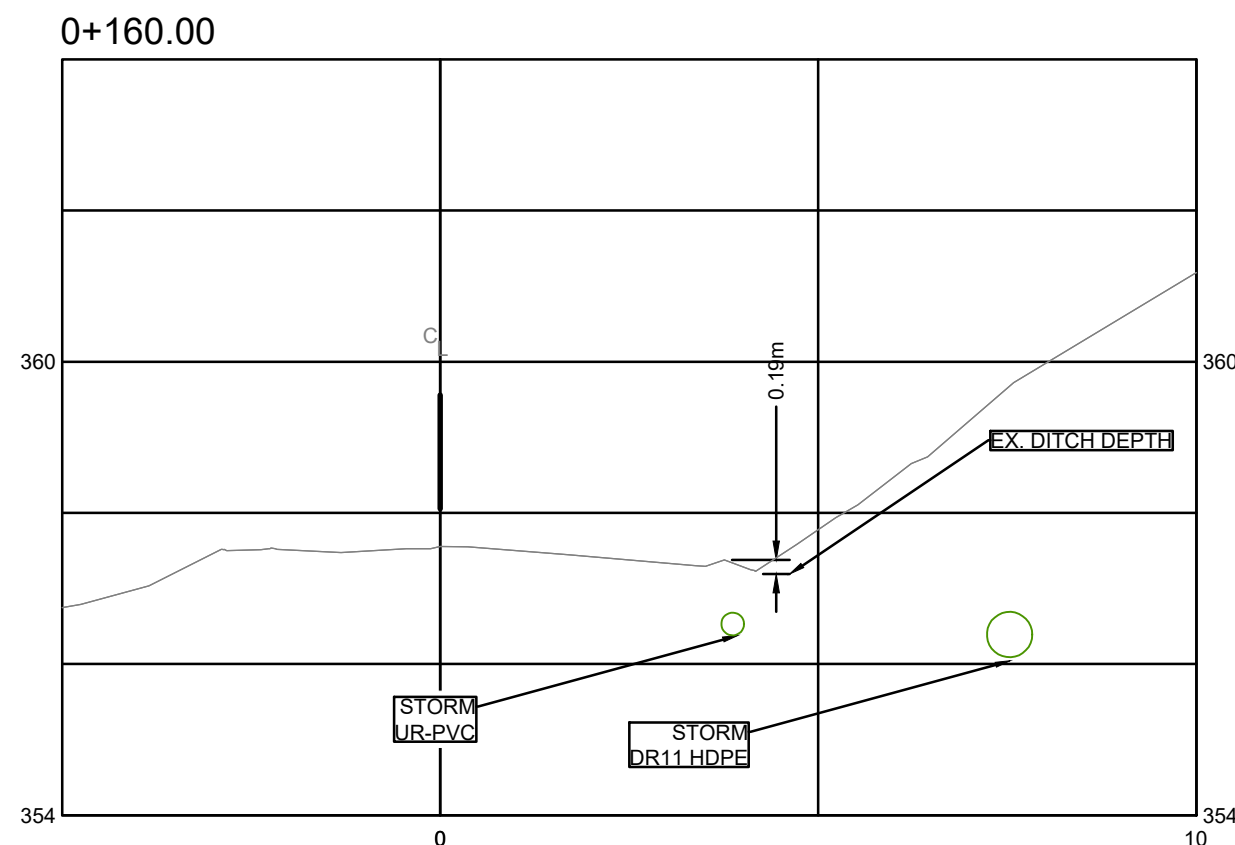
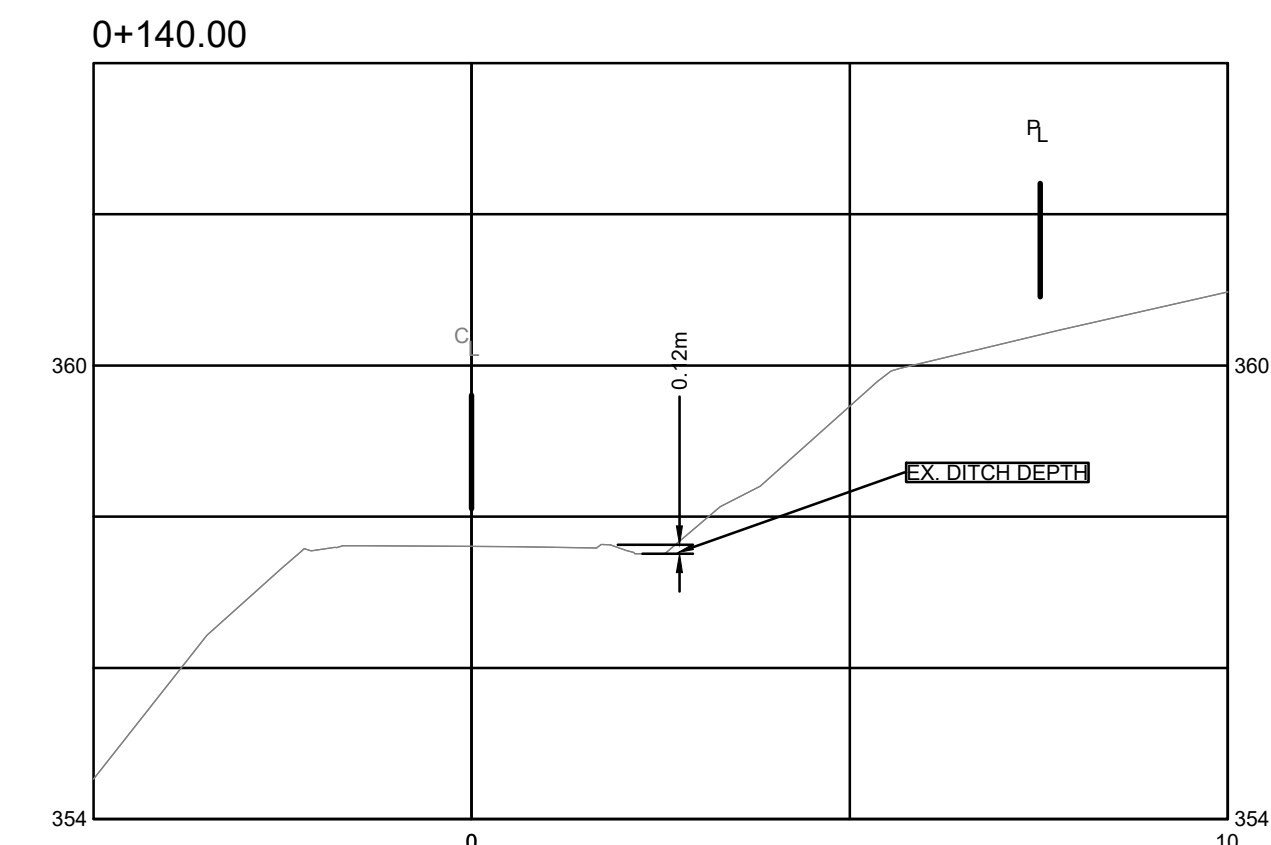
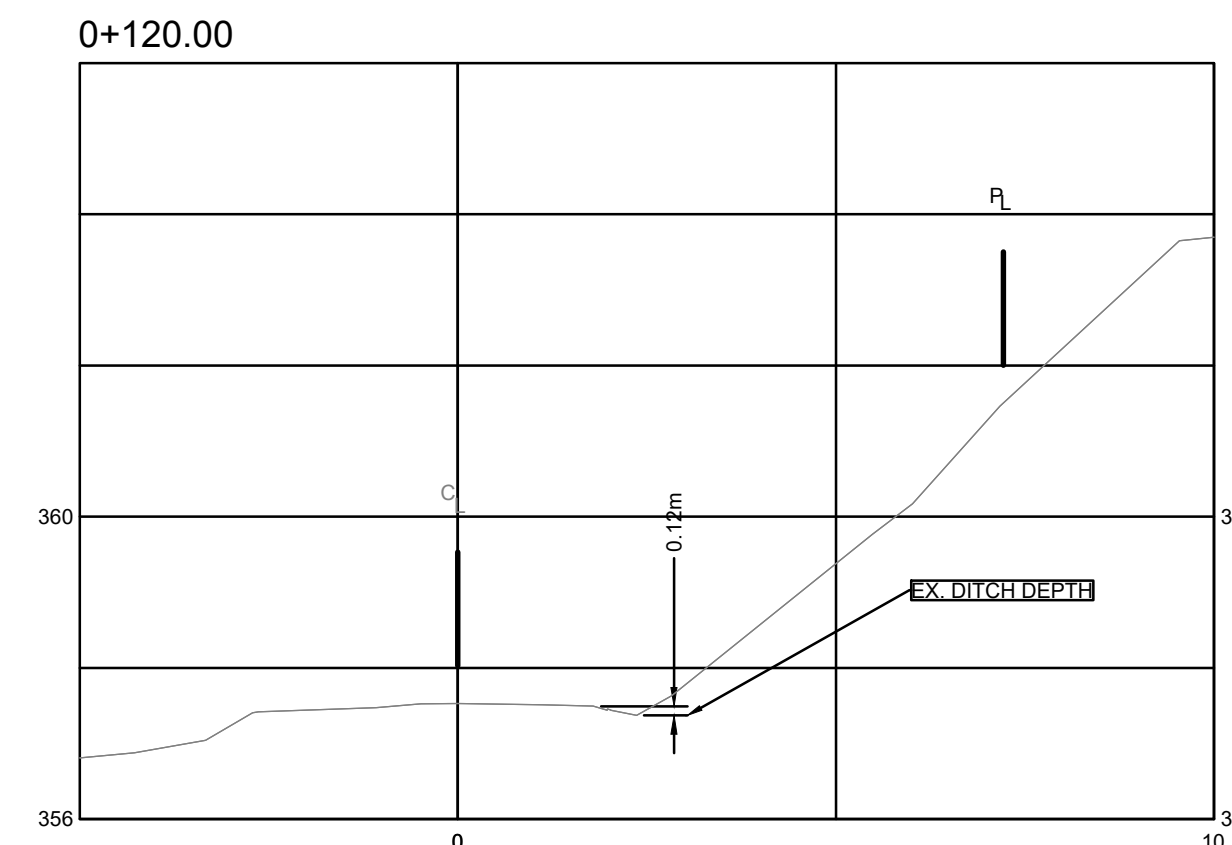
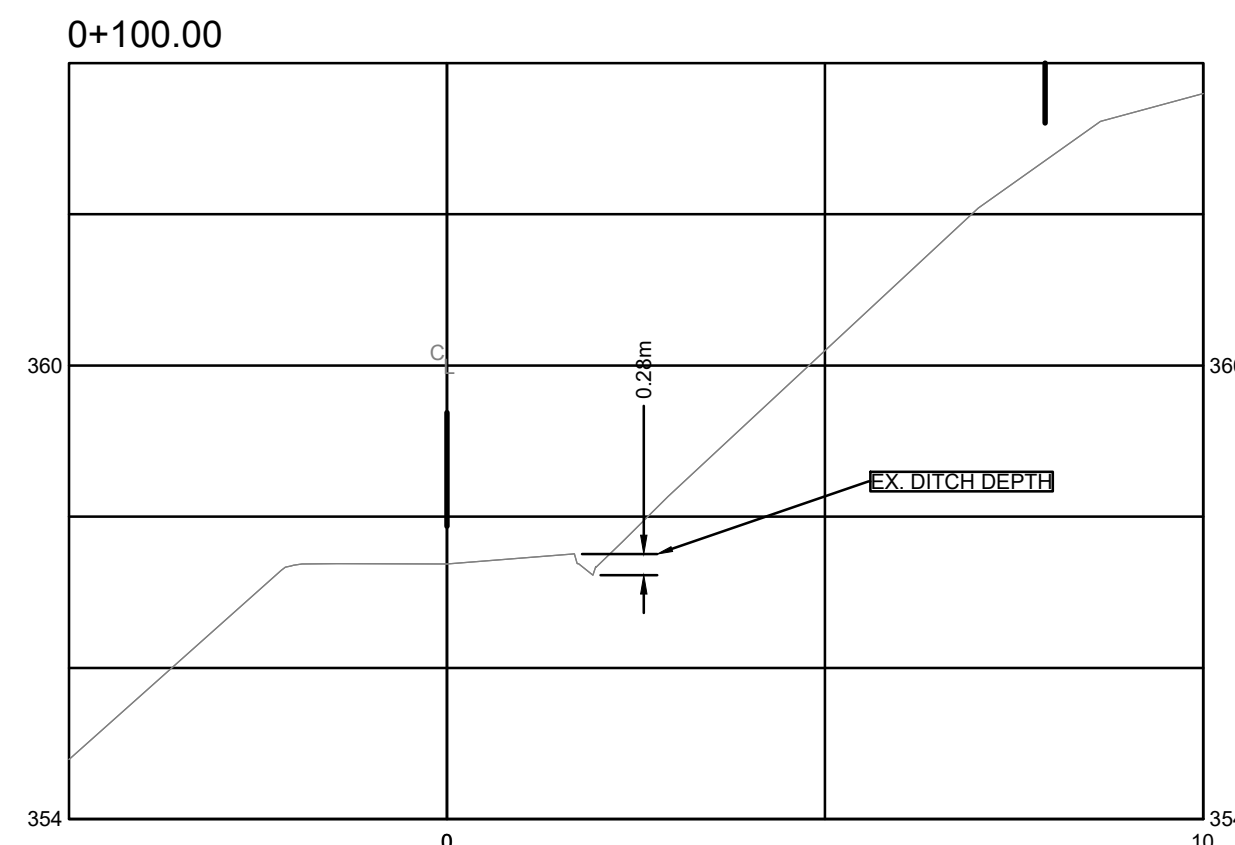
