



Purchasing Division
Finance Department
Room 120
411 West First Street
Duluth, Minnesota 55802

218-730-5340
purchasing@duluthmn.gov

Addendum 1
Solicitation 21-99547
Brighton Beach Trail Relocation

This addendum serves to notify all bidders of the following changes to the solicitation documents:

1. The pre-bid meeting sign-in sheet is attached.
2. A revised planset is attached. Changes to the plans are as follows:
 - a. Trail alignment and profile have been modified
 - b. Cross sections reflect the new alignment and profile
 - c. The CMP arch pipe is 21 in x 15 in
 - d. The Statement of Estimated Quantities chart has been updated

Please acknowledge receipt of this Addendum by checking the acknowledgment box within the www.bidexpress.com solicitation.

Posted: **July 9, 2021**

Miller
 Jim
 Randy
 Patrick
 Erica
 Jon Meyer

PRE-BID MEETING SIGN-IN SHEET

BID NUMBER: 21-99547 PROJECT NAME: Brighton Beach Trail Relocation

Thursday, July 8, 2021 - 8 AM

NAME	COMPANY	ADDRESS	PHONE	E-MAIL
DAVID NELSON	WILLARD		218-389-4266	DNELSON@willard.com
Kyle Kenger	VCIT		218-260-0164	kkenger@vcit.com
Patricia Stallings	City of Duluth		218-730-5340	stallings@cityofduluth.com
Melanie Beane	" "			
Jim Shoberg	" "			
Randy Rosendick	" "			
Patrick Loomes	" "			
Erica Vatsias	" "			
Jon Loye	MSA			

LEGEND

	EXISTING WATER MAIN
	EXISTING GATE VALVE & HYDRANT
	WATER SERVICE & CURB STOP
	PROPOSED WATERMAIN, VALVE, & HYDRANT
	PROPOSED WATER SERVICE & CURB STOP
	EXISTING SANITARY SEWER & MANHOLE
	EXISTING FORCEMAIN
	EXISTING STORM SEWER & INLET
	PROPOSED FORCEMAIN
	PROPOSED SANITARY SEWER & MANHOLE
	BURIED ELECTRIC
	BURIED GAS & VALVE
	BURIED CABLE TELEVISION
	BURIED TELEPHONE
	BURIED FIBER OPTICS
	OVERHEAD UTILITY
	RAILROAD TRACKS
	EXISTING CURB & GUTTER
	PROPOSED CURB & GUTTER
	EXISTING SIDEWALK
	PROPOSED SIDEWALK
	EXISTING CULVERT PIPE
	PROPOSED CULVERT PIPE
	FENCE LINE
	DRAINAGE ARROW
	SILT FENCE
	RIGHT-OF-WAY
	BASELINE
	PROPERTY LINE
	TREE LINE
	BENCHMARK
	IRON PIPE
	IRON ROD
	CONTROL POINT
	UTILITY POLE & GUY
	SOIL BORING
	LIGHT POLE
	PEDESTAL
	STREET SIGN
	MAILBOX
	FLAGPOLE
	TREE - DECIDUOUS
	TREE - CONIFEROUS
	TREE TO BE REMOVED

MINNESOTA DEPARTMENT OF TRANSPORTATION
CITY OF DULUTH
DEPARTMENT OF PUBLIC WORKS AND UTILITIES
ENGINEERING DIVISION

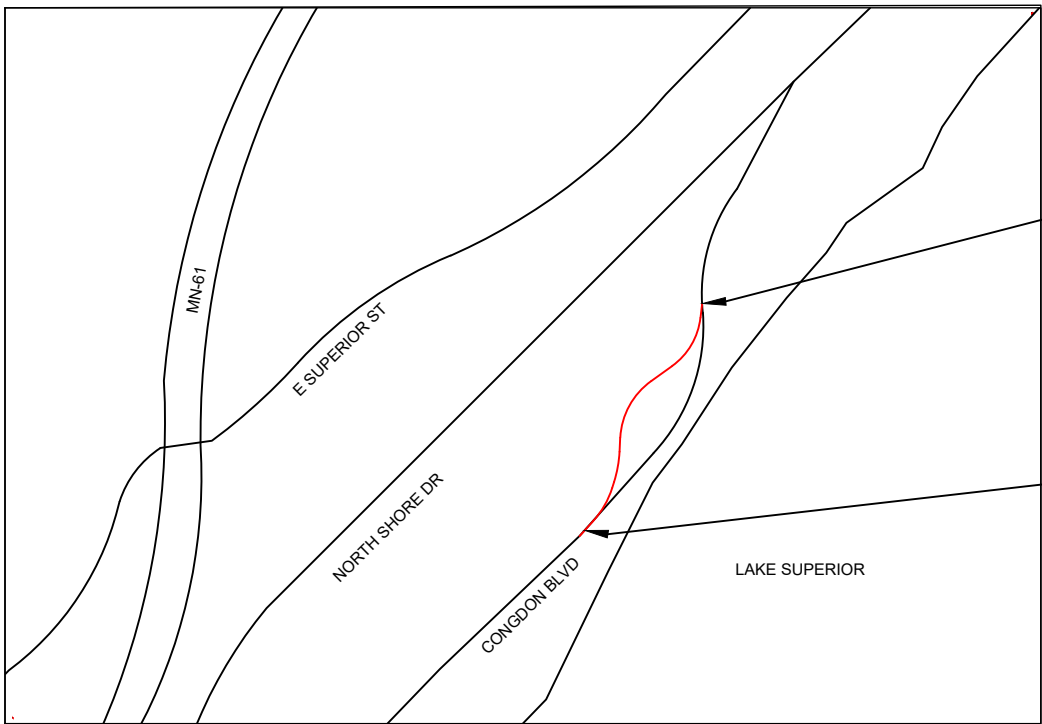
REALIGNMENT PLAN FOR LAKEWALK EXTENSION:

GRADING, AGGREGATE BASE, BITUMINOUS SURFACING, DRAINAGE

LOCATED ON:

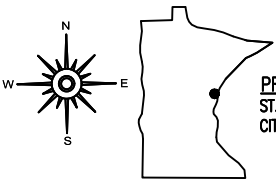
BRIGHTON BEACH OFF OF CONGDON BLVD

CITY OF DULUTH PROJ. NO.	1544
GROSS LENGTH	659 FEET 0.125 MILES
BRIDGES-LENGTH	NA FEET NA MILES
EXCEPTIONS-LENGTH	NA FEET NA MILES
NET LENGTH	659 FEET 0.125 MILES



STA. R117+50
END CITY PROJECT 1544
END CONSTRUCTION

BEGIN CITY PROJECT 1544
BEGIN CONSTRUCTION
STA. R110+91



PROJECT LOCATION
ST. LOUIS COUNTY
CITY OF DULUTH

MSA PROJECT NO. 00616166



ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION
"STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

THE CITY OF DULUTH PUBLIC WORKS AND UTILITIES DEPARTMENT
ENGINEERING DIVISION 2019 EDITION STANDARD CONSTRUCTION SPECIFICATION
(WITH 2020 SUPPLEMENT) SHALL APPLY.

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "MN
BICYCLE FACILITY MANUAL" SHALL APPLY.

SHEET NO.	DESCRIPTION	INDEX
1	TITLE SHEET	
2	SEQ & CONSTRUCTION NOTES	
3	CONSTRUCTION DETAILS	
4	EROSION CONTROL	
5	TYPICAL SECTION	
6-7	TRAIL PLAN & PROFILE	
8-15	CROSS SECTIONS	

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY
DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

JON LOYE

PROJECT ENGINEER (TYPED OR PRINTED NAME)

JULY 8, 2021

52222

PROJECT ENGINEER

DATE

LIC. NO.

CITY APPROVAL

APPROVED CHIEF ENGINEER OF TRANSPORTATION DATE

APPROVED CHIEF ENGINEER OF UTILITIES DATE

APPROVED CITY ENGINEER DATE

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY LEVEL D.
THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 38-02,
ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION
AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

WARNING:
LOCATION OF UNDERGROUND UTILITIES TO BE VERIFIED BY
CONTRACTOR. CALL BEFORE DIGGING. GOPHER STATE ONE CALL
1-800-252-1166 REQUIRED BY LAW

CITY OF DULUTH PROJECT NO. 1544

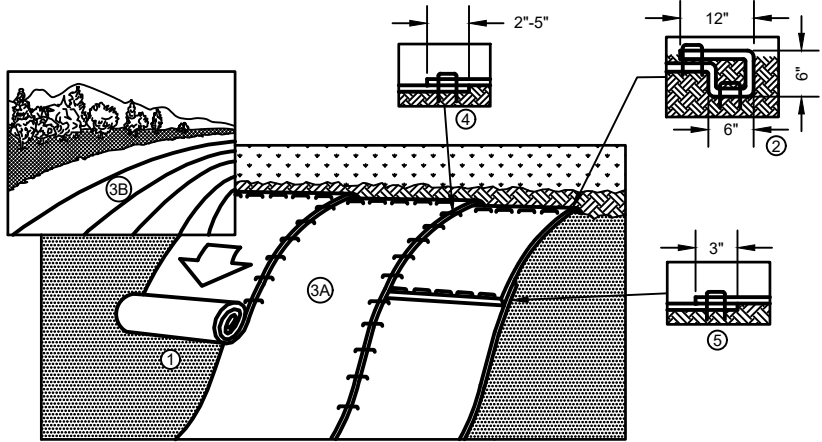
SHEET NO. 1 OF 15

STATEMENT OF ESTIMATED QUANTITIES (SEQ)

ITEM NO.	SPEC NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNITS
		SCHEDULE 1.0 - STREET		
1	2021.501	MOBILIZATION	1	LS
2	2101.501	CLEARING AND GRUBBING	1	LS
3	2105.503	EXCAVATION TYPE COMMON	215	CY
4	2211.501	AGGREGATE BASE CLASS 5	319	TON
5	2360.509	TYPE SP 9.5 WEAR COURSE MIXTURE 3C (D/W)	106	TON
6	2563.601	TRAFFIC CONTROL	1	LS
7	2573.503	SILT FENCE, TYPE MACHINE SLICED	724	LF
8	2574.507	COMMON TOPSOIL BORROW (P)	152	CY
9	2575.501	TURF ESTABLISHMENT	1	LS
10	2575.504	EROSION CONTROL BLANKET CATEGORY 3N TYPE WOOD FIBER	1,155	SY
		SCHEDULE 4.0 - STORM		
1	2501.565	21" x 15" CM PIPE CULVERT	24	LF

