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. 1 - OUTLINE AND SUMMARY INFORMATION

Project Name: Parking Improvements 2023

PPA No.: 22-0012

Date: 5/11/23

Owner: Montana State University – PDC
P.O. Box 172760
Bozeman, Montana 59717-2760

To: All Plan Holders of Record
*The Plans and Specification prepared by **DJ&A** dated **May 6th, 2023**, shall be clarified and added as follow. 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.*

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

AMENDMENTS TO THE PROJECT MANUAL

A. Table of contents

B. Bid Proposal form 098

C. 012300 – Alternates - Specification

D. 02114 – Relocating or Removing Utility Piles, Street Signs And Mailboxes - Specification

E. 021753 - ADA Parking Improvements - Specification

AMENDMENTS TO THE DRAWINGS

A. GIO-1 Cover Page – revised drawing index

B. GIO-2 Notes, Legend, & Abbreviations – Engineer stamp added

C. GIO-3 Key Pay & Survey Control – Engineer stamp added

D. CD-1 Paisley Court West – Demolition– Engineer stamp added

E. CD1-2 Paisley Court East - Demolition– Engineer stamp added

F. CD1-3 Grant Chamberlain – Demolition – 100% drawings added

G. CP-1 Paisley Court West – Site Plan– Engineer stamp added

H. CP-2 Paisley Court East - Site Plan– Engineer stamp added

I. CP-3 Grant Chamberlain - Site Plan - 100% drawings added

J. CG-1 Paisley Court West – Grading– Engineer stamp added

K. CG1-2 Paisley Court East - Grading– Engineer stamp added

L. CG1-3 Grant Chamberlain – Grading - 100% drawings added

M. CU1-1 Grant Chamberlain – Storm Water – Engineer stamp added

N. C5-1 Details 1 – Engineer stamp added

O. C5-2 Details 2 – Engineer stamp added

P. C5-3 Details 3 – Engineer stamp added

Q. C5-4 Details 4 – Engineer stamp added

R. C5-5 Details 5 – Engineer stamp added

ATTACHMENTS

A. Addendum No.1

TABLE OF CONTENTS

BIDDING REQUIREMENTS

Permit Notice
Invitation To Bid
Instructions to Bidders
Bid Proposal, Form 098 .....

CONTRACT DOCUMENTS

Included in this Project Manual:

State of Montana General Conditions — MSU Supplemental Conditions

The following documents to be used for construction are not included in the printed project manual. These MSU Forms can be downloaded from our website: http://www.montana.edu/pdc/docs/index.html – or will be provided upon request.

Substitution Request, Form 99
Schedule of Values for Payment, Form 100
Periodic Estimate for Partial Payment, Form 101
Acknowledgement of Subcontractors, Form 102
Consent of Surety to Final Payment, Form 103
Contract Change Order, Form 104
Contractor's Affidavit, Form 106
Certificate of Substantial Completion, Form 107
Construction Change Directive, Form 109
Request for Information, Form 111
Performance Bond, Form 112
Labor and Material Payment Bond, Form 113
Certificate of Final Acceptance, Form 118
Buy Safe Montana Form

For most current Montana Prevailing Wage Rates applicable to this project download from this site: http://erd.dli.mt.gov/labor-standards/state-prevailing-wage-rates

TECHNICAL SPECIFICATIONS

Division 1 - General Requirements

Summary 011000
Price and Payment Procedures 012000
Unit Prices 012200
Alternates 012300
Substitution Procedures 012500
Submittals 013000
Project Coordination 013100
Quality Requirements 014000
Temporary Facilities 015000
Product Requirements 016000
Executions 017300
Warranties Bonds 017400
Waste Management 017419
Project Closeout 017700
Operations & Maintenance Manuals 017823
Project Record Documents 017839
Selective Demolition 024119

Division 2 – Site Construction

Geotextiles 02110
Aggregate Sub-Base Course 021116
Removal of Existing Pavement, Concrete Curb, Sidewalk, Driveaway, And / Or Structures 02112

Adjusting Existing Manholes, Lampholes, Inlets, Water Valve Boxes, Water Services, And Hydrants To Grade 02113
Relocating or Removing Utility Piles, Street Signs And Mailboxes 02114
~~ADA Parking Stalls~~ ..... ~~021723~~
ADA Parking lot improvements 021753
Trench Excavation And Backfill For Pipelines & Appurtenant Structures 02221
Sub-Base Course 02234
Crushed Base Course 02235
Asphalt Prime And / or Tack Coat 02502
Asphalt Seal Coat 02504
Construction Seal 02505
Asphalt Concrete Pavement 02510
Concrete Curb And Gutter 02528
Concrete Sidewalks, Driveways, Approaches, Curb Turn Fillets, Valley Gutters And Miscellaneous New Concrete Construction 02529
Pavement Markings And Markers 02581
Storm Drain Systems 02720

Division 3 – Concrete
Structural Concrete 03310

Division 16 –Electrical
Lighting 165600

CONSTRUCTION DRAWINGS

GIO-1 Cover
GIO-2 Notes, Legend, & Abbreviations
GIO-3 Key Map & Survey Control
CD1-1 Paisley Court West - Demolition
CD1-2 Paisley Court East - Demolition
CD1-3 Grant Chamberlain – Demolition
CP1-1 Paisley Court West – Site Plan
CP1-2 Paisley Court East – Site Plan
CP1-3 Grant Chamberlain – Site Plan
CG1-1 Paisley Court West – Grading
CG1-2 Paisley Court West – Grading
CG1-3 Grant Chamberlain – Grading
CU1-1 Grant Chamberlain – Storm Water
C5-1 Details 1
C5-2 Details 2
C5-3 Details 3
C5-4 Details 4
C5-5 Details 5

MONTANA STATE UNIVERSITY

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

REVISED BID PROPOSAL 5/11/23
PARKING IMPROVEMENTS 2023
PPA No. 22-0012

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 **DJ&A, 220 W Lamme Street, Bozeman, MT 59715, (406) 721-4320,** 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:

Item		Quantity	Unit	Unit Price	Cost
M1	MOBILIZATION	1	LS		
A1	TEMPORARY TRAFFIC CONTROL	*1*	LS		
A2	SOIL EROSION AND POLLUTION CONTROL	*1*	LS		
A3	REMOVE EXISTING ASPHALT	*16902*	SY		
A4	REMOVE EXISTING CURB & GUTTER	*507*	LF		
A5	REMOVE EXISTING CONCRETE	*980*	SY		
A6	REMOVE EXISTING ELECTRIC POSTS	*89*	EA		
A7	REMOVE & REINSTALL ELECTRIC POSTS	*8*	EA		
A8	REMOVE LIGHT POLES	*4*	EA		
A9	REMOVE EXISTING SIGNS	*5*	EA		
A10	REMOVE EXISTING WHEEL STOPS	*392*	EA		
A11	REMOVE & REINSTALL EXISTING WHEEL STOPS	*28*	EA		
A12	REMOVE & REINSTALL MAILBOX	*2*	EA		
A13	ASHPALT PAVEMENT	*141510*	SF		
A14	CRUSHED BASE COURSE, 3/4" MINUS	*5442*	CY		
A15	RECLAIMED ASPHALT & PLACEMENT (ALTERNATE #4)	*141510*	SF		

A16	CRUSHED BASE COURSE, 3/4" MINUS (ALTERNATE #4)	*1948*	CY		
A17	SUB-BASE COURSE, 3" MINUS (ALTERNATE #4)	*4368*	CY		
A19	CURB AND GUTTER	*2334*	LF		
A20	CONCRETE (SIDEWALKS)	*880*	SY		
A21	CONCRETE (TRAFFIC-RATED PAD)	*248*	SY		
A22	CRUSHED BASE COURSE, 1" MINUS	*83*	CY		
A23	INSTALL LIGHT POLES	*4*	EA		
A24	PLACEMENT OF 3 4" HDPE CONDUIT	*900*	LF		
A25	ADA RAMP & SIDEWALK IMPROVEMENTS	*9*	EA		
A26	ADA SIGNS	*11*	EA		
A27	"SERVICE VEHICLES ONLY" OR "NO PARKING SIGN INSTALLATION	*15*	EA		
A28	PERMANENT PAVEMENT MARKINGS - 4" STRIPING	*5612*	LF		
A29	PERMANENT PAVEMENT MARKINGS - NO PARKING STRIPING	*4629*	SF		
A30	PERMANENT PAVEMENT MARKING - CURB STRIPING	*50*	LF		
A31	60" ID DRY WELL STORM DRAIN STRUCTURE	*3*	EA		
A32	DRY WELL GRATE/INLET ASSEMBLY	*3*	EA		
A33	TRENCH DRAIN INSTALLATION	*6*	EA		
A34	VEGETATED SWALES	*3049*	SF		
A35	3"-8" WASHED DRAIN ROCK	*135*	CY		
A36	GEOTEXTILE	*162170*	SF		
A37	EXISTING MANHOLES TO ADJUST	*3*	EA		
A38	EXISTING WATER VALVE BOXES TO ADJUST	*4*	EA		
A39	REMOVE & REINSTALL UNDERGROUND ELECTRIC	*1510*	LF		
	Total for all unit Prices				$

BASE BID:

_____ and _____ /100 DOLLARS

(ALPHA notation) $_____

(NUMERIC notation)

ALTERNATE NO. 1: DEDUCT Paisley West ADA Improvements

THE BIDDER AGREES TO **DEDUCT** THE SPECIFIED SCOPE OF WORK FOR THE TOTAL SUM OF:

_____ and _____ /100 DOLLARS

(ALPHA notation) $_____

(NUMERIC notation)

ALTERNATE NO. 2: DEDUCT Future Use Conduit
THE BIDDER AGREES TO **DEDUCT** THE SPECIFIED SCOPE OF WORK FOR THE TOTAL SUM OF:

_____and _____ /100 DOLLARS
(ALPHA notation) $_____
(NUMERIC notation)

ALTERNATE NO. 3: DEDUCT Electrical Poles
THE BIDDER AGREES TO **DEDUCT** THE SPECIFIED SCOPE OF WORK FOR THE TOTAL SUM OF:

_____and _____ /100 DOLLARS
(ALPHA notation) $_____
(NUMERIC notation)

ALTERNATE NO. 4: ADD Asphalt Pavement
THE BIDDER AGREES TO **ADD** THE SPECIFIED SCOPE OF WORK FOR THE TOTAL SUM OF:

_____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: _____

SECTION 012300
ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions, Supplemental Conditions and other Division 1 Specification Sections, apply to this section. See also *Instructions to Bidders 10.3 Award of Bids.*

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the Base Bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated modifications to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Description of Alternates
   1. Paisley West ADA Improvements:
      a. Remove from scope (DEDUCT)
   2. Future Use Conduit:
      a. Remove from project scope (DEDUCT)
   3. Electric Poles:
      a. Do not reinstall (DEDUCT)
   4. Asphalt Pavement
      a. Alternative 2 from Geotechnical Report and shown in Drawings – Detail F/C5-1 (ADD)

END OF SECTION

SECTION 02114
RELOCATING OR REMOVING UTILITY POLES, STREET SIGNS AND MAILBOXES

PART 1 - GENERAL

1.1 DESCRIPTION

A. This item consists of relocating or removing existing street lights, signs, power poles, telephone poles, and mailboxes, as shown in the contract documents.

PART 2 - PRODUCTS - NOT USED PART

3 - EXECUTION

3.1 POWER, STREET LIGHT, AND TELEPHONE POLES

A. Affected utility companies are to move power, streetlight, and telephone poles unless they are designated in the contract documents to be removed or relocated by the CONTRACTOR. If a utility company is non-responsive, notify ENGINEER. Coordinate all utility relocation activity with the construction activity.

B. When relocating or removing power poles, street light poles, and telephone poles, comply with the contract documents' applicable requirements.

3.2 STREET AND TRAFFIC CONTROL SIGNS

A. Remove and reinstall all street, stop, and other traffic control/direction signs designated to be relocated by the CONTRACTOR as shown in the contract documents or as designated by the ENGINEER. Include removing, temporarily installing, storing, and permanently installing the signs.

B. The locations shown in the contract documents for streetlights, street signs, power poles, telephone poles, and private mailboxes to be relocated are approximate. The specific locations are to be designated by the ENGINEER in the field.

C. Relocate all signs within the staked grading limits whose existing locations do not conform to final plan locations. Also, relocate signs outside the staked grading limits to conform to final plan locations.

D. Preserve all street, stop, and other traffic control and direction signs that are to remain in place.Should any such signs be moved for the CONTRACTOR's convenience, permanently reinstall the signs after curb and gutter construction is complete. Assume responsibility for any damage to such signs. No extra compensation will be allowed for preserving, removing, or replacing stop and traffic control and direction signs designated to remain

in place since this work is considered incidental to the contract unit prices for the various items of the contract.

E. Where stop signs and traffic direction or control signs are temporarily removed but are needed for traffic reasons during construction, temporarily install a similar stop sign or traffic direction sign in locations acceptable to the ENGINEER. Assure that the temporary signs remain in place until the permanent stop or traffic control signs are in place.

F. Do not install street signs temporarily.

G. Store signs which are not used for temporary installation.

H. Set all permanent signs in fresh concrete, the pole supporting the sign being vertical, and the bottom of the sign being 7'-0" above the top of the curb or sidewalk. Replace all signs which are damaged during removal with new signs.

I. Assure that all sign locations conform to the latest issue of the Manual on Uniform Traffic Control Devices and MSU Standards.

3.3 MAILBOXES

A. Mailboxes designated for relocation shall be placed temporarily outside but immediately adjacent to the construction limits. Any Mailbox damaged will be replaced and installed at CONTRACTOR expense. Within 48 hours following the damage or removal, reinstall the mailboxes in accordance with current U.S. Post Office regulations and applicable MSU standards.

B. Any mailbox temporarily placed or displaced must be coordinated with MSU and the local Postmaster as to not disrupt mail service to residents.

C. Mailboxes must be accessible throughout the entirety of construction to accommodate Postal Service delivery and tenant access.

END OF SECTION

SECTION 021723

ADA PARKING IMPROVEMENTS

PART 1 - GENERAL

1.1 DESCRIPTION

A. This specification covers the installation of American with Disabilities Act (ADA) parking lot improvements to pavement markings, grading improvements, sidewalk improvements, and truncated domes as per the Drawings and Specifications.

1.2 REFERENCES

A. American with Disabilities Act of 1990 (ADA) Standards for Accessible Design

B. American with Disabilities Act Accessibility Guidelines (ADAAG) 2010

C. ASTM D 2628 - Standard Specification for Preformed Polymeric Pavement Marking Tape for Nonairfield Applications

D. ASTM D 794 - Standard Test Method for Shear Strength of Plastics by Punch Tool

E. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension

F. ASTM D 638 - Standard Test Method for Tensile Properties of Plastics

G. ASTM D 695 - Standard Test Method for Compressive Properties of Rigid Plastics

H. ASTM D 792 - Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement

I. ASTM D 882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting

J. ASTM E 1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs

K. ASTM E 303 - Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester

PART 2 - PRODUCTS

2.1 GENERAL

A. PAVEMENT MARKINGS

1. All pavement markings shall be preformed polymeric pavement marking tape as per

ASTM D 2628.

2. All pavement markings shall be installed in accordance with the manufacturer's recommendations.
3. All pavement markings shall be reflective.
4. All pavement markings shall have a minimum shear strength of 15 pounds per inch as per ASTM D 794.

B. GRADING IMPROVEMENTS

1. All grading improvements shall be made in accordance with the requirements of the ADA Standards for Accessible Design and the ADAAG 2010.
2. All grading improvements shall be compacted to a minimum of 95% of maximum density as determined by ASTM D 695.

C. SIDEWALK IMPROVEMENTS

1. All sidewalk improvements shall be constructed in accordance with the requirements of the ADA Standards for Accessible Design and the ADAAG 2010.
2. All sidewalks shall have a minimum width of 36 inches.
3. All sidewalks shall have a maximum cross slope of 2% and a maximum running slope of 5%.

D. Truncated Domes

1. All truncated domes shall be constructed in accordance with the requirements of the ADA Standards for Accessible Design and the ADAAG 2010.
2. All truncated domes shall be made of durable material that is resistant to wear and weathering.
3. All truncated domes shall be placed at a spacing of 24 inches center-to-center in a grid pattern.
4. All truncated domes shall have a maximum heigh of 0.2 inches and a minimum height of 0.1 inches.
5. All truncated domes shall have a base diameter of 0.9 inches and a top diameter of 0.45 inches.
6. All truncated domes shall be tested for slip resistance.

PART 3 - EXECUTION

3.1 PREPERATION

A. The CONTRACTOR shall ensure the parking lot area designated for ADA access is graded to the required slope and cross slope.

3.2 PAVEMENT MARKINGS & SIGNS

A. The CONTRACTOR shall apply ADA markings, if required, in accordance with the approved Drawings and Specifications. The pavement markings shall be applied using traffic paint or thermoplastic material. The CONTRACTOR shall ensure that the pavement markings have a non-slip surface.

B. The CONTRACTOR shall install ADA Accessible Parking signs in accordance with the approved Drawings and Specifications. MSU shall provide the signs.

3.3 GRADING IMPROVEMENTS

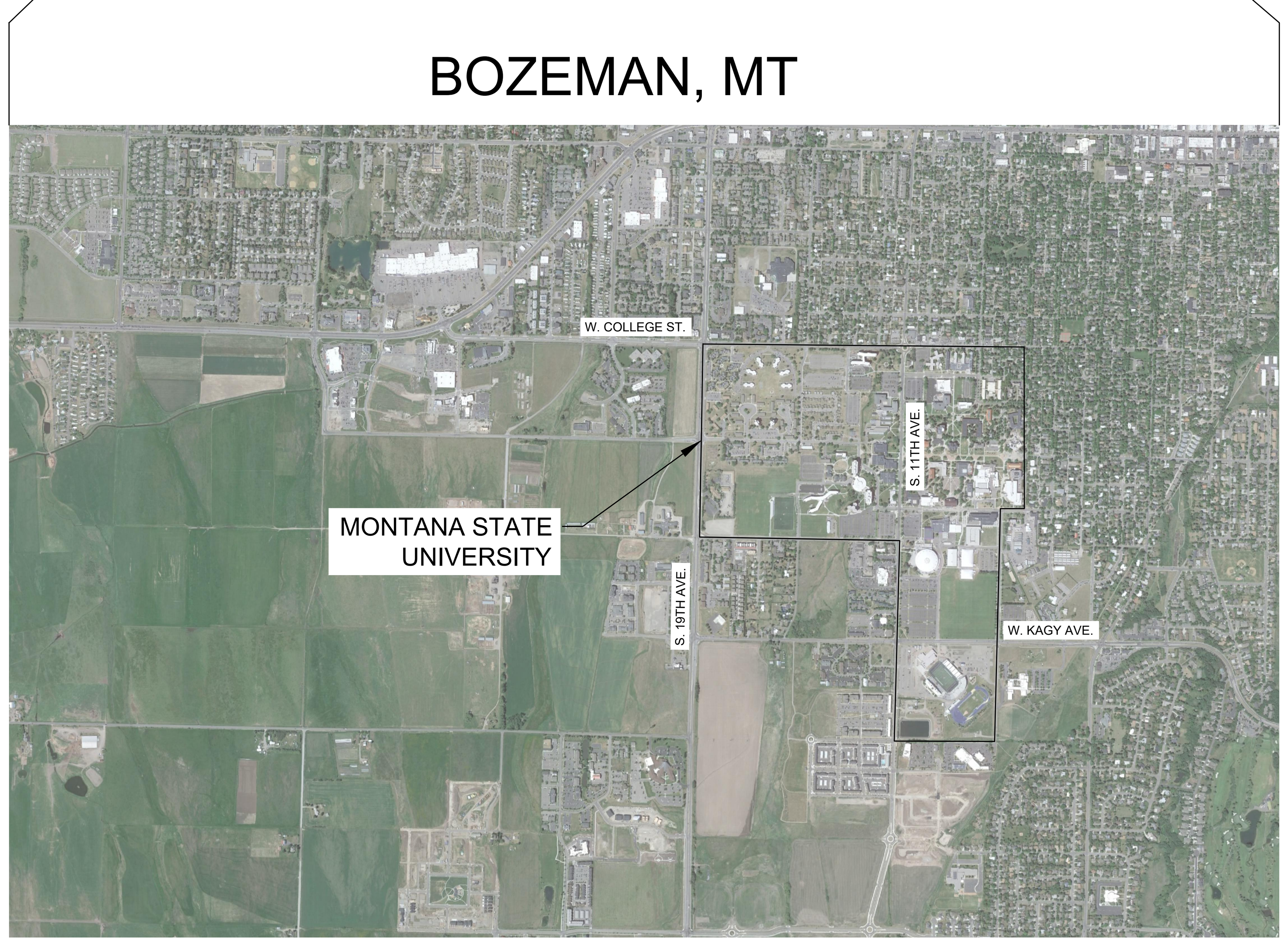
A. The CONTRACTOR shall install the sidewalks in accordance with the approved Drawings and Specifications. The CONTRACTOR shall ensure that the sidewalks have a minimum width of 36 inches and shall have a non-slip surface. The CONTRACTOR shall also ensure that the sidewalks have a slope of no more than 4.8%.

