

BIG DITCH TRAIL EXTENSION - PKBDTG

PARKS, RECREATION, AND PUBLIC LANDS

BILLINGS, MONTANA

CLIENT

CITY OF BILLINGS PARKS RECREATION AND PUBLIC LANDS

Attn: Brad Wright
390 N. 23rd St.
Billings, Montana

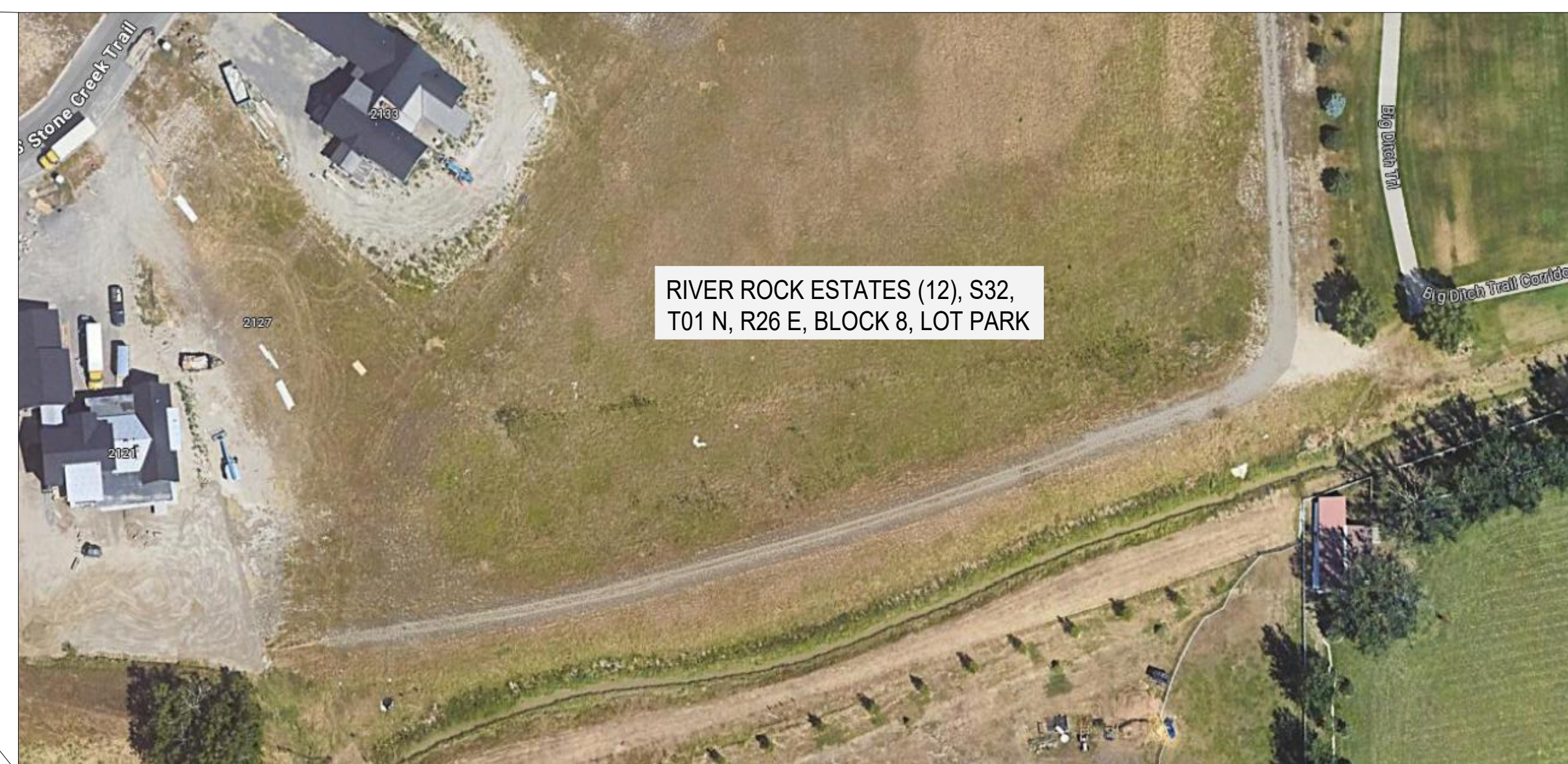
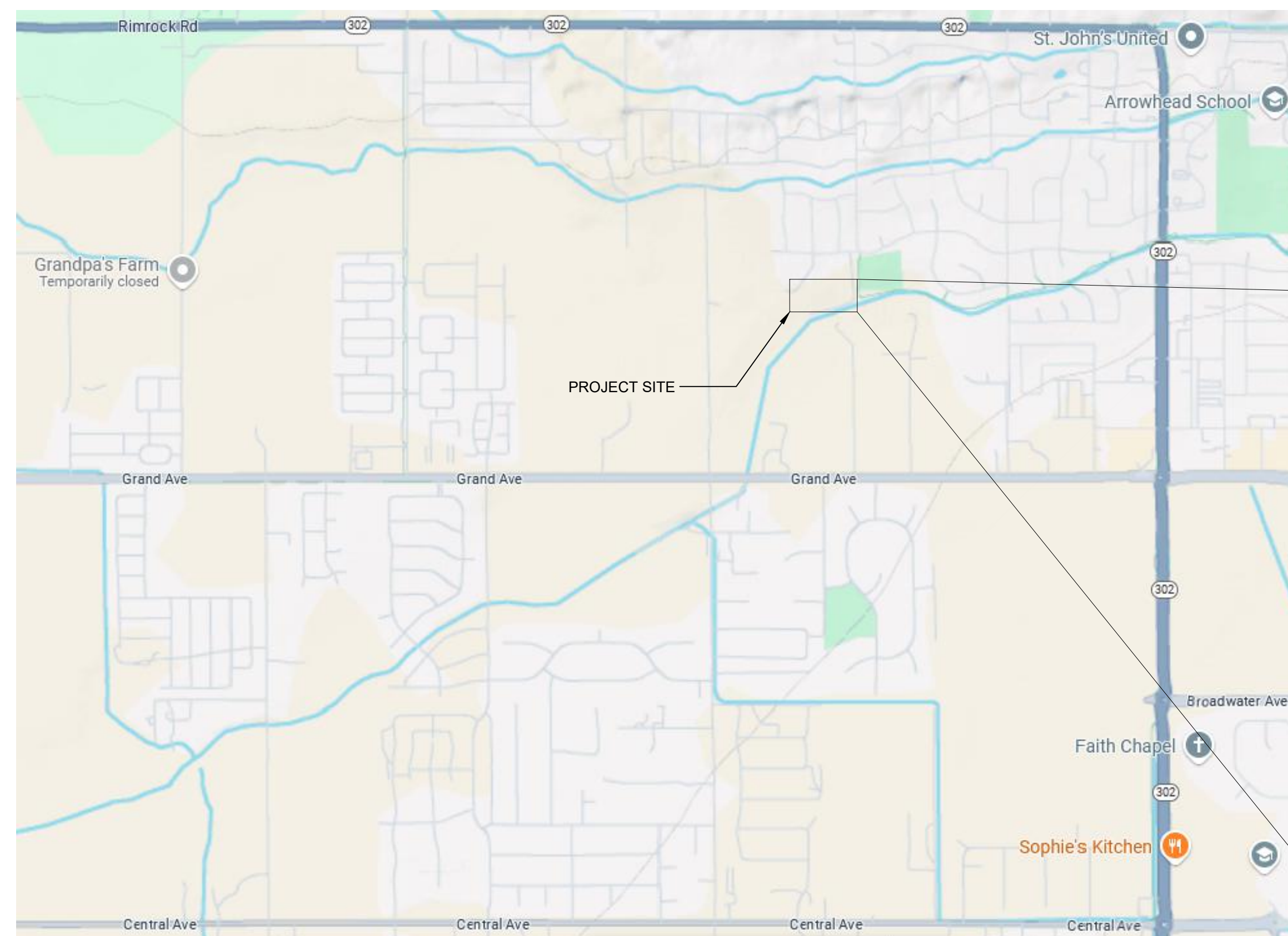
LANDSCAPE ARCHITECT:

SECOND NATURE CONSULTING

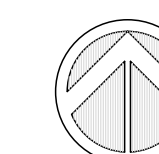
Attn: Erik Sweet, RLA, ASLA
2722 3rd Ave North, Suite 230
Billings, Montana 59101

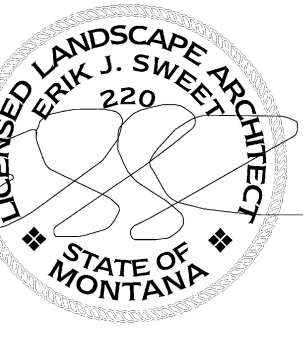
SHEET INDEX

- L0.1 OVERALL TRAIL PLAN
- L0.2 DEMOLITION PLAN
- L1.1 LAYOUT PLAN
- L1.2 LAYOUT PLAN
- L1.3 LAYOUT PLAN
- L1.4 LAYOUT PLAN
- L1.5 LAYOUT PLAN
- L2.1 GRADING PLAN
- L2.2 GRADING PLAN
- L2.3 GRADING PLAN
- L2.4 GRADING PLAN
- L2.5 GRADING PLAN
- L3.1 SEEDING PLAN
- L4.1 DETAILS



NTS





SECOND NATURE
CONSULTING
LANDSCAPE ARCHITECTURE & PLANNING
(406) 850-0461 www.secondnature.com/llg

