MONTANA STATE UNIVERSITY

UNIVERSITY FACILITIES MANAGEMENT
Sixth Avenue and Grant Street • P.O. Box 172760 • Bozeman, Montana 59717-2760
Phone: (406) 994-5413 • Fax: (406) 994-5665

ADDENDUM NO. 2 - OUTLINE AND SUMMARY INFORMATION

Project Name:	Grant Street Pedestrian Mall	PPA No.:	22-0001
Location:	Grant Street from 7th Ave to 11th Ave	Date:	5/7/2024

To: All Plan Holders of Record

The Plans and Specification prepared by ***Sanderson Stewart*** *dated* ***April 1, 2024****, shall be clarified and added as follows. The bidder proposes to perform all the following clarifications or changes. It is understood that the Base Bid shall include any modification of Work or Additional Work that may be required by reason of the following change or clarifications.*

The Bidders are to acknowledge the receipt of this Addendum by inserting its number and date into their Bid Forms. Failure to acknowledge may subject the Bidder to disqualification and rejection of the bid. This Addendum forms part of the Contract Documents as if bound therein and modifies them as follows:

I. AMENDMENTS TO THE PROJECT MANUAL

BID PROPOSAL

A. Updated quantities for revised phase line between Phase 1 and Phase 2. Also includes miscellaneous stormwater and electrical revisions to address questions received.

II. AMENDMENTS TO THE DRAWINGS

CIVIL PLANS

A. C2.2, C3.1, C3.3, C3.4, C4.2, C4.3, C6.3, C6.4, C6.5, C6.6 – Move phase line between Phases 1 and 2 to east side of Romney.

B. C5.1, C5.2 – Label storm drain inlet and manhole types and sizes.

C. C7.1 – Add three additional storm drain details.

ELECTRICAL PLANS

A. E1.1 through E1.5 – Added phase lines to electrical sheets, along with miscellaneous revisions to address questions received.

LANDSCAPE PLANS

A. L1.2, L1.4, L2.2, L4.3, L4.4 - Move phase line between Phases 1 and 2 to east side of Romney.

III. ATTACHMENTS

A. Bid Proposal

B. Updated Plan Sheets

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BID PROPOSAL

Grant Street Pedestrian Mall
PPA No. 22-0001

TO:
State of Montana, Montana State University
University Facilities Management
Attn: Contract Administrator
Plew Building, 6th & Grant, PO Box 172760
Bozeman, Montana 59717-2760

Prospective Bidders:

The undersigned, having familiarized themselves with the Contract Documents, site, location, and conditions of the Work as prepared by **Sanderson Stewart, 106 East Babcock Street, Suite L1, Bozeman, MT 59715, (406)522-9876** by submission of this Bid Proposal, hereby agrees to provide all materials, systems, equipment, and labor necessary to complete the Work for the total sum as follows:

Phase 1: Bobcat Circle to Strand Union Building					
Item No.	Quantity	Unit	Description	Unit Price	Subtotal
101	1	LS	Mobilization and Insurance		
102	1	LS	Stormwater Management and Erosion Control		
103	1	LS	Construction Traffic Control		
104	1,000	CY	Strip, Stockpile & Replace or Dispose of Topsoil		
105	2,300	SY	Sawcut, Remove and Dispose of Existing Asphalt		
106	15,805	SF	Remove and Dispose of Existing Concrete Sidewalk		
107	1,320	LF	Remove and Dispose of Existing Curb and Gutter		
108	2	EA	Remove Existing Sign and Post		
109	7	EA	Remove Existing Luminaire		
110	2	EA	Remove Existing Tree		
111	1	EA	Hydrant Extension 1.5 feet		
112	2	EA	Remove Existing Inlet and Plug/Abandon Storm Drain		
113	7	EA	Adjust Existing Manhole to New Grade		
114	7	EA	Adjust Existing Valve/Cleanout to New Grade		
115	165	LF	5-inch Schedule 40 PVC Conduits		
116	245	LF	New Trace Wire on Existing Gas Main		
117	1	EA	36-inch Storm Drain Area Inlet		

118	2	EA	48-inch Combination Manhole and Inlet		
119	179	LF	12-inch RCP Storm Drain Pipe		
120	1	EA	12-inch RCP FETS with Debris Rack		
121	600	CY	Unclassified Excavation		
122	700	CY	Imported Fill		
123	570	CY	1.5-inch Minus Crushed Base Course		
124	27,907	SF	6-inch Standard Concrete (Fiber Mesh Reinforced)		
125	2,930	SF	6-inch Stamped Concrete Border (Fiber Mesh Reinforced)		
126	9	EA	Pull Box - Type I		
127	4,100	LF	CONDUCTOR - AWG #8		
128	2,600	LF	CONDUCTOR - AWG #10 Ground		
129	2,600	LF	PVC Conduit 2" Sch 80		
130	14	EA	P26-196L-1150-WW-G2-2-UNV		
131	3	EA	P26-196L-650-WW-G2-2-UNV		
132	2	EA	P26-196L-650-WW-G2-3-UNV		
133	1	EA	P26-196L-650-WW-G2-5-DBL		
134	20	EA	Ameron MEO-5 (16'5")		
135	2	EA	Reset Existing Monument Sign		
136	1	LS	Irrigation		
137	21	EA	Coniferous Trees (5-6' Tall)		
138	3	EA	Deciduous Trees (1.5" Cal.)		
139	59	EA	Shrubs (5 Gal.)		
140	11	EA	Perennials & Grasses (1 Gal.)		
141	43	EA	Boulders		
142	260	LF	Stone Seat Walls		
143	14	EA	Patio Seating		
144	5	EA	Bike Racks		
145	42	CY	Organic Mulch		
146	16,900	SF	Seed Mix		
147	900	SF	Sod		
148	45	CY	Rock Mulch		
149	15,000	SF	Crushed Fines		
			Phase 1 - Subtotal		

Phase 2: Strand Union Building to South 7th Avenue

Item No.	Quantity	Unit	Description	Unit Price	Subtotal
201	1	LS	Mobilization and Insurance		
202	1	LS	Stormwater Management and Erosion Control		
203	1	LS	Construction Traffic Control		
204	1,200	CY	Strip, Stockpile & Replace or Dispose of Topsoil		
205	6,000	SY	Sawcut, Remove and Dispose of Existing Asphalt		
206	31,296	SF	Remove and Dispose of Existing Concrete Sidewalk		
207	2,880	LF	Remove and Dispose of Existing Curb and Gutter		

208	270	LF	Remove Existing Retaining Wall		
209	22	EA	Remove Existing Sign and Post		
210	29	EA	Remove Existing Luminaire		
211	56	EA	Remove Existing Tree		
212	1	EA	Hydrant Extension 1.0 foot		
213	1	EA	Hydrant Extension 1.5 feet		
214	1	EA	Relocate Existing Hydrant		
215	157	LF	4-inch Gas Main and Cap		
216	7	EA	Remove Existing Inlet and Plug/Abandon Storm Drain		
217	2	EA	Remove Existing Inlet and Replace with Cleanout		
218	2	EA	Remove Curb Inlet Grate and Casting, Replace with Area Inlet Grate and Casting		
219	1	EA	Adjust Existing Manhole to New Grade		
220	1	EA	48-inch Storm Drain Manhole		
221	1	EA	48-inch Storm Drain Manhole over Existing 10-inch Storm Drain Pipe		
222	2	EA	24-inch x 72-inch Double Curb Inlet		
223	1	EA	Connect to Existing Storm Drain Pipe with Concrete Collar		
224	175	LF	12-inch RCP Storm Drain Pipe		
225	1	EA	12-inch RCP FETS with Debris Rack		
226	1	EA	Curb Cut		
227	400	CY	Unclassified Excavation		
228	6,100	CY	Unclassified Excavation with Haul Off		
229	4,705	SY	Geosynthetic Reinforcement Fabric (Mirafi 380i or approved equal)		
230	1,820	CY	1.5-inch Minus Crushed Base Course		
231	2,360	CY	6-inch Minus Sub-Base Course		
232	46,307	SF	6-inch Standard Concrete (Fiber Mesh Reinforced)		
233	1,651	SF	6-inch Stamped Concrete Border (Fiber Mesh Reinforced)		
234	7,291	SF	6-inch Sparkle Concrete for Oval (Fiber Mesh Reinforced)		
235	411	SF	6-inch Stamped Concrete for Veterans Plaza (Fiber Mesh Reinforced)		
236	12	EA	Parking Bumpers		
237	1	EA	Etched MSU Seal		
238	2,572	SF	9-inch Stamped Concrete Roundabout Truck Apron		
239	251	LF	Roundabout Mountable Curb		
240	318	SF	3-inch Concrete Median Cap		
241	2,720	LF	Standard Curb and Gutter		
242	345	SF	3-foot Double Gutter		
243	4,705	SY	Asphalt Surface Course (4-inch		

			Thick)		
244	192	SF	Truncated Dome Panels		
245	29	EA	New Sign on New Post		
246	7	EA	Reset Existing Sign on New Post		
247	8	EA	Flexible Delineators		
248	2	EA	Reset Existing Building Sign		
249	15	GAL	Epoxy Pavement Markings (White)		
250	15	GAL	Epoxy Pavement Markings (Yellow)		
251	447	SF	Thermoplastic Pavement Markings (White)		
252	116	SF	Thermoplastic Pavement Markings (Yellow)		
253	5	GAL	Curb Epoxy (Yellow)		
254	14	EA	Pull Box - Type I		
255	2	CY	Foundation - Concrete		
256	500	LF	CONDUCTOR - AWG #6		
257	5,000	LF	CONDUCTOR - AWG #8		
258	2,800	LF	CONDUCTOR - AWG #10 Ground		
259	3,000	LF	PVC Conduit 2" Sch 80		
260	8	EA	P26-196L-2100-WW-G2-2-UNV		
261	9	EA	P26-196L-1150-WW-G2-2-UNV		
262	8	EA	P26-196L-650-WW-G2-2-UNV		
263	3	EA	P26-196L-650-WW-G2-3-UNV		
264	1	EA	P26-196L-450-NW-G2-2-UNV		
265	7	EA	SL43-10W-WW-ADA-MED		
266	2	EA	Internal Halyard Beacon		
267	21	EA	Ameron MEO-5 (16'5")		
268	4	EA	Ameron MBO-8.5 (27'11")		
269	4	EA	Ameron MEO-9 (29'11")		
270	2	EA	Electric Service Drop		
271	2	EA	Electric Service Pedestal		
272	3	EA	Reset Existing Monument Sign		
273	1	LS	Irrigation		
274	10	EA	Coniferous Trees (5-6' Tall)		
275	27	EA	Deciduous Trees (1.5" Cal.)		
276	579	EA	Shrubs (5 Gal.)		
277	248	EA	Perennials & Grasses (1 Gal.)		
278	7	EA	Benches		
279	7	EA	Rock Monuments (Veterans Park)		
280	2	EA	Flag Poles (Veterans Park)		
281	71	LF	Concrete Seat Wall (Veterans Park)		
282	27	LF	Stacked Stone Seat Wall (Veterans Park)		
283	72	LF	Concrete Seat Walls		
284	10	EA	Bike Racks		
285	31,619	SF	Seed Mix		
286	20,017	SF	Lawn Seeding		
287	24	CY	Rock Mulch		
288	10	CY	Organic Mulch		
289	3,621	SF	Crushed Fines		
			Phase 2 - Subtotal		

BASE BID TOTAL (PHASES 1 AND 2):

____ and ___ /100 DOLLARS.

(ALPHA notation) $______________________________

(NUMERIC notation)

This bidder acknowledges receipt of the following addenda:

ADDENDUM No.: ______ Dated: _______
ADDENDUM No.: ______ Dated: _______
ADDENDUM No.: ______ Dated: _______

By signing below, the bidder agrees to all terms specified and AGREES TO fulfill the requirements of the CONTRACT in strict accordance with the bidding documents.

Company Name: ____

Business Address: ____

____

____

Construction Contractor Registration No.: ____

Phone No.: ____

Fax No.: ____

Email: ____

Date: ____

Bid Proposals entitled to consideration shall be signed by the proper representative of the firm submitting the proposal as follows (Initial which requirement you meet):

☐ The principal of a single owner firm;

☐ A principal of a partnership firm;

☐ An officer of an incorporated firm, or an agent whose signature is accompanied by a certified copy of the resolution of the Board of Directors authorizing that agent to sign; or (attach a copy of the resolution),

☐ Other persons signing for a single-owner firm or a partnership shall attach a power-of-attorney evidencing his authority to sign for that firm.

Signature: ____

Print Name: ____

Title: ____

GRANT STREET PEDESTRIAN MALL

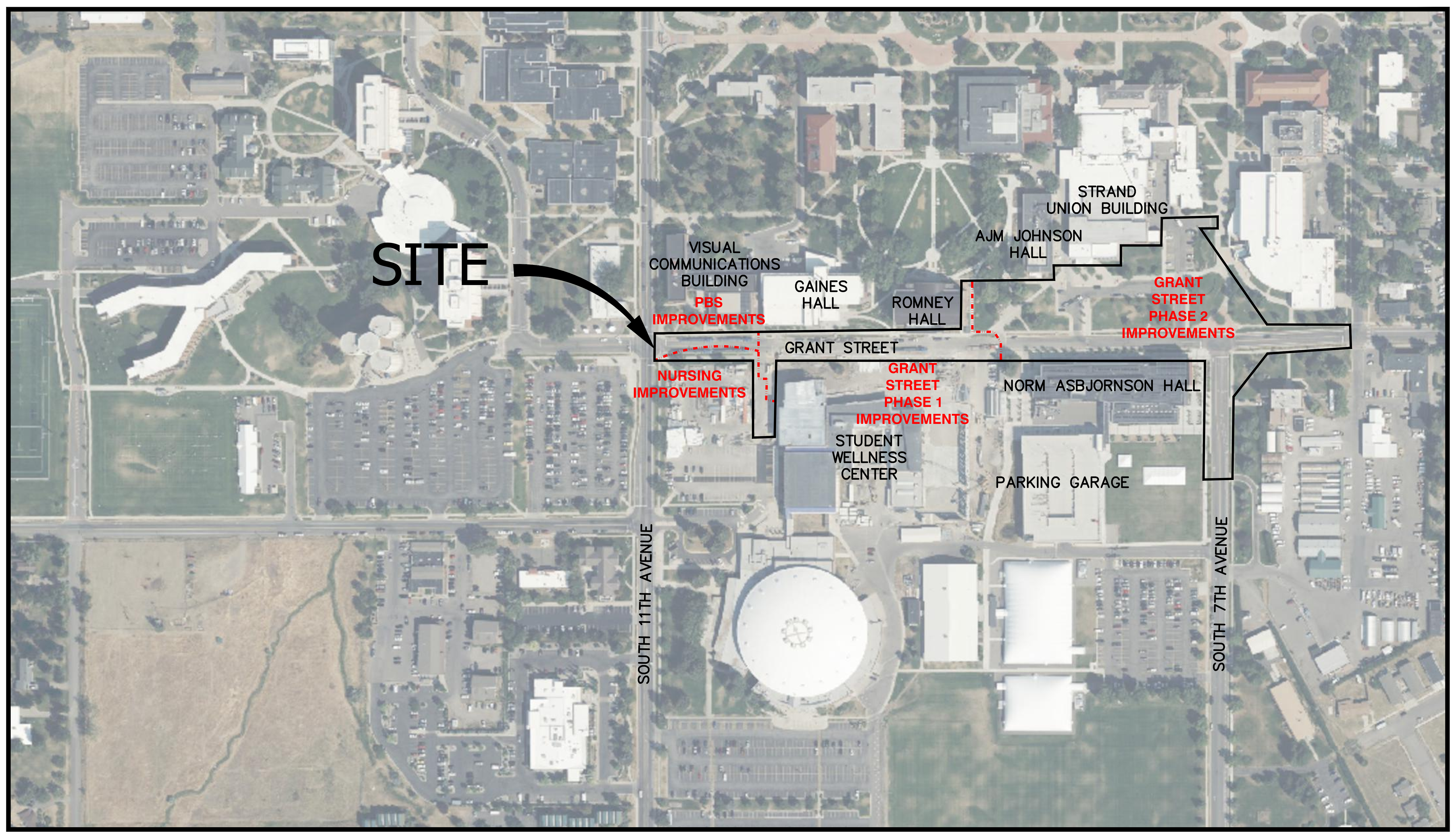
PPA#22-0001

A/E#2022-0202-3D

IMPROVEMENTS TO GRANT STREET FROM SOUTH 7TH AVENUE TO SOUTH 11TH AVENUE

PHASE 1: BOBCAT CIRCLE TO STRAND UNION BUILDING

PHASE 2: STRAND UNION BUILDING TO SOUTH 7TH AVENUE



NORTH

VICINITY MAP

NOT TO SCALE

SANDERSON STEWART

Enduring Community Design

alta

MONTANA STATE UNIVERSITY

MSU-CPDC

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

FOR BIDDING

DRAWN BY: CMK/CE

REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

MONTANA
DANIELLE R. SCHARF
14799PE
LICENSED
PROFESSIONAL ENGINEER

PPA#00-0000

A/E#00-00-00

22236

SHEET TITLE

COVER SHEET

SHEET

C1.1

DATE

5/7/2024

LINETYPES

	EXISTING	PROPOSED
SANITARY SEWER	SS SS	SS SS
STORM DRAIN	SD SD	SD SD
WATER	W W W	W W W
CURB AND GUTTER		
EDGE OF ASPHALT	EDGE OF EX. ASPHALT	
EDGE OF GRAVEL	EDGE OF EX. GRAVEL	
FENCE - BARBED WIRE	X X	X X
FENCE - CHAINLINK/ WOVEN WIRE		
FENCE - VINYL	V V	V V
FENCE - WOOD		
FIBER OPTIC	FO FO	FO FO
GAS PIPELINE	G G G	G G G
GEOTHERMAL LINE	HW HW HW HW	
LIQUID PROPANE PIPELINE	LP LP	LP LP
OIL PIPELINE	OIL OIL	OIL OIL
UNDERGROUND POWER	P P P	P P P
OVERHEAD POWER	OHP OHP	P P P
TELEPHONE	T T T	T T T
TELEVISION/CABLE	TV TV	TV TV
CONTOUR	3157	3157
DEMO AREA		
PROPOSED ASPHALT		
PROPOSED CONCRETE		
PROPOSED SPARKLE CONCRETE		
PROPOSED STORM POND		

ABBREVIATIONS

AC = FINISHED GRADE AT ASPHALT
BC = FINISHED GRADE AT BUILDING CORNER
BRK = GRADE BREAK
BFV = BUTTERFLY VALVE
BVC = BEGIN VERTICAL CURVE
CS = CURB STOP
EA = FINISHED GRADE AT EDGE OF ASPHALT
EC = FINISHED GRADE AT EDGE OF CONCRETE
EVC = END VERTICAL CURVE
EW = FINISHED GRADE AT EDGE OF WALK
EX = APPROXIMATE EXISTING ELEVATION
FL = FINISHED GRADE AT FLOWLINE
FT = FEET
FG = FINISHED GRADE
GR = EXISTING GRADE AT GROUND
GV = GATE VALVE
HP = HIGH POINT
LF = LINEAL FOOT
LT = LEFT

PC = POINT OF CURVATURE
PI = POINT OF INTERSECTION
POC = POINT ON CURVE
PRC = POINT OF REVERSE CURVE
PT = POINT OF TANGENCY
PVI = POINT OF VERTICAL INTERSECTION
RED = REDUCER
RT = RIGHT
SD = STORM DRAIN
SDI = STORM DRAIN INLET
SDMH = STORM DRAIN MANHOLE
SRVC = SERVICE
SS = SANITARY SEWER
SSMH = SANITARY SEWER MANHOLE
TC = FINISHED GRADE AT TOP BACK OF CURB
TW = FINISHED GRADE AT TOP OF WALL
WTR = WATER
(TYP.) = TYPICAL

KEYNOTE CALL OUT (SEE KEYNOTE LEGEND)

GRADING PLAN

1 CATCH CURB
2 SPILL CURB
3 TRANSITION FROM CATCH TO SPILL CURB
4 TAPER CURB HEAD 3'

CATCH CURB → TOP OF CURB - 0.375' = LIP
TOP OF CURB - 0.45' = FLOWLINE

SPILL CURB → TOP OF CURB - 0.583' = LIP
TOP OF CURB - 0.53' = FLOWLINE

SYMBOLS

EXISTING WATER REDUCER
PROPOSED WATER REDUCER
EXISTING WATER VALVE
PROPOSED WATER VALVE
EXISTING FIRE HYDRANT
PROPOSED FIRE HYDRANT
EXISTING CURB STOP
PROPOSED CURB STOP
FIRE DEPT. CONNECTION
WELL

YARD HYDRANT
EXISTING SANITARY SEWER MANHOLE
PROPOSED SANITARY SEWER MANHOLE
SANITARY SEWER CLEAN OUT
EXISTING STORM DRAIN MANHOLE
PROPOSED STORM DRAIN MANHOLE
EXISTING CATCH BASIN
PROPOSED CATCH BASIN
ROOF DRAIN
TELEPHONE BOX

TELEPHONE MANHOLE
TELEPHONE PEDESTAL
COMMUNICATIONS MANHOLE
COMMUNICATIONS PEDESTAL
FIBER OPTIC PEDESTAL
GAS MANHOLE
GAS METER
GAS WELL
GAS VALVE
ELECTRIC JUNCTION BOX
ELECTRIC PEDESTAL

TRANSFORMER
POWER MANHOLE
POWER METER
POWER POLE
GUYWIRE
LIGHT POLE
SIGN
BOLLARD
EXISTING MONUMENT BOX
PROPOSED MONUMENT BOX
IRRIGATION BOX

IRRIGATION VALVE
BUSH
CONIFEROUS TREE
DECIDUOUS TREE
SIGNAL POLE
FOUND CORNER MONUMENT AS NOTED
SET CORNER MONUMENT, REBAR WITH CAP
BENCHMARK
SECTION QUARTER CORNER
SECTION CORNER

NOTE:

-EXISTING UNDERGROUND INSTALLATIONS & PRIVATE UTILITIES SHOWN ARE INDICATED ACCORDING TO THE BEST INFORMATION AVAILABLE TO THE ENGINEER. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF SUCH INFORMATION. SERVICE LINES (WATER, POWER, GAS, STORM, SEWER, TELEPHONE & TELEVISION) MAY NOT BE STRAIGHT LINES OR AS INDICATED ON THE PLANS. STATE LAW REQUIRES CONTRACTOR TO CALL ALL UTILITY COMPANIES BEFORE EXCAVATION FOR EXACT LOCATIONS.

-ALL IMPROVEMENTS SHALL BE PERFORMED IN ACCORDANCE WITH MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS 7TH EDITION, APRIL, 2021.

-UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION LAYOUT AND STAKING SHALL BE PERFORMED UNDER THE RESPONSIBLE CHARGE OF A LAND SURVEYOR LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED AND BY A PARTY CHIEF OR ENGINEERING TECHNICIAN EXPERIENCED IN CONSTRUCTION LAYOUT AND STAKING TECHNIQUES AS ARE REQUIRED BY THE SPECIFIC TYPE OF WORK BEING PERFORMED.

MONTANA STATE UNIVERSITY

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GRANT STREET
PEDESTRIAN MALL

FOR BIDDING

DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

MONTANA
DANIELLE R. SCHARF
14799PE
LICENSED
PROFESSIONAL ENGINEER

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
LEGEND, NOTES & ABBREVIATIONS

SHEET
C1.2

DATE
5/7/2024

PROJECT SURVEY CONTROL				
Point #	Northing	Easting	Elevation	Description
3	114756.40	378644.80	4901.21	CP / MAG-NAIL
4	114864.06	378956.11	4909.65	CP / MAG-NAIL
5	115198.45	380076.19	4915.35	CP / MAG-NAIL
6	114606.52	380036.46	4921.86	CP / MAG-NAIL
7	115017.52	379965.75	4917.70	CP / MAG-NAIL
8	115260.07	379920.69	4915.75	CP / MAG-NAIL
9	114975.83	379711.07	4919.44	CP / MAG-NAIL
10	115170.26	379702.50	4918.60	CP / MAG-NAIL
11	114998.68	379487.23	4920.34	CP / MAG-NAIL
12	114864.50	379456.40	4921.41	CP / MAG-NAIL

PROJECT SURVEY CONTROL				
Point #	Northing	Easting	Elevation	Description
13	114803.50	379608.23	4920.75	CP / MAG-NAIL
14	115025.27	379276.66	4918.82	CP / MAG-NAIL
16	115147.76	379007.25	4907.97	CP / MAG-NAIL
17	114861.42	378735.08	4901.44	CP / MAG-NAIL
18	115025.56	378670.47	4897.81	CP / MAG-NAIL
19	114951.45	378824.41	4910.54	CP / X MARK ON CONC.
20	114856.72	378464.49	4895.91	CP / MAG-NAIL
115	114863.75	379205.19	4919.82	CP / MAG-NAIL
43073	114635.18	379602.72	4922.15	CP / MAG-NAIL

HORIZONTAL DATUM: BOBCAT LDP
VERTICAL DATUM: NAVD 88

NORTH

60 30 0 60 120

SCALE: 1" = 60'

FOR BIDDING

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MONTANA DANIELLE R. SCHARF 14799PE LICENSED PROFESSIONAL ENGINEER

PPA#00-0000
A/E#00-00-00
22236

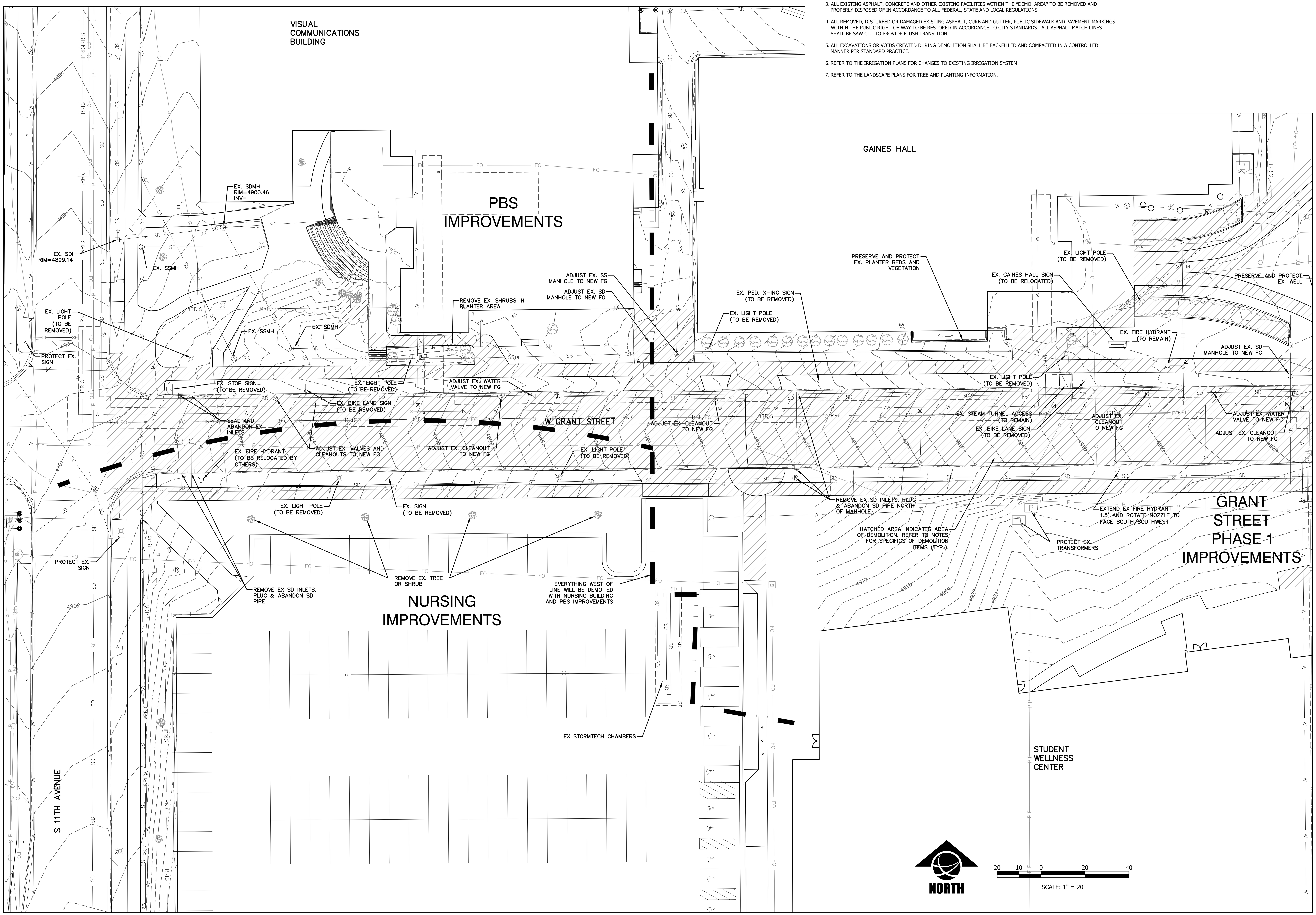
SHEET TITLE
SURVEY CONTROL

SHEET
C1.3

DATE
5/7/2024

SITE DEMOLITION NOTES:

1. ALL LOCATIONS AND DIMENSIONS OF EXISTING AND PROPOSED FEATURES ARE APPROXIMATE AND THE PROJECT DRAWINGS MAY NOT INCLUDE ALL EXISTING FEATURES WITHIN THE PROJECT BOUNDARIES. THE CONTRACTOR SHALL THOROUGHLY REVIEW THE SITE PRIOR TO BIDDING AND CONSTRUCTION TO BECOME FAMILIAR WITH THE EXISTING SITE FEATURES AND CONDITIONS. IF DISCREPANCIES ARE FOUND BETWEEN THE PROJECT DRAWINGS AND FIELD CONDITIONS THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER FOR CLARIFICATION.
2. ALL PUBLIC AND PRIVATE UTILITY TERMINATIONS, DISCONNECTS AND REMOVALS TO BE COORDINATED WITH THE APPLICABLE UTILITY PROVIDERS AND PERFORMED IN ACCORDANCE TO THEIR RESPECTIVE STANDARDS AND SPECIFICATIONS.
3. ALL EXISTING ASPHALT, CONCRETE AND OTHER EXISTING FACILITIES WITHIN THE "DEMO. AREA" TO BE REMOVED AND PROPERLY DISPOSED OF IN ACCORDANCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS.
4. ALL REMOVED, DISTURBED OR DAMAGED EXISTING ASPHALT, CURB AND GUTTER, PUBLIC SIDEWALK AND PAVEMENT MARKINGS WITHIN THE PUBLIC RIGHT-OF-WAY TO BE RESTORED IN ACCORDANCE TO CITY STANDARDS. ALL ASPHALT MATCH LINES SHALL BE SAW CUT TO PROVIDE FLUSH TRANSITION.
5. ALL EXCAVATIONS OR VOIDS CREATED DURING DEMOLITION SHALL BE BACKFILLED AND COMPACTED IN A CONTROLLED MANNER PER STANDARD PRACTICE.
6. REFER TO THE IRRIGATION PLANS FOR CHANGES TO EXISTING IRRIGATION SYSTEM.
7. REFER TO THE LANDSCAPE PLANS FOR TREE AND PLANTING INFORMATION.



MONTANA STATE UNIVERSITY

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PEDESTRIAN MALL

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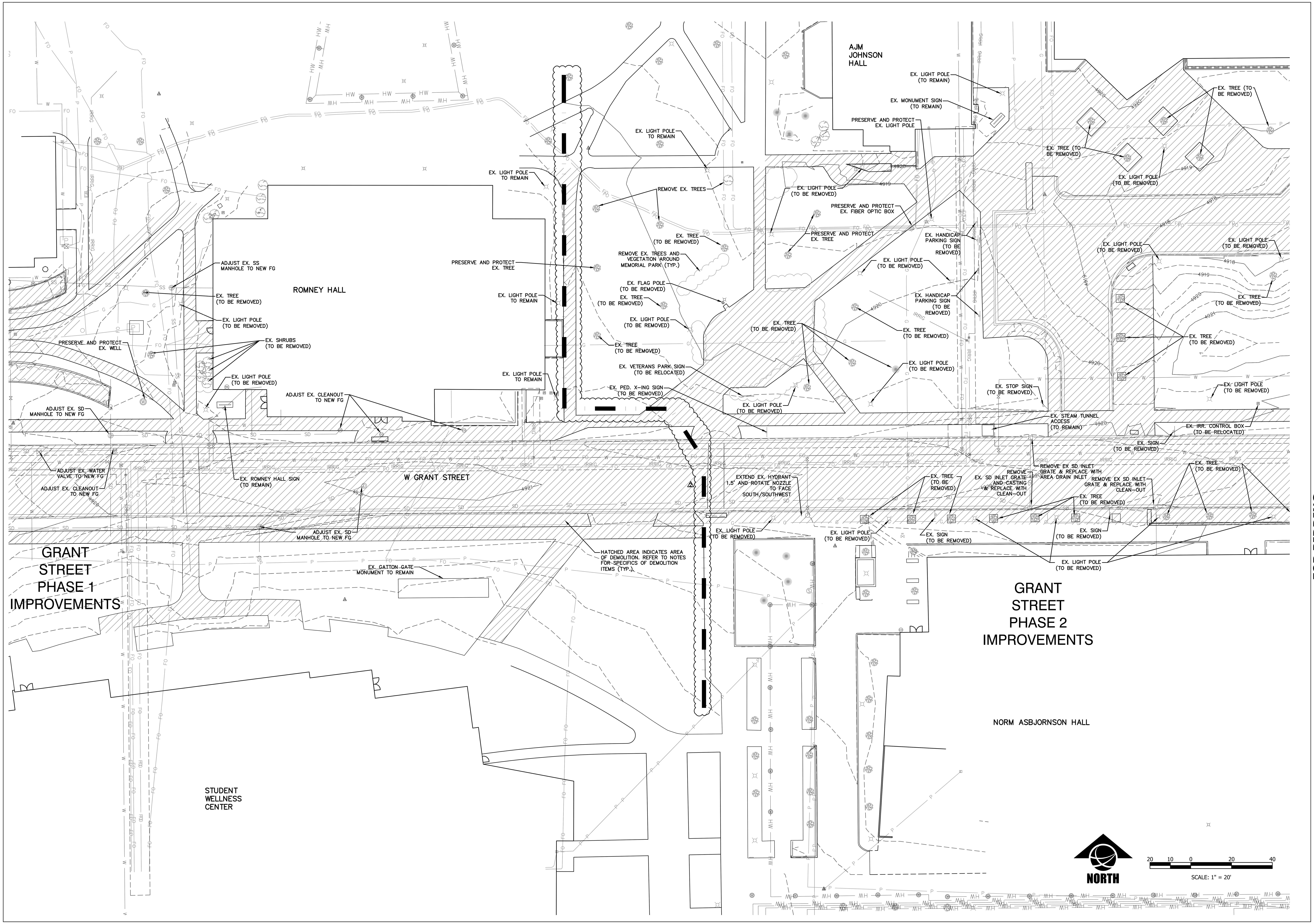
PROFESSIONAL ENGINEER

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
C2.1

DATE
5/7/2024



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GRANT STREET

PEDESTRIAN MALL

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2	ADDENDUM #2	05/07/24
3	-	-

MONTANA DANIELLE R. SCHARF 14799PE LICENSED PROFESSIONAL ENGINEER

PPA#00-0000

A/E#00-00-00

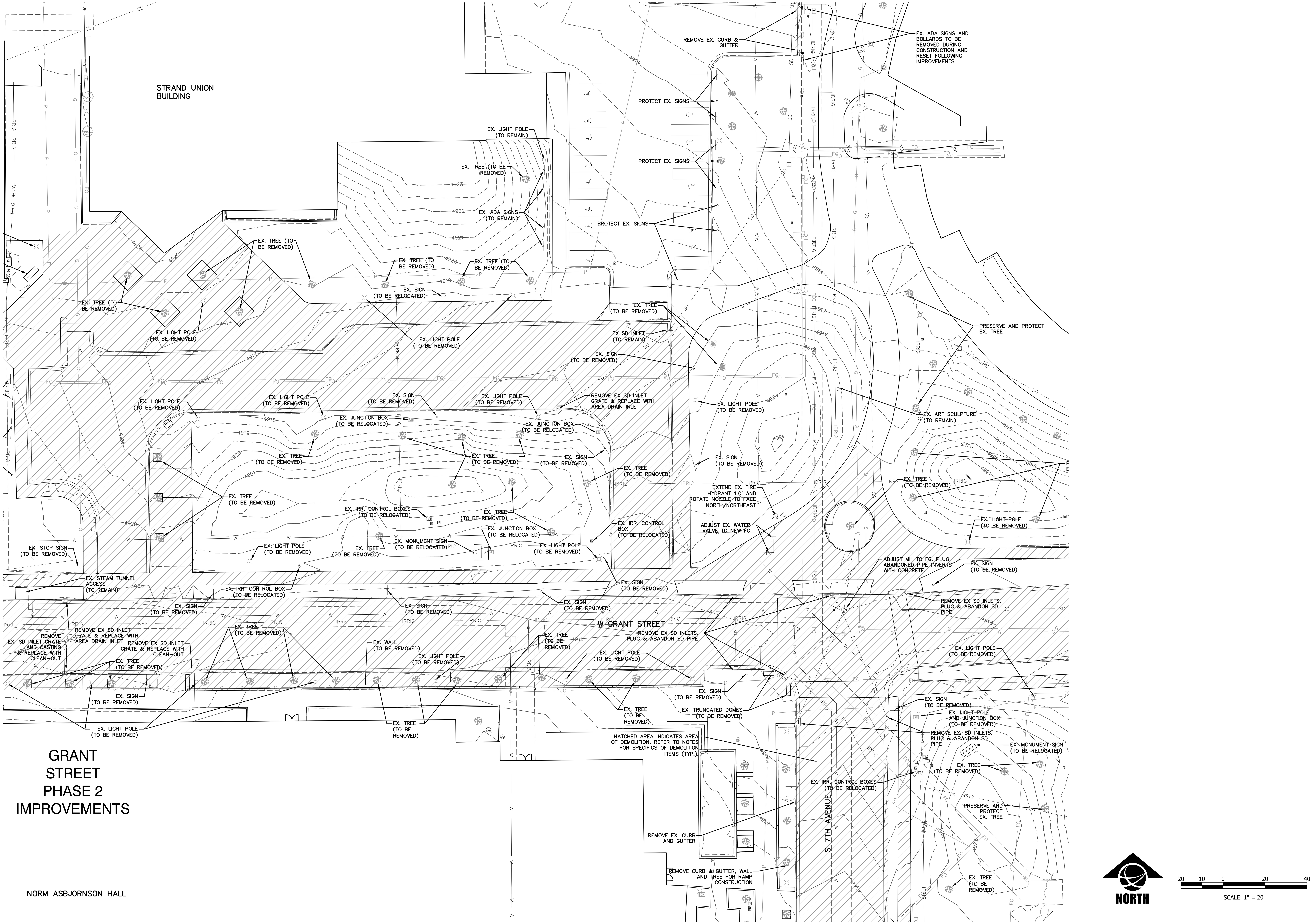
22236

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET

C2.2

DATE
5/7/2024



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GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

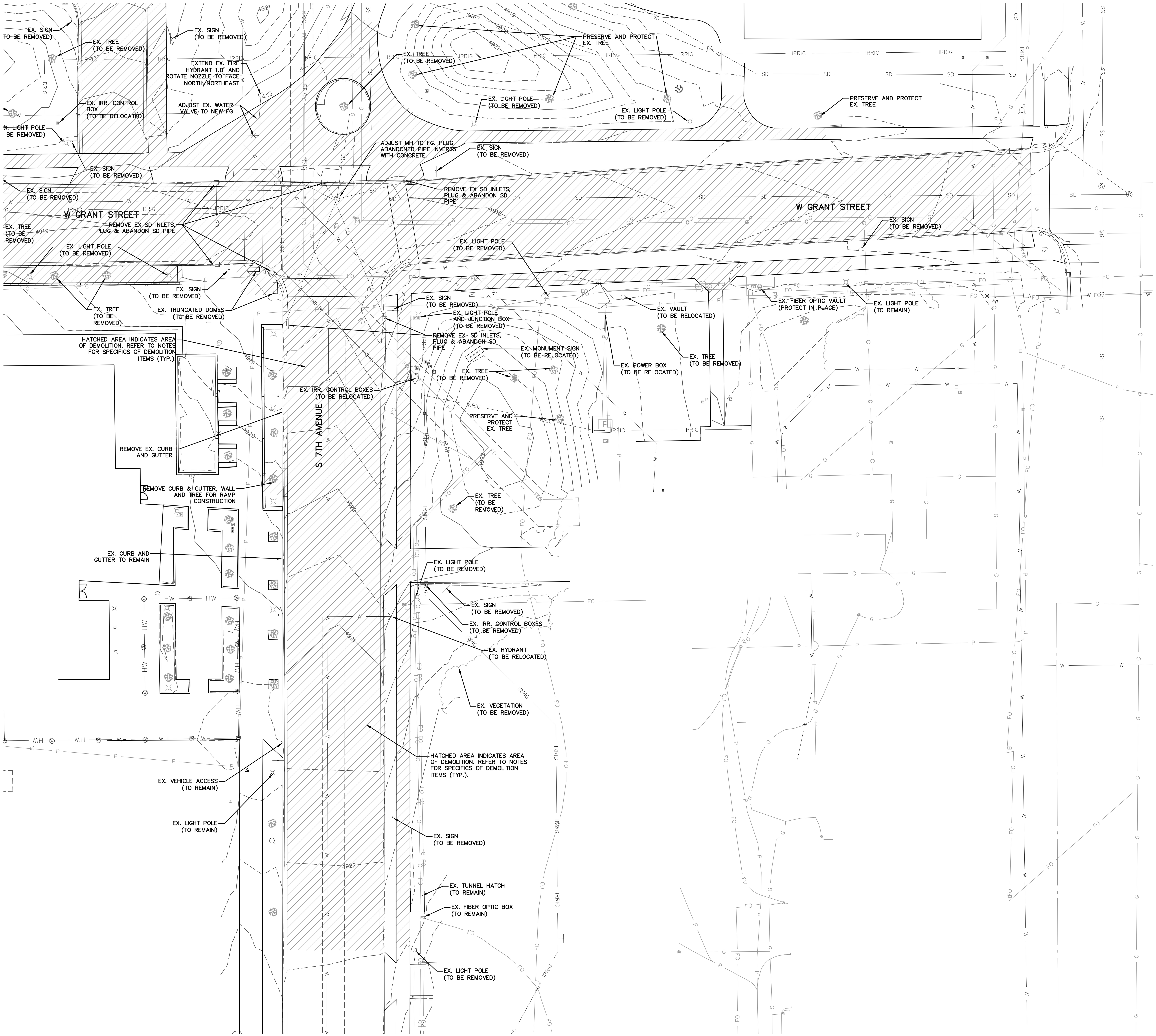
MONTANA DANIELLE R. SCHARF 14799PE PROFESSIONAL ENGINEER LICENSED

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
C2.3

DATE
5/7/2024



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PEDESTRIAN MALL

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REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

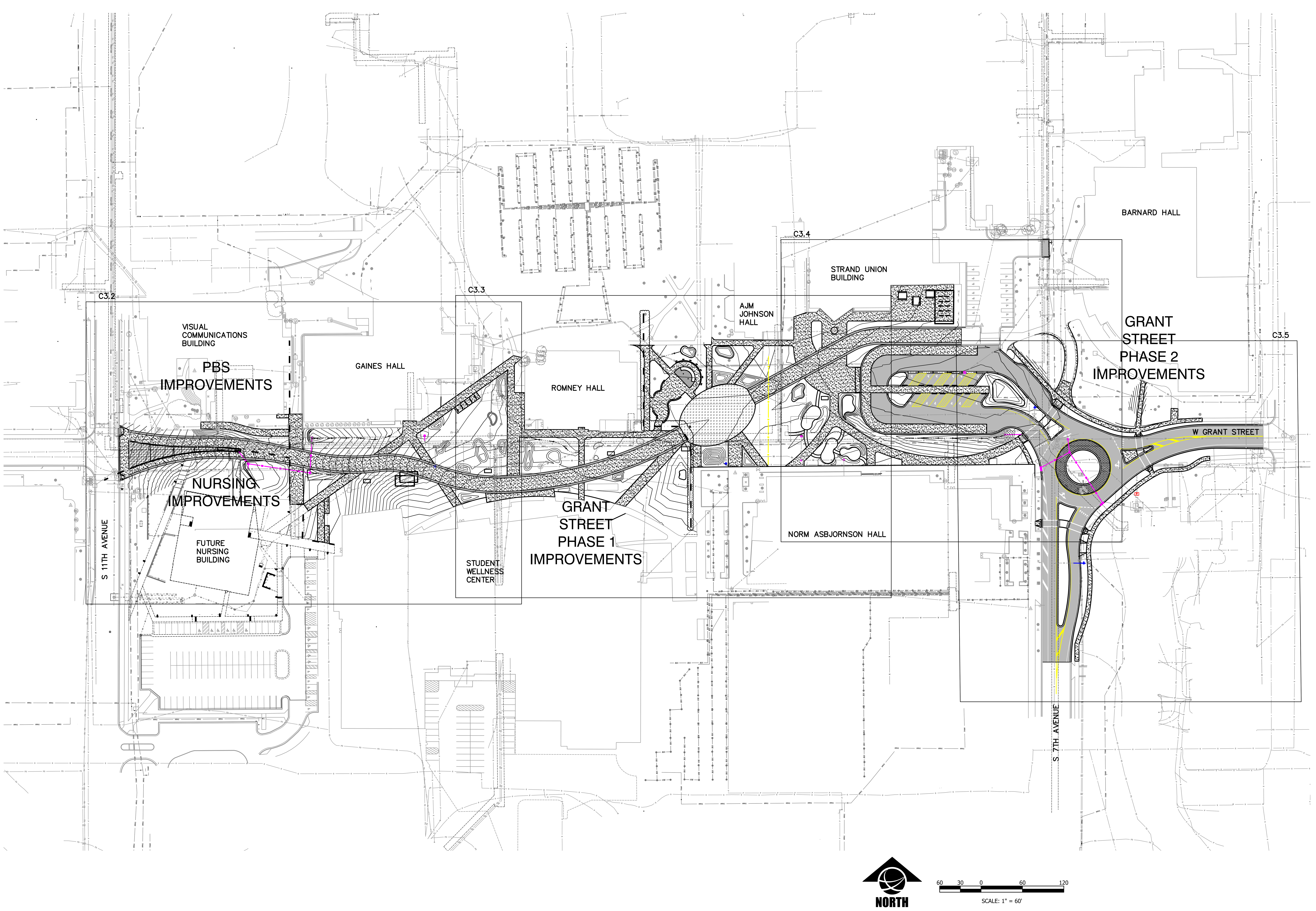
MONTANA DANIELLE R. SCHAFF 14799PE LICENSED PROFESSIONAL ENGINEER

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET
C2.4

DATE
5/7/2024



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REV.	DESCRIPTION	DATE
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2	ADDENDUM #2	05/07/24
3	-	-

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14799PE
LICENSED PROFESSIONAL ENGINEER

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A/E#00-00-00
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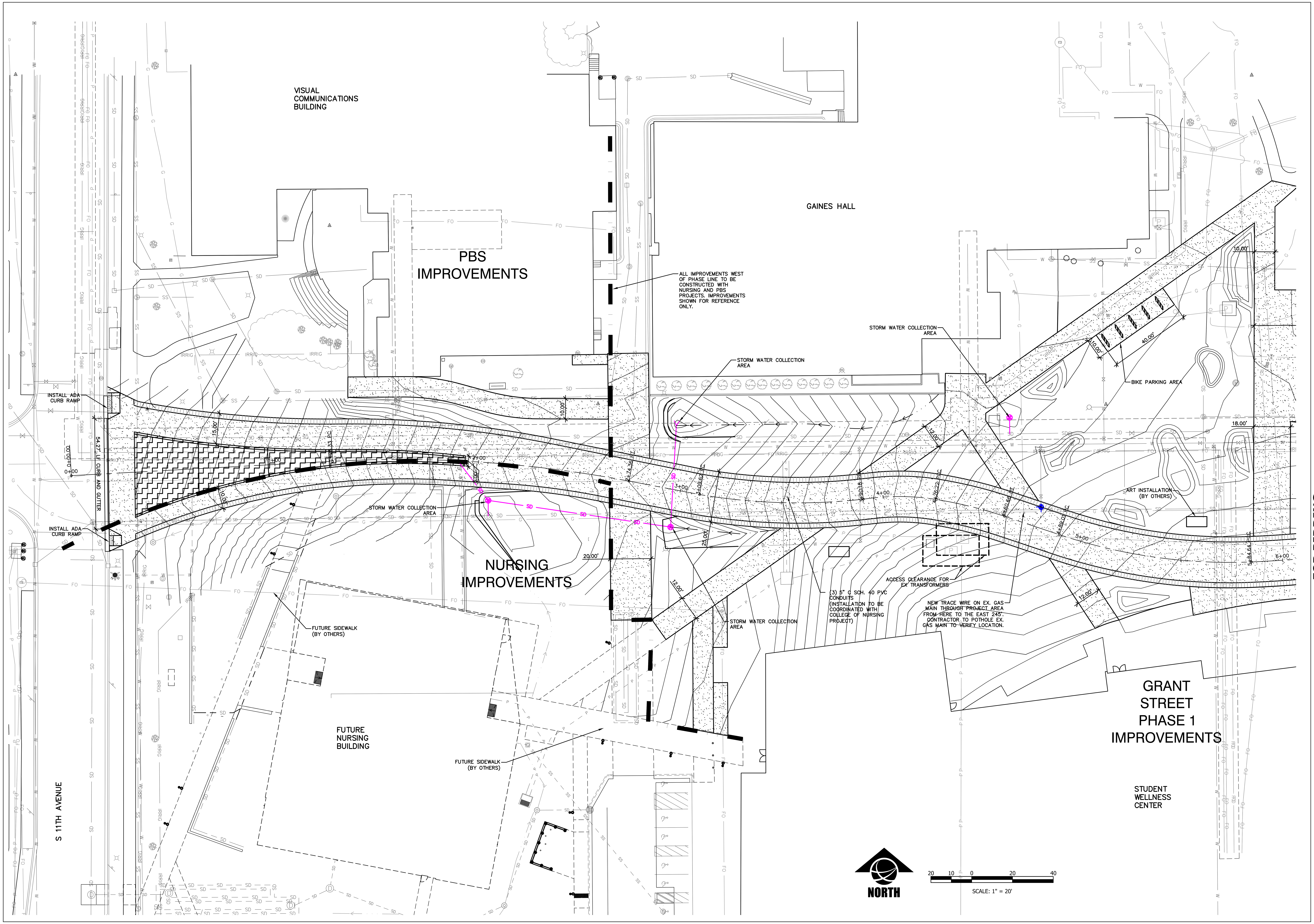
SHEET TITLE
OVERALL SITE LAYOUT

