McElhanney Cover D - 2019-04-01

CLIENT

CITY OF FERNIE

ADDRESS / CONTACT INFO.

501 - 3RD AVE, BOX 190, FERNIE, BC V0B 1M0

PROJECT NAME

ANNEX DIKE IMPROVEMENTS

McELHANNEY PROJECT

2441 - 01170- 00

STATUS

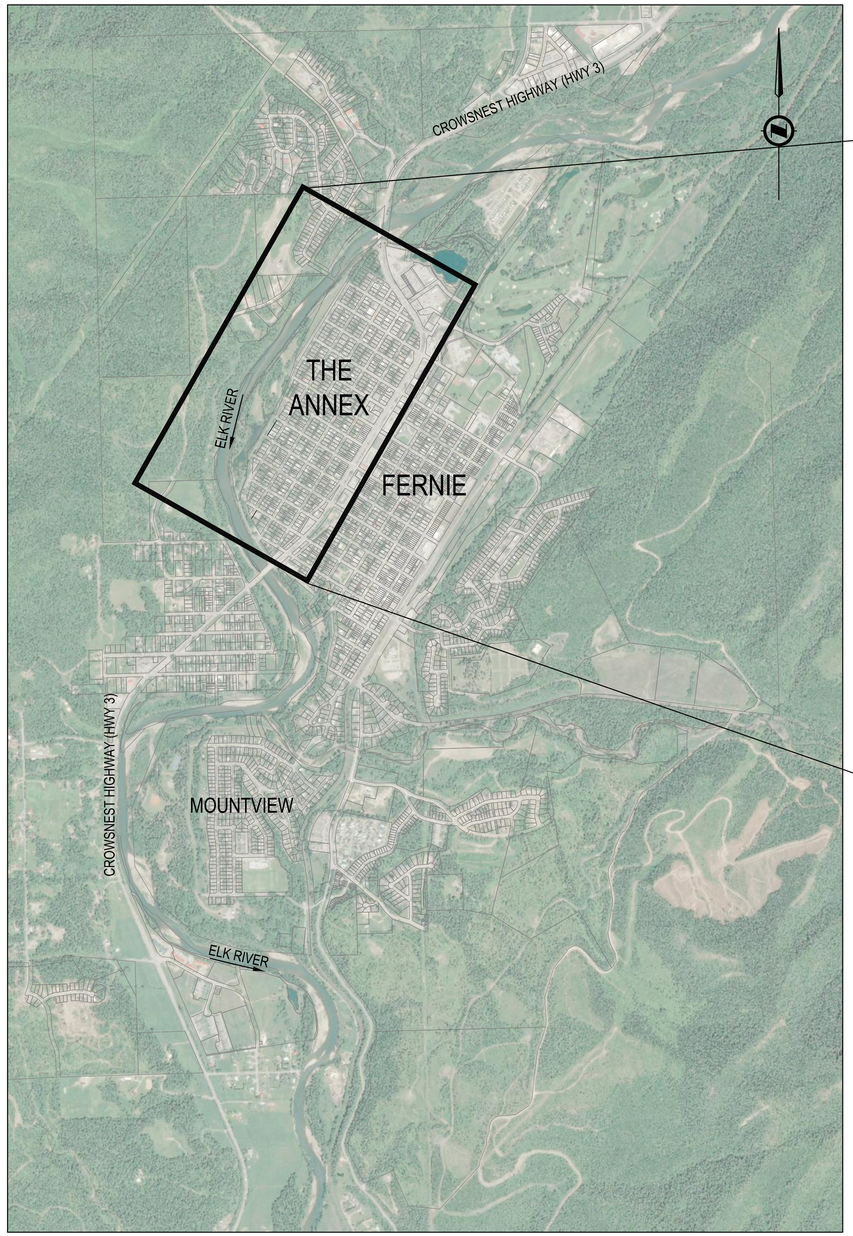
ISSUED FOR CONSULTATION

McElhanney

402C Hwy 3
PO Box 1505
Fernie BC
V0B 1M0
T 250 425 0158

DATE: 2021-10-27, 14:18 FILE: X:\2441\Projects\2441-01170-00 - CoF - Annex Dike Improvements\10 - Drawings\10.3 Sheet Files\01170-CA-000.dwg

McElhanney ANSI D - 2039-09-91



A LOCATION PLAN
SCALE 1:15,000



B SITE PLAN
SCALE 1:5000

DRAWING INDEX		
SHEET #	REVISION	DWG NAME
C-000	C	COVER SHEET
C-001	C	SITE LOCATION PLAN AND DRAWING INDEX
C-002	C	GENERAL NOTES AND LEGEND
C-101	C	EXISTING SITE PLAN
C-201	C	PROPOSED SITE PLAN
C-301	C	PLAN PROFILE, STA 0+070 TO STA 0+420
C-302	C	PLAN PROFILE, STA 0+420 TO STA 0+770
C-303	C	PLAN PROFILE, STA 0+770 TO STA 1+120
C-304	C	PLAN PROFILE, STA 1+120 TO STA 1+470
C-305	C	PLAN PROFILE, STA 1+470 TO STA 1+820
C-306	C	PLAN PROFILE, STA 1+820 TO STA 1+930
C-307	B	PLAN PROFILE, ANNEX PARK PARKING LOT
C-401	C	PLAN DETAILS
C-402	B	RETAINING WALL DETAIL
C-403	-	FLOOD WALL DETAIL (PLACEHOLDER)
C-404	-	POND OUTFALL DETAIL (PLACEHOLDER)
C-405	-	STAIRS & BIKE RAMP DETAIL (PLACEHOLDER)
C-501	C	TYPICAL SECTIONS

Rev	Date	Description	Drawn	Design	App'd
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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0 1:5,000 250

0 1:15,000 600

ORIGINAL DWG SIZE: ANSI D (22" x 34")

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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

SITE LOCATION PLAN AND DRAWING INDEX

Drawing No.
C-001

Project Number
2441-01170-00

Rev.
C

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

DATE: 2021-10-27, 14:17 FILE: X:\2441\Projects\2441-01170-00 - CoF - Annex Dike Improvements\10 - Drawings\10.3 Sheet Files\01170-C0-001.dwg

GENERAL INSTRUCTIONS TO CONTRACTOR

1. THE LOCATION AND SIZE OF EXISTING UTILITIES AND SERVICES, AS SHOWN ON THE DRAWINGS IS APPROXIMATE ONLY. PRIOR TO COMMENCEMENT OF CONSTRUCTION THE CONTRACTOR SHALL EXPOSE AND VERIFY THE EXACT LOCATION AND SIZE OF THESE INSTALLATIONS AND SHALL NOTIFY THE CONSULTANT OF ANY DISCREPANCIES, CONFLICTS OR OMISSIONS.

2. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR EXISTING UTILITIES AND SERVICES. ANY DAMAGES SUFFERED BY THESE UTILITIES, WHICH MAY BE ATTRIBUTED TO THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.

3. WHEN WORKING ON EXISTING PAVEMENT WHICH WILL BE RETAINED FOR FUTURE USE, THE CONTRACTOR SHALL EXERCISE CARE NOT TO CAUSE ANY DAMAGE. ANY DAMAGE CAUSED BY THE CONTRACTOR TO EQUIVALENT CONDITION TO THAT EXISTING PREVIOUS AT HIS EXPENSE AND TO THE SATISFACTION OF THE CONSULTANT.

4. THE CONTRACTOR SHALL USE ONLY NEW AND APPROVED MATERIALS AND SHALL NOT SUBSTITUTE ANY MATERIALS WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CONSULTANT.

5. ALL SURVEY MONUMENTS, PROPERTY PINS AND PROJECT PRIMARY SURVEY CONTROL PINS, SHALL BE PROTECTED DURING ALL STAGES OF CONSTRUCTION. ANY DAMAGE SUFFERED BY THE MONUMENTS OR PINS SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

6. EXISTING PARKING AREAS, ON-SITE AND OFF-SITE ROADS MUST BE KEPT CLEAN. STREET, ROAD AND PARKING AREA CLEANING SHALL BE DONE BY THE CONTRACTOR AT HIS EXPENSE.

7. DISTURBANCE TO EXISTING LANDSCAPING OR SURFACE IMPROVEMENT, ATTRIBUTABLE TO THE CONTRACTOR'S OPERATION SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE. SUCH REPAIR SHALL BE CARRIED OUT TO THE SATISFACTION OF THE CONSULTANT AND THE CITY OF FERNIE.

8. THE CONTRACTOR SHALL NOT ENTER UPON ADJACENT PROPERTIES DURING THE COURSE OF CONSTRUCTION WITHOUT THE PRIOR APPROVAL OF THE PROPERTY OWNER. IF THE CONTRACTOR DOES CAUSE DAMAGE TO ADJOINING PROPERTY HE SHALL IMMEDIATELY REPAIR IT TO THE SATISFACTION OF THE OWNER. HE SHALL OBTAIN A LETTER OF CLEARANCE FROM THE OWNER AND SUBMIT IT TO THE CONSULTANT. SUBSTANTIAL COMPLETION SHALL NOT BE GRANTED UNTIL ALL SUCH LETTERS HAVE BEEN RECEIVED BY THE CONSULTANT.

9. CONSTRUCTION AND EXCAVATION WASTES, OVERBURDEN, SOIL, OR OTHER SUBSTANCES DELETERIOUS TO AQUATIC LIFE SHALL BE DISPOSED OF OR PLACED IN SUCH A MANNER SO AS TO PREVENT THEIR ENTRY INTO ANY WATERCOURSE, RAVINE OR STORM SEWER SYSTEM.