REVISIONS

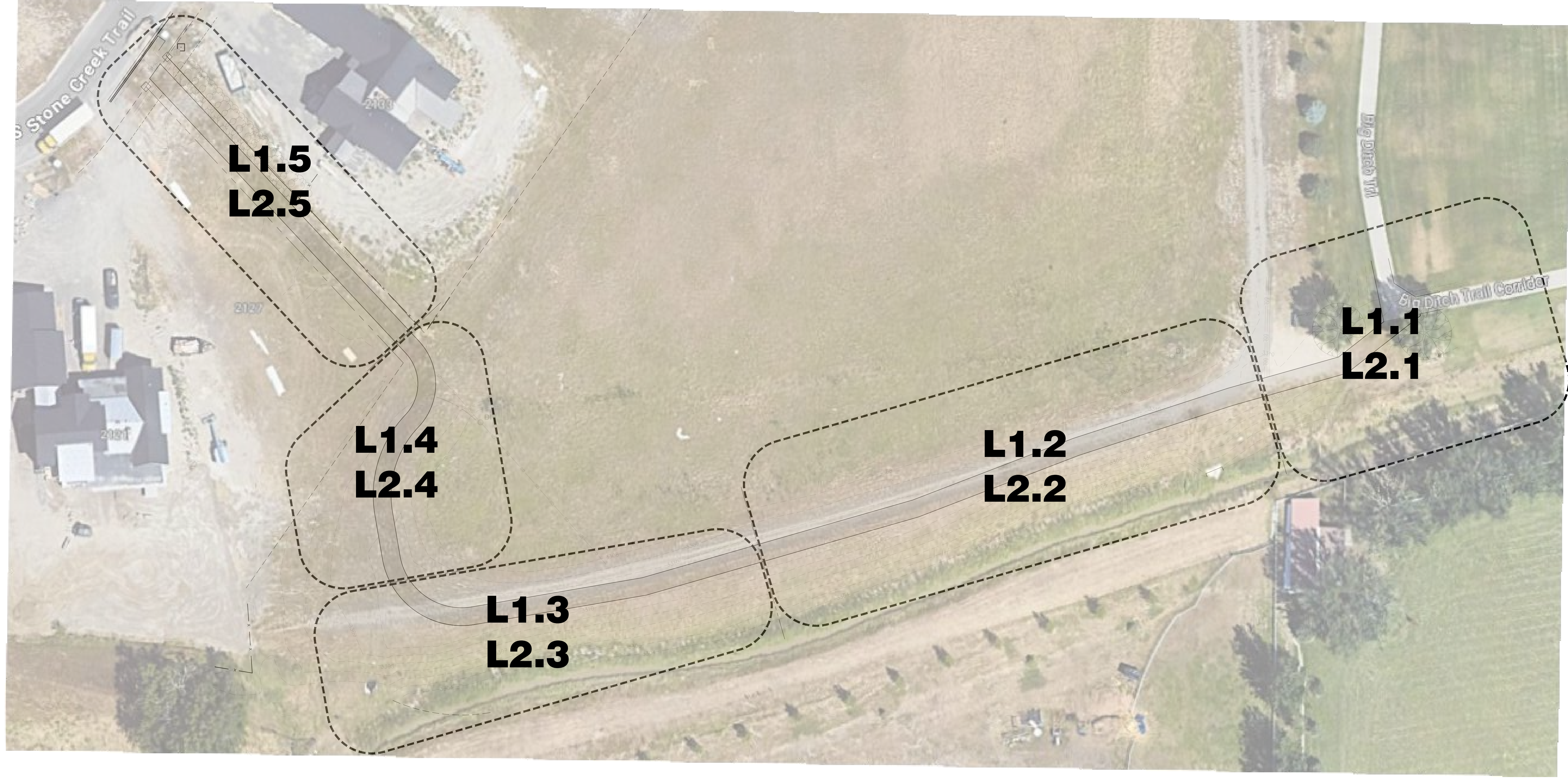
PKBDTG

BID SET

**BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT**
OVERALL TRAIL PLAN

241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L0.1

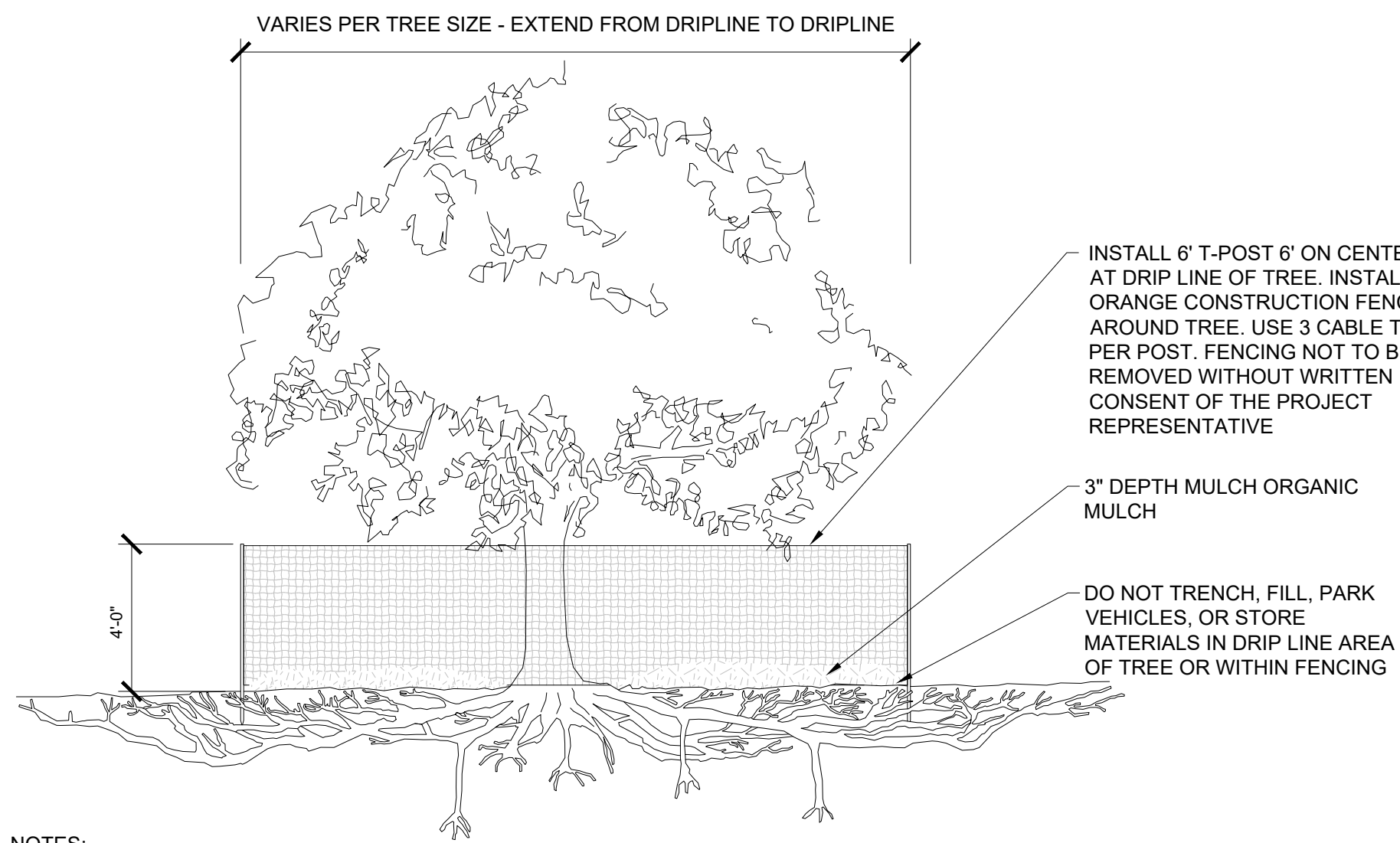


 **OVERALL TRAIL PLAN**

SCALE: 1" = 30'
0 30' 60'
SCALE IN FEET

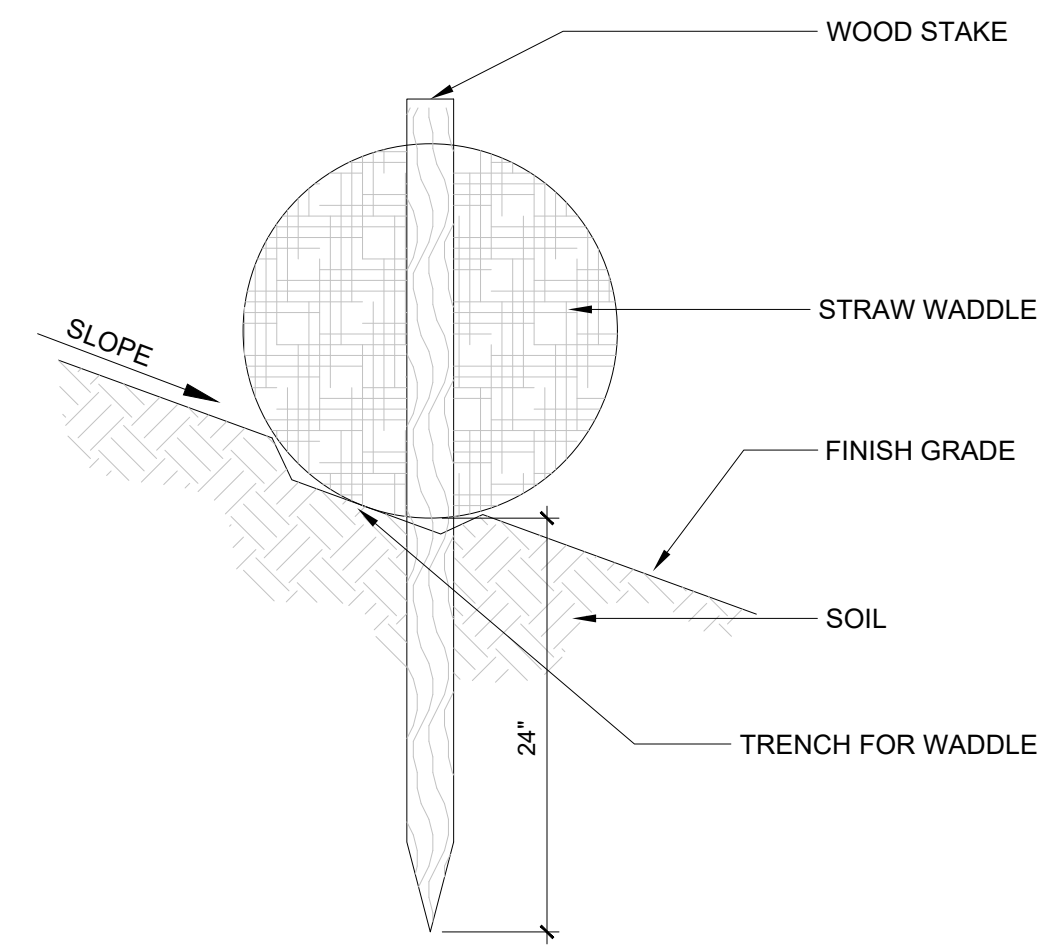
GENERAL DEMOLITION NOTES

1. CONTRACTOR IS RESPONSIBLE FOR REMOVING OF ALL ORGANICS, MISCELLANEOUS WASTE AND MATERIAL FROM EXCAVATION AREA UPON COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED. ALL UNWANTED MATERIALS SHALL BE DISPOSED OF LEGALLY.
3. THE CONTRACTOR SHALL USE WATER SPRINKLING AND OTHER SUITABLE METHODS AS NECESSARY TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION WORK.
4. CONTRACTOR SHALL PROVIDE PROTECTION TO ALL STREETS, FENCES, TREES, UTILITIES AND STRUCTURES THAT ARE TO REMAIN. REPAIR CONTRACTOR-CAUSED DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
5. ANY VOIDS LEFT BY STRUCTURE REMOVAL SHALL BE BACK FILLED AND COMPACTED.
6. CONTRACTOR SHALL LOCATE AND MARK ALL EXISTING UTILITIES PRIOR TO ANY EXCAVATION.
7. CONTRACTOR TO PLACE TEMPORARY EROSION CONTROL MEASURES INCLUDING STRAW WADDLE ALONG THE SOUTHERN EDGE OF DISTURBED SOIL ALONG EXCAVATION FOR BASE COURSE PLACEMENT.
8. PROVIDE GRADED SWALE TO EXISTING STORM DRAIN BASIN. STORM DRAIN TO BE PROTECTED WITH STRAW WADDLE SURROUNDING AND FILTER SOCK UNDER LID.

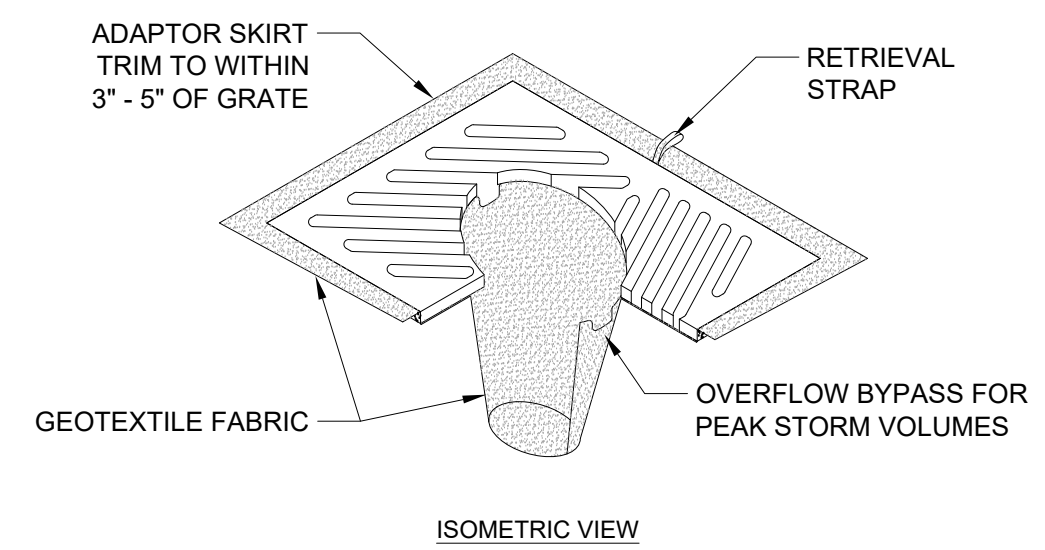


- NOTES:
1. IN AREAS WHERE GRADING EXTENDS INTO EXT TREE DRIP LINES, CONTRACTOR SHALL HAND GRADE.
 2. TREE PROTECTION FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
 3. ANY DAMAGED FENCE SHALL BE REPAIRED ON A DAILY BASIS.
 4. DEAD TREES, SHRUBS, OR UNDERGROWTH SHALL BE CUT FLUSH WITH ADJACENT GRADE. THERE SHALL BE NO SOIL COMPACTION UNDER THE DRIP LINE OF THE TREE TO REMAIN.

