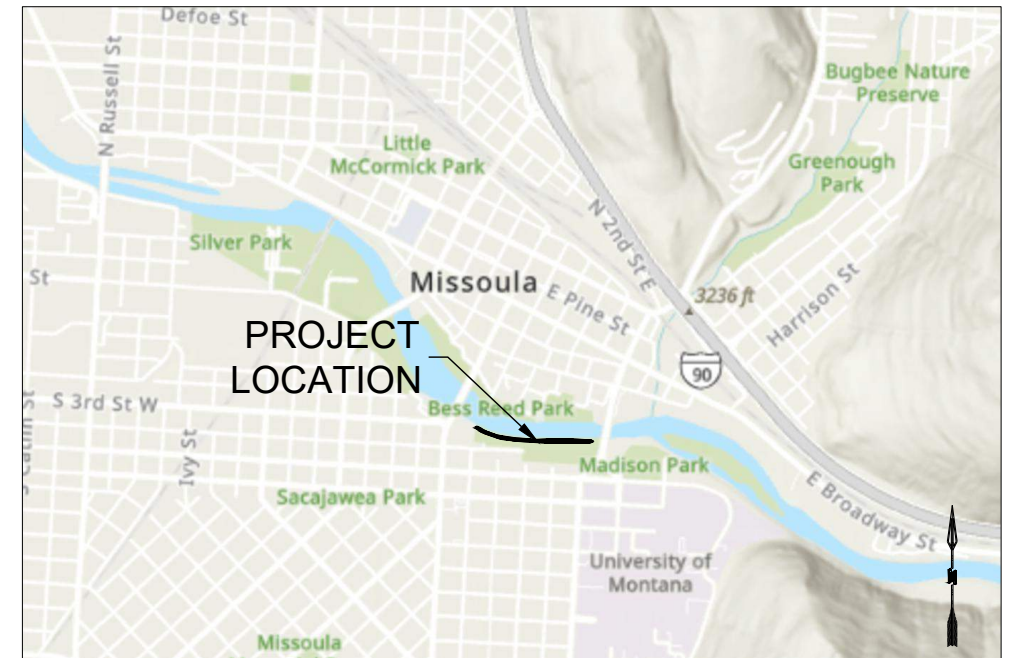


# CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK

CITY OF MISSOULA PARKS & RECREATION DEPARTMENT  
MISSOULA, MONTANA  
MAY 2024  
RESPEC PROJECT NO. W0020.21001



**\*ARCHITECTURAL RENDERING**  
N.T.S.  
\*TO BE UPDATED WITH FINAL DESIGN PLANS



**PROJECT VICINITY MAP**  
N.T.S.

MICHAEL ANTHONY ROTAR  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF MONTANA NO. PEL-PE-LIC-13285

DATE

REVISION			
DESIGNED	MDH	CHECKED	MDH
DRAWN	MDH	CHECKED	MDH
DATE	03/2024	DATE	03/2024
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WATER & NATURAL RESOURCES			
3810 VALLEY COMMONS DR SUITE 4			
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MISSOULA, MT 59801			
CLARK FORK RIVER			
RESTORATION AND			
ACCESS - MADISON ST.			
& TOOLE PARK			
COVER			
SHEET NUMBER:			
G-00			
SHEET			

NAME: N:\PROJECTS\W0020.2\1001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST.\_S\_GENERAL.DWG  
PLOT DATE: May 22, 2024 2:34 PM, BY: MAAA REDDINGTON

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RESTORATION AND

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& TOOLE PARK

SHEET INDEX

SHEET NUMBER:

G-01

SHEET



NAME: N:\PROJECTS\W020\_21001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST.\_S\_GENERAL.DWG  
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MADISON ST. BRIDGE ACCESS - CONSTRUCTION QUANTITIES	QUANTITY	UNIT
SITE WORK AND GRADING		
CLEARING AND GRUBBING	1	LS
EXCAVATION	32	CY
TOPSOIL	6	CY
RIPRAP (MDT TYPE III)	5	CY
VEGETATED RIPRAP (MDT TYPE III)	7	CY
STABILIZATION GEOTEXTILE	94	SY
EROSION CONTROL MATTING	40	SY
HAUL OFF	32	CY
GRAVEL TRAIL		
SURFACE COURSE (3/8" MINUS)	0.6	CY
AGGREGATE BASE COURSE (1/4" MINUS)	0.8	CY
FLAT STONE STAIRS		
FLAT STONE 3'-4' X 4' X 1' (L X W X H)	21	EA
BEDDING GRAVEL (3/4" MINUS)	2	CY
STRUCTURAL FILL	4	CY
BOULDERS 2.0'-2.5' DIAMETER (FOR STAIR STRINGERS)	47	EA
GROUT (STAIRS, BOULDER STRINGERS)	5	CY
KEystone ROCK (2.5' X 4' X 2.5')	1	EA
LANDSCAPING		
UPLAND SMALL SHRUBS	39	EA
UPLAND MEDIUM SHRUBS	2	EA
UPLAND LARGE SHRUBS	1	EA
SEEDING	26	SY

TOOLE PARK ACCESS - CONSTRUCTION QUANTITIES	QUANTITY	UNIT
SITE WORK AND GRADING		
CLEARING AND GRUBBING	1	LS
EXCAVATION	66	CY
TOPSOIL	4	CY
RIPRAP (MDT TYPE III)	19	CY
VEGETATED RIPRAP (MDT TYPE III)	5	CY
STABILIZATION GEOTEXTILE	72	SY
EROSION CONTROL MATTING	30	SY
HAUL OFF	66	CY
GRAVEL TRAIL		
SURFACE COURSE (3/8" MINUS)	0.6	CY
AGGREGATE BASE COURSE (1/4" MINUS)	0.8	CY
FLAT STONE STAIRS		
FLAT STONE 3'-4' X 4' X 1' (L X W X H)	11	EA
TERRACE BOULDERS 4' X 4' X 4' (L X W X H)	15	EA
BEDDING GRAVEL (3/4" MINUS)	3	CY
STRUCTURAL FILL	6	CY
BOULDERS 2.0'-2.5' DIAMETER (FOR STAIR STRINGERS)	12	EA
GROUT (STAIRS, BOULDER STRINGERS)	5	CY
KEystone ROCK (2.5' X 4' X 2.5')	1	EA
LANDSCAPING		
UPLAND SMALL SHRUBS	96	EA
UPLAND MEDIUM SHRUBS	9	EA
UPLAND LARGE SHRUBS	3	EA
SEEDING	115	SY

BEARTRACKS TO MADISON ST. SOUTH BANK QUANTITIES	QUANTITY	UNIT
WOODEN FENCE	2192	LF

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CLARK FORK RIVER  
RESTORATION AND  
ACCESS - MADISON ST.  
& TOOLE PARK

CONSTRUCTION  
QUANTITIES

SHEET NUMBER:  
**G-02**  
**SHEET**

WEST RIVER ACCESS - CONSTRUCTION QUANTITIES	QUANTITY	UNIT
<b>SITE WORK AND GRADING</b>		
CLEARING AND GRUBBING	1	LS
EXCAVATION	48	CY
TOPSOIL	4	CY
RIPRAP (MDT TYPE III)	12	CY
VEGETATED RIPRAP (MDT TYPE III)	14	CY
STABILIZATION GEOTEXTILE	52	SY
EROSION CONTROL MATTING	15	SY
HAUL OFF	48	CY
<b>GRAVEL TRAIL</b>		
SURFACE COURSE (3/8" MINUS)	0.6	CY
AGGREGATE BASE COURSE (1/4" MINUS)	0.8	CY
<b>FLAT STONE STAIRS</b>		
FLAT STONE 3'-4' X 4' X 1' (L X W X H)	10	EA
BEDDING GRAVEL (3/4" MINUS)	1	CY
STRUCTURAL FILL	2	CY
BOULDERS 2.0'-2.5' DIAMETER (FOR STAIR STRINGERS)	14	EA
GROUT (STAIRS, BOULDER STRINGERS)	3	CY
KEystone ROCK (2.5' X 4' X 2.5')	1	EA
<b>LANDSCAPING</b>		
UPLAND SMALL SHRUBS	39	EA
UPLAND MEDIUM SHRUBS	6	EA
UPLAND LARGE SHRUBS	1	EA
WILLOW PLANTINGS	41	EA
SEEDING	58	SY

EAST RIVER ACCESS - CONSTRUCTION QUANTITIES	QUANTITY	UNIT
<b>SITE WORK AND GRADING</b>		
CLEARING AND GRUBBING	1	LS
EXCAVATION	79	CY
TOPSOIL	6	CY
RIPRAP (MDT TYPE III)	15	CY
VEGETATED RIPRAP (MDT TYPE III)	36	CY
STABILIZATION GEOTEXTILE	97	SY
EROSION CONTROL MATTING	27	SY
HAUL OFF	79	CY
<b>GRAVEL TRAIL</b>		
SURFACE COURSE (3/8" MINUS)	1.0	CY
AGGREGATE BASE COURSE (1/4" MINUS)	1.3	CY
<b>FLAT STONE STAIRS</b>		
FLAT STONE 3'-4' X 4' X 1' (L X W X H)	18	EA
BEDDING GRAVEL (3/4" MINUS)	2	CY
STRUCTURAL FILL	6	CY
BOULDERS 2.0'-2.5' DIAMETER (FOR STAIR STRINGERS)	18	EA
GROUT (STAIRS, BOULDER STRINGERS)	5	CY
KEystone ROCK (2.5' X 4' X 2.5')	1	EA
<b>LANDSCAPING</b>		
UPLAND SMALL SHRUBS	78	EA
UPLAND MEDIUM SHRUBS	8	EA
UPLAND LARGE SHRUBS	3	EA
WILLOW PLANTINGS	60	EA
SEEDING	142	SY

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SHEET NUMBER:

G-02

**SHEET**



NAME: N:\PROJECTS\W0020\_21001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST\_1\_S\_GENERAL.DWG  
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GENERAL NOTES:

- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND DETERMINE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK. **CALL 811** (OR ONE CALL UTILITY LOCATE: 1-800-424-5555) A MINIMUM OF 72-HOURS BEFORE WORK IS PLANNED. CONTRACTOR IS RESPONSIBLE FOR PROTECTING AND PROPERLY REPAIRING ANY AND ALL DAMAGED UTILITIES.
- ANY UTILITY LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ALL UTILITY LOCATIONS ARE SUBJECT TO THE ACCURACY OF THE LOCATION METHOD AND SUBJECT TO RELOCATION FROM THE TIME THAT THESE DRAWINGS WERE PREPARED.
- THE CONTRACTOR SHALL HAVE ONE (1) SIGNED COPY OF THE APPROVED PLANS AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED FOR THE JOB, ON-SITE AT ALL TIMES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL, ALL SITE VISITORS, AND THE GENERAL PUBLIC WHO MAY BE AFFECTED BY THE CONSTRUCTION. THIS INCLUDES BUT IS NOT LIMITED TO GENERAL AND CHANNEL EXCAVATION, SHORING, TRAFFIC CONTROL, AND SECURITY. SHOULD CONSTRUCTION ACTIVITIES NECESSITATE TEMPORARY FULL OR PARTIAL CLOSURE OF ROADWAYS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MANAGING THE CLOSURE.
- CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY CONFLICTS FOUND BETWEEN THE CONSTRUCTION PLANS AND CONDITIONS ENCOUNTERED IN THE FIELD.
- CONTRACTOR SHALL, UNLESS OTHERWISE DIRECTED, REPLACE ALL SIGNS, FENCES, CABLES, APPROACH DELINEATORS, OR OTHER FEATURES THAT MAY BE REMOVED TO ACCESS THE CONSTRUCTION AREA. CONTRACTOR SHALL VERIFY THE NATURE AND EXTENT OF ANY OF THESE FEATURES PRIOR TO BIDDING THE WORK. COST OF THIS WORK SHALL BE INCIDENTAL TO THE PROJECT UNLESS OTHERWISE STATED IN THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS AND RESTRICTIONS FOUND IN REGULATORY PERMITS OBTAINED BY THE ENGINEER.
- LEGAL LOAD LIMIT REQUIREMENTS SHALL BE ADHERED TO ON ALL STATE HIGHWAYS, COUNTY ROADS, AND CITY STREETS.
- THE CONTRACTOR IS TO PROVIDE THEIR OWN WATER FOR COMPACTION AND DUST ABATEMENT.
- CONSTRUCTION SHALL COMPLY WITH THESE PLANS IN ADDITION TO THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
- ALL EQUIPMENT USED ONSITE WILL BE CLEAN AND WASHED PRIOR TO ARRIVAL TO THE PROJECT AREAS. ALL IMPORTED MATERIAL MUST BE CERTIFIED AS WEED FREE.
- EMERGENCY SPILL KITS WILL BE MAINTAINED ON EACH PIECE OF EQUIPMENT, OR IN AN AREA THAT CAN RAPIDLY BE REACHED.
- ALL WORK IN OR ADJACENT TO THE RIVER WILL BE DONE DURING LOW FLOWS.
- STRUCTURAL BMPS, SUCH AS SILT FENCE, STRAW BALES OR WATTLES SHALL BE USED TO ISOLATE CONSTRUCTION ALONG THE ACTIVE CHANNEL AND ALL OTHER WATER BODIES. CONDUCT ONGOING MONITORING AND REPAIR (AS NEEDED) OF SEDIMENT BARRIERS DURING PROJECT IMPLEMENTATION.
- DURING POST-PROJECT SEDIMENT BARRIER REMOVAL, REMOVE OR PERMANENTLY STABILIZE SEDIMENT TRAPPED BY SEDIMENT BARRIERS.
- ALL EXPOSED SOILS WILL BE STABILIZED ONCE CONSTRUCTION IS COMPLETED. SOILS WILL BE STABILIZED USING VARIOUS TECHNIQUES AS DESCRIBED IN THIS PLAN INCLUDING, SEEDING, SOD TRANSPLANT AND PLANTING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAVING AND PROTECTING ALL EXISTING TREES AND VEGETATION WHERE REMOVAL FOR CONSTRUCTION IS NOT MANDATORY.