CONSTRUCTION NOTES:

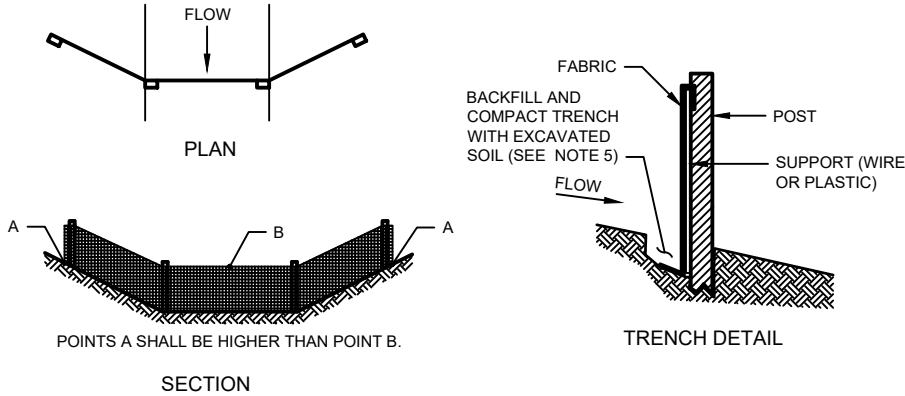
1. CONTRACTOR SHALL REPAIR ALL IMPACTED TURF AREAS WITH 4" TOPSOIL AND SOD.
2. CONTRACTOR SHALL COORDINATE ALL UTILITY LOCATES BEFORE STARTING ANY EARTH DISTURBING ACTIVITIES.
3. CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MAINTAINING, AND REMOVING ALL BMPs.
4. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND REMOVAL ITEMS FROM THE OWNERS PROPERTY AND DISPOSE OF PROPERLY IN ACCORDANCE WITH STATE STATUTES.
5. THE CONTRACTOR SHALL MAINTAIN FENCING AROUND EXCAVATIONS AND MUST ENSURE ALL EXCAVATIONS ARE FILLED AT THE END OF EVERY WORK DAY.
6. IF CONSTRUCTION STAKING IS PROVIDED, THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL STAKES. RE-STAKING WILL BE AT THE COST OF THE CONTRACTOR'S EXPENSE.



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2'-5" (5 CM-12.5 CM) OVERLAP DEPENDING ON BLANKET TYPE.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

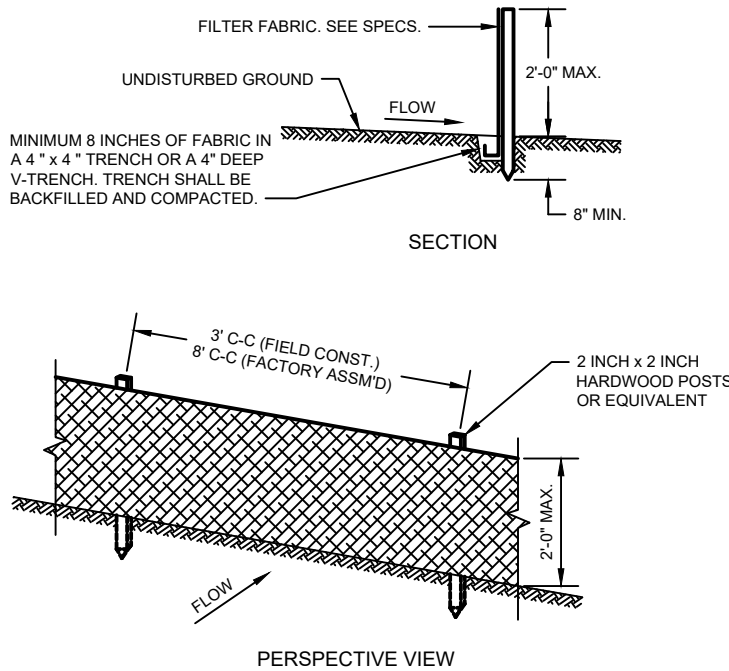
EROSION CONTROL BLANKET SLOPE INSTALLATION
NO SCALE



GENERAL NOTES:

1. DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
2. WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.
3. CROSS BRACE WITH 2 INCH BY 4 INCH WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.
4. MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3 INCHES OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS 12 INCHES O.C.
5. EXCAVATE A TRENCH A MINIMUM OF 4 INCHES WIDE AND 6 INCHES DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD THE MATERIAL TO FIT TRENCH AND BACKFILL AND COMPACT TRENCH WITH EXCAVATED SOIL.
6. WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6 INCHES, SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12 INCHES O.C.
7. GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 3/4" INCH OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.
8. STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.28 LBS./LIN. FT. (WITHOUT ANCHOR). FIN ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS SHALL BE 4 INCH IN DIAMETER OR 1- 1/2 INCH BY 3- 1/2 INCH EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM OF 1- 1/8 INCH BY 1- 1/8 INCH OAK OR HICKORY.

TYPICAL SILT FENCE INSTALLATION AT DRAINAGE WAYS DETAIL
NO SCALE



GENERAL NOTES:

1. ENDS OF FENCE SHALL BE TURNED UPSLOPE 1 TO 2 FEET IN ELEVATION TO PREVENT FLANKING.
2. STAPLE FABRIC WITH 1/2 INCH (MINIMUM) STAPLES TO THE UPSLOPE SIDE OF THE POSTS.
3. WHEN TWO SECTIONS OF FILTER FABRIC ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.

TYPICAL SILT FENCE INSTALLATION AT SITE PERIMETER DETAIL
NO SCALE

EROSION CONTROL NOTES

1. This information is only one part of the overall erosion control requirements. Additional requirements may also be shown in the plan sheets and in the accompanying specifications, MnDot Standard Specifications 2573 AND 2575.
2. The methods and structures used to control erosion shall be the responsibility of the Contractor. The methods and structures indicated on the plan are the minimum requirements in the opinion of the Engineer. Contractor shall implement an appropriate means of controlling erosion during his operation and until the vegetation is re-established. adjustments to the control system shall be made as required.
3. Along with the City of Duluth, The Contractor will be co-permittee for the MPCA NPDES stormwater construction permit for this project - Contractor's signature on permit is required upon receiving the Notice of Award. Submit Initial Erosion Control (EC) schedule at Preconstruction Conference. Submit EC schedule alterations/adjustments weekly thereafter for Engineers approval. Site Work shall be scheduled to minimize exposure to erosion.
4. The Contractor is responsible for erosion and sediment control on this project. Contractor shall place or otherwise construct erosion control and sediment containment devices to prevent the runoff, tracking or loss of sediment from disturbed areas of the project site. Exposed areas shall drain to protected basins or silt fence.
5. Sediment and erosion control devices shall be functional before site is disturbed.
6. Total disturbed area is 0.39 acres. Beginning impervious is N/A acres. Estimated New impervious area is 0.15 acres. Total change in impervious is 0.15 acres.
7. All runoff is directed to Lake Superior.
8. Exposed soil slopes 1:3 or steeper, with a continuous positive slope to the waters of the state must have temporary erosion control or permanent cover placed within 7 days once the area is not actively being worked. Install RAPID STABILIZATION METHOD 4 in these areas. Exposed soil slopes flatter than 1:3, with a continuous positive slope to the special water must have temporary or permanent erosion control placed within 3 days once the area is not actively being worked.
9. At a minimum the following erosion and sediment controls will be implemented at the construction site:
 - i. Erosion control blankets shall be used on all slopes 1:3 or steeper and to a 10-foot width in all ditch bottoms.
 - ii. Permanent vegetation will be established after topsoil is spread.
 - iii. Rock ditch checks, or approved equal, will reduce velocities and reduce erosion in ditches.
 - iv. Storm inlets and outlet aprons shall be protected with sediment containment devices.
 - v. Stabilized construction entrance to reduce sediment tracking.
10. All slopes and ditches shall be stabilized prior to opening new culverts into existing drainage ways.
11. If any stockpile is to remain in place for more than 3 days, sediment and erosion control devices/methods shall be used.
12. Water pumped or otherwise discharged from the site during construction dewatering shall be directed toward sediment containment or filtering device.

13. The Contractor shall take all possible precautions to prevent appreciable soil tracking onto roadways. Soil, mud or debris washed, tracked or deposited onto paved surfaces shall be removed prior to the end of each workday.
14. Stabilized construction entrance(s) (aka:Vehicle Tracking Pad) shall be removed and area restored after grading is complete.
15. The Contractor shall maintain the sediment and erosion control measures until the site is stabilized. In accordance with MnDot 2573 AND 2575, Contractor QC program shall ensure all erosion and sediment control devices are routinely inspected and logged at least once every seven (7) days and within 24 hours of any 1/2" rain event. All nonfunctional devices shall be repaired or replaced or cleaned with no additional compensation made therefor.
16. Where not otherwise specified; MnDOT Method 4 shall be used when Rapid Stabilization is needed. Use erosion control blanket (ECB) Cat 3 (N. American Green S150 or approved equal). It shall include fertilizer (10-10-20) @ 8lb per 100 SY and seed (Mix 260) @ 2lb per 100 SY, done in accordance with MnDOT 2575.3. The ECB shall be pinned with 6-8 inch long staples every 18 inches along the perimeter and throughout interior.

