

RETAINING WALL REPLACEMENT

CENTER FOR BEHAVIORAL MEDICINE BUILDING

KANSAS CITY, MISSOURI

OWNER:

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

DEPARTMENT OF
MENTAL HEALTH

PROJECT
MANAGEMENT:

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT,
DESIGN AND CONSTRUCTION



"Part of the solution..."



DESIGNER:

CEO STRUCTURAL ENGINEERS, INC.
BHC, CIVIL & LANDSCAPE ARCHITECT
HFG ARCHITECTURE

PROJECT NUMBER:

M2407-01

SITE NUMBER:
ASSET:

7360
6517360003

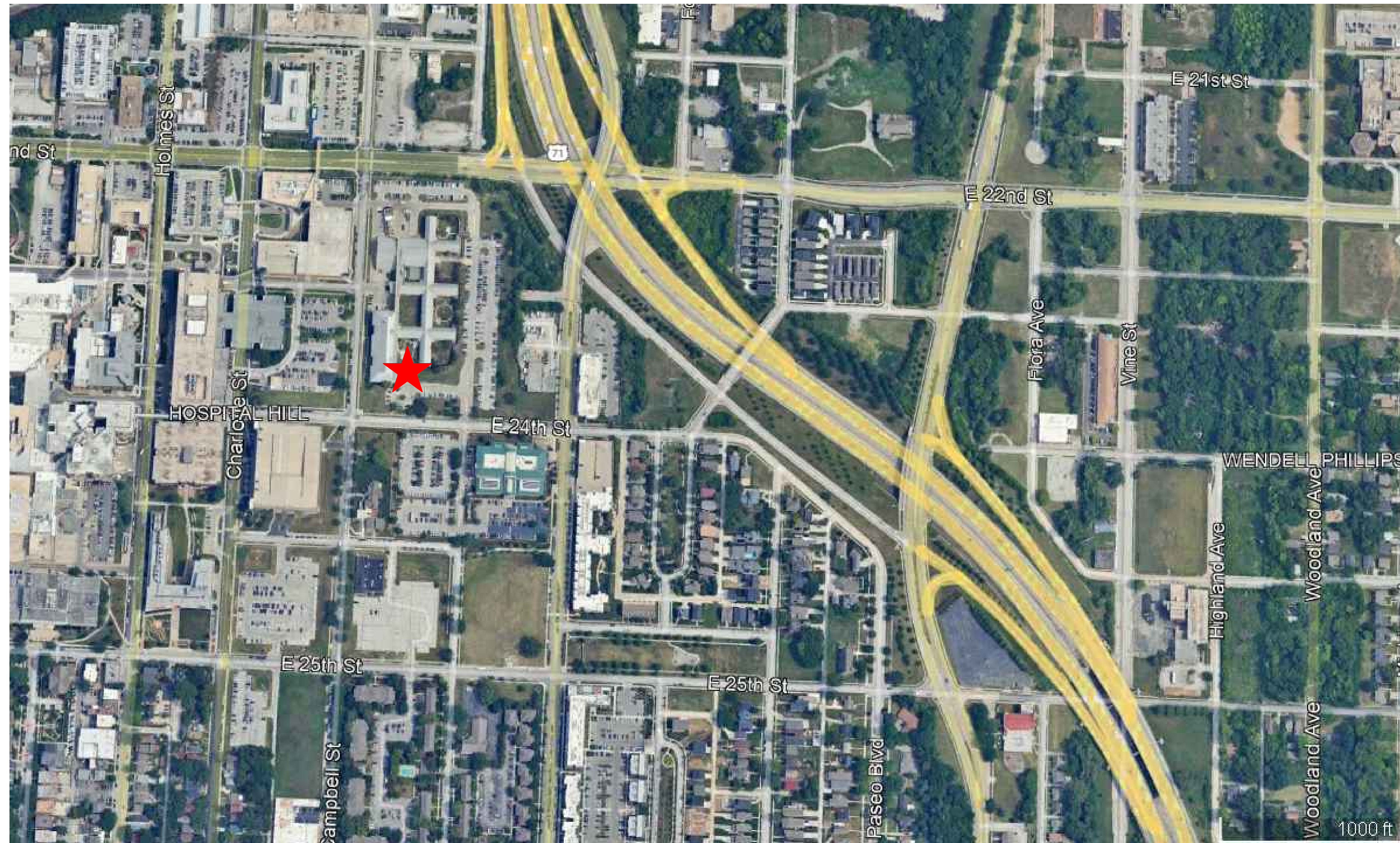
SHEET NUMBER:

G-001

01 OF 14 SHEETS
09/10/2024

CONSTRUCTION DOCUMENTS FOR CENTER FOR BEHAVIORAL MEDICINE RETAINING WALL REPLACEMENT & MEMORIAL GARDEN AT ENTRYWAY

VICINITY MAP

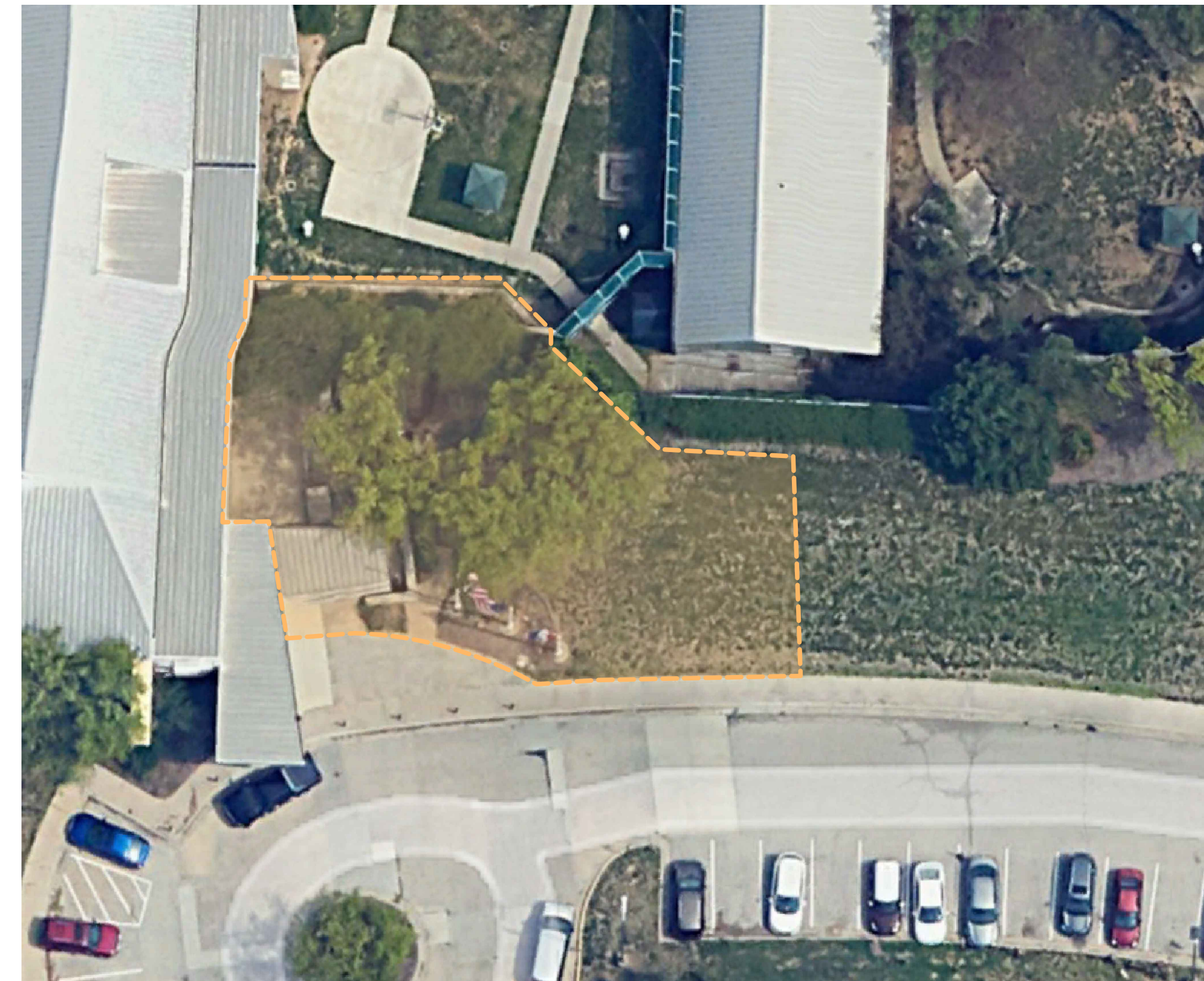


PROJECT NARRATIVE

The masonry block retaining wall at the north of the main entry for the building is separating in several locations. The retaining wall portion to the east is cast-in-place concrete and shows no sign of failure. The goal is to replace the current masonry block retaining wall with a reinforced cast-in-place concrete retaining wall to prevent further degradation and possible catastrophic failure.

As a result of removing and replacing the retaining wall, the memorial garden at the entry will be severely impacted and destroyed. Rejuvenation of the memorial garden is included in the followings plans along with retaining wall replacement. The memorial garden is in poor condition and includes issues contributing to the retaining wall degradation from poor drainage and pernicious tree roots as well as decreased health and safety concerns arising from indigent persons hiding behind sign walls and refuse blowing into the site. After replacement, the memorial garden will provide a calm, welcoming, and low-maintenance area for visitors and employees. The garden will contain all native plantings, low seat walls, memorial signage, benches, and bike parking.

PROJECT LIMITS



SHEET INDEX

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- C-102 - SITE DEMOLITION PLAN
- C-103 - SITE GRADING PLAN
- C-104 - SITE LAYOUT PLAN
- C-105 - SITE JOINTING PLAN
- C-106 - SITE FURNISHINGS PLAN
- C-201 - SECTION ELEVATIONS
- C-501 - CONSTRUCTION DETAILS
- L-101 - NATIVE PLANT GUIDELINES
- L-102 - SITE PLANTING PLAN
- L-501 - PLANTING DETAILS
- S-000 - GENERAL NOTES & RETAINING WALL PLAN
- S-100 - RETAINING WALL ELEVATION

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RETAINING WALL
REPLACEMENT

CENTER FOR BEHAVIORAL
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1000 EAST 24TH STREET
KANSAS CITY, MO 64108

PROJECT # M2407-01
SITE # 7360
ASSET # 6517360003

REVISION: _____
DATE: _____
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REVISION: _____
DATE: _____
ISSUE DATE: 08/28/2024

CAD DWG FILE: _____
DRAWN BY: EM
CHECKED BY: PLA-NAB & PE-ERB
DESIGNED BY: EM

SHEET TITLE:
SHEET INDEX

SHEET NUMBER:

G-002

02 OF 16 SHEETS
PLOT DATE: 08/28/2024

REGIONAL GENERAL NOTES:

- All construction and materials shall be in accordance with the City of Kansas City, Missouri, Design & Construction Standards. Where inconsistencies exist, the latest edition shall take precedence.
- Public safety and traffic control shall be provided in accordance with the new Traffic Control Policy and the KCMO Traffic Engineering and Operations Manual and as directed by the City Inspector. Safe vehicular and pedestrian access shall be provided at all times during construction.
- The Contractor or any Sub-Contractor for this contract shall notify Missouri One Call System three (3) full working days in advance of performing any excavation work by calling 811 or 1-800-DIG-RITE (1-800-344-7483).
- The State of Missouri does not locate utilities. The Contractor shall be responsible for accurately locating, marking, and maintaining all utilities throughout construction.
- The Contractor shall be responsible for the protection of all existing survey monuments and other survey markers during construction. All such monuments or markers destroyed during construction shall be replaced at the Contractor's expense. (REF: 01720 CITY SURVEYING AND CONSTRUCTION STAKING)
- Erosion control measures shall be in accordance with Division II, Section 2100 of the City of Kansas City Construction and Material Specifications.
- The Contractor shall be responsible for additional signing and striping for public safety, as determined by the City of Kansas City.
- Sidewalk ramps and driveways shall conform to the City of Kansas City standards.
- The Contractor shall be responsible for checking all existing elevations, alignments, and profiles where new construction matches existing structures, inverts, roadways, sidewalks, or any other permanent structure or surface. The Project Representative shall be notified as soon as possible of any deviation of horizontal or vertical alignment from that shown on the plans. In no event shall the Landscape Architect be held liable for any delays in construction caused by the horizontal or vertical misalignment of new construction to an existing, permanent structure or surface.

GENERAL DEMOLITION NOTES:

- Contractor shall verify the location, size, material and depth of all utilities prior to any excavation or construction activity.
- All materials shall be removed and disposed of off-site. It is the contractor's responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
- The Contractor shall ensure that any structures to remain which are damaged during demolition operations shall be repaired to meet current code, at no additional cost to the owner.
- The Contractor shall remove any and all existing debris which is encountered from the existing site. This shall include, but shall not be limited to, footings, concrete slabs, conduits, granular subgrade, utility services, and/or unsuitable structural fill material as determined by the owner's engineer. The cost for these removals shall be considered incidental to the project. Said debris shall become property of the contractor and it shall be the responsibility of the contractor to dispose of properly off-site.
- It shall be the Contractor's responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.
- The Contractor shall be responsible for obtaining and payment of any permits for demolition that pertain to this project.
- All protection fencing shall be installed prior to demolition/construction activity. The Contractor shall provide a 6-foot security fence around the entire job site with locked gated access points, if required by the owner or the city.
- All existing utilities removed during construction shall have their trenches backfilled with structural fill and be compacted to the requirements for structural fill.
- All removals required to properly perform the work (whether shown on the plans or not) shall be performed by the Contractor at no additional cost to the owner.

GENERAL NOTES:

- The Contractor shall verify all dimensions and existing conditions prior to commencing work and promptly notify the Landscape Architect of any discrepancies between actual site conditions and the Contract Documents.
- The Contractor shall verify and coordinate all final grades with the Landscape Architect and design team prior to completion.
- Refer to Civil Drawings for storm drainage and utilities layout.
- Location of all utilities are approximate; the Contractor shall field

- verify locations prior to commencement of construction operations. All existing utilities shall be located and identified prior to the commencement of any work or installation of landscape or plant materials.
- Plant quantities are for information only; drawing shall prevail if conflict occurs. Contractor is responsible for calculating required quantities and bid accordingly.
 - The Contractor shall provide a submittal to show proof of procurement, sources, quantities, and varieties for all trees, shrubs, perennials, ornamental grasses, groundcovers, sod/seed, and annuals within 14 days following the award of the contract.
 - The Contractor shall arrange--providing a two week notice--and conduct a pre-construction meeting onsite with Landscape Architect prior to work.
 - The Contractor shall report subsurface soil or drainage problems to the Landscape Architect within 24 hours of noticing problem.
 - The plans are subject to changes based on plant size and material availability. All changes or substitutions must be approved by the Landscape Architect.
 - The Contractor shall be responsible for watering all plant material until the time that a permanent water source is ready.
 - The Contractor shall provide full maintenance for newly landscaped areas for a period of 30 days after the date of final acceptance. At the end of the 30-day maintenance period, healthy, well-rooted, even-colored, viable turf and landscaped areas must be established. The landscaped areas shall be free of weeds, open joints, bare areas, and surface irregularities.
 - The Contractor shall report any discrepancy / issue noticed during the construction phase of the project which may cause the end product to differ from the demonstrated design intent and / or result in any unsafe situation to the Owner's Representative, Landscape Architect, and Engineer's notice within 24 hours.

PROPOSED EXISTING		LINETYPE LEGEND		PROPOSED EXISTING	
SITWORK	CURB & GUTTER	GRADING & DRAINAGE	980	MAJOR CONTOUR	
	EDGE OF PAVEMENT		982	MINOR CONTOUR	
	EXTERIOR WALL		SWALE CENTERLINE		
	ISOLATION JOINT		STORM DRAIN LINE		
ARCH	ROOF OVERHANG	UTILITIES	PERF PIPE	PERFORATED PIPE	
	BUILDING WALL		BURIED ELECTRIC LINE		
FENCING	EROSION CONTROL FENCE	UGC	CABLE TV / INTERNET LINE		
	TREE PROTECTION FENCE	GAS	GAS LINE		
	CUSTOM FENCE	SAN	SANITARY SEWER LINE		
		FO	FIBER OPTIC LINE		

TABLE OF ABBREVIATIONS

APPROX	APPROXIMATE	FOC	FACE OF CURB	SAN	SANITARY
ARCH	ARCHITECT	FT, '	FOOT (FEET)	SD	STORM DRAIN
AVG	AVERAGE	FTG	FOOTING	SF	SQUARE FOOT (FEET)
B&B	BALLED & BURLAPPED	GA	GAUGE	SHT	SHEET
BC	BOTTOM OF CURB	GEN	GENERAL	SIM	SIMILAR
BLDG	BUILDING	GR	GRADE ELEVATION	SPD	STANDARD PROCTOR DENSITY
BM	BENCHMARK	HORIZ	HORIZONTAL	SPECS	SPECIFICATIONS
BOC	BACK OF CURB	HP	HIGH POINT	ST	STORM SEWER
BR	BOTTOM OF RAMP	HT	HEIGHT	SY	SQUARE YARD
BS	BOTTOM OF STEP	ID	INSIDE DIAMETER	STA	STATION
BW	BOTTOM OF WALL	INV	INVERT ELEVATION	STD	STANDARD
CAL	CALIPER	IN, "	INCH(ES)	SYM	SYMMETRICAL
CB	CATCH BASIN	INCL	INCLUDE(D)	T&B	TOP AND BOTTOM
CF	CUBIC FEET	JT	JOINT	TBC	TOP OF BACK CURB
CIP	CAST IN PLACE	LF	LINEAR FEET	TOC	TOP OF CURB
CL, €	CENTERLINE	LOD, LOW	LIMITS OF DISTURBANCE / WORK	TF	TOP OF FOOTING
CLR	CLEARANCE, CLEAR (FACE TO FACE)	LP	LOW POINT	TH	THICK
CM	CENTIMETER	MAX	MAXIMUM	TOPO	TOPOGRAPHY
CO	CLEAN OUT	MH	MANHOLE	TP	TOP OF PAVEMENT
CONT	CONTINUOUS	MIN	MINIMUM	TPZ	TREE PROTECTION ZONE
CY	CUBIC YARD	MISC	MISCELLANEOUS	TR	TOP OF RAMP
DEG, °	DEGREE	N	NORTH	TS	TOP OF STEP
DEMO	DEMOLISH, DEMOLITION	NIC	NOT IN CONTRACT	TW	TOP OF WALL
DIA, Ø	DIAMETER	NO, #	NUMBER	TYP	TYPICAL
DIM	DIMENSION	NTS	NOT TO SCALE / DO NOT SCALE	VAR	VARIES, VARIABLE
DTL	DETAIL	OC	ON CENTER	VOL	VOLUME
DWG	DRAWING	OD	OUTSIDE DIAMETER	W/	WITH
E	EAST	PL, €	PROPERTY LINE	W/O	WITHOUT
EA	EACH	POB	POINT OF BEGINNING	WT	WEIGHT
EL	ELEVATION	PT	POINT, POINT OF TANGENCY	WWF	WELDED WIRE FABRIC
ENG	ENGINEER	PVC	POLYVINYL CHLORIDE	WWW	WELDED WIRE MESH
EQ	EQUAL	QTY	QUANTITY	YD	YARD
EST	ESTIMATE	R	RADIUS	@	AT
E.W.	EACH WAY	REF	REFERENCE	>	GREATER THAN
EXIST, EX	EXISTING	REINF	REINFORCE(D)	≥	GREATER THAN OR EQUAL TO
EXP	EXPANSION, EXPOSED	REQ'D	REQUIRED	<	LESS THAN
FFE, FF	FINISHED FLOOR ELEVATION	REV	REVISION, REVISED	≤	LESS THAN OR EQUAL TO
FG	FINISHED GRADE	ROW	RIGHT OF WAY		
FL, €	FLOWLINE	S	SOUTH		



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GENERAL
INFORMATION

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G-003

03 OF 16 SHEETS
PLOT DATE: 09/10/2024



A - EROSION CONTROL PLAN

EROSION AND SEDIMENT CONTROL GENERAL NOTES

- Prior to Land Disturbance activities, the contractor shall:
 - Delineate the outer limits of any natural stream corridor designated with construction fencing.
 - Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
 - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the City inspector and in conformance with the erosion and sediment control plan.
- The contractor shall comply with all the following requirements, including but not limited to:
 - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
 - The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals:
 - During active construction phases - at least once per week
 - During periods of inactivity - at least once per 14 days
 - After each rainfall event of 1/2 inch or more - within 24 hours of the rain event
 - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.
 - The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.
- Unless otherwise noted in the plans, all seeding must conform to Division II-Construction and Materials Specification-Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.
- The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.
- The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.
- Concrete wash or rinse water from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc. may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place.
- Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.
- Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.
- Interior Silt Fence as necessary during construction. Portions may be limited as vegetation is established and hardscape is installed. Entire length may be installed at the contractor's option to aid in stabilizing slopes.
- Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Kansas City with reports and documentation.
- At construction completion, all roads, curbs, walkways, and landscape areas shall be rehabilitated to their pre-construction state or better.

