

# BID SET

Issued: JANUARY 14, 2025

## THE MARYLAND ZOO IN BALTIMORE RED PANDA

### The Maryland Zoo in Baltimore

1 Safari Place  
Baltimore, MD 21217

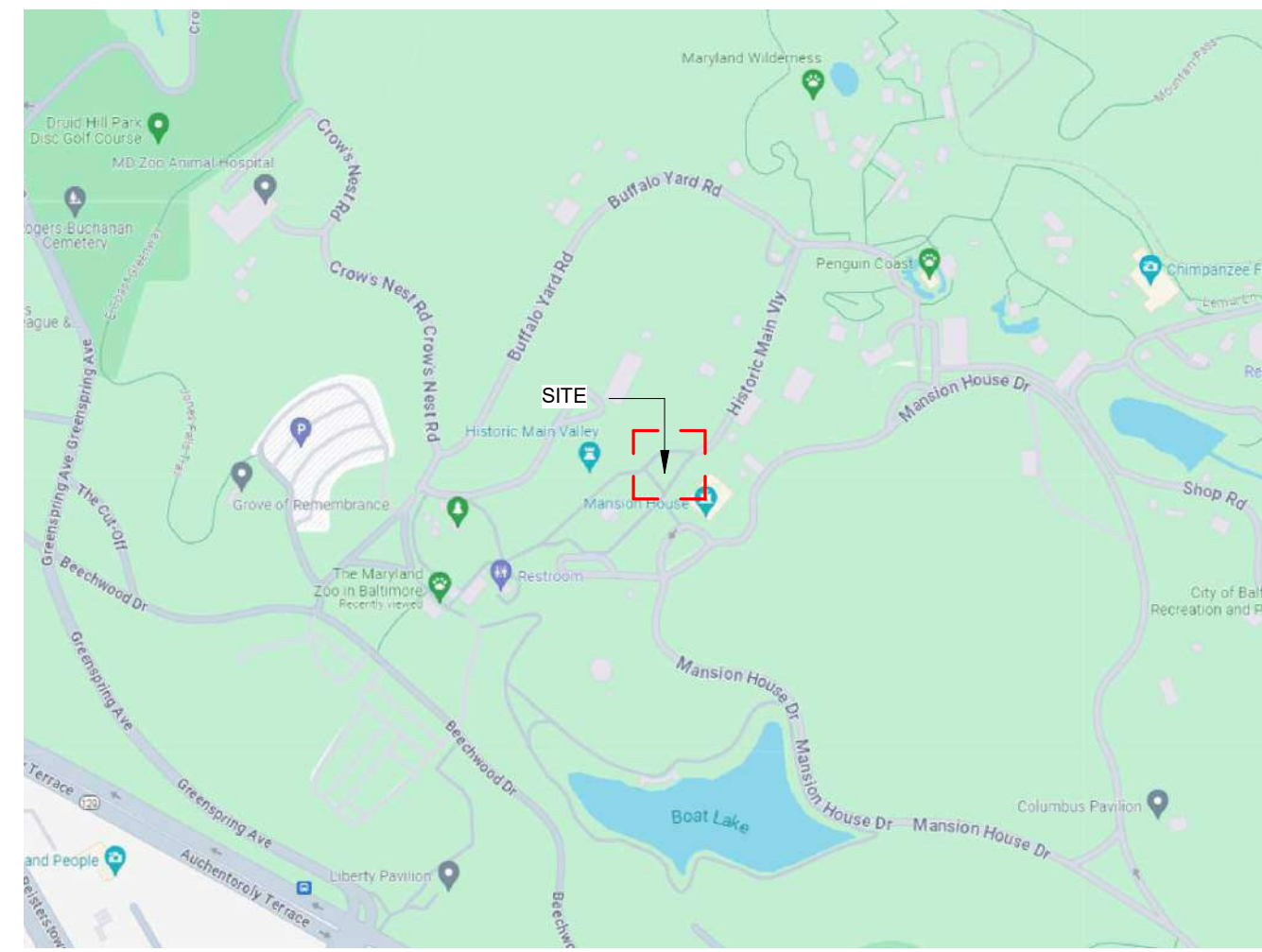
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**APPLICABLE CODES**

- 2019 Maryland Building Performance Standards;
- 2018 International Building Code, MD Edition;
- 2021 International Existing Building Code;
- 2017 National Electrical Code (NFPA 70);
- 2018 International Fuel Gas Code;
- 2018 Life Safety Code (NFPA 101);
- 2018 International Plumbing Code;
- 2018 International Mechanical Code;
- 2018 International Property Maintenance Code;
- 2018 International Fire Code;
- 2018 International Energy Conservation Code, MD Edition;
- 2018 International Green Construction Code;
- 2020 Baltimore City Building, Fire & Related Codes;
- 2012 Maryland Accessibility Code;
- 2010 ADA Standards for Accessible Design by Department of Justice;
- ICC/ANSI A117.1-2009;
- Baltimore City Building, Fire, and Related Codes (BCBFR 2024 Edition)

DRAWING SHEET LIST		
SHEET NO.	SHEET NAME	PERMIT SET BID SET
<b>GENERAL</b>		
G001	COVER SHEET	••
G002	ABBREVIATIONS & SYMBOLS	••
G003	CODE REVIEW	••
G110	SITE SURVEY	••
G111	SITE ACCESS PLAN	••
<b>CIVIL</b>		
C100	EXISTING CONDITIONS PLAN	••
C101	EXISTING CONDITION UTILITY PLAN	••
C110	BORING PLAN	••
C111	BORING LOGS	••
C120	DEMOLITION PLAN	••
C200	PROPOSED CONDITIONS PLAN	••
C210	PROPOSED GRADING PLAN	••
C300	DETAIL REFERENCE PLAN	••
C310	SITE DETAILS	••
C311	SITE DETAILS	••
C400	PROPOSED UTILITY PLAN	••
C410	UTILITY PROFILES	••
C411	UTILITY PROFILES	••
C412	UTILITY PROFILES	••
C420	UTILITY DETAILS	••
C421	UTILITY DETAILS	••
C500	STORM DRAIN KEY PLAN	••
C510	STORM DRAIN SCHEDULES	••
C520	STORM DRAIN DETAILS	••
C521	STORM DRAIN DETAILS	••
C522	STORM DRAIN DETAILS	••
C523	STORM DRAIN DETAILS	••
C524	STORM DRAIN DETAILS	••
C525	STORM DRAIN DETAILS	••
C530	STORM DRAIN PROFILES	••
C531	STORM DRAIN PROFILES	••
C532	STORM DRAIN PROFILES	••
C533	STORM DRAIN PROFILES	••
C600	STORMWATER MANAGEMENT PLAN	••
C610	MWS-1A SECTIONS	••

DRAWING SHEET LIST		
SHEET NO.	SHEET NAME	PERMIT SET BID SET
<b>DRAINAGE</b>		
DA-1	DRAINAGE AREA EXHIBIT	••
<b>STORMWATER MANAGEMENT</b>		
SWM-1	EXISTING CONDITIONS SWM EXHIBIT	••
SWM-2	IART EXHIBIT	••
SWM-3	BMP EXHIBIT	••
SWM-4	PROPOSED SWM EXHIBIT	••
SWM-5	EXISTING CONDITIONS SITE PHOTOS EXHIBIT	••
<b>LANDSCAPE</b>		
L100	SITE DEMOLITION & TREE PROTECTION PLAN	••
L101	SITE REFERENCE PLAN	••
L200A	SITE GRADING & LAYOUT PLAN A	••
L200B	SITE GRADING & LAYOUT PLAN B	••
L300	HABITAT A CURB LAYOUT PLAN	••
L310	HABITAT B CURB LAYOUT PLAN	••
L400	HABITAT A LAYOUT & GRADING PLAN	••
L410	HABITAT B LAYOUT & GRADING PLAN	••
L500	BED PREPARATION PLAN	••
L510A	PLANTING PLAN A	••
L510B	PLANTING PLAN B	••
L520	PLANTING DETAILS, NOTES, PLANT SCHEDULE	••
L600	SITE SECTIONS (FOR REFERENCE ONLY)	••
L700	HABITAT DETAILS	••
L701	SITE CAGING DETAILS	••
L702	SITE FENCING DETAILS	••
L703	VIEWING DETAILS	••
<b>EXHIBIT GLAZING</b>		
GL001	EXHIBIT GLAZING	••

DRAWING SHEET LIST		
SHEET NO.	SHEET NAME	PERMIT SET BID SET
<b>STRUCTURAL</b>		
S001	GENERAL STRUCTURAL NOTES	••
S002	GENERAL STRUCTURAL NOTES	••
S003	SPECIAL INSPECTIONS	••
S101	FOOTING & FOUNDATION PLAN	••
S121	ROOF FRAMING PLAN	••
S301	STRUCTURAL SCHEDULES	••
S302	STRUCTURAL SCHEDULES	••
S303	STRUCTURAL SCHEDULES	••
S501	STRUCTURAL FOUNDATION DETAILS	••
S521	STRUCTURAL FRAMING DETAILS	••
S531	EXHIBIT STRUCTURAL DETAILS	••
<b>ARCHITECTURE DEMO</b>		
AD210	EXG STRUCTURE DEMO FLOOR PLAN	••
<b>ARCHITECTURE</b>		
A001	3D VIEW	••
A002	DOOR & FINISH SCHEDULES, DOOR & FRAME TYPES	••
A003	DOOR DETAILS	••
A110	HOLDING BUILDING PLAN	••
A111	HOLDING BUILDING RCP	••
A112	HOLDING BUILDING ROOF PLAN	••
A120	BUILDING ELEVATIONS	••
A130	HOLDING BUILDING SECTIONS	••
A131	HOLDING BUILDING WALL SECTIONS	••
A132	HOLDING BUILDING WALL SECTIONS	••
A161	CONSTRUCTION DETAILS	••
A162	CONSTRUCTION DETAILS	••
A163	CONSTRUCTION DETAILS	••
A210	EXISTING STRUCTURE FLOOR PLAN	••
A230	EXISTING STRUCTURE BUILDING SECTIONS	••
A261	METAL STAIR DETAILS	••
<b>CAGING</b>		
CG001	CAGING GENERAL REQUIREMENTS	••
CG002	CAGING DETAILS	••
CG110	CAGING PLAN	••
CG111	CAGING PLAN RCP	••
CG121	CAGING ELEVATIONS	••
CG122	SERVICE GATE DETAILS	••
CG123	SERVICE GATE DETAILS	••

DRAWING SHEET LIST		
SHEET NO.	SHEET NAME	PERMIT SET BID SET
<b>PLUMBING</b>		
P001	PLUMBING SCHEDULES	••
P101	HOLDING BUILDING - PLUMBING - NEW WORK	••
P102	SITE PLAN - PLUMBING - NEW WORK	••
P501	PLUMBING DETAILS	••
P601	PIPING SCHEMATIC	••
<b>ELECTRICAL</b>		
E001	LEGEND	••
E101	PART SITE PLAN - ELECTRICAL - NEW WORK	••
E102	PART FLOOR PLAN - LIGHTING & POWER & SPECIAL SYSTEMS - NEW WORK	••
E103	PART FLOOR PLAN - LIGHTING & POWER DEMOLITION & NEW WORK	••
E104	FLOOR PLANS - LIGHTING PROTECTION - NEW WORK	••
E401	DETAILS	••
E601	PANEL SCHEDULES	••
<b>MECHANICAL</b>		
M001	MECHANICAL SCHEDULES AND LEGEND	••
M101	HOLDING BUILDING - HVAC - NEW WORK	••
M102	SITE PLAN - HVAC - NEW WORK	••
M301	SECTIONS	••
M501	DETAILS AND ATC	••

CODES, REGULATIONS & ORDINANCES

DRAWING SHEET LIST

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

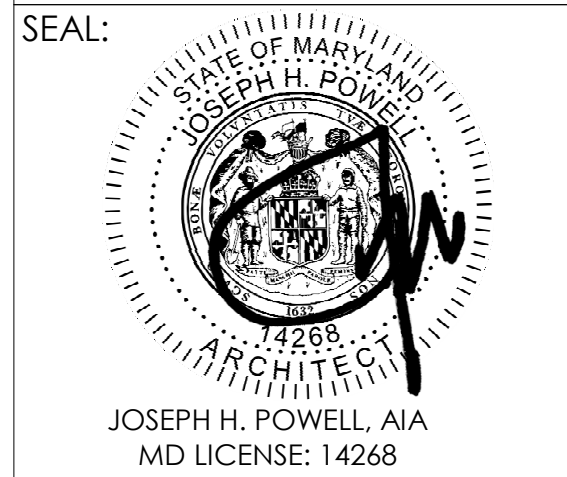


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CLIENT:  
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1 SAFARI PLACE  
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**RED PANDA**  
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DATE:	JANUARY 14, 2025
PROJECT NO.:	2023-10.04
DRAWN BY:	CC
CHECKED BY:	JP
SUBMISSION:	DATE
PERMIT SET:	11/22/2024
BID SET:	01/14/2025
REVISION:	DATE

DRAWING TITLE:  
COVER SHEET

DRAWING NO.:

# G001

**ABBREVIATIONS**

<	ANGLE	E	EAST	ID	INSIDE DIAMETER	QT	QUARRY TILE	W	WEST
@	AT	EA	EACH	IN	INCH	QTY	QUANTITY	W/	WITH
ABV	ANCHOR BOLT	EF	EXHAUST FAN	INCL	INCLUDE	R	RISER	WB	WATER BOWLS
AC	ABOVE	EPS	EXTERIOR INSULATION & FINISH SYSTEM	INFO	INFORMATION	RA	RETURN AIR	WC	WATER CLOSET
ACP	AIR CONDITIONING	EJ	EXPANSION JOINT	INST	INSTALLATION	RAD	RADIUS	WD	WOOD
ACT	ACOUSTICAL CEILING PANEL	EL	ELEVATION	INSUL	INSULATE(ION)	RB	RUBBER BASE	WDW	WINDOW
ADJ	ADJUSTABLE	ELEC	ELECTRICAL	INT	INTERIOR	RD	ROOF DRAIN	WGL	WIRE GLASS
AFF	ADJUSTABLE	ELEV	ELEVATOR	INTV	INTERVIEW	REC/P	RECEPTACLE	WH	WATER HEATER
AHU	AIR HANDLING UNIT	EMER	EMERGENCY	JAN	JANITOR	REF	REFERENCE	W/O	WITHOUT
ALT	ALTERNATE	EPBD	ELECTRICAL PANELBOARD	JB	JUNCTION BOX	REFG	REFRIGERATOR	WP	WORKING POINT
ALUM	ALUMINUM	EPS	EXPANDED POLYSTYRENE	JCT	JUNCTION	RENF	REINFORCED(D)ING	WR	WATER RESISTANT
AP	ACCESS PANEL	EPX	EPOXY	JO	JOINT	REQD	REQUIRED	WRB	WEATHER BARRIER
APC	APPROXIMATE	EQ	EQUAL	JOINT	JOINT	REQMT	REQUIREMENT	WSCT	WEIGHT
APPR	ARCH. PRECAST CONCRETE	EQUIP	EQUIPMENT	JT	JOINT	RESIN	RESIN	WT	WEIGHT
A/RCH	ARCHITECT(URAL)	EST	ESTIMATE	K-O	KNOCK-OUT	RET	RETURN		
ASB	ASBESTOS	EW	EACH WAY	LAB	LABORATORY	RF	RADIO FREQUENCY		
ATTEN	ATTENUATION	ENC	ELECTRIC WATER COOLER	LAM	LAMINATE	RFG	ROOFING		
AUTO	AUTOMATIC	EXH	EXHAUST	LAV	LAVATORY	RH	RIGHT HAND		
AVG	AVERAGE	EXST	EXISTING	LBS	POUNDS	RL	RAIN LEADER		
AWP	ACUSTICAL WALL PANEL	EXP	EXPANSION	LF	LINEAR FEET (FOOT)	RM	ROOM		
BC	BOTTOM OF CURB	EXP C	EXPOSED CONSTRUCTION	LH	LEFT HAND	RO	ROUGH OPENING		
BBD	BULLETIN BOARD	EXT	EXTERIOR	LKR	LOCKER	RT	RUBBER TILE		
BD	BOARD	FB	FACE BRICK	LT	LIGHT	RTU	ROOFTOP UNIT		
BLDG	BUILDING	FD	FLOOR DRAIN	LVR	LLOUVER	RW	RIGHT OF WAY		
BLK	BLOCK	FE	FIRE EXTINGUISHER	LW	LIGHTWEIGHT	S	SOUTH		
BLNG	BLOCKING	FEC	FIRE EXTINGUISHER CABINET	M	METER(S)	SAN	SANITARY		
BM	BENCH MARK	FF	FINISHED FLOOR	MACH	MACHINE	SAB	SOUND ATTENUATION BLANKET		
BO	BOTTOM OF	FFE	FINISHED FLOOR ELEVATION	MAS	MASONRY	SC	SOLID CORE		
BOT	BOTTOM OF CURB	FGL	FIBERGLASS	MATL	MATERIAL	SCH/ SCHED	SCHEDULE		
BRG	BEARING	FH	FIRE HYDRANT	MAX	MAXIMUM	SCWD	SOLID CORE WOOD DOOR		
BRK	BRICK	FHC	FIRE HOSE CABINET	MB	MARKERBOARD	SD	STORM DRAIN		
BSMT	BASEMENT	FHVC	FIRE HOSE VALVE CABINET	MECH	MECHANICAL	SHLVG	SHELVING		
BTWN	BETWEEN	FN	FINISHED	MEM	MEMBRANE	SHT	SHEET		
C	CARPET	FIXT	FIXTURE	MEMB	MEMBRANE	SHTH	SHEATHING		
CAB	CABINET	FLSHG	FLASHING	MANUF/MFG/MFR	MANUFACTURER	SIM	SIMILAR		
CB	CHALKBOARD	FLH	FLOOR HOLE	MH	MANHOLE	SOF	SOFT		
CCTV	CLOSED CIRCUIT TELEVISION	FLUR	FLUORESCENT	MIN	MINIMUM	SPEC	SPECIFICATION		
CFM	CUBIC FEET PER MINUTE	FND	FOUNDATION	MIR	MIRROR	SPR	SPRINKLER		
CG	CAGING	FOC	FACE OF CONCRETE	MISC	MISCELLANEOUS	SQ	SQUARE		
CI	CAST IRON	FOM	FACE OF MASONRY	MOLDG	MOLDING	SS	STAINLESS STEEL		
CP	CAST-IN-PLACE CONCRETE	FR	FIRE RATED	MO	MASONRY OPENING	ST	STONE		
CJ	CONTROL JOINT	FRM	FRAMING	MR	MAP RAIL	ST	STONE		
CL	CENTRUM	FRP	FIBERGLASS REIN. PLASTIC	MT	MOUNT	STA	STATION		
CLG	CEILING	FRT	FIBER RETARDANT TREATED	MTD/MNTD	MOUNTED	STC	SOUND TRANSMISSION COEF.		
CLM	CLOSED	FT	FOOT, FEET	MTG	MOUNTING	STD	STANDARD		
CM	CLEAR	FTG	FOOTING	MTL	METAL	STL	STEEL		
CMU	CENTIMETER	FURN	FURNITURE	MUL	MULLION	STOR	STORAGE		
CONTR	CONCRETE MASONRY UNIT	FURR	FURRING	MWP	MEMBRANE WATERPROOFING	STRUCT	STRUCTURAL		
CO	CLEAN OUT	FVC	FIRE VALVE CABINET	N	NORTH	SUBFLR	SUBFLOOR		
COL	COLUMN	G	GAS	NC	NOT IN CONTRACT	SUSP	SUSPENSION		
CONC	CONCRETE	GAL	GALLON	NO	NUMBER	SYM	SYMMETRY(RICAL)		
CONST	CONSTRUCTION	GAW	GALVANIZED AFTER WELD	NOM	NOMINAL	T	TREAD		
CONTR	CONTINUOUS	GB	GRAB BAR	NRC	NOISE REDUCTION COEFFICIENT	TB	TACKBOARD		
CORR	CORRIDOR	GB	GRAB BAR	NTS	NOT TO SCALE	TBD	TO BE DETERMINE		
CR	CLASSROOM	GC	GENERAL CONTRACTOR	OC	ON CENTER	T&B	TOP & BOTTOM		
CRS	COURSE	GD	GLAZED CONC. MASONRY UNIT	OD	OUTSIDE DIAMETER	TO	TOP OF		
CPT	CARPET TILES	GCMU	GLAZED CONC. MASONRY UNIT	OH	OVERHEAD	TOC	TOP OF CURB		
CTSK	COUNTERSINK	GEN	GENERAL	OPNG	OPENING	TEL	TELEPHONE		
CT	CERAMIC TILE	GFCL	GROUND FAULT CIRC. INTERUP.	OPP	OPPOSITE	T&G	TONGUE & GROOVE		
CUH	CABINET UNIT HEATER	GFRG	GLASS FIBER REIN. CONC.	PRKG	PARKING	THD	THRESHOLD		
CUYD	CUBIC YARD	GL	GLASS	PC	PRECAST	THK	THICK(NESS)		
CW	DOUBLE	GPM	GALLONS PER MINUTE	PERF	PERFORATE(D)	THRU	THROUGH		
DBL	COLD WATER	GR	GRADE	PERM	PERIMETER	TOS	TOP OF STEEL		
DEMO	DEMOLISH, DEMOLITION	GS	GALVANIZED STEEL	PIP	POURED IN PLACE	TOW	TOP OF WALL		
DEPT	DEPARTMENT	CSU	GLAZED STRUCTURAL UNIT	PL	PROPERTY LINE	TPT	TEXTURES PAINT		
DI	DIAGONAL	GYP	GYPSUM	PL	PLATE	TRT	TREATED		
DIAG	DIAMETER	HB	HOSE BIBB	PLAM	PLASTIC LAMINATE	TOS	TOP OF SLAB		
DM	DIMENSION	HBD	HARDBOARD	PLAS	PLASTER	TV	TELEVISION		
DM	DIVISION	HBC	HORIZONTAL BRICK COURSE(S)	PLUMB	PLUMBING	TYP	TYPICAL		
DMT	DEMOUNTABLE	HC	HORIZONTAL COURSE(S) (CMU)	PLYWD/ PLY	PLYWOOD	UC	UNDERCUT		
DN	DOWN	HDPF	HIGH DENSITY POLYETHYLENE	PNT	PANEL	UG	UNDERGROUND		
DP	DAMP/PROOFING	HDR	HEADER	PNT	PANT	UH	UNIT HEATER		
DR	DOOR	HDNR	HARDENER	POLY	POLYETHYLENE	UNFIN	UNFINISHED		
DR	DOWN SPOUT	HDWD	HARDWOOD	PR	PAIR	UNO	UNLESS NOTED OTHERWISE		
DT	DRAIN TILE	HDWR	HARDWARE	PREFAB	PREFABRICATE(D)	V	VACUUM		
DTL	DETAIL	HGT	HEIGHT	PREFIN	PREFINISHED	VAC	VACUUM		
DWG	DRAWING	HM	HOLLOW METAL	PREP	PREPARE	VB	VINYL BASE		
DWR	DRAWER	HHRZ	HORIZONTAL	PROJ	PROJECT	VBC	VERTICAL BRICK COURSE(S)		
		HP	HORSEPOWER	PSF	POUNDS PER SQUARE FOOT	VCT	VINYL COMPOSITION TILE		
		HPC	HIGH PERFORMANCE COATING	PSI	POUNDS PER SQUARE INCH	VERT	VERTICAL		
		HR	HOUR	PT/PTD	PRESSURE TREATED	VEST	VESTIBLE		
		HS	HIGH STRENGTH	PTN	PARTITION	VIF	VERIFY IN FIELD		
		HT	HEIGHT	PVC	POLYVINYL CHLORIDE	VR	VAPOR RETARDER		
		HTG	HEATING	PMNT	PAVEMENT	VT	VINYL TILE		
		HTR	HEATER			VVB	VINYL WALL BASE		
		HVAC	HEATING, VENTILATING AIR CONDITIONING			VVC	VINYL WALL COVERING		
		HW	HOT WATER						

**SYMBOLS**

SECTION		A101
EXTERIOR ELEVATION		A101
INTERIOR ELEVATION		?
ENLARGEMENT		?
NORTH ARROW		N
DRAWING IDENTIFICATION		?
BUILDING GRID		?
MATCH LINE		A101
REVISION NUMBER		?
ROOM NAME AND NUMBER		?
ARCHITECTURAL DOOR NUMBER		A101
CAGING / KEEPER DOOR NUMBER		K101
CAGING / TRANSFER DOOR NUMBER		T101
CAGING / TRANSFER DOOR OPERATOR		T10 PB
WALL TYPE		?
CEILING HEIGHT ABOVE FINISHED FLOOR		? A.F.F.
WINDOW NUMBER		?
FIRE EXTINGUISHER		FE
ELEVATION MARK		1ST FLOOR 0' - 0''
DIMENSION STRING		
HOSE BIBB/ MIXING STATION		+
SPOT ELEVATION		

FLOOR ELEVATION (AS SHOWN IN SECTION AND ELEVATIONS)

**BKP**

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DATE:	JANUARY 14, 2025
PROJECT NO.:	2023-10.04
DRAWN BY	Author
CHECKED BY	Checker
SUBMISSION DATE	
PERMIT SET	11/22/2024
BID SET	01/14/2025
REVISION	DATE

DRAWING TITLE:  
**ABBREVIATIONS & SYMBOLS**

DRAWING NO:  
**G002**

**THE MARYLAND ZOO IN BALTIMORE  
RED PANDA**

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**BUILDING DATA**

**A. Building Description**

Located within the main zoo campus, the primary function of the holding building is to provide holding facilities for red pandas. Support spaces include holding stalls, animal food prep area, & mechanical room. The red panda holding building is a new one-story, cast-in-place, concrete structure with a wood truss framed roof.

The storage building is an existing building previously used for animal holding. The building is one-story with stone and mortar walls, and concrete roof. The storage building is within 14 feet of the red panda holding building and will be used to support storage needs for the staff such as animal crates and cleaning tools.

**B. Occupancy Classification**

Holding Building Occupancy: U - Utility (Animal Holding)  
Storage Building Occupancy: S-2 (Storage)

**C. Construction Type**

Holding Building Occupancy: Type VB  
Storage Building Occupancy: Type VB

**D. Fire Protection & Egress**

Automatic fire sprinklers not provided  
Holding Total Building Exits 1  
Storage Total Building Exits 2

**E. Building Dimensions**

Holding Building Total Area 390 SF  
Average Building Height 16' 6"  
Storage Building Total Area 348 SF  
Average Building Height 17' 9"

**F. OCCUPANT LOAD**

Holding Building Total Occupancy Load 2  
Holding Building Total Occupancy Load 2

**LIMITS & REQUIREMENTS**

**G. Building Limits (IBC 503)**

Area 5,500 SF  
\*Per 506.2.1 The allowable area of a single-occupancy building with no more than one story above grade plane shall be determined in accordance with Equation 5-1:  
 $A_a = (A_u + [NS \times I]) = (5,500 \text{ SF} + [5,500 \text{ SF} \times 0]) = 5,500 \text{ SF}$

Height 40' - 0" (non-sprinklered)  
Stories 1 (non-sprinklered)

**H. Lot Limits**

Zoning classification R - 7

**I. Occupant Fire Protection Requirements (IBC 903)**

Automatic fire sprinklers system not required

**J. Construction Type Fire Resistive Requirements (IBC 601)**

Structural Framing 0 hr  
Bearing Walls (int.) 0 hr  
Bearing Walls (ext.) 0 hr  
Nonbearing Walls (int.) 0 hr  
Nonbearing Walls (ext.) 0 hr  
Floor Construction 0 hr  
Roof Construction 0 hr

**K. Exterior Wall and Opening Protection (IBC 602, 705.8)**

Fire Separation Distance > 30 ft  
Category ≥ 30 ft  
Required rating walls (ext.) 0 hr  
Allowable area for unprotected non-sprinkled openings No Limit  
Allowable area for unprotected sprinkled openings Not Required  
Allowable area for protected openings Not Required

**IBC 705.8.1**  
Note i: "Buildings whose exterior bearing walls, exterior nonbearing walls, and exterior structural frame are not required to be fire-resistance rated by table 601 or 602 shall be permitted to have unlimited protected openings."

**L. Means of Egress**

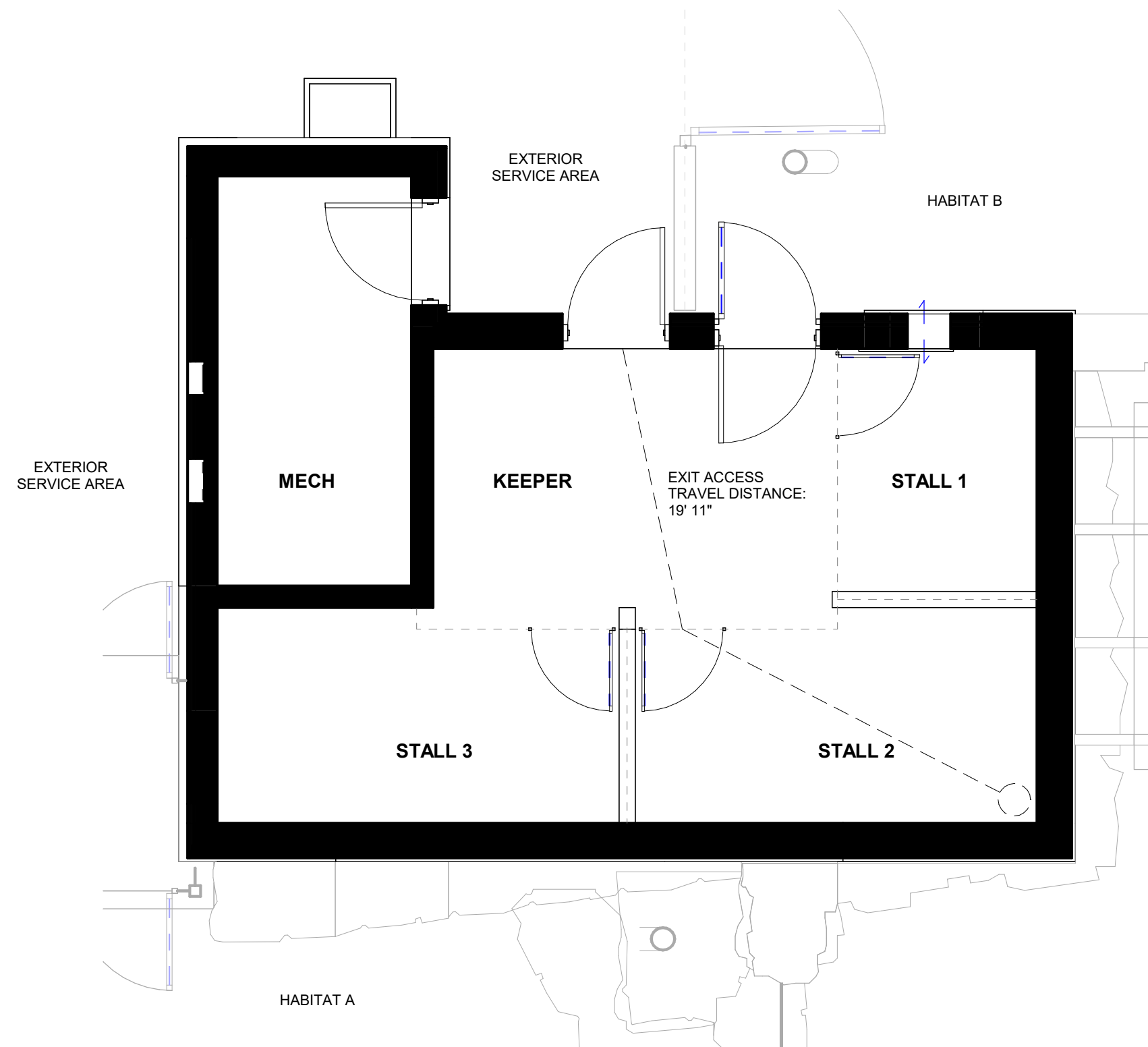
**IBC 1006.3.3 (2)**  
Exit access travel distance shall not exceed 75 ft  
**IBC 1006.3.2**  
Two exits required for occupant load of 1-500 per story. 1  
Exits Required 1  
**1006.3.3 Exception:** "A single exit or access to a single exit shall be permitted from any story or occupied roof where one of the following conditions exists:  
1. The occupant load, number of dwelling units and common path of egress travel distance do not exceed the values in Table 1006.3.3(1) or 1006.3.3(2).  
2. Rooms, areas and spaces complying with Section 1006.2.1 with exits that discharge directly to the exterior at the level of exit discharge, are permitted to have one exit or access to a single exit."  
**IBC 1010.1.1**  
Min. required width of egress doors 32.0 in  
**IBC 1020.1, 1020.2**  
Exit corridor fire resistance rating for occupancy >30 without sprinkler 1 hr  
Max. dead-end corridor length 20.0 ft  
Min. corridor width serving occupancy >50 36.0 in

**APPLICABLE CODES**

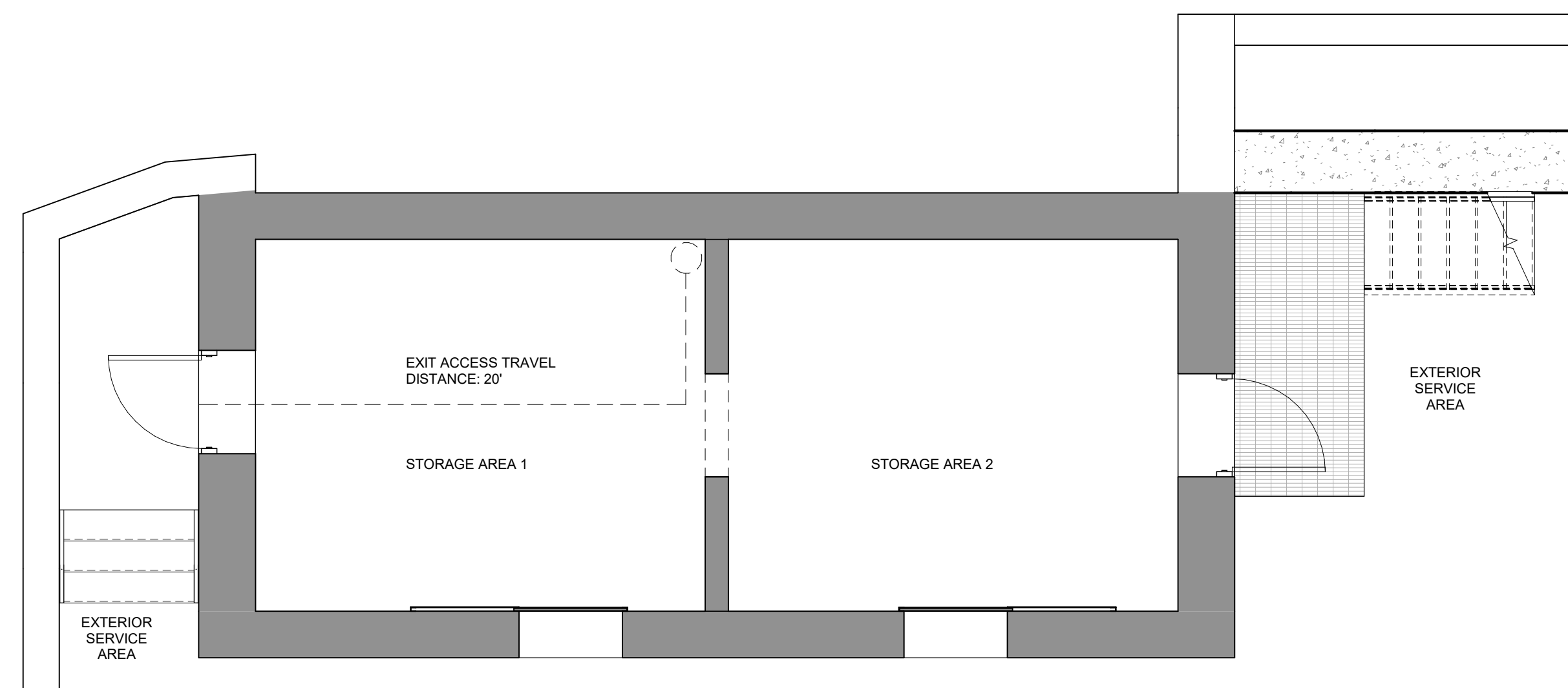
2019 Maryland Building Performance Standards;  
2018 International Building Code, MD Edition;  
2021 International Existing Building Code;  
2017 National Electrical Code (NFPA 70);  
2018 International Fuel Gas Code;  
2018 Life Safety Code (NFPA 101);  
2018 International Plumbing Code;  
2018 International Mechanical Code;  
2018 International Property Maintenance Code;  
2018 International Fire Code;  
2018 International Energy Conservation Code, MD Edition;  
2018 International Green Construction Code;  
2020 Baltimore City Building, Fire & Related Codes;  
2012 Maryland Accessibility Code;  
2010 ADA Standards for Accessible Design by Department of Justice;  
ICC/ANSI A117.1-2009;  
**Baltimore City Building, Fire, and Related Codes (BCBFR 2024 Edition)**