10. ALL WORK SHALL BE UNDERTAKEN IN A MANNER THAT PREVENTS THE RELEASE OF SEDIMENT-LADEN WATER INTO ANY DITCH, WATERCOURSE OR STORM SEWER.

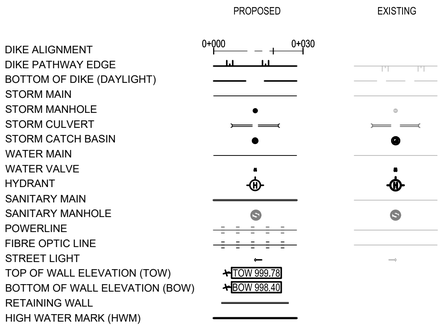
SURVEY

1. GEODETIC INFORMATION IS IN UTM ZONE 11 CVD2013.

2. CONSTRUCTION LAYOUT SURVEY IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

3. SURVEY CONTROL BENCHMARKS WILL BE PROVIDED BY THE CONSULTANT FOR THE CONTRACTOR'S USE.

LEGEND



Rev	Date	Description	Drawn	Design	App'd
C	2021/10/20	ISSUED FOR CONSULTATION	SS	KP	KM
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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

GENERAL NOTES AND LEGEND

Drawing No.
C-002

Project Number
2441-01170-00

Rev.
C

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

McElhanney ANSI D - 2020-01-01

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C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS

EXISTING SITE PLAN

Drawing No.
C-101

Project Number
2441-01170-00

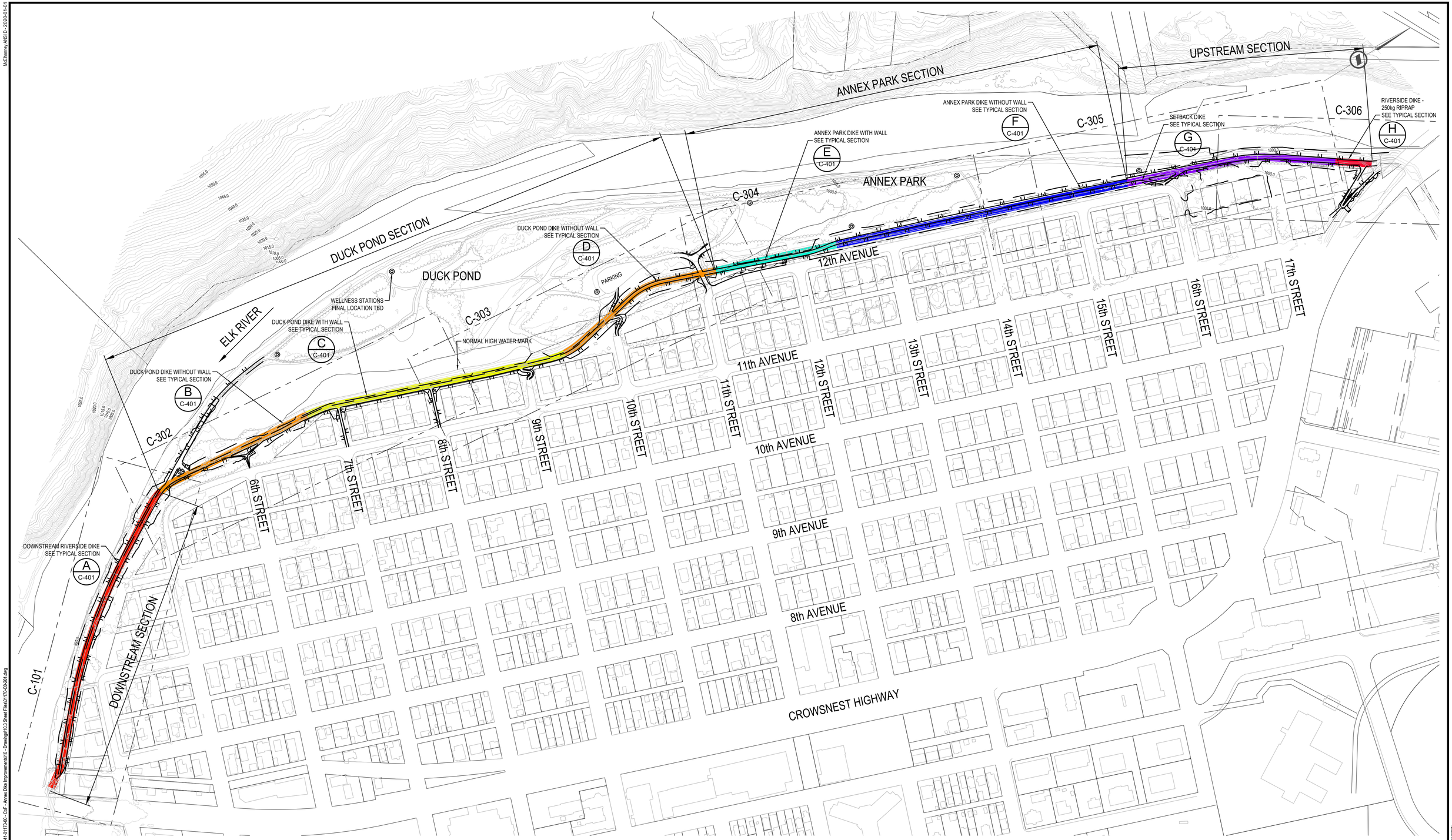
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DATE: 2021-10-27, 14:21 FILE: X:\2441\Projects\2441-01170-00 - CoF - Annex Dike Improvements\10 - Drawings\10.3 Sheet Files\01170-C0-101.dwg

McElhanney ANSI D - 2020-01-01

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McElhanney ANSI D - 2020-01-01



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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS PROPOSED SITE PLAN AND KEY PLAN

Drawing No.
C-201

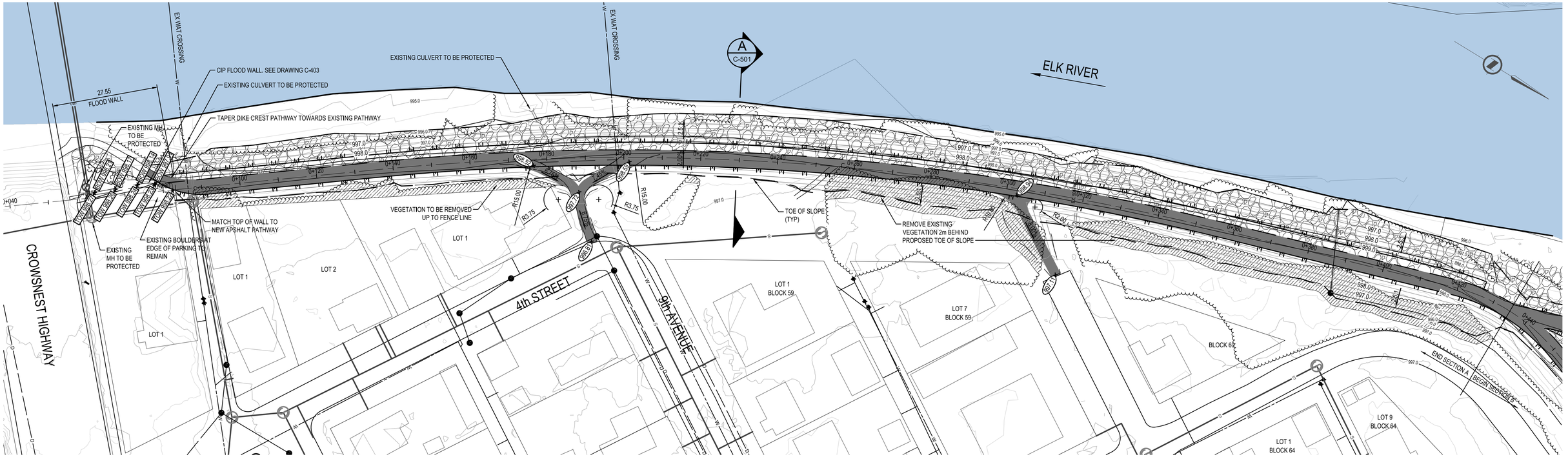
Project Number
2441-01170-00

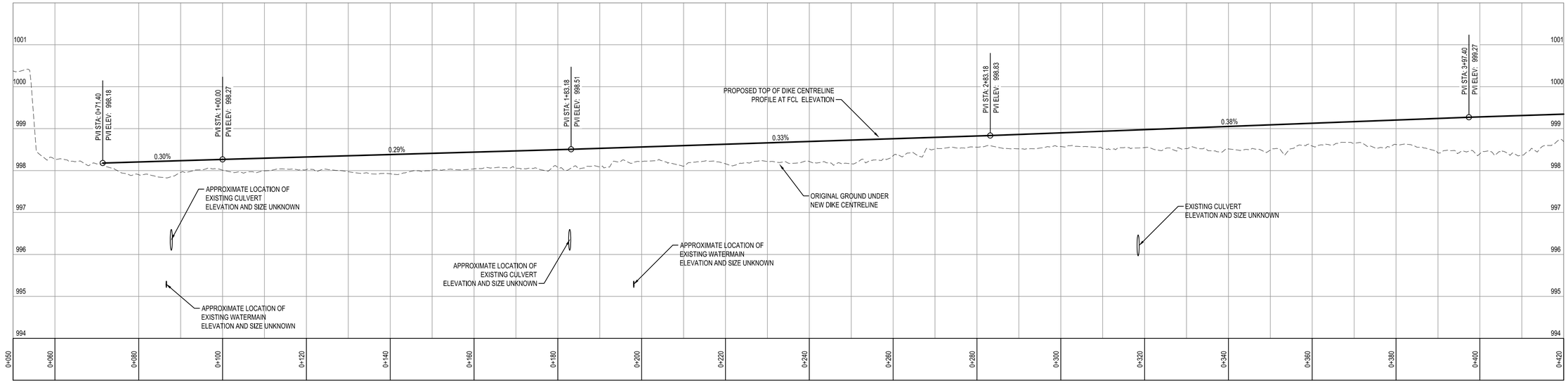
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McElhanney ANSI D - 2020-01-01