EROSION CONTROL LEGEND

	DISTURBED AREA (0.4 AC)		CONSTRUCTION ENTRANCE
	SILT/SEDIMENT FENCE		STAGING AREA
	INLET PROTECTION FILTER BAGS		CONCRETE WASHOUT

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	See Detail	BMP Description & Notes	Remove After Stage:
Phase I (PRE-CON)	A - Place BMP's Prior to Land Disturbance	01	600	Construction Entrance & Staging Area: Placement TBD	B
		02	601	Perimeter Silt Fence: Placement TBD	C
		03	602	Concrete Wash-Out: Placement TBD	B
		04	603	Existing Inlet Protection: Place as shown on plan	C
Phase II (POST-CON)	C - Final Grading, Paving & Landscaping	06	N/A	Final Seeding, Sod, and Landscaping: Silt fencing & inlet protect may be removed once seed & sodded areas are established on 80% of site.	N/A



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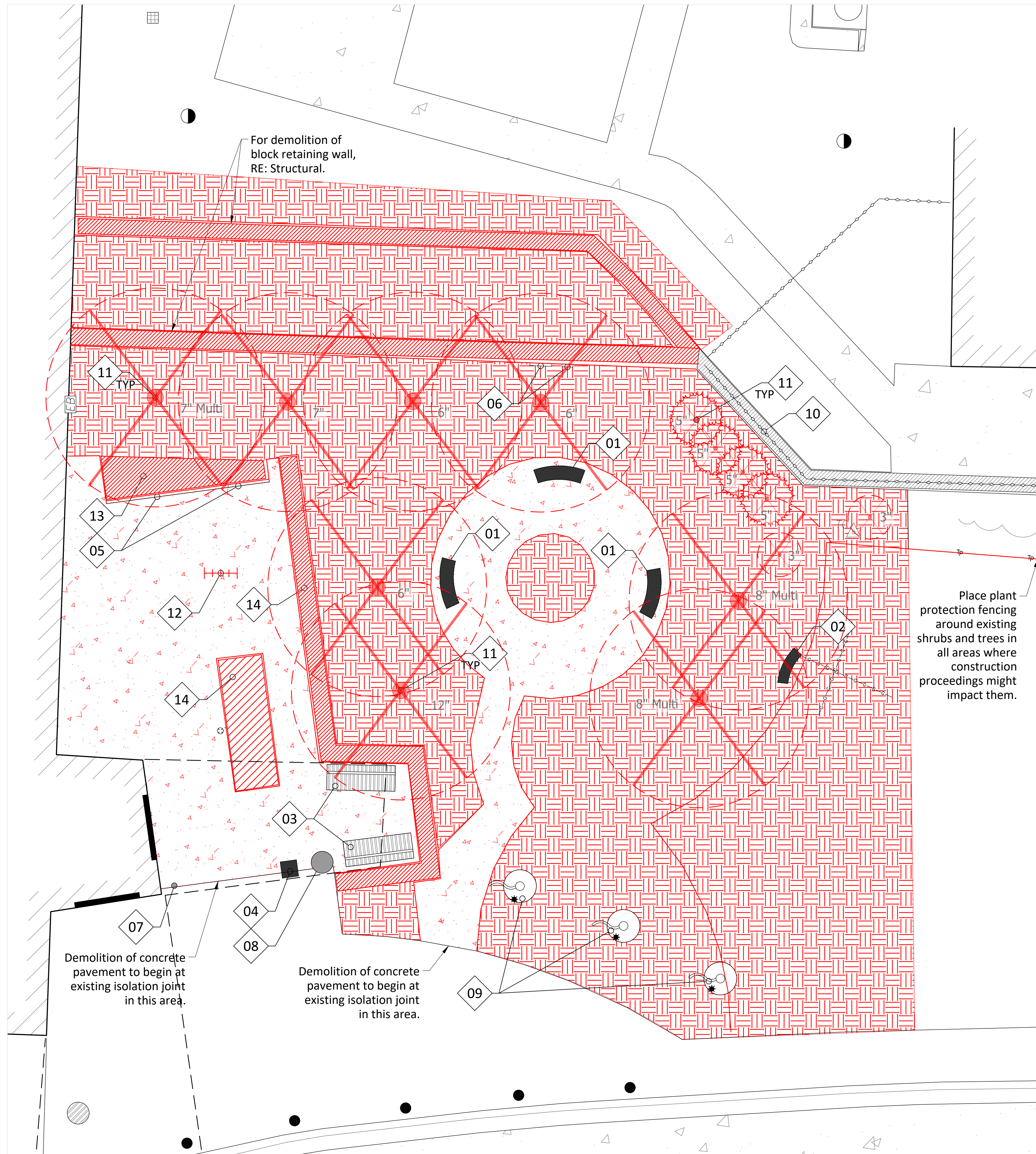
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CHECKED BY: PLA-NAB & PE-ERB
DESIGNED BY: EM

SHEET TITLE:
**EROSION CONTROL
PLAN**

SHEET NUMBER:

C-101

04 OF 16 SHEETS
PLOT DATE: 08/28/2024



A - SITE DEMOLITION PLAN

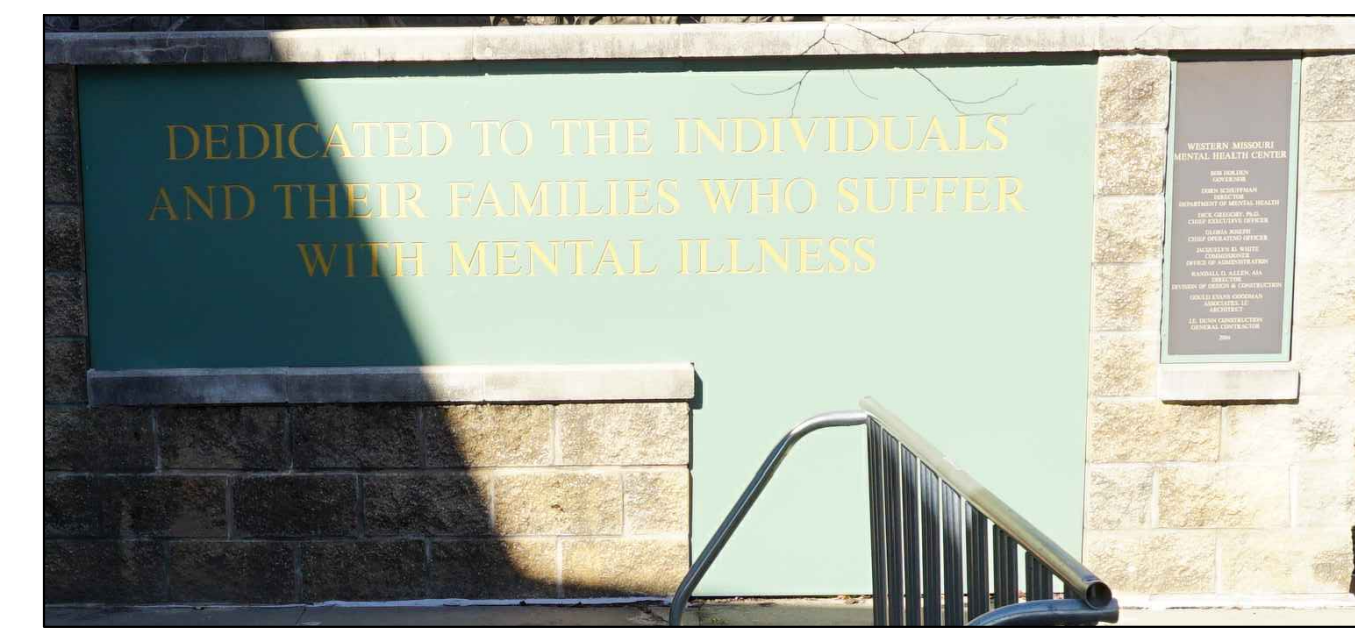
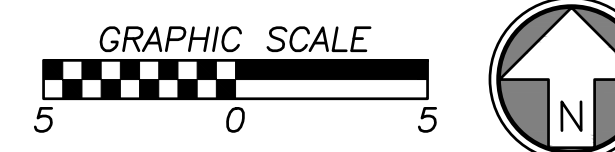


IMAGE 01

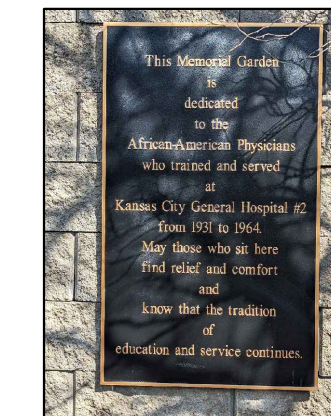


IMAGE 02

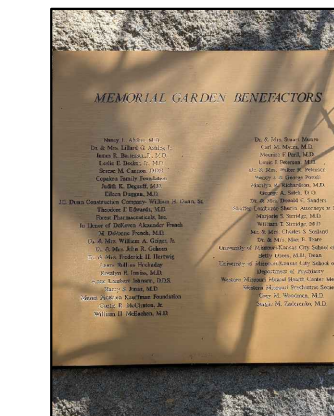


IMAGE 03



IMAGE 04

SITE DEMOLITION LEGEND

Demolition Intent	Description
00 DEMOLITION INTENT	Description
01 REMOVE & REUSE	Existing curved concrete benches (QTY 3) to be preserved at demolition and best quality two to be reused at project completion.
02 REMOVE & REUSE	Existing curved concrete bench (QTY 1) with memorial plaquard afixed to top to be preserved at demolition and reused at project completion. See Image 04.
03 REMOVE & REUSE	Existing metal benches (QTY 2) to be removed and preserved at demolition and reused.
04 REMOVE & REUSE	Existing garbage receptacle (QTY 1) to be preserved at demolition and reused at project completion.
05 REMOVE & REUSE	Existing building sign and memorial plaquard to be removed and preserved at demolition and reused. See Image 01.
06 REMOVE & REUSE	Existing memorial plaquards to be removed and preserved at demolition and reused. See Image 02 and Image 03.
07 PROTECT IN SITU	Existing ADA door button and post (QTY 1) shall remain in situ and be protected at all times from damage. See Note 2.
08 PROTECT IN SITU	Existing building, posts, and building overhang shall remain in situ. See Note 1.
09 PROTECT IN SITU	Existing flagpole with base and light (QTY 3) shall remain in situ and be protected at all times from damage. Maintain electric service throughout demolition and construction.
10 PROTECT IN SITU	Existing concrete retaining wall with metal fence shall remain in situ and be protected at all times from damage and/or failure.
11 REMOVE	Existing trees, shrubs, grasses, perennials, and groundcovers to be removed completely and disposed of in compliance with all local and state regulations. All plant material including trunks and roots to be removed to a minimum depth of three feet (3') below existing grade.
12 REMOVE	Existing Saris brand metal bike rack to be removed permanently during demolition.
13 REMOVE	Existing sign wall including all footing and reinforcement materials to be removed permanently during demolition.
14 REMOVE	Existing block seat walls including all footing and reinforcement materials to be removed permanently during demolition.
	Concrete paving to be removed.
	Plant, landscape materials, and boulders to be removed.
	Block seat walls to be removed. See Structural for demolition of retaining wall.

- NOTES:**
- EXISTING BUILDING, BUILDING OVERHANGS, EXTERIOR BUILDING FAÇADE, ALL BUILDING COMPONENTS, COURTYARD FENCE, AND EXISTING CONCRETE RETAINING WALL SHALL BE PROTECTED FROM DAMAGE DURING ENTIRE CONSTRUCTION PROCEEDINGS. ALL DAMAGES CAUSED DURING CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
 - UNIVERSAL ADA ACCESS TO THE BUILDING SHALL BE PROVIDED THROUGHOUT CONSTRUCTION. COORDINATE WITH PROJECT REPRESENTATIVE AND BUILDING PERSONNEL TO ENSURE COMPLIANT BUILDING ACCESS AT ALL TIMES.
 - EXISTING SITE FURNISHINGS, SIGNS, AND MEMORIAL PLAQUARDS DESIGNATED TO BE REMOVED AND PRESERVED SHALL BE STORED IN A SECURE LOCATION UNTIL PERMANENT PLACEMENT AS SHOWN ON C-106.
 - NOTIFY PROJECT REPRESENTATIVE AND LANDSCAPE ARCHITECT IMMEDIATELY IF ANY ITEMS MEANT FOR REUSE ARE IN POOR QUALITY OR DAMAGED DURING REMOVAL.
 - CLEANED TOPSOIL REMOVED FROM DEMOLITION AREA TO BE STORED, AMENDED AS REQUIRED, AND REUSED AS SPECIFIED.
 - EXISTING PAVEMENT, PLANT MATERIALS, LANDSCAPE BOULDERS, WALLS, GARBAGE, AND FOOTINGS NOT OTHERWISE NOTED TO BE REMOVED PERMANENTLY DURING DEMOLITION. CLEANED TOPSOIL REMOVED FROM DEMOLITION AREA TO BE STORED, AMENDED AS REQUIRED, AND REUSED AS NEEDED. PROTECT ALL EXISTING WATER, SEWER, STORM SEWER, AND UTILITY LINES FROM DAMAGE THROUGHOUT DEMOLITION AND CONSTRUCTION.



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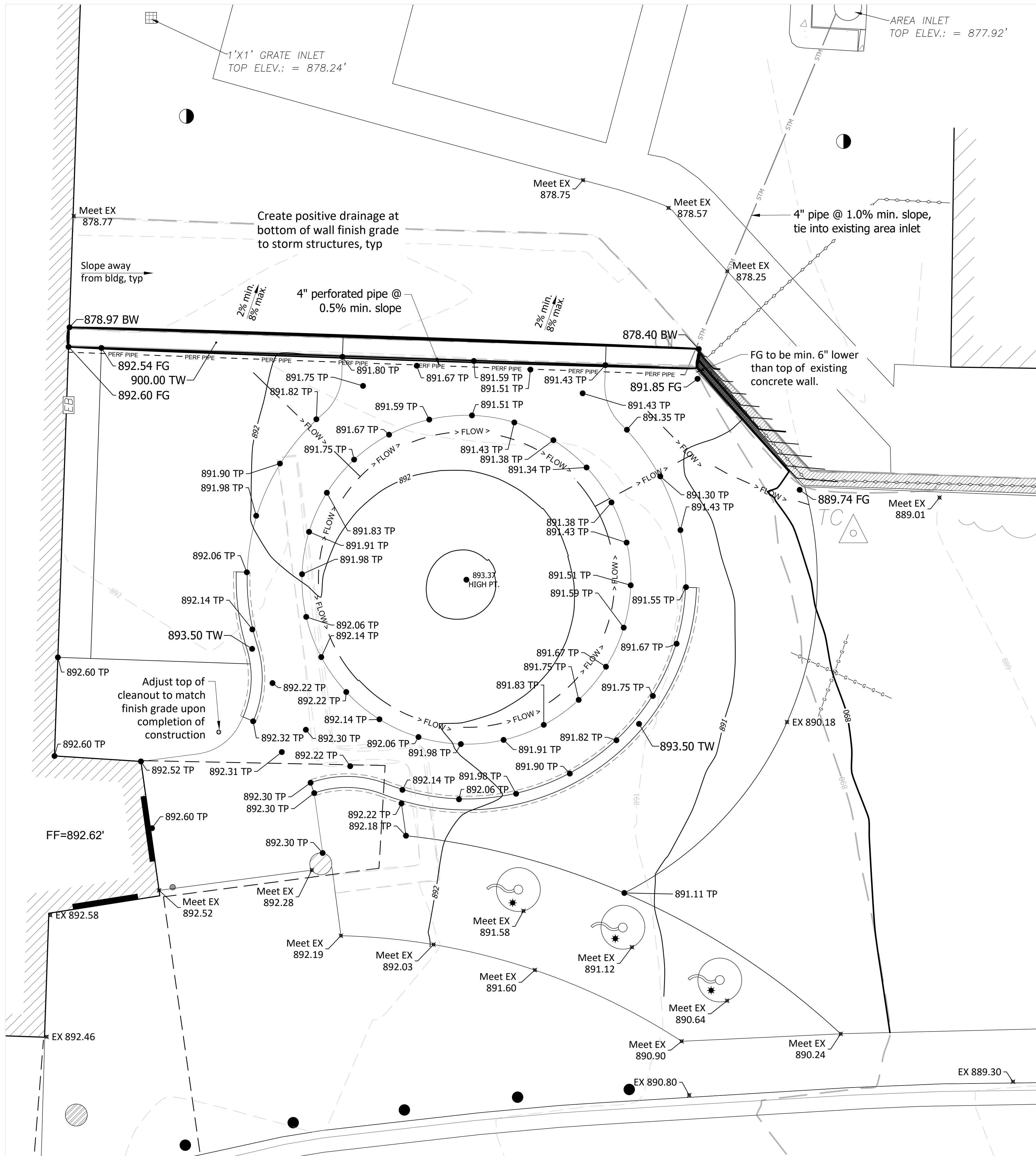
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SHEET TITLE:
**SITE DEMOLITION
PLAN**

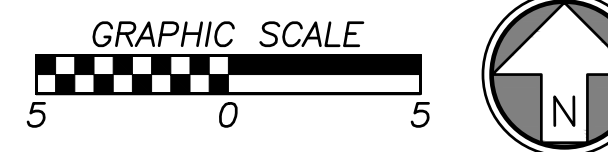
SHEET NUMBER:

C-102

05 OF 16 SHEETS
PLOT DATE: 08/28/2024



A - SITE GRADING PLAN



GRADING NOTES

1. Contractor shall obtain a copy of the Geotechnical Services Report (prepared by CFS Engineers dated May 08, 2024) for the project and be familiar with the existing conditions and recommendations contained in the report if such a report has been prepared.
2. Contractor is responsible for any over excavation of existing unsuitable soils will be required under wall and pavement areas. Contractor shall perform over excavation of unsuitable soils as a part of this work.
3. Contractor shall obtain soils suitable as structural fill from off-site sources. All borrow materials must be tested and approved by the Geotechnical Engineer prior to importing the soils to the project site.
4. Contractor shall operate under the terms and permits included in the Erosion Control Plan (C-101) prepared for this project. Contractor shall employ a qualified person to conduct regular inspections of the site erosion control measures and document such inspections in the inspection document maintained by the Contractor.
5. All topsoil, vegetation, root structures, and deleterious materials shall be stripped from the ground surface prior to the placement of embankments. Contractor shall obtain the on-site geotechnical representative's acceptance of the existing ground surface materials and the proposed fill material prior to the placement of fill.
6. All proposed contour lines and spot elevations shown are finish ground elevations. Contractor shall account for pavement depths, building pads, topsoil, etc when grading the site.
7. All disturbed areas that are not to be paved (green spaces) shall be finish graded with a minimum of thirty six inches (36") of clean native soil.
8. All excavation and embankments shall comply with the recommendations provided by the geotechnical engineer.