SHEET
C3.1

DATE
5/7/2024



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3	-	-

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SHEET TITLE

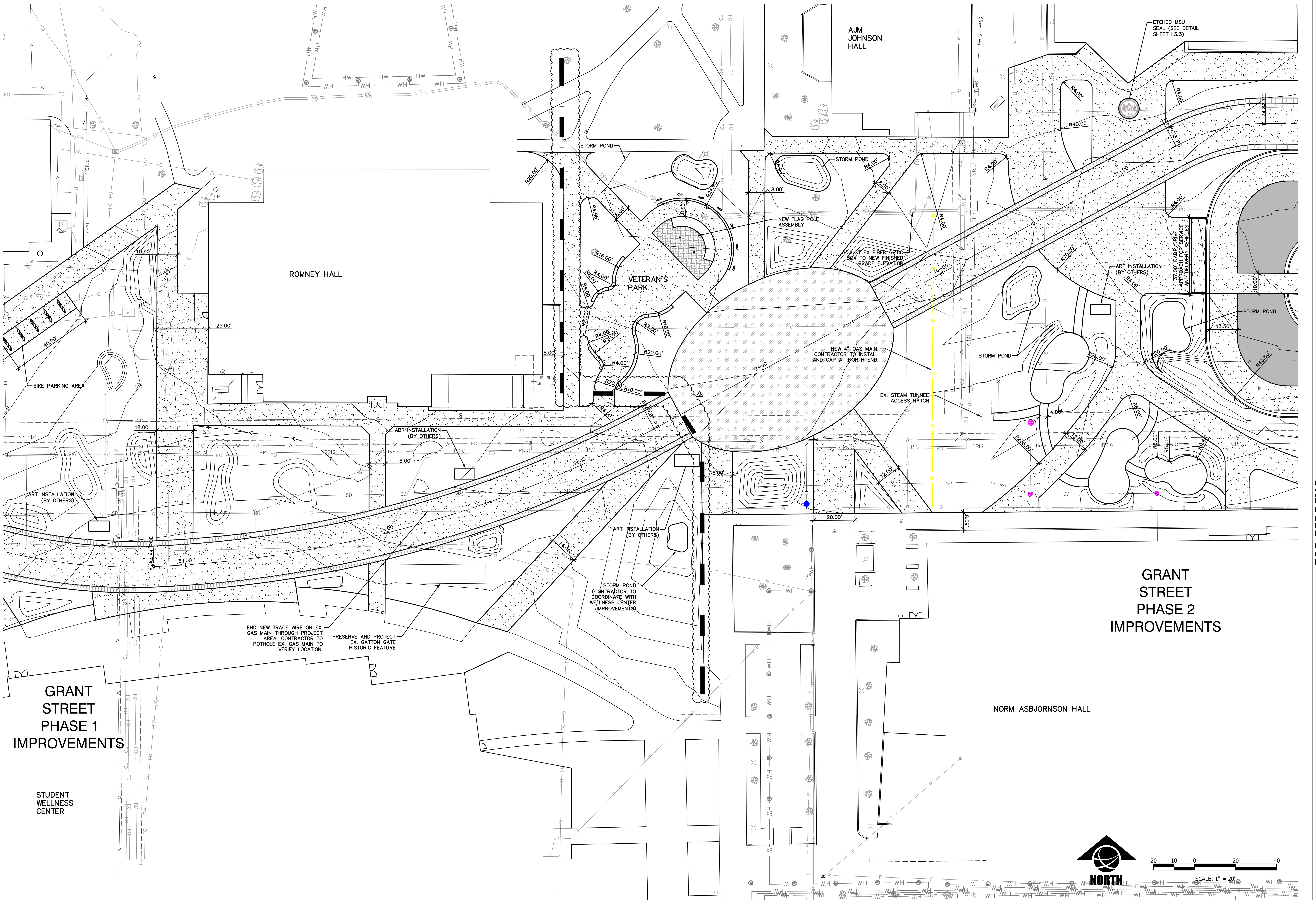
SITE PLAN

SHEET

C3.2

DATE

5/7/2024



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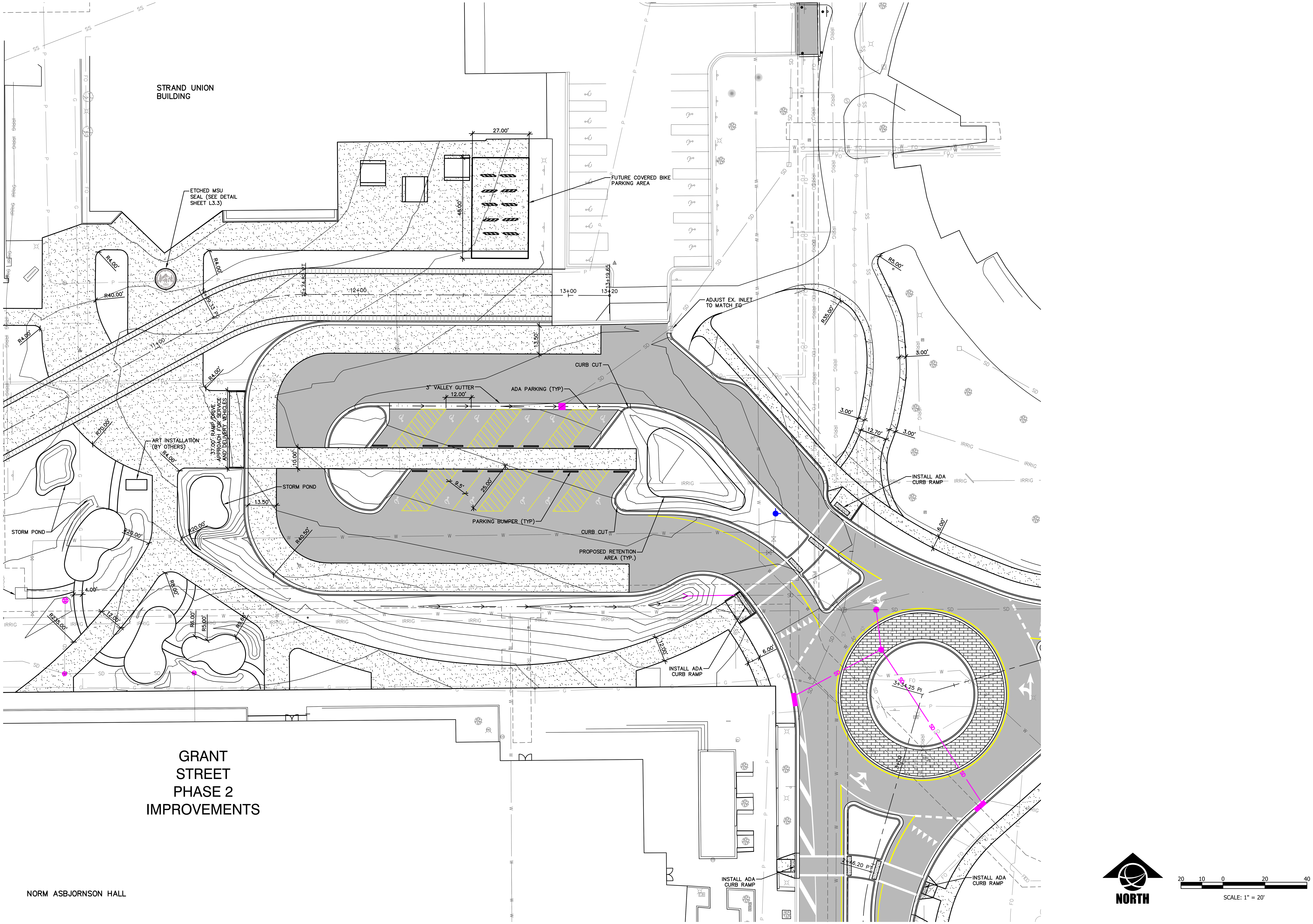
SHEET TITLE
SITE PLAN

SHEET
C3.3

DATE
5/7/2024



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PPA#00-0000

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22236

SHEET TITLE

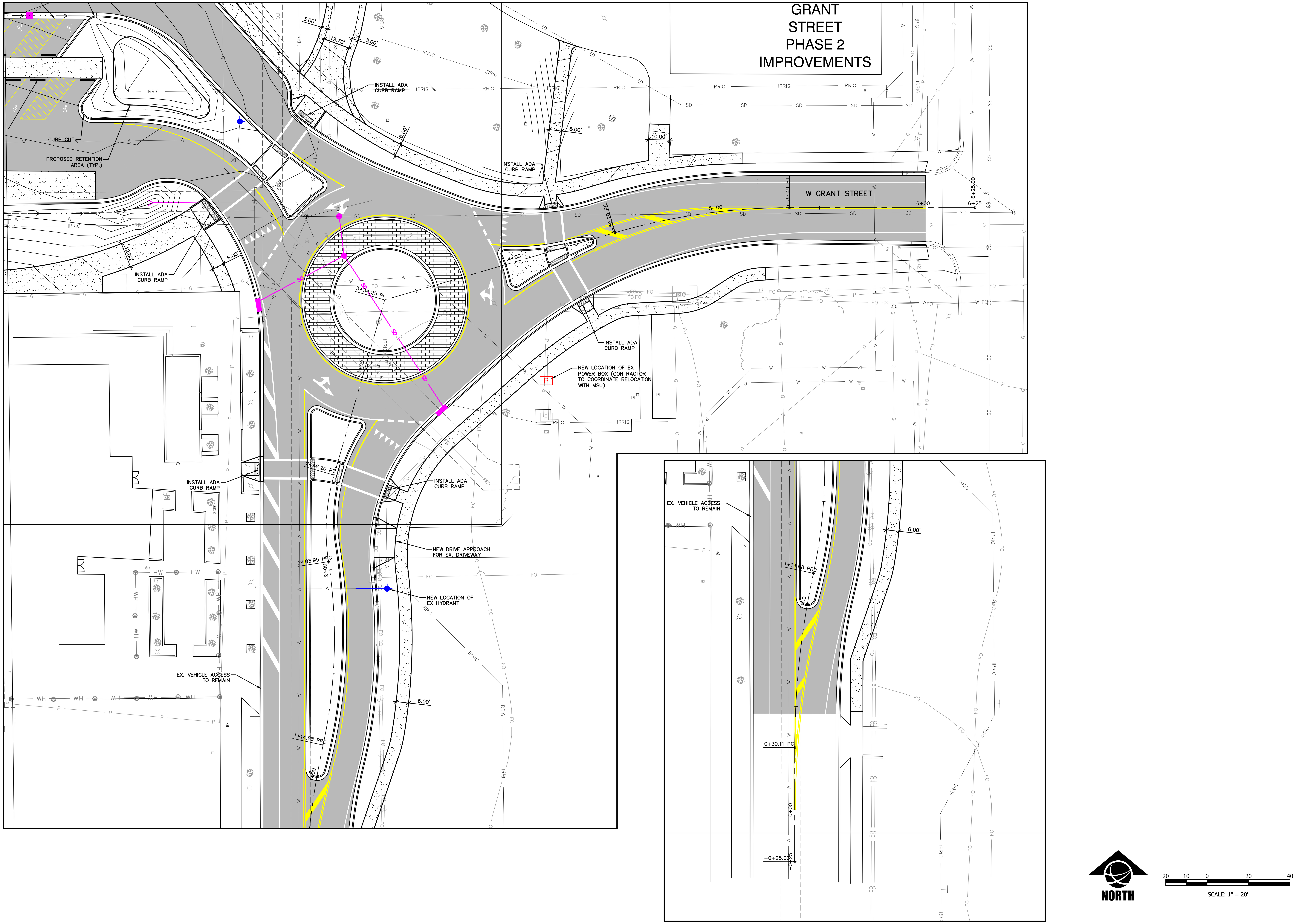
SITE PLAN

SHEET

C3.4

DATE

5/7/2024



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1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
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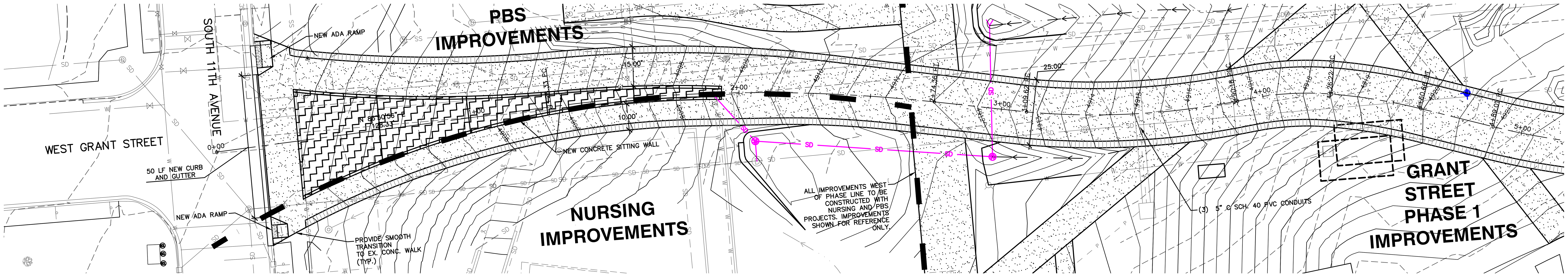
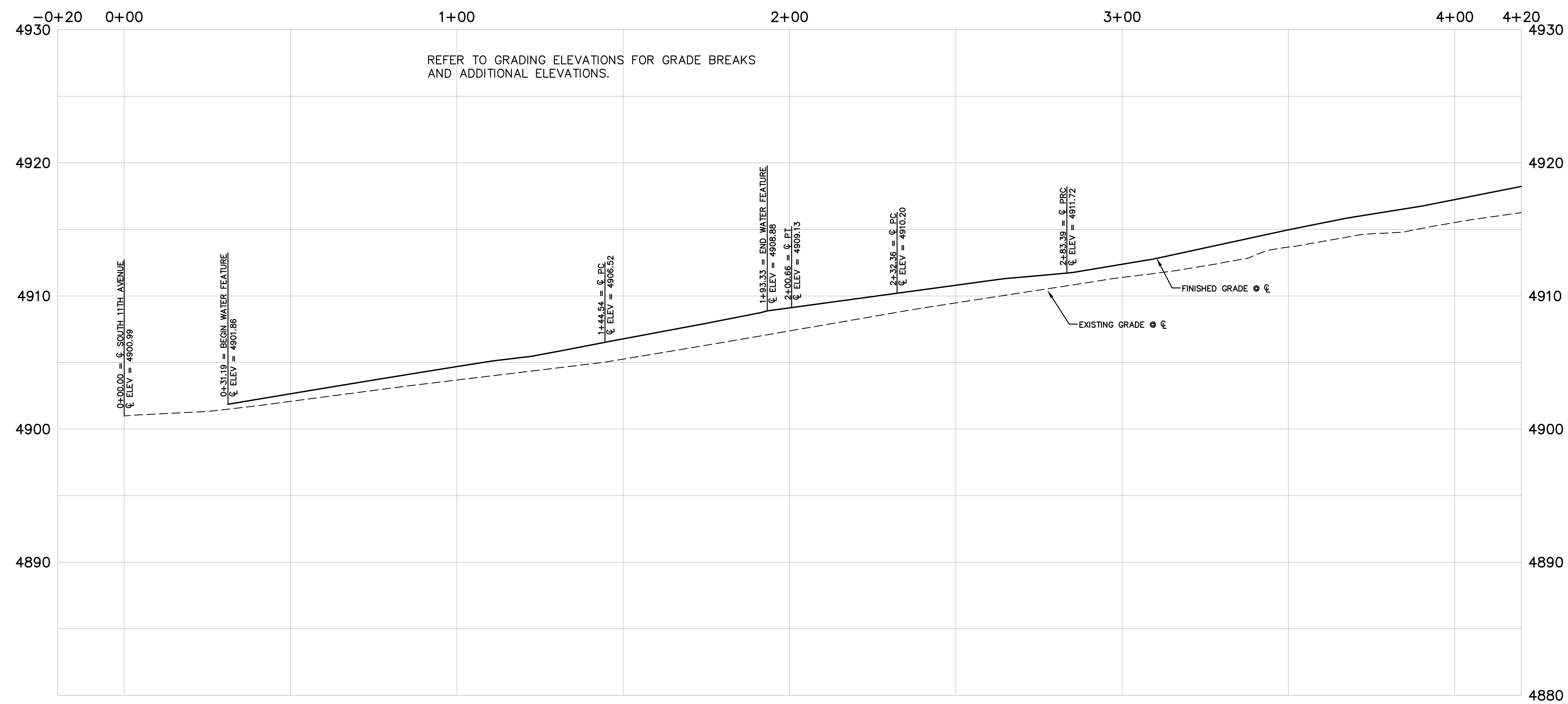
SHEET TITLE
SITE PLAN

SHEET
C3.5

DATE
5/7/2024





NORTH

20 10 0 20 40

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1"=5'

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2	ADDENDUM #2	05/07/24
3	-	-

MONTANA DANIELLE R. SCHARF 14799PE LICENSED PROFESSIONAL ENGINEER

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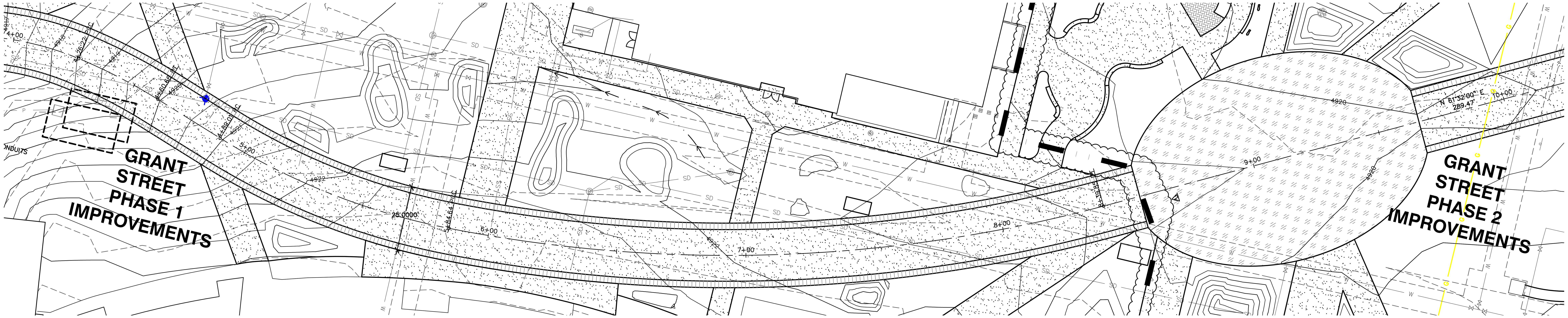
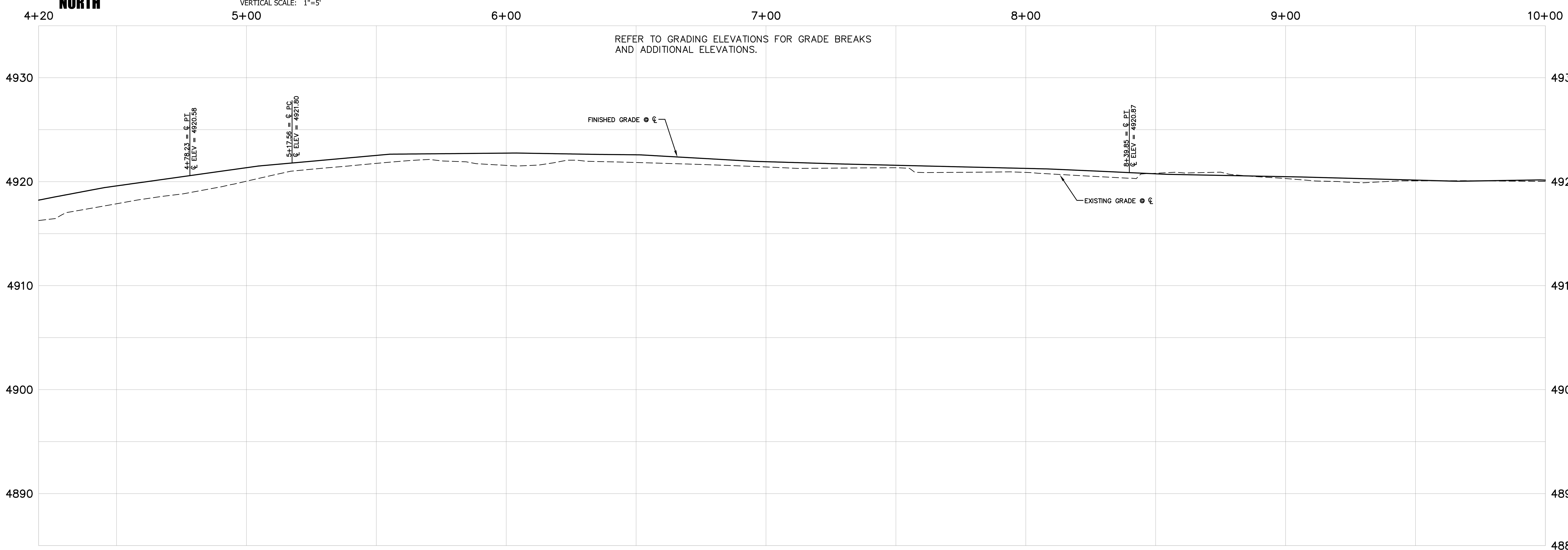
22236

SHEET TITLE
PLAN & PROFILE
MULTI-USE PATH STA 0+00 TO 4+20

SHEET
C4.1

DATE
5/7/2024





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2	ADDENDUM #2	05/07/24
3	-	-

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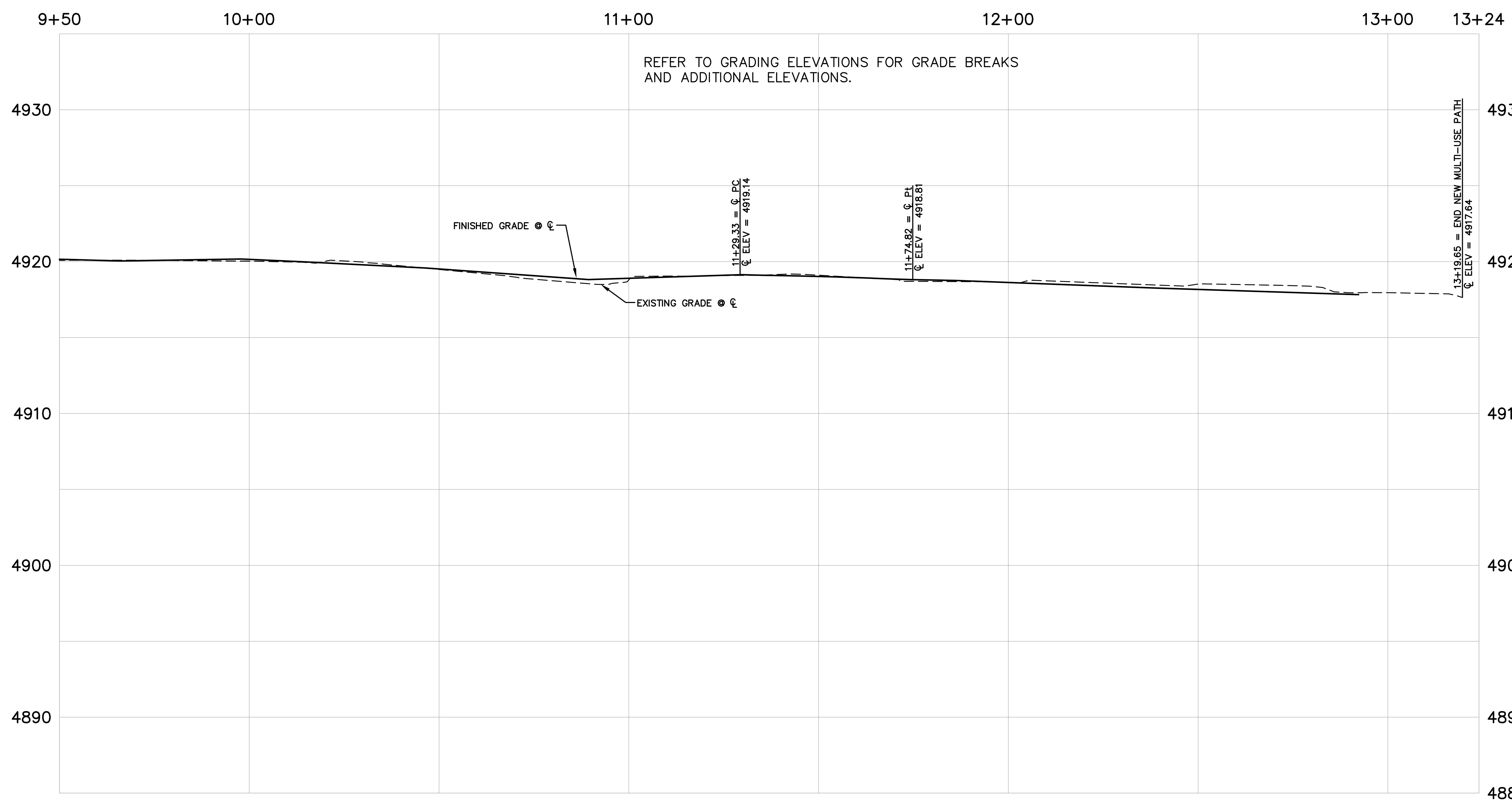
A/E#00-00-00
22236

SHEET TITLE
PLAN & PROFILE
MULTI-USE PATH STA
4+20 TO 9+50

SHEET
C4.2

DATE
5/7/2024



NORTH

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE: 1"=5'

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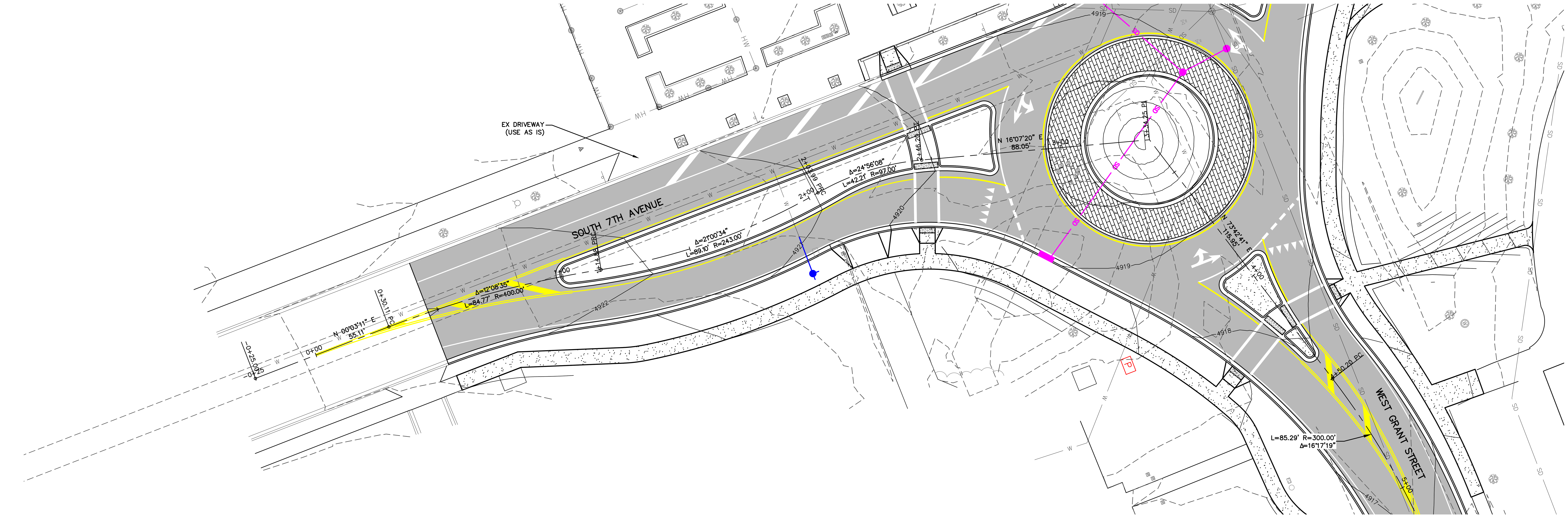
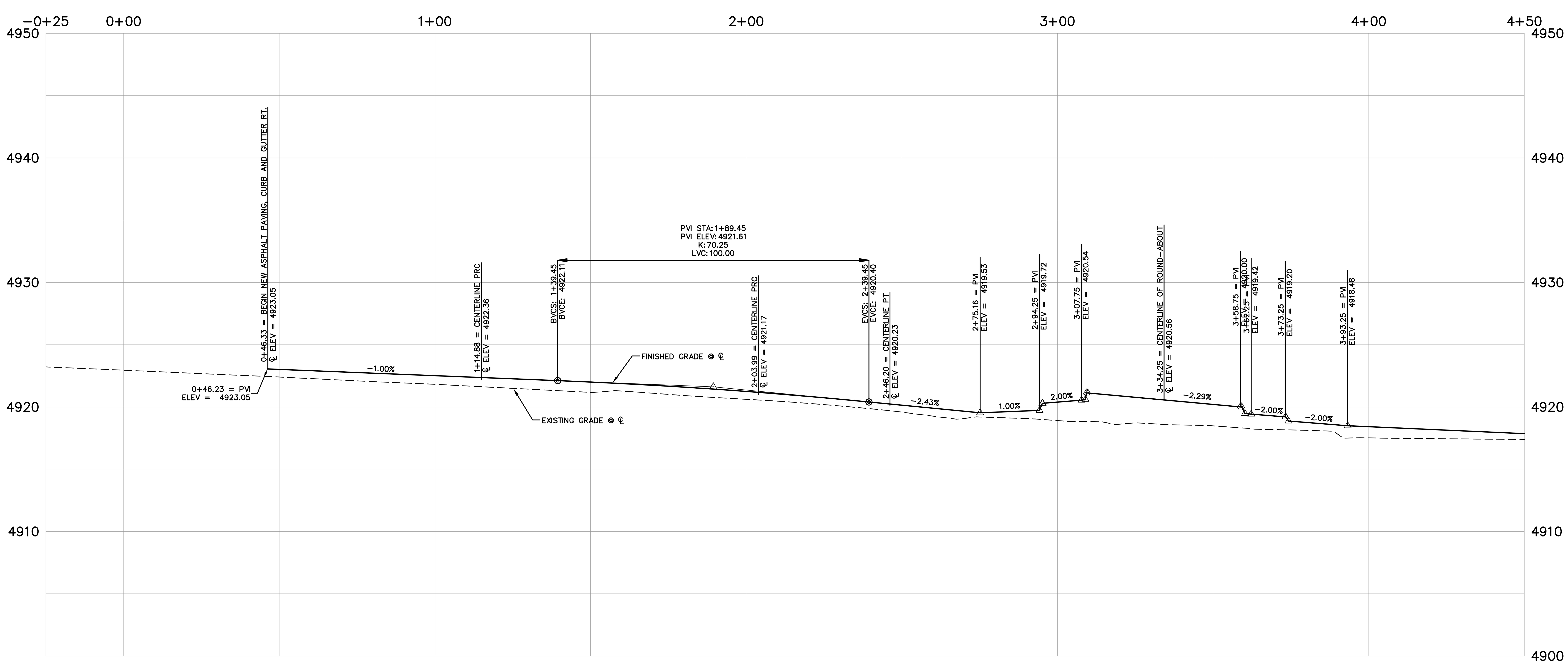
SHEET TITLE
PLAN & PROFILE
MULTI-USE PATH STA
9+50 TO 13+50

SHEET
C4.3

DATE
5/7/2024





NORTH

20 10 0 20 40

HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE: 1"=5'

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3	-	-

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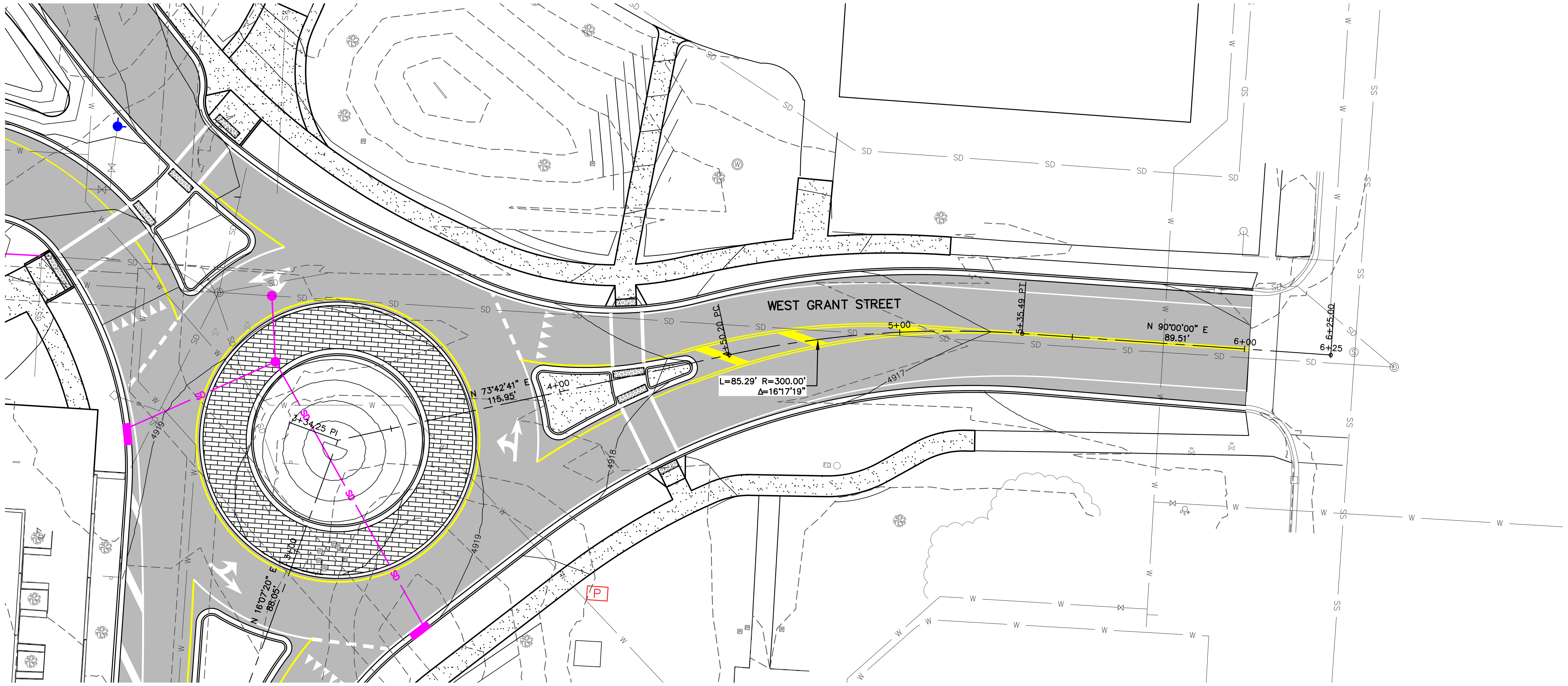
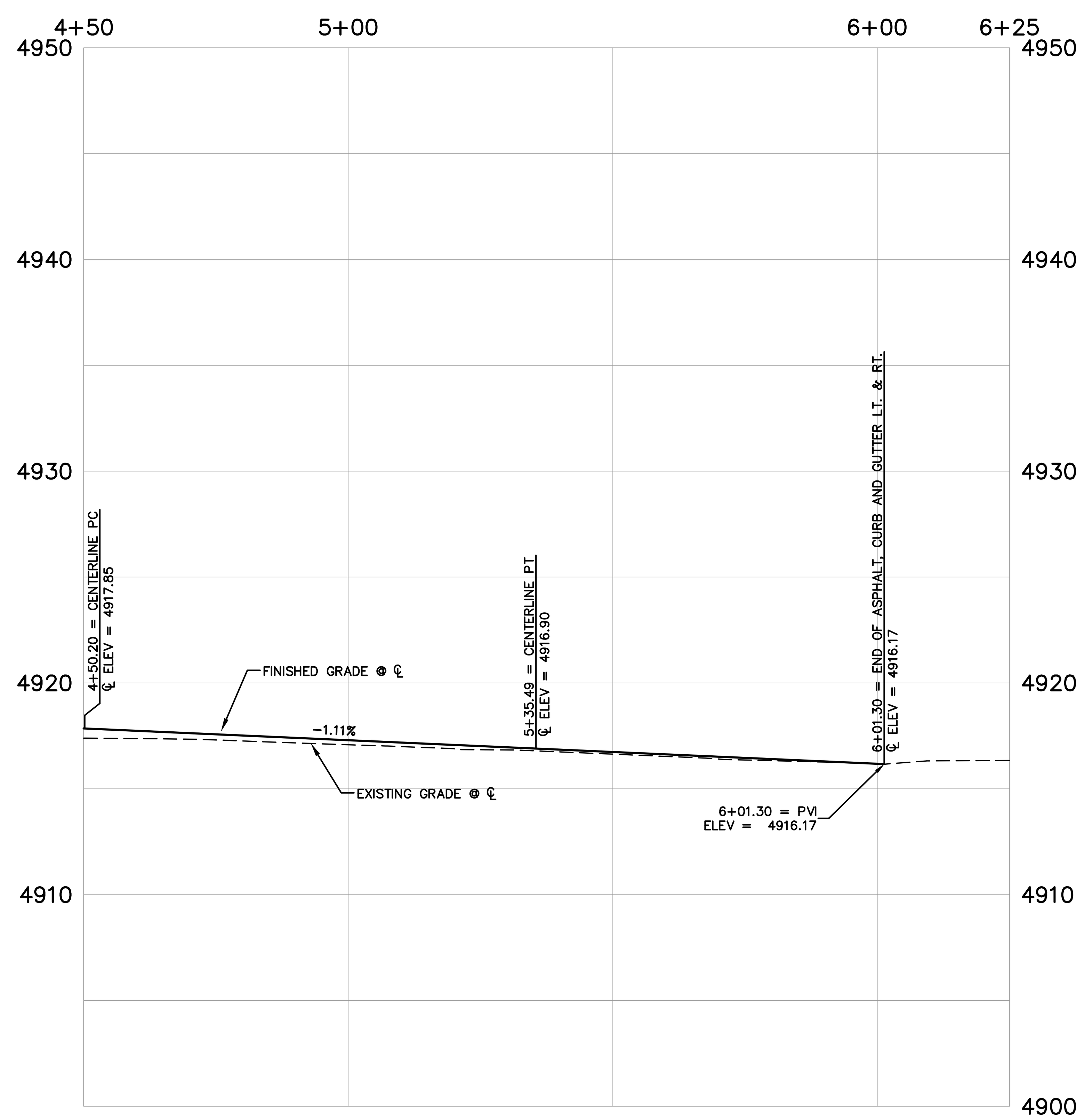
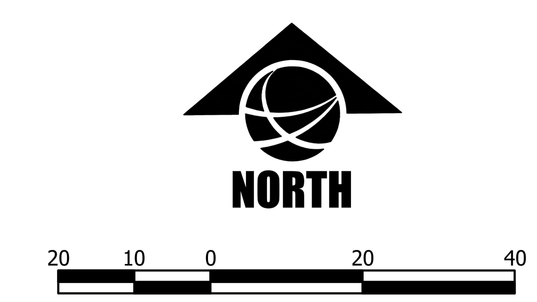
SHEET TITLE
PLAN & PROFILE
ROUNDABOUT STA
0+00 TO 4+50

SHEET
C4.4

DATE
5/7/2024







HORIZONTAL SCALE:1" = 20'
VERTICAL SCALE: 1"=5'

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REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

MONTANA
DANIELLE R. SCHARF
14799PE
PROFESSIONAL ENGINEER
LICENSED

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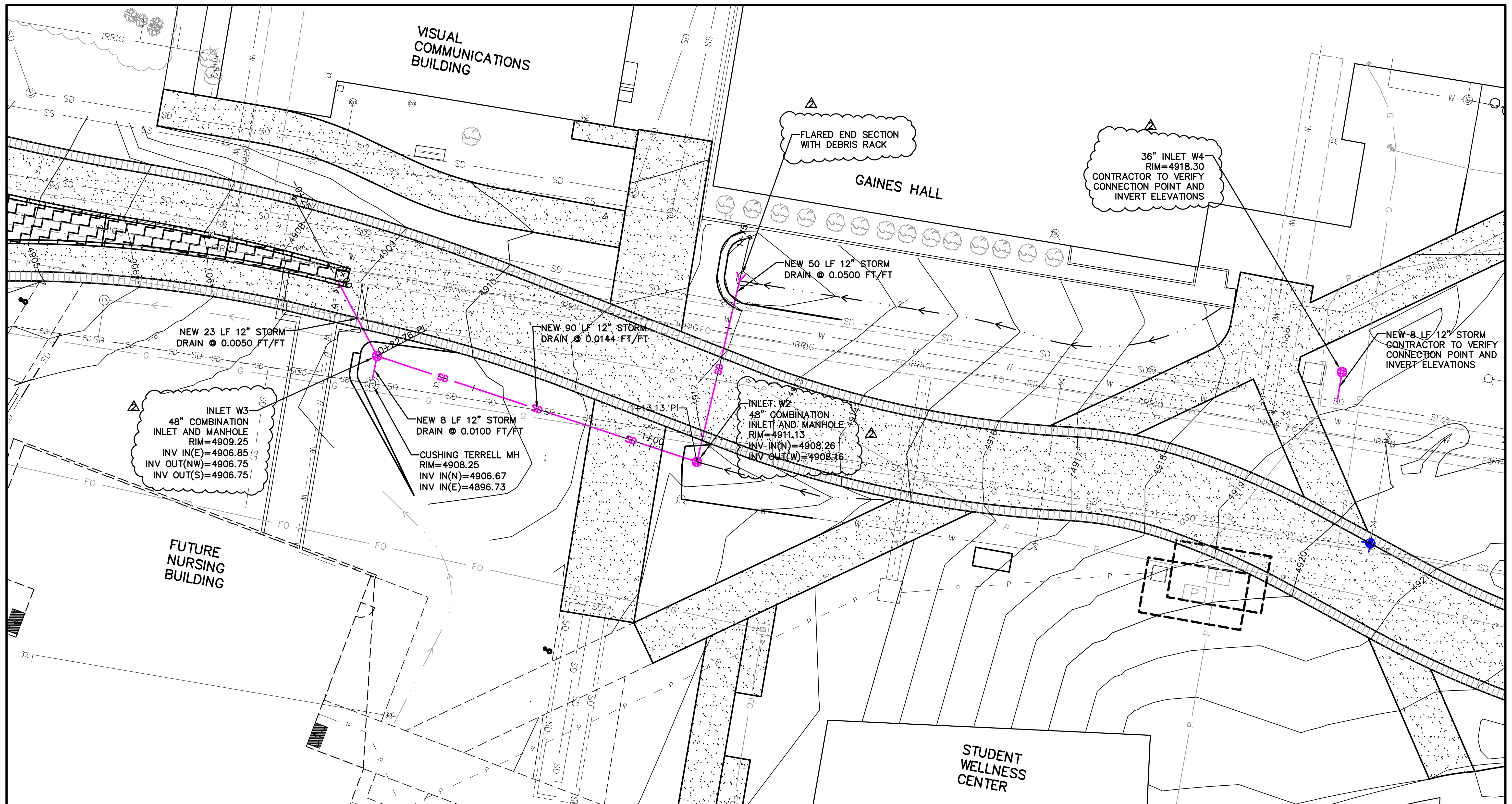
22236

SHEET TITLE
PLAN & PROFILE
ROUNDABOUT STA
4+50 TO 6+25

SHEET
C4.5

DATE
5/7/2024

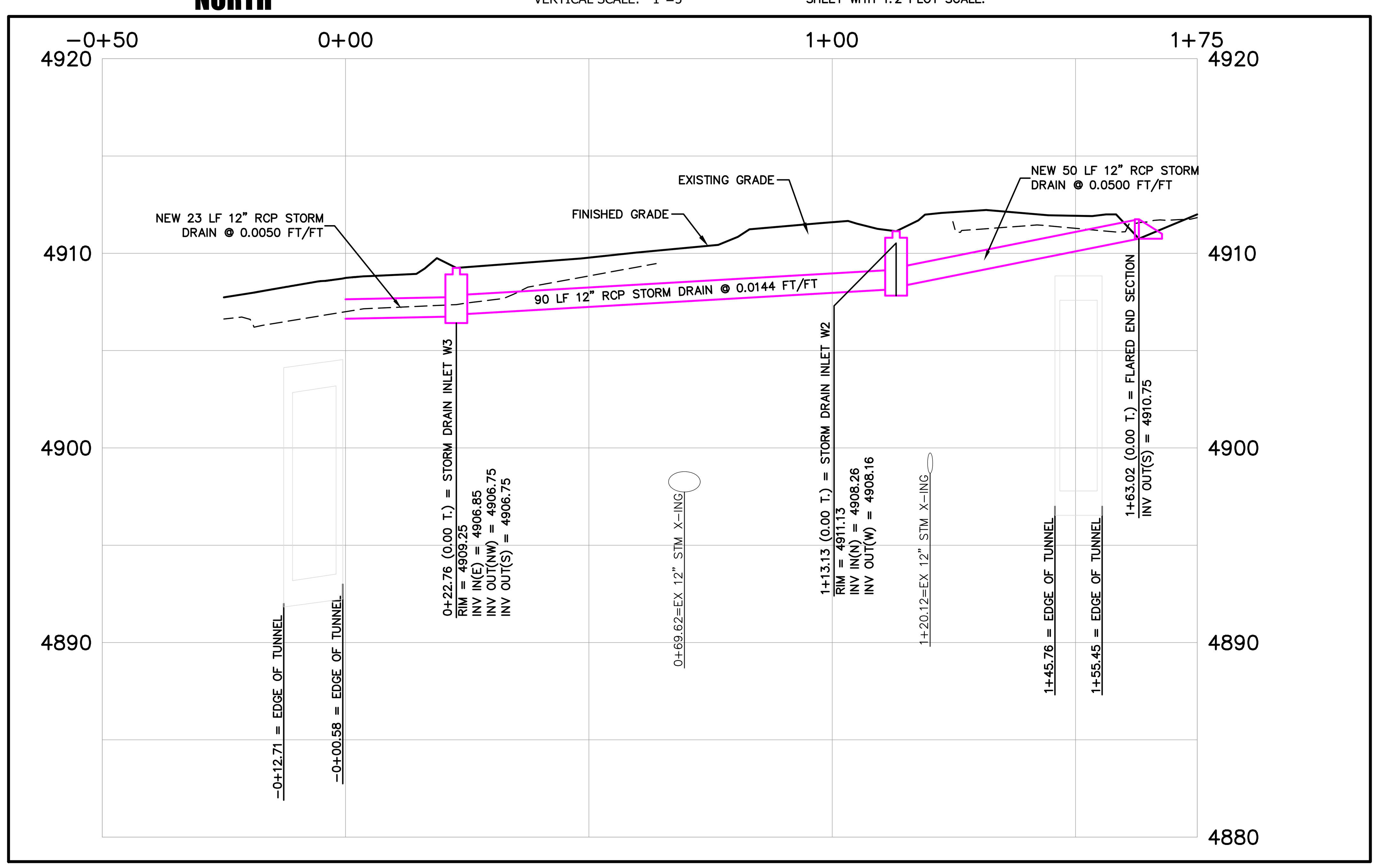


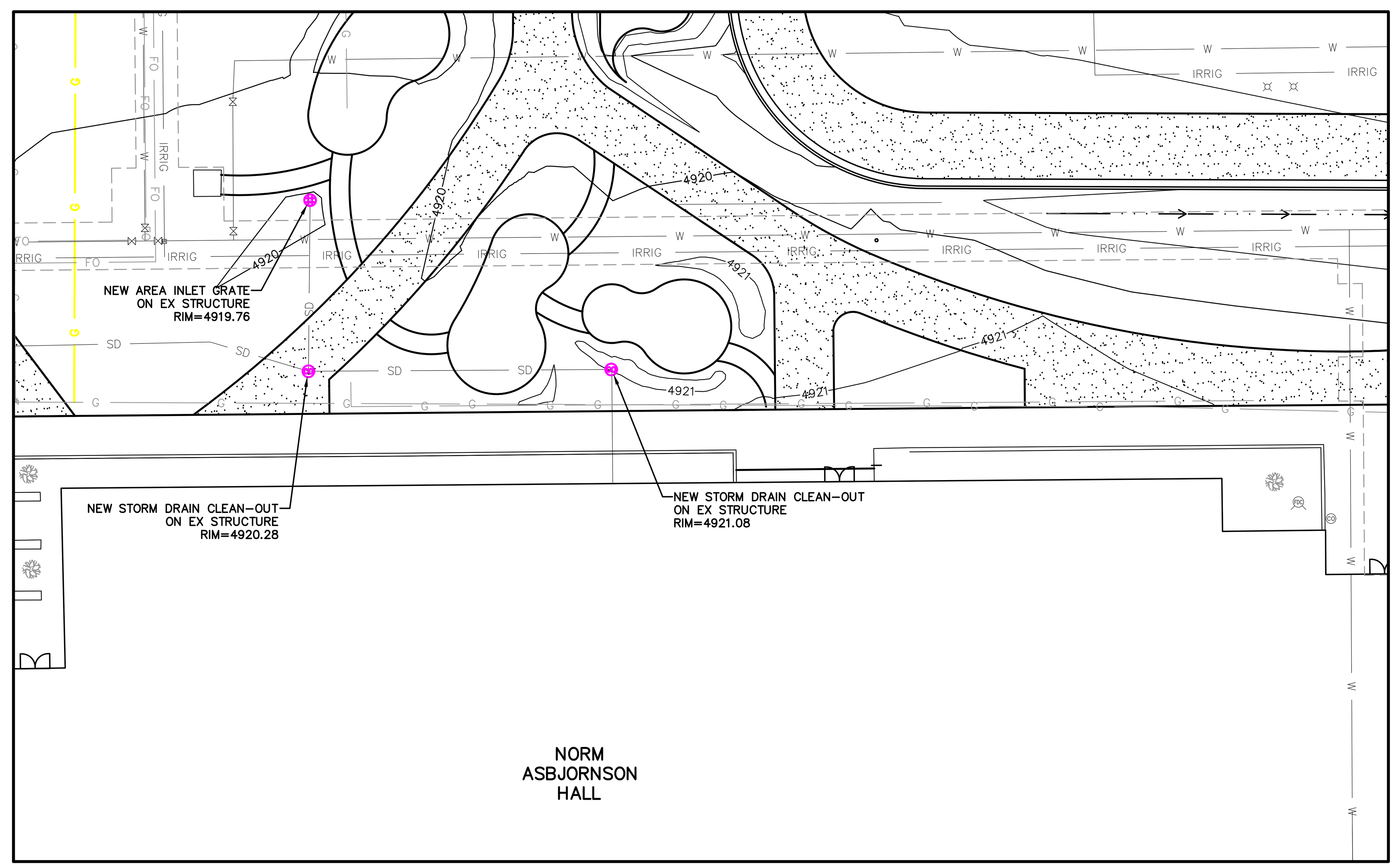
NORTH

20 10 0 20 40

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1"=5'

SCALE SHOWN IS ACCURATE WHEN PRINTED ON 22X34 SHEET WITH 1:1 PLOT SCALE. DOUBLE HORIZONTAL AND VERTICAL SCALES ON 11X17 SHEET WITH 1:2 PLOT SCALE.