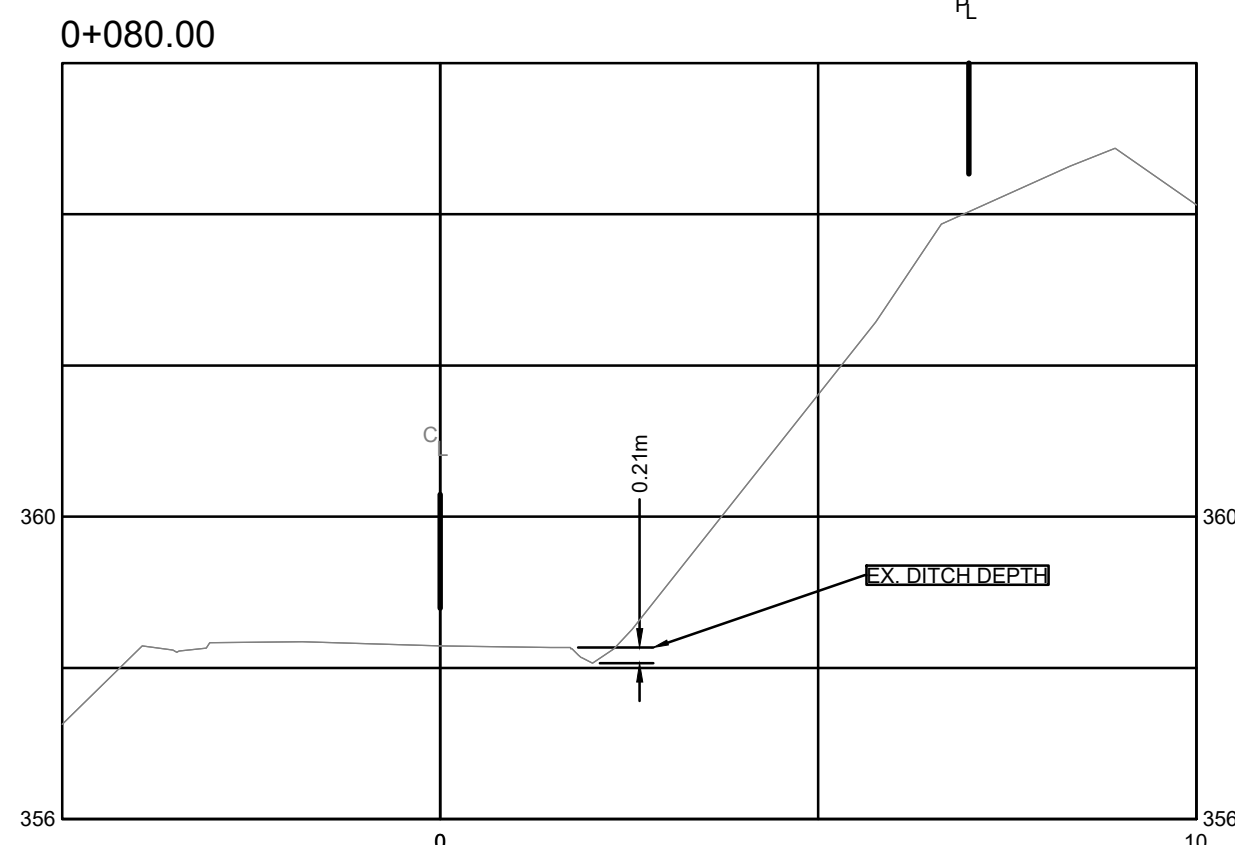
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3	2025/03/06	FDS	DLP	BTL
4	2025/05/01	FDS	PJD	BTL
5	2025/08/19	FDS	DLP	BTL