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0 1:500 25

ORIGINAL DWG SIZE: ANSI D (22" x 34")

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CITY OF FERNIE
FERNIE, BRITISH COLUMBIA

ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 0+070 TO STA 0+420
DOWNSTREAM SECTION

Drawing No. C-301

Project Number 2441-01170-00

Rev. C

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

DATE: 2021-10-27, 14:12 FILE: X:\2441\Projects\2441-01170-00 - CoF - Annex Dike Improvements\10 - Drawings\10.3 Sheet Files\01170-C00-301.dwg

McElhanney ANSI D - 2020-01-01

ELK RIVER

DUCK POND OUTFALL. SEE DRAWING C-404

WELLNESS CENTER

ATTACK DIKE

DUCK POND

SURVEYED HIGH WATER MARK MAY 2021

RIPRAP REVETMENT. SEE DRAWING C-401

EXISTING CULVERT TO BE PROTECTED

19.74 TYPICAL DIKE SECTION B

18.24 TYPICAL DIKE SECTION B

BEGIN RETAINING WALL AT STATION 0+610

REMOVE EXISTING VEGETATION 2m BEHIND PROPOSED TOE OF SLOPE

MATCH PATH TO TOP OF ASPHALT

END SECTION A | BEGIN SECTION B

END SECTION B | BEGIN SECTION C

PARCEL A BLOCK 69

LOT 3 BLOCK 69

7th STREET

8th STREET

11th AVENUE

LOT 1 BLOCK 74

LOT 2 BLOCK 74

LOT 3 BLOCK 74

LOT 4 BLOCK 74

LOT 5 BLOCK 74

RETAINING WALL HEIGHT VARIES

LOT 9 BLOCK 64

LOT 1

LOT 2

LOT A

LOT B

BLOCK 60

REVOLVED SECTION

3-BLOCK HEIGHT RETAINING WALL

3-BLOCK HEIGHT RETAINING WALL

PVI STA: 5+108.08
PVI ELEV: 999.64

PVI STA: 6+01.49
PVI ELEV: 999.92

PVI STA: 6+99.05
PVI ELEV: 1000.21

PROPOSED TOP OF DIKE CENTRELINE PROFILE AT FCL ELEVATION

TOP OF WALL (TOW)

BOTTOM OF WALL (BOW)

ORIGINAL GROUND UNDER NEW DIKE CENTRELINE

EXISTING CULVERT SIZE UNKNOWN

APPROXIMATE LOCATION OF EXISTING STORM MAIN ELEVATION AND SIZE UNKNOWN

0.33% 0.30% 0.30% 0.25%

1002 1001 1000 999 998 997 996

0+420 0+440 0+460 0+480 0+500 0+520 0+540 0+560 0+580 0+600 0+620 0+640 0+660 0+680 0+700 0+720 0+740 0+760 0+770

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0 1:500 25

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ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 0+420 TO STA 0+770
DUCK POND SECTION

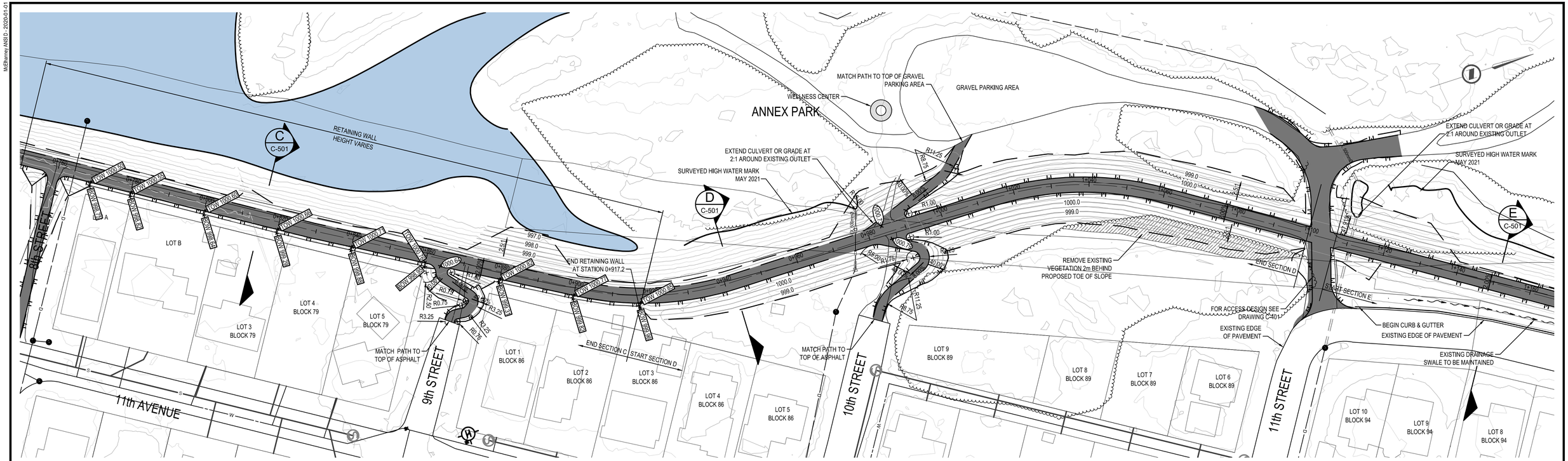
Drawing No. C-302

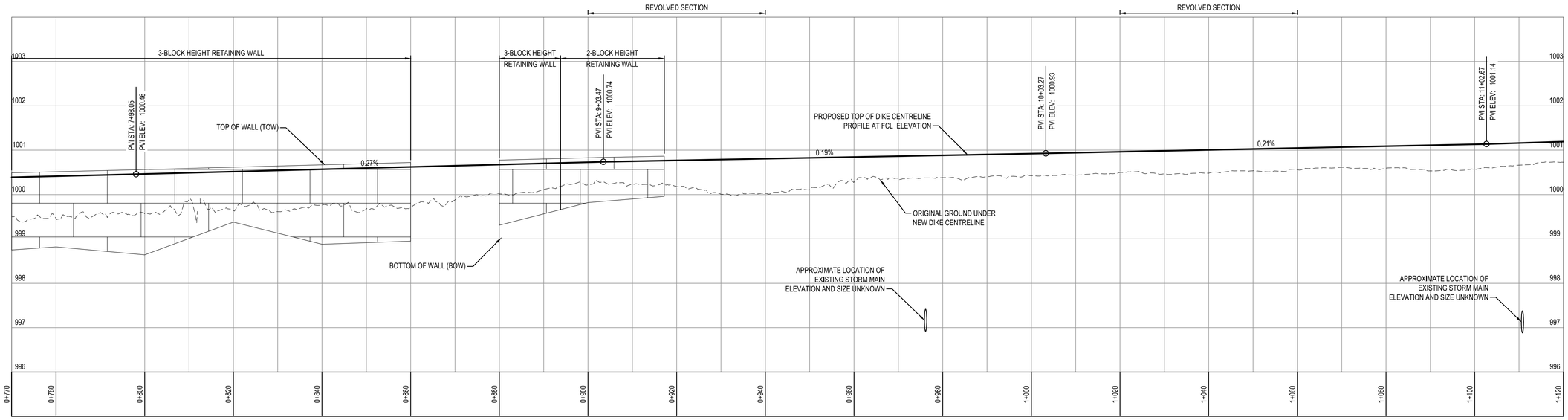
Project Number 2441-01170-00

Rev. C

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

DATE: 2021-10-27, 14:11 FILE: X:\2441\Projects\2441-01170-00 - CoF - Annex Dike Improvements\10 - Drawings\10.3 Sheet Files\01170-C0-302.dwg





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0 1:500 25

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ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 0+770 TO STA 1+120
DUCK POND AND ANNEX PARK SECTION