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3	-	-

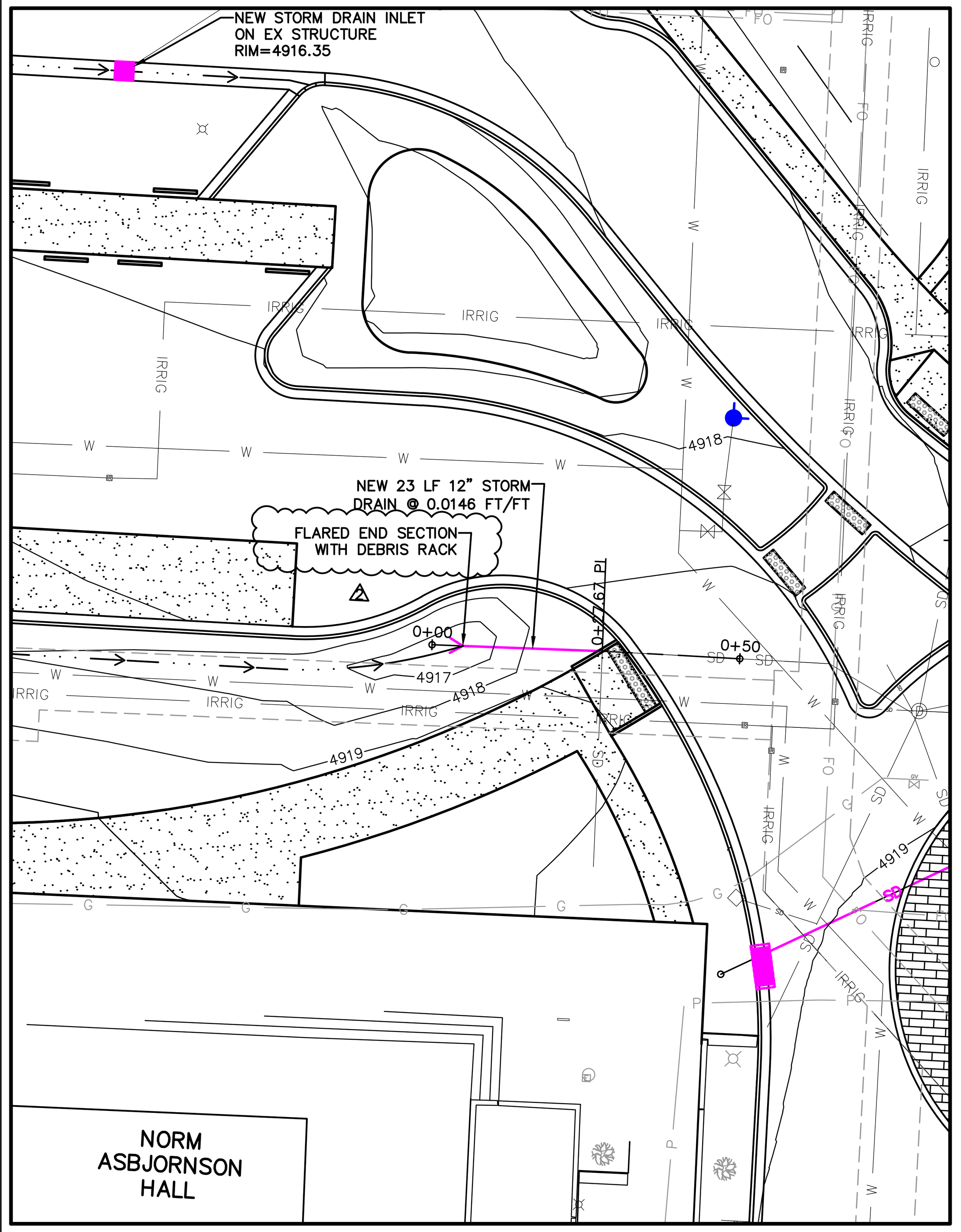
MONTANA DANIELLE R. SCHARF 14799PE PROFESSIONAL ENGINEER LICENSED

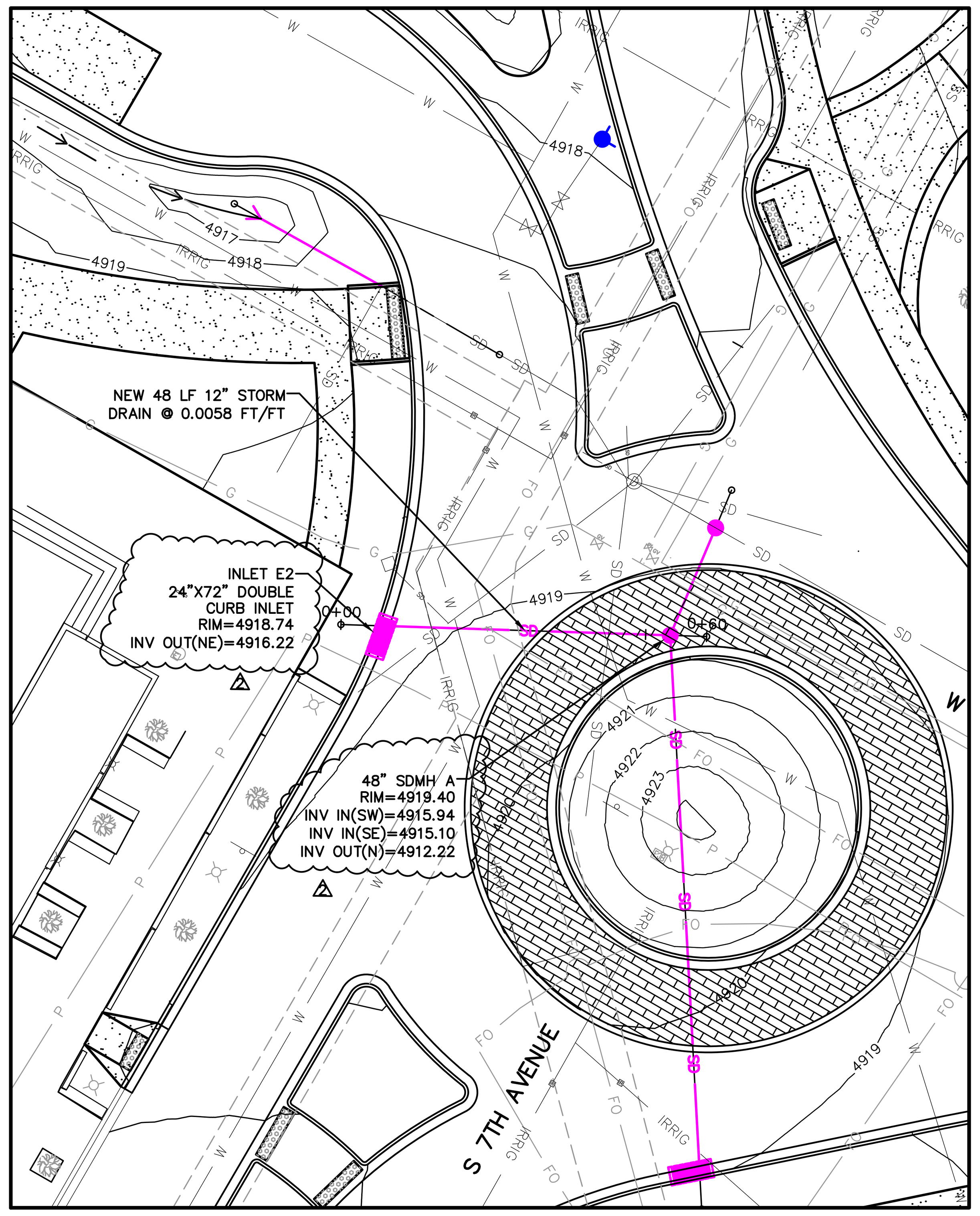
PPA#00-0000
A/E#00-00-00
22236

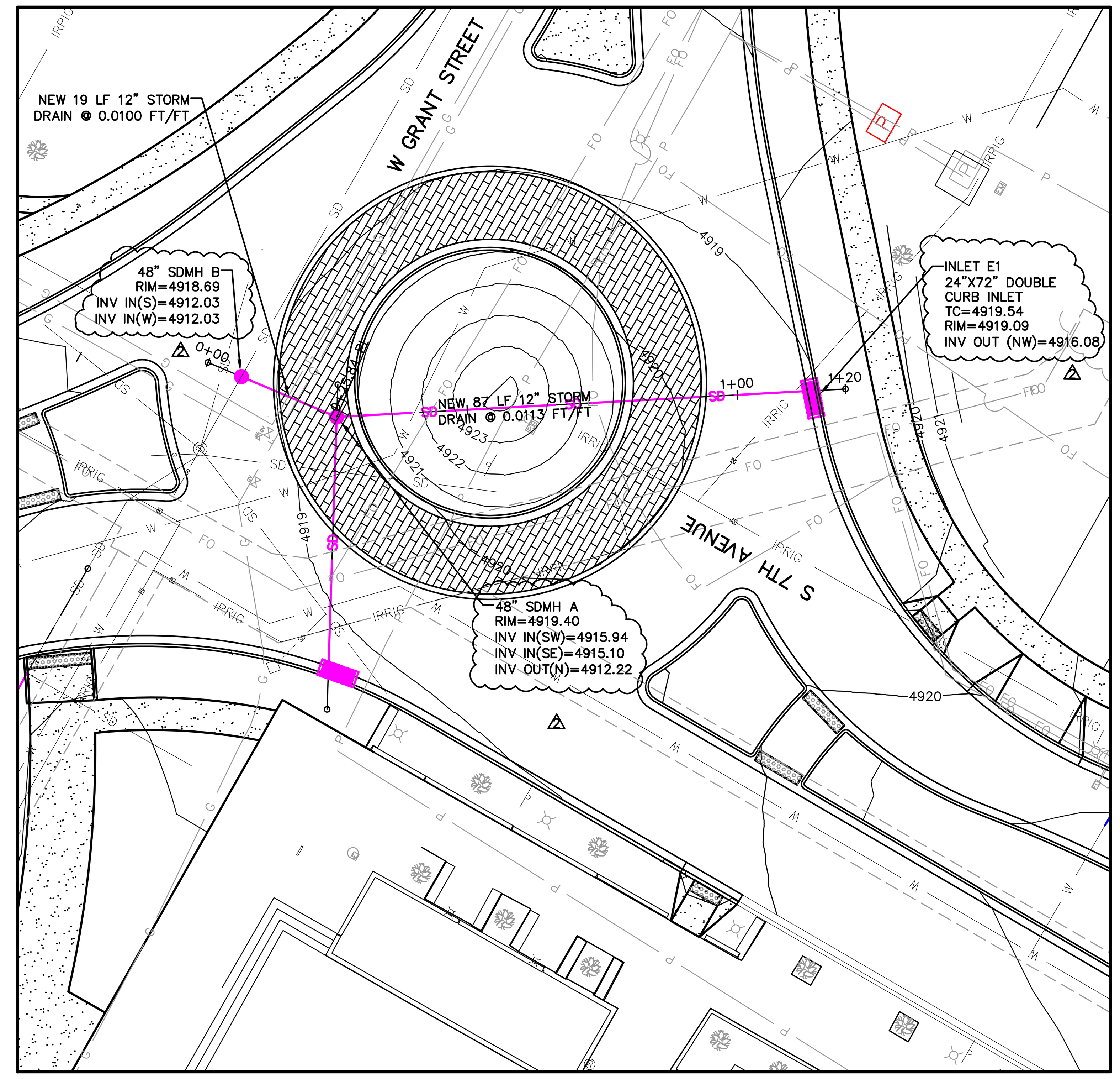
SHEET TITLE
PLAN & PROFILE WEST STORM DRAIN

SHEET
C5.1

DATE
5/7/2024







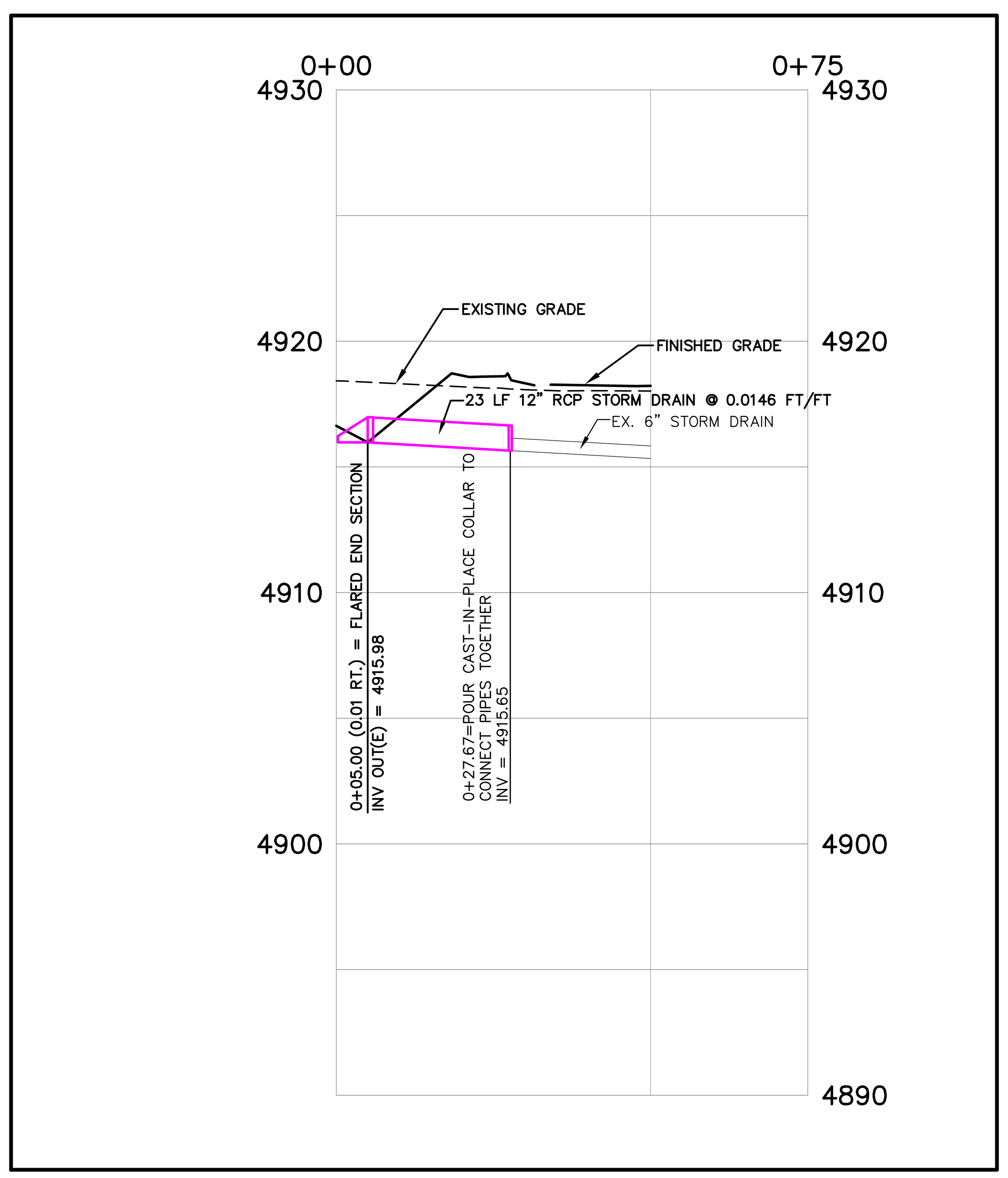
NORTH

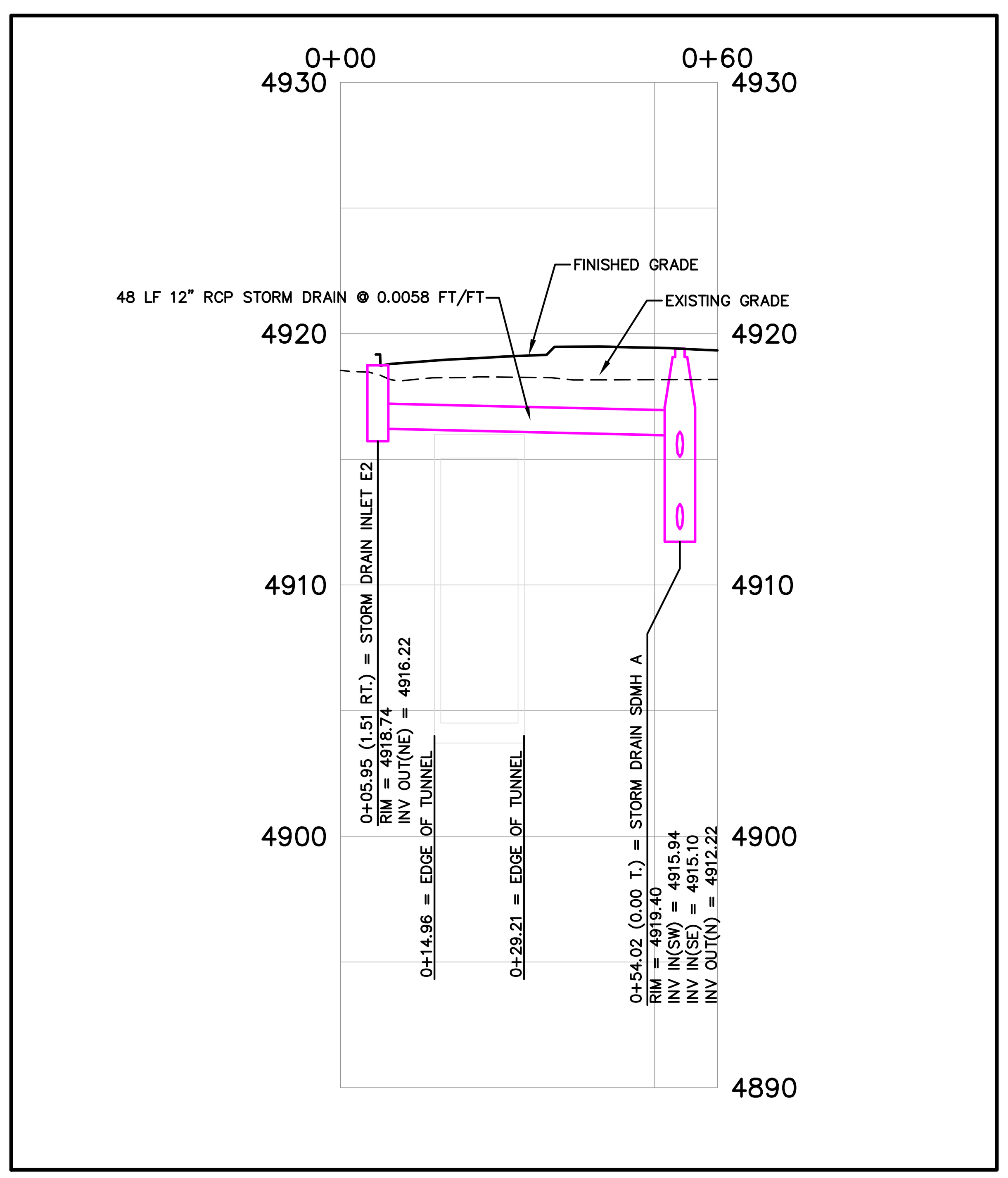
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1"=5'

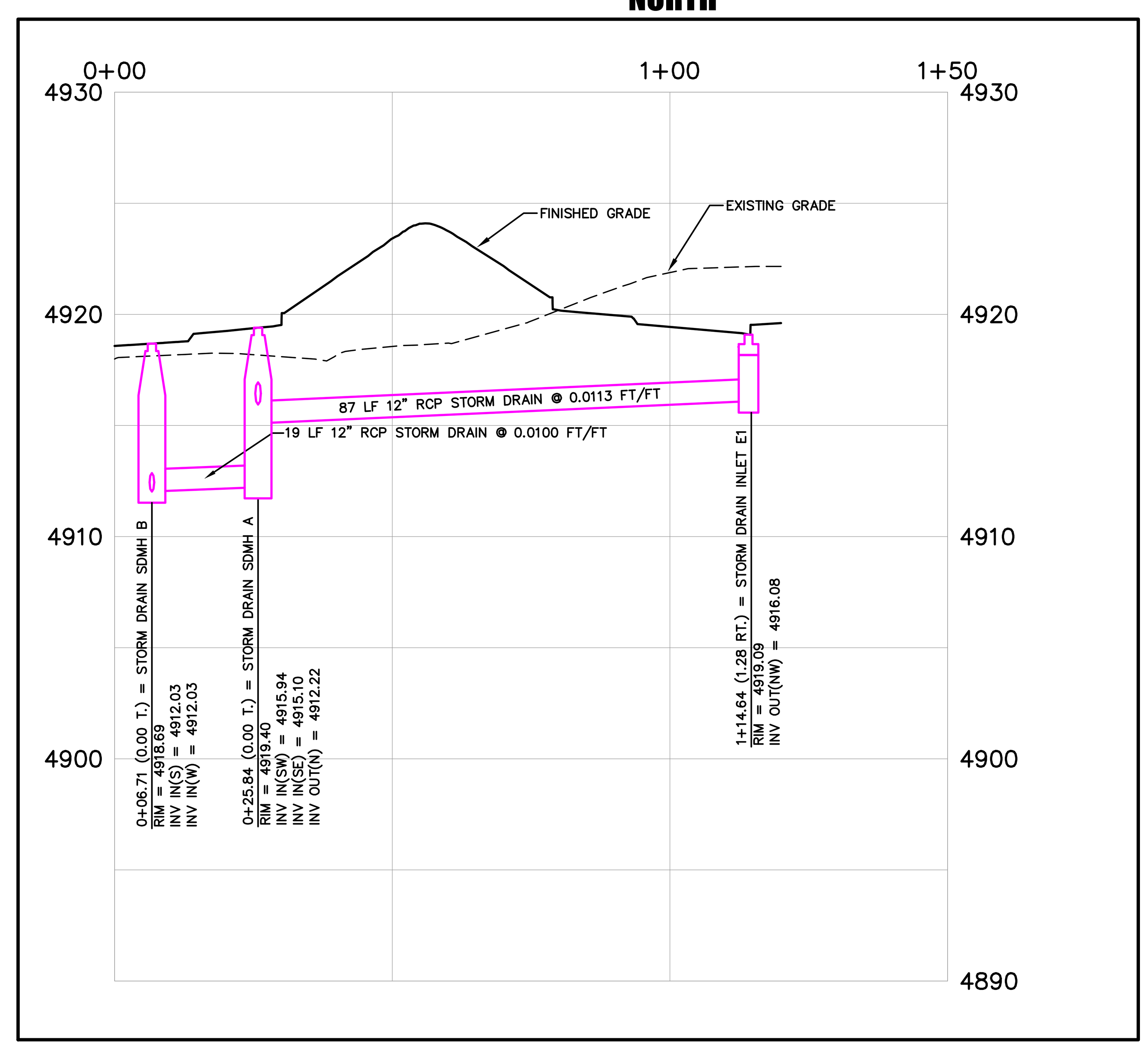
SCALE SHOWN IS ACCURATE WHEN PRINTED ON 22X34 SHEET WITH 1:1 PLOT SCALE. DOUBLE HORIZONTAL AND VERTICAL SCALES ON 11X17 SHEET WITH 1:2 PLOT SCALE.

NORTH

NORTH







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REV.	DESCRIPTION	DATE
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3	-	-

MONTANA DANIELLE R. SCHARF 14799PE LICENSED PROFESSIONAL ENGINEER

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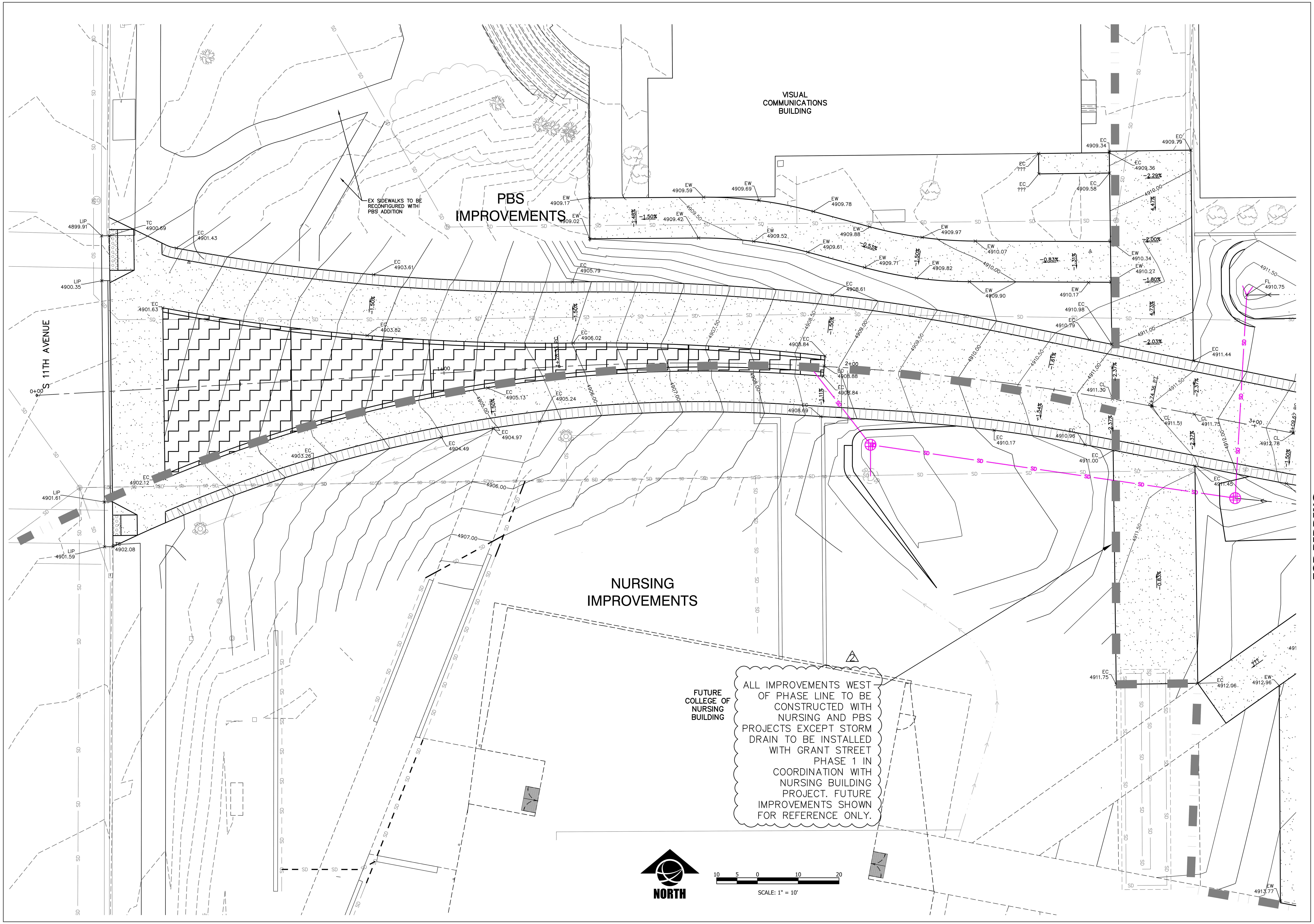
SHEET TITLE
PLAN & PROFILE EAST STORM DRAIN

SHEET
C5.2

DATE
5/7/2024



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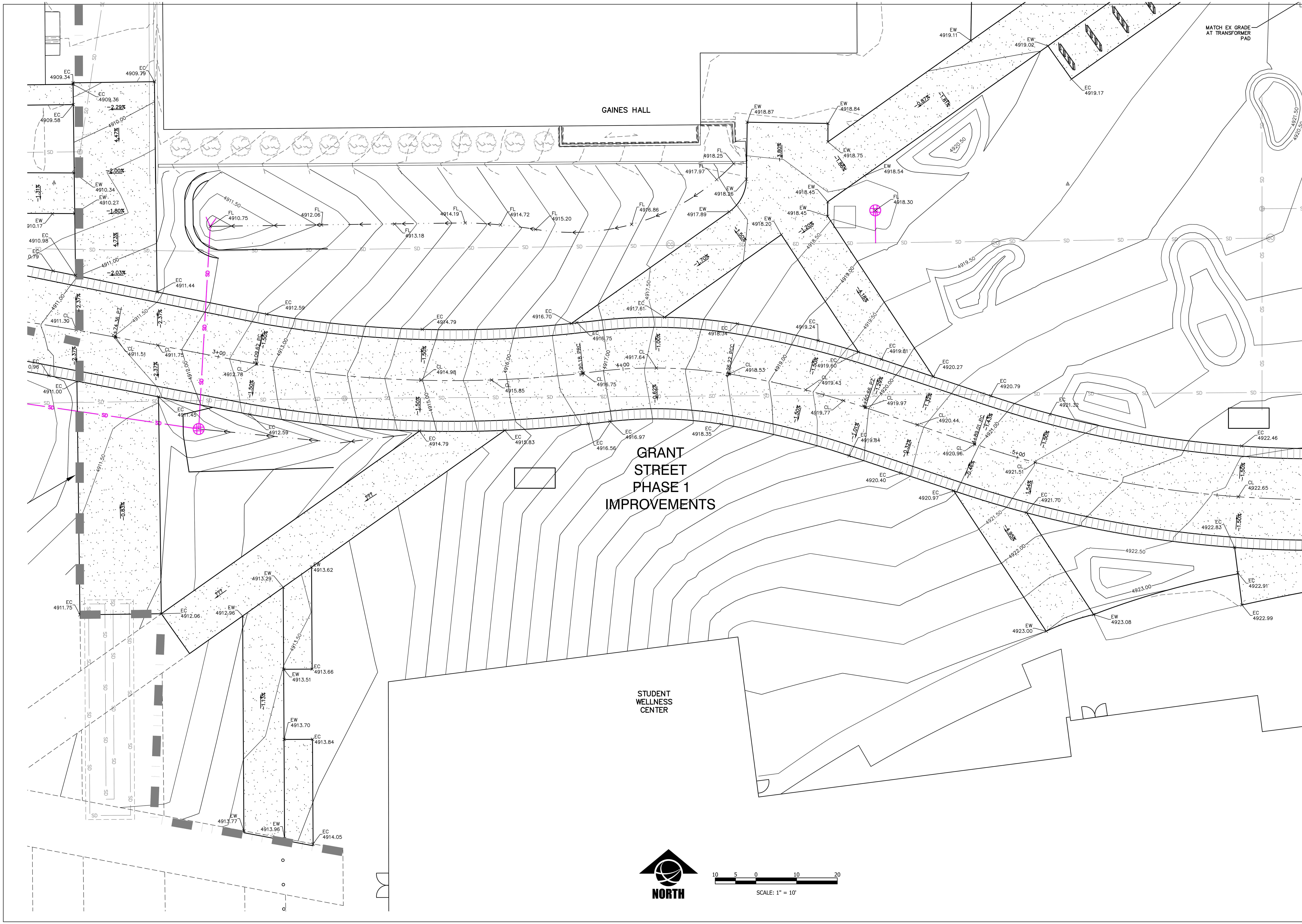
SHEET TITLE
DETAILED GRADING

SHEET
C6.1

DATE
5/7/2024



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SHEET TITLE
DETAILED GRADING

SHEET
C6.2

DATE
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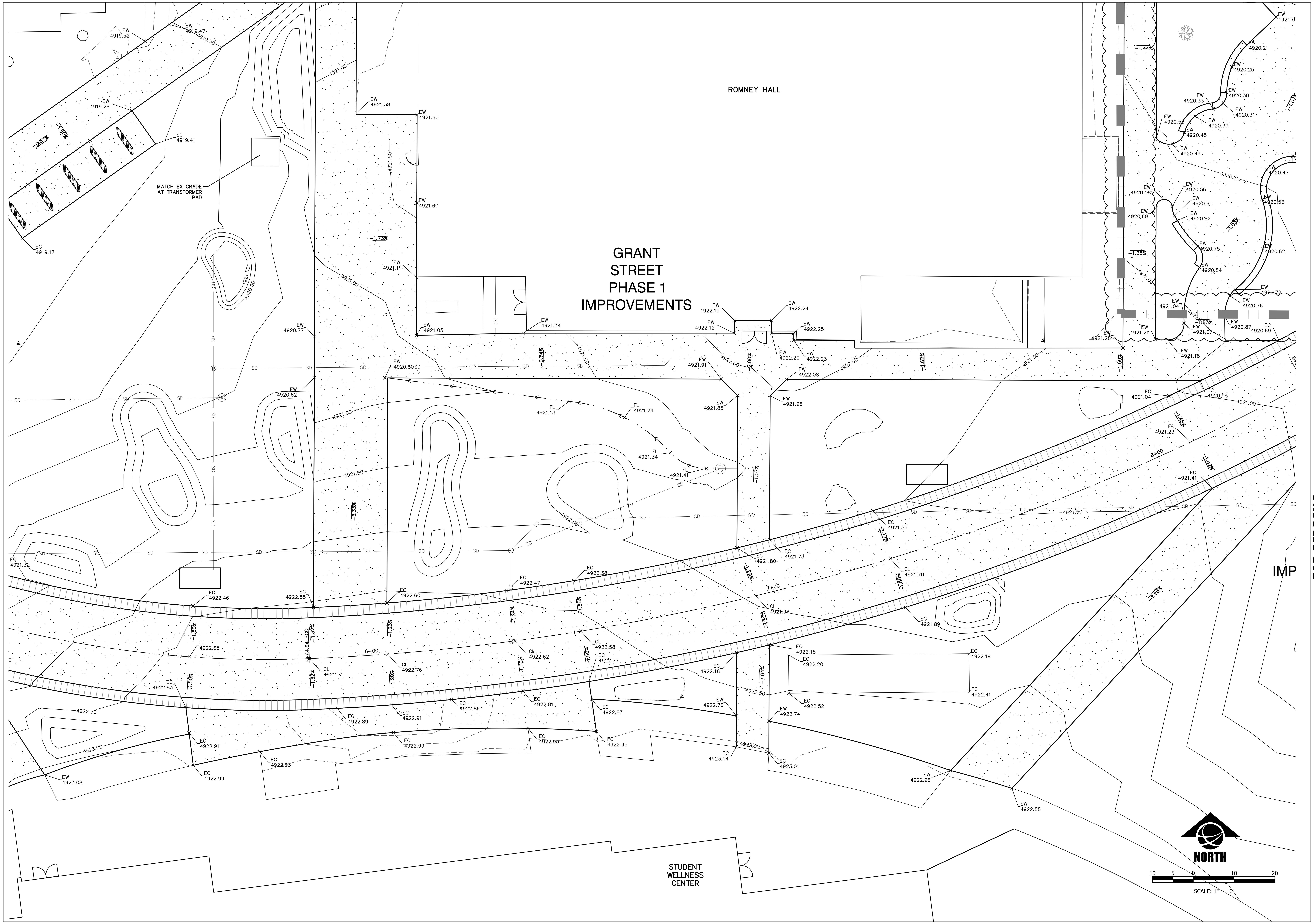

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SHEET TITLE

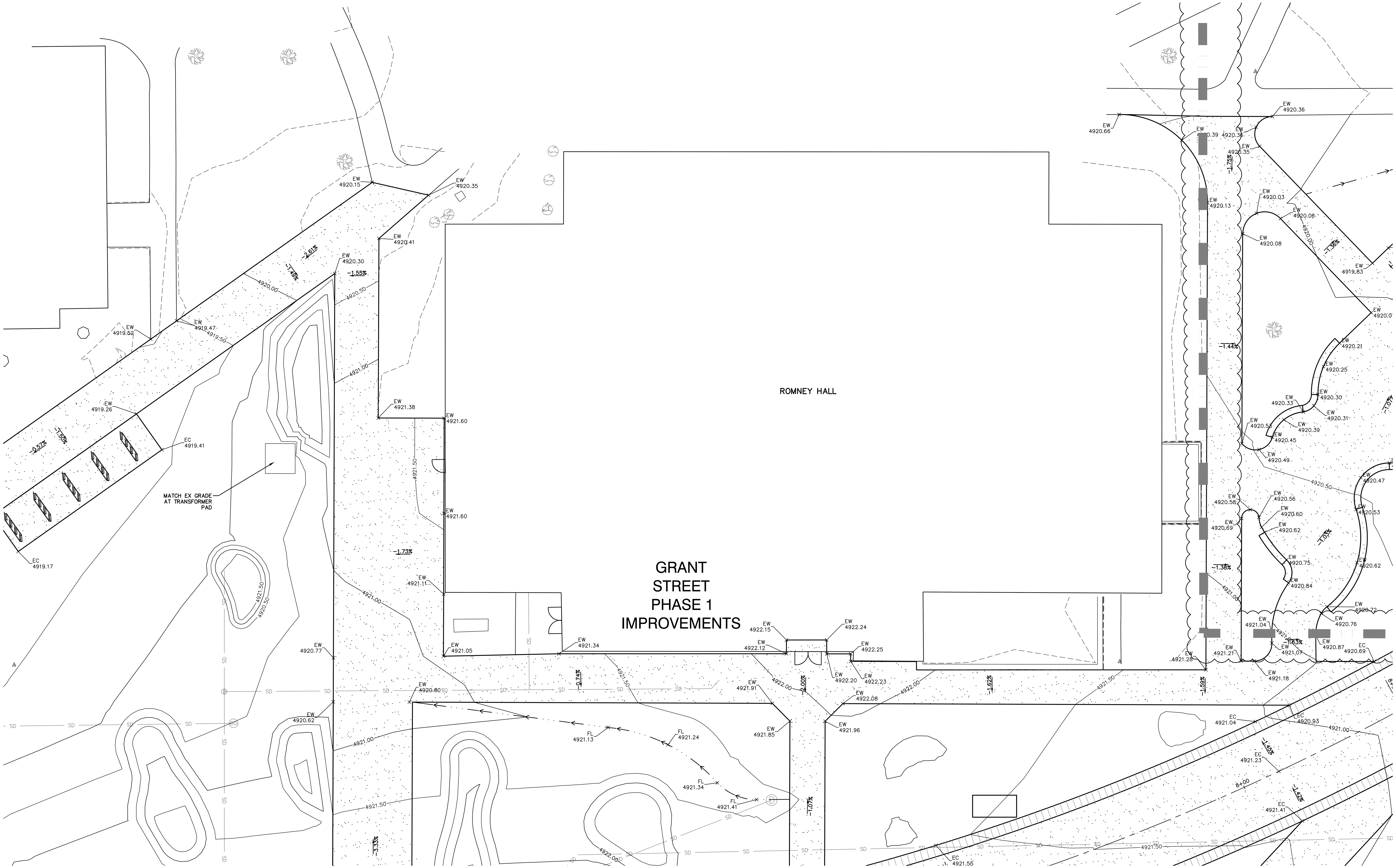
DETAILED GRADING

SHEET

C6.3

DATE

5/7/2024



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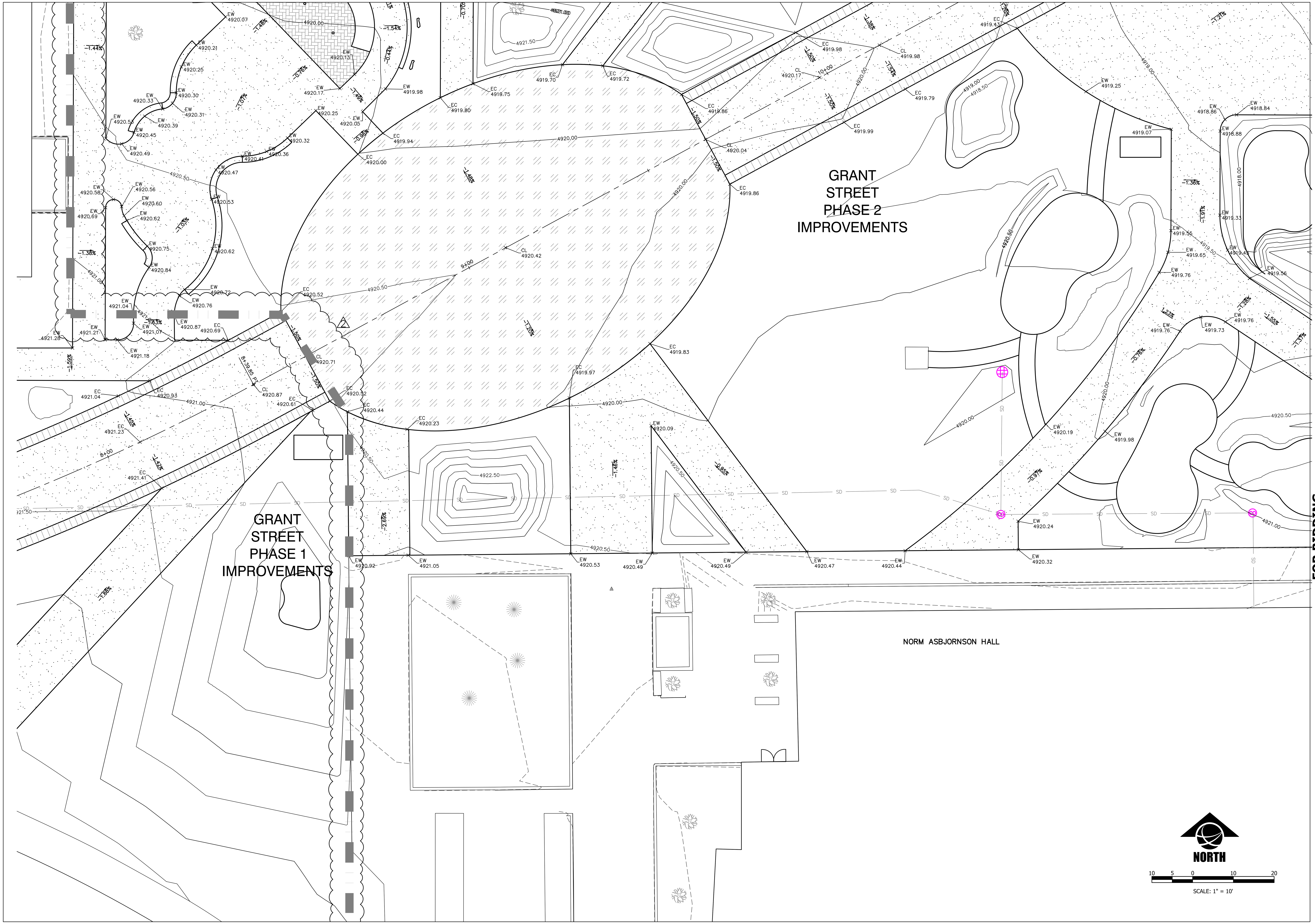
SHEET TITLE
DETAILED GRADING

SHEET
C6.4

DATE
5/7/2024



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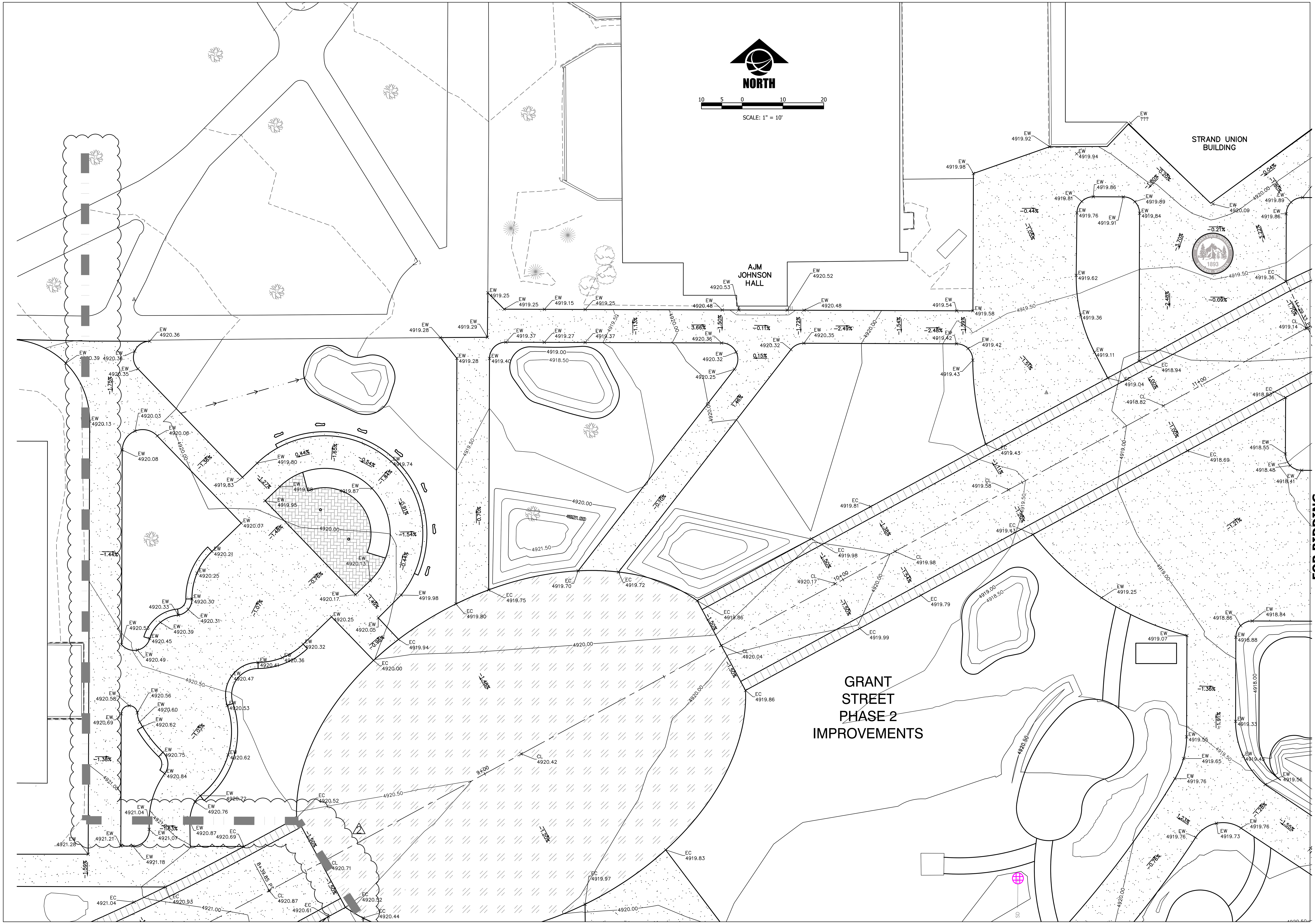
SHEET TITLE
DETAILED GRADING

SHEET
C6.5

DATE
5/7/2024



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FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

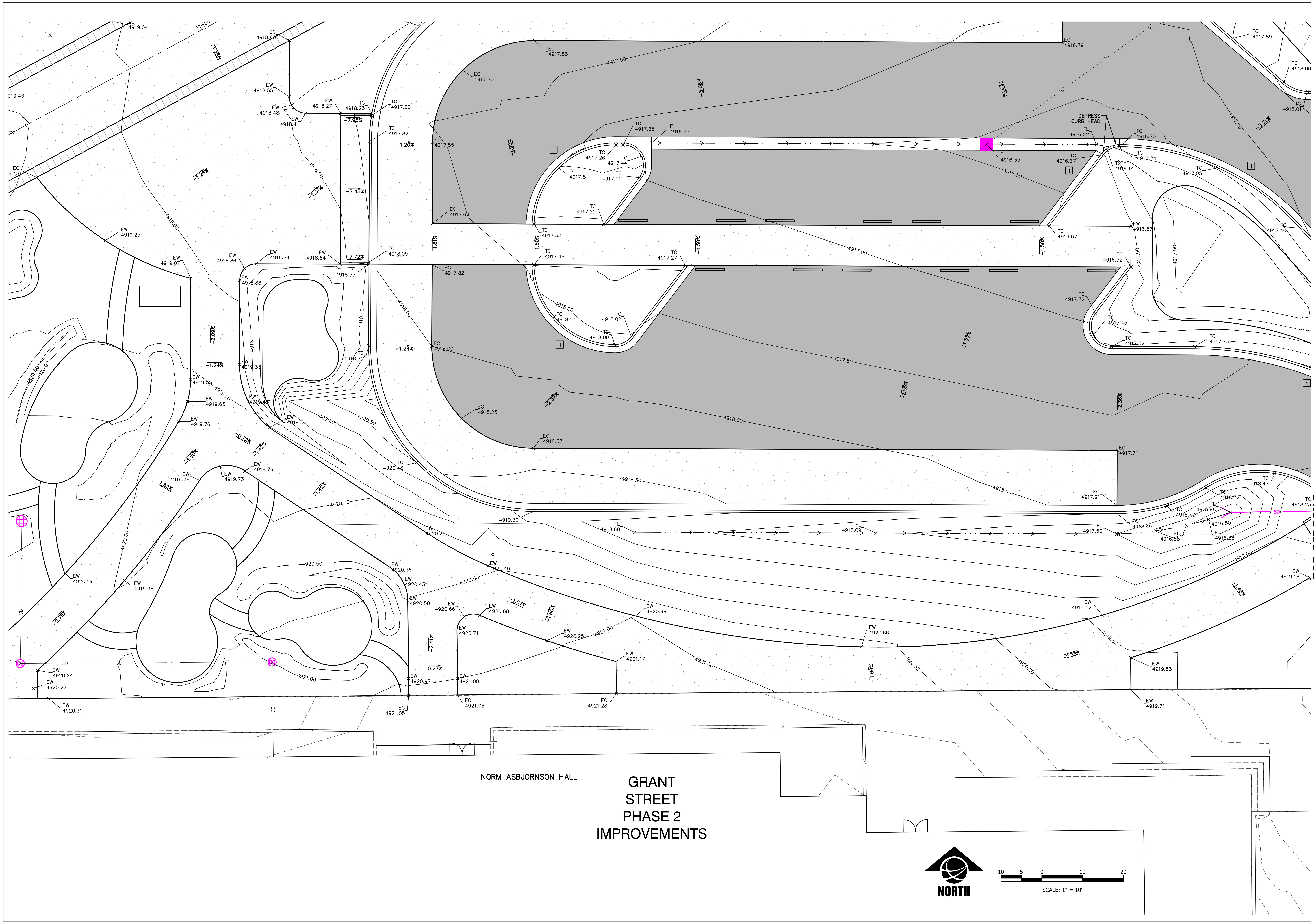
MONTANA DANIELLE R. SCHARF 14799PE PROFESSIONAL ENGINEER LICENSED

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
DETAILED GRADING

SHEET
C6.6

DATE
5/7/2024



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3	-	-

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A/E#00-00-00
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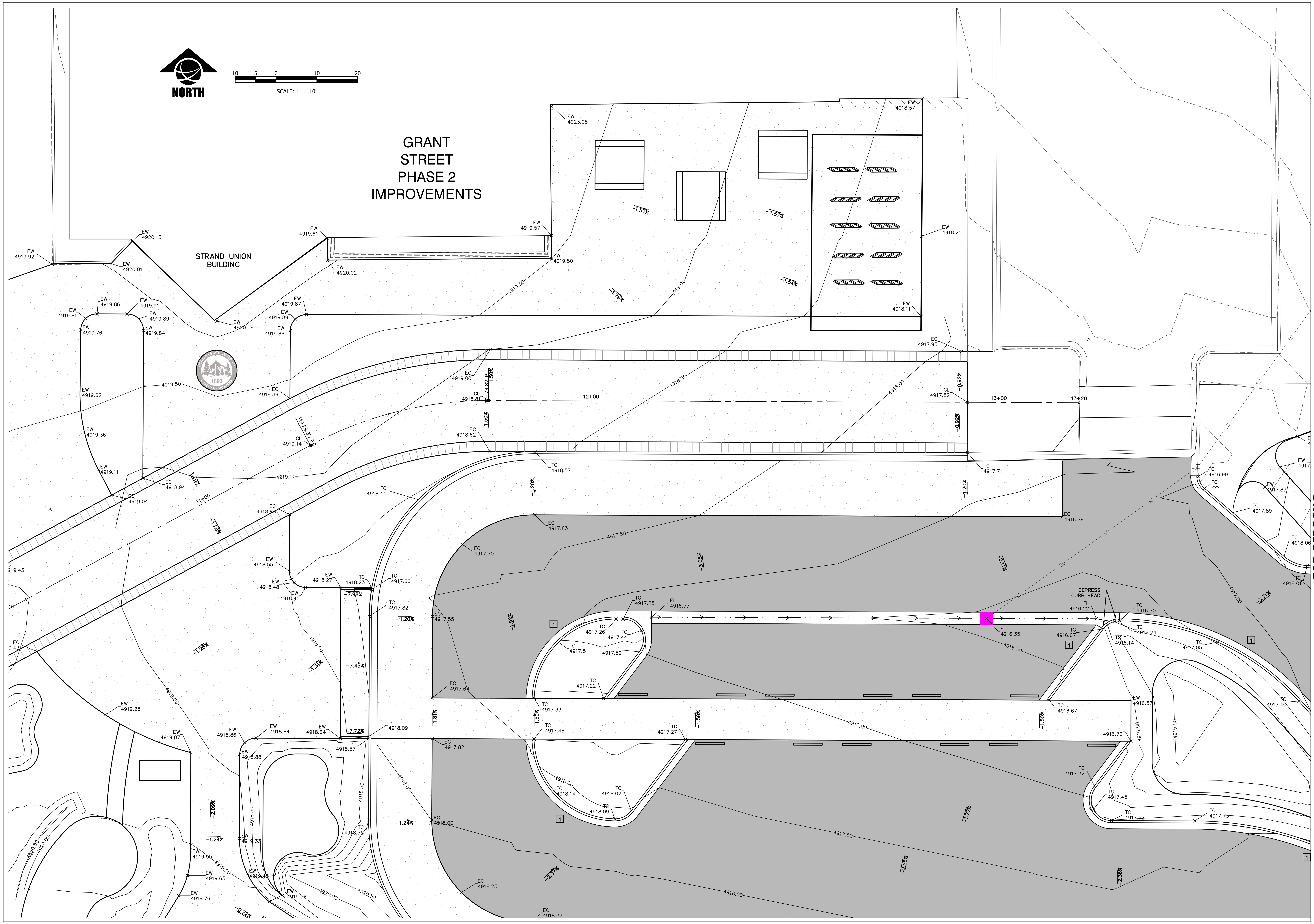
SHEET TITLE
DETAILED GRADING

SHEET
C6.7

DATE
5/7/2024



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14799PE
PROFESSIONAL ENGINEER
LICENSED

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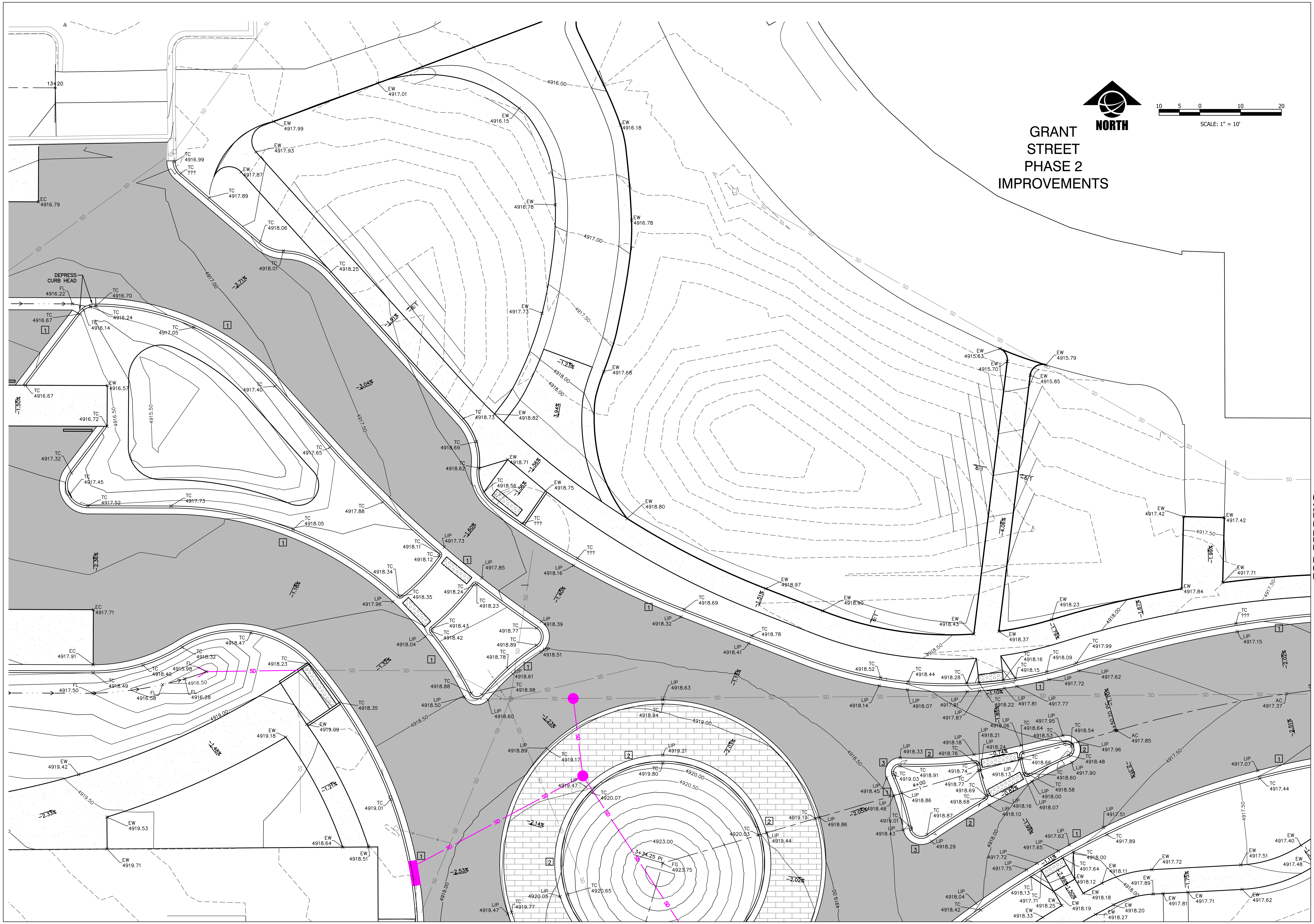
A/E#00-00-00
22236