PROJECT DATE:	DRAWN BY:	SS	NO.	DATE	REVISION	BY
	DESIGNED BY:	JL				
	CHECKED BY:	JL				

PLOT DATE: 7/8/2021 1:07 PM, G:\00\00616\00616166\CADD\Construction Documents\00616166 Details.dwg

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

7/8/2021
Date
52222
License No.
JON LOYE

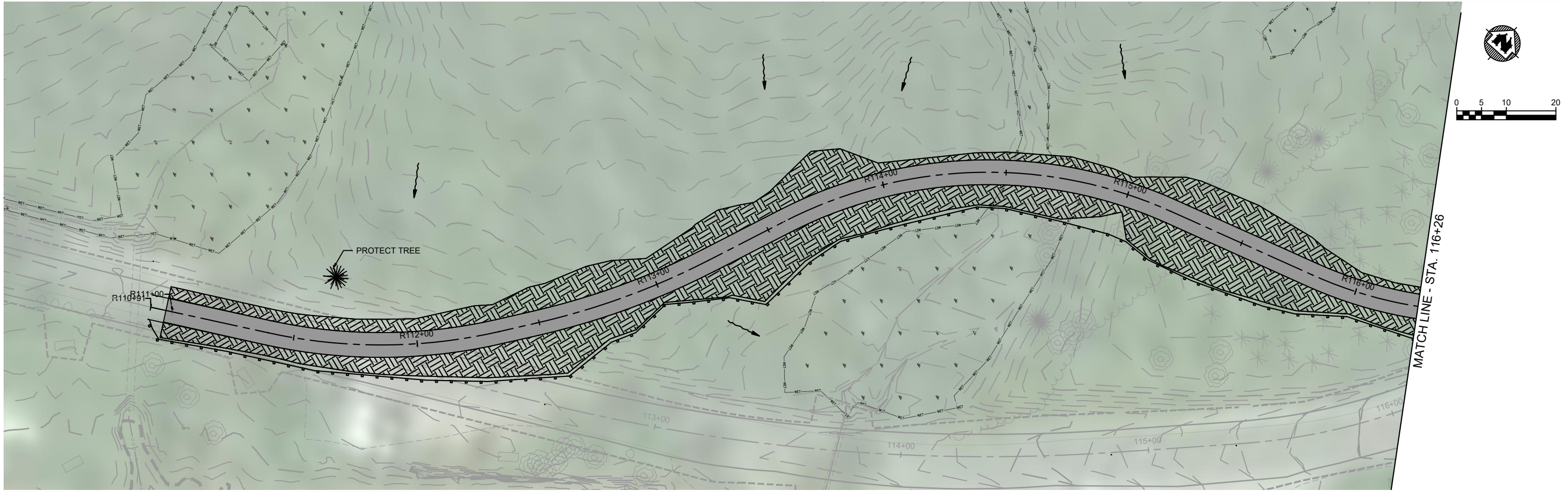


ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.


BRIGHTON BEACH TRAIL RELOCATION
CITY OF DULUTH
DULUTH, MN


DETAILS


PROJECT NO.
00616166
SHEET
3

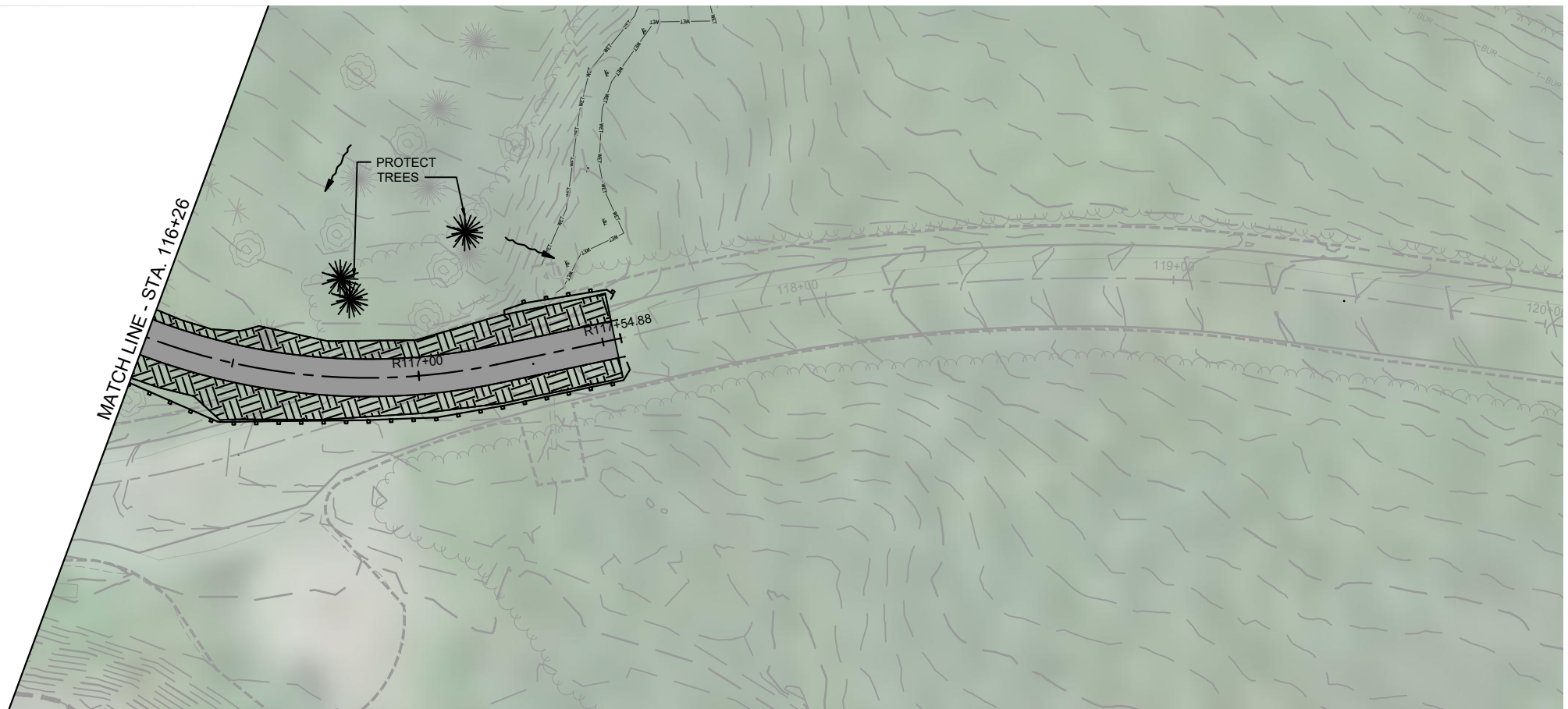


SEDIMENT & EROSION CONTROL LEGEND

 EROSION CONTROL BLANKET CAT. 3N
TURF ESTABLISHMENT
4" TOPSOIL BORROW SPEC. 3877.2F

 DRAINAGE ARROW

 SILT FENCE



PROJECT DATE:	DRAWN BY:	SS	NO.	DATE	REVISION	BY
	DESIGNED BY:	JL				
	CHECKED BY:	JL				

PLOT DATE: 7/8/2021 1:09 PM, G:\00\00616\00616166\CADD\Construction Documents\00616166 EC Sheets.dwg

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

7/8/2021
Date

52222
License No.

JON LOYE

 **MSA**

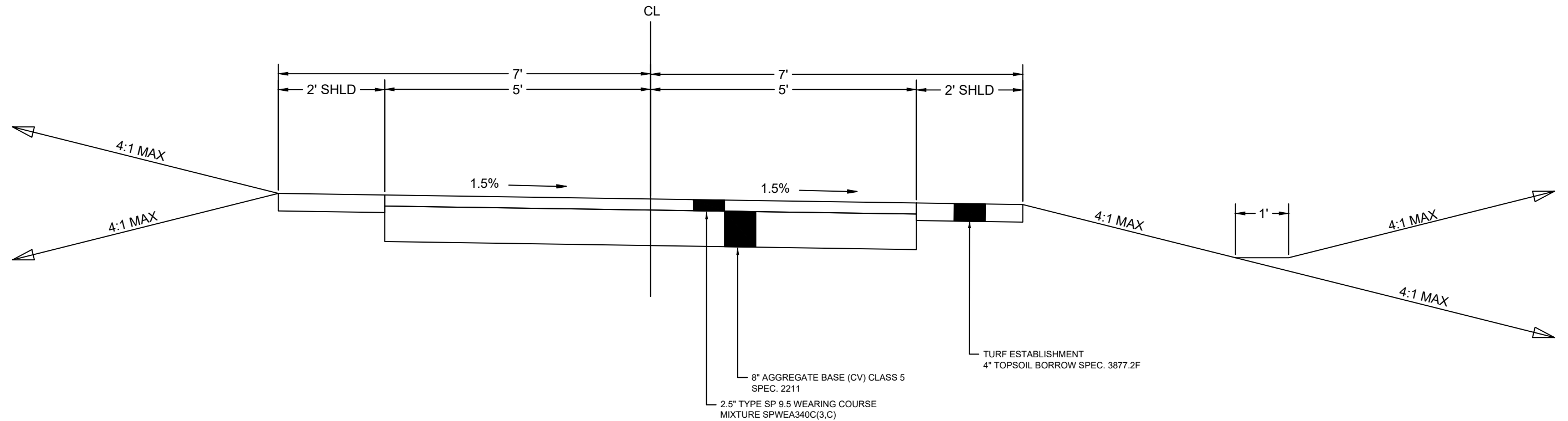
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.