3.4 TRUNCATED DOMES

A. The CONTRACTOR shall install the truncated domes in accordance with the approved Drawings and Specifications. The CONTRACTOR shall ensure that the truncated domes are made of durable and non-slip material. The color of the truncated domes shall be yellow.

END OF SECTION

LOCATION MAP
NTS



VICINITY MAP
NTS

PPA# 22-0012

PARKING IMPROVEMENTS 2023

MONTANA STATE UNIVERSITY

BOZEMAN, MT

PREPARED FOR:

STATE OF MONTANA - MONTANA STATE UNIVERSITY
UNIVERSITY FACILITIES MANAGEMENT, PLANNING,
DESIGN & CONSTRUCTION
PLEW BUILDING 6TH & GRANT
PO BOX 172760
BOZEMAN, MT 59717-2760
PHONE: 406-994-5413
FAX: 406-994-5665

MONTANA STATE UNIVERSITY

PREPARED BY:

DJ&A
220 WEST LAMME STREET, SUITE 1D
BOZEMAN, MT 59715
406-721-4320

SHEET INDEX:

Sheet Number	Sheet Title
GI0-1	COVER
GI0-2	NOTES, LEGEND, & ABBREVIATIONS
GI0-3	KEY MAP & SURVEY CONTROL
CD1-1	PAISLEY COURT WEST - DEMOLITION
CD1-2	PAISLEY COURT EAST - DEMOLITION
CD1-3	GRANT CHAMBERLAIN - DEMOLITION
CP1-1	PAISLEY COURT WEST - SITE PLAN
CP1-2	PAISLEY COURT EAST - SITE PLAN
CP1-3	GRANT CHAMBERLAIN - SITE PLAN
CG1-1	PAISLEY COURT WEST - GRADING
CG1-2	PAISLEY COURT EAST - GRADING
CG1-3	GRANT CHAMBERLAIN - GRADING
CU1-1	GRANT CHAMBERLAIN - STORM WATER
C5-1	DETAILS 1
C5-2	DETAILS 2
C5-3	DETAILS 3
C5-4	DETAILS 4
C5-5	DETAILS 5

MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE
1	GC ADDENDUM ADDITION	05/09/23

MONTANA LICENSED PROFESSIONAL ENGINEER

PPA#22-0012

COVER

SHEET
GI0-1

DATE
05-09-23

GENERAL NOTES

1. CONDUIT WILL BE INSTALLED IN A JOINT UTILITY TRENCH WHEN FEASIBLE. TRENCH TO BE EXCAVATED BY THE CONTRACTOR AND SHALL CONFORM TO NORTHWESTERN ENERGY (NWE) AND MSU SPECIFICATIONS. THE WORKING CONTRACTOR WILL BE RESPONSIBLE FOR BACKFILLING & COMPACTING THE TRENCH.

2. UTILITIES: UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE. NOT ALL UTILITIES ARE SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATIONS OF ALL UTILITIES THAT MAY BE IMPACTED BY THIS PROJECT.

3. WHERE CONDITIONS ENCOUNTERED WHICH APPEAR DIFFERENT FROM THOSE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE PERFORMANCE OF WORK.

4. SPECIFICATIONS: ALL WORK SHALL CONFORM TO THE 7TH EDITION OF THE MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS (MPWSS) & MODIFICATIONS THERETO. IN CASE OF A CONFLICT BETWEEN REGULATORY OR STANDARD SPECIFICATIONS, THE MORE STRINGENT REQUIREMENT WILL PREVAIL.

5. PERMITS & FEES: ALL PERMITS AND FEES REQUIRED FOR THIS PROJECT SHALL BE OBTAINED & PURCHASED BY THE CONTRACTOR. *PERMITS REQUIRED:* MONTANA DEQ SWPPP. OTHER PERMITS MAY BE REQUIRED AND SHALL BE DISCUSSED WITH THE ENGINEER.

6. EROSION CONTROL PLAN & STATE OF MONTANA SWPPP: THE CONTRACTOR WILL BE RESPONSIBLE FOR CREATING AND FILING A STATE OF MONTANA NOTICE OF INTENT (NOI) FORM AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) UNDER THE MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (MPDES) WITH THE MONTANA WATER QUALITY DIVISION FOR STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES. ALL CONTRACTORS, INCLUDING THOSE SUBCONTRACTED BY THE GENERAL CONTRACTOR, SHALL COMPLY WITH THE APPROVED SWPPP.

7. DISPOSAL: ALL MATERIALS DESIGNATED FOR REMOVAL BECOME THE PROPERTY OF THE CONTRACTOR UPON REMOVAL AND ARE TO BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER IN ACCORDANCE WITH ALL LOCAL, STATE & FEDERAL REQUIREMENTS.

8. EXISTING CONDITIONS AT THE SITE ARE THE RESPONSIBILITY OF THE CONTRACTOR & MUST BE FIELD VERIFIED BY THE CONTRACTOR.

9. NO STORAGE OF CONSTRUCTION MATERIALS AND/OR EQUIPMENT HAS BEEN DESIGNATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN MATERIAL & EQUIPMENT STORAGE AREA.

10. THE CONTRACTOR SHALL PROTECT ADJACENT SITES FROM DAMAGE DURING CONSTRUCTION.

11. LOTS & STREET CLOSURES SHALL BE COORDINATED WITH & APPROVED BY MSU PARKING, MSU PLANNING, DESIGN, & CONSTRUCTION (PDC), & MSU FAMILY GRADUATE HOUSING STAFF 72 HOURS PRIOR TO CLOSURE.

12. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO EXISTING CONDITION OR BETTER AT THE CONTRACTOR'S EXPENSE.

13. THE CONTRACTOR SHALL MAINTAIN & PROVIDE A CLEAN & CLEARLY REDLINED SET OF AS-BUILT DRAWINGS TO THE ENGINEER PRIOR TO FINAL ACCEPTANCE.

14. CONTRACTOR SHALL REMOVE & DISPOSE OF ALL ABANDONED FACILITIES THAT ARE A RESULT OF THESE IMPROVEMENTS AS DESCRIBED HERE & IN SPECIFICATIONS.

15. REFER TO THE FOLLOWING DEFINITIONS FOR THE PLANS & SPECIFICATIONS:
    - 15.1. REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION & LEGALLY DISPOSE OF THEM OFF-SITE UNLESS INDICATED TO BE REMOVED & SALVAGED OR REMOVED & REINSTALLED.
    - 15.2. REMOVE & SALVAGE: CAREFULLY DETACH FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE, & DELIVER TO MSU.
    - 15.3. REMOVE & REINSTALL: DETACH ITEMS FROM EXISTING CONSTRUCTION, PREPARE FOR REUSE, & REINSTALL WHERE INDICATED.

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION
ADA	AMERICAN DISABILITY ACT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVE.	AVENUE
cf	CUBIC FEET
CL	CENTERLINE
CP	CONTROL POINT
DESC.	DESCRIPTION
EG	EXISTING GRADE
EL/ELEV	ELEVATION
EOA	EDGE OF ASPHALT
E	EXISTING
FETS	FLARED END TREATMENT SECTIONS
FG	FINISH GRADE
FH	FAMILY HOUSING
FL	FLOW LINE
FT	FEET/FOOT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LF	LINEAR FOOT
MAX	MAXIMUM
MIN	MINIMUM
MPDES	MONTANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
MPWSS	MONTANA PUBLIC WORKS STANDARD SPECIFICATIONS
MSU	MONTANA STATE UNIVERSITY
MT	MONTANA
NAD	NORTH AMERICAN DATUM
NAVD	NORTH AMERICAN VERTICAL DATUM
NE	NORTHEAST
NTS	NOT TO SCALE
NWE	NORTHWESTERN ENERGY
PED	PEDESTRIAN
PPA	PHYSICAL PLANT ACCOUNT
R	RADIUS
ROW	RIGHT-OF-WAY
RPC	RED PLASTIC CAP
S =	SLOPE
SF	SQUARE FEET (FOOT)
SD	STORM DRAIN
SPC	STATE PLANE COORDINATE
SW	STORM WATER
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
TC	TIME TO CONCENTRATION
TYP.	TYPICAL
TBC	TOP BACK OF CURB

LEGEND

- EXISTING ELECTRIC PEDESTAL OR JUNCTION BOX
- EXISTING OVERHEAD UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING TELEPHONE PEDESTAL
- EXISTING MANHOLE COVERS
- EXISTING WATER HYDRANT
- EXISTING WATER VALVE
- EXISTING STORM SUMP OR CATCH BASIN
- EXISTING VEHICLE HEATER BLOCK PLUGINS
- EXISTING TREE
- EXISTING CURB STOPS
- EXISTING MAILBOX LOCATION
- EXISTING PLAYGROUND
- EXISTING PARK BENCH
- EXISTING STORM ROOF DROP INLET/OUTLET - POINT
- EXISTING BIKE RACK
- EXISTING WATER WELL OR PUMPING STATION
- EXISTING IRRIGATION WATER VALVE
- EXISTING DUMPSTER LOCATION
- EXISTING - OVERHEAD POWER
- EXISTING - CONCRETE HATCH & CONCRETE EDGE
- EXISTING - ASPHALT HATCH & ASPHALT EDGE
- PROPOSED - CONCRETE HATCH & CONCRETE EDGE
- PROPOSED - ASPHALT HATCH & ASPHALT EDGE

MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

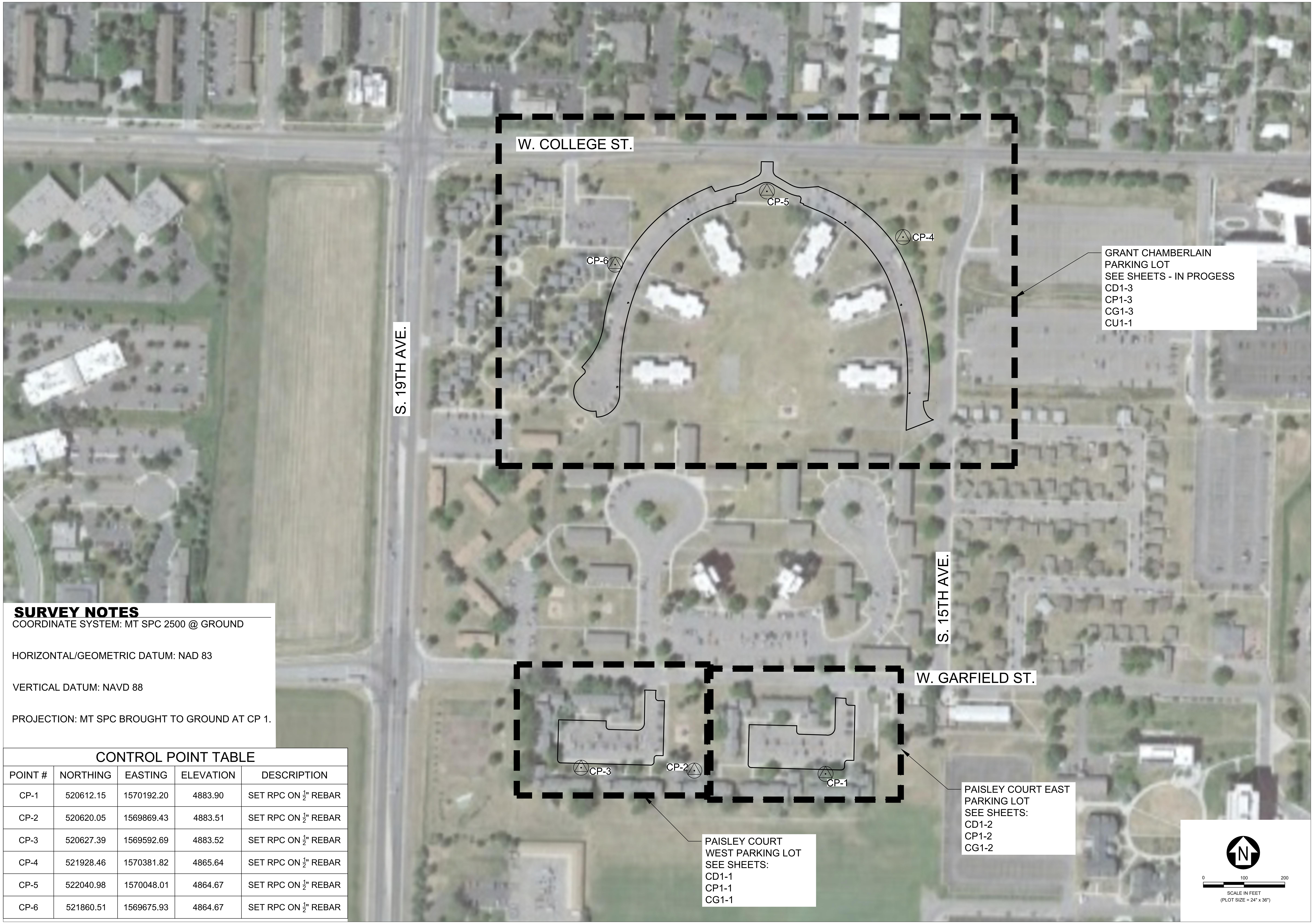
REV.	DESCRIPTION	DATE

PPA#22-0012

NOTES, LEGEND, & ABBREVIATIONS

SHEET
GI0-2

DATE
05-09-23



SURVEY NOTES

COORDINATE SYSTEM: MT SPC 2500 @ GROUND

HORIZONTAL/GEOMETRIC DATUM: NAD 83

VERTICAL DATUM: NAVD 88

PROJECTION: MT SPC BROUGHT TO GROUND AT CP 1.

CONTROL POINT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	520612.15	1570192.20	4883.90	SET RPC ON $\frac{1}{2}$" REBAR
CP-2	520620.05	1569869.43	4883.51	SET RPC ON $\frac{1}{2}$" REBAR
CP-3	520627.39	1569592.69	4883.52	SET RPC ON $\frac{1}{2}$" REBAR
CP-4	521928.46	1570381.82	4865.64	SET RPC ON $\frac{1}{2}$" REBAR
CP-5	522040.98	1570048.01	4864.67	SET RPC ON $\frac{1}{2}$" REBAR
CP-6	521860.51	1569675.93	4864.67	SET RPC ON $\frac{1}{2}$" REBAR

MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE
1	GC ADDENDUM ADDITION	05/09/23

MONTANA SHARI ESLINGER No. 49472 LICENSED PROFESSIONAL ENGINEER

PPA#22-0012

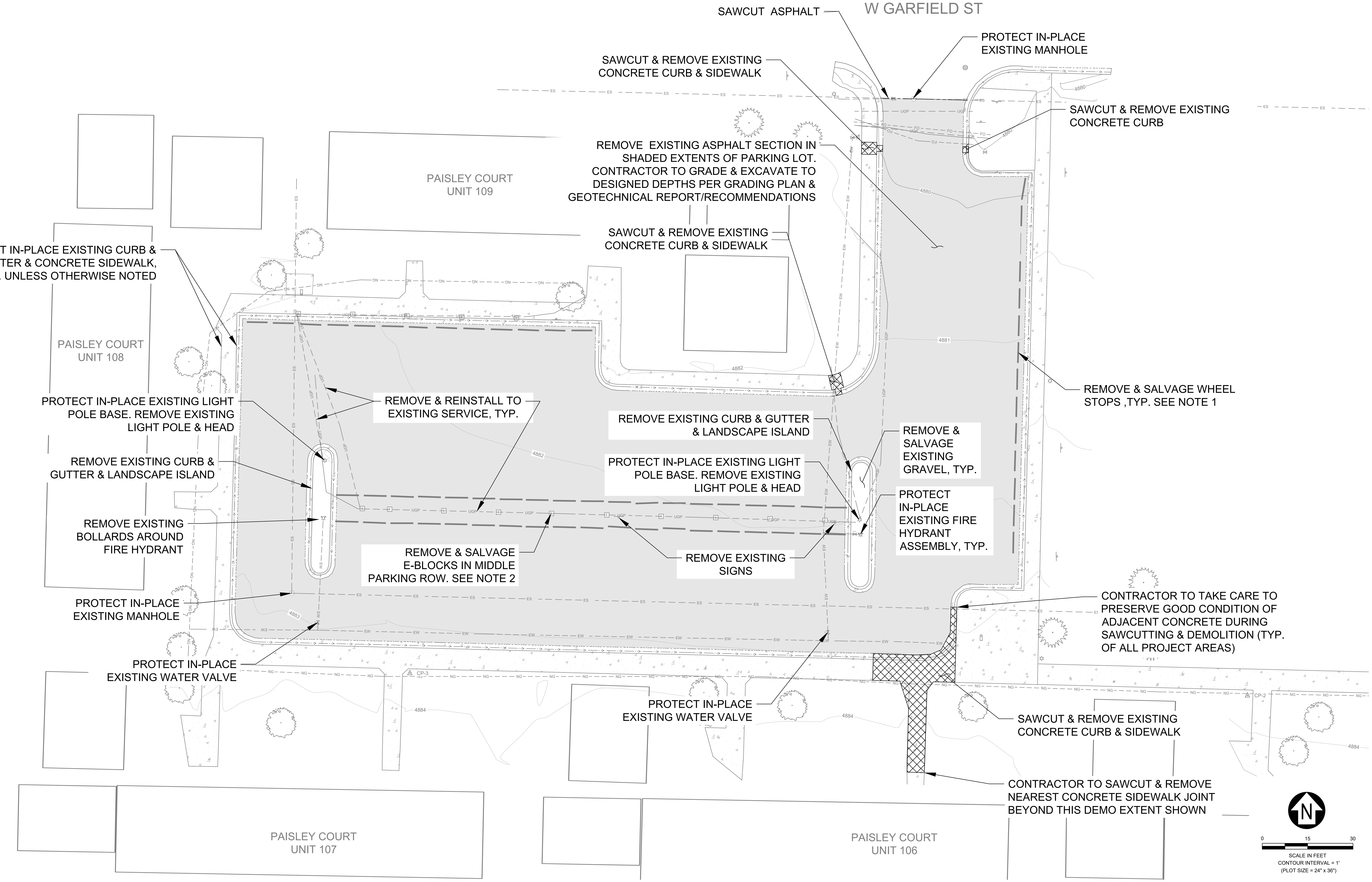
KEY MAP & SURVEY CONTROL

SHEET
GI0-3

DATE
05-09-23

NOTES:

1. ALL WHEEL STOPS WILL BE REMOVED & EXAMINED. THE 13 WHEEL STOPS IN THE BEST REPAIR WILL BE SELECTED & REINSTALLED ON THE EAST ROW. THE REMAINING WHEEL STOPS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
2. ALL E-BLOCKS IN THE MIDDLE ROW WILL BE REMOVED & EXAMINED. THE TWO BLOCKS IN THE BEST REPAIR WILL BE SELECTED & REINSTALLED ON EACH ISLAND AS DEPICTED ON SHEET CP1-1. THE REMAINING E-BLOCKS WILL BE SALVAGED BACK TO MSU. DO NOT REMOVE E-BLOCKS ON THE NORTH PARKING ROW.



MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS

2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

PAISLEY COURT WEST - DEMO PLAN

SHEET

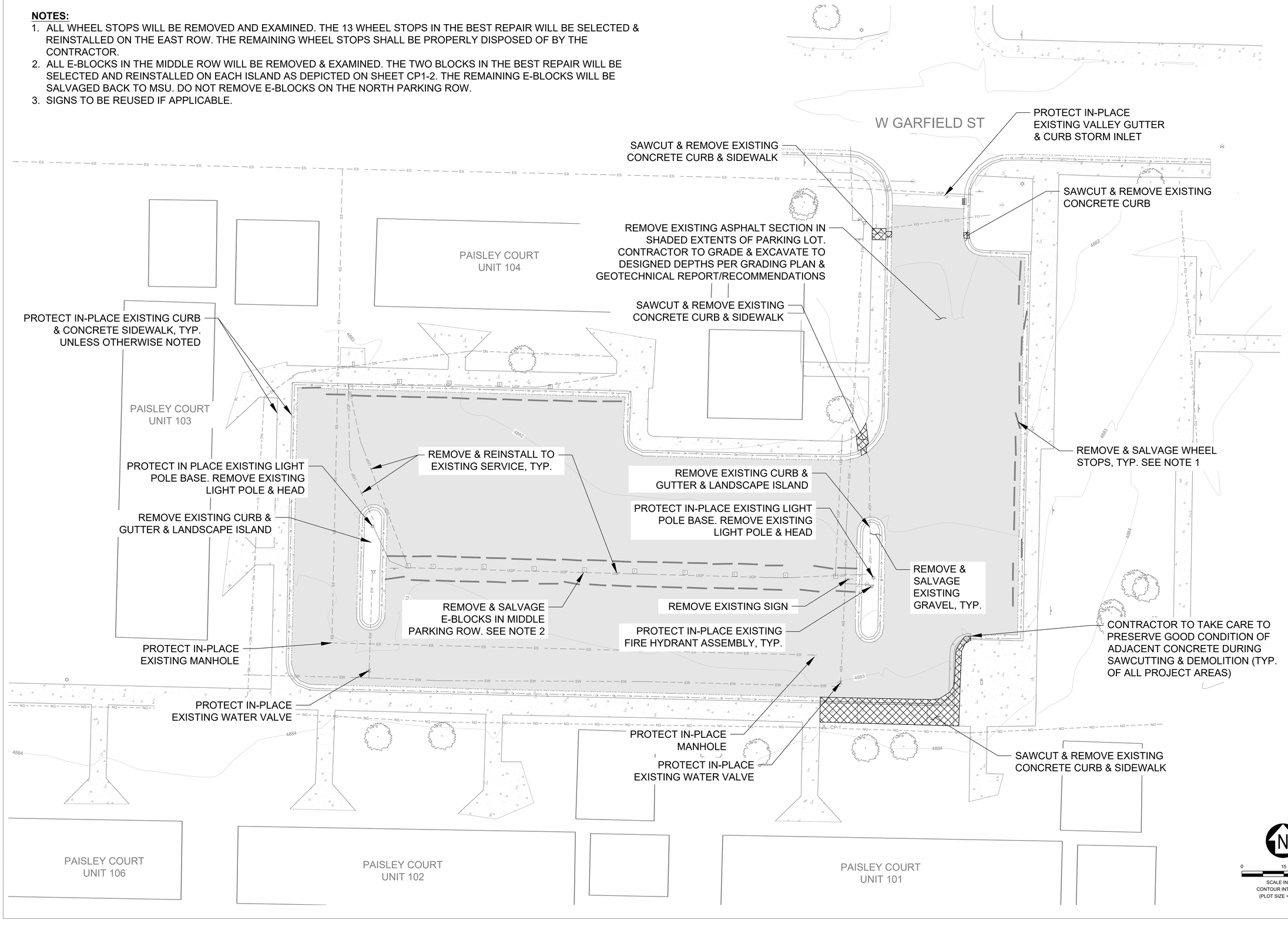
CD1-1

DATE

05-05-23

NOTES:

1. ALL WHEEL STOPS WILL BE REMOVED AND EXAMINED. THE 13 WHEEL STOPS IN THE BEST REPAIR WILL BE SELECTED & REINSTALLED ON THE EAST ROW. THE REMAINING WHEEL STOPS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR.
2. ALL E-BLOCKS IN THE MIDDLE ROW WILL BE REMOVED & EXAMINED. THE TWO BLOCKS IN THE BEST REPAIR WILL BE SELECTED AND REINSTALLED ON EACH ISLAND AS DEPICTED ON SHEET CP1-2. THE REMAINING E-BLOCKS WILL BE SALVAGED BACK TO MSU. DO NOT REMOVE E-BLOCKS ON THE NORTH PARKING ROW.
3. SIGNS TO BE REUSED IF APPLICABLE.



MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY		
REVIEWED BY: K. GAUTHIER		
REV.	DESCRIPTION	DATE

MONTANA SHARI ESSMILLER 24470 LICENSED PROFESSIONAL ENGINEER

PPA#22-0012

PAISLEY COURT EAST - DEMO PLAN

SHEET
CD1-2

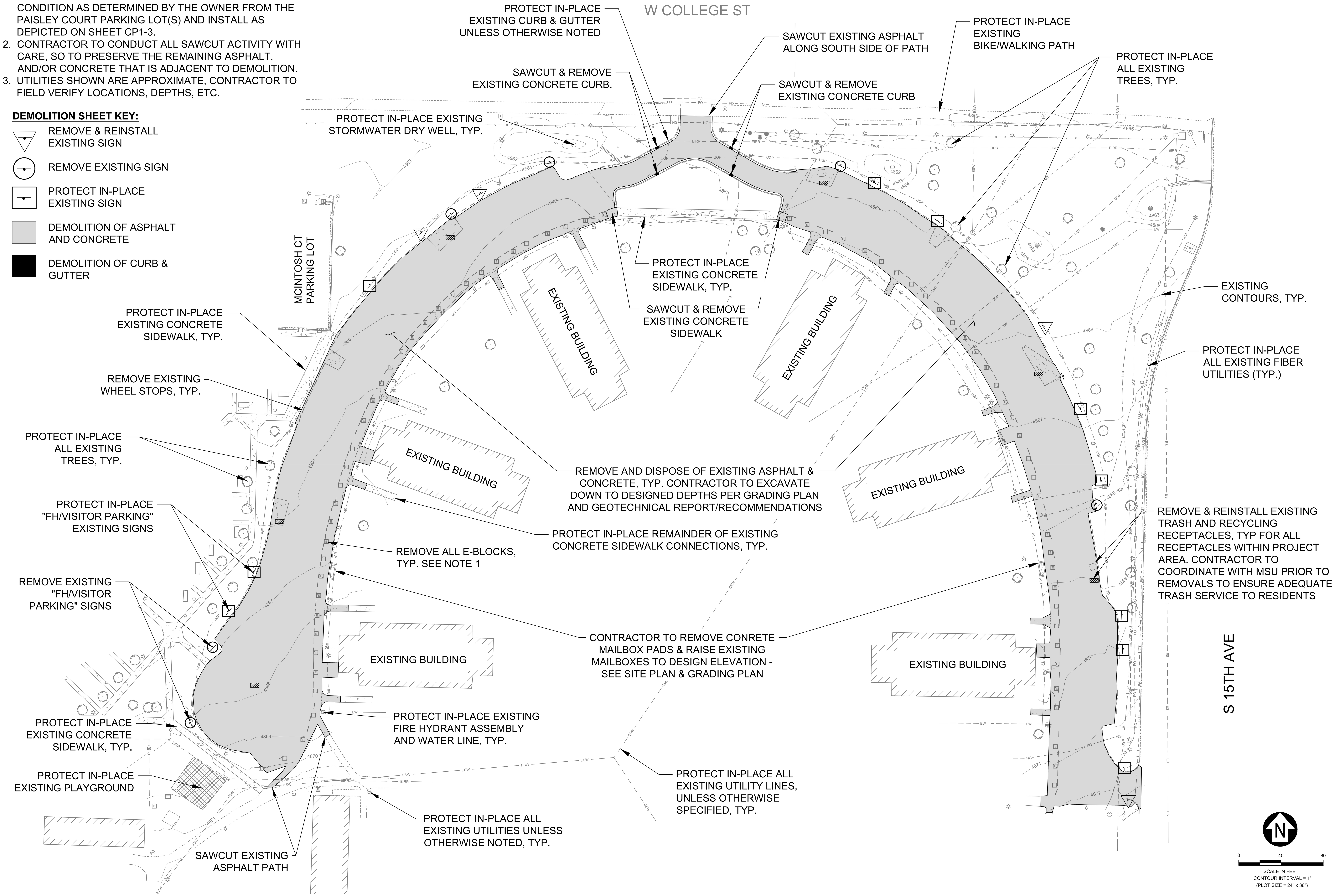
DATE
05-05-23

DEMOLITION NOTES:

1. ALL E-BLOCKS IN THE GRANT CHAMBERLAIN PARKING LOT TO BE REMOVED. SELECT FOUR BLOCKS IN GOOD CONDITION AS DETERMINED BY THE OWNER FROM THE PAISLEY COURT PARKING LOT(S) AND INSTALL AS DEPICTED ON SHEET CP1-3.
2. CONTRACTOR TO CONDUCT ALL SAWCUT ACTIVITY WITH CARE, SO TO PRESERVE THE REMAINING ASPHALT, AND/OR CONCRETE THAT IS ADJACENT TO DEMOLITION.
3. UTILITIES SHOWN ARE APPROXIMATE, CONTRACTOR TO FIELD VERIFY LOCATIONS, DEPTHS, ETC.

DEMOLITION SHEET KEY:

- REMOVE & REINSTALL EXISTING SIGN
- REMOVE EXISTING SIGN
- PROTECT IN-PLACE EXISTING SIGN
- DEMOLITION OF ASPHALT AND CONCRETE
- DEMOLITION OF CURB & GUTTER



MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS

2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

GRANT CHAMBERLAIN - DEMO PLAN

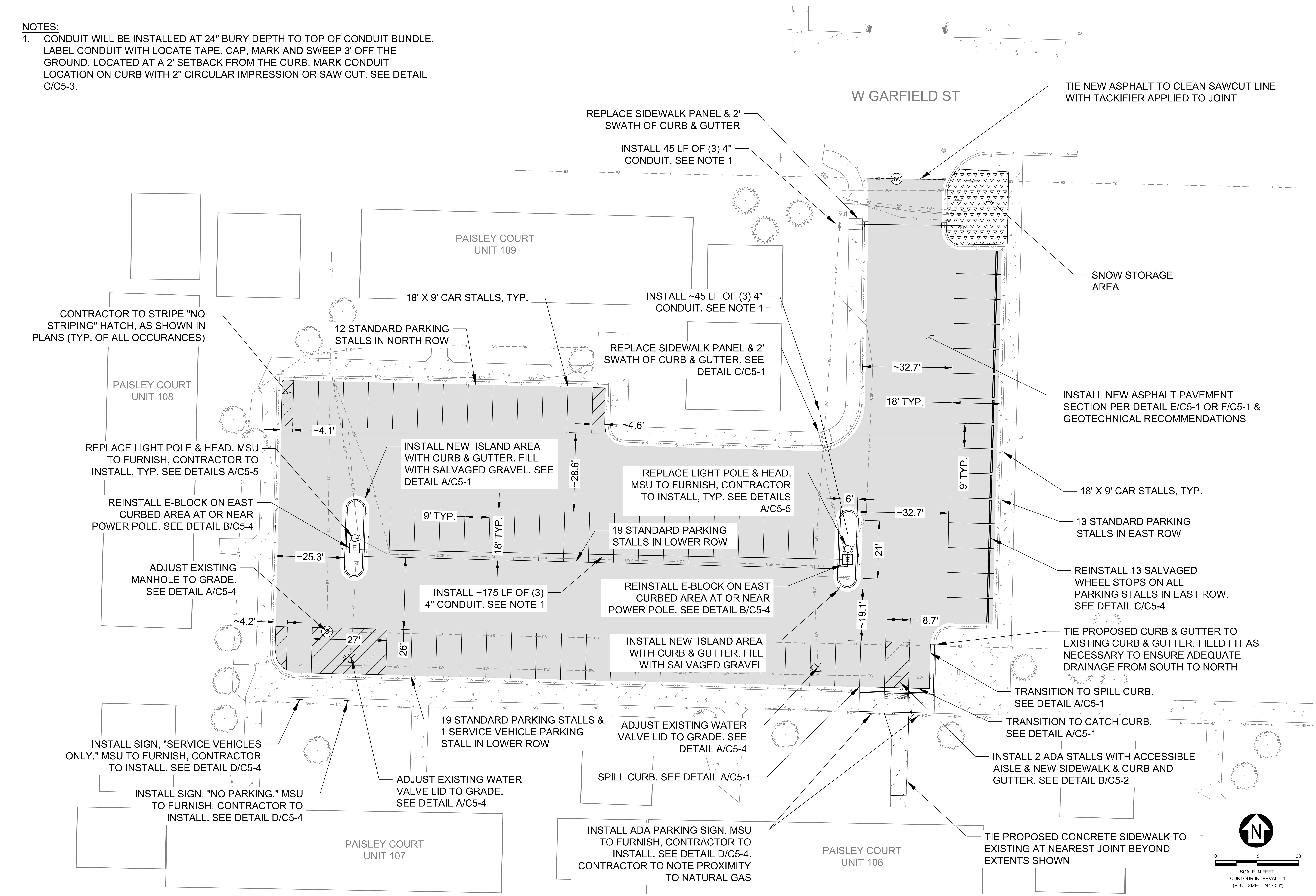
SHEET

CD1-3

DATE

05-09-23

NOTES:
1. CONDUIT WILL BE INSTALLED AT 24" BURY DEPTH TO TOP OF CONDUIT BUNDLE. LABEL CONDUIT WITH LOCATE TAPE. CAP, MARK AND SWEEP 3' OFF THE GROUND. LOCATED AT A 2' SETBACK FROM THE CURB. MARK CONDUIT LOCATION ON CURB WITH 2" CIRCULAR IMPRESSION OR SAW CUT. SEE DETAIL C/C5-3.



MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS
2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

MONTANA SHARI ESLINGER No. 49472 LICENSED PROFESSIONAL ENGINEER

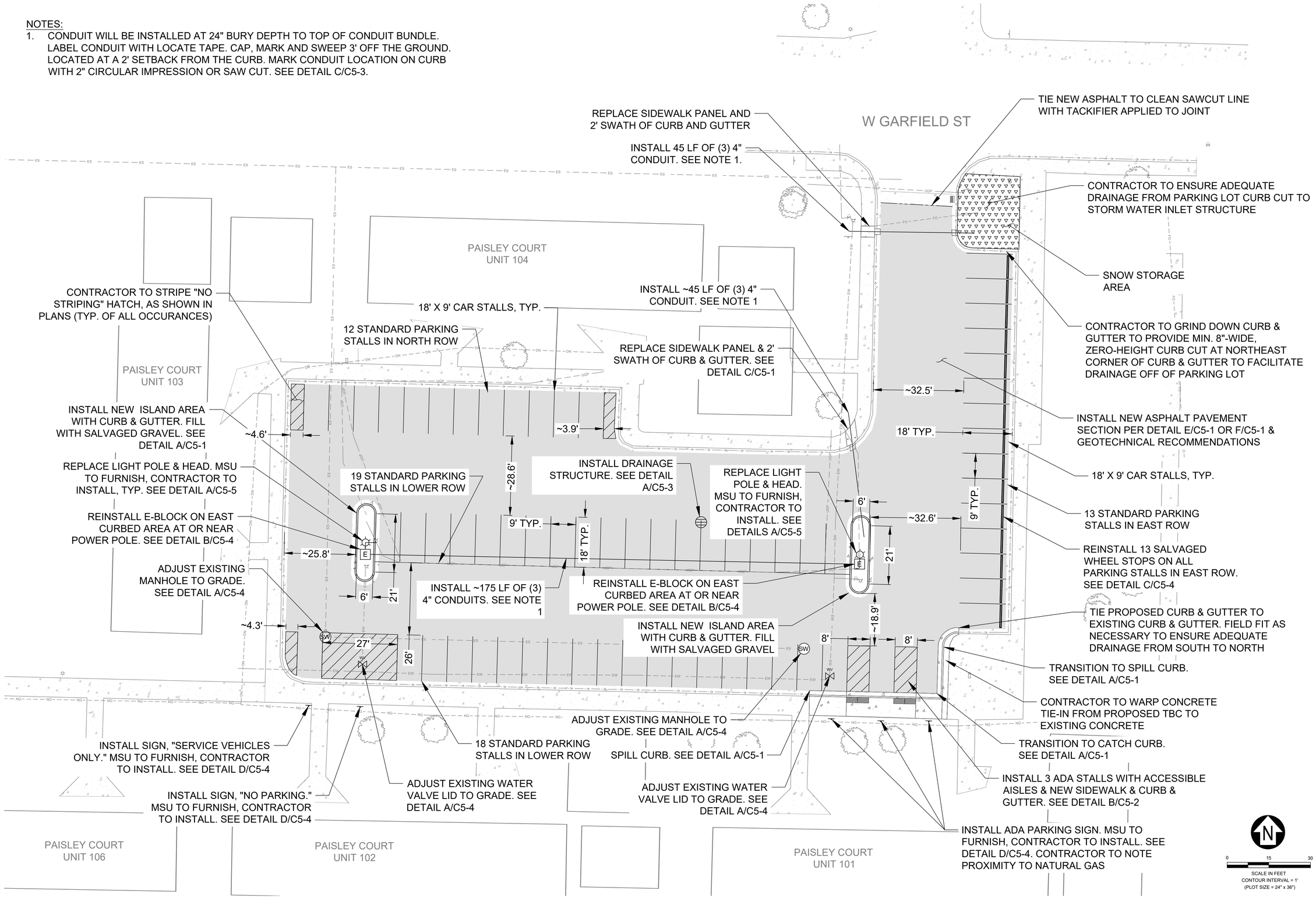
PPA#22-0012

WEST PAISLEY COURT- SITE PLAN

SHEET
CP1-1

DATE
05-05-23

NOTES:
1. CONDUIT WILL BE INSTALLED AT 24" BURY DEPTH TO TOP OF CONDUIT BUNDLE. LABEL CONDUIT WITH LOCATE TAPE. CAP, MARK AND SWEEP 3' OFF THE GROUND. LOCATED AT A 2' SETBACK FROM THE CURB. MARK CONDUIT LOCATION ON CURB WITH 2" CIRCULAR IMPRESSION OR SAW CUT. SEE DETAIL C/C5-3.



MONTANA STATE UNIVERSITY

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY		
REVIEWED BY: K. GAUTHIER		
REV.	DESCRIPTION	DATE

MONTANA — SHARI ESPINDER — No. 22012 — LICENSED PROFESSIONAL ENGINEER

PPA#22-0012

PAISLEY COURT EAST - SITE PLAN

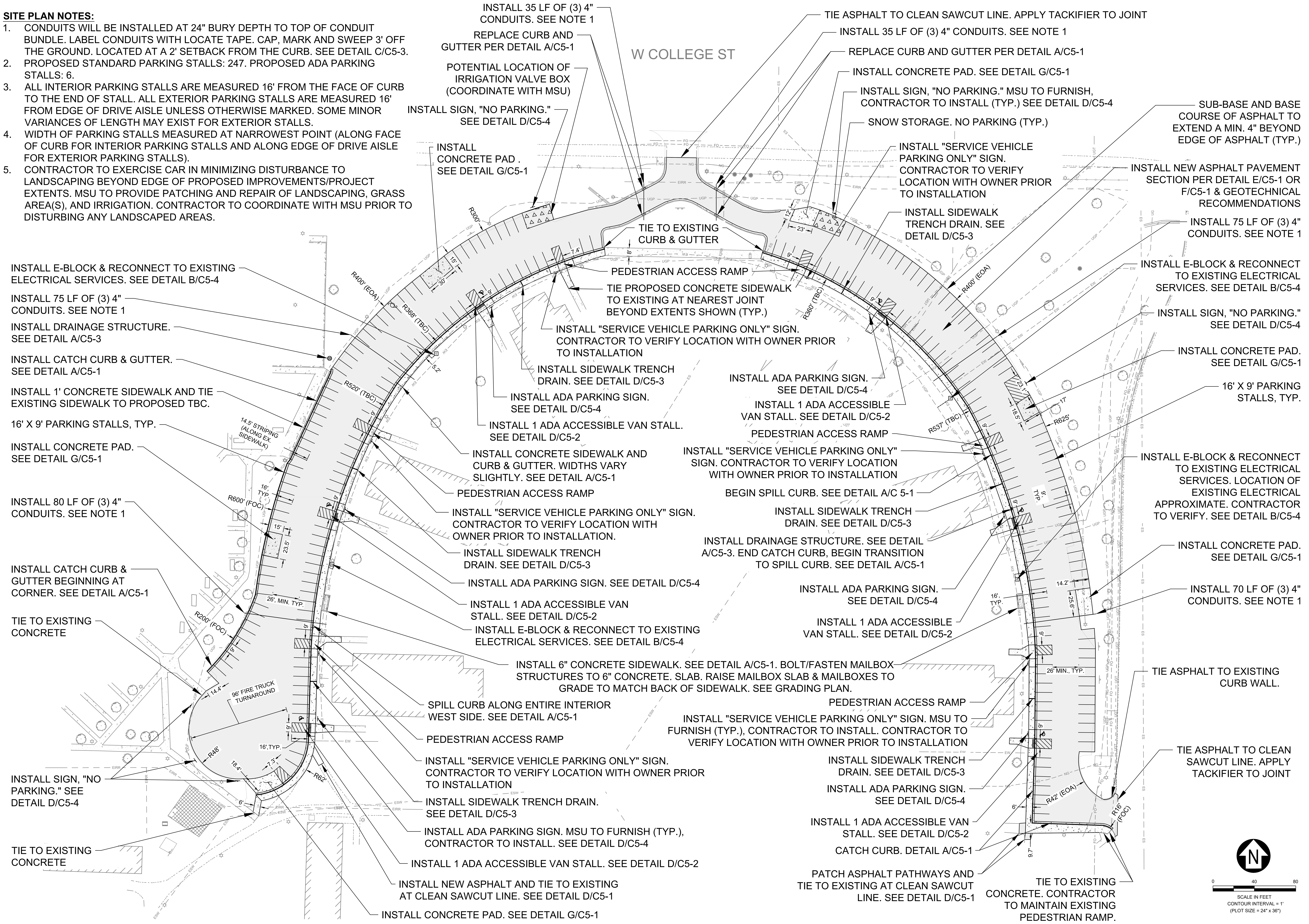
SHEET
CP1-2

DATE
05-05-23

Mar 06, 2023 - 4:49pm - 7318 PAISLEY PLAN SHEETS.dwg
P:\7318 MSU Paisley Court Parking Lot Improvements\Drawings\PRODUCTION Design

SITE PLAN NOTES:

1. CONDUITS WILL BE INSTALLED AT 24" BURY DEPTH TO TOP OF CONDUIT BUNDLE. LABEL CONDUITS WITH LOCATE TAPE. CAP, MARK AND SWEEP 3' OFF THE GROUND. LOCATED AT A 2' SETBACK FROM THE CURB. SEE DETAIL C/C5-3.
2. PROPOSED STANDARD PARKING STALLS: 247. PROPOSED ADA PARKING STALLS: 6.
3. ALL INTERIOR PARKING STALLS ARE MEASURED 16' FROM THE FACE OF CURB TO THE END OF STALL. ALL EXTERIOR PARKING STALLS ARE MEASURED 16' FROM EDGE OF DRIVE AISLE UNLESS OTHERWISE MARKED. SOME MINOR VARIANCES OF LENGTH MAY EXIST FOR EXTERIOR STALLS.
4. WIDTH OF PARKING STALLS MEASURED AT NARROWEST POINT (ALONG FACE OF CURB FOR INTERIOR PARKING STALLS AND ALONG EDGE OF DRIVE AISLE FOR EXTERIOR PARKING STALLS).
5. CONTRACTOR TO EXERCISE CAR IN MINIMIZING DISTURBANCE TO LANDSCAPING BEYOND EDGE OF PROPOSED IMPROVEMENTS/PROJECT EXTENTS. MSU TO PROVIDE PATCHING AND REPAIR OF LANDSCAPING, GRASS AREA(S), AND IRRIGATION. CONTRACTOR TO COORDINATE WITH MSU PRIOR TO DISTURBING ANY LANDSCAPED AREAS.



MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS

2023

DJ&A

DRAWN BY: L. OTTEY

REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

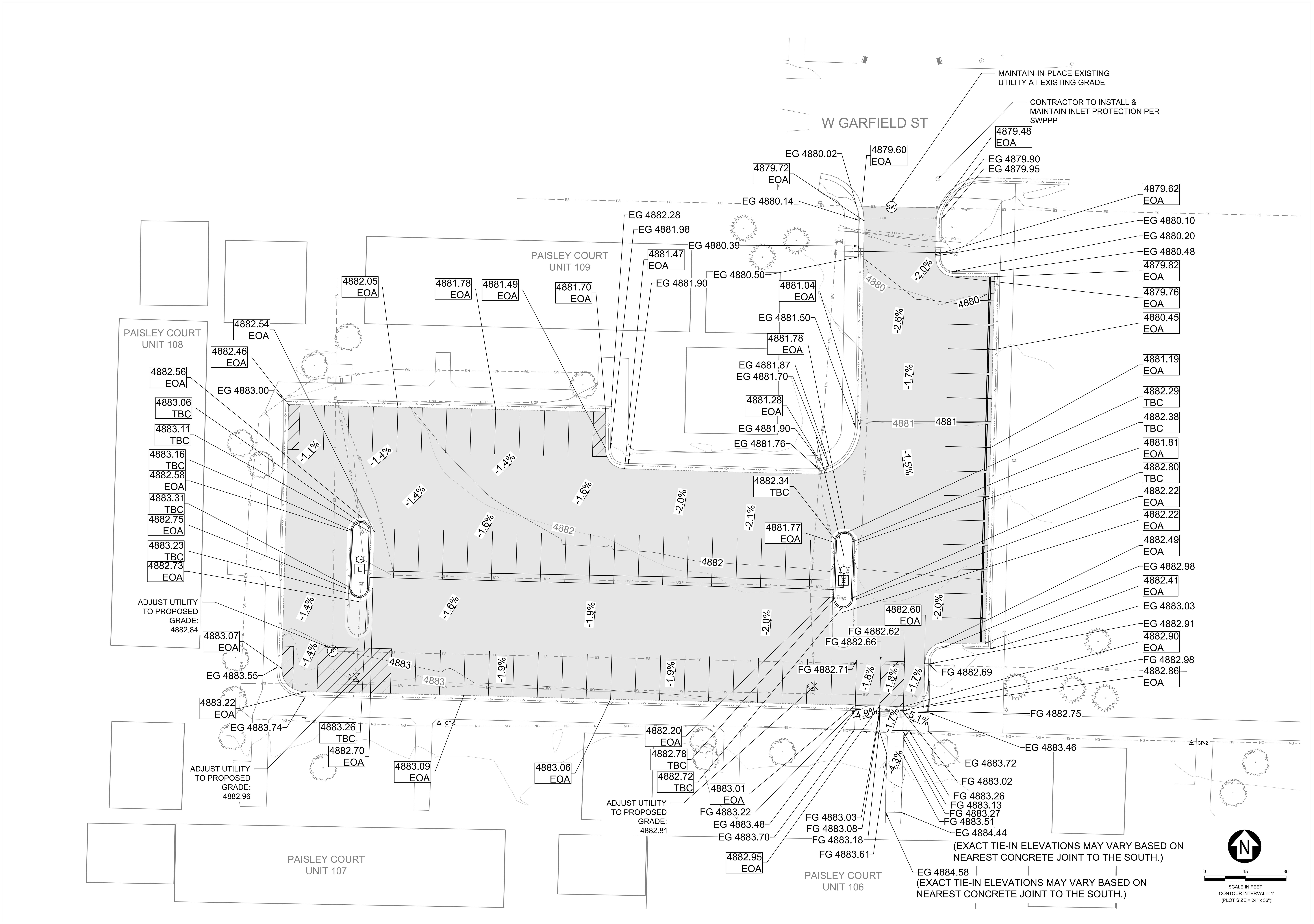
GRANT CHAMBERLAIN - SITE PLAN

SHEET

CP1-3

DATE

05-09-23



MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

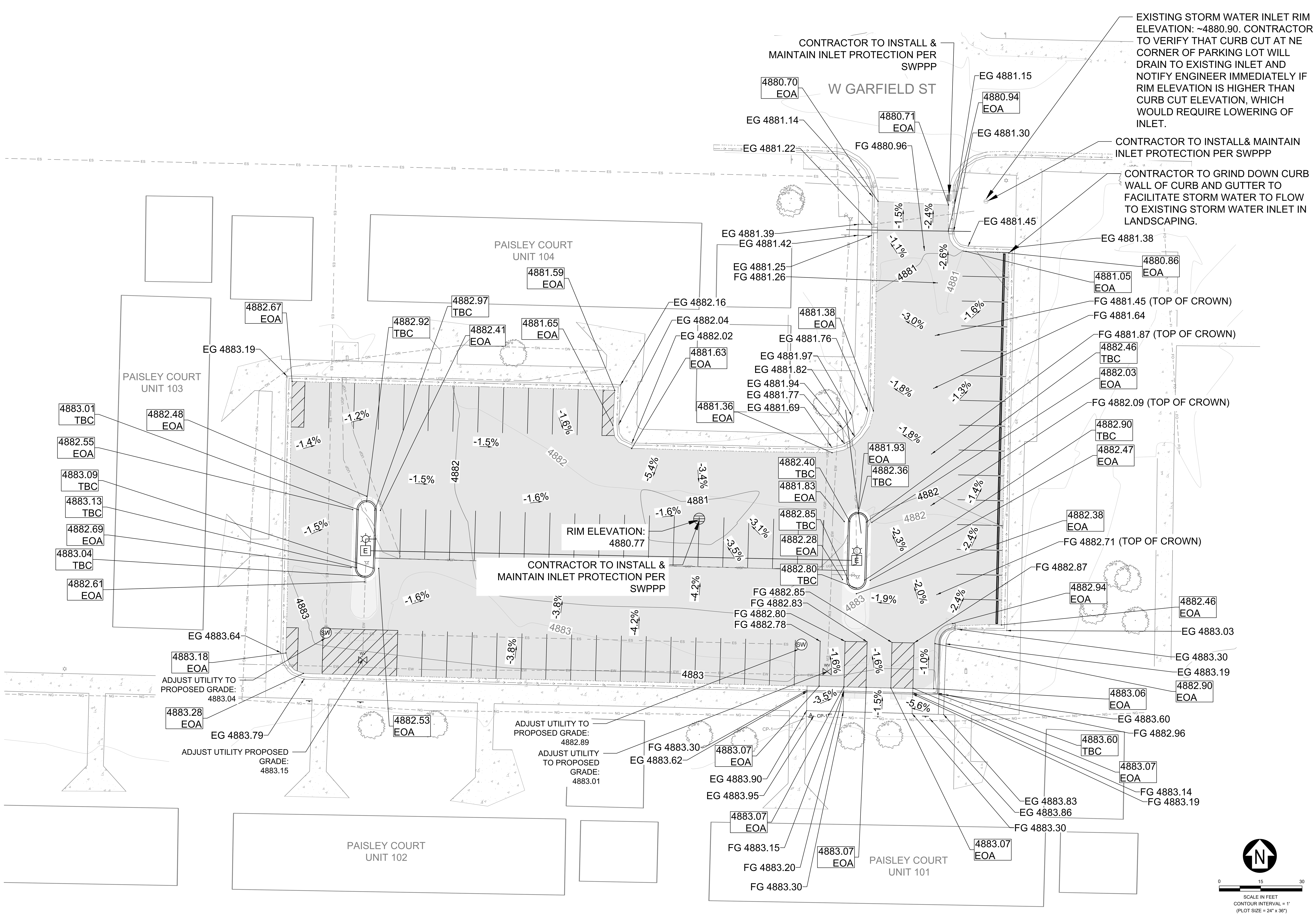
REV.	DESCRIPTION	DATE

PPA#22-0012

PAISLEY COURT WEST - GRADING PLAN

SHEET
CG1-1

DATE
05-05-23



W GARFIELD ST
PAISLEY COURT UNIT 104
PAISLEY COURT UNIT 103
PAISLEY COURT UNIT 102
PAISLEY COURT UNIT 101
CONTRACTOR TO INSTALL & MAINTAIN INLET PROTECTION PER SWPPP
EXISTING STORM WATER INLET RIM ELEVATION: ~4880.90. CONTRACTOR TO VERIFY THAT CURB CUT AT NE CORNER OF PARKING LOT WILL DRAIN TO EXISTING INLET AND NOTIFY ENGINEER IMMEDIATELY IF RIM ELEVATION IS HIGHER THAN CURB CUT ELEVATION, WHICH WOULD REQUIRE LOWERING OF INLET.
CONTRACTOR TO INSTALL& MAINTAIN INLET PROTECTION PER SWPPP
CONTRACTOR TO GRIND DOWN CURB WALL OF CURB AND GUTTER TO FACILITATE STORM WATER TO FLOW TO EXISTING STORM WATER INLET IN LANDSCAPING.
4880.70 EOA
EG 4881.14
EG 4881.22
4880.71 EOA
FG 4880.96
EG 4881.15
4880.94 EOA
EG 4881.30
EG 4881.45
EG 4881.39
EG 4881.42
EG 4881.25
FG 4881.26
EG 4881.38
4880.86 EOA
4881.05 EOA
FG 4881.45 (TOP OF CROWN)
FG 4881.64
FG 4881.87 (TOP OF CROWN)
4882.46 TBC
4882.03 EOA
FG 4882.09 (TOP OF CROWN)
4882.90 TBC
4882.47 EOA
4882.38 EOA
FG 4882.71 (TOP OF CROWN)
FG 4882.87
4882.94 EOA
4882.46 EOA
EG 4883.03
EG 4883.30
EG 4883.19
4882.90 EOA
4883.06 EOA
EG 4883.60
FG 4882.96
4883.60 TBC
4883.07 EOA
FG 4883.14
FG 4883.19
EG 4883.83
EG 4883.86
FG 4883.30
4883.07 EOA
4881.59 EOA
4882.97 TBC
4882.92 TBC
4882.41 EOA
4881.65 EOA
4882.67 EOA
EG 4883.19
EG 4882.16
EG 4882.04
EG 4882.02
4881.63 EOA
4881.38 EOA
EG 4881.76
EG 4881.97
EG 4881.82
EG 4881.94
EG 4881.77
EG 4881.69
4881.36 EOA
4881.93 EOA
4882.36 TBC
4882.40 TBC
4881.83 EOA
4882.85 TBC
4882.28 EOA
4882.80 TBC
4883.01 TBC
4882.48 EOA
4882.55 EOA
4883.09 TBC
4883.13 TBC
4882.69 EOA
4883.04 TBC
4882.61 EOA
RIM ELEVATION: 4880.77
CONTRACTOR TO INSTALL & MAINTAIN INLET PROTECTION PER SWPPP
FG 4882.85
FG 4882.83
FG 4882.80
FG 4882.78
EG 4883.64
4883.18 EOA
ADJUST UTILITY TO PROPOSED GRADE: 4883.04
4883.28 EOA
EG 4883.79
ADJUST UTILITY PROPOSED GRADE: 4883.15
4882.53 EOA
ADJUST UTILITY TO PROPOSED GRADE: 4882.89
ADJUST UTILITY TO PROPOSED GRADE: 4883.01
FG 4883.30
EG 4883.62
4883.07 EOA
EG 4883.90
EG 4883.95
4883.07 EOA
FG 4883.15
FG 4883.20
FG 4883.30
4883.07 EOA
-1.5%
-2.4%
-1.1%
-2.6%
-3.0%
-1.6%
-1.8%
-1.3%
-1.8%
-1.4%
-2.3%
-2.4%
-2.0%
-2.4%
-1.9%
-1.2%
-1.4%
-1.6%
-1.5%
-1.5%
-1.6%
-5.4%
-3.4%
-1.6%
-3.1%
-3.5%
-1.5%
-1.6%
-3.8%
-4.2%
-4.2%
-3.8%
-1.6%
-1.6%
-1.0%
-3.5%
-1.5%
-5.6%
4881
4882
4883
0 15 30
SCALE IN FEET
CONTOUR INTERVAL = 1'
(PLOT SIZE = 24" x 36")

MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS
2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

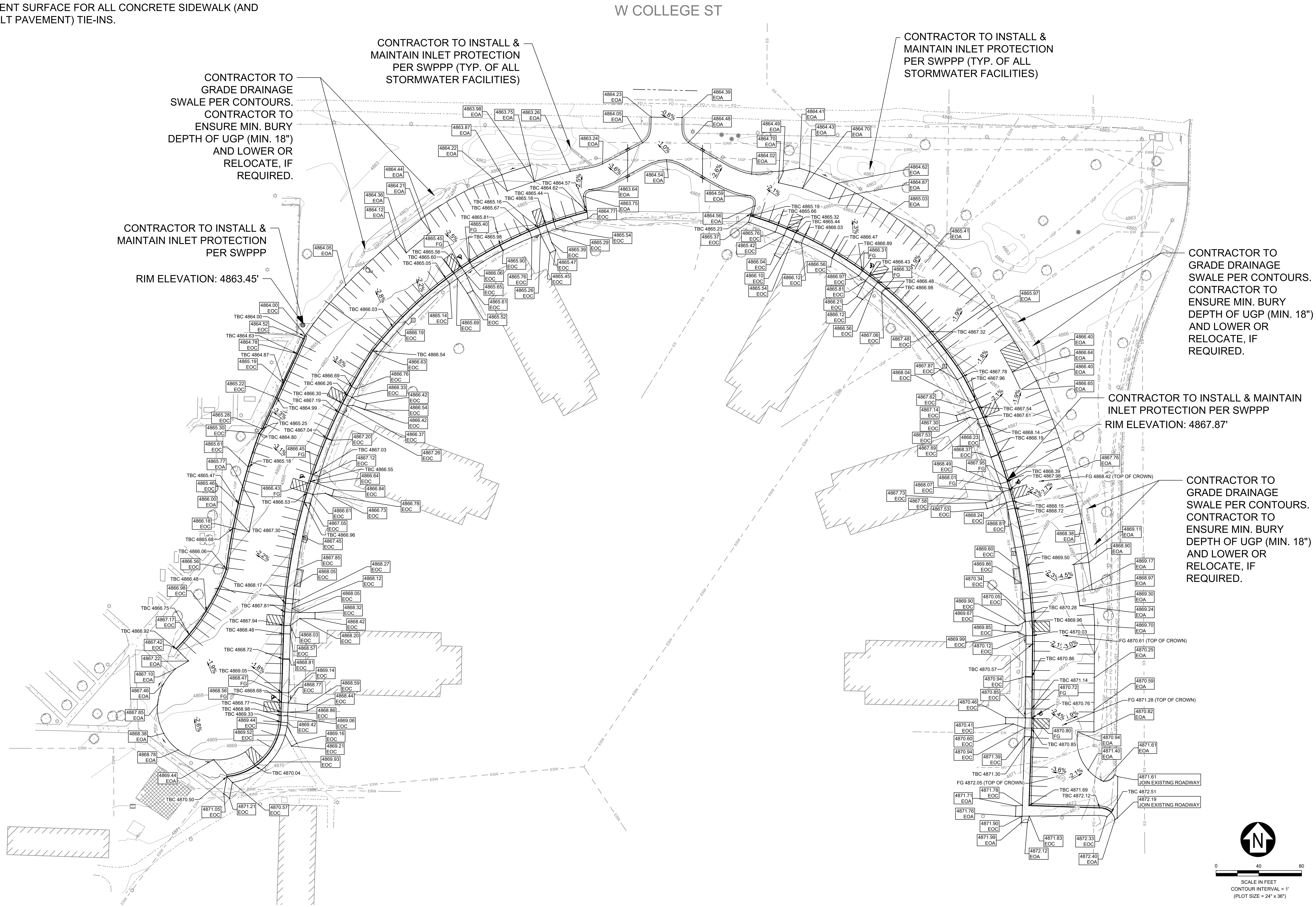
PAISLEY COURT EAST - GRADING PLAN

SHEET
CG1-2

DATE
05-05-23

GRADING AND DRAINAGE GENERAL NOTE:

EXACT TIE-IN ELEVATIONS MAY VARY BASED ON NEAREST ADJACENT SURFACE FOR ALL CONCRETE SIDEWALK (AND ASPHALT PAVEMENT) TIE-INS.