1 TREE PROTECTION
NTS P-CO-BIGD-07

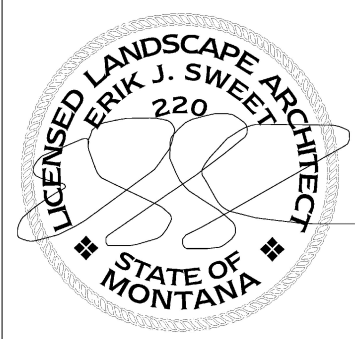
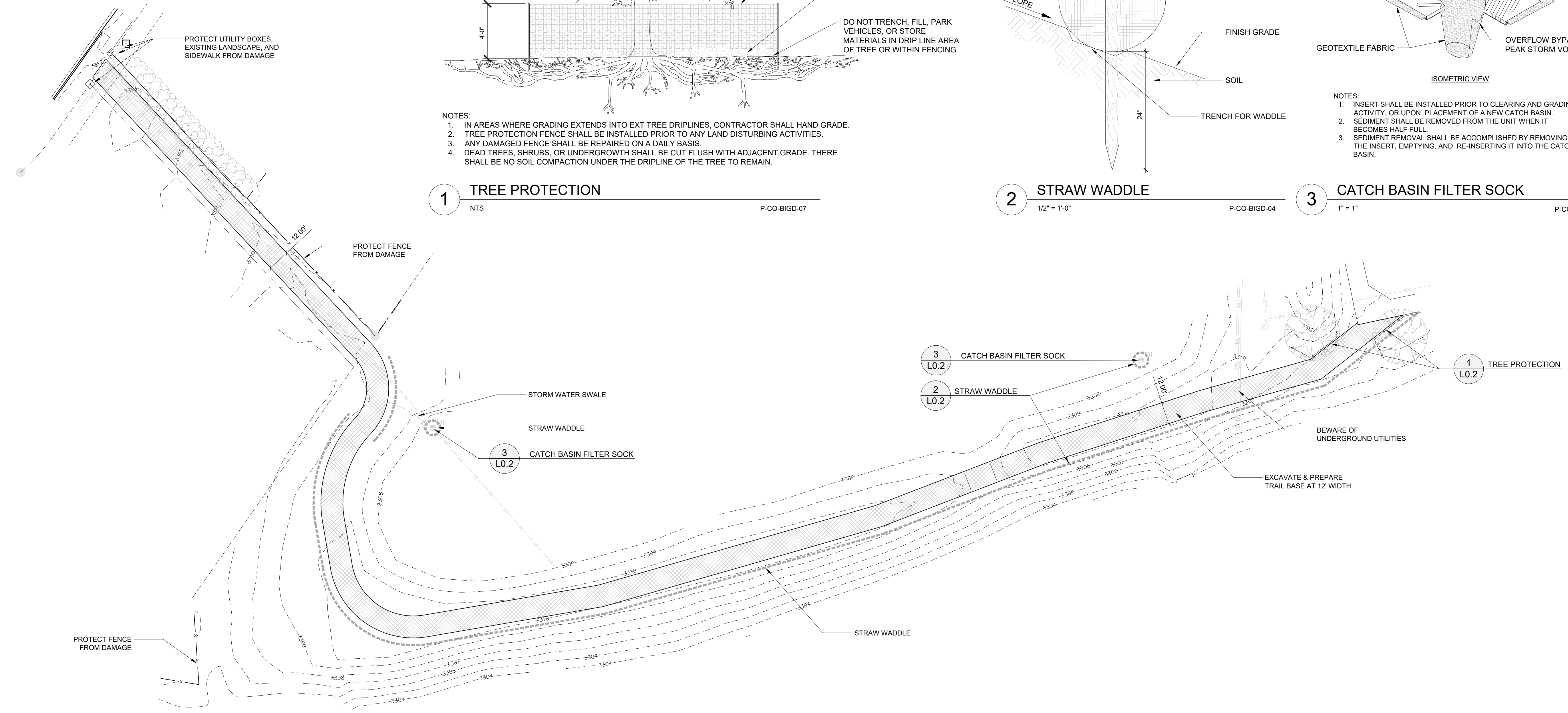


2 STRAW WADDLE
1/2" = 1'-0" P-CO-BIGD-04



- NOTES:
1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
 2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL.
 3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE-INSERTING IT INTO THE CATCH BASIN.

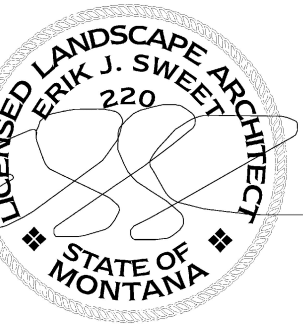
3 CATCH BASIN FILTER SOCK
1" = 1" P-CO-BIGD-02



REVISIONS

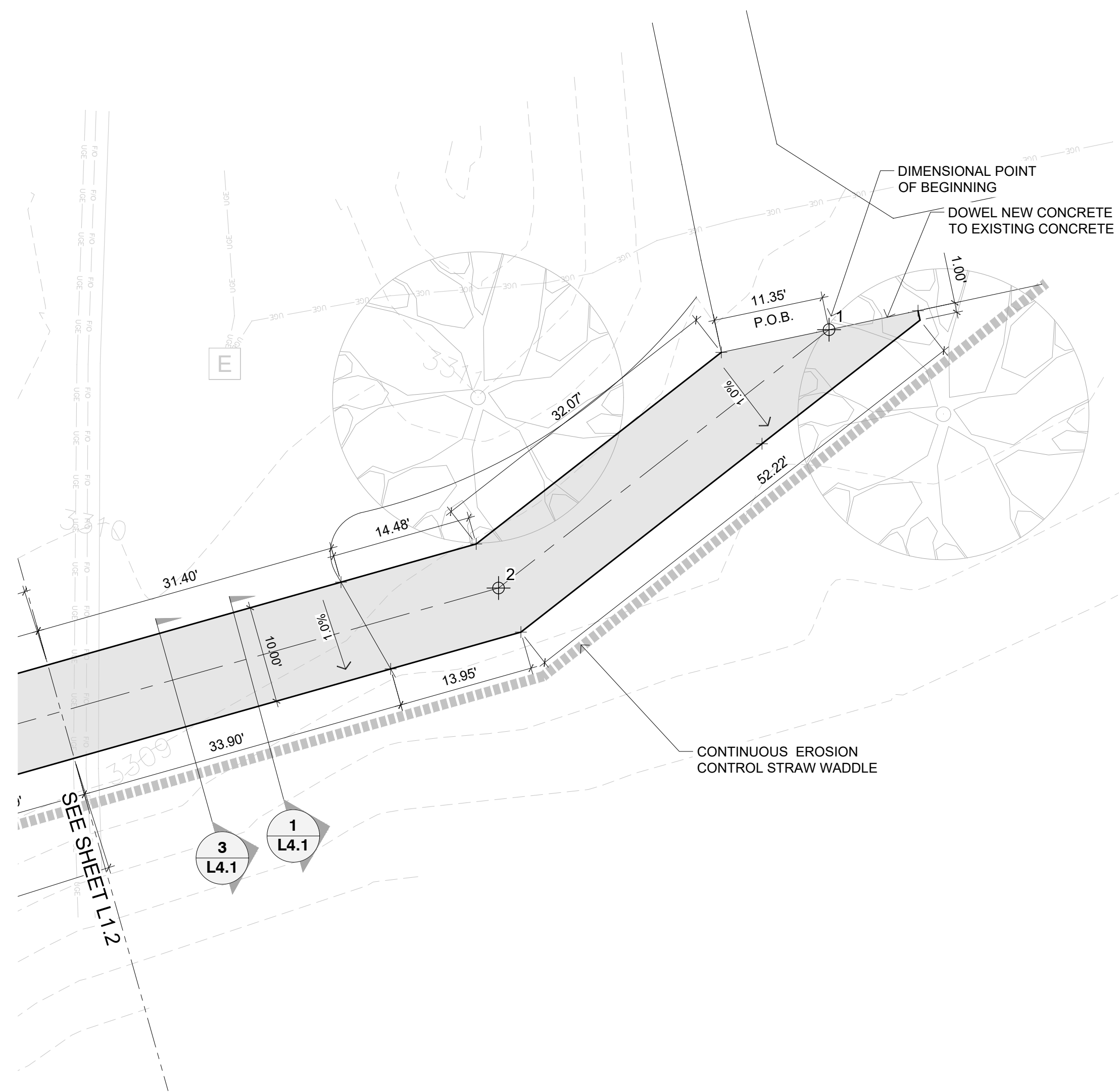
NO.	DESCRIPTION

PKBDTG
BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT
DEMOLITION PLAN
BID SET



NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48



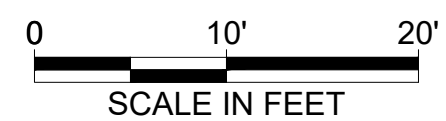
REVISIONS

NO.	DESCRIPTION

PKBDTG
BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
 BILLINGS, MT
LAYOUT PLAN
 BID SET

LAYOUT PLAN

SCALE: 1" = 10'



241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L1.1



SECOND NATURE
CONSULTING
LANDSCAPE ARCHITECTURE & PLANNING
(406) 850-0461 www.secondnature.com