NUMBER	ROOM NAME	AREA	OCCUPANCY	OCCUPANT LOAD FACTOR	OCCUPANTS
A101	STALL 1	47 SF	U-ANIMAL HOLDING	300	0.2
A102	STALL 2	79 SF	U-ANIMAL HOLDING	300	0.3
A103	STALL 3	80 SF	U-ANIMAL HOLDING	300	0.3
A104	MECH	76 SF	U-MECH/ELEC	300	0.3
A105	KEEPER	108 SF	U-KEEPER	300	0.4
Grand total		390 SF			1.3

NUMBER	ROOM NAME	AREA	OCCUPANCY	OCCUPANT LOAD FACTOR	OCCUPANTS
A201	STORAGE AREA 1	174 SF	S2-STORAGE	300	0.6
A202	STORAGE AREA 2	174 SF	S2-STORAGE	300	0.6
Grand total		348 SF			1.2



HOLDING BUILDING - FIRE AND LIFE SAFETY PLAN



EXISTING STORAGE BUILDING - FIRE AND LIFE SAFETY PLAN



**PROJECT TEAM:**

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**CLIENT:**

**MARYLAND ZOO**  
THE MARYLAND ZOO IN BALTIMORE  
1 SAFARI PLACE  
BALTIMORE, MD 21217

**RED PANDA**  
THE MARYLAND ZOO  
IN BALTIMORE  
1 SAFARI PLACE  
BALTIMORE, MD 21217

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**SEAL:**



JOSEPH H. POWELL, AIA  
MD LICENSE: 14268

DATE:	JANUARY 14, 2025
PROJECT NO:	2023-10.04
DRAWN BY:	CC
CHECKED BY:	JP
SUBMISSION:	DATE
PERMIT SET:	11/22/2024
BID SET:	01/14/2025

REVISION:	DATE
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**DRAWING TITLE:**  
CODE REVIEW

**DRAWING NO:**  
G003



**PROJECT TEAM:**

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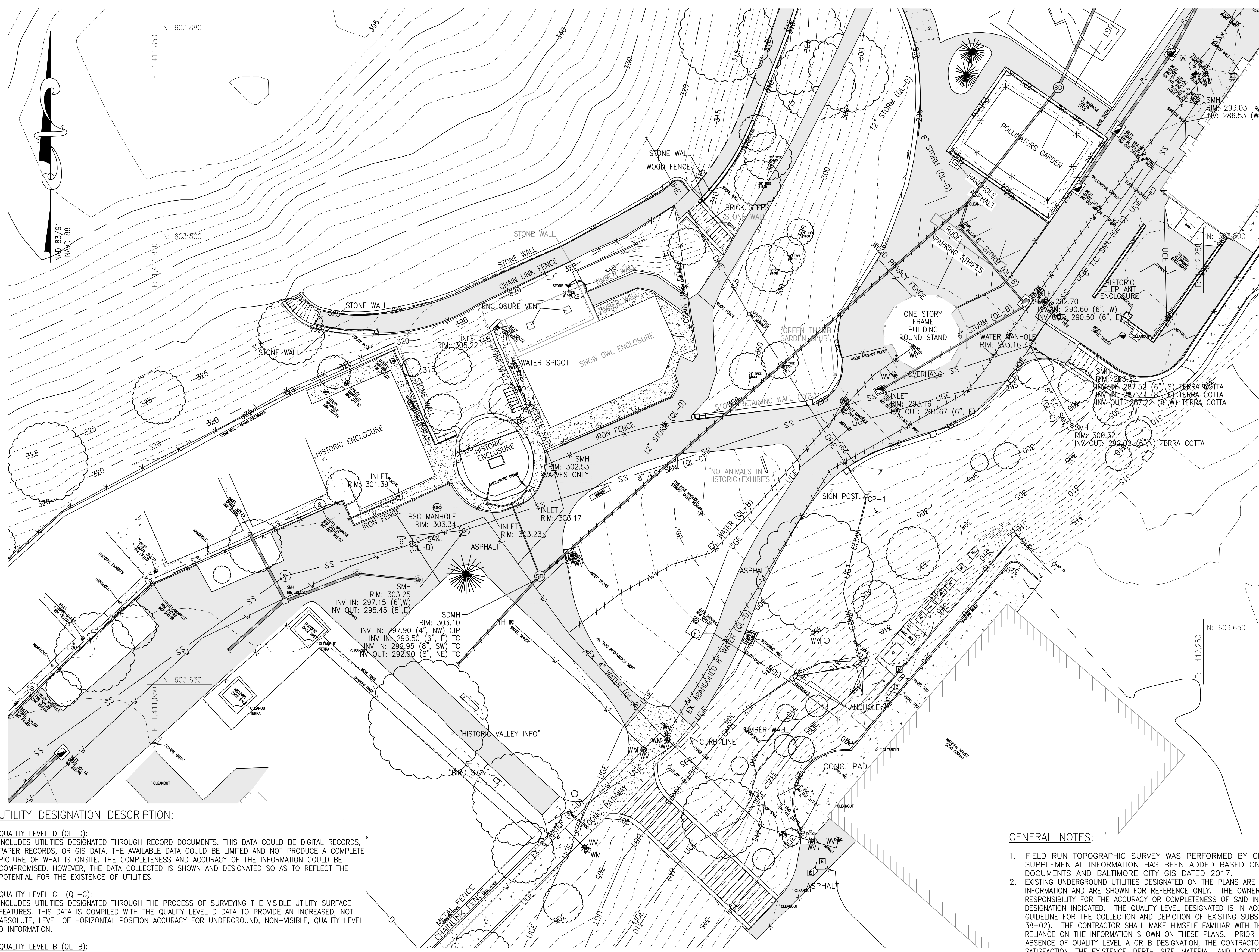
**SEAL:**

PROFESSIONAL CERTIFICATION: HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14446, EXPIRATION DATE 9/25/25.

<b>DATE:</b>	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 EXISTING  
 CONDITIONS  
 PLAN

**DRAWING NO:**  
**C100**



**UTILITY DESIGNATION DESCRIPTION:**

**QUALITY LEVEL D (QL-D):**  
 INCLUDES UTILITIES DESIGNATED THROUGH RECORD DOCUMENTS. THIS DATA COULD BE DIGITAL RECORDS, PAPER RECORDS, OR GIS DATA. THE AVAILABLE DATA COULD BE LIMITED AND NOT PRODUCE A COMPLETE PICTURE OF WHAT IS ONSITE. THE COMPLETENESS AND ACCURACY OF THE INFORMATION COULD BE COMPROMISED. HOWEVER, THE DATA COLLECTED IS SHOWN AND DESIGNATED SO AS TO REFLECT THE POTENTIAL FOR THE EXISTENCE OF UTILITIES.

**QUALITY LEVEL C (QL-C):**  
 INCLUDES UTILITIES DESIGNATED THROUGH THE PROCESS OF SURVEYING THE VISIBLE UTILITY SURFACE FEATURES. THIS DATA IS COMPILED WITH THE QUALITY LEVEL D DATA TO PROVIDE AN INCREASED, NOT ABSOLUTE, LEVEL OF HORIZONTAL POSITION ACCURACY FOR UNDERGROUND, NON-VISIBLE, QUALITY LEVEL D INFORMATION.

**QUALITY LEVEL B (QL-B):**  
 INCLUDES DESIGNATING THE UNDERGROUND UTILITIES BY MARKINGS PROVIDED THROUGH AN 811 CALL, BY CONTACTING AN INDIVIDUAL UTILITY COMPANY, OR PERFORMING TRACING OR GROUND PENETRATING RADAR. THE DESIGNATED UTILITY MARKINGS ARE THEN SURVEYED AND ADDED TO THE DRAWING. THIS DATA IS ADDED TO THE DATA COLLECTED FROM QUALITY LEVELS D AND C TO PROVIDE AN INCREASED LEVEL OF HORIZONTAL POSITION ACCURACY FOR UNDERGROUND, NON-VISIBLE UTILITIES.

**QUALITY LEVEL A (QL-A):**  
 INVOLVES PHYSICALLY LOCATING THE ACTUAL UTILITY BY MEANS OF TEST PITTING OR OTHER METHODS OF EXPOSURE. ONCE THE UTILITY IS EXPOSED IT IS LOCATED HORIZONTALLY AND VERTICALLY BY SURVEY MEASUREMENTS.

**\*\*ALL UTILITIES LACKING A QUALITY LEVEL DESIGNATION ON THE PLANS SHALL BE CONSIDERED QUALITY LEVEL D (QL-D).**

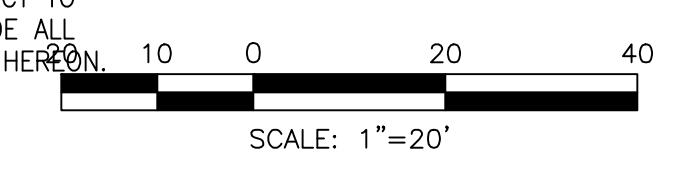
**GENERAL NOTES:**

- FIELD RUN TOPOGRAPHIC SURVEY WAS PERFORMED BY CLSI IN FEBRUARY 2024. SUPPLEMENTAL INFORMATION HAS BEEN ADDED BASED ON AVAILABLE RECORD DOCUMENTS AND BALTIMORE CITY GIS DATED 2017.
- EXISTING UNDERGROUND UTILITIES DESIGNATED ON THE PLANS ARE BASED ON CURRENTLY AVAILABLE INFORMATION AND ARE SHOWN FOR REFERENCE ONLY. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEYOND THE DESIGNATION INDICATED. THE QUALITY LEVEL DESIGNATED IS IN ACCORDANCE WITH ASCE "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" (31/ASCE 38-02). THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THOSE STANDARDS PRIOR TO ANY RELIANCE ON THE INFORMATION SHOWN ON THESE PLANS. PRIOR TO ANY EXCAVATION, IN THE ABSENCE OF QUALITY LEVEL A OR B DESIGNATION, THE CONTRACTOR SHALL VERIFY, TO HIS OWN SATISFACTION, THE EXISTENCE, DEPTH, SIZE, MATERIAL, AND LOCATION OF ALL UNDERGROUND UTILITIES, AND DETERMINE WHETHER THOSE UTILITIES ARE LIVE. ANY EARTHWORK IN LOCATIONS WHERE UTILITIES ARE POSSIBLE SHALL BE DONE WITH EXTREME CAUTION. THE GIVING OF INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO SUPPORT AND PROTECT ALL DESIGNATED OR UNDESIGNATED EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITY BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
- LIVE UNDERGROUND UTILITIES MAY EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
- INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**LEGEND**

	EXISTING BUILDING
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING CURB
	EXISTING ROADWAY
	EXISTING PAVEMENT
	EXISTING ASPHALT PAVING
	EXISTING CONCRETE PAVING
	EXISTING FENCELINE
	EXISTING SIGN
	EXISTING ELECTRIC HANDBOX
	EXISTING ELECTRIC MANHOLE
	EXISTING OVERHEAD ELECTRIC
	EXISTING ELECTRIC
	EXISTING SANITARY LINE
	EXISTING SANITARY MANHOLE
	EXISTING STORM DRAIN LINE
	EXISTING STORM DRAIN INLET
	EXISTING STORM DRAIN MANHOLE
	EXISTING UTILITY POLE
	EXISTING WATER VALVE
	EXISTING WATER MANHOLE
	EXISTING SOILS
	EXISTING TREELINE
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE
	EXISTING WATER METER
	EXISTING TELEPHONE PEDESTAL
	EXISTING WATER LINE
	EXISTING FIRE HYDRANT
	EXISTING COMMUNICATION
	EXISTING FLAGPOLE
	EXISTING SHRUB
	EXISTING LIGHT POLE
	EXISTING BRICK PAVING
	EXISTING GRAVEL
	EXISTING UNDERGROUND ELECTRIC
	EXISTING TELEPHONE
	EXISTING BOLLARD
	EXISTING SANITARY CLEANOUT
	EXISTING GAS LINE
	EXISTING WATER METER
	EXISTING ABANDONED UTILITY



**EXISTING CONDITIONS PLAN**  
 SCALE: 1"=20'

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

Q  
P  
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L  
K  
J  
H  
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E  
D  
C  
B  
A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20





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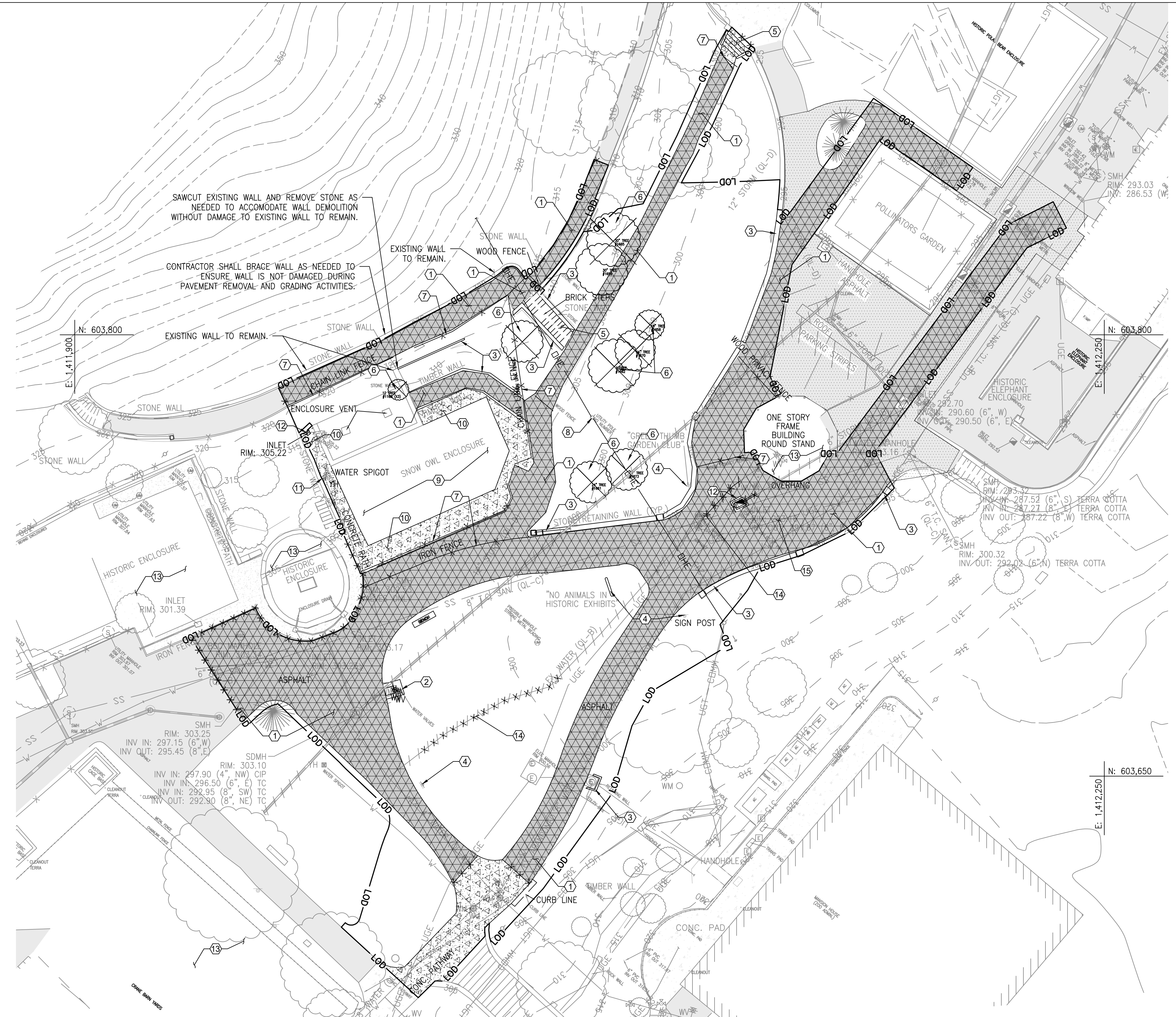
<b>DATE:</b>	
PROJECT NO: 2023-10.04	
<b>DRAWN BY</b>	
<b>CHECKED BY</b>	
<b>SUBMISSION</b>	<b>DATE</b>
<b>REVISION</b>	<b>DATE</b>

**DRAWING TITLE:**  
 DEMOLITION  
 PLAN

**DRAWING NO:**  
 C120

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

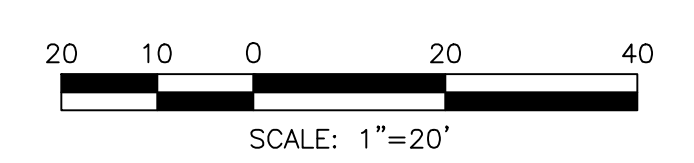
- LEGEND**
- 100 --- EXISTING BUILDING
  - EXISTING MAJOR CONTOUR
  - EXISTING MINOR CONTOUR
  - EXISTING CURB
  - EXISTING ROADWAY
  - EXISTING PAVEMENT
  - EXISTING ASPHALT PAVING
  - EXISTING CONCRETE PAVING
  - EXISTING FENCELINE
  - EXISTING SIGN
  - EXISTING ELECTRIC HANDBOX
  - EXISTING ELECTRIC MANHOLE
  - OHE EXISTING OVERHEAD ELECTRIC
  - EXISTING ELECTRIC
  - SS EXISTING SANITARY LINE
  - (S) EXISTING SANITARY MANHOLE
  - EXISTING STORMDRAIN LINE
  - EXISTING STORMDRAIN INLET
  - EXISTING STORMDRAIN MANHOLE
  - EXISTING UTILITY POLE
  - EXISTING WATER VALVE
  - EXISTING WATER MANHOLE
  - EXISTING SOILS
  - EXISTING TREE LINE
  - EXISTING DECIDUOUS TREE
  - EXISTING EVERGREEN TREE
  - WM EXISTING WATER METER
  - W EXISTING TELEPHONE PEDESTAL
  - W EXISTING WATER LINE
  - EXISTING FIRE HYDRANT
  - COMM EXISTING COMMUNICATION
  - EXISTING FLAGPOLE
  - EXISTING SHRUB
  - EXISTING LIGHT POLE
  - EXISTING BRICK PAVING
  - EXISTING GRAVEL
  - UGE EXISTING UNDERGROUND ELECTRIC
  - UGT EXISTING TELEPHONE
  - EXISTING BOLLARD
  - 1.5" ASPHALT MILL
  - ASPHALT TO BE REMOVED
  - CONCRETE TO BE REMOVED
  - LIMIT OF SAWCUT/EXCAVATION
  - TREE TO BE REMOVED
  - LOD LIMIT OF DISTURBANCE



- DEMOLITION LIST:**
- 1 ASPHALT AND ASSOCIATED BASE MATERIAL TO BE SAWCUT AND REMOVED/DISPOSED OF.
  - 2 CONCRETE VAULT AND LID AND ASSOCIATED SUB-BASE TO BE REMOVED/DISPOSED OF. ANY VALVES OR UTILITY APPURTENANCES SHALL BE REMOVED. WATER PIPES SHALL BE CUT AND PERMANENTLY CAPPED. SLUMP DRAINS SHALL BE FILLED WITH FLOWABLE FILL AND ABANDONED.
  - 3 RETAINING WALL, FOUNDATIONS AND BASE MATERIAL TO BE DEMOLISHED.
  - 4 SIGN TO BE REMOVED AND SALVAGED FOR REUSE OR RETURNED TO THE OWNER.
  - 5 STAIRS AND ASSOCIATED FOUNDATIONS AND BASE MATERIAL TO BE SAWCUT AND REMOVED/DISPOSED OF.
  - 6 TREE TO BE REMOVED.
  - 7 FENCE TO BE DEMOLISHED.
  - 8 UTILITY POLE AND OVERHEAD WIRE TO BE REMOVED COORDINATE WITH UTILITY PROVIDER FOR SERVICE DISCONNECTION.
  - 9 SNOW OWL ENCLOSURE TO BE DEMOLISHED AND DISPOSED OF. SEE ARCHITECTURAL PLAN FOR ADDITIONAL INFORMATION AND DETAIL.
  - 10 CONCRETE PAVEMENT AND BASE MATERIAL TO BE REMOVED/DISPOSED OF.
  - 11 REMOVE EXISTING YARD HYDRANT. TEMPORARILY CAP SUPPLY PIPE FOR FUTURE CONNECTION OF A PROPOSED YARD HYDRANT.
  - 12 REMOVE/DISPOSE OF EXISTING STORM DRAIN STRUCTURE AND PIPE TO ACCOMMODATE UTILITY INSTALLATION. PERMANENTLY CAP STORM DRAIN PIPE.
  - 13 EXISTING BUILDING TO REMAIN. PROVIDE NECESSARY PROTECTION TO PREVENT ANY DAMAGE TO EXISTING STRUCTURE.
  - 14 REMOVE PORTION OF ABANDONED WATER TO ACCOMMODATE UTILITY INSTALLATION. PERMANENTLY CAP ABANDONED PIPE.
  - 15 RELOCATED UNDERGROUND ELECTRIC AS NEEDED TO ACCOMMODATE UTILITY INSTALLATION.

- DEMOLITION NOTES:**
1. CONTRACTOR SHALL CONTACT THE OWNER AND DEVELOPER 72 HOURS PRIOR TO COMMENCING ANY WORK.
  2. CONTRACTOR TO COORDINATE WITH MISS UTILITY, BALTIMORE COUNTY DEPARTMENT OF PROPERTY MANAGEMENT, AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
  3. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS.
  4. ALL UTILITY FRAMES AND COVERS TO REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET NEW PAVEMENT OR GROUND ELEVATION. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF AND THE PREVENTION OF MISFITTINGS IN THE WORK. VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES BEFORE STARTING CONSTRUCTION IN EACH AREA.
  5. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY DISTURBANCE OR DEMOLITION IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
  6. CONTRACTOR SHALL STABILIZE ALL UNINTENTIONALLY DISTURBED AREAS OUTSIDE OF THE L.O.D. BY THE END OF THE SAME WORKING DAY.
  7. CONTRACTOR SHALL DISPOSE OF ALL DEMOLISHED AND DELETERIOUS MATERIALS NOT TO BE SALVAGED FOR REUSE ON SITE IN A SAFE AND LEGAL MANNER.
  8. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
  9. CONTRACTOR SHALL PROTECT ALL FACILITIES AND UTILITIES TO REMAIN FROM DAMAGE WHETHER SHOWN HEREON OR NOT.
  10. CONTRACTOR TO REMOVE ALL POLES, FOUNDATIONS, TIES, MANHOLES, MANHOLE COVERS, METERS/VAULTS, HAND BOXES, ETC. ASSOCIATED WITH EXISTING UTILITIES TO BE REMOVED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL EXISTING POLES TO REMAIN.
  11. ALL PAVEMENT SHALL BE SAWCUT PRIOR TO REMOVAL WHERE EXISTING CURB IS BEING REMOVED AND/ OR THERE IS ADJOINING PAVEMENT TO REMAIN. ALL SAWCUTS ARE TO BE NEAT, CLEAN AND STRAIGHT.
  12. THE CONTRACTOR SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO ORIGINAL CONDITION OR BETTER.
  13. ALL EXISTING PAINT MARKINGS ADJACENT TO THE PROJECT AREA WHICH BECOME FADED OR OBLISCURED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED OR RESTORED AT NO ADDITIONAL COST TO THE OWNER.
  14. CONTRACTOR SHALL USE CAUTION WHEN WORKING AROUND EXISTING TREES TO REMAIN SO AS TO NOT DAMAGE THE TREES, TREE BRANCHES OR TREE ROOT SYSTEM.
  15. CONTRACTOR SHALL INSTALL ORANGE PLASTIC MESH TREE PROTECTION FENCE (TPF) PRIOR TO ANY DEMOLITION ACTIVITIES, UNLESS OTHERWISE NOTED.
  16. ALL ABANDONED UTILITIES SHALL BE PERMANENTLY CAPPED IN ACCORDANCE WITH UTILITY OWNERS REQUIREMENTS UNLESS OTHERWISE NOTED.
  17. CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF UTILITY OUTAGES.
  18. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO AND AROUND ADJACENT AREAS AS DIRECTED BY THE OWNER DURING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION.
  19. CONTRACTOR SHALL UTILIZE SIX (6) FOOT TALL CHAIN LINK CONSTRUCTION FENCE AROUND ALL ACTIVE WORK AREAS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND WARNING MEASURES TO PROTECT PEDESTRIANS FROM CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL FURNISH VISUAL SCREENS ON THE FENCE AS DIRECTED BY THE OWNER.
  20. CONTRACTORS SHALL SUBMIT TO BALTIMORE CITY FOR ALL APPLICABLE PERMITS.
  21. CONTRACTOR SHALL COORDINATE SITE ACCESS, CONTRACTOR PARKING, AND CONSTRUCTION MATERIAL STAGING AND STORAGE WITH THE OWNER.
  22. ALL TREE REMOVAL SHALL INCLUDE GRINDING AND GRUBBING OF STUMPS.

- GENERAL NOTES:**
1. FIELD RUN TOPOGRAPHIC SURVEY WAS PERFORMED BY CLSI IN FEBRUARY 2024.
  2. EXISTING UNDERGROUND UTILITIES DESIGNATED ON THE PLANS ARE BASED ON CURRENTLY AVAILABLE INFORMATION AND ARE SHOWN FOR REFERENCE ONLY. THE OWNER AND ENGINEER DISCLAIM ANY RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF SAID INFORMATION BEYOND THE DESIGNATION INDICATED. THE QUALITY LEVEL DESIGNATED IS IN ACCORDANCE WITH ASCE "STANDARD GUIDELINE FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA" (CI/ASCE 38-02). THE CONTRACTOR SHALL MAKE HIMSELF FAMILIAR WITH THOSE STANDARDS PRIOR TO ANY RELIANCE ON THE INFORMATION SHOWN ON THESE PLANS. PRIOR TO ANY EXCAVATION, IN THE ABSENCE OF QUALITY LEVEL A OR B DESIGNATION, THE CONTRACTOR SHALL VERIFY, TO HIS OWN SATISFACTION, THE EXISTENCE, DEPTH, SIZE, MATERIAL, AND LOCATION OF ALL UNDERGROUND UTILITIES, AND DETERMINE WHETHER THOSE UTILITIES ARE LIVE. ANY EARTHWORK IN LOCATIONS WHERE UTILITIES ARE POSSIBLE SHALL BE DONE WITH EXTREME CAUTION. THE GIVING OF INFORMATION ON THE PLANS WILL NOT RELIEVE THE CONTRACTOR OF HIS OBLIGATION TO SUPPORT AND PROTECT ALL DESIGNATED OR UNDESIGNATED EXISTING UTILITIES AND APPURTENANCES. SHOULD ANY EXISTING UTILITY BE DAMAGED BY THE CONTRACTOR, THE CONTRACTOR SHALL REPAIR THE DAMAGE CAUSED TO THE UTILITY OWNER'S SATISFACTION, AT THE CONTRACTOR'S EXPENSE.
  3. LIVE UNDERGROUND UTILITIES MAY EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
  4. INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.



SEE LANDSCAPE PLAN L100 FOR ADDITIONAL DEMOLITION INFORMATION.

# DEMOLITION PLAN

SCALE: 1"=20'

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595

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**PROJECT TEAM:**

**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509

**CIVIL ENGINEER:**  
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**LANDSCAPE ARCHITECT:**  
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**STRUCTURAL ENGINEER:**  
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**MEP ENGINEER:**  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

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**SEAL:**

DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 PROPOSED  
 CONDITIONS  
 PLAN

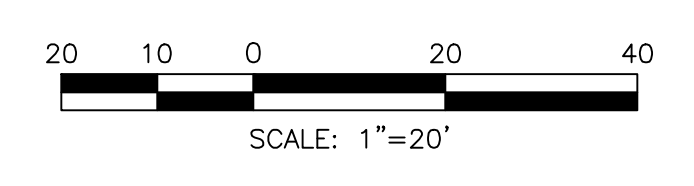
**DRAWING NO:**  
**C200**

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

- LEGEND**
- PROPOSED BUILDING
  - 100 PROPOSED MAJOR CONTOUR
  - 99 PROPOSED MINOR CONTOUR
  - PROPOSED 1.5" ASPHALT OVERLAY
  - PROPOSED CURB
  - PROPOSED CONCRETE WALK
  - PROPOSED FENCELINE
  - LIMIT OF DISTURBANCE
  - PROPOSED UNDERGROUND ELECTRIC
  - PROPOSED SANITARY LINE
  - PROPOSED SANITARY CLEANOUT
  - PROPOSED STORMDRAIN LINE
  - PROPOSED STORMDRAIN MANHOLE
  - PROPOSED WATER LINE
  - PROPOSED SMALL SECTIONAL VAULT
  - PROPOSED WATER VALVE
  - PROPOSED DRAINAGE AREA

- SITE FEATURE LIST:**
- ① PROPOSED RETAINING WALL.
  - ② PROPOSED FENCE AND GATE. SEE LANDSCAPE PLAN FOR ADDITIONAL INFORMATION AND DETAILS.
  - ③ PROPOSED VIEWING AREAS. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION AND DETAILS.
  - ④ PROPOSED ASPHALT REPAIR. PROTECT EXISTING BUILDING FROM DAMAGE.
  - ⑤ PROPOSED STAIRS.
  - ⑥ PROPOSED UNDERGROUND STORM WATER STORAGE CHAMBERS.
  - ⑦ PROPOSED MODULAR WETLAND STORMWATER MANAGEMENT STRUCTURE.

SEE LANDSCAPE PLANS L300 AND L310 FOR CURB LAYOUT AND ELEVATIONS.



BCNR # 11595

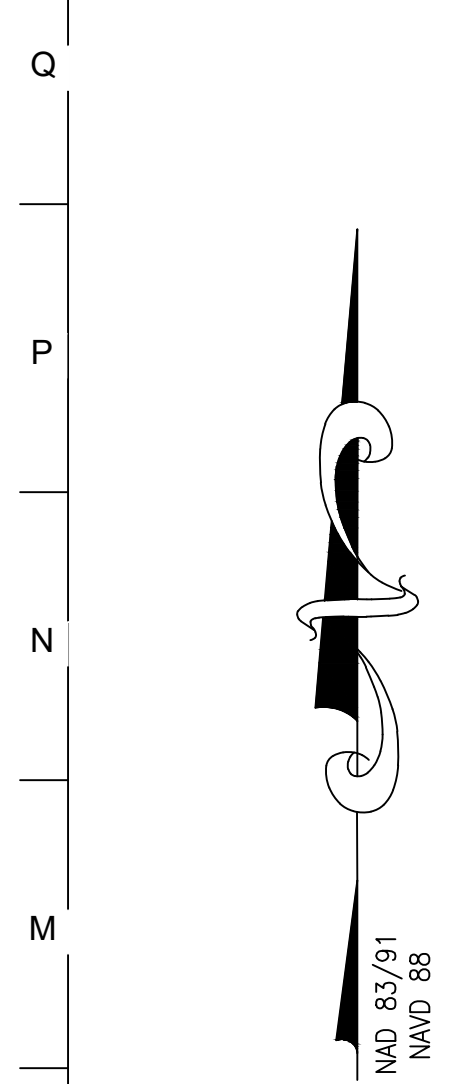


- CONSTRUCTION NOTES:**
1. CONTRACTOR SHALL CONTACT THE OWNER AND DEVELOPER 72 HOURS PRIOR TO COMMENCING ANY WORK.
  2. CONTRACTOR TO COORDINATE WITH MISS UTILITY, BALTIMORE COUNTY PUBLIC SCHOOLS, AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
  3. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE PLANS.
  4. ALL UTILITY FRAMES AND COVERS TO REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET NEW PAVEMENT OR GROUND ELEVATION. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF AND THE PREVENTION OF MISFITTINGS IN THE WORK. VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES BEFORE STARTING CONSTRUCTION IN EACH AREA.
  5. CONTRACTOR SHALL STABILIZE ALL UNINTENTIONALLY DISTURBED AREAS OUTSIDE OF THE L.O.D. BY THE END OF THE SAME WORKING DAY.
  6. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
  7. CONTRACTOR SHALL PROTECT ALL FACILITIES AND UTILITIES TO REMAIN FROM DAMAGE WHETHER SHOWN HEREON OR NOT.
  8. CONTRACTOR SHALL PROVIDE PROTECTION FOR ALL EXISTING POLES TO REMAIN.
  9. THE CONTRACTOR SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO ORIGINAL CONDITION OR BETTER.
  10. ALL EXISTING PAINT MARKINGS ADJACENT TO THE PROJECT AREA WHICH BECAME FADED OR OBLISCURED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED OR RESTORED AT NO ADDITIONAL COST TO THE OWNER.
  11. CONTRACTOR SHALL USE CAUTION WHEN WORKING AROUND EXISTING TREES TO REMAIN SO AS TO NOT DAMAGE THE TREES, TREE BRANCHES OR TREE ROOT SYSTEM.
  12. CONTRACTOR SHALL INSTALL ORANGE PLASTIC MESH TREE PROTECTION FENCE (TPF) PRIOR TO ANY CONSTRUCTION ACTIVITIES.
  13. CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF UTILITY OUTAGES.
  14. CONTRACTOR SHALL MAINTAIN VEHICULAR ACCESS TO AND AROUND OVERALL SITE DURING PAVEMENT OPEN CUT ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION.
  15. CONTRACTOR SHALL UTILIZE SIX (6) FOOT TALL CHAIN LINK CONSTRUCTION FENCE AROUND ALL ACTIVE WORK AREAS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND WARNING MEASURES TO PROTECT PEDESTRIANS FROM CONSTRUCTION ACTIVITIES. CONTRACTORS SHALL SUBMIT TO BALTIMORE CITY FOR ALL APPLICABLE PERMITS.

**PROPOSED CONDITIONS PLAN**

SCALE: 1"=20'

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88



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**PROJECT TEAM:**  
**ARCHITECT:**  
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**LANDSCAPE ARCHITECT:**  
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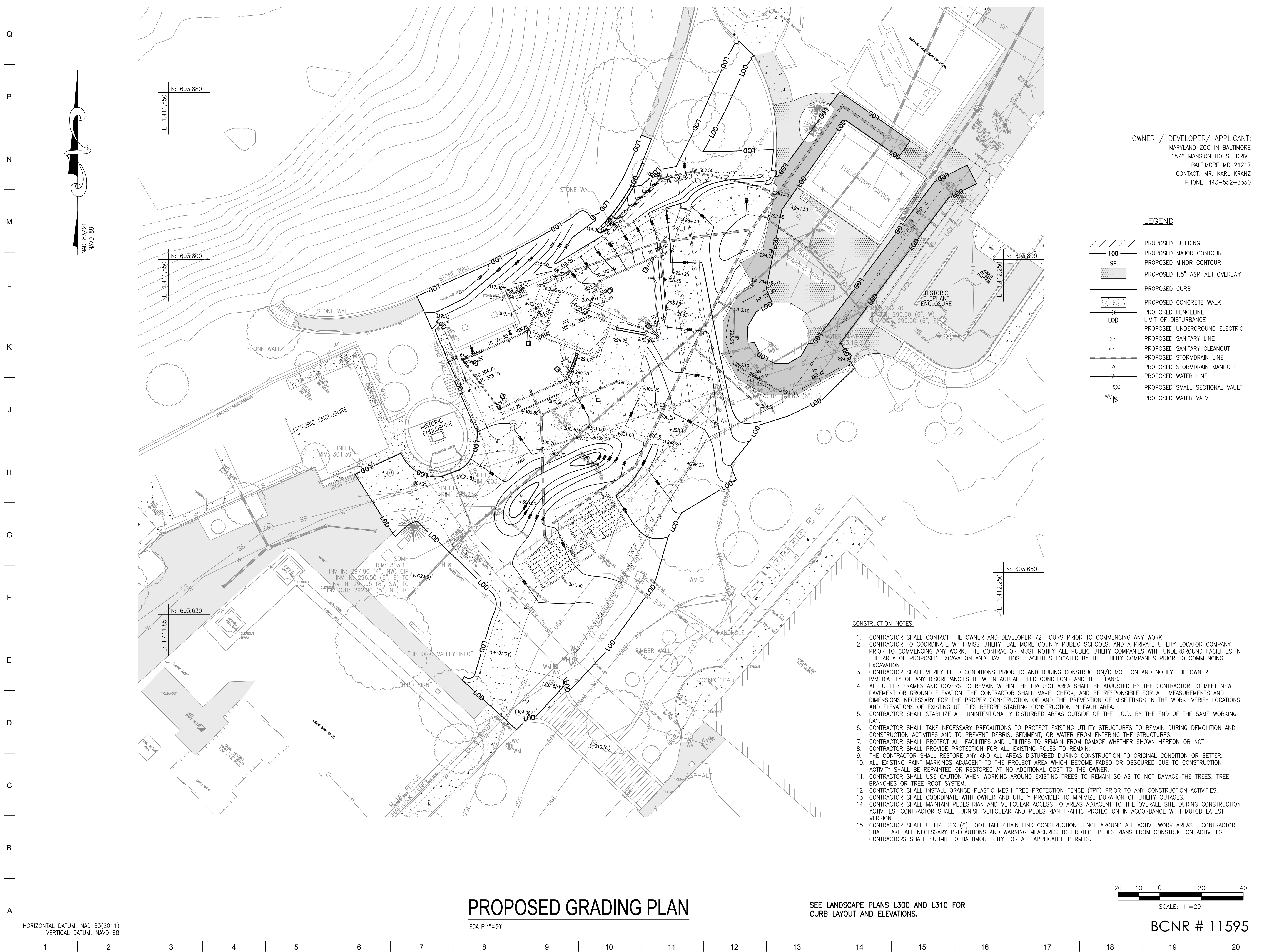
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**SEAL:**

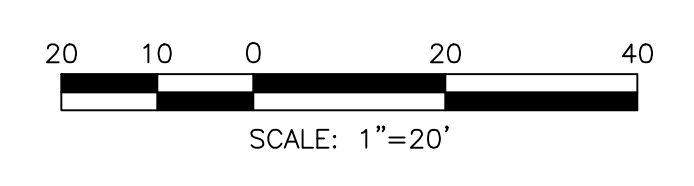
<b>DATE:</b>	
PROJECT NO: 2023-10.04	
<b>DRAWN BY</b>	
<b>CHECKED BY</b>	
<b>SUBMISSION</b>	<b>DATE</b>
<b>REVISION</b>	<b>DATE</b>

**DRAWING TITLE:**  
 PROPOSED  
 GRADING  
 PLAN

**DRAWING NO:**  
**C210**



- CONSTRUCTION NOTES:**
- CONTRACTOR SHALL CONTACT THE OWNER AND DEVELOPER 72 HOURS PRIOR TO COMMENCING ANY WORK.
  - CONTRACTOR TO COORDINATE WITH MISS UTILITY, BALTIMORE COUNTY PUBLIC SCHOOLS, AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
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  - CONTRACTOR SHALL MAINTAIN PEDESTRIAN AND VEHICULAR ACCESS TO AREAS ADJACENT TO THE OVERALL SITE DURING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION.
  - CONTRACTOR SHALL UTILIZE SIX (6) FOOT TALL CHAIN LINK CONSTRUCTION FENCE AROUND ALL ACTIVE WORK AREAS. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS AND WARNING MEASURES TO PROTECT PEDESTRIANS FROM CONSTRUCTION ACTIVITIES. CONTRACTORS SHALL SUBMIT TO BALTIMORE CITY FOR ALL APPLICABLE PERMITS.