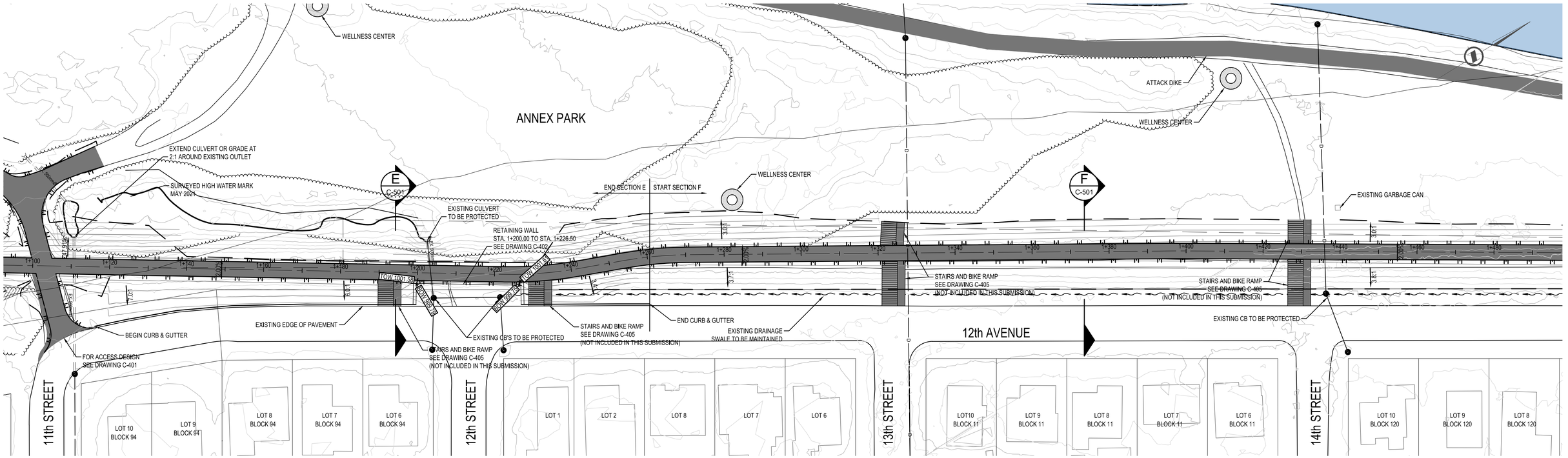
Drawing No. C-303

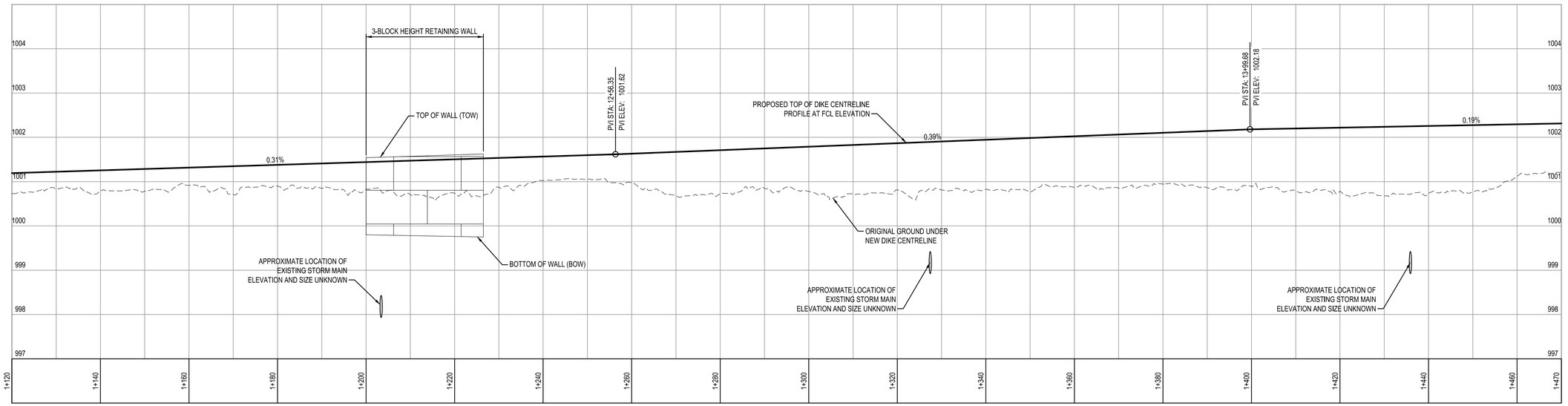
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ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 1+120 TO STA 1+470
ANNEX PARK SECTION

Drawing No. C-304

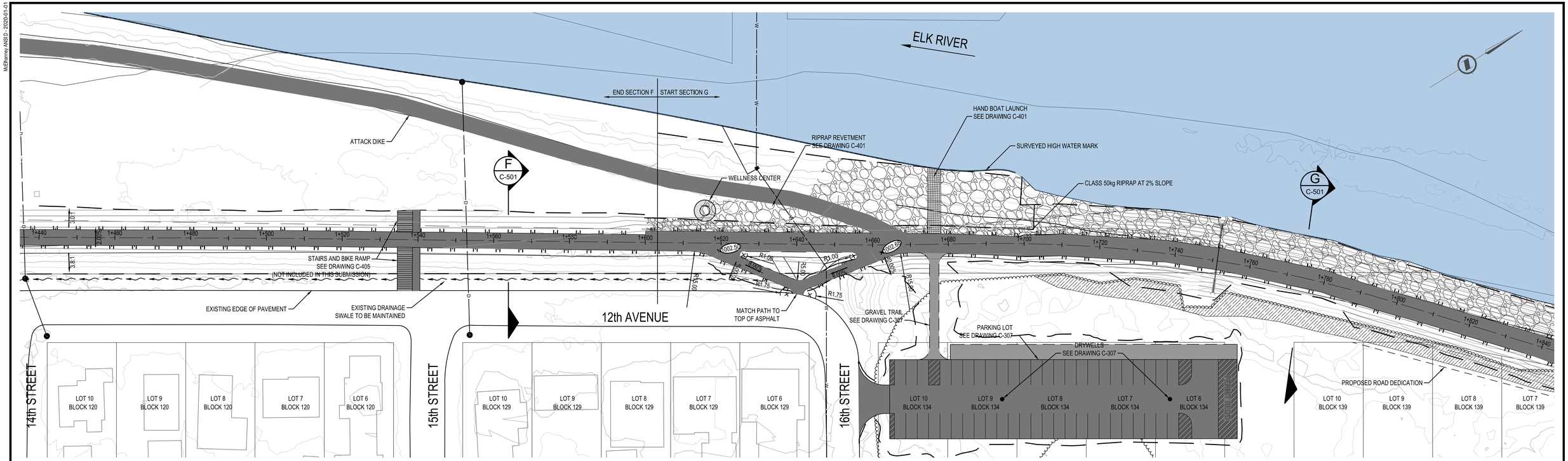
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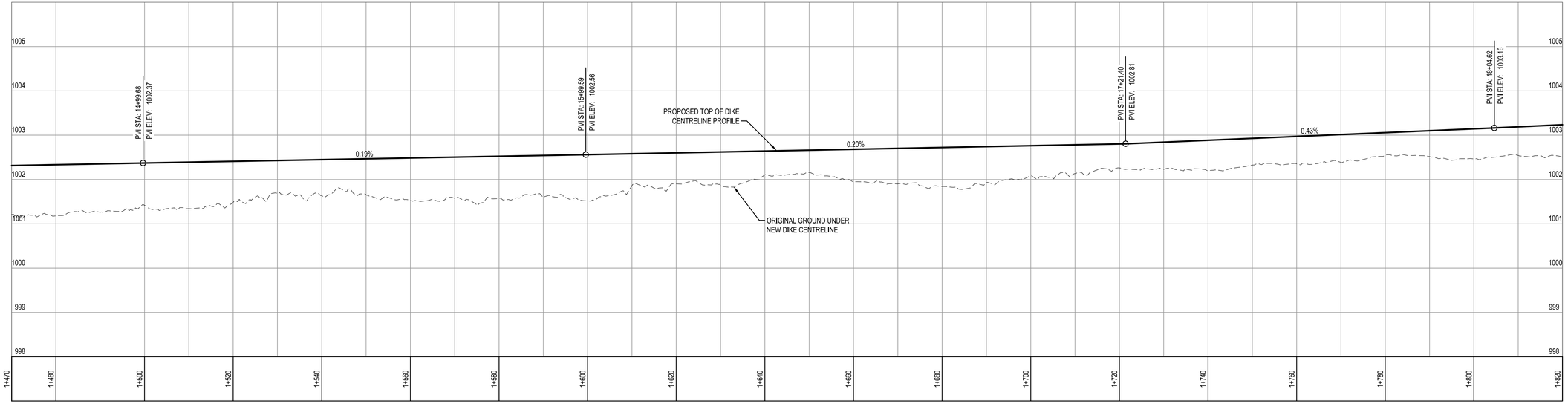
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ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 1+470 TO STA 1+820
ANNEX PARK AND UPSTREAM SECTION