SHEET TITLE
DETAILED GRADING

SHEET
C6.8

DATE
5/7/2024



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3	-	-

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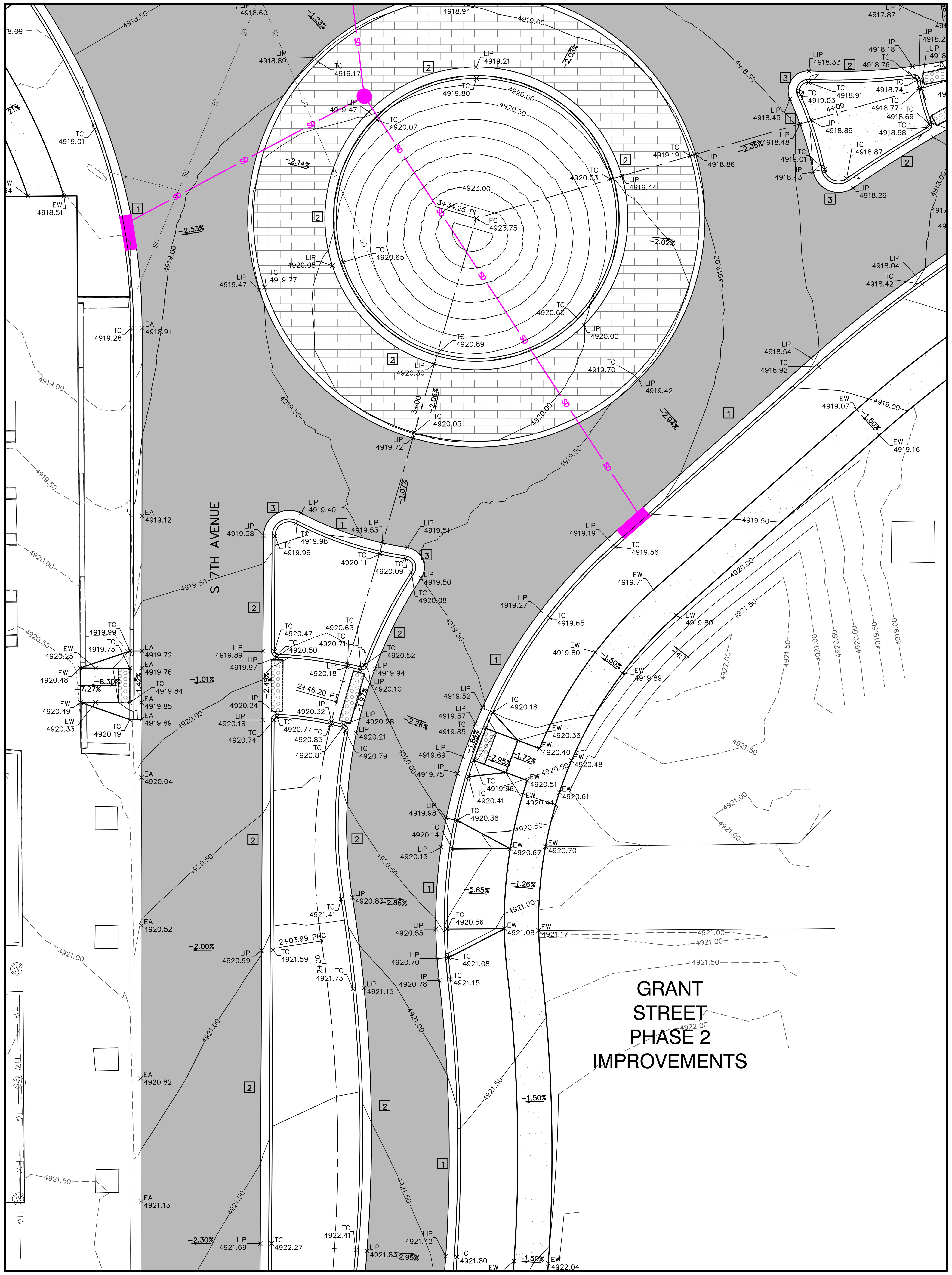
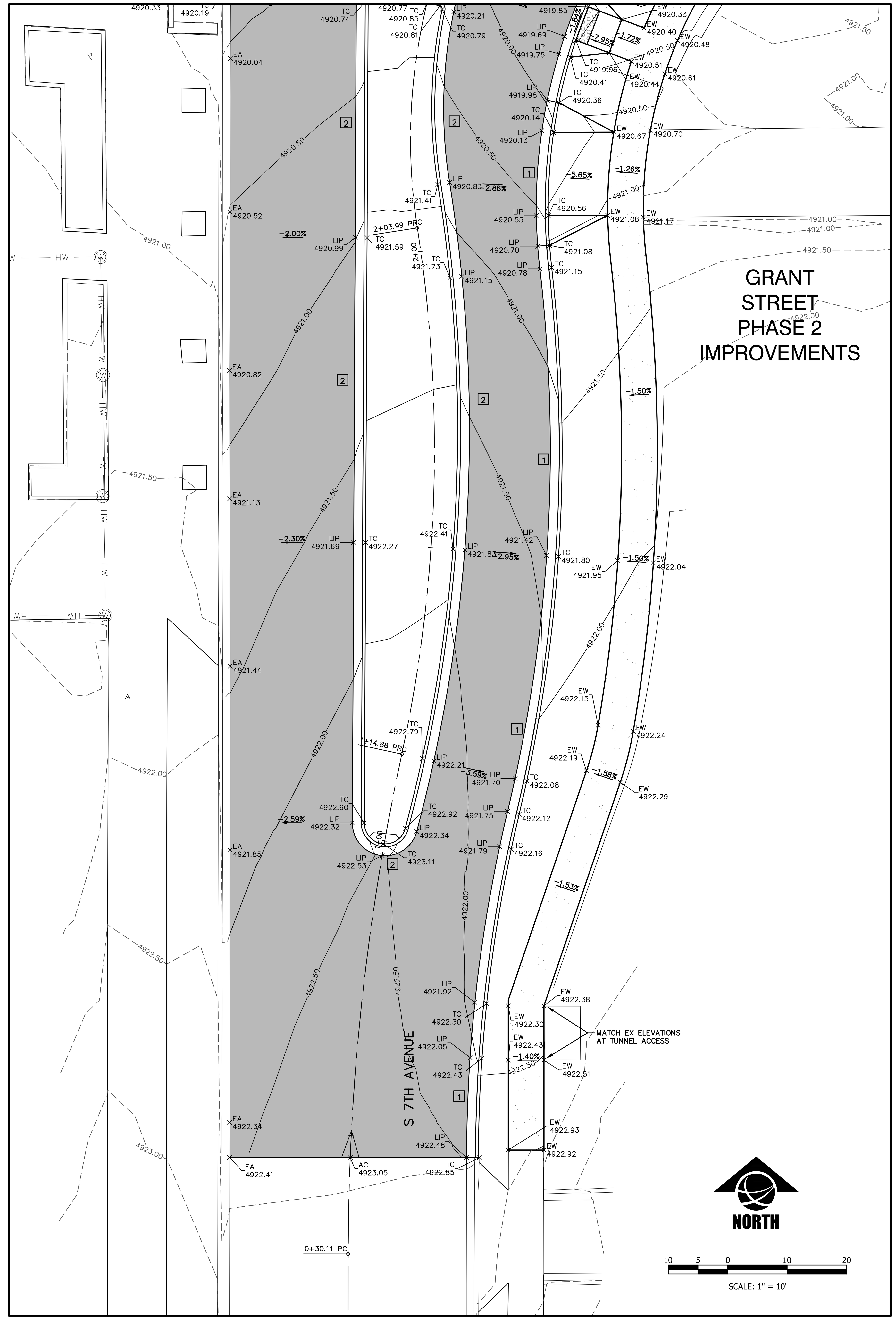
SHEET TITLE
DETAILED GRADING

SHEET
C6.9

DATE
5/7/2024





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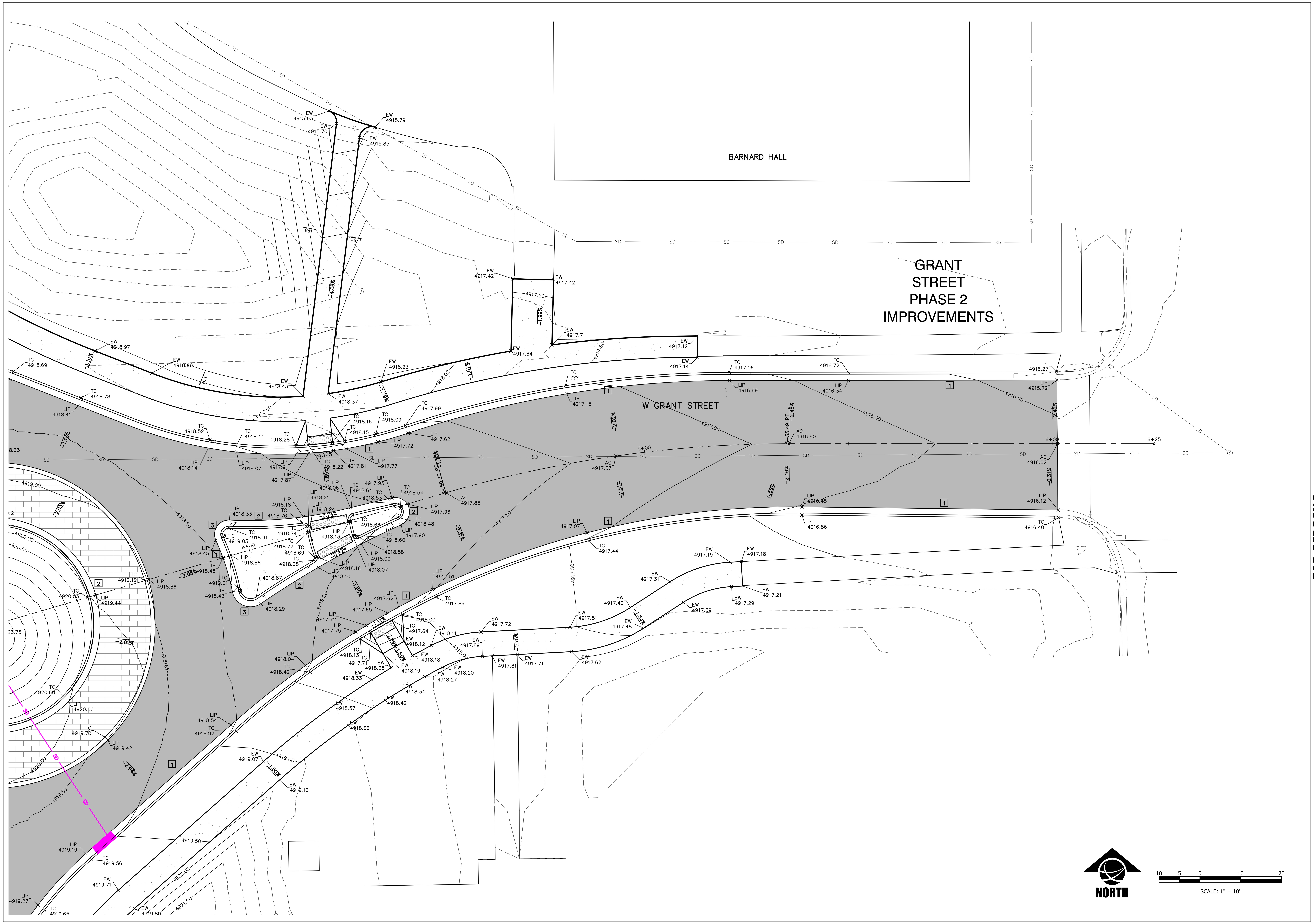
SHEET TITLE
DETAILED GRADING

SHEET
C6.10

DATE
5/7/2024



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MONTANA
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14799PE
LICENSED
PROFESSIONAL ENGINEER

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A/E#00-00-00

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SHEET TITLE

DETAILED GRADING

SHEET

C6.11

DATE

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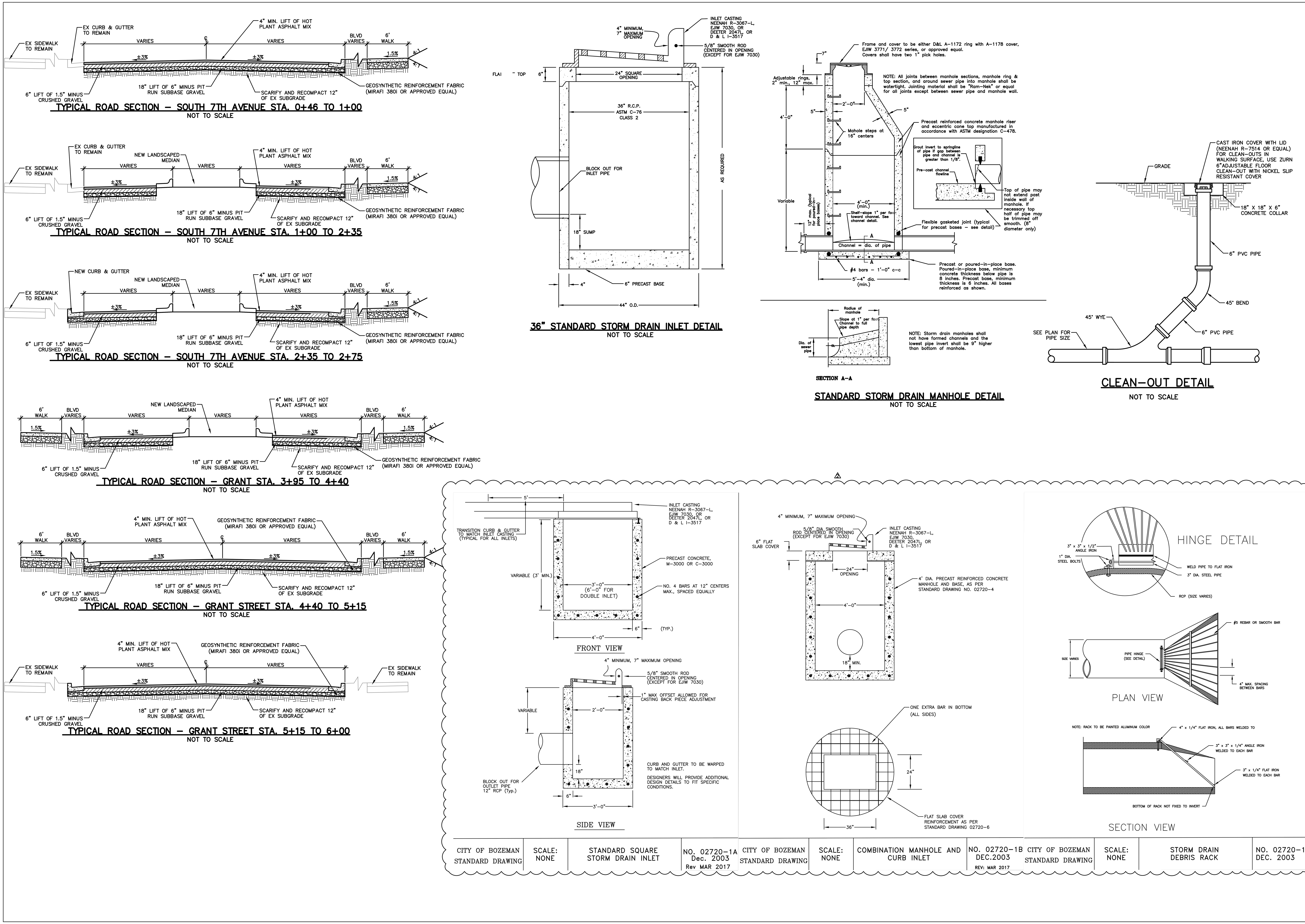

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SHEET TITLE
DETAILS

SHEET
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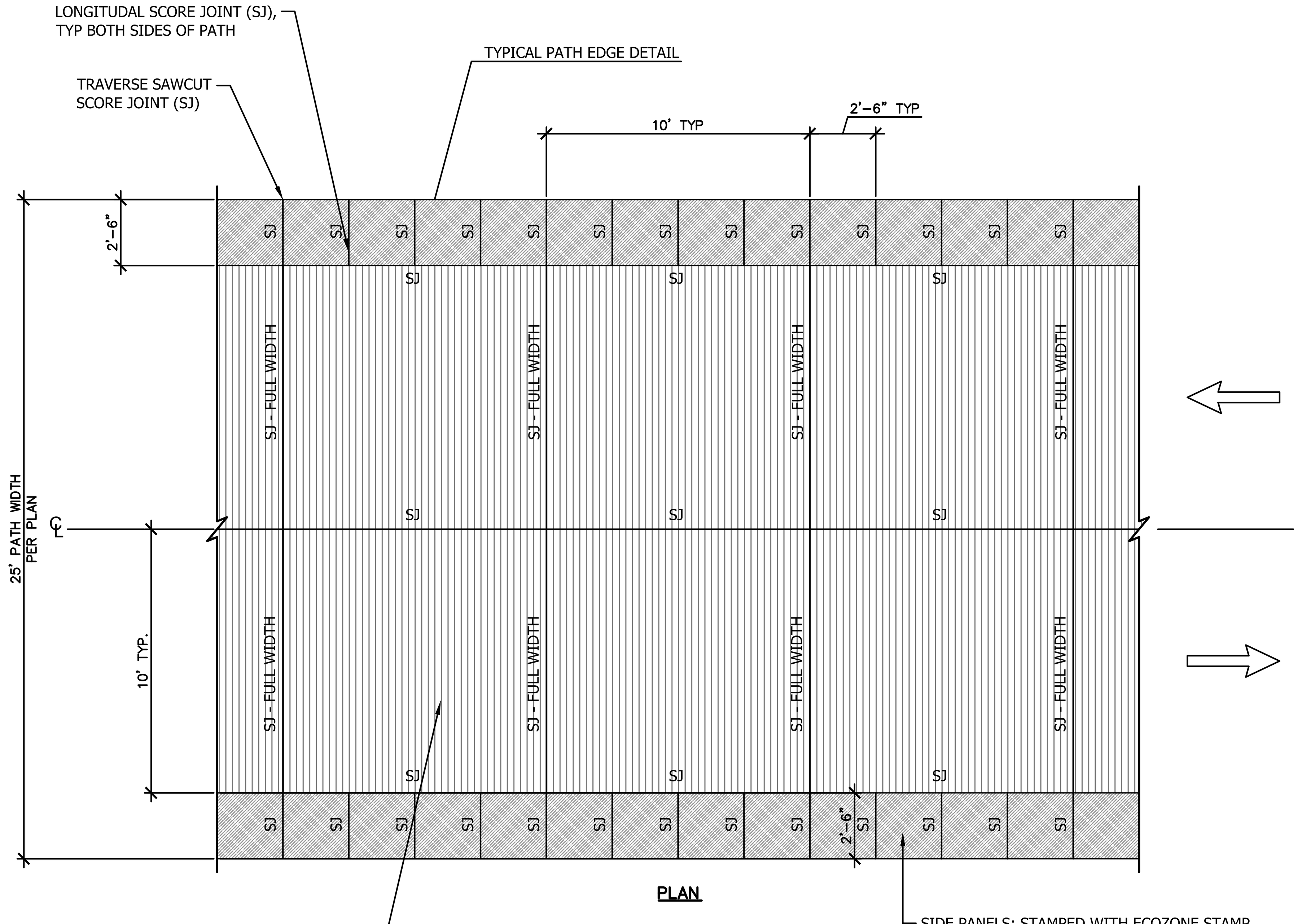


TYPICAL 25 FT WIDE PATH

NOTES:

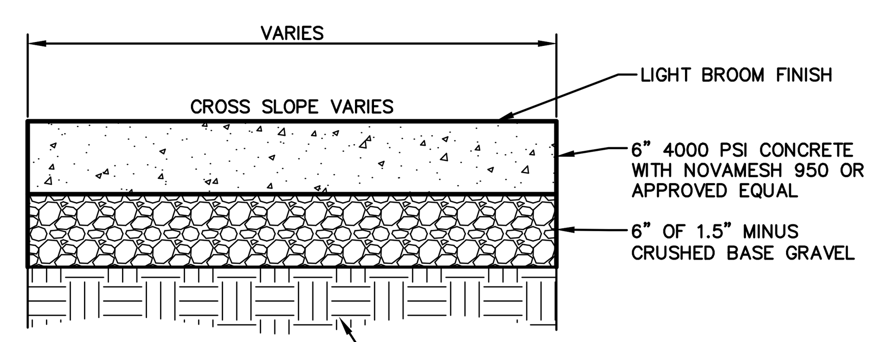
1. CONCRETE JOINTS, SEE TYPICAL PEDESTRIAN TRAIL CONCRETE JOINT DETAIL.
2. SEE DETAIL 1 ON SHEET L3.5 FOR CUSTOM CONCRETE STAMPS DETAIL.
3. STAMPS TO BE APPLIED IN AN UPRIGHT DIRECTION;THE TOP OF THE PATTERN SHOULD ALIGN WITH THE OUTSIDE EDGE SO THAT THE PATTERN IS VIEWABLE WHILE STANDING ON THE MAIN PATH AND LOOKING OUTWARDS TOWARDS THE PATH EDGE

LEGEND:

CJ	CONSTRUCTION JOINT (EXPANSION)
SJ	SAWCUT CONTROL / SCORE JOINT

TYPICAL CONCRETE SCORING/JOINT PATTERN AND FINISH DETAIL

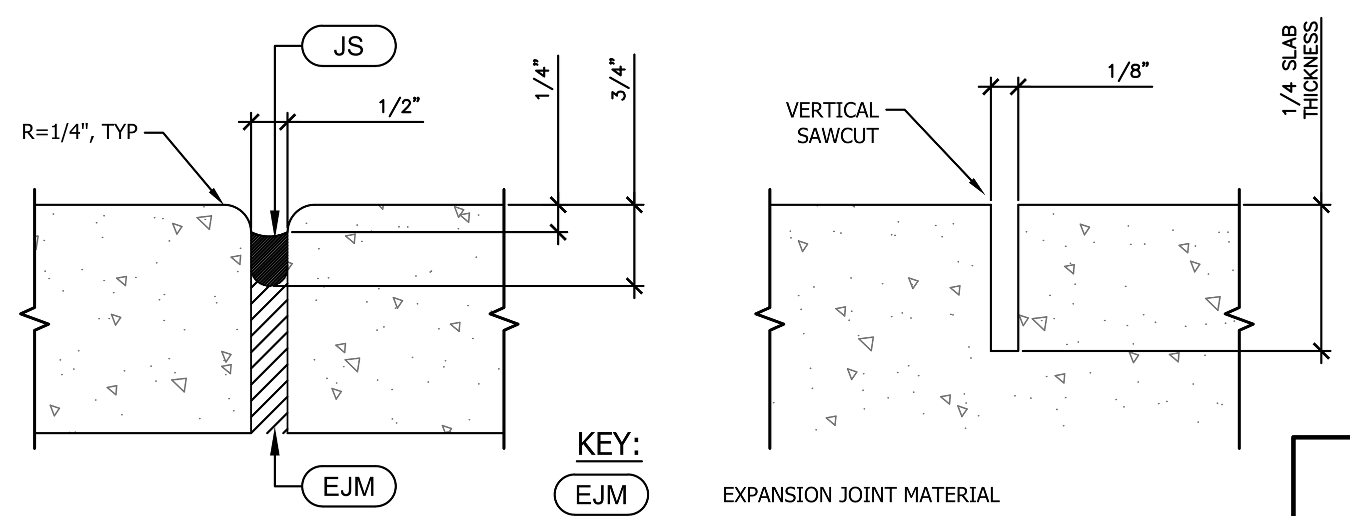
NOT TO SCALE



TYPICAL SIDEWALK SECTION

NOT TO SCALE

NOTES:
ADD 5 LBS/CY OF NOVAMESH 950 TO CONCRETE. FOLLOW MANUFACTURER'S INSTRUCTIONS.



KEY:

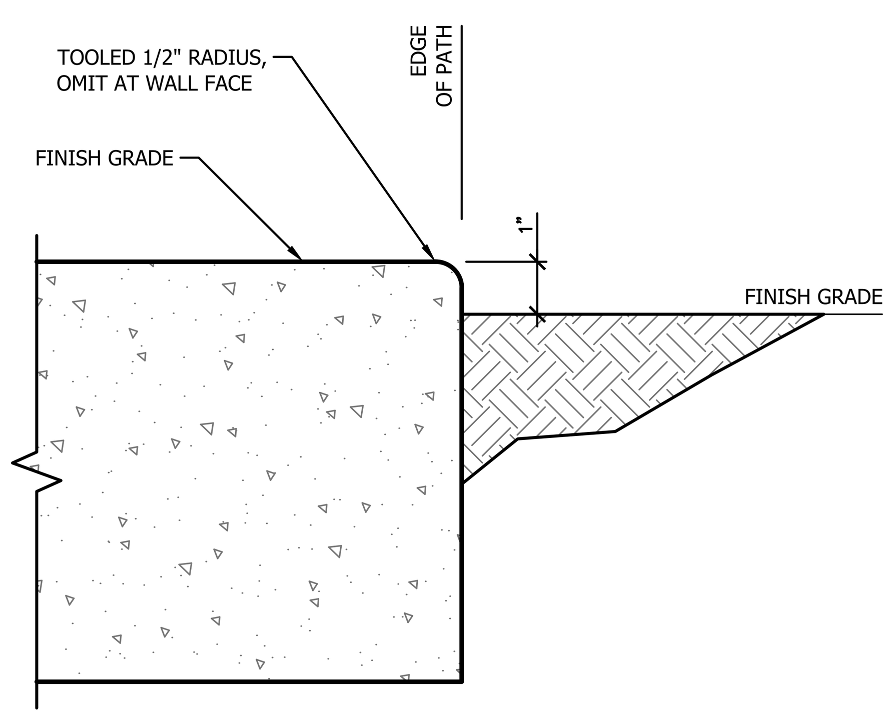
EJM	EXPANSION JOINT MATERIAL
JS	JOINT SEALANT

CONSTRUCTION JOINT (CJ)

SAWCUT CONTROL / SCORE JOINT (SJ)

TYPICAL PEDESTRIAN TRAIL CONCRETE JOINT DETAIL

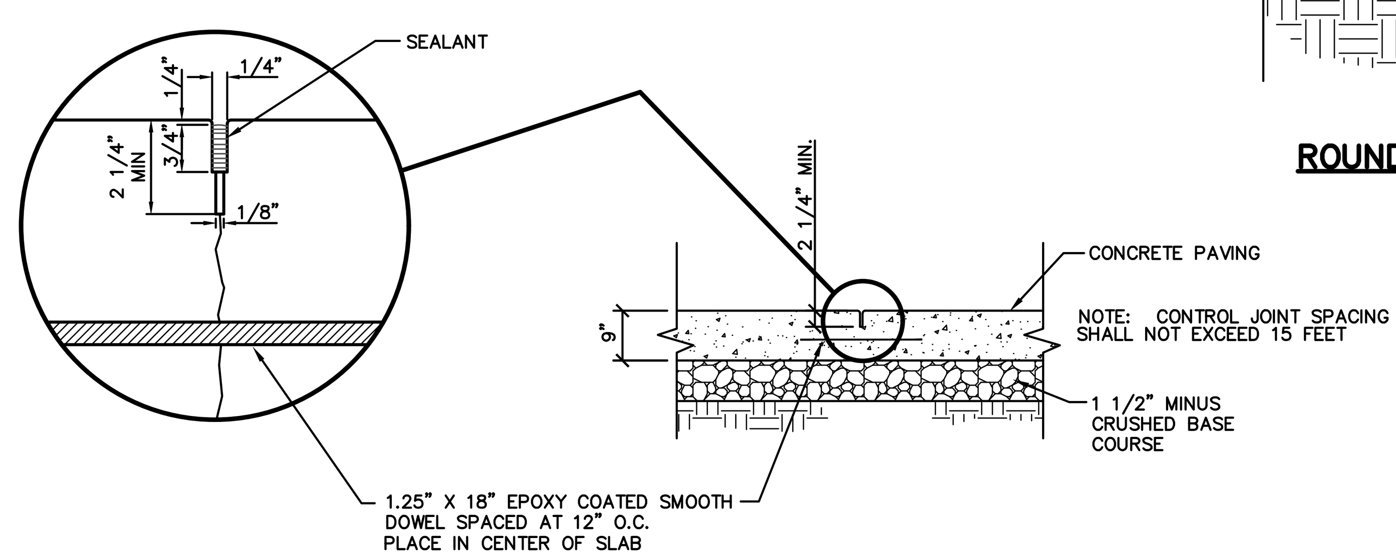
NOT TO SCALE



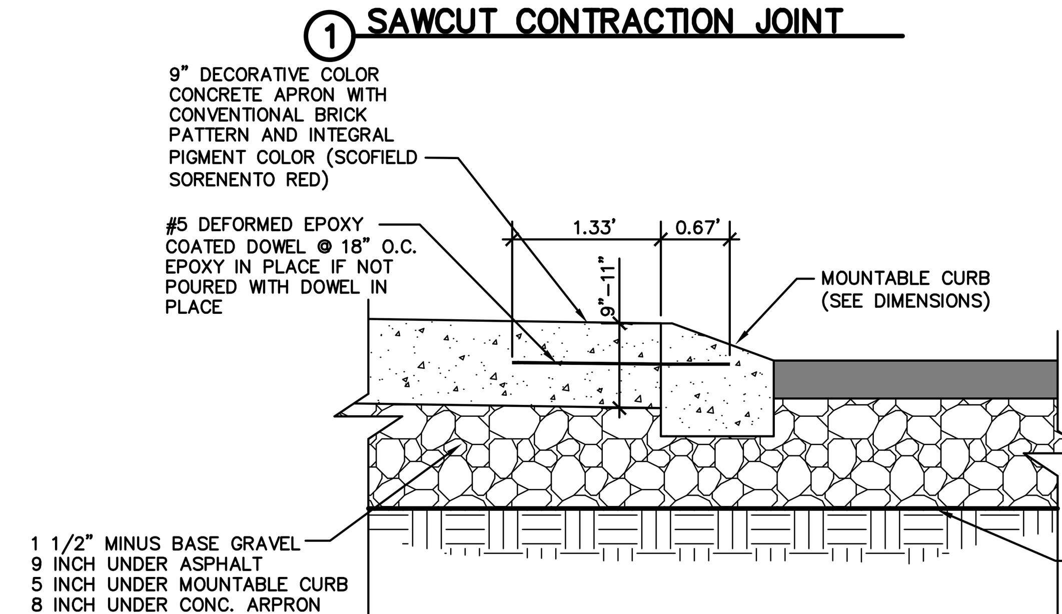
SECTION

TYPICAL PEDESTRIAN TRAIL EDGE DETAIL

NOT TO SCALE

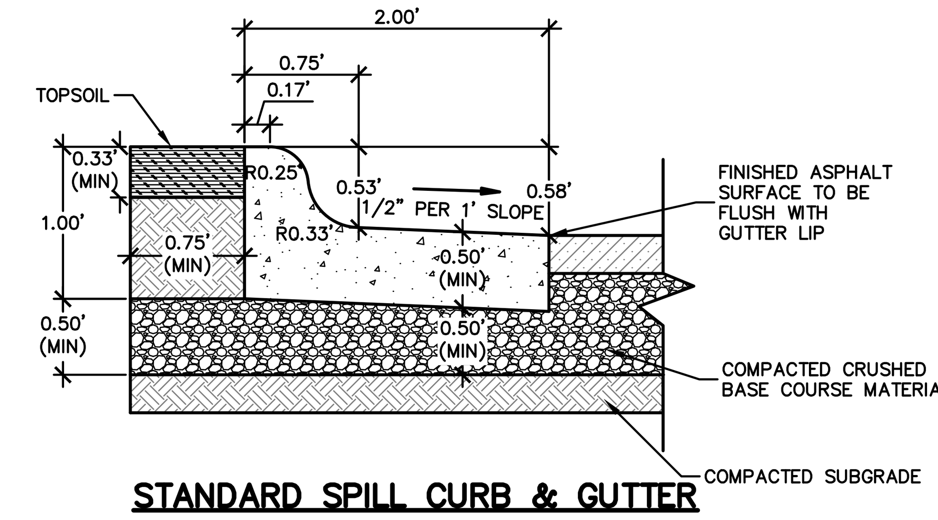


1 SAWCUT CONTRACTION JOINT

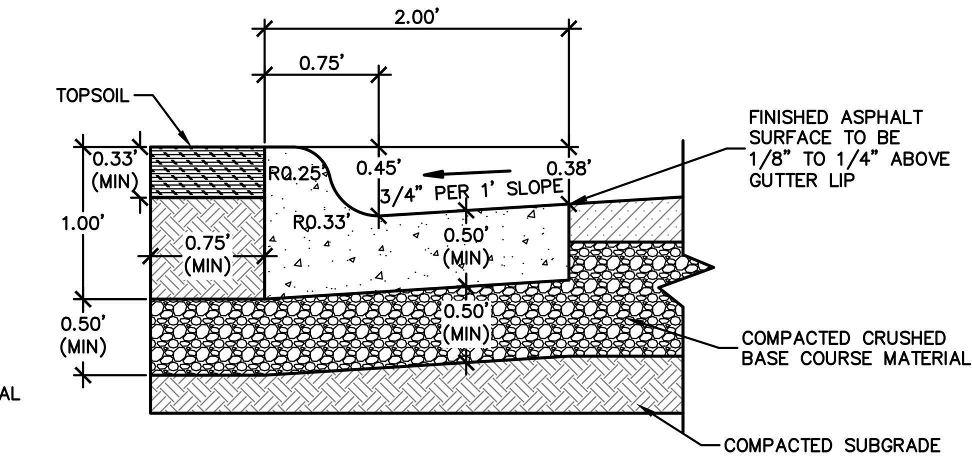


ROUNDABOUT MOUNTABLE CURB DETAIL

NOT TO SCALE



STANDARD SPILL CURB & GUTTER



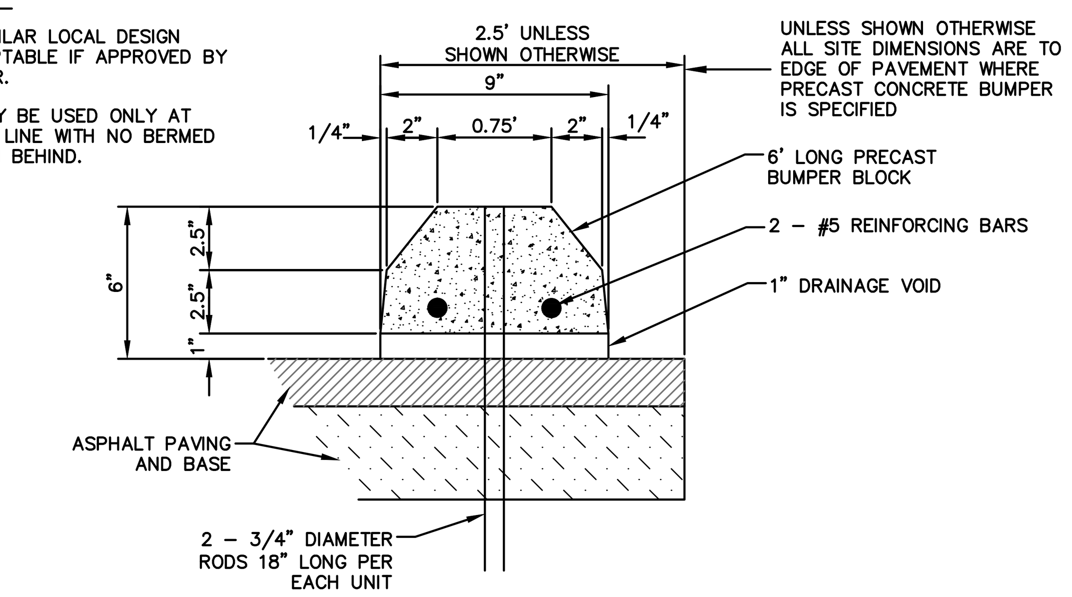
STANDARD CATCH CURB & GUTTER

NOTES:

1. SUBGRADE OR BASE COURSE COMPACTION SHALL CONFORM TO SECTION 02230 (MPWSS LATEST EDITION)
2. CONTRACTION JOINTS SHALL BE PLACED AT 10' INTERVALS AND SHALL HAVE A MINIMUM DEPTH OF 3/4" AND MINIMUM WIDTH OF 1/8".
3. 1/2" EXPANSION JOINT MATERIAL SHALL BE PLACED AT ALL P.C.S, P.T.S, CURB RETURNS AND AT NOT MORE THAN 300' INTERVALS. THE EXPANSION MATERIAL SHALL EXTEND THROUGH THE FULL DEPTH OF THE CURB AND GUTTER.
4. NO CURB AND GUTTER SHALL BE PLACED WITHOUT A FINAL FORM INSPECTION BY THE CITY ENGINEER OR HIS REPRESENTATIVE.
5. CONCRETE SHALL BE CLASS M-4000.
6. CRUSHED GRAVEL BASE SHALL MEET THE REQUIREMENTS OF 02235 (MPWSS LATEST EDITION) FOR CURB AND GUTTER REPLACEMENT PROJECTS, WASHED ROCK MAY BE USED FOR THE GRAVEL BASE.

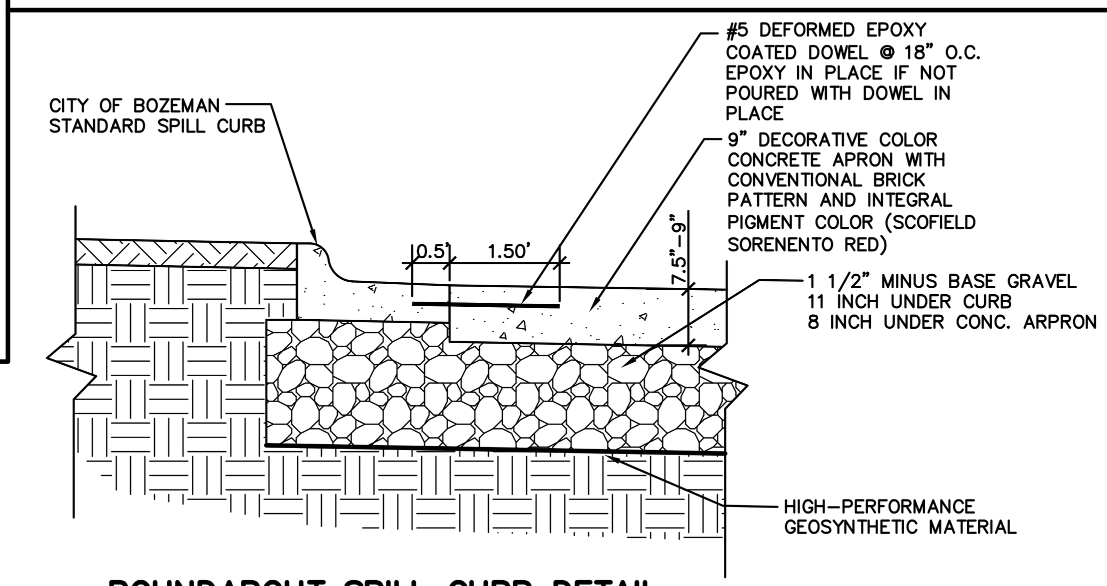
NOTES :

- SIMILAR LOCAL DESIGN ACCEPTABLE IF APPROVED BY OWNER.
- MAY BE USED ONLY AT RIDGE LINE WITH NO BERMED EARTH BEHIND.



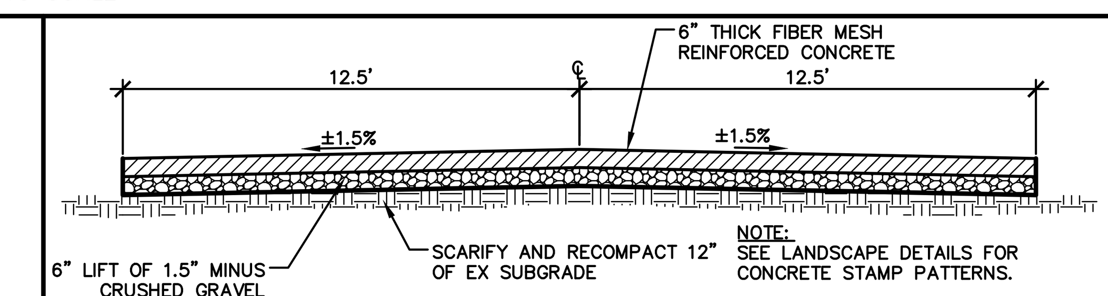
PRE-CAST CONCRETE PIN-DOWN PARKING STOP

NOT TO SCALE



ROUNDABOUT SPILL CURB DETAIL

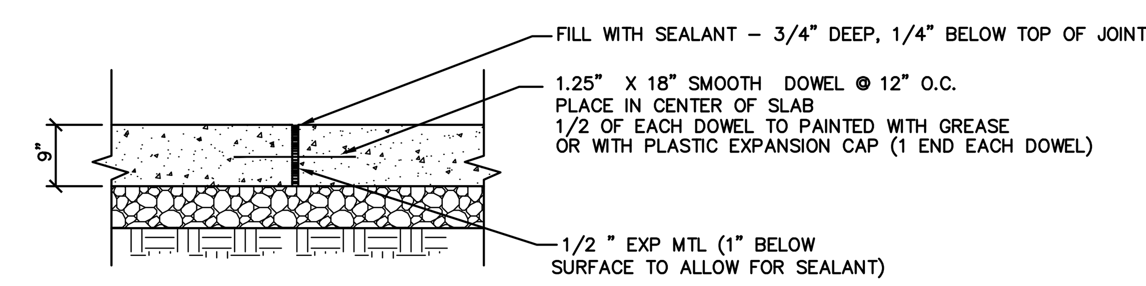
NOT TO SCALE



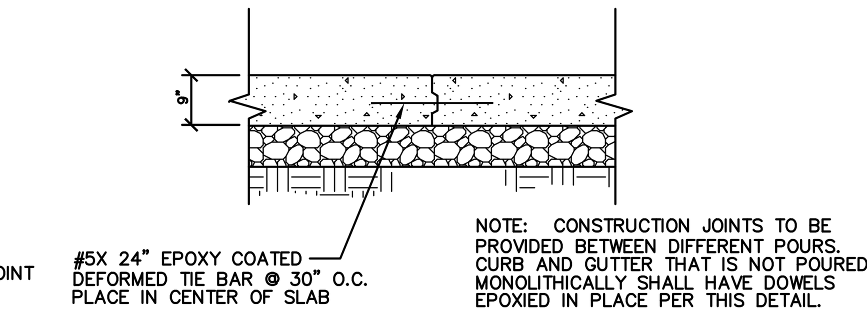
NOTE:
SEE LANDSCAPE DETAILS FOR CONCRETE STAMP PATTERNS.

TYPICAL PEDESTRIAN TRAIL SECTION

NOT TO SCALE



2 DOWELED TRANSVERSE ISOLATION JOINT



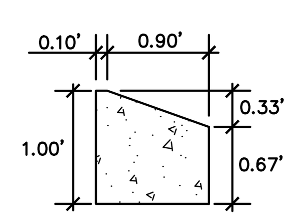
NOTE: CONSTRUCTION JOINTS TO BE PROVIDED BETWEEN DIFFERENT POURS. CURB AND GUTTER THAT IS NOT POURED MONOLITHICALLY SHALL HAVE DOWELS EPOXIED IN PLACE PER THIS DETAIL.

3 CONSTRUCTION JOINT

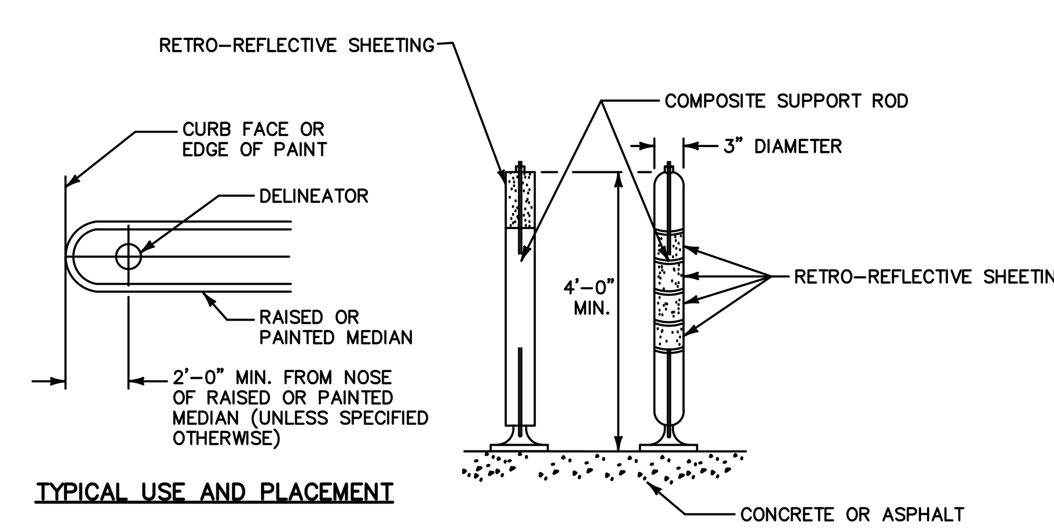
NOTE: ALL SITE CONCRETE SHALL BE CLASS M-4000 AS PER MONTANA PUBLIC WORKS STANDARD SPECIFICATION

ROUNDABOUT CONCRETE JOINTING DETAILS

NOT TO SCALE



MOUNTABLE CURB



TYPICAL USE AND PLACEMENT

NOTES:

USE FLEXIBLE DELINEATORS SIMILAR TO THE DESIGN AND SPECIFICATIONS SHOWN ON THIS SHEET OR IN THE SIGNING PLANS OF THE CONTRACT.

MOUNT OR EMBED FLEXIBLE DELINEATORS TO THE MANUFACTURER'S SPECIFICATIONS.

RETRO-REFLECTORIZE FLEXIBLE DELINEATORS, IF REQUIRED IN PLAN SPECIFICATIONS, BY THE ADDITION OF DELINEATOR CRYSTALS, EITHER 1" x 7" OR 3" DIAMETER, OR BY ADDING TWO 3" MINIMUM WIDTH BANDS OF RETRO-REFLECTIVE SHEETING TYPE HI, 360° AROUND THE TOP OF THE DELINEATOR. USE THE COLOR OF THE DELINEATOR CRYSTALS OR RETRO-REFLECTORIZED MATERIAL AS SHOWN IN THE SIGNING PLANS OF THE CONTRACT OR THE MUTCD.

THE EXACT LOCATION AND PLACEMENT OF THE FLEXIBLE DELINEATORS ARE SHOWN IN THE SIGNING PLANS.

FLEXIBLE SURFACE-MOUNT DELINEATORS

NOT TO SCALE

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GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE

REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
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MONTANA DANIELLE R. SCHARF 14799PE PROFESSIONAL ENGINEER LICENSED

PPA#00-0000

A/E#00-00-00

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SHEET TITLE

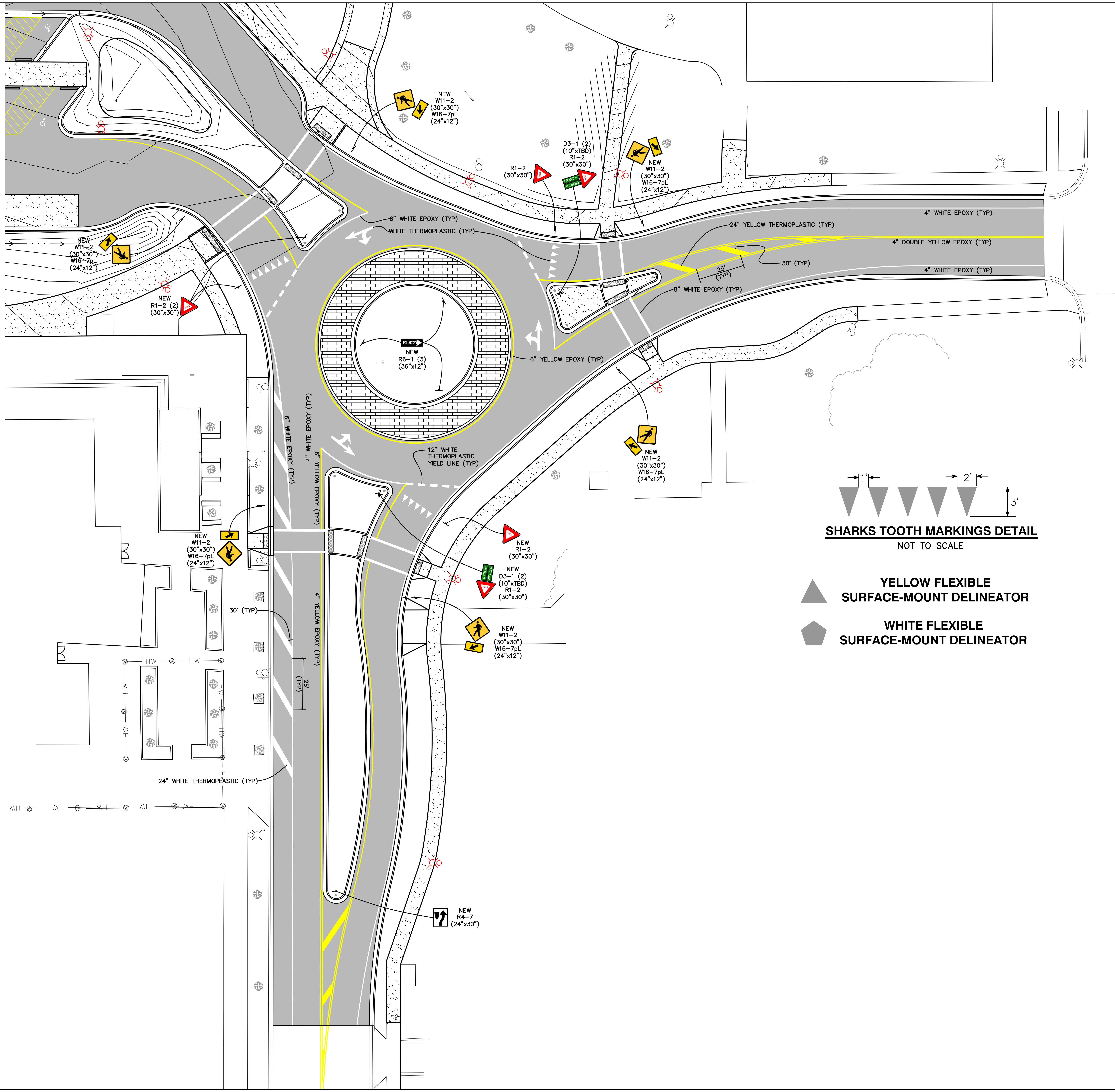
DETAILS

SHEET

C7.2

DATE

5/7/2024



1' 2' 3'

SHARKS TOOTH MARKINGS DETAIL

NOT TO SCALE

YELLOW FLEXIBLE SURFACE-MOUNT DELINEATOR

WHITE FLEXIBLE SURFACE-MOUNT DELINEATOR

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MONTANA JEREMY HERRING 14760 LICENSED PROFESSIONAL ENGINEER

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SHEET TITLE

SIGNAGE & STRIPING PLAN ROUNDABOUT

SHEET

C8.1

DATE

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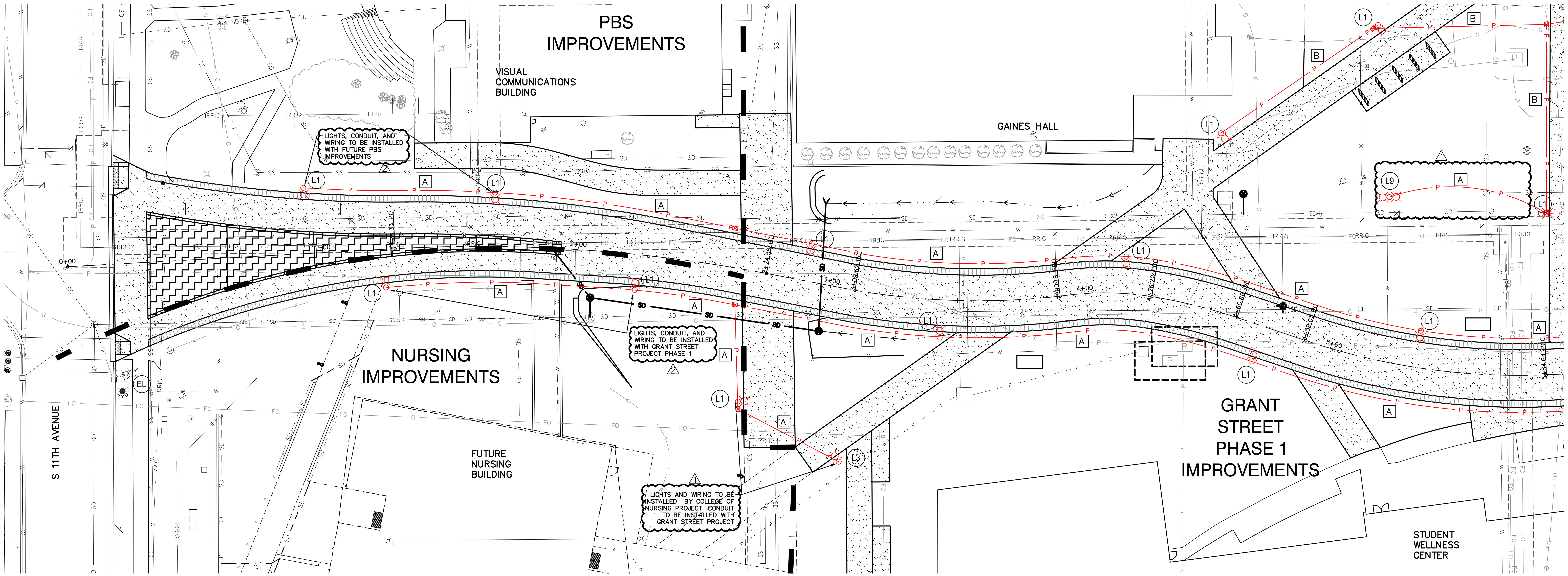


ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH CIVIL AND GENERAL CONTRACTOR FOR ROUTING, TRENCHING, AND DEMOLITION.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH CIVIL DRAWINGS FOR ADDITIONAL WORK.
3. NOT ALL UTILITIES AND ELECTRICAL WORK IS SHOWN ON THIS DRAWING.
4. EXISTING LIGHT FIXTURE TO REMAIN SHOWN FOR REFERENCE AND OVERALL SITE POLE REPLACEMENT MAPPING. REWORK UNDERGROUND CIRCUITRY AS REQUIRED TO REMAIN CONNECTED ELECTRONICALLY COMPLETE.
5. FOR EXISTING LIGHT FIXTURES TO BE REMOVED AND RETURNED TO OWNER FOR RETENTION, REMOVE CIRCUIT WIRING BACK TO SOURCE. EXISTING UNDERGROUND CONDUIT CAN BE ABANDONED IN PLACE IF NOT IN CONFLICT WITH OTHER PROJECT ELEMENTS.