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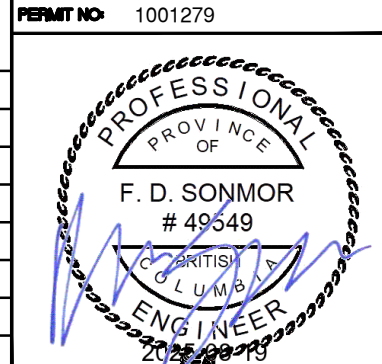
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SHEET
17 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
EASTSIDE ROAD CROSS SECTIONS
DRAWING NUMBER
C304



REV. No.	DATE	DESIGNED	DRAWN	CHECKED
1	2025/01/09	FDS	DLP	BTL
2	2025/01/24	FDS	DLP	BTL
3	2025/03/06	FDS	DLP	BTL
4	2025/05/01	FDS	PJD	BTL
5	2025/08/19	FDS	DLP	BTL

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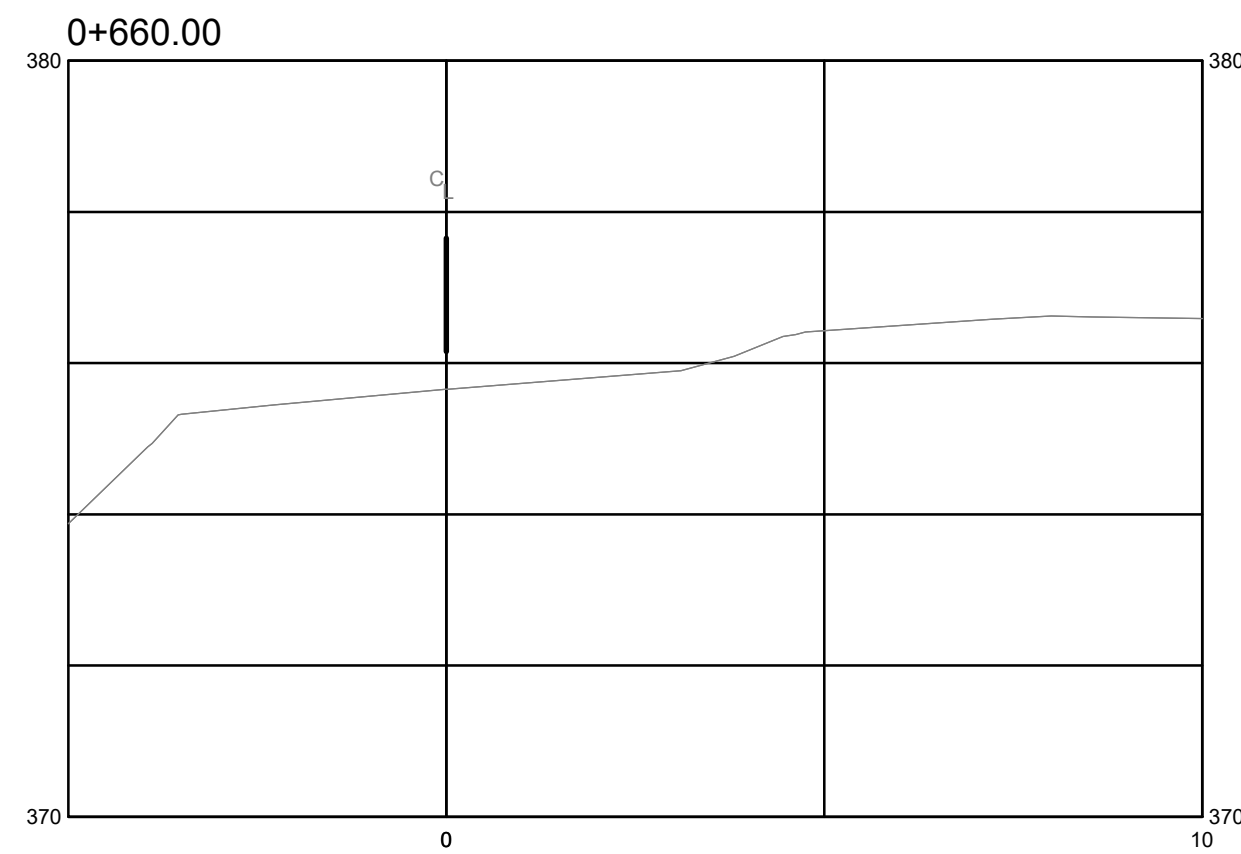