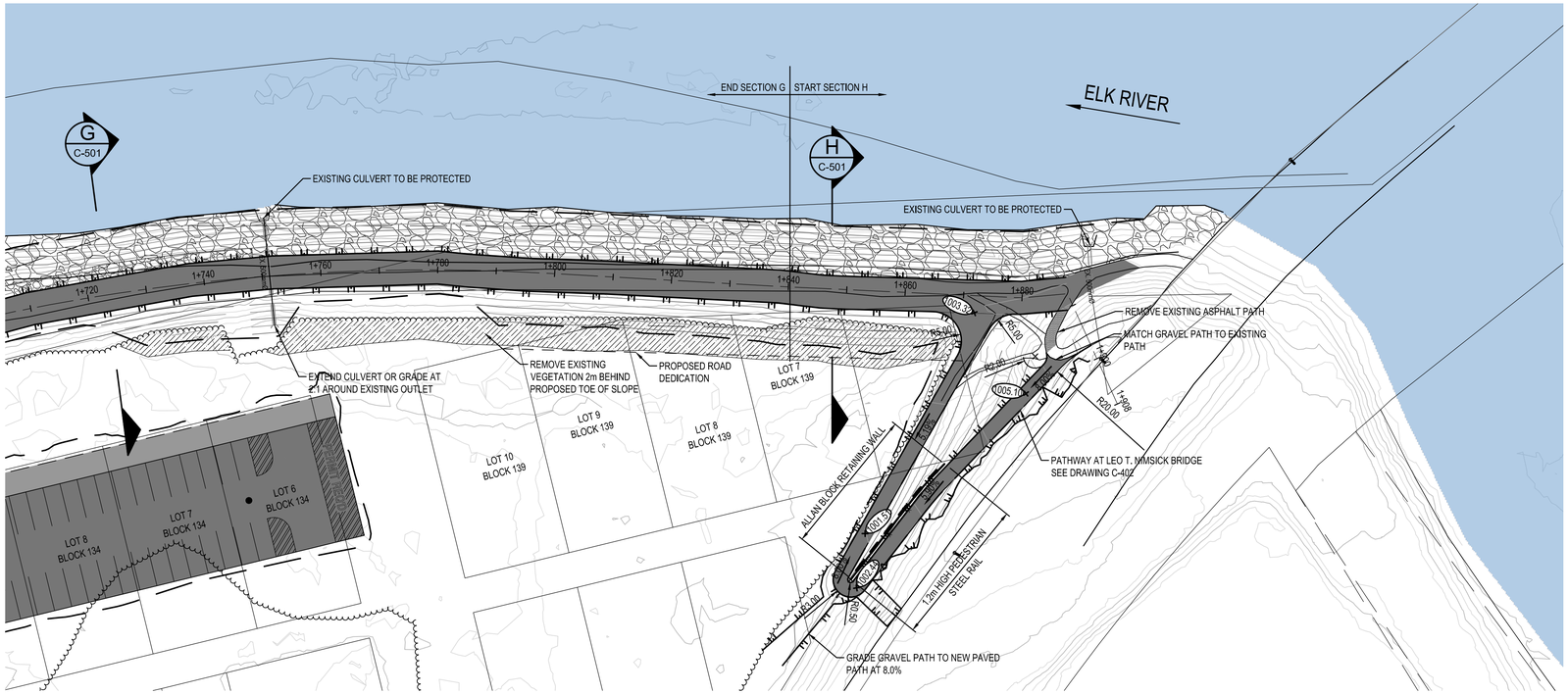
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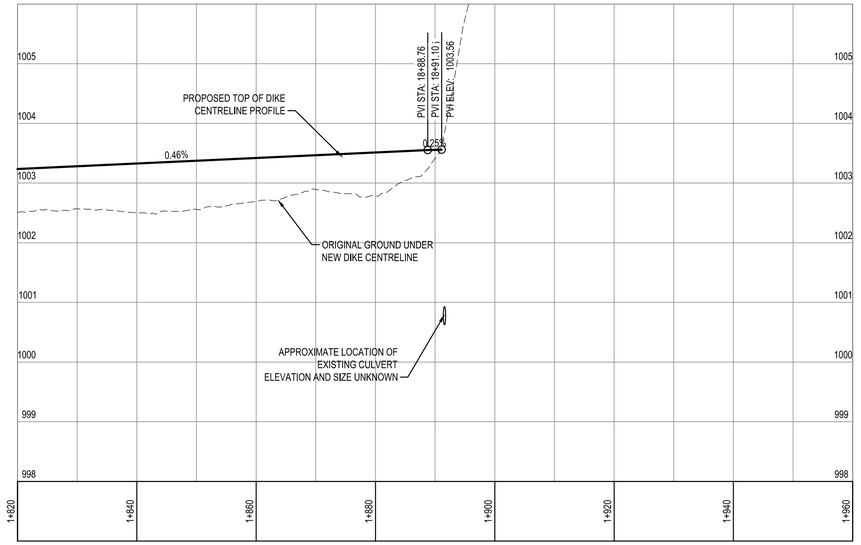
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Rev. C

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DATE: 2021-10-27, 13:52 FILE: X:\2441\Projects\2441-01170-00 - CoF - Annex Dike Improvements\10 - Drawings\10.3 Sheet Files\01170-C05-305.dwg





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ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
STA 1+820 TO STA 1+930
UPSTREAM SECTION

Drawing No.
C-306

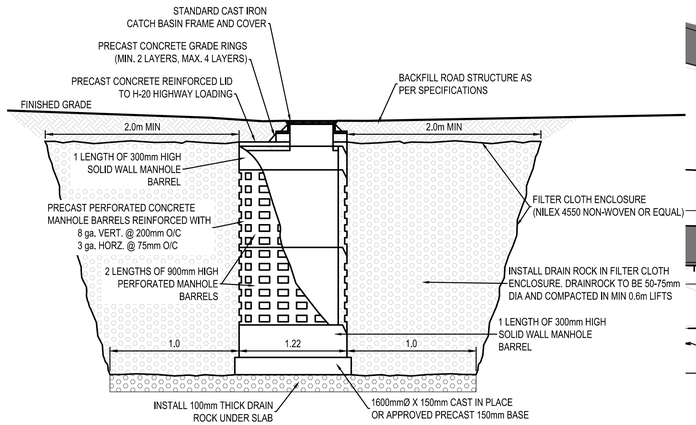
Project Number
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DRAINAGE DRY WELL DETAIL
SCALE: NTS



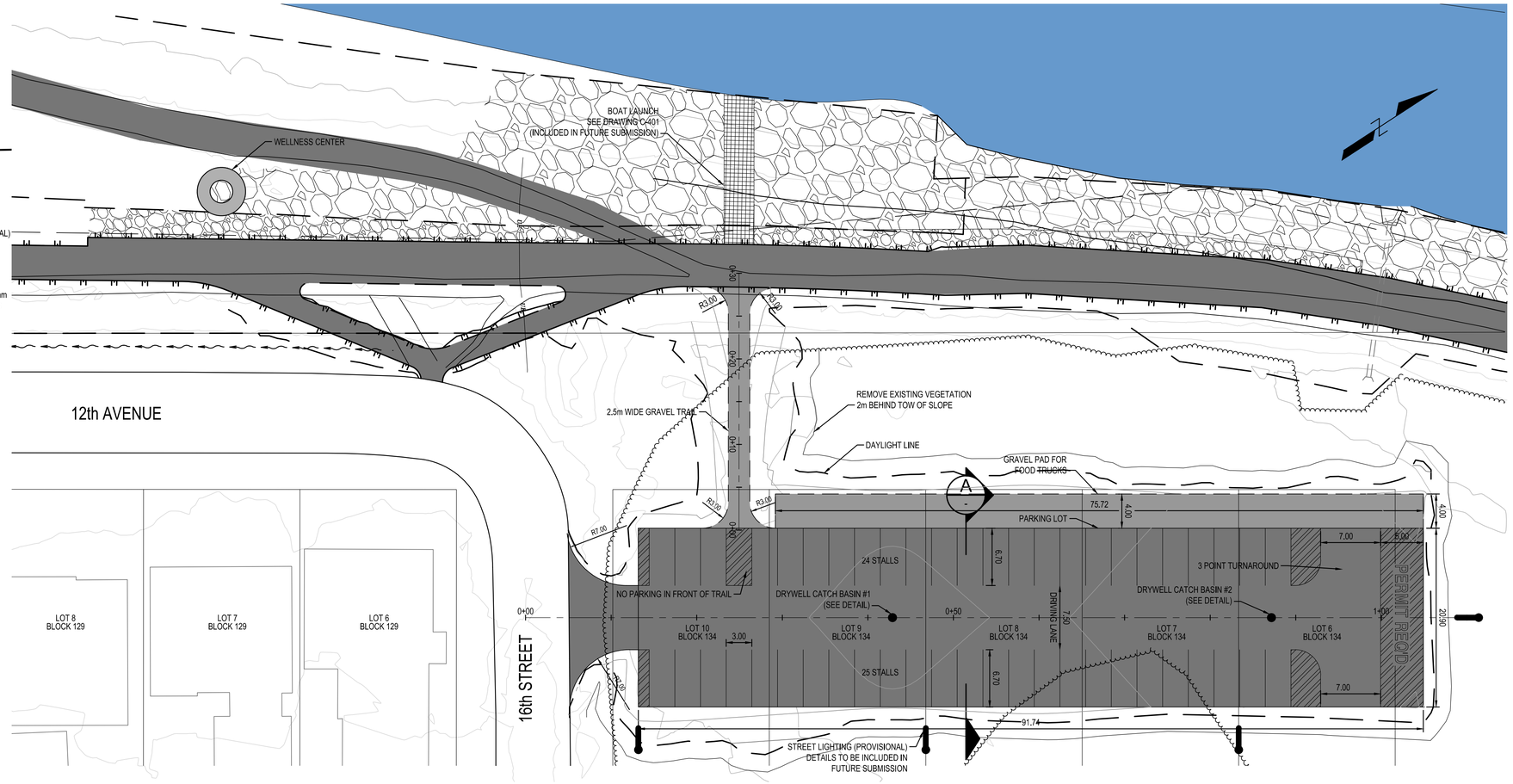
HOLE SPACING;
VERT. @ 150mm O/C
HORZ. @ 200mm O/C

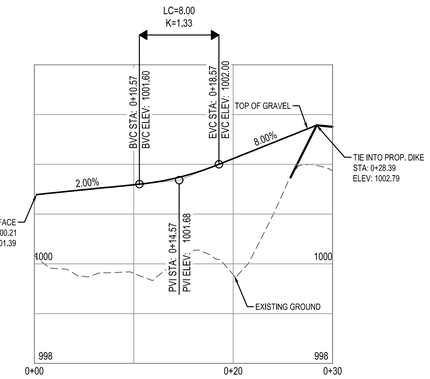
HOLE SPACING:
2 ROWS OF 4 HOLES AND
2 ROWS OF 5 HOLES ALTERNATING
(100 HOLES PER 915mm BARREL SECTION)
HOLE SPACING AT 150mm O/C