BRIGHTON BEACH TRAIL RELOCATION
CITY OF DULUTH
DULUTH, MN

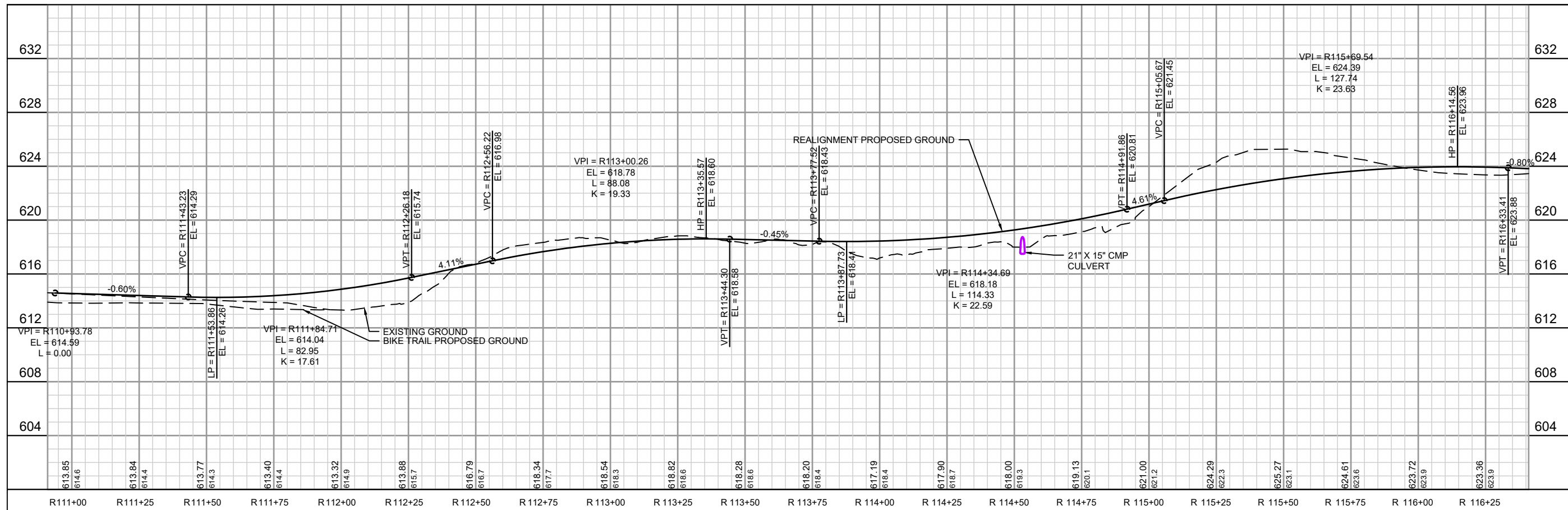
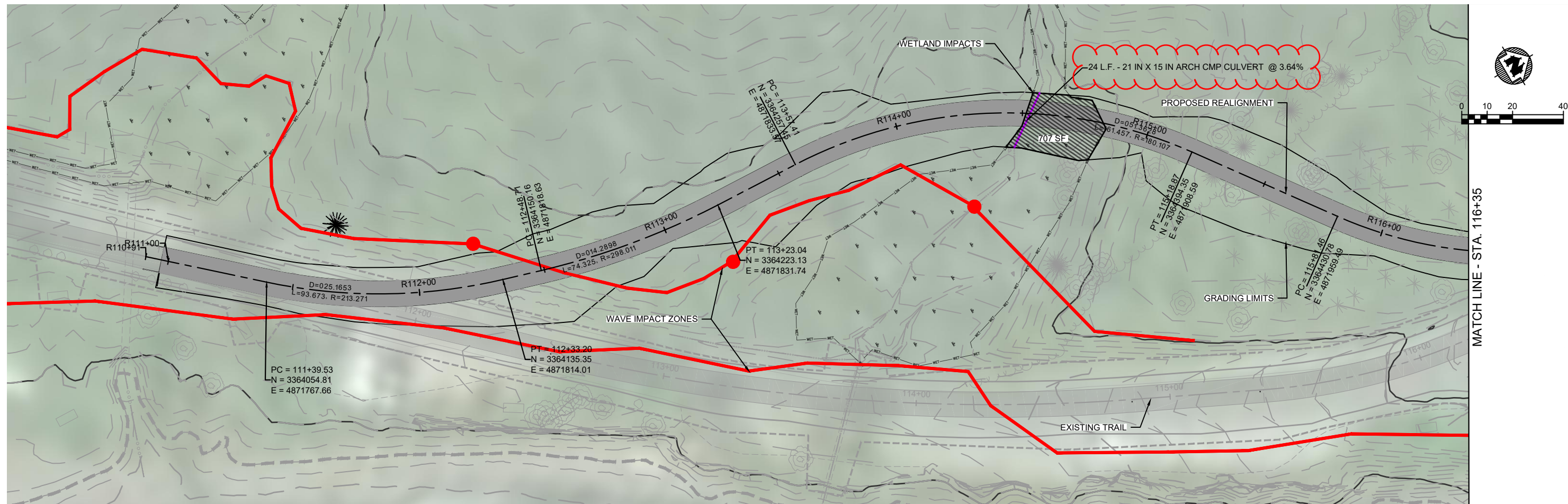
EROSION CONTROL

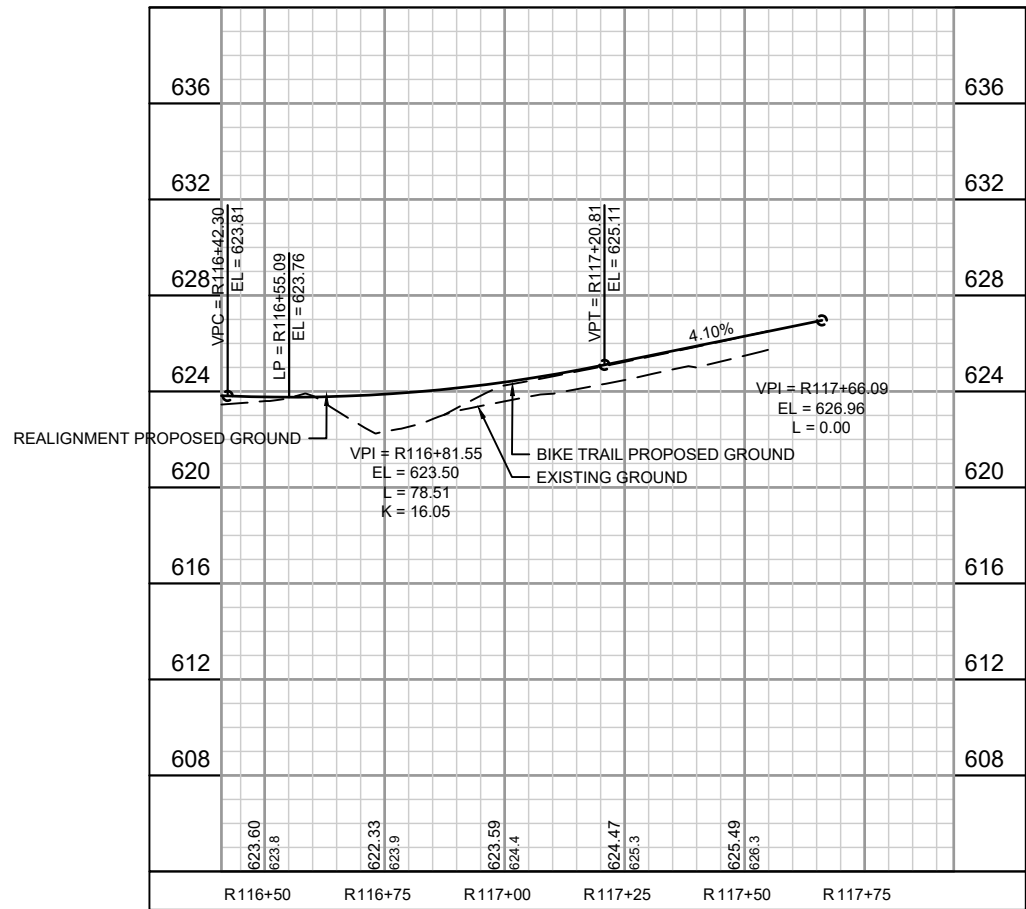
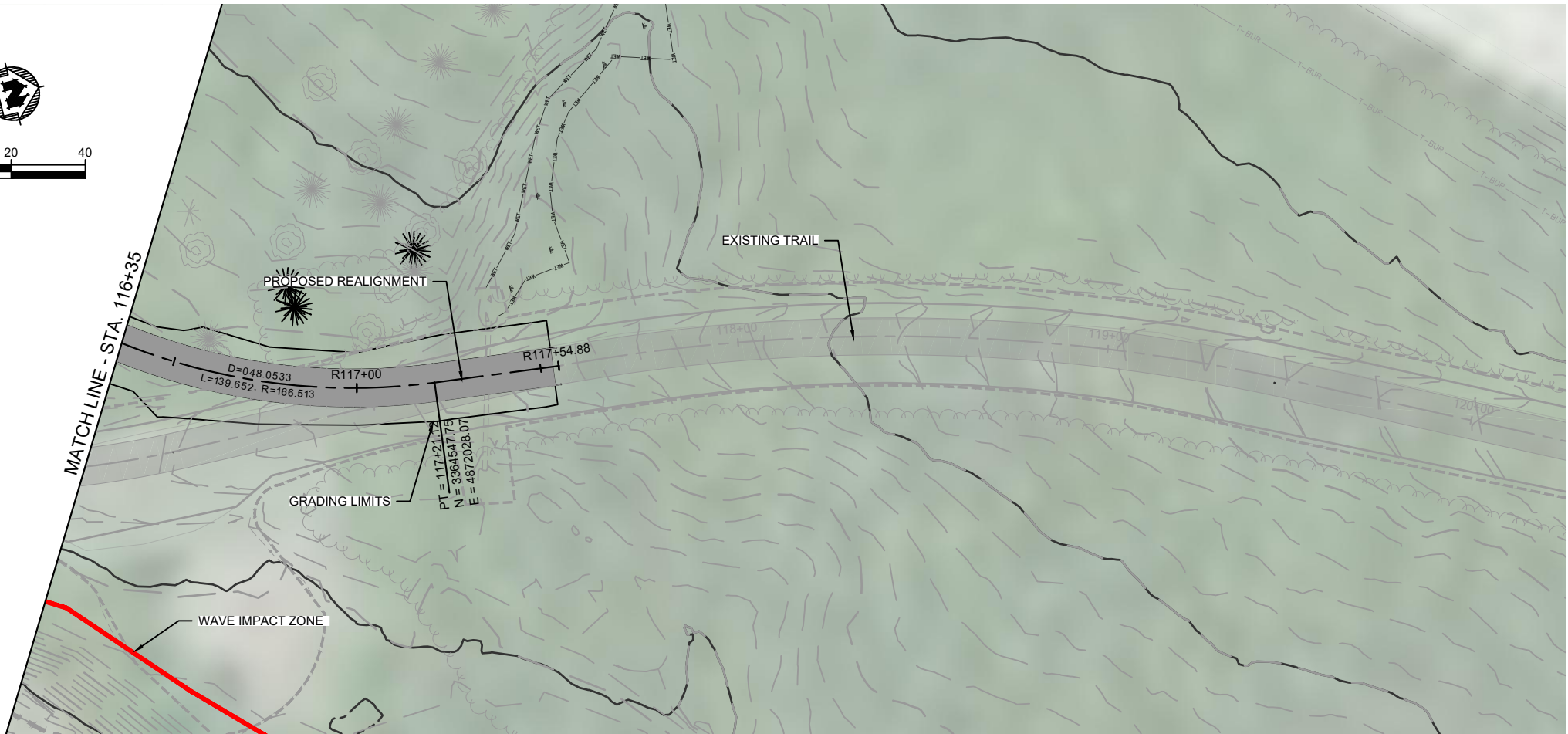
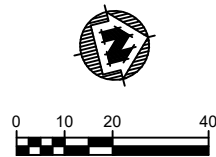
PROJECT NO:
00616166