SEE LANDSCAPE PLANS L300 AND L310 FOR CURB LAYOUT AND ELEVATIONS.

**PROPOSED GRADING PLAN**  
 SCALE: 1"=20'

BCNR # 11595

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

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**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
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 T: 410.785.7423  
**LANDSCAPE ARCHITECT:**  
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**MEP ENGINEER:**  
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 BALTIMORE, MD 21230  
 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
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 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

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DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 DETAIL  
 REFERENCE  
 PLAN

**DRAWING NO:**  
**C300**

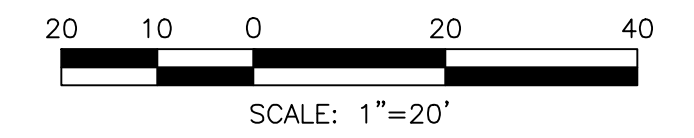
**LEGEND**

- PROPOSED BUILDING
- 100 PROPOSED MAJOR CONTOUR
- 99 PROPOSED MINOR CONTOUR
- PROPOSED 1.5" ASPHALT OVERLAY
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED FENCELINE
- LOD LIMIT OF DISTURBANCE
- PROPOSED DETAIL REFERENCE

DETAIL NO. — **A**  
 SHEET NO. — **C410**



**DETAIL REFERENCE PLAN**  
 SCALE: 1"=20'



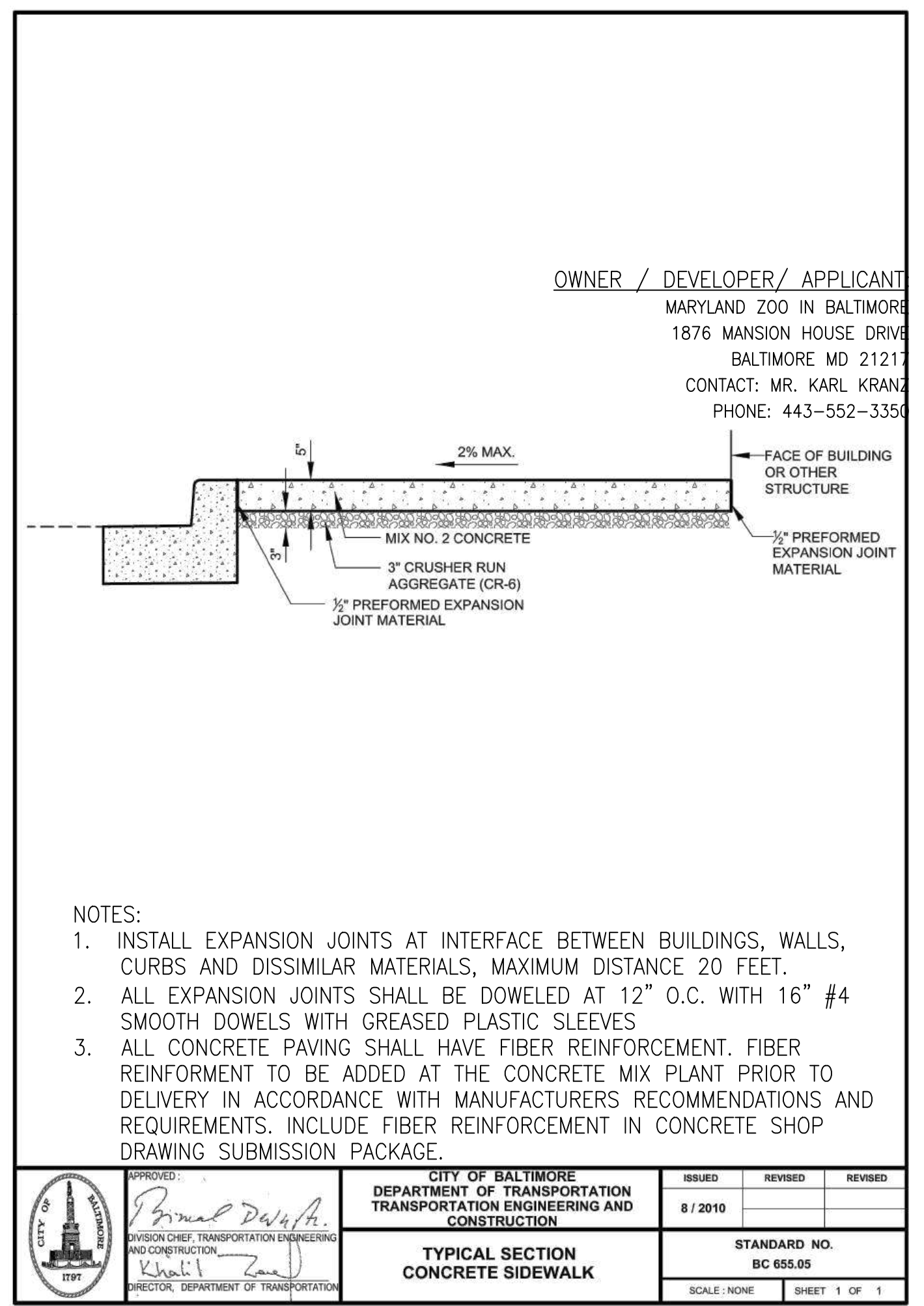
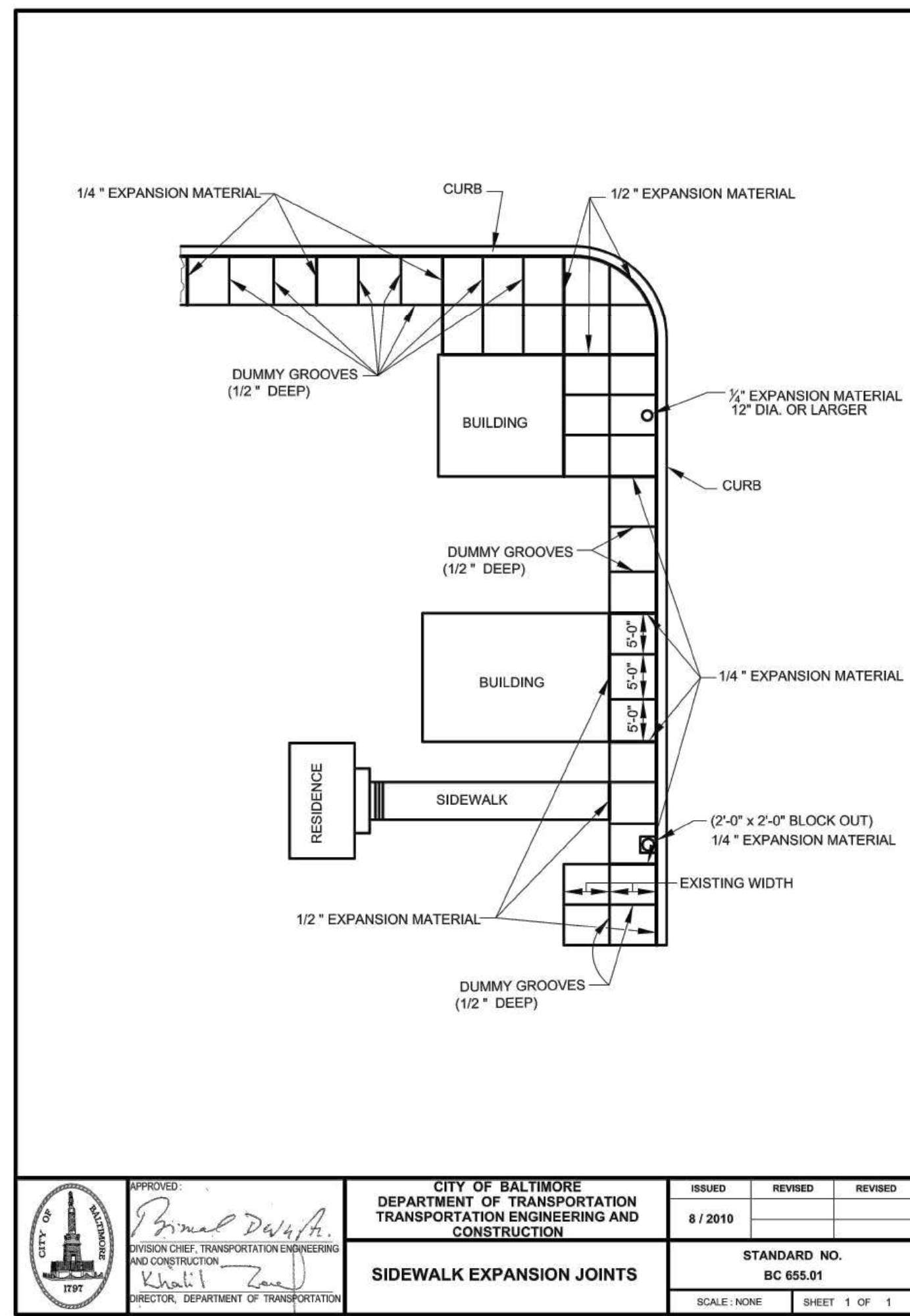
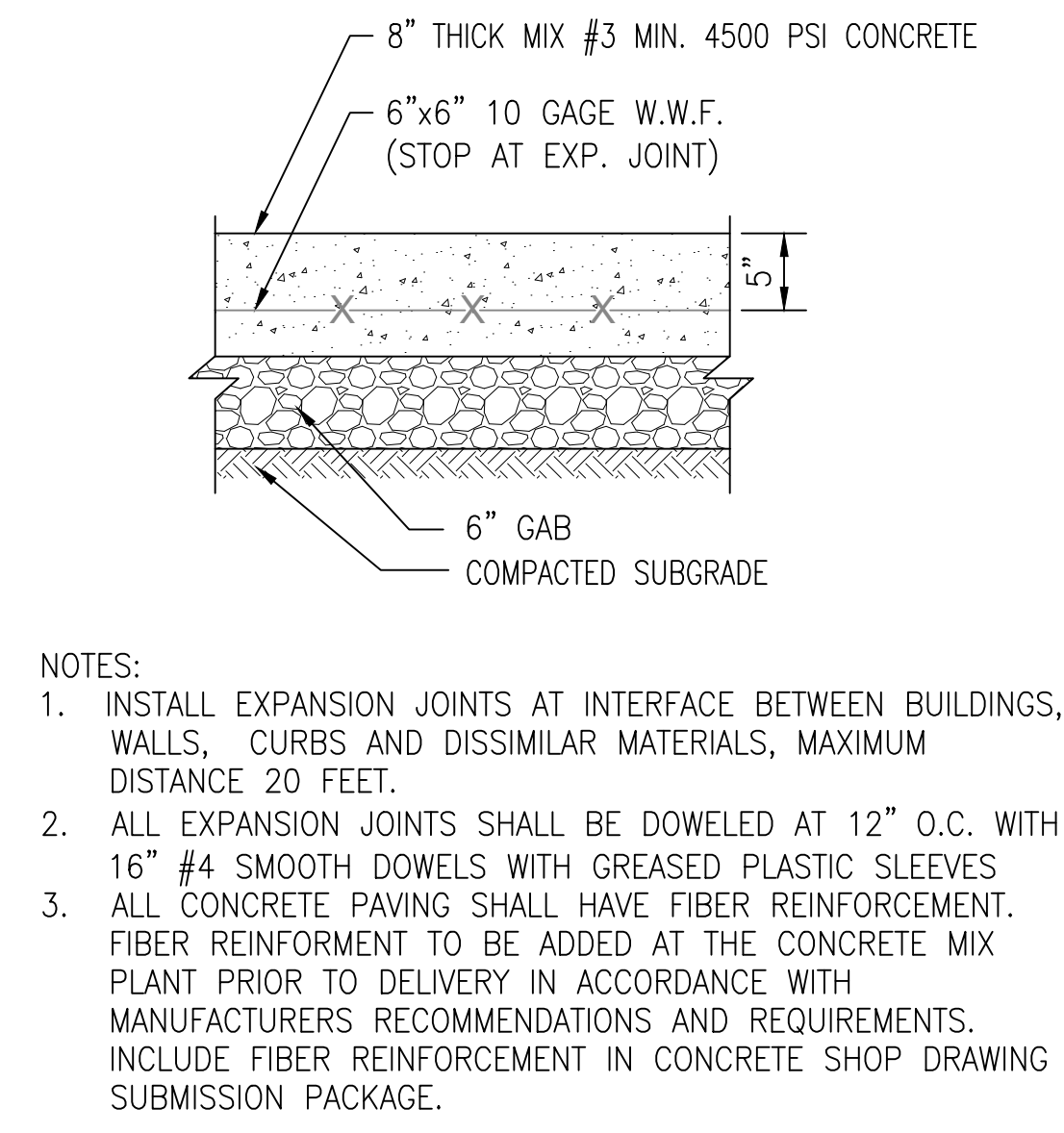
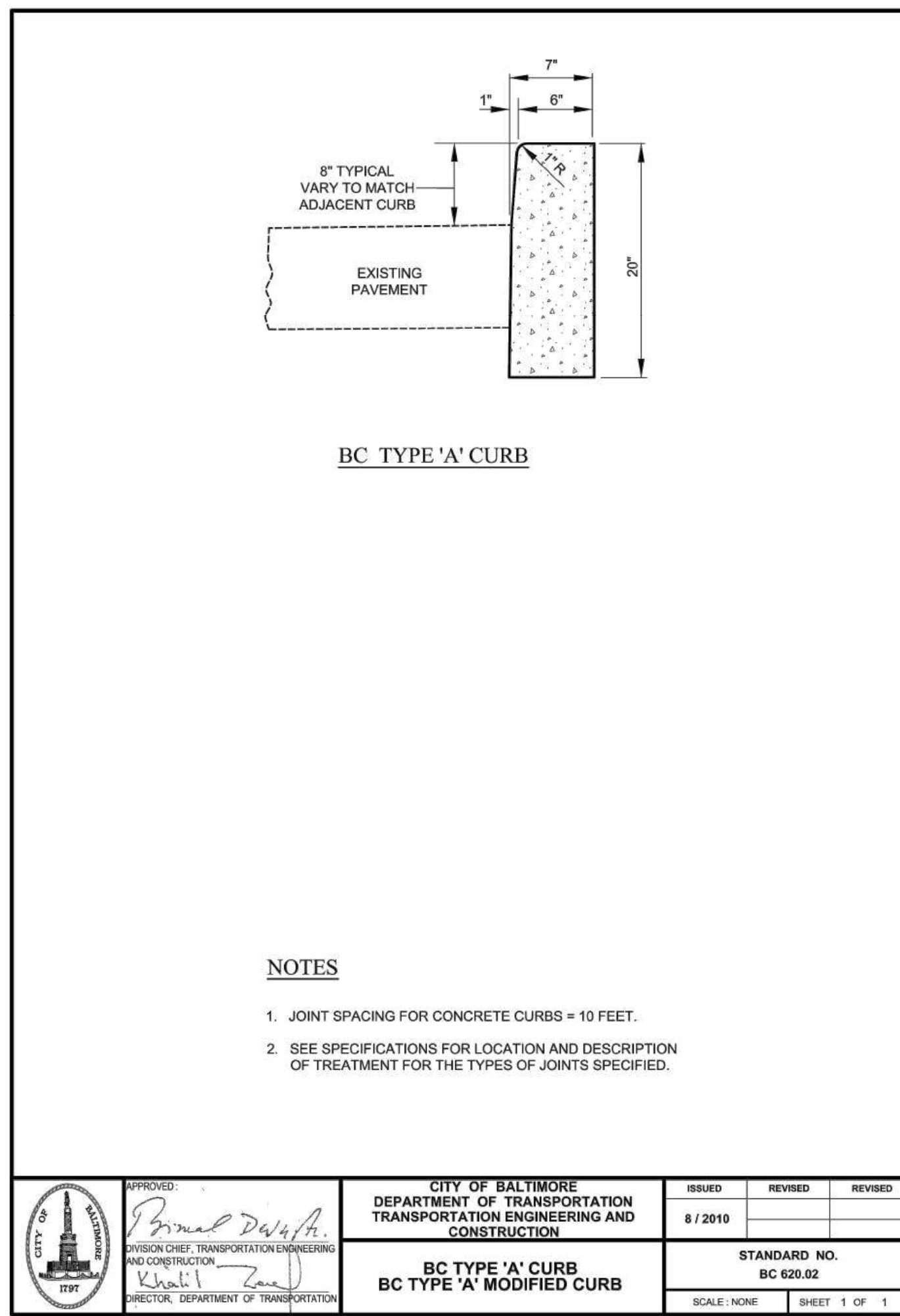
BCNR # 11595

ALL WORK SHALL CONFORM TO CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS FOR MATERIALS, HIGHWAYS, BRIDGES, UTILITIES, AND INCIDENTAL STRUCTURES 2006, AND SUPPLEMENTARY SPECIFICATIONS IN THE CONTRACT DOCUMENTS.

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

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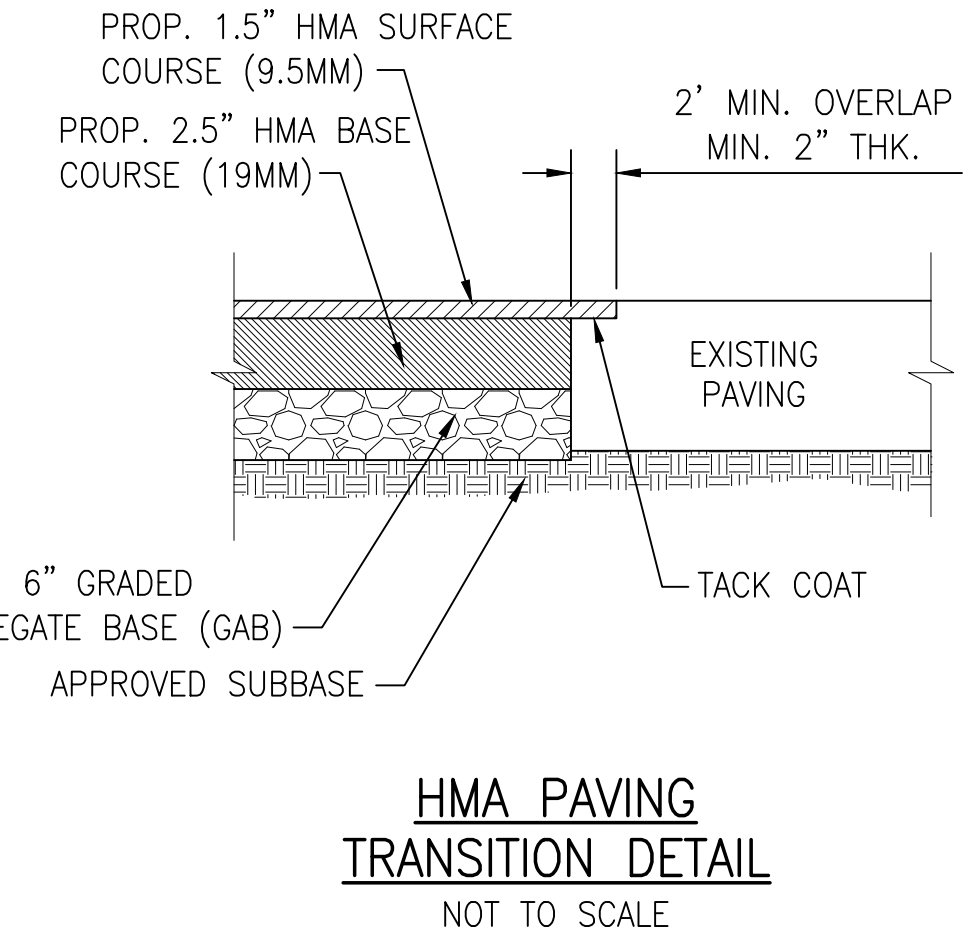
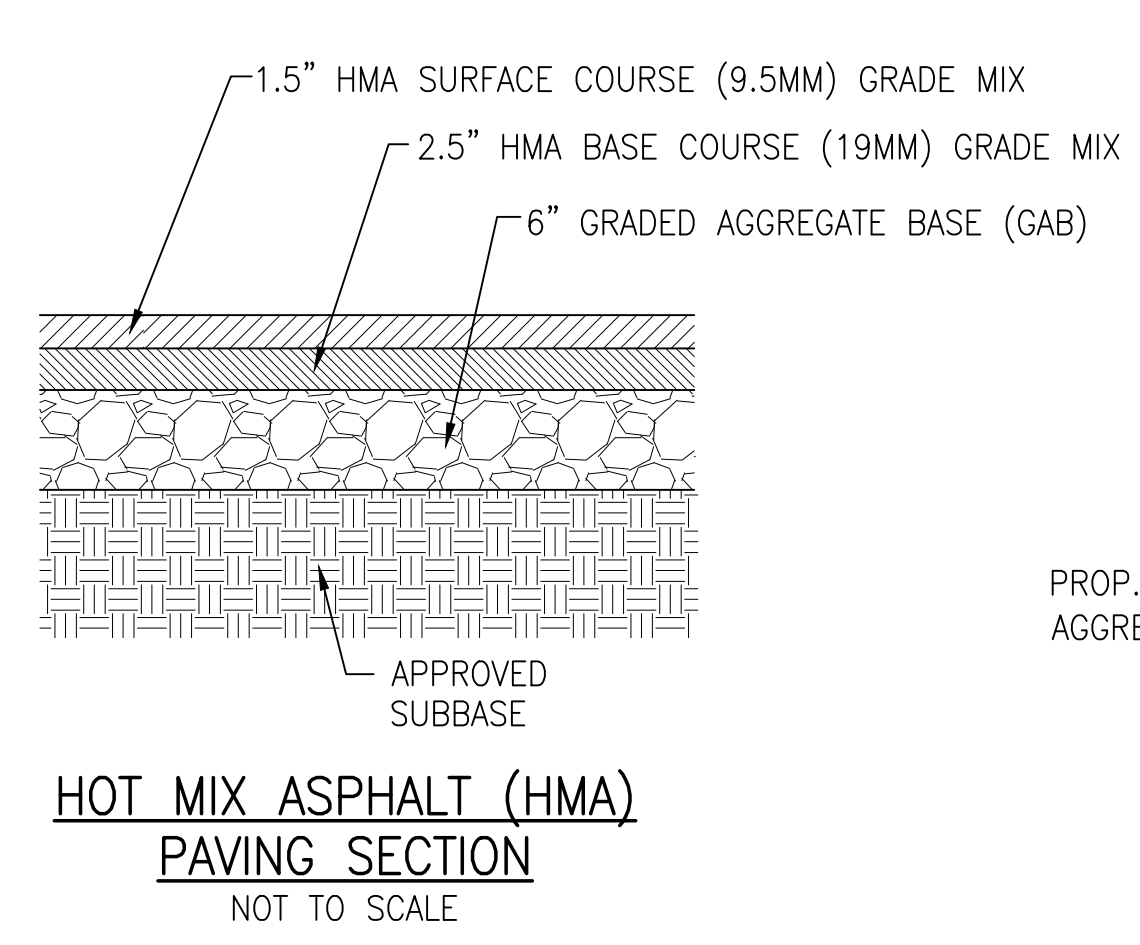
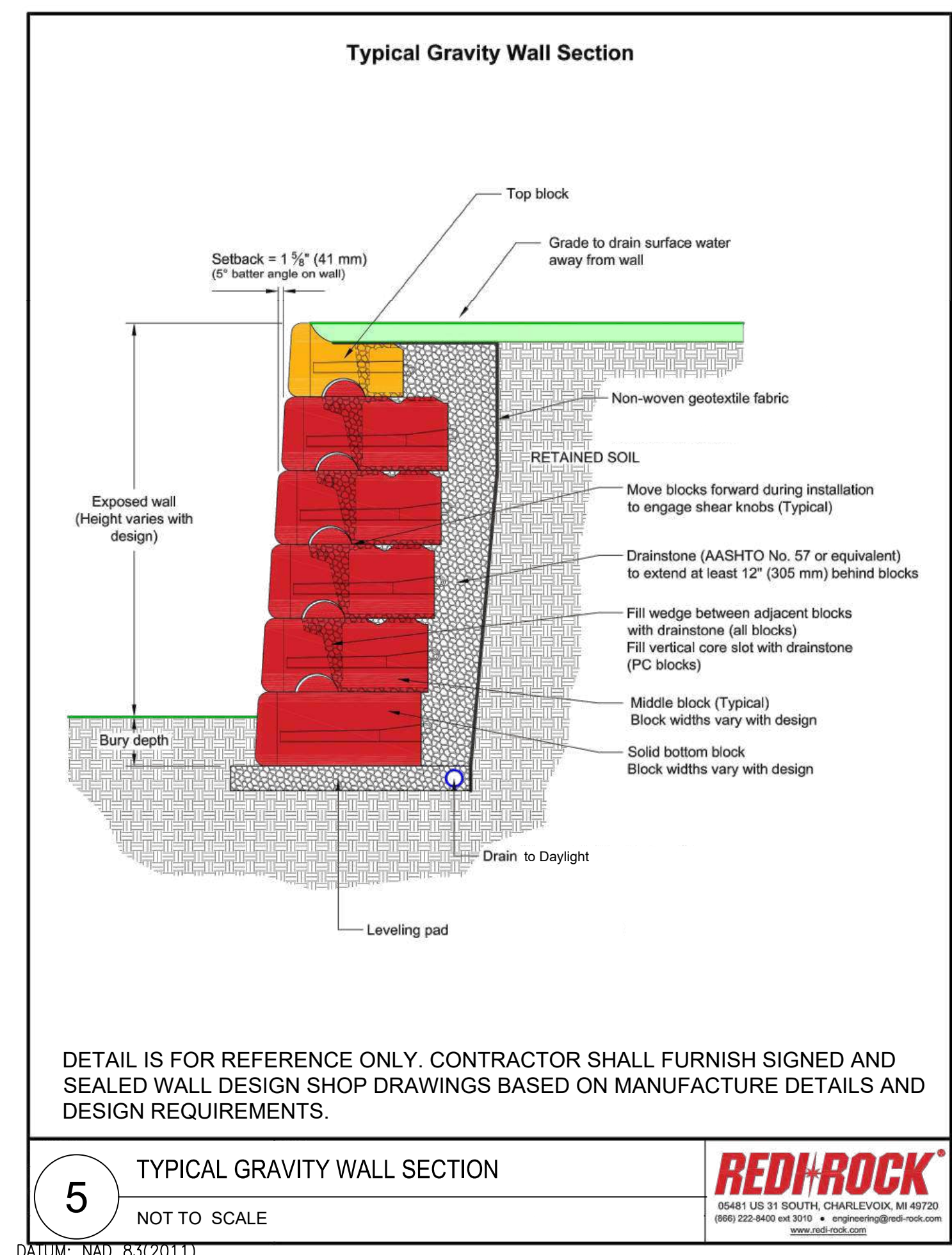


**1** TYPE A CURB DETAIL  
NOT TO SCALE

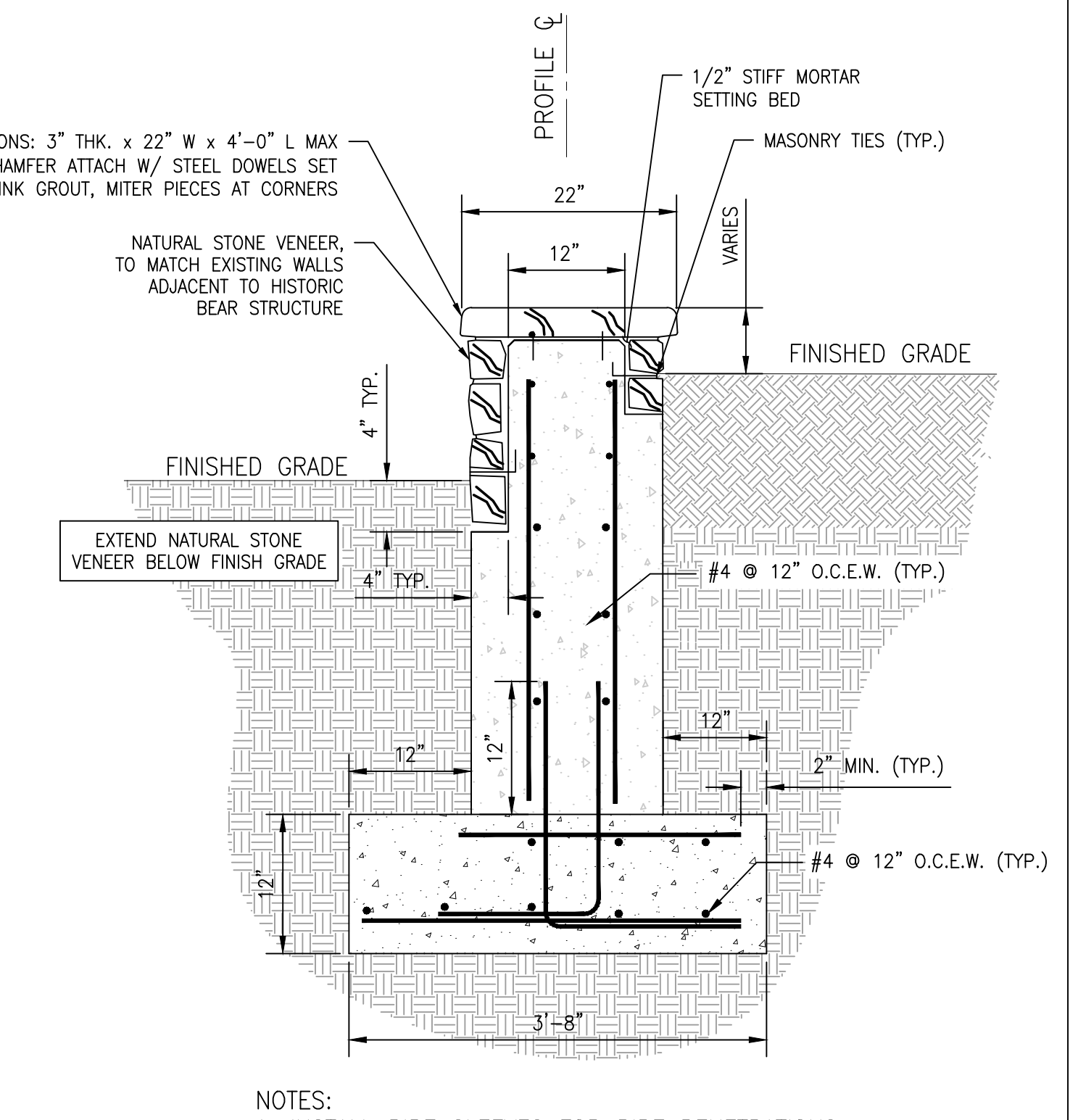
**2** HEAVY DUTY CONCRETE PAVING  
NOT TO SCALE

**3** SIDEWALK EXPANSION JOINTS  
BALTIMORE CITY STANDARD 655.01  
NOT TO SCALE

**4** TYPICAL SECTION CONCRETE SIDEWALK  
BALTIMORE CITY STANDARD 655.05  
NOT TO SCALE



**6** ASPHALT PAVING  
NOT TO SCALE



**7** SEAT WALL DETAIL  
NOT TO SCALE BCNR # 11595

**BKP**

**PROJECT TEAM:**

**ARCHITECT:**  
BUELL KRATZER POWELL, P.C.  
1525 LOCUST STREET  
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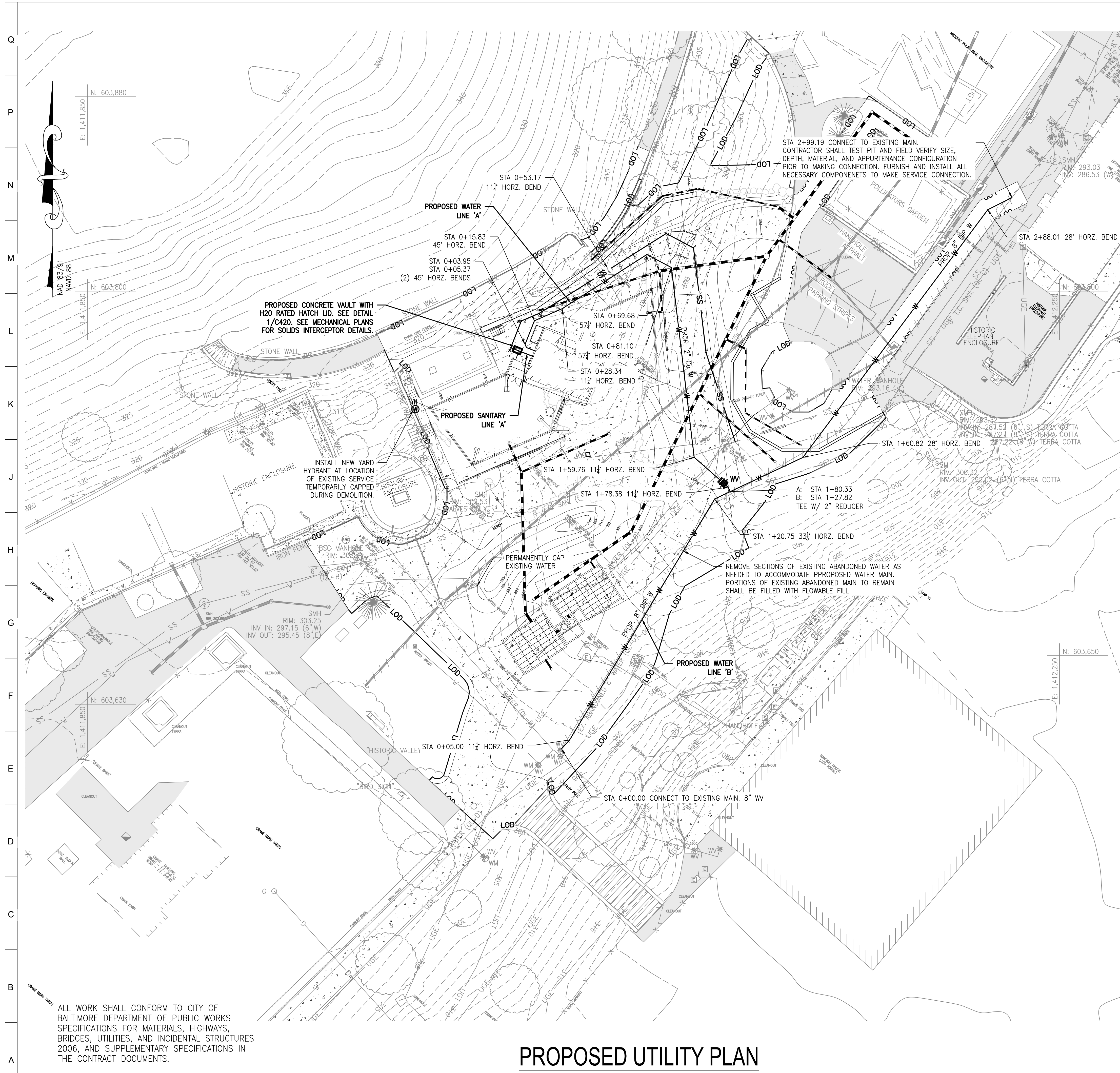
**SEAL:**

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14446, EXPIRATION DATE 9/25/25.