REVISIONS

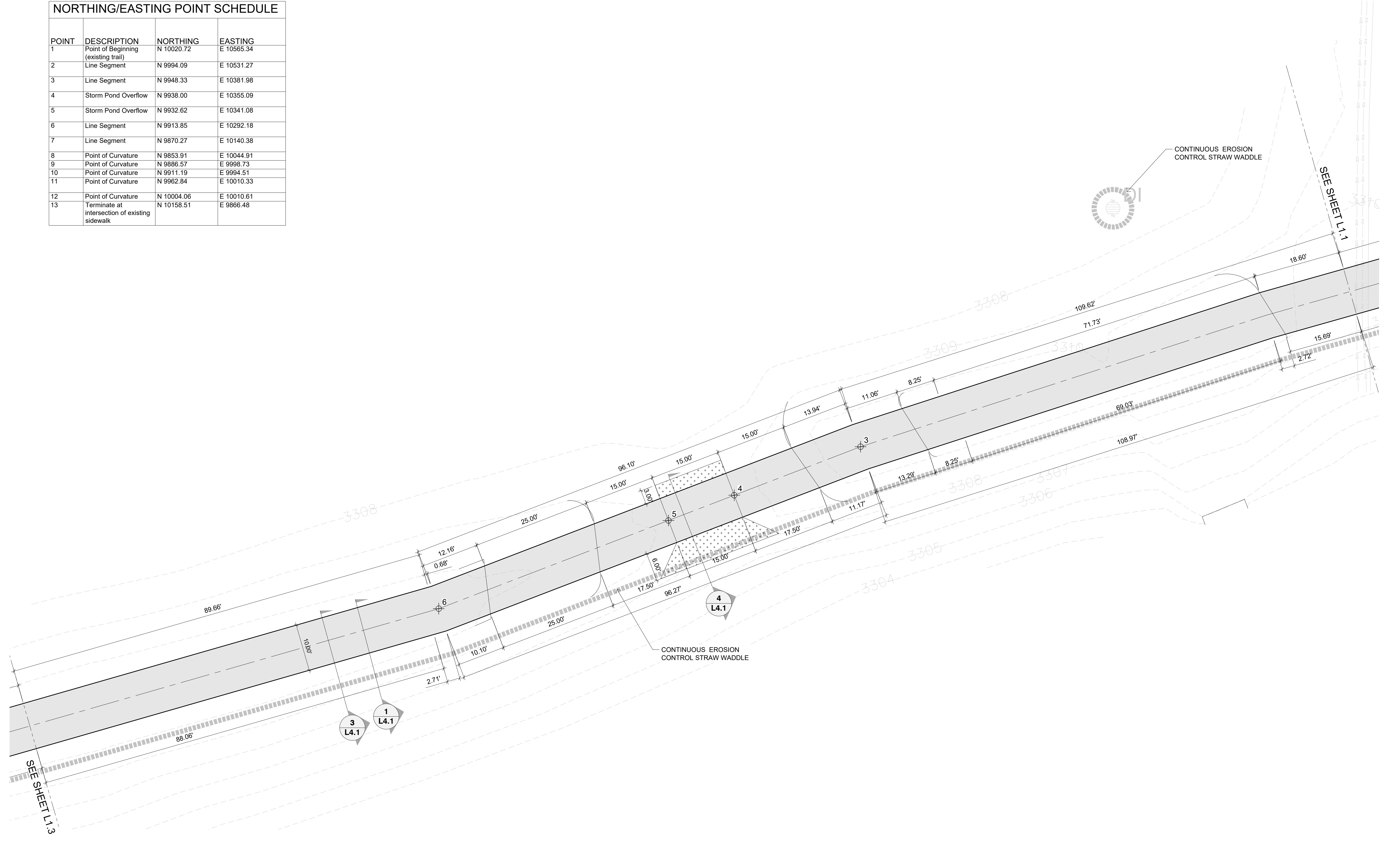
PKBDTG
BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT
LAYOUT PLAN
BID SET

241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L1.2

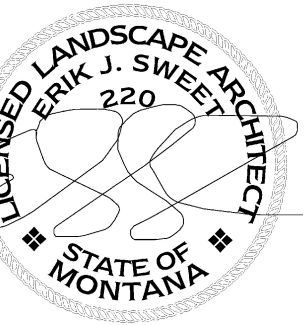
NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48



LAYOUT PLAN

SCALE: 1" = 10'
0 10' 20'
SCALE IN FEET



REVISIONS

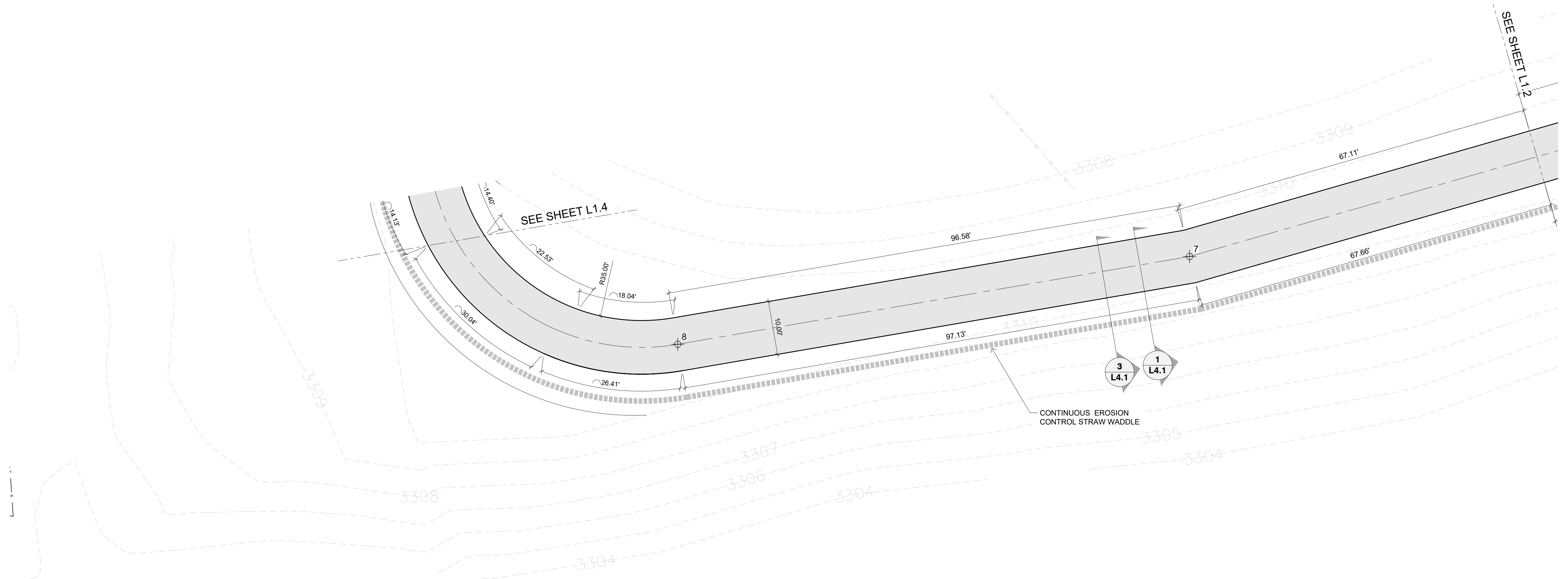
PKBDTG
 BIG DITCH TRAIL EXTENSION
 RIVER ROCK ESTATES
 BILLINGS, MT
 LAYOUT PLAN
 BID SET

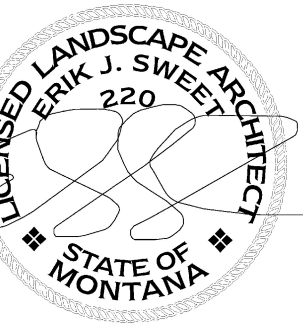
241033
 DRAWN BY SNC
 APPROVED NRK
 DATE 06-20-2025

L1.3

NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection at existing sidewalk	N 10158.51	E 9866.48





REVISIONS

PKBDTG
BID SET

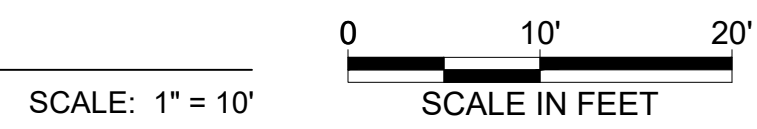
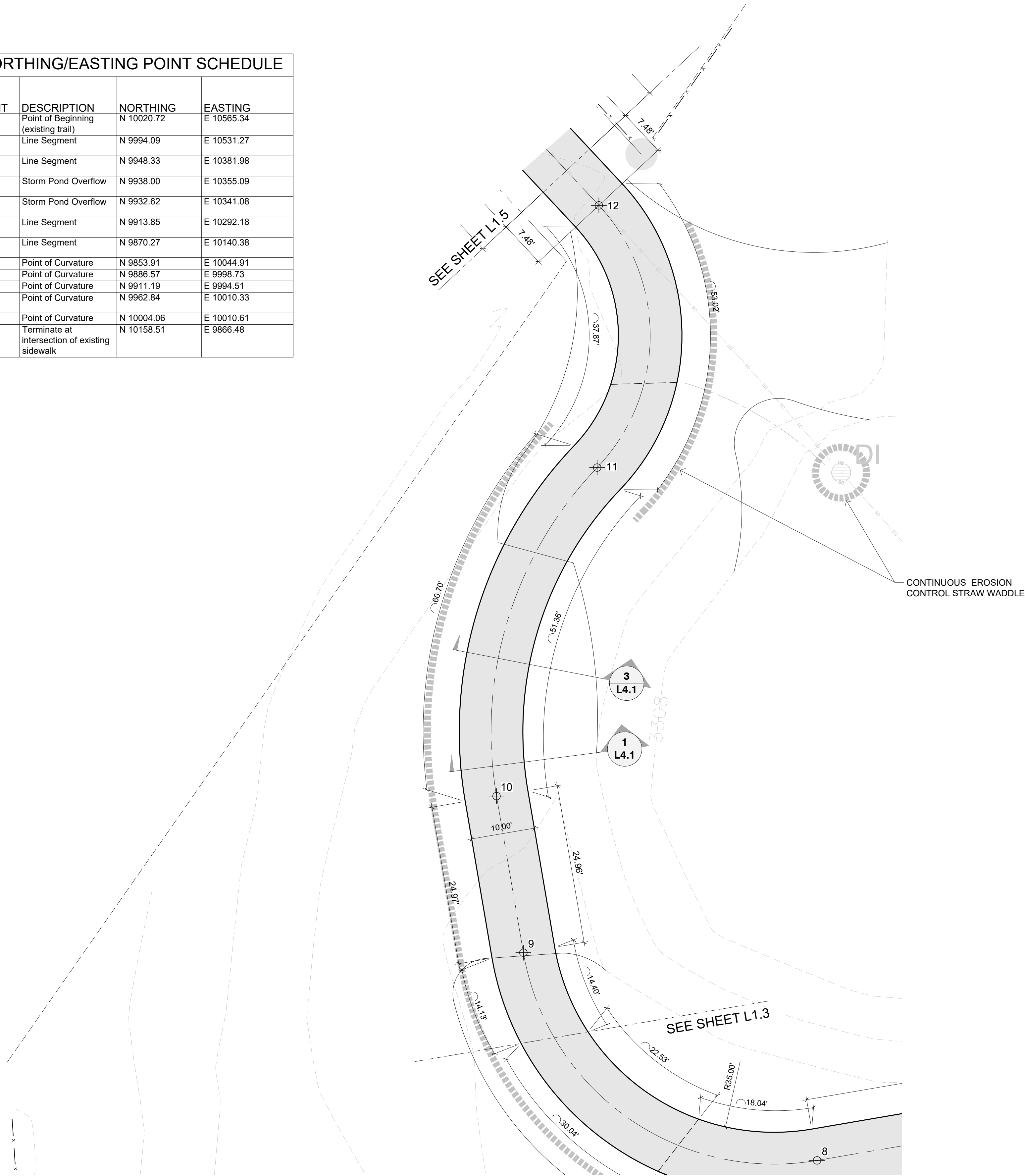
BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT
LAYOUT PLAN

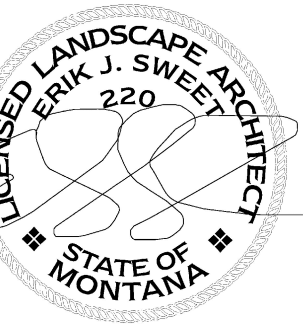
241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L1.4

NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48





REVISIONS

NO.	DATE	DESCRIPTION

PKBDTG
BID SET

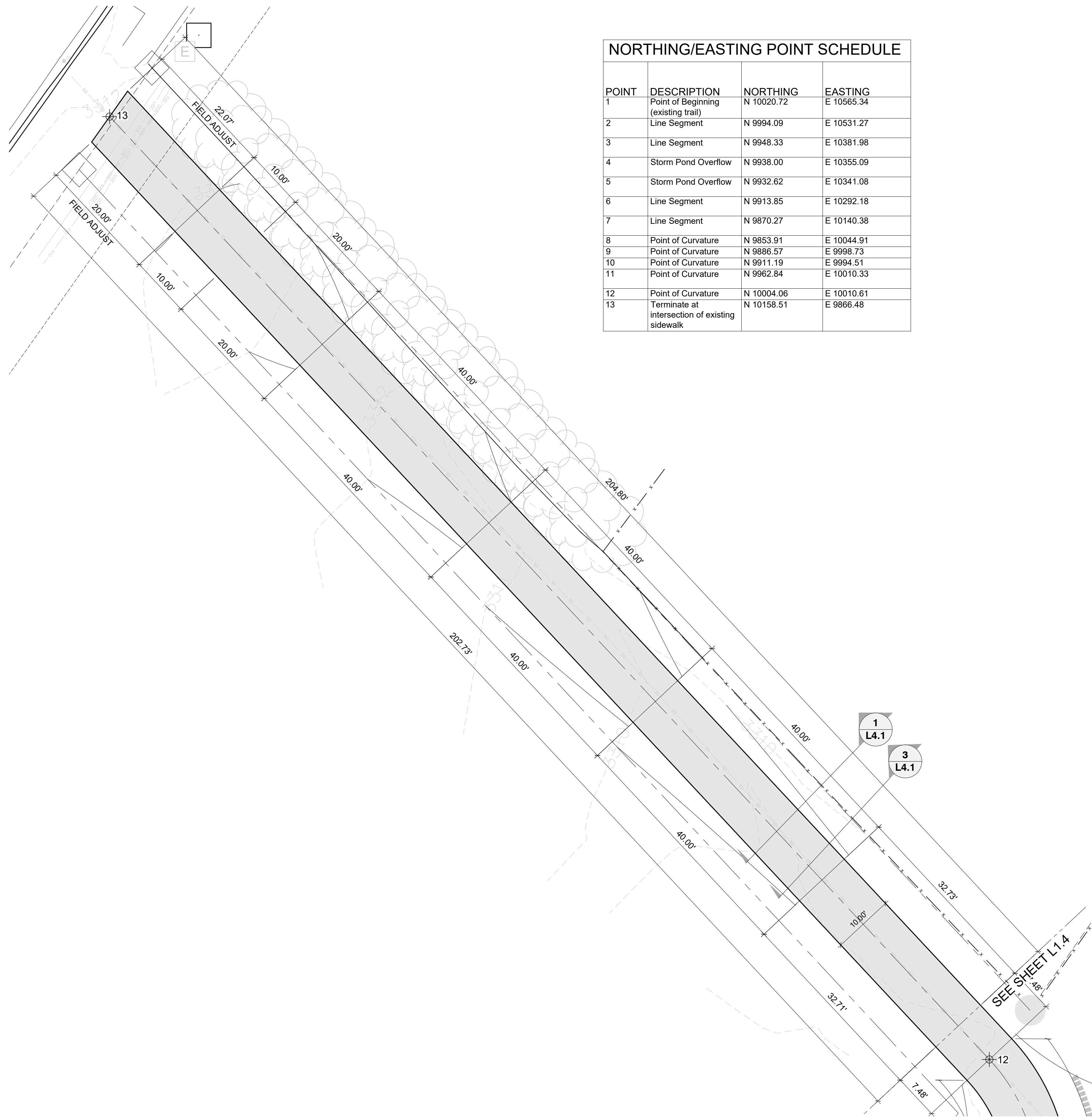
BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT
LAYOUT PLAN

241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L1.5

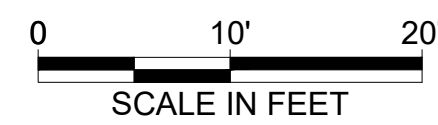
NORTHING/EASTING POINT SCHEDULE

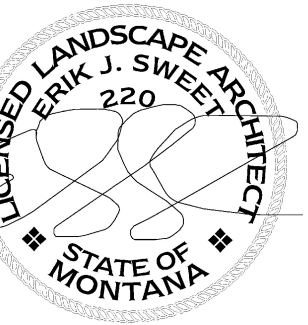
POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48



LAYOUT PLAN

SCALE: 1" = 10'

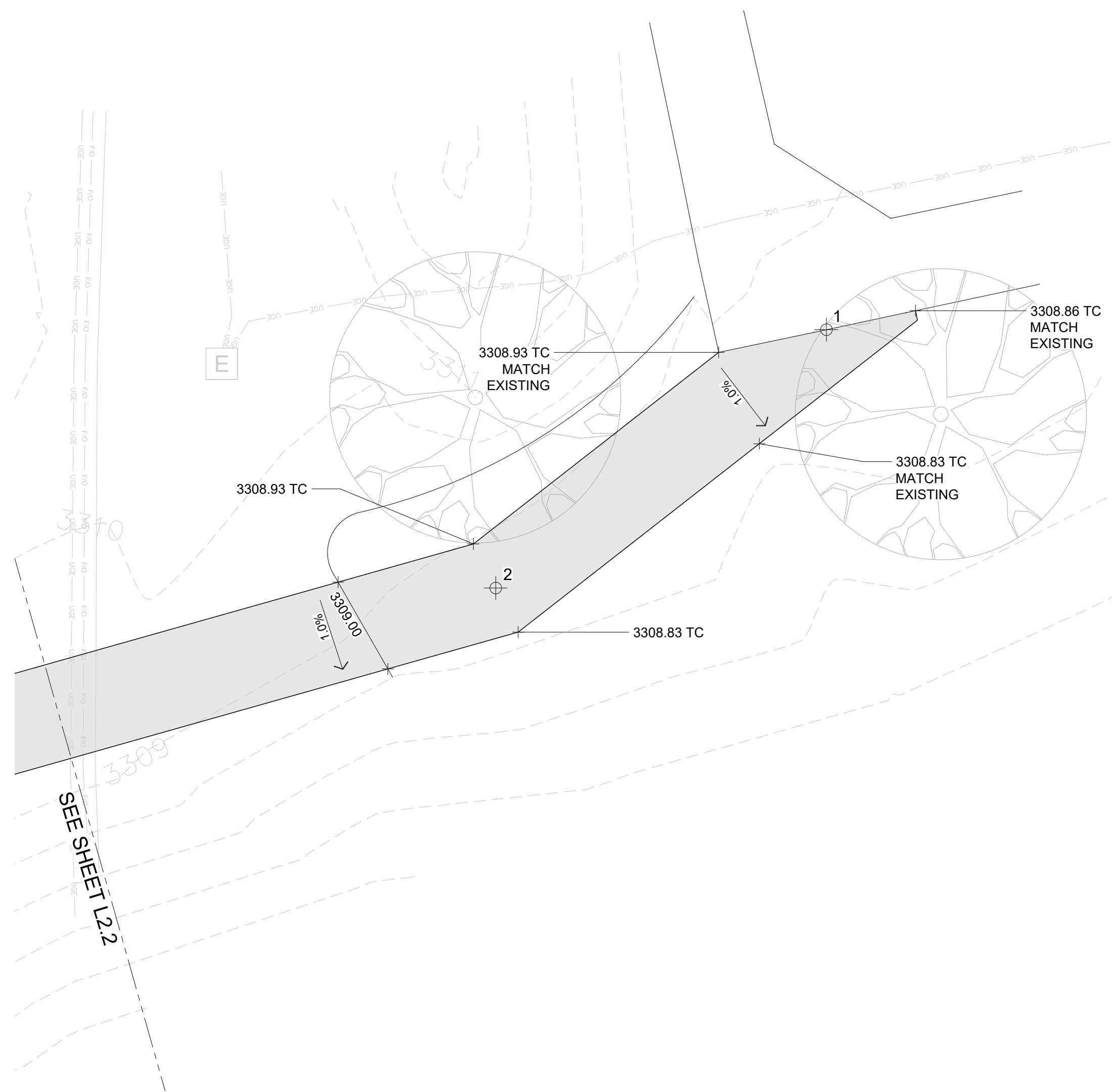




NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48

GRADING LEGEND
 TC TOP OF CONCRETE
 HP HIGH POINT
 LP LOW POINT

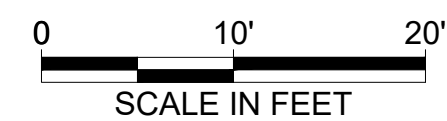


REVISIONS

PKBDTG
 BIG DITCH TRAIL EXTENSION
 RIVER ROCK ESTATES
 BILLINGS, MT
 GRADING PLAN
 BID SET



SCALE: 1" = 10'