0 40 80
SCALE IN FEET
CONTOUR INTERVAL = 1'
(PLOT SIZE = 24" x 36")

MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING IMPROVEMENTS

2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K.GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

GRANT CHAMBERLAIN - GRADING PLAN

SHEET

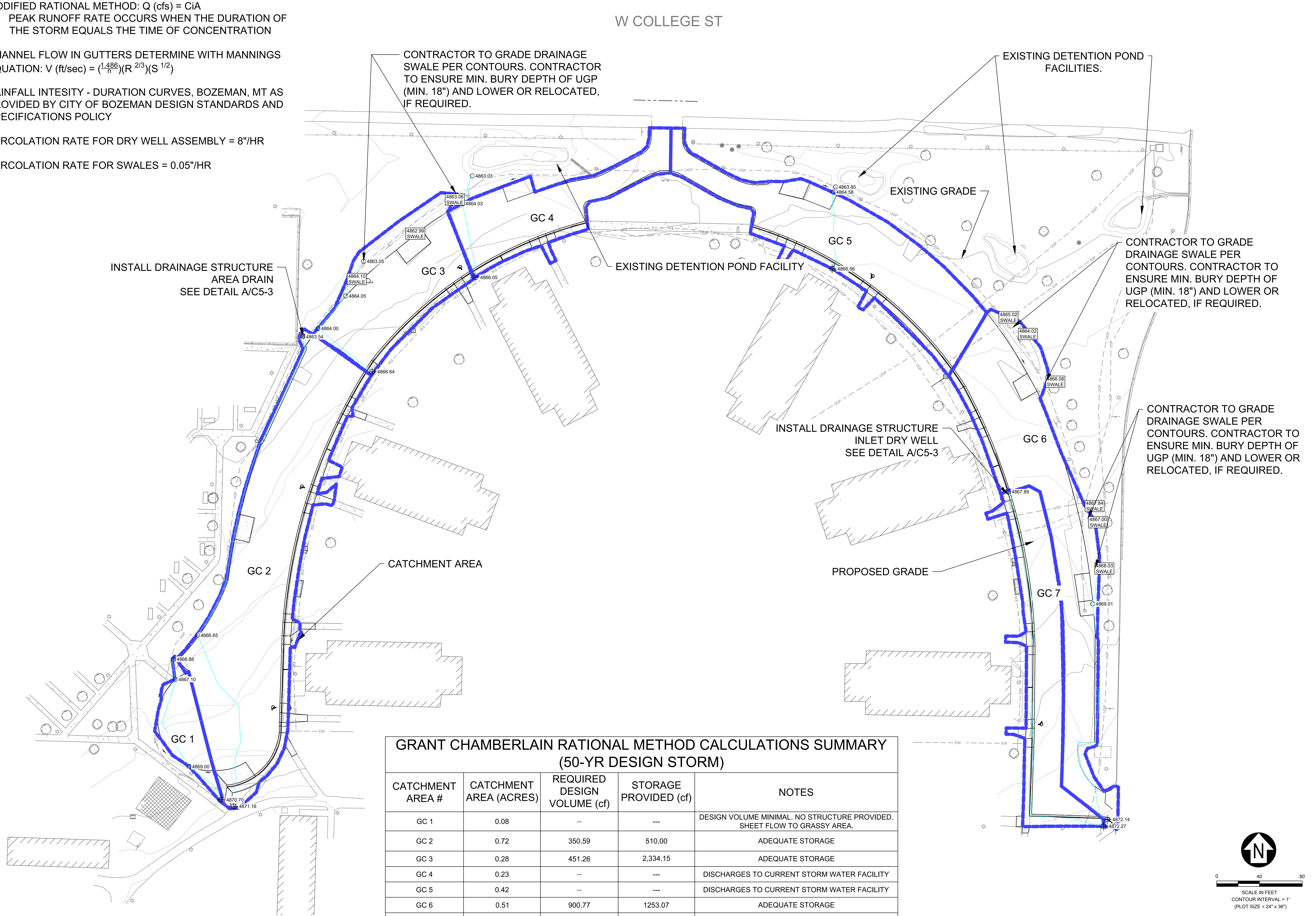
CG1-3

DATE

05-09-23

STORM WATER CALCULATION ASSUMPTIONS:

- MODIFIED RATIONAL METHOD: Q (cfs) = CiA
  - PEAK RUNOFF RATE OCCURS WHEN THE DURATION OF THE STORM EQUALS THE TIME OF CONCENTRATION
- CHANNEL FLOW IN GUTTERS DETERMINE WITH MANNINGS EQUATION: V (ft/sec) = $(\frac{1.486}{n})(R^{2/3})(S^{1/2})$
- RAINFALL INTESITY - DURATION CURVES, BOZEMAN, MT AS PROVIDED BY CITY OF BOZEMAN DESIGN STANDARDS AND SPECIFICATIONS POLICY
- PERCOLATION RATE FOR DRY WELL ASSEMBLY = 8"/HR
- PERCOLATION RATE FOR SWALES = 0.05"/HR



GRANT CHAMBERLAIN RATIONAL METHOD CALCULATIONS SUMMARY (50-YR DESIGN STORM)				
CATCHMENT AREA #	CATCHMENT AREA (ACRES)	REQUIRED DESIGN VOLUME (cf)	STORAGE PROVIDED (cf)	NOTES
GC 1	0.08	---	---	DESIGN VOLUME MINIMAL. NO STRUCTURE PROVIDED. SHEET FLOW TO GRASSY AREA.
GC 2	0.72	350.59	510.00	ADEQUATE STORAGE
GC 3	0.28	451.26	2,334.15	ADEQUATE STORAGE
GC 4	0.23	---	---	DISCHARGES TO CURRENT STORM WATER FACILITY
GC 5	0.42	---	---	DISCHARGES TO CURRENT STORM WATER FACILITY
GC 6	0.51	900.77	1253.07	ADEQUATE STORAGE
GC 7	0.22	172.88	510.00	ADEQUATE STORAGE

MONTANA STATE UNIVERSITY

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: S. ESLINGER
REVIEWED BY: K.GAUTHIER

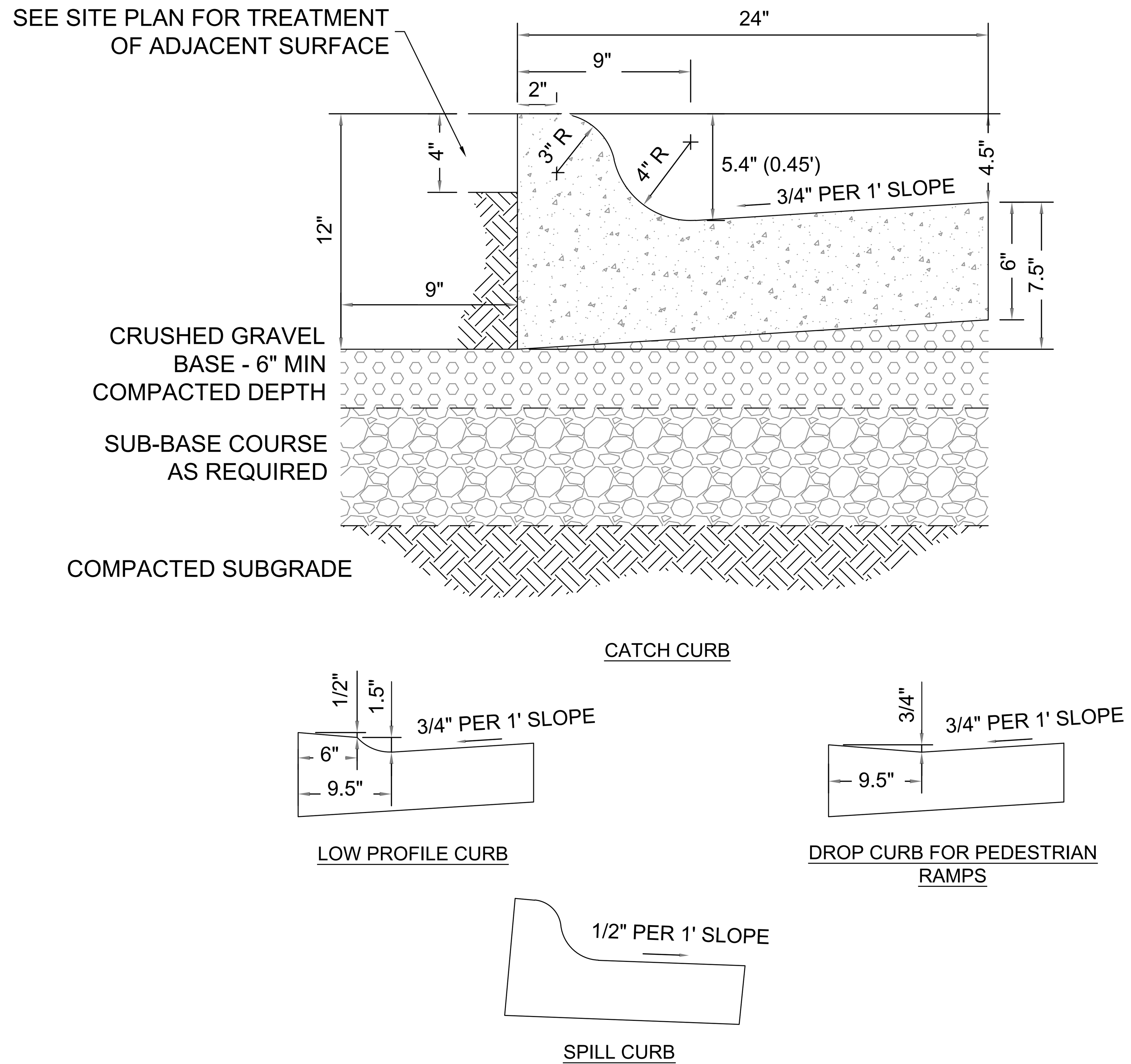
REV.	DESCRIPTION	DATE

PPA#22-0012

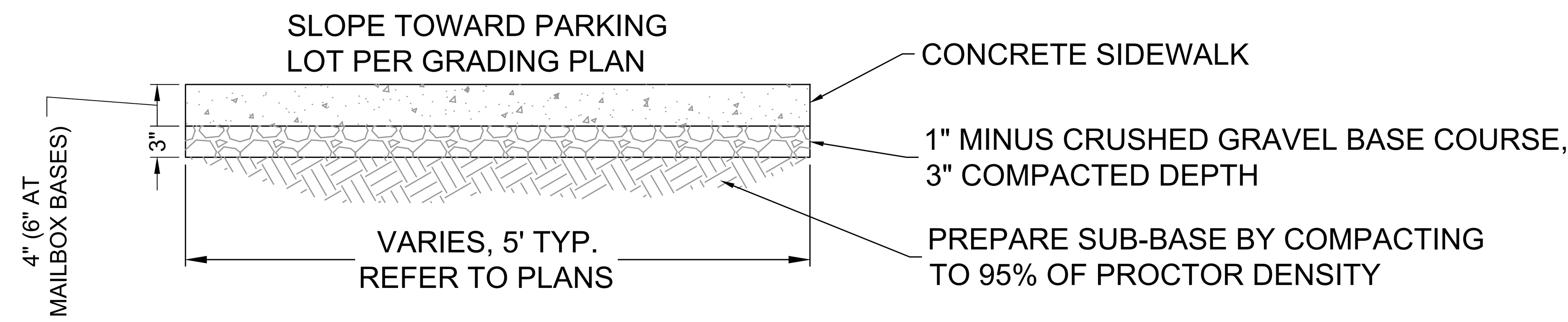
GRANT CHAMBERLAIN - STORM WATER

SHEET
CU1-1

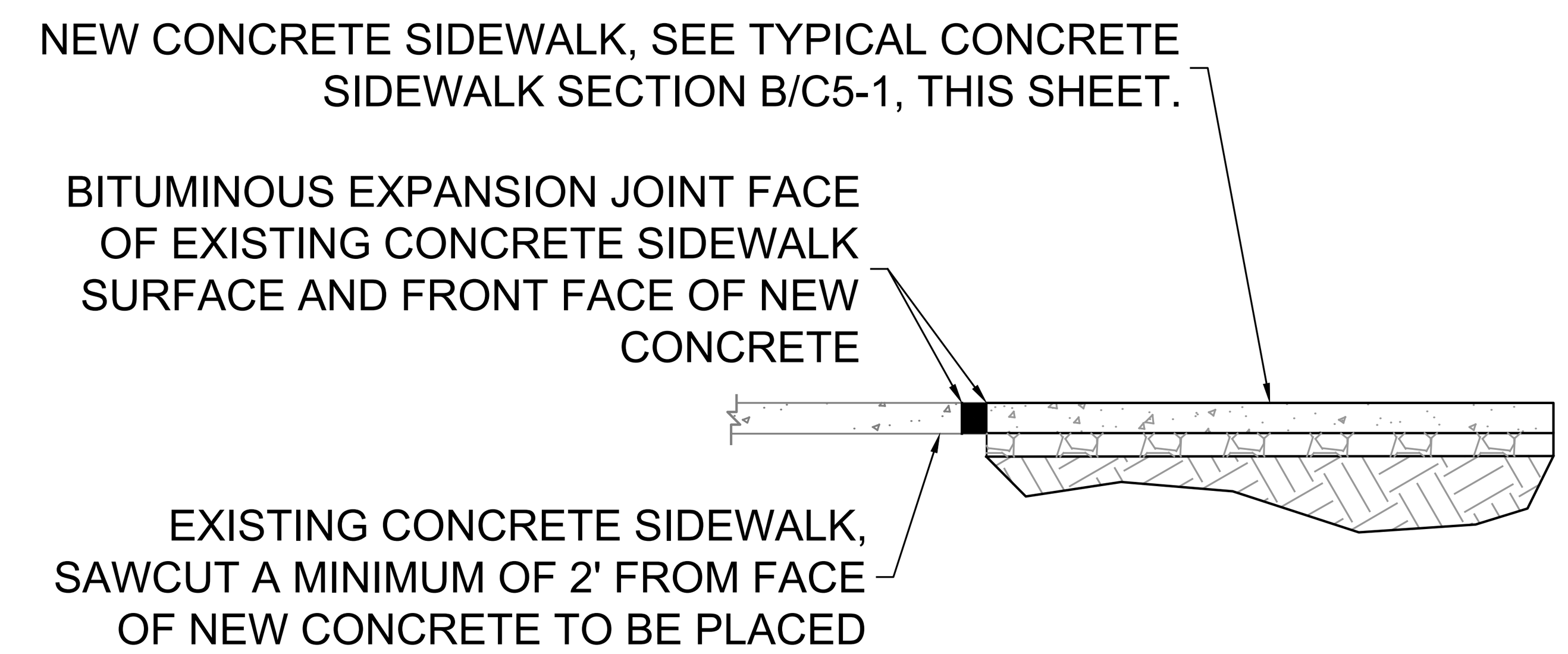
DATE
05-09-23



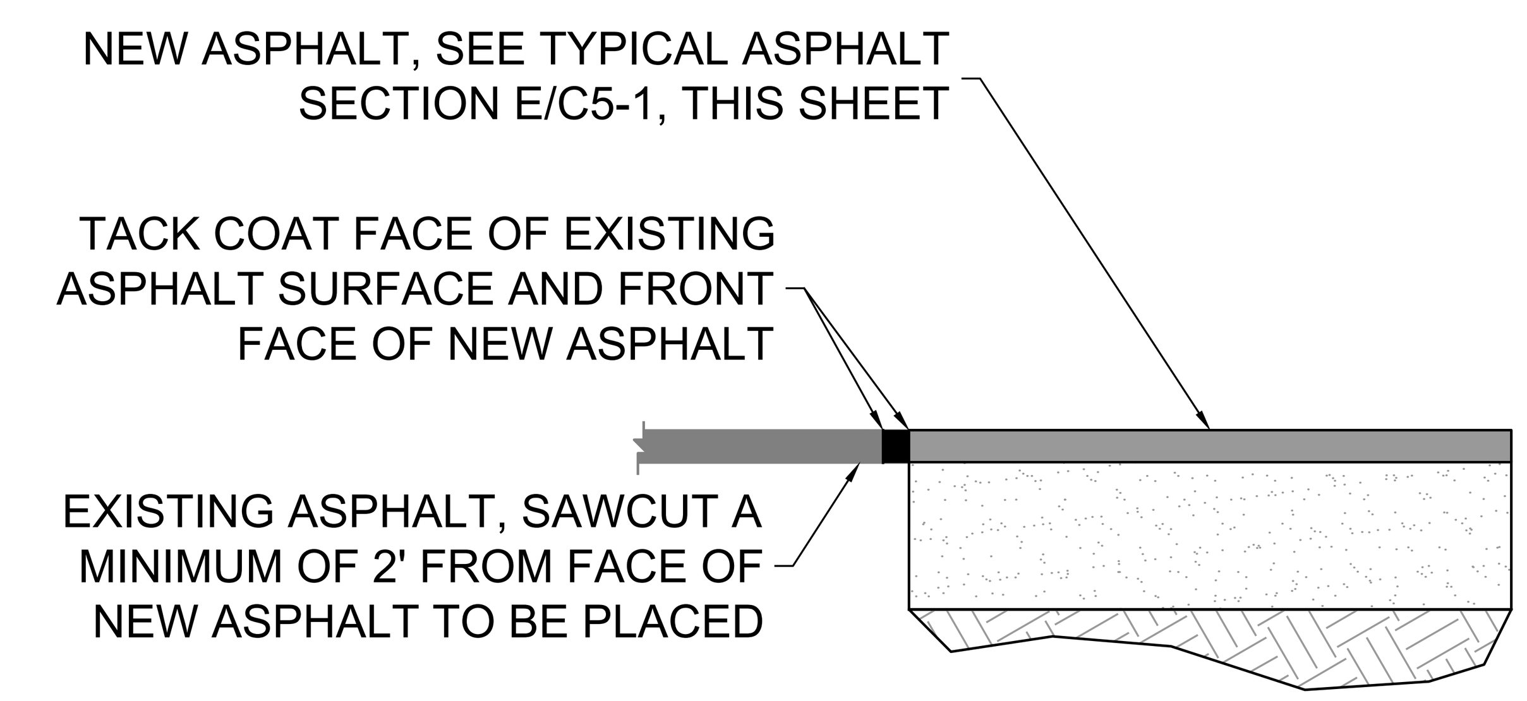
A
C5-1
INTEGRAL CURB & GUTTER
NTS



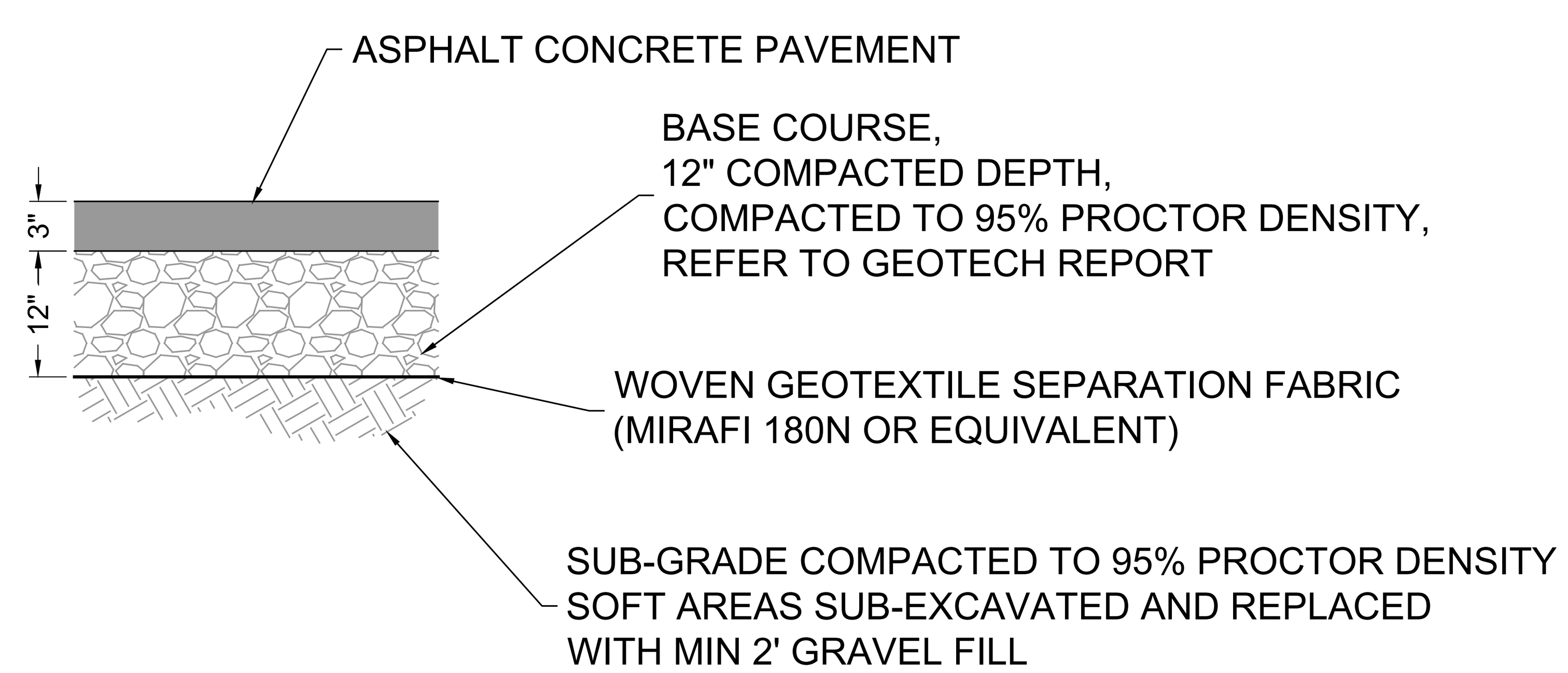
B
C5-1
TYPICAL CONCRETE SIDEWALK SECTION
NTS