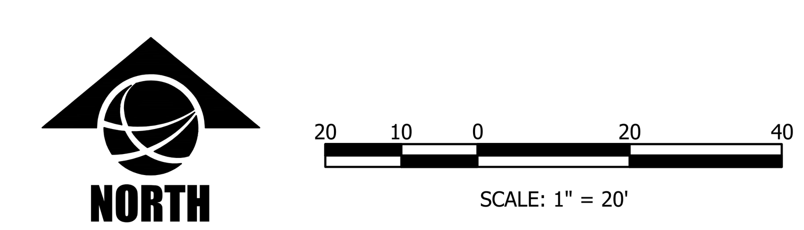
CONDUIT RUNS:

A A – 1 OF 2" PVC CONDUIT
2 OF AWG NO. 8 CONDUCTOR
1 OF AWG NO. 10 CONDUCTOR

B B – 2 OF 2" PVC CONDUIT
2 OF AWG NO. 8 CONDUCTOR
2 OF AWG NO. 10 CONDUCTOR

NOTE: CONDUIT RUN B SPARE CONDUIT SHALL BE CAPPED WITH 1 OF AWG NO. 10 AND 2500# PULL TAPE PLACED INSIDE CONDUIT.

PULL BOX – TYPE 1



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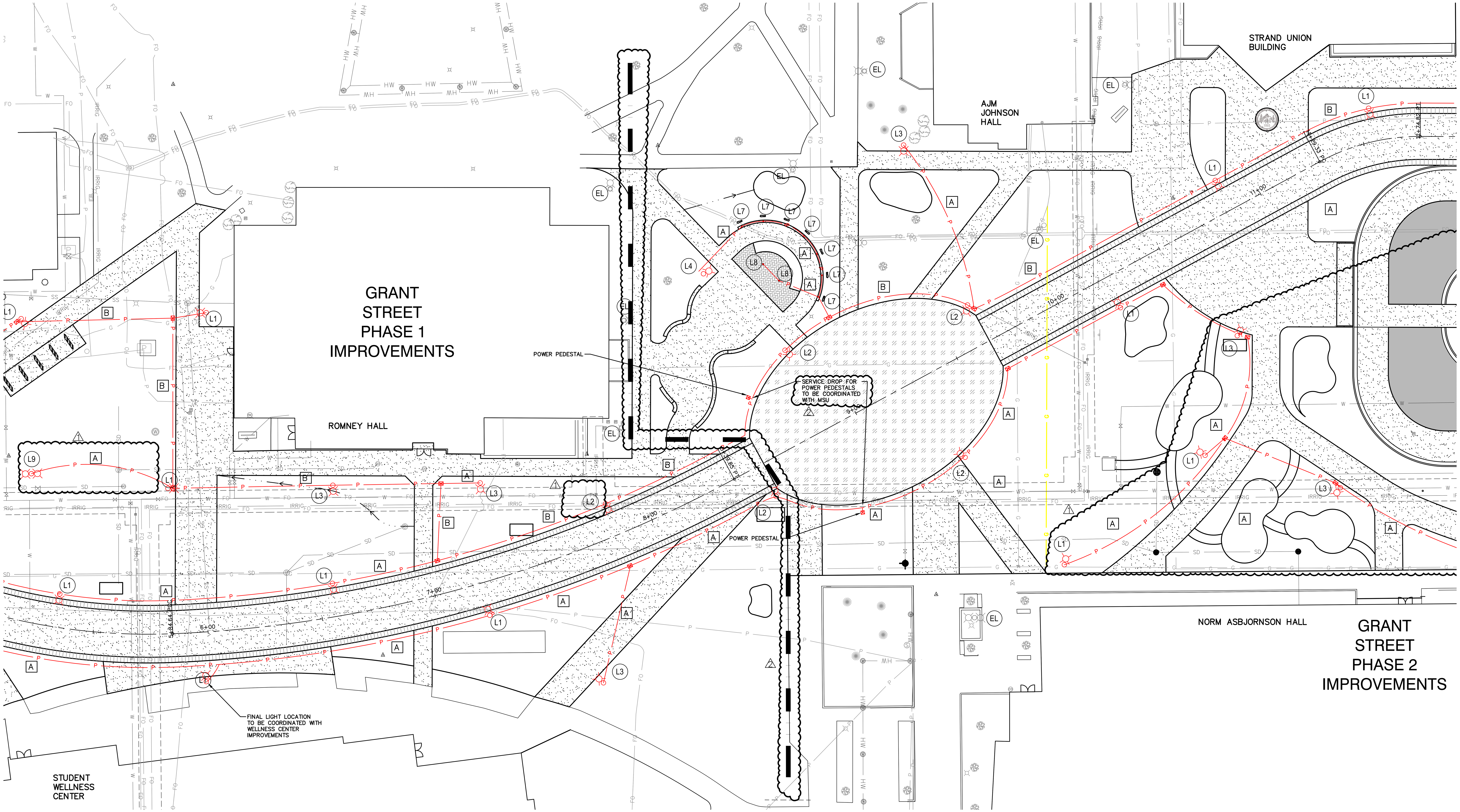
SHEET TITLE
ELECTRICAL SITE PLAN

SHEET
E1.1

DATE
5/7/2024



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1 OF AWG NO. 10 CONDUCTOR

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2 OF AWG NO. 8 CONDUCTOR
2 OF AWG NO. 10 CONDUCTOR

NOTE: CONDUIT RUN B SPARE CONDUIT SHALL BE CAPPED WITH 1 OF AWG NO. 10 AND 2500# PULL TAPE PLACED INSIDE CONDUIT.

PULL BOX – TYPE 1

NORTH

SCALE: 1" = 20'

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SHEET TITLE
ELECTRICAL SITE PLAN

SHEET
E1.2

DATE
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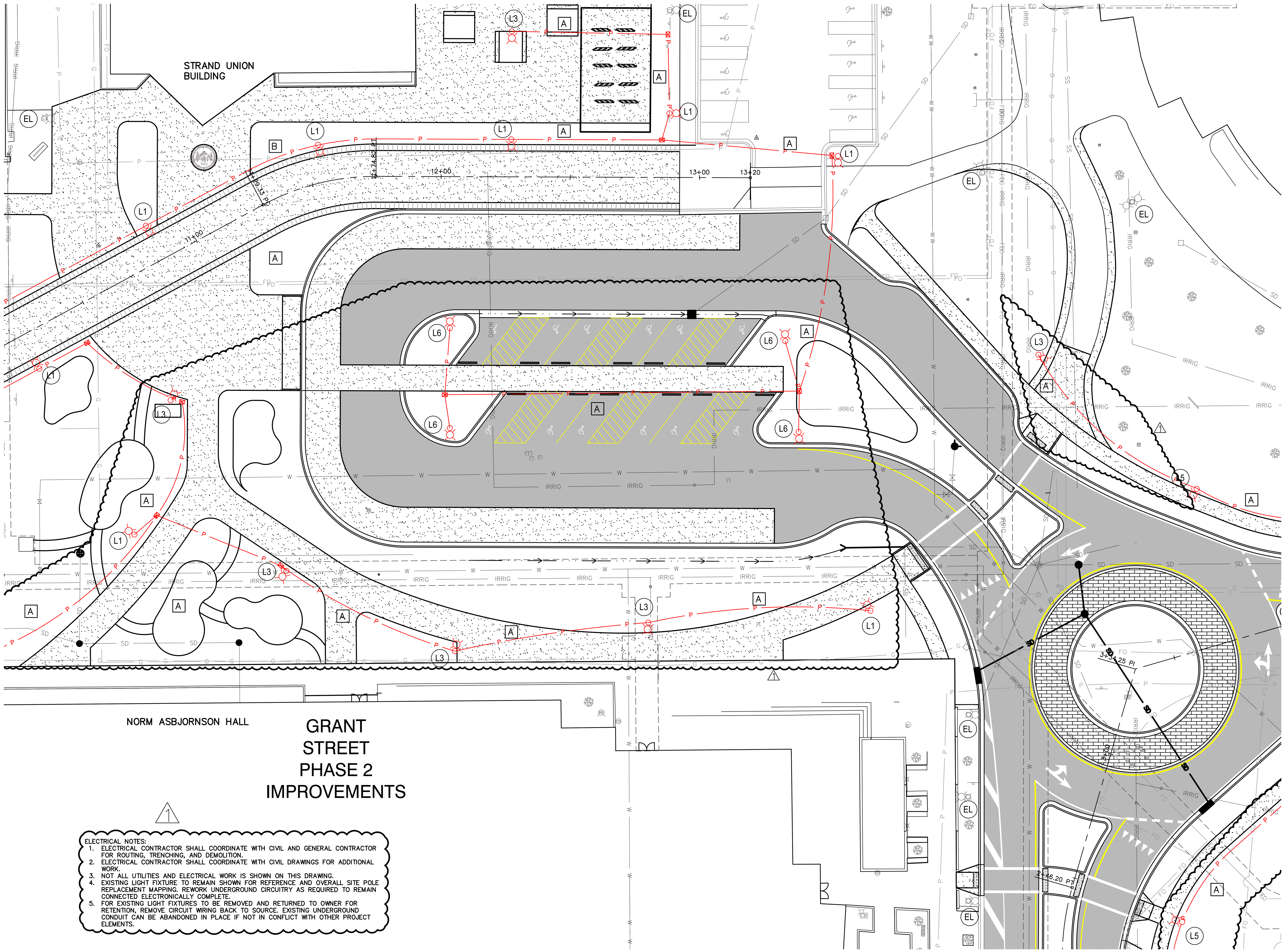

GRANT STREET PHASE 2 IMPROVEMENTS

ELECTRICAL NOTES:
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2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH CIVIL DRAWINGS FOR ADDITIONAL WORK.
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2 OF AWG NO. 8 CONDUCTOR
1 OF AWG NO. 10 CONDUCTOR

B – 2 OF 2" PVC CONDUIT
2 OF AWG NO. 8 CONDUCTOR
2 OF AWG NO. 10 CONDUCTOR

NOTE: CONDUIT RUN B SPARE CONDUIT SHALL BE CAPPED WITH 1 OF AWG NO. 10 AND 2500# PULL TAPE PLACED INSIDE CONDUIT.

PULL BOX – TYPE 1

NORTH

20 10 0 20 40

SCALE: 1" = 20'

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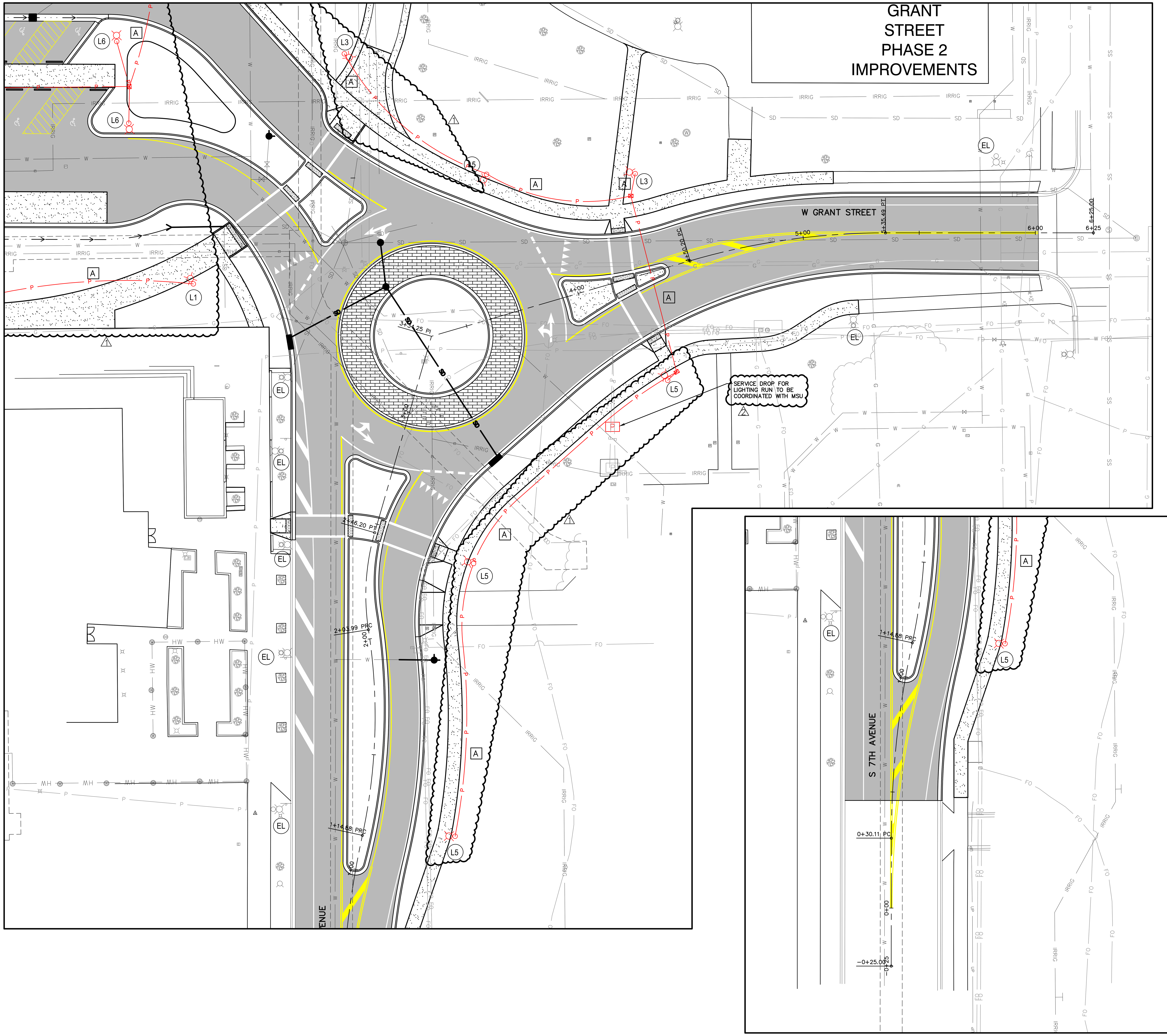
ELECTRICAL SITE PLAN

SHEET
E1.3

DATE
5/7/2024



ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH CIVIL AND GENERAL CONTRACTOR FOR ROUTING, TRENCHING, AND DEMOLITION.
2. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH CIVIL DRAWINGS FOR ADDITIONAL WORK.
3. NOT ALL UTILITIES AND ELECTRICAL WORK IS SHOWN ON THIS DRAWING.
4. EXISTING LIGHT FIXTURE TO REMAIN SHOWN FOR REFERENCE AND OVERALL SITE POLE REPLACEMENT MAPPING. REWORK UNDERGROUND CIRCUITRY AS REQUIRED TO REMAIN CONNECTED ELECTRONICALLY COMPLETE.
5. FOR EXISTING LIGHT FIXTURES TO BE REMOVED AND RETURNED TO OWNER FOR RETENTION, REMOVE CIRCUIT WIRING BACK TO SOURCE. EXISTING UNDERGROUND CONDUIT CAN BE ABANDONED IN PLACE IF NOT IN CONFLICT WITH OTHER PROJECT ELEMENTS.

CONDUIT RUNS:

A – 1 OF 2" PVC CONDUIT
2 OF AWG NO. 8 CONDUCTOR
1 OF AWG NO. 10 CONDUCTOR

B – 2 OF 2" PVC CONDUIT
2 OF AWG NO. 8 CONDUCTOR
2 OF AWG NO. 10 CONDUCTOR

NOTE: CONDUIT RUN B SPARE CONDUIT SHALL BE CAPPED WITH 1 OF AWG NO. 10 AND 2500# PULL TAPE PLACED INSIDE CONDUIT.

PULL BOX – TYPE 1

NORTH

SCALE: 1" = 20'

FOR BIDDING

MONTANA STATE UNIVERSITY

MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE

REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

MONTANA JEREMY T. HERRING 14780 LICENSED PROFESSIONAL ENGINEER

PPA#00-0000

A/E#00-00-00

22236

SHEET TITLE

ELECTRICAL SITE PLAN

SHEET

E1.4

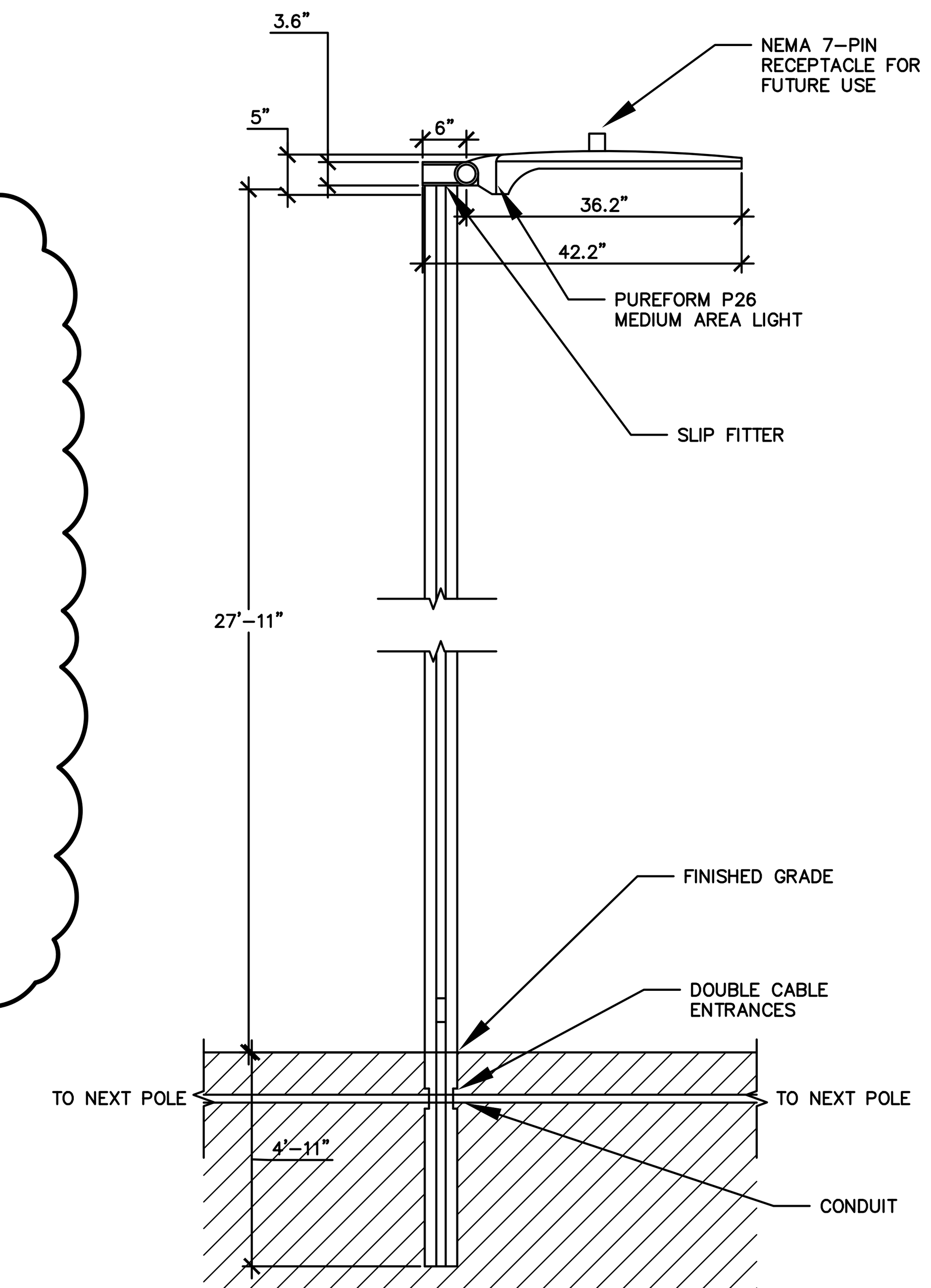
DATE

5/7/2024

CALLOUT	MANUFACTURER	MODEL	MOUNTING	MOUNTING HEIGHT	LAMP BALLAST	INPUT WATTS	VOLTS	CCT	CRI	LUMEN	EFFICACY	DIM	DESCRIPTION
EL	GARDCO	EXISTING LIGHTS											
L1	GARDCO	P26-196L-1150-WW-G2-SF-2-277-FAWS-TLRD7-PH9-FP1-BZ PTF2-P26/34-1/90-BZ	POLE TOP FITTER	16.5	DRIVER	51	277	3000	80	5106	109	FAWS	Grant Street Main Corridor
L2	GARDCO	P26-196L-650-WW-G2-SF-3-277-FAWS-TLRD7-PH9-FP1-BZ PTF2-P26/34-1/90-BZ	POLE TOP FITTER	16.5	DRIVER	51	277	3000	80	5712	122	FAWS	Grant Street Main Corridor
L3	GARDCO	P26-196L-650-WW-G2-SF-2-277-FAWS-TLRD7-PH9=FP1-BZ PTF2-P26/34-1/90-BZ	POLE TOP FITTER	16.5	DRIVER	30	277	3000	80	2908	106	FAWS	Grant Street Main Corridor
L4	GARDCO	P26-196L-450-WW-G2-SF-2-277-FAWS-TLRD7-PH9-FP1-BZ PTF2-P26/34-1/90-BZ	POLE TOP FITTER	16.5	DRIVER	21	277	3000	80	2282	119	FAWS	Grant Street Main Corridor
L5	GARDCO	P26-196L-2100-WW-G2-SF-2-277-FAWS-TLRD7-PH9-FP1-BZ PTF2-P26/34-1/90-BZ	POLE TOP FITTER	30	DRIVER	114	277	3000	80	14013	123	FAWS	Roadway Lighting
L6	GARDCO	P26-196L-2100-WW-G2-SF-2-277-FAWS-TLRD7-PH9-FP1-BZ PTF2-P26/~~34-2/180-BZ~~ 34-1/90-BZ 2	POLE TOP FITTER	28	DRIVER	114	277	3000	80	14013	123	FAWS	Parking Lot Lighting
L7	HADCO	SL43-BZ-W-ADA-N-N-N	GROUND	0		10	120/277	3000		953			In-ground Line Voltage ADA Walkover
L8	Intertek	Internal Halyard Beacon	POLE ** 2	25		7	110	3000		300-350			Commercial Flagpole Lighting Fixture (Flagpole Warehouse)
L9	GARDCO	P26-196L-650-WW-G2-SF-5-277-FAWS-TLRD7-PH9-FP1-BZ PTF2-P26/34-2/180-BZ	POLE TOP FITTER	16.5	DRIVER	30	277	3000	80	3259	109	FAWS	DUAL ARM

* FAWS to be set at 70% at installation.
* *See Light Pole Base Detail. 2

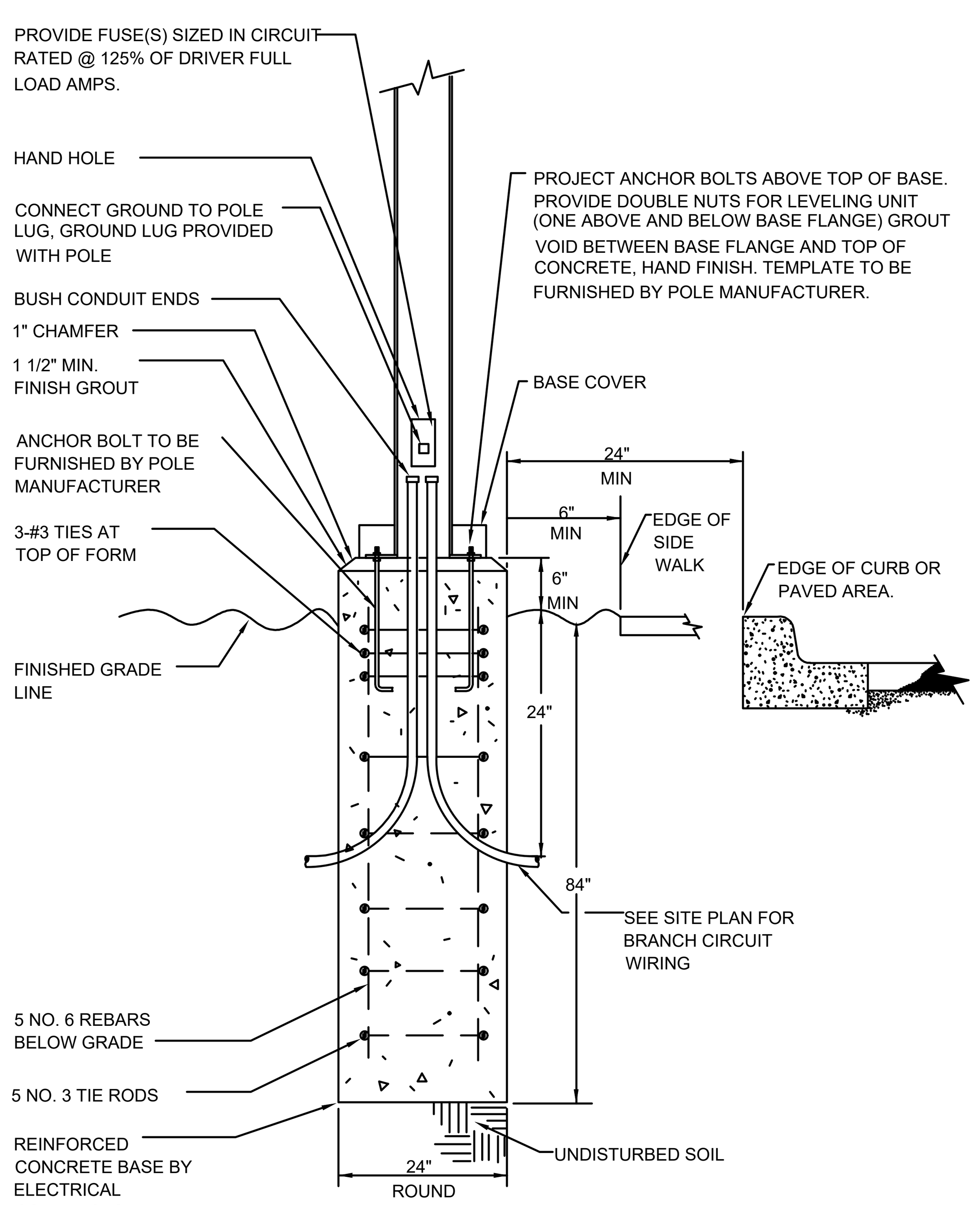
1



AMERON 28' DIRECT BURY POLE DETAIL

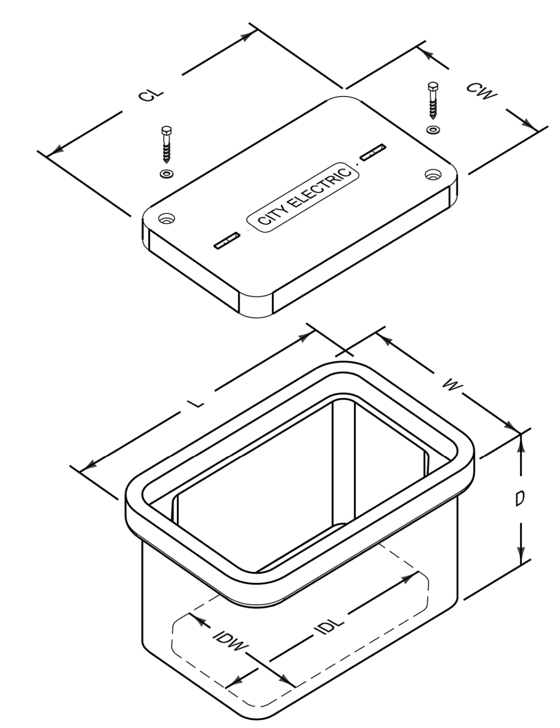
NOT TO SCALE

1



LIGHT POLE BASE DETAIL

NOT TO SCALE



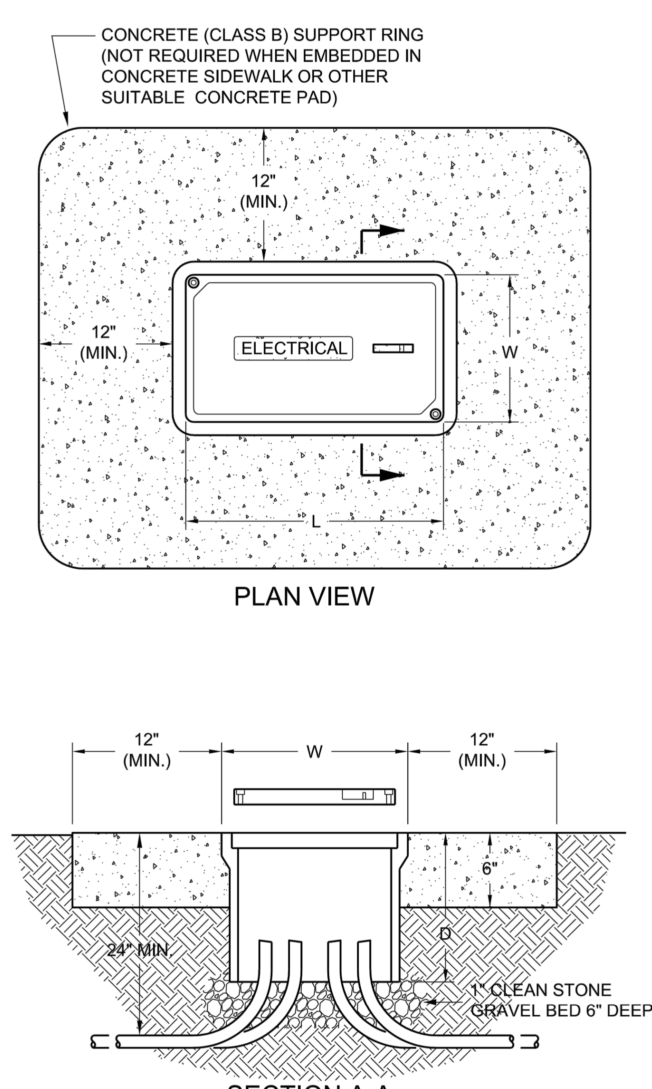
PULL BOX / SPLICE BOX - COMPOSITE MINIMUM DIMENSIONS								
TYPE 1			TYPE 2			TYPE 3		
L	=	20"	L	=	25"	L	=	32"
W	=	13"	W	=	15"	W	=	19"
D	=	12"	D	=	12"	D	=	20"
I D L	=	17"	I D L	=	21"	I D L	=	28"
I D W	=	10"	I D W	=	11"	I D W	=	15"
C L	=	18"	C L	=	23"	C L	=	30"
C W	=	11"	C W	=	13"	C W	=	17"

DETAIL NOTES

1. BOX COVERS MUST BE POLYMER CONCRETE WITH FIBERGLASS REINFORCEMENT, TRAFFIC RATED TO TIER 22 AND BOLTED.
2. BOX COVERS SHALL BE LABELED AS FOLLOWS:
   - "CITY ELECTRIC" ON ALL PULL BOXES CONTAINING CITY ELECTRICAL POWER.
   - "UTILITY ELECTRIC" ON ALL PULL BOXES CONTAINING UTILITY ELECTRICAL POWER.
   - "CITY LIGHTING" ON ALL PULL BOXES CONTAINING CITY OWNED STREET LIGHTING CONDUCTORS.
   - "UTILITY LIGHTING" ON ALL PULL BOXES CONTAINING UTILITY OWNED STREET LIGHTING CONDUCTORS.

   LABELING MUST BE CAST INTO THE COVER AND NOT A SEPARATE INDEPENDENT TAG.
3. REFER TO N.E.C. ARTICLE 314 "PULL AND JUNCTION BOXES AND CONDUIT BODIES MINIMUM SIZE" FOR BOX SIZE REQUIREMENTS BASED ON CONDUIT AND WIRE SIZES

FIGURE 2	TYPICAL PULL BOX / SPLICE BOX MINIMUM DIMENSIONS STANDARD DETAILS	THE CITY OF BOZEMAN ENGINEERING DEPARTMENT 20 E. OLIVE -- P.O. BOX 1230 BOZEMAN, MONTANA 59771-1230 PHONE: (406) 582-2280 -- FAX: (406) 582-2263



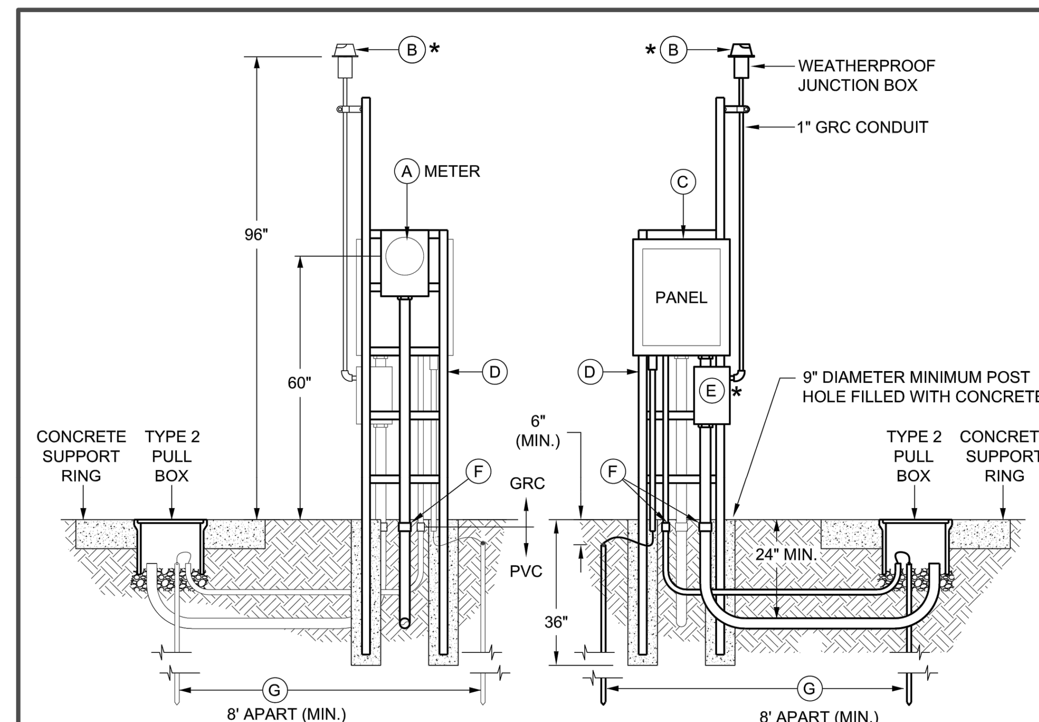
SECTION A-A

TYPICAL PULL BOX / SPLICE BOX

DETAIL NOTES

1. ALL PULL OR SPLICE BOXES SHALL BE TRAFFIC RATED TO TIER 22 MINIMUM.
2. REFER TO FIGURE 2 FOR PULL BOX SIZE REQUIREMENTS.

FIGURE 3	TYPICAL IN-GRADE COMPOSITE PULL BOX / SPLICE BOX DETAIL	THE CITY OF BOZEMAN ENGINEERING DEPARTMENT 20 E. OLIVE -- P.O. BOX 1230 BOZEMAN, MONTANA 59771-1230 PHONE: (406) 582-2280 -- FAX: (406) 582-2263



FRONT ELEVATION

REAR ELEVATION

LIGHTING CONTROL CENTER (PEDESTAL)

PEDESTAL COMPONENT LIST

(A) 200A, 120/240V, NEMA 3R METER HOUSING CONFORMING TO UTILITY PROVIDER REQUIREMENTS.

* (B) NEMA 3R 120V PHOTOELECTRIC CONTROL WITH 3-PRONG TWIST-LOCK RECEPTACLE BASE WIRED THROUGH THE H.O.A. SWITCH. THE PHOTOELECTRIC CONTROL SHALL BE MOUNTED TO A WEATHERPROOF JUNCTION BOX ON TOP OF A 1" GRC CONDUIT AT 96" ABOVE FINISHED GRADE ORIENTED NORTHWARD TO MINIMIZE THE SUN'S INTERFERENCE.

(C) 200A, 120/240V-1Ø-3W, NEMA 3R SERVICE ENTRANCE RATED LOAD CENTER WITH COPPER BUS, SERVICE MAIN AND BRANCH BREAKERS AS LISTED ON ENGINEER PROVIDED PANEL SCHEDULE. PROVIDE SPACES FOR CIRCUITS AS DESIGNED PLUS A MINIMUM OF TWO AVAILABLE SPACES FOR FUTURE USE. PROVIDE NEUTRAL TO GROUND SERVICE ENTRANCE BOND PER N.E.C.

(D) HEAVY DUTY, GALVANIZED C-CHANNEL TYPE RACKING SET IN CONCRETE. PAINT TO MATCH PANEL COLOR. PROVIDE A MINIMUM OF (5) C-CHANNEL CROSS MEMBERS.

* (E) 30-AMP, 12-POLE, ELECTRICALLY HELD, LIGHTING CONTACTOR FURNISHED WITH 120-VOLT COIL, NEMA 3R ENCLOSURE WITH PAD LOCKABLE COVER AND HOA SWITCH MOUNTED INSIDE ENCLOSURE.

(F) PROVIDE TRANSITION FITTING (JUST BELOW GRADE) FROM PVC CONDUIT IN EARTH TO GRC CONDUIT ABOVE GRADE. PROVIDE 2-HOLE CONDUIT STRAPS ON ALL C-CHANNEL CROSS MEMBERS.

(G) (2) 3/4" x 8'-0" COPPER-CLAD DRIVEN GROUND RODS WITH APPROVED GROUND ROD CLAMP. 8'-0" (MIN.) APART AND 6" (MIN.) BELOW GRADE.

* THESE TWO DEVICES (B & E ABOVE) ARE ONLY REQUIRED FOR PROJECTS WITH PAYWAY AND PEDESTRIAN LIGHTS THAT DO NOT HAVE INDIVIDUAL ANSI 7-PIN RECEPTACLES ON THE LUMINAIRES.

FIGURE 8	TYPICAL LIGHTING CONTROL CENTER METERED PEDESTAL STANDARD DETAILS	THE CITY OF BOZEMAN ENGINEERING DEPARTMENT 20 E. OLIVE -- P.O. BOX 1230 BOZEMAN, MONTANA 59771-1230 PHONE: (406) 582-2280 -- FAX: (406) 582-2263

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MONTANA JEREMY HERRING 14780 LICENSED PROFESSIONAL ENGINEER

PPA#00-0000

A/E#00-00-00

22236

SHEET TITLE

ELECTRICAL DETAILS

SHEET

E1.5

DATE

5/7/2024

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE		QTY
CONIFEROUS TREES					
	JS	JUNIPERUS SCOPULORUM / ROCKY MOUNTAIN JUNIPER	5`-6` TALL		7
	PE2	PICEA ENGELMANNII / ENGELMANN SPRUCE	5`-6` TALL		9
	PL	PINUS FLEXILIS / LIMBER PINE	5`-6` TALL		6
	PP	PINUS PONDEROSA / PONDEROSA PINE	5`-6` TALL		4
	PM	PSEUDOTSUGA MENZIESII GLAUCA / ROCKY MOUNTAIN DOUGLAS FIR	5`-6` TALL		5
DECIDUOUS TREES					
	AG	ACER GLABRUM / ROCKY MOUNTAIN MAPLE	1 1/2 IN		4
	AG3	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' / AUTUMN BRILLIANCE APPLE SERVICEBERRY	1 1/2 IN		5
	PT	POPULUS TREMULOIDES / QUAKING ASPEN	1 1/2 IN		6
	PA	PRUNUS AMERICANA / AMERICAN PLUM	1 1/2 IN		3
	PC2	PRUNUS VIRGINIANA / CHOKECHERRY	1 1/2 IN		3
	UP	ULMUS X `MORTON GLOSSY` / TRIUMPH™ ELM	1 1/2 IN		13
SHRUBS					
	AS	AMELANCHIER ALNIFOLIA / SERVICEBERRY	5 GAL		6
	AT	ARTEMISIA TRIDENTATA / BIG SAGEBRUSH	5 GAL		246
	CR	CORNUS SERICEA / RED TWIG DOGWOOD	5 GAL		19
	EN	ERICAMERIA NAUSEOSA / RUBBER RABBITBRUSH	5 GAL		78
	ES	EUONYMUS ALATUS 'SELECT' / FIREBALL® BURNING BUSH	5 GAL		15
	HD	HOLODISCUS DISCOLOR / OCEANSPRAY	5 GAL		5
	JJ	JUNIPERUS COMMUNIS / COMMON JUNIPER	5 GAL		6
	PW	PHILADELPHUS LEWISII / WILD MOCKORANGE	5 GAL		15
	RG	RHUS AROMATICA 'GRO-LOW' / GRO-LOW FRAGRANT SUMAC	5 GAL		15
	RT	RHUS TRILOBATA / SKUNKBUSH SUMAC	5 GAL		18
	RW	ROSA WOODSII / MOUNTAIN ROSE	5 GAL		39
	SP	SALIX DISCOLOR / PUSSY WILLOW	5 GAL		1
	SA2	SHEPHERDIA ARGENTEA / SILVER BUFFALOBERRY	5 GAL		9
	SB	SPIRAEA BETULIFOLIA / BIRCHLEAF SPIREA	5 GAL		25
	SA	SYMPHORICARPOS ALBUS / COMMON WHITE SNOWBERRY	5 GAL		18
	YG	YUCCA GLAUCA / SOAPWEED	5 GAL		159
GRASSES					
	AG2	ANDROPOGON GERARDII / BIG BLUESTEM	2 GAL		50
	HS	HELICTOTRICHON SEMPERVIRENS / BLUE OAT GRASS	2 GAL		38
	PV	PANICUM VIRGATUM / SWITCH GRASS	2 GAL		40

GROUNDCOVER					
	AU	ARCTOSTAPHYLOS UVA-URSI / KINNIKINNICK	1 GAL		23
	JH	JUNIPERUS HORIZONTALIS / CREEPING JUNIPER	1 GAL		31
PERENNIALS					
	AM	ACHILLEA MILLEFOLIUM / COMMON YARROW	1 GAL		35
	HX	HEUCHERA X 'CHERRY TRUFFLES' / DOLCE® CHERRY TRUFFLES CORAL BELLS	1 GAL		19
	VR	VERONICA SPICATA 'ROYAL CANDLES' / ROYAL CANDLES SPIKE SPEEDWELL	1 GAL		51
SYMBOL	CODE	BOTANICAL / COMMON NAME	CONT	SPACING	QTY
GROUND COVERS					
	AW	ALPINE WILDFLOWERS MIX SEE SEED MIX SCHEDULE.	SEED		1,094 SF
	CG	CANYON/BREAKS NATIVE GRASS MIX SEE SEED MIX SCHEDULE.	SEED		11,943 SF
	FM	FOOTHILLS NATIVE GRASS AND WILDFLOWER MIX SEE SEED MIX SCHEDULE.	SEED		15,777 SF
	MG	MEADOW GRASS MIX SEE SEED MIX SCHEDULE.	SEED		19,825 SF
	ST	MSU STANDARD IRRIGATED GRASS SEE SEED MIX SCHEDULE.	SEED		20,909 SF
	SO	SOD SOD SHALL BE FROM A COMMERCIAL SOD FARM LOCATED IN THE GALLATIN VALLEY.	SOD		893 SF
SITE					
	CF	CRUSHER FINES 3"-4" DEPTH.	ROCK		18,170 SF
	MC	MIXED SIZE COBBLE 3"-12" MIXED SIZE COBBLE.	ROCK		4,168 SF
	OM	ORGANIC MULCH DOUGLAS FIR BARK WITH A CHIP SIZE OF 1 1/2" - 2" AVERAGE. 3" DEPTH.	MULCH		6,274 SF
	RM	ROCK MULCH 1 1/2" ROUND, NATIVE, WASHED, RIVER ROCK. 3" DEPTH.	ROCK		3,191 SF

SEED MIX SCHEDULE

1. SEE SPECIFICATIONS FOR APPLICATION METHODS AND RATES.

SEED MIX NAME:	
ALPINE WILDFLOWER MIX (20 POUNDS PER ACRE)	INTERMOUNTAIN NATIVE WILDFLOWER SEED MIX, APPLEWOOD SEED CO.: ARROWLEAF BALSAMROOT, DEERHORN CLARKIA, GLOBE GILIA, LEWIS FLAX, MOUNTAIN LUPINE, MUNRO'S GLOBEMALLOW, OREGON SUNSHINE, PALE EVENING PRIMROSE, PALMER PENSTEMON, ROCKY MOUNTAIN BEEPLANT, ROCKY MOUNTAIN PENSTEMON, SULPHUR FLOWER, UTAH SWEETVETCH, YELLOW GAILLARDIA
CANYON/BREAKS NATIVE GRASS MIX	ROSANA WESTERN WHEATGRASS - 25% NEZPAR INDIAN RICEGRASS - 16% LARB HILLS SANDBERG BLUEGRASS - 16% COLUMBIA BLUEBUNCH WHEATGRASS - 16% PUEBLO BOTTLEBRUSH SQUIRELLTAIL - 9% SAND DROPSEED - 9% REVENUE SLENDER WHEATGRASS - 9%
FOOTHILLS NATIVE GRASS AND WILDFLOWERS MIX	REVENUE SLENDER WHEATGRASS - 19% ANATONE BLUEBUNCH WHEATGRASS - 18% SHERMAN BIG BLUEGRASS - 14% WINCHESTER IDAHO FESCUE - 14% ROSANA WESTERN WHEATGRASS - 9% CRITANA THICKSPIKE WHEATGRASS - 9% GARNET MOUNTAIN BROME - 9% PRAIRIE JUNEGRASS - 2% APPAR BLUE FLAX - 2% STILLWATER PRAIRIE CONEFLOWER - 2% VNS BLANKETFLOWER - 2%
MEADOW GRASS MIX	ROSANA WESTERN WHEATGRASS - 25% BAD RIVER BLUE GRAMA - 16% LODORM GREEN NEEDLEGRASS - 16% PRAIRIE JUNEGRASS - 16% ITASCA LITTLE BLUESTEM - 9% LARB HILLS SANDBERG BLUEGRASS - 9% KILLDEER SIDE-OATS GRAMA - 9%
MSU STANDARD IRRIGATED GRASS (MINIMUM 3 POUNDS PER 1,000 SF)	'MIDNIGHT' KENTUCKY BLUEGRASS 'RUGBY II” KENTUCKY BLUEGRASS 'RAM I' KENTUCKY BLUEGRASS 'DELWARE' DWARF PEREN. RYE GRASS

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN, AT THEIR OWN EXPENSE, APPLICABLE LICENSES, STANDARDS, PERMITS, ETC. WHICH ARE NECESSARY TO PERFORM THE WORK.
2. THE CONTRACTOR SHALL LOCATE, CLEARLY MARK AND MAINTAIN EXISTING UTILITIES ON THE SITE PRIOR TO WORK START UP. CALL FOR UTILITY LOCATES PRIOR TO COMMENCING WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES AND REPAIR OF UTILITIES IF DAMAGED. REPAIR SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER
4. ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. ANY DEVIATION FROM THESE PLANS MUST BE APPROVED BY OWNER OR LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION.
5. LIMIT OF WORK IS AS INDICATED ON THE PLANS.
6. COORDINATE SITE ACCESS, STAGING, STORAGE AND CLEANOUT AREAS WITH OWNER'S REPRESENTATIVE.
7. TREE STUMPS TO BE REMOVED WITH CLEARING AND GRUBBING.

