

WALNUT GROVE - BIKE PARK

MADISON, WISCONSIN

APRIL 8TH, 2022



P.O. Box 20280
Boulder, CO 80308
303.545.9011
www.IMBA.com

OWNER

City of Madison, WI
Parks and Recreation
Contact: Corey Stelljes
CStelljes@cityofmadison.com

CONSULTANTS

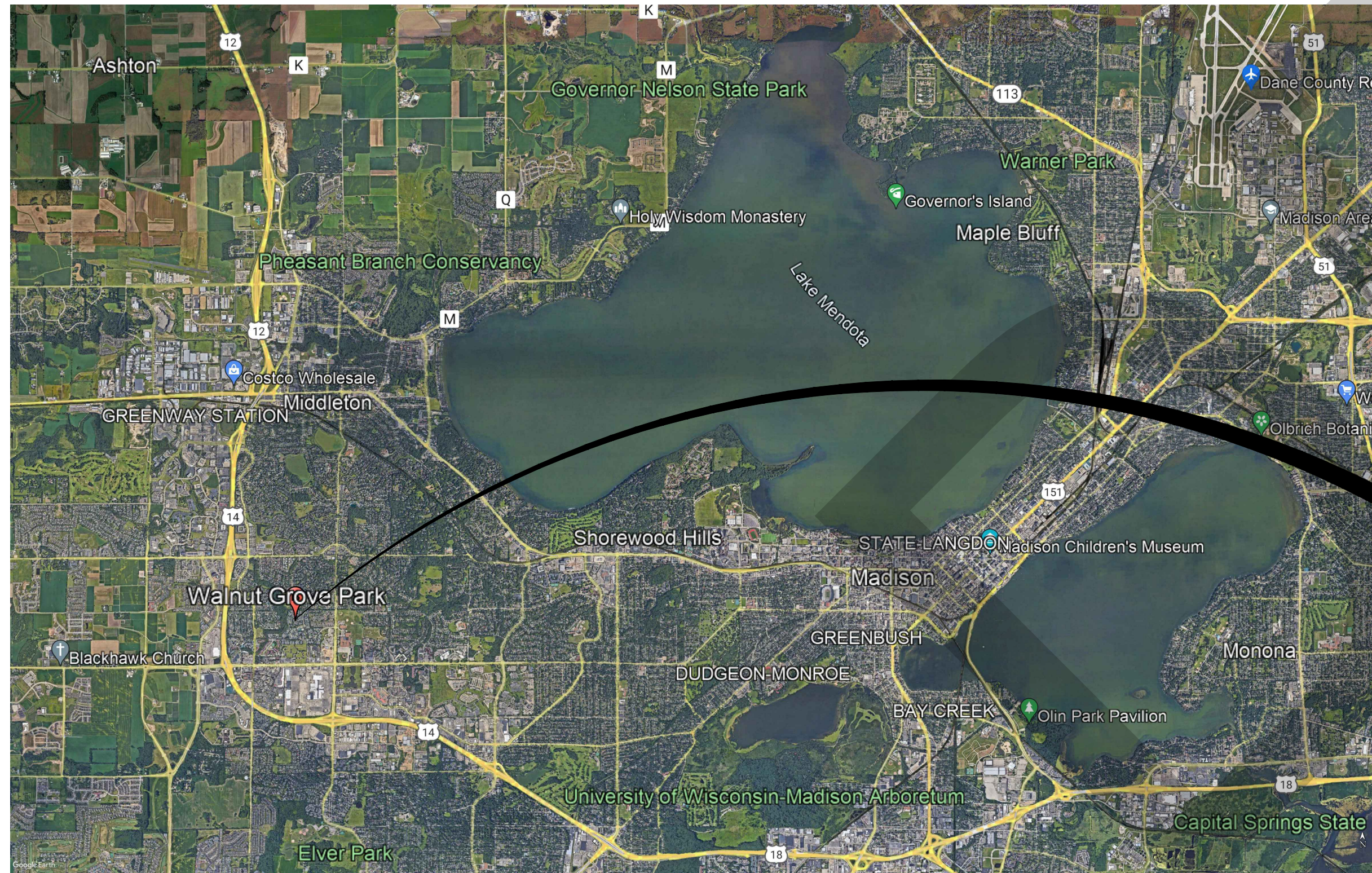
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SUBMITTALS

Concept Documents



PROJECT LOCATION:

VICINITY MAP - MADISON, WI

NOT TO SCALE

PROJECT: WALNUT GROVE
MADISON, WI
SHEET TITLE: COVER PAGE

PROJECT:

SHEET TITLE:

PROJECT No: CMPR2101
ORIGIN DATE: 4.08.2021
DRAWN BY: TJH/RMH
CHECKED BY: MR

ISSUED FOR:

No.	DATE	COMMENT
A	4/8/22	BID DOCUMENTS

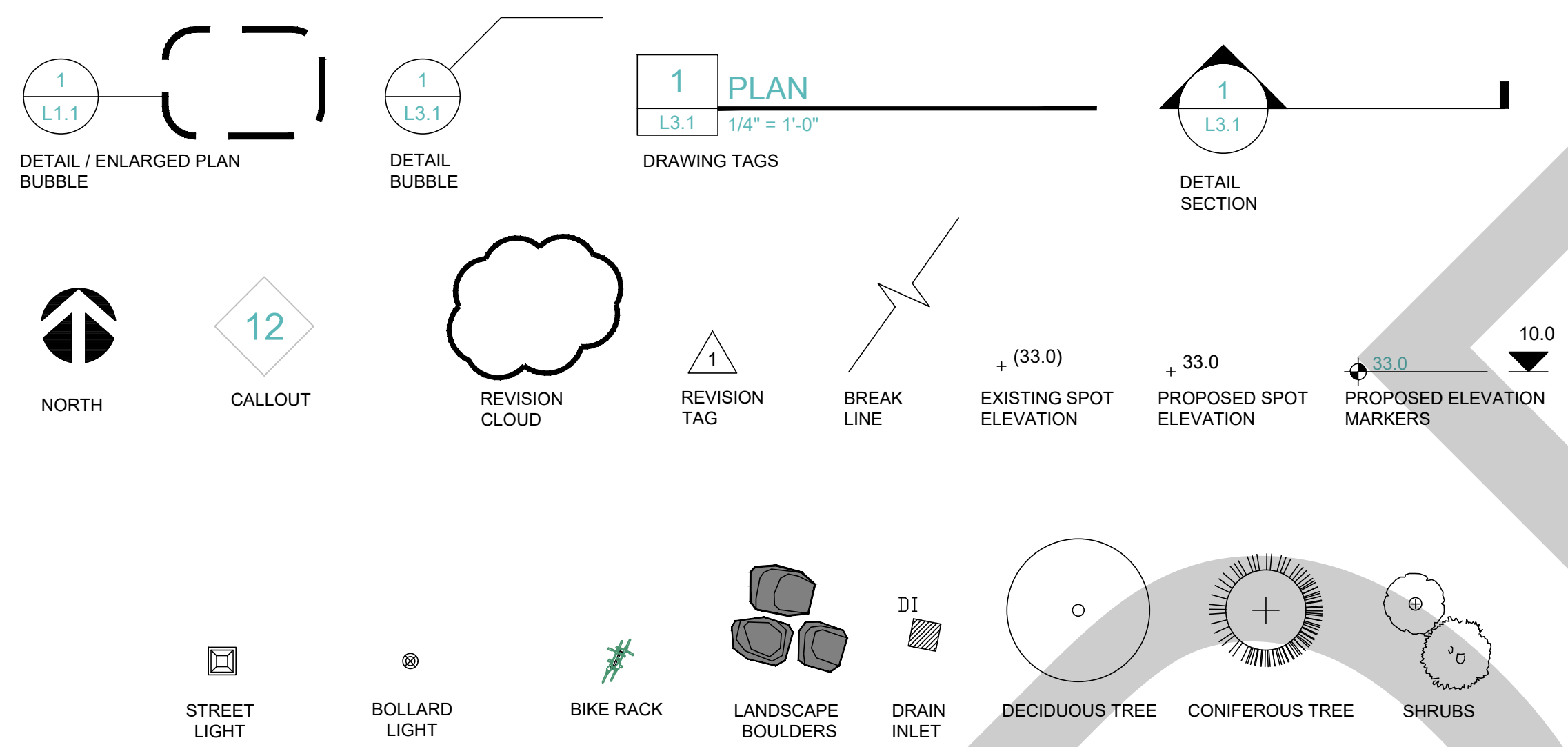
SHEET NUMBER:

CP-00

DRAWING SET ABBREVIATIONS

ABC	AGGREGATE BASE COURSE	EQ	EQUAL	MECH	MECHANICAL	SD	STORM DRAIN
AD	AREA DRAIN	ESC	EQUIPMENT	MED	MEDIUM	SECT	SECTION
ADJ	ADJACENT	EXS	ESCALATOR	MEZZ	MEZZANINE	SF	SQUARE FEET
AFF	ABOVE FINISH FLOOR	EXIST	EXISTING	MFR	MANUFACTURER	SHT	SHEET
ALT	ALTERNATE	EXP	EXPOSED	MH	MANHOLE	SIM	SIMILAR
ALUM	ALUMINIUM	EXPA	EXPANSION	MIN	MINIMUM	SIP	STRUCTURAL INSULATION PANEL
ANOD	ANODIZED	EXT	EXTERIOR	MISC	MISCELLANEOUS	SLR	SEALER
APPROX	APPROXIMATE	FD	FLOOR DRAIN	MLW	MILLWORK	SNK	SINK
ARCH	ARCHITECTURAL	FDN	FOUNDATION	MO	MASONRY OPENING	SPEC	SPECIFICATION
B&B	BALL AND BURLAP	FIN	FINISH(ed)	MTD	MOUNTED	SQ	SQUARE
B/O	BOTTOM OF	FL	FLOOR	MTL	METAL	SS	STAINLESS STEEL
BC	BACK OF CURB	FLG	FLANGE	N	NORTH	SSK	SERVICE SINK
BLW	BELOW	FLSG	FLASHING	N/A	NOT APPLICABLE	STA	STAINED
BLDG	BUILDING	FLR	FLOOR	NIC	NOT IN CONTRACT	STD	STANDARD
BLKG	BLOCKING	FLUOR	FLUORESCENT	NO	NUMBER	STIFF	STIFFENER
BM	BEAM	FOC	FACE OF CONCRETE	NOM	NOMINAL	STL	STEEL
BOT	BOTTOM	FOF	FACE OF FINISH	NTS	NOT TO SCALE	STMP	STAMPED
BRG	BEARING	FOS	FACE OF STUD	OA	OVERALL	STN	STONE
BRK	BRICK	FR	FIRE-RETARDANT	OC	ON CENTER	STOR	STORAGE
BS	BOTTOM OF STEP	FT	FEET	OD	OUTSIDE DIAMETER	STRUCT	STRUCTURAL
BW	BOTTOM OF WALL	FTG	FOOTING	OPD	OVERFLOW DRAIN	SUSP	SUSPENDED
C/C	CENTER TO CENTER	GA	GUAGE	OPNG	OPENING	TR	TREAD
CAL	TREE CALIPER	GAL	GALLON	OPP	OPPOSITE	TSS	TOP OF STRUCTURAL SLAB
CFM	CUBIC FEET PER MINUTE	GALV	GALVANIZED	OSB	ORIENTED STRAND BOARD	TSF	TOP OF STRUCTURAL FLOOR
CIP	CAST IN PLACE	GC	GENERAL CONTRACTOR	OSF	OUTSIDE FACE	TFF	TOP OF FINISH FLOOR
CJ	CONTROL JOINT	GI	GLASS IRON	OZ	OUNCE	TOC	TOP OF CURB
CL	CENTER LINE	GL BLK	GLASS BLOCK	PA	PAINTED	TEL	TELEPHONE
CLG	CEILING	GL	GLASS	PART	PARTITION	THK	THICKNESS
CLR	CLEAR	GMMU	GLASS MESH MASONRY UNIT	PAV	PAVERS	THRU	THROUGH
CM	CORRUGATED METAL	GND	GROUND	PC	POINTS OF CURVATURE	TOB	TOP OF BEAM
CMP	CORRUGATED METAL PIPE	GR	GRANITE	PCC	PRECAST CONCRETE	TC	TOP OF CONCRETE
CMU	CONCRETE MASONRY UNIT	GRD	GRADE	PERP	PERPENDICULAR	TW	TOP OF WALL
CO	CLEAN OUT	H&V	HEATING & VENTILATION	PL	PLATE	TRANS	TRANSVERSE
COL	COLUMN	HB	HOSE BIB	PLMB	PLUMBING	TS	TOP OF STEP
CONC	CONCRETE	HC	HOLLOW CORE	PLSTC	PLASTIC	TYP	TYPICAL
CONST	CONSTRUCTION	HDW	HARDWARE	PLWD	PLYWOOD	UG	UNDERGROUND
CONT	CONTINUOUS	HM	HOLLOW METAL	PNT	PAINTED	UL	UNDERWRITER'S LAB
CORR	CORRUGATED	HH	HAND HEWN	PPL	PROPERTY LINE	UNO	UNLESS NOTED OTHERWISE
CS	CONCRETE SEALER	HORZ	HORIZONTAL	PR	PAIR	UR	URINAL
CU	CUBIC	HP	HIGH POINT	PREFAB	PREFABRICATE	VERT	VERTICAL
CY	CUBIC YARD	HR	HOURS	PROJ	PROJECTION	VEST	VESTIBULE
D	DEPTH	HT	HEIGHT	PSF	POUNDS PER SQUARE FOOT	VIF	VERIFY IN FIELD
DD	DECK DRAIN	ID	INSIDE DIAMETER	PSI	POUNDS PER SQUARE INCH	VNR	VENER
DF	DRINKING FOUNTAIN	IN	INCHES	PT	PRESSURE TREATED	W	WEST
DI	DRAIN INLET	INCL	INCLUDE	PVC	POLYVINYL CHLORIDE	WC	WATER CLOSET
DIA	DIAMETER	INFO	INFORMATION	QTY	QUANTITY	WD	WOOD
DIAG	DIAGONAL	INSUL	INSULATION	R	RISER	WLS	WALLS
DIM	DIMENSION	INT	INTERIORS	RD	ROOF DRAIN	WP	WATERPROOF
DN	DOWN	JT	JOINT	REF	REFERENCE	WPM	WATERPROOF MEMBRANE
DS	DOWNSPOUT	LAB	LABORATORY	REFR	REFRIGERATOR	WR	WATER RESISTANT
DTL	DETAIL	LAM	LAMINATED	REINF	REINFORCED	WS	WATER SURFACE
DWG	DRAWING	LAV	LAVATORY	REQD	REQUIRED	WWF	WELDED WIRE FABRIC
E	EAST	LB(S)	POUNDS	REV	REVISION	WWP	WHITE WATER PARK
EA	EACH	LP	LOW POINT	RM	ROOM	YDS	YARDS
EC	EXPOSED CONSTRUCTION	LT	LIGHT	RO	ROUGH OPENING		
EJ	EXPANSION JOINT	LTWT	LIGHTWEIGHT	RP	RADIUS POINT		
ELEC	ELECTRICAL	LVR	LOUVER	RS	ROUGH SAWN		
ELEV	ELEVATION	MACH	MACHINE	S	SOUTH		
ELEVTR	ELEVATOR	MATL	MATERIAL	SC	SOLID CORE		
EM	EMERGENCY	MAX	MAXIMUM	SCH	SCHEDULE		
EMBED	EMBEDMENT						

GRAPHIC SYMBOLS LEGEND



SUMMARY OF WORK

These Design Development documents provide the layout and details necessary for the City of Madison to proceed with the RFP process for all bike and trails related amenities. These documents also conceptually identify other park elements that will require further documentation by other various consultants.

NOTES

GENERAL CONSTRUCTION NOTES

- Contractor shall verify and coordinate finish grades with related site improvements. Contractor shall immediately report any conflicts or discrepancies to the Owner's Representative.
- The contractor shall be responsible for confirming ground elevations and overall topography of the site, as well as, all site dimensions prior to start of construction. The contractor shall immediately notify the Owner's Representative in writing of any differences in topography or site dimensions that differ from those shown on the plans.
- Written dimensions are to take precedence over scaled dimensions. Notify Owner's Representative of any discrepancies found in the field before moving forward. Failure to gain clarification from Owner's Representative before moving forward will render contractor responsible for all costs associated with correcting installed work to the satisfaction of the Owner's Representative.
- Contractor shall be responsible for removing all debris from the project site, as needed, during construction and upon final acceptance by Owner's Representative.
- Contractor shall perform all work in accordance with all applicable local, state and/or national building codes and regulations.
- Contractor is responsible for investigating and procuring any necessary local, state, and federal permits required for compliance with any local, state, or federal laws.
- Confirm utility locations before digging. Call New Mexico Dig 811 or 1-800-321-ALERT (2537), and ensure utility locates are done before work commences.
- Contractor shall be responsible for maintenance and protection of vehicular and pedestrian traffic. All traffic control measures shall be in accordance with local, state, and OSHA regulations.
- Any retaining walls as part of the pump track will require coordination with and design by a professional engineer. Plans to be in accordance with local design and permitting requirements. Shop drawings shall be required and provided to Owner's Representative for approval before commencing with construction.
- Contractor shall have all required submittal approvals prior to beginning the work or ordering materials.
- Contractor shall be responsible for repair to any sidewalks, lawn, trees, paving, and other improvements disturbed by construction or demolition activities proposed herein.

PERFORMANCE SPECIFICATIONS

TRAILS-

All trail construction shall comply with the specifications, drawings, requirements, and design intent prescribed in the construction and contract documents. Additional resources include "Trail Solutions, IMBA's Guide to Building Sweet Singletrack" (2004) and "Managing Mountain Biking" (2007). Modifications shall be approved by Owner's Representative.

- Completed products shall reflect professional workmanship in appearance, quality, and attention to detail. Trails and features shall be well integrated into site, aesthetically pleasing in appearance, and well-shaped, crafted, and finished according to commonly accepted best practices for high quality and sustainable mountain biking trails. Work must be completed to the satisfaction of the Owner's Representative.
- Should the contractor discover discrepancies in the specifications, the matter shall be at once brought to the attention of the Owner's Representative, and the discrepancies corrected before proceeding further.
- Trail contractor shall be responsible for any coordination with General Contractor and Subcontractors as required to complete all operations.
- Test Riding: Trail Contractor shall thoroughly test ride all trails and trail features, by bike with appropriately skilled rider, to ensure the specified riding experience, design, flow, rhythm, character, difficulty, and specifications are met. Testing shall be performed during the trail alignment and trail feature location process, as well as during construction and following construction, to the extent possible and in consultation with Owner's Representative. Trails and features shall be modified and corrected as necessary until performance specifications are met.
- Trail Contractor shall leave trails and the adjacent area in a finished and natural-looking condition and minimize disturbance to permanent existing vegetation to the extent possible in coordination with general contractor, topsoil spreading, and irrigation and landscape installation.
- All excavated material generated during trail construction must be used in the trail, or dispersed and blended into surrounding terrain, or removed. No piles of excavated material greater than 6 inches depth shall be left behind. All material left onsite shall be revegetated per plan. If taken off site, coordinate location with County Inspector.
- The Trail Contractor shall be responsible for fine grading and positive drainage away from all trails and trail features. No impoundments nor ponding of surface water shall be allowed.
- Where necessary, Trail Contractor may construct shallow porous detention basins adjacent to the trail to manage surface water drainage, provided they are constructed in an appropriate manner and do not create a hazard.