SHEET
4



PROPOSED TYPICAL SECTION
NO SCALE





PROJECT DATE:	DRAWN BY:	SS	NO.	DATE	REVISION	BY
	DESIGNED BY:	JL				
	CHECKED BY:	JL				
PLOT DATE: Thursday, July 8, 2021 1:10:33 PM, G:\00\00616\00616166\CADD\Construction Documents\00616166 Plan & Profile.dwg						

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

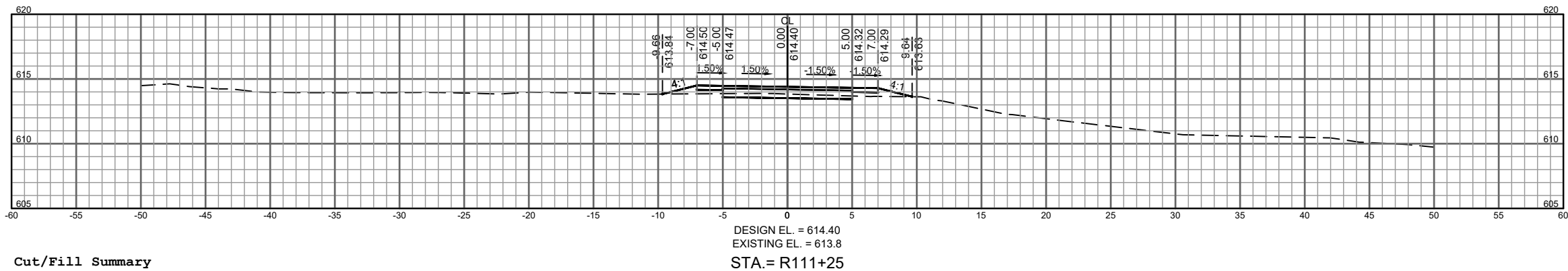
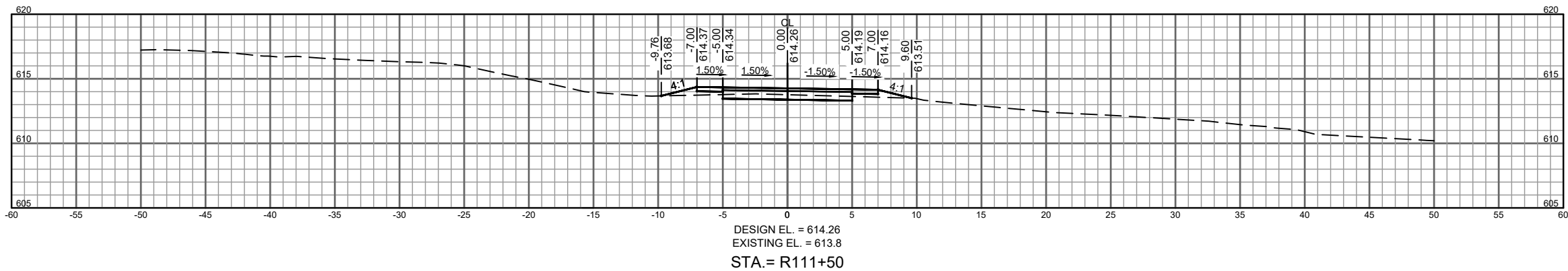
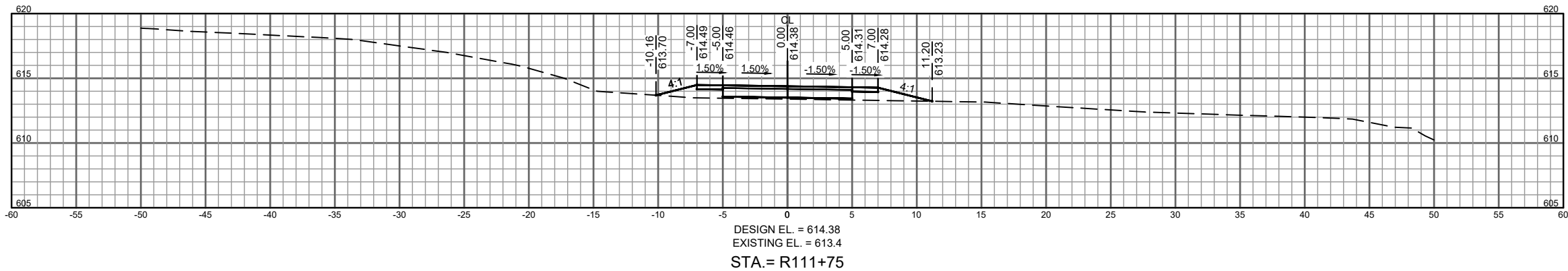
7/8/2021
Date

52222
License No.

JON LOYE

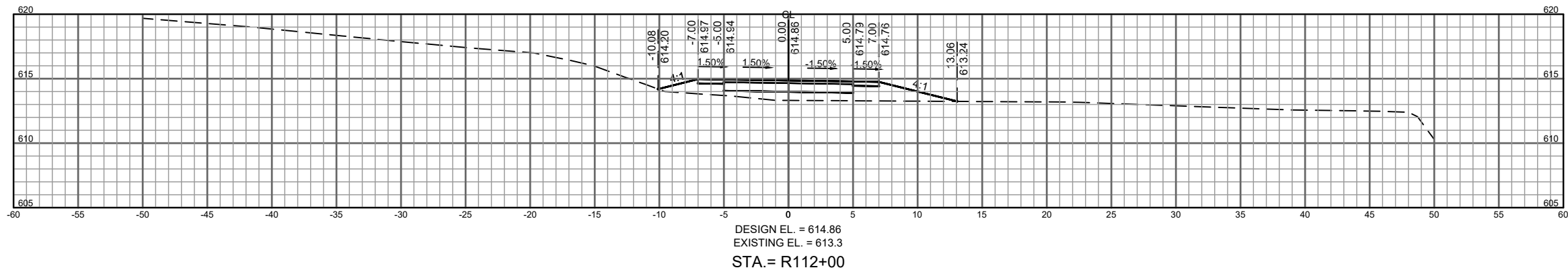
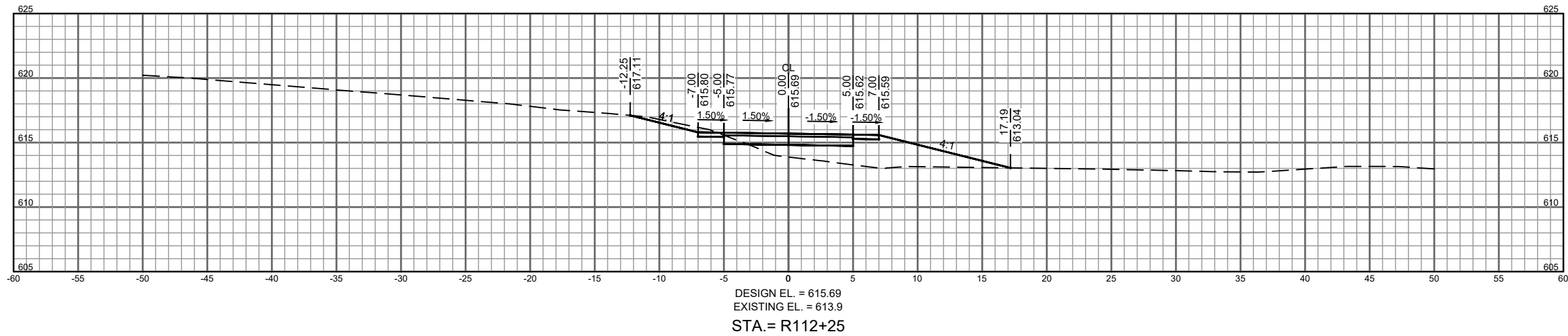
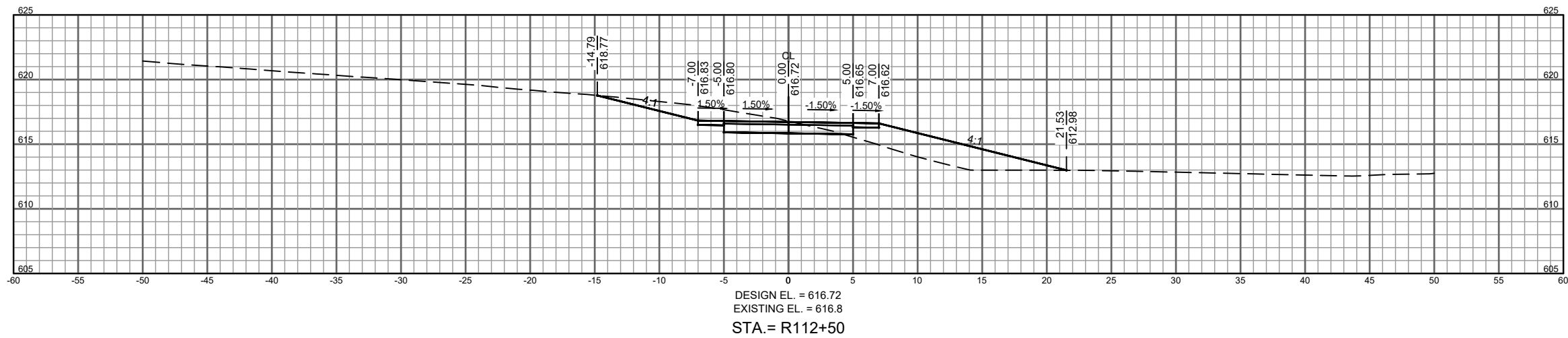


ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.