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



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DEPARTMENT OF
MENTAL HEALTH

RETAINING WALL
REPLACEMENT

CENTER FOR BEHAVIORAL
MEDICINE BUILDING

1000 EAST 24TH STREET
KANSAS CITY, MO 64108

PROJECT # M2407-01
SITE # 7360
ASSET # 6517360003

REVISION: _____
DATE: _____
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DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 08/28/2024

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DESIGNED BY: EM

SHEET TITLE:
**SITE GRADING
PLAN**

SHEET NUMBER:

C-103

06 OF 16 SHEETS
PLOT DATE: 08/28/2024

PROJECT CONTROL TABLE (NAD83 MISSOURI STATE PLANE, WEST ZONE, US SURVEY FOOT)				
POINT NO.	CONTROL POINT/ BENCHMARK DESCRIPTION	NORTHING COORDINATE	EASTING COORDINATE	ELEV.
10	CP10 / IB4 W CAP	1062213.43	2768189.29	891.35'
11	CP11 / IB4 W CAP	1062332.29	2768162.66	888.09'

GRADING LEGEND					
	880	EXISTING GRADE MAJOR CONTOURS		880	FINISH GRADE MAJOR CONTOURS
	882	EXISTING GRADE MINOR CONTOURS		882	FINISH GRADE MINOR CONTOURS



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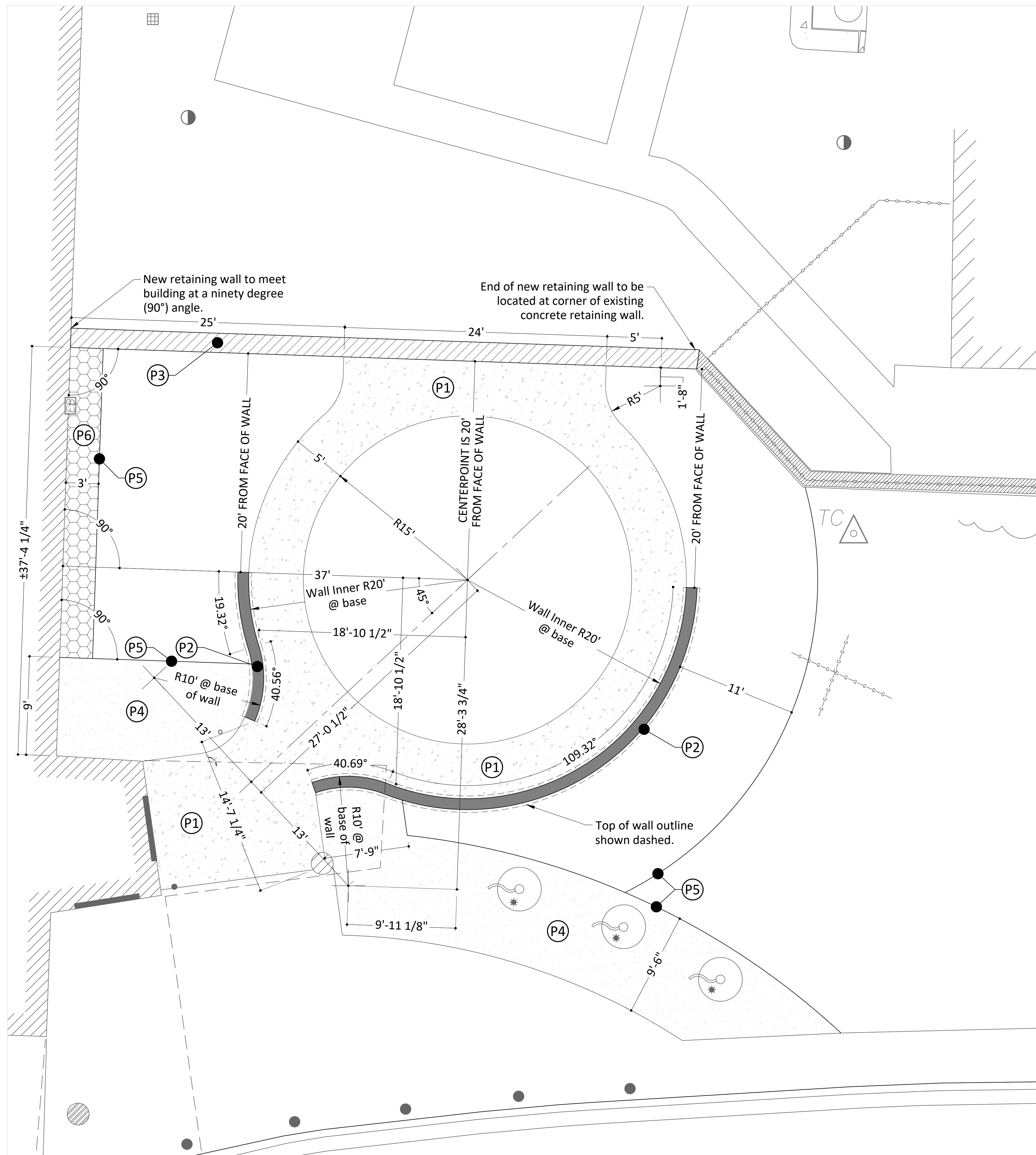
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SHEET TITLE:
SITE LAYOUT
PLAN

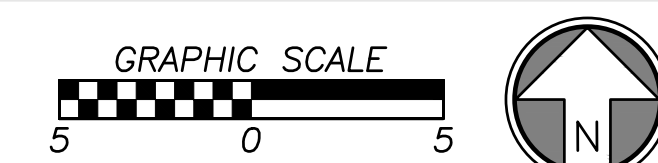
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07 OF 16 SHEETS
PLOT DATE: 08/28/2024

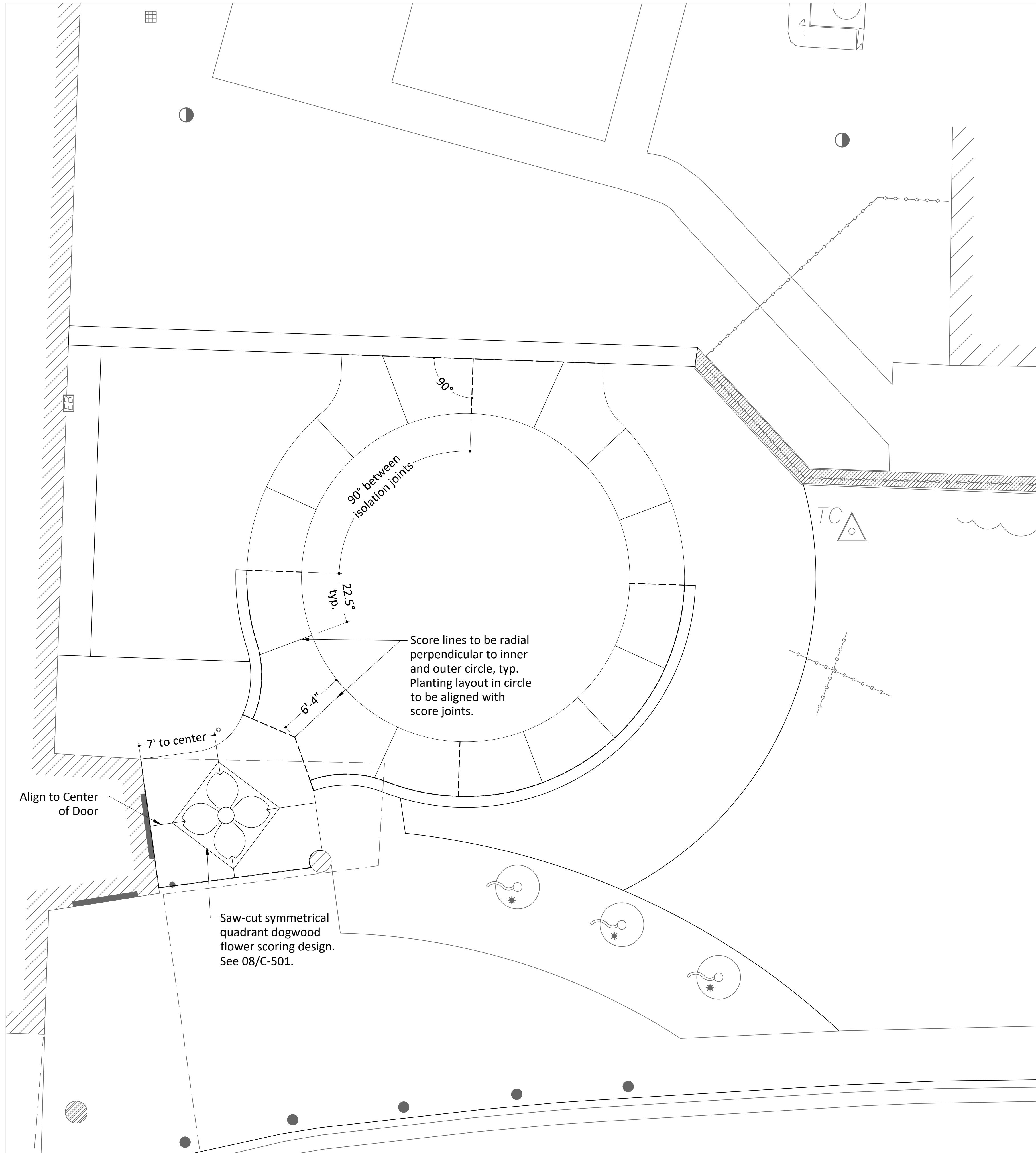


A - SITE LAYOUT PLAN

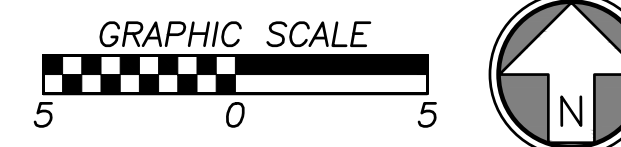


MATERIALS LEGEND						
Approx. Quantity	P#	Type	Product / Color	Finish	Joint(s)	Note(s) / RE: Detail(s)
806 SF	P1	Light-Duty Concrete	KCMMB 4k; Standard Gray	Medium Broom Finish	As shown	RE: 02/C-501
60 LF	P2	Reinforced CIP Concrete Seatwall	TBD; Black Granite Aggregate	TBD	Match adjacent paving joints	RE: 01/C-501 & 1/S-100
57 LF	P3	Reinforced CIP Concrete Retaining Wall	TBD	TBD	TBD; RE: STRUCT	RE: A/S-100
536 SF	P4	Decomposed Granite	Aggregate Color: Black Granite	N/A	N/A	RE: 05/C-501
137 LF	P5	Steel Edging	N/A	N/A	N/A	RE: 09/C-501
85 SF	P6	Maintenance Edge	N/A	N/A	N/A	RE: 10/C-501

- NOTES:
1. Clay soils should be pre-wet before compaction and laying cementitious mixture.
 2. Concrete pours should end at joint locations. All construction joint locations to become isolation joints.
 3. Place isolation joints wherever the sidewalk abuts another rigid structure.
 - 3.1. Always use backer rod size bigger than joint to be filled.
 - 3.2. Joint to be sound, clean, and dry prior to packing and sealing.
 4. Concrete mix shall use type and kind for current weather conditions and shall be protected while curing as required.
 5. Finished grade prior to sod installation to be a half inch (1/2") lower than sidewalk edge.



A - CONCRETE JOINTING PLAN



SCORING LEGEND	
ISOLATION JOINT 03/C-501	CONTROL JOINT 04/C-501



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SHEET TITLE:
**SITE JOINTING
PLAN**

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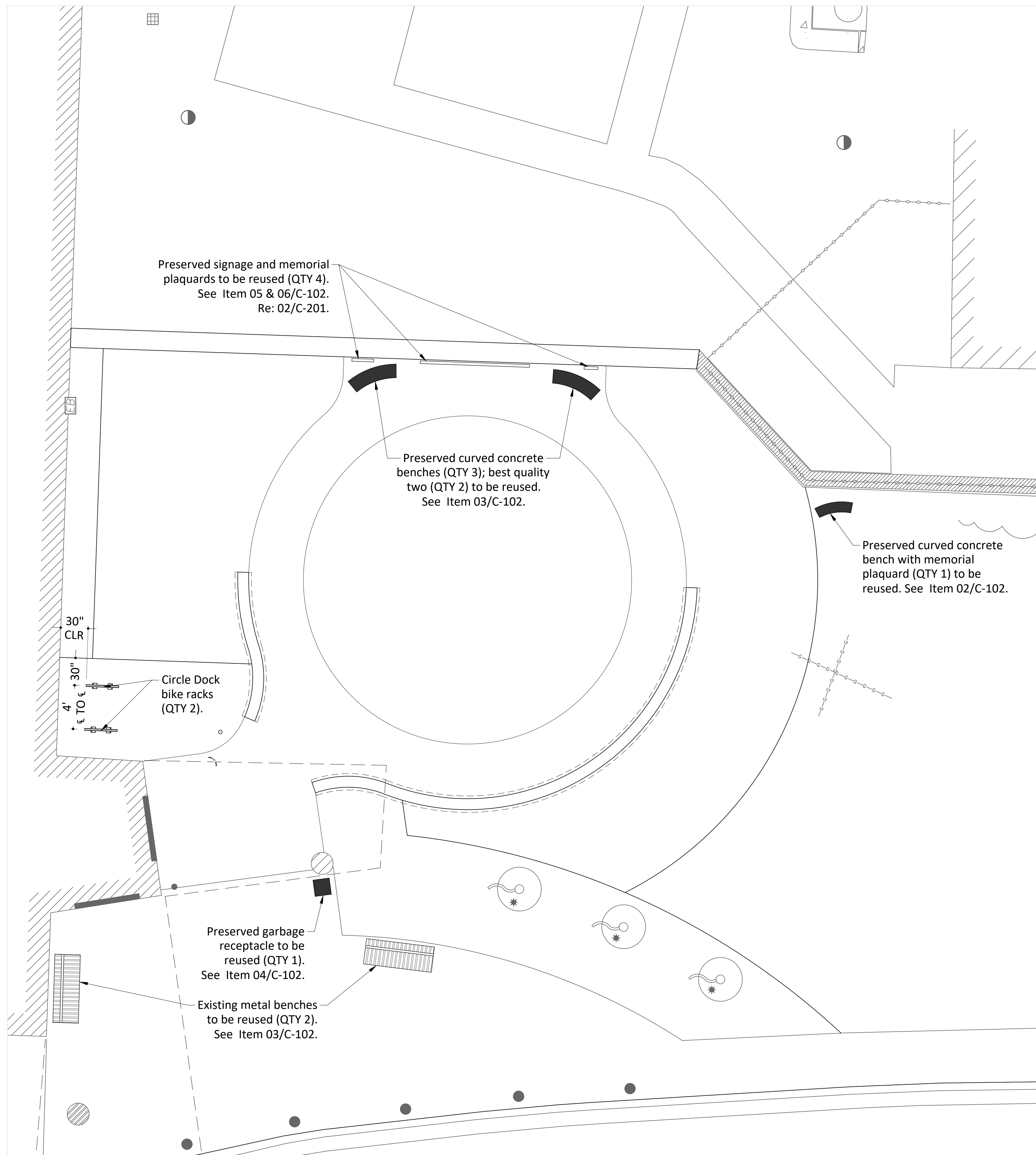
SHEET TITLE:

SITE
FURNISHINGS
PLAN

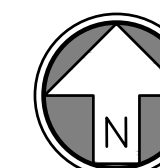
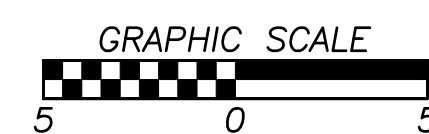
SHEET NUMBER:

C-106

09 OF 16 SHEETS
PLOT DATE: 08/28/2024



A - SITE FURNISHINGS PLAN



SITE FURNISHINGS LEGEND

Quantity	Symbol	Description
2		Saris Infrastructure Circle Dock Bike Rack
2		Reused Green Metal Bench
2		Reused Curved Concrete Bench
1		Reused Curved Concrete Bench with Memorial Plaquard
1		Reused Trash Receptacle

NOTES:
1. Notify Project Representative and Landscape Architect immediately if any items meant for reuse are in poor quality or damaged during removal.