- IF WOUNDING OF SAVED TREES OCCUR, A NON-TOXIC WOUND DRESSING MUST BE APPLIED IMMEDIATELY. EXCAVATORS MUST HAVE A NON-TOXIC TREE WOUND DRESSING WITH THEM ON CONSTRUCTION SITES.
- ALL REMOVED ITEMS SHALL BECOME THE CONTRACTOR'S PROPERTY TO BE DISPOSED OF IN AN APPROVED MANNER IN ACCORDANCE WITH REGULATION BY THE OWNER AT NO ADDITIONAL EXPENSE TO THE OWNER, UNLESS SPECIFIED WITHIN THE PLANS. NO CONCRETE, RUBBLE, OR EXTRA MATERIALS SHALL BE BACKFILLED ON SITE.
- MATERIAL STOCK PILE AREAS, ACCESS ROUTES, AND EQUIPMENT STORAGE AREAS WILL BE DISCUSSED AND APPROVED DURING THE PRECONSTRUCTION MEETING.
- MATERIALS STORED ON THE SITE WHICH MIGHT CONTRIBUTE POLLUTANTS TO RUNOFF SHALL BE LOCATED IN AN ENCLOSED, COVERED, AND LOCKABLE CONTAINER. THESE MATERIALS ARE EXPECTED TO CONSIST MAINLY OF FERTILIZERS, FUELS, AND MACHINERY LUBRICANTS.
- ALL EXISTING AND PROPOSED CONTOURS ARE LABELED IN FEET. ALL SLOPES ARE SHOWN AS DIAGRAMMATIC AND SHALL BE ROUNDED AT THE TOP AND BOTTOM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEANUP OF THE PROJECT SITE AND SURROUNDING AREAS ON A DAILY BASIS AND OF ANY TRASH OR MUD ON THE SITE AS A RESULT OF CONSTRUCTION.
- THE CONTRACTOR SHALL RESTORE ALL STAGING AND STOCKPILING AREAS TO THEIR ORIGINAL CONDITION OR BETTER THAN EXISTING UPON COMPLETION OF THE PROJECT. THE COST TO RESTORE THESE AREAS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE WORK.
- THE CONTRACTOR SHALL MAINTAIN ALL HAUL ROUTES AND RESTORE THEM TO THEIR ORIGINAL CONDITION OR BETTER THAN EXISTING UPON COMPLETION OF USE AT NO EXPENSE TO THE OWNER.
- ALL PAVED HAUL ROUTES SHALL BE MAINTAINED FREE OF MUD AND DEBRIS RESULTING FROM CONSTRUCTION OPERATIONS.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRING/REPLACING ALL DAMAGED INFRASTRUCTURE.
- THE CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM ENGINEER. THE CONTRACTOR SHALL CONTACT THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL ESTIMATES OF QUANTITIES SHALL BE VERIFIED BY THE CONTRACTOR/SUBCONTRACTOR, WHO SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES AND PROVIDING THE WORK AND MATERIALS AS SHOWN ON THE PLANS. QUANTITY ESTIMATES ARE PROVIDED FOR GUIDANCE PURPOSES ONLY, AND SHOULD NOT BE USED AS A BASIS FOR PRICING.
- DEWATERING ACTIVITIES MAY BE REQUIRED FOR CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR OBTAINING A UNITED STATES ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT 33 TEMPORARY CONSTRUCTION, ACCESS AND DEWATERING PERMIT, ALONG WITH ANY OTHER RELEVANT PERMITS REQUIRED FOR CONSTRUCTION DEWATERING.
- ALL FLOW RATES REFERENCED IN THE DRAWINGS ARE RELATIVE TO USGS GAGE 12340500 CLARK FORK ABOVE MISSOULA, MT AND DO NOT EQUAL ACTUAL FLOWS AT THE PROJECT SITE .

GENERAL LEGEND		
ITEM	EXISTING	PROPOSED
OVERHEAD POWER		
GRADING LIMITS		
MAJOR CONTOUR		
MINOR CONTOUR		
EXISTING MAJOR CONTOUR		
EXISTING MINOR CONTOUR		
SLOPE ARROW		
SLOPE ARROW		
SITE LEGEND		
ITEM	EXISTING	PROPOSED
GRAVEL TRAIL		
RIPRAP		
ROCK STAIR		
BENCH		
FENCE		
PLANTING REGION		
TREE		
APPROXIMATE ORDINARY HIGH WATER ELEVATION (OHWE)		
APPROXIMATE 10-YEAR WATER SURFACE ELEVATION (WSEL)		

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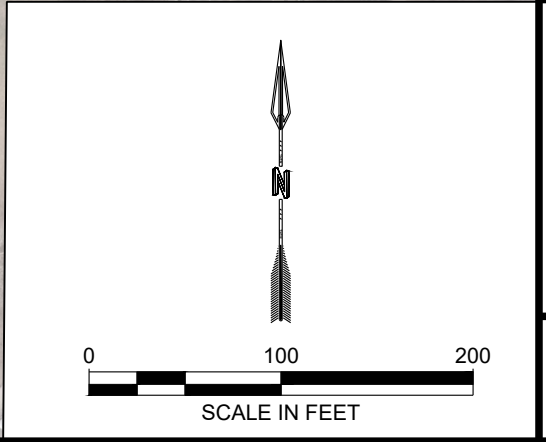
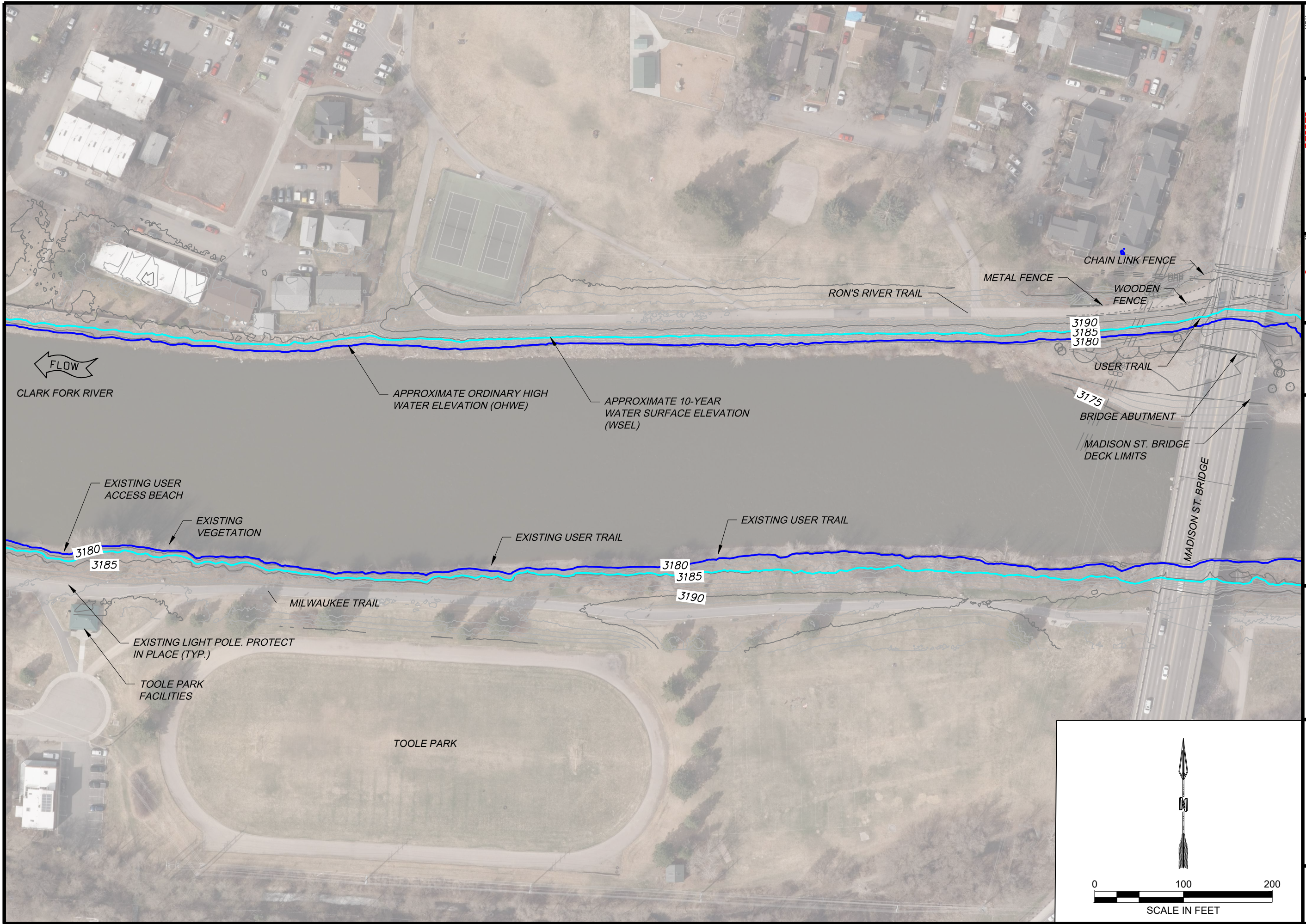
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RESTORATION AND  
ACCESS - MADISON ST.  
& TOOLE PARK

GENERAL NOTES  
ABBREVIATIONS AND  
LEGEND

SHEET NUMBER:  
G-04  
SHEET



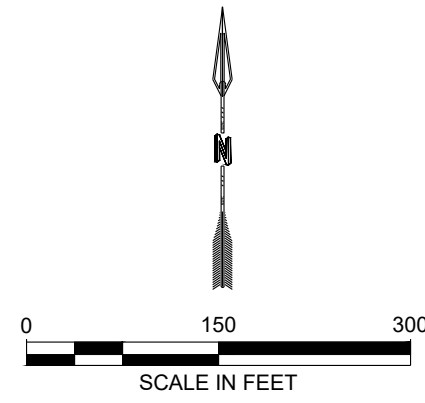
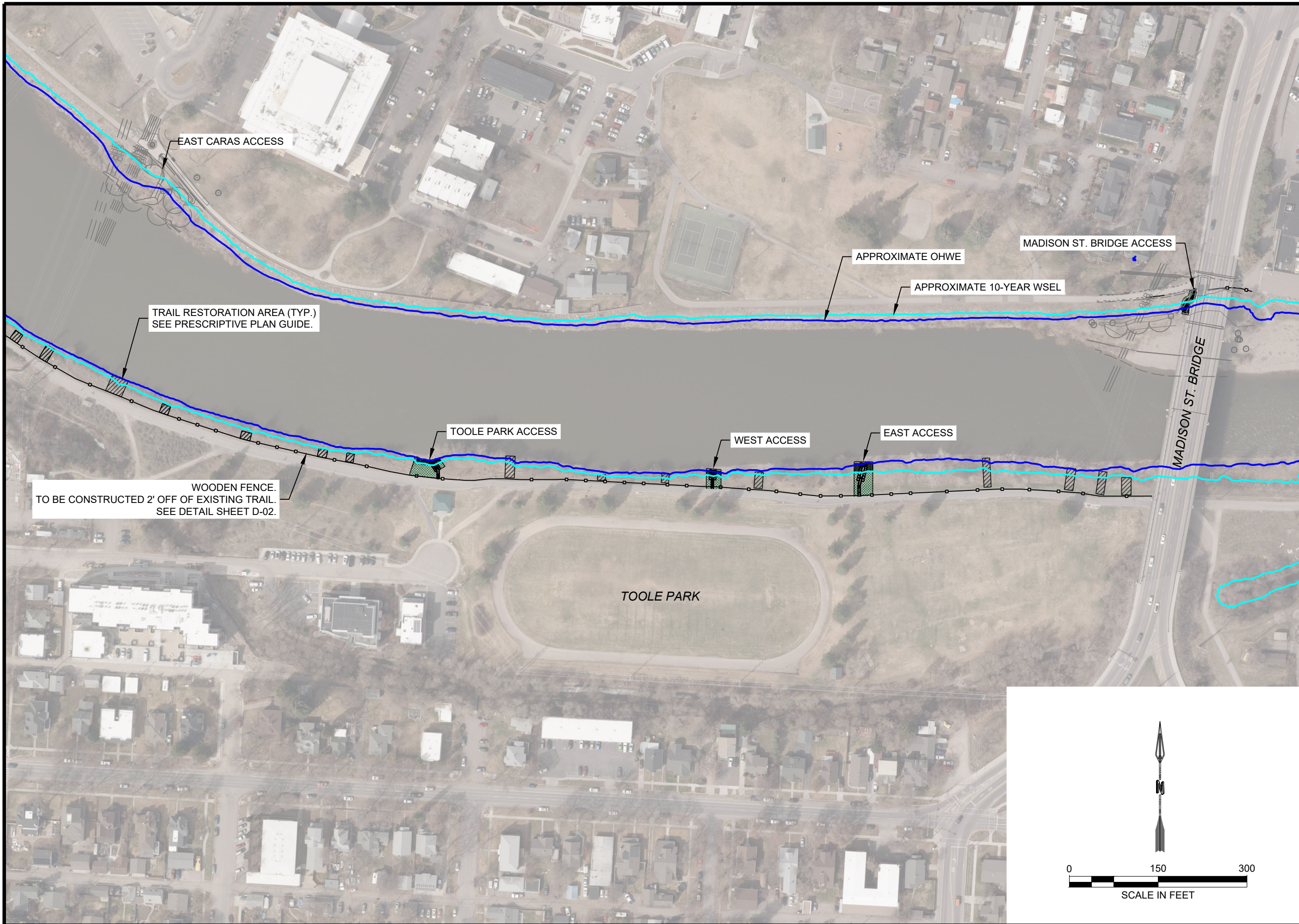
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CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK	
EXISTING CONDITIONS - SOUTH BANK	
SHEET NUMBER: <b>EX-01</b> <b>SHEET</b>	



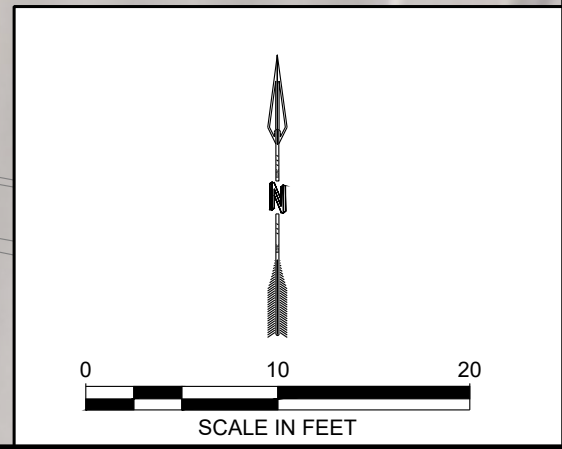
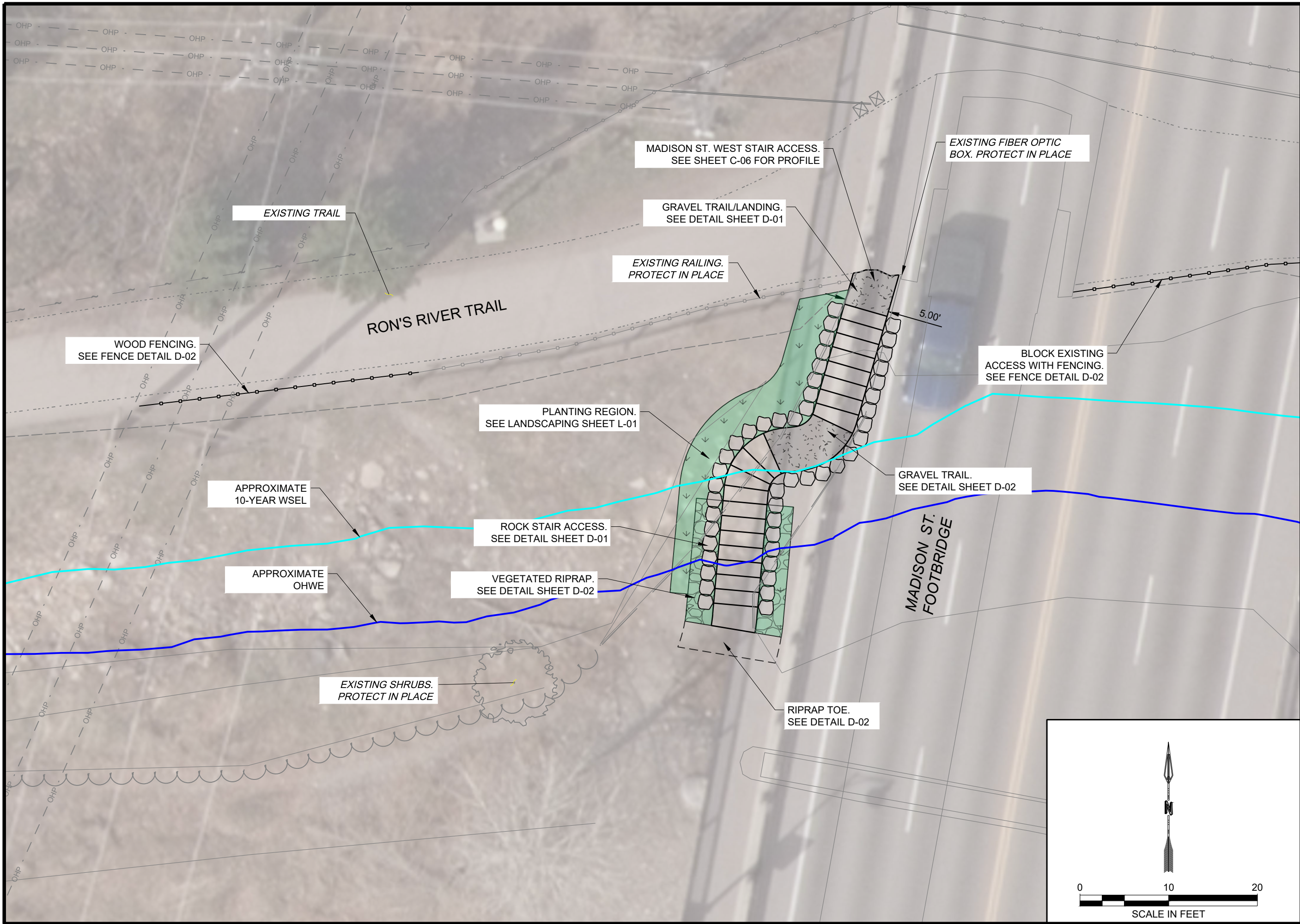
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<b>CLARK FORK RIVER</b> RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK		<b>SITE PLAN - SOUTH</b> BANK	
<b>SHEET NUMBER:</b> <b>C-01</b> <b>SHEET</b>			