<b>DATE:</b>	
<b>PROJECT NO:</b>	2023-10.04
<b>DRAWN BY:</b>	
<b>CHECKED BY:</b>	
<b>SUBMISSION:</b>	DATE
<b>REVISION:</b>	DATE

**DRAWING TITLE:**  
SITE DETAILS

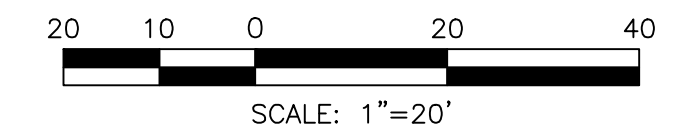
**DRAWING NO:**  
**C310**



- OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
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- CIVIL ENGINEER:**  
 CARROLL ENGINEERING, INC  
 215 SCHILLING CIRCLE, STE 102  
 HUNT VALLEY, MD 21031  
 T: 410.785.7423
- LANDSCAPE ARCHITECT:**  
 ROBINSON ANDERSON SUMMERS  
 28 WEST STATE STREET  
 MEDIA, PA 19063  
 T: 302.888.1544
- STRUCTURAL ENGINEER:**  
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 2225 EAST MURRAY HOLLADAY RD  
 SALT LAKE CITY, UT 84117  
 T: 801.274.3950
- MEP ENGINEER:**  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191
- LEGEND:**
- PROPOSED BUILDING
  - PROPOSED MAJOR CONTOUR
  - PROPOSED MINOR CONTOUR
  - PROPOSED 1.5" ASPHALT OVERLAY
  - PROPOSED CURB
  - PROPOSED CONCRETE WALK
  - PROPOSED FENCELINE
  - LIMIT OF DISTURBANCE
  - PROPOSED UNDERGROUND ELECTRIC
  - PROPOSED SANITARY LINE
  - PROPOSED SANITARY CLEANOUT
  - PROPOSED STORMDRAIN LINE
  - PROPOSED STORMDRAIN MANHOLE
  - PROPOSED WATER LINE
  - PROPOSED SMALL SECTIONAL VAULT
  - PROPOSED WATER VALVE

**PROPOSED NOTES:**

1. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
2. CONTRACTOR SHALL MAINTAIN PEDESTRIAN & VEHICULAR ACCESS TO AND AROUND OVERALL SITE DURING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION AND THE CITY OF BALTIMORE REQUIREMENTS.
3. CONTRACTOR SHALL CONTACT THE OWNER AND DEVELOPER 72 HOURS PRIOR TO COMMENCING ANY WORK.
4. ALL UTILITY FRAMES AND COVERS TO REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET NEW PAVEMENT OR GROUND ELEVATION. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF AND THE PREVENTION OF MISFITTINGS IN THE WORK. VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES BEFORE STARTING CONSTRUCTION IN EACH AREA.
5. CONTRACTOR TO COORDINATE WITH MISS UTILITY, THE CITY OF BALTIMORE, AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
6. LIVE UNDERGROUND UTILITIES EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
7. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
8. CONTRACTOR SHALL PROTECT ALL FACILITIES AND UTILITIES TO REMAIN FROM DAMAGE WHETHER SHOWN HEREON OR NOT.
9. ALL EXISTING PAINT MARKINGS ADJACENT TO THE PROJECT AREA WHICH BECAME FADED OR OBSCURED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED OR RESTORED AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF UTILITY OUTAGES.
11. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND PLACEMENT OF ALL UTILITY CONDUITS AND ENCASUREMENT. CONTRACTOR SHALL PROVIDE CONDUITS AND PULL STRINGS IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS FOR THEIR RESPECTIVE CONDUITS.
12. USE EXTREME CAUTION WHEN WORKING AROUND EXISTING TREES TO REMAIN SO AS NOT TO DAMAGE THE TREES OR ROOT SYSTEMS.
13. CONTRACTOR SHALL PROTECT ALL AREAS BEYOND THE LIMITS OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
14. INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.
15. CONTRACTOR SHALL FURNISH SHORING, SHEATHING, OR OTHERWISE SUPPORT EXCAVATIONS TO PROTECT EXCAVATIONS FROM CAVE-INS UNTIL BACKFILL PLACEMENT IS COMPLETE PER SPECIFICATIONS.
16. SEE EXISTING CONDITIONS PLAN FOR SITE BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS THROUGHOUT THE DURATION OF THE PROJECT FOR CONSTRUCTION LAYOUT PURPOSES.
17. REFER TO THE SITE LANDSCAPING PLANS FOR SITE FURNISHING AND PLANTING INFORMATION.
18. SEE LANDSCAPE PLANS FOR PROPOSED SCORING AND PAVEMENT PATTERNS.
19. REFER TO THE ELECTRICAL PLANS FOR ADDITIONAL ELECTRICAL UTILITY INFORMATION.



BCNR # 11595

ALL WORK SHALL CONFORM TO CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS FOR MATERIALS, HIGHWAYS, BRIDGES, UTILITIES, AND INCIDENTAL STRUCTURES 2006, AND SUPPLEMENTARY SPECIFICATIONS IN THE CONTRACT DOCUMENTS.

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

**PROPOSED UTILITY PLAN**  
 SCALE: 1"=20'



**PROJECT TEAM:**

**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
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**CIVIL ENGINEER:**  
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**LANDSCAPE ARCHITECT:**  
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**STRUCTURAL ENGINEER:**  
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**MEP ENGINEER:**  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

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**SEAL:**

<b>DATE:</b>	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 PROPOSED  
 UTILITY  
 PLAN

**DRAWING NO:**  
**C400**



**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
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 190 WEST OSTEND ST, STE 300  
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 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

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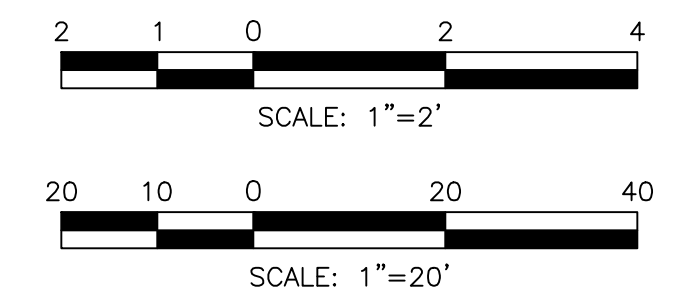
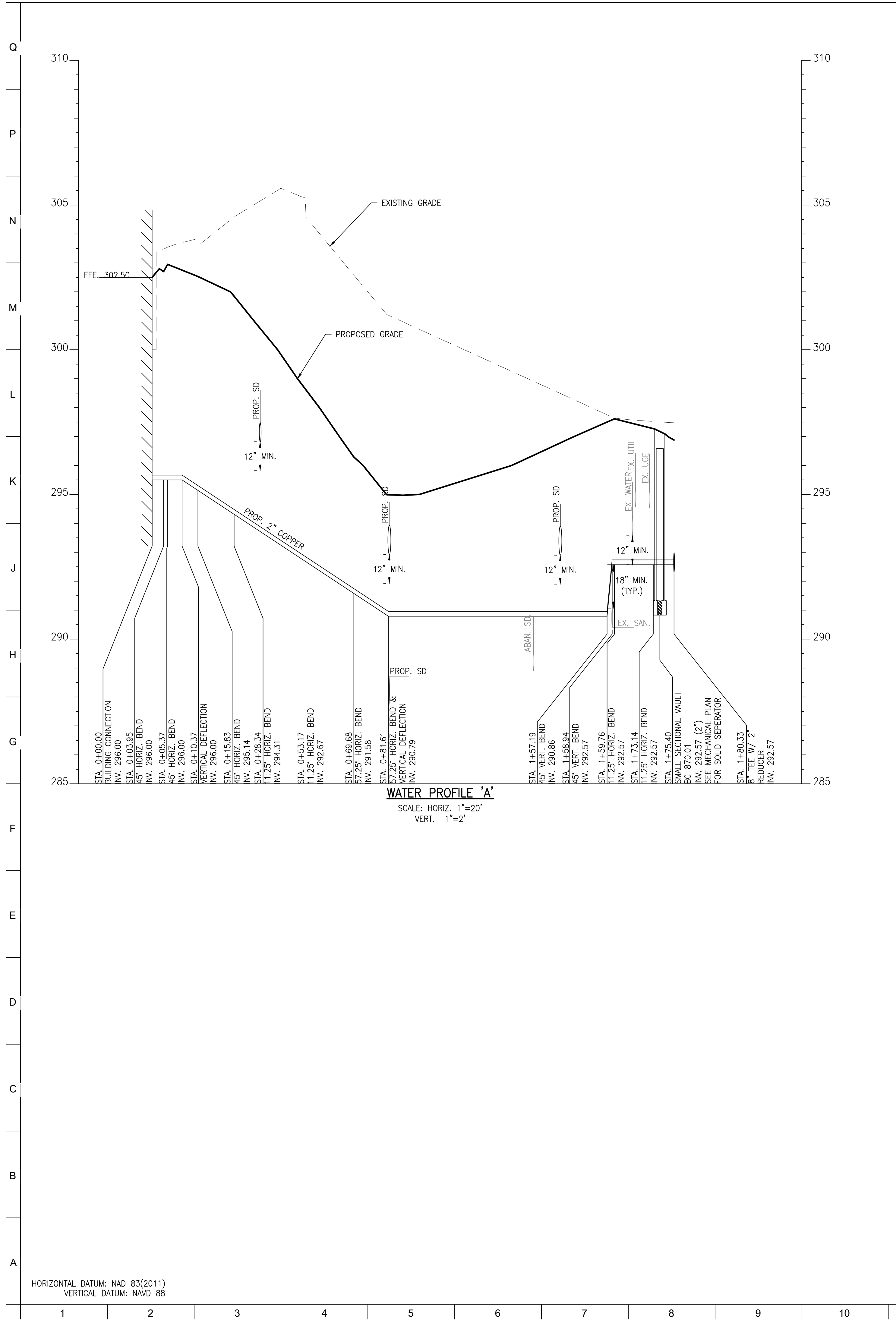
**SEAL:**

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DATE:	PROJECT NO: 2023-10.04
DRAWN BY:	
CHECKED BY:	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 UTILITY  
 PROFILES

**DRAWING NO.:**  
**C410**



BCNR # 11595

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88



**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
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**CIVIL ENGINEER:**  
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**LANDSCAPE ARCHITECT:**  
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**STRUCTURAL ENGINEER:**  
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**MEP ENGINEER:**  
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 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**CLIENT:**  
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 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
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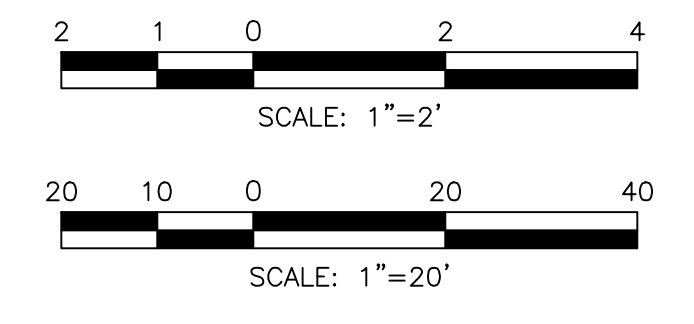
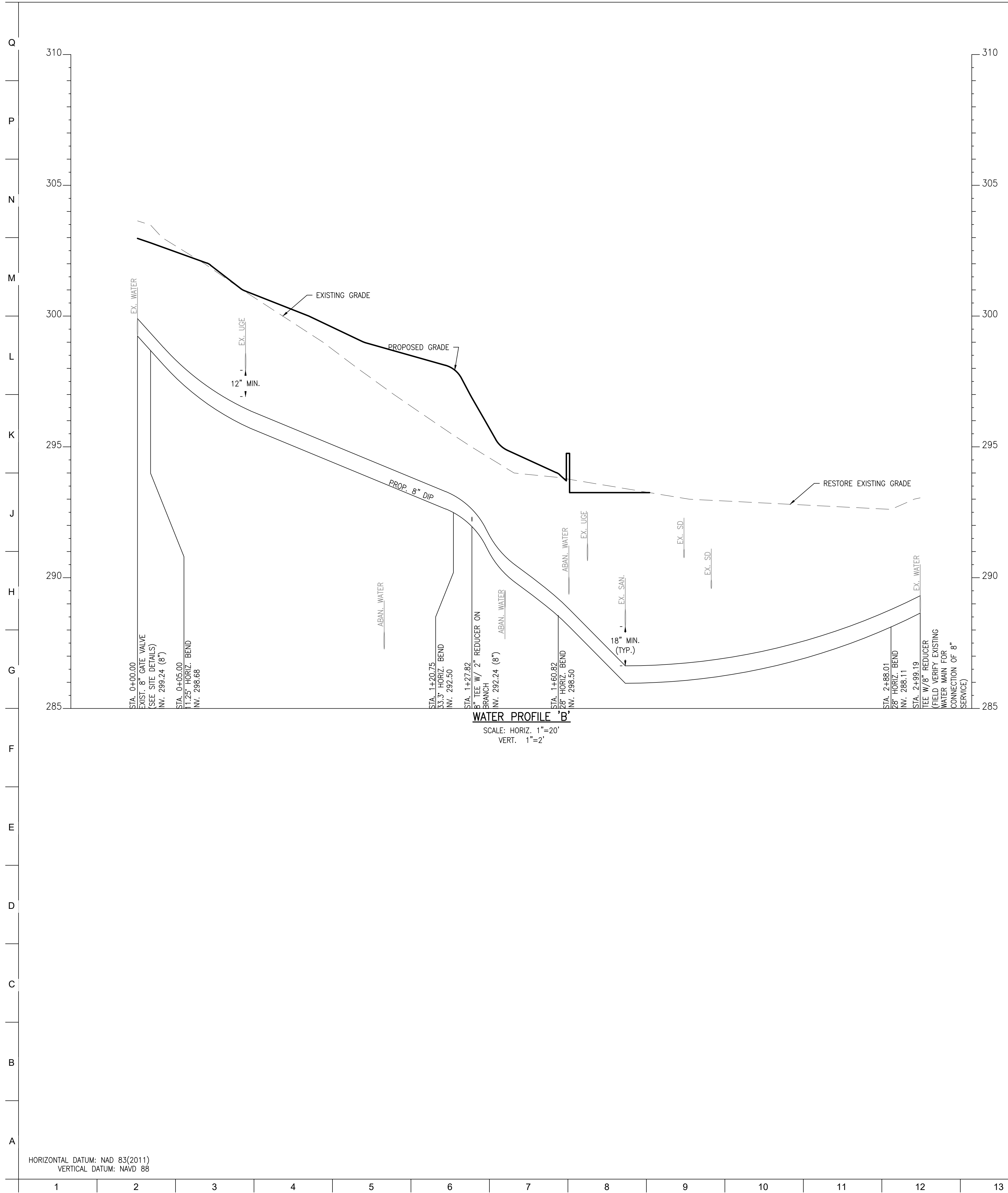
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DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 UTILITY  
 PROFILES

**DRAWING NO:**  
 C411



HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595



PROJECT TEAM:

ARCHITECT:  
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LANDSCAPE ARCHITECT:  
ROBINSON ANDERSON SUMMERS  
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STRUCTURAL DESIGN STUDIO, INC  
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MEP ENGINEER:  
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190 WEST OSTEND ST, STE 300  
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T: 410.244.7191

OWNER / DEVELOPER / APPLICANT:  
MARYLAND ZOO IN BALTIMORE  
1876 MANSION HOUSE DRIVE  
BALTIMORE MD 21217  
CONTACT: MR. KARL KRANZ  
PHONE: 443-552-3350

CLIENT:

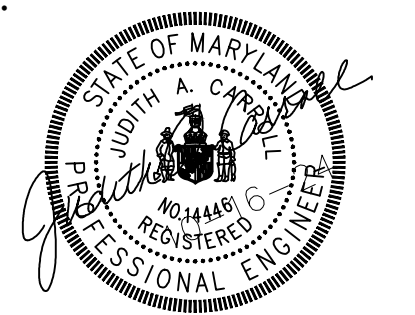
**MARYLAND ZOO**

THE MARYLAND ZOO IN BALTIMORE  
1 SAFARI PLACE  
BALTIMORE, MD 21217

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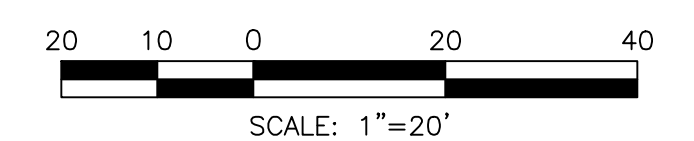
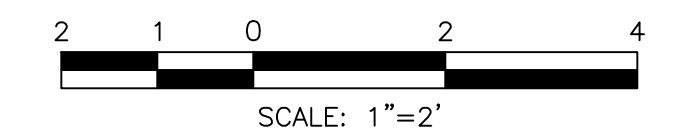
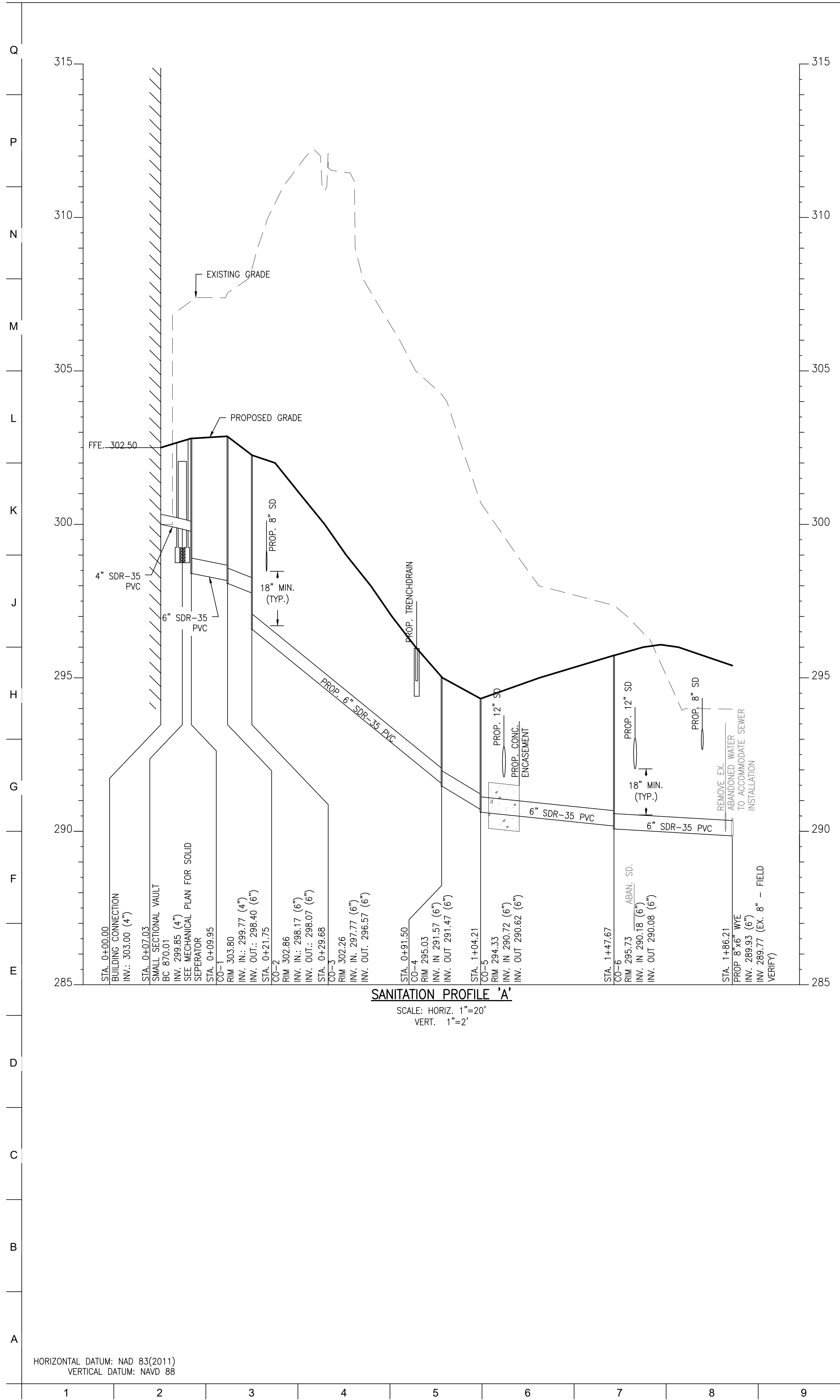
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DRAWN BY:	
CHECKED BY:	
SUBMISSION:	DATE
REVISION:	DATE

DRAWING TITLE:  
UTILITY  
PROFILES

DRAWING NO:

**C412**





**PROJECT TEAM:**

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**CLIENT:**  
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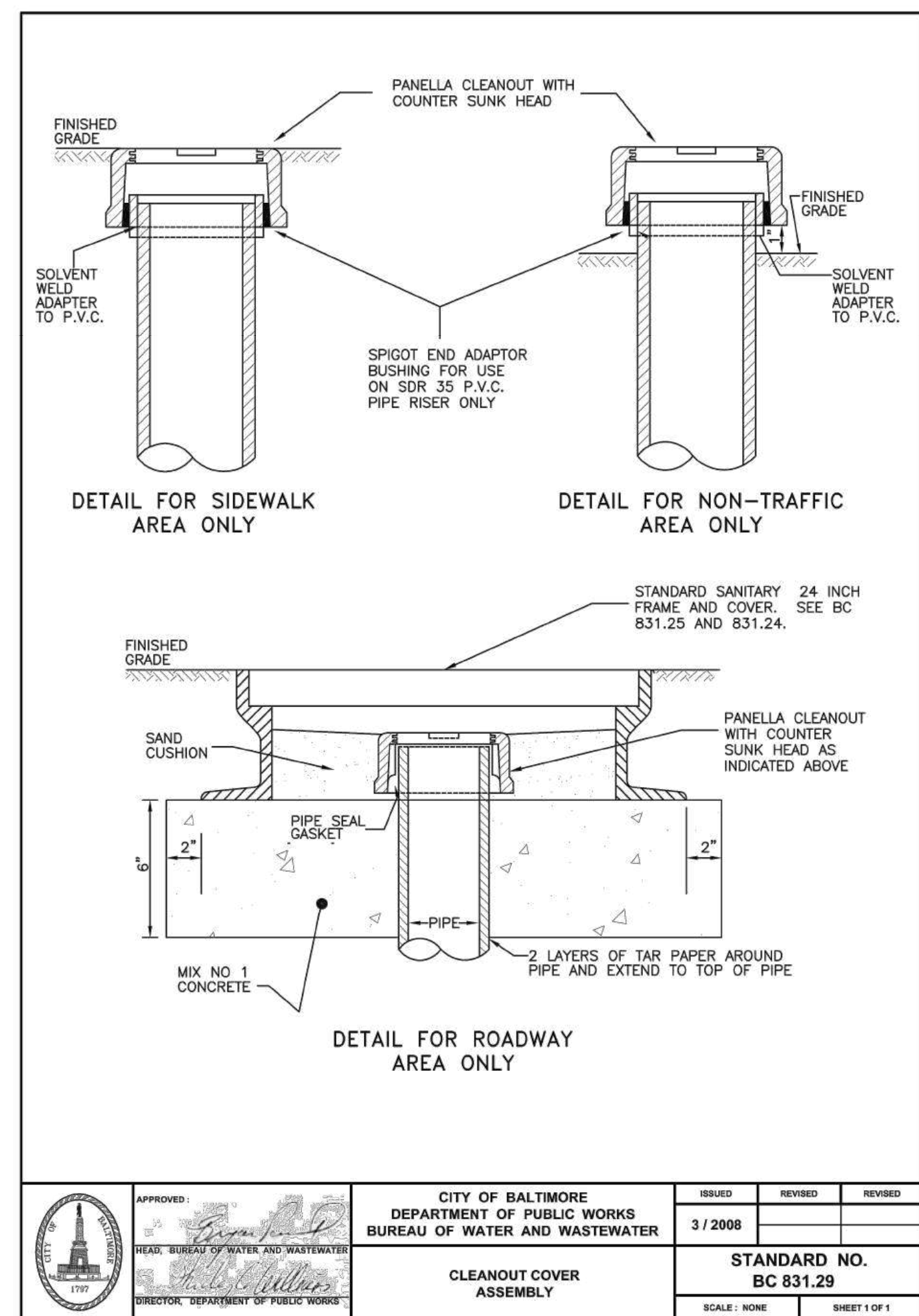
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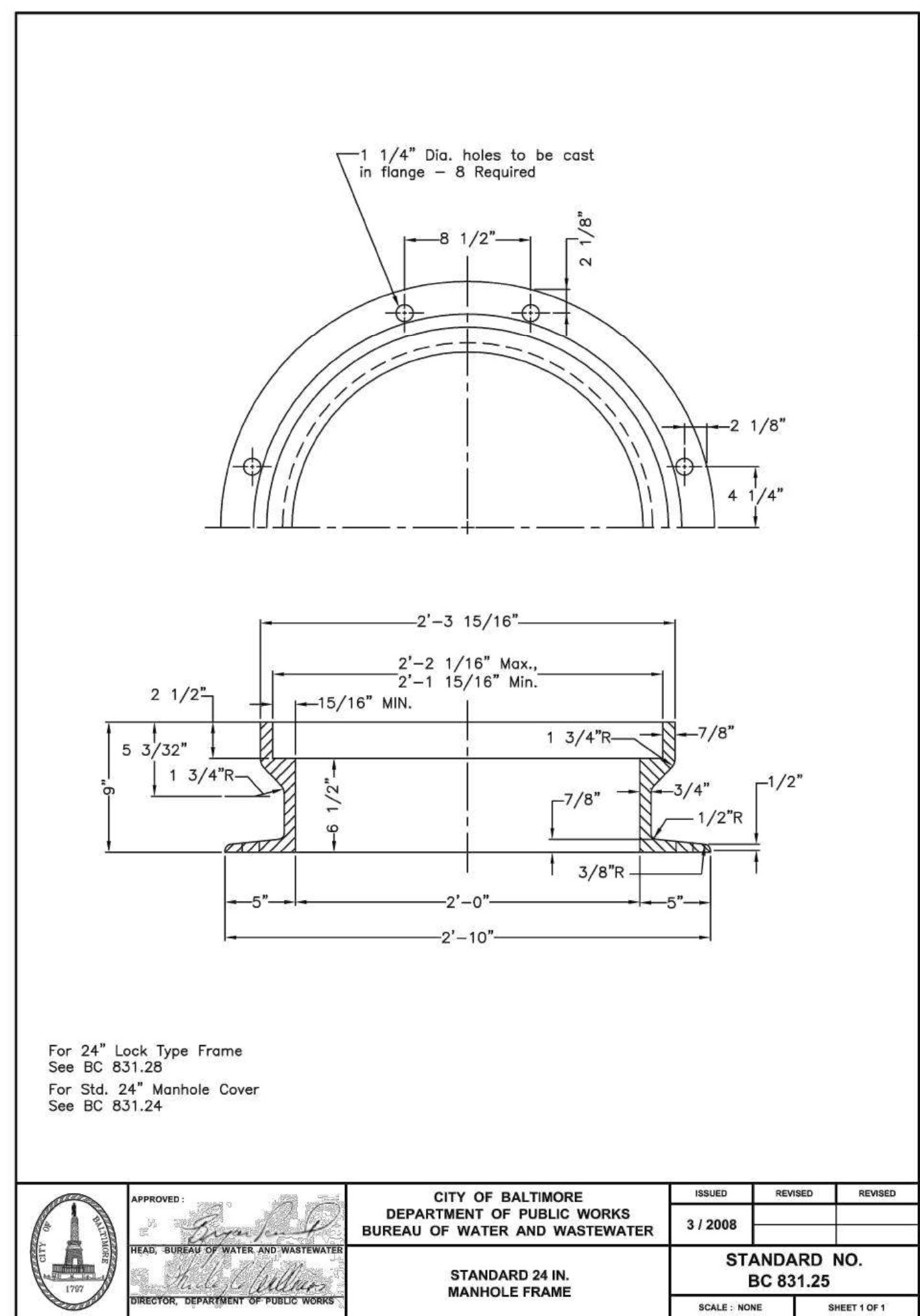
**DRAWING TITLE:**  
 UTILITY  
 DETAILS

**DRAWING NO:**  
**C420**

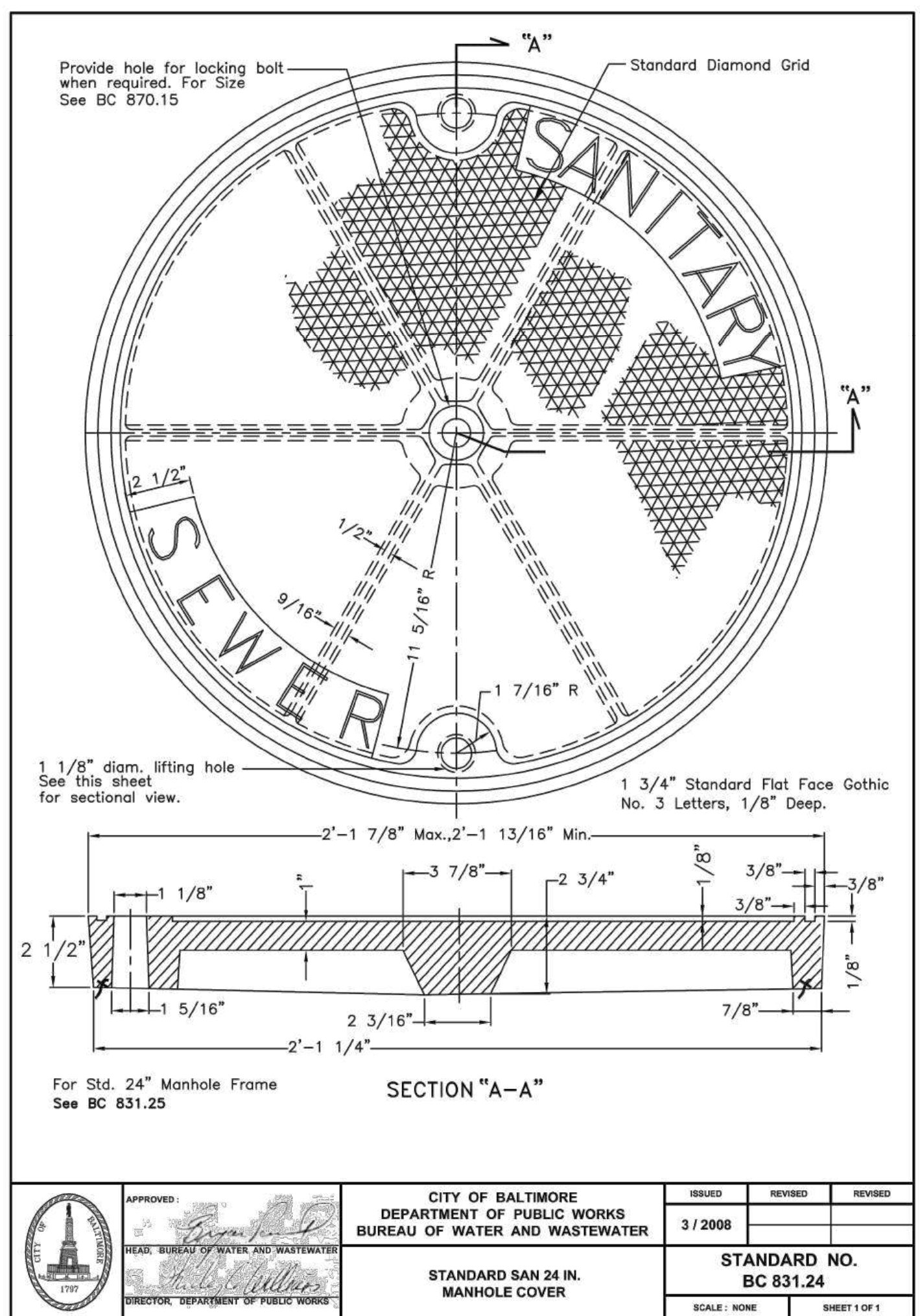
**OWNER / DEVELOPER / APPLICANT:**  
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 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350



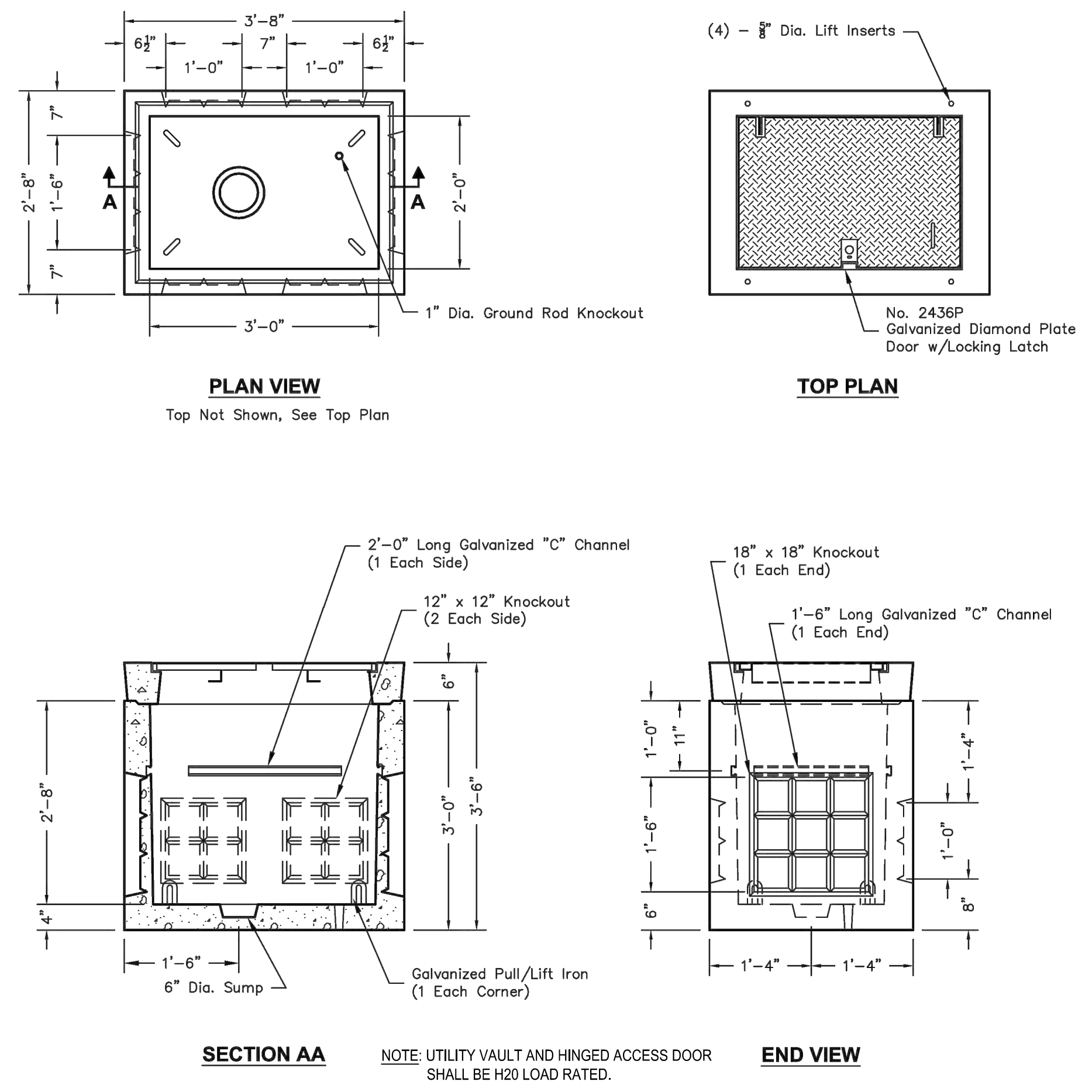
APPROVED:	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
		3 / 2008		
STANDARD NO. BC 831.25		STANDARD NO. BC 831.29		
CLEANOUT COVER ASSEMBLY		SCALE: NONE SHEET 1 OF 1		



APPROVED:	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
		3 / 2008		
STANDARD NO. BC 831.25		STANDARD NO. BC 831.25		
STANDARD 24 IN. MANHOLE FRAME		SCALE: NONE SHEET 1 OF 1		



APPROVED:	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
		3 / 2008		
STANDARD NO. BC 831.24		STANDARD NO. BC 831.24		
STANDARD SAN 24 IN. MANHOLE COVER		SCALE: NONE SHEET 1 OF 1		