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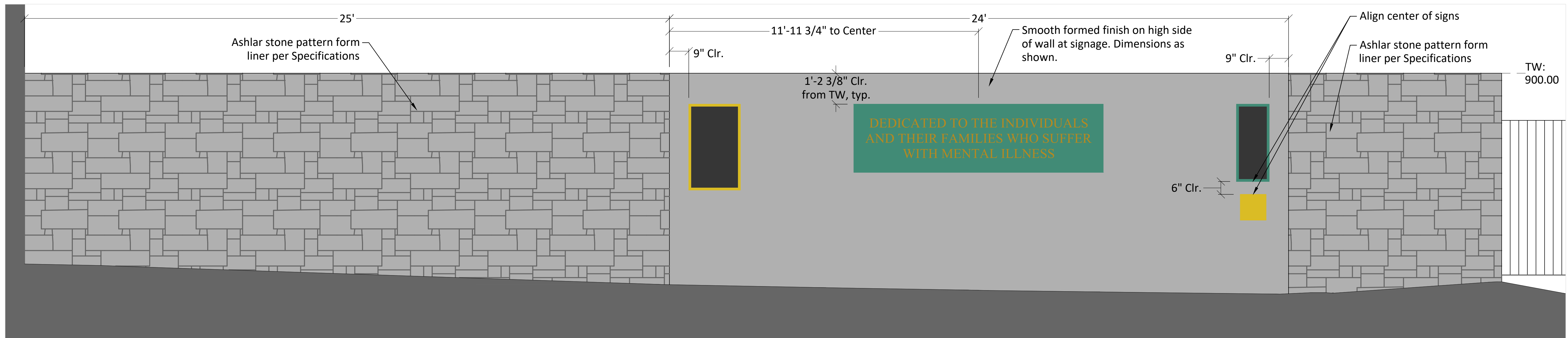
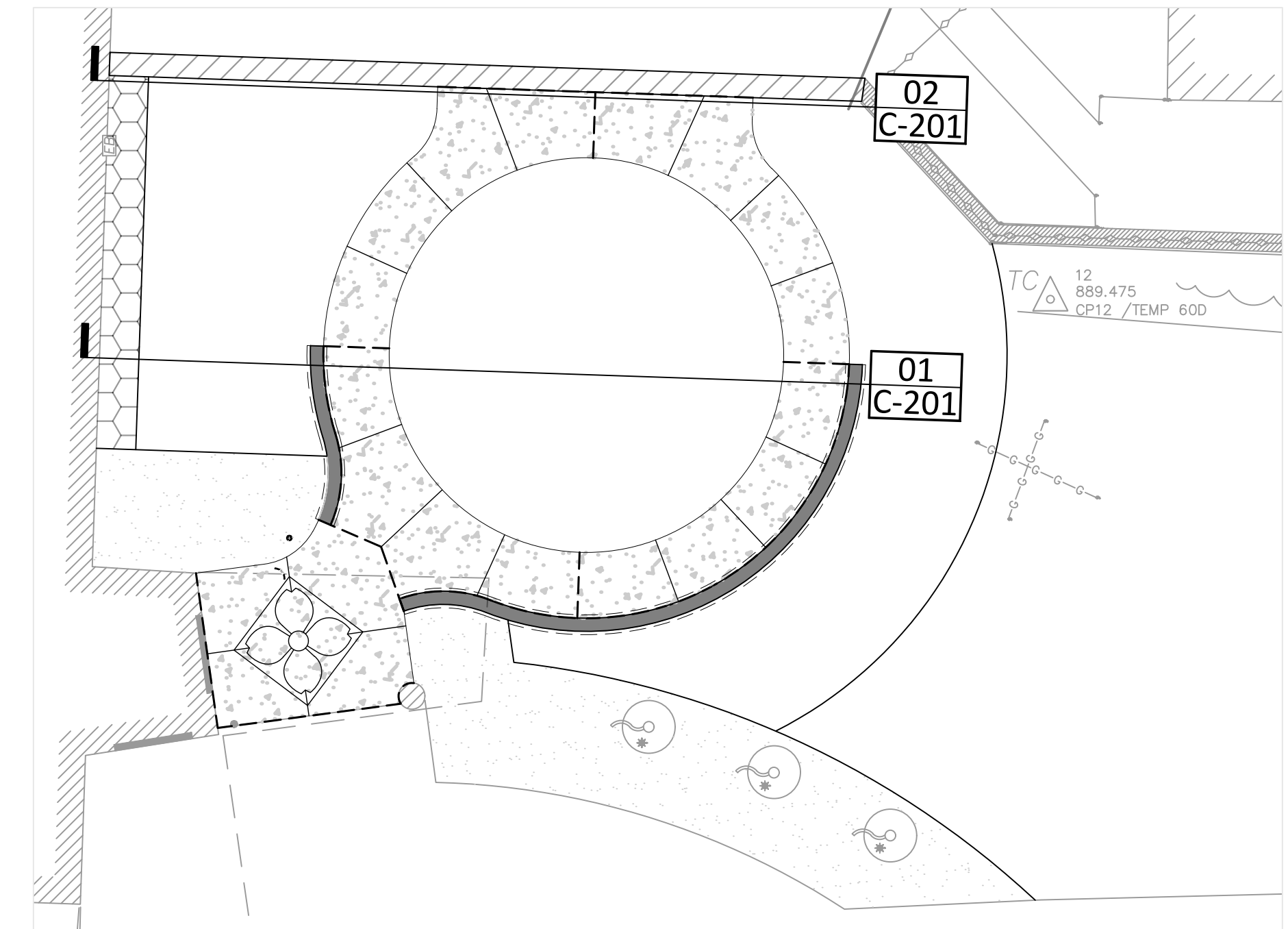
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SECTION
ELEVATIONS

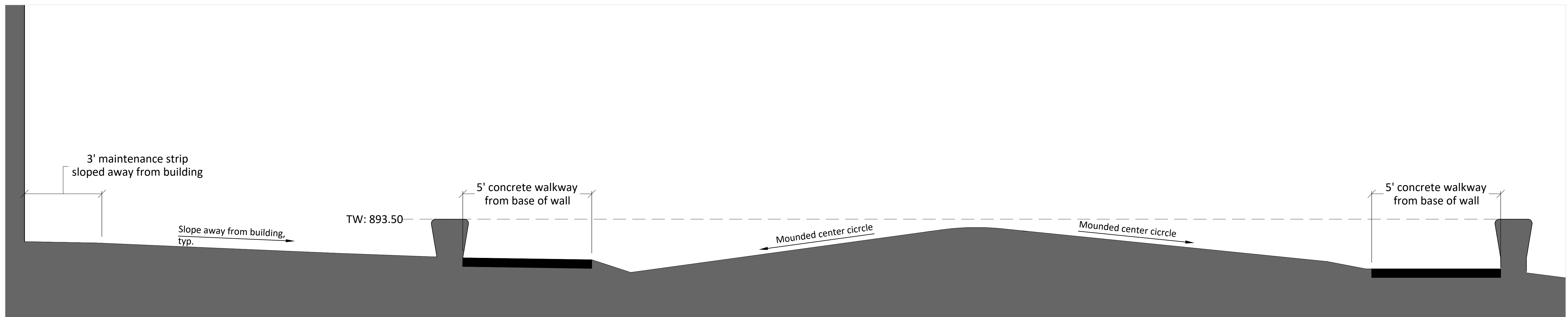
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02 - MEMORIAL GARDEN RETAINING WALL - SOUTH SIDE ELEVATION



01 - MEMORIAL GARDEN SEATWALL SECTION



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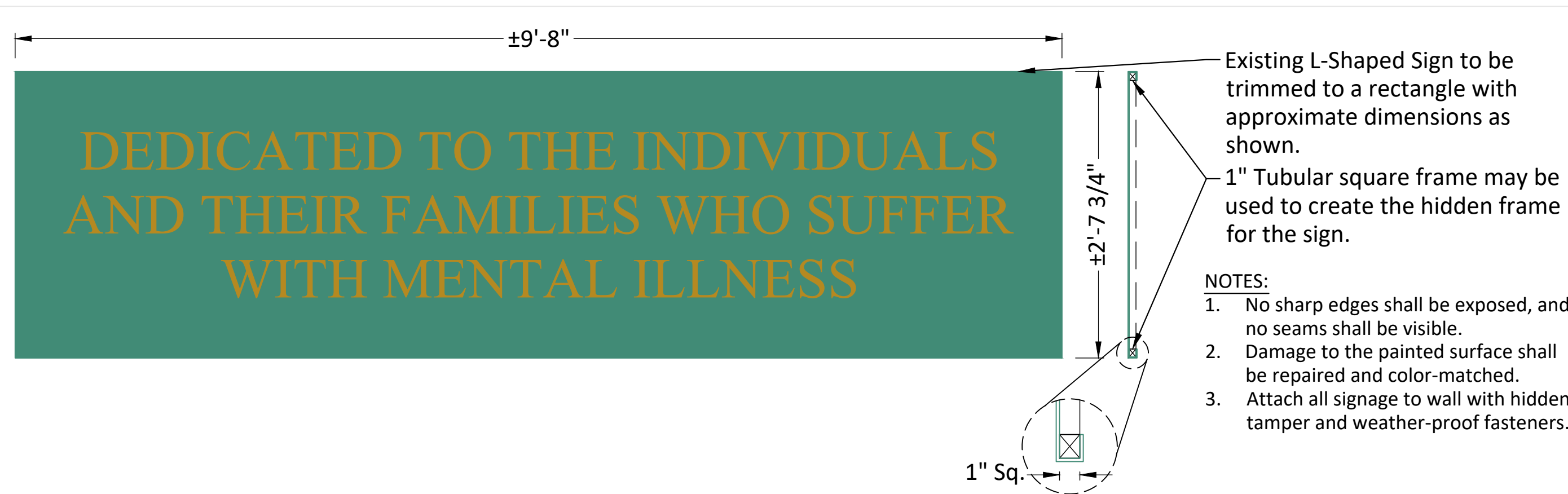
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**CONSTRUCTION
DETAILS**

SHEET NUMBER:

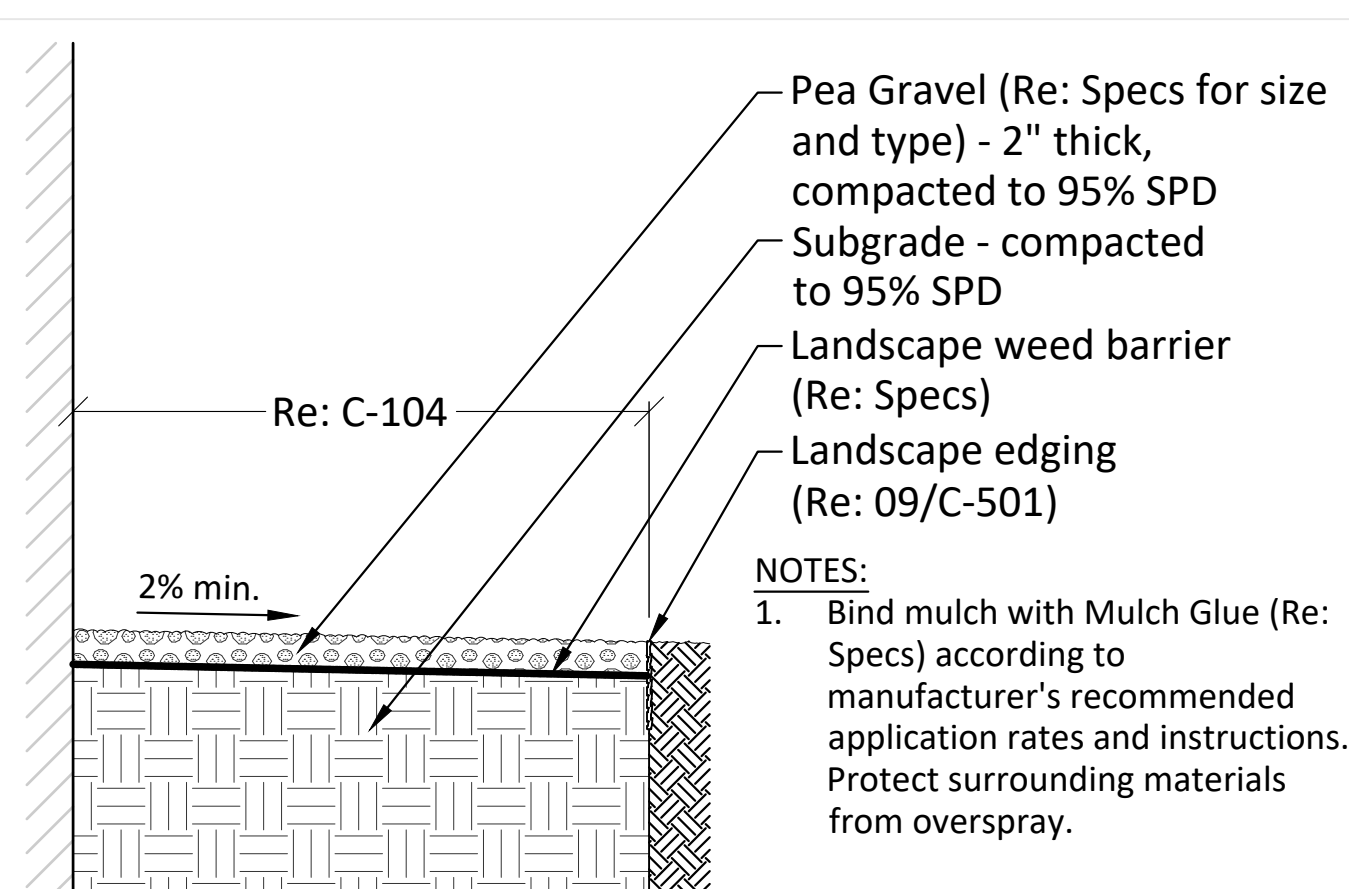
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11 OF 16 SHEETS
PLOT DATE: 08/28/2024

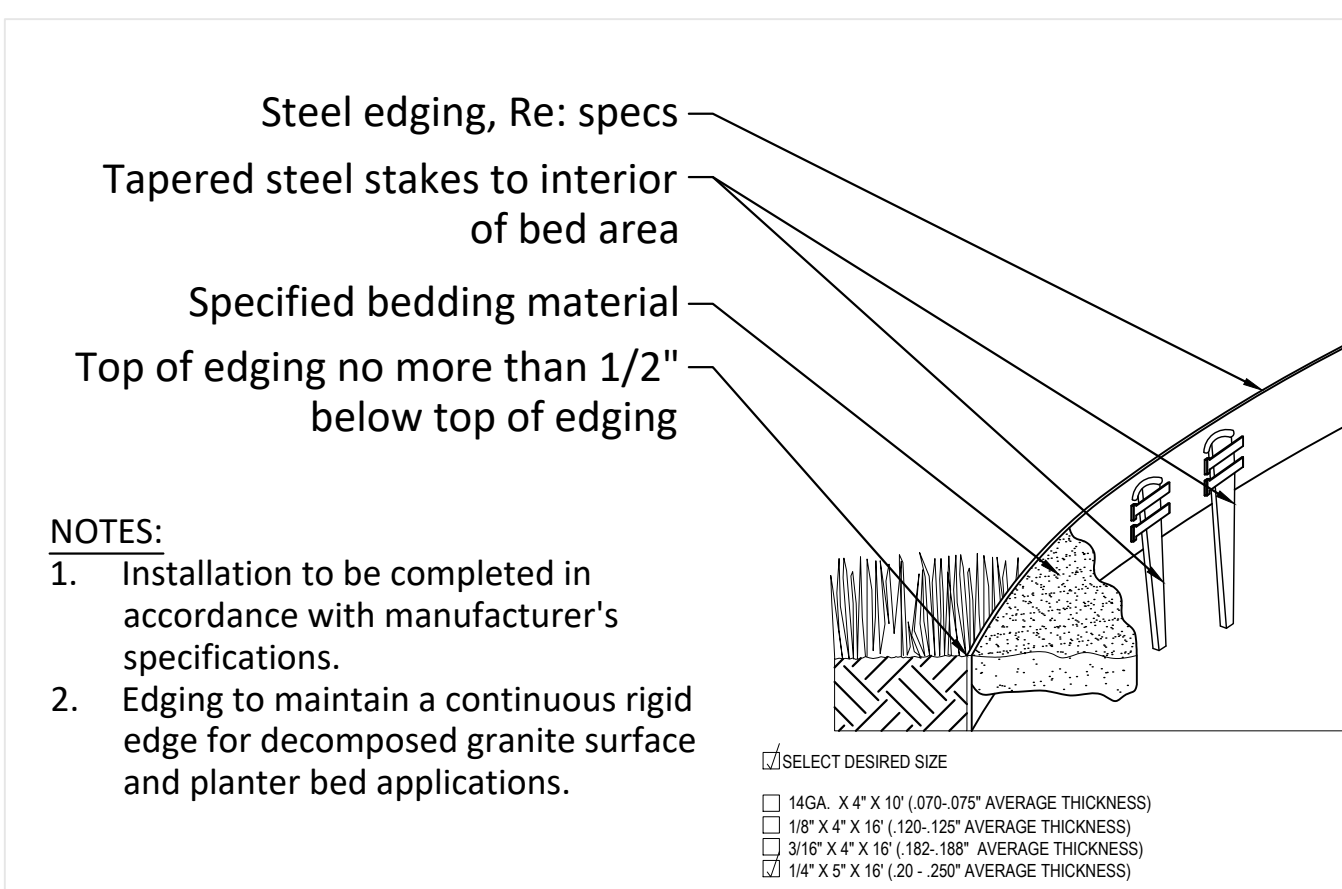


- NOTES:
1. No sharp edges shall be exposed, and no seams shall be visible.
 2. Damage to the painted surface shall be repaired and color-matched.
 3. Attach all signage to wall with hidden, tamper and weather-proof fasteners.