Cut/Fill Summary

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
REALIGNMENT	1.000	1.200	16951.56 Sq. Ft.	214.87 Cu. Yd.	366.76 Cu. Yd.	151.89 Cu. Yd.<Fill>
Totals			16951.56 Sq. Ft.	214.87 Cu. Yd.	366.76 Cu. Yd.	151.89 Cu. Yd.<Fill>



PROJECT NO.: 00616166	SCALE: AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	DRAWN BY: SS	-	-	-	-
F.B.:	CHECKED BY: JL	-	-	-	-
PLOT DATE: Thursday, July 8, 2021 1:11:06 PM, G:\00\00616166\CADD\Construction Documents\00616166 Cross Sections.dwg					

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

7/8/2021
Date

52222
License No.

JON LOYE

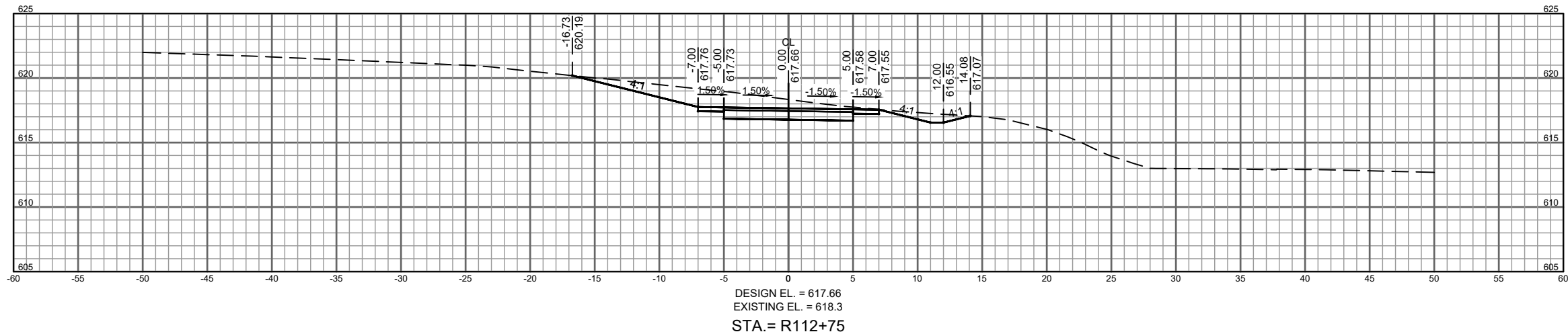
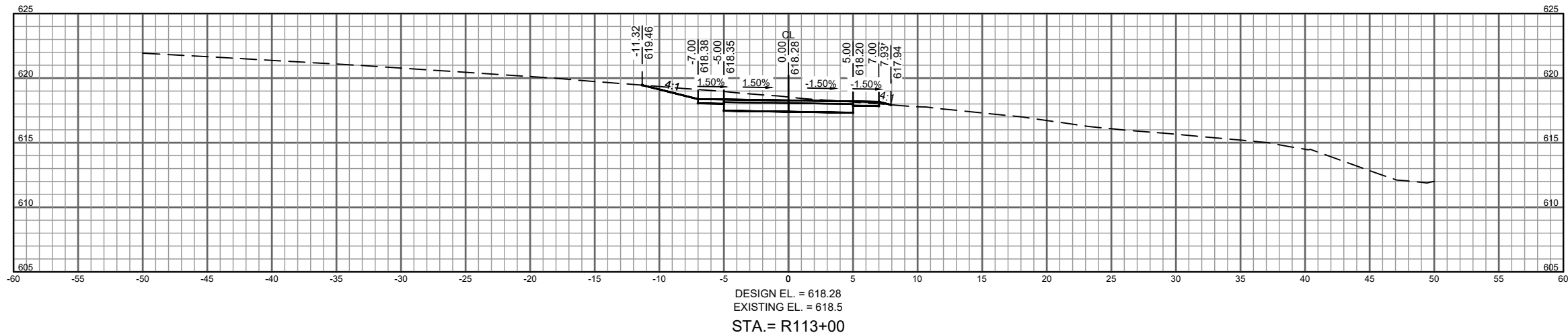
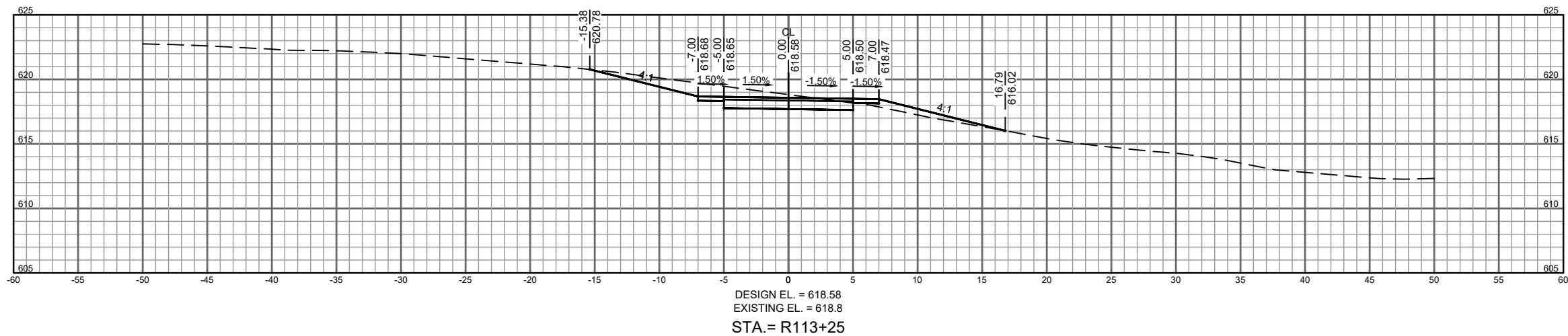


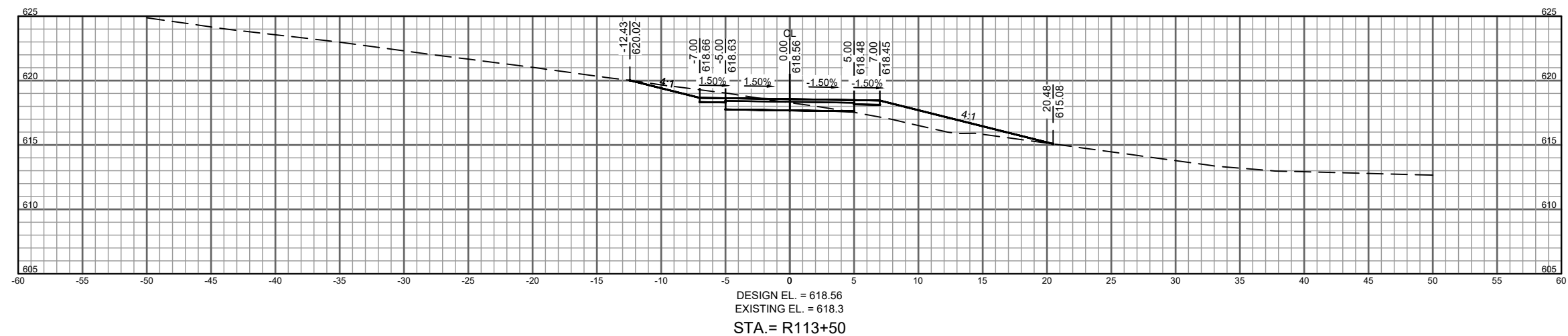
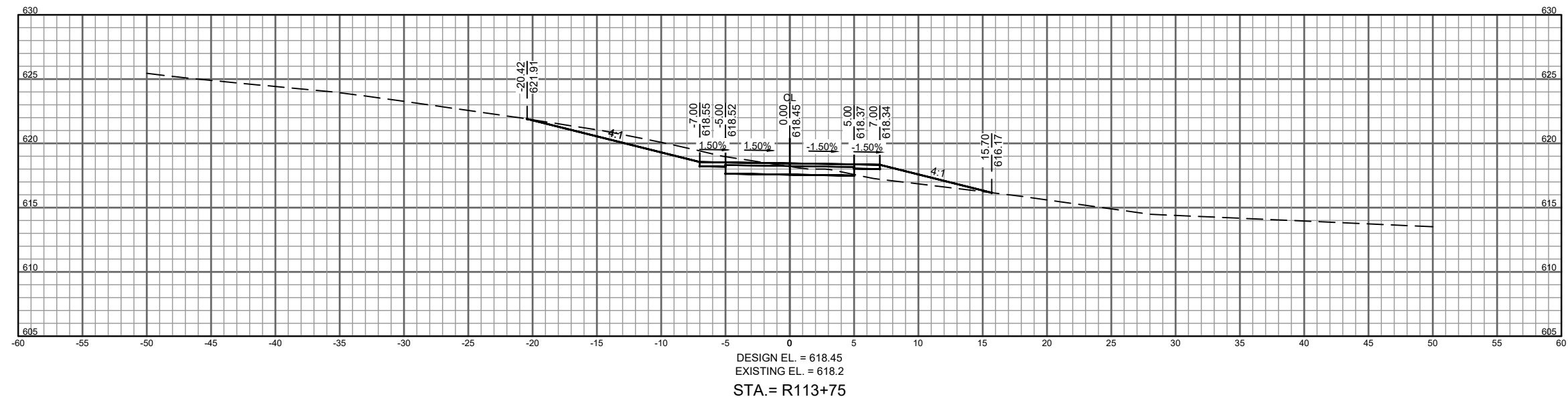
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.