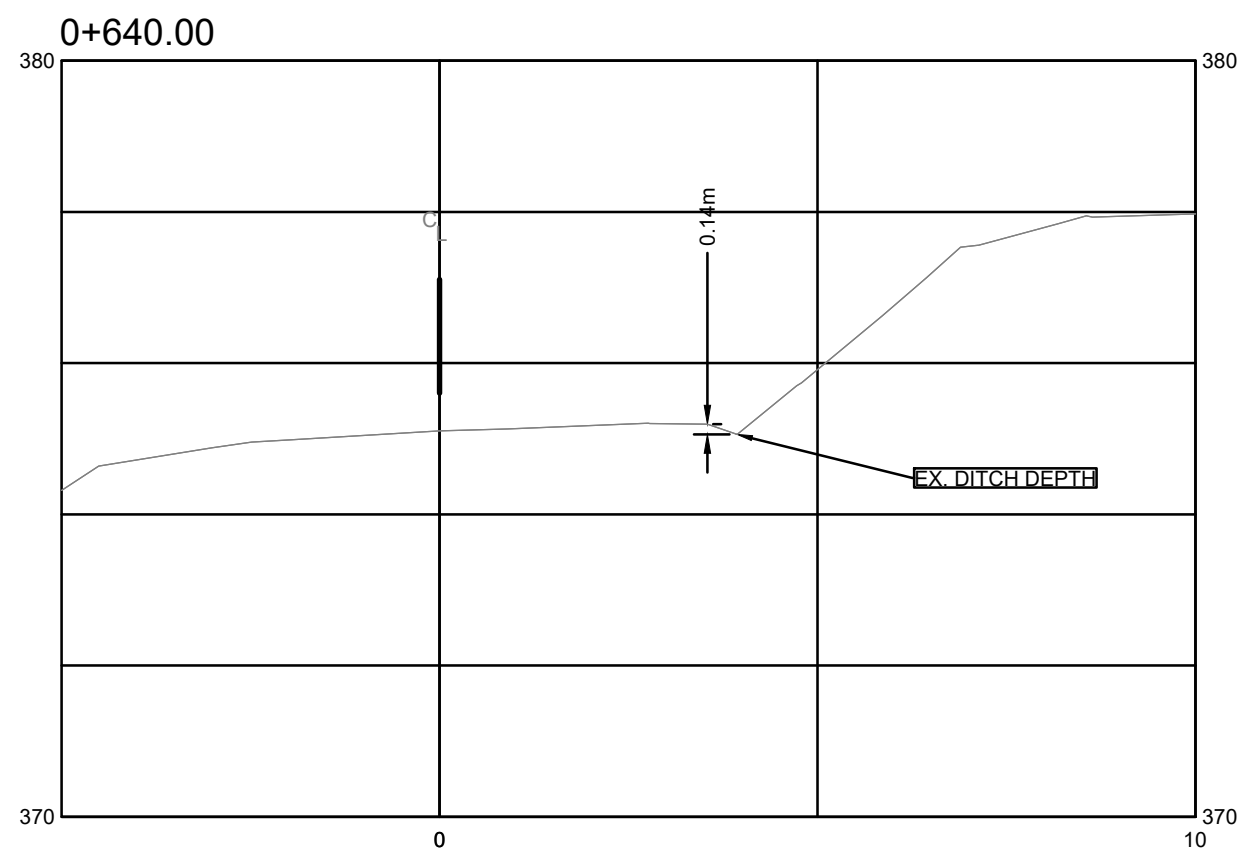
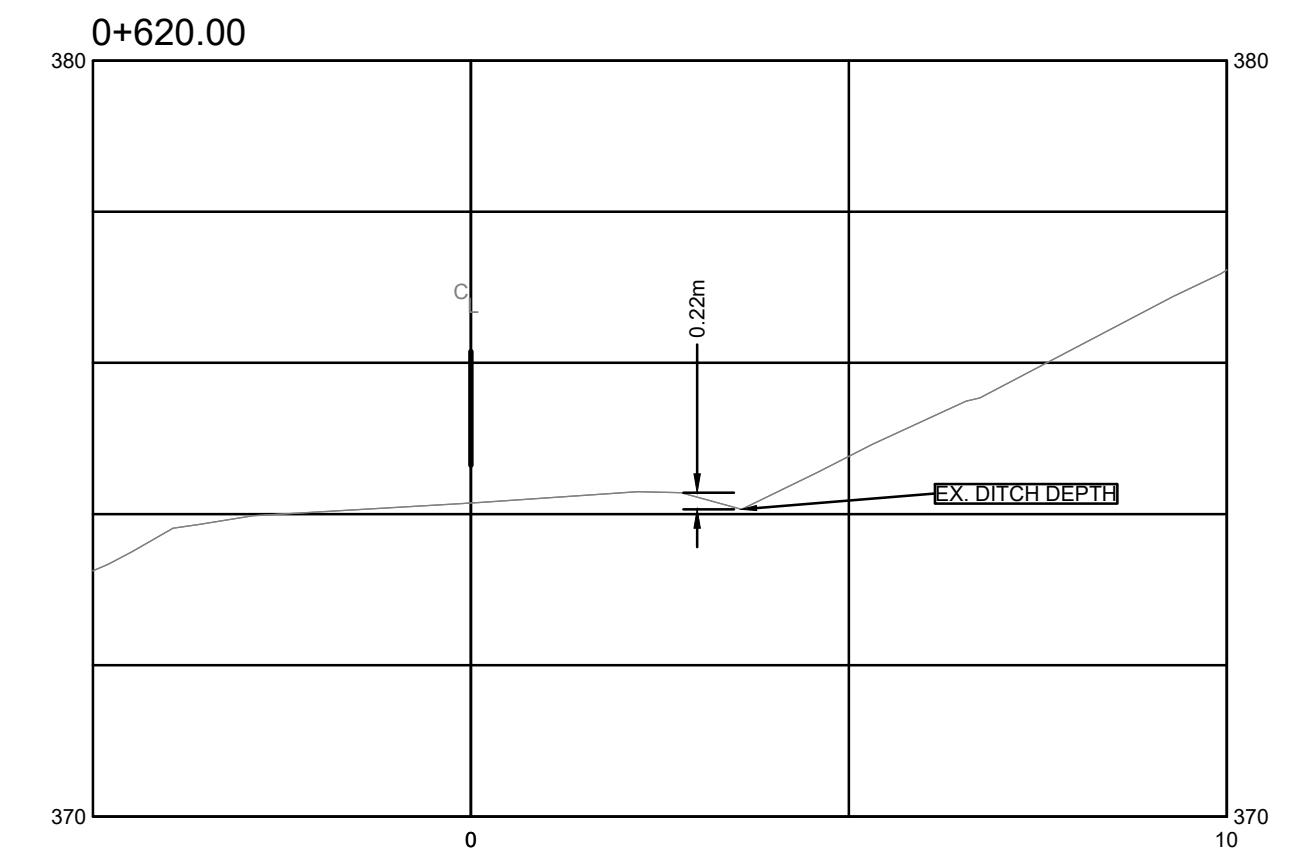
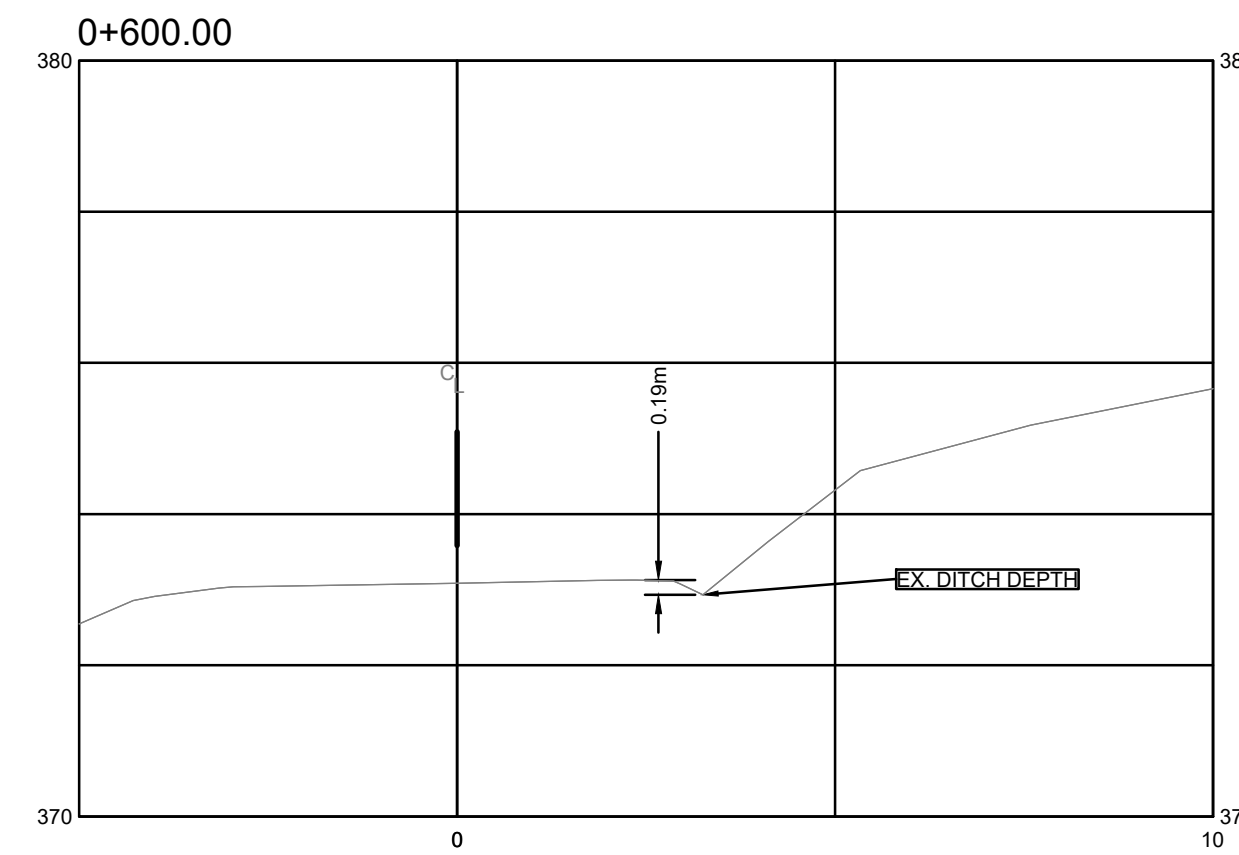
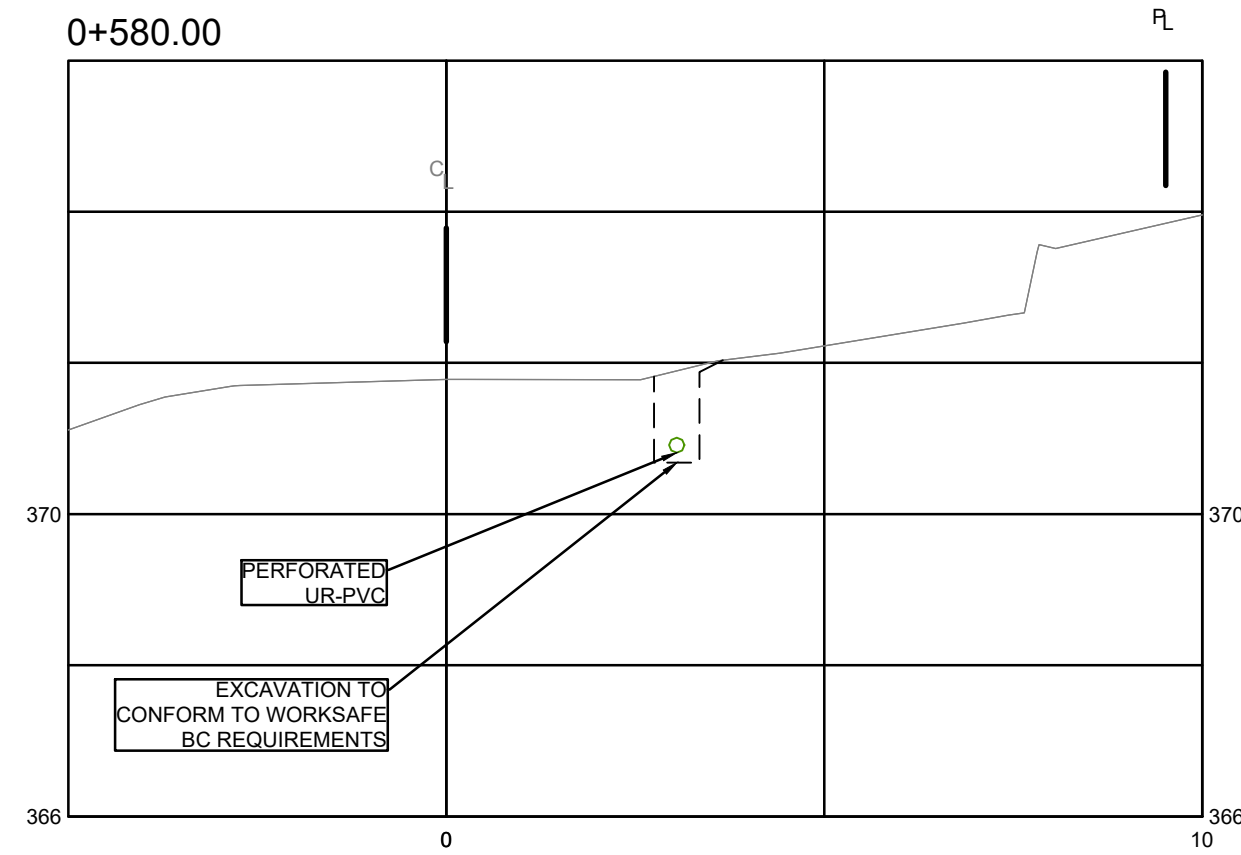
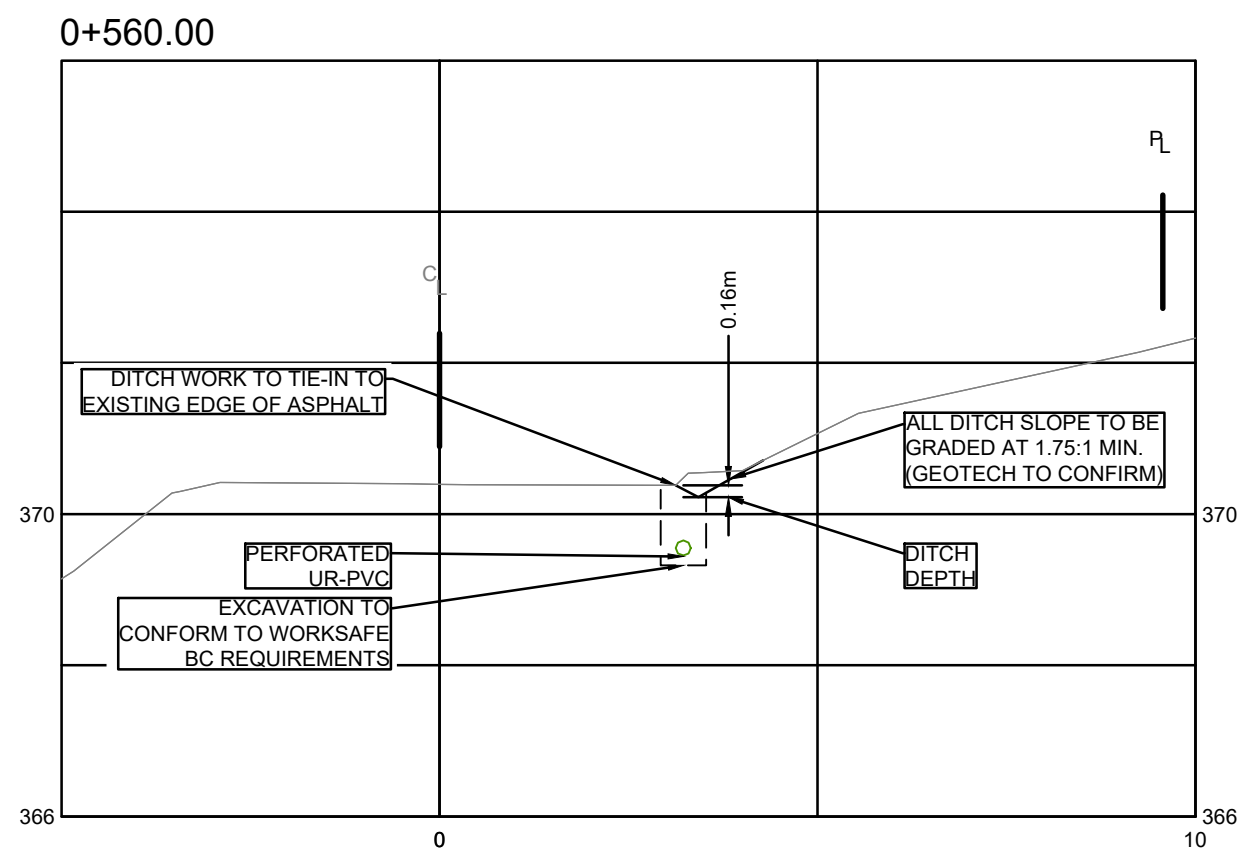
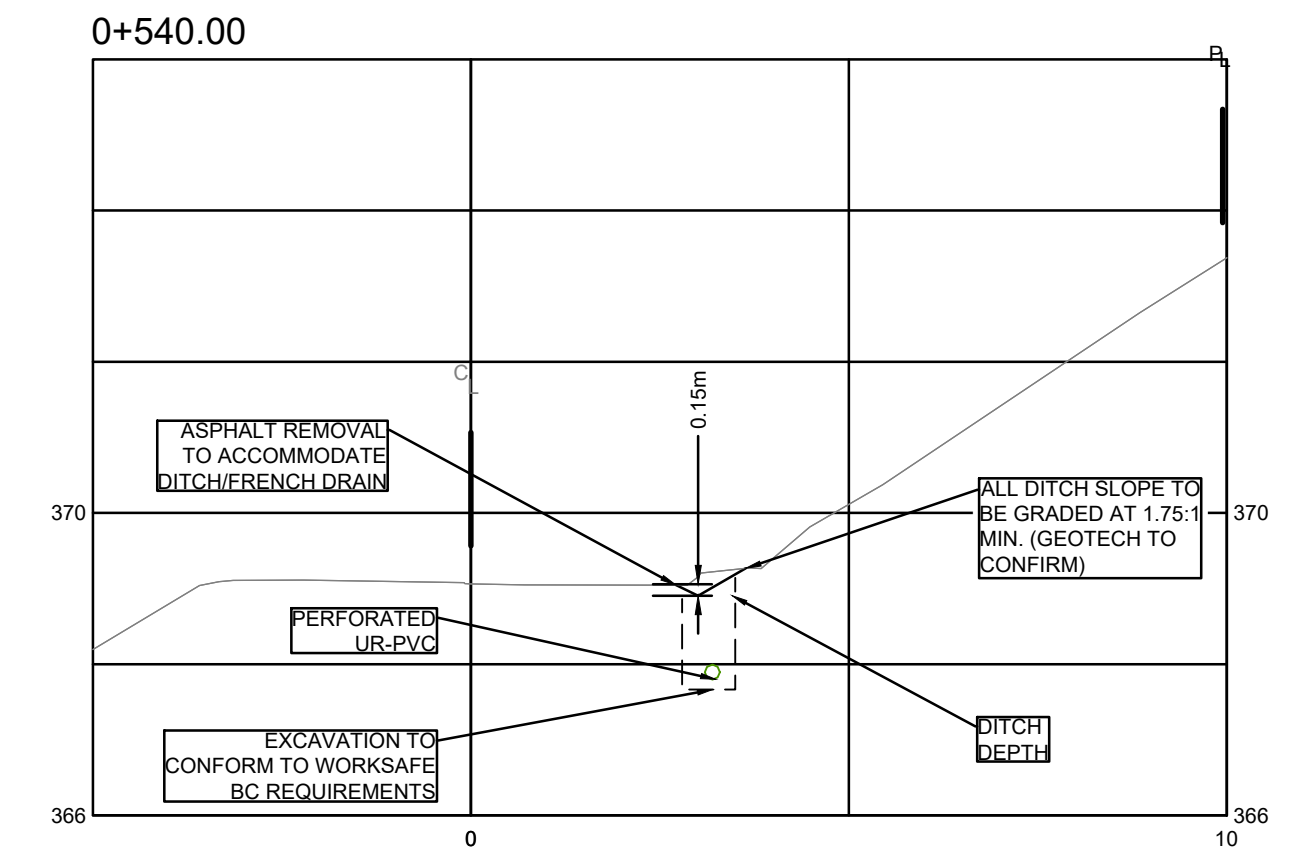
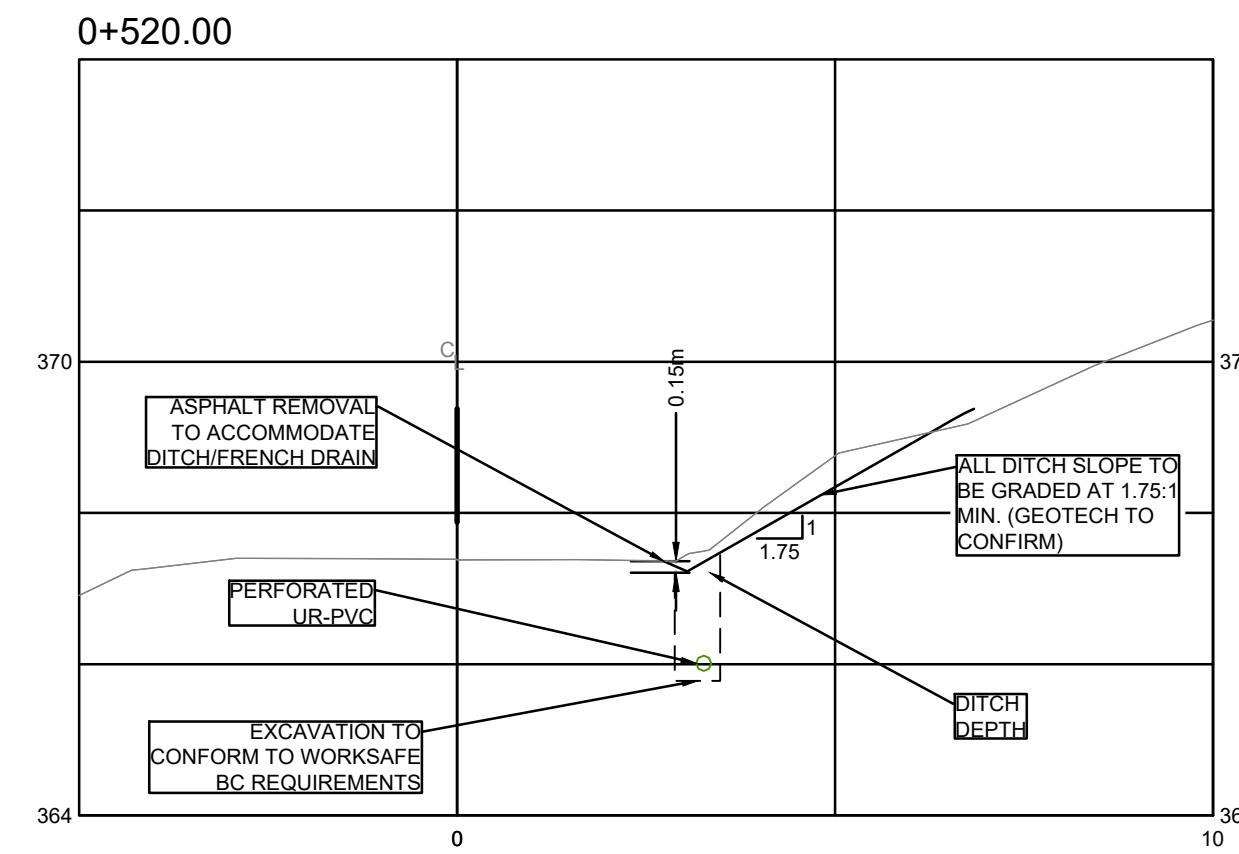