**1 SOLIDS INTERCEPTOR VAULT**  
 NOT TO SCALE

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595



**PROJECT TEAM:**

**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
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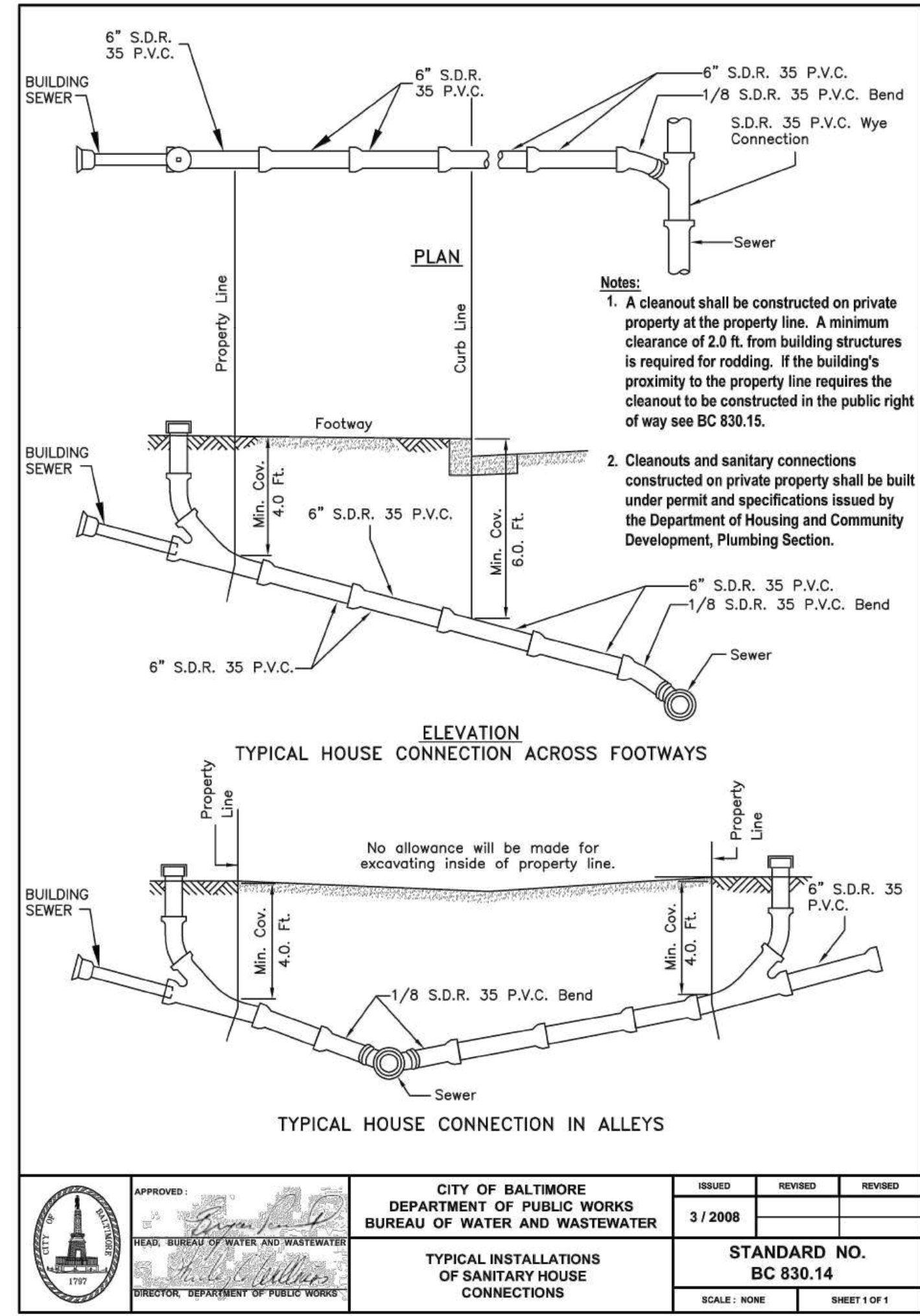
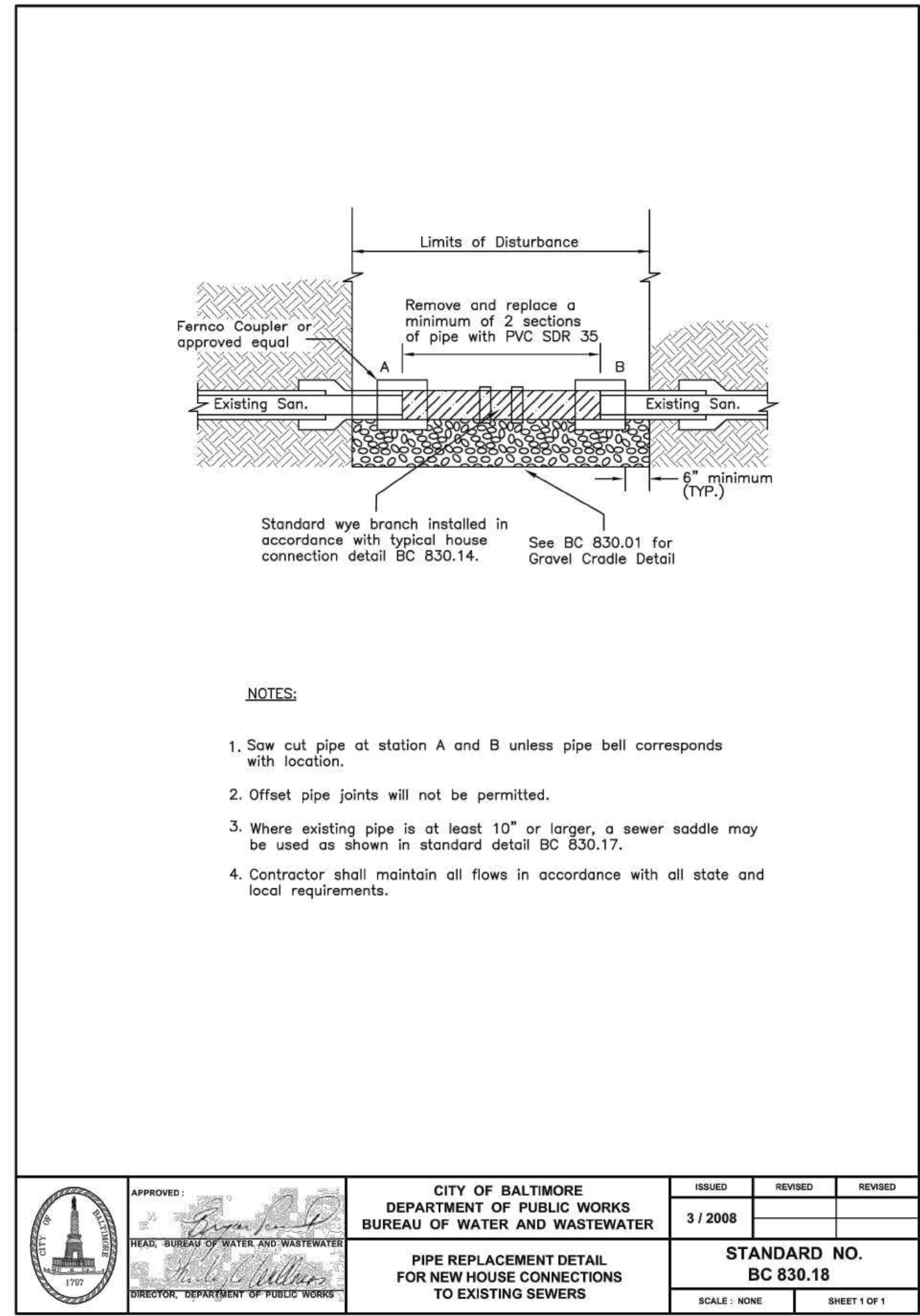
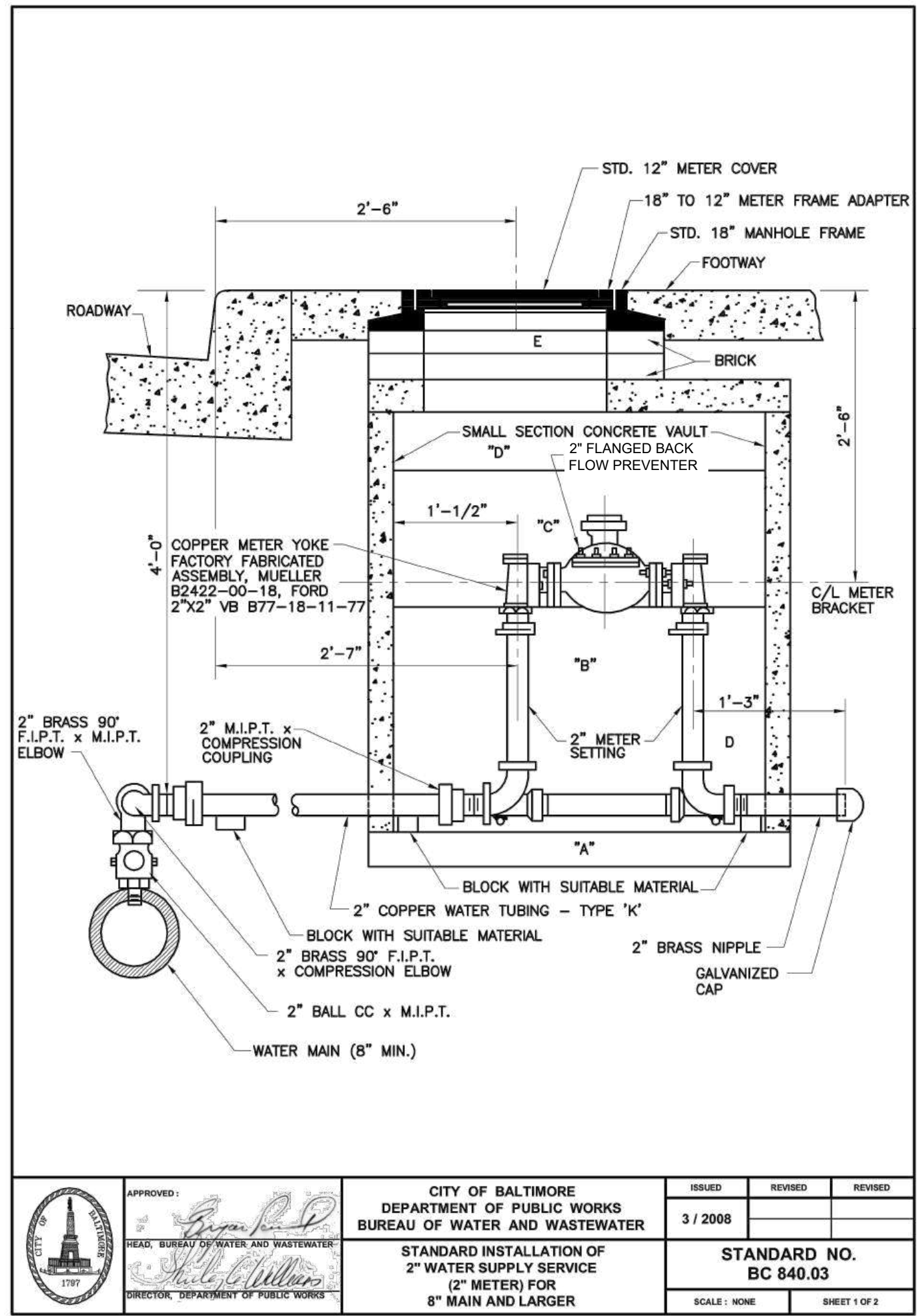
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SUBMISSION:	DATE
REVISION:	DATE

**DRAWING TITLE:**  
 UTILITY  
 DETAILS

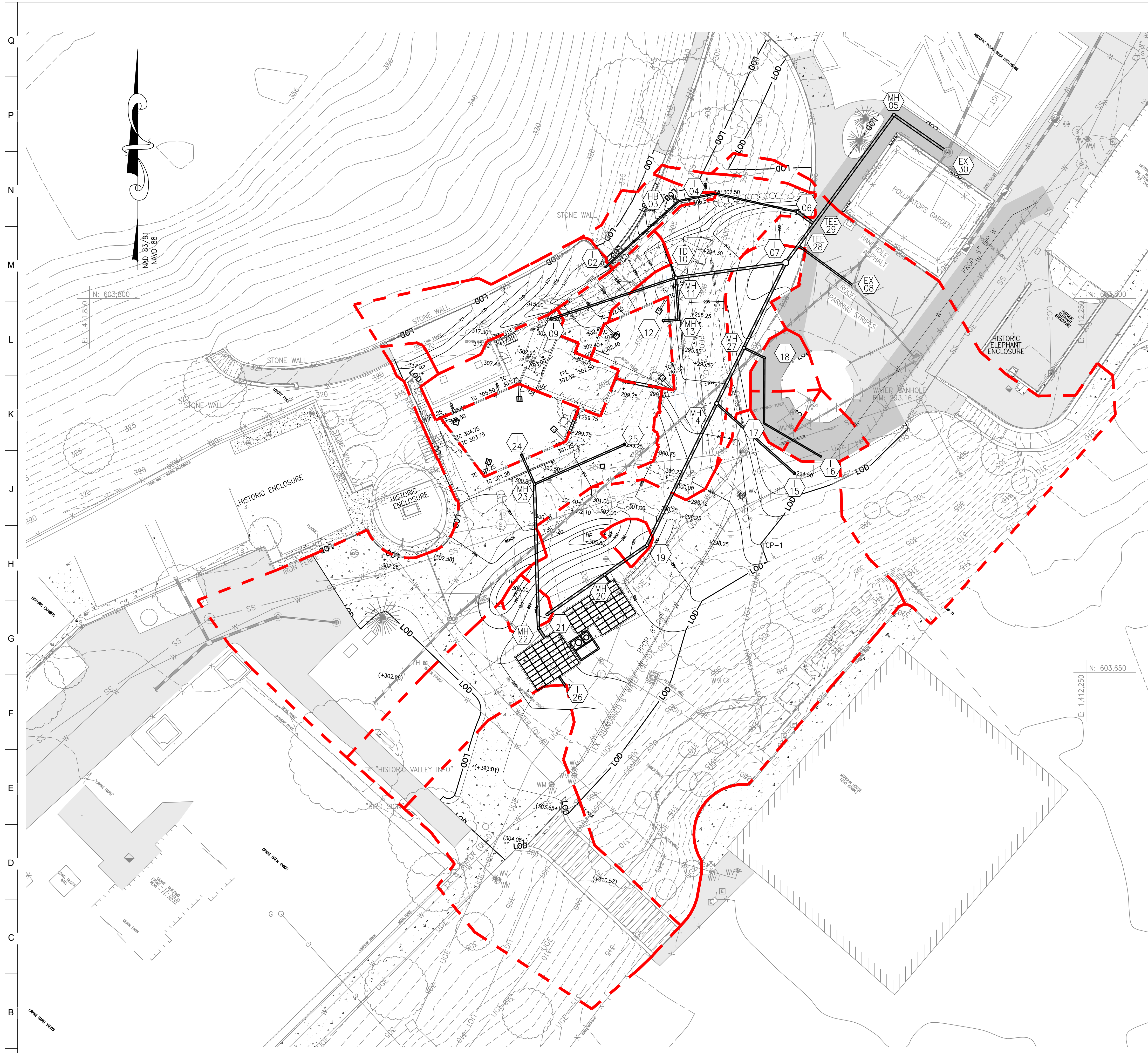
**DRAWING NO:**  
**C421**



HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595





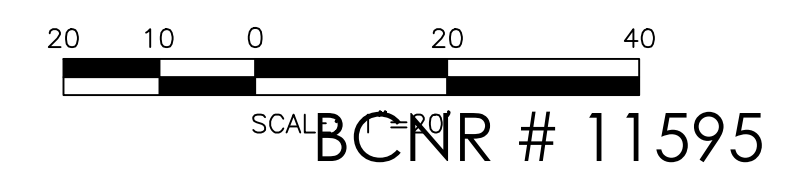
OWNER / DEVELOPER / APPLICANT:  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

- LEGEND**
- PROPOSED BUILDING
  - 100 PROPOSED MAJOR CONTOUR
  - 99 PROPOSED MINOR CONTOUR
  - PROPOSED 1.5" ASPHALT OVERLAY
  - PROPOSED CURB
  - PROPOSED CONCRETE WALK
  - PROPOSED FENCELINE
  - LOD LIMIT OF DISTURBANCE
  - PROPOSED UNDERGROUND ELECTRIC
  - PROPOSED SANITARY LINE
  - PROPOSED SANITARY CLEANOUT
  - PROPOSED STORM DRAIN LINE
  - PROPOSED STORM DRAIN MANHOLE
  - PROPOSED WATER LINE
  - PROPOSED SMALL SECTIONAL VAULT
  - PROPOSED WATER VALVE
  - PROPOSED DRAINAGE AREA

**PROPOSED NOTES:**

1. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
2. CONTRACTOR SHALL MAINTAIN PEDESTRIAN & VEHICULAR ACCESS TO AND AROUND OVERALL SITE DURING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION AND THE CITY OF BALTIMORE REQUIREMENTS.
3. CONTRACTOR SHALL CONTACT THE OWNER AND DEVELOPER 72 HOURS PRIOR TO COMMENCING ANY WORK.
4. ALL UTILITY FRAMES AND COVERS TO REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET NEW PAVEMENT OR GROUND ELEVATION. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF AND THE PREVENTION OF MISFITTINGS IN THE WORK. VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES BEFORE STARTING CONSTRUCTION IN EACH AREA.
5. CONTRACTOR TO COORDINATE WITH MISS UTILITY, THE CITY OF BALTIMORE, AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
6. LIVE UNDERGROUND UTILITIES EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
7. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
8. CONTRACTOR SHALL PROTECT ALL FACILITIES AND UTILITIES TO REMAIN FROM DAMAGE WHETHER SHOWN HEREON OR NOT.
9. ALL EXISTING PAINT MARKINGS ADJACENT TO THE PROJECT AREA WHICH BECOME FADED OR OBSCURED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED OR RESTORED AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF UTILITY OUTAGES.
11. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND PLACEMENT OF ALL UTILITY CONDUITS AND ENCASUREMENT. CONTRACTOR SHALL PROVIDE CONDUITS AND PULL STRINGS IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS FOR THEIR RESPECTIVE CONDUITS.
12. USE EXTREME CAUTION WHEN WORKING AROUND EXISTING TREES TO REMAIN SO AS NOT TO DAMAGE THE TREES OR ROOT SYSTEMS.
13. CONTRACTOR SHALL PROTECT ALL AREAS BEYOND THE LIMITS OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
14. INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.
15. CONTRACTOR SHALL FURNISH SHORING, SHEATHING, OR OTHERWISE SUPPORT EXCAVATIONS TO PROTECT EXCAVATIONS FROM CAVE-INS UNTIL BACKFILL PLACEMENT IS COMPLETE PER SPECIFICATIONS.
16. SEE EXISTING CONDITIONS PLAN FOR SITE BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS THROUGHOUT THE DURATION OF THE PROJECT FOR CONSTRUCTION LAYOUT PURPOSES.
17. REFER TO THE SITE LANDSCAPING PLANS FOR SITE FURNISHING AND PLANTING INFORMATION.
18. SEE LANDSCAPE PLANS FOR PROPOSED SCORING AND PAVER PATTERNS.
19. REFER TO THE ELECTRICAL PLANS FOR ADDITIONAL ELECTRICAL UTILITY INFORMATION.

ALL WORK SHALL CONFORM TO CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS SPECIFICATIONS FOR MATERIALS, HIGHWAYS, BRIDGES, UTILITIES, AND INCIDENTAL STRUCTURES 2006, AND SUPPLEMENTARY SPECIFICATIONS IN THE CONTRACT DOCUMENTS.



**STORM DRAIN KEY PLAN**

SCALE: 1" = 20'

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88



**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
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**LANDSCAPE ARCHITECT:**  
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**STRUCTURAL ENGINEER:**  
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 T: 801.274.3950  
**MEP ENGINEER:**  
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 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

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**SEAL:**

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14446, EXPIRES DATE 9/25/25.

DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN  
 KEY PLAN

**DRAWING NO:**  
**C500**

STORM DRAIN SCHEDULE				
STRUCTURE	RIM	INVERT IN	INVERT OUT	STRUCTURE/GRATE TYPE
I-2	314.00	-----	311.00 (6")	2808AG/0899CGD
HB-3	-----	303.00 (6")	303.00 (6")	6" PVC 45° BEND
I-4	302.50	300.00 (6")	295.35 (6")	2808AG/0899CGD
MH-5	293.19	288.55 (12")	288.45 (12")	1599CGC
I-6	292.75	290.05 (6")	289.55 (12")	1599CGD
I-7	292.25	289.39 (12"); 289.39 (12")	289.29 (12")	3099CGD
EX-8	292.26	291.10 (EX. 6")	289.61 (8")	EXIST. MH.
I-9	302.00	-----	299.00 (8")	1299CGS
TD-10	296.00-296.00	295.00 (UPSTREAM END)	294.80 (DOWNSTREAM END) (4")	8'-8" LONG X 8" WIDE w/ LOCKING GRATE
MH-11	295.80	293.41 (4"); 293.08 (8"); 293.08 (8")	292.98 (12")	1899CGC
I-12	296.00	-----	294.00 (8")	SEE LS PLAN
MH-13	295.85	293.78 (8")	293.68 (8")	1099CGC
MH-14	295.80	292.58 (12"); 292.58 (8")	292.48 (12")	1899CGC
I-15	294.11	292.78 (8")	-----	1299CGD
I-16	293.10	-----	290.60 (6")	0899CGP
I-17	293.10	290.34 (6")	290.24 (6")	0899CGP
I-18	293.10	289.98 (6")	289.88 (8")	1099CGP
I-19	300.10	294.90 (12")	294.80 (12")	1599CGS
MH-20	300.80	295.20 (6"); 296.63 (12")	295.10 (12")	1599CGC
I-21	300.75	-----	297.00 (12")	1299CGS
MH-22	301.25	295.70 (12")	295.60 (12")	1299CGS
MH-23	300.75	296.60 (8"); 296.60 (8")	296.27 (12")	1299CGC
I-24	300.75	-----	297.37 (8")	SEE LS PLAN
I-25	299.25	-----	297.00 (8")	1299CGP
I-26	301.50	-----	295.75 (8")	1299CGD
MH-27	294.50	289.65 (12"); 289.80 (8")	289.55 (12")	1599CGC
TEE-28	-----	289.20 (12"); 289.36 (8")	289.20 (12")	12"x8" TEE
TEE-29	-----	284.28 (12")	284.28 (12")	12" HDPE TEE
EX-30	293.20 (EX)	288.24 (12")	-----	EXIST. MH.
DP-1	300.10	295.25 (6")	-----	STORMBRIX STORAGE CHAMBERS

- NOTES:
- FIELD VERIFY SIZE, DEPTH, AND MATERIAL OF ALL EXISTING PIPE CONNECTIONS PRIOR TO SUBMISSION OF STRUCTURE SHOP DRAWINGS.
  - SHOP DRAWINGS FOR STRUCTURES SHALL BE SUBMITTED PRIOR TO INSTALLATION. EQUIVELANT STRUCTURES MAY BE SUBSTITUTED.

PIPE SCHEDULE				
FROM	TO	LENGTH (FEET)	SIZE (INCHES)	MATERIAL
MH-05	EX-30	26	12	HDPE
TEE-29	MH-05	54	12	HDPE
TEE-28	TEE-29	11	12	HDPE
I-07	TEE-28	9	12	HDPE
MH-27	I-07	38	12	HDPE
MH-14	MH-27	36	12	HDPE
I-19	MH-14	52	12	HDPE
MH-20	I-19	21	12	HDPE
I-21	MH-20	28	12	HDPE
I-06	TEE-29	8	12	HDPE
ExMH-08	TEE-28	27	8	PVC
MH-11	I-07	44	12	HDPE
I-18	MH-27	9	8	PVC
I-15	MH-14	40	12	HDPE
DP-01	MH-20	4	6	PVC
I-04	I-06	34	4	PVC
TD-10	MH-11	6	4	PVC
I-17	I-18	26	6	PVC
HB-03	I-04	15	6	PVC
I-16	I-17	26	6	PVC
I-02	HB-03	40	6	PVC
I-09	MH-11	53	8	PVC
MH-13	MH-11	17	8	PVC
I-12	MH-13	6	8	PVC
I-26	PreStor	5	8	PVC
MH-22	PreStor	5	12	HDPE
MH-23	MH-22	58	12	HDPE
I-24	MH-23	13	8	PVC
I-25	MH-26	39	8	PVC
MWS	DP-1	1	12	HDPE
PreStor	MWS	2	8	PVC

- NOTES:
- ALL HDPE PIPE SHALL BE N-12 DUAL WALL WITH WATER TIGHT JOINTS.
  - ALL PVC PIPE SHALL BE SCHEDULE 40 WITH SOLVENT WELD JOINTS.

HORIZONTAL DATUM: NAD 83(2011)  
VERTICAL DATUM: NAVD 88

OWNER / DEVELOPER / APPLICANT:  
MARYLAND ZOO IN BALTIMORE  
1876 MANSION HOUSE DRIVE  
BALTIMORE MD 21217  
CONTACT: MR. KARL KRANZ  
PHONE: 443-552-3350



**PROJECT TEAM:**

**ARCHITECT:**  
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1525 LOCUST STREET  
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215 SCHILLING CIRCLE, STE 102  
HUNT VALLEY, MD 21031  
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**LANDSCAPE ARCHITECT:**  
ROBINSON ANDERSON SUMMERS  
28 WEST STATE STREET  
MEDIA, PA 19063  
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2225 EAST MURRAY HOLLADAY RD  
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190 WEST OSTEND ST, STE 300  
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T: 410.244.7191

**CLIENT:**

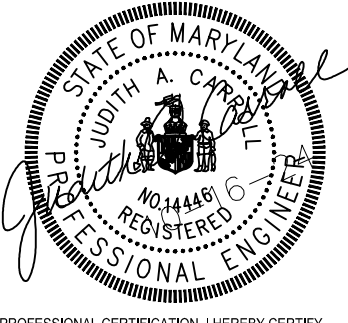
**MARYLAND ZOO**

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BALTIMORE, MD 21217

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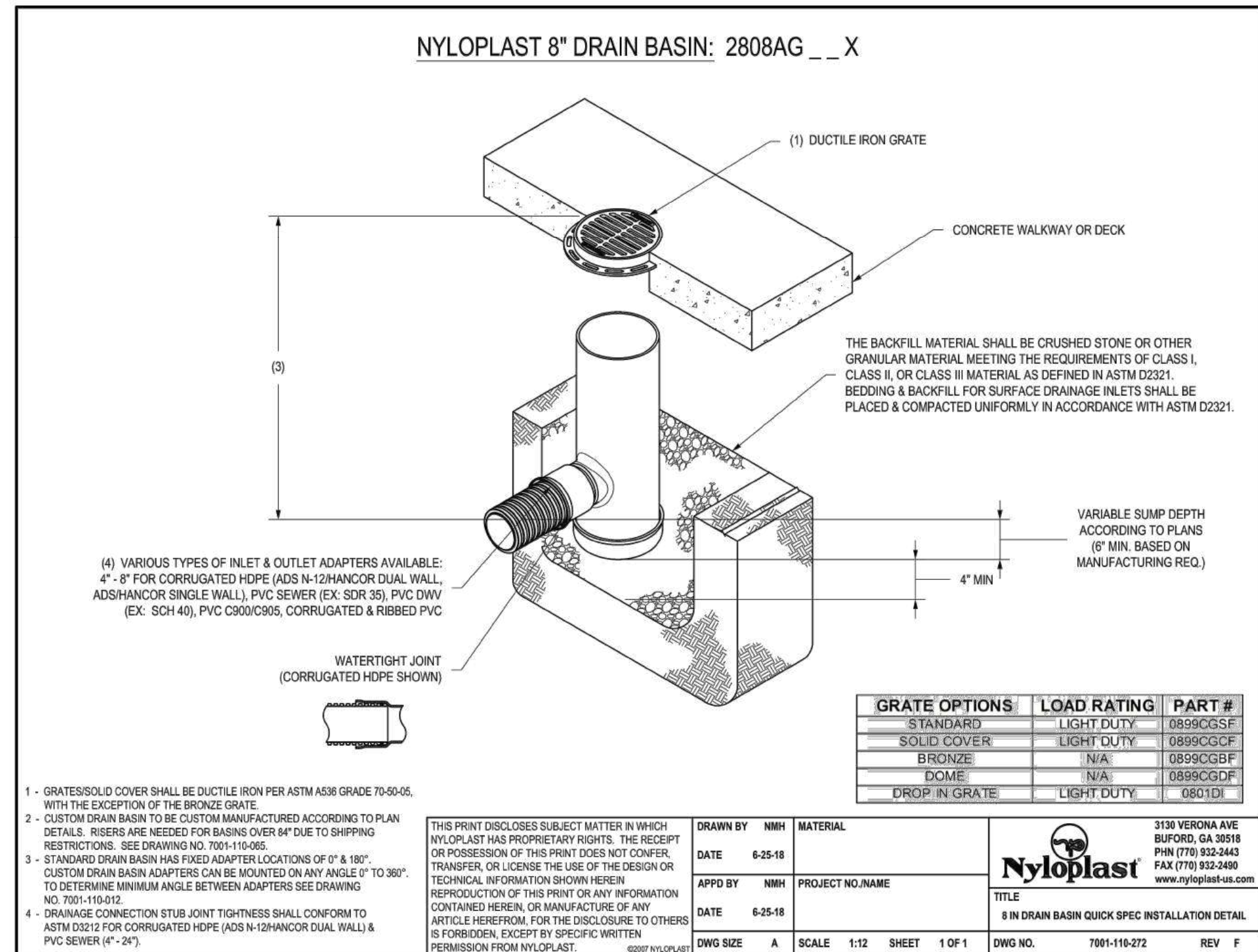
DATE:	PROJECT NO: 2023-10.04
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
STORM DRAIN SCHEDULES

**DRAWING NO:**  
**C510**

BCNR # 11595

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HORIZONTAL DATUM: NAD 83(2011)  
VERTICAL DATUM: NAVD 88

OWNER / DEVELOPER / APPLICANT:  
MARYLAND ZOO IN BALTIMORE  
1876 MANSION HOUSE DRIVE  
BALTIMORE MD 21217  
CONTACT: MR. KARL KRANZ  
PHONE: 443-552-3350

**BKP**

PROJECT TEAM:

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CLIENT:  
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DATE:	PROJECT NO: 2023-10.04
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

DRAWING TITLE:  
STORM DRAIN  
DETAILS

DRAWING NO:  
**C520**

BCNR # 11595



**PROJECT TEAM:**

**ARCHITECT:**  
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**LANDSCAPE ARCHITECT:**  
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**MEP ENGINEER:**  
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 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
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 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
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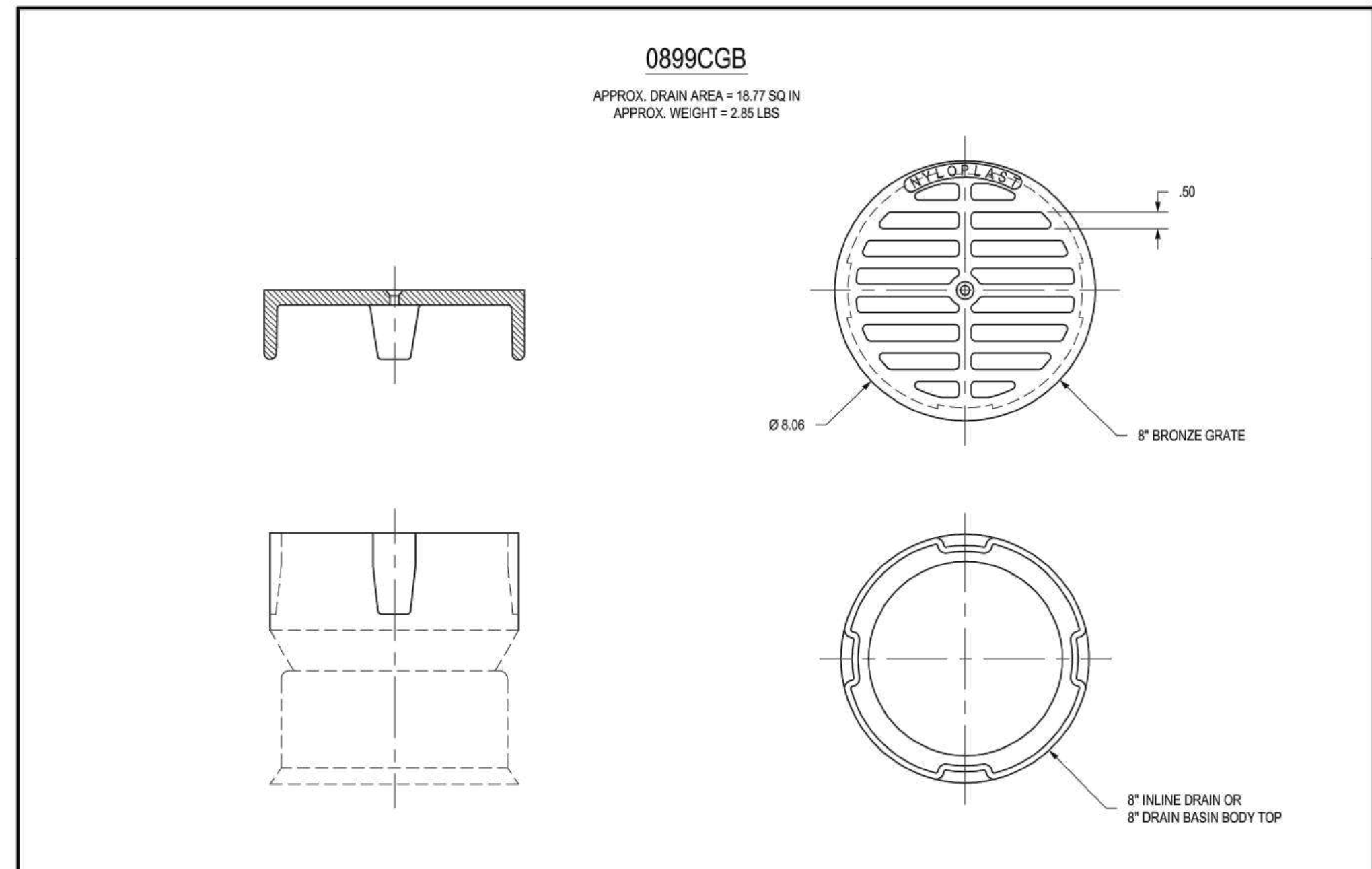
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<b>DATE:</b>	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN  
 DETAILS

**DRAWING NO:**  
**C521**

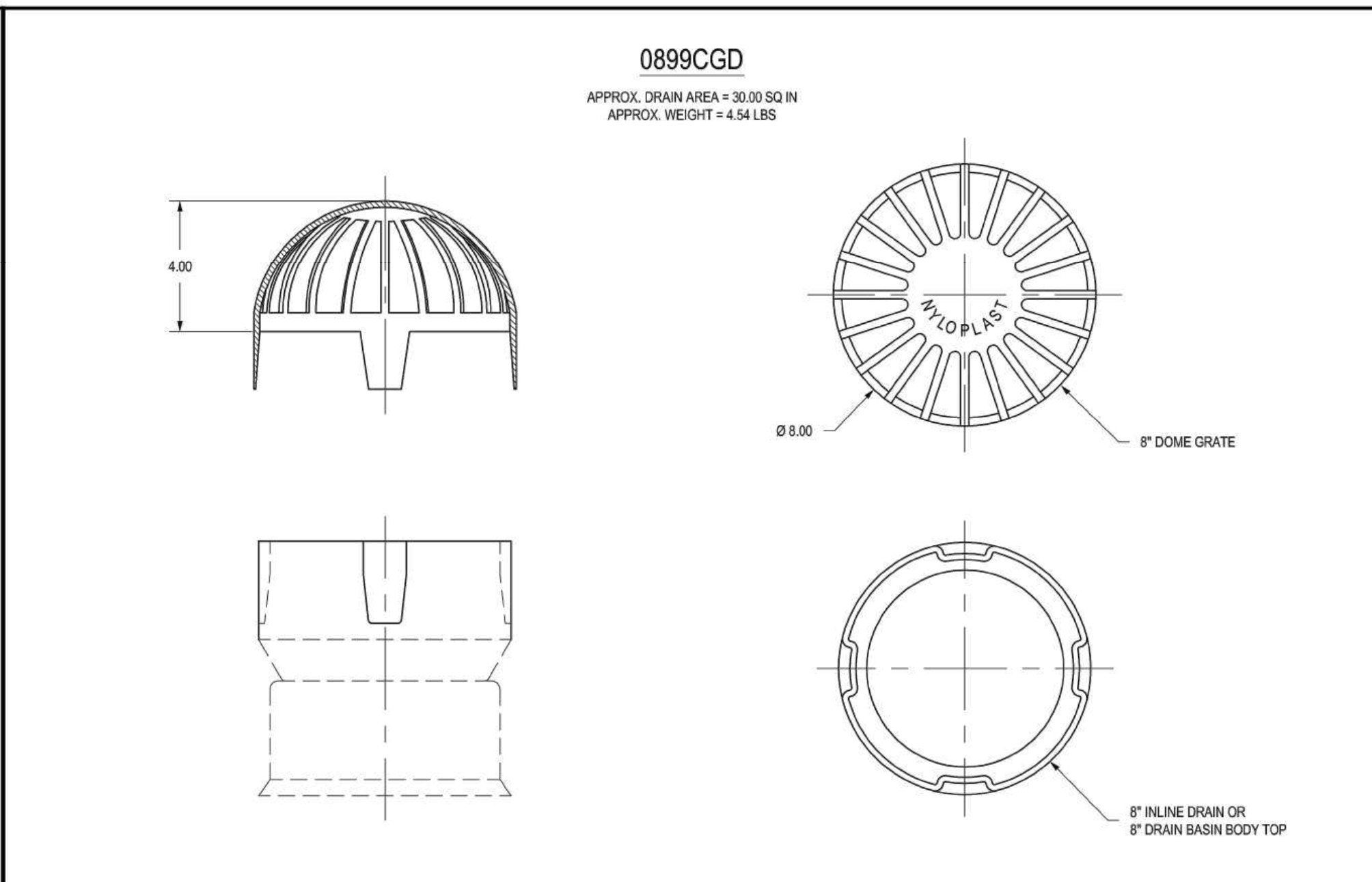


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<b>DRAWN BY</b>	EBG	<b>MATERIAL</b>	BRONZE
<b>DATE</b>	3-3-06	<b>PROJECT NO./NAME</b>	
<b>REVISED BY</b>	EBG	<b>TITLE</b>	8 IN BRONZE GRATE ASSEMBLY
<b>DATE</b>	3-13-10	<b>DWG NO.</b>	7001-110-196
<b>DWG SIZE</b>	A	<b>SCALE</b>	1:4 SHEET 1 OF 1