BRIGHTON BEACH TRAIL RELOCATION
CITY OF DULUTH
DULUTH, MN

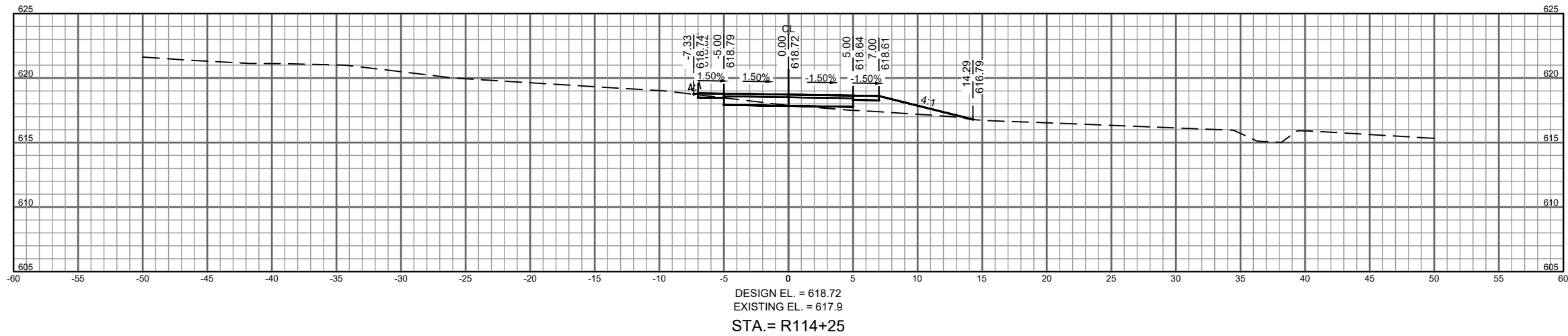
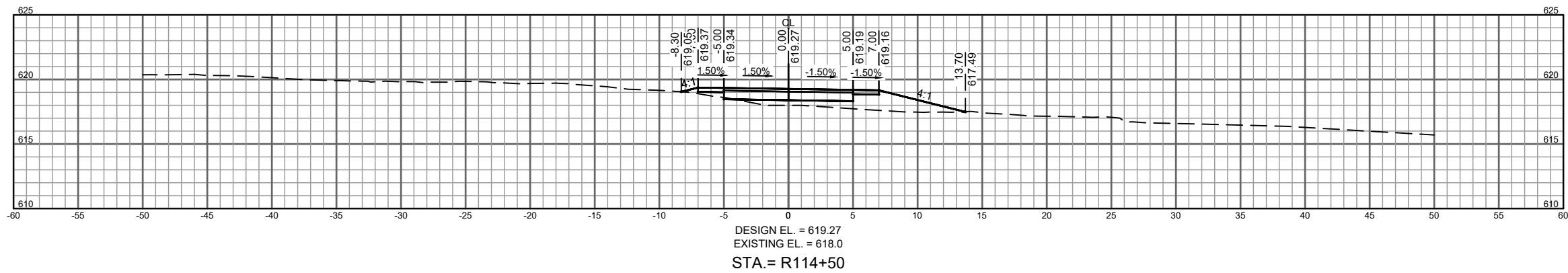
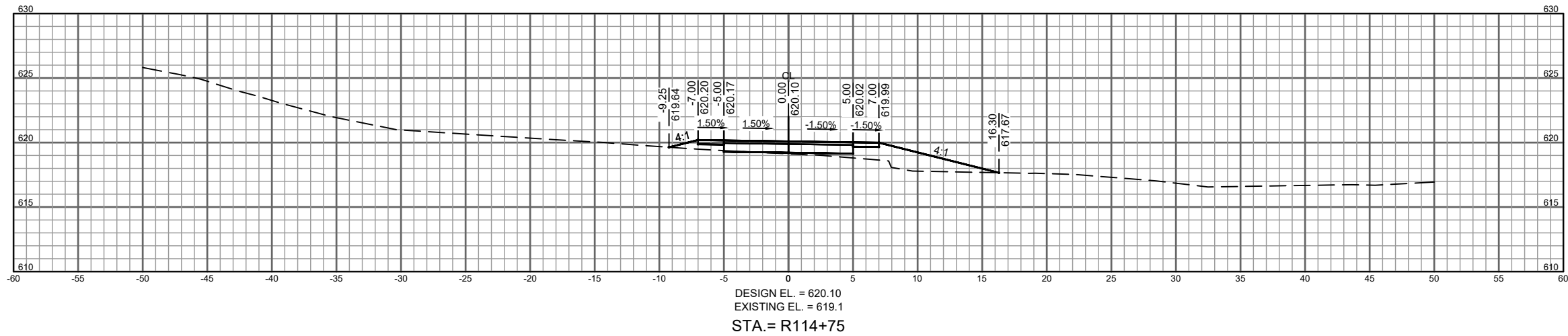
CROSS SECTIONS

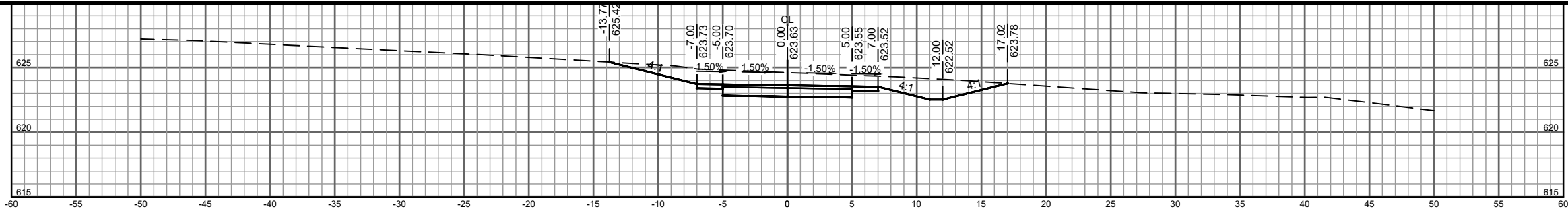
FILE NO.
00616166
SHEET
9R





PROJECT NO.: 00616166	SCALE: AS SHOWN	NO.	DATE	REVISION	BY	I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.	7/8/2021	52222	 MSA ENGINEERING ARCHITECTURE SURVEYING FUNDING PLANNING ENVIRONMENTAL 332 W Superior Street, Duluth MN 55802 (218) 722-3915 www.msa-ps.com © MSA Professional Services, Inc.	BRIGHTON BEACH TRAIL RELOCATION CITY OF DULUTH DULUTH, MN	CROSS SECTIONS	FILE NO.
PROJECT DATE:	DRAWN BY: SS	-	-	-	-		Date	License No.				00616166
F.B.:	CHECKED BY: JL	-	-	-	-		 JON LOYE					SHEET
-	-	-	-	-	-							11R
PLOT DATE: Thursday, July 8, 2021 1:11:10 PM, G:\00\00616\00616166\CADD\Construction Documents\00616166 Cross Sections.dwg												-

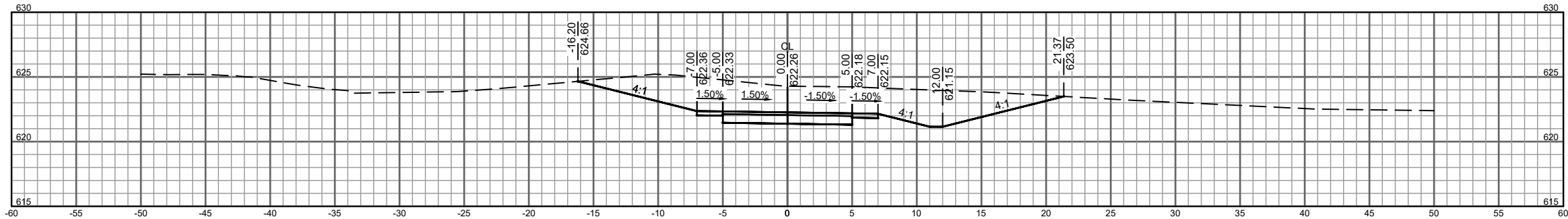




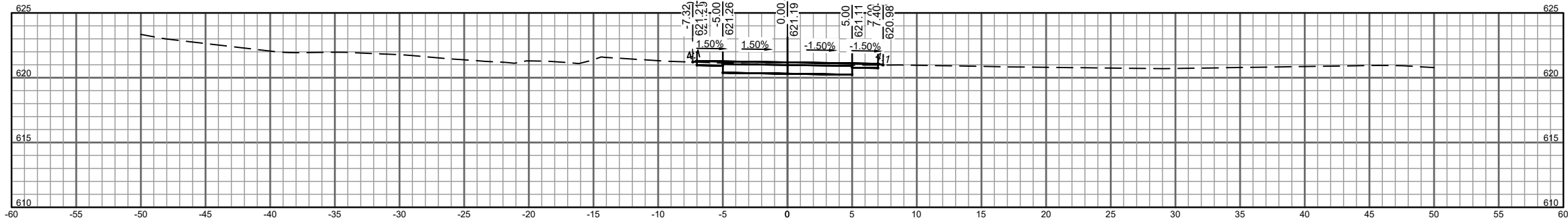
DESIGN EL. = 623.63
EXISTING EL. = 624.6
STA. = R115+75



DESIGN EL. = 623.08
EXISTING EL. = 625.3
STA. = R115+50



DESIGN EL. = 622.26
EXISTING EL. = 624.3
STA. = R115+25



DESIGN EL. = 621.19
EXISTING EL. = 621.0
STA. = R115+00

PROJECT NO.: 00616166	SCALE: AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	DRAWN BY: SS	-	-	-	-
F.B.:	CHECKED BY: JL	-	-	-	-
PLOT DATE: Thursday, July 8, 2021 1:11:13 PM, G:\00\00616166\CADD\Construction Documents\00616166 Cross Sections.dwg					

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

7/8/2021
Date

52222
License No.

JON LOYE

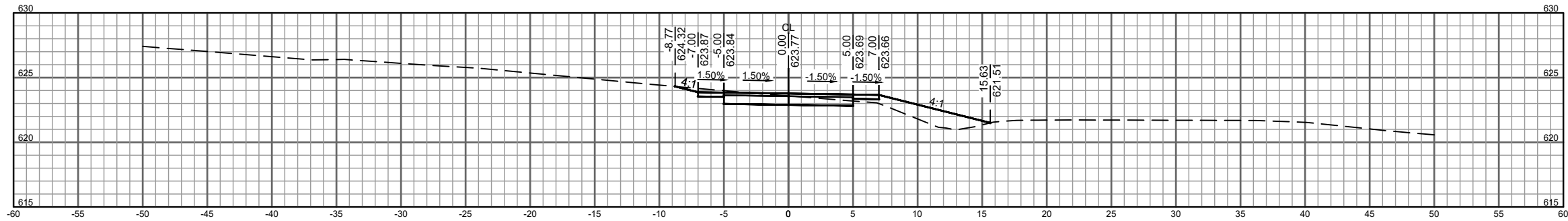


ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.