241033
 DRAWN BY SNC
 APPROVED NRK
 DATE 06-20-2025

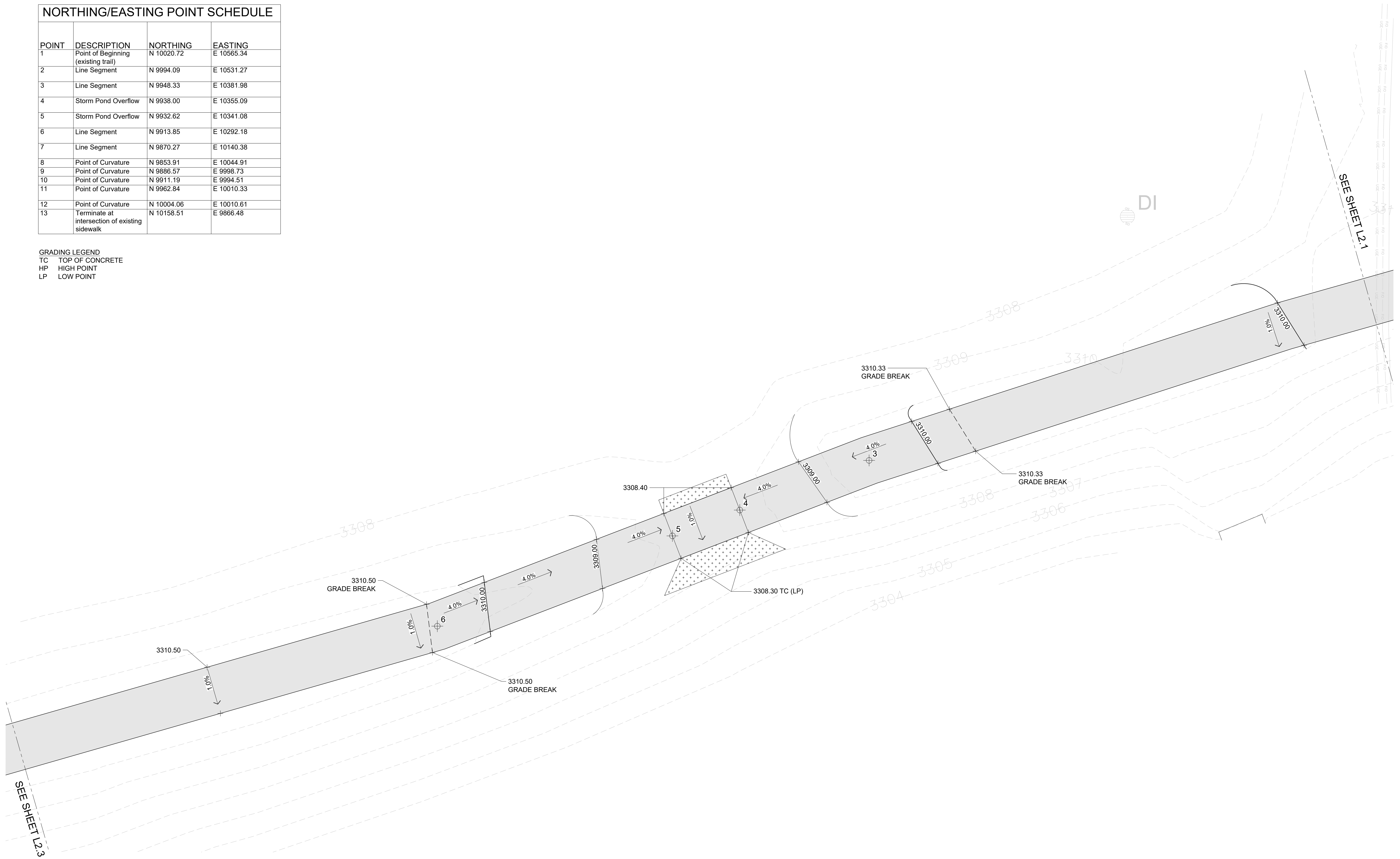
L2.1



NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48

GRADING LEGEND
 TC TOP OF CONCRETE
 HP HIGH POINT
 LP LOW POINT



REVISIONS

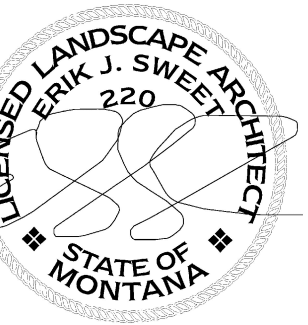
NO.	DESCRIPTION

PKBDTG
 BIG DITCH TRAIL EXTENSION
 RIVER ROCK ESTATES
 BILLINGS, MT
 GRADING PLAN
 BID SET



241033
 DRAWN BY SNC
 APPROVED NRK
 DATE 06-20-2025

L2.2

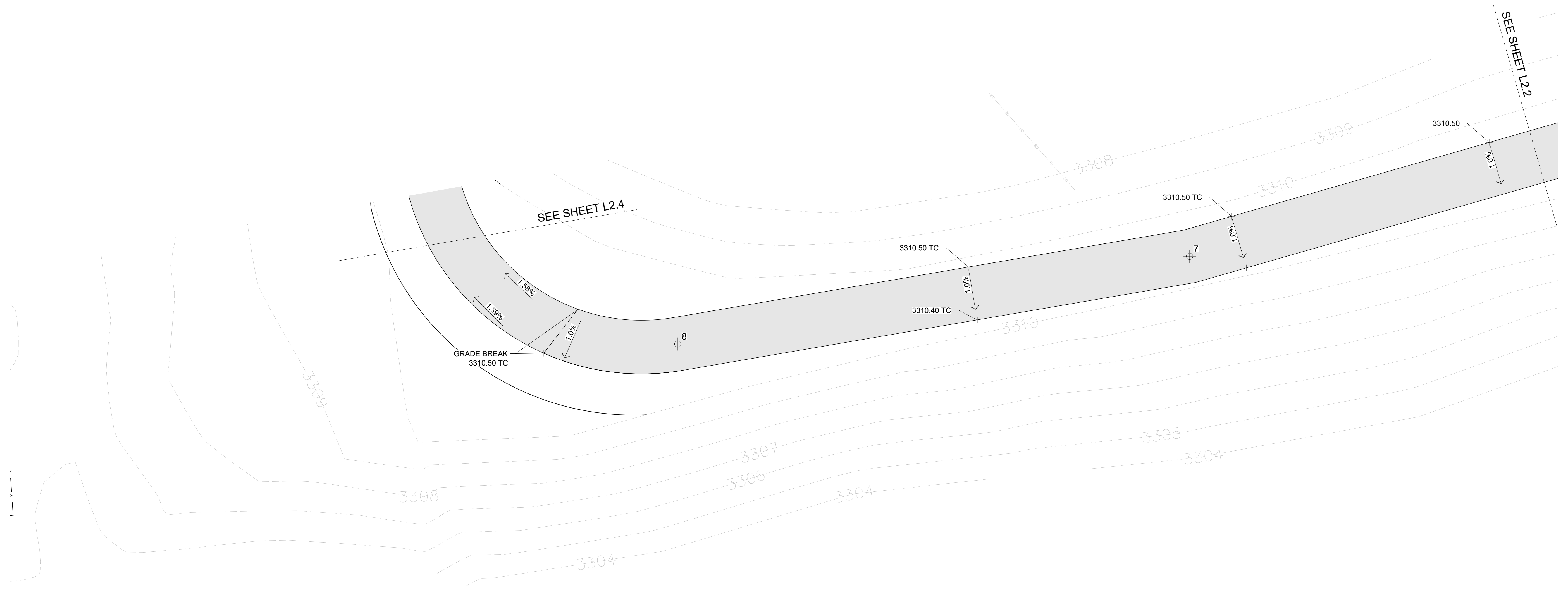


NORTHING/EASTING POINT SCHEDULE

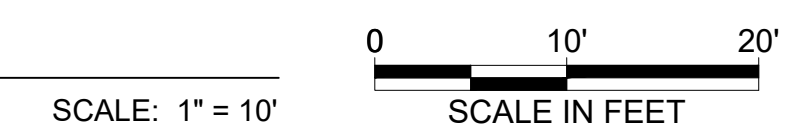
POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48

GRADING LEGEND
 TC TOP OF CONCRETE
 HP HIGH POINT
 LP LOW POINT

REVISIONS

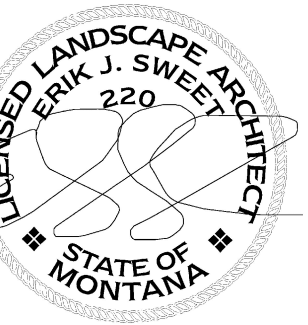


PKBDTG
 BIG DITCH TRAIL EXTENSION
 RIVER ROCK ESTATES
 BILLINGS, MT
 GRADING PLAN
 BID SET



241033
 DRAWN BY SNC
 APPROVED NRK
 DATE 06-20-2025

L2.3



REVISIONS

PKBDTG
BID SET

BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT
GRADING PLAN

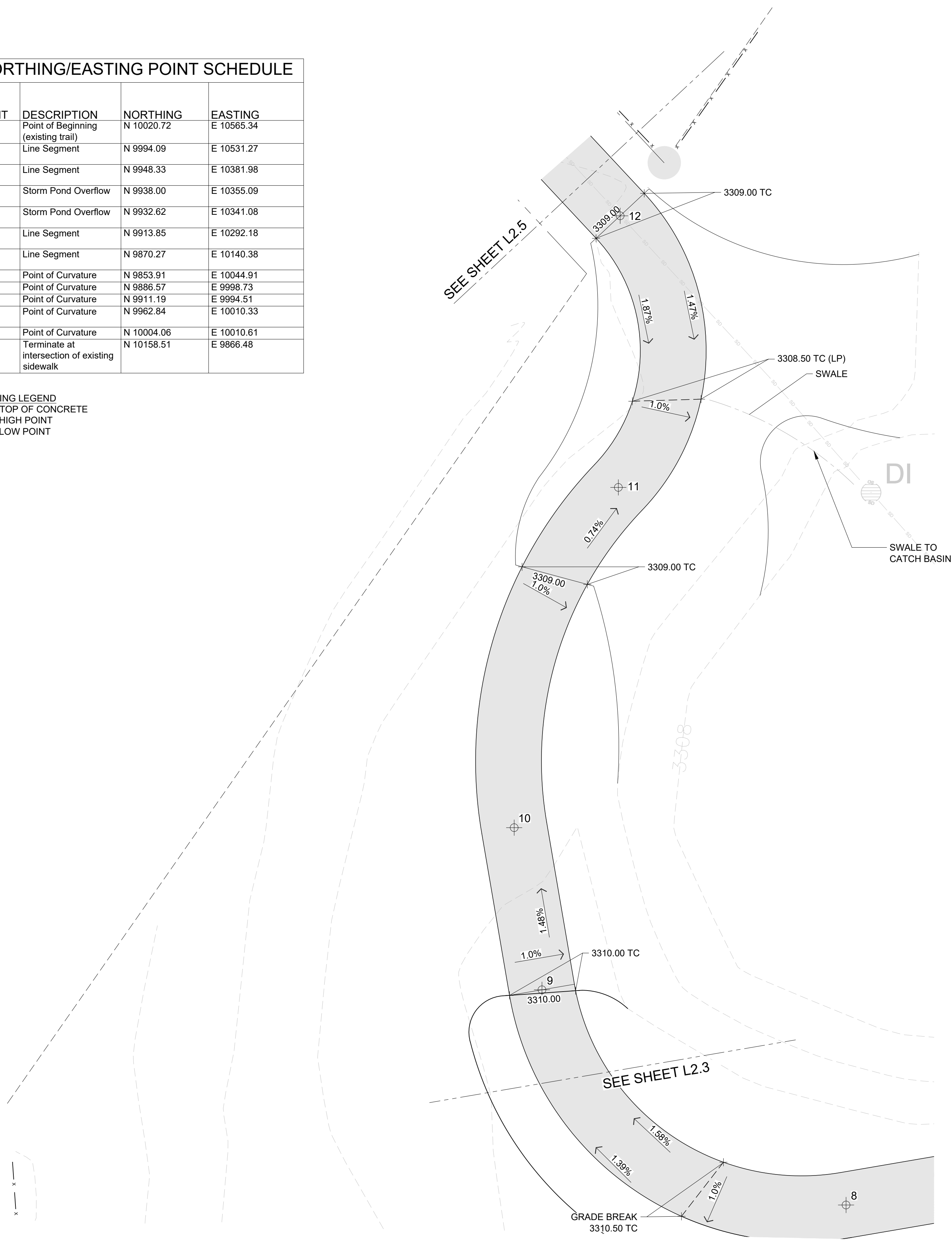
241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L2.4

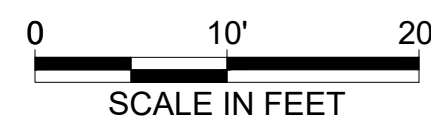
NORTHING/EASTING POINT SCHEDULE

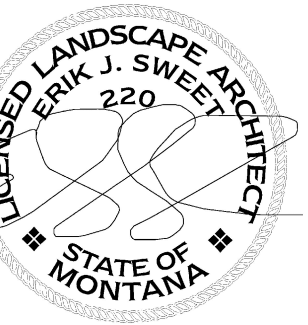
POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48

GRADING LEGEND
TC TOP OF CONCRETE
HP HIGH POINT
LP LOW POINT



SCALE: 1" = 10'





REVISIONS

PKBDTG
 BIG DITCH TRAIL EXTENSION
 RIVER ROCK ESTATES
 BILLINGS, MT
 GRADING PLAN
 BID SET

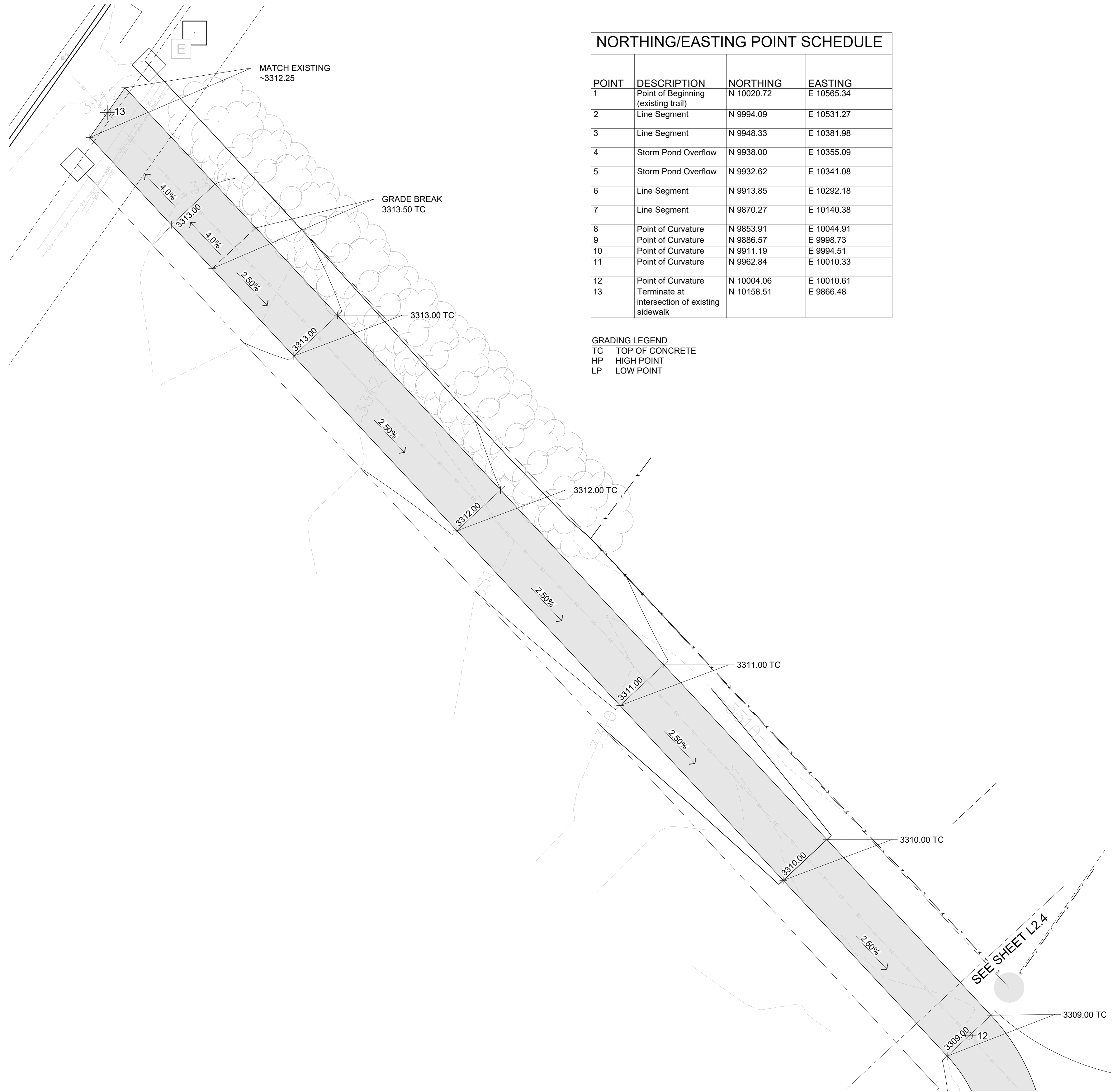
241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L2.5

NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	Point of Beginning (existing trail)	N 10020.72	E 10565.34
2	Line Segment	N 9994.09	E 10531.27
3	Line Segment	N 9948.33	E 10381.98
4	Storm Pond Overflow	N 9938.00	E 10355.09
5	Storm Pond Overflow	N 9932.62	E 10341.08
6	Line Segment	N 9913.85	E 10292.18
7	Line Segment	N 9870.27	E 10140.38
8	Point of Curvature	N 9853.91	E 10044.91
9	Point of Curvature	N 9886.57	E 9998.73
10	Point of Curvature	N 9911.19	E 9994.51
11	Point of Curvature	N 9962.84	E 10010.33
12	Point of Curvature	N 10004.06	E 10010.61
13	Terminate at intersection of existing sidewalk	N 10158.51	E 9866.48

GRADING LEGEND
 TC TOP OF CONCRETE
 HP HIGH POINT
 LP LOW POINT



GRADING PLAN

SCALE: 1" = 10'



SEEDING NOTES

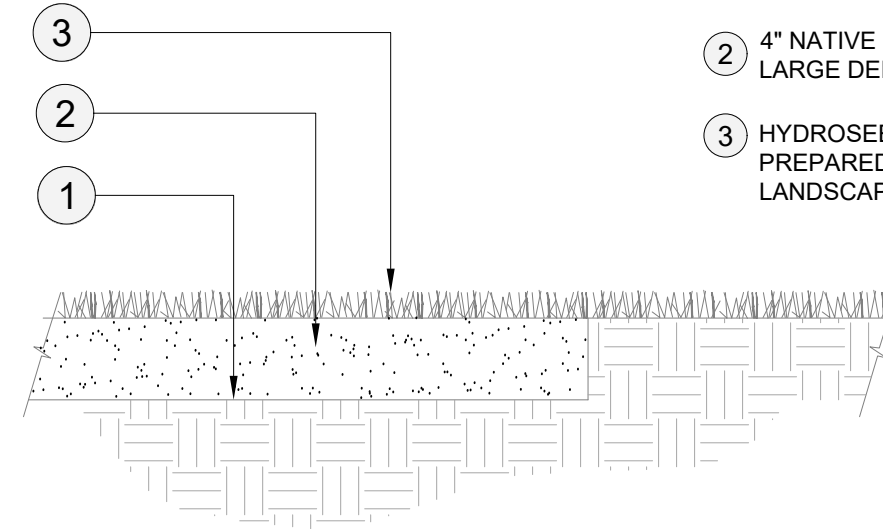
GENERAL NOTES:

1. SOIL IN ALL AREAS TO BE HYDRO-SEEDED SHALL BE CLEARED OF WEEDS, LITTER, DEBRIS, ETC. AMENDED AND FINE GRADED AS DESCRIBED ON PLAN PRIOR TO COMMENCING HYDROSEEDING OPERATIONS.
 2. CAREFULLY MAINTAIN AN EVEN FINISHED GRADE TO INSURE PROPER SURFACE DRAINAGE, WITH RIDGES AND DEPRESSIONS REMOVED. ALL AREAS SHALL BE FREE DRAINING.
 3. ALL AREAS WHICH ARE COMPLETE (I.E. FINISHED SLOPES) WILL BE HYDROSEEDED PER SPECIFICATIONS WILL RECEIVE STRAW MULCH SPREAD WITH TACKIFIER
- QUANTITIES AND AREA:
4. LIMITS OF WORK SHOWN ARE APPROXIMATE. THE INTENT IS TO HYDROSEED ANY DISTURBED AREAS DUE TO UTILITY OR GENERAL CONSTRUCTION AS COORDINATED WITH OWNER. ALL DISTURBED AREAS STEEPER THAN 5:1 SHALL BE COVERED WITH A PROTECTIVE MATTING AFTER HYDROSEEDING.
- GENERAL HYDROSEEDING: PER SPECIFICATIONS
5. WATER: MUST BE OF ACCEPTABLE AGRICULTURAL QUALITY, FREE OF TOXIC INGREDIENTS OR OTHER FACTORS THAT INHIBIT PLANT GROWTH OR GERMINATION. USE 1,500 TO 3,000 GALLONS PER ACRE, AS NEEDED.
 6. SEED MIX: PER LEGEND. SEED MUST BE IN ORIGINAL, UNOPENED CONTAINERS, DISPLAYING LABEL WHICH GUARANTEES FREEDOM FROM UNOPENED CONTAINERS, DISPLAYING LABEL WHICH GUARANTEES FREEDOM FROM NOXIOUS WEED SEEDS, A MINIMUM OF 85% PURE LIVE SEED, AND A MINIMUM GERMINATION RATE OF 85%.
 7. APPLICATION: THE OPERATOR SHALL SPRAY THE AREAS IN A SWEEPING MOTION, ALLOWING THE FIBRES TO BUILD ON EACH OTHER, AND CREATING A UNIFORM VISIBLE COAT, USING THE COLOR OF THE MULCH AS A GUIDE, UNTIL ALL OF THE MATERIAL HAS BEEN APPLIED AND THE SPECIFIED RATES HAVE BEEN ACHIEVED.

LOW STATURE SEED MIX:
 60% IDAHO FESCUE (FESTUCA IDAHOENSIS)
 30% SHEEP FESCUE (FESTUCA OVINA)
 10% SANDBERG'S BLUEGRASS (POA SECUNDA)

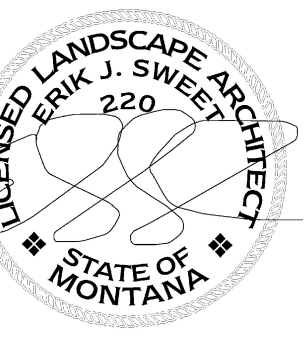
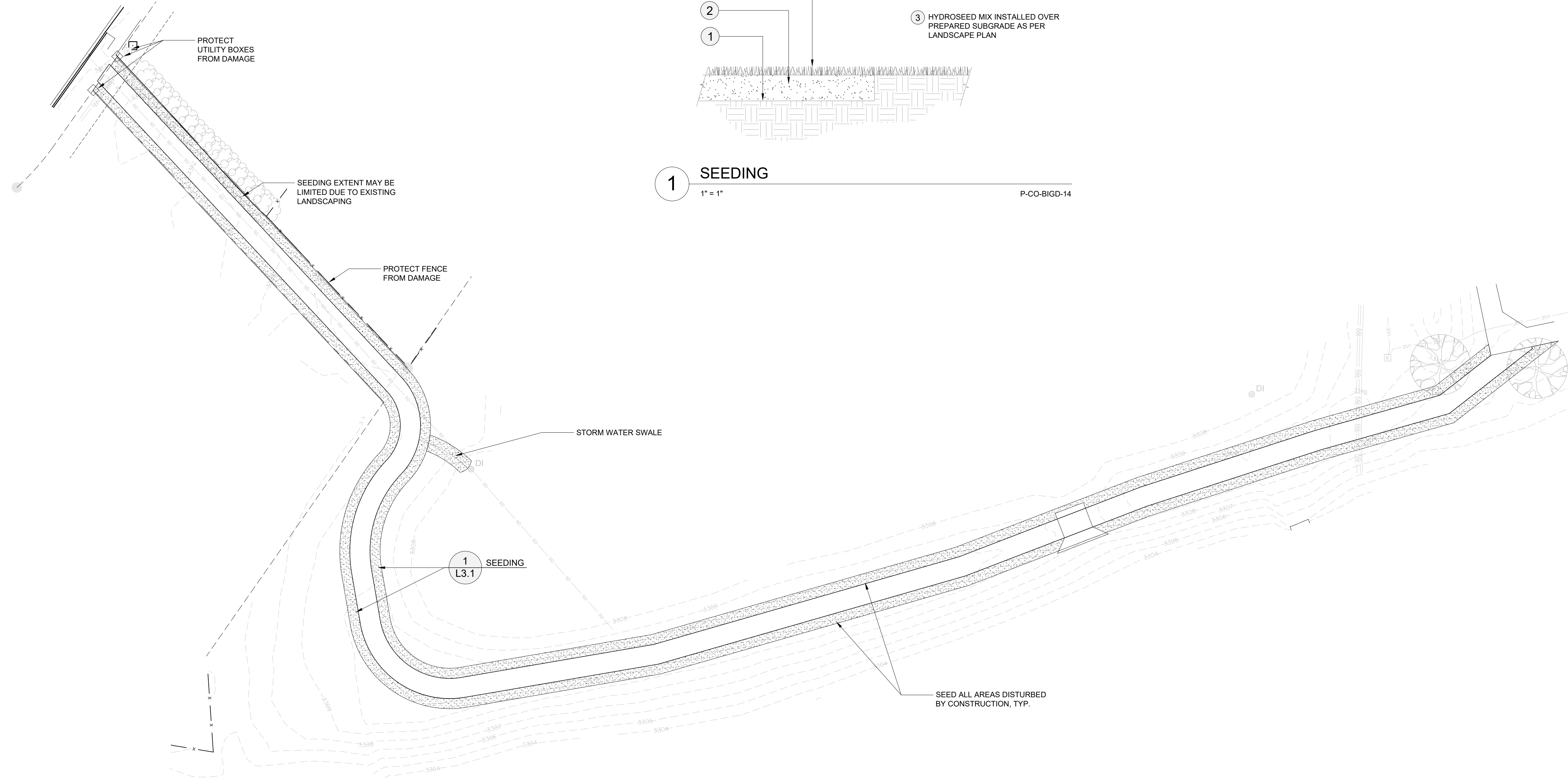
NOTES:

1. SCARIFY SUBGRADE 6", RAKE SUBGRADE AND REMOVE ALL DEBRIS GREATER THAN 1/2" IN DIA. INCLUDE ALL ROCKS, CONCRETE, ORGANIC DEBRIS, AND OR CONSTRUCTION DEBRIS
2. 4" NATIVE TOPSOIL REMOVE ALL LARGE DEBRIS FROM TOPSOIL
3. HYDROSEED MIX INSTALLED OVER PREPARED SUBGRADE AS PER LANDSCAPE PLAN