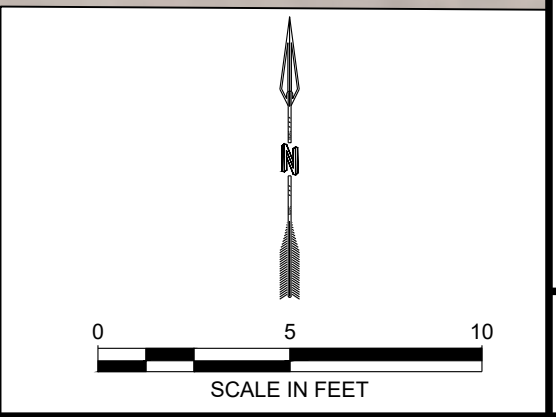
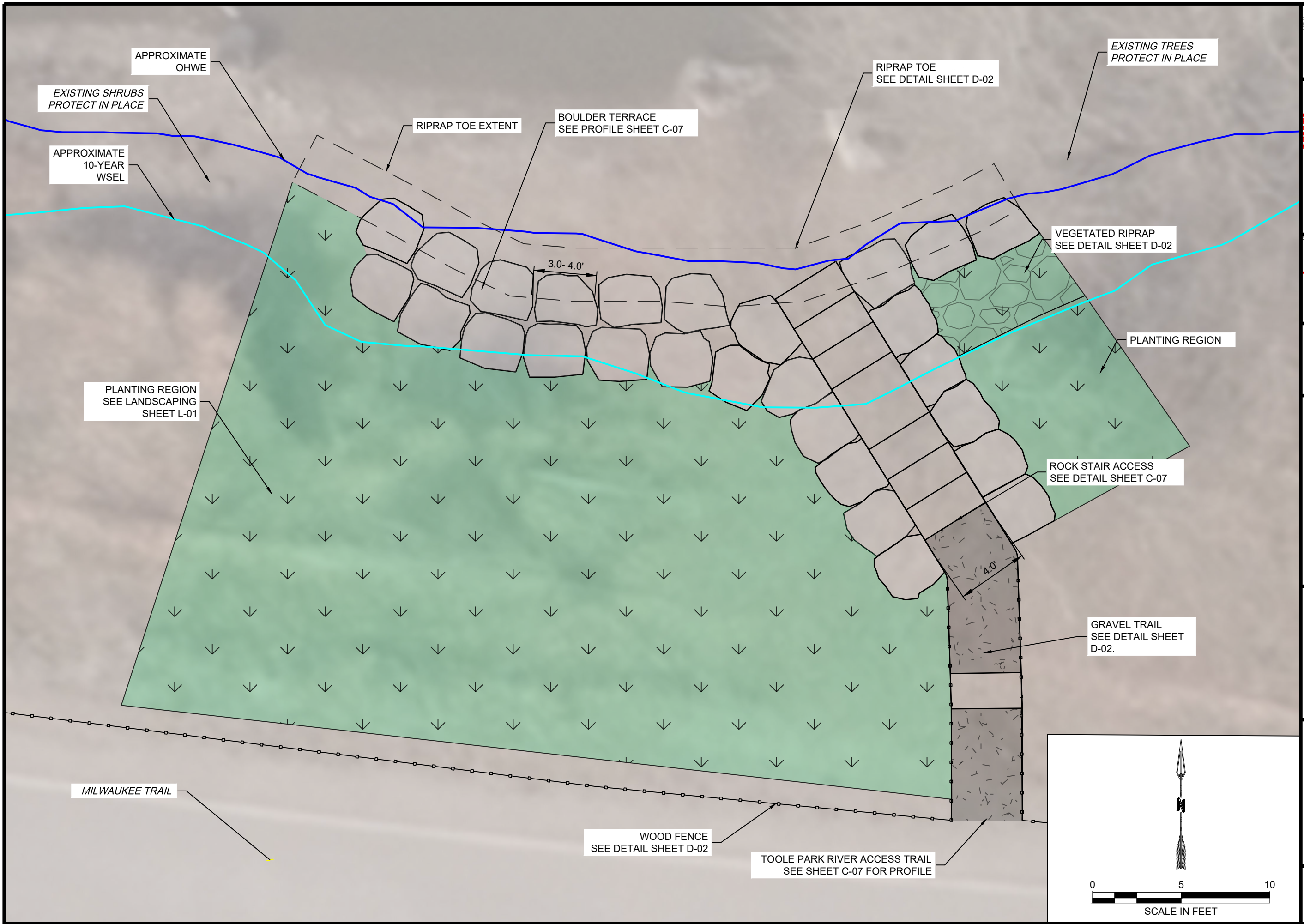
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CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK				
SITE PLAN - MADISON ST. BRIDGE				
SHEET NUMBER: <b>C-02</b> <b>SHEET</b>				



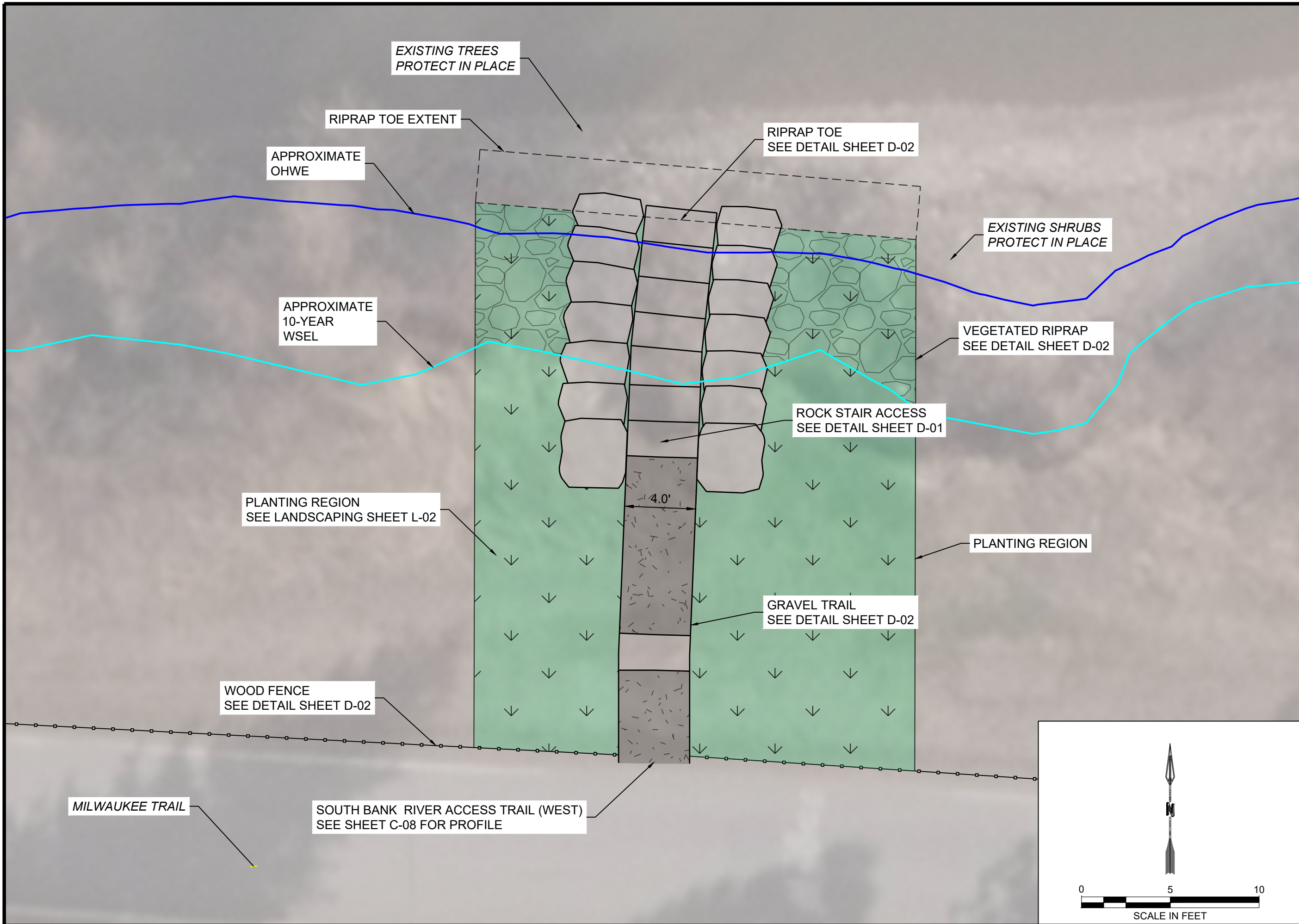
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CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK									
SITE PLAN - TOOLE PARK									
SHEET NUMBER: <b>C-03</b>									
<b>SHEET</b>									



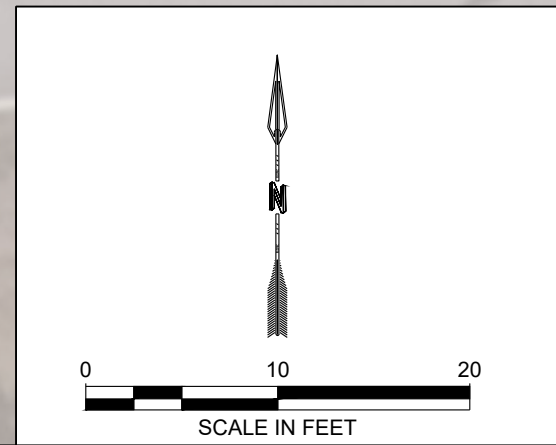
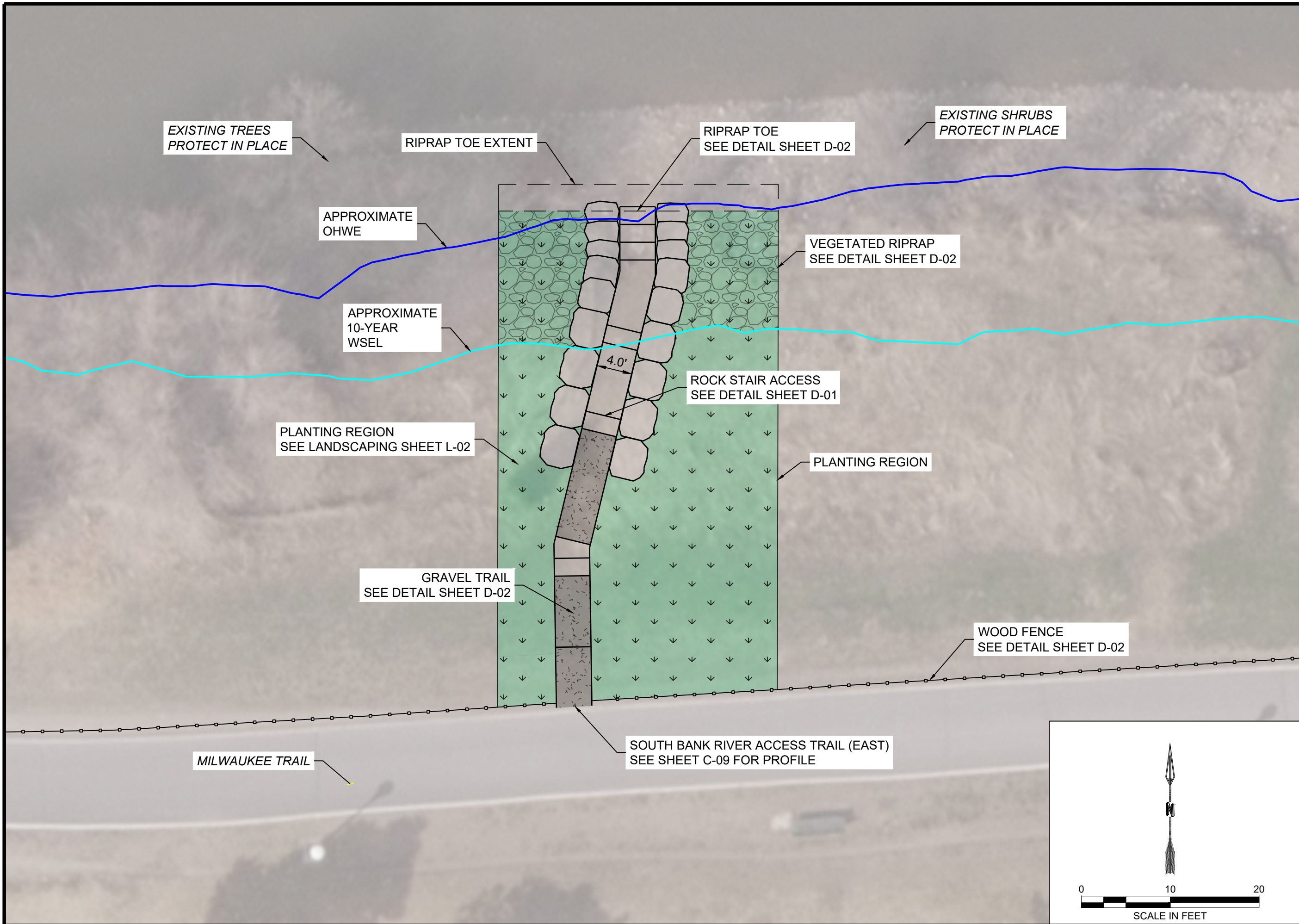
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PLOT DATE: May 22, 2024 2:36 PM, BY: MAAA REDDINGTON



DESIGNED MDH	DRAWN MDH	CHECKED MAR	DATE 03/2024	REVISION
<b>RESPEC</b> WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE 409.884.2525				
<b>STAMP</b> 90% REVIEW				
<b>PRELIMINARY</b> NOT FOR CONSTRUCTION 5/2024				
<b>811</b> Know what's below. Call before you dig.				
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801				
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK				
SITE PLAN - WEST ACCESS				
SHEET NUMBER: <b>C-04</b> <b>SHEET</b>				