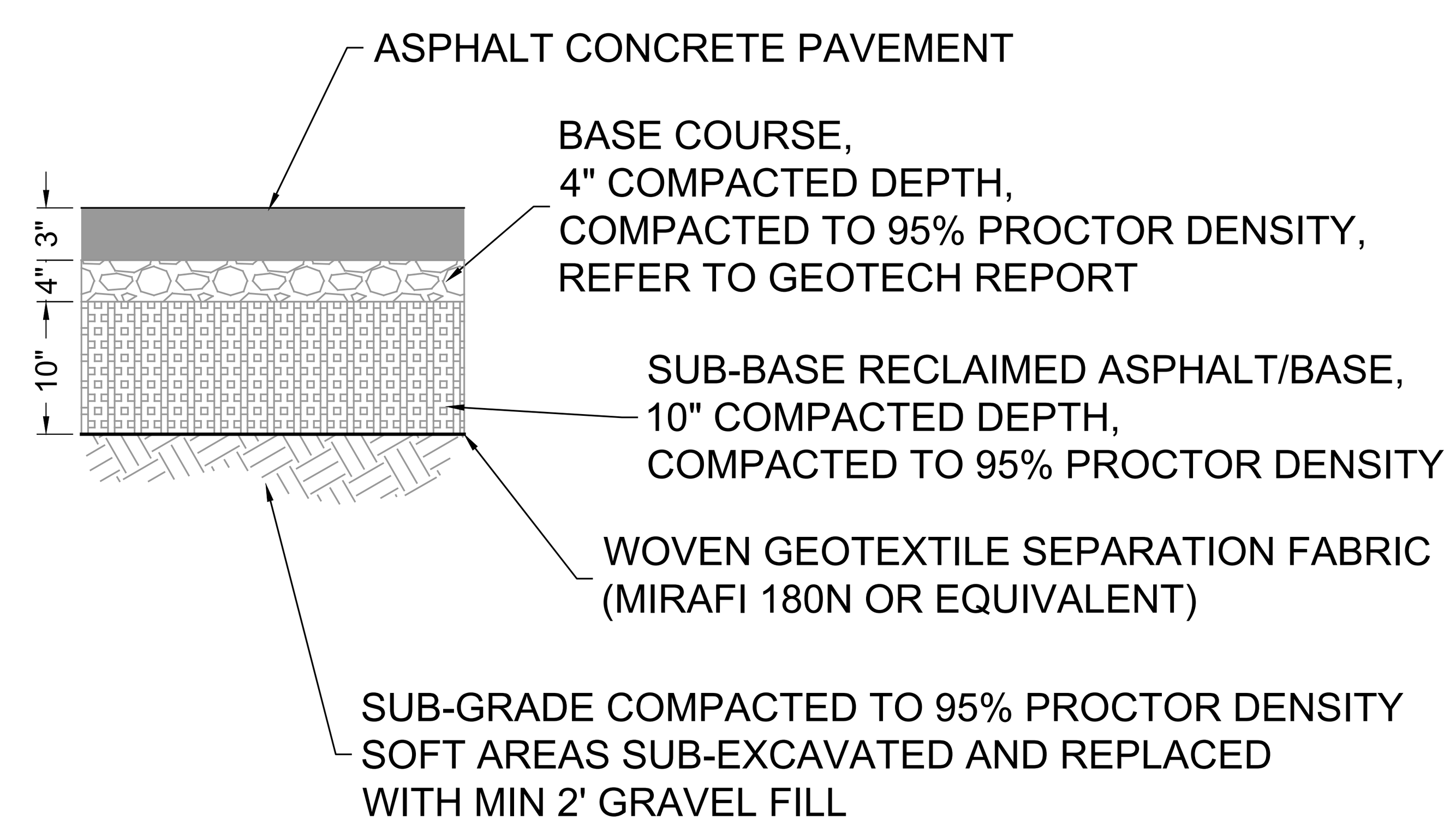
C
C5-1
TYPICAL CONCRETE CUT
NTS



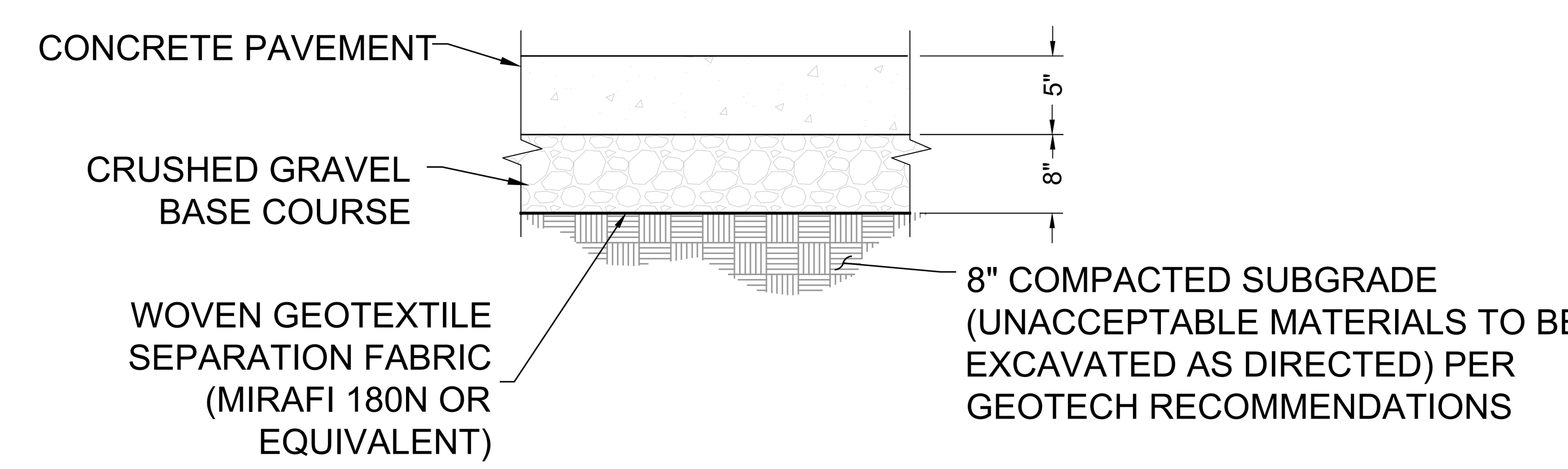
D
C5-1
TYPICAL ASPHALT CUT
NTS



E
C5-1
BID ALTERNATIVE 1 ASPHALT SECTION
NTS



F
C5-1
BID ALTERNATIVE 2 ASPHALT SECTION
NTS



NOTE: REINFORCE AND PLACE JOINTS PER SPECIFICATION & JOINT DETAIL. PLACE CROSS JOINTS ON DRIVE-THRU CONCRETE APPROX. EVERY 10' AS TO MAKE THE CONCRETE PANELS AS SQUARE AS POSSIBLE. SEE GEOTECH REPORT FOR SECTION DETAILS.

G
C5-1
REINFORCED CONCRETE SECTION
NTS

MONTANA STATE UNIVERSITY

MSU-CPDC

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

PARKING
IMPROVEMENTS
2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

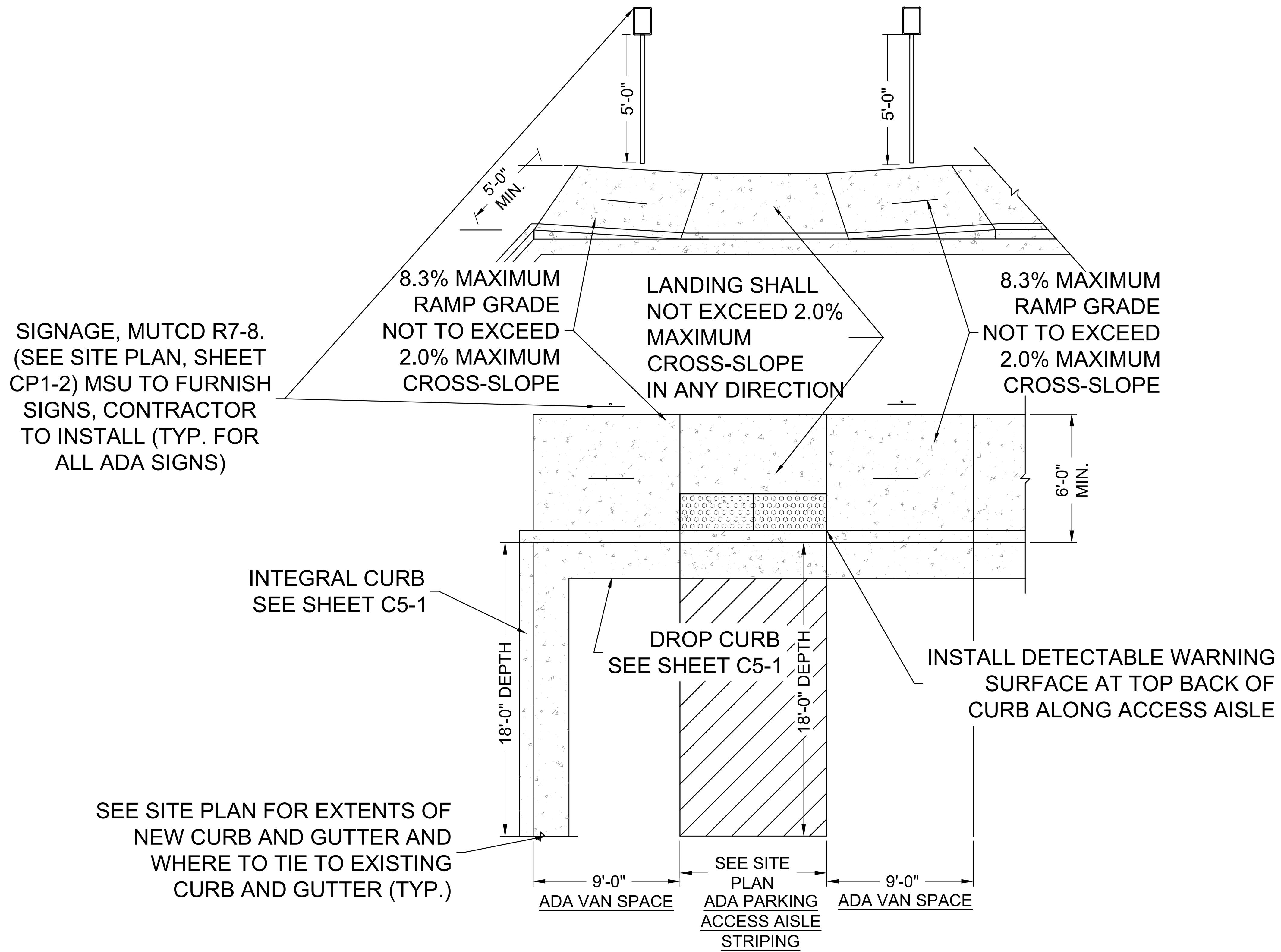
REV.	DESCRIPTION	DATE

PPA#22-0012

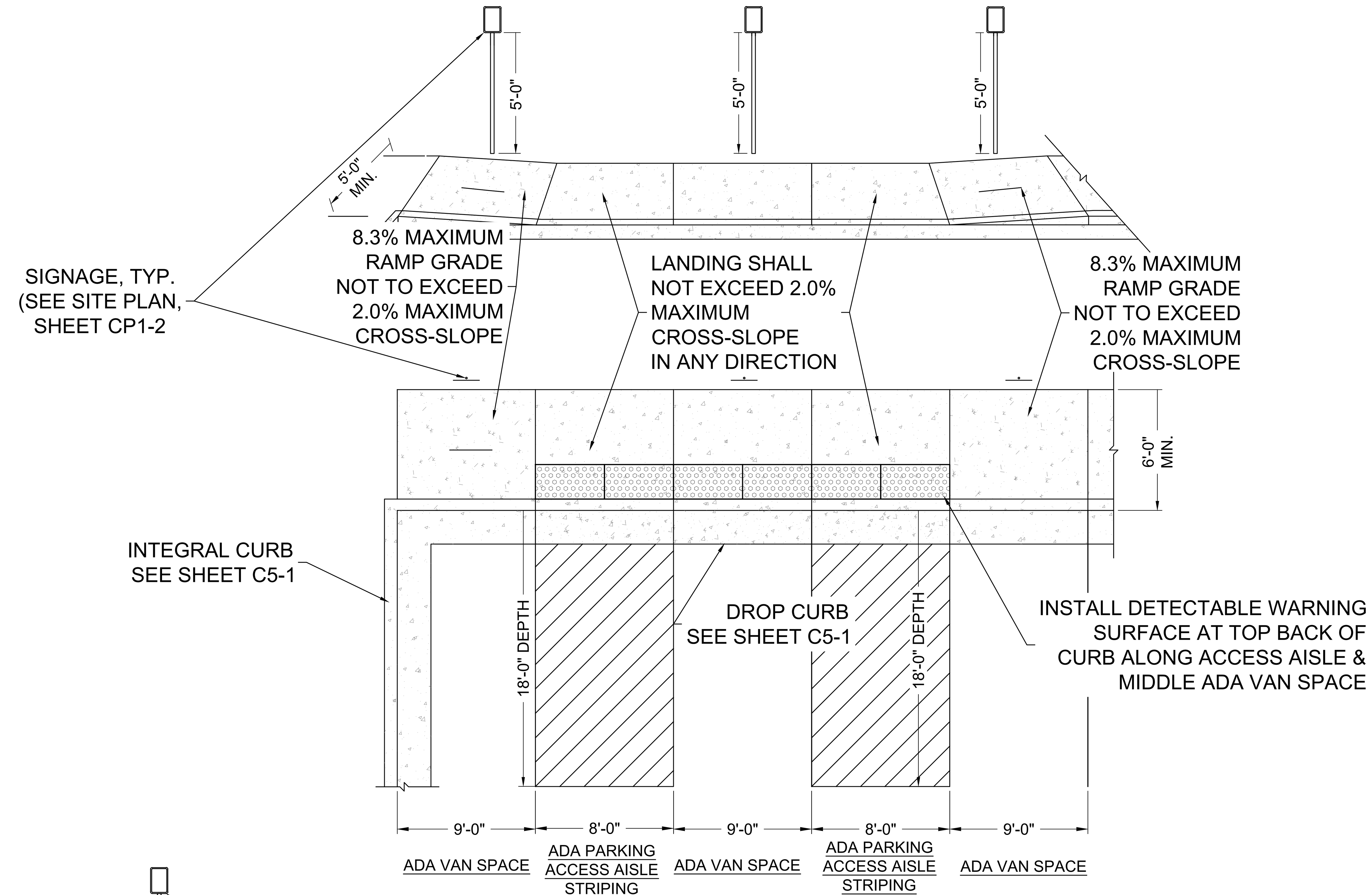
DETAILS 1

SHEET
C5-1

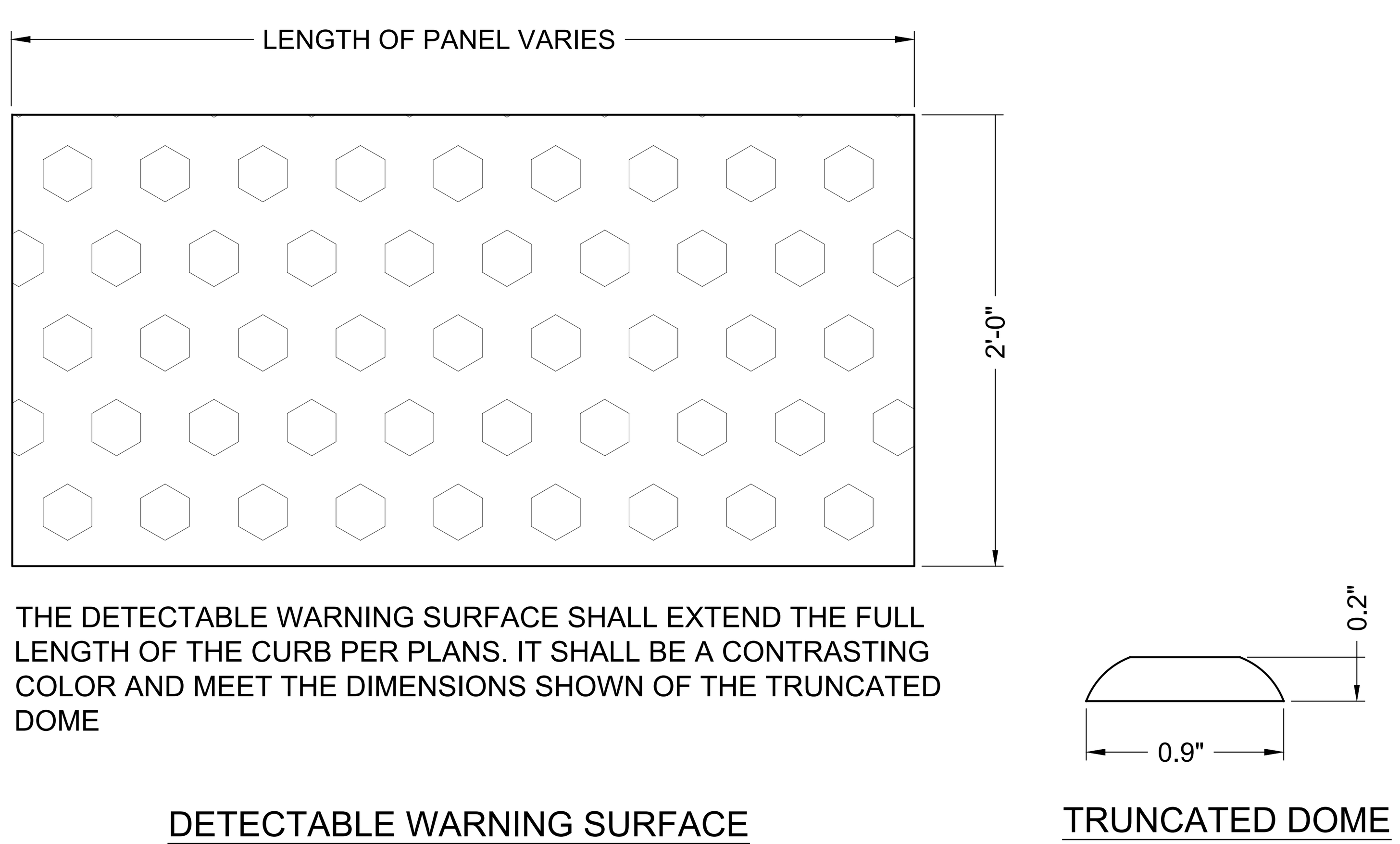
DATE
05-09-23



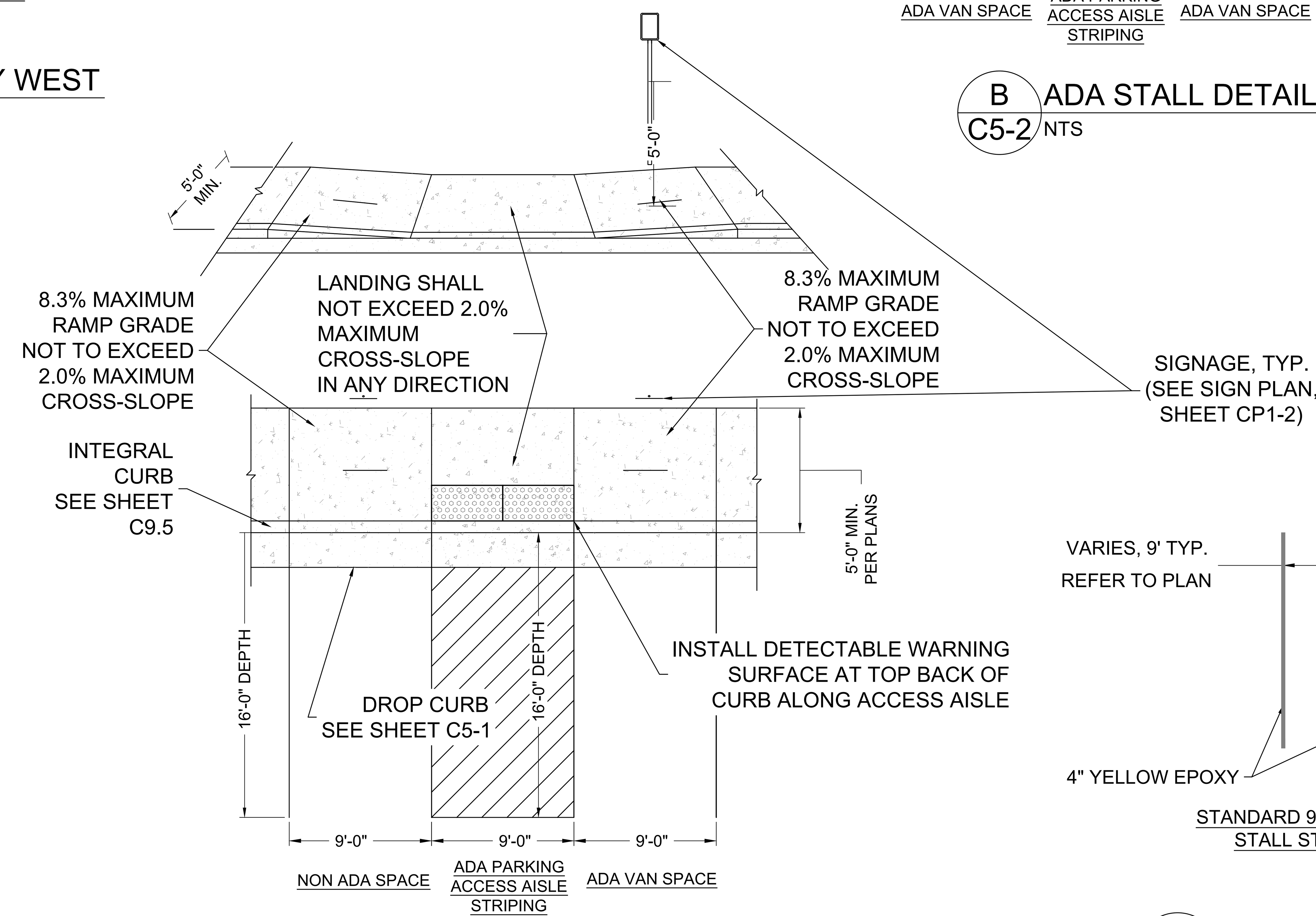
A ADA STALL DETAIL - PAISLEY WEST
C5-2 NTS