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WALNUT GROVE
MADISON, WI
CONSTRUCTION NOTES

PROJECT:

SHEET TITLE:

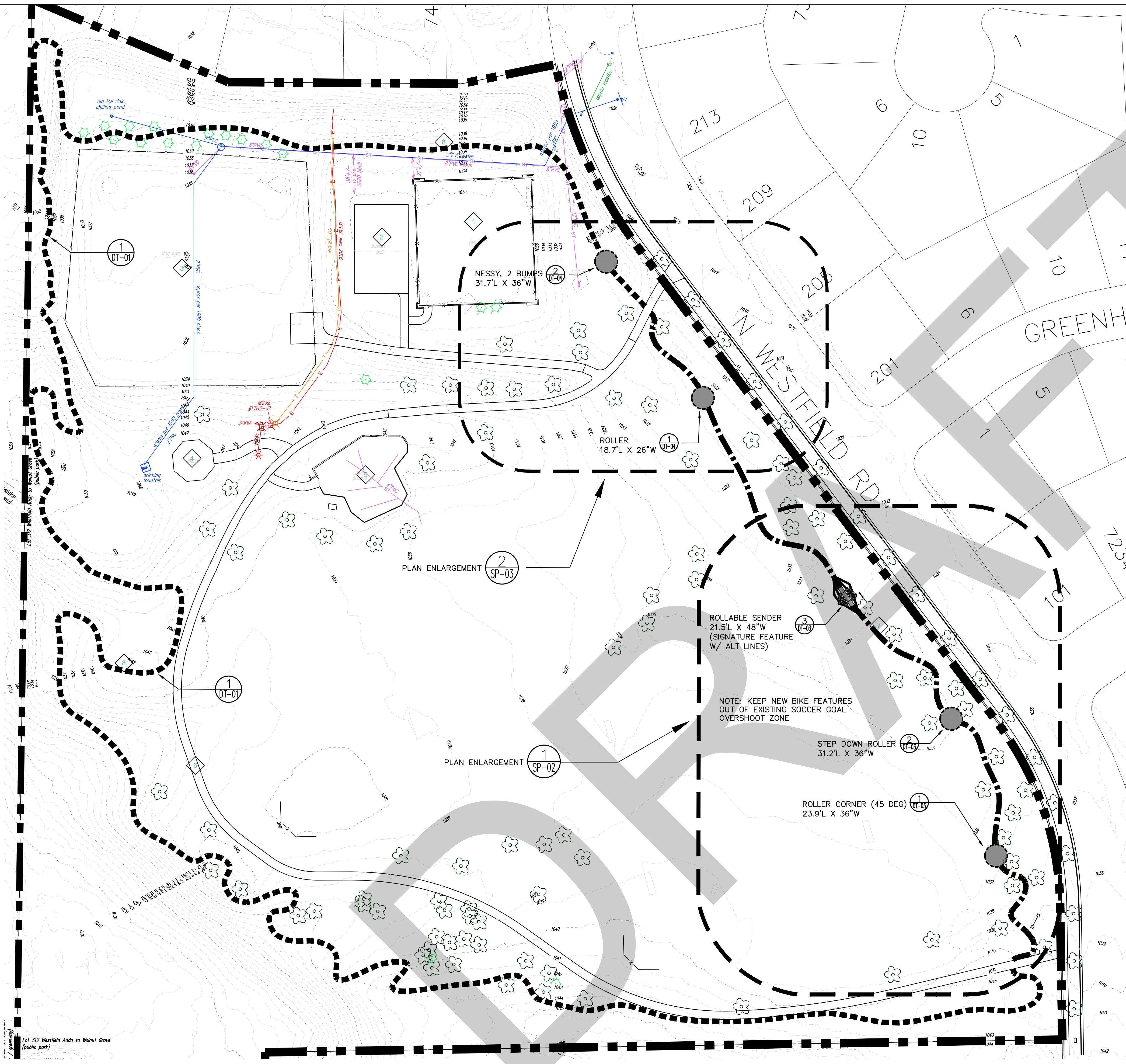
PROJECT No: CMPR2101
ORIGIN DATE: 4.08.2021
DRAWN BY: TJH/RMH
CHECKED BY: MR

ISSUED FOR:




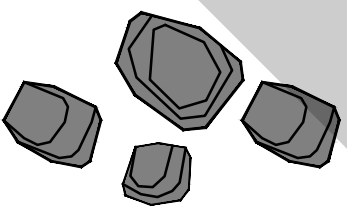
No.	DATE	COMMENT
A	4/8/22	BID DOCUMENTS

SHEET NUMBER:

CP-01











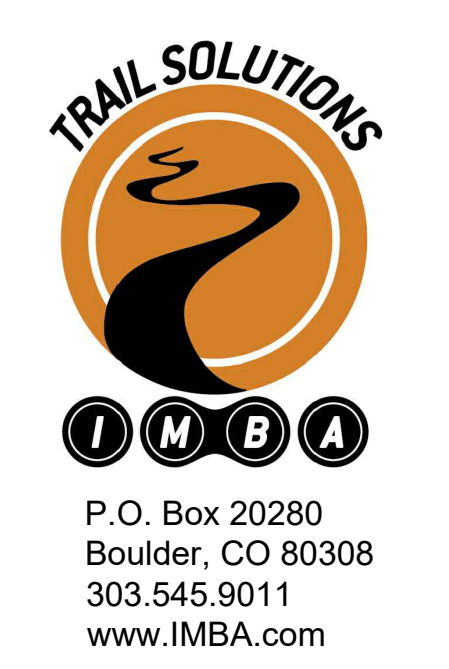
LEGEND

-  Mountain bike optimized (MBO) with enhanced limestone trail surface - this trail will use rolling contour and lift and tilt (where required for drainage) construction methods and will have a medium frequency of rollers, wooden features and rock rolls (3-5 PER 100LF). The tread will be a limestone surface and will have all weather usability and will be signed as such. (810 LF)
-  Mountain bike optimized (MBO) with natural trail surface - This trail will be constructed as a rolling contour traditional cross country style singletrack with 1 wooden rollable feature. The tread will be a natural surface and will not have all weather usability and will be signed as such. (3,110 LF)
-  Technical Trail Feature (TTF) - Either Natural rock/boulder or prefabricated, ref. to callout for detail.
-  LANDSCAPE BOULDERS

- NOTES:**
1. The selected contractor will be responsible for the layout and selection of feature elements on the MBO (Enhanced surface) and MBO (Natural surface), refer to sheet DT-02 for trail feature details.
 2. Technical Trail Features (TTF) are called out and located specifically on the Plan Enlargement sheet SP-01 and SP-02. The selected contractor shall adhere to the quantities proposed, but may suggest substitutions and/or alternate layouts based on the field fitting process. All alterations shall be approved by the owner's representative. Refer to sheet DT-02 - DT-03 for TTF details.
 3. Refer to sheet TS-01 for Trail Schedule

SITE ELEMENTS SCHEDULE

-  EXISTING TENNIS COURTS
-  EXISTING BASKETBALL COURT
-  EXISTING DOG PARK
-  PAVILION
-  PARK PLAYGROUND
-  EXISTING PAVED LOOP TRAIL
-  TRADITIONAL W/ ENHANCED TREAD TRAIL - 101
-  MBO WITH ENHANCED TRAIL TREAD - 201



**WALNUT GROVE
MADISON, WI
OVERALL SITE PLAN**

PROJECT: _____
SHEET TITLE: _____

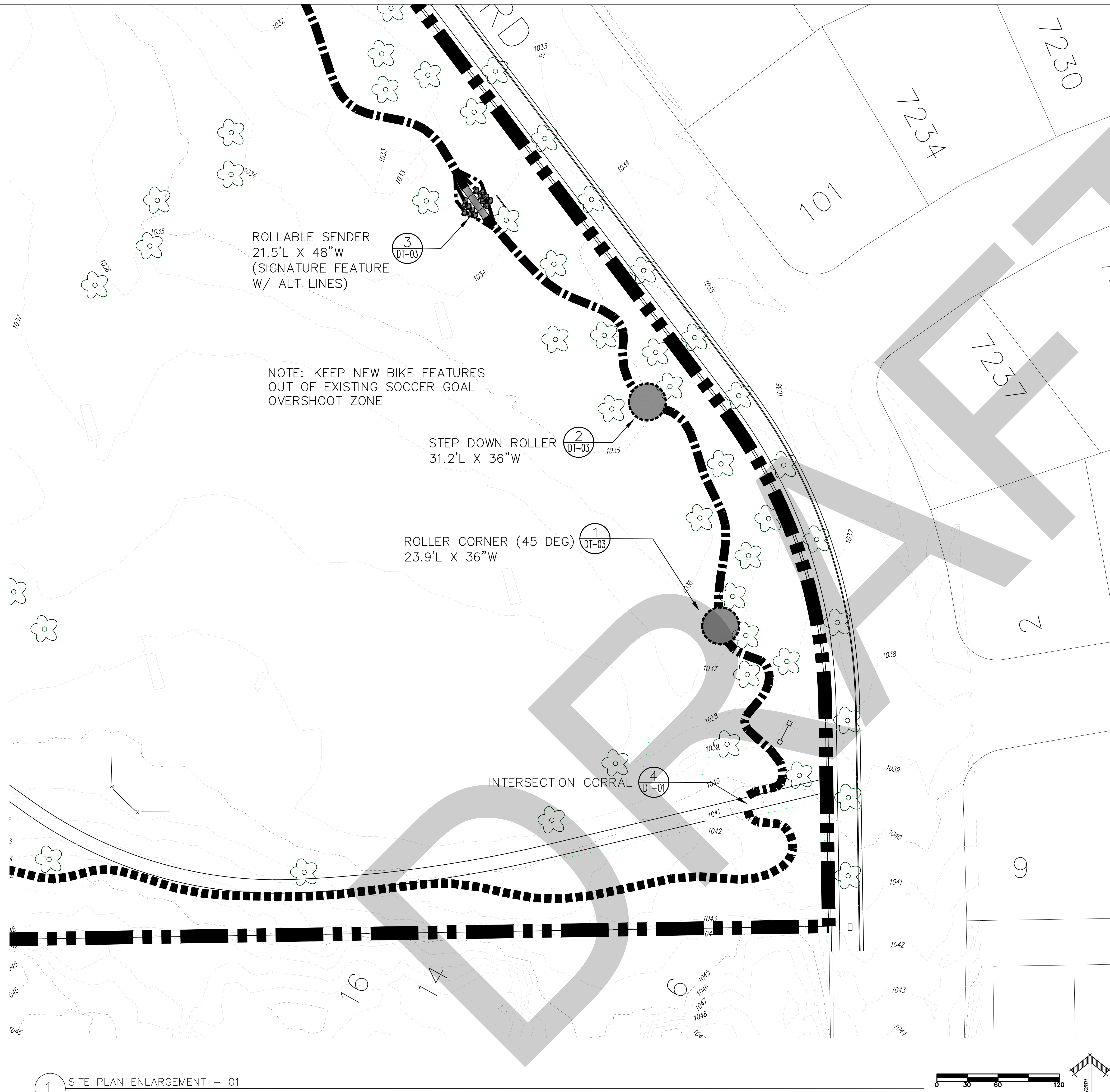
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ISSUED FOR:




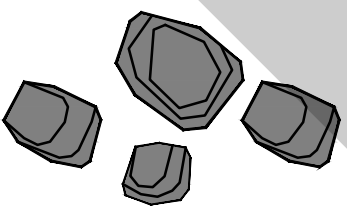
No.	DATE	COMMENT
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SHEET NUMBER:
SP-01

1 OVERALL SITE PLAN
SCALE: 1" = 50' - 0"



LEGEND

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-  LANDSCAPE BOULDERS

- NOTES:**
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 3. Refer to sheet TS-01 for Trail Schedule

ROLLABLE SENDER
21.5'L X 48"W
(SIGNATURE FEATURE
W/ ALT LINES)

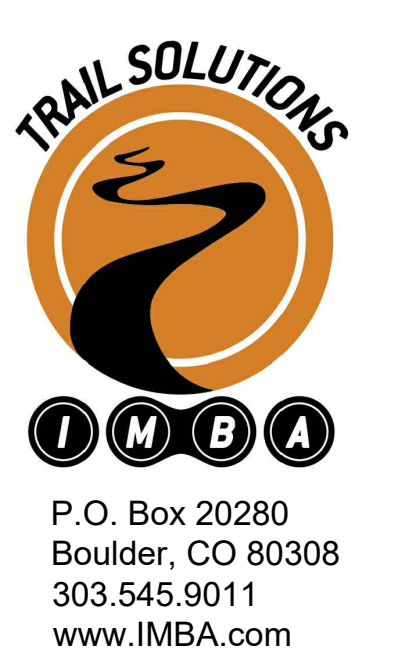
NOTE: KEEP NEW BIKE FEATURES
OUT OF EXISTING SOCCER GOAL
OVERSHOOT ZONE

STEP DOWN ROLLER
31.2'L X 36"W

ROLLER CORNER (45 DEG)
23.9'L X 36"W

INTERSECTION CORRAL

1 SITE PLAN ENLARGEMENT - 01
SCALE: 1" = 30' - 0"



**WALNUT GROVE
MADISON, WI
OVERALL SITE PLAN**

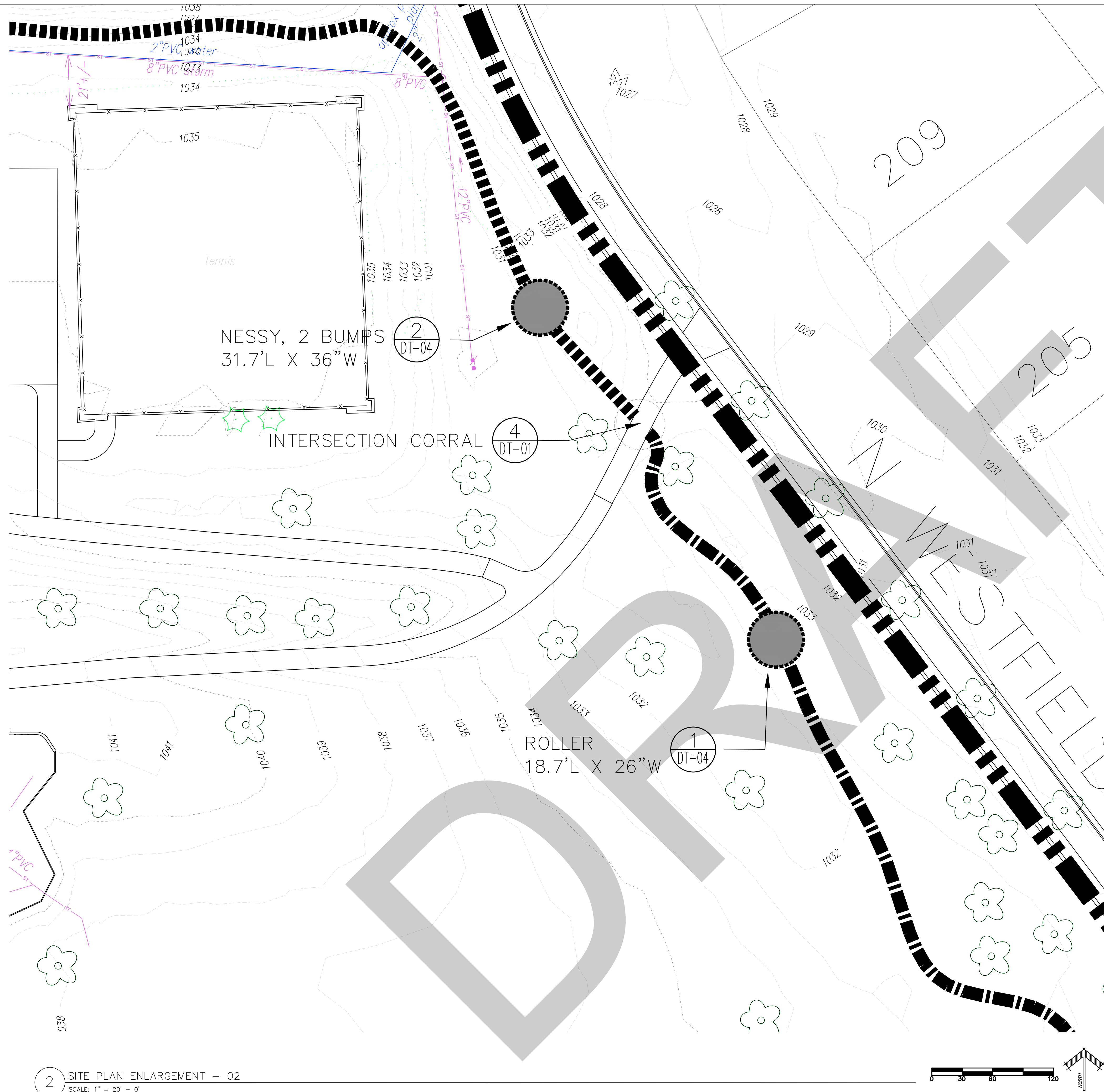
PROJECT:
SHEET TITLE:

PROJECT No: CMPR2101
ORIGIN DATE: 4.08.2021
DRAWN BY: TJH/RMH
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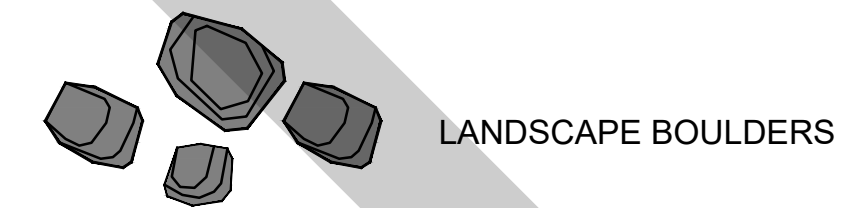
SHEET NUMBER:
SP-02



Mountain bike optimized (MBO) with enhanced limestone trail surface - This trail will use rolling contour and lift and tilt (where required for drainage) construction methods and will have a medium frequency of rollers, wooden features and rock rolls (3-5 PER 100LF). The tread will be a limestone surface and will have all weather usability and will be signed as such. (810 LF)

Mountain bike optimized (MBO) with natural trail surface - This trail will be constructed as a rolling contour traditional cross country style singletrack with 1 wooden rollable feature. The tread will be a natural surface and will not have all weather usability and will be signed as such. (3,110 LF)

Technical Trail Feature (TTF) - Either Natural rock/boulder or prefabricated, ref. to callout for detail.



- NOTES:
- The selected contractor will be responsible for the layout and selection of feature elements on the MBO (Enhanced surface) and MBO (Natural surface), refer to sheet DT-02 for trail feature details.
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 - Refer to sheet TS-01 for Trail Schedule



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**WALNUT GROVE
MADISON, WI
OVERALL SITE PLAN**

2 SITE PLAN ENLARGEMENT - 02
SCALE: 1" = 20' - 0"



PROJECT:
SHEET TITLE:

PROJECT No. CMPR2101
ORIGIN DATE: 4.08.2021
DRAWN BY: TJH/RMH
CHECKED BY: MR

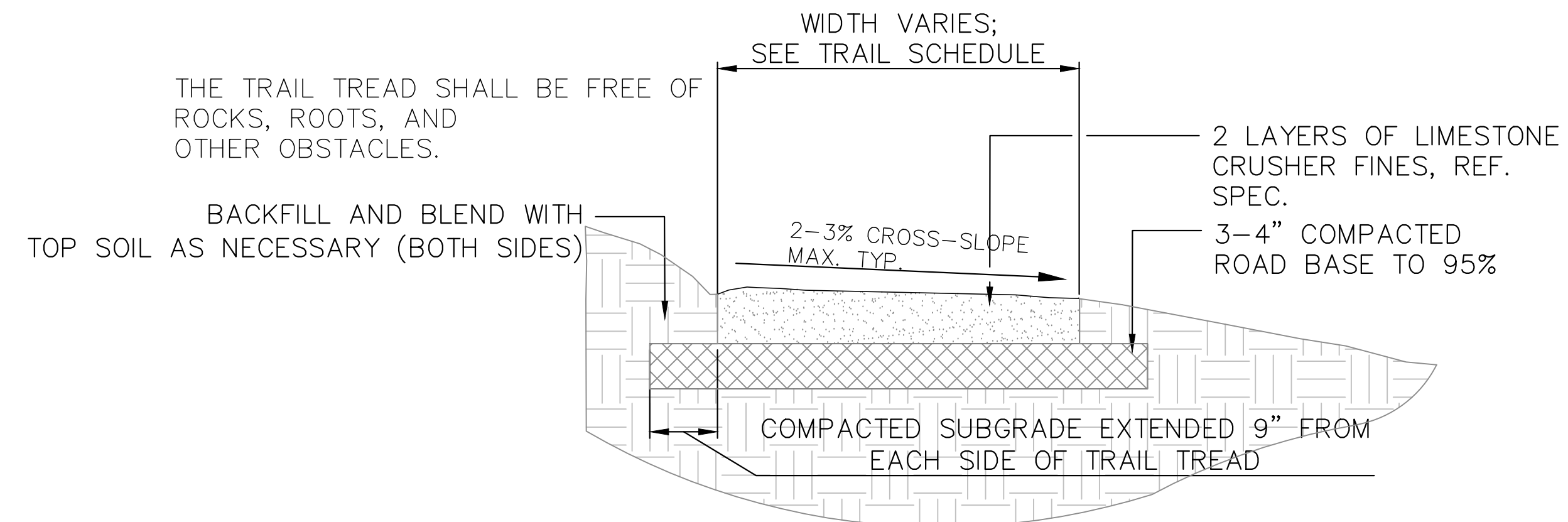
ISSUED FOR:

No.	DATE	COMMENT
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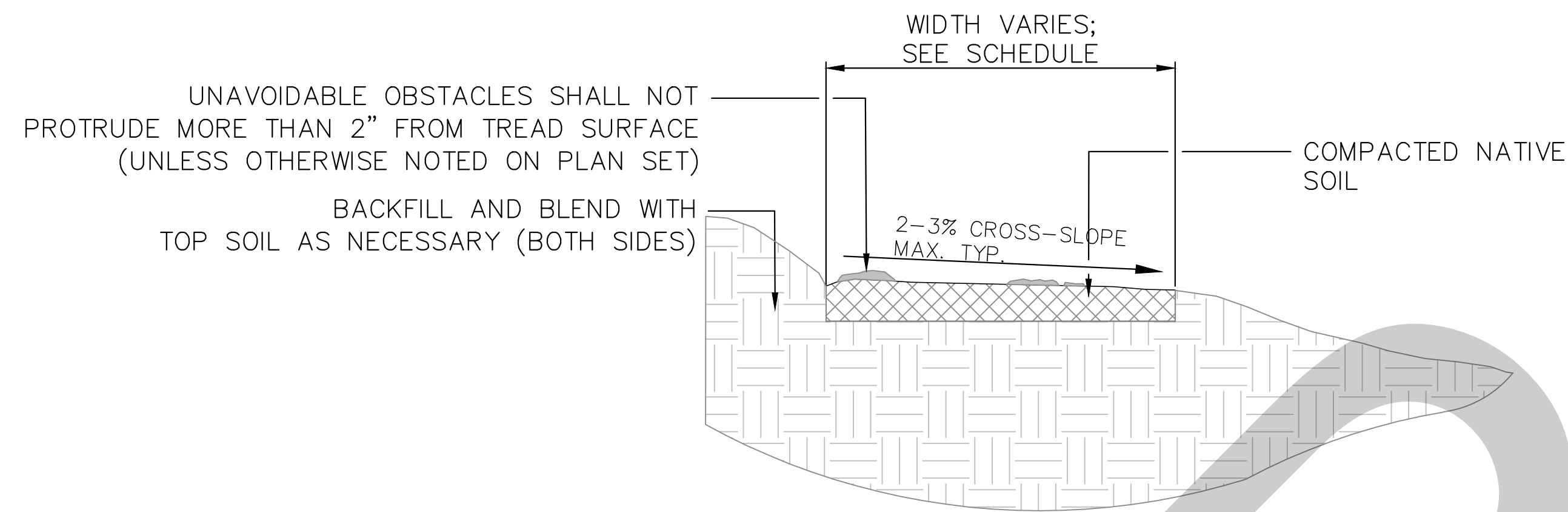
SHEET NUMBER:
SP-03



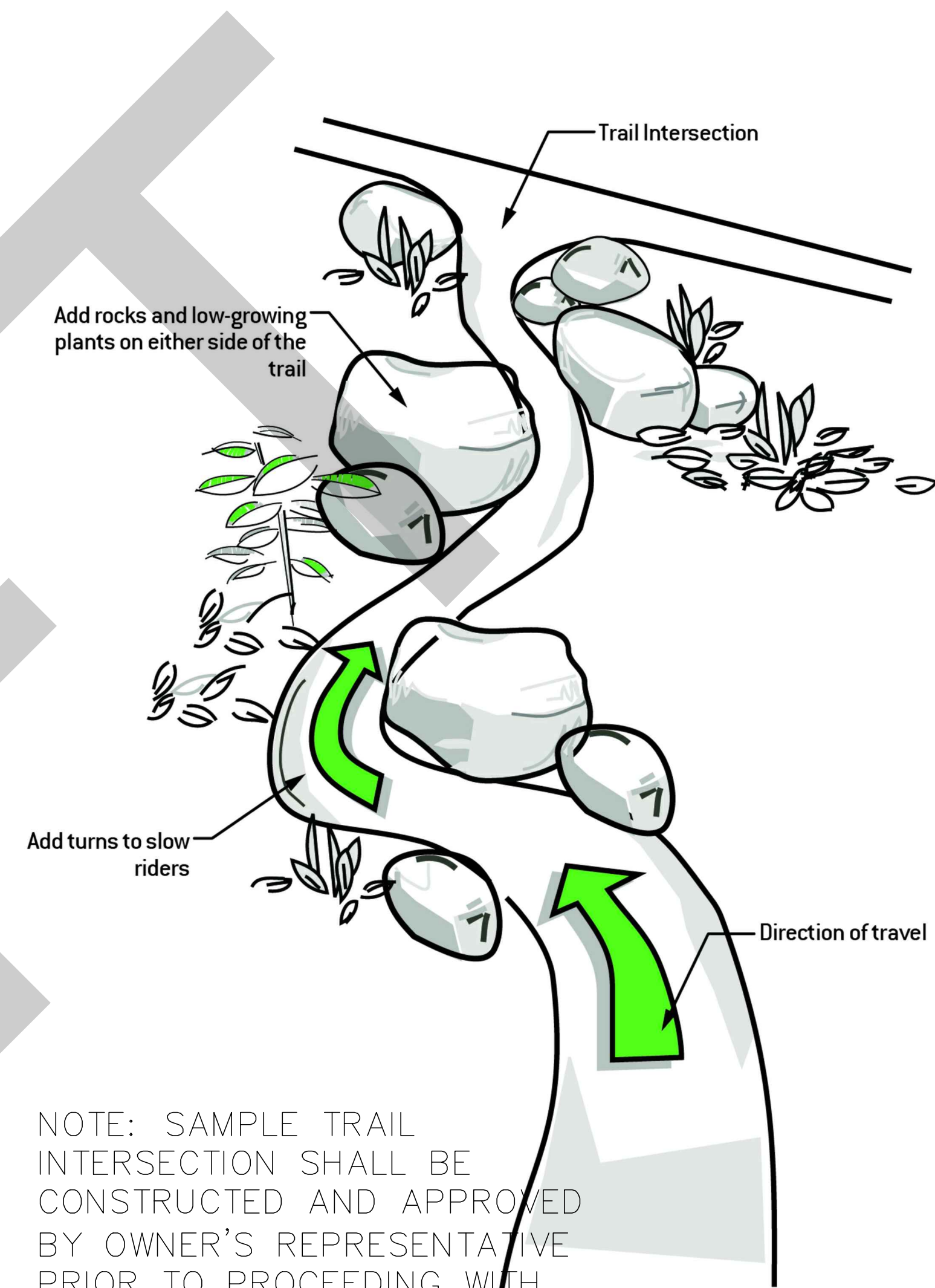
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1 TYPICAL MOUNTAIN BIKE OPTIMIZED ENHANCED LIMESTONE SURFACE
SCALE: 3/4" = 1' - 0"

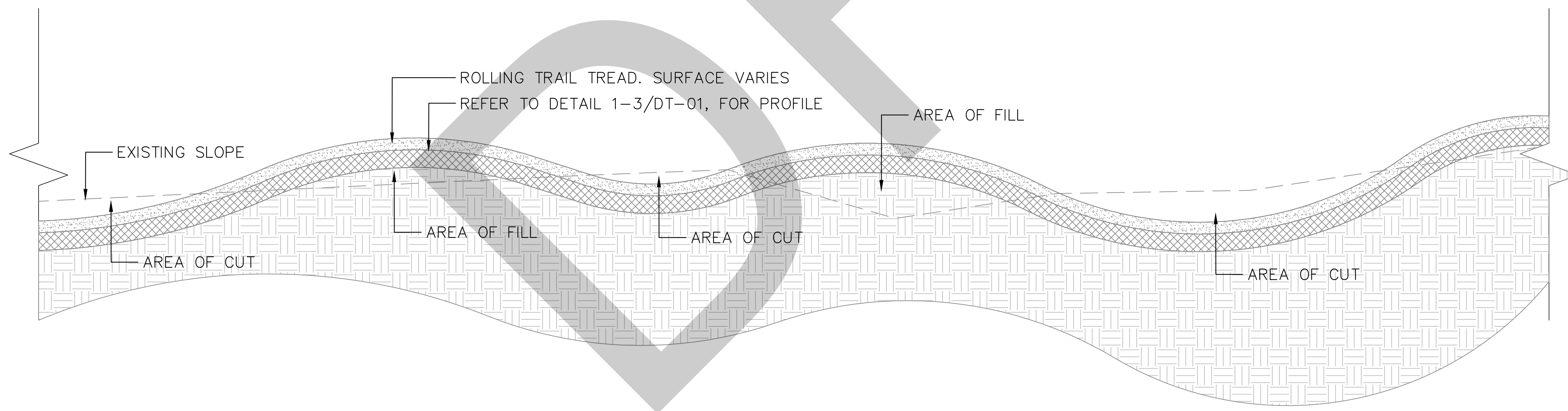


2 TYPICAL MOUNTAIN BIKE OPTIMIZED NATURAL SURFACE SINGLETRACK
SCALE: 3/4" = 1' - 0"



NOTE: SAMPLE TRAIL INTERSECTION SHALL BE CONSTRUCTED AND APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH REMAINING INTERESECTIONS.