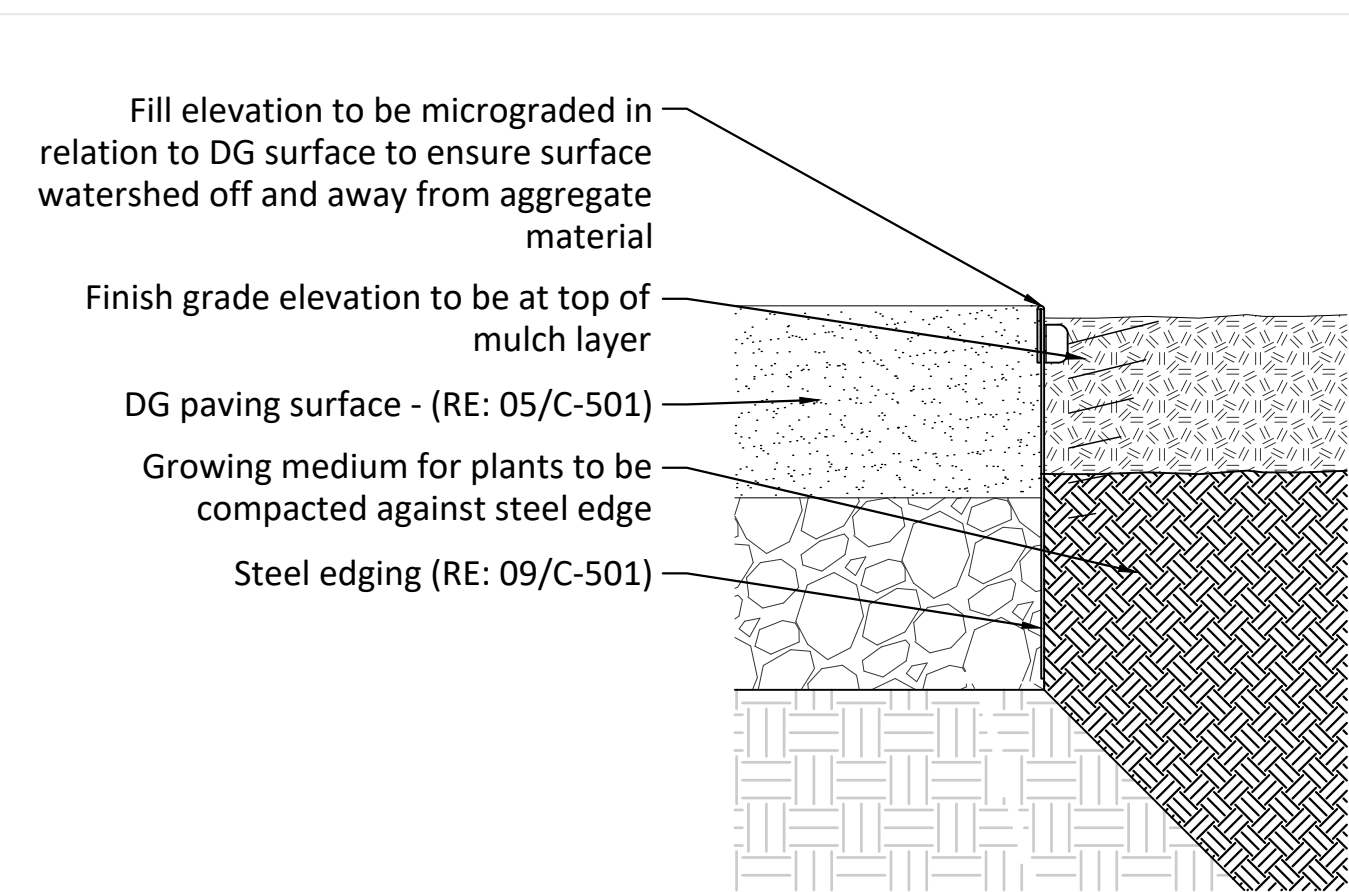
11 Existing Large Dedication Sign Revisions
1" = 1'-0"



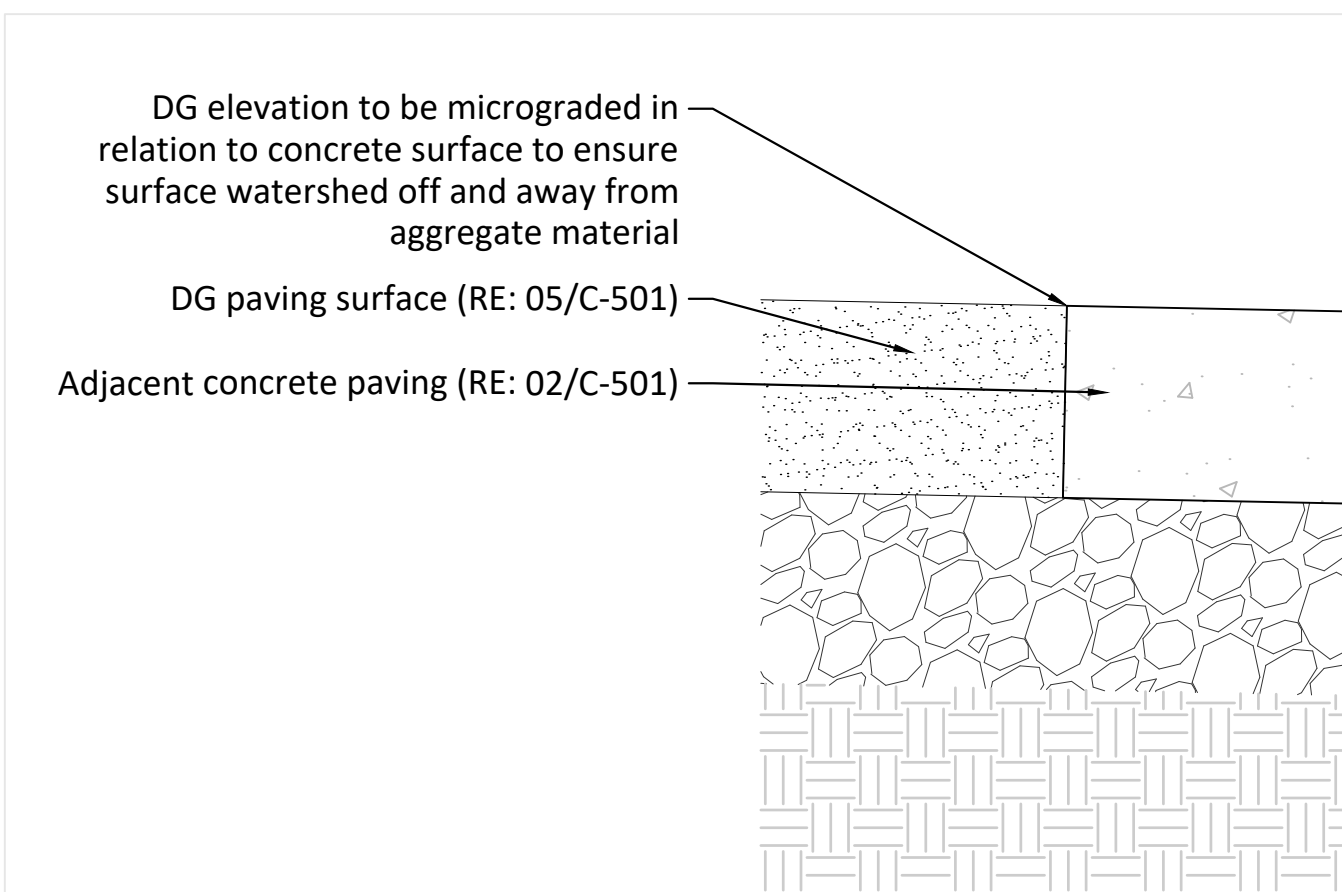
10 Maintenance Edge @ Building
1" = 1'-0"



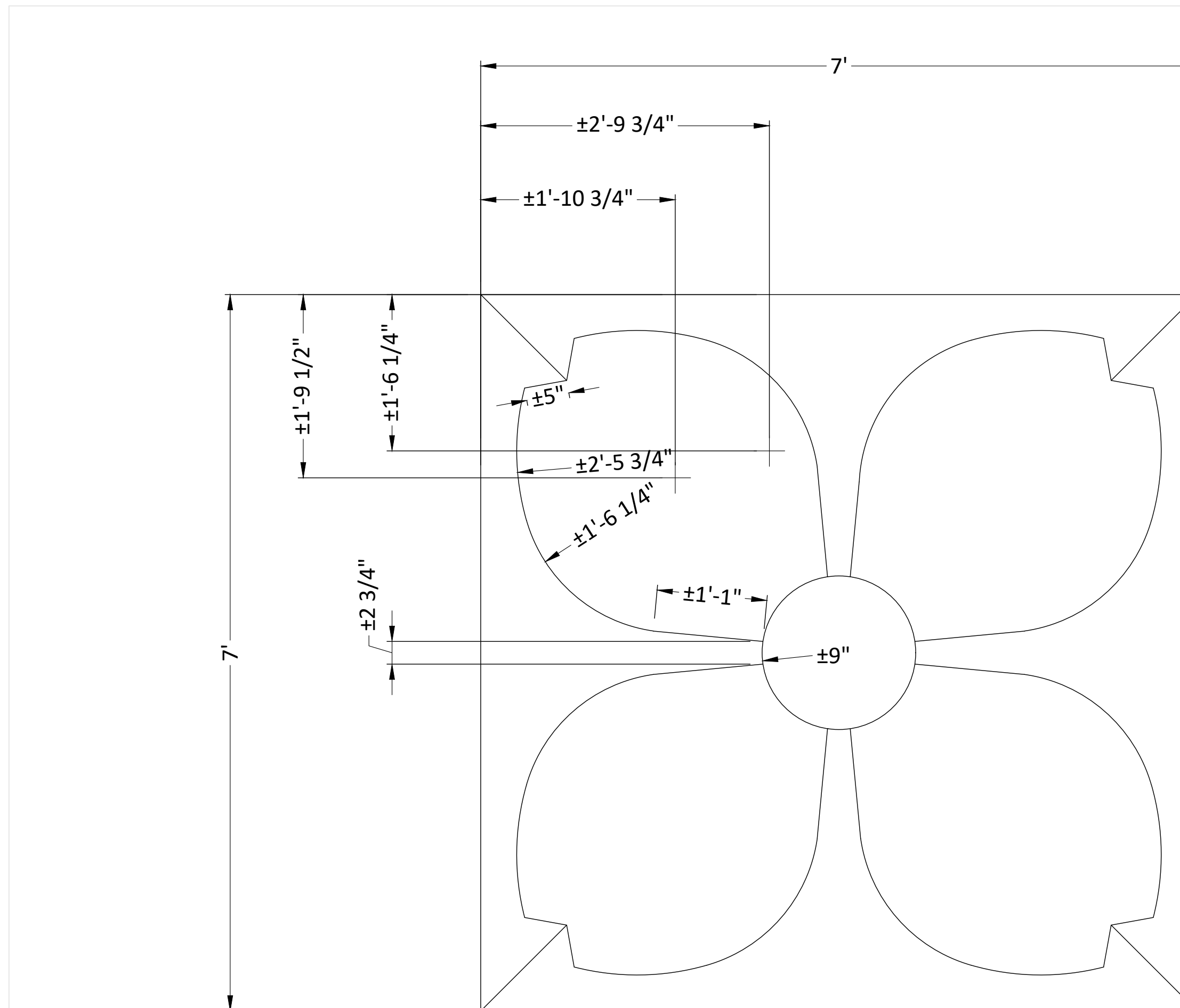
09 Steel Landscape Edging
1" = 1'-0"



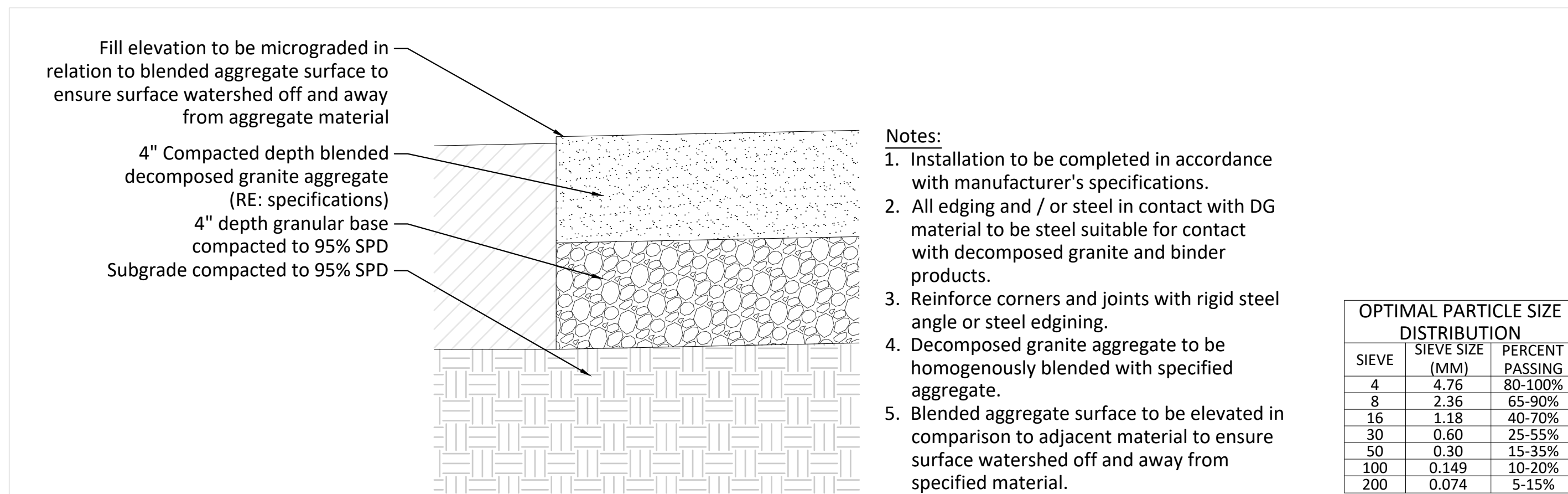
07 Decomposed Granite Edge at Planter Bed
3" = 1'-0"



06 Decomposed Granite Edge at Concrete Paving
3" = 1'-0"

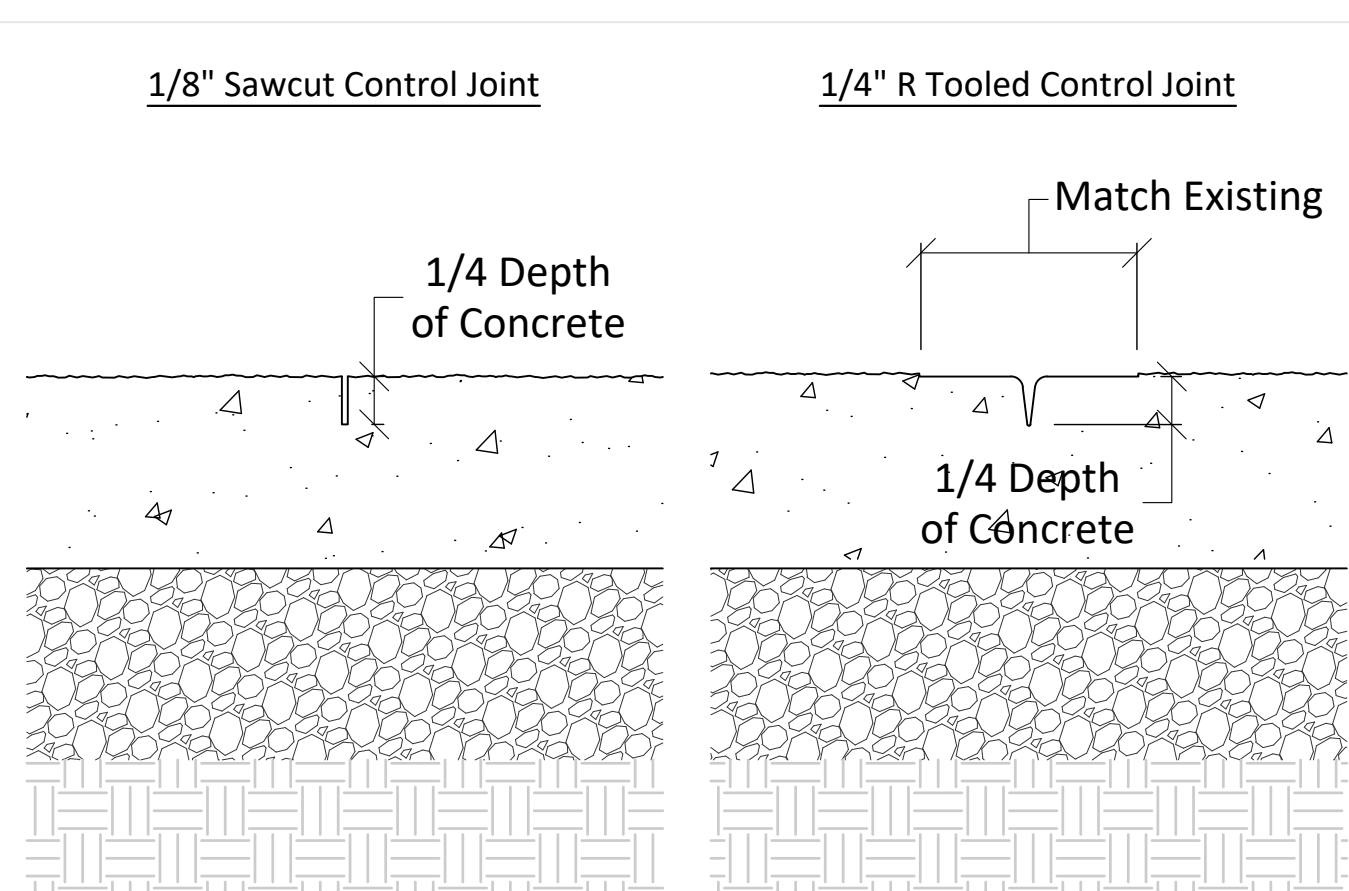


08 Dogwood Flower Concrete Scoring Template
1" = 1'-0"

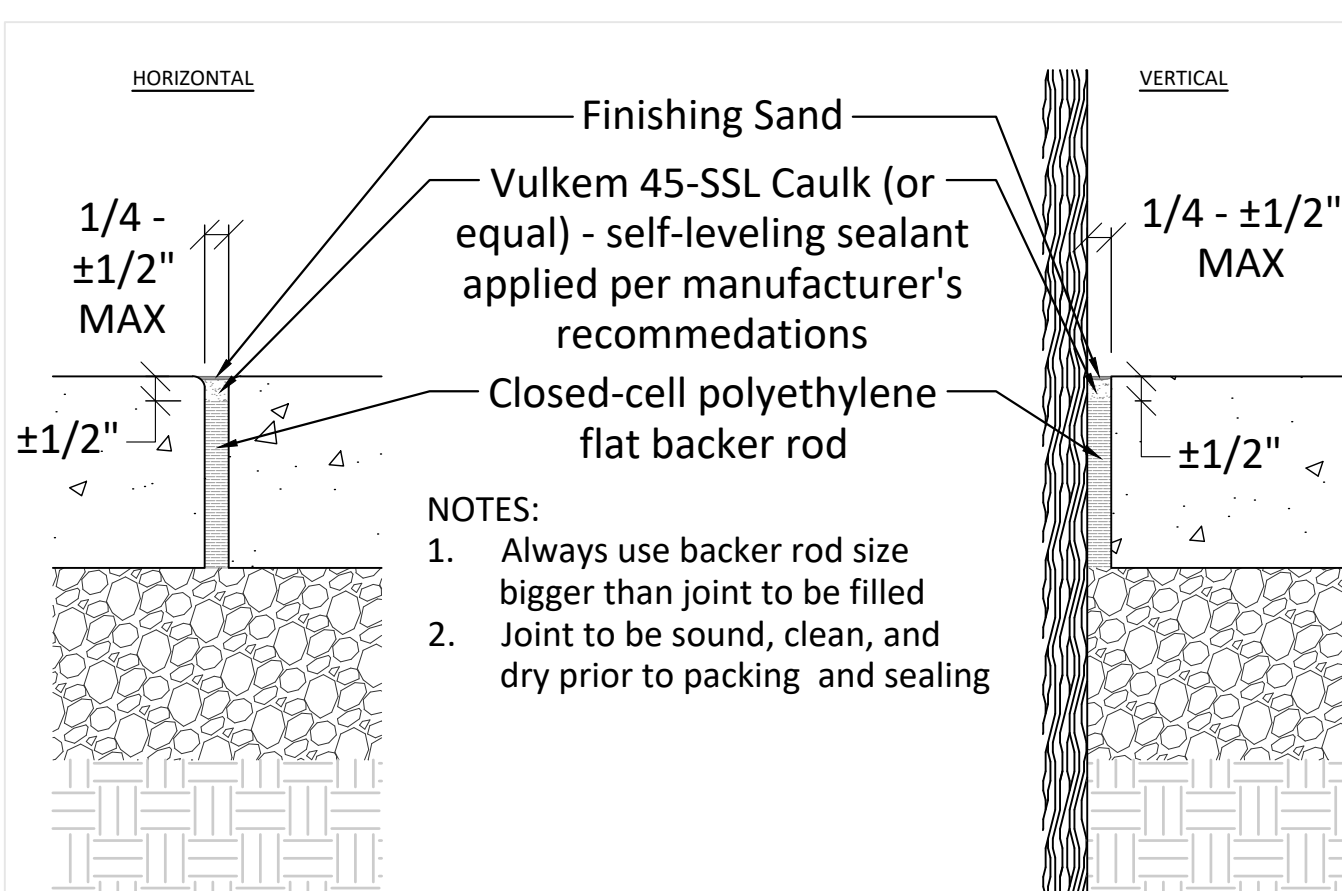


OPTIMAL PARTICLE SIZE DISTRIBUTION		
SIEVE	SIEVE SIZE (MM)	PERCENT PASSING
4	4.75	80-100%
8	2.36	65-90%
16	1.18	40-70%
30	0.60	25-55%
50	0.30	15-35%
100	0.149	10-20%
200	0.074	5-15%