1 SEEDING
 1" = 1"

P-CO-BIGD-14

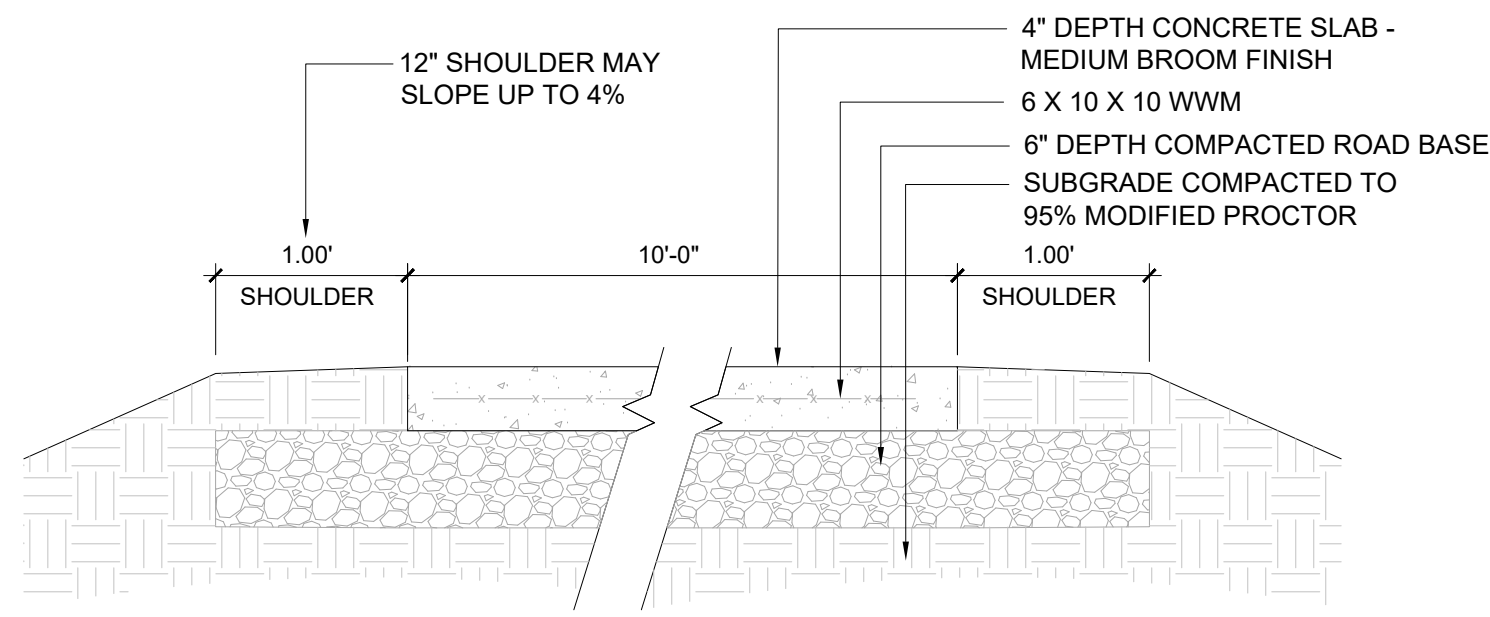
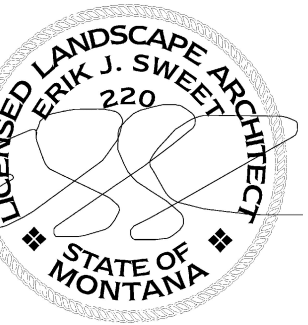


REVISIONS

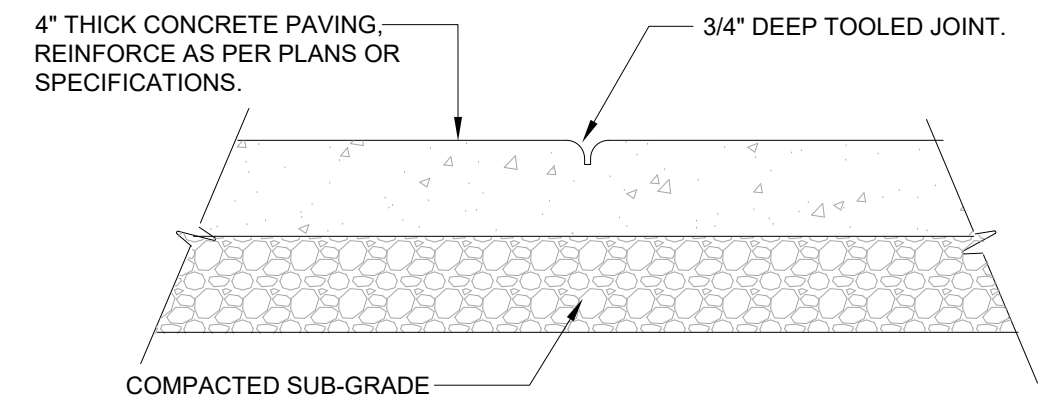
PKBDTG
 BIG DITCH TRAIL EXTENSION
 RIVER ROCK ESTATES
 BILLINGS, MT
 SEEDING PLAN
 BID SET

241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

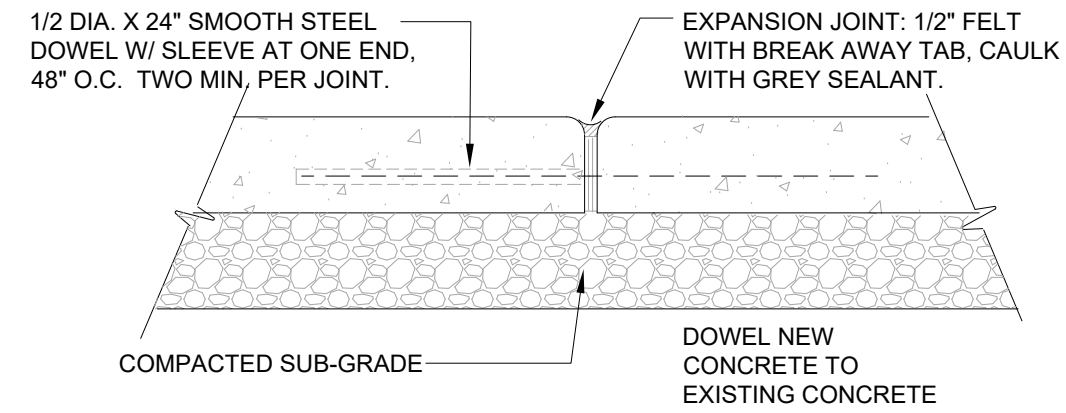
L3.1



1 CONCRETE PAVING
1" = 1'-0"
BASEBID P-CO-BIGD-20

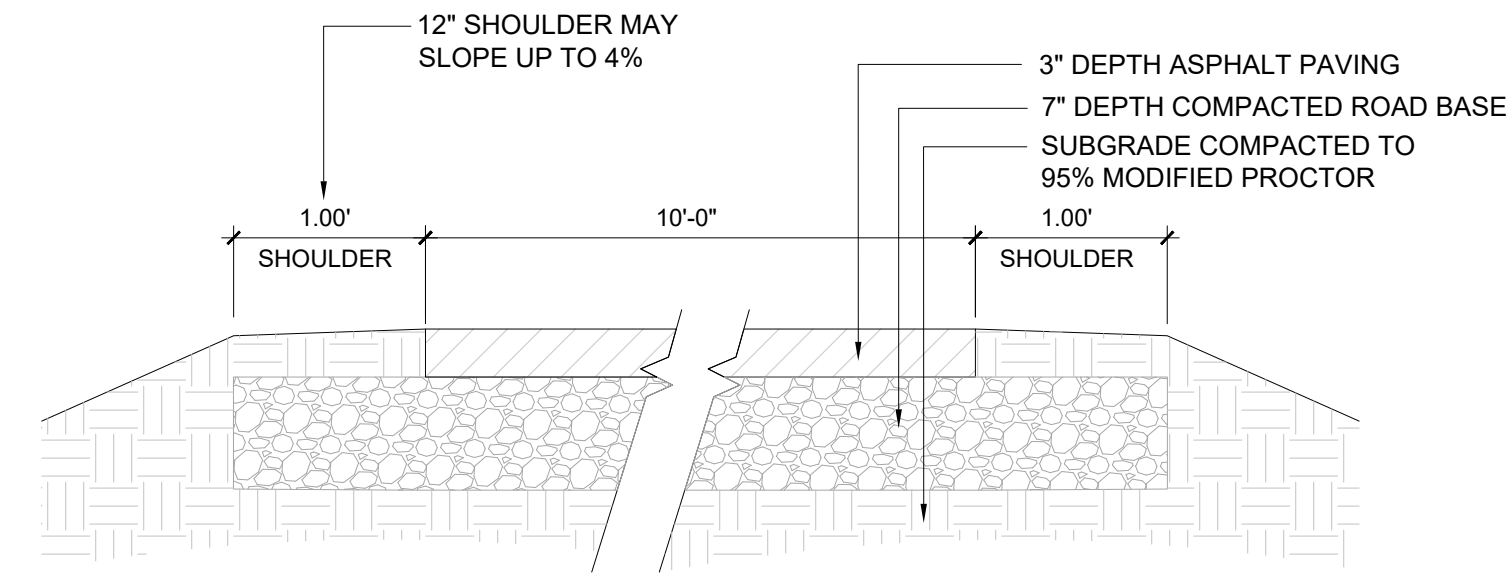


CONTROL JOINT

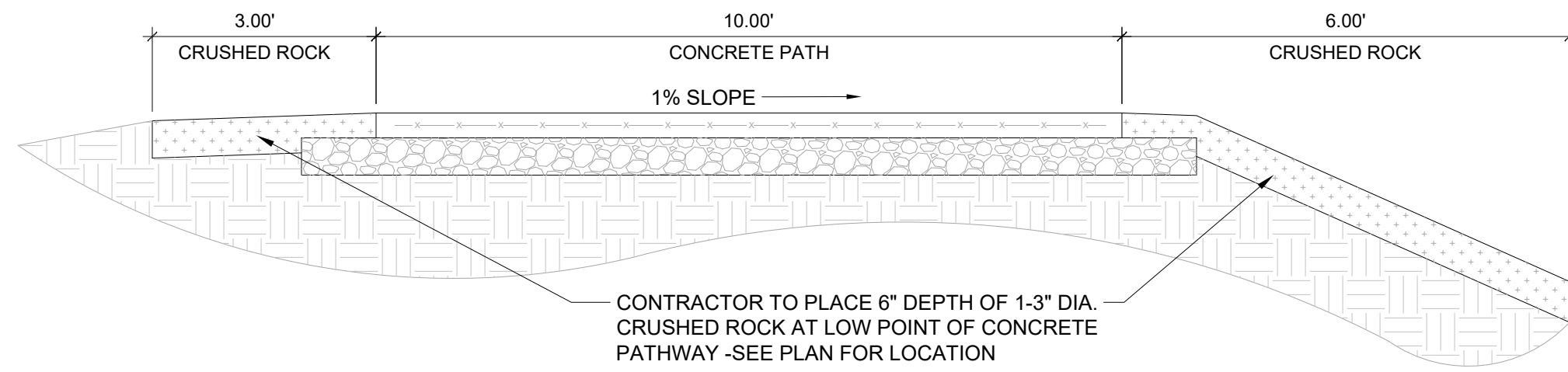


EXPANSION JOINT

2 CONCRETE EXPANSION/CONTROL
1 1/2" = 1'-0"
P-CO-BIGD-05



3 ASPHALT PAVING
1" = 1'-0"
BID ALTERNATE #1 P-CO-BIGD-24



4 POND OVERFLOW SECTION
1/2" = 1'-0"
P-CO-BIGD-39

REVISIONS

NO.	DESCRIPTION

PKBDTG
BID SET

BIG DITCH TRAIL EXTENSION
RIVER ROCK ESTATES
BILLINGS, MT
TRAIL CONSTRUCTION DETAILS

241033
DRAWN BY SNC
APPROVED NRK
DATE 06-20-2025

L4.1