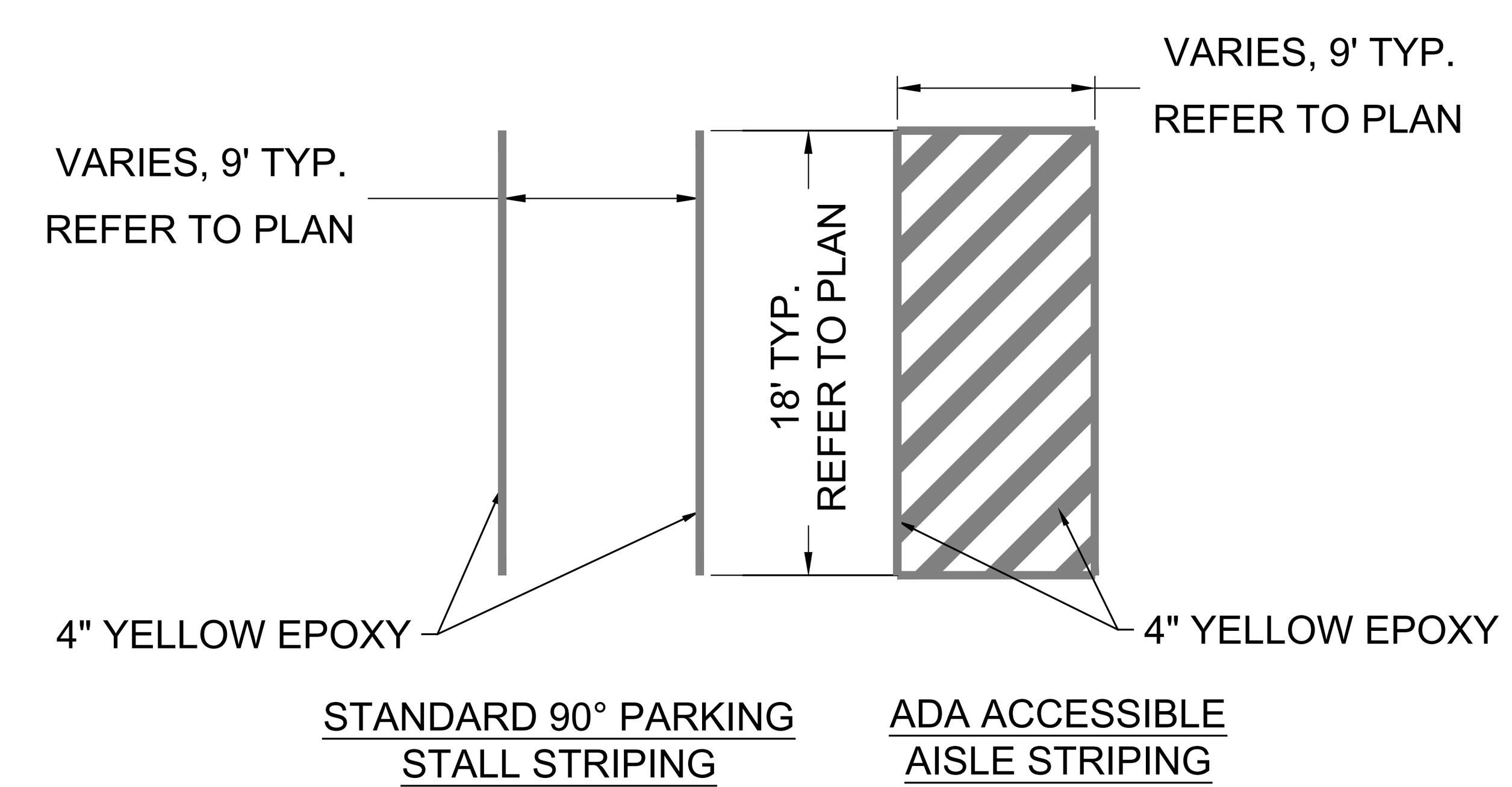
B ADA STALL DETAIL - PAISLEY EAST
C5-2 NTS



C DETECTABLE WARNING DETAIL
C5-2 NTS



D ADA STALL DETAIL - GRANT CHAMBERLAIN
C5-2 NTS



E TYPICAL PAVEMENT MARKINGS
C5-2 NTS

MONTANA STATE UNIVERSITY

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

PARKING IMPROVEMENTS
2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

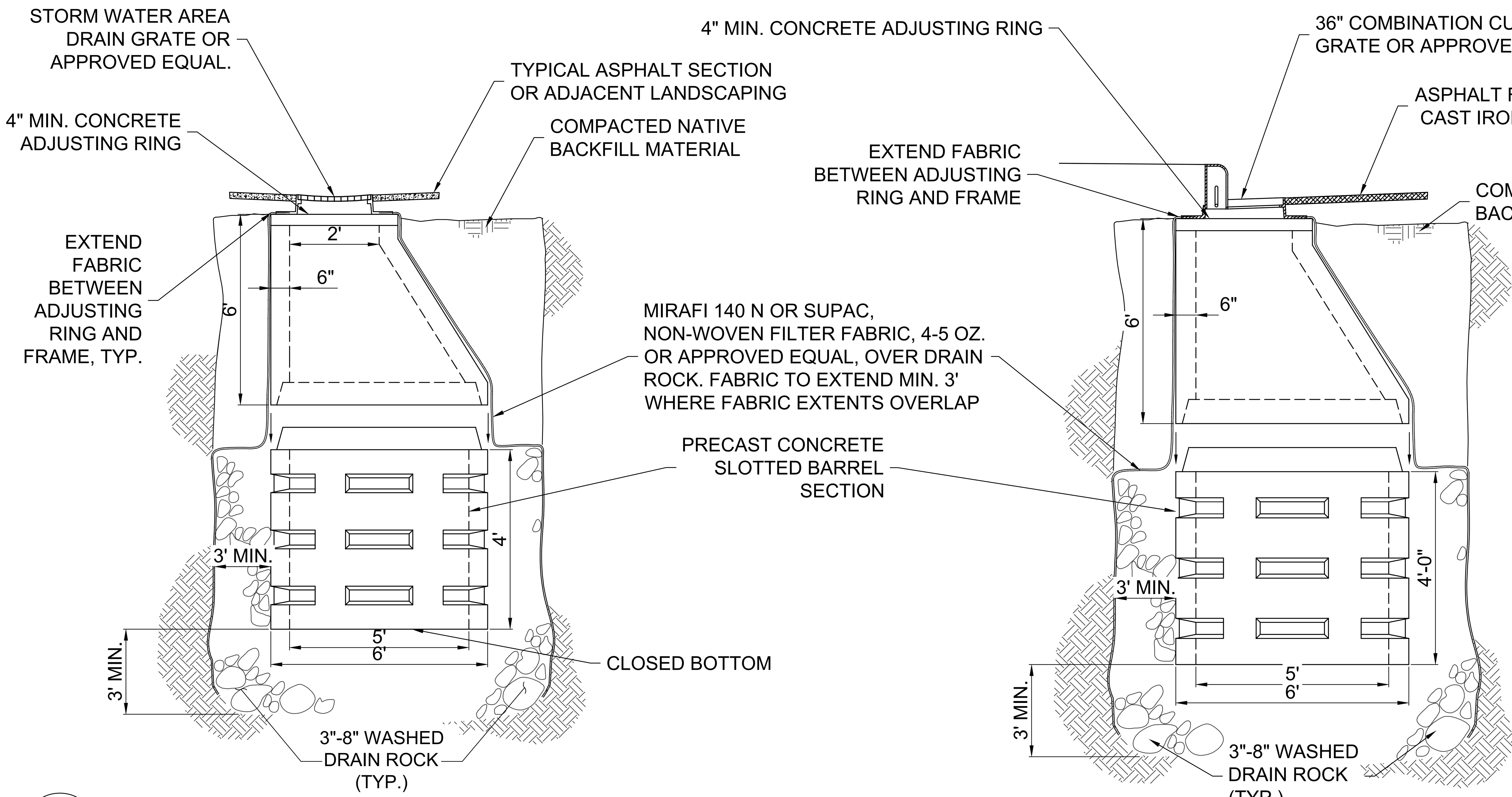
REV.	DESCRIPTION	DATE

PPA#22-0012

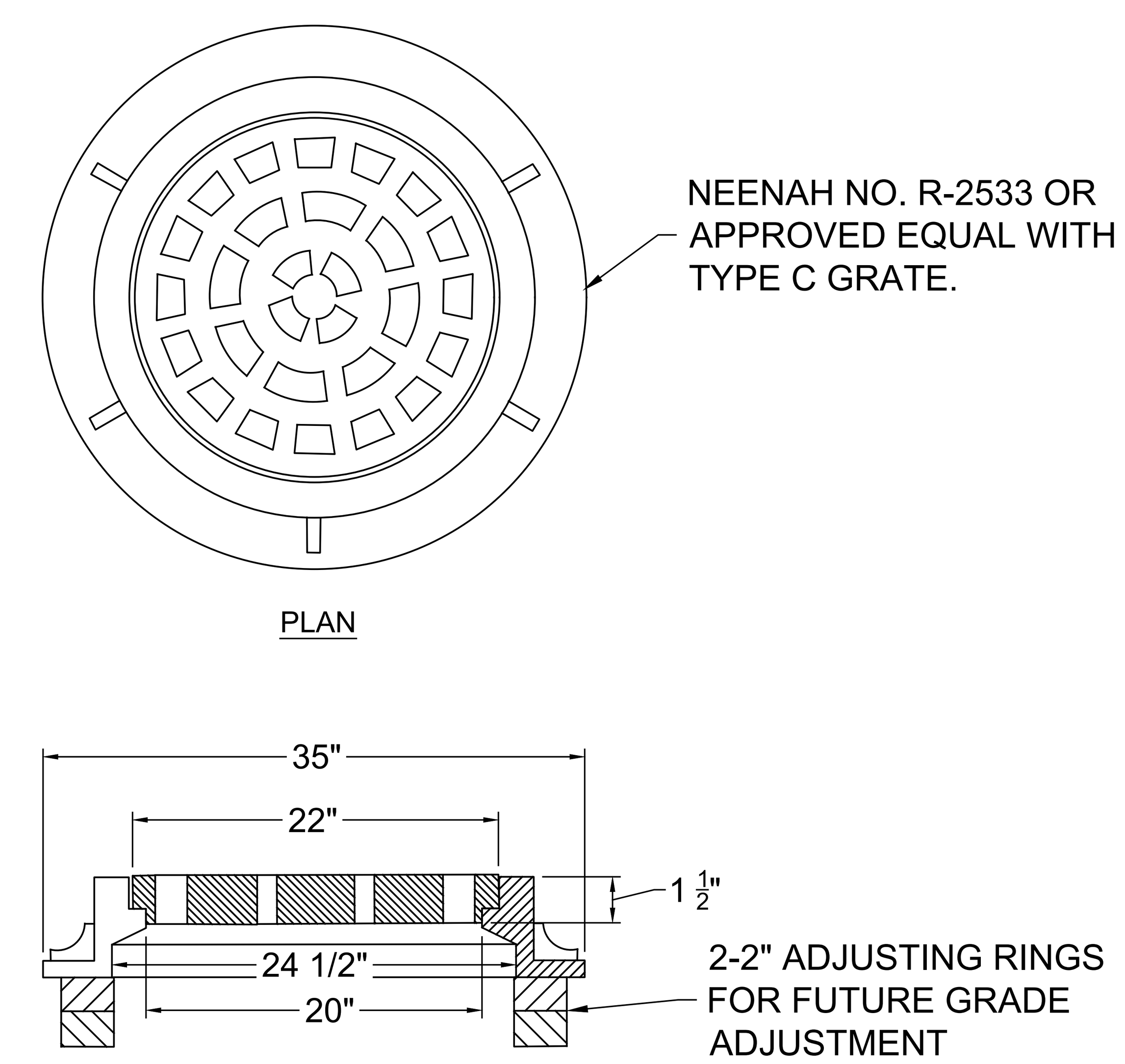
DETAILS 2

SHEET
C5-2

DATE
05-09-23

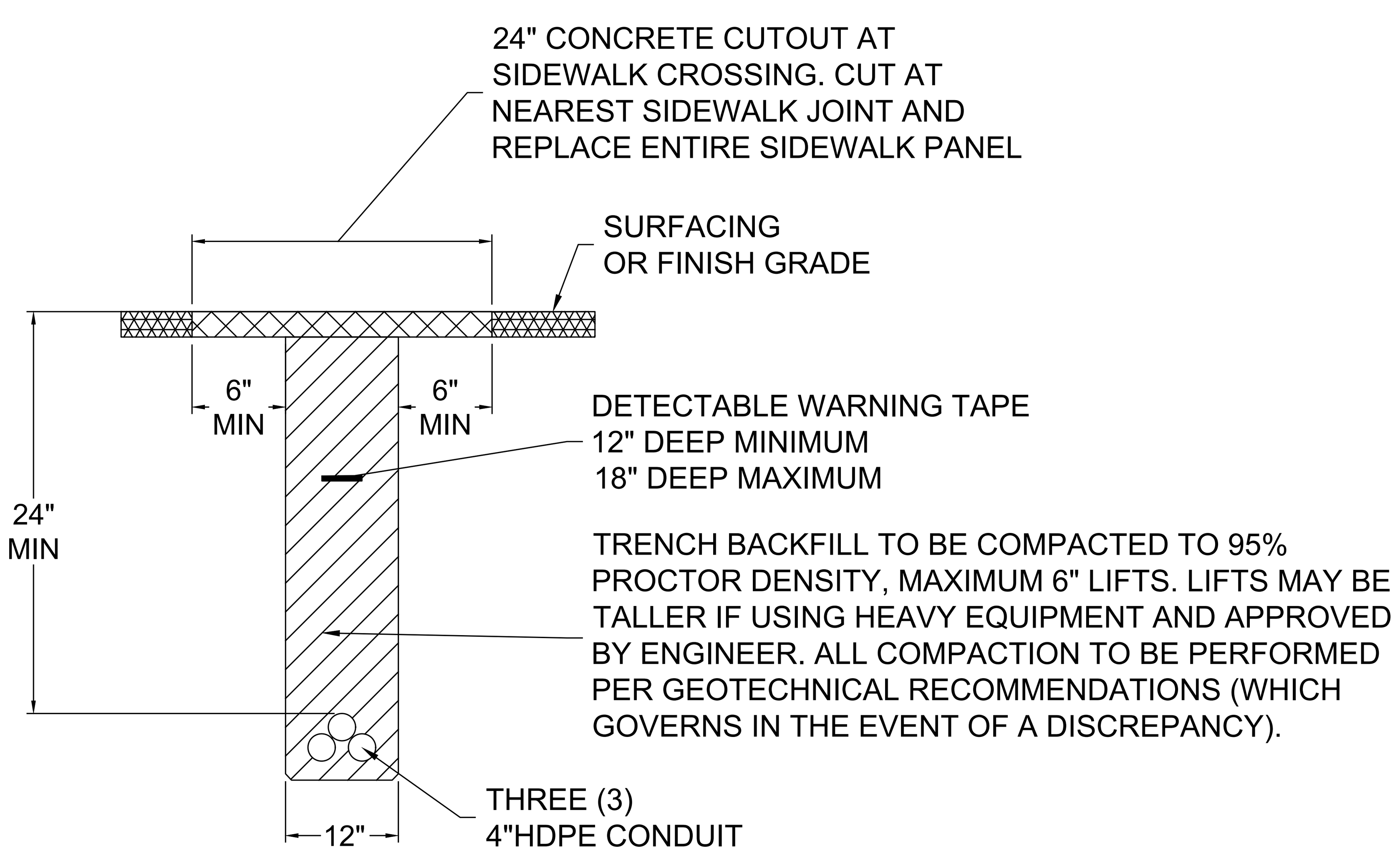


A / C5-3 PRECAST DRY WELL (W/ AREA DRAIN OR CURB INLET) DETAIL
NTS



NOTE: CONTRACTOR MAY USE APPROVED EQUIVALENT, TRAFFIC-RATED GRATED MANHOLE THROUGH SUBMITTAL PROCESS.

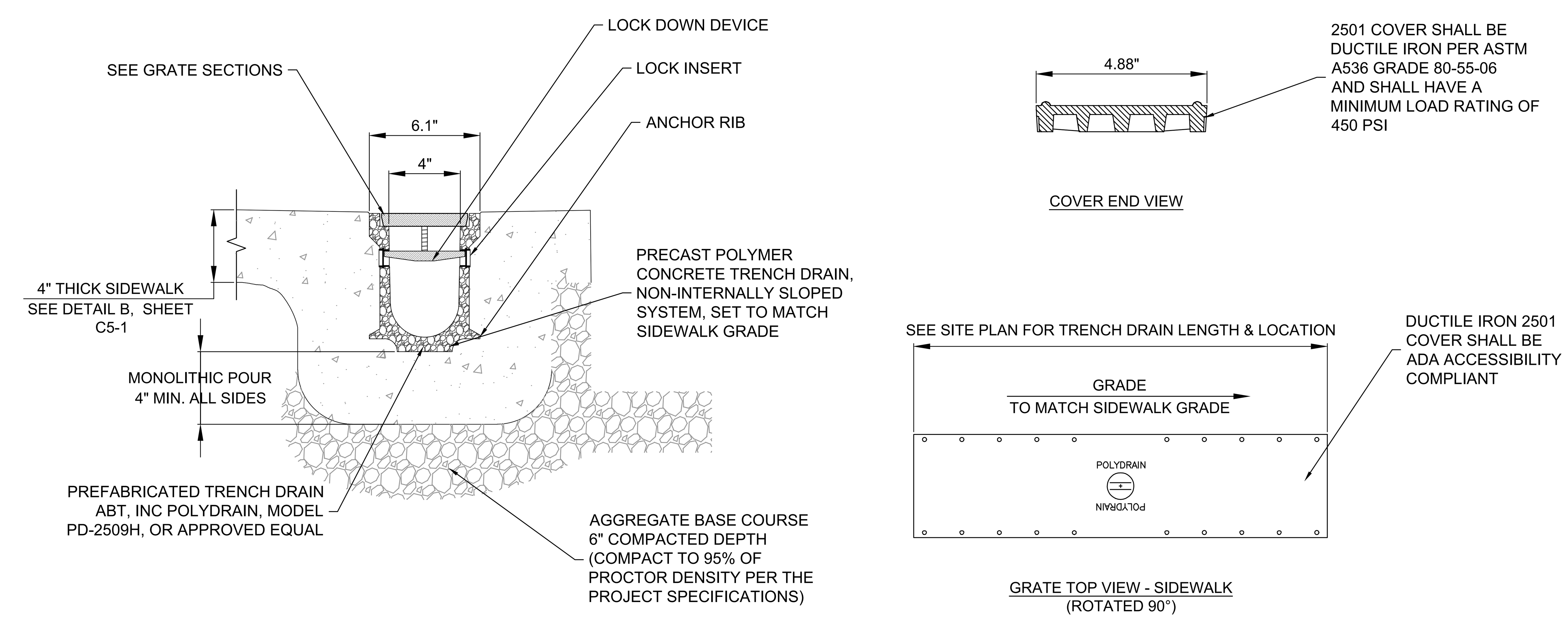
B / C5-3 STORM DRAIN GRATE
NTS



DETAIL NOTES:

1. CONTRACTOR SHALL COORDINATE TRENCHING WITH OTHER UNDERGROUND UTILITIES. CONTRACTOR SHALL USE COMMON TRENCHES AT ALL CROSSING WHENEVER POSSIBLE.
2. 1-#12 AWG LOCATE WIRE AND A NYLON OR POLYESTER PULL TAPE WITH 1,250 LBS TEST STRENGTH AND FOOTAGE MARKINGS IN ALL EMPTY CONDUITS.
3. CUT WIDTH VARIES OUTSIDE OF SIDEWALK. REFER TO SITE PLAN AND GRADING PLAN FOR CUT WIDTH AND PROPOSED FINISH SURFACE GRADE

C / C5-3 CONDUIT TRENCH DETAIL
NTS



D / C5-3 TRENCH DRAIN DETAIL
NTS

MONTANA STATE UNIVERSITY

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

PARKING IMPROVEMENTS 2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

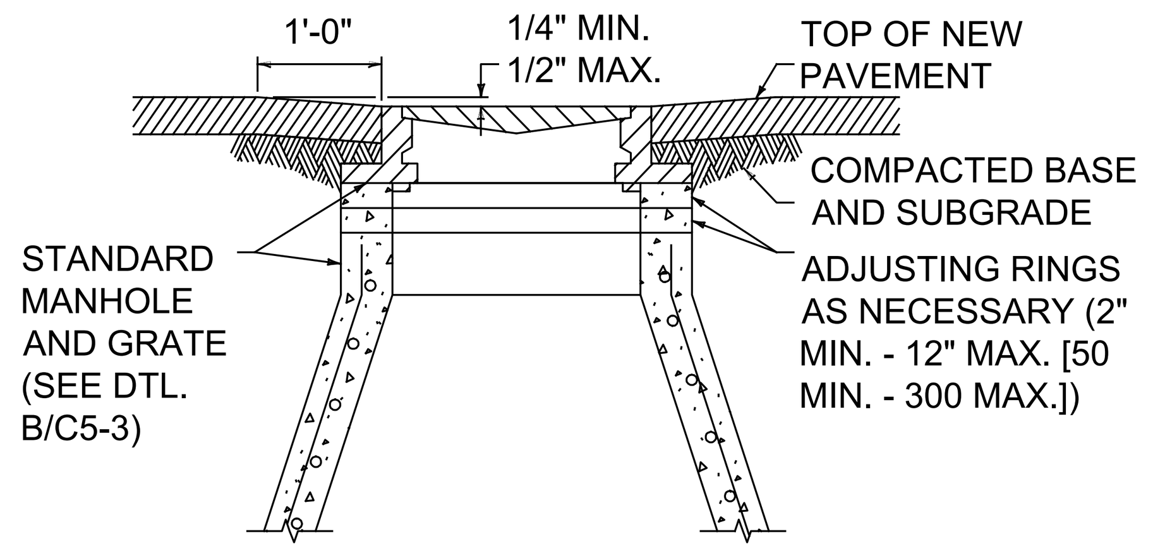
REV.	DESCRIPTION	DATE

PPA#22-0012

DETAILS 3

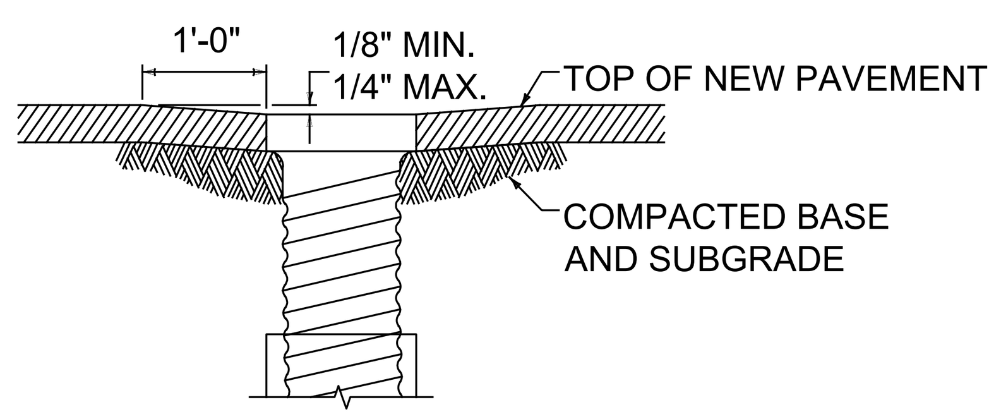
SHEET C5-3

DATE 05-09-23



NOTES:
1. ADJUST MANHOLES UPWARD WITH ADJUSTING RINGS UNDER FRAME.
2. ADJUST MANHOLES DOWNWARD BY REMOVING CONE AND BARREL SECTIONS AS NECESSARY AND REPLACING WITH SECTIONS OF LENGTH REQUIRED TO MATCH GRADE.
3. SLOPE MANHOLE FRAME AS REQUIRED TO MATCH SLOPE OF STREET.
4. MAKE FINAL MANHOLE ADJUSTMENTS BEFORE PAVING.