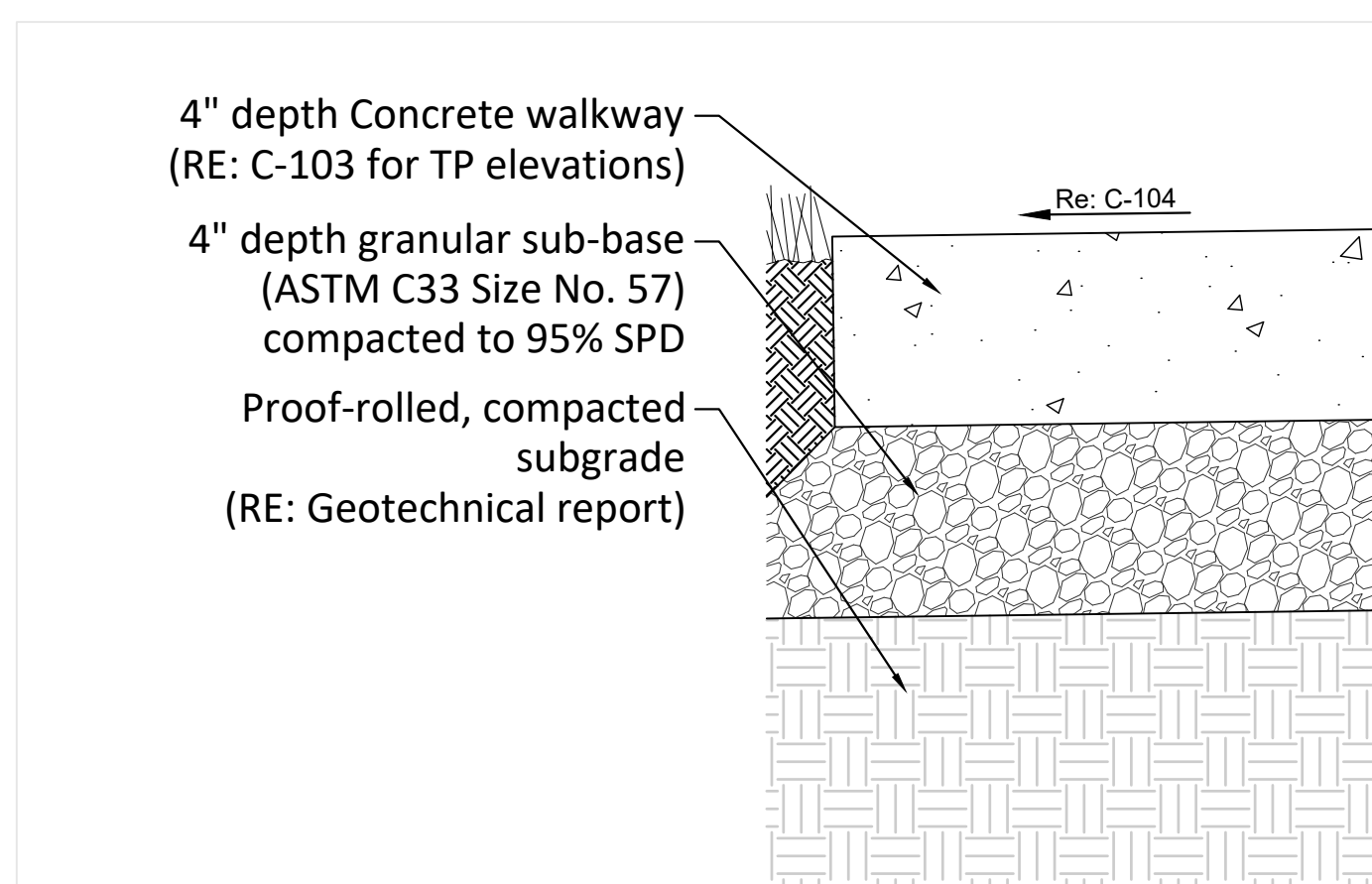
05 Decomposed Granite Surface
3" = 1'-0"



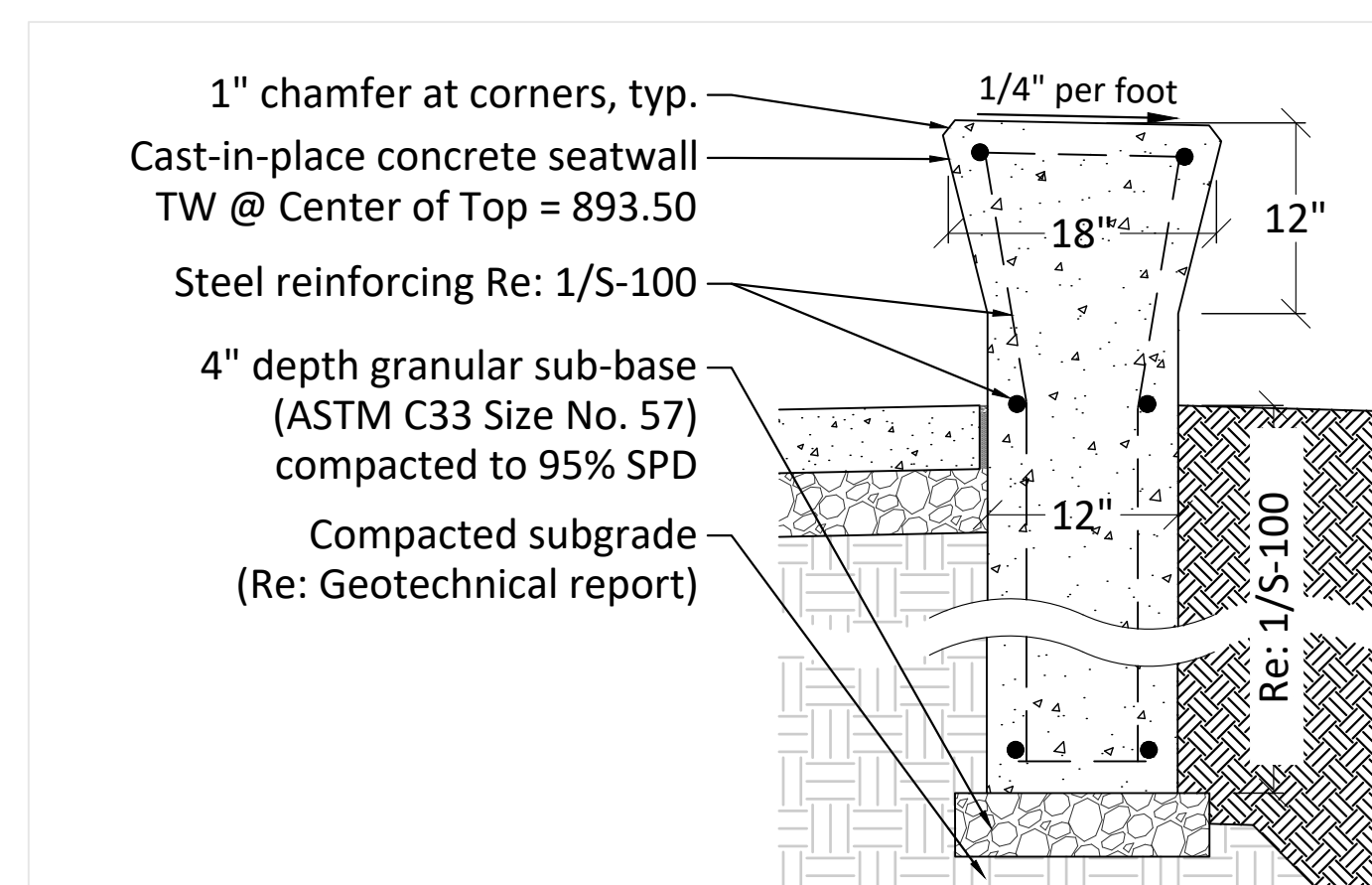
04 Concrete Control Joints
3" = 1'-0"



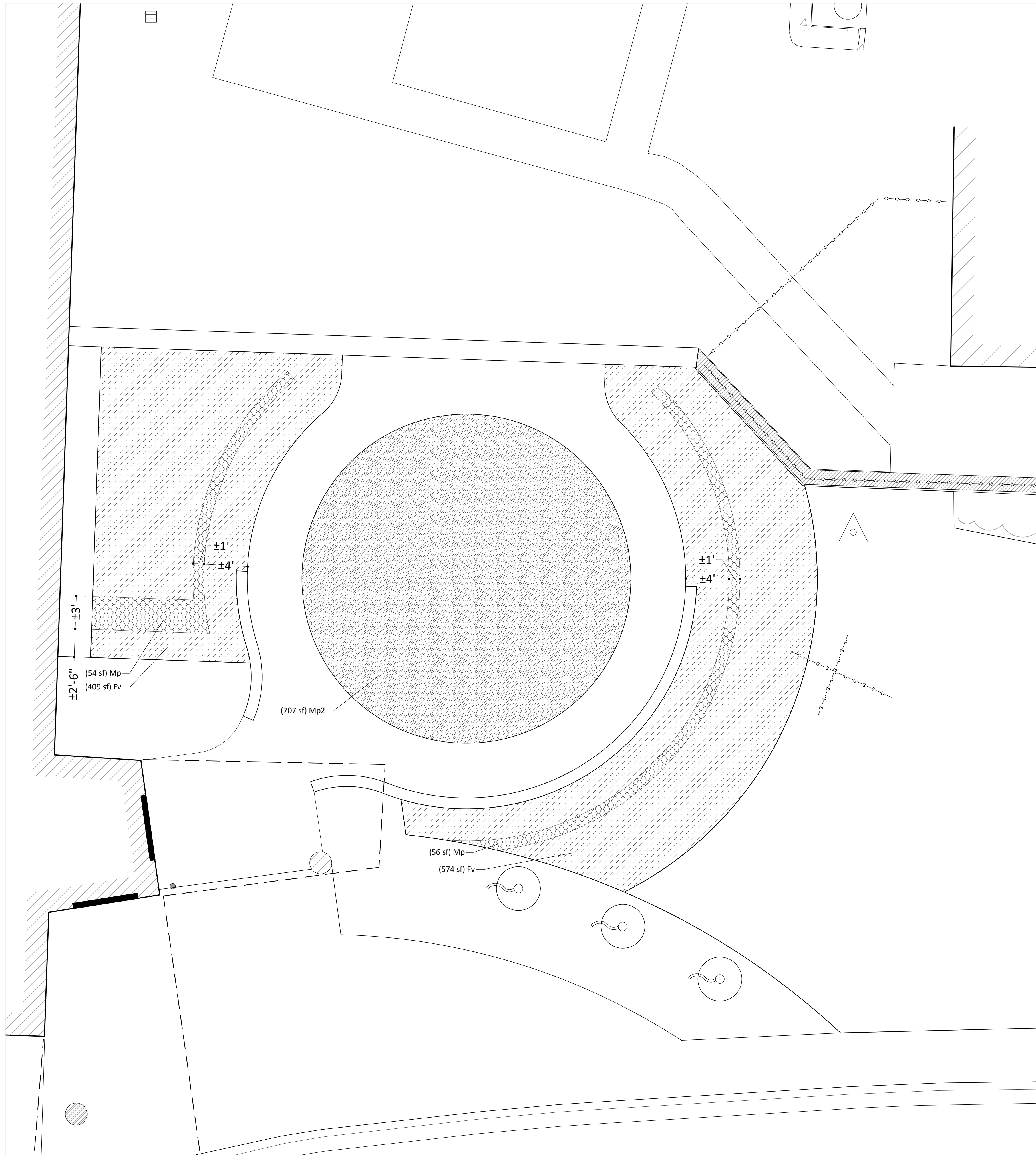
03 Concrete Isolation Joints
3" = 1'-0"



02 Concrete Paving
3" = 1'-0"



01 Reinforced CIP Concrete Seatwall
1" = 1'-0"



A - NATIVE GROUNDCOVER ESTABLISHMENT PLAN

PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	REMARKS
GROUND COVERS					
	Fv	983 sf	Fragaria virginiana / Wild Strawberry	seed	Evenly sow approximately 500 seeds per 10 square feet. Prepare seeds as recommended by distributor.
	Mp	110 sf	Mulch - Pine Bark	None	3" thick compacted layer maintenance path, place even with surrounding soil to prevent wash-out.
	Mp2	707 sf	Mulch - Pine Bark	None	3" thick

Native Plant Establishment Requirements

- A. Requirements are based on United States Department of Agriculture, 420 MO-GD Native Forb, Native Forb Guidance Document, and Grow Native! recommendations. Use in conjunction with industry standard best management practices.
- B. **SITE PREPARATION:**
 - B.4. Minimize soil compaction and ensure compacted soils are loosened. Prepared areas of soil shall have an infiltration rate suitable for selected species with no ponding or puddling of water for more than six (6) hours.
 - B.5. Ensure site is clear of all plants, noxious weeds, and unwanted seeds prior to planting.
 - B.6. After native planting areas are consistently clear of weeds and other vegetation, all beds shall be sown liberally with *Fragaria virginiana* / Wild Strawberry seeds between March 15 and April 07. Ensure germination of seeds by following proper stratification guidelines for the intended species. If seed planting cannot occur during the sowing window above, bare root plants shall be planted at six inch centers (6" o.c.).
- C. **SITE PLANTING:**
 - C.1. Place the specified plants as indicated on the planting plan.
 - C.2. Preserve *Fragaria virginiana* seedlings / plants as native forbs and shrubs are being placed and planted.
 - C.3. Disturb as little soil as possible to fully plant the native species.
 - C.4. Sprinkle granular mycorrhizae onto the root ball of each plant per manufacturer's recommendations immediately before planting.
- D. **PLANT WATERING:**
 - D.1. Thoroughly water in all new plantings within 1 hour of planting.
 - D.2. Provide temporary irrigation with above-ground drip hoses. Install a 4 Zone Sprinkler Timer for hose bib connection. Facilities manager on site to approve model and be provided with full operation instructions and training.
 - D.3. Week 0-2 after planting: Ensure the soil remains moist--not soaking wet.
 - D.4. Week 2-4 after planting: Water when two inches (2") below top of soil is dry to the touch.
 - D.5. Week 4 onwards after planting: Water when four inches (4") below top of soil is dry to the touch for the first and second year during the growing season.
- E. **PLANT DISEASES**
 - E.1. All plants shall be guaranteed disease and pest free at time of planting.
 - E.2. Throughout the one-year maintenance period, any plants exhibiting symptoms of disease shall be immediately completely removed roots and all and destroyed. Affected plants shall be replaced with like kind and size after adequate time and required treatment to ensure the disease will not spread to other plants.



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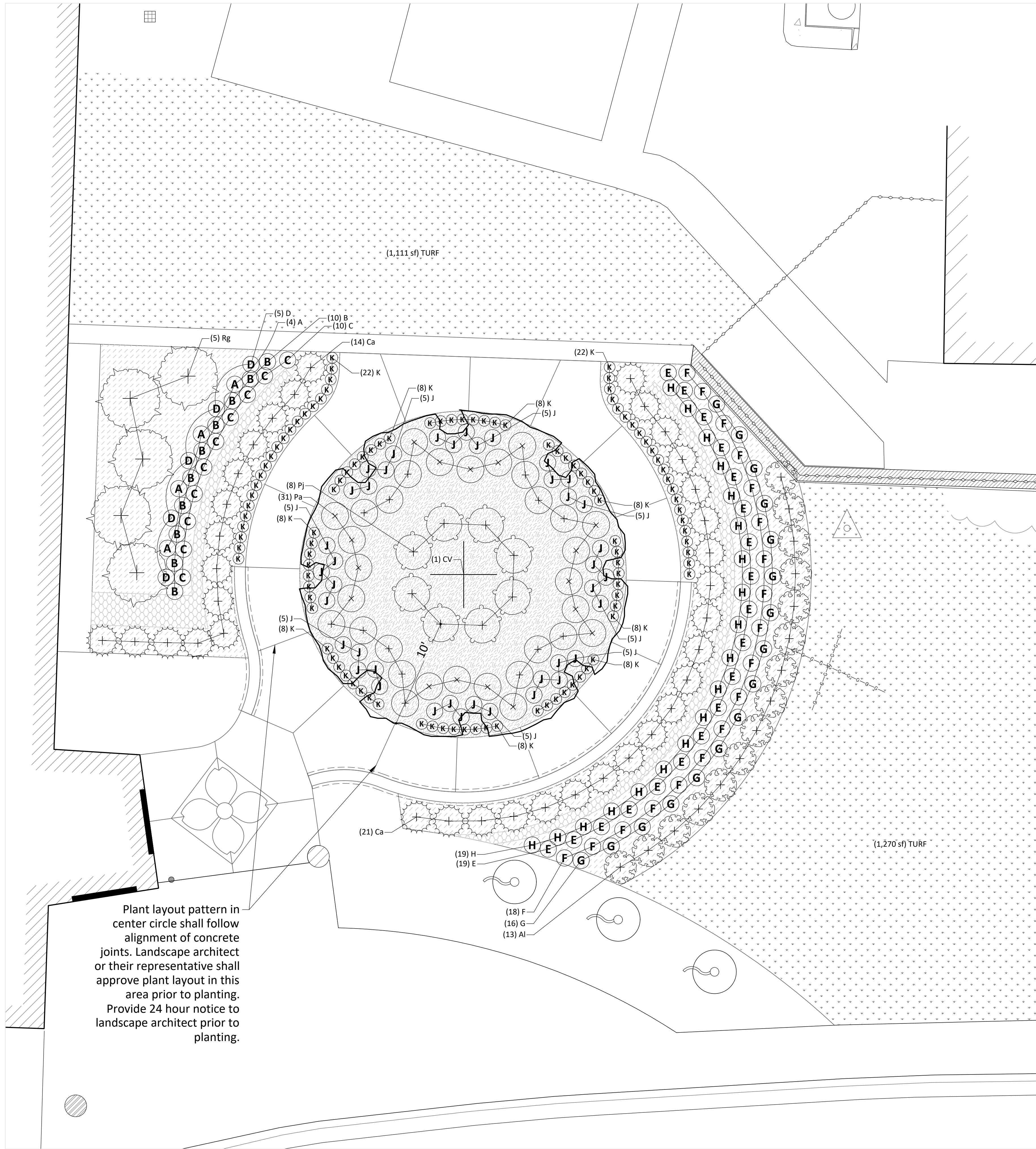
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**NATIVE PLANT
GUIDELINES**