3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 932-2443  
 FAX (770) 932-2480  
 www.nyloplast-us.com

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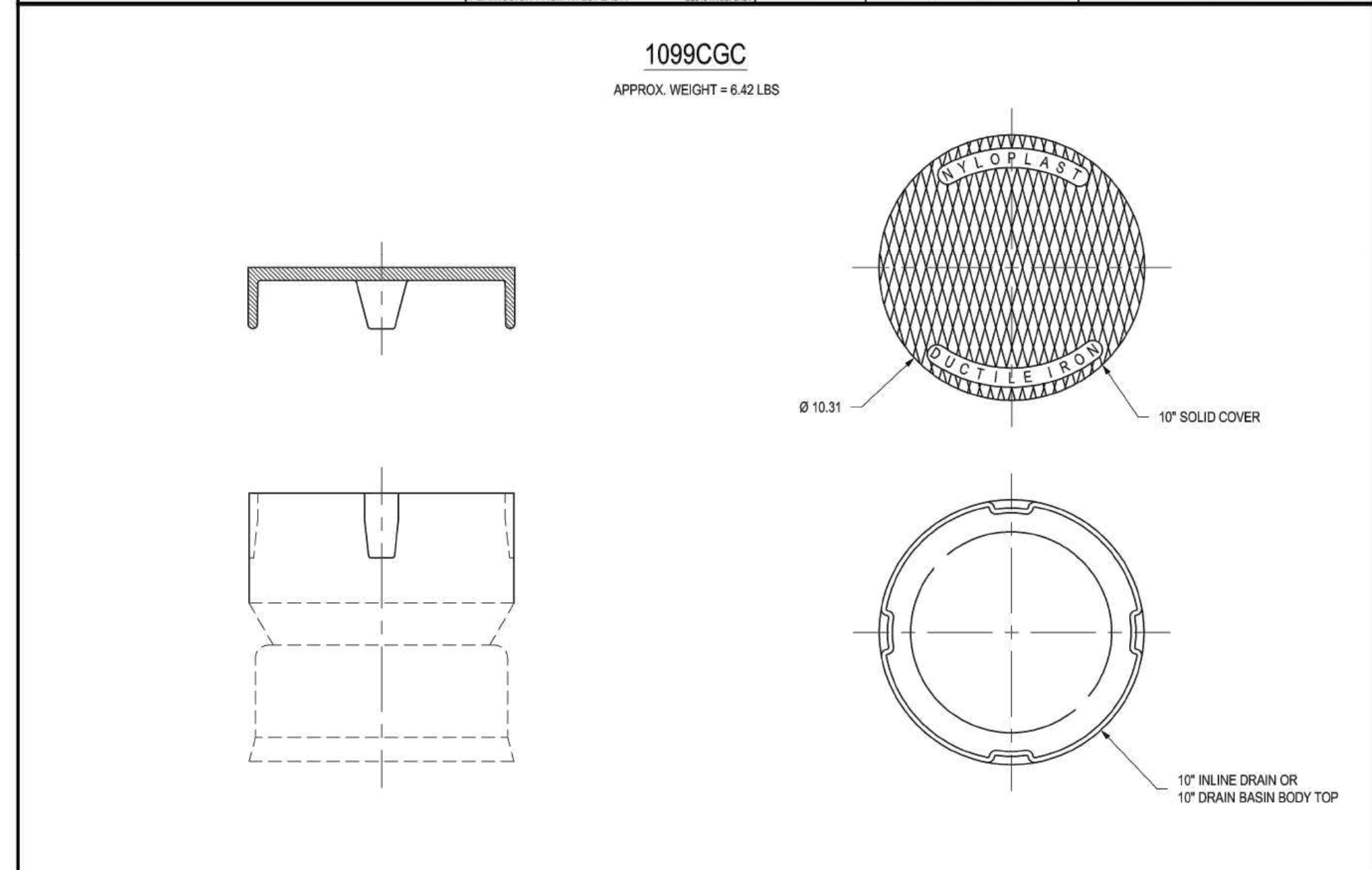


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<b>DRAWN BY</b>	EBG	<b>MATERIAL</b>	DUCTILE IRON
<b>DATE</b>	3-3-06	<b>PROJECT NO./NAME</b>	
<b>REVISED BY</b>	EBG	<b>TITLE</b>	8 IN DOME GRATE ASSEMBLY
<b>DATE</b>	3-13-10	<b>DWG NO.</b>	7001-110-197
<b>DWG SIZE</b>	A	<b>SCALE</b>	1:4 SHEET 1 OF 1

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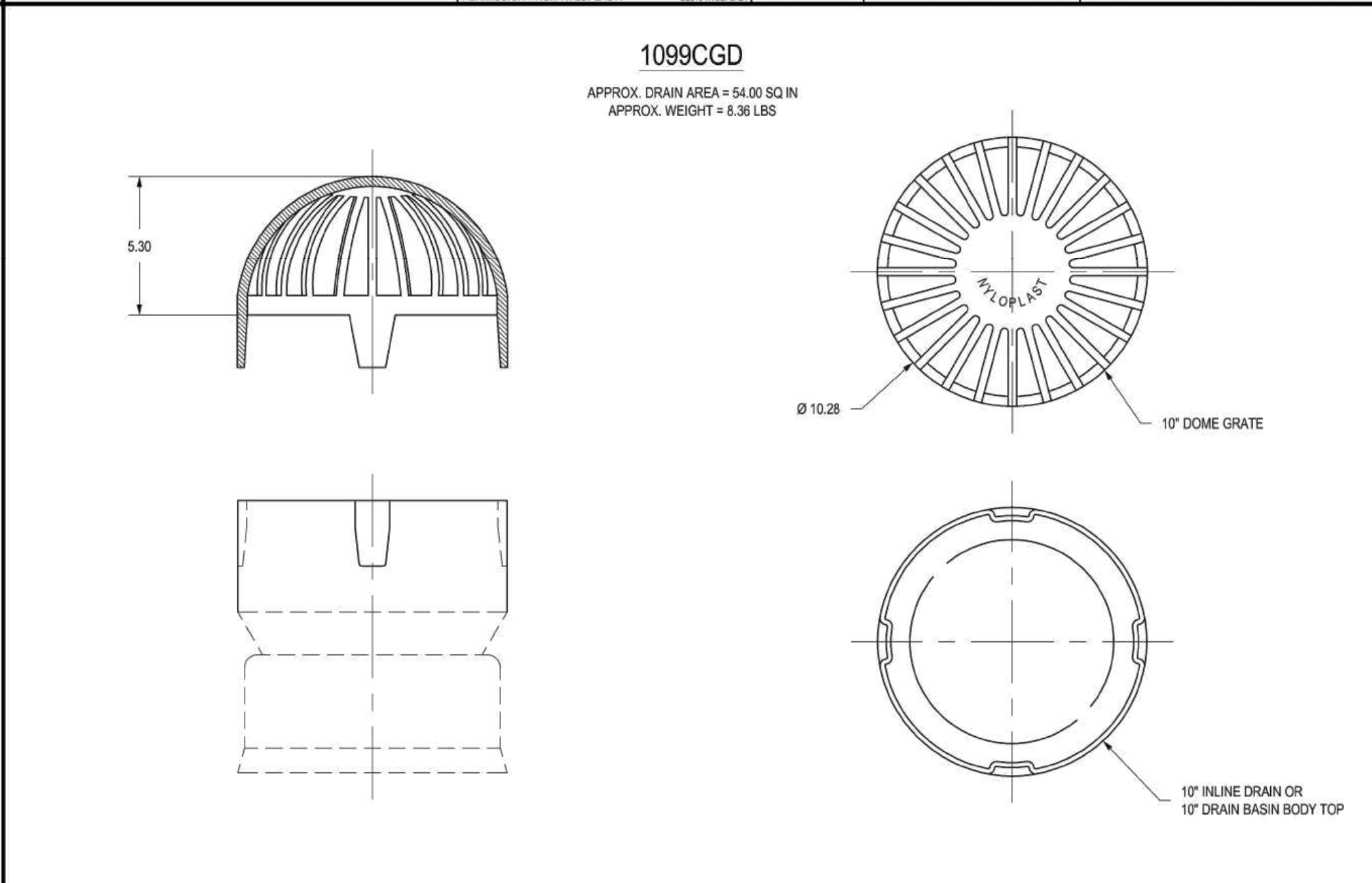


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<b>DRAWN BY</b>	EBG	<b>MATERIAL</b>	DUCTILE IRON
<b>DATE</b>	3-3-06	<b>PROJECT NO./NAME</b>	
<b>REVISED BY</b>	EBG	<b>TITLE</b>	10 IN SOLID COVER ASSEMBLY
<b>DATE</b>	3-13-10	<b>DWG NO.</b>	7001-110-199
<b>DWG SIZE</b>	A	<b>SCALE</b>	1:5 SHEET 1 OF 1

3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 932-2443  
 FAX (770) 932-2480  
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<b>DRAWN BY</b>	EBG	<b>MATERIAL</b>	DUCTILE IRON
<b>DATE</b>	3-3-06	<b>PROJECT NO./NAME</b>	
<b>REVISED BY</b>	EBG	<b>TITLE</b>	10 IN DOME GRATE ASSEMBLY
<b>DATE</b>	3-13-10	<b>DWG NO.</b>	7001-110-201
<b>DWG SIZE</b>	A	<b>SCALE</b>	1:5 SHEET 1 OF 1

3130 VERONA AVE  
 BUFORD, GA 30518  
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HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595



**PROJECT TEAM:**

**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509

**CIVIL ENGINEER:**  
 CARROLL ENGINEERING, INC  
 215 SCHILLING CIRCLE, STE 102  
 HUNT VALLEY, MD 21031  
 T: 410.785.7423

**LANDSCAPE ARCHITECT:**  
 ROBINSON ANDERSON SUMMERS  
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 T: 302.888.1544

**STRUCTURAL ENGINEER:**  
 STRUCTURAL DESIGN STUDIO, INC  
 2225 EAST MURRAY HOLLADAY RD  
 SALT LAKE CITY, UT 84117  
 T: 801.274.3950

**MEP ENGINEER:**  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

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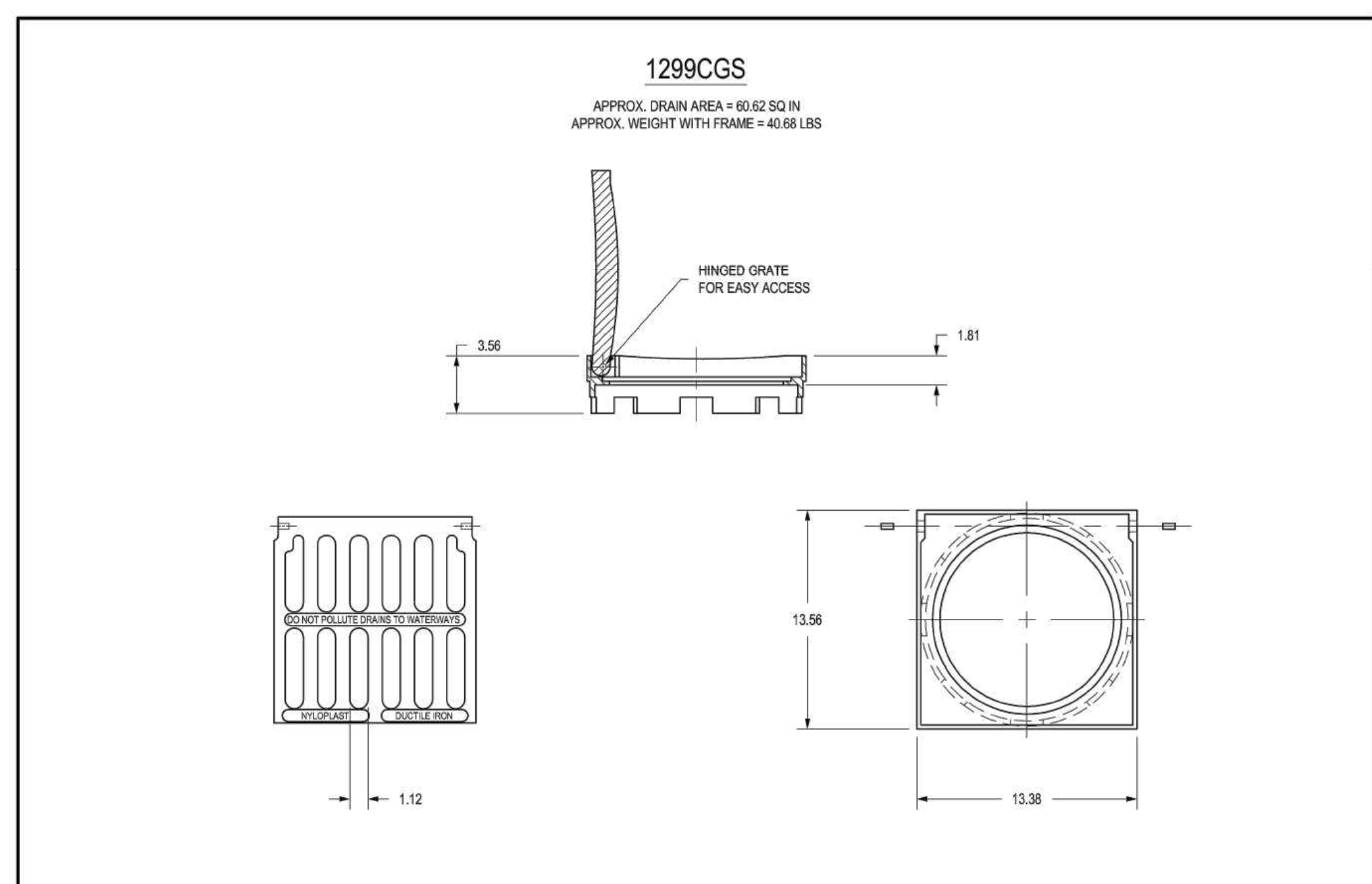
**SEAL:**

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 1444, EXPIRATION DATE 9/25/23.

DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN  
 DETAILS

**DRAWING NO:**  
**C522**



1299CGS  
 APPROX. DRAIN AREA = 60.82 SQ IN  
 APPROX. WEIGHT WITH FRAME = 40.68 LBS

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DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-3-06		
REVISED BY	EBC	PROJECT NO./NAME	
DATE	3-13-10		
DWG SIZE	A	SCALE	1:8 SHEET 1 OF 1
DWG NO.	7001-110-203	REV	C

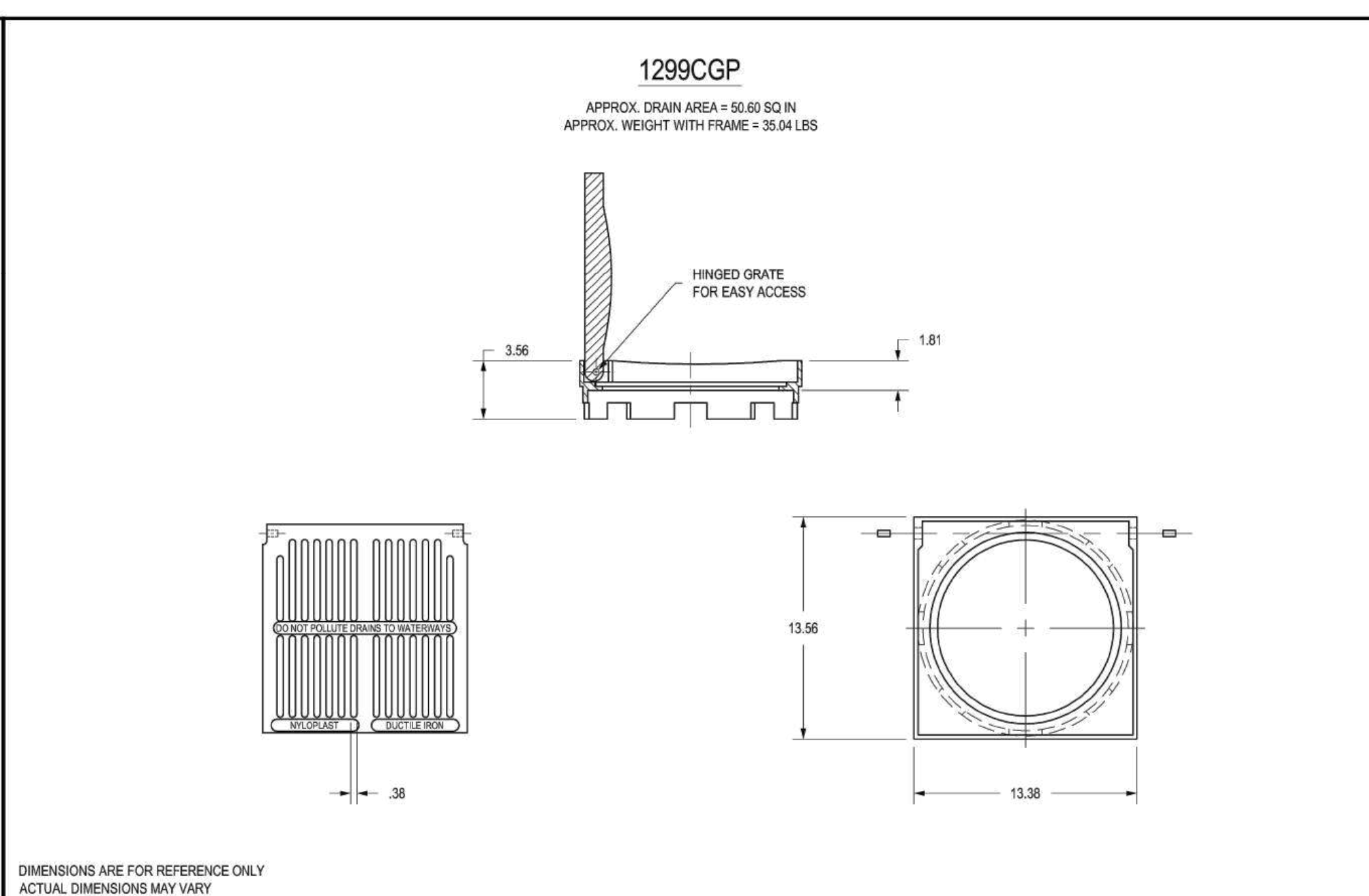
3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 832-2443  
 FAX (770) 832-2490  
 www.nyloplast-us.com

**Nyloplast**

TITLE: 12 IN STANDARD GRATE ASSEMBLY

DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

GRATE MEETS H-10 LOAD RATING. QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05. PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-025.



1299CGP  
 APPROX. DRAIN AREA = 50.60 SQ IN  
 APPROX. WEIGHT WITH FRAME = 35.04 LBS

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DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-3-06		
REVISED BY	EBC	PROJECT NO./NAME	
DATE	3-13-10		
DWG SIZE	A	SCALE	1:8 SHEET 1 OF 1
DWG NO.	7001-110-202	REV	C

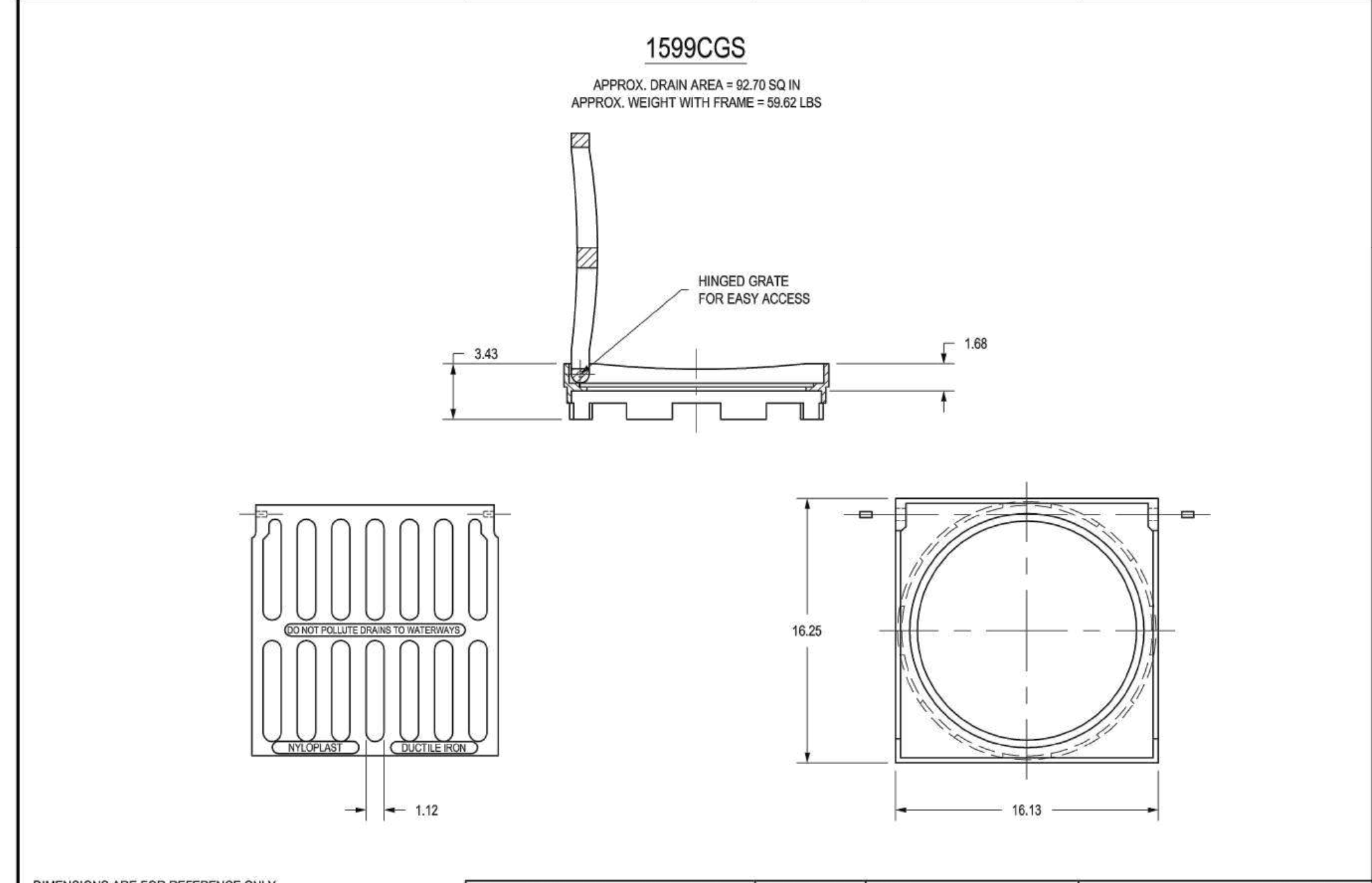
3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 832-2443  
 FAX (770) 832-2490  
 www.nyloplast-us.com

**Nyloplast**

TITLE: 12 IN PEDESTRIAN GRATE ASSEMBLY

DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

GRATE MEETS H-10 LOAD RATING. QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05. PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-024.



1599CGS  
 APPROX. DRAIN AREA = 92.70 SQ IN  
 APPROX. WEIGHT WITH FRAME = 99.62 LBS

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DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-7-06		
REVISED BY	EBC	PROJECT NO./NAME	
DATE	3-7-06		
DWG SIZE	A	SCALE	1:8 SHEET 1 OF 1
DWG NO.	7001-110-208	REV	C

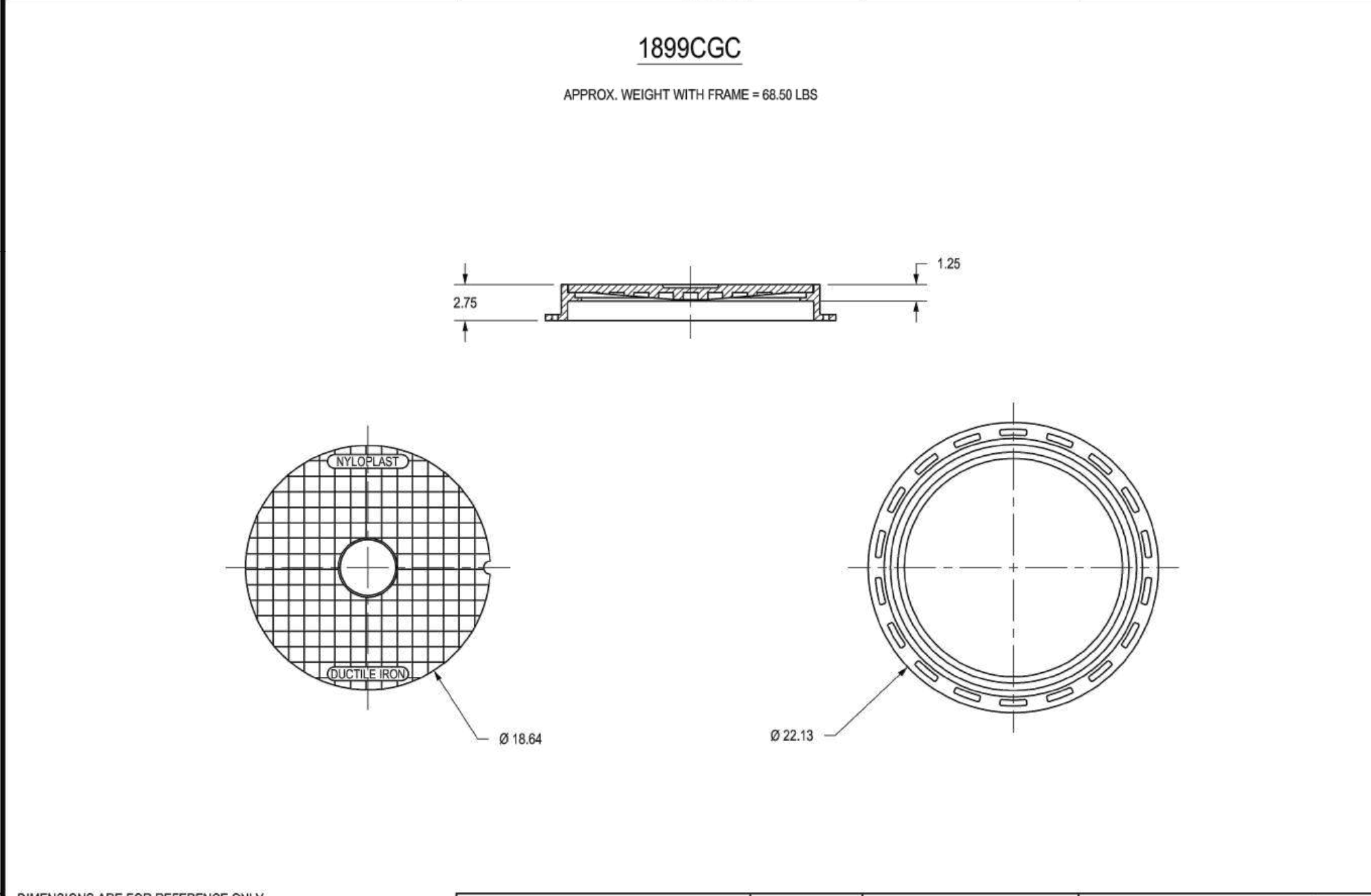
3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 832-2443  
 FAX (770) 832-2490  
 www.nyloplast-us.com

**Nyloplast**

TITLE: 15 IN STANDARD GRATE ASSEMBLY

DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

GRATE MEETS H-20 LOAD RATING. QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05. PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-027.



1899CGC  
 APPROX. WEIGHT WITH FRAME = 66.50 LBS

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DRAWN BY	EBC	MATERIAL	DUCTILE IRON
DATE	3-9-06		
REVISED BY	EBC	PROJECT NO./NAME	
DATE	3-13-10		
DWG SIZE	A	SCALE	1:10 SHEET 1 OF 1
DWG NO.	7001-110-214	REV	C

3130 VERONA AVE  
 BUFORD, GA 30518  
 PHN (770) 832-2443  
 FAX (770) 832-2490  
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**Nyloplast**

TITLE: 18 IN SOLID COVER ASSEMBLY - TYPE C

DIMENSIONS ARE FOR REFERENCE ONLY. ACTUAL DIMENSIONS MAY VARY.

GRATE MEETS H-20 LOAD RATING. QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05. PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT. LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-027.

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595



**PROJECT TEAM:**

**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
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 HUNT VALLEY, MD 21031  
 T: 410.785.7423

**LANDSCAPE ARCHITECT:**  
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 T: 302.888.1544

**STRUCTURAL ENGINEER:**  
 STRUCTURAL DESIGN STUDIO, INC  
 2225 EAST MURRAY HOLLADAY RD  
 SALT LAKE CITY, UT 84117  
 T: 801.274.3950

**MEP ENGINEER:**  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

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**SEAL:**

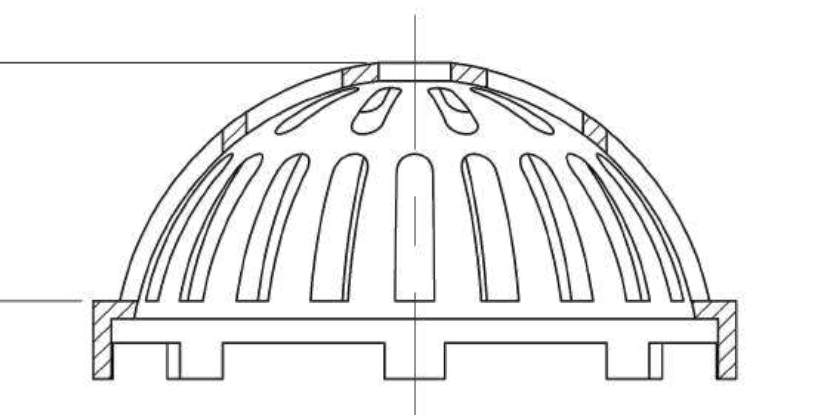
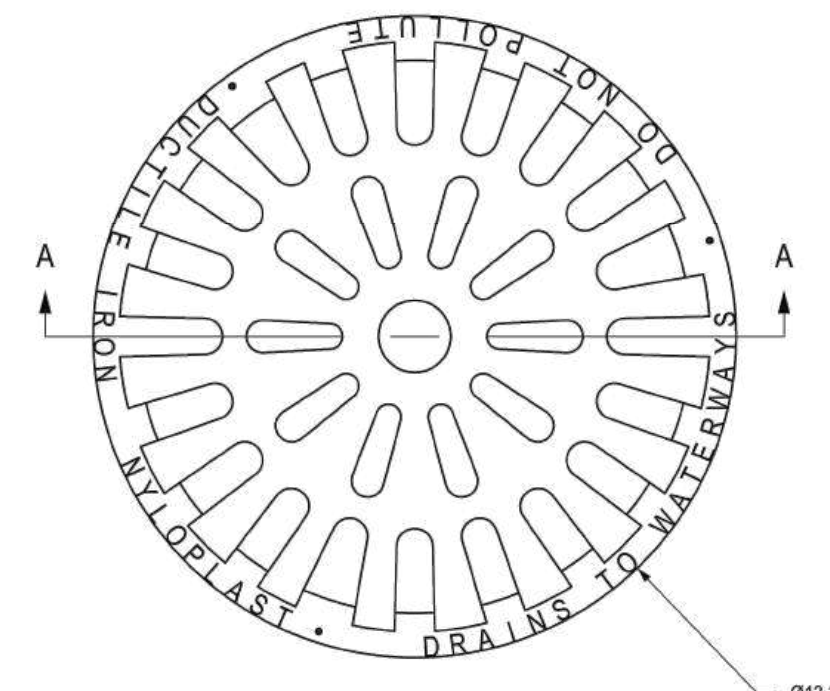
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14446, EXPIRATION DATE 9/25/25.