4 TYPICAL TRAIL INTERSECTION AND CORRAL
SCALE: NTS



3 TYPICAL MOUNTAIN BIKE OPTIMIZED SINGLETRACK SECTION
SCALE: 3/4" = 1' - 0"

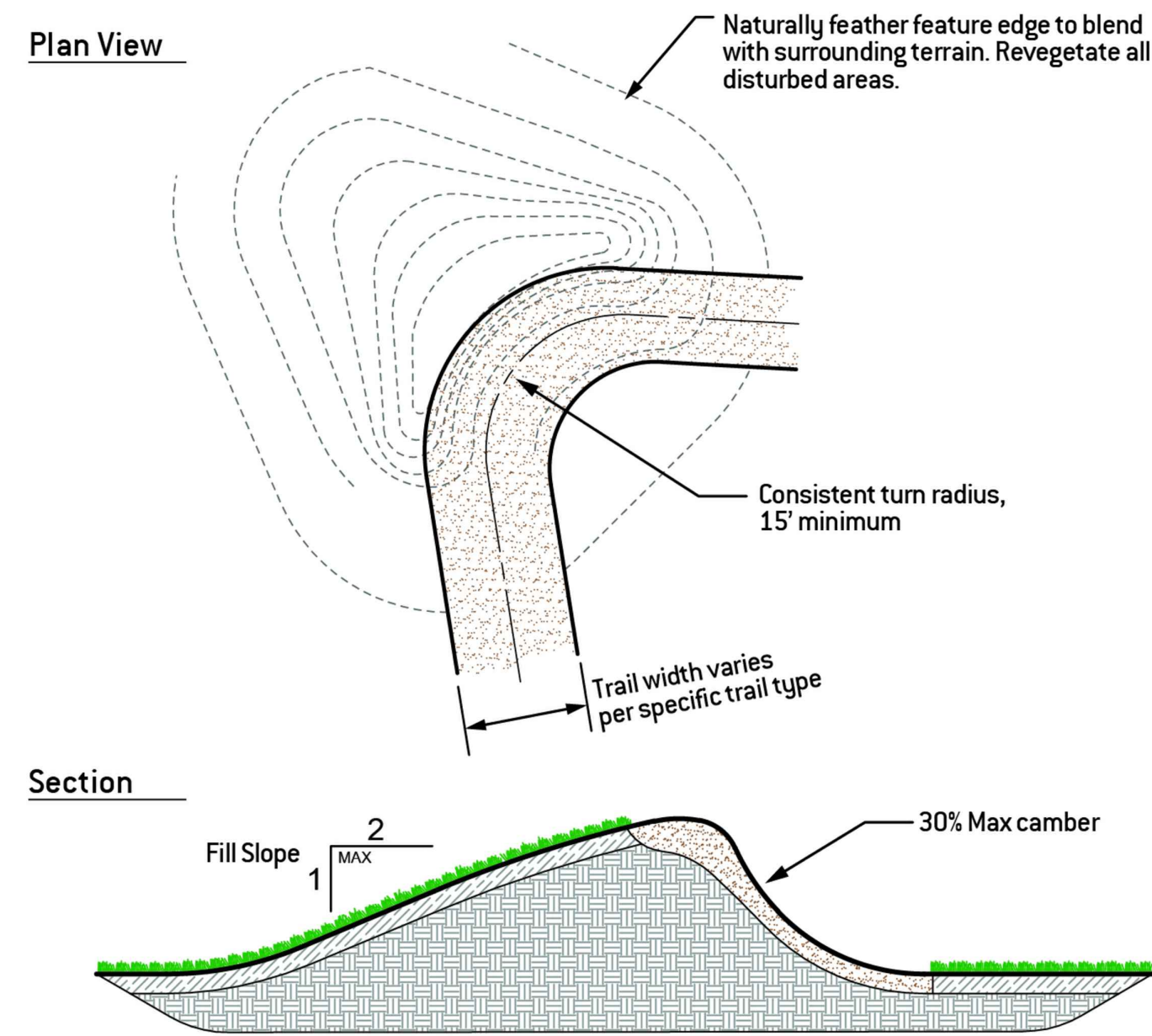
PROJECT: WALNUT GROVE
MADISON, WI
SHEET TITLE: DETAILS

PROJECT No: CMPR2101
ORIGIN DATE: 4.08.2021
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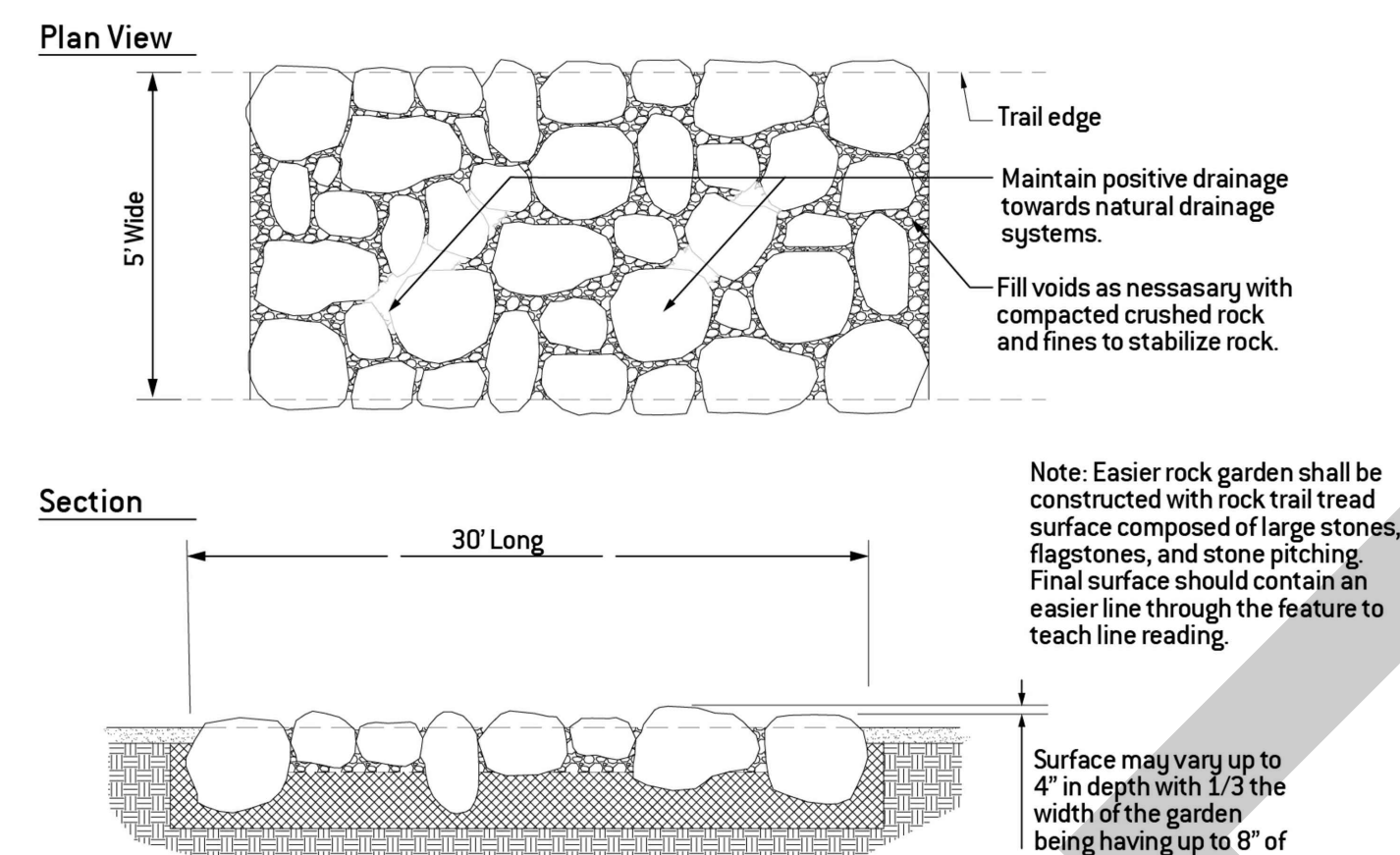
ISSUED FOR:

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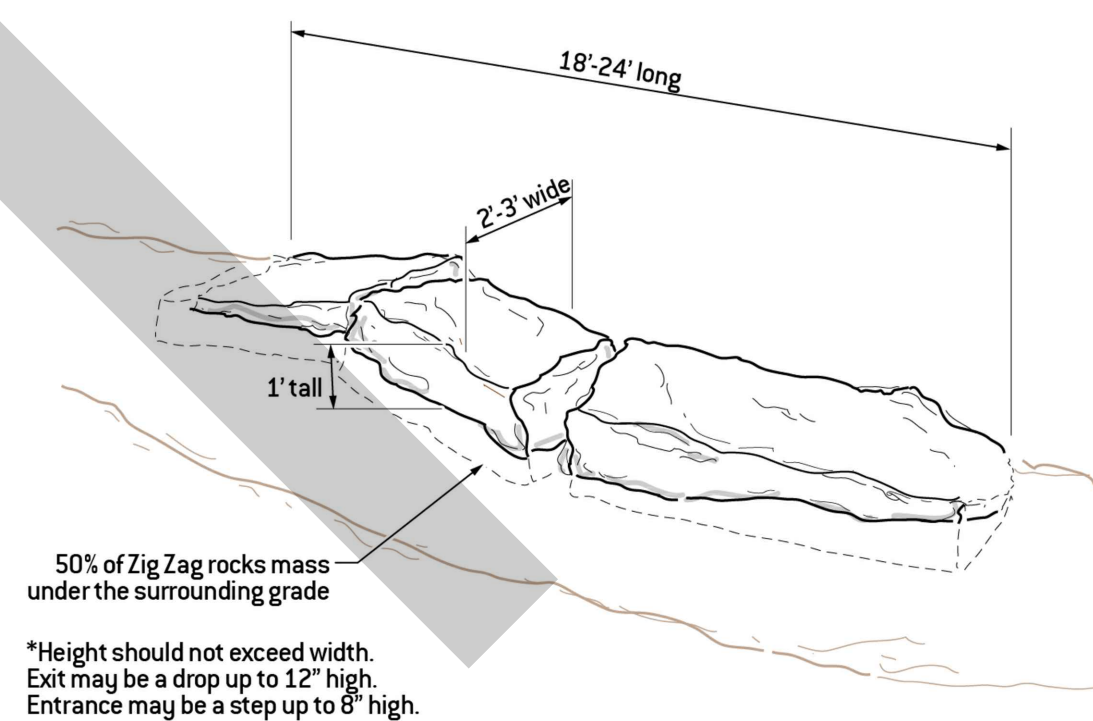
SHEET NUMBER:
DT-01



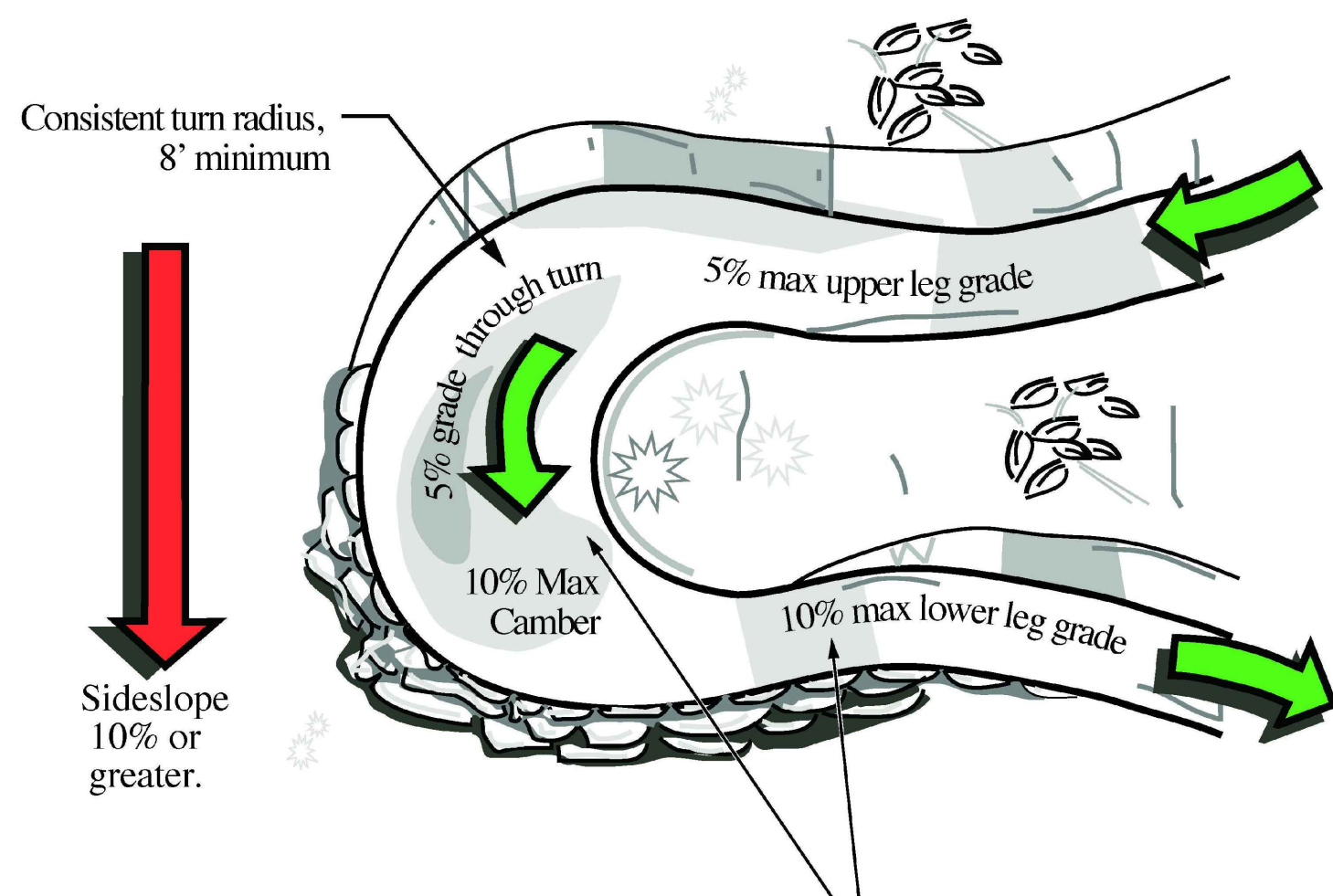
1 TYPICAL BERMED TURN
SCALE: NTS



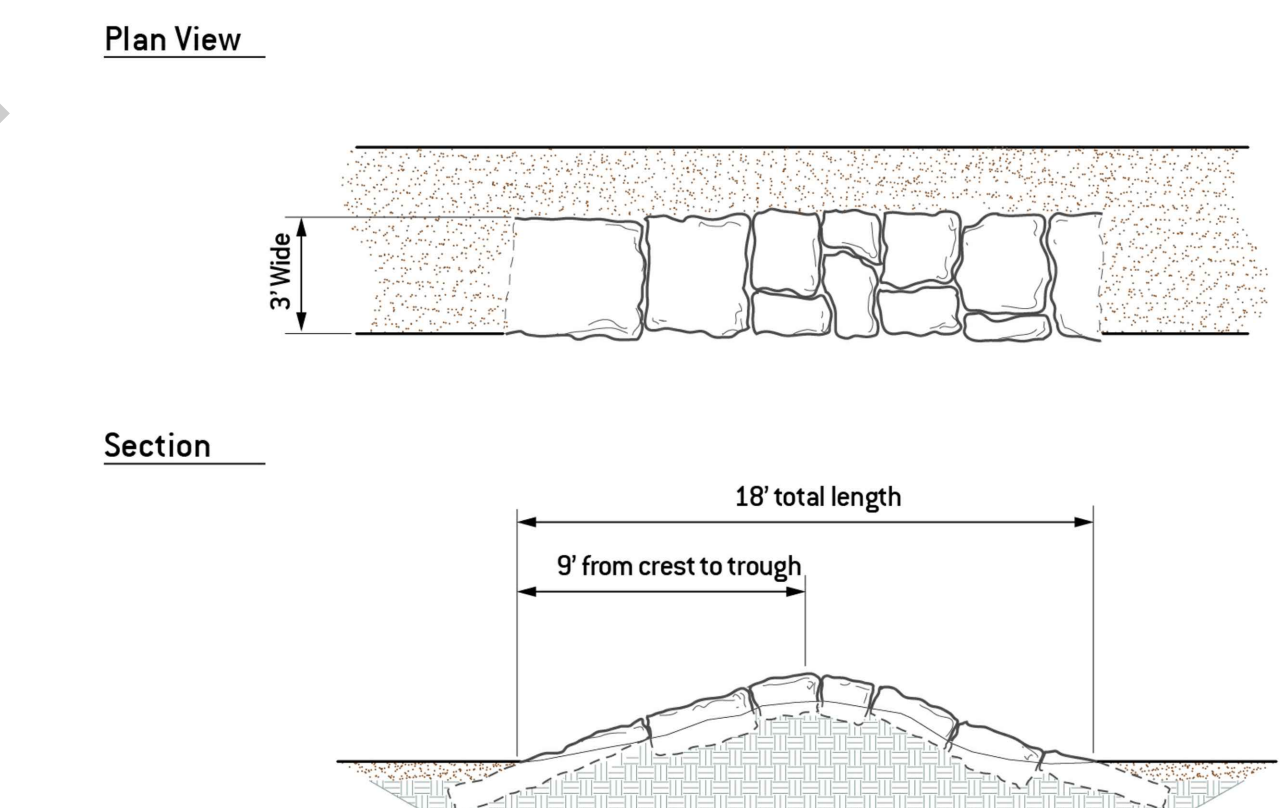
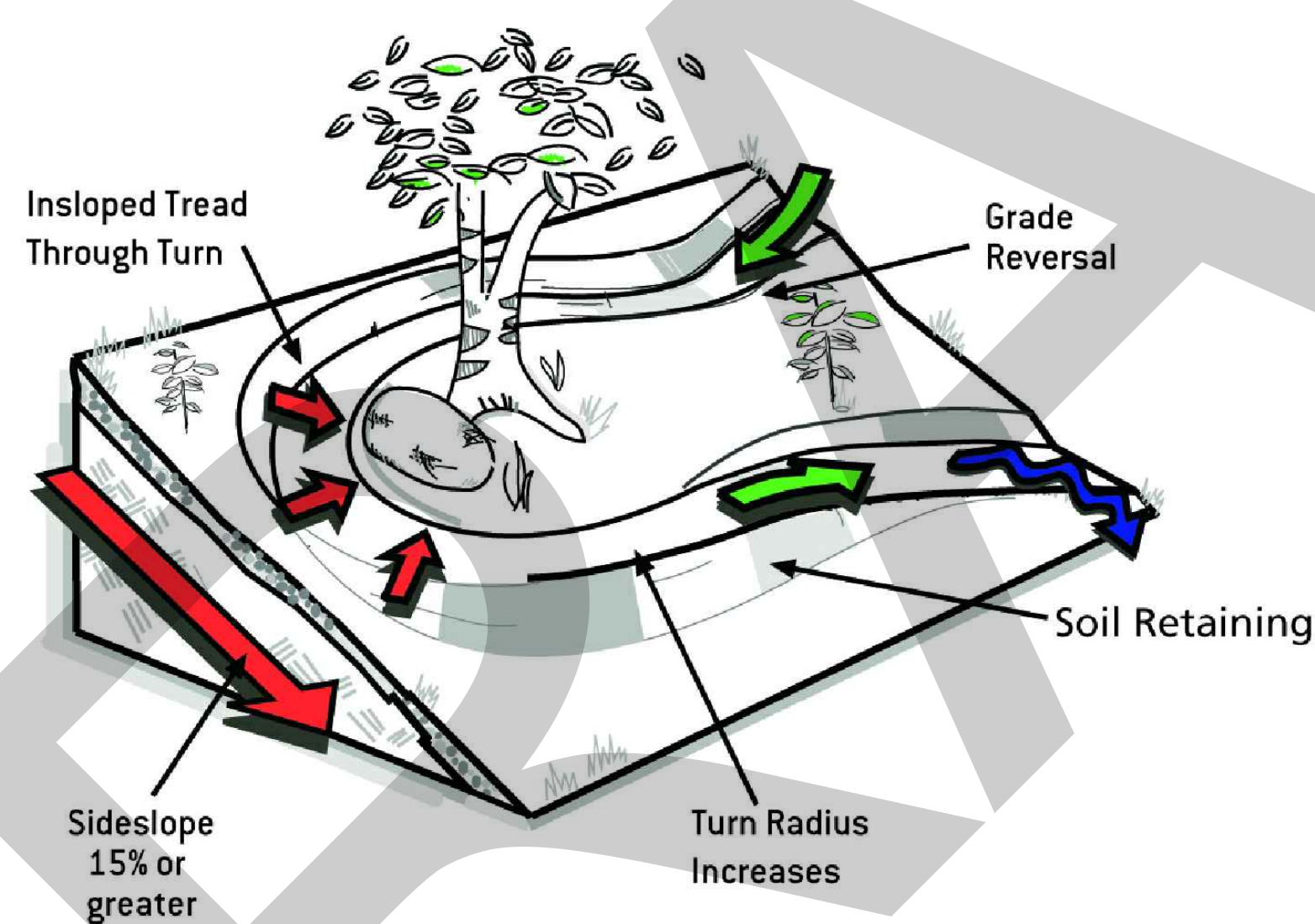
4 TYPICAL ROCK GARDEN
SCALE: NTS