PLANTING NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL PLANT QUANTITIES. GRAPHIC QUANTITIES TAKE PRECEDENCE OVER WRITTEN QUANTITIES.
2. ALL LANDSCAPE AREAS SHALL RECEIVE SOIL PREPARATION AS SPECIFIED.
3. ALL EXISTING GRASS STAND AREAS DISTURBED BY CONSTRUCTION OPERATIONS SHALL BE SOIL PREPARED AND SEEDED BY THE CONTRACTOR.
4. EXISTING TURF AREAS THAT ARE DISTURBED DURING CONSTRUCTION, ESTABLISHMENT AND THE MAINTENANCE PERIOD SHALL BE RESTORED WITH NEW SOD TO MATCH EXISTING TURF SPECIES.
5. ALL LANDSCAPE MATERIALS SHALL BE INSTALLED ACCORDING TO SOUND HORTICULTURAL PRACTICES AND AMERICAN NURSERY STANDARDS IN A MANNER DESIGNED TO ENCOURAGE QUICK ESTABLISHMENT AND HEALTHY GROWTH.
6. REPAIR DISTURBED AREAS BENEATH SHRUBS BY HAND.
7. REPAIR AND RESEED STAGING AREA.
8. CONTRACTOR SHALL COORDINATE IRRIGATION AND PLANTING WORK SUCH THAT INSTALLED IRRIGATION EQUIPMENT SHALL NOT CAUSE ADJUSTMENT OF PLANTING LOCATIONS CONTRARY TO THE PLANS. IF IRRIGATION EQUIPMENT IS INSTALLED IN LOCATIONS OBSTRUCTING THE INTENDED LOCATIONS OF THE PLANTINGS, NOTIFY THE LANDSCAPE ARCHITECT FOR CLARIFICATION.
9. THE CONTRACTOR SHALL WARRANTY ALL CONTRACTED WORK AND MATERIALS FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION HAS BEEN ISSUED BY THE OWNER'S REPRESENTATIVE FOR THE ENTIRE PROJECT UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS OR SPECIFICATIONS.
10. PLANTING BEDS TO BE AMENDED WITH A MIN. 12" DEPTH TOPSOIL PRIOR TO PLANTING.
11. AREAS TO BE SODDED TO BE AMENDED WITH A MIN. 4" DEPTH TOPSOIL PRIOR TO SODDING.
12. AREAS TO BE SEEDED TO BE AMENDED WITH A MIN. 2" DEPTH COMPOST PRIOR TO SEEDING.
13. ALL PLANTING MATERIAL SHALL BE APPROVED ON-SITE BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

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GRANT STREET
PEDESTRIAN MALL

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DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

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1	ADDENDUM #1	05/07/24
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STATE OF MONTANA
JORIE M CREEL
No. 25787
LICENSED LANDSCAPE ARCHITECT
5/07/24

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
SCHEDULES AND NOTES

SHEET
L1.1

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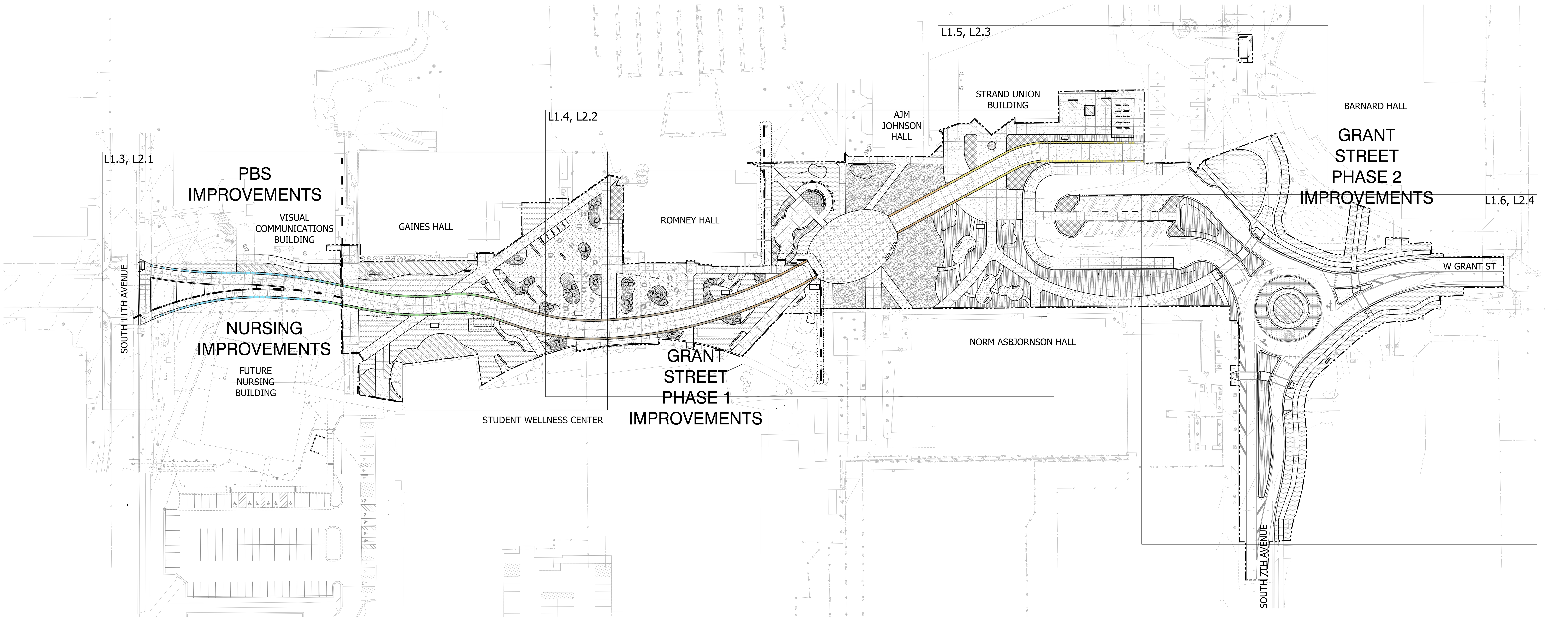

NORTH

OVERALL LANDSCAPE SITE PLAN

60 30 0 60 120

SCALE: 1" = 60'

LEGEND

- LIMIT OF WORK
- PHASE LINE
- LANDSCAPE EDGING
- EXISTING VEGETATION
- BENCH
- PATIO SEATING
- BOULDERS
- STONE SEATING

CONCRETE STAMP PATTERN

- WATER ECOZONE STAMP AREA
- FOREST ECOZONE STAMP AREA
- MOUNTAIN ECOZONE STAMP AREA
- CANYON ECOZONE STAMP AREA
- GRASSLANDS ECOZONE STAMP AREA

GROUND COVERS

- ALPINE WILDFLOWERS MIX
- CANYON/BREAKS NATIVE GRASS MIX
- FOOTHILLS NATIVE GRASS AND WILDFLOWER MIX
- MEADOW GRASS MIX
- MSU STANDARD IRRIGATED GRASS
- SOD

SITE

- CRUSHER FINES
- MIXED SIZE COBBLE
- ORGANIC MULCH
- ROCK MULCH
- SPARKLE CONCRETE
- HERRINGBONE PATTERN STAMPED CONCRETE
- ROUNDABOUT STAMPED CONCRETE

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No. 25787
LICENSED LANDSCAPE ARCHITECT

PPA#00-0000
A/E#00-00-00
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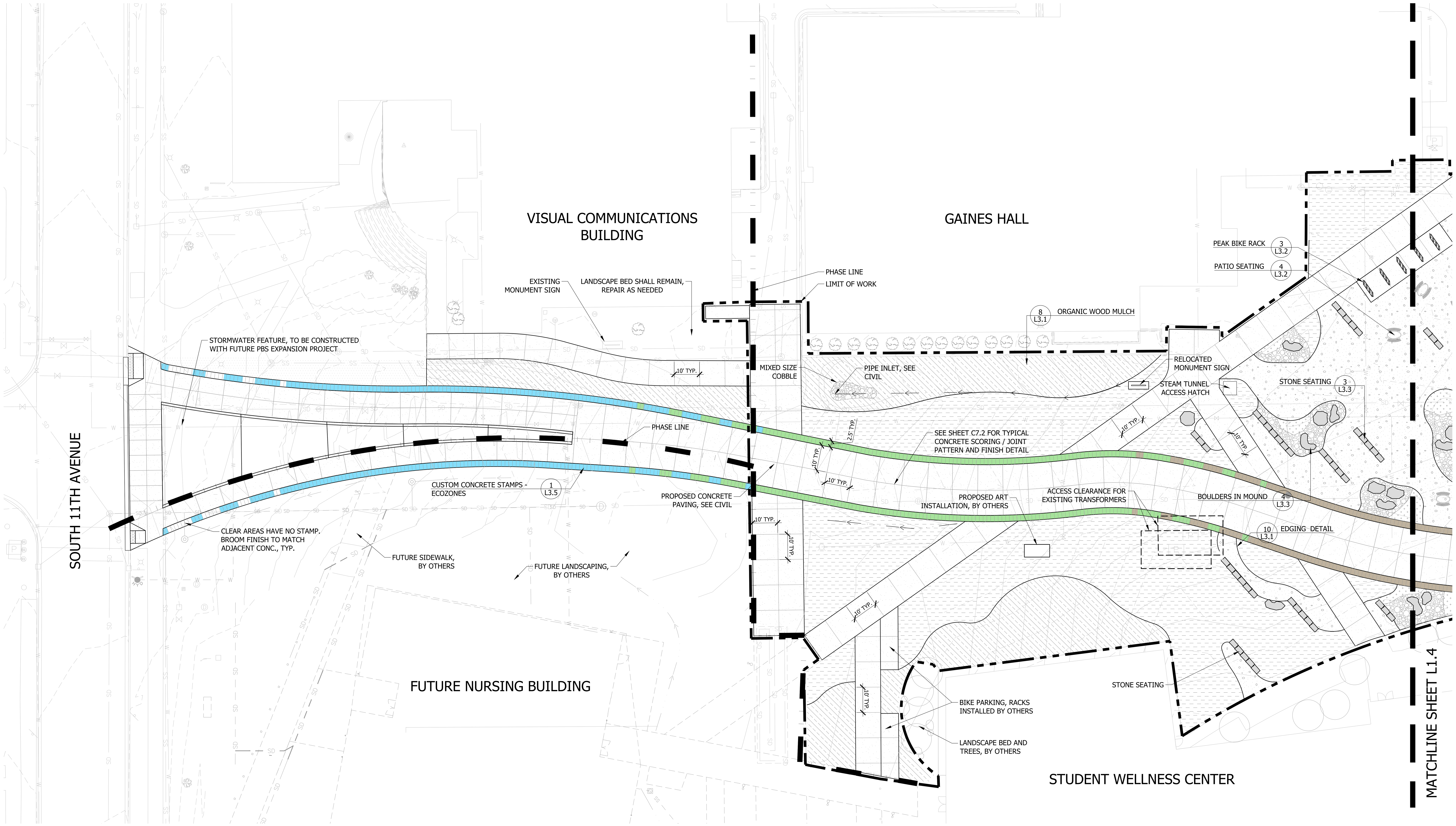
SHEET TITLE
OVERALL LANDSCAPE SITE PLAN

SHEET
L1.2

DATE
5/7/2024



NORTH

LANDSCAPE SITE PLAN

20 10 0 20 40

SCALE: 1" = 20'

LEGEND

- LIMIT OF WORK
- PHASE LINE
- LANDSCAPE EDGING
- EXISTING VEGETATION
- BENCH
- PATIO SEATING
- BOULDERS
- STONE SEATING

CONCRETE STAMP PATTERN

- WATER ECOZONE STAMP AREA
- FOREST ECOZONE STAMP AREA
- MOUNTAIN ECOZONE STAMP AREA
- CANYON ECOZONE STAMP AREA
- GRASSLANDS ECOZONE STAMP AREA

GROUND COVERS

- ALPINE WILDFLOWERS MIX
- CANYON/BREAKS NATIVE GRASS MIX
- FOOTHILLS NATIVE GRASS AND WILDFLOWER MIX
- MEADOW GRASS MIX
- MSU STANDARD IRRIGATED GRASS
- SOD

SITE

- CRUSHER FINES
- MIXED SIZE COBBLE
- ORGANIC MULCH
- ROCK MULCH
- SPARKLE CONCRETE
- HERRINGBONE PATTERN STAMPED CONCRETE
- ROUNDABOUT STAMPED CONCRETE

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GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

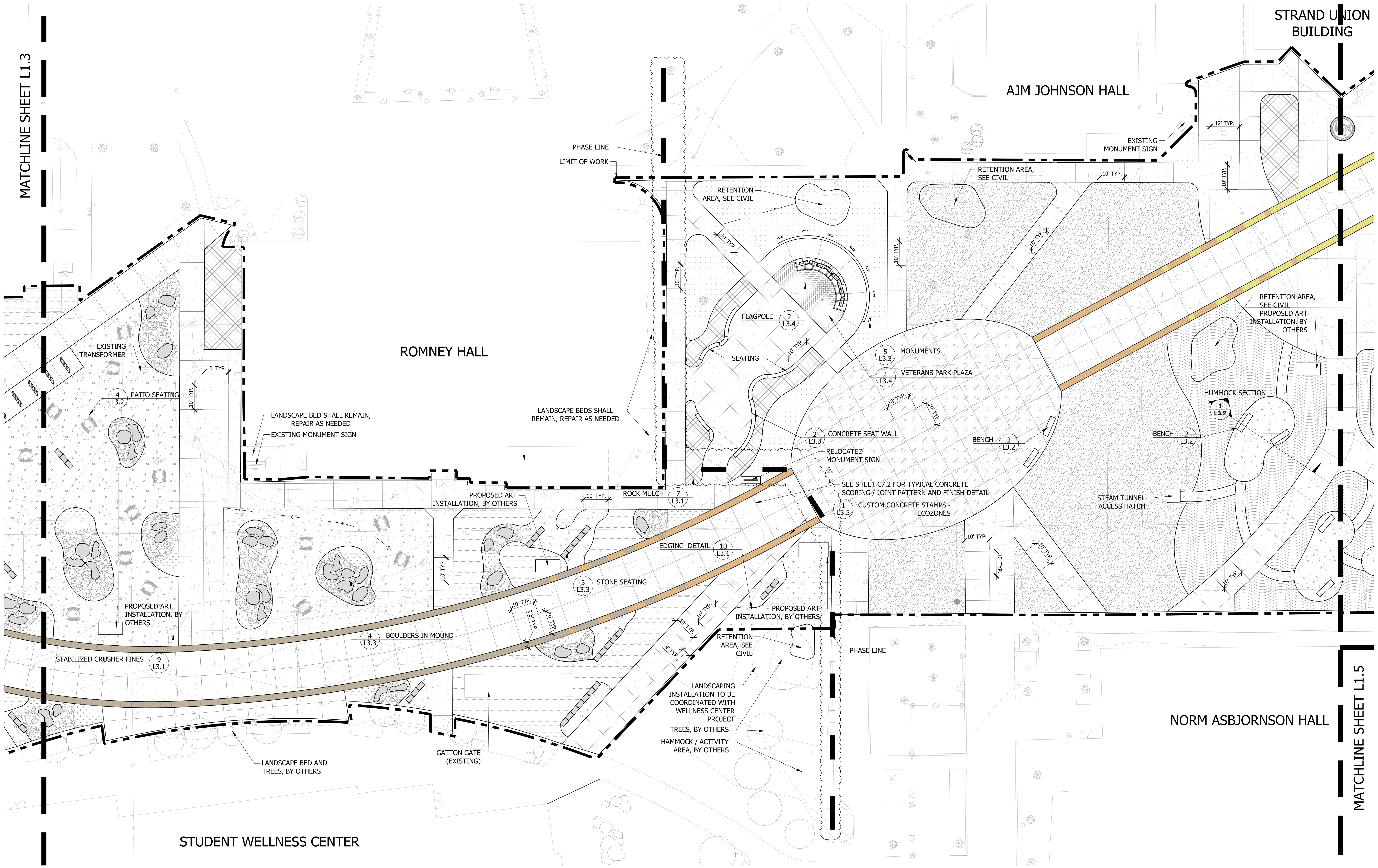
STATE OF MONTANA
JORIE M CREEL
No. 25787
LICENSED LANDSCAPE ARCHITECT

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
LANDSCAPE SITE PLAN

SHEET
L1.3

DATE
5/7/2024



NORTH

LANDSCAPE SITE PLAN

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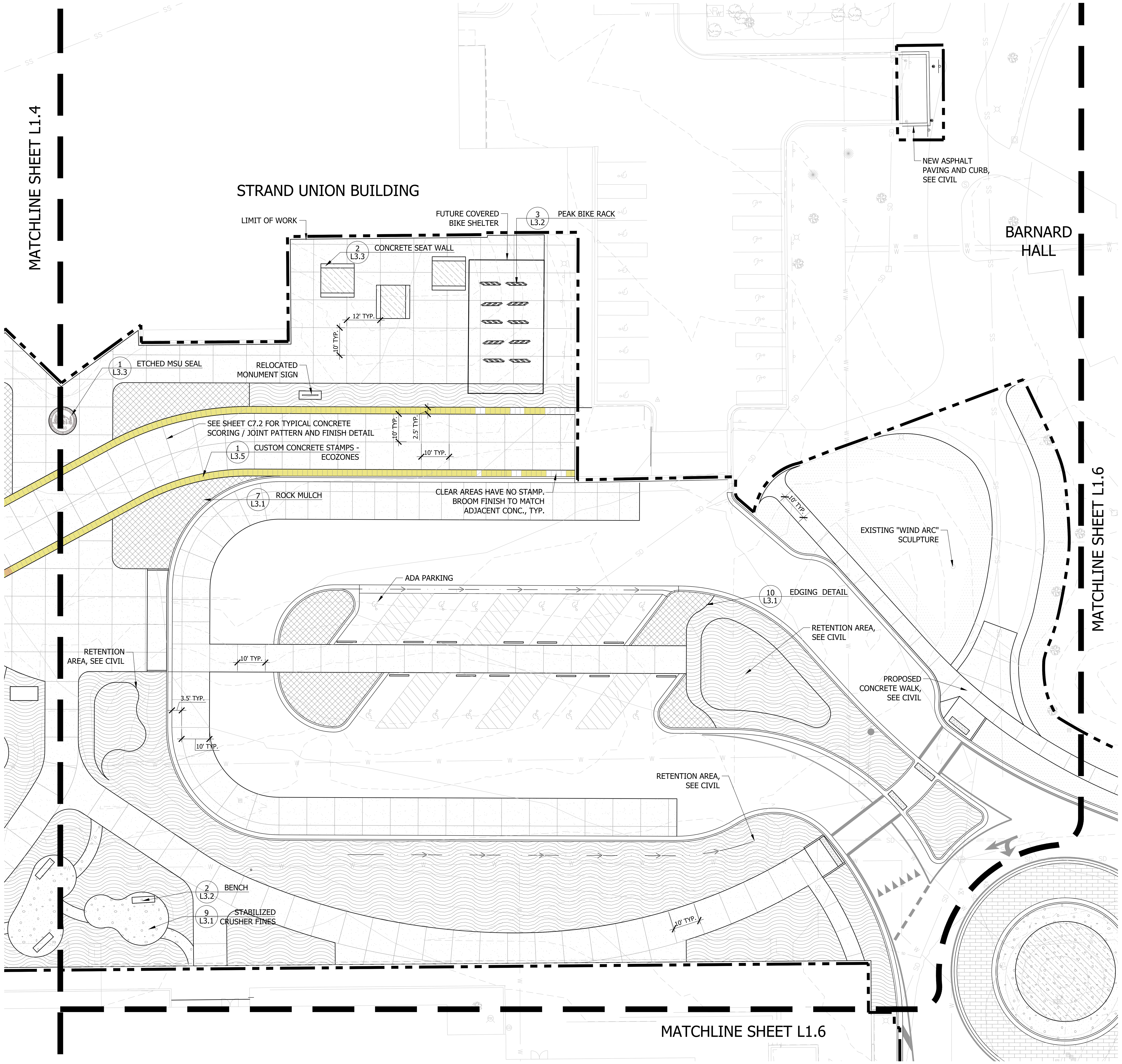
SHEET TITLE
LANDSCAPE SITE PLAN

SHEET
L1.4

DATE
5/7/2024



NORTH

LANDSCAPE SITE PLAN

20 10 0 20 40

SCALE: 1" = 20'

LEGEND

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SHEET TITLE
LANDSCAPE SITE PLAN

SHEET
L1.5

DATE
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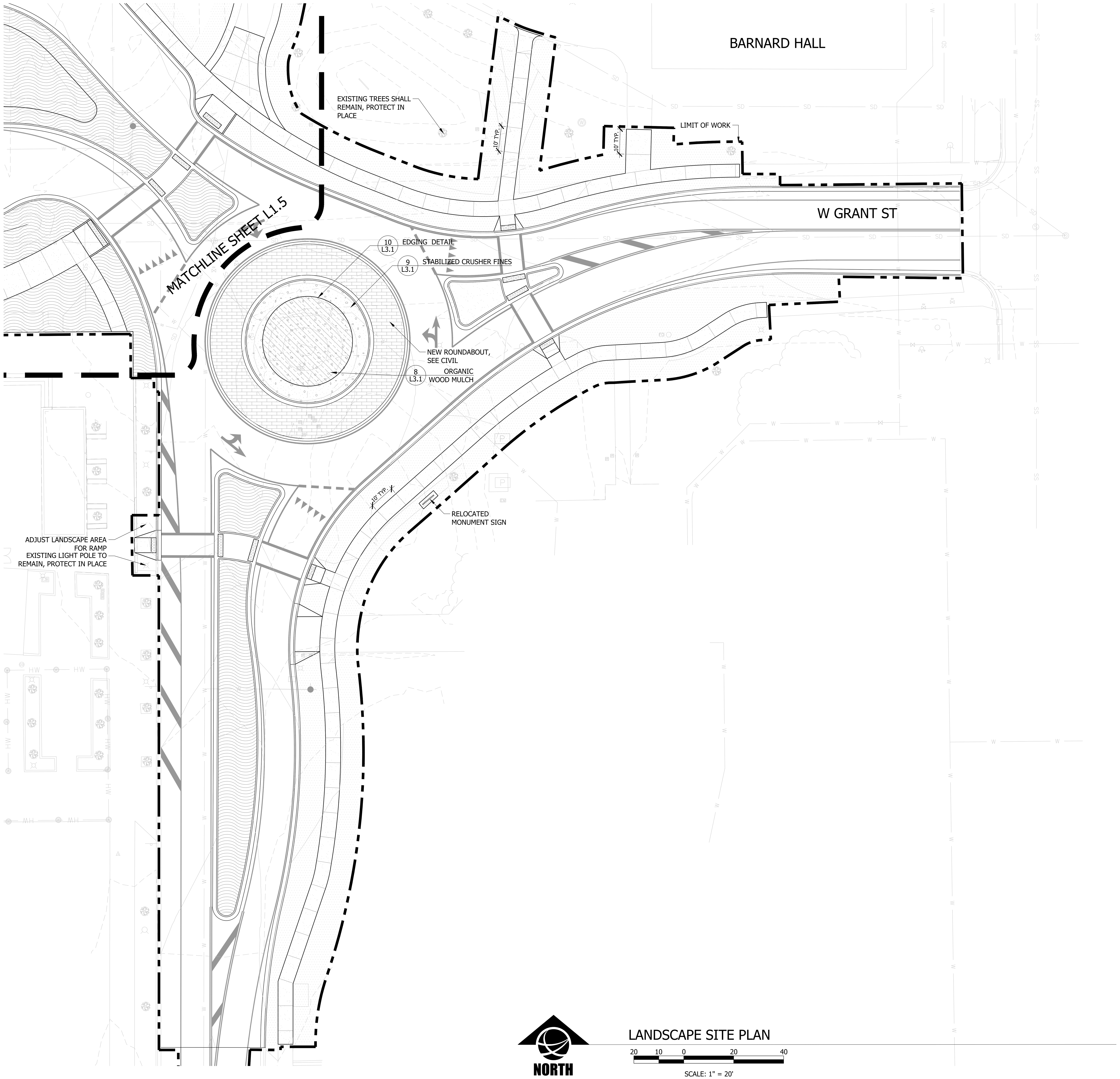

LANDSCAPE SITE PLAN

20 10 0 20 40

SCALE: 1" = 20'

LEGEND

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LANDSCAPE SITE PLAN

SHEET
L1.6

DATE
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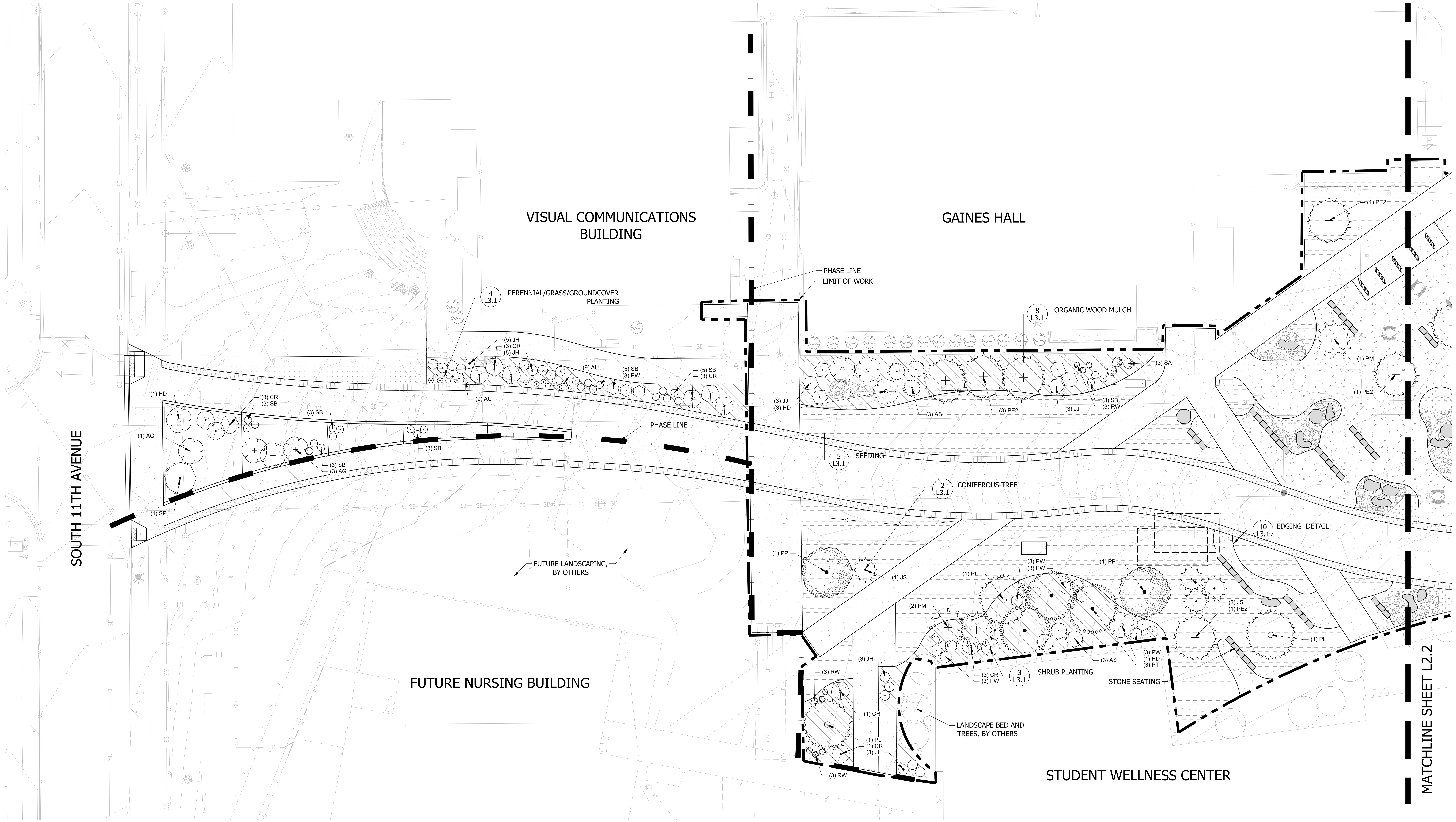

NORTH

PLANTING PLAN

20 10 0 20 40

SCALE: 1" = 20'

LEGEND

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SHEET TITLE

PLANTING PLAN

SHEET

L2.1

DATE

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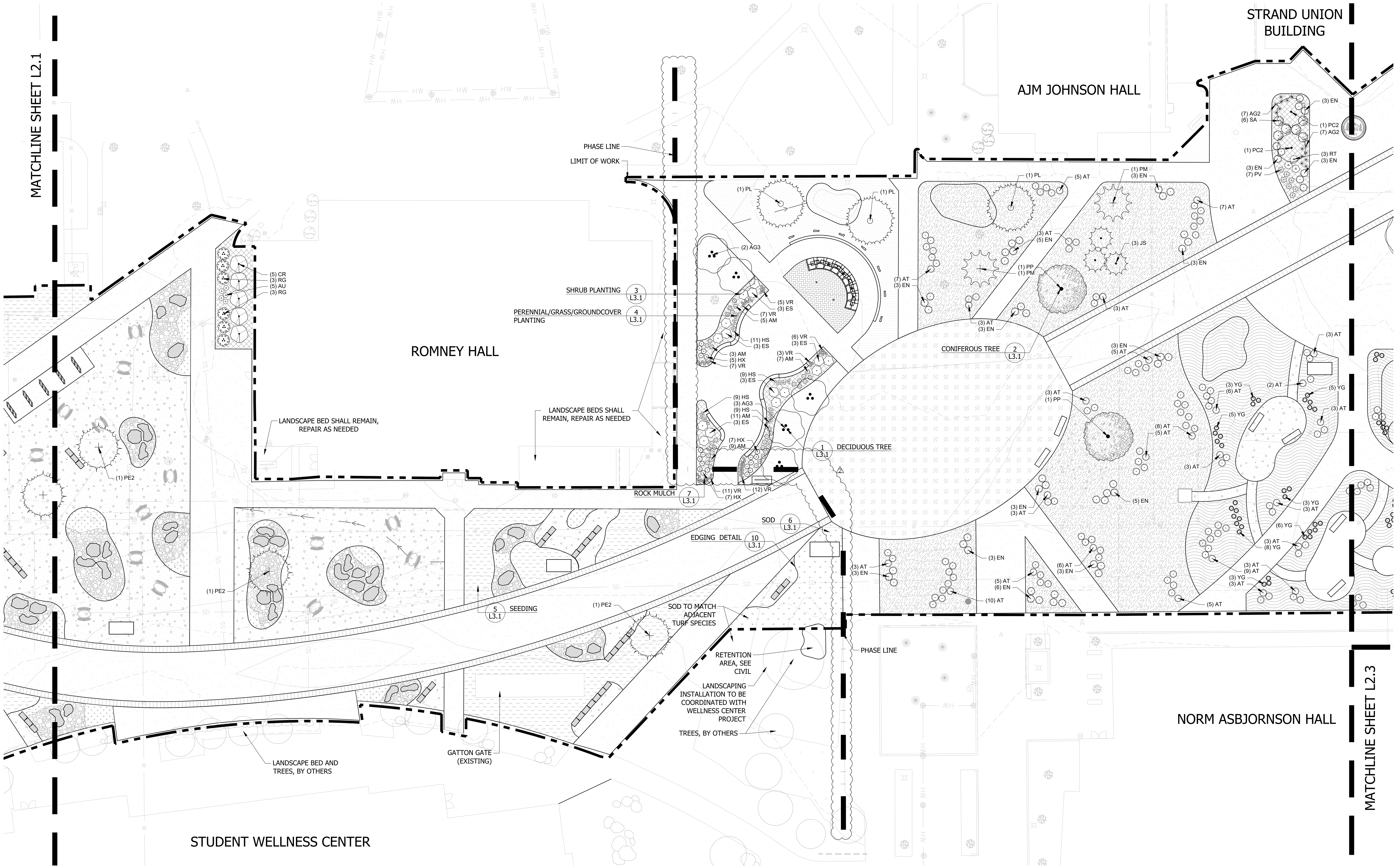

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SHEET TITLE

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SHEET

L2.2

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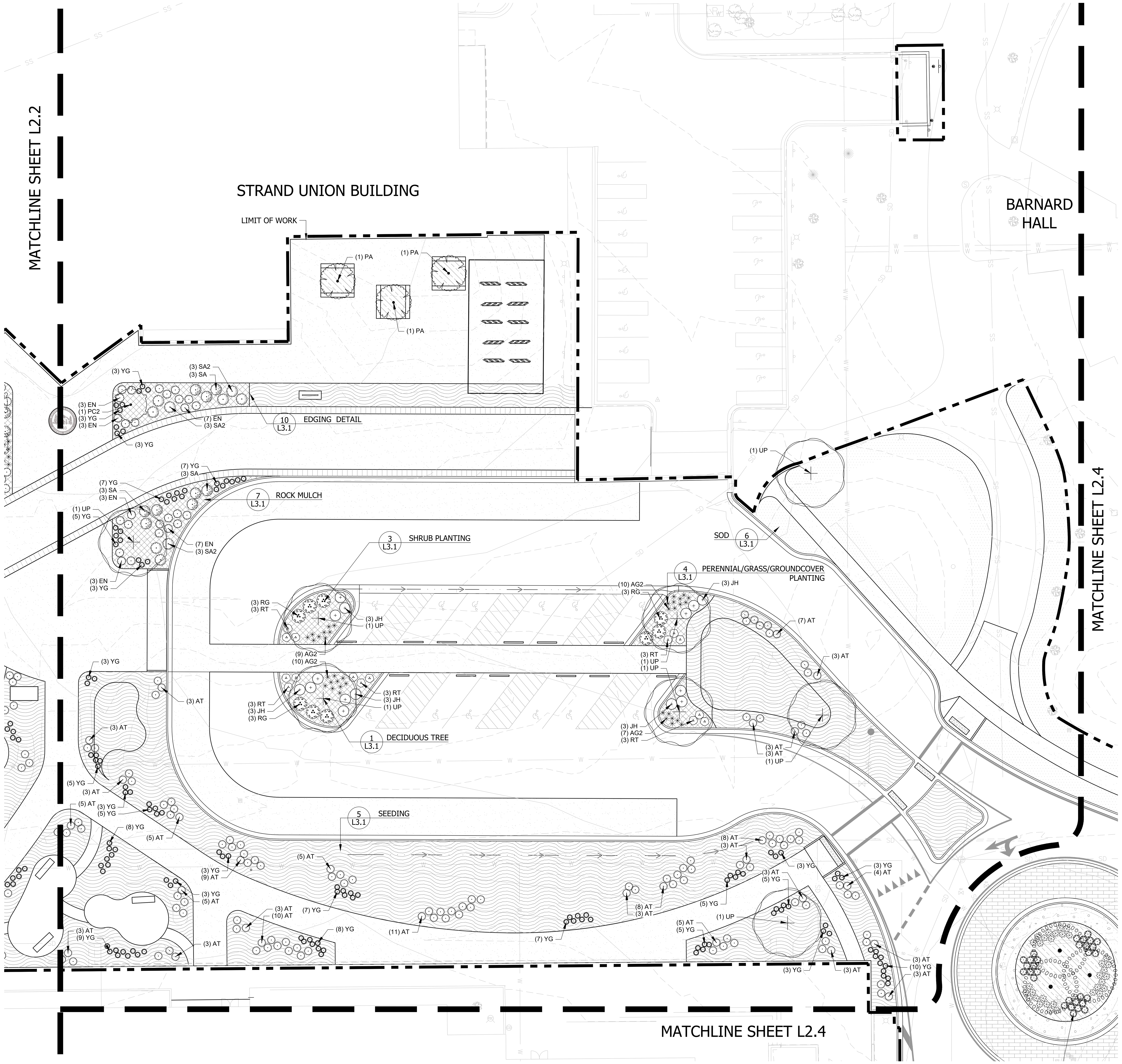

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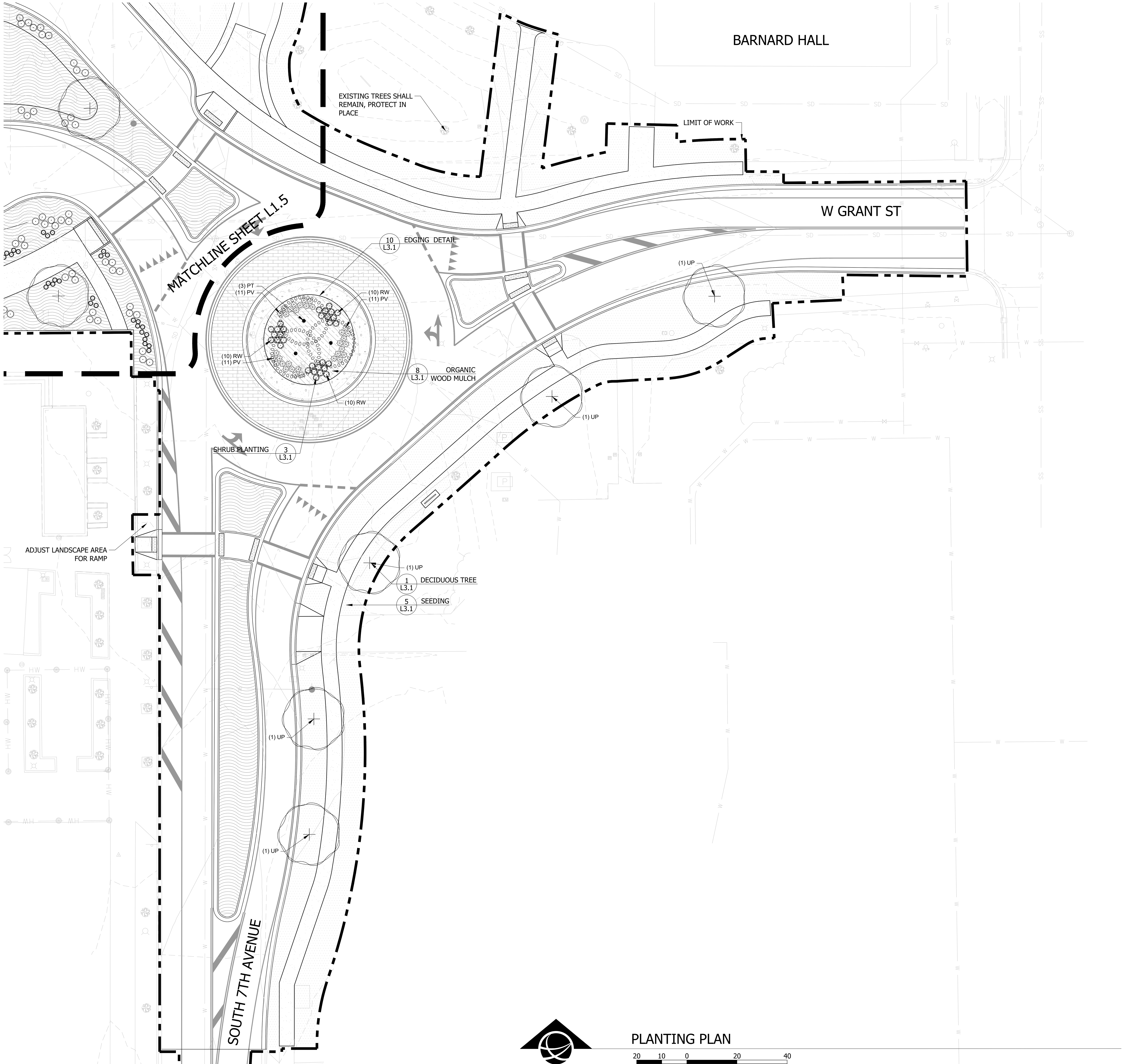

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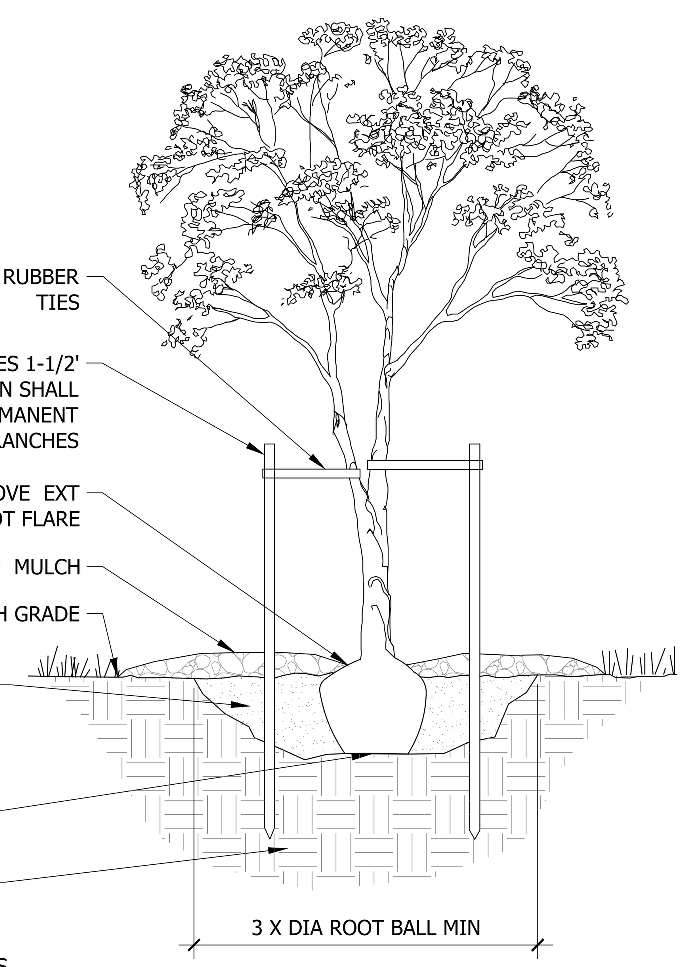
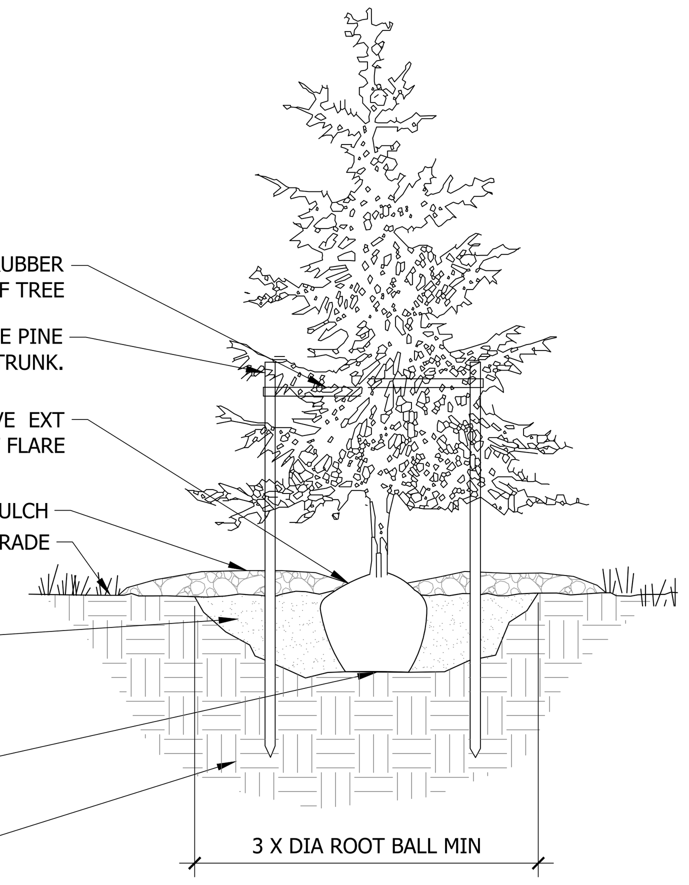


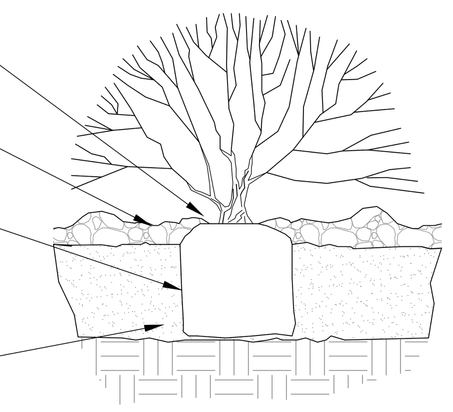
NOTES:
1. REMOVE NURSERY STAKES.
2. PRUNE DEAD OR DAMAGED LIMBS IMMEDIATELY AFTER PLANTING.
3. REMOVE WIRE TIES AND BURLAP FROM ROOT BALL.
4. PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND ROOT BALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. WHEN PLANTING PIT HAS BEEN BACKFILLED, POUR WATER AROUND ROOT BALL TO SETTLE THE SOIL.
5. BACKFILL WITH AMENDED SOIL.
6. REMOVE STAKES FOLLOWING FIRST GROWING SEASON.
7. RAKE SUBGRADE AND REMOVE ALL DEBRIS GREATER THAN 1/2" IN DIA. INCLUDING ROCKS, CONCRETE, ORGANIC DEBRIS, AND OR CONSTRUCTION DEBRIS.
8. PROVIDE SUPPLEMENTAL WATER FOR THE FIRST YEAR FOLLOWING INSTALLATION.

1 DECIDUOUS TREE
N.T.S.



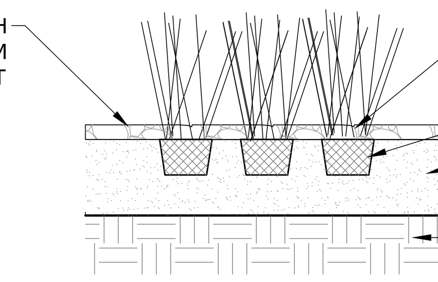
NOTES:
1. REMOVE NURSERY STAKES.
2. PRUNE DEAD OR DAMAGED LIMBS IMMEDIATELY AFTER PLANTING.
3. REMOVE WIRE TIES AND BURLAP FROM TOP 1/2 OF ROOT BALL.
4. REMOVE ALL BASKETS.
5. PRIOR TO MULCHING, LIGHTLY TAMP SOIL AROUND ROOT BALL IN 6" LIFTS TO BRACE TREE. DO NOT OVER COMPACT. WHEN PLANTING PIT HAS BEEN BACKFILLED, POUR WATER AROUND ROOT BALL TO SETTLE THE SOIL.
6. BACKFILL WITH AMENDED SOIL.
7. REMOVE STAKES FOLLOWING FIRST GROWING SEASON.
8. RAKE SUBGRADE AND REMOVE ALL DEBRIS GREATER THAN 1/2" IN DIA. INCLUDING ROCKS, CONCRETE, ORGANIC DEBRIS, AND OR CONSTRUCTION DEBRIS.
9. PROVIDE SUPPLEMENTAL WATER FOR THE FIRST YEAR FOLLOWING INSTALLATION.

2 CONIFEROUS TREE
N.T.S.



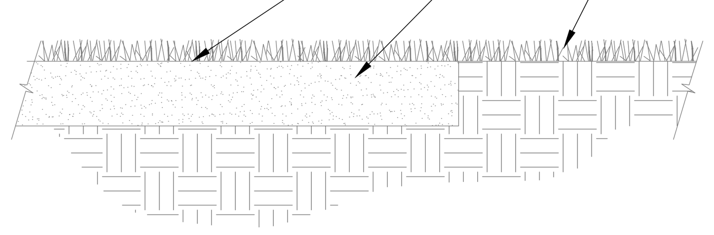
NOTES:
1. SHRUBS WITH BROKEN OR CRUMBLING ROOT BALLS WILL BE REJECTED. CONTAINER REMOVAL WILL NOT BE AN EXCUSE FOR DAMAGED ROOT BALLS.
2. TOP OF MULCH TO BE 1" BELOW ADJ WALKWAY, CURB, EDGING, OR OTHER SURFACE.
3. PRUNE OUT ALL DAMAGED OR DEAD WOOD.
4. ALL PLANT MATERIAL TO BE INSPECTED UPON DELIVERY. REJECTED MATERIALS TO BE IMMEDIATELY RETURNED TO SOURCE.
6. RAKE SUBGRADE AND REMOVE ALL DEBRIS GREATER THAN 1/2" IN DIA. INCLUDING ROCKS, CONCRETE, ORGANIC DEBRIS, AND OR CONSTRUCTION DEBRIS.

3 SHRUB PLANTING
N.T.S.



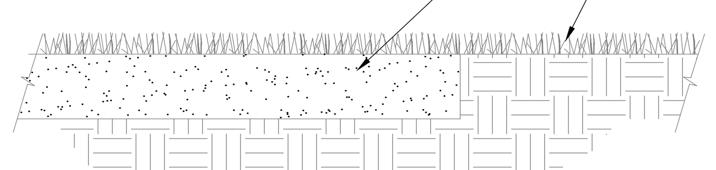
NOTES:
1. REMOVE SPENT FLOWERS PRIOR TO PLANTING.
2. LOOSEN ROOT MASS AT BOTTOM OF ROOTBALL.
3. STRIP TOP OF ROOTBALL ¼" OF SURFACE GROWING MEDIA AND COVER WITH ¼" PLANTING MIX PLUS SURFACE MULCH.
4. QUANTITY AND SPACING AS NOTED IN PLANT SCHEDULE.

4 PERENNIAL/GRASS/GROUNDCOVER PLANTING
N.T.S.



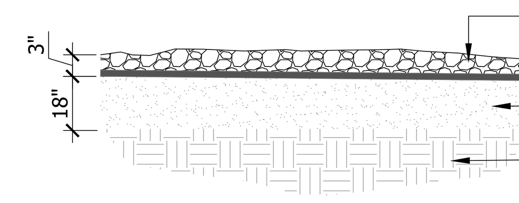
NOTE:
1. EXISTING TOPSOIL WILL BE PLACED BY SITE WORK CONTRACTOR TO ROUGH GRADE
2. LANDSCAPE CONTRACTOR SHALL AMEND SOIL WITH 2" DEPTH OF ORGANIC COMPOST AND TILL INTO EXISTING TOPSOIL AND PREPARE FOR SEEDING..
3. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINAL GRADING AND SEEDING PREPARATION.

5 SEEDING
N.T.S.

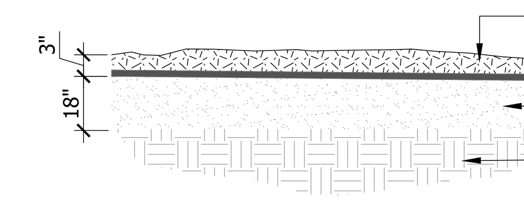


NOTE:
1. SCARIFY SUBGRADE 12", RAKE SUBGRADE AND REMOVE ALL DEBRIS GREATER THAN 1/2" IN DIA. INCLUDING ROCKS, CONCRETE, ORGANIC DEBRIS, AND OR CONSTRUCTION DEBRIS.

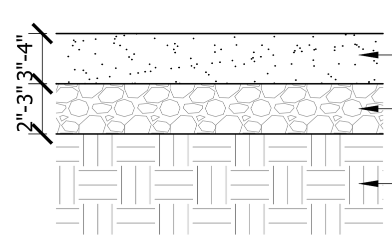
6 SOD
N.T.S.



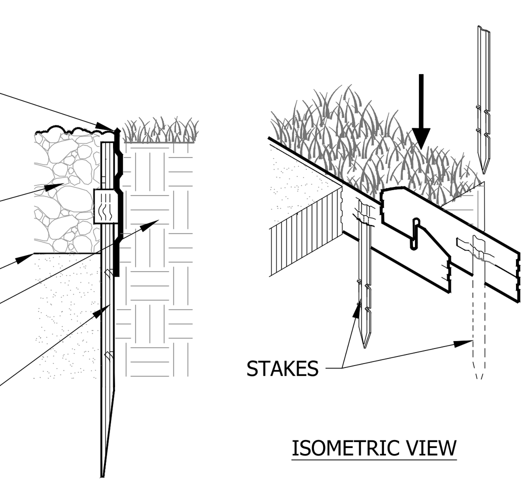
7 ROCK MULCH
N.T.S.



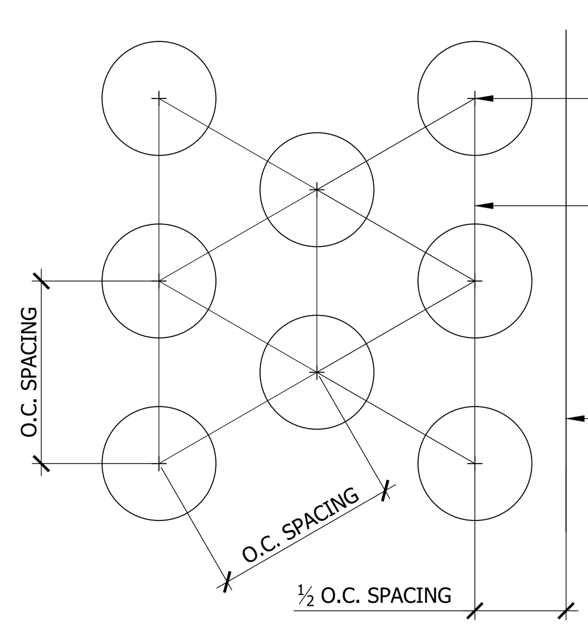
8 ORGANIC WOOD MULCH
N.T.S.