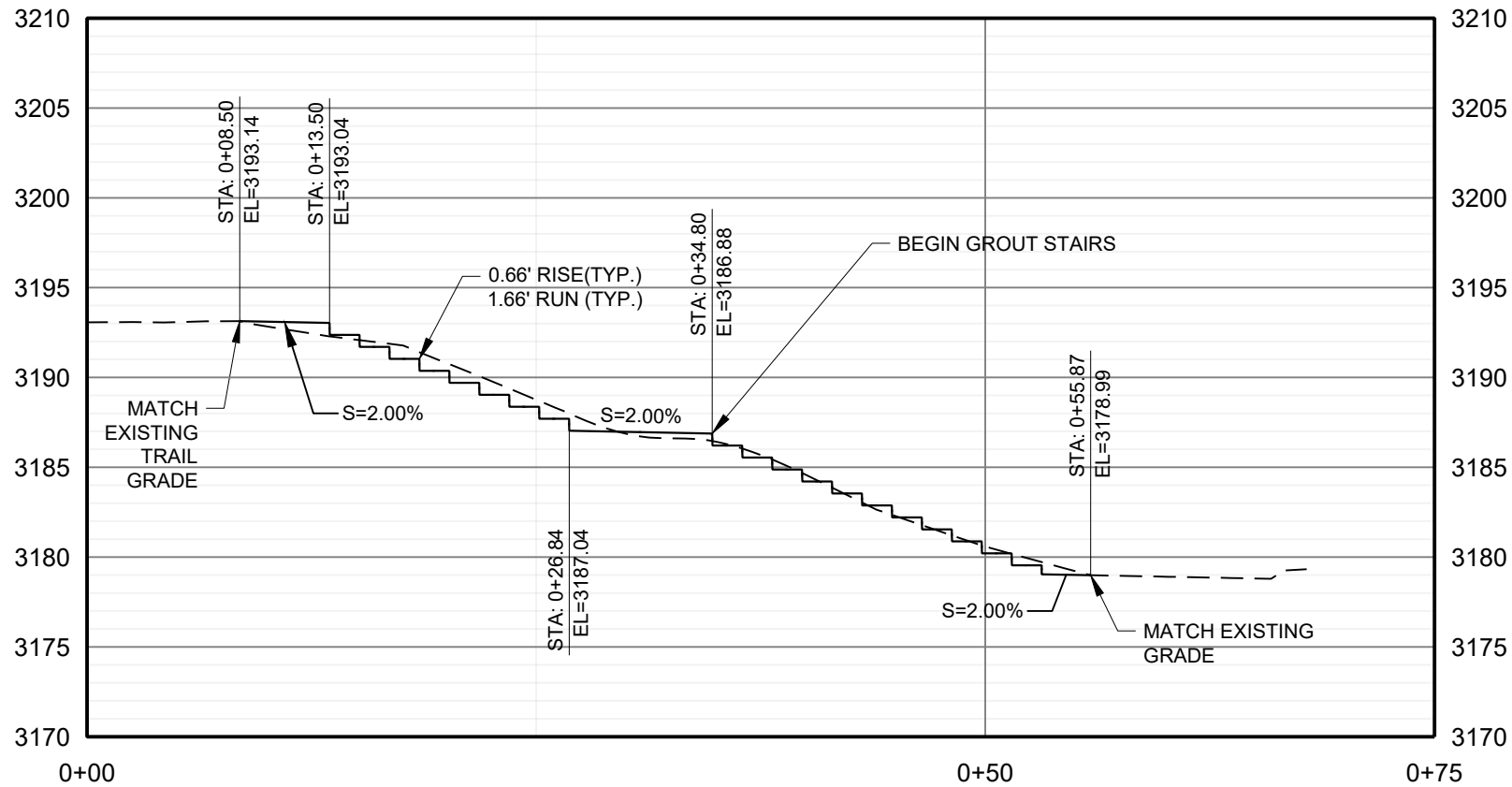
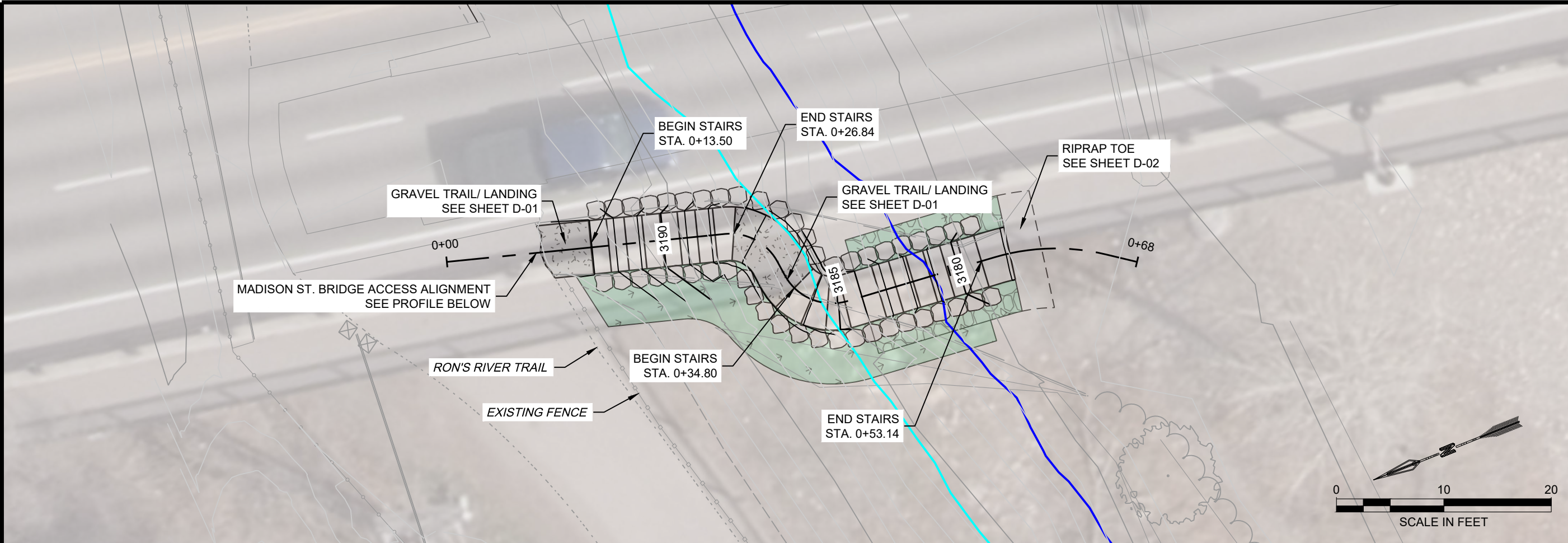
NAME: N:\PROJECTS\W0020 21001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST.\_S\_SITE PLAN.DWG  
PLOT DATE: May 22, 2024 2:37 PM, BY: NANA REDDINGTON



DESIGNED MDH	DRAWN MDH	CHECKED MAR	DATE 03/2024	REVISION	
<b>RESPEC</b> WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE 406.284.2525					
<b>STAMP</b> 90% REVIEW					
<b>PRELIMINARY</b> NOT FOR CONSTRUCTION 5/2024					
<b>811</b> Know what's below. Call before you dig.					
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801					
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK					
SITE PLAN - EAST ACCESS					
SHEET NUMBER: <b>C-05</b> <b>SHEET</b>					



NAME: N:\PROJECTS\W0020\_21001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST.\_S DESIGN PROFILES.DWG  
PLOT DATE: May 22, 2024 2:37 PM, BY: NANA REDDINGTON



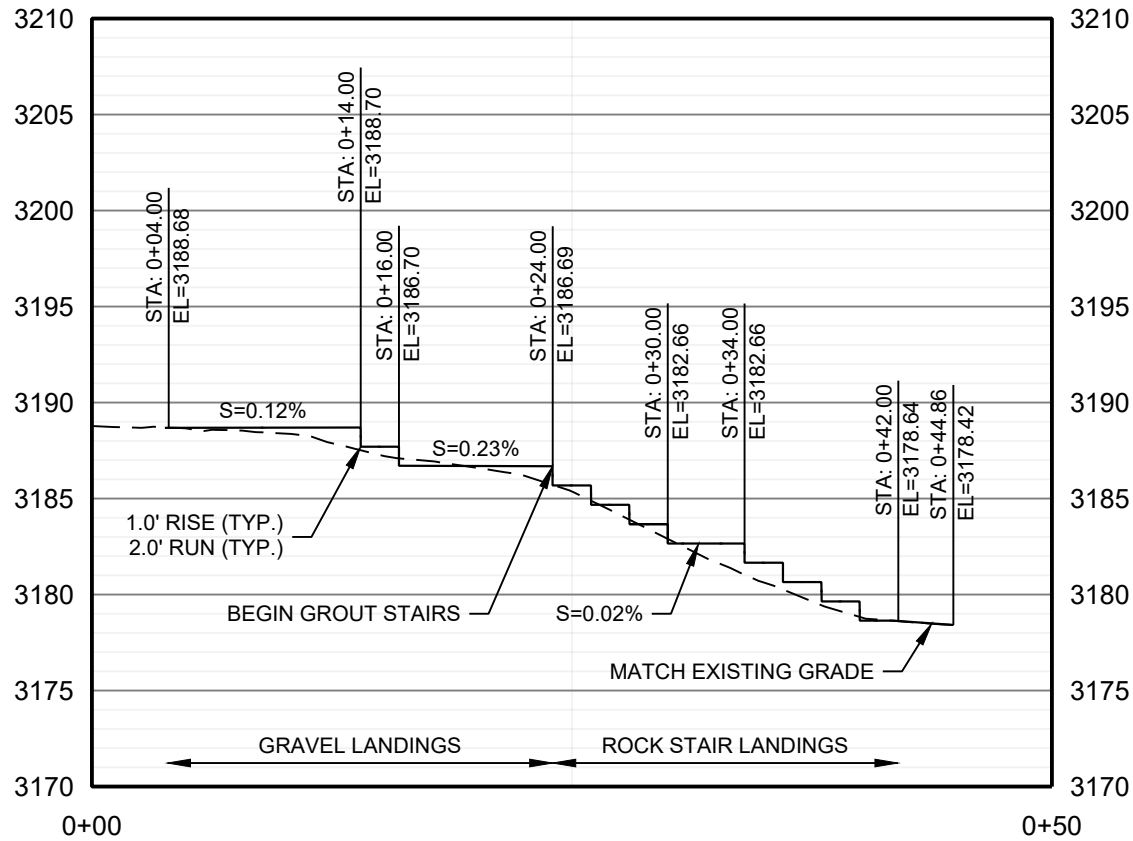
MADISON BRIDGE - STAIR ACCESS PROFILE  
HORIZ. SCALE 1" = 10'  
VERT. SCALE: 1" = 1'

PROPOSED GROUND —————  
EXISTING GROUND - - - - -

DESIGNED				DRAWN				CHECKED				DATE				REVISION			
MDH				MDH				MAR				03/2024							
RESPEC				WATER & NATURAL RESOURCES				3810 VALLEY COMMONS DR SUITE 4				BOZEMAN, MT 59718				WWW.RESPEC.COM PHONE 409.884.2525			
R				RESPEC															
STAMP				90% REVIEW				PRELIMINARY				NOT FOR CONSTRUCTION				5/2024			
811				Know what's below.				Call before you dig.											
CITY OF MISSOULA				PARKS AND RECREATION				DEPARTMENT				600 CREGG LANE				MISSOULA, MT 59801			
CLARK FORK RIVER				RESTORATION AND				ACCESS - MADISON ST.				& TOOLE PARK							
GRADING PLAN -				MADISON ST. BRIDGE															
SHEET NUMBER:				C-06															
				SHEET															

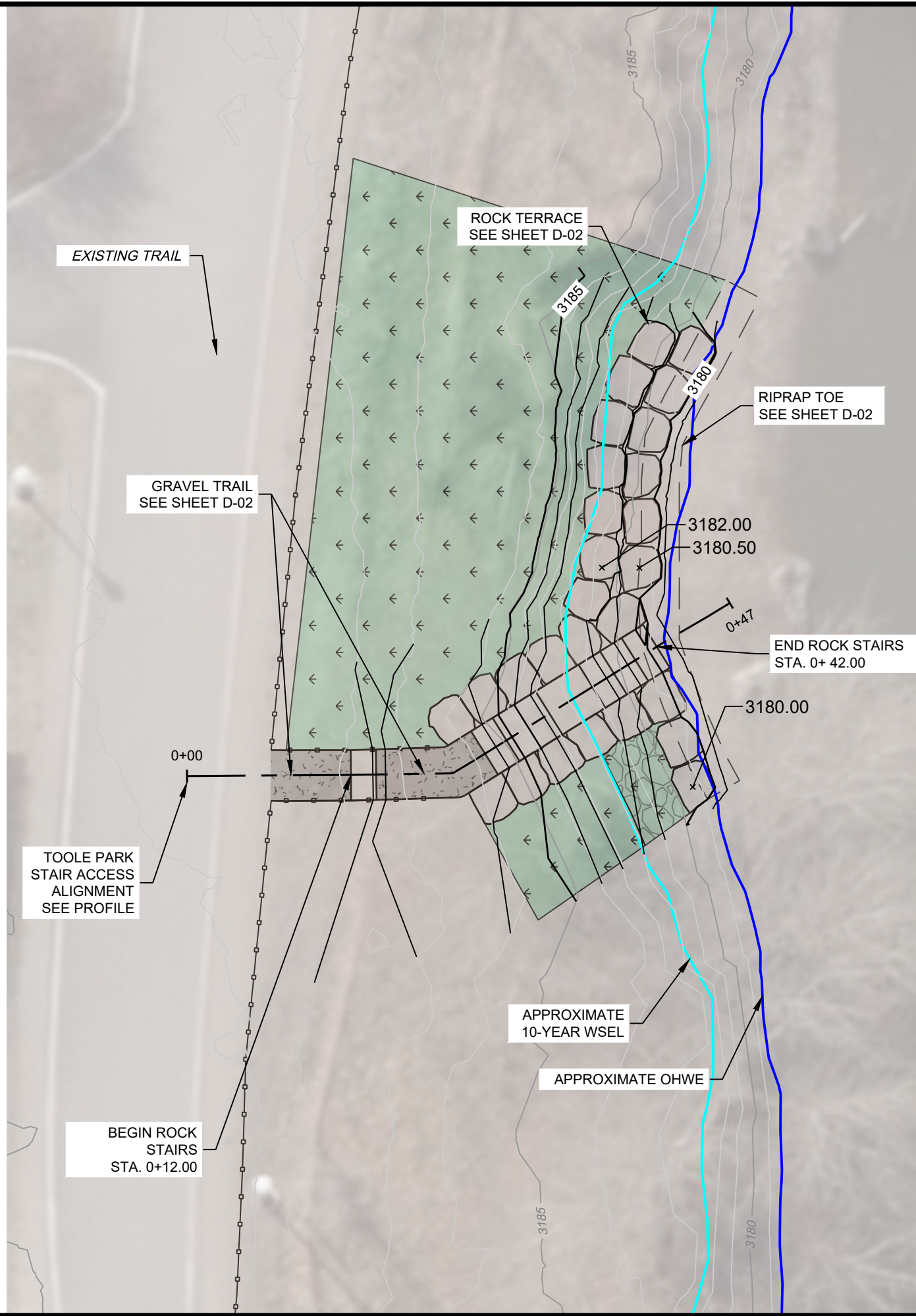
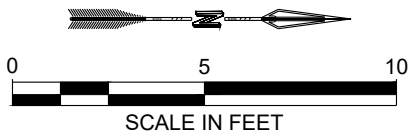