MANHOLE ADJUSTMENT DETAIL

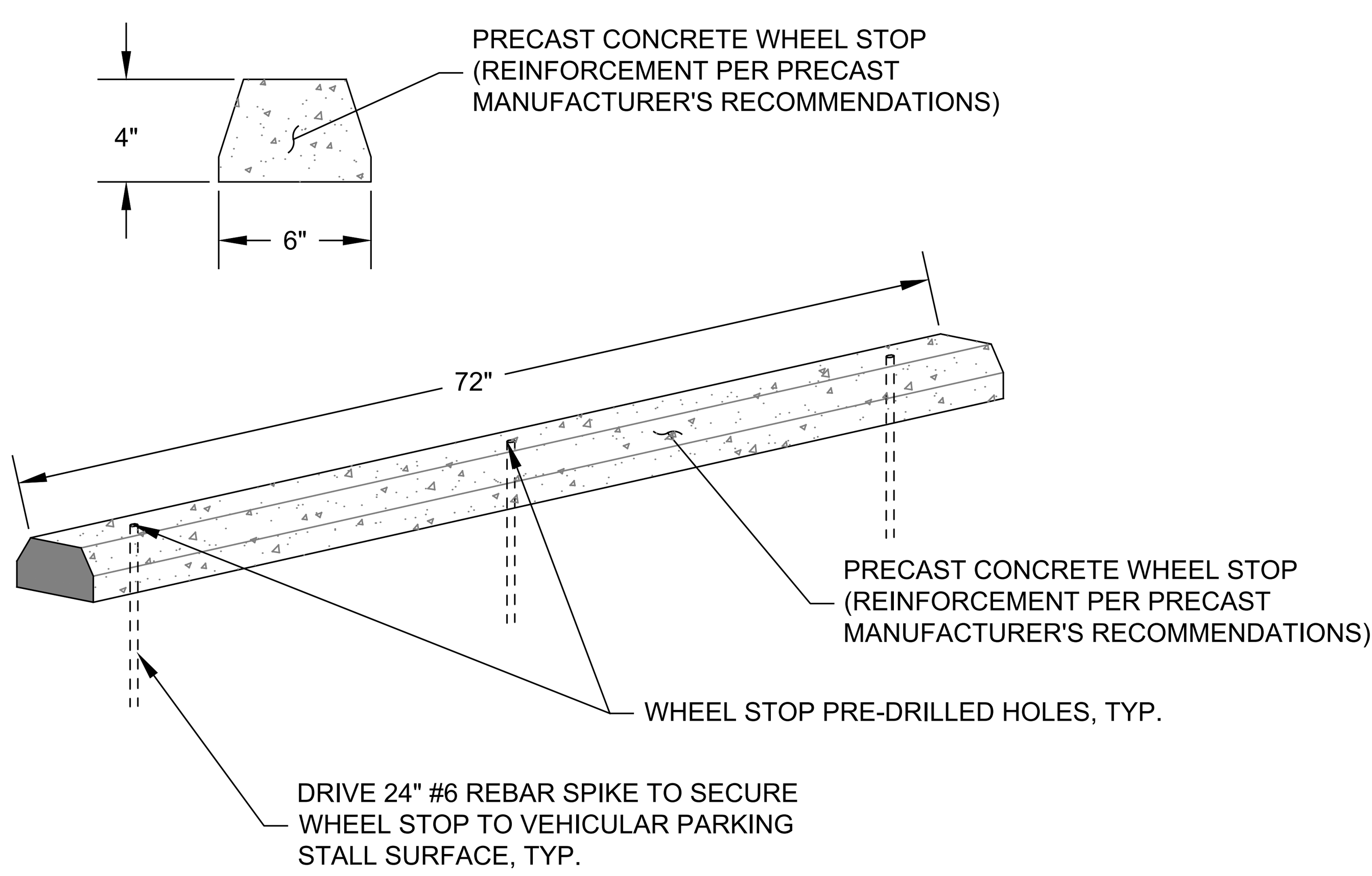


NOTES:
1. ADJUST WATER VALVES UPWARD OR DOWNWARD AS REQUIRED.
2. MAKE FINAL ADJUSTMENTS BEFORE PAVING.

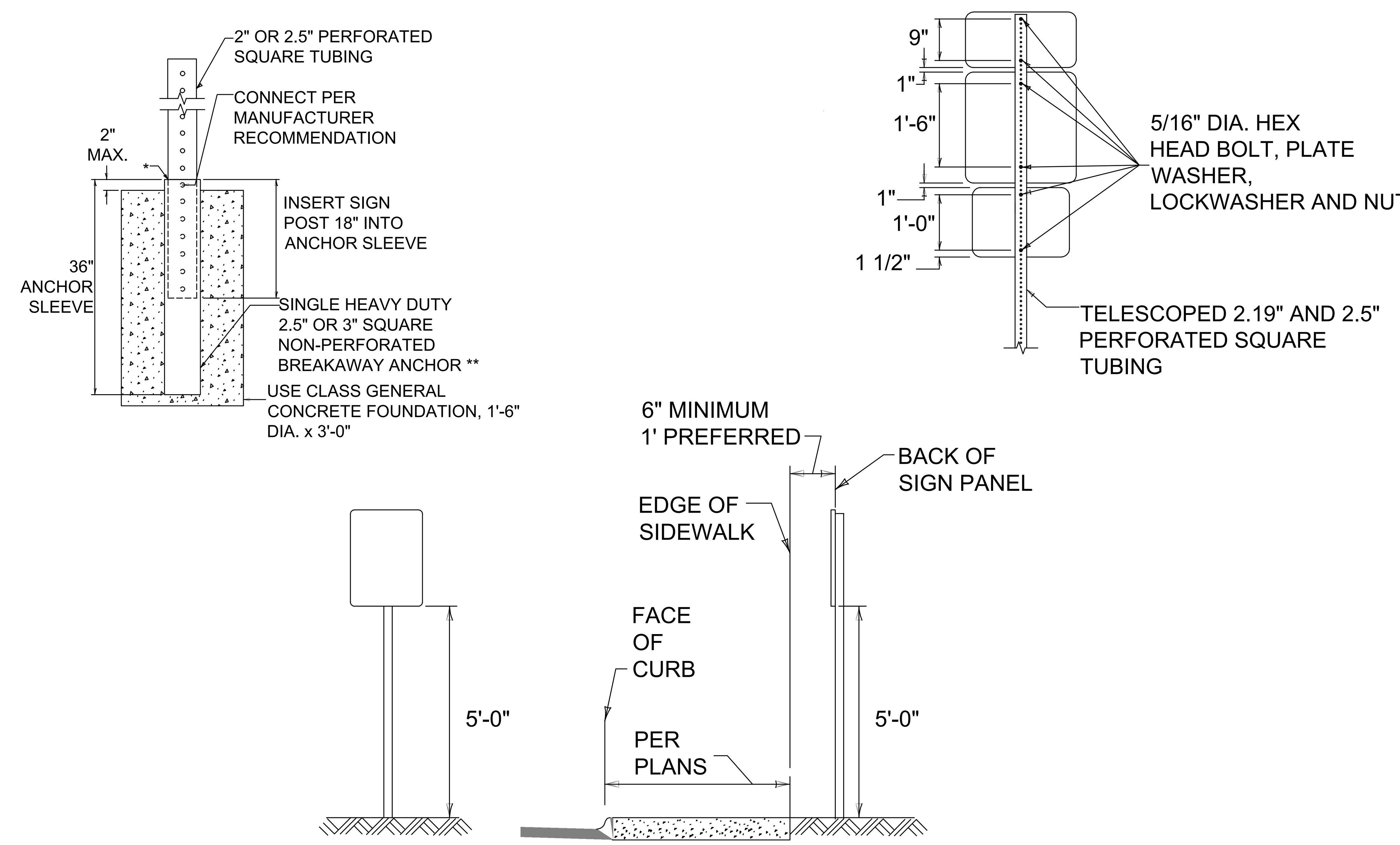
VALVE BOX ADJUSTMENT DETAIL

A / C5-4 MANHOLE AND VALVE BOX ADJUSTMENT DETAILS
NTS

B / C5-4 E-BLOCK
NTS



C / C5-4 CONCRETE WHEEL STOP DETAIL
NTS



D / C5-4 SIGN INSTALATION DETAIL
NTS

MONTANA STATE UNIVERSITY

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

PARKING IMPROVEMENTS
2023

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

DETAILS 4

SHEET
C5-4

DATE
05-09-23

PROJECT INFORMATION

MSU - PAISLEY COURT || LIGHTING PLAN
BOZEMAN, MONTANA

CONSTRUCTION DOCUMENTS

DATE ISSUED | 03/01/2023
PROJECT ENGINEER | ANDY MOORE

Issue
100%

LIGHTING

- B01 IDENTIFICATION (1, a)
  - B01: LUMINAIRE TYPE
  - a: SWITCH/ZONE
  - 1: CIRCUIT NUMBER
- FILLED LUMINAIRE INDICATED EMERGENCY OPERATION
- SURFACE MOUNTED LUMINAIRE
- RECESSED LUMINAIRE
- WALL WASH LUMINAIRE
  - ARROW INDICATED ORIENTATION
- WALL MOUNTED LUMINAIRE
  - +XX" INDICATES MOUNTING HEIGHT TO CENTER
- SUSPENDED LUMINAIRE
- POLE MOUNTED LUMINAIRE WITH ARM
- POST MOUNTED LUMINAIRE
- GROUND/FLOOR MOUNTED LUMINAIRE
- TRACK LUMINAIRE SYSTEM (LENGTH, HEAD TYPES, & QUANTITIES AS INDICATED ON PLANS & SCHEDULES)
- EXIT SIGN - ARROWS & FACES AS INDICATED ON PLANS

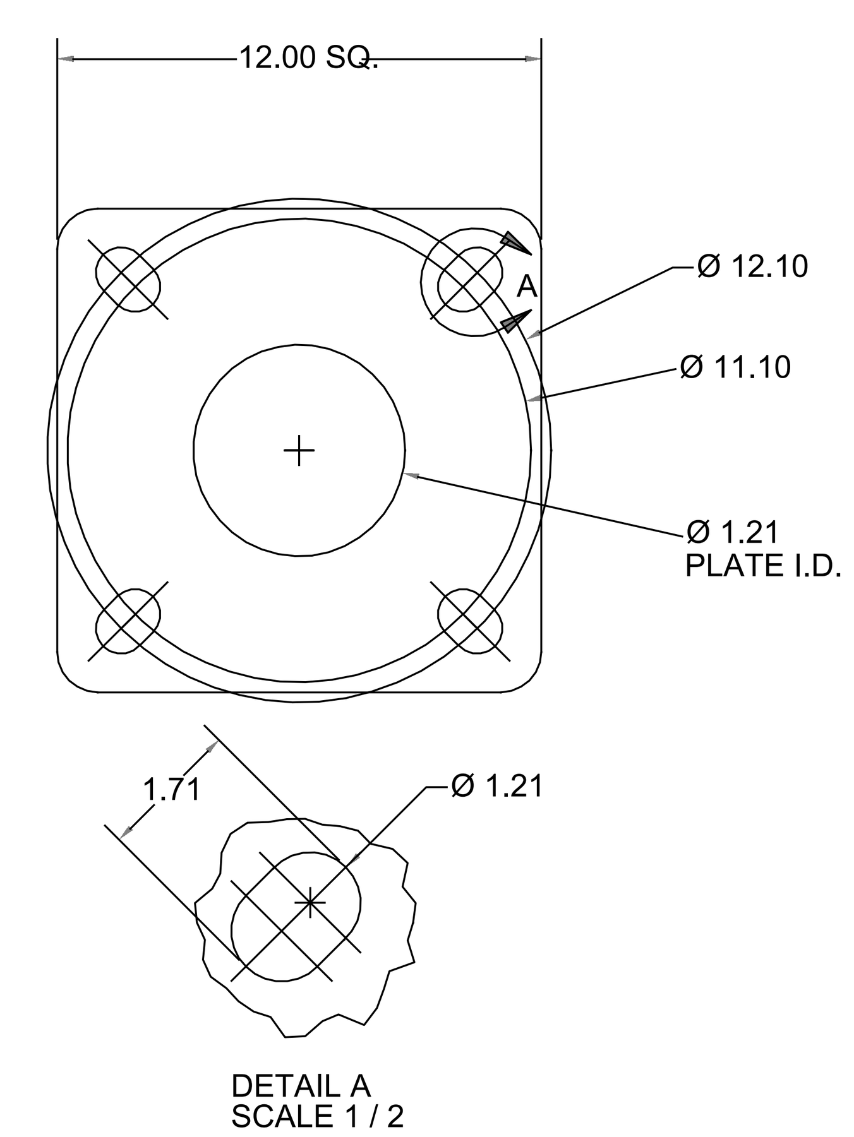
ORIENTATION

- HORIZONTAL ZERO LINE INDICATED HOTLINE ZERO DRAWN FROM CENTER
- DIRECTIONAL ARROW INDICATED PRIMARY LUMEN ORIENTATION
- DIRECTIONAL AIMING LINE

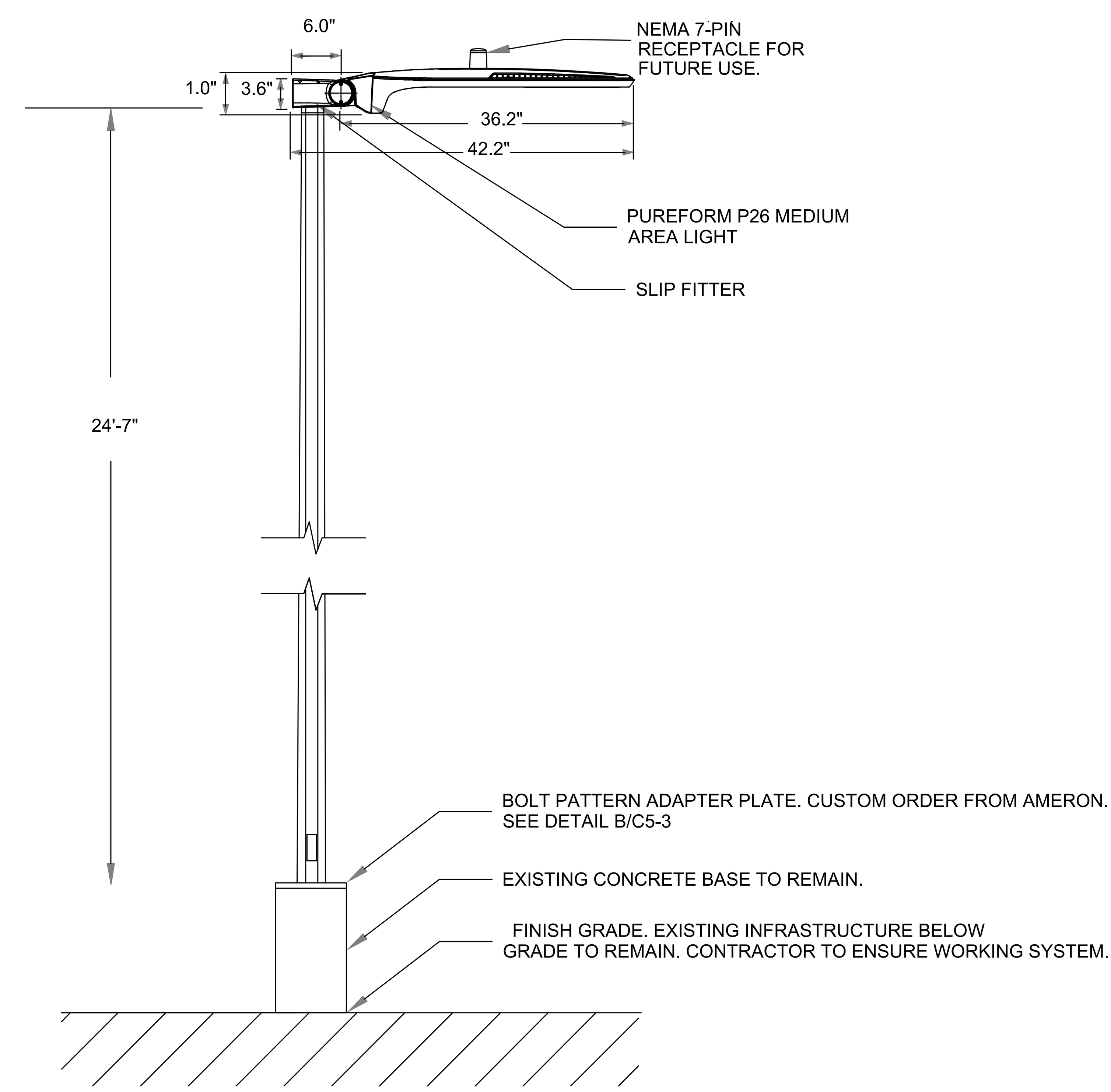
LUMINAIRE SCHEDULE

Type	Description	Manufacturer	Catalog Number	Source	CRI	CCT	Voltage	Load	Luminous Flux	Efficacy	Dim	Life Expectancy	Mounting	Finish	Notes
B01	STREET/PARKING ENTRY LUMINIARE	GARDCO	P26-64L-600-WW(80CRI)-G2-SF-2-277-FAWS-TLRD7-F1-BZ // PTF2-P26/34-1-90-(F)	LED	80	3000K	277 V	167 VA	14493 lm	127 lm/W	FAWS	100,000	EXISTING POLE W/ SLIPFITTER	BRONZE	2
B02	PARKING LOT LUMINIARE	GARDCO	P26-80L-700-WW(80CRI)-G2-SF-5W-277-FAWS-TLRD7-F1 // PTF2-P26/34-1-90-(F)	LED	80	3000K	277 V	169 VA	21363 lm	127 lm/W	FAWS	100,000	25' NEW POLE	BRONZE	1

NOTES:
1.PROVIDE & INSTALL NEW AMERON #MEO-7.5 POLE AND CUSTOM BOLT PATTERN ADAPTER PROVIDED BY AMERON. REFER TO DETAIL 1/EL0.01
2. EXISTING POLE TO REMAIN.



1 AMERON CUSTOM BOLT PATTERN ADAPTER
EL0.01 NTS



2 AMERON POLE MOUNTING DETAIL
EL0.01 NTS

A MODULUS LIGHT POLE DETAIL
C5-5 NTS

MONTANA STATE UNIVERSITY

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

PARKING IMPROVEMENTS
2023

DJ&A

DRAWN BY: L. OTTEY
REVIEWED BY: K. GAUTHIER

REV.	DESCRIPTION	DATE

PPA#22-0012

DETAILS 5

SHEET
C5-5

DATE
05-09-23