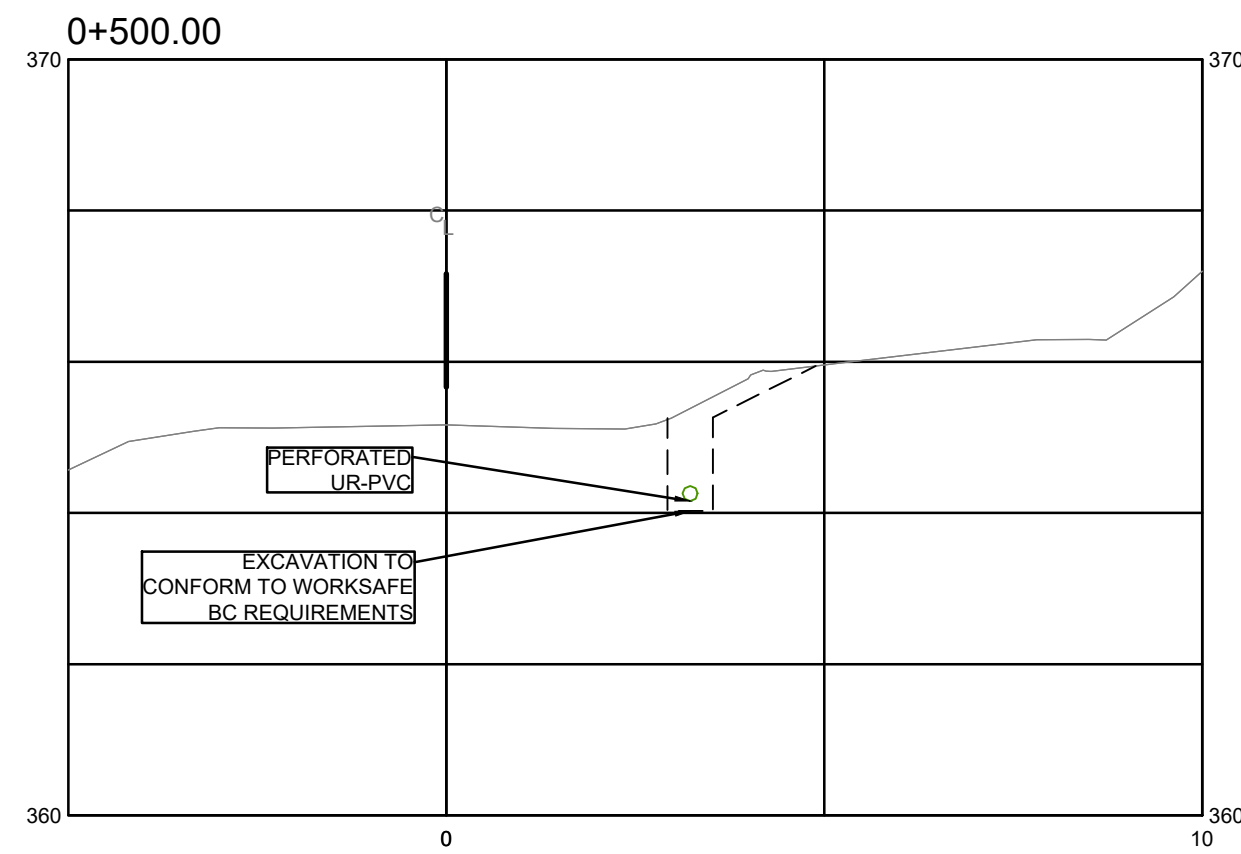
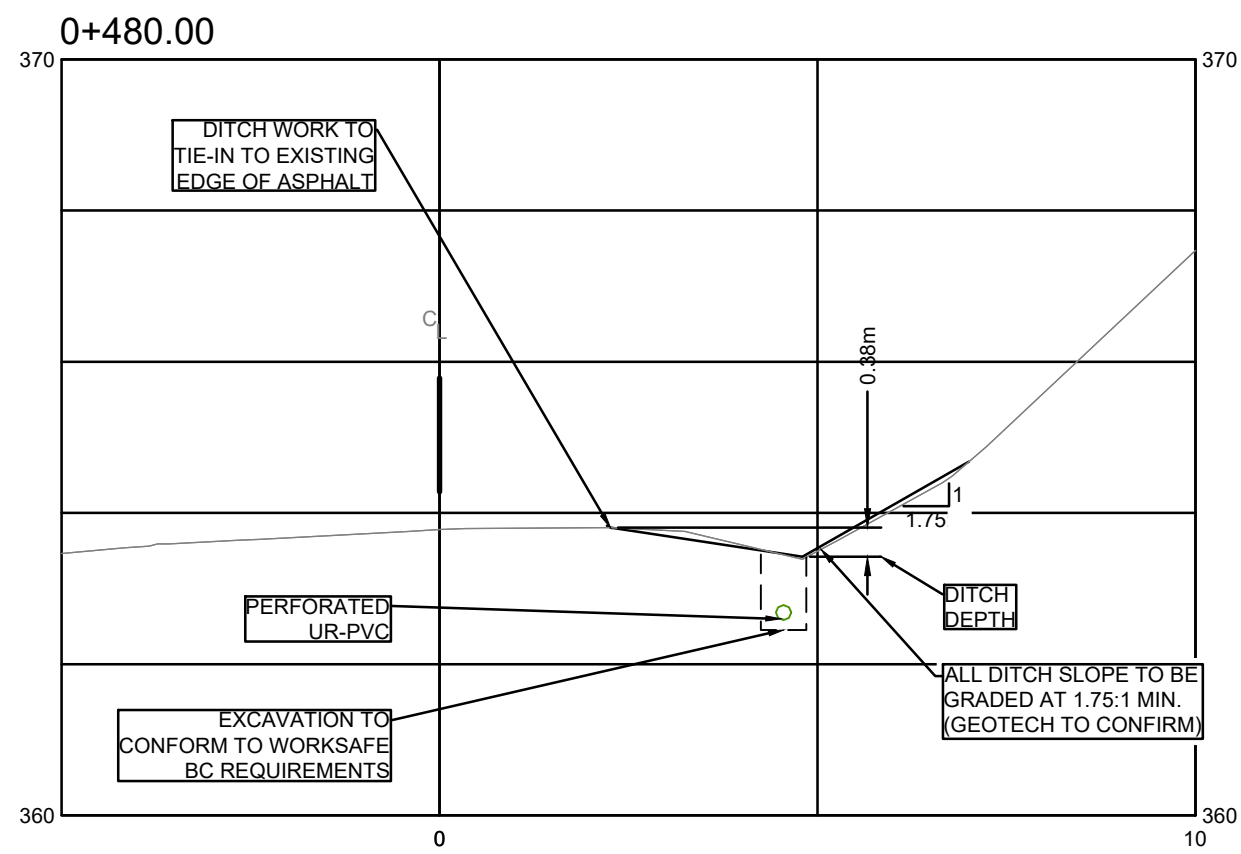
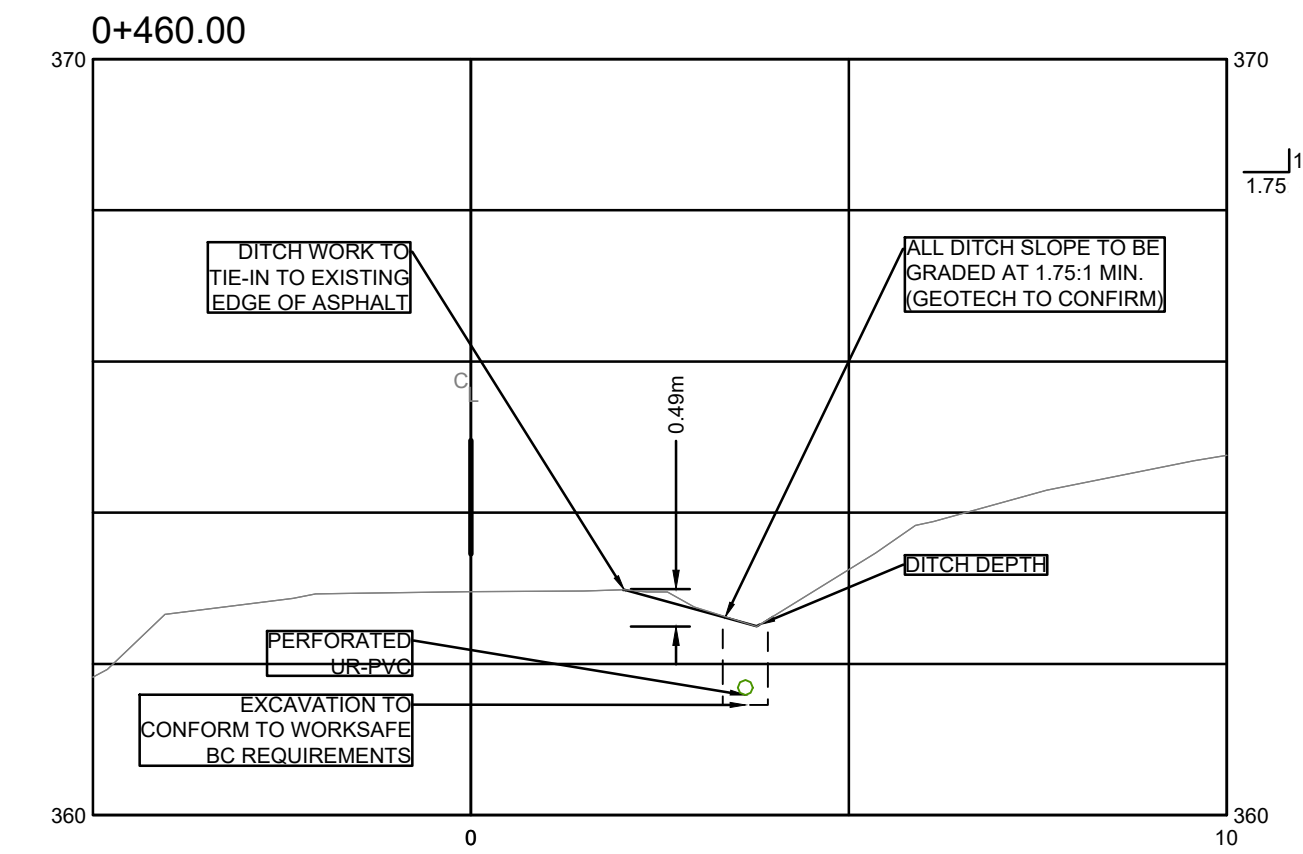
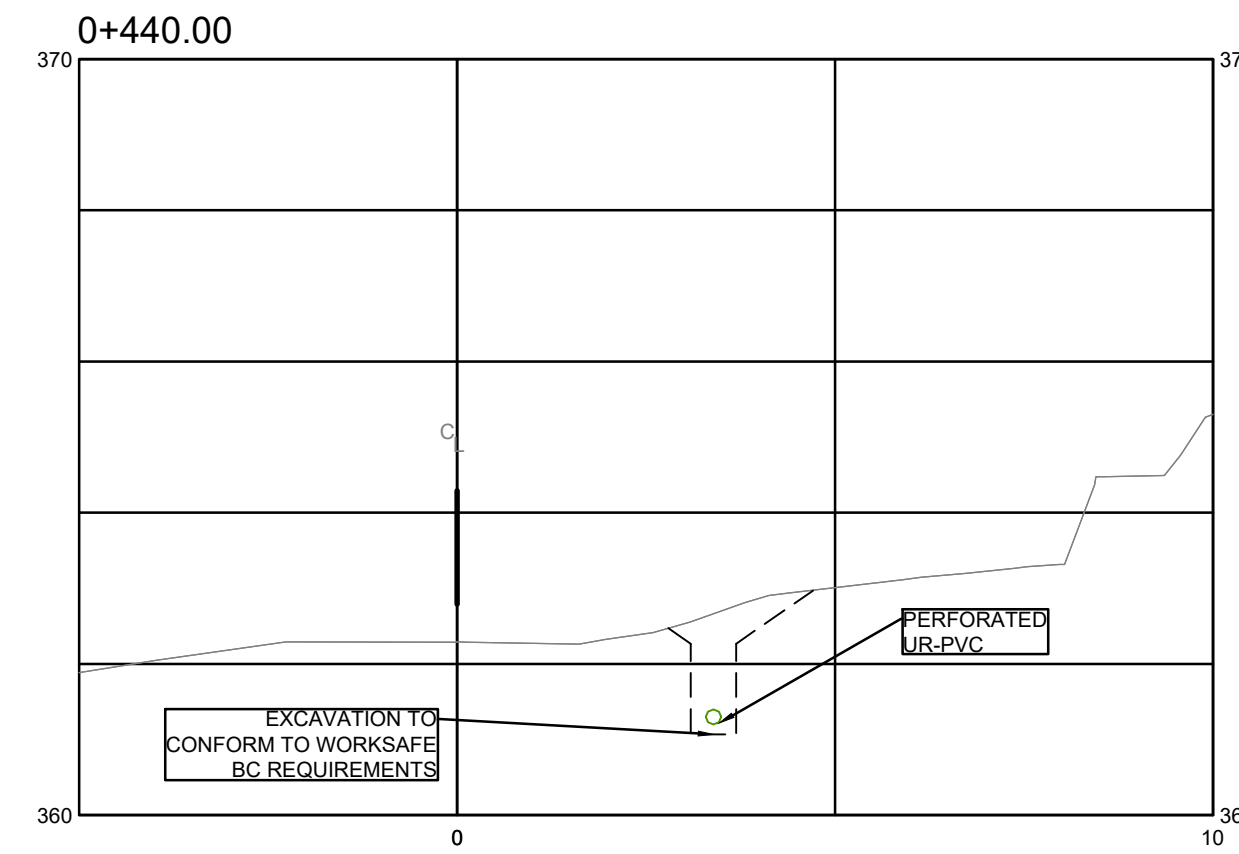
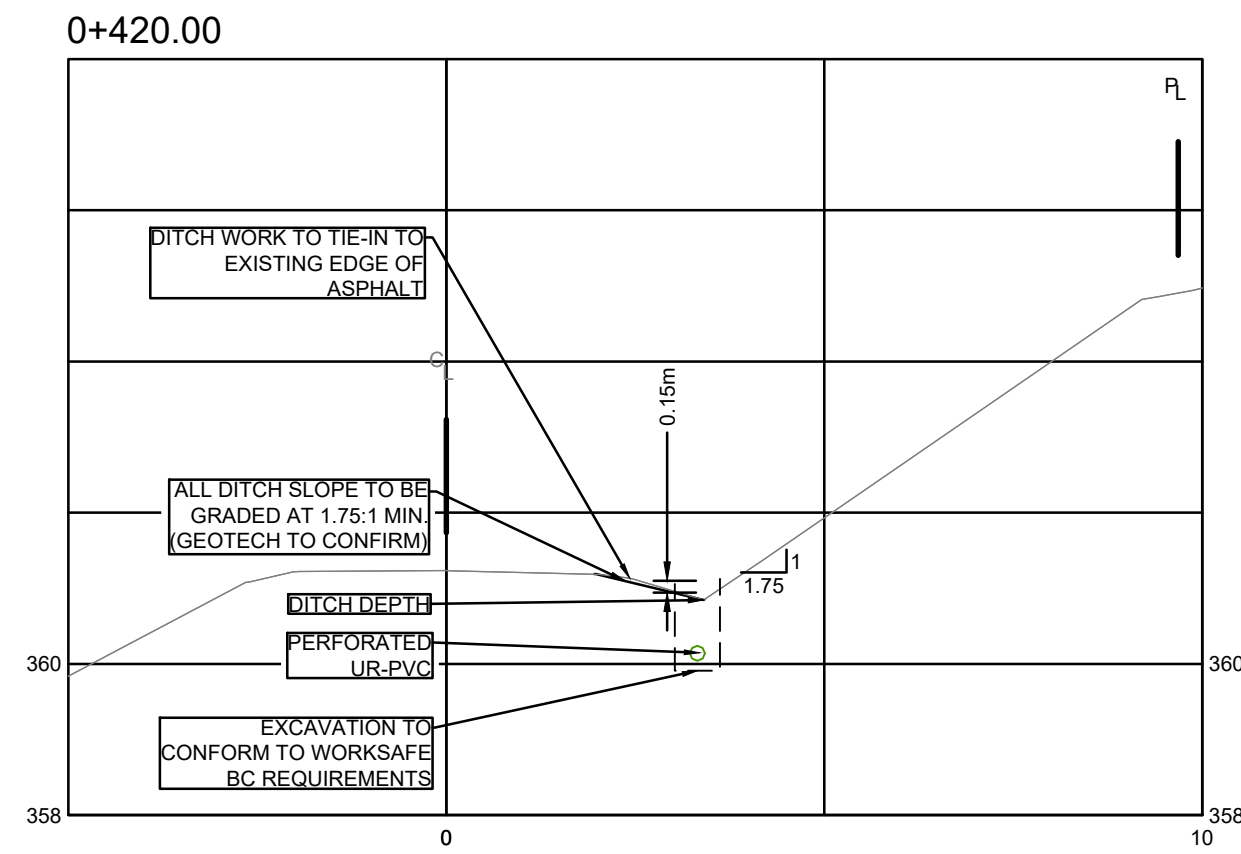
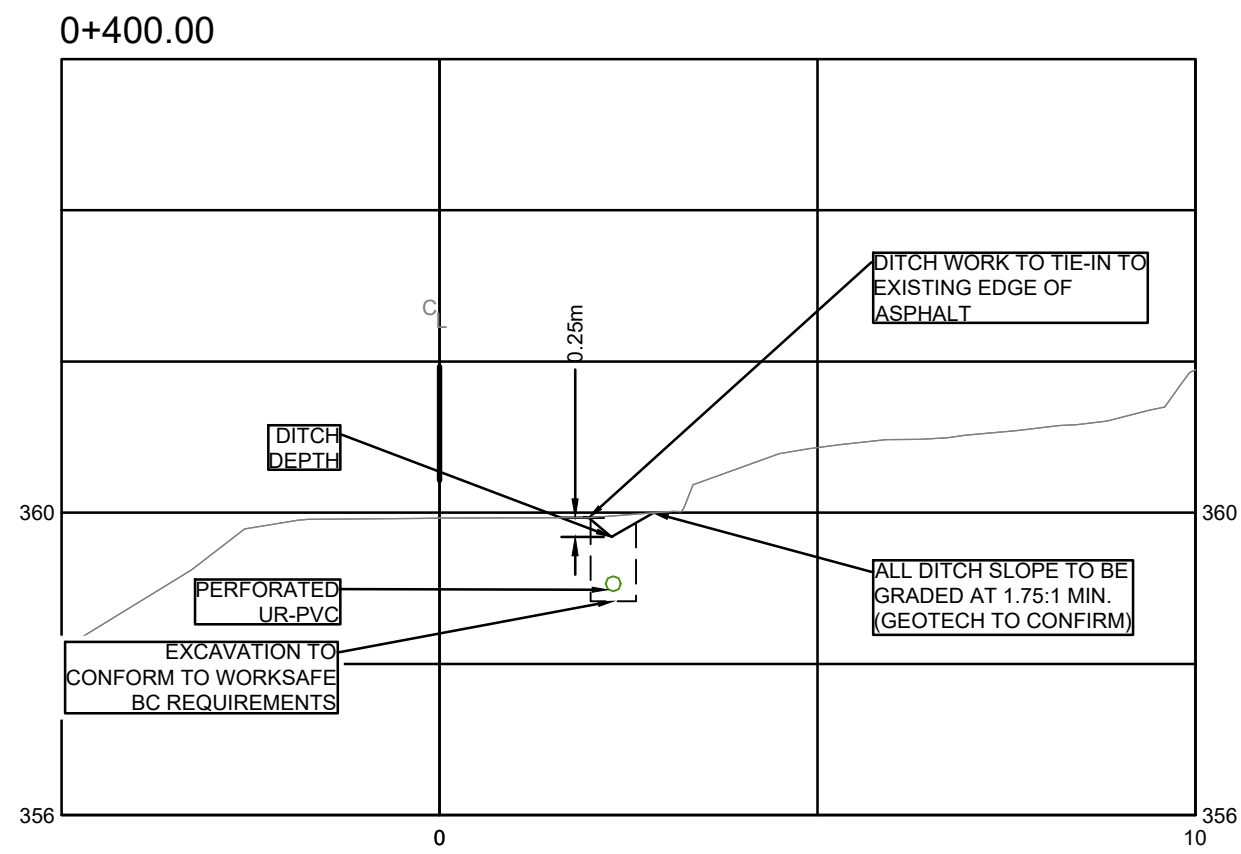