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PLOT DATE: May 22, 2024 2:37 PM, BY: NANA REDDINGTON



TOOLE PARK STAIR ACCESS PROFILE  
HORIZ. SCALE 1" = 10'  
VERT. SCALE: 1" = 1'

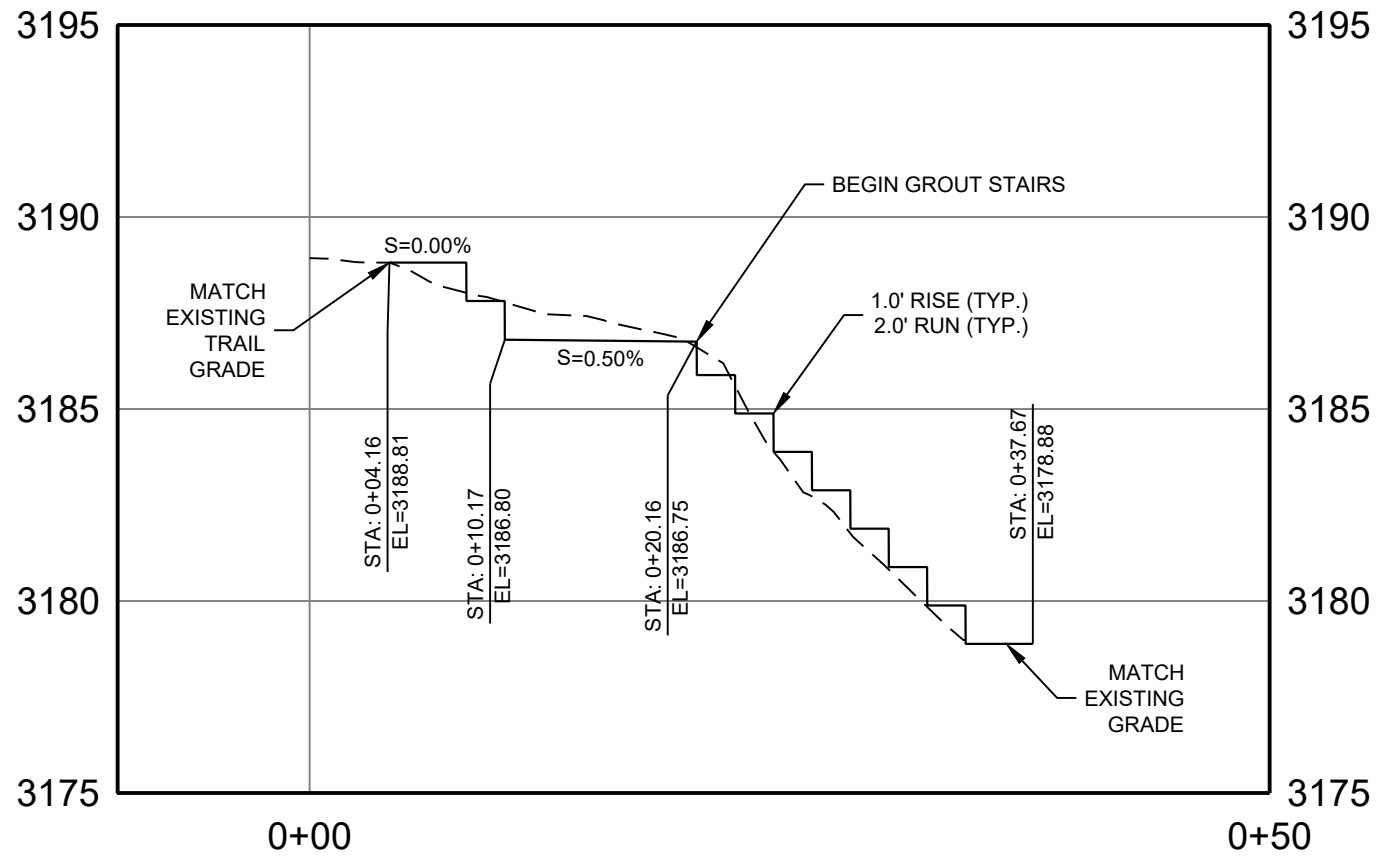
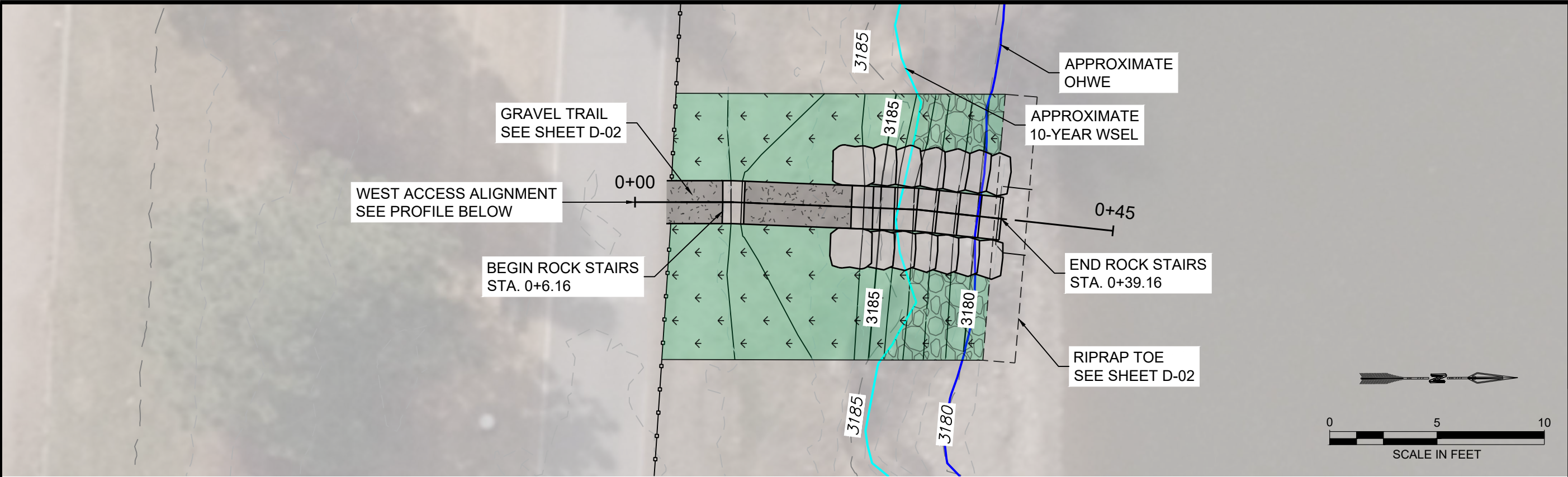
PROPOSED GROUND —————  
EXISTING GROUND - - - - -



DESIGNED MDH	DRAWN MDH	CHECKED MAR	DATE 03/2024	REVISION
<b>RESPEC</b> WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE 409.884.2525				
STAMP 90% REVIEW				
<b>PRELIMINARY</b> NOT FOR CONSTRUCTION 5/2024				
<b>811</b> Know what's below. Call before you dig.				
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801				
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK				
GRADING PLAN - TOOLE PARK				
SHEET NUMBER: <b>C-07</b> <b>SHEET</b>				



NAME: N:\PROJECTS\W020.2\1001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST\_S\_WEST SITE\_GRADING PLAN.DWG  
PLOT DATE: May 22, 2024 2:38 PM BY: MAIA REDDINGTON



WEST ACCESS STAIRS PROFILE  
HORIZ. SCALE: 1" = 10'  
VERT. SCALE: 1" = 5'

PROPOSED GROUND ———  
EXISTING GROUND - - -

DESIGNED MDH	DRAWN MDH	CHECKED MAR	DATE 03/2024	REVISION
RESPEC WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE (406) 284-2525				
STAMP 90% REVIEW				
PRELIMINARY NOT FOR CONSTRUCTION 5/2024				
811 Know what's below. Call before you dig.				
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801				
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK				
GRADING PLAN - WEST ACCESS				
SHEET NUMBER: C-08				
SHEET				

NAME: N:\PROJECTS\W0020.2\1001 - CFR RESTORATION & ACCESS\CAD\SHEETS\ACCESS DESIGN\MADISON ST. SHEET SET\CFR R&A\_MADISON ST\_S\_EAST SITE\_GRADING PLAN.DWG  
PLOT DATE: May 22, 2024 2:38 PM BY: MAIA REDDINGTON

EAST ACCESS ALIGNMENT  
SEE PROFILE BELOW

BEGIN ROCK STAIRS  
STA. 0+7.76

GRAVEL TRAIL  
SEE SHEET D-02

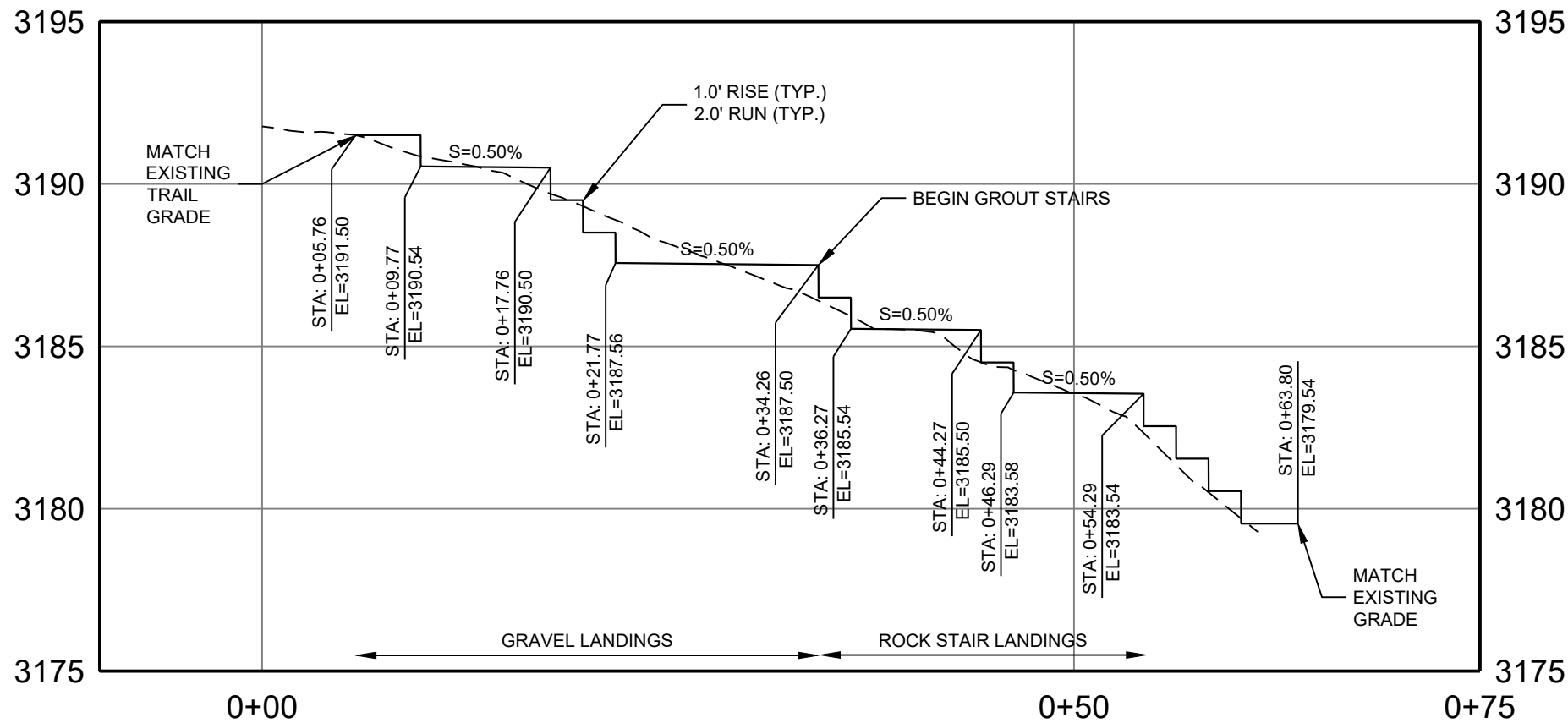
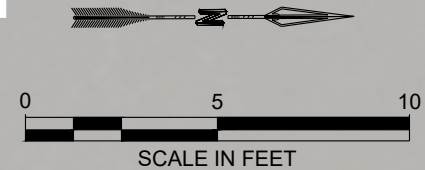
APPROXIMATE  
10-YEAR WSEL

APPROXIMATE  
OHWE

0+70

END ROCK STAIRS  
STA. 0+60.29

RIPRAP TOE  
SEE SHEET D-02



EAST ACCESS STAIRS PROFILE  
HORIZ. SCALE: 1" = 10'  
VERT. SCALE: 1" = 5'

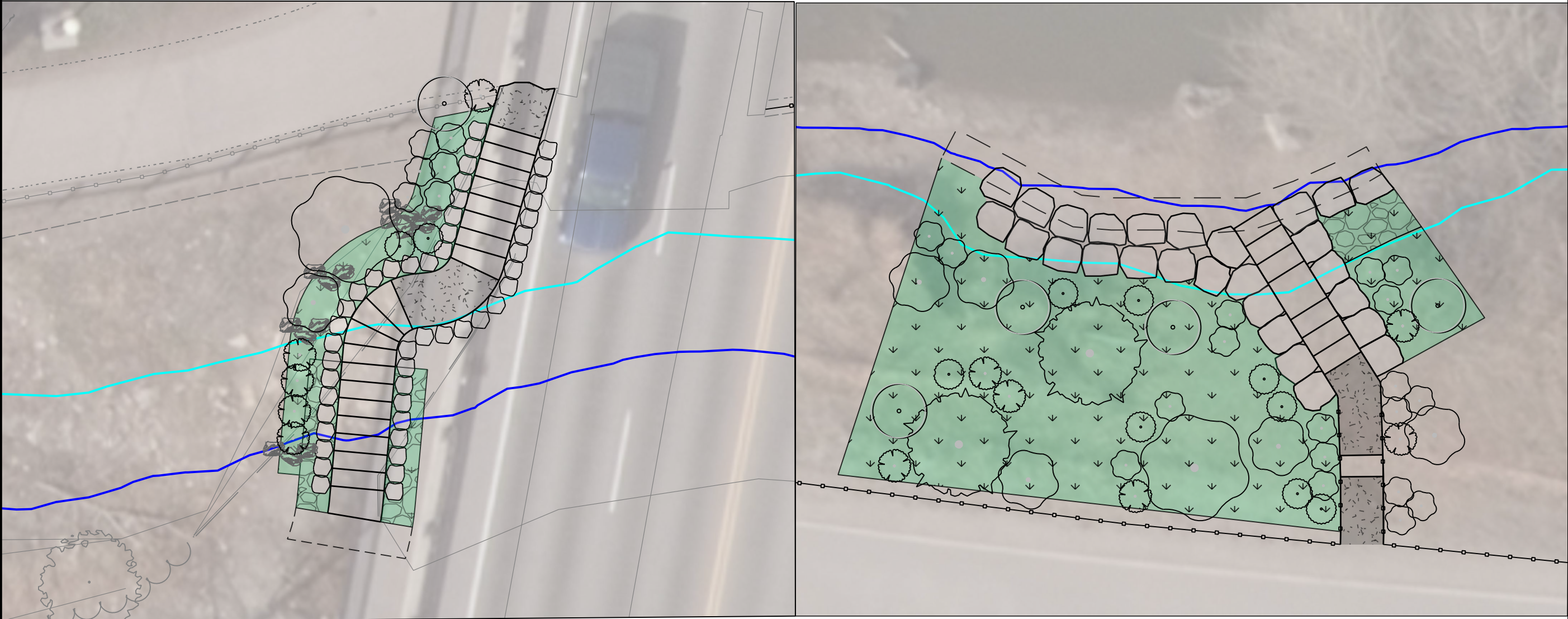
PROPOSED GROUND \_\_\_\_\_  
EXISTING GROUND - - -