9 STABILIZED CRUSHER FINES
N.T.S.



10 EDGING DETAIL
N.T.S.



11 GROUNDCOVER PLANT SPACING
N.T.S.

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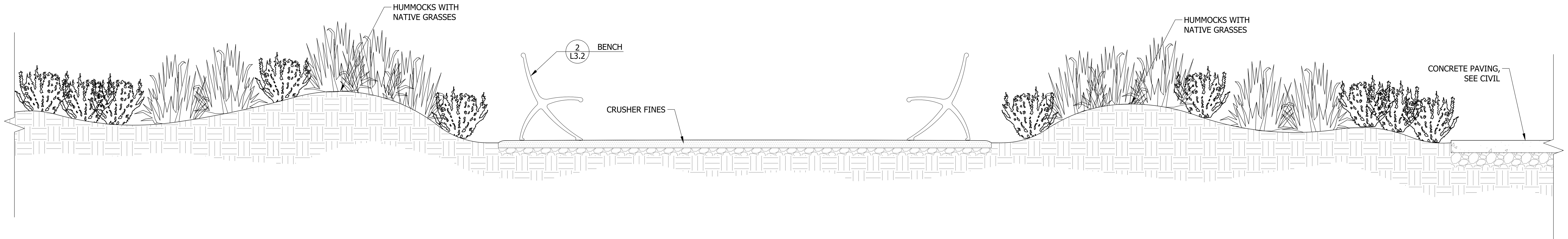
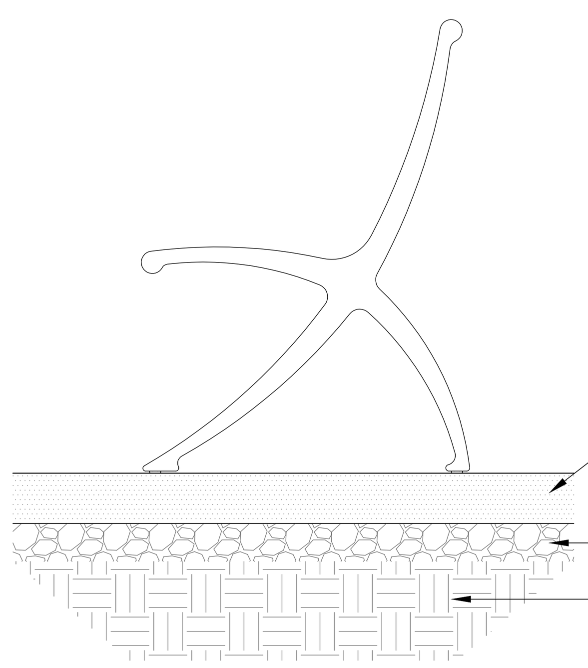
DATE
5/7/2024



1 HUMMOCK SECTION

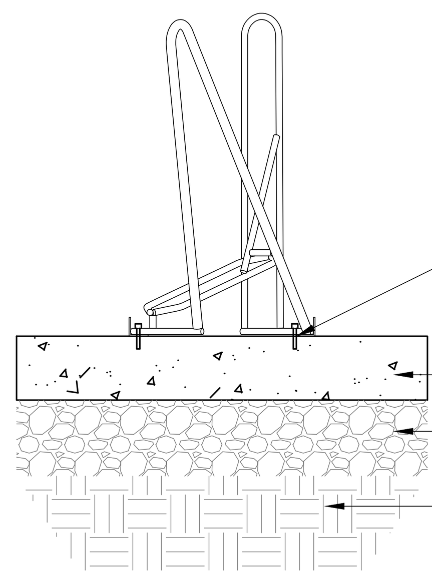
N.T.S.



NOTES:
1. BENCHES SHALL BE PARC VUE BENCH BY LANDSCAPE FORMS, POWDERCOATED SILVER METALLIC, OR APPROVED EQUAL.
2. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. FREESTANDING. SEE LANDSCAPE PLAN FOR LOCATION.

2 BENCH

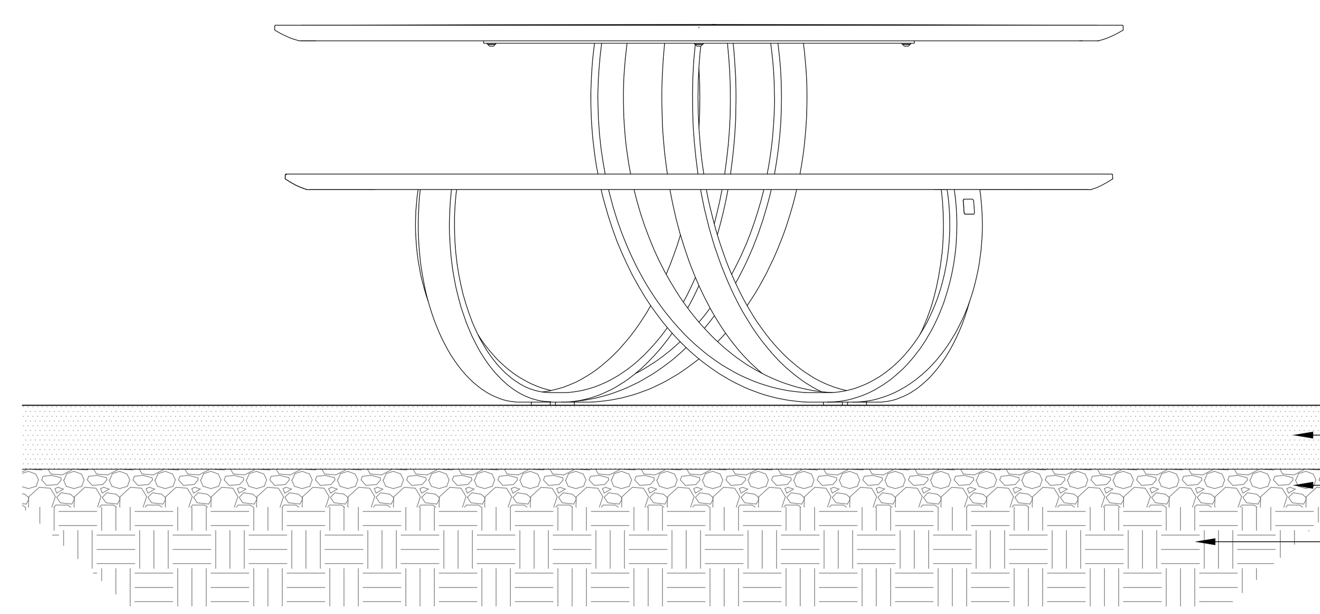
N.T.S.



NOTES:
1. BIKE RACKS TO BE 4-BIKE ANGLED RACKS, FROM PEAK RACKS.
2. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. ANCHOR BOLTS SHALL HAVE A MINIMUM CLEARANCE OF 3" OF CONCRETE BELOW ANCHOR BOLT OR ALL THREAD.
4. SURFACE MOUNT. SEE LANDSCAPE PLAN FOR LOCATION.

3 PEAK BIKE RACK

N.T.S.



NOTES:
1. TABLES SHALL BE CHARLIE TABLE BY LANDSCAPE FORMS, POWDERCOATED SILVER METALLIC, OR APPROVED EQUAL.
2. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. FREESTANDING. SEE LANDSCAPE PLAN FOR LOCATION.

4 PATIO SEATING

N.T.S.

FOR BIDDING

MONTANA STATE UNIVERSITY

MSU-CPDC

MONTANA STATE
UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE

REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

STATE OF MONTANA
JORIE M
CREEL
No. 25787
LICENSED
LANDSCAPE ARCHITECT
05/07/24

PPA#00-0000

A/E#00-00-00

22236

SHEET TITLE

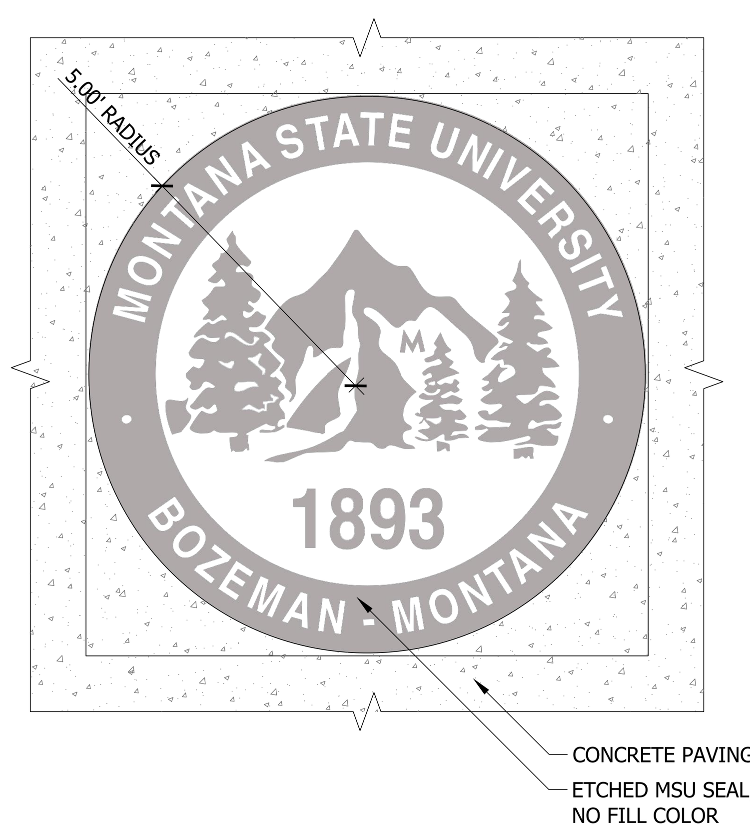
LANDSCAPE DETAILS

SHEET

L3.2

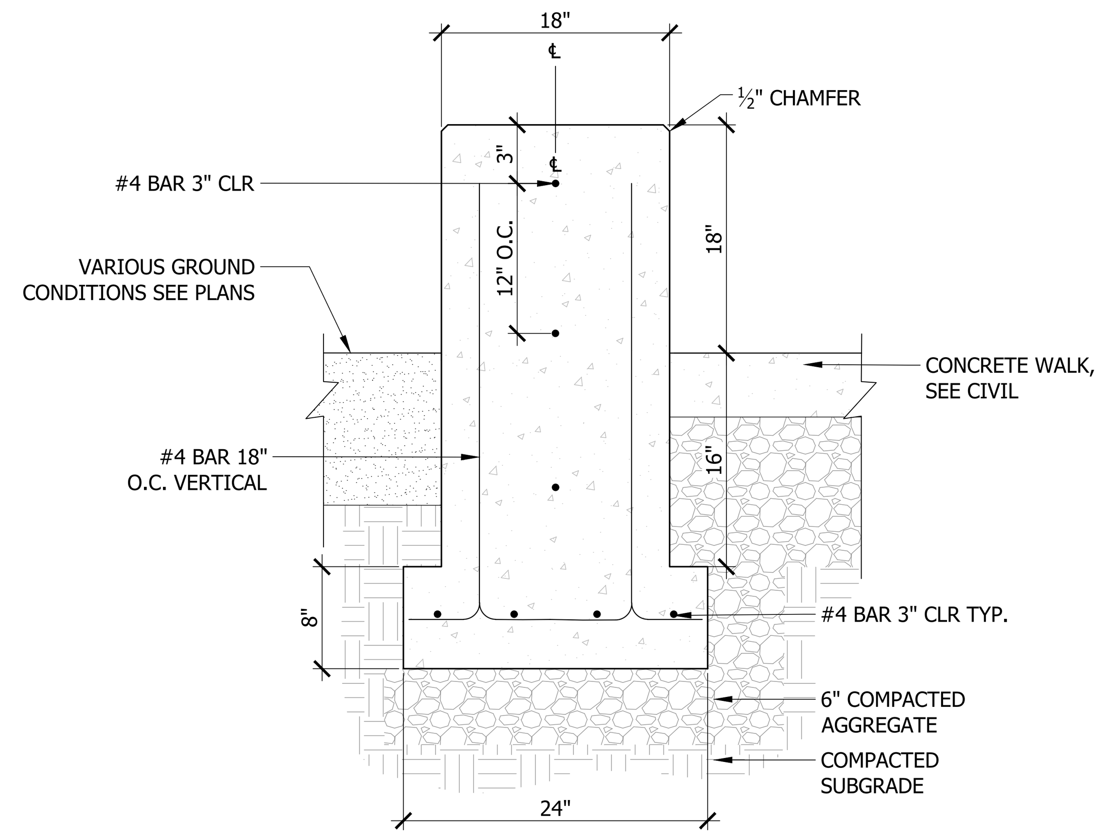
DATE

5/7/2024



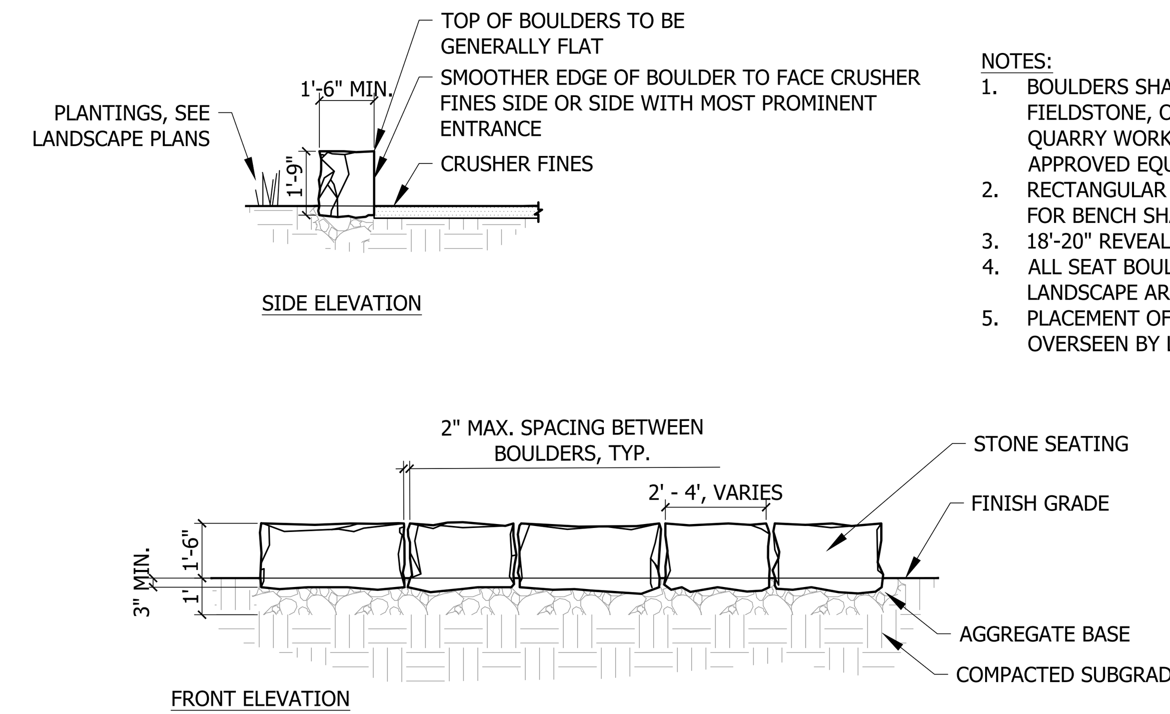
1 **ETCHED MSU SEAL**

N.T.S.



2 **CONCRETE SEAT WALL**

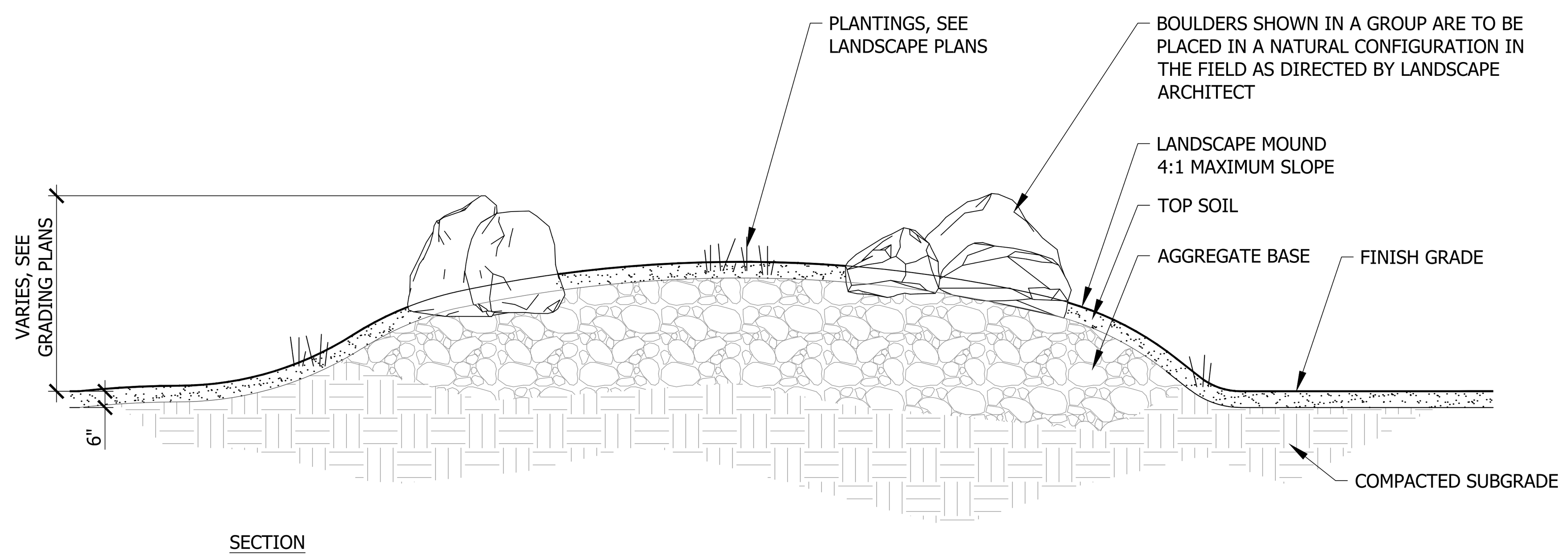
N.T.S.

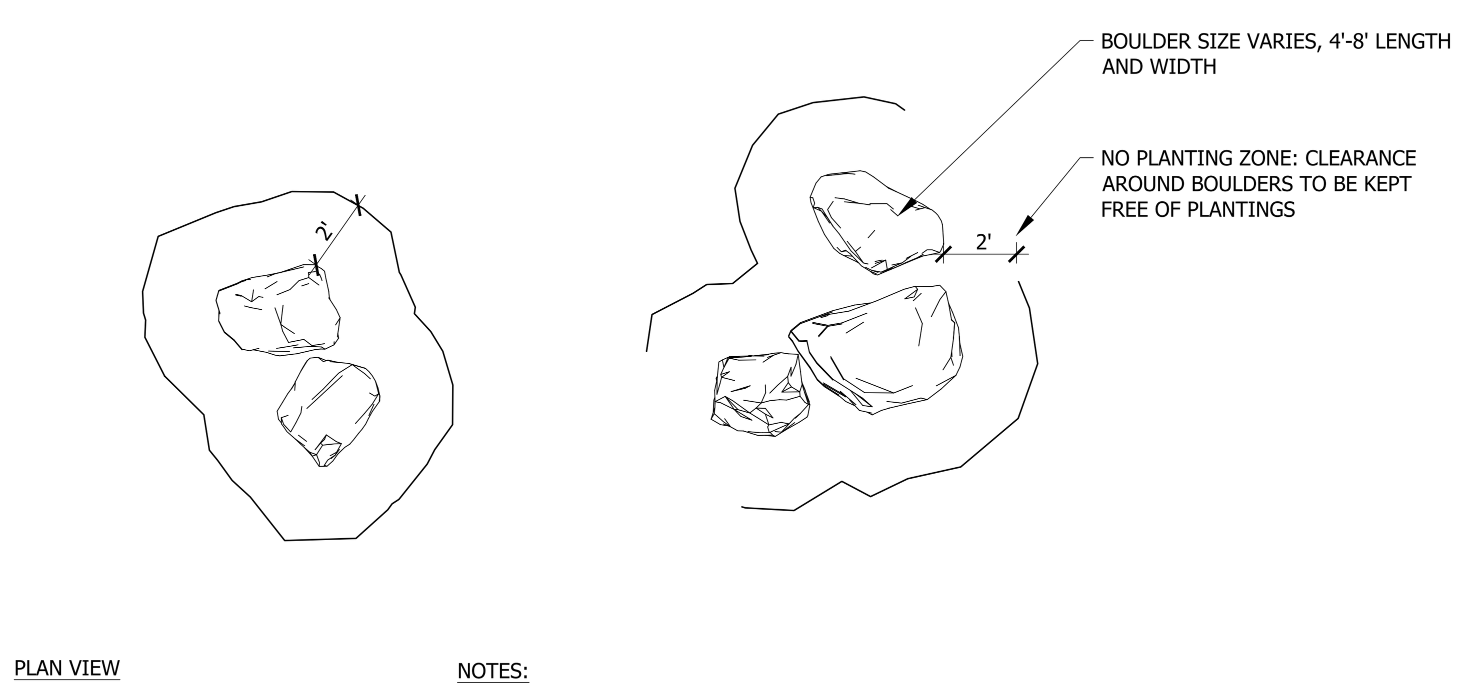


NOTES:
1. BOULDERS SHALL BE CHIEF CLIFF, PRAIRIE FIELDSTONE, OR DEEP CREEK BOULDERS FROM QUARRY WORKS, (406) 763-3028, OR APPROVED EQUAL.
2. RECTANGULAR ACCENT BOULDER SELECTED FOR BENCH SHAPE.
3. 18'-20" REVEAL.
4. ALL SEAT BOULDERS TO BE APPROVED BY LANDSCAPE ARCHITECT AT QUARRY.
5. PLACEMENT OF SEAT BOULDERS TO BE OVERSEEN BY LANDSCAPE ARCHITECT.

3 **STONE SEATING**

N.T.S.

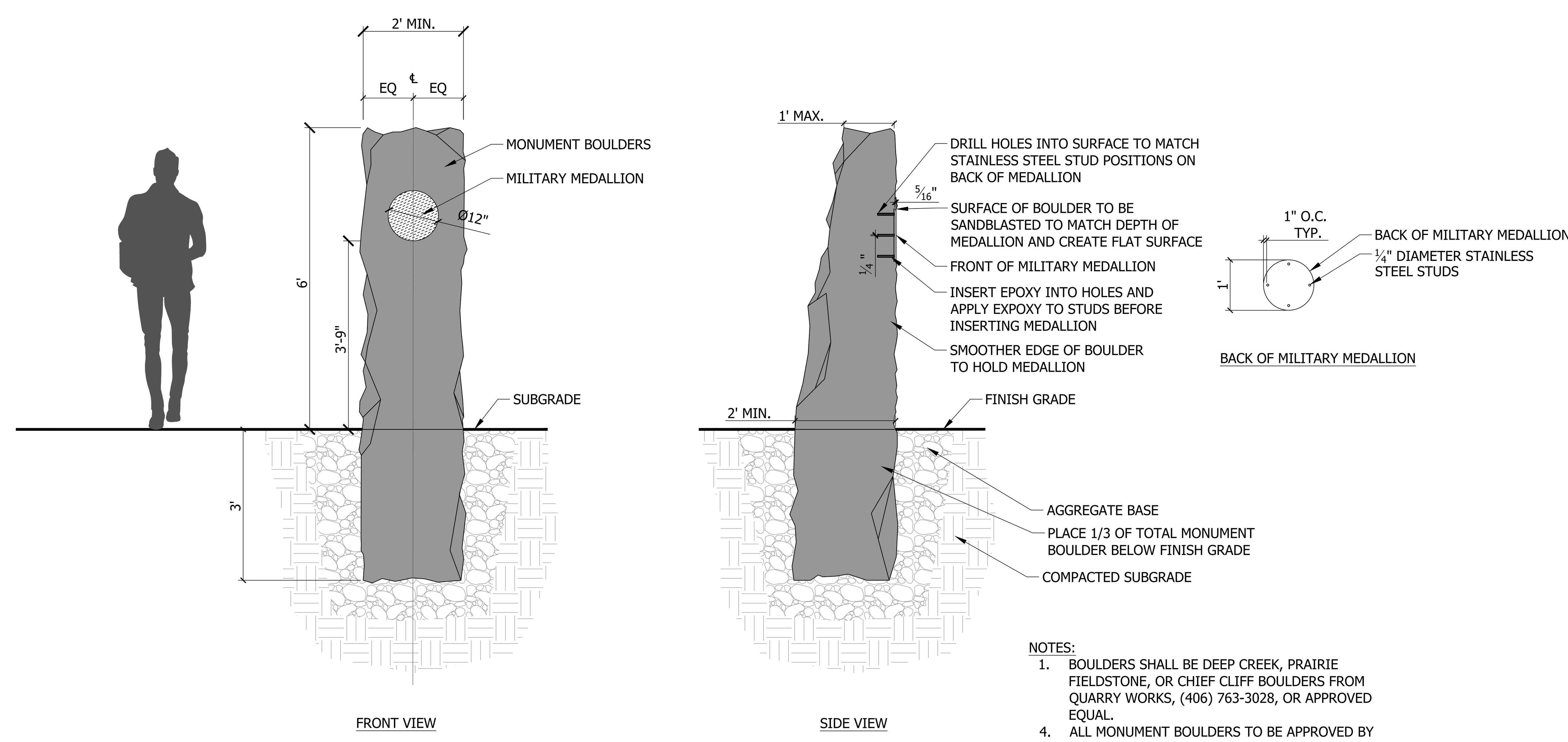




NOTES:
1. BOULDERS SHALL BE PIPESTONE GRANITE BOULDERS FROM FROM QUARRY WORKS, (406) 763-3028, OR APPROVED EQUAL.
2. BOULDERS SHALL BE WEATHERED BOULDERS WITH ROUNDED EDGES.
3. PLACE ALL BOULDERS SUCH THAT 1/3 OF THE TOTAL MASS OF EACH BOULDER IS BELOW FINISH GRADE.
4. LANDSCAPE MOUNDS TO BE NATURALLY SHAPED WITH SMOOTH TRANSITION BETWEEN CONTOUR LINES.
5. LANDSCAPE MOUND HEIGHTS TO VARY, SEE PLAN SHEETS C5.2 AND C5.3 FOR GRADING PLANS.
6. ALL BOULDERS TO BE APPROVED BY LANDSCAPE ARCHITECT AT QUARRY.
7. PLACEMENT OF BOULDERS TO BE OVERSEEN BY LANDSCAPE ARCHITECT.

4 **BOULDERS IN MOUND**

N.T.S.



NOTES:
1. BOULDERS SHALL BE DEEP CREEK, PRAIRIE FIELDSTONE, OR CHIEF CLIFF BOULDERS FROM QUARRY WORKS, (406) 763-3028, OR APPROVED EQUAL.
4. ALL MONUMENT BOULDERS TO BE APPROVED BY LANDSCAPE ARCHITECT AT QUARRY.
5. PLACEMENT OF SEAT BOULDERS TO BE OVERSEEN BY LANDSCAPE ARCHITECT.

5 **MONUMENTS**

N.T.S.

FOR BIDDING

MONTANA STATE UNIVERSITY

MSU-CPDC

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE

REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

STATE OF MONTANA
JORIE M CREEL
No. 25787
LICENSED LANDSCAPE ARCHITECT
5/07/24

PPA#00-0000

A/E#00-00-00

22236

SHEET TITLE

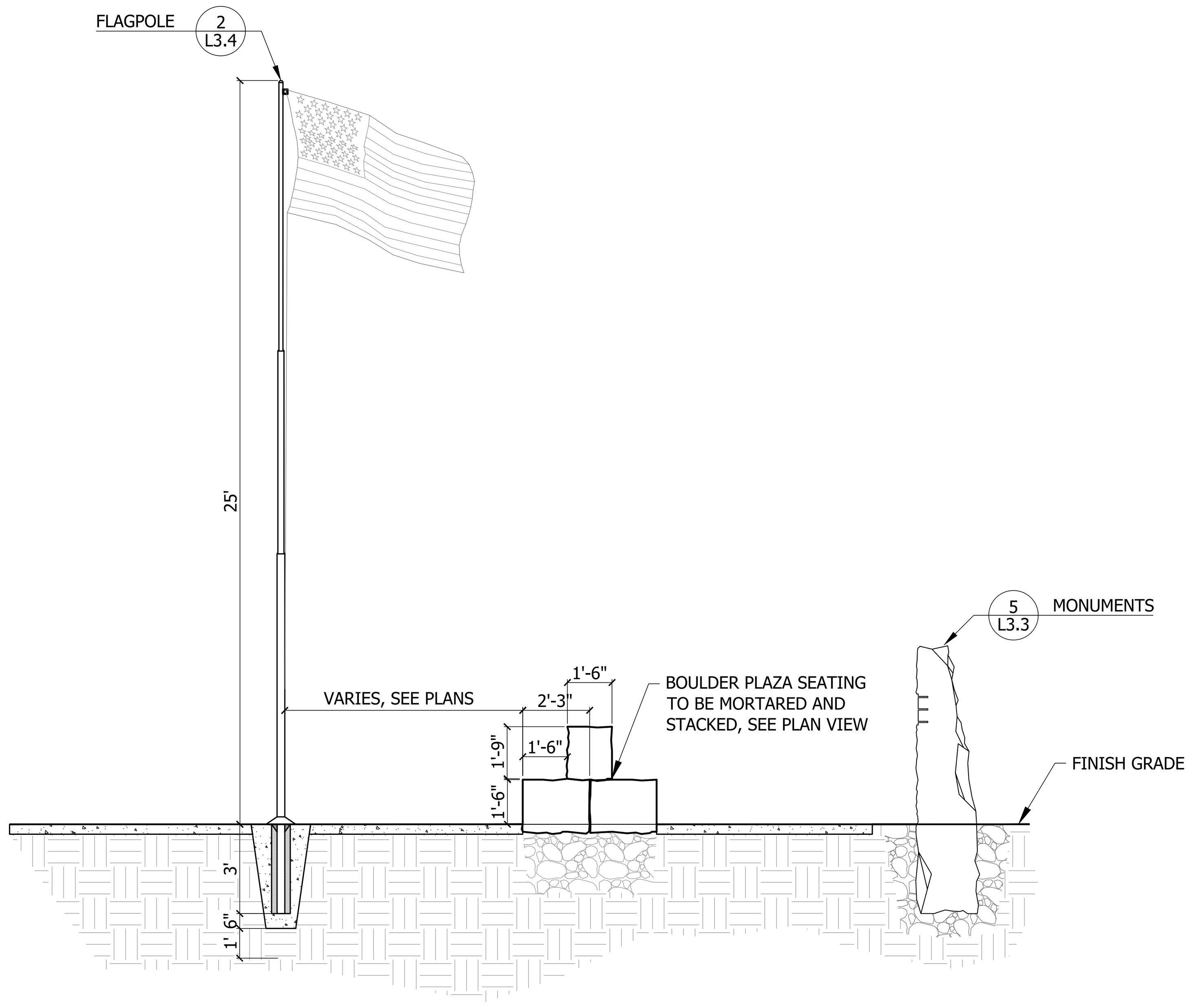
LANDSCAPE DETAILS

SHEET

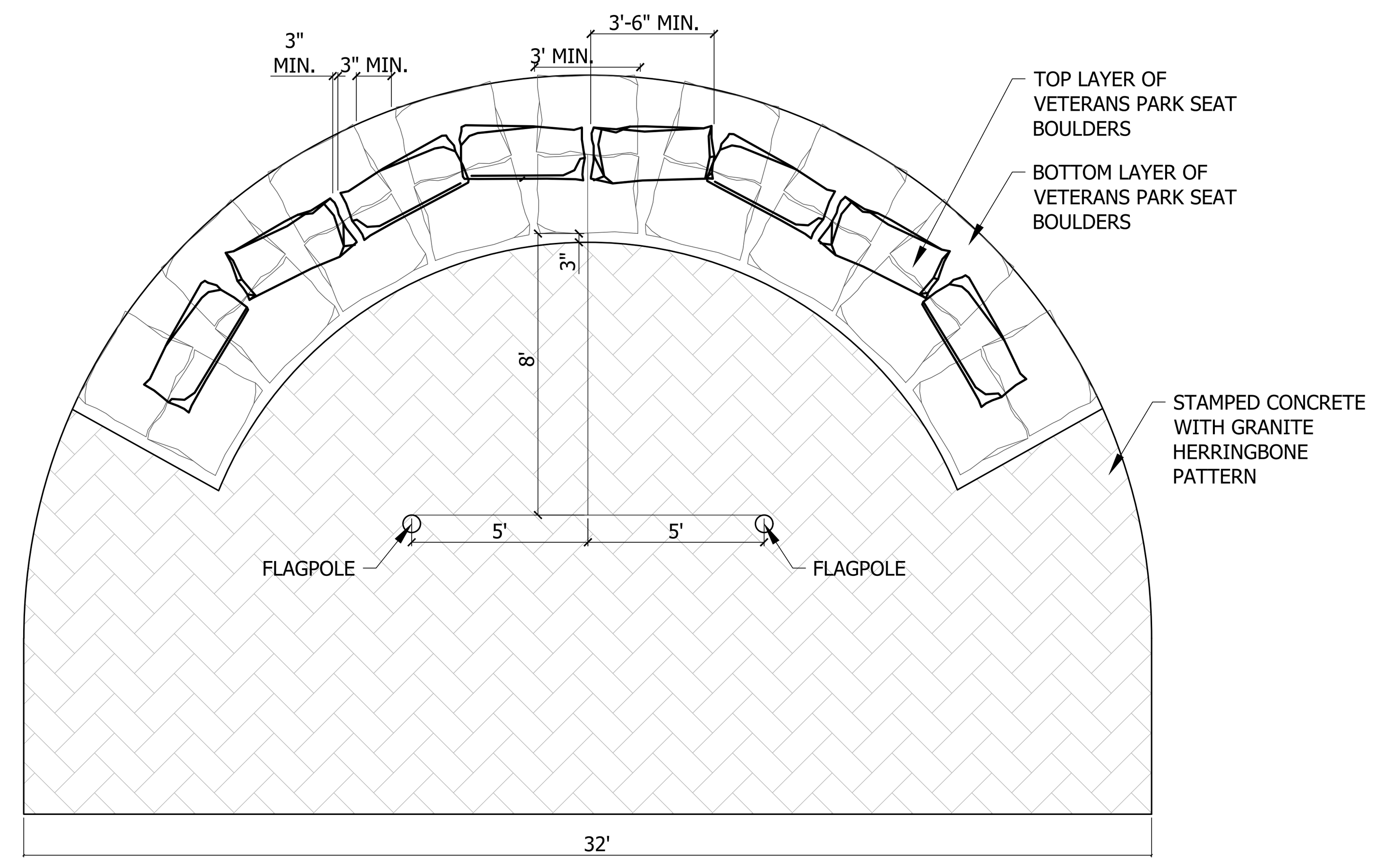
L3.3

DATE

5/7/2024



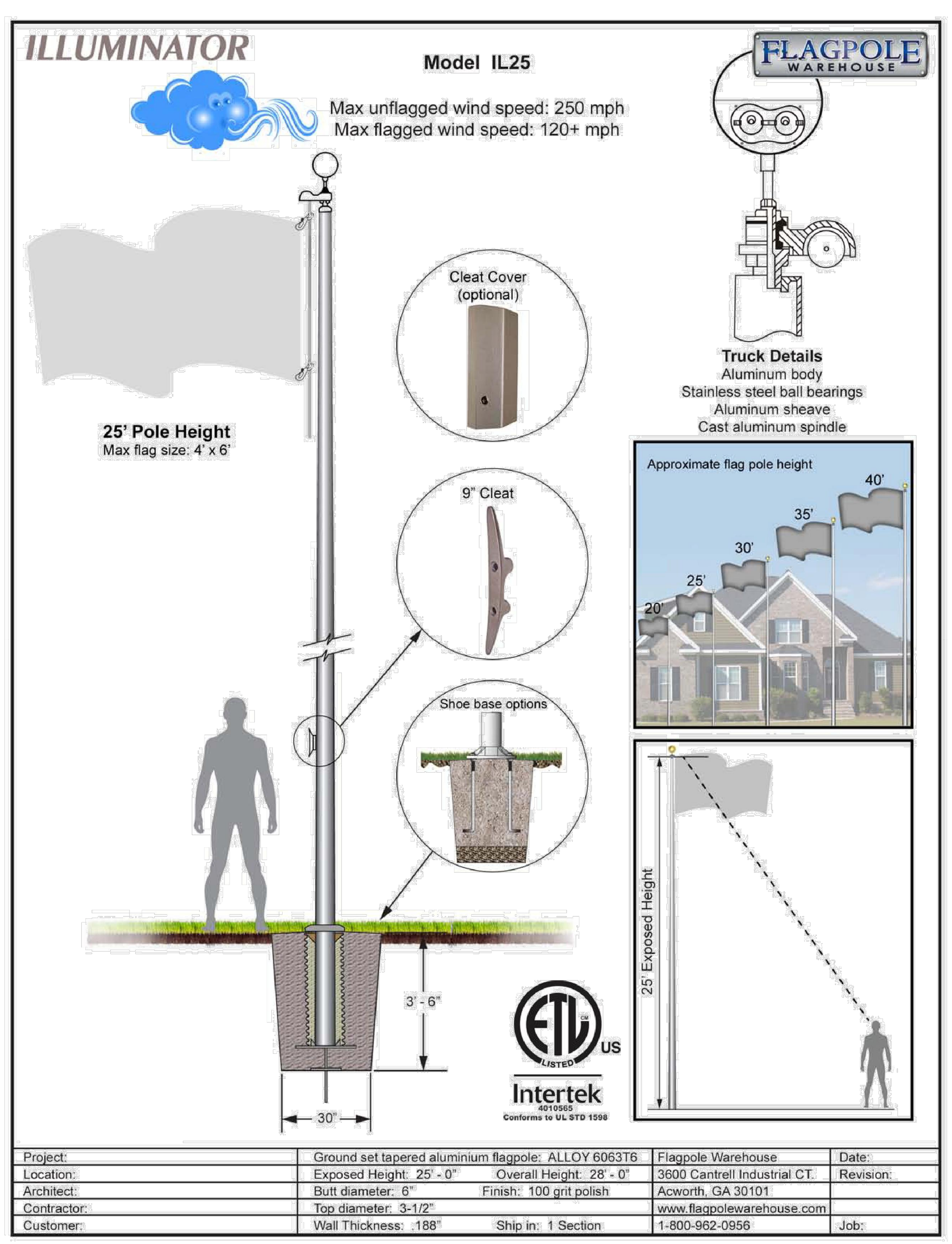
SIDE ELEVATION

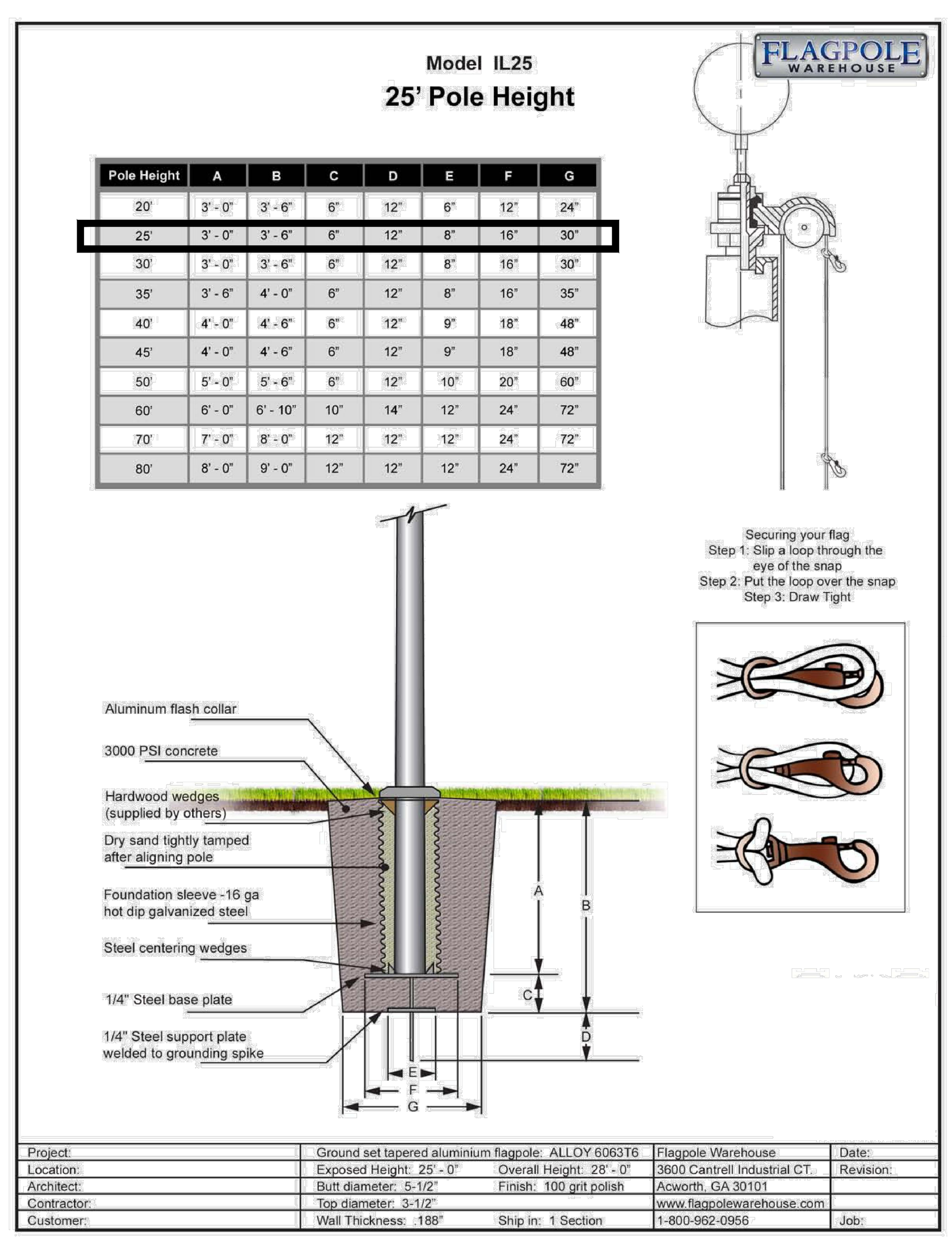


PLAN VIEW

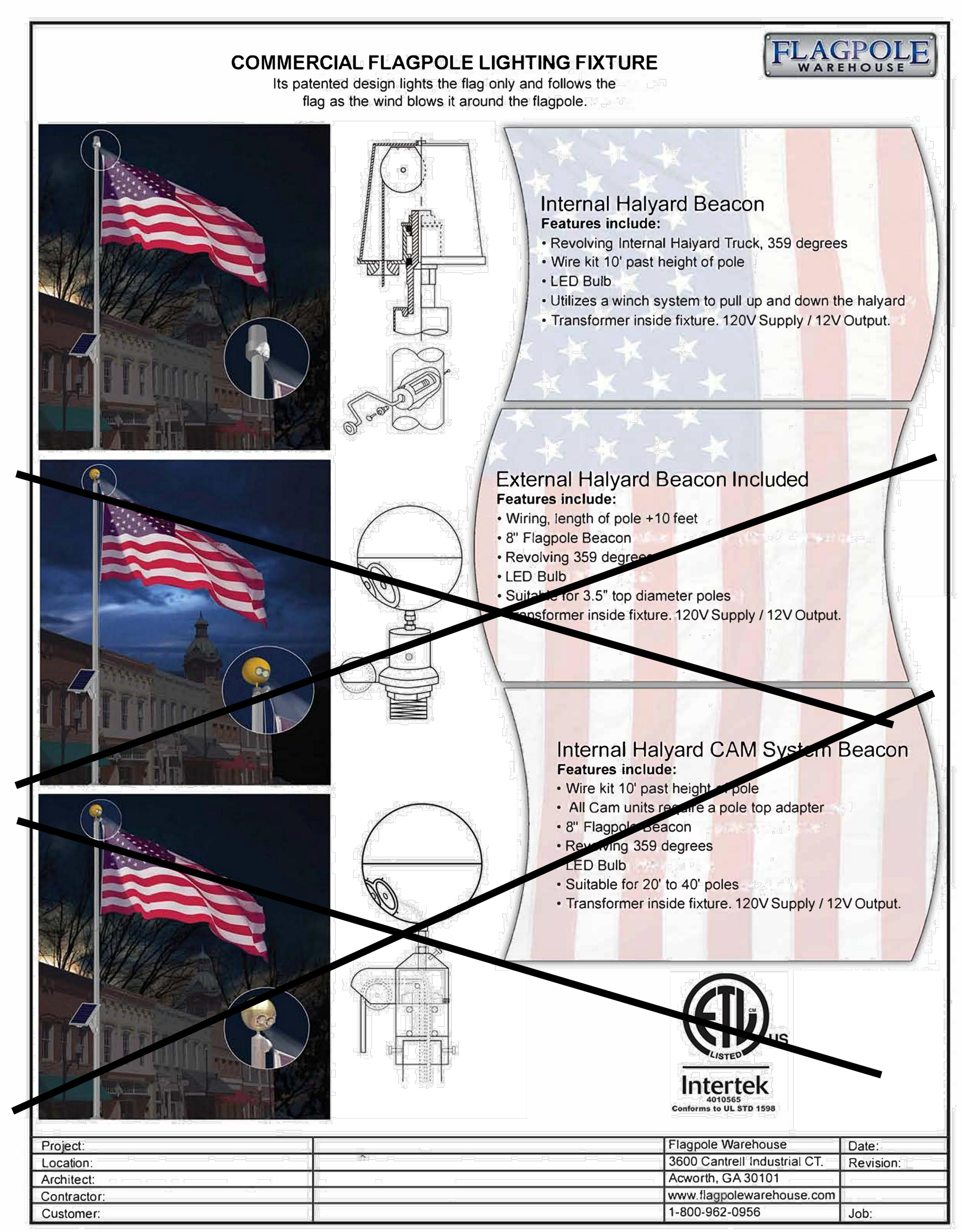
NOTES:
1. BOULDERS SHALL BE CHIEF CLIFF, PRAIRIE FIELDSTONE, OR DEEP CREEK BOULDERS FROM QUARRY WORKS, (406) 763-3028, OR APPROVED EQUAL.
2. RECTANGULAR ACCENT BOULDER SELECTED FOR BENCH SHAPE.
3. ALL SEAT BOULDERS TO BE APPROVED BY LANDSCAPE ARCHITECT AT QUARRY.
4. PLACEMENT OF SEAT BOULDERS TO BE OVERSEEN BY LANDSCAPE ARCHITECT.

1 VETERANS PARK PLAZA
N.T.S.





Pole Height	A	B	C	D	E	F	G
20'	3' - 0"	3' - 6"	6"	12"	6"	12"	24"
25'	3' - 0"	3' - 6"	6"	12"	8"	16"	30"
30'	3' - 0"	3' - 6"	6"	12"	8"	16"	30"
35'	3' - 6"	4' - 0"	6"	12"	8"	16"	35"
40'	4' - 0"	4' - 6"	6"	12"	9"	18"	48"
45'	4' - 0"	4' - 6"	6"	12"	9"	18"	48"
50'	5' - 0"	5' - 6"	6"	12"	10"	20"	60"
60'	6' - 0"	6' - 10"	10"	14"	12"	24"	72"
70'	7' - 0"	8' - 0"	12"	12"	12"	24"	72"
80'	8' - 0"	9' - 0"	12"	12"	12"	24"	72"



2 FLAGPOLE
N.T.S.

MONTANA STATE UNIVERSITY

MSU-CPDC
MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

FOR BIDDING

DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

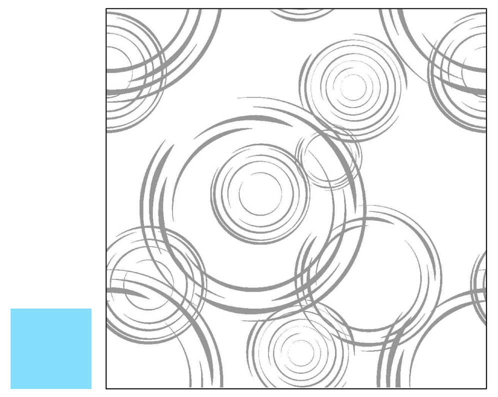
STATE OF MONTANA
JORIE M CREEL
No. 25787
LICENSED LANDSCAPE ARCHITECT

PPA#00-0000
A/E#00-00-00
22236

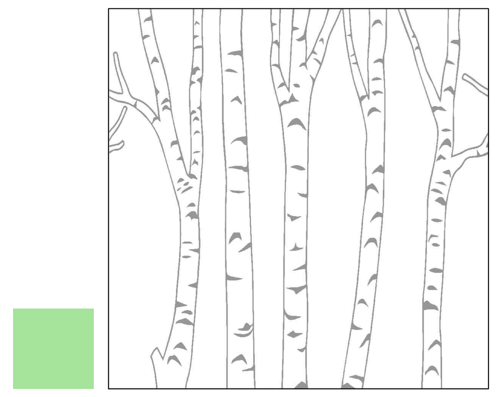
SHEET TITLE
LANDSCAPE DETAILS

SHEET
L3.4

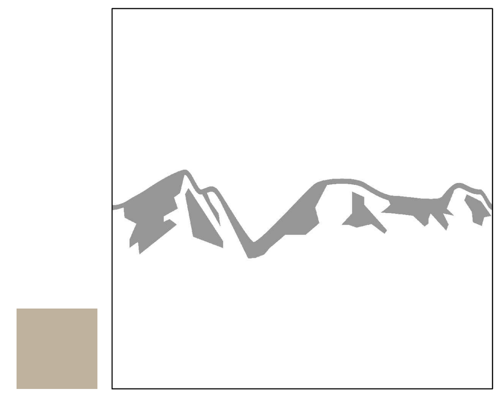
DATE
5/7/2024



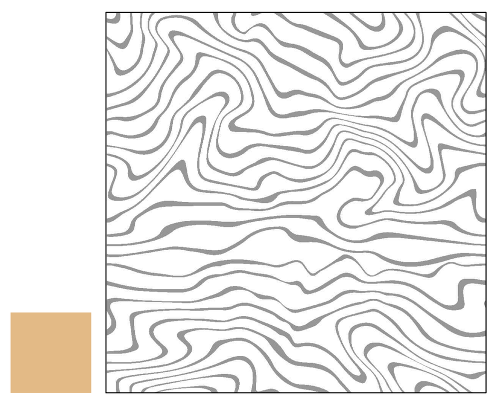
WATER ECOZONE STAMP



FOREST ECOZONE STAMP



MOUNTAIN ECOZONE STAMP



CANYON ECOZONE STAMP

GRASSLANDS ECOZONE STAMP

NOTES:
1. SIZE: 2.5 FT X 2.5 FT (900 SQ IN)
2. MATERIAL: FLEXIBLE RUBBER SKIN, ⅛" IMPRESSION DEPTH.
3. APPLICATION: APPLY CONCRETE MOLD FORM RELEASE AGENT, CRETE LEASE 880 SPRAY TO STAMP. PRESS INTO FRESH CONCRETE, AND REMOVE IMMEDIATELY. STAMP SKIN TO BE ADHERED TO PIECE OF 2.5' X 2.5' WOOD BOARD TO ACT AS A 'STAMP'.
4. ELECTRONIC VECTOR FILE OF EACH STAMP WILL BE PROVIDED TO THE CONTRACTOR.
5. SEE SHEET C7.2 FOR TYPICAL CONCRETE SCORING / JOINT PATTERN AND FINISH DETAIL.

1 CUSTOM CONCRETE STAMPS - ECOZONES

N.T.S.

FOR BIDDING

MONTANA STATE UNIVERSITY

MSU-CPDC

MONTANA STATE UNIVERSITY
BOZEMAN, MONTANA
PHONE: 406.994.5413
FAX: 406.994.5665

GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE

REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
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3	-	-

STATE OF MONTANA
JORIE M
CREEL
No. 25787
LICENSED
LANDSCAPE ARCHITECT

PPA#00-0000

A/E#00-00-00

22236

SHEET TITLE

LANDSCAPE DETAILS

SHEET

L3.5

DATE

5/7/2024

NOTE

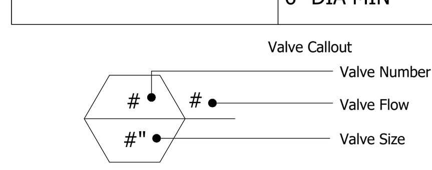
ALL IRRIGATION COMPONENTS CONFORM WITH MONTANA STATE UNIVERSITY'S IRRIGATION GUIDELINES AND SPECIFICATIONS.