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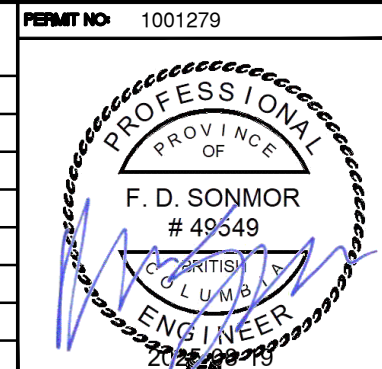
SHEET
18 OF 21

SOUTH BASIN DRAINAGE IMPROVEMENTS
SMITH ROAD CROSS SECTIONS

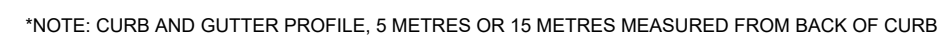
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REV. No.	DATE	DESIGNED	DRAWN	CHECKED	DESCRIPTION
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3	2025/03/06	FDS	DLP	BTL	RE-ISSUED FOR TENDER
4	2025/05/01	FDS	PJD	BTL	RE-ISSUED FOR TENDER
5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



SCALE H: 1:100 V: 1:100	SOUTH BASIN DRAINAGE IMPROVEMENTS SMITH ROAD CROSS SECTIONS	DRAWING NUMBER C306
SHEET 19 OF 21		

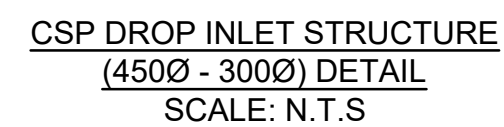


- NOTE:
- REFER TO MoTI CHAPTER 1000 FOR COMPREHENSIVE BEDDING AND BACKFILL DETAILS
 - MINIMUM PIPE SIZE MAY BE INCREASED AT THE DISCRETION OF THE MINISTRY REPRESENTATIVE
 - MINIMUM COVER OF CULVERTS SUBJECT TO EROSION SHALL HAVE SANDBAGS OR HEADWALL
 - INLET AND/OR OUTLET OF CULVERTS SUBJECT TO EROSION SHALL HAVE SANDBAGS OR HEADWALL RESPECTING CLEARZONE PRINCIPLES AND SHALL NOT INTRODUCE A FURTHER HAZARD

*NOTE: CURB AND GUTTER PROFILE, 5 METRES OR 15 METRES MEASURED FROM BACK OF CURB

- NOTE:
- REFER TO MoTI CHAPTER 1000 FOR COMPREHENSIVE BEDDING AND BACKFILL DETAILS
 - MINIMUM PIPE SIZE MAY BE INCREASED AT THE DISCRETION OF THE MINISTRY REPRESENTATIVE
 - MINIMUM COVER OF CULVERTS SUBJECT TO EROSION SHALL HAVE SANDBAGS OR HEADWALL
 - INLET AND/OR OUTLET OF CULVERTS SUBJECT TO EROSION SHALL HAVE SANDBAGS OR HEADWALL RESPECTING CLEARZONE PRINCIPLES AND SHALL NOT INTRODUCE A FURTHER HAZARD

CSP DROP INLET STRUCTURE
(600Ø - 450Ø) DETAIL
SCALE: N.T.S



- CSP DROP INLET GRATED LID
(450Ø - 300Ø) DETAIL
SCALE: N.T.S

PROFESSIONAL
ENGINEER
PROVINCE
OF
ONTARIO
F. D. SONMOR
49549
12-20-99



SOUTH BASIN DRAINAGE IMPROVEMENTS CONSTRUCTION DETAILS

DRAWING NUMBER
C501

GENERAL NOTES:

- ALL WORKS TO CONFORM TO THE CITY OF VERNON BYLAWS AND THE MASTER MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) AND STANDARD DETAIL DRAWINGS, UNLESS OTHERWISE SPECIFIED.
- ALL MATERIALS SHALL CONFORM TO THE CITY OF VERNON APPROVED PRODUCTS LIST.
- SCHEDULE 40 AND SCHEDULE 80 PLASTIC PIPE SHALL NOT BE USED FOR ANY SITE APPLICATIONS IN THE SITE WORK.
- ANY REVISIONS TO THESE DRAWINGS MUST BE APPROVED BY THE DESIGN ENGINEER, WHO SHALL REVIEW ANY CHANGES WITH THE CITY OF VERNON.
- CONTRACTOR MUST REQUEST A UTILITY LOCATE THROUGH BC ONE CALL BEFORE EXCAVATING WITH ANY POWER EQUIPMENT.
- WORKSAFE BC IS TO BE NOTIFIED PRIOR TO THE START OF CONSTRUCTION AND THE CONTRACTOR SHALL BE REGISTERED WITH WORKSAFE BC.
- CONTRACTOR TO EXPOSE ALL EXISTING UTILITIES AT ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION. CONTRACTOR IS TO VERIFY LOCATION AND INVERTS AND REPORT TO ENGINEER ANY CONFLICTS OR DISCREPANCIES.
- UTILITY TRENCH TO CONFORM TO MMCD STANDARD DRAWING G4.
- RESIDENTS AND BUSINESS OWNERS AFFECTED BY THE PROPOSED CONSTRUCTION ARE TO BE NOTIFIED BY THE CONTRACTOR IN WRITING 48 HOURS PRIOR TO THE START OF CONSTRUCTION AND PROVIDED WITH THE CONTRACTORS PHONE NUMBER AND SCHEDULE.
- THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR THE REPAIR OF ANY DAMAGE CAUSED TO EXISTING STREETS OR SERVICES BY CONSTRUCTION EQUIPMENT AND/OR TRUCKS Hauling MATERIALS TO THE SITE. THIS WILL INCLUDE DAILY CLEANING OR SWEEPING OF ALL EXISTING ROADS OF DIRT AND DEBRIS CAUSED BY CONSTRUCTION ACTIVITY.
- TRAFFIC CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL COMPLY WITH SECTION 52 OF THE INDUSTRIAL HEALTH AND SAFETY REGULATIONS OF THE WORKER'S COMPENSATION BOARD OF B.C. THE DEVELOPER IS TO HAVE, ON SITE, A COPY OF THE CURRENT "B.C. TRAFFIC CONTROL MANUAL FOR WORK ON ROADWAYS" AS PUBLISHED BY THE MINISTRY OF TRANSPORTATION (MOT). VEHICULAR AND PEDESTRIAN ACCESS IS TO BE MAINTAINED ALONG EXISTING ROADS DURING CONSTRUCTION.
- A TRAFFIC MANAGEMENT PLAN WITH LANE CLOSURES MUST BE APPROVED BY THE CITY OF VERNON PRIOR TO CONSTRUCTION.
- LEGAL SURVEY MONUMENTS ARE TO BE PROTECTED. SHOULD THEY REQUIRE RAISING OR RELOCATING, THE CONTRACTOR MUST NOTIFY THE INSPECTOR AT LEAST 72 HOURS IN ADVANCE OF SCHEDULING WORK AFFECTING THEM.
- PIPE BEDDING TO BE MMCD TYPE 1 GRANULAR PIPE BEDDING COMPACTED TO 95% SPD.
- PIPE BACKFILL TO BE IMPORTED 75mm MINUS PIT RUN GRAVEL COMPACTED TO 95% SPD. WHEN NATIVE SITE GRANULAR BACKFILL IS PROPOSED FOR USE IN TRENCHES THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND PROVIDE SAMPLES TO THE GEOTECHNICAL MATERIALS TESTING AGENCY FOR APPROVAL, BEFORE PROCEEDING WITH THE RE-USE OF NATIVE BACKFILL MATERIALS. THE SITE MATERIAL MUST BE APPROVED FOR RE-USE BY THE GEOTECHNICAL ENGINEER.
- WHEN INFILLING OF EXISTING DITCHES, ETC., IS REQUIRED OR PROPOSED, AND WHERE SERVICES ARE CONSTRUCTED IN FILL SECTIONS, THE FILL MATERIAL IS TO BE APPROVED GRANULAR MATERIAL PLACED IN LIFTS NOT EXCEEDING 300MM AND COMPACTED TO 95% SPD.
- FIGURED DIMENSIONS SHALL GOVERN OVER SCALED DIMENSIONS.
- AFTER CONSTRUCTION, RESTORE WORK AREAS AND EXISTING FEATURES TO THEIR ORIGINAL CONDITION OR BETTER.
- ADJUST ALL PROPOSED AND EXISTING APPURTENANCES TO MEET FINAL DESIGN GRADES.
- DEWATERING FOR UTILITY INSTALLATIONS WILL BE COMPLETED AT THE CONTRACTORS EXPENSE. DEWATERING IN THE TRENCHES SHALL BE COMPLETED AS OUTLINED IN THE GEOTECHNICAL REPORT FOR THE SITE, OR AS REQUIRED.

ROADWORKS NOTES:

- SEE PLAN AND PROFILE DRAWINGS FOR TYPICAL ROAD CROSS-SECTIONS. WHERE INDICATED, PROVIDE DRIVEWAY CROSSINGS IN CONFORMANCE WITH MMCD STANDARD DRAWING C7.
- CHANGES OF GRADE ARE TO BE FORMED BY SMOOTH VERTICAL CURVES.
- ALL LOOSE, ORGANIC, OTHERWISE DELETERIOUS MATERIALS OR SOFT SPOT(S) ARE TO BE EXCAVATED AND REMOVED FROM THE ROADWAY AND UTILITY TRENCHES IN THE ROADWAY.
- SUB-BASE AND GRANULAR BASE MATERIALS SHALL BE COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
- CATCH BASIN RIM ELEVATIONS GIVEN ARE THE ELEVATION OF THE SURFACE INLET.
- EXISTING VALVE BOXES, MANHOLES, ETC. WITHIN THE ROAD R.O.W ARE TO BE ADJUSTED TO SUIT THE PROPOSED FINISHED GRADE.
- THE CONDITIONS FOR PLACING ASPHALT PAVEMENT AND CONCRETE SHALL BE IN ACCORDANCE WITH CITY OF VERNON STANDARD CONSTRUCTION DOCUMENTS AND MMCD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS APPLICABLE AT THE TIME OF CONSTRUCTION. WEATHER CONDITIONS MUST ALSO BE IN CONFORMANCE WITH MMCD SPECIFICATIONS. SHOULD DEVICES BE ALLOWED FROM THESE SPECIFICATIONS, THE CONTRACTOR IS TO ASSUME ALL RESPONSIBILITY FOR THESE PRODUCTS.
- TIE-INS TO EXISTING PAVEMENT SHALL BE MADE BY CUTTING BACK THE EXISTING PAVEMENT TO SOUND MATERIAL AS NECESSARY TO PRODUCE A NEAT VERTICAL FACE AND PROVIDE A KEY-WAY. PRIOR TO PLACING ASPHALTIC CONCRETE, EXPOSED PAVEMENT FACES AND OTHER ABUTTING STRUCTURES SHALL BE TACK COATED WITH ASPHALT EMULSION.
- ALL EXISTING ASPHALT TO BE REMOVED MUST BE DISPOSED OF AT AN APPROVED SITE.
- REPAIR ANY PAVEMENT DAMAGE OR DAMAGE TO PRIVATE PROPERTY. PAVEMENT RESTORATION AS PER MMCD STANDARD DRAWING G5. REFER TO ROADWORKS PLAN DRAWINGS FOR SPECIFIED PAVEMENT STRUCTURE.