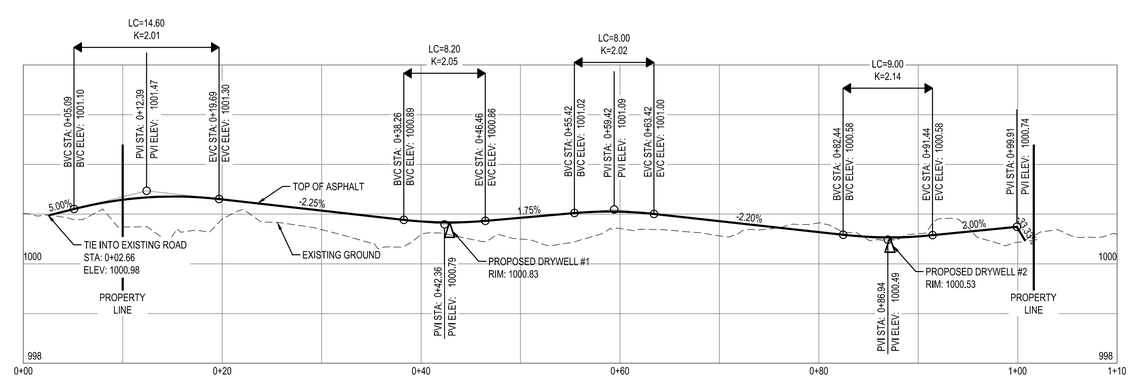
HOLE DETAIL
NTS

ALTERNATE HOLE DETAIL
NTS

A - TYPICAL PARKING LOT SECTION
H SCALE 1:200
V SCALE 1:40







GRAVEL TRAIL PROFILE
H SCALE 1:300
V SCALE 1:60

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0 1:300 15

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ANNEX DIKE IMPROVEMENTS
PLAN PROFILE
ANNEX PARK PARLING LOT

Drawing No. C-307

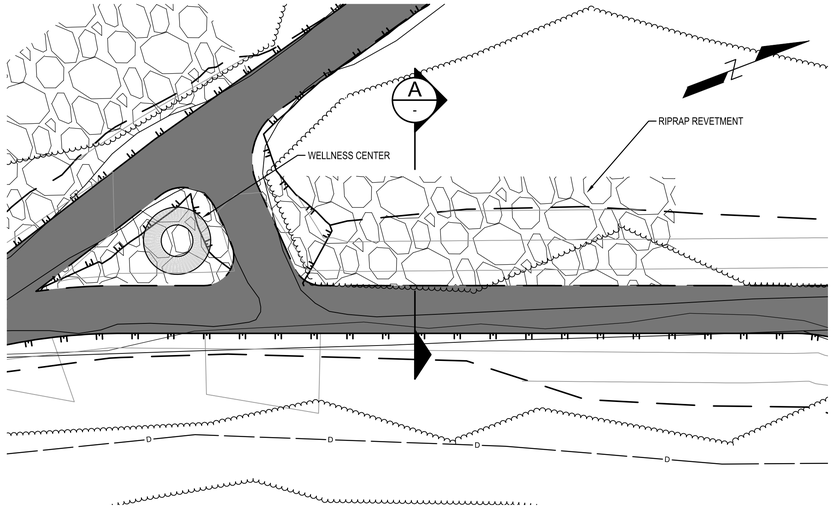
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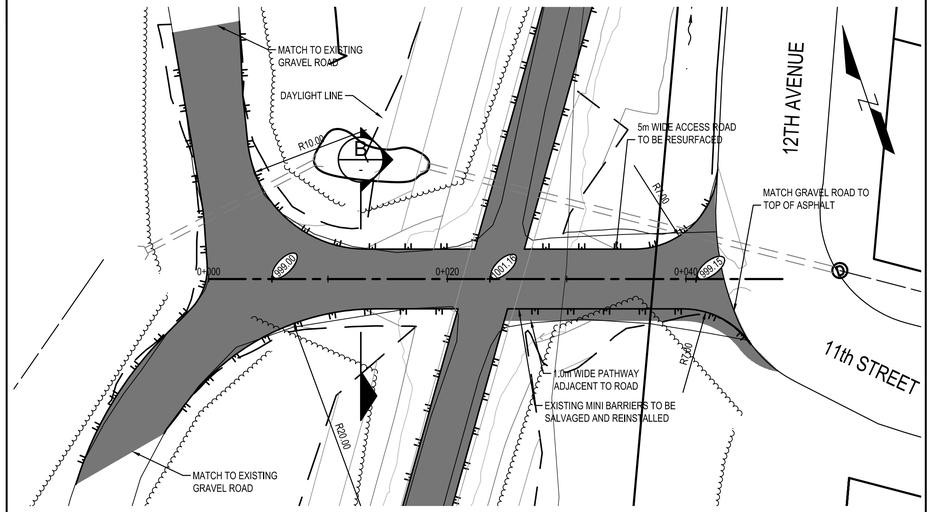
Rev. B

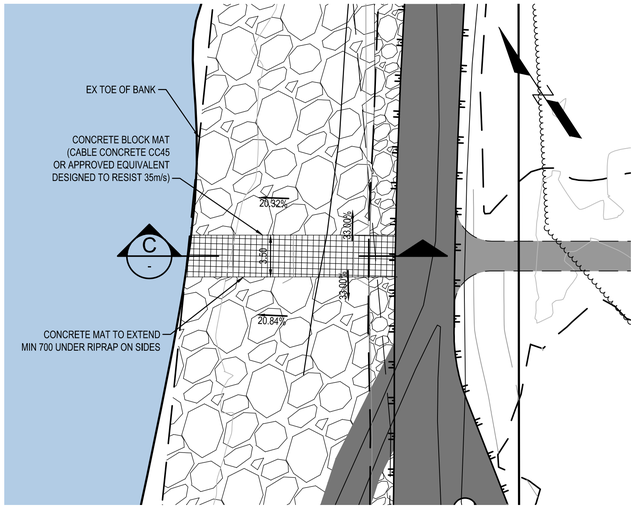
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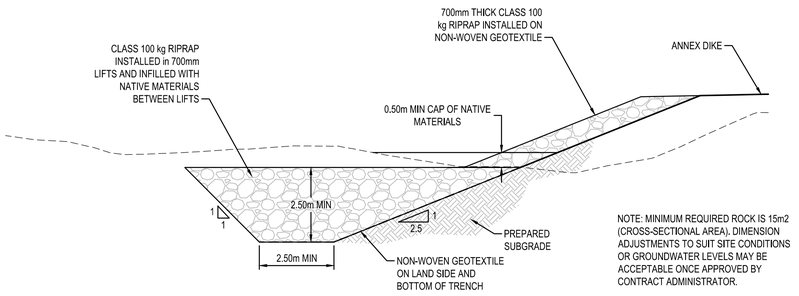
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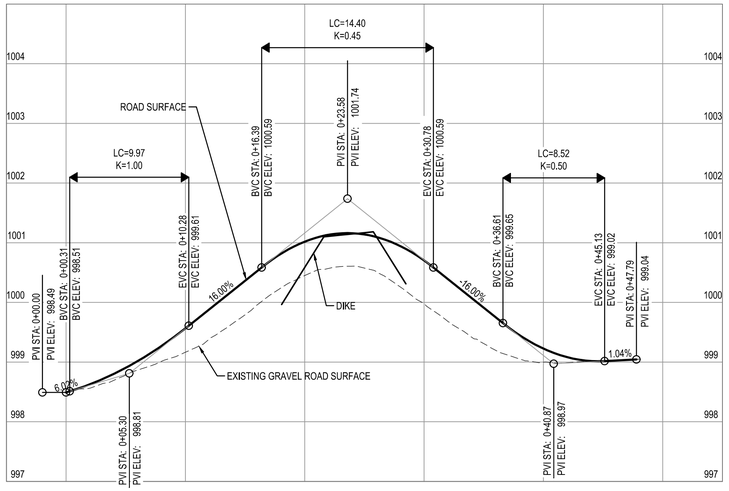


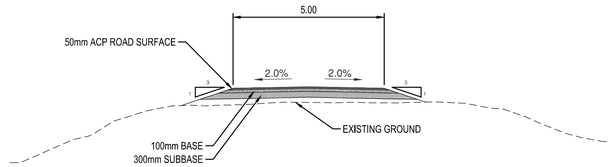




NOTE: MINIMUM REQUIRED ROCK IS 15m2 (CROSS-SECTIONAL AREA), DIMENSION ADJUSTMENTS TO SUIT SITE CONDITIONS OR GROUNDWATER LEVELS MAY BE ACCEPTABLE ONCE APPROVED BY CONTRACT ADMINISTRATOR.

A - TYPICAL REVETMENT SECTION
H SCALE 1:100





B - TYPICAL ROAD SECTION
H SCALE 1:100

C - BOAT LAUNCH SECTION
H SCALE 1:100

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ANNEX DIKE IMPROVEMENTS

PLAN DETAILS

Drawing No. C-401

Project Number 2441-01170-00

Rev. C

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Lock Block Retaining Wall Construction Notes and Specifications:

SECTION 1: LOCK BLOCKS AND SOILS

PART 1: MATERIALS

1.1 Drain Rock

A. Material must be well-graded drainrock aggregate, 0.25 in. to 1.5 in., (6 mm - 38 mm) with no more than 5% passing the #4 sieve. (ASTM D422)
B. Material behind and within the stacked rock wall may be the same drainrock material.

1.2 Infill Soil

A. Infill material shall be imported granular soils as approved by the engineer. Unsuitable soils for backfill (poor quality fills, clays or organic soils) shall not be used in the reinforced soil mass. Existing native sandy gravel soil may be suitable for use in wall construction. Poorly graded sands, expansive clays and/or soils with a plasticity index (PI) >20 or a liquid limit (LL) >40 should not be used in wall construction.
B. The infill soil used must be free of debris and consist of one of the following inorganic USCS soil types: GP, GW, SW, SP meeting the following gradation as determined in accordance with ASTM D422:

Sieve Size	Percent Passing
4 inch (100 mm)	100
3/4 inch (19mm	80 - 40
No. 4 (4.75 mm)	60 - 20
No. 40 (0.425 mm)	40 - 5
No. 200 (0.075 mm)	15 - 0

C. Where additional fill is required, contractor shall submit sample and specifications to the engineer for review.

1.3 Lock Blocks

A. Concrete must have a minimum 28 day strength of 20MPa unless otherwise specified.
B. Blocks must not have any cold joints.
C. The finish must not be honeycombed.
D. Dimensional tolerance must be 20mm± for length, width and height and must be reasonably square, within a tolerance of 15mm± of each other.
E. Top and bottom surfaces must be flat to a tolerance of 3mm± under a straight edge.