IT IS THE RESPONSIBILITY OF THE BIDDING CONTRACTOR TO UNDERSTAND MSU SPECIFICATIONS AND GUIDELINES PRIOR TO BID IN ORDER TO INSTALL FINAL PRODUCT THAT WILL BE ACCEPTED AND APPROVED BY CLIENT

IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
EST LCS RCS CST SST	RAIN BIRD 1804-SAM-PRS-NP 15 STRIP SERIES TURF SPRAY 4IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING. NON POTABLE PURPLE CAP.	6
Q H F	RAIN BIRD 1804-SAM-PRS-NP 5 SERIES MPR TURF SPRAY 4IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING. NON POTABLE PURPLE CAP.	4
Q T H F	RAIN BIRD 1804-SAM-PRS-NP 8 SERIES MPR TURF SPRAY 4IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING. NON POTABLE PURPLE CAP.	67
Q T H F	RAIN BIRD 1804-SAM-PRS-NP 10 SERIES MPR TURF SPRAY 4IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING. NON POTABLE PURPLE CAP.	15
4 6 8 10 12 15 18	RAIN BIRD 1804-SAM-PRS-NP ADJ TURF SPRAY 4IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE. PRESSURE REGULATING. NON POTABLE PURPLE CAP.	5
Q T H F	RAIN BIRD 1812-SAM-PRS-NP 8 SERIES MPR SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING DEVICE, AND NON-POTABLE PURPLE CAP.	30
4 6 8 10 12 15 18	RAIN BIRD 1812-SAM-PRS-NP ADJ SHRUB SPRAY 12IN. POP-UP SPRINKLER WITH CO-MOLDED WIPER SEAL. 1/2IN. NPT FEMALE THREADED INLET. WITH SEAL-A-MATIC CHECK VALVE, PRESSURE REGULATING DEVICE, AND NON-POTABLE PURPLE CAP.	91
LST SST RST	RAIN BIRD R-VAN-STRIP RD-04-SAM-P45-NP SHRUB ROTARY, 5FT.X15FT. (LCS AND RCS), 5FT.X30FT. (SST) HAND ADJUSTABLE MULTI-STREAM ROTARY W/ RD1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. W/ NON-POTABLE PURPLE CAP.	8
14 ADJ 14 F	RAIN BIRD R-VAN14 RD-04-SAM-P45-NP TURF ROTARY, 8FT.-14FT. 45-270 DEGREES AND 360 DEGREES HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. WITH NON-POTABLE PURPLE CAP.	135
18 ADJ 18 F	RAIN BIRD R-VAN18 RD-04-SAM-P45-NP TURF ROTARY, 13FT.-18FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. W/ NON-POTABLE PURPLE CAP.	36
24 ADJ 24 F	RAIN BIRD R-VAN24 RD-04-SAM-P45-NP TURF ROTARY, 17FT.-24FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 TURF SPRAY BODY ON 4IN. POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. W/ NON-POTABLE PURPLE CAP.	30
14 ADJ 14 F	RAIN BIRD R-VAN14 RD-12-SAM-P45-NP SHRUB ROTARY, 8FT.-14FT. 45-270 DEGREES AND 360 DEGREES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 SHRUB SPRAY BODY ON 12IN. POP-UP, W/ CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. W/ NON-POTABLE PURPLE CAP.	245
18 ADJ 18 F	RAIN BIRD R-VAN18 RD-12-SAM-P45-NP SHRUB ROTARY, 13FT.-18FT. 45-270 DEGREES AND 360 DEGEES. HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 SHRUB SPRAY BODY ON 12IN. POP-UP, W/ CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. W/ NON-POTABLE PURPLE CAP.	116
24 ADJ 24 F	RAIN BIRD R-VAN24 RD-12-SAM-P45-NP SHRUB ROTARY, 17FT.-24FT. 45-270 DEGREES AND 360 DEGREES HAND ADJUSTABLE MULTI-STREAM ROTARY W/RD1800 SHRUB SPRAY BODY ON 12IN. POP-UP, W/ CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR. 1/2IN. NPT FEMALE THREADED INLET. W/ NON-POTABLE PURPLE CAP.	77
360	RAIN BIRD 1804-1300AF FLOOD FLOOD BUBBLER 4.0IN. POP-UP, WITH A PA-80 ADAPTER.	151
1401 1402 1404 1408	RAIN BIRD RWS-B-C-P W/ RWS-SOCK 1400 SERIES ROOT WATERING SYSTEM WITH 4IN. DIAMETER X 36IN. LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE. CHECK VALVE, PURPLE GRATE, AND SAND SOCK. RAIN BIRD BUBBLER OPTION AS INDICATED: 1401 0.25 GPM, 1402 0.5 GPM, 1404 1.0 GPM, 1408 2.0 GPM.	8

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	
	RAIN BIRD PESB 1IN., 1-1/2IN., 2IN. PLASTIC INDUSTRIAL VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION. WITH SCRUBBER TECHNOLOGY FOR RELIABLE PERFORMANCE IN DIRTY WATER IRRIGATION APPLICATIONS.	
	IRRIGATION LATERAL LINE: PVC SCHEDULE 40 1.5" MIN	
	IRRIGATION MAINLINE: PVC SCHEDULE 40 WITH 14 AWG TRACER WIRE	
	PIPE SLEEVE: PVC SCHEDULE 40 6" DIA MIN	



VALVE SCHEDULES

THE DESIGN OF THE IRRIGATION SYSTEM ASSUMES THAT THE VALVES LOCATIONS ARE PLACED IN RELATION TO THE EXISTING IRRIGATION MAINLINES AND AS-BUILT MAPS PROVIDED BY MSU. THE VALVES ASSOCIATED WITH EACH BUILDING ARE PLACED WITH PROXIMITY TO AN EXISTING CONTROLLER. EXISTING CONTROLLER CAPACITY AND AVAILABILITY MUST BE CHECKED AND COORDINATED WITH THE CAMPUS IRRIGATION STAFF. IF THERE IS NO AVAILBILITY WITHIN EXISTING CONTROLLERS, CONTACT LANDSCAPE ARCHITECT TO COORDINATE ALTERNATIVES.

VALVE SCHEDULE HEATING PLANT

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1-1/2"	TURF ROTARY	32.97	52	45	49.0		1.08 in/h
2	RAIN BIRD PESB	1-1/2"	TURF ROTARY	17.96	32	45	49.2		1.08 in/h
3	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	20.06	28	45	49.5		0.81 in/h

VALVE SCHEDULE BARNARD BLDG

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1"	TURF SPRAY	17.78	30	30	32.8		2.49 in/h
2	RAIN BIRD PESB	1-1/2"	TURF SPRAY	19.79	38	30	34.3		2.28 in/h
3	RAIN BIRD PESB	1"	TURF ROTARY	3.35	7	45	46.6		1.41 in/h

VALVE SCHEDULE AJM BLDG

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	21.31	24	45	49.6		0.75 in/h
2	RAIN BIRD PESB	1-1/2"	BUBBLER	18	18	10	14.3		3.77 in/h
3	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	31.48	37	45	49.5		0.7 in/h
4	RAIN BIRD PESB	1-1/2"	TURF ROTARY	44.9	32	45	49.2		0.61 in/h
5	RAIN BIRD PESB	1-1/2"	TURF ROTARY	26.11	47	45	49.7		0.84 in/h
6	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	38.1	36	45	49.7		0.52 in/h
7	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	25.68	27	45	49.9		0.6 in/h
8	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	25.31	19	45	49.6		0.45 in/h
9	RAIN BIRD PESB	1-1/2"	TURF ROTARY	41.07	56	45	49.6		1.06 in/h
10	RAIN BIRD PESB	1"	BUBBLER	27	27	10	16.7		3.7 in/h
11	RAIN BIRD PESB	1"	SHRUB SPRAY	15.08	30	30	34.6		1.38 in/h
12	RAIN BIRD PESB	1"	SHRUB ROTARY	22.2	31	45	51.4		1.05 in/h
13	RAIN BIRD PESB	1"	SHRUB SPRAY	26.51	40	30	36.1		2.81 in/h

VALVE SCHEDULE ROMNEY BLDG

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1"	TURF ROTARY	8.68	14	45	47.0		0.84 in/h
2	RAIN BIRD PESB	1"	SHRUB ROTARY	24.29	49	45	49.6		0.67 in/h
3	RAIN BIRD PESB	1"	SHRUB SPRAY	25.64	51	30	37.5		3.14 in/h
4	RAIN BIRD PESB	1"	BUBBLER	9	12	20	22.1		2.77 in/h

VALVE SCHEDULE WELLNESS BLDG

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1-1/2"	SHRUB ROTARY	29.17	31	45	50.8		0.49 in/h
2	RAIN BIRD PESB	1"	BUBBLER	45	45	10	24.7		3.88 in/h
3	RAIN BIRD PESB	1"	SHRUB ROTARY	25.05	34	45	49.7		0.59 in/h
4	RAIN BIRD PESB	1"	BUBBLER	13	13	10	12.4		3.6 in/h

VALVE SCHEDULE GAINES BLDG

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1"	BUBBLER	25	25	10	16.0		3.91 in/h
2	RAIN BIRD PESB	1"	BUBBLER	2	2	10	11.4		3.74 in/h
3	RAIN BIRD PESB	1"	SHRUB ROTARY	39.25	55	45	55.7		0.8 in/h
4	RAIN BIRD PESB	1"	SHRUB ROTARY	3.85	8	45	46.7		0.62 in/h

VALVE SCHEDULE V.COM. BLDG

NUMBER	MODEL	SIZE	TYPE	GPM	HEADS	DESIGN PSI	PSI	PSI @ POC	PRECIP
1	RAIN BIRD PESB	1"	SHRUB ROTARY	16.53	28	45	47.6		1.16 in/h
2	RAIN BIRD PESB	1"	BUBBLER	17	17	10	13.5		3.81 in/h
3	RAIN BIRD PESB	1"	TURF SPRAY	16.05	29	30	32.8		1.81 in/h

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GRANT STREET
PEDESTRIAN MALL

DRAWN BY: CMK/CE
REVIEWED BY: TP/DRS

REV.	DESCRIPTION	DATE
1	ADDENDUM #1	05/07/24
2	ADDENDUM #2	05/07/24
3	-	-

STATE OF MONTANA
JORIE M CREEL
No. 25787
LICENSED LANDSCAPE ARCHITECT
5/07/24

PPA#00-0000
A/E#00-00-00
22236

SHEET TITLE
IRRIGATION SCHEDULE & NOTES

SHEET
L4.1

DATE
5/7/2024

IRRIGATION NOTES

1. THIS SYSTEM DESIGN ASSUMES A MINIMUM DYNAMIC PRESSURE FOR THE IRRIGATION SYSTEM OF 60 PSI AT THE VARIOUS EXISTING CONNECTION POINTS.
2. THE IRRIGATION SYSTEM POINT-OF-CONNECTION SHALL BE AT VARIOUS LOCATIONS SHOWN. AVAILABLE WATER USAGE AT EACH POC SHALL BE VERIFIED. VERIFY EXACT LOCATION OF P.O.C. WITH OWNERS REPRESENTATIVE.
3. ANY NEW IRRIGATION MAIN LINE TO BE 2" SCH 40 PVC PIPE PER MSU SPECIFICATIONS.
4. ALL TREES TO BE IRRIGATED THROUGH DEDICATED BUBBLERS UNLESS OTHERWISE NOTED.
5. ALL SHRUBS TO BE IRRIGATED THROUGH OVERHEAD SPRAY OR DEDICATED BUBBLERS. SEE PLANS FOR IRRIGATION TYPE FOR EACH SHRUB.
6. CONTROLLER : VALVE LOCATIONS ARE DESIGNED TO BE WITHIN PROXIMITY TO EXISTING BUILDING LOCATIONS. CONTROLLER CAPACITY AND AVAILABILITY TO BE CONFIRMED WITH CAMPUS IRRIGATION STAFF. FINAL LOCATION TO BE APPROVED BY OWNERS REPRESENTATIVE.
7. COORDINATE UTILITY LOCATES OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
8. DO NOT PROCEED WITH THE INSTALLATION OF THE IRRIGATION SYSTEM WHEN IT IS OBVIOUS IN THE FIELD THAT OBSTRUCTIONS OR GRADE DIFFERENCES EXIST THAT MIGHT NOT HAVE CONSIDERED IN THE DESIGN PROCESS. IF DISCREPANCIES IN CONSTRUCTION DETAILS, LEGEND, NOTES OR SPECIFICATIONS ARE DISCOVERED, BRING ALL SUCH OBSTRUCTIONS OR DISCREPANCIES TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE.
9. DRAWINGS ARE DIAGRAMMATIC. THEREFORE, THE FOLLOWING SHOULD BE NOTED:
   A. ALTHOUGH IRRIGATION COMPONENTS MAY BE SHOWN OUTSIDE OF PLANTING AREAS FOR CLARITY, INSTALL IRRIGATION PIPE, WIRING, VALVES, ETC. IN LANDSCAPED AREAS AND WITH PROPERTY LINES.
   B. TREE AND SHRUB LOCATION SHOWN ON LANDSCAPE PLANS TAKE PRECEDENCE OVER IRRIGATION EQUIPMENT LOCATIONS. AVOID CONFLICTS BETWEEN THE IRRIGATION SYSTEM, PLANTING MATERIALS, AND ARCHITECTURAL FEATURES.
10. PROVIDE THE FOLLOWING COMPONENTS TO THE OWNER PRIOR TO THE COMPLETION OF THE PROJECT:
   A. TWO (2) OPERATING KEYS FOR EACH TYPE OF MANUALLY OPERATED VALVES AND CONTROLLERS.

8. THE IRRIGATION CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF IRRIGATION SLEEVING. SCHEDULE 40 PVC SLEEVES ARE REQUIRED FOR BOTH PIPING AND ELECTRICAL WIRING AT EACH HARDSCAPE CROSSING. COORDINATE INSTALLATION OF SLEEVING WITH OTHER TRADES. ANY PIPE OR WIRE WHICH WAS NOT INSTALLED WILL REQUIRE HORIZONTAL BORING BY THE IRRIGATION CONTRACTOR. IRRIGATION CONTRACTOR TO COORDINATE WITH SITE CONTRACTOR FOR TIME OF INSTALLATION AND LOCATION OF ANY SLEEVE AND/OR CONDUIT INSTALLATION. LOCATION AND NUMBER OF SLEEVES IS THE RESPONSIBILITY OF THE CONTRACTOR. SLEEVES SHALL BE MARKED IN CONCRETE. (SEE SPEC). ALL PIPE SLEEVE SHALL BE 2 PIPE SIZES LARGER THAN THE PIPE TO BE INSTALLED THROUGH MIN 6" SLEEVE, UNLESS NOTED OTHERWISE. PROVIDE SEPARATE SLEEVES FOR BOTH 120V AND 24V WIRING. WIRE SLEEVES SHALL BE MIN 6" DIA.
9. INSTALL TWO (2) #14 AWG CONTROL WIRES FROM CONTROLLER LOCATION TO EACH DEAD-END OF MAINLINE FOR USE AS SPARE INCASE OF CONTROL WIRE FAILURE. COIL 3 FEET OF WIRE IN VALVE BOX.
10. CONTRACTOR SHALL BE REQUIRED TO START UP AND WINTERIZE SYSTEM FOR THE WARRANTY PERIOD, ONE YEAR FROM FINAL COMPLETION, AND MAKE ALL ADJUSTMENTS AND REPAIRS REQUIRED TO INSURE EFFICIENT OPERATION.
11. CONTRACTOR SHALL PROVIDE ALL REQUIRED IRRIGATION WATER CONTROL, FILTRATION PRESSURE REGULATION, WASTE AND DRAINAGE REQUIREMENTS OF A COMPLETE MAINTENANCE SYSTEM.
12. CONTRACTOR SHALL MAINTAIN AN ACCURATE CURRENT AS BUILT PLAN ON THE JOBSITE AT ALL TIMES.
13. ALL VALVE BOXES TO BE SIZED PER MSU SPECIFICATIONS. VALVE LOCATIONS ARE DIAGRAMMATIC. LOCATE VALVES IN PLANTING BED AREAS WHEN POSSIBLE.
14. CONTRACTOR SHALL REPAIR EXISTING IRRIGATION WHERE POSSIBLE.
15. A COMPLETE LIST OF EQUIPMENT, SHOP DRAWING CATALOG CUTS, LAYOUT PERFORMANCE AND MAINTENANCE WARRANTY INFORMATION SHALL BE SUBMITTED TO THE OWNERS REPRESENTATIVE FOR APPROVAL PRIOR TO COMMENCING WORK. SAID INFORMATION SHALL BE COMPILED ALONG WITH AS-BUILT DRAWINGS AND MAINTENANCE INSTRUCTION AND SUBMITTED TO THE OWNERS REPRESENTATIVE FOR APPROVAL AT FINAL COMPLETION. CONTRACTOR SHALL DEMONSTRATE COMPLETE OPERATING SYSTEM AND MAINTENANCE TO OWNERS REPRESENTATIVE AND OWNERS MAINTENANCE AND OPERATING PERSONNEL.

NOTE

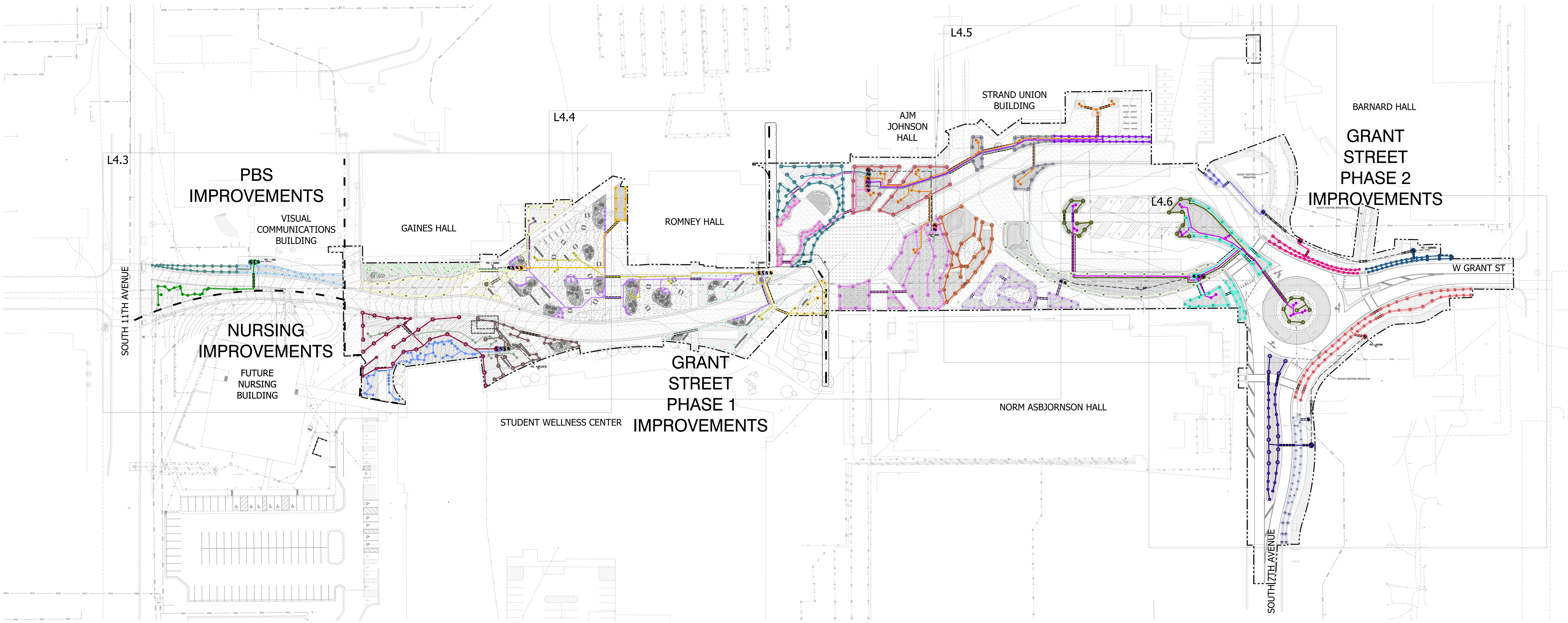
ALL IRRIGATION COMPONENTS CONFORM WITH MONTANA STATE UNIVERSITY'S IRRIGATION GUIDELINES AND SPECIFICATIONS.

IT IS THE RESPONSIBILITY OF THE BIDDING CONTRACTOR TO UNDERSTAND MSU SPECIFICATIONS AND GUIDELINES PRIOR TO BID IN ORDER TO INSTALL FINAL PRODUCT THAT WILL BE ACCEPTED AND APPROVED BY CLIENT

LEGEND

LIMIT OF WORK

PHASE LINE



NORTH

OVERALL IRRIGATION PLAN

60 30 0 60 120

SCALE: 1" = 60'

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GRANT STREET
PEDESTRIAN MALL

FOR BIDDING

DRAWN BY: CMK/CE

REVIEWED BY:		TP/DRS
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2	ADDENDUM #2	05/07/24
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JORIE M CREEL
No. 25787
LICENSED LANDSCAPE ARCHITECT

PPA#00-0000

A/E#00-00-00

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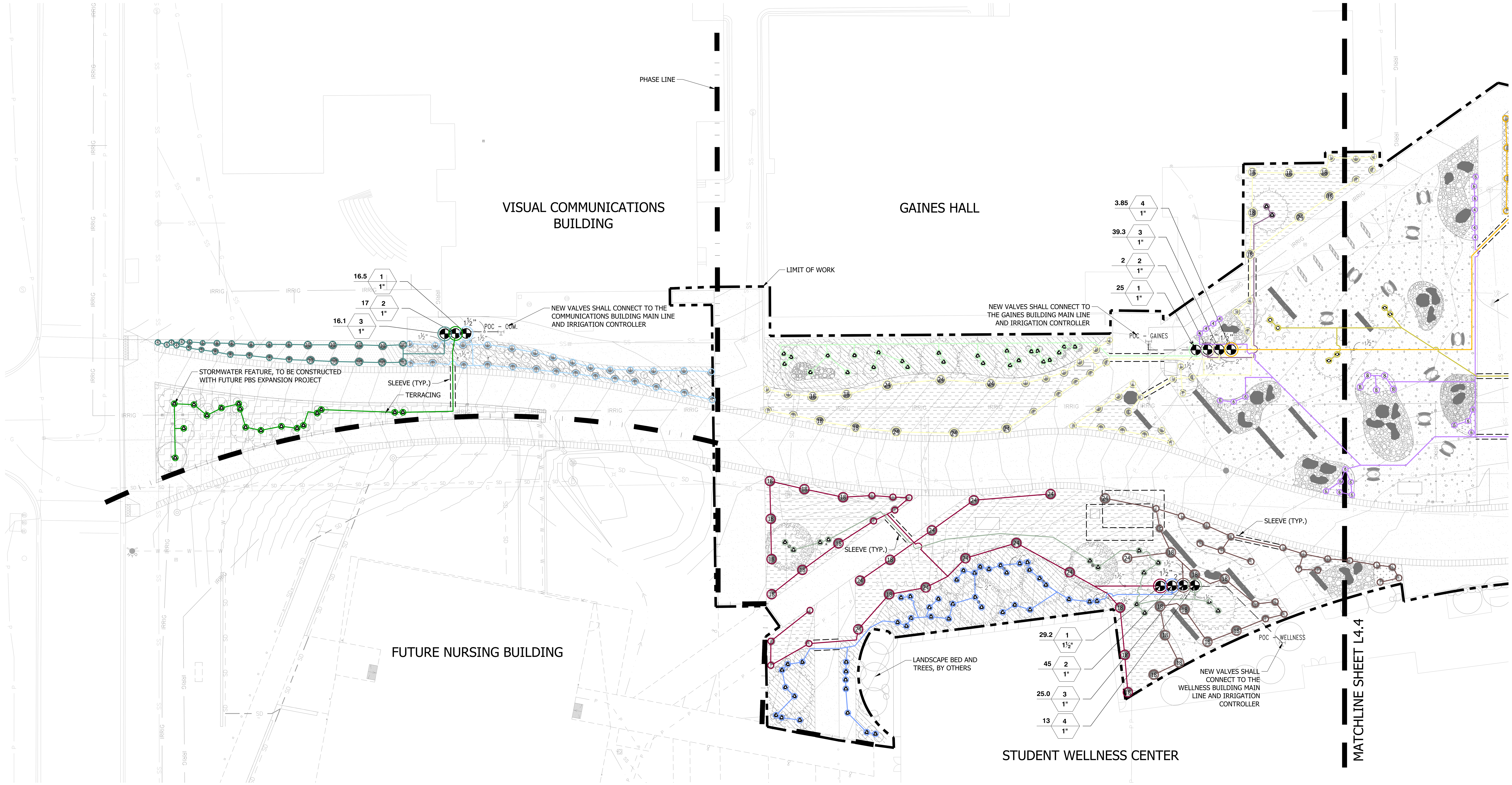
SHEET TITLE
OVERALL IRRIGATION PLAN

SHEET
L4.2

DATE
5/7/2024



NORTH

IRRIGATION PLAN

20 10 0 20 40

SCALE: 1" = 20'

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No. 25787
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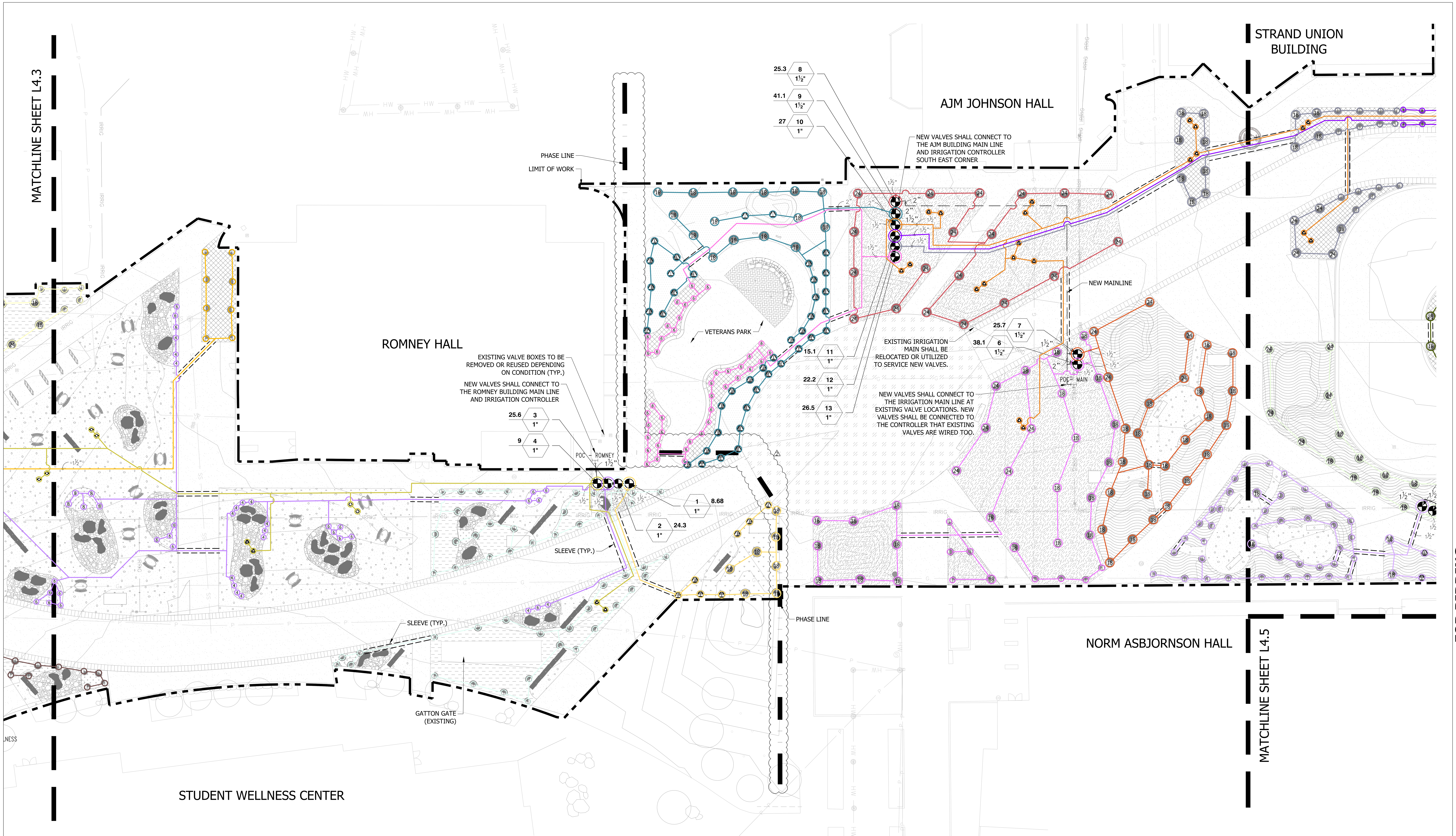
SHEET TITLE
IRRIGATION PLAN

SHEET
L4.3

DATE
5/7/2024



IRRIGATION PLAN

NORTH

SCALE: 1" = 20'

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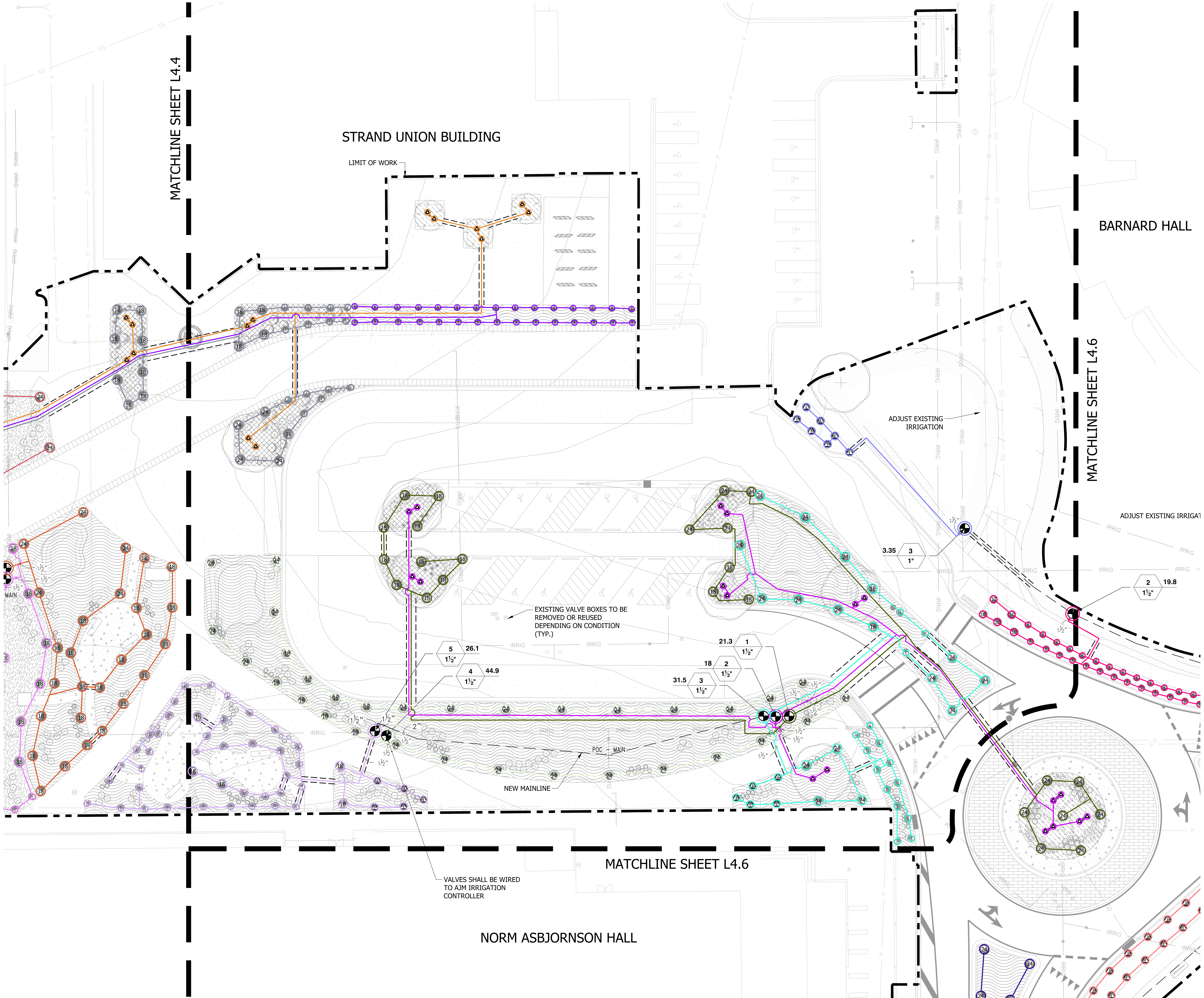
SHEET TITLE
IRRIGATION PLAN

SHEET
L4.4

DATE
5/7/2024



NORTH

IRRIGATION PLAN

20 10 0 20 40

SCALE: 1" = 20'

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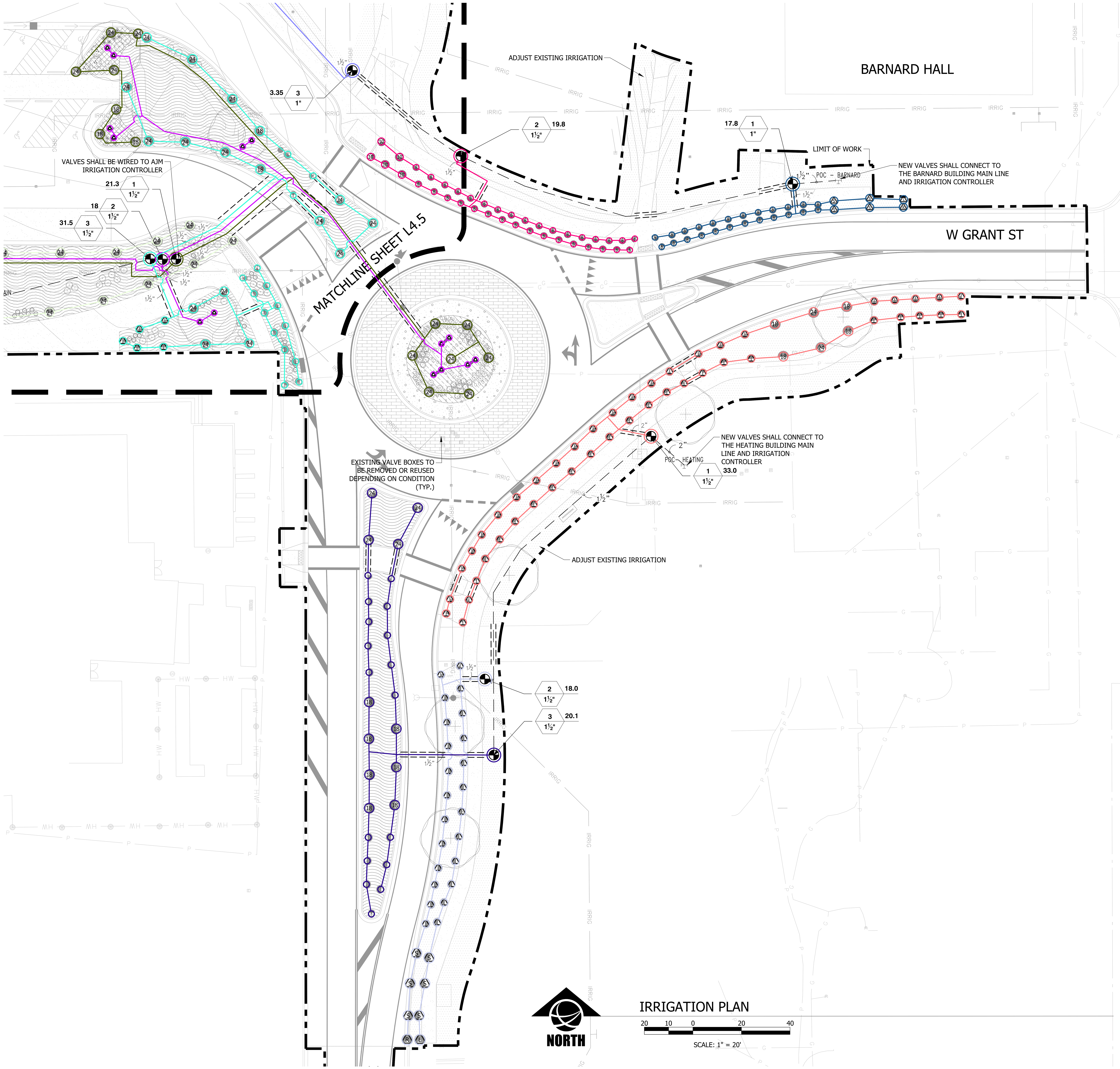
SHEET TITLE
IRRIGATION PLAN

SHEET
L4.5

DATE
5/7/2024



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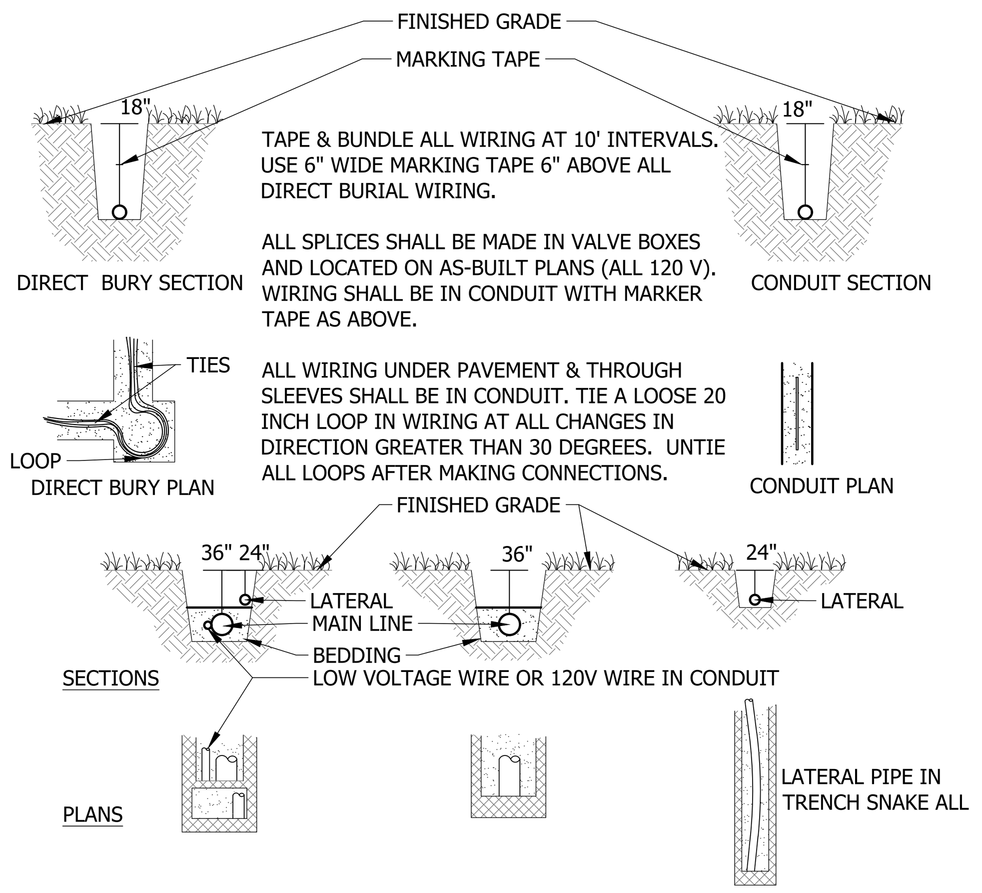
SHEET TITLE
IRRIGATION PLAN

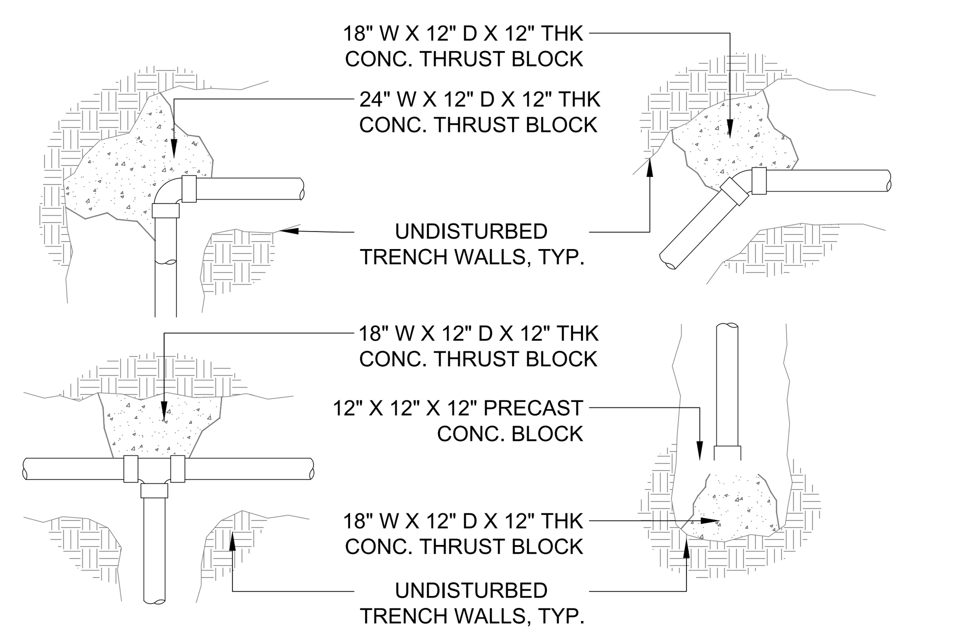
SHEET
L4.6

DATE
5/7/2024



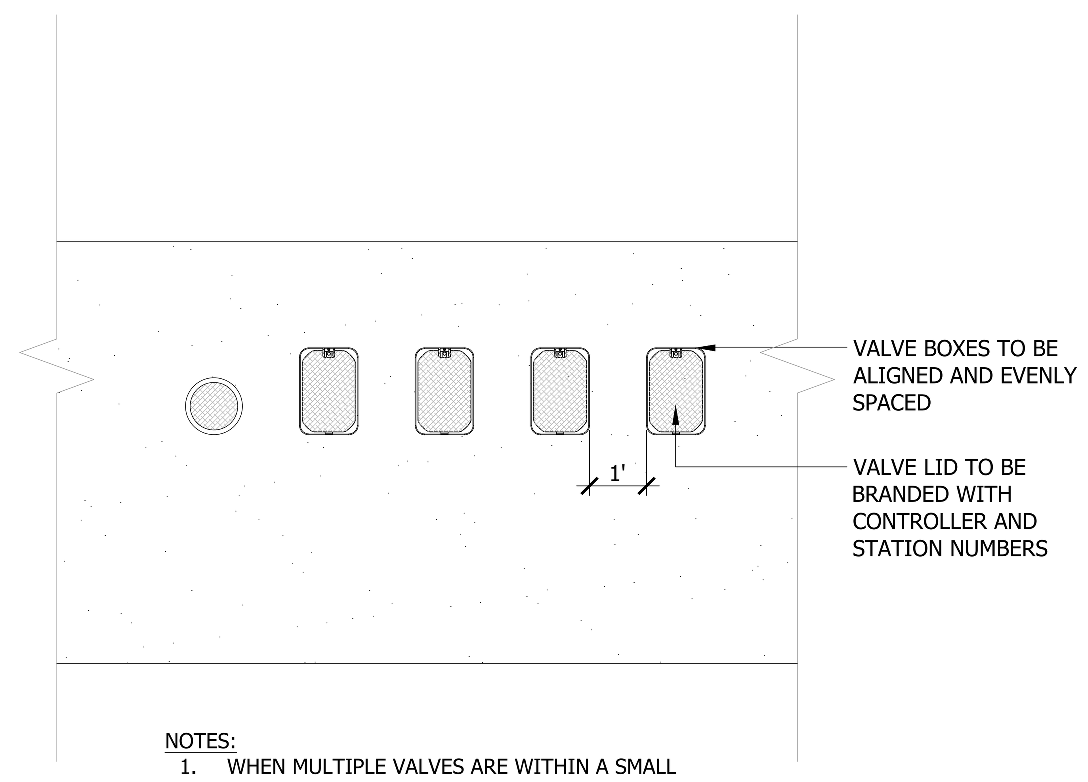
1 TRENCHING DETAILS

N.T.S.



2 THRUST BLOCKING MAINLINE

N.T.S.

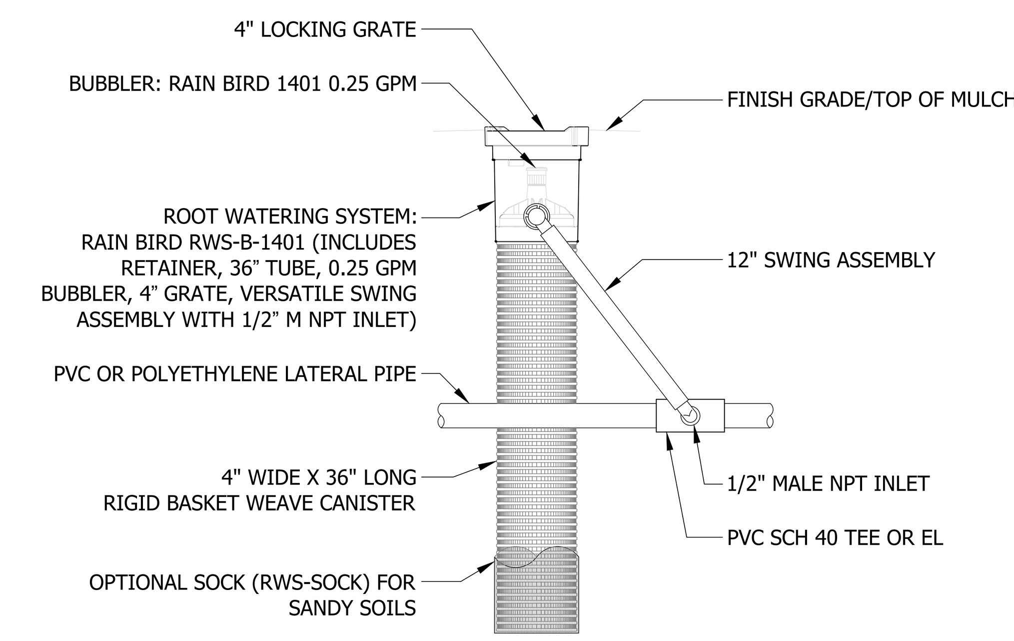


NOTES:

1. WHEN MULTIPLE VALVES ARE WITHIN A SMALL PROXIMITY THE CONTRACTOR SHALL DETERMINE IF BEST TO USE ONE LARGE VALVE BOX AND GANG VALVES TOGETHER.

3 VALVE BOX PLACEMENT

N.T.S.

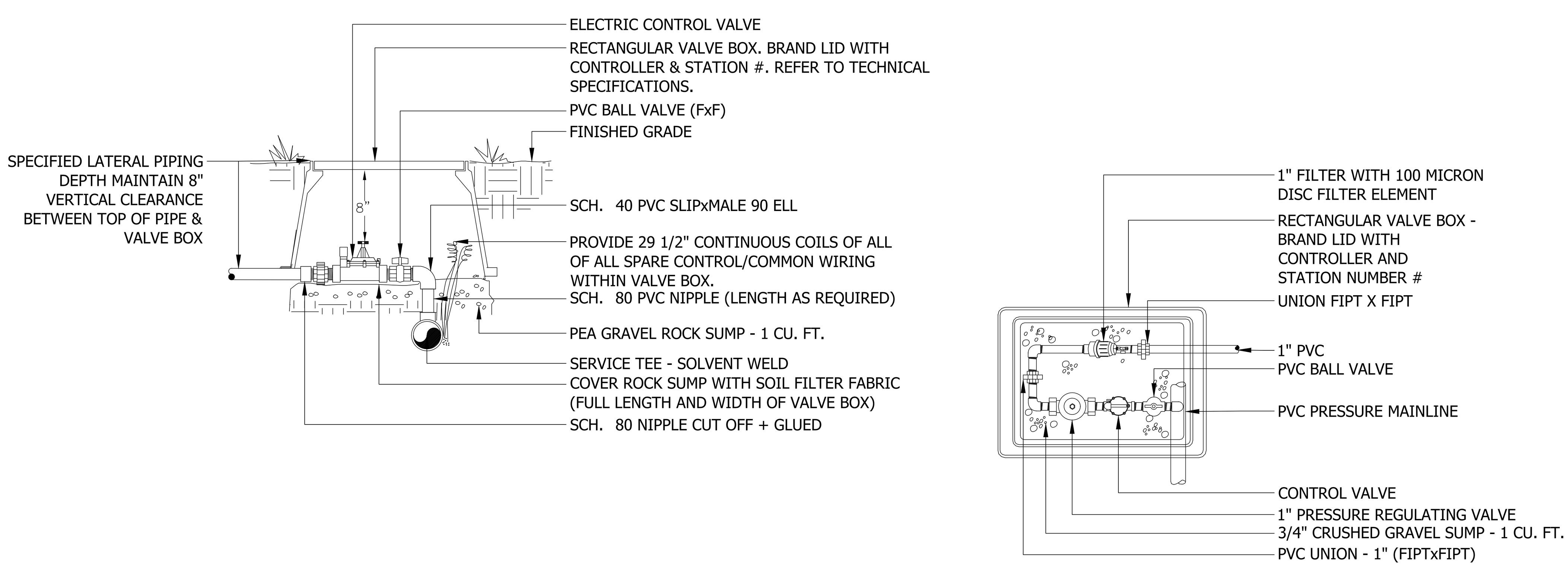


NOTES:

1. 4" (10.2 cm) GRATE IS ALSO AVAILABLE IN PURPLE (RWS-GRATE-P).
2. INSTALL PRODUCT SO THAT THE GRATE IS EVEN WITH FINISH GRADE OR TOP OF MULCH.
3. OPTIONAL SAND SOCK (RWS-SOCK) IS 34" (86.4 cm) IN LENGTH TO COVER MESH BASKET AREA.
4. WHEN INSTALLING IN EXTREMELY HARD OR CLAY SOILS, ADD 3/4" (1.9 cm) GRAVEL UNDER AND AROUND THE UNIT TO ALLOW FASTER WATER INFILTRATION AND ROOT PENETRATION.
5. ONCE RWS HAS BEEN INSTALLED FILL THE BASKET WITH PEA GRAVEL BEFORE LOCKING LID.

4 RAIN BIRD 1401 BUBBLER

N.T.S.



NOTES:

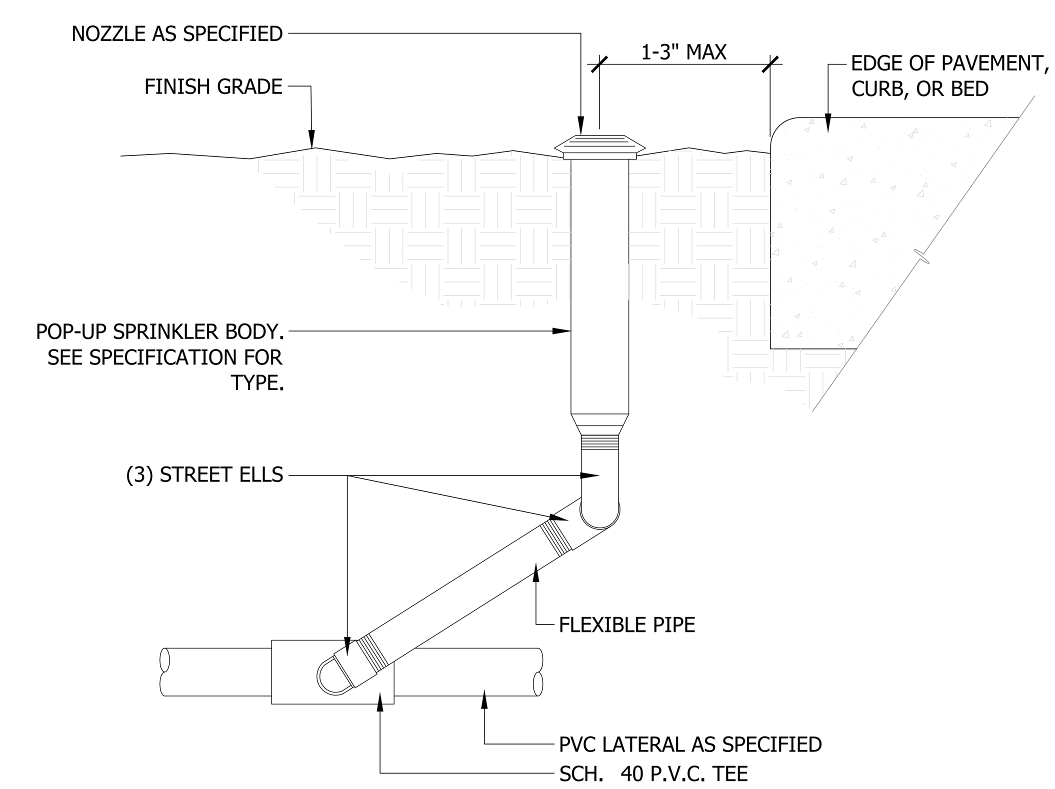
1. DIAMETERS OF PVC FITTINGS AND RISER SHALL EQUAL ELECTRIC CONTROL VALVE DIAMETER.
2. VALVE BOXES SHALL BE INSTALLED PARALLEL OR PERPENDICULAR TO ADJACENT SIDEWALKS AND HARD SURFACES WHERE APPLICABLE.
3. PROVIDE 4 FT. MIN. SEPARATION BETWEEN ALL BOXES.
4. SEE SPECIFICATION FOR CONTROL VALVE INSTALLATION

NOTES:

1. INSTALL ASSEMBLY TO REST ON GRAVEL SUMP. CONTAIN ENTIRE ASSEMBLY WITHIN BOX. VALVE BOX TO BE FLUSH WITH FINISH GRADE.

5 ELECTRIC CONTROL VALVE

N.T.S.



NOTES:

1. NIPPLE AND STREET ELL DIAMETERS SHALL EQUAL INLET SIZE SPRAY BODY.
2. ALL SPRAY HEADS SHALL BE BOTTOM INLET ONLY.

6 POP-UP SPRAY HEAD

N.T.S.

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GRANT STREET
PEDESTRIAN MALL

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SHEET TITLE

IRRIGATION DETAILS

SHEET

L5.1

DATE

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