STORM SEWER NOTES:

- STORM SEWER MATERIALS SHALL CONFORM TO CITY OF VERNON APPROVED PRODUCTS LIST AND MMCD PLATINUM SECTIONS 33 30 01 AND 33 40 01. STORM SEWER MAINS UP TO 600mm DIAMETER TO BE MINIMUM PVC ULTRA RIBBED TO ASTM D2412 AND ASTM D3034 (UNLESS OTHERWISE NOTED). PVC PROFILE PIPE TO ASTM F794 AND CSA B182.4 IS ALSO ACCEPTABLE FOR 200mm - 1200mm DIAMETER STORM SEWER.
- CONTRACTOR TO PROVIDE A MINIMUM 1.5m COVER (COV SCHED F2.12) OVER ALL PROPOSED OFFSITE STORM MAINS. WHERE MINIMUM COVER CANNOT BE PROVIDED FOR OFFSITE MAINS, SEWERS SHALL BE CONSTRUCTED OF CONCRETE AS NOTED IN THE DRAWINGS.
- CONTRACTOR IS TO EXPOSE AND CONFIRM LOCATIONS AND INVERTS OF ALL EXISTING SANITARY AND STORM SERVICE CONNECTIONS PRIOR TO CONSTRUCTION AND REPORT TO ENGINEER ANY CONFLICTS OR DISCREPANCIES. ALL EXISTING SERVICE CONNECTIONS TO BE REPAIRED IN REQUIRED AND TIED IN TO THE PROPOSED STORM SEWER.
- CONNECTIONS TO THE NEW STORM MAINS UNDER 450mm DIAMETER SHALL BE MADE USING STANDARD WYE FITTINGS. CONNECTIONS TO NEW STORM MAINS 450mm DIAMETER AND LARGER AND TO EXISTING MAINS SHALL BE MADE USING WYE SADDLES OR INSERTA-TEES WHERE NOTED. REFER TO MMCD STANDARD DRAWING S1 FOR MANHOLE REQUIREMENTS.
- A MINIMUM OF 3m HORIZONTAL CLEAR SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND ALL STORM SEWERS/SERVICES EXCEPT WHERE NOTED.
- WHERE A STORM SEWER CROSSES A WATER MAIN, THE SEWER SHALL BE BELOW THE WATER MAIN WHERE POSSIBLE WITH A MINIMUM CLEAR VERTICAL SEPARATION OF 0.45m (MEASURED BETWEEN THE BOTTOM OF THE WATER MAIN AND THE TOP OF THE SEWER). IF THIS CANNOT BE ACHIEVED DUE TO EXTREME SITE CONDITIONS, FOR VERTICAL SEPARATION BETWEEN 0.15m - 0.45m THE FOLLOWING PROVISIONS MUST BE MET:
 - WATER MAIN AND SEWER JOINTS WITHIN 3m EITHER SIDE OF THE CROSSING SHALL BE RESTRAINED AND PROTECTED WITH AWWA APPROVED PIPELINE PROTECTION PROJECT (IE. HEAT SHRINK WRAP, PETROLATUM TAPE).
 - STRUCTURAL SUPPORT IS TO BE PROVIDED TO PROTECT WATER MAIN AGAINST DEFLECTION AND SETTLING OF SEWER PIPE. CLEAR VERTICAL SEPARATION OF LESS THAN 0.15m IS NOT PERMITTED.
- ALL MANHOLES TO BE A MINIMUM OF 1050MM DIAMETER PER-CAST REINFORCED CONCRETE TO ASTM C478 OR AS NOTED ON DRAWINGS. REFER TO MMCD DRAWINGS S1.
- STORM PIPE LENGTHS SHOW IN PROFILE REPRESENT THE LENGTH FROM CENTER OF MANHOLE TO CENTER OF MANHOLE.
- CONTRACTOR TO COMPLETE TIE-INS AND DISCONNECTIONS OF EXISTING SERVICE FOR DISTRICT WATER AND DRAINAGE IN THE PRESENCE OF THE CONSULTANT'S REPRESENTATIVE AND UNDER SUPERVISION OF CITY OF VERNON PERSONNEL AFTER APPROPRIATE CITY APPROVALS ARE OBTAINED.
- STORM SEWER TESTING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL VIDEO INSPECT COMPLETED STORM SEWERS UNDER 900mm IN DIAMETER FOLLOWING COMPLETION OF INSTALLATION. SHOULD VIDEO INDICATE APPARENT DEFICIENCIES, ADDITIONAL TESTING AND/OR REPLACEMENT WILL BE REQUIRED AT THE DIRECTION OF THE CONTRACT ADMINISTRATION AND AT THE COST OF THE CONTRACTOR.
- STORM SEWERS ARE TO BE CONSTRUCTED WITH SEALED JOINTS UNLESS OTHERWISE SPECIFIED ON THE DESIGN DRAWINGS.
- ALL CATCH BASINS TO BE DOBNEY FOUNDRY LTD. B-39B TOP INLET WITH B-39A FRAME, B-39 GRATE AND ALUMINUM TRAPPING HOOD OR APPROVED EQUIVALENT. CATCH BASIN LEADS TO BE A MINIMUM 200 DIAMETER PVC DR35 * 2.0% MINIMUM SLOPE UNLESS OTHERWISE NOTED
- ALL LAWN BASINS TO BE 600mm DIAMETER WITH CLOSED BOTTOM AND ALUMINUM TRAPPING HOOD AND SHALL CONFORM TO MMCD DWG S12 (TYPE 2) UNLESS OTHERWISE NOTED. LAWN BASIN LEADS TO BE A MINIMUM 150MM DIAMETER PVC DR35 * 1.0% MINIMUM SLOPE UNLESS OTHERWISE NOTED.

PAVEMENT MARKING AND SIGNAGE NOTES:

- ALL PAVEMENT MARKINGS AND SIGNAGE TO BE MINISTRY OF TRANSPORTATION STANDARDS (MANUAL OF STANDARD TRAFFIC SIGNS & PAVEMENT MARKINGS).

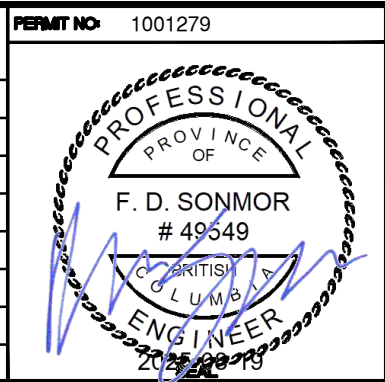
EXISTING UTILITIES

- THE LOCATION OF EXISTING SERVICES IS NOT GUARANTEED TO BE ACCURATE. THE INFORMATION HAS BEEN COMPILED FROM THE CITIES AS-CONSTRUCTED RECORDS AND FROM TOPOGRAPHIC SURVEY. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL INVESTIGATE THE WORK AREA. TO CONFIRM THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES, NOTIFY LAWSON ENGINEERING LTD. IMMEDIATELY IF THERE ARE ANY DISCREPANCIES.
- NOTIFY TELUS, BC HYDRO, FORTIS BC, CITY WATER & SEWER AND CABLE 72 HOURS PRIOR TO CONSTRUCTION FOR LOCATED, IF APPLICABLE.
- ALL DRAWING DISCREPANCIES TO BE REPORTED TO THE ENGINEER.

TABLE 3: STORM DITCH DESIGN CALCULATIONS

EXISTING TRANSECTS INCLUDING ROAD SURFACE (BANK) FLOWS									
LOCATION				EPASWMM MODEL RESULTS					
Road	From Sta	To Sta	Min Flow Area Sta	Conduit ID #	Max Flow L/sec	Time of Max Flow hr : min	Max Velocity m/sec	Max/Full Depth	
kokanee	0+280	0+550	0+320	ditch-1a	864	2:18	3.09	63	
kokanee	0+210	0+280	0+280	ditch-1b	912	2:19	4.57	80	
kokanee	0+000	0+210	0+040	ditch-2	102	2:10	1.21	68	
eastside -W	0+000	0+090	0+040	ditch-4	48	2:55	0.75	50	
east side - W	0+090	0+270	0+240	ditch-5	114	2:11	1.89	42	
eastside - E	0+660	0+620	0+640	ditch-6a	69	2:10	0.22	61	
eastside - E	0+620	0+580	0+600	ditch-6b	76	2:10	0.93	55	
eastside - E	0+580	0+270	0+400	ditch-6c	57	2:15	0.73	57	
smith - W	0+000	0+160	0+120	ditch-8	24	2:10	0.54	74	
smith - E	0+640	0+590	0+640	ditch-7	13	2:10	1.6	43	
SMITH ROAD FRENCH DRAIN - PIPED CONVEYANCE AND DITCH FLOWS									
LOCATION				EPASWMM MODEL RESULTS					
From MH	To MH	Conduit ID #	Max Flow L/sec	Time of Max Flow hr : min	Max Velocity m/sec	Max/Full Depth %	Ponded Depth at Upstream CB mm		
CB-8	CB-7	frenchP-7a	27	2:10	1.98	44	50		
CB-8	CB-7	frenchD-7a	3	2:10	0.72	32			
CB-7	CB-6	frenchP-7b	51	2:10	2.4	64	50		
CB-7	CB-6	frenchD-7b	2	2:10	0.69	29			
CB-6	CB-5	frenchP-7c	68	2:10	2.61	79	40		
CB-6	CB-5	frenchD-7c	1	2:15	0.51	26			
CB-5	CB-4	frenchP-7d	83	2:10	2.89	91	40		
CB-5	CB-4	frenchD-7d	1	2:20	0.39	28			
CB-4	CB-3	frenchP-7e	101	2:11	1.56	87	50		
CB-4	CB-3	frenchD-7e	1	2:10	0.22	26			
CB-3	Inlet_3	frenchP-7f	109	2:11	2.58	58	30		
CB-3	Inlet_3	frenchD-7f	1	2:10	0.41	22			

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5	2025/08/19	FDS	DLP	BTL	ISSUED FOR CONSTRUCTION



SCALE H:N/A	SOUTH BASIN DRAINAGE IMPROVEMENTS CONSTRUCTION NOTES & STORM CALCULATIONS TABLE	DRAWING NUMBER C801
SHEET 21 OF 21		