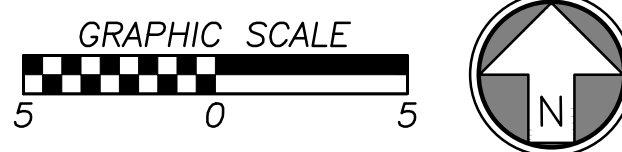
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12 OF 16 SHEETS
PLOT DATE: 08/27/2024

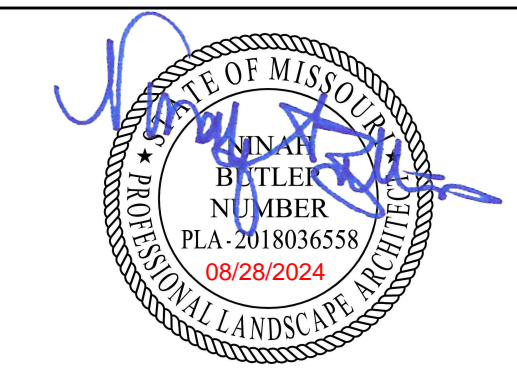


A - MEMORIAL GARDEN & LOWER COURTYARD PLANTING PLAN



PLANT LEGEND

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL	REMARKS
NATIVE TREE						
	CV	1	Crataegus viridis 'Winter King' / Winter King Hawthorn	B & B	4" Cal	Choose specimen with as few thorns as possible. Lowest branch to be 6' above grade.
NATIVE PERENNIALS						
	A	4	Aruncus dioicus / Goatsbeard	1 gal		
	B	10	Aster oblongifolius / Fall Aster	1 gal		
	F	18	Baptisia australis / Blue Wild Indigo	1 gal		
	K	108	Carex albicans / White-tinged Sedge	1 gal		
	G	16	Dalea purpurea / Purple Prairie Clover	1 gal		
	D	5	Echinacea purpurea / Coneflower	1 gal		
	J	40	Geranium maculatum 'Espresso' / Spotted Geranium	1 gal		
	E	19	Ratibida columnifera / Prairie Coneflower	1 gal		
	H	19	Rudbeckia fulgida / Coneflower	1 gal		
	C	10	Solidago flexicaulis / Zigzag Goldenrod	1 gal		
NATIVE SHRUB						
	Al	15	Aronia melanocarpa 'UCONNAM165' / Low Scape Mound® Black Chokeberry	3 gal		
	Ca	35	Ceanothus americanus / New Jersey Tea	3 gal		
	Pa	32	Physocarpus opulifolius 'Hoogi016' / Little Angel™ Ninebark	3 gal		
	Pj	8	Physocarpus opulifolius 'Iefam' / First Editions® Amber Jubilee® Ninebark	3 gal		
	Rg	5	Rhus glabra / Smooth Sumac	3 gal		
GROUND COVERS						
	TURF	2,381 sf	Turf Type Fescue	sod		Match existing. Minimum 3 variety mix.
NOTES:						
1. Refer to Sheet L-101 for native plant establishment requirements.						
2. Refer to Sheet L-501 for planting details and notes.						
3. Native plant materials shall be sourced when bid is awarded and procured three to six (3-6) weeks before installation. Alternates to be submitted and approved by Landscape Architect.						
4. Contractor to provide temporary irrigation to all seeded, sodded, and planted areas until fully established.						



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DEPARTMENT OF
MENTAL HEALTH

RETAINING WALL
REPLACEMENT

CENTER FOR BEHAVIORAL
MEDICINE BUILDING

1000 EAST 24TH STREET
KANSAS CITY, MO 64108

PROJECT # M2407-01
SITE # 7360
ASSET # 6517360003

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 08/28/2024

CAD DWG FILE:
DRAWN BY: EM
CHECKED BY: PLA-NAB & PE-ERB
DESIGNED BY: EM

SHEET TITLE:
**SITE PLANTING
PLAN**

SHEET NUMBER:

L-102

13 OF 16 SHEETS
PLOT DATE: 08/27/2024



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DESIGNED BY: EM

SHEET TITLE:
**PLANTING
DETAILS**

SHEET NUMBER:

L-501

14 OF 16 SHEETS
PLOT DATE: 08/27/2024

DETAILED PLANTING NOTES

- All existing utilities need to be located and identified prior to the commencement of any work or installation.
- Protect all structures, utilities, hardscapes, and other facilities, as well as existing turf grass areas and existing plant material, from damage caused by planting operations.
- The planting plan graphically illustrates overall plant massings. Each plant species massing shall be placed in the field to utilize the greatest coverage of ground plane.
- The following applies for individual plantings unless otherwise specified:
 - Creeping groundcover shall be a minimum of six inches (6") from any paving edge.
 - All shrubs shall be a minimum of two feet (2') from any paving edge.
 - All trees shall be a minimum of three feet (3') from any paving edge or curb.
 - All plants of the same species shall be equally spaced and placed for best aesthetic viewing and overall plant success.

MATERIALS:

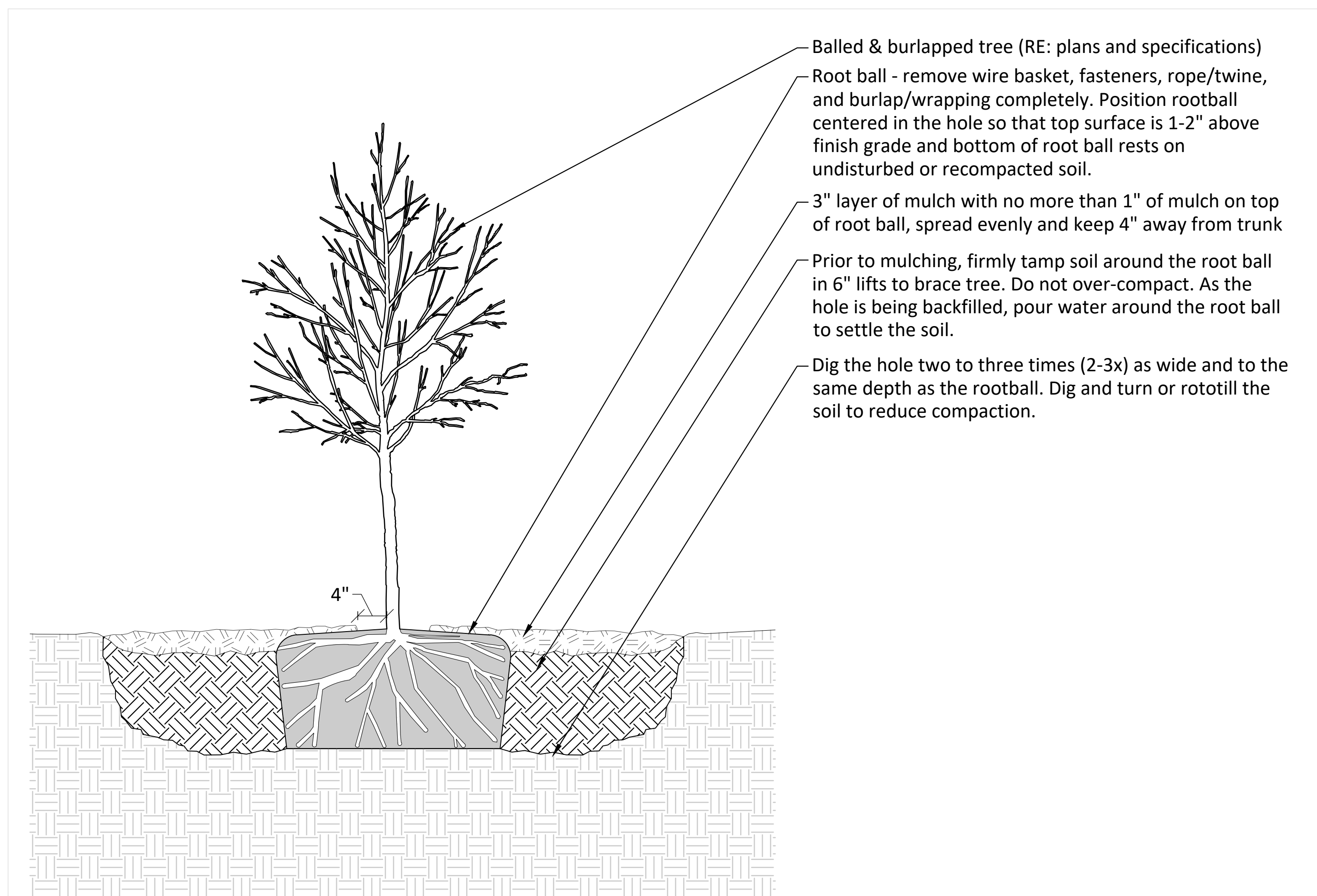
- Kind, size, and quality of plant material shall conform to American Standard for Nursery Stock, ANSI-Z60.1-2014, or most current edition.
- Plant material shall be healthy, vigorous, and free of disease and insects as per AAN standards.
- Any seed planted areas shall not use wet, moldy, or otherwise damaged seed.
- Topsoil shall be free of stones larger than half inch (1/2"), foreign matter, plants, roots, and seeds.

INSTALLATION:

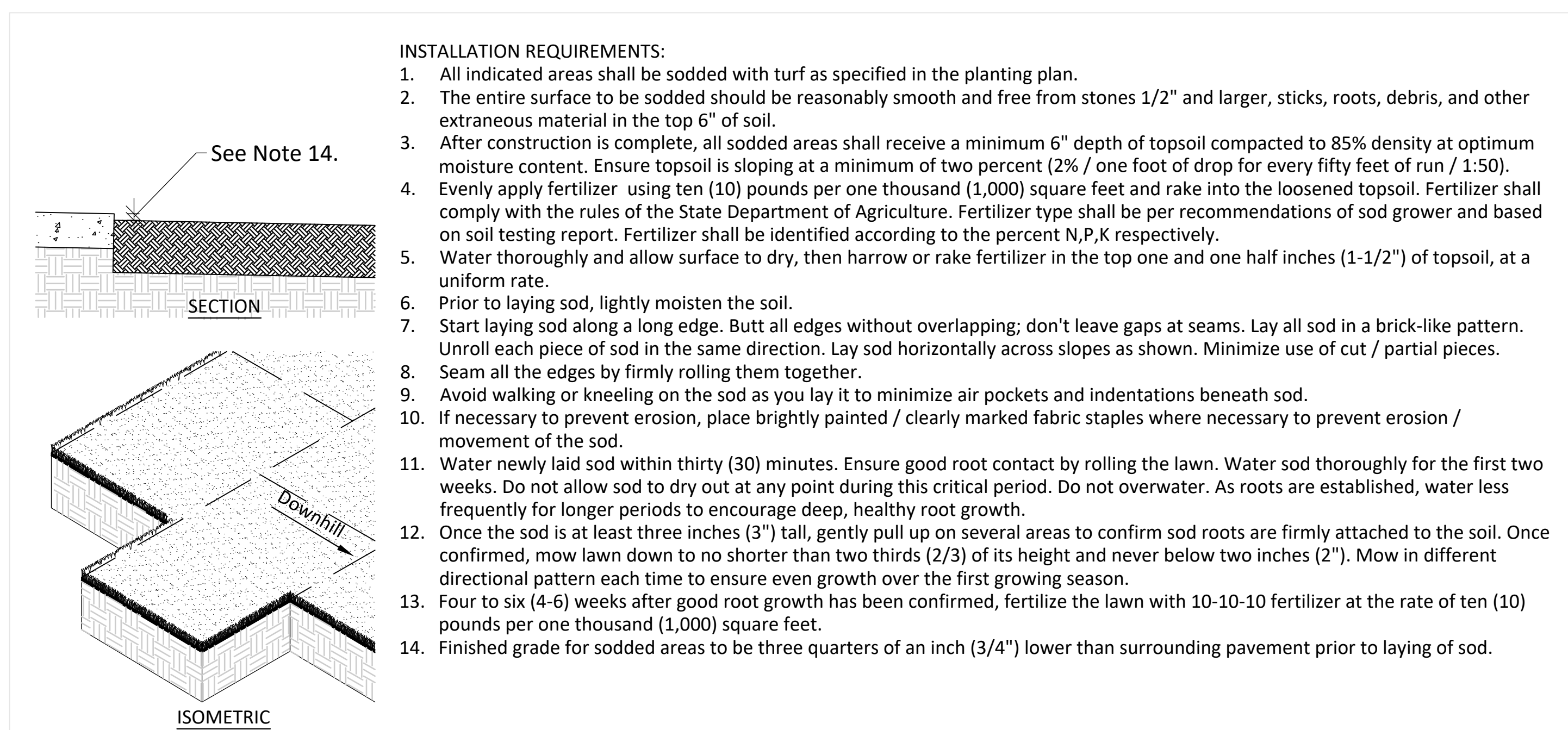
- Planting of trees, shrubs, and seeded groundcover shall commence during the spring (March 15 - June 15) or fall (September 1 - October 15) planting season.
- Water shall be available for hand irrigation purposes.
- Prior to planting, gently massage root ball at the bottom until they loosen from their coils then continue massaging all around the plant until they are loose being careful to not pull or break roots.
- Follow all requirements found in L-101.
- All planting areas shall be brought to a smooth, uniform surface, free of ruts and irregularities. All landscape beds shall be one half inch (1/2") below surrounding surfaces or hardscape unless specified otherwise.
- Trees, shrubs, and perennials shall not be pruned or trimmed before delivery, and shall not be pruned during or after installation except to remove damaged or dead growth.
- Plant material shall be guaranteed for a period of one year after owner's acceptance of finished job. All dead or damaged plant material shall be replaced at The Landscape Contractor's expense.
- The Landscape Contractor shall maintain all plant material until final acceptance, at which point the one year guarantee begins.

SOD NOTES:

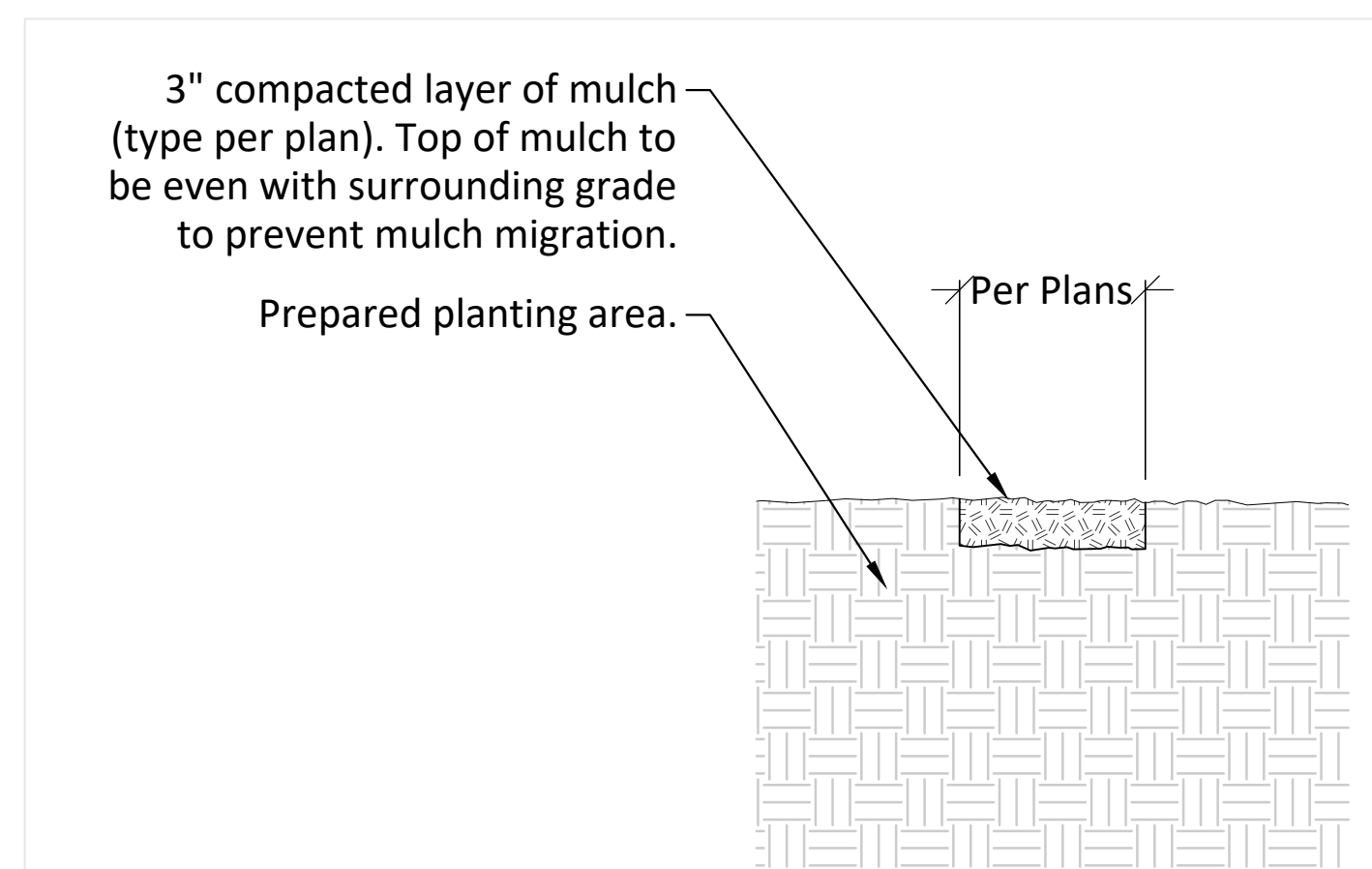
- Sod shall be machine stripped at a uniform soil thickness of approximately one inch (1") plus or minus one quarter inch (1/4"). The measurement for thickness shall exclude top growth and thatch, and shall be determined at the time of cutting in the field. Precautions shall be taken to prevent drying and heating. Sod damaged by heat and dry conditions, and sod cut more than eighteen (18) hours prior to installation shall not be used.
- Handling of sod shall be done in a manner that will prevent tearing, breaking, drying, and other damage. Protect exposed roots from dehydration. Do not deliver more sod than can be laid within twenty-four (24) hours.
- Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface to dry before installing sod, fertilize, harrow or rake fertilizer in the top one and one half inches (1-1/2") of topsoil, at a uniform rate.
- Saturate sod with fine water spray within two hours of planting. During the first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum of 4" depth.