DESIGNED MDH	DRAWN MDH	CHECKED MAR	DATE 03/2024	REVISION
<b>RESPEC</b> WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE (406) 284-2525				
<b>PRELIMINARY</b> NOT FOR CONSTRUCTION 5/2024				
<b>811</b> Know what's below. Call before you dig.				
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801				
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK				
GRADING PLAN - EAST ACCESS				
SHEET NUMBER: <b>C-09</b>				
<b>SHEET</b>				

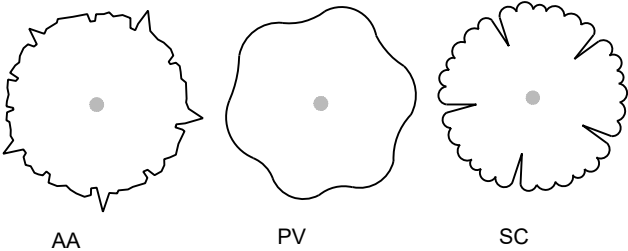


MADISON ST. BRIDGE ACCESS

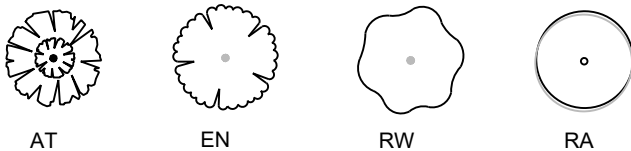
TOOLE PARK ACCESS



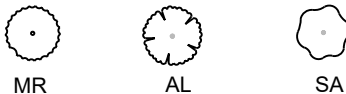
UPLAND LARGE SHRUBS



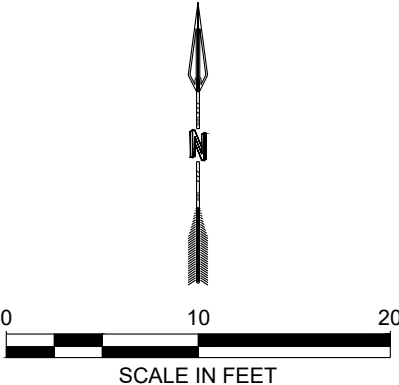
UPLAND MEDIUM SHRUBS



UPLAND SMALL SHRUBS



NOTE:  
ALL UPLAND SMALL SHRUB  
SYMBOLS REPRESENT A CLUSTER  
OF THREE SHRUBS PLANTED 18"  
APART



DESIGNED	MDH
DRAWN	MDH
CHECKED	MAR
DATE	03/2024



STAMP  
90% REVIEW

PRELIMINARY  
NOT FOR CONSTRUCTION  
5/2024



CITY OF MISSOULA  
PARKS AND RECREATION  
DEPARTMENT  
600 CREGG LANE  
MISSOULA, MT 59801

CLARK FORK RIVER  
RESTORATION AND  
ACCESS - MADISON ST.  
& TOOLE PARK

LANDSCAPE PLAN -  
MADISON ST. AND  
TOOLE PARK

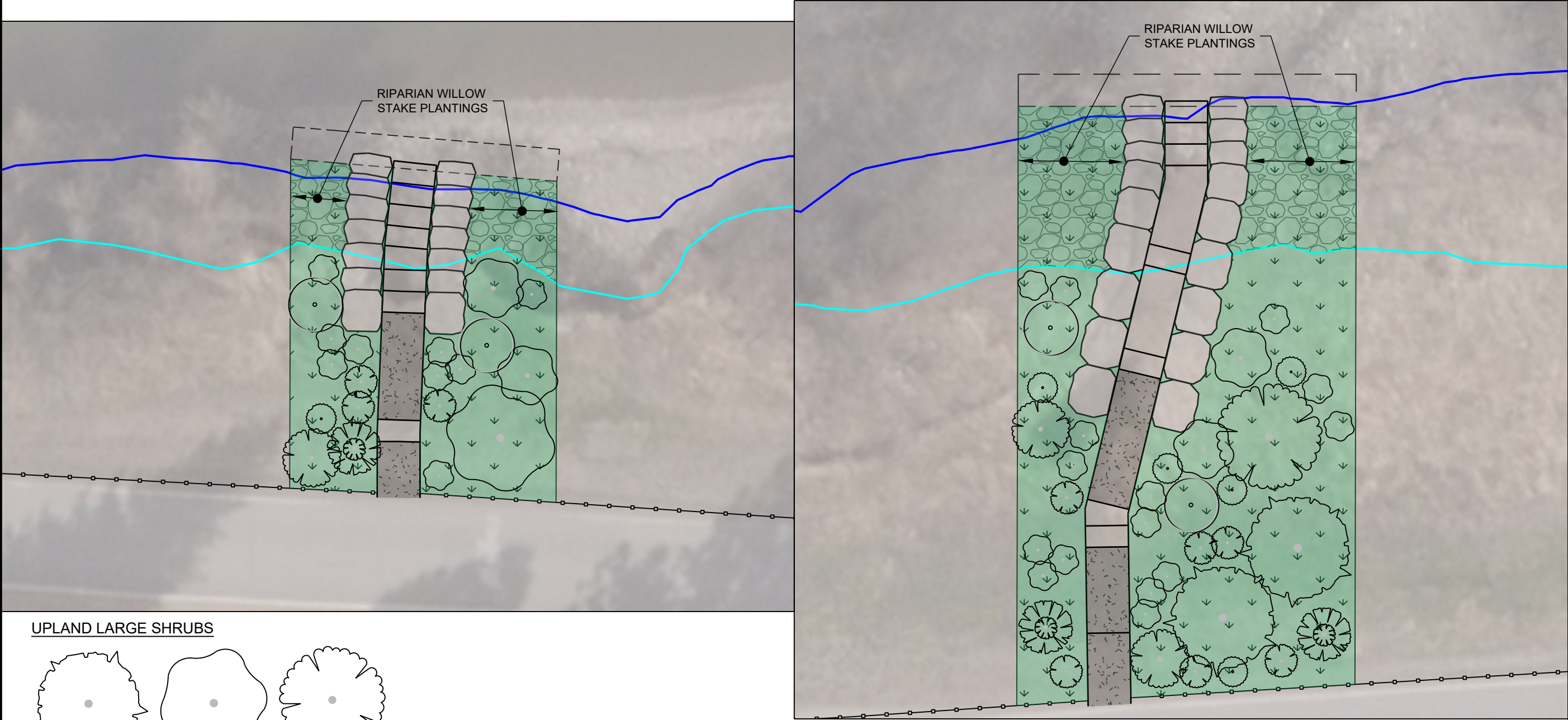
SHEET NUMBER:  
L-01  
SHEET



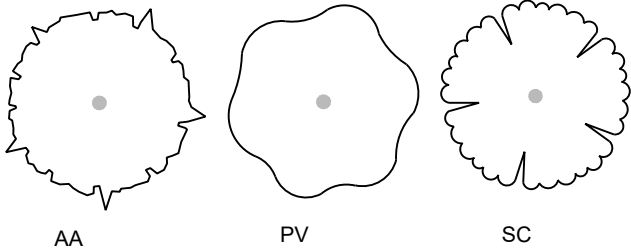
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PLOT DATE: May 22, 2024 2:39 PM BY: MAAA REDDINGTON

WEST ACCESS

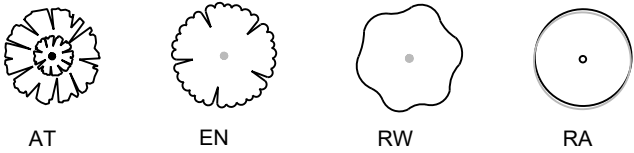
EAST ACCESS



UPLAND LARGE SHRUBS



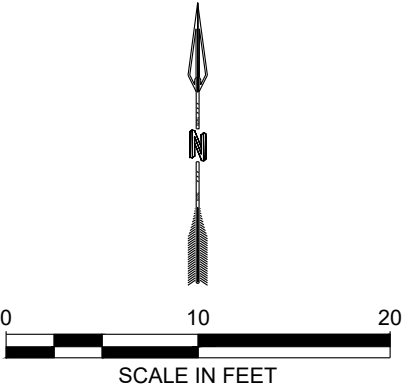
UPLAND MEDIUM SHRUBS



UPLAND SMALL SHRUBS



NOTE:  
ALL UPLAND SMALL SHRUB  
SYMBOLS REPRESENT A CLUSTER  
OF THREE SHRUBS PLANTED 18"  
APART



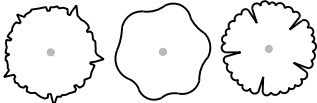
DESIGNED MDH	DRAWN MDH	CHECKED MAR	DATE 03/2024
<b>RESPEC</b> WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE (406) 284-2525			
STAMP 90% REVIEW			
<b>PRELIMINARY</b> NOT FOR CONSTRUCTION 5/2024			
<b>811</b> Know what's below. Call before you dig.			
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801			
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK			
LANDSCAPE PLAN - WEST AND EAST ACCESSES			
SHEET NUMBER: <b>L-02</b> <b>SHEET</b>			

NAME: N:\PROJECTS\W020.2\001 - CFR RESTORATION & ACCESS\CAD\DESIGN\PLANTING\CFR L-XX - MADISON ST. & TOOLE.DWG  
PLOT DATE: May 22, 2024 2:39 PM, BY: MAAA REDDINGTON

UPLAND MEDIUM SHRUBS			UPLAND SMALL SHRUBS			UPLAND LARGE SHRUBS		
*USE LIBERALLY (#5 CONTAINER GROWN AND MULTI-STEM FORM)		QUANTITIES	*USE BETWEEN LARGER SHRUBS (#1 CONTAINER)		QUANTITIES	*USE SPARINGLY TO KEEP SIGHT LINES OPEN (#10 CONTAINER AND MULTI-STEM FORM)		QUANTITIES
ARTEMISIA TRIDENTATA	SILVER SAGEBRUSH (AT)	3	MAHONIA REPENS	CREeping OREGON GRAPE (MR)	48	AMELANCHIER ALNIFOLIA	SERVICEBERRY (AA)	4
ERICAMERIA NAUSEOSA	RUBBER RABBITBRUSH (EN)	3	ARTEMISIA LUDOVICIANA	WHITE SAGE (AL)	60	PRUNUS VIRGINIANA	CHOKECHERRY (PV)	3
ROSA WOODSII	WOODS ROSE (RW)	10	SYMPHORICARPOS ALBUS	COMMON SNOWBERRY (SA)	144	SAMBUCUS CANADENSIS	ELDERBERRY (SC)	1
RIBES AUREUM	GOLDEN CURRENT (RA)	9						

GRASS MIX		UPLAND PERENNIALS		RIPARIAN LARGE SHRUBS	
*SEED IN BETWEEN PLANTINGS (35 LB PER ACRE)		*SEED IN BETWEEN PLANTINGS (10 LB PER ACRE)		*LIVE STAKING @/DIRECTLY ABOVE OHW	
FESTUCA IDAHOENSIS	IDAHO FESCUE (60%)	SOLIDAGO CANADENSIS	GOLDENROD (10%)	CORNUS SERICEA	RED TWIG DOGWOOD
KOELERIA MACRANTHA	PRARIE JUNEGRASS (10%)	GAILLARDIA ARISTATA	BLANKET FLOWER (25%)	SALIX EXIGUA	SANDBAR WILLOW
POA SECUNDA	SANDBERG BLUEGRASS (10%)	ACHILLEA MILLEFOLIUM	WHITE YARROW (25%)		
AGROPYRON SMITH II	WESTERN WHEATGRASS (10%)	PENSTEMON PROCERUS	PENSTEMON (10%)		
PSEUDOROEGNERIA SPICATA	BLUEBUNCH WHEATGRASS (10%)	ARTEMISIA FRIGIDA	FRINGED SAGE (20%)		

UPLAND LARGE SHRUBS



AA PV SC

UPLAND MEDIUM SHRUBS



AT EN RW RA

UPLAND SMALL SHRUBS



MR AL SA

PLANTING NOTES

- ALL PLANTS TO BE WARRANTED 1 YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
- ALL PLANTTS ARE TO BE NATIVE SPECIES. CULTIVATED VARIETIES OR HYBRIDS WILL NOT BE ACCEPTED.
- ENSURE ALL BACK FILL, FINE GRADING, AND ADJACENT HARDSCAPE WORK IS COMPLETE AND REVIEWED BY LANDSCAPE ARCHITECT BEFORE SEEDING OR PLANTING.
- EXCAVATION: WHEN CONDITIONS DETRIMENTAL TO PLANT GROWTH ARE ENCOUNTERED, SUCH AS RUBBLE FILL, ADVERSE DRAINAGE CONDITIONS, OR OBSTRUCTIONS, NOTIFY LANDSCAPE ARCHITECT BEFORE PLANTING.
- COORDINATE INSTALLATION OF PLANTING MATERIALS DURING NORMAL PLANTING SEASONS FOR EACH TYPE OF PLANT MATERIAL REQUIRED.
- ALL PLANTS SHALL BE TRUE TO NAME AND MEET ALL CONDITIONS OF THESE SPECIFICATIONS. ANY PLANT WHICH IS NOT TRUE TO NAME AS INDICATED BY FORM, LEAF, FLOWER, OR FRUITING CHARACTERISTICS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR TO NOTIFY CITY OF MISSOULA PARKS DEPARTMENT TWO WEEKS PRIOR TO PLANT MATERIAL BEING DELIVERED TO THE SITE FOR INSPECTION/APPROVAL.
- TOPSOIL TO MEET SPECIFICATIONS FOUND IN THE PARKS AND RECREATION DESIGN MANUAL. SUBMIT SOURCE INFORMATION AND SAMPLE TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
- MULCH TO BE SHREDDED CEDAR WOOD MULCH. MOUNTAIN WEST PRODUCTS "GORILLA HAIR" IS AN APPROVED SOURCE. MULCH SHALL BE PLACED IN THE FOLLOWING AVERAGE THICKNESS AND FINISH LEVEL WITH ADJACENT FINISH GRADES. MULCH SHALL NOT BE PLACED AGAINST TRUNKS OR STEMS.  
7.1 PLANTING RINGS: 3" DEPTH OF MULCH (FOR PLANTING RINGS, MULCH WITH SPECIFIED DEPTH TO THE DRIPLINE). PLANTING GROUPINGS TO BE MULCHED CONTINUOUSLY. MULCH SHALL BE PULLED BACK TO EXPOSE ROOT FLAIR OF ALL PLANTINGS. PLANT STEMS BURIED WITH MULCH WILL NOT BE ACCEPTED.