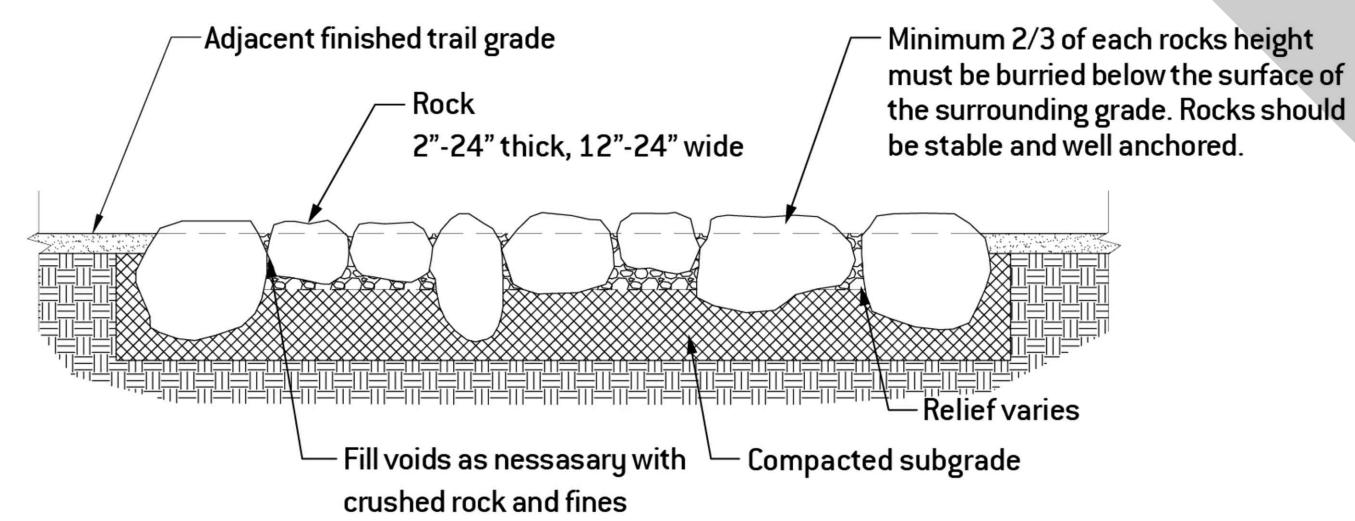
7 TYPICAL ROCK ZIG ZAG
SCALE: NTS



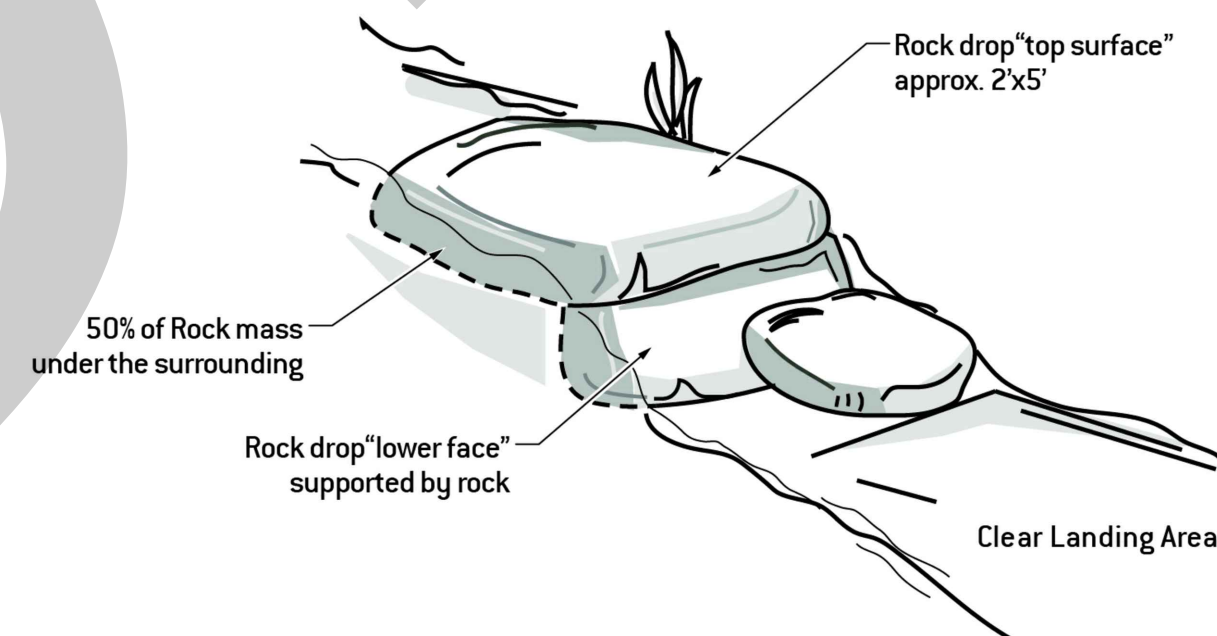
2 TYPICAL ELEVATED PLATFORM TURN
SCALE: NTS



5 TYPICAL ROCK ROLLER
SCALE: NTS



3 ROCK FEATURES - TYPICAL ROCK PLACEMENT
SCALE: NTS



6 TYPICAL ROCK DROP
SCALE: NTS

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DT-02



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1 ROLLER CORNER 23.9'L X 36"W
 SCALE: NTS



2 STEP-DOWN ROLLER 31.2'L X 36"W
 SCALE: NTS



3 ROLLABLE SENDER (MAIN FEATURE) 21.5'L X 48"W
 SCALE: NTS



4 ROLLER 18.7'L X 36"W
 SCALE: NTS



5 NESSY 2 BUMPS 31.7' X 36"W
 SCALE: NTS

PROJECT: WALNUT GROVE
 MADISON, WI
 SHEET TITLE: DETAILS

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DT-03

Trail Schedule

Type	Difficulty Rating	Use	Surface Type	Direction	Feature Frequency(1)	Constructed Tread Width	Avg. Trail Grade per 1000'	Min. Turn Radius	Max Turnpad Grade(3)	Max Berm / Turn Camber(4)	Unavoidable Obstacles	Avoidable Obstacles (over 50% of tread or less)	Tread and Trail Features	Notes
MBO with enhanced surface	Blue	Bike	Limestone crusher fines	One-Way	Low	36-48"	7%	12'	N/A	NA	Less than 2"	None	Firm trail surface with 4-5 Prefabricated rollable features	
MBO with natural surface	Blue	Bike	Natural	One-Way	Low	36-48"	7%	12'	10%	30%	less than 2"	None	Firm trail surface. Rollers, 1 prefabricated rollable feature, elevated turns and natural trail features. Ref. DT-02	

Footnotes:

1. Feature frequency is averaged over long distances. Per 100': "low" = 2 - 3 features, "med" = 3 - 5 features, "high" = 4-5+ features
2. Max climbing and descending grades only apply to very short segments of 12 feet or less.
3. Turnpad grade measures the rise/fall across the turning surface at the base of any inslope
4. Max camber is measured at the top of the inslope. More advanced berms will go to vertical.

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WALNUT GROVE
MADISON, WI
DETAILS

PROJECT:

SHEET TITLE:

PROJECT No: CMPR2101
 ORIGIN DATE: 4.08.2021
 DRAWN BY: TJH/RMH
 CHECKED BY: MR

ISSUED FOR:

No.	DATE	COMMENT
A	4/8/22	BID DOCUMENTS

SHEET NUMBER:

TS -01