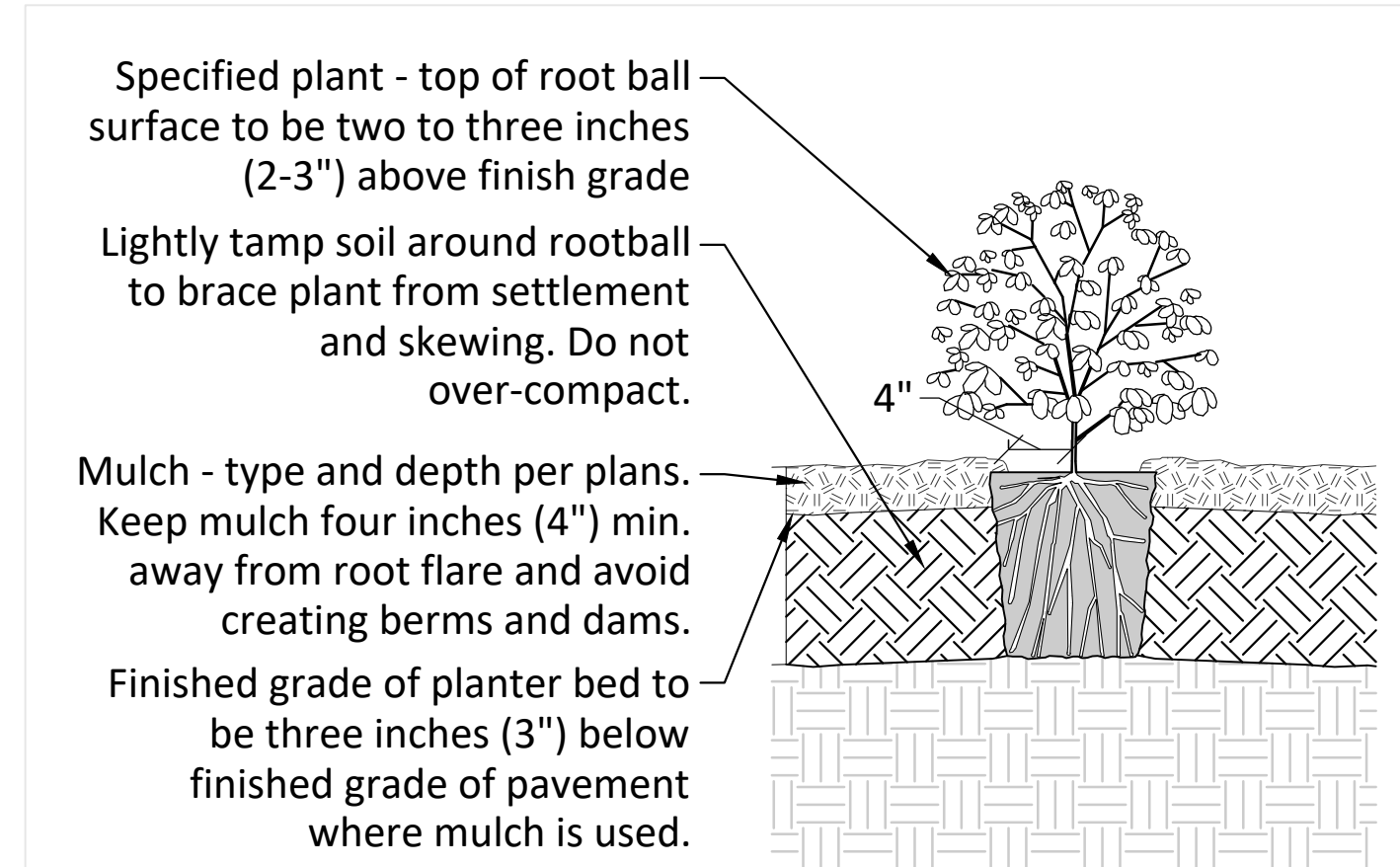
02 Balled & Burlapped Native Tree Planting in Clay Soil
1" = 1'-0"



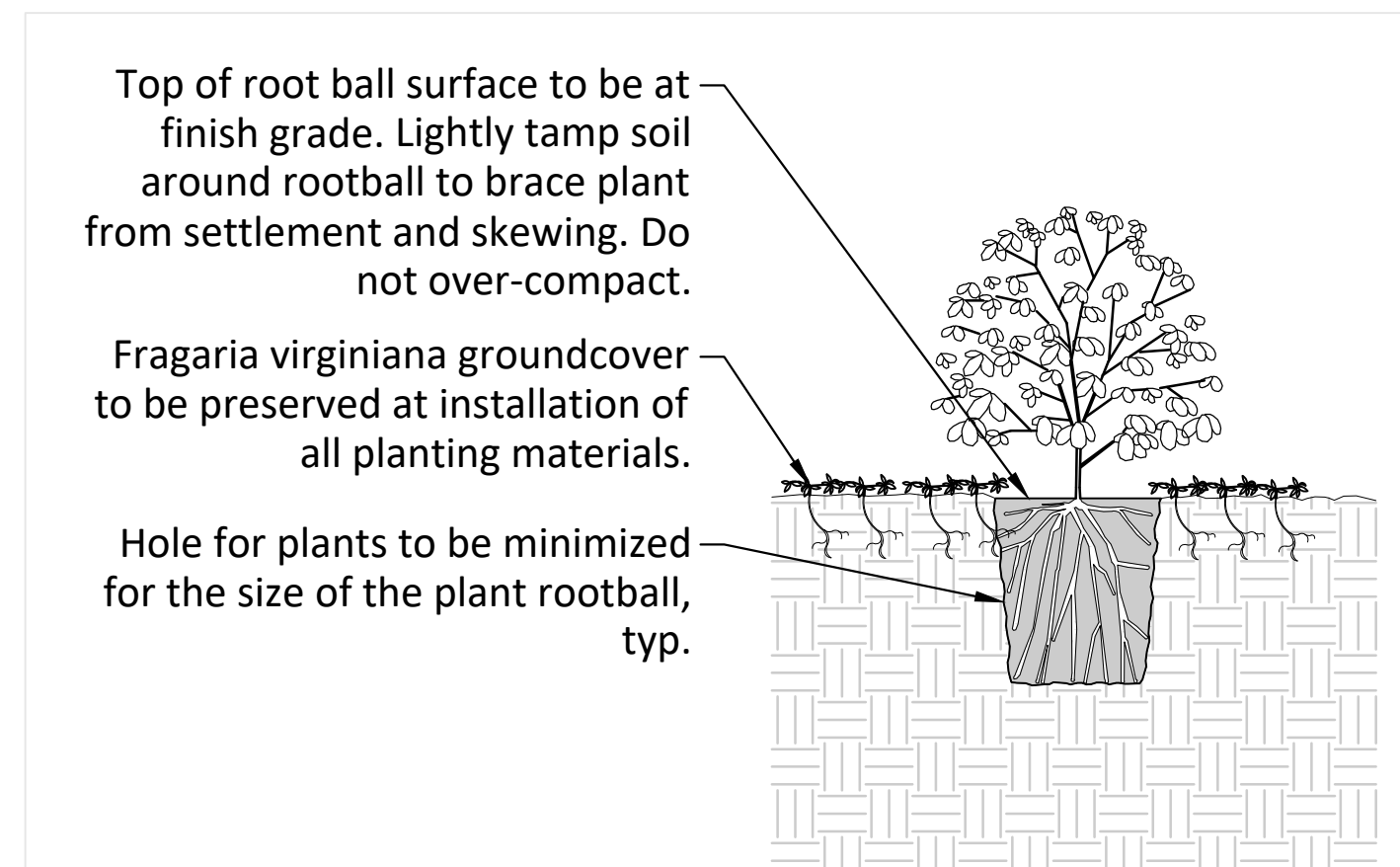
01 Sod Installation
1" = 1'-0"



05 Mulch Maintenance Path
1" = 1'-0"



04 Shrub Planting
1" = 1'-0"



03 Native Shrub, Forb, and Sedge Planting
1" = 1'-0"



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PROJECT # M2407-01
SITE # 7360
ASSET # 6517360003

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ISSUE DATE: 08/28/2024

CAD DWG FILE: S-000.dwg
DRAWN BY: MJR
CHECKED BY: AMP
DESIGNED BY: MJR

SHEET TITLE:
GENERAL NOTES
& RETAINING
WALL PLAN

SHEET NUMBER:

S-000

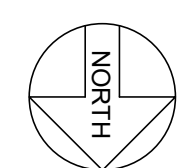
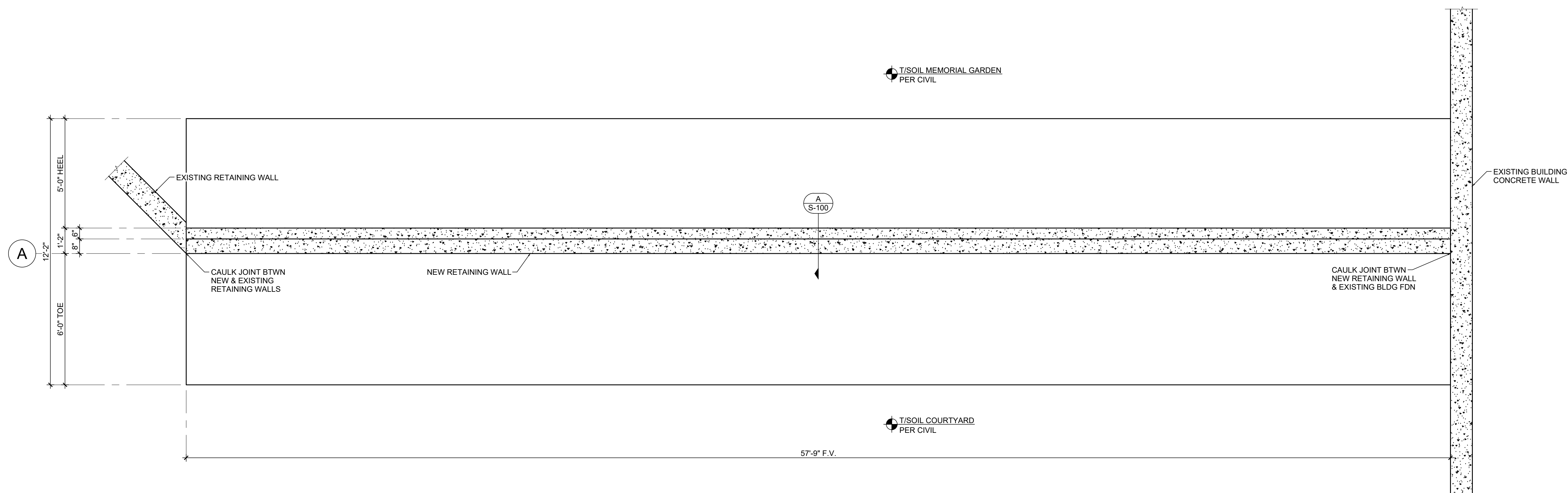
15 OF 16 SHEETS
PLOT DATE: 8-27-2024

STRUCTURAL NOTES:

- GENERAL
 - Design and construction shall conform to the 2018 International Building Code (IBC) as adopted by the state of Missouri.
 - The Contractor shall notify the Structural Engineer when actual conditions vary relevantly from what these drawings portray. The Engineer is not responsible for the consequences of construction that do not comply with the requirements specified or the reasonable intent conveyed in these drawings or approved revisions thereof.
 - The Contractor shall coordinate any miscellaneous structural requirements that may be shown in architectural or other consultant's drawings.
 - The Contractor shall coordinate dimensions shown herein with dimensions shown on other drawings, and in case of relevant conflict, seek clarification with the Structural Engineer before proceeding with construction.
 - This design is valid only for the dimensions shown. This design may not be valid if actual constructed dimensions vary substantially from what is shown.
 - On the drawings details marked "Typical" shall apply to all situations occurring on the project that are the same or similar, as may be ascertained by the title of the detail, whether the section is cut on the drawing at each required location or not. If it is not clear how a particular typical detail applies to a specific location, the Contractor shall seek clarification from the Engineer before proceeding with construction.
 - The Contractor shall take all necessary and prudent precautions to maintain the full integrity of the structure during construction. The Contractor is also solely responsible for designing and installing all temporary shoring and bracing.
 - Structural members shall not be cut, notched or otherwise penetrated unless specifically approved by the Engineer in advance or as shown on these drawings.
 - These drawings and notes are for this specific project and no other use is authorized.
- DESIGN CRITERIA [Occupancy Category III]
 - Retaining Limestone Active (Ka) = 0.27, Passive (Kp) = 3.69, At-Rest (Ko) = 0.43, Allowable Base Friction = 0.47, Unit Weight = 135 pcf
Wall In-situ Active (Ka) = 0.49, Passive (Kp) = 2.04, At-Rest (Ko) = 0.66, Clay Allowable Base Friction = 0.24, Unit Weight = 125 pcf
Wind Ultimate velocity 117 mph, Nominal velocity 91 mph, Internal pressure coeff +/- 0.18, Exposure B, Importance 1.00, Sa = 0.095, S1 = 0.069, Sds = 0.102, Sd1 = 0.11, Soil site class "D", Importance 1.00, SDC "B", R = 1.25, Cd = 2.5 [re ASCE 7-16 Table 15.4-2], Cs = 0.101
Soil Bearing Allow 1500 psf [geotechnical report per 3.A]
- FOUNDATIONS
 - Geotechnical report provided by Cook, Flatt & Strobel Engineers. Sealed by Adam McEachron, PE on 5/8/24.
 - All foundation excavations shall be approved by a geotechnical engineer licensed in the state of Missouri prior to placement of reinforcing steel or concrete.
 - All structure shall bear on continuous wall footings that are at least 18" wide and bear at least 36" in the ground.
 - The Contractor shall be entirely responsible for safely excavating into the ground and constructing stable soil slopes.
 - For plumbing or electrical installation, the Contractor may not core holes thru the footings. Rather, all such installations need to pass thru PVC sleeves set in concrete under the footing.
 - Zones of soil encountered at the bottom of footing excavations deemed inadequate by the geotechnical engineer shall be replaced or remediated as directed by him.
 - The Contractor shall provide dewatering of excavations from either surface water or seepage. The moisture content in soils prior to excavation should not be allowed to change relevantly after the excavation is made. Concrete for foundations shall not be placed on frozen ground or on ground softened from excess water.
 - The base of the excavation shall be free of water and loose soil prior to placement of reinforcing or concrete. Footing excavations left open for more than 24 hours shall be covered over and protected to reduce evaporation or entry of moisture. Ideally, foundation concrete shall be placed the same day the excavation is made.
 - Establish grades so that drainage flows positively away from the building perimeter.
 - Shrubs, trees or other plants with deep roots requiring large quantities of water shall not be planted within 20' of the building perimeter.
 - Unless noted otherwise, all concrete slabs-on-grade shall be poured upon 4" gravel on stabilized compacted fill. The gravel shall consist of well-graded crushed stone with 3/4" maximum particle size and less than 5% passing through No. 4 sieve. Prior to concrete placement, the gravel shall be compacted with a minimum of 4 passes of a vibratory plate compactor or vibratory drum roller.

- STRUCTURAL CONCRETE
 - All concrete shall be designed and constructed according to ACI 318-14, "Building Code Requirements for Reinforced Concrete," and Commentary (ACI 318-14R).
 - All concrete shall develop a minimum ultimate compressive strength of 2800 psi in 3 days and 4000 psi in 28 days, with not less than 550 pounds of Type 1 Portland cement per cubic yard of concrete, regardless of the strengths obtained, not more than 6 gallons of water for each 100 pounds of cement, with aggregate not larger than 3/4" diameter, and slump that does not exceed 4-1/2".
 - All concrete other than flatwork may have up to 15% of Portland cement weight replaced with an equivalent weight of an approved Class F fly ash.
 - All large aggregate shall be comprised of either "hardrock" (granite, quartz, traprock or K-DOTs "CPA-3") or saturated-surface-dry ("SSD") limestone. Use only hardrock in all exterior exposed slab concrete.
 - Small aggregate shall be comprised of clean, uniformly graded sand or quartz crystals with at least 5% of the total weight passing thru #50 sieve and not more than 45% of the total weight passing thru any two consecutive standard sieves.
 - Water shall be potable. All of the water ingredient shall be mixed into the concrete at the batch plant. Concrete identified as having water added to it at the jobsite shall be removed at the contractor's expense.
 - For all admixture products to be used in concrete, the Contractor shall submit defining literature for review and approval by the EOR prior to placement in concrete. Unless approved otherwise, all admixtures shall be mixed at the batch plant according to manufacturer's written instructions. Admixtures shall not contain chlorine or any chemical detrimental to reinforcing, light-gage metal or structural steel.
 - Entrain exterior exposed concrete and concrete flatwork with 6% +/- 1% air.
 - Where specified on plan, concrete shall contain "fibrillated polypropylene" micro-fibers complying with ASTM C-1116 with specific gravity < 1.00 that are both alkali and acid resistant. Average fiber length shall be at least 1" long, not less than 3/4" and not more than 2" long. Dosage shall not be less than 1.5 lbs per cubic yard of concrete.
 - Do not embed or anchor aluminum items to concrete.
 - All concrete is reinforced unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any sections not shown shall be detailed per ACI 315, "Details and Detailing of Concrete Reinforcement", current edition.
 - Clear minimum coverage of concrete over longitudinal reinforcing steel shall be minimized, but it shall not be less than the largest nominal bar diameter, nor less than the following unless noted otherwise (see next column):
 - Concrete placed against trenched earth 3"
 - Concrete placed against form in earth 2"
 - Un-tied elements (elevated slabs and walls) 1"
 - Tied elements (columns & elevated beams) 1-1/2"
 - Limit control joints in dirt-formed slab areas to 16'-0" apart along any side.
 - Cut saw joints in slab-on-grade concrete maximum 8 hours after concrete pour.
- REINFORCING STEEL
 - Fabrication, erection and placement of reinforcing steel shall conform to Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice".
 - Bar reinforcing shall conform to ASTM A615 Gr 60 deformed reinforcing steel with 60 ksi yield minimum, except stirrups and ties shall comply with CRSI requirements for improved bendability.
 - Reinforcing steel shall not be heated or welded. All bar bends shall be made cold.
 - Reinforcing steel shall be clean of rust, grease or other material likely to impair bond.
 - Fabricate reinforcing bars in continuous lengths as is practicable. Where discrete rebars require splicing, use direct contact bar laps according to the Schedule:

BAR SIZE	MIN LAP IN CONC	90° HOOK IN CONC	BAR SIZE	MIN LAP IN CONC	90° HOOK IN CONC
#3	15"	6"	#6	30"	12"
#4	20"	8"	#7	42"	14"
#5	24"	10"	#8	48"	16"



RETAINING WALL PLAN A
3/8" = 1'-0" S-000



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DRAWN BY: MJR
CHECKED BY: AMP
DESIGNED BY: MJR

SHEET TITLE:
**RETAINING WALL
ELEVATION**

SHEET NUMBER:

S-100

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PLOT DATE: 8-27-2024