<b>DATE:</b>	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN  
 DETAILS

**DRAWING NO:**  
**C523**

**1299CGD**  
 APPROX. DRAIN AREA = 82.87 SQ IN  
 APPROX. WEIGHT = 18.50 LBS

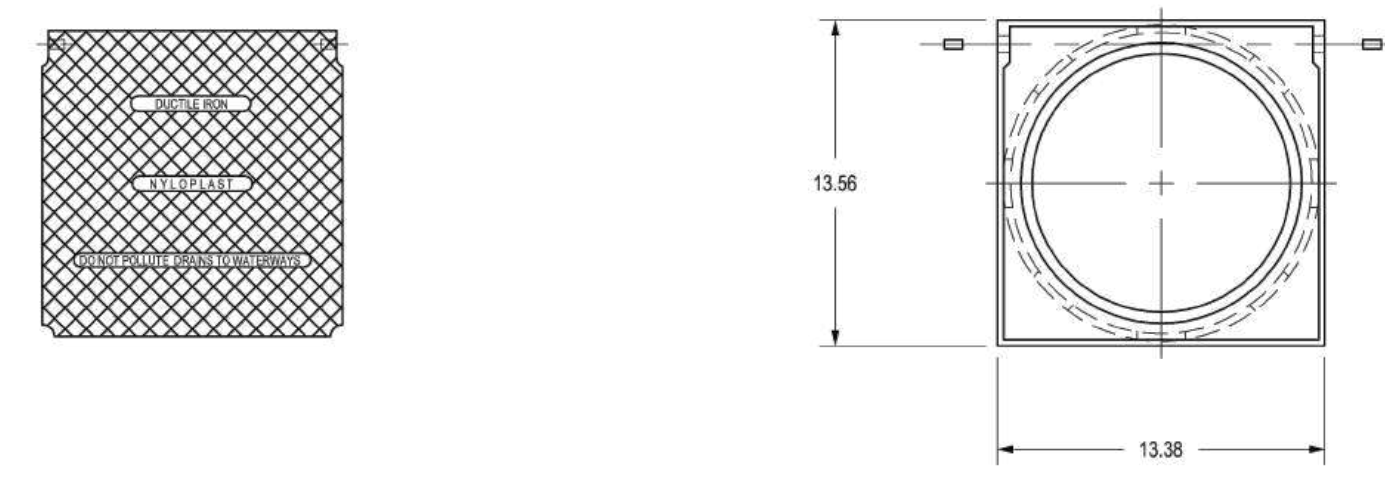
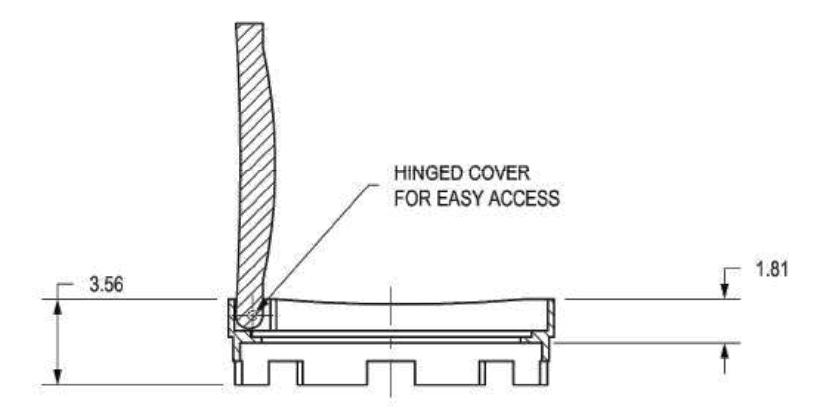


**SECTION A-A**

DIMENSIONS ARE FOR REFERENCE ONLY  
 ACTUAL DIMENSIONS MAY VARY  
 DIMENSIONS ARE IN INCHES  
 QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05  
 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST

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	<b>DATE</b>	3-6-06	<b>PROJECT NO. NAME</b>					
	<b>REVISED BY</b>	<b>EGC</b>	<b>TITLE</b>	12 IN SOLID COVER ASSEMBLY				
	<b>DATE</b>	3-16-19	<b>DWG NO.</b>	7001-110-204				
	<b>DWG SIZE</b>	A	<b>SCALE</b>	1:8	<b>SHEET</b>	1 OF 1	<b>REV</b>	C

**1299CGC**  
 APPROX. WEIGHT WITH FRAME = 39.90 LBS

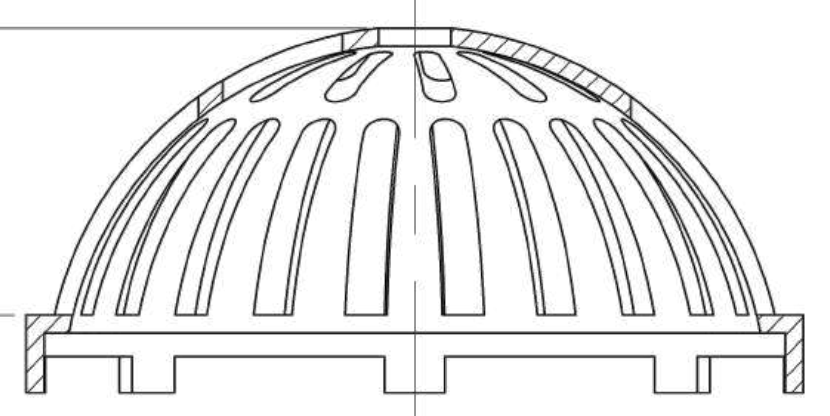
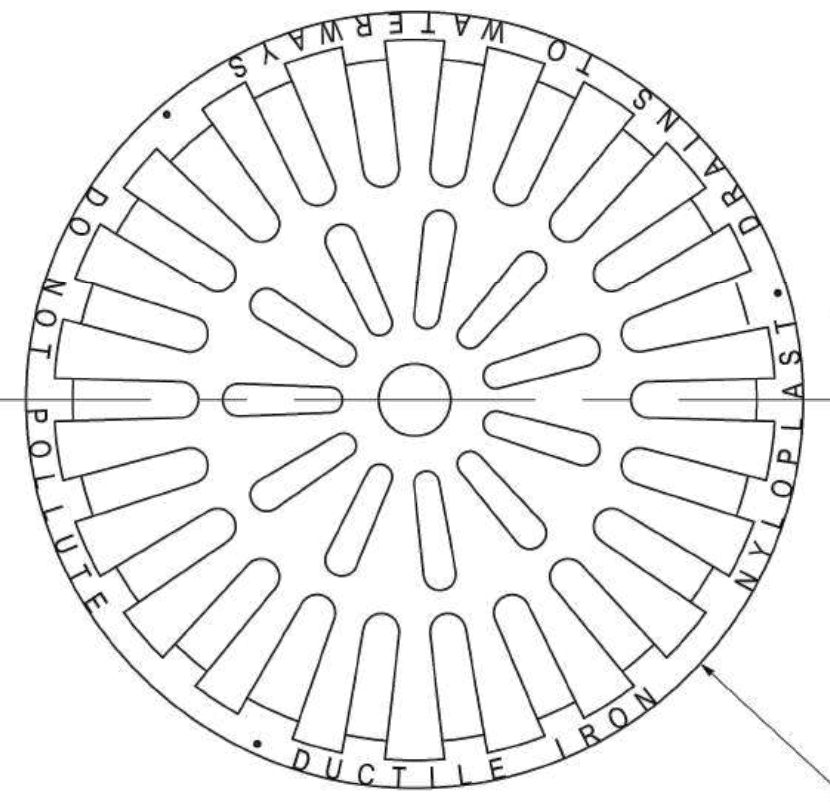


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 ACTUAL DIMENSIONS MAY VARY  
 DIMENSIONS ARE IN INCHES  
 QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05  
 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-203

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<b>DATE</b>	3-6-06	<b>PROJECT NO. NAME</b>						
<b>REVISED BY</b>	<b>EGC</b>	<b>TITLE</b>	12 IN SOLID COVER ASSEMBLY					
<b>DATE</b>	3-16-19	<b>DWG NO.</b>	7001-110-204					
	<b>DWG SIZE</b>	A	<b>SCALE</b>	1:8	<b>SHEET</b>	1 OF 1	<b>REV</b>	C

**1599CGD**  
 APPROX. DRAIN AREA = 122.07 SQ IN  
 APPROX. WEIGHT = 26.50 LBS

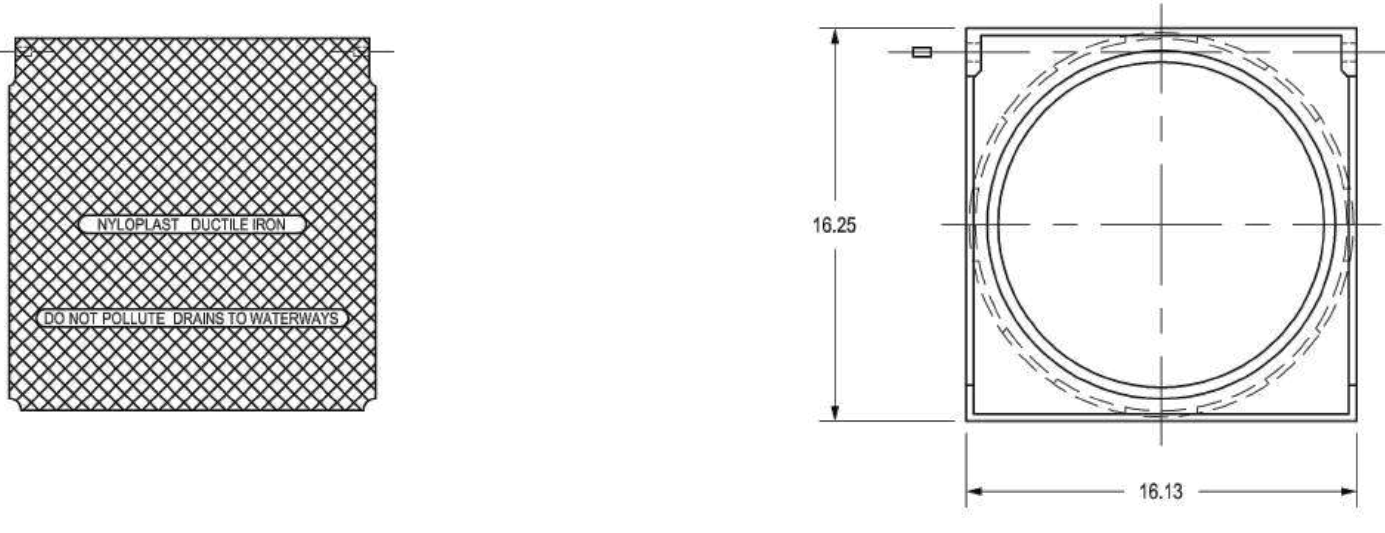
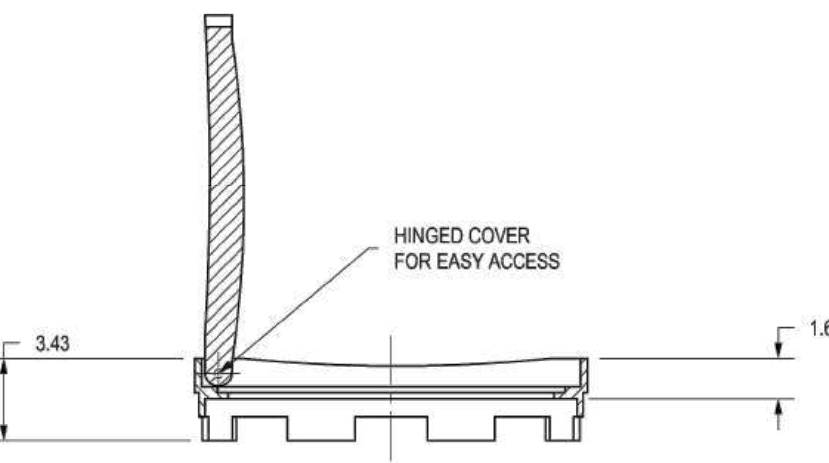


**SECTION A-A**

DIMENSIONS ARE FOR REFERENCE ONLY  
 ACTUAL DIMENSIONS MAY VARY  
 DIMENSIONS ARE IN INCHES  
 QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05  
 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST

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	<b>DATE</b>	3-7-06	<b>PROJECT NO. NAME</b>					
	<b>REVISED BY</b>	<b>EGC</b>	<b>TITLE</b>	15 IN SOLID COVER ASSEMBLY				
	<b>DATE</b>	3-23-11	<b>DWG NO.</b>	7001-110-211				
	<b>DWG SIZE</b>	A	<b>SCALE</b>	1:4	<b>SHEET</b>	1 OF 1	<b>REV</b>	D

**1599CGC**  
 APPROX. WEIGHT WITH FRAME = 58.00 LBS



DIMENSIONS ARE FOR REFERENCE ONLY  
 ACTUAL DIMENSIONS MAY VARY  
 DIMENSIONS ARE IN INCHES  
 QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05  
 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-203

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<b>DATE</b>	3-7-06	<b>PROJECT NO. NAME</b>						
<b>REVISED BY</b>	<b>EGC</b>	<b>TITLE</b>	15 IN SOLID COVER ASSEMBLY					
<b>DATE</b>	3-16-19	<b>DWG NO.</b>	7001-110-209					
	<b>DWG SIZE</b>	A	<b>SCALE</b>	1:8	<b>SHEET</b>	1 OF 1	<b>REV</b>	C

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595



PROJECT TEAM:

ARCHITECT:  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509

CIVIL ENGINEER:  
 CARROLL ENGINEERING, INC  
 215 SCHILLING CIRCLE, STE 102  
 HUNT VALLEY, MD 21031  
 T: 410.785.7423

LANDSCAPE ARCHITECT:  
 ROBINSON ANDERSON SUMMERS  
 28 WEST STATE STREET  
 MEDIA, PA 19063  
 T: 302.888.1544

STRUCTURAL ENGINEER:  
 STRUCTURAL DESIGN STUDIO, INC  
 2225 EAST MURRAY HOLLADAY RD  
 SALT LAKE CITY, UT 84117  
 T: 801.274.3950

MEP ENGINEER:  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

OWNER / DEVELOPER / APPLICANT:  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

CLIENT:  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
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SEAL:

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14446, EXPIRATION DATE 9/25/25.

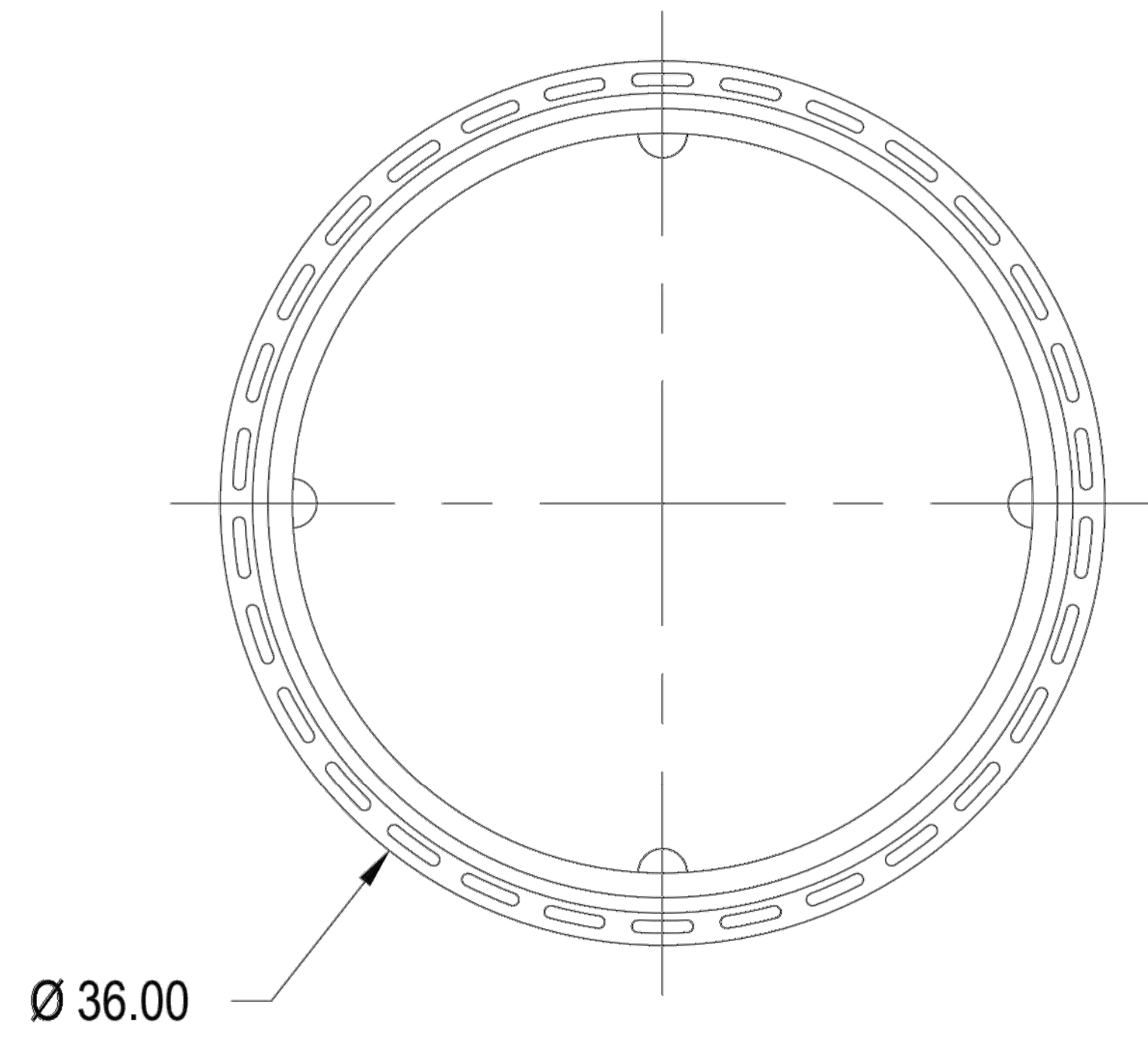
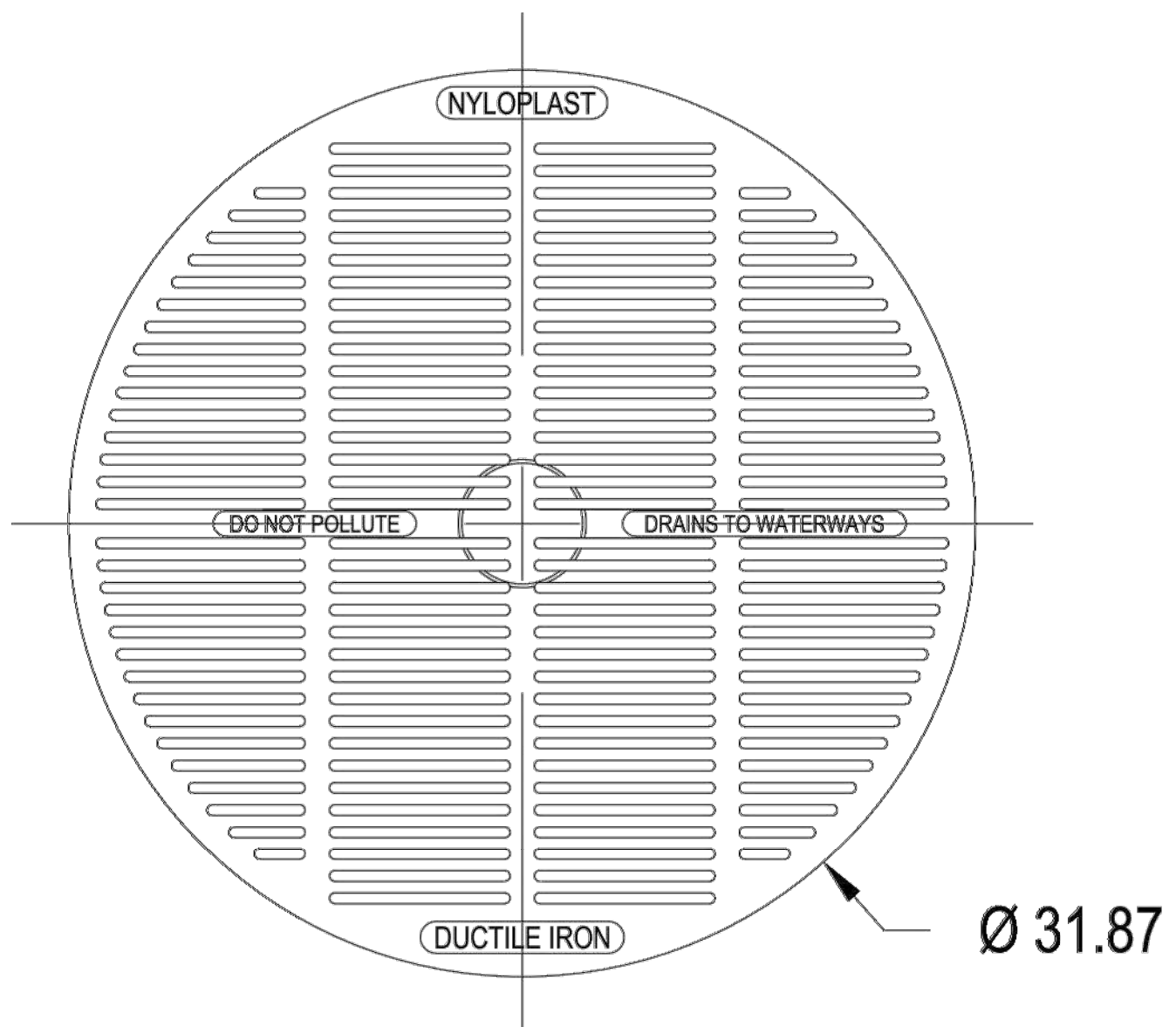
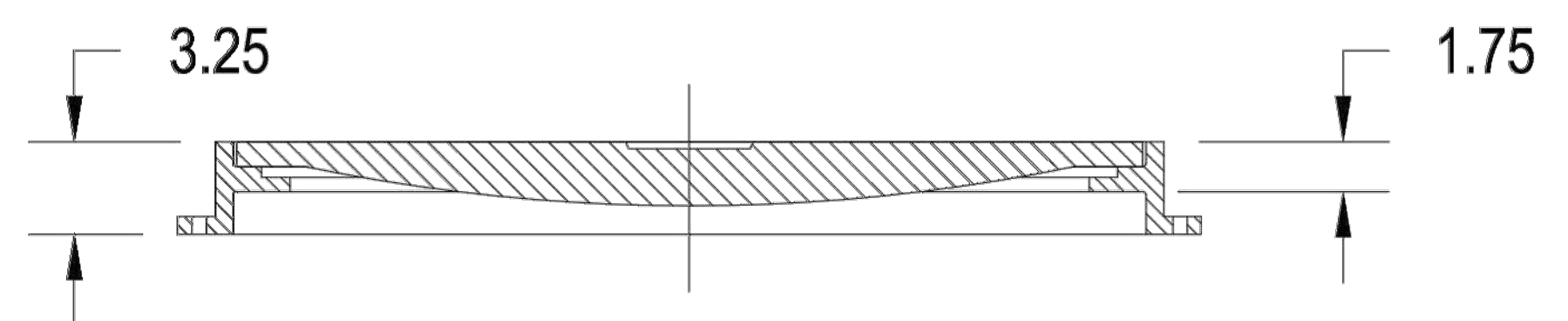
DATE:	
PROJECT NO:	2023-10.04
DRAWN BY:	
CHECKED BY:	
SUBMISSION:	DATE
REVISION:	DATE

DRAWING TITLE:  
**STORM DRAIN DETAILS**

DRAWING NO:  
**C524**

**3099CGP**

APPROX. DRAIN AREA = 277.95 SQ IN  
 APPROX. WEIGHT WITH FRAME = 223.50 LBS



DIMENSIONS ARE FOR REFERENCE ONLY  
 ACTUAL DIMENSIONS MAY VARY  
 DIMENSIONS ARE IN INCHES  
 GRATE MEETS H-20 LOAD RATING  
 QUALITY: MATERIALS SHALL CONFORM TO ASTM A536 GRADE 70-50-05  
 PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT  
 SIZE OF OPENING MEETS REQUIREMENTS OF AMERICAN DISABILITY ACT AS STATED IN FEDERAL REGISTER PART III, DEPARTMENT OF JUSTICE, 28 CFR PART 36.  
 LOCKING DEVICE AVAILABLE UPON REQUEST SEE DRAWING NO. 7001-110-232

ADVANCED DRAINAGE SYSTEMS, INC. ("ADS") HAS PREPARED THIS DETAIL BASED ON INFORMATION PROVIDED TO ADS. THIS DRAWING IS INTENDED TO DEPICT THE COMPONENTS AS REQUESTED. ADS HAS NOT PERFORMED ANY ENGINEERING OR DESIGN SERVICES FOR THIS PROJECT, NOR HAS ADS INDEPENDENTLY VERIFIED THE INFORMATION SUPPLIED. THE INSTALLATION DETAILS PROVIDED HEREIN ARE GENERAL RECOMMENDATIONS AND ARE NOT SPECIFIC FOR THIS PROJECT. THE DESIGN ENGINEER SHALL REVIEW THESE DETAILS PRIOR TO CONSTRUCTION. IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ENSURE THE DETAILS PROVIDED HEREIN MEETS OR EXCEEDS THE APPLICABLE NATIONAL, STATE, OR LOCAL REQUIREMENTS AND TO ENSURE THAT THE DETAILS PROVIDED HEREIN ARE ACCEPTABLE FOR THIS PROJECT.

STANDARD DETAIL  
 NYLOPLAST 30 IN PEDESTRIAN  
 GRATE ASSEMBLY

DRAWING NUMBER 7001-110-220



4640 TRUEMAN BLVD  
 HILLIARD, OH 43026

DRAWN BY:	NMH
DATE:	02/06/23
CHK'D BY:	
SCALE:	NTS
SHEET:	1 OF 1



**PROJECT TEAM:**

**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509

**CIVIL ENGINEER:**  
 CARROLL ENGINEERING, INC  
 215 SCHILLING CIRCLE, STE 102  
 HUNT VALLEY, MD 21031  
 T: 410.785.7423

**LANDSCAPE ARCHITECT:**  
 ROBINSON ANDERSON SUMMERS  
 28 WEST STATE STREET  
 MEDIA, PA 19063  
 T: 302.888.1544

**STRUCTURAL ENGINEER:**  
 STRUCTURAL DESIGN STUDIO, INC  
 2225 EAST MURRAY HOLLADAY RD  
 SALT LAKE CITY, UT 84117  
 T: 801.274.3950

**MEP ENGINEER:**  
 KOVACS, WHITNEY & ASSOCIATES  
 190 WEST OSTEND ST, STE 300  
 BALTIMORE, MD 21230  
 T: 410.244.7191

**OWNER / DEVELOPER / APPLICANT:**  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

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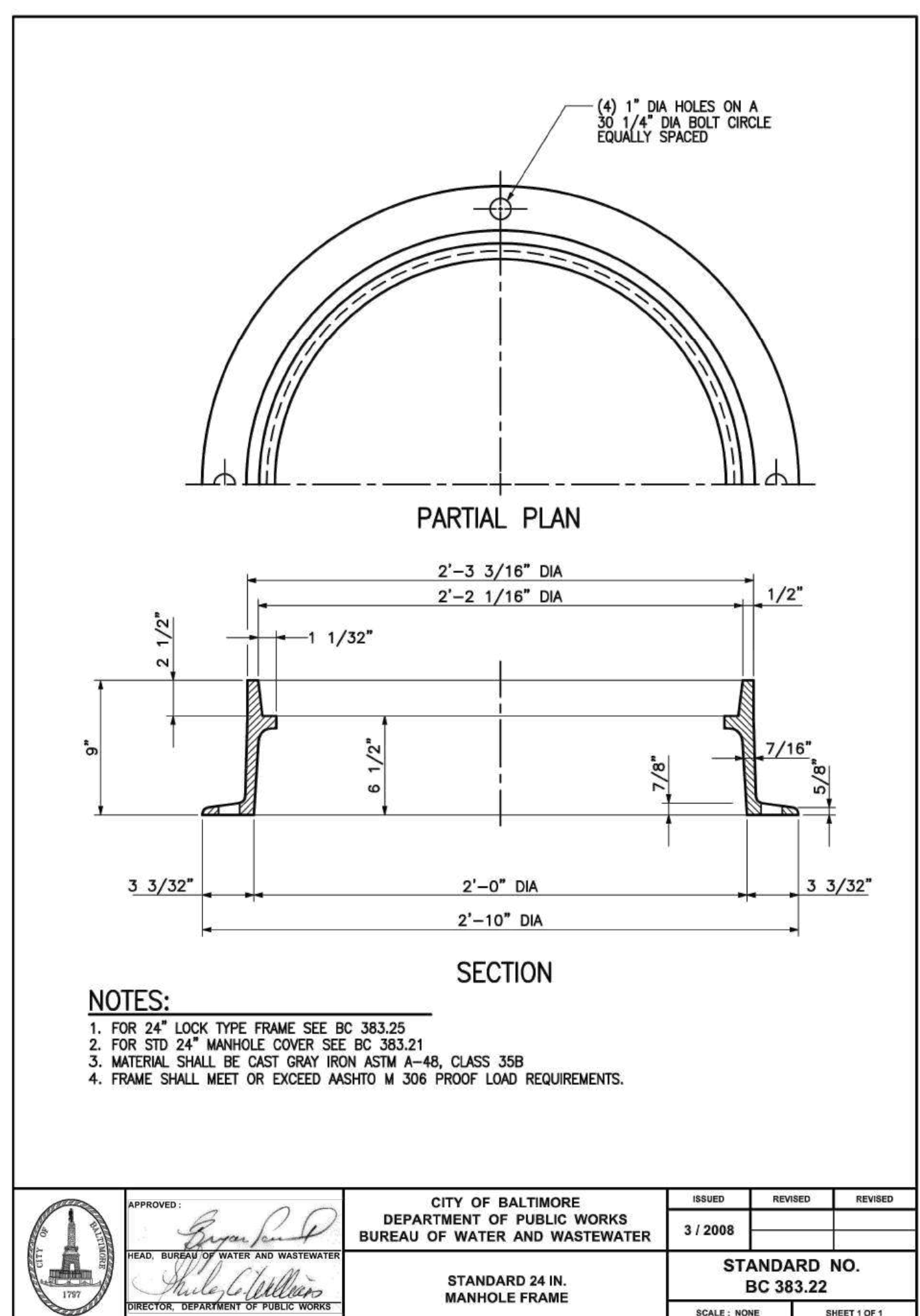
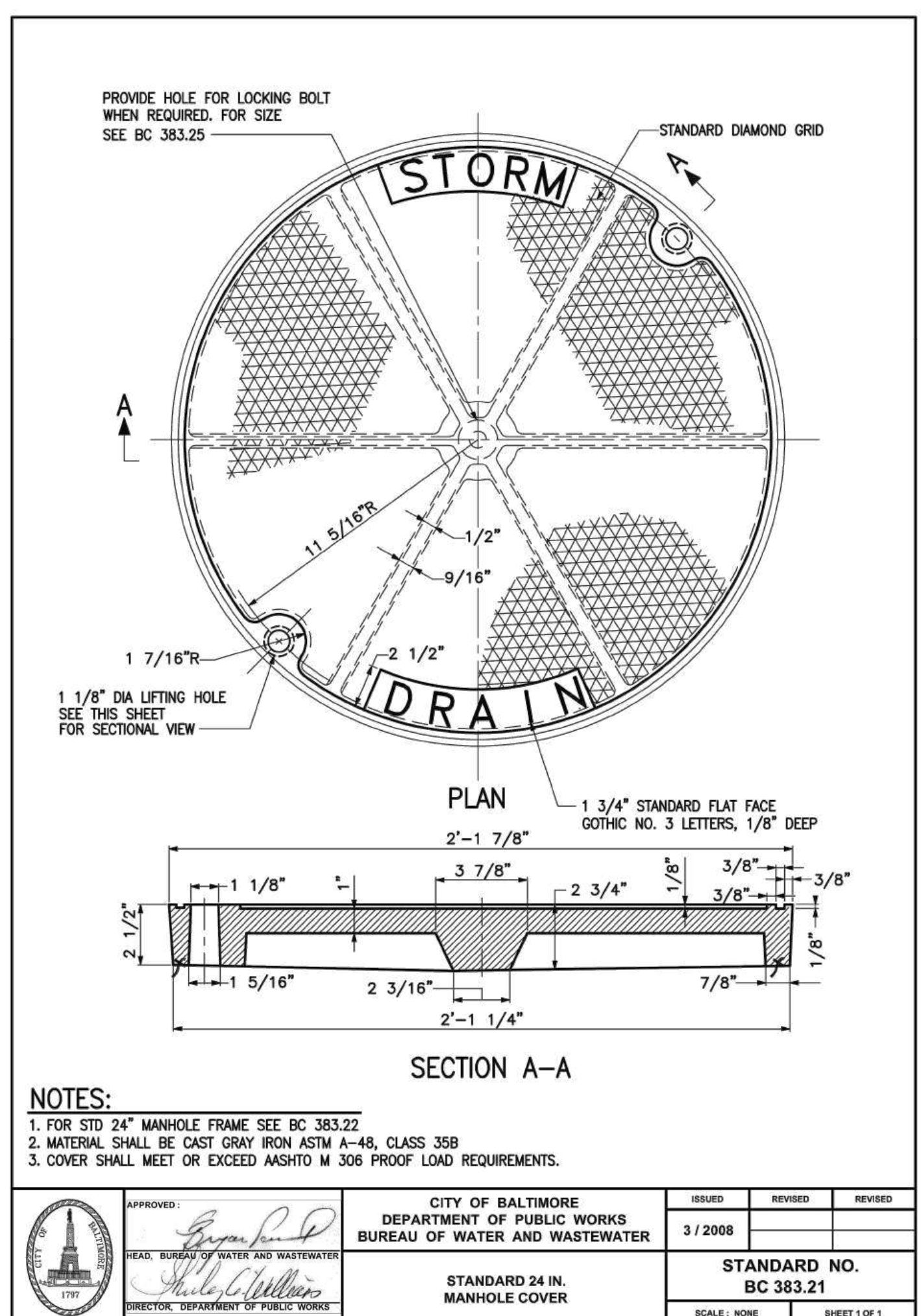
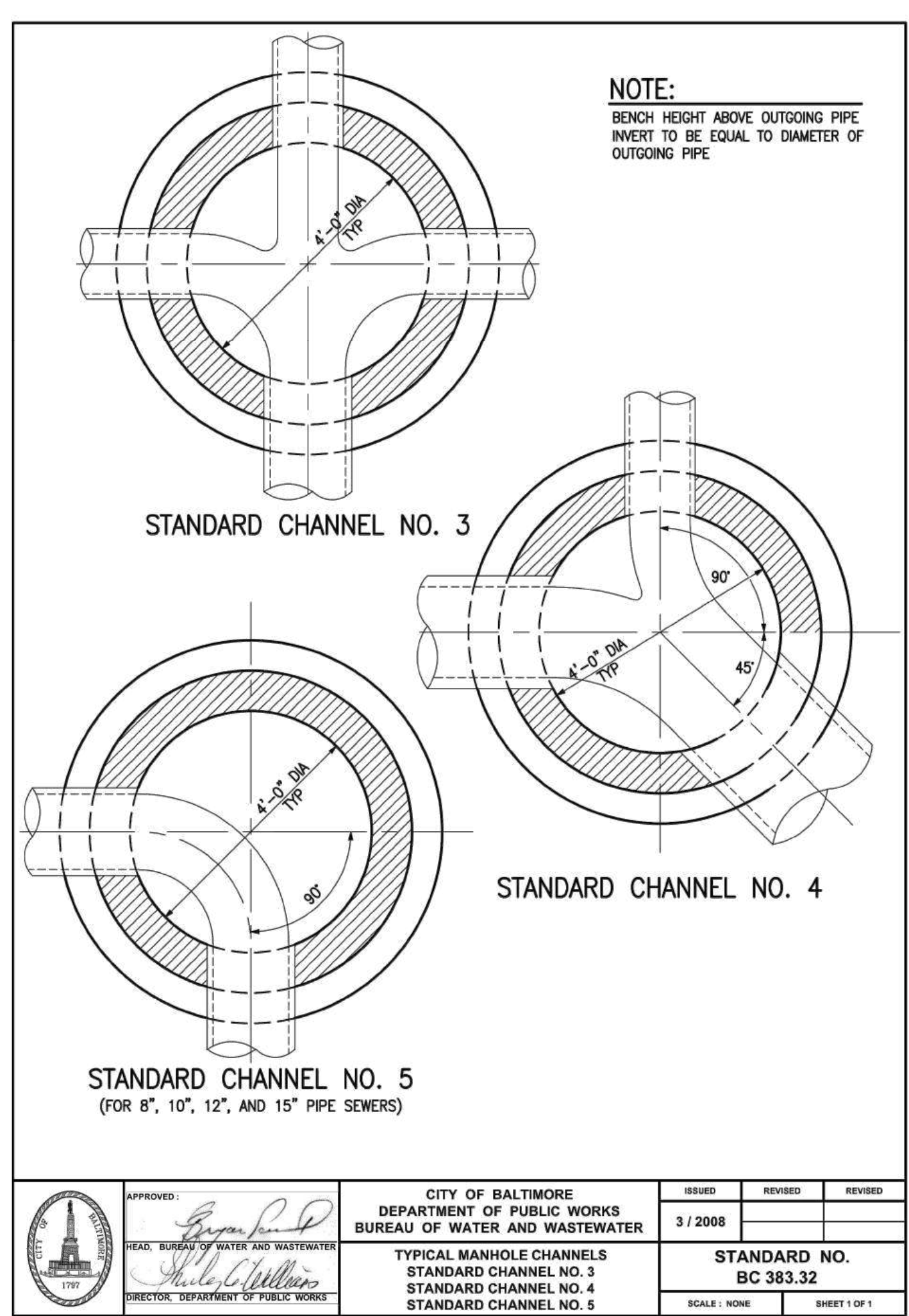
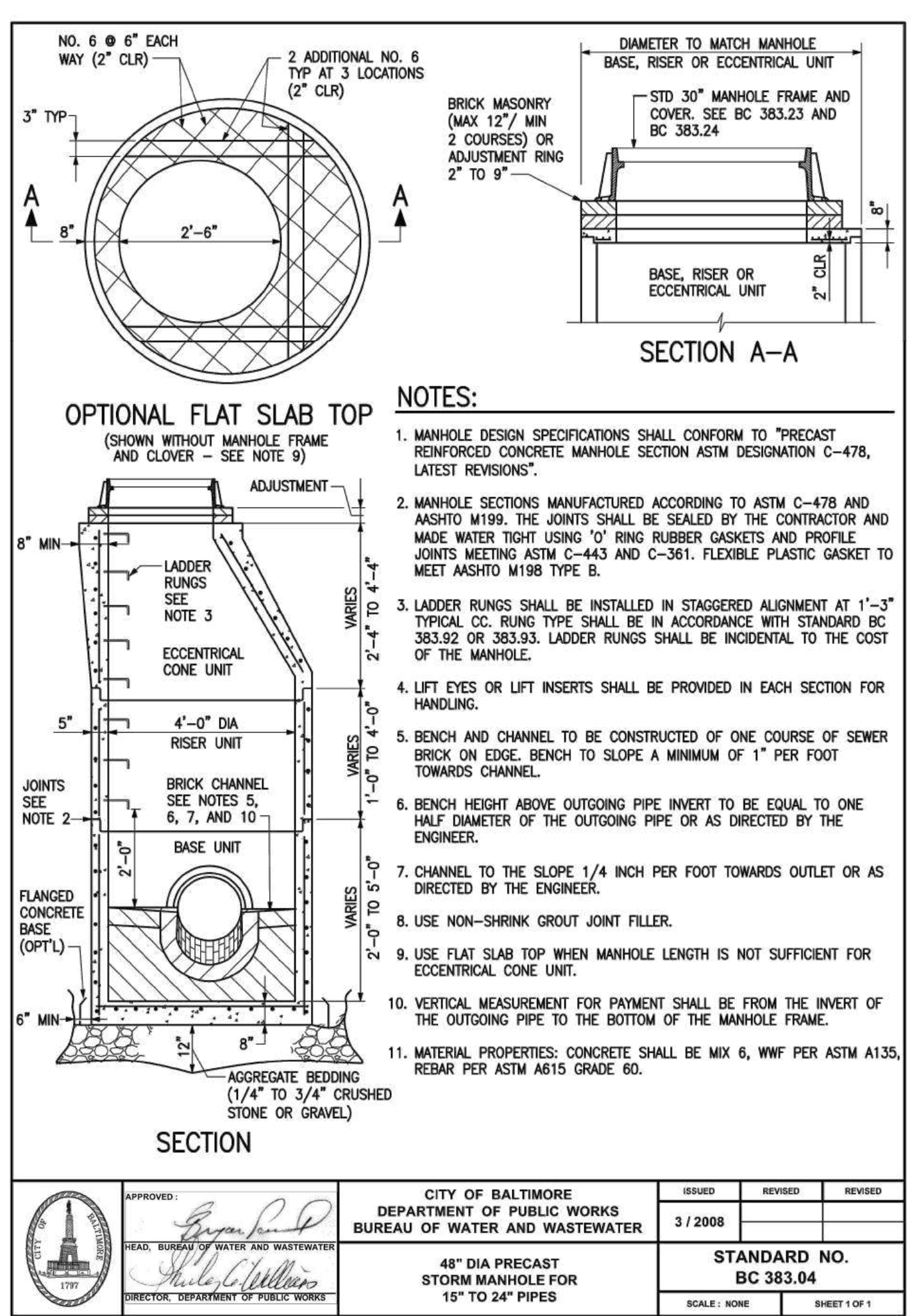
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<b>DATE:</b>	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN  
 DETAILS