9.2 MULCH BACKFILLED SURFACES OF PITS, PLANTED AREAS, NON-IRRIGATED ZONES, AND OTHER AREAS INDICATED.

- CONTRACTOR RESPONSIBLE FOR WATERING AND UPKEEP OF ALL PLANTINGS UNTIL FINAL ACCEPTANCE. ALL PLANTINGS MUST BE WATERED REGULARLY TO ENSURE PROPER ESTABLISHMENT.
- PLANTING LAYOUT IS CONCEPTUAL. FINAL LAYOUT TO BE APPROVED BY ENGINEER OR OWNER ON SITE.
- REFER TO MISSOULA PARKS AND REC DEPT. STANDARD DETAIL PR-101 FOR TREE PLANTING DETAIL, AND PR-103 FOR SHRUB PLANTING DETAIL
- WILLOW STAKES WILL BE PLANTED NEAR THE APPROXIMATE ORDINARY HIGH WATER SURFACE ELEVATION, PER THE TYPICAL SECTION, IN NEWLY GRADED AREAS. 3 STAKES WILL BE PLANTED PER LINEAR FOOT OF BANK TREATMENT. WILLOW STAKES SHALL BE 5'-6' LONG. WILLOW STAKES THAT ARE HARVESTED BY THE CONTRACTOR SHALL BE CUT CLEAN, WITHOUT STRIPPING THE BARK, AT AN ANGLE. WILLOWS SHALL BE SOAKED IN WATER PRIOR TO PLANTING ON-SITE. CONTRACTOR TO PLANT DURING SPRING OR FALL UNLESS OTHERWISE APPROVED BY OWNER OR ENGINEER.

DRYLAND SEED MIX NOTES

- ALL AREAS DISTURBED WITHIN CONSTRUCTION LIMITS, WHERE NOT SPECIFIED TO BE ANOTHER MATERIAL PER PLAN, SHALL BE RE-ESTABLISHED WITH DRYLAND SEED MIX, AS SPECIFIED.
- PROVIDE DOCUMENTATION OF SEED ORIGIN AND PURITY TO LANDSCAPE ARCHITECT PRIOR TO SEEDING.
- SOW SEED MIXES ON DISTURBED AREAS AFTER ALL GRADING ACTIVITIES HAVE BEEN COMPLETED.
- PREPARE SEED BED PRIOR TO SEEDING PER PLANS.
- ACCEPTABLE SEEDING DATES ARE APRIL 15 - JUNE 20 IN THE SPRING, OR SEPTEMBER 20 - OCTOBER 20 IN THE FALL. WRITTEN PERMISSION MUST BE GRANTED BY THE CITY OF MISSOULA TO PERFORM SEEDING OPERATIONS ON ANY OTHER DATES OF THE YEAR.
- USE BROADCAST SEEDING METHOD, RAKE SEED THOROUGHLY INTO TOP ½" OF SEED BED WITH HARD RAKE. SEED MUST BE APPLIED AT THE SPECIFIED RATE.
- DRYLAND GRASS MIX AND WILDFLOWER MIX TO BE SEEDED AT SPECIFIED RATES ACROSS ALL DISTURBED AREAS PER PLANS.
- SEED ESTABLISHMENT PERIOD COMMENCES UPON FINAL ACCEPTANCE AND SHALL CONSIST OF FIRST GROWING SEASON, OR UNTIL A HEALTHY, WELL-ROOTED, VIABLE MEADOW HAS BEEN ESTABLISHED, FREE OF NOXIOUS WEEDS, AND BARE AREAS. CONTRACTOR TO REQUEST A FINAL INSPECTION BY CITY OF MISSOULA TO DETERMINE THE END OF THE SEED ESTABLISHMENT PERIOD.
- MONITOR THE SITE DURING THIS PERIOD TO DETECT AREAS OF WEED COLONIZATION. TREAT ALL NOXIOUS WEEDS (AS CURRENTLY DEFINED BY DEPARTMENT OF AGRICULTURE) WITH HERBICIDE OR MANUAL REMOVAL AS SOON AS DETECTED.
- AFTER INITIAL GERMINATION PREPARE AND RE-SEED ANY BARE SPOTS GREATER THAN 2 SQUARE FEET.
- IF AREAS OF BARE GROUND PERSIST AFTER FIRST GROWING SEASON RESEED PER PLAN.

DESIGNED MDH  
DRAWN MDH  
CHECKED MAR  
DATE 03/2024

RESPEC  
WATER & NATURAL RESOURCES  
3810 VALLEY COMMONS DR SUITE 4  
BOZEMAN, MT 59718  
WWW.RESPEC.COM PHONE (406)844-2525

REVISION

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REVIEW  
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NOT FOR CONSTRUCTION  
5/2024

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Know what's below.  
Call before you dig.

CITY OF MISSOULA  
PARKS AND RECREATION  
DEPARTMENT  
600 CREGG LANE  
MISSOULA, MT 59801

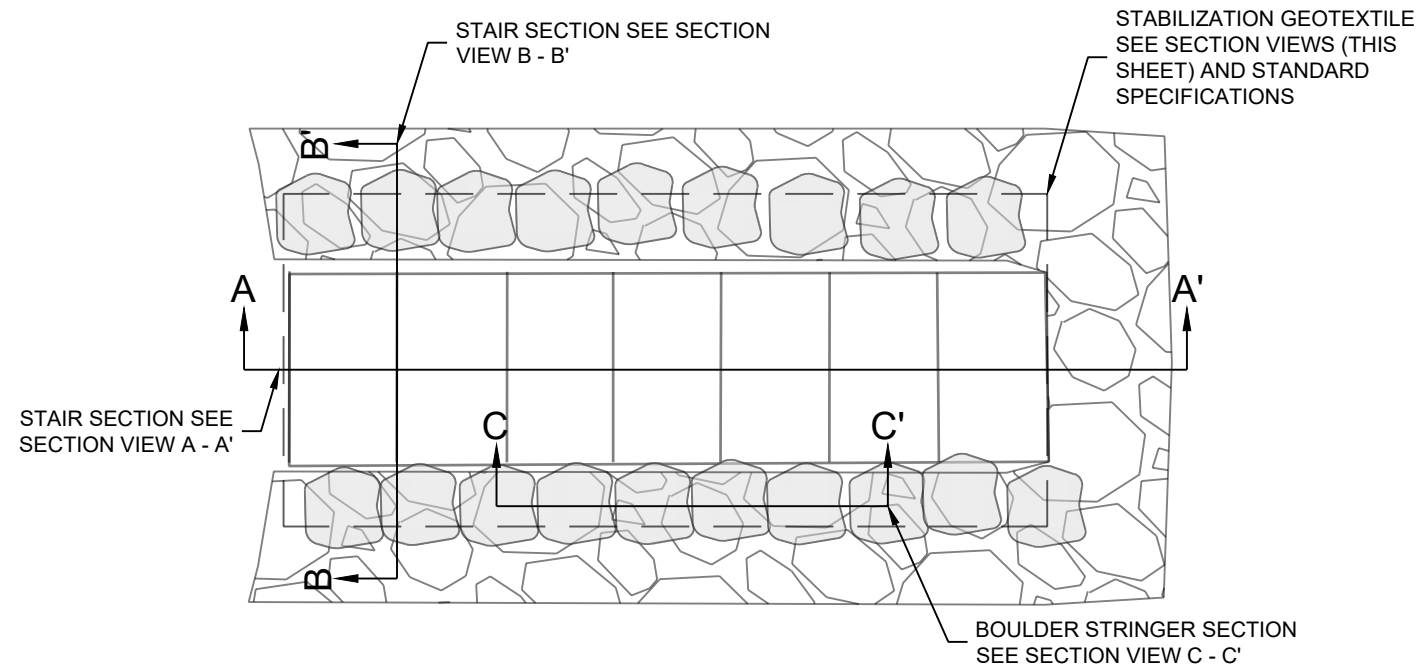
CLARK FORK RIVER  
RESTORATION AND  
ACCESS - MADISON ST.  
& TOOLE PARK

LANDSCAPE PLAN -  
NOTES

SHEET NUMBER:  
L-03  
SHEET

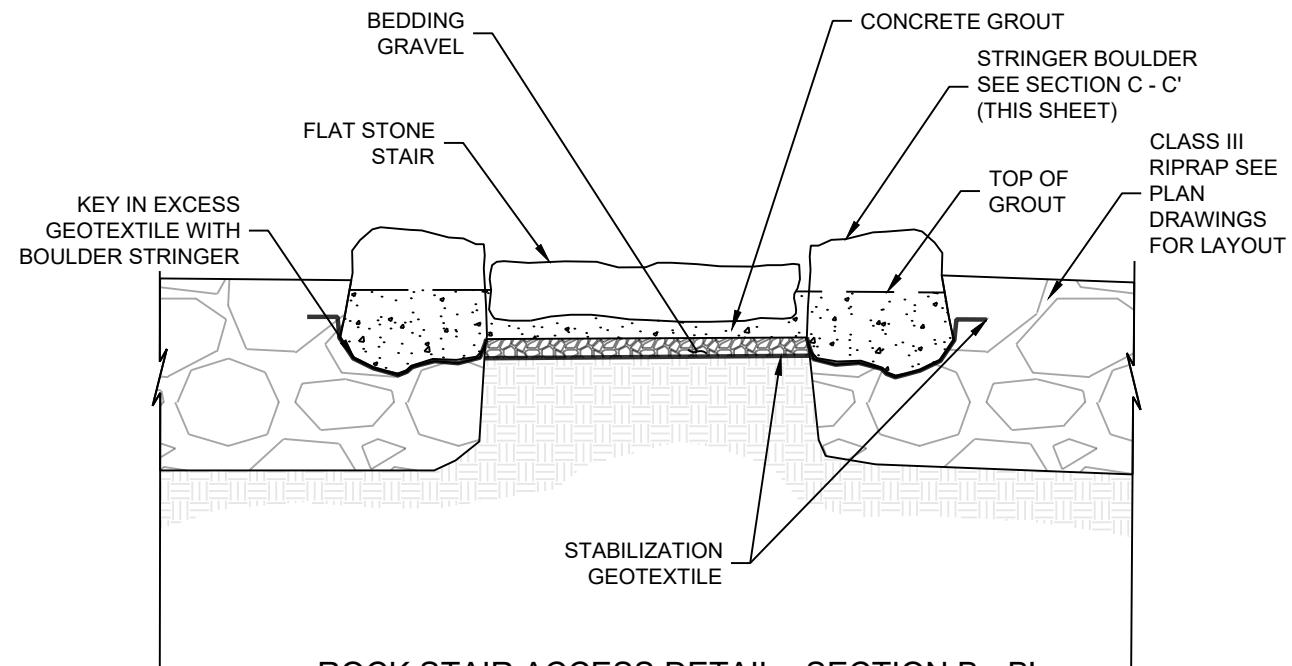


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PLOT DATE: May 22, 2024 2:39 PM, BY: NANA REDDINGTON



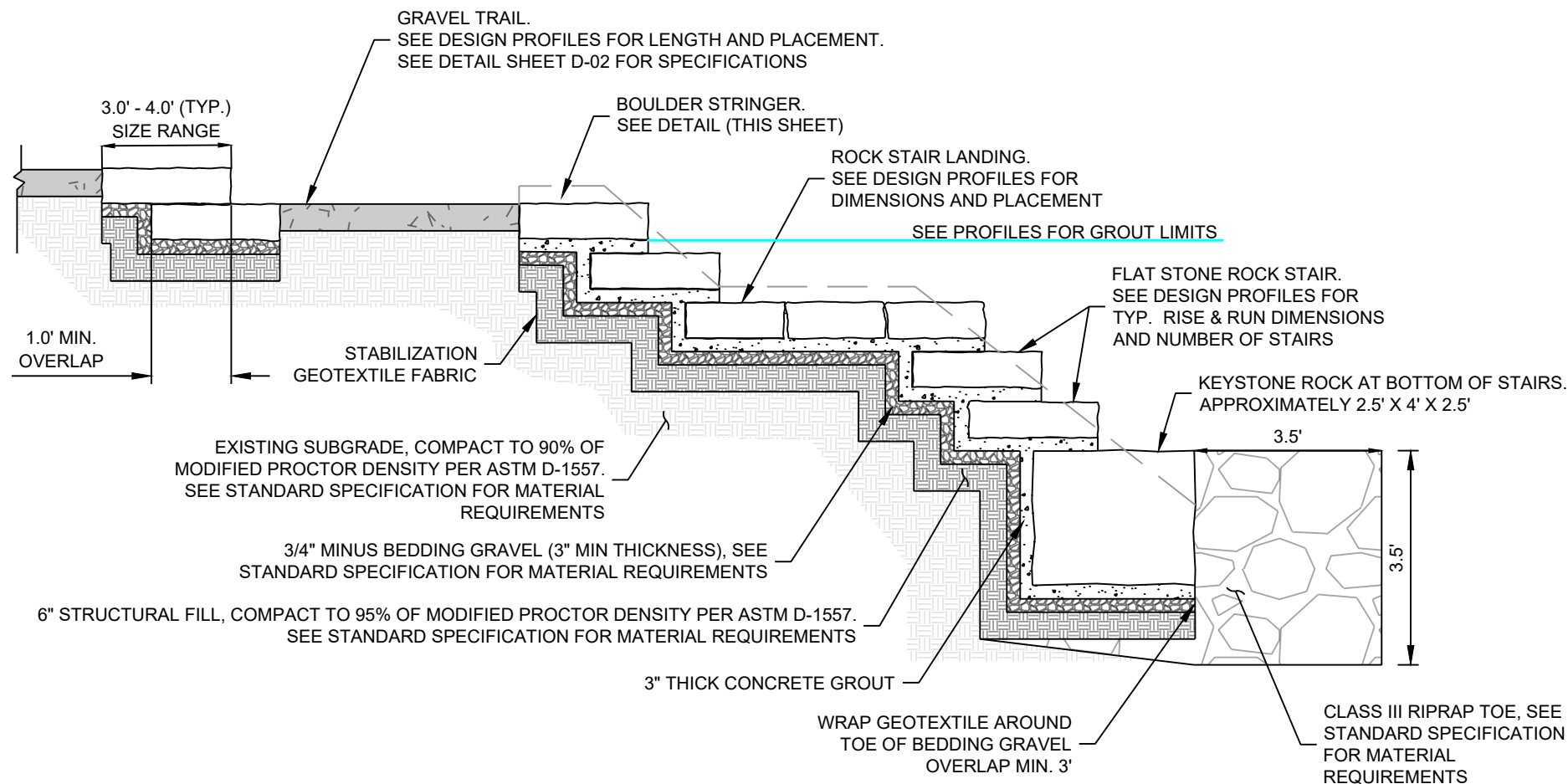
ROCK STAIR ACCESS DETAIL - PLAN VIEW

NOT TO SCALE



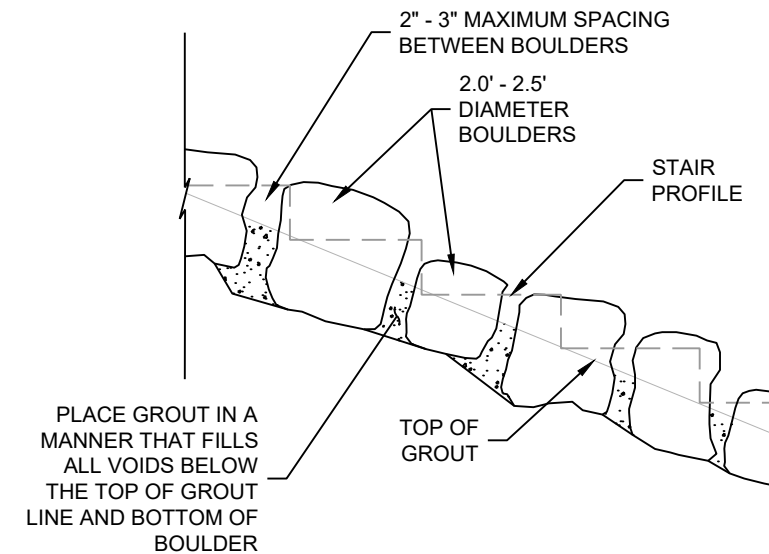
ROCK STAIR ACCESS DETAIL - SECTION B - B'