PART 2: WALL CONSTRUCTION

2.1 Excavation

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Contractor shall use caution not to over-excavate beyond the lines shown, or to disturb the base elevations beyond those shown.
B. Contractor shall verify locations of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation.

2.2 Foundation Soil Preparation

A. Foundation soil shall be defined as any soils located beneath a wall.
B. Foundation soil shall be excavated as dimensioned on the plans and compacted to a minimum of 100% of Standard Proctor (ASTM D698) prior to placement of the base material.
C. Foundation soil shall be examined by the geotechnical engineer to ensure that the actual foundation soil strength meets or exceeds assumed design strength. Soil not meeting the required strength shall be removed and replaced with acceptable material.

2.3 Base

A. The base material shall be comprised of a crushed granular material (base gravel) or drainrock.
B. Base material shall be placed as shown on the section drawings. Top of base shall be located to allow bottom wall rock to be buried to proper depths as per wall heights and specifications.
C. Base material shall be installed on undisturbed native soils or suitable replacement fills compacted to a minimum of 100% Standard Proctor (ASTM D698).
D. Base shall be compacted at 100% Standard Proctor (ASTM D698) in max 8 in. (200mm) lifts to the necessary thicknesses. Install geogrid as necessary within base gravels - see sectional drawing for details. Top of base shall provide a level hard surface on which to place the first course of wall rock. The base shall be constructed to ensure proper wall embedment and the final elevation shown on the plans. Well-graded sand can be used to smooth the top 1/2 in. (13 mm) on the base material pad.

2.4 Block Installation

A. The first course of lock blocks shall be placed on the prepared base with the front edges tight together. The blocks shall be checked for level and alignment as they are placed.
B. Ensure that blocks are in full contact with base. Proper care shall be taken to develop reasonably straight lines and smooth curves on base course as per wall layout.
C. Fill all cores and cavities and a minimum of 12 in. (300 mm) behind the base course with wall drainrock. Use drainrock behind the lock blocks. Check again for level and alignment. Use a plate compactor to consolidate the area behind the base course. All excess material shall be swept from top of block.
D. Install drainage works as shown on section detail drawings.
E. Install next course of lock blocks on top of base course. Check each block for proper alignment and level. Fill all cavities in and around blocks and to a minimum of 12 in. (300 mm) depth behind block with drain rock. Spread infill soil in uniform lifts not exceeding 8 in. (200 mm) in uncompacted thickness and compact to 98% of Standard Proctor (ASTM D698). Install geogrid where shown. Stake/nail ends of geogrid to keep taut prior to placement of next lift.
F. Compaction within 1m behind the wall shall be accomplished by using a hand operated plate compactor and shall begin by running the plate compactor directly on lock block and then compacting in parallel paths from the wall face until the entire consolidation zone has been compacted. A minimum of two passes of the plate compactor are required with maximum lifts of 8 in. (200 mm). Expansive or fine-grained soils may require additional compaction passes and/or specific compaction equipment such as a sheepsfoot roller. Maximum lifts of 4 inches (100 mm) may be required to achieve adequate compaction within the consolidation zone. Employ methods using lightweight compaction equipment that will not disrupt the stability or batter of the wall. Final compaction requirements in the consolidation zone shall be established by the engineer.
G. Install each subsequent course in like manner. Repeat procedure to the extent of wall height.
H. As with any construction work, some deviation from construction drawing alignments will occur. Alignment can be corrected or modified during construction. The following recommended minimum tolerances can be achieved with good construction techniques.
   - Vertical Control - 2 in. (50 mm) max. over 10 ft (3 m) distance
   - Horizontal Location Control - straight lines ±4 in. (100 mm) over a 10 ft (3 m) distance
   - Rotation - from established plan wall batter: 2.0°
   - Bulging - 4 in. (100 mm) over a 10 ft (3.0 m) distance

2.5 Additional Construction Notes

A. Water management is of extreme concern during and after construction. Steps must be taken to ensure that drain pipes are properly installed and vented to daylight and a grading plan has been developed that routes water away from the retaining wall location. Site water management is required both during construction of the wall and after completion of construction.

SECTION 2: GEOGRID REINFORCEMENT

PART 1: GENERAL

1.1 Scope

Work includes furnishings and installing geogrid reinforcement, wall block, and backfill to the lines and grades designated on the construction drawings and as specified herein.

1.2 Delivery, Storage, and Handling

A. Contractor shall check the geogrid upon delivery to assure that the proper material has been received.
B. Geogrid shall be stored above -10 F (-23 C).
C. Contractor shall prevent excessive mud, cementitious material, or other foreign materials from coming in contact with the geogrid material.

PART 2: MATERIALS

2.1 Definitions

A. Geogrid products shall be of high density polyethylene encapsulated in a protective coating specifically fabricated for use as a soil reinforcement material. Tensar UX series or Mirafi Miragrid XT series are the approved products. See drawing set for specific product specification.
B. Drainage material is free draining granular material as defined in Section 1. 2 Drain Rock.
C. Infill soil is the soil used as fill for the reinforced soil mass (Section 1.3).
D. Foundation soil is compacted drainrock or compacted 1" minus well graded base (WGB) gravel to 98% SPD.

2.2 Products

Geogrid shall be the type as shown on the drawings having the property requirements as described within the manufacturer's specifications.

2.3 Acceptable Manufacturers

A manufacturer's product shall be approved by the engineer.

PART 3: WALL CONSTRUCTION

3.1 Wall Construction

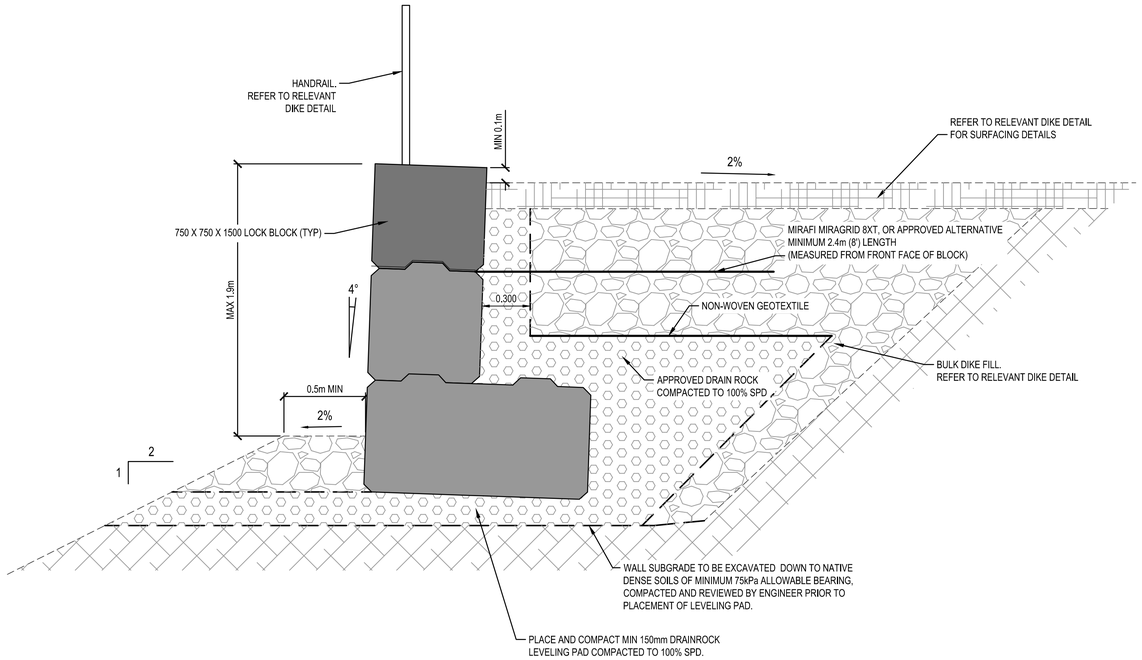
Wall construction shall be as specified under Section 1, Part 3, Wall Construction.

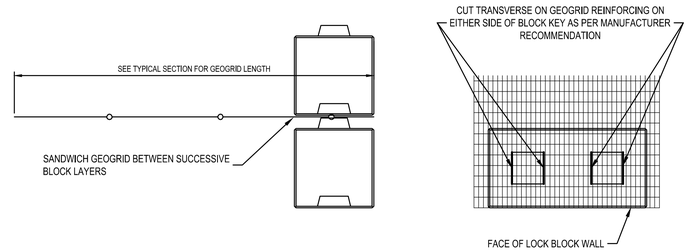
3.2 Geogrid Installation

A. Install wall to designated height of first geogrid layer. Backfill and compact the drain rock and infill soil in layers not to exceed 8 in. (200 mm) lifts behind wall to depth equal to designed grid length before grid is installed.
B. Cut geogrid to designed embedment length and place on top block to front edge of lock block. Extend away from wall approximately 3% above horizontal on compacted infill soils. Cut transverse bar on Geogrid either side of the block keys as per manufacturer recommendations
C. Lay geogrid at the proper elevation and orientations shown on the construction drawings or as directed by the engineer.
D. Correct orientation of the geogrid shall be verified by the contractor. Strength direction is typically perpendicular to wall face.
E. Follow manufacturer's guidelines for overlap requirements. In curves and corners, ensure grid overlaps in accordance with manufacturers specifications.
F. Place next course of block on top of grid to lock in place. Remove slack and folds in grid and stake taut to hold in place.
G. Adjacent sheets of geogrid shall be butted against each other at the wall face to achieve 100 percent coverage.
H. Geogrid lengths shall be continuous. Splicing parallel to the wall face is not allowed.