**DRAWING NO:**  
**C525**

BCNR # 11595



HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88





**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509  
**CIVIL ENGINEER:**  
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 HUNT VALLEY, MD 21031  
 T: 410.785.7423  
**LANDSCAPE ARCHITECT:**  
 ROBINSON ANDERSON SUMMERS  
 28 WEST STATE STREET  
 MEDIA, PA 19063  
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 STRUCTURAL DESIGN STUDIO, INC  
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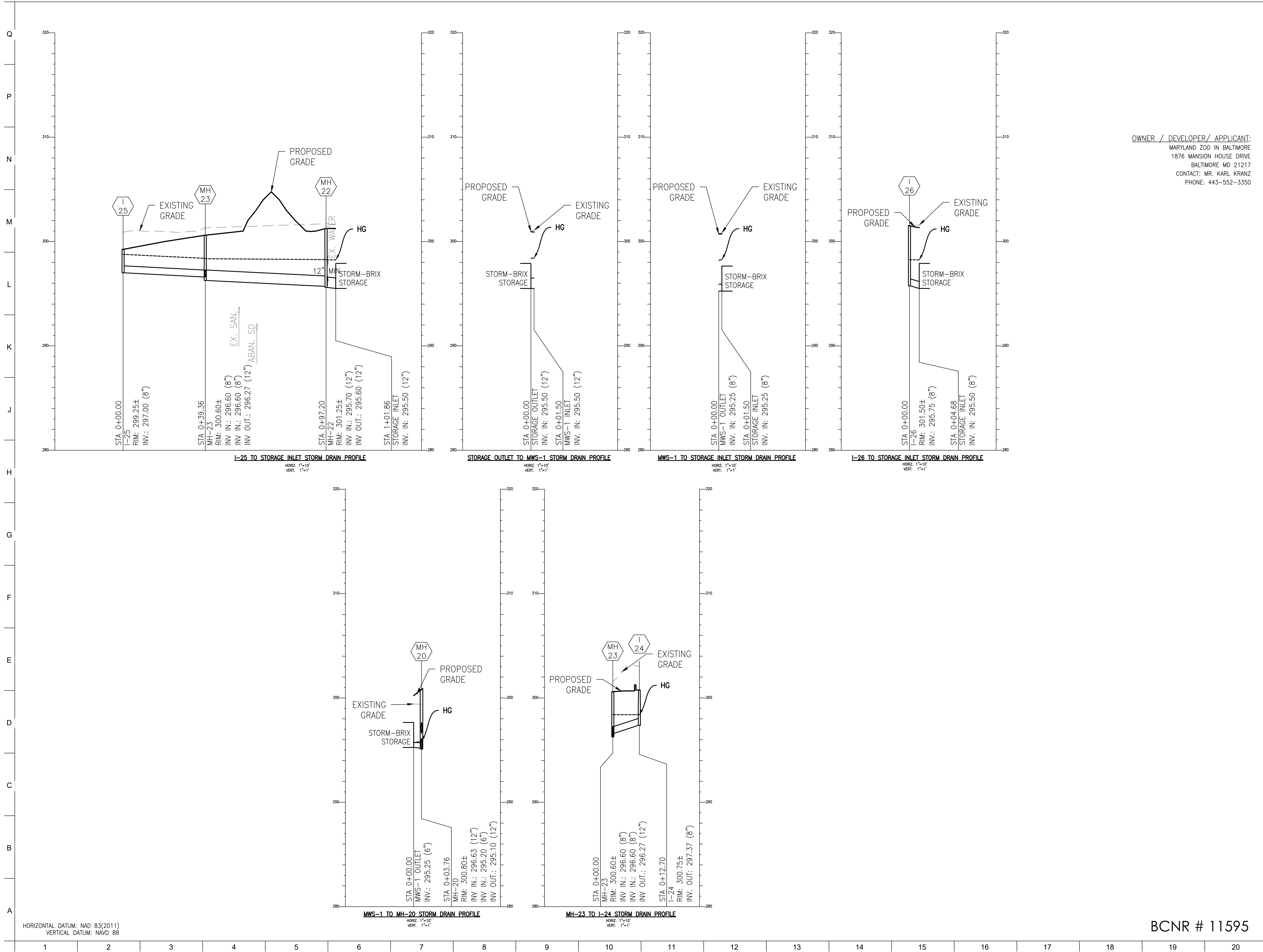
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DATE:	PROJECT NO: 2023-10.04
DRAWN BY:	
CHECKED BY:	
SUBMISSION:	DATE
REVISION:	DATE

**DRAWING TITLE:**  
 STORM DRAIN PROFILES

**DRAWING NO:**  
**C530**



HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509  
**CIVIL ENGINEER:**  
 CARROLL ENGINEERING, INC  
 215 SCHILLING CIRCLE, STE 102  
 HUNT VALLEY, MD 21031  
 T: 410.785.7423  
**LANDSCAPE ARCHITECT:**  
 ROBINSON ANDERSON SUMMERS  
 28 WEST STATE STREET  
 MEDIA, PA 19063  
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**MEP ENGINEER:**  
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 BALTIMORE, MD 21230  
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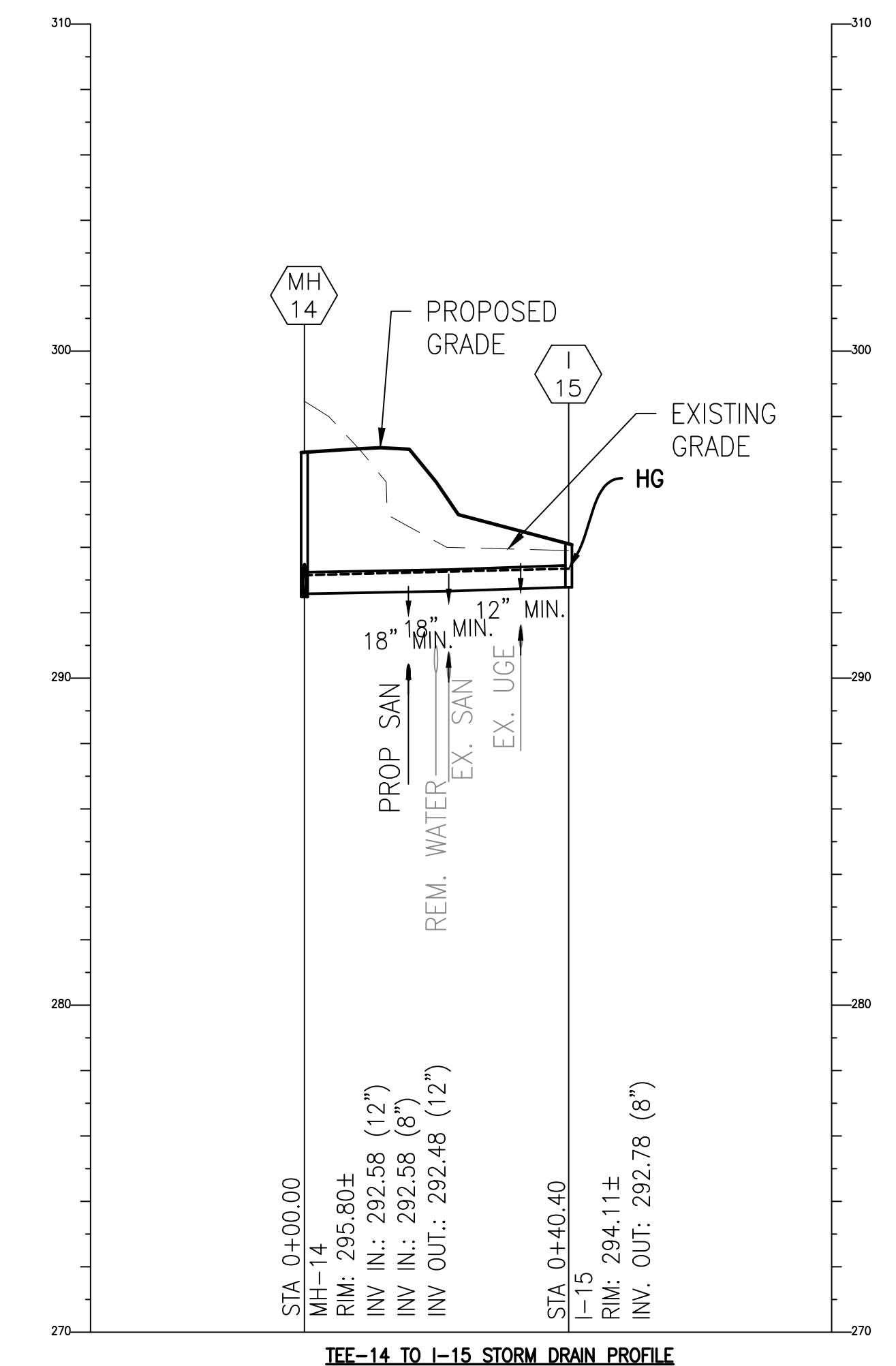
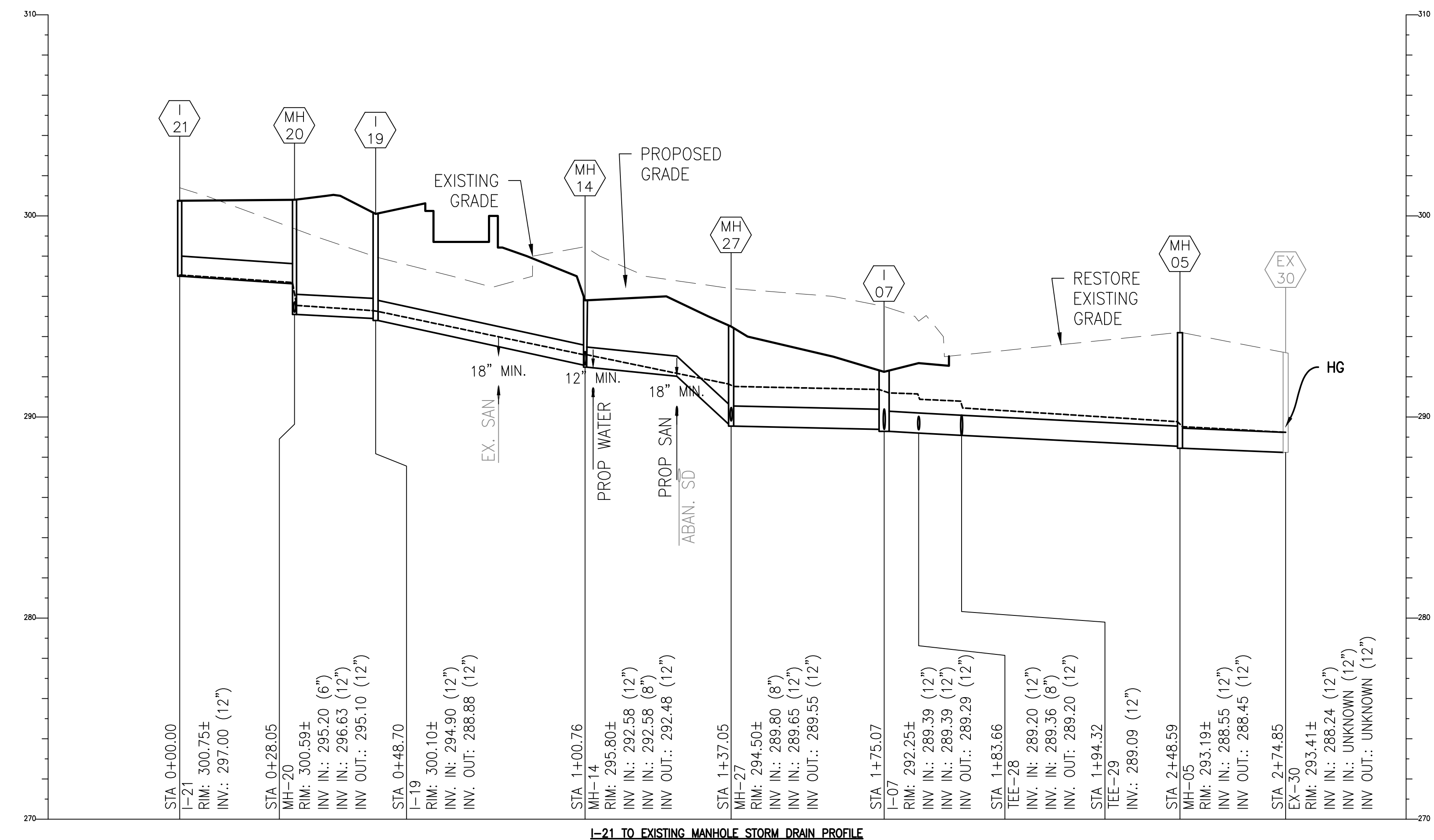
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DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN  
 PROFILES

**DRAWING NO:**  
**C531**



HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595

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**PROJECT TEAM:**  
**ARCHITECT:**  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
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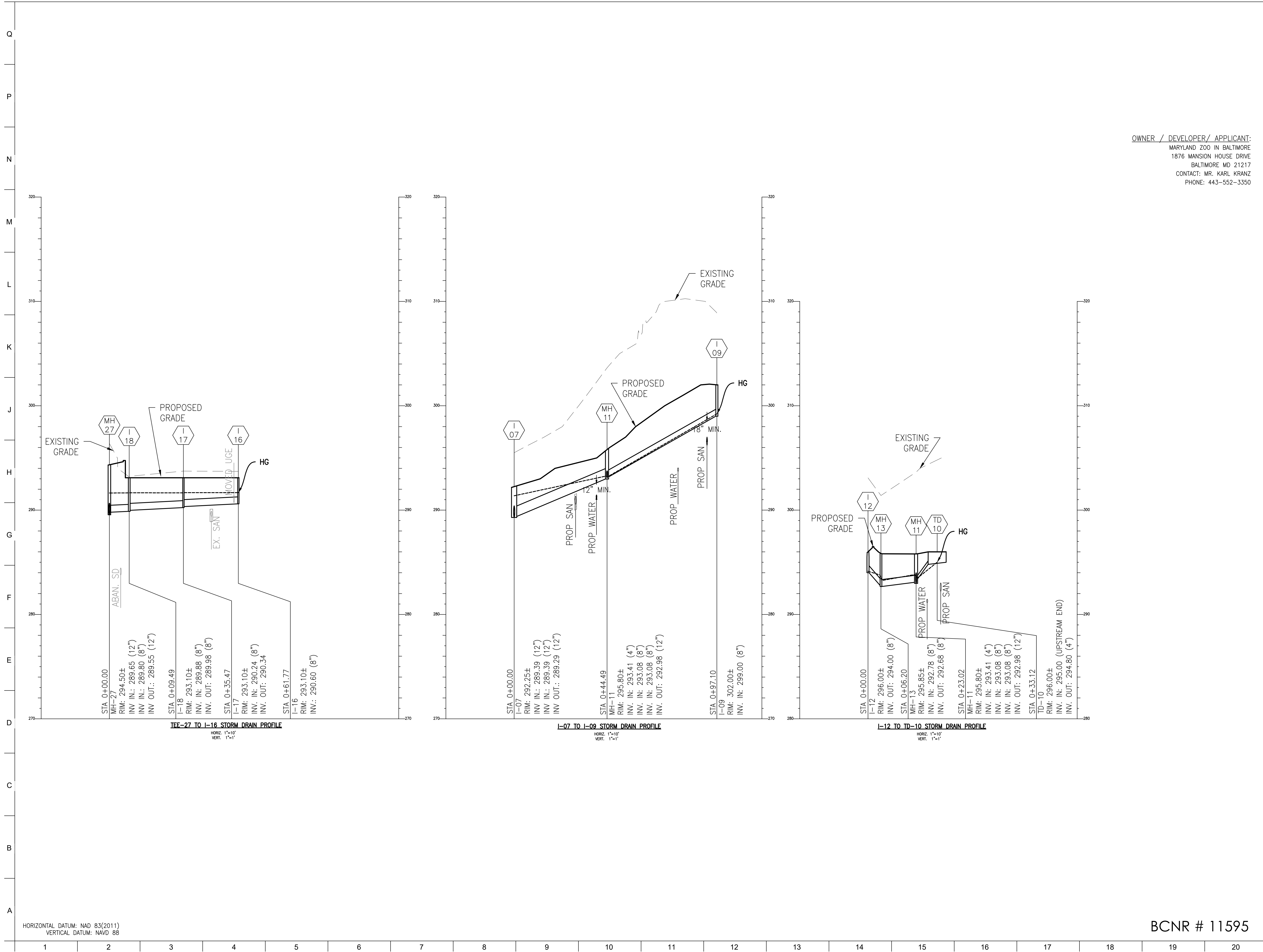
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DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORM DRAIN PROFILES

**DRAWING NO:**  
**C532**

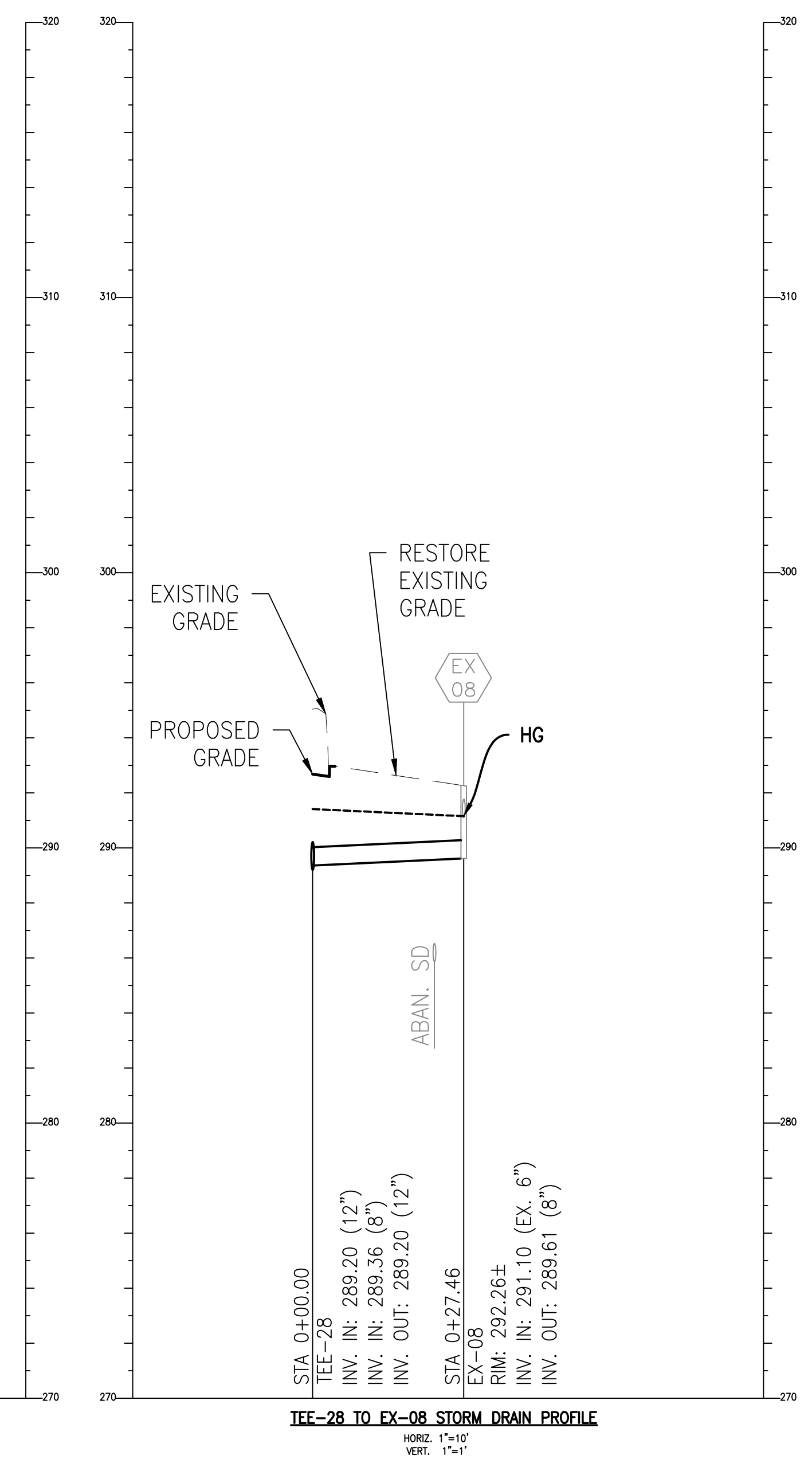
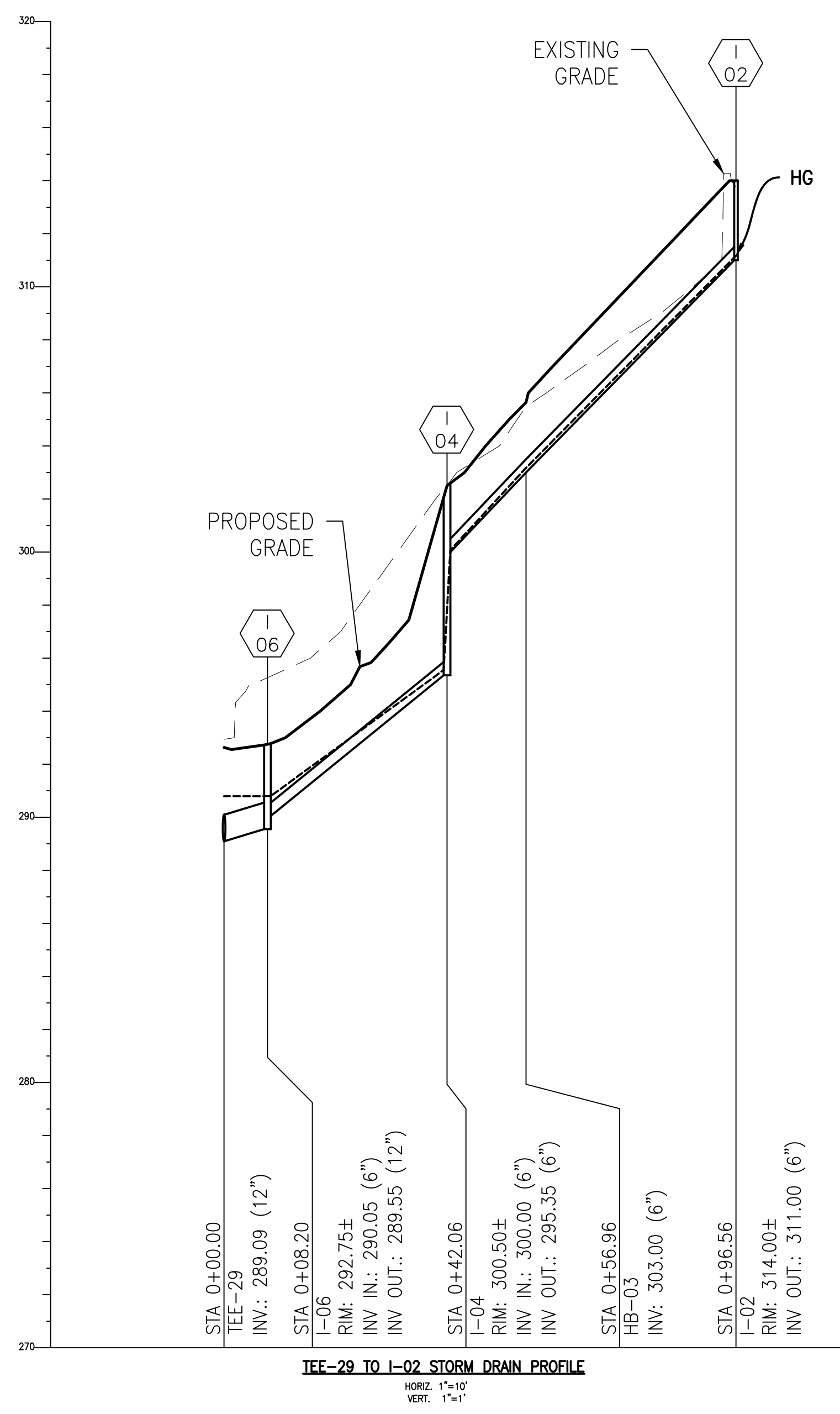


HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595

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HORIZONTAL DATUM: NAD 83(2011)  
VERTICAL DATUM: NAVD 88



OWNER / DEVELOPER / APPLICANT:  
 MARYLAND ZOO IN BALTIMORE  
 1876 MANSION HOUSE DRIVE  
 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**BKP**

PROJECT TEAM:

ARCHITECT:  
 BUELL KRATZER POWELL, P.C.  
 1525 LOCUST STREET  
 PHILADELPHIA, PA 19102  
 T: 215.557.6509

CIVIL ENGINEER:  
 CARROLL ENGINEERING, INC  
 215 SCHILLING CIRCLE, STE 102  
 HUNT VALLEY, MD 21031  
 T: 410.785.7423

LANDSCAPE ARCHITECT:  
 ROBINSON ANDERSON SUMMERS  
 28 WEST STATE STREET  
 MEDIA, PA 19063  
 T: 302.888.1544

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 T: 801.274.3950

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 190 WEST OSTEND ST, STE 300  
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 T: 410.244.7191

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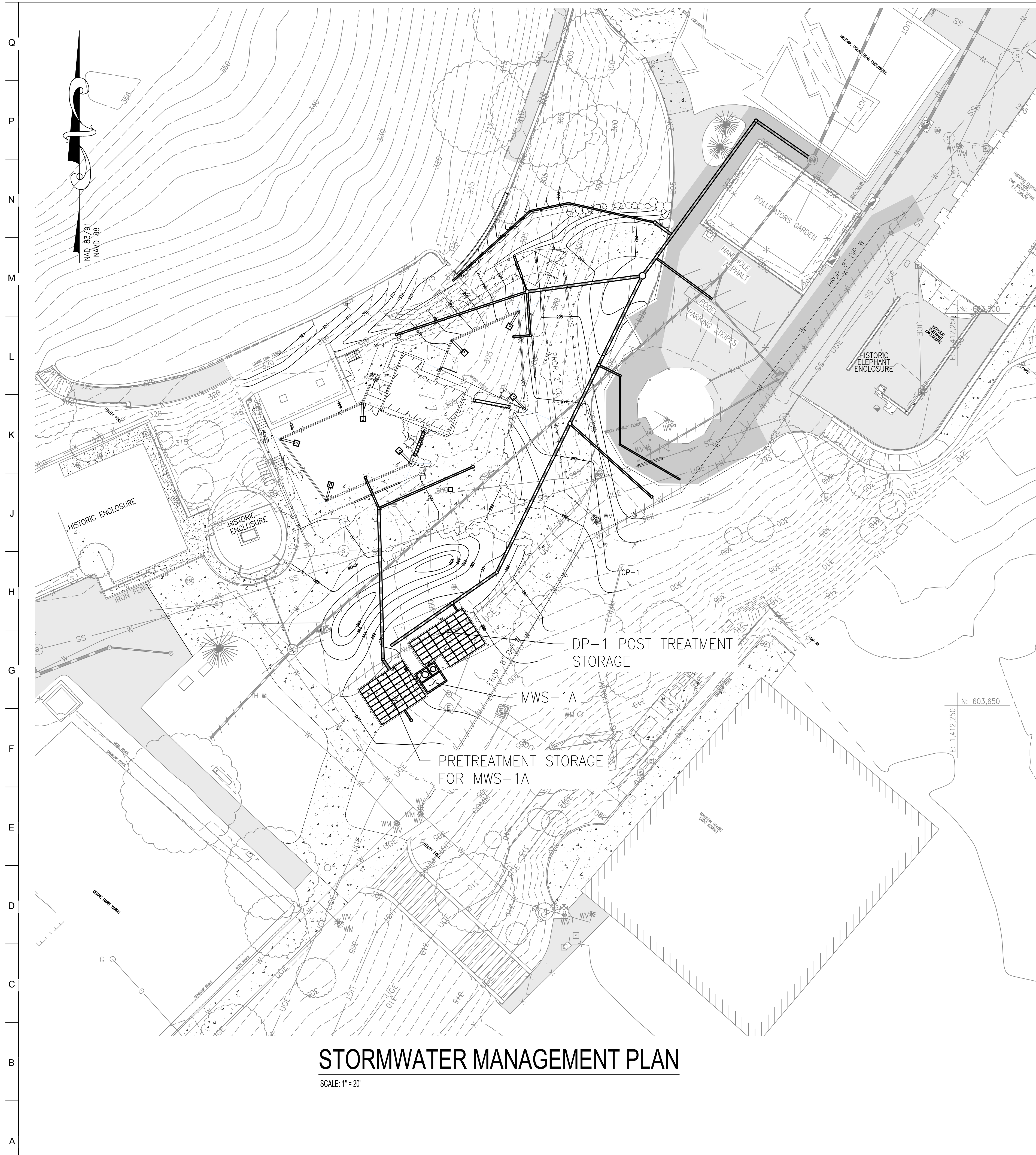
DATE:	
PROJECT NO: 2023-10.04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

DRAWING TITLE:  
**STORM DRAIN PROFILES**

DRAWING NO:  
**C533**

BCNR # 11595

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20



**LEGEND**

- PROPOSED BUILDING
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED 1.5" ASPHALT OVERLAY
- PROPOSED CURB
- PROPOSED CONCRETE WALK
- PROPOSED FENCELINE
- LIMIT OF DISTURBANCE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED SANITARY LINE
- PROPOSED SANITARY CLEANOUT
- PROPOSED STORMDRAIN LINE
- PROPOSED STORMDRAIN MANHOLE
- PROPOSED WATER LINE
- PROPOSED SMALL SECTIONAL VAULT
- PROPOSED WATER VALVE

**OWNER / DEVELOPER / APPLICANT:**  
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 BALTIMORE MD 21217  
 CONTACT: MR. KARL KRANZ  
 PHONE: 443-552-3350

**SWM CERTIFICATIONS**  
 SHEET REVISION DATE: May 18, 2022

**OWNER'S/DEVELOPER'S CERTIFICATION**  
 I/WE HEREBY CERTIFY THAT ALL PROPOSED WORK SHOWN IN THESE CONSTRUCTION DRAWING(S) AND APPROVED SEDIMENT CONTROL DRAWING(S) WILL BE ACCOMPLISHED PURSUANT TO THESE PLANS. I/WE ALSO UNDERSTAND THAT IT IS MY/OUR RESPONSIBILITY TO HAVE THE CONSTRUCTION SUPERVISED AND CERTIFIED INCLUDING THE SUBMITTAL OF "AS-BUILT" PLANS WITHIN THIRTY (30) DAYS OF COMPLETION, BY A REGISTERED PROFESSIONAL ENGINEER.

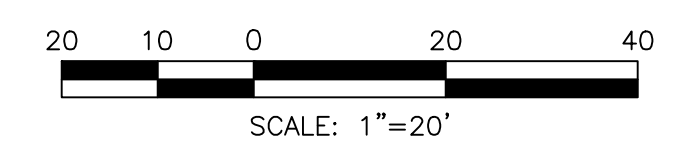
PRINT NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ TELEPHONE NUMBER \_\_\_\_\_

**ENGINEERS CERTIFICATION**  
 I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY ME OR UNDER MY SUPERVISION AND MEETS THE MINIMUM STANDARDS OF BALTIMORE CITY DEPARTMENT OF PUBLIC WORKS REQUIREMENTS AND SPECIFICATIONS.

PRINT NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ TELEPHONE NUMBER \_\_\_\_\_

**PROPOSED NOTES:**

1. CONTRACTOR SHALL VERIFY FIELD CONDITIONS PRIOR TO AND DURING CONSTRUCTION/DEMOLITION AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND THE APPROVED PLANS.
2. CONTRACTOR SHALL MAINTAIN PEDESTRIAN & VEHICULAR ACCESS TO AND AROUND OVERALL SITE DURING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL FURNISH VEHICULAR AND PEDESTRIAN TRAFFIC PROTECTION IN ACCORDANCE WITH MUTCD LATEST VERSION AND THE CITY OF BALTIMORE REQUIREMENTS.
3. CONTRACTOR SHALL CONTACT THE OWNER AND DEVELOPER 72 HOURS PRIOR TO COMMENCING ANY WORK.
4. ALL UTILITY FRAMES AND COVERS TO REMAIN WITHIN THE PROJECT AREA SHALL BE ADJUSTED BY THE CONTRACTOR TO MEET NEW PAVEMENT OR GROUND ELEVATION. THE CONTRACTOR SHALL MAKE, CHECK, AND BE RESPONSIBLE FOR ALL MEASUREMENTS AND DIMENSIONS NECESSARY FOR THE PROPER CONSTRUCTION OF AND THE PREVENTION OF MISFITTINGS IN THE WORK. VERIFY LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES BEFORE STARTING CONSTRUCTION IN EACH AREA.
5. CONTRACTOR TO COORDINATE WITH MISS UTILITY, THE CITY OF BALTIMORE, AND A PRIVATE UTILITY LOCATOR COMPANY PRIOR TO COMMENCING ANY WORK. THE CONTRACTOR MUST NOTIFY ALL PUBLIC UTILITY COMPANIES WITH UNDERGROUND FACILITIES IN THE AREA OF PROPOSED EXCAVATION AND HAVE THOSE FACILITIES LOCATED BY THE UTILITY COMPANIES PRIOR TO COMMENCING EXCAVATION.
6. LIVE UNDERGROUND UTILITIES EXIST WITHIN THE WORK AREA. CONTRACTOR SHALL USE EXTREME CAUTION AND SHALL COMPLY WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
7. CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITY STRUCTURES TO REMAIN DURING DEMOLITION AND CONSTRUCTION ACTIVITIES AND TO PREVENT DEBRIS, SEDIMENT, OR WATER FROM ENTERING THE STRUCTURES.
8. CONTRACTOR SHALL PROTECT ALL FACILITIES AND UTILITIES TO REMAIN FROM DAMAGE WHETHER SHOWN HEREON OR NOT.
9. ALL EXISTING PAINT MARKINGS ADJACENT TO THE PROJECT AREA WHICH BECAME FADED OR OBLISCURED DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED OR RESTORED AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL COORDINATE WITH OWNER AND UTILITY PROVIDER TO MINIMIZE DURATION OF UTILITY OUTAGES.
11. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION AND PLACEMENT OF ALL UTILITY CONDUITS AND ENCASEMENT. CONTRACTOR SHALL PROVIDE CONDUITS AND PULL STRINGS IN ACCORDANCE WITH UTILITY PROVIDER REQUIREMENTS FOR THEIR RESPECTIVE CONDUITS.
12. USE EXTREME CAUTION WHEN WORKING AROUND EXISTING TREES TO REMAIN SO AS NOT TO DAMAGE THE TREES OR ROOT SYSTEMS.
13. CONTRACTOR SHALL PROTECT ALL AREAS BEYOND THE LIMITS OF DISTURBANCE AND SHALL RESTORE ANY AND ALL AREAS DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
14. INFORMATION SHOWN ON THIS DRAWING HAS BEEN PROVIDED AS A GUIDE TO ASSIST THE CONTRACTOR IN ESTABLISHING THE LOCATIONS OF PROPOSED CONSTRUCTION WITH RESPECT TO EXISTING SITE IMPROVEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL CONSTRUCTION SURVEY STAKEOUT REQUIRED AND TO CONFIRM ALL INFORMATION SHOWN HEREON.
15. CONTRACTOR SHALL FURNISH SHORING, SHEATHING, OR OTHERWISE SUPPORT EXCAVATIONS TO PROTECT EXCAVATIONS FROM CAVE-INS UNTIL BACKFILL PLACEMENT IS COMPLETE PER SPECIFICATIONS.
16. SEE EXISTING CONDITIONS PLAN FOR SITE BENCHMARKS. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS THROUGHOUT THE DURATION OF THE PROJECT FOR CONSTRUCTION LAYOUT PURPOSES.
17. REFER TO THE SITE LANDSCAPING PLANS FOR ADDITIONAL INFORMATION AND DETAILS.
18. REFER TO THE ELECTRICAL PLANS FOR ADDITIONAL ELECTRICAL UTILITY INFORMATION.



**STORMWATER MANAGEMENT PLAN**

SCALE: 1"=20'

HORIZONTAL DATUM: NAD 83(2011)  
 VERTICAL DATUM: NAVD 88

BCNR # 11595



**PROJECT TEAM:**

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**CLIENT:**  
**MARYLAND ZOO**  
 THE MARYLAND ZOO IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

**RED PANDA**  
 THE MARYLAND ZOO  
 IN BALTIMORE  
 1 SAFARI PLACE  
 BALTIMORE, MD 21217

THIS DRAWING IS TO ILLUSTRATE THE WORK TO BE DONE. THE ARCHITECT IS NOT RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES USED TO DO THE WORK OR THE SAFETY ASPECTS