NOT TO SCALE



ROCK STAIR ACCESS DETAIL - SECTION A-A'

NOT TO SCALE



BOULDER STRINGER DETAIL - SECTION C-C'

NOT TO SCALE

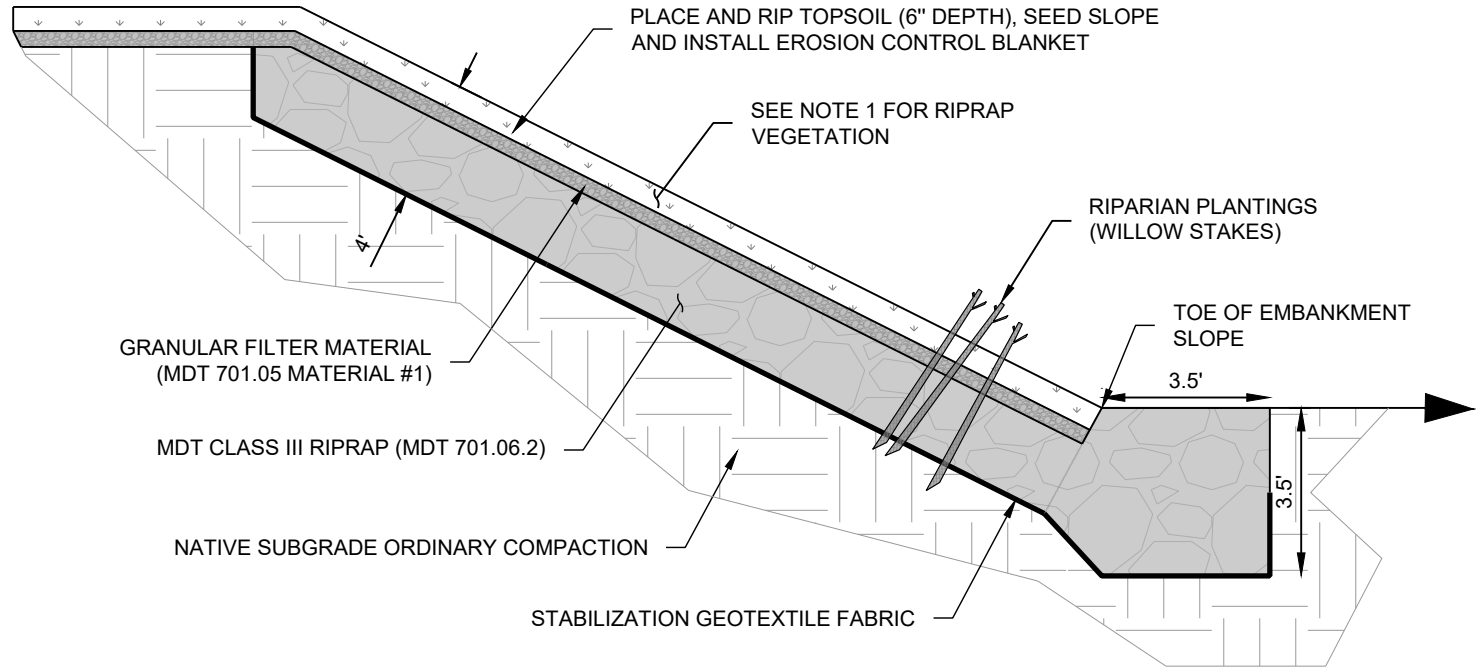
NOTES

- STONE DIMENSIONS ARE SUBJECT TO SUPPLIER AVAILABILITY. CONTRACTOR WILL COORDINATE WITH ENGINEER OR PARKS PROJECT MANAGER ON STONE SELECTION AND PLACEMENT IN ACCORDANCE WITH PROPOSED ROCK SPECIFICATIONS.
- SURFACES ADJACENT TO THE "BOULDER STRINGER" WILL BE GRADED TO CREATE A SMOOTH TRANSITION UPSTREAM AND DOWNSTREAM OF STAIR ACCESSES.
- PRIOR TO PLACEMENT OF FILL AND/OR GRAVEL SECTION MATERIALS, THE EXPOSED SUBGRADE SOILS WILL BE PROOF-ROLLED TO VERIFY THAT STABLE SUBGRADE CONDITIONS EXIST. ANY LOOSE, SOFT, DISTURBED, OR OTHERWISE UNSUITABLE MATERIALS WILL BE OVER EXCAVATED AND REPLACED WITH STRUCTURAL FILL.
- SEE STANDARD SPECIFICATIONS FOR ALL MATERIAL REQUIREMENTS.

REVISION			
DESIGNED	MDH	DRAWN	MDH
CHECKED	MDH	CHECKED	MDH
DATE	03/2024	DATE	03/2024
RESPEC WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE 409.884.2525			
STAMP 90% REVIEW			
PRELIMINARY NOT FOR CONSTRUCTION 5/2024			
811 Know what's below. Call before you dig.			
CITY OF MISSOULA PARKS AND RECREATION DEPARTMENT 600 CREGG LANE MISSOULA, MT 59801			
CLARK FORK RIVER RESTORATION AND ACCESS - MADISON ST. & TOOLE PARK			
DETAILS			
SHEET NUMBER: D-01			
SHEET			



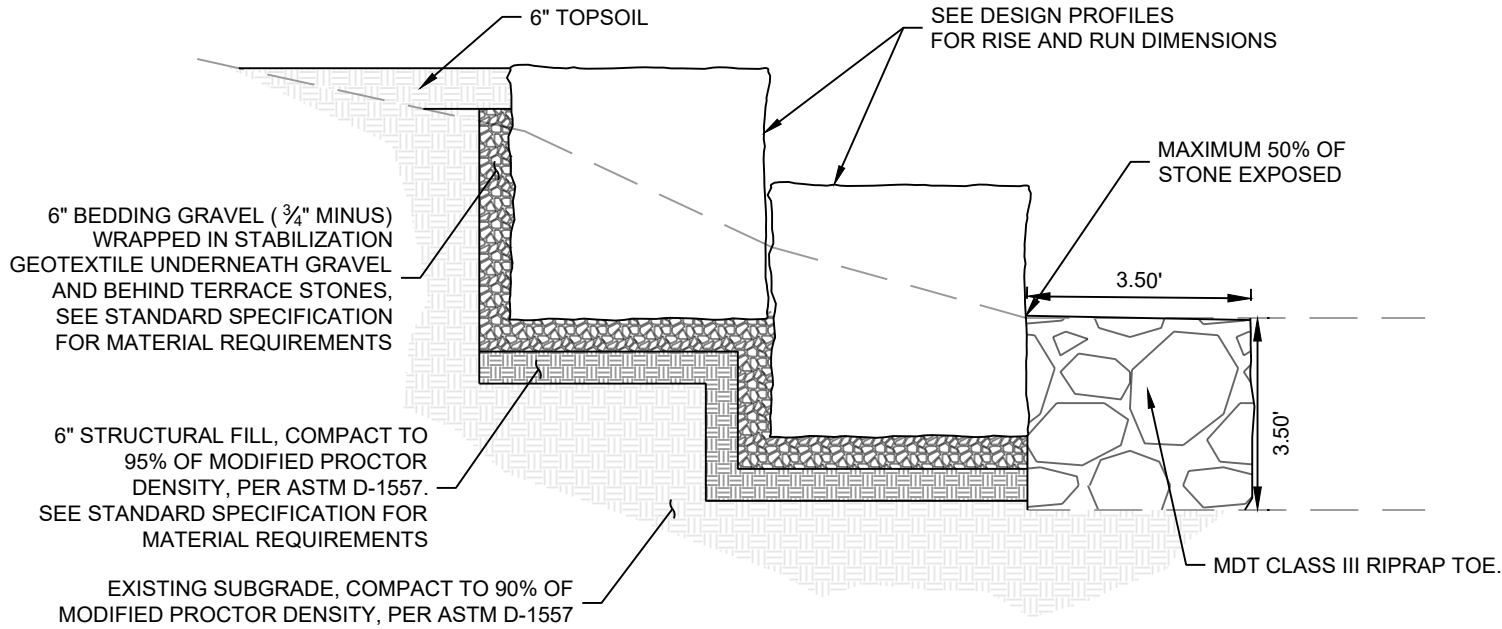
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PLOT DATE: May 22, 2024 2:39 PM. BY: NANA REDDINGTON



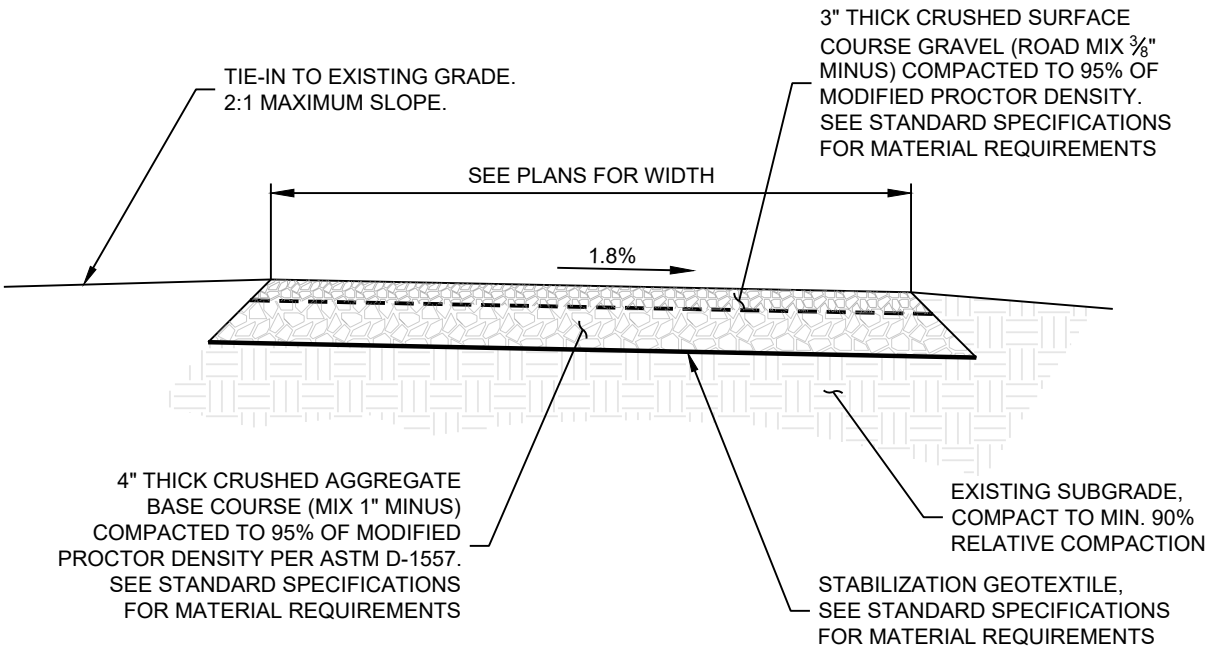
**NOTE:**

1. RIPRAP REVEGETATION: THIS WORK IS THE CONSTRUCTION REQUIREMENTS FOR REVEGETATION MATERIAL ON RIPRAP SURFACES ABOVE ORDINARY HIGH WATER MARK ELEVATION. CONSTRUCTION REQUIREMENTS ARE TO FILL THE SPACES AND VOIDS BETWEEN THE ROCKS WITH GRANULAR FILTER MATERIAL AND TOPSOIL FOLLOWING PLACEMENT OF RIPRAP, OR AT INTERVALS APPROPRIATE FOR THE SIZE AND CONFIGURATION OF THE INSTALLATION. ACCEPTABLE TOPSOIL TO MATCH MISSOULA PARKS AND RECREATION DESIGN MANUAL SECTION 4 IMPORTED TOPSOIL REQUIREMENTS. CONTRACTOR TO PLACE A SUFFICIENT AMOUNT OF GRANULAR FILTER MATERIAL OVER THE RIPRAP, SO THAT AFTER SETTLING, THE LEVEL OF GRANULAR FILTER MATERIAL COMES TO THE VERY TOP OF THE ROCK. PLACE THE TOPSOIL TO A 6-INCH DEPTH OVER THE GRANULAR FILTER MATERIAL. PLACE MATERIAL IN A MANNER THAT CREATES A SMOOTH, UNIFORM SURFACE FOR SEEDING AND PLACEMENT OF THE EROSION CONTROL BLANKET/MULCH. CONTRACTOR TO HAND BROADCAST SEED THE SOIL IMMEDIATELY AFTER PLACEMENT, REGARDLESS OF TIME OF YEAR, WITH THE SEED MIXTURE AND RATES SPECIFIED BY THE ENGINEER. SCARIFY THE SOIL IMMEDIATELY PRIOR TO AND FOLLOWING SEEDING TO INCORPORATE SEED TO A DEPTH OF ½ INCH INTO THE SOIL.

**VEGETATED RIPRAP DETAIL - SECTION VIEW**  
NOT TO SCALE

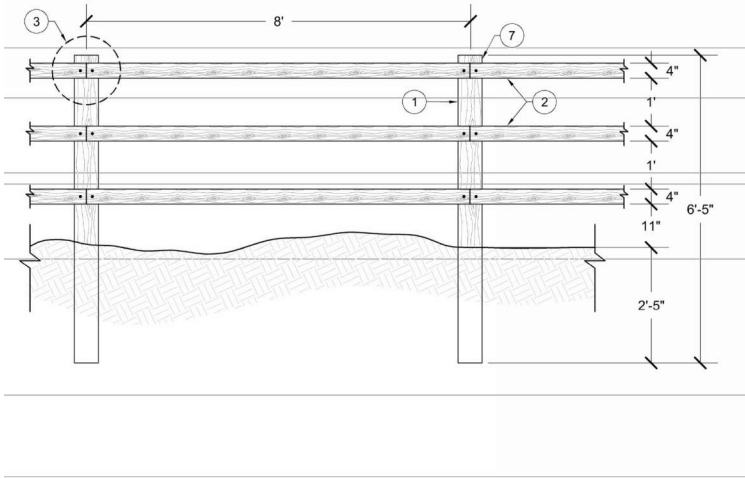


**STONE TERRACE DETAIL - SECTION VIEW**  
NOT TO SCALE



**GRAVEL TRAIL DETAIL - SECTION VIEW**  
NOT TO SCALE

- KEY NOTES:**
- 6" DIAMETER TREATED WOOD POST
  - SMOOTH 4" DIAMETER TREATED WOOD RAILS (OUTSIDE FENCE)
  - REFERENCE BEVEL DETAIL
  - 1" MORTISE
  - 22.5 DEGREE CHAMFER TO THE INSIDE OF FENCE. FINISH CHAMFER WITH ¼" ROUNDED EDGE.
  - EXTERIOR ⅝" X 6" STAR DRIVE LAG SCREW OR APPROVED EQUAL
  - TOP OF TOP RAIL - 2" BELOW TOP OF POST



**WOODEN FENCE DETAIL - SECTION VIEW**  
NOT TO SCALE

DESIGNED		DRAWN		CHECKED		DATE		REVISION	
MDH	MDH	MDH	MDH	MDH	MDH	MDH	MDH		
<b>RESPEC</b> WATER & NATURAL RESOURCES 3810 VALLEY COMMONS DR SUITE 4 BOZEMAN, MT 59718 WWW.RESPEC.COM PHONE 409.884.2525									
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DETAILS									
SHEET NUMBER: <b>D-02</b>									
<b>SHEET</b>									