BRIGHTON BEACH TRAIL RELOCATION
CITY OF DULUTH
DULUTH, MN

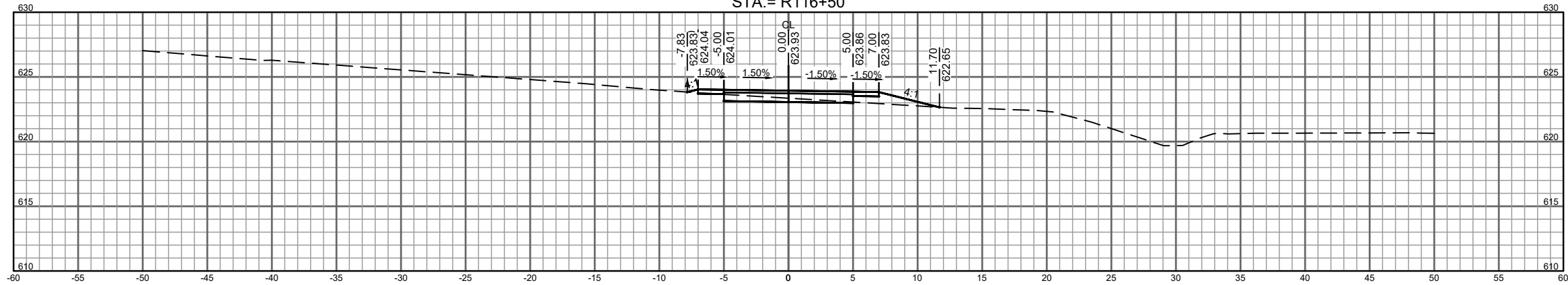
CROSS SECTIONS

FILE NO.
00616166
SHEET
13R



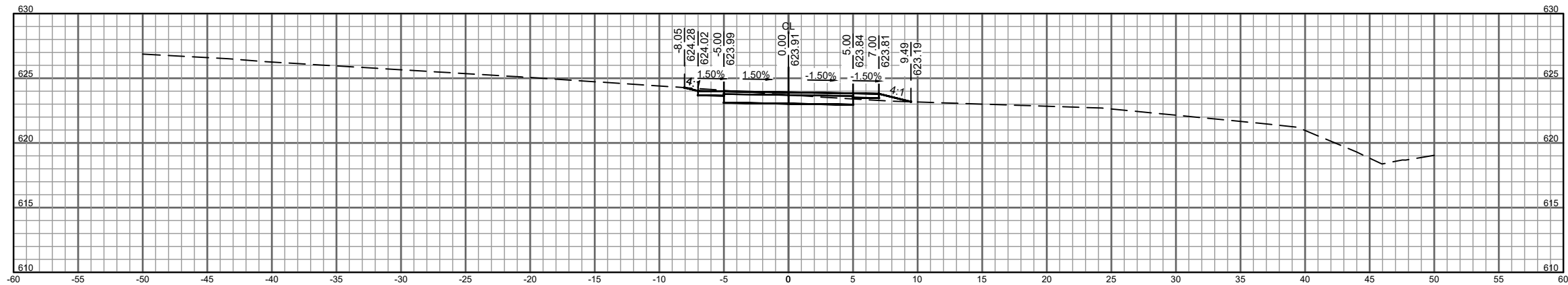
DESIGN EL. = 623.77
EXISTING EL. = 623.6

STA. = R116+50



DESIGN EL. = 623.93
EXISTING EL. = 623.4

STA. = R116+25



DESIGN EL. = 623.91
EXISTING EL. = 623.7

STA. = R116+00

PROJECT NO.:	00616166	SCALE: AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:		DRAWN BY: SS	-	-		-
F.B.:		CHECKED BY: JL	-	-		-
			-	-		-

PLOT DATE: Thursday, July 8, 2021 1:11:15 PM, G:\00\00616166\00616166\CADD\Construction Documents\00616166 Cross Sections.dwg

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

7/8/2021
Date

52222
License No.

JON LOYE

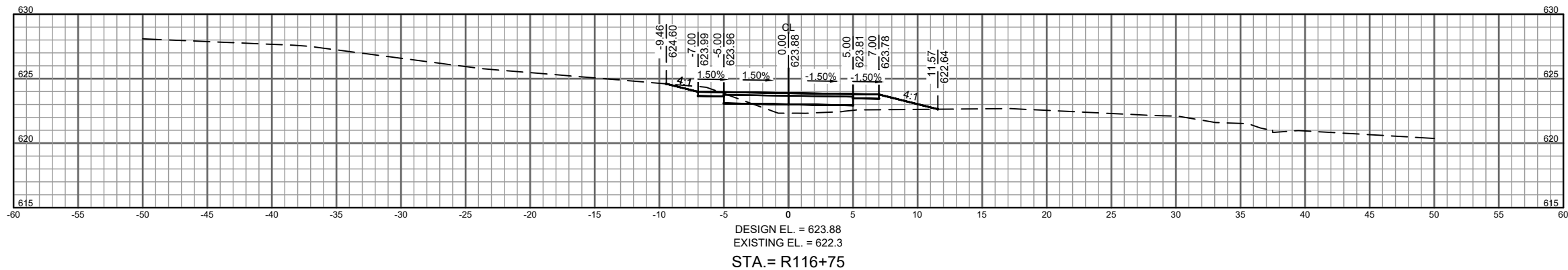
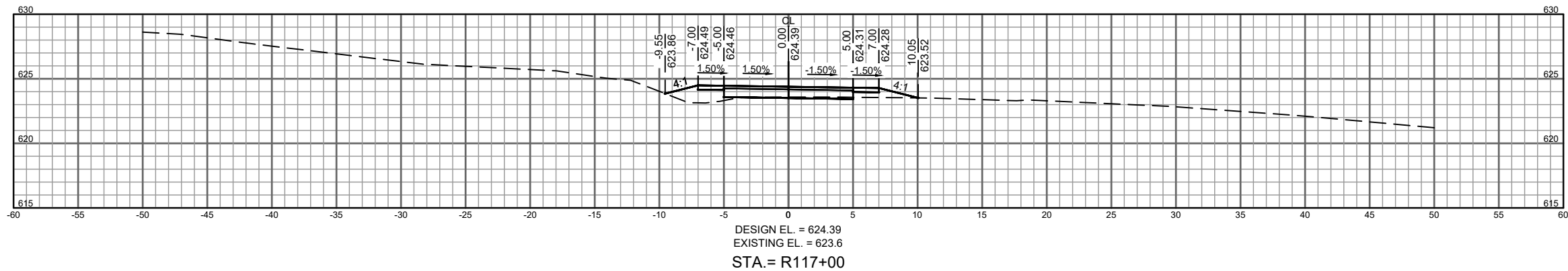
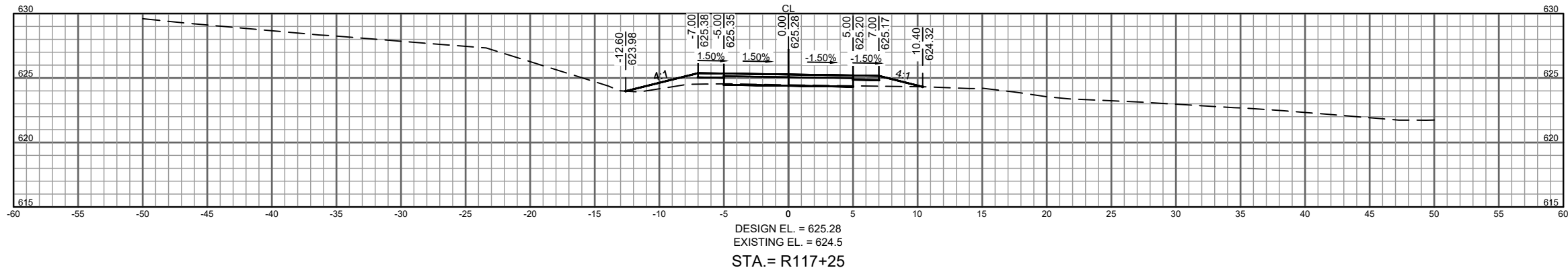


ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com
© MSA Professional Services, Inc.

BRIGHTON BEACH TRAIL RELOCATION
CITY OF DULUTH
DULUTH, MN

CROSS SECTIONS

FILE NO.
00616166
SHEET
14R



PROJECT NO.: 00616166	SCALE: AS SHOWN	NO.	DATE	REVISION	BY
PROJECT DATE:	DRAWN BY: SS	-	-	-	-
F.B.:	CHECKED BY: JL	-	-	-	-
PLOT DATE: Thursday, July 8, 2021 1:11:17 PM, G:\00\00616\00616166\CADD\Construction Documents\00616166 Cross Sections.dwg					

I HEREBY CERTIFY THAT THIS PLAN, REPORT, OR SPECIFICATION WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

7/8/2021
Date

52222
License No.

JON LOYE



ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
332 W Superior Street, Duluth MN 55802
(218) 722-3915 www.msa-ps.com

© MSA Professional Services, Inc.

BRIGHTON BEACH TRAIL RELOCATION
CITY OF DULUTH
DULUTH, MN

CROSS SECTIONS

FILE NO.
00616166
SHEET
15R