3.3 Fill Placement

A. Infill soil shall be placed in lifts and compacted as specified under Section 1, Part 2.4, Block Installation.
B. Infill soil shall be placed, spread and compacted in such a manner that minimizes the development of slack or movement of the geogrid.
C. Construction equipment shall not be operated directly on the geogrid. A minimum fill thickness of 6 in. (150 mm) is required prior to operation of tracked vehicles over the geogrid. Turning of tracked vehicles should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.
D. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 mph (16 Km/h). Sudden braking and sharp turning shall be avoided.





GEOGRID PLACEMENT DETAIL

Rev	Date	Description	Drawn	Design	App'd
B	2021/10/26	ISSUED FOR CONSULTATION	AD	KP	KM
A	2021/07/16	ISSUED FOR 90% REVIEW	AD	KP	KM

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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ANNEX DIKE IMPROVEMENTS

RETAINING WALL DETAIL

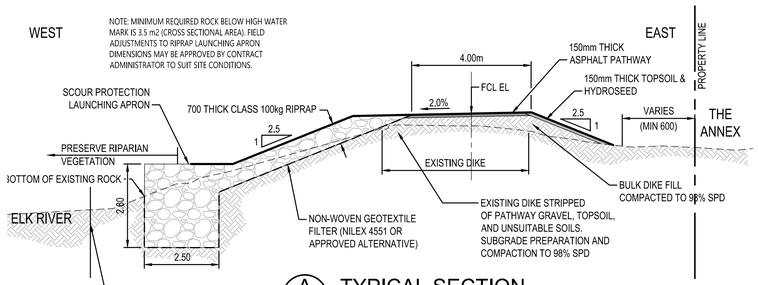
Drawing No. C-402

Project Number 2441-01170-00

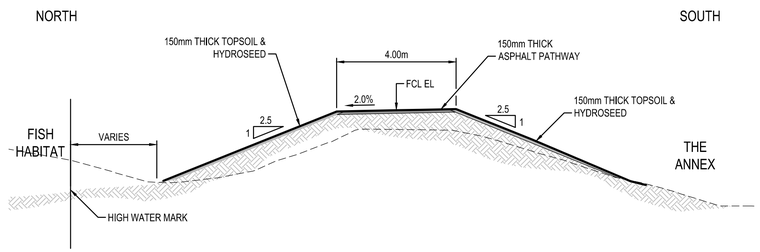
Rev. B

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

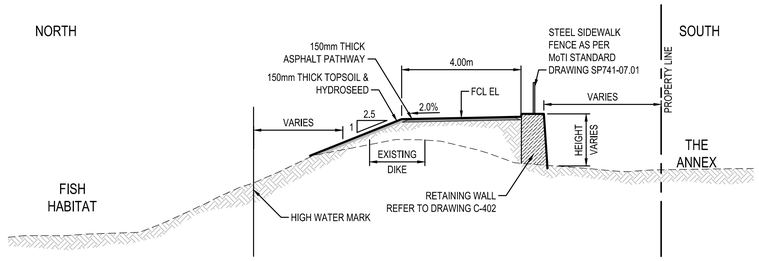
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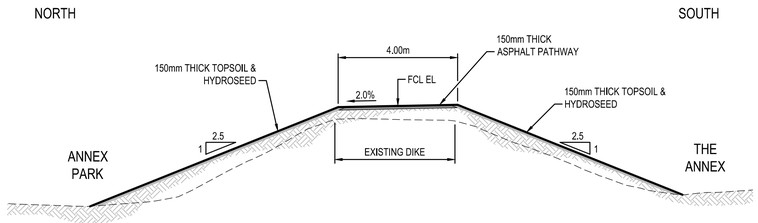
A C-201 **TYPICAL SECTION**
DOWNSTREAM DIKE RAISE w/ EROSION PROTECTION SCALE 1:100



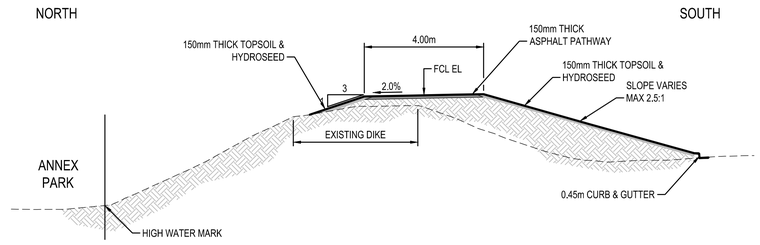
B C-201 **TYPICAL SECTION**
DUCK POND DIKE RAISE SCALE 1:100



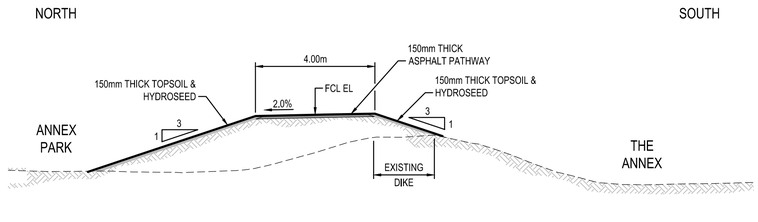
C C-201 **TYPICAL SECTION**
DUCK POND DIKE RAISE w/ RETAINING WALL SCALE 1:100



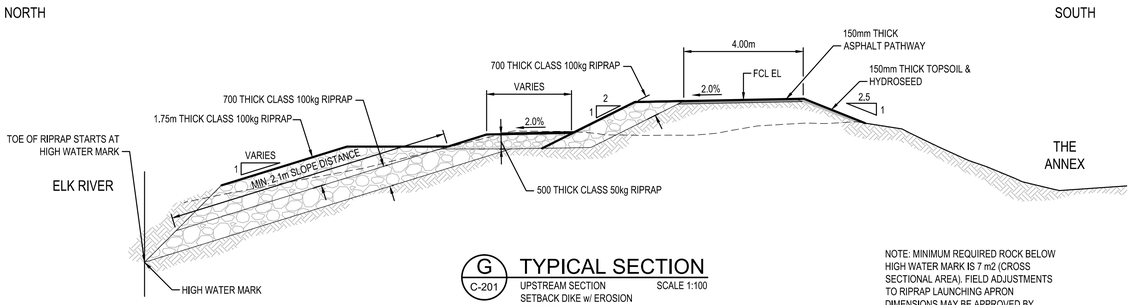
D C-201 **TYPICAL SECTION**
ANNEX PARK DIKE RAISE SCALE 1:100



E C-201 **TYPICAL SECTION**
ANNEX PARK DIKE RAISE w/ RETAINING WALL SCALE 1:100

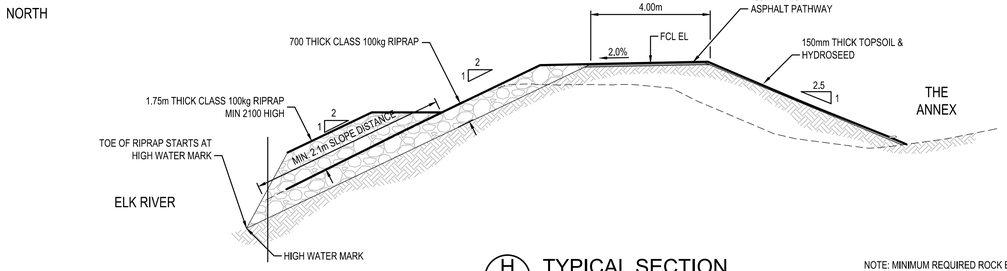


F C-201 **TYPICAL SECTION**
ANNEX PARK DIKE RAISE SCALE 1:100



G C-201 **TYPICAL SECTION**
UPSTREAM SECTION SETBACK DIKE w/ EROSION PROTECTION SCALE 1:100

NOTE: MINIMUM REQUIRED ROCK BELOW HIGH WATER MARK IS 7 m2 (CROSS SECTIONAL AREA). FIELD ADJUSTMENTS TO RIPRAP LAUNCHING APRON DIMENSIONS MAY BE APPROVED BY CONTRACT ADMINISTRATOR TO SUIT SITE CONDITIONS.



H C-201 **TYPICAL SECTION**
UPSTREAM DIKE RAISE w/ CLASS 250kg EROSION PROTECTION SCALE 1:100

NOTE: MINIMUM REQUIRED ROCK BELOW HIGH WATER MARK IS 7 m2 (CROSS SECTIONAL AREA). FIELD ADJUSTMENTS TO RIPRAP LAUNCHING APRON DIMENSIONS MAY BE APPROVED BY CONTRACT ADMINISTRATOR TO SUIT SITE CONDITIONS.

Rev	Date	Description	Drawn	Design	App'd
C	2021/10/26	ISSUED FOR CONSULTATION	SS	KP	KM
B	2021/07/16	ISSUED FOR 90% REVIEW	SS	KP	KM
A	2021/05/12	ISSUED FOR 75% REVIEW	SS	KM	KM

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ORIGINAL DWG SIZE: ANSI D (22" x 34")

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ANNEX DIKE IMPROVEMENTS

TYPICAL SECTIONS

Drawing No. C-501

Project Number 2441-01170-00

Rev. C

DESTROY ALL PRINTS BEARING PREVIOUS REVISION

McElhanney ANSI D - 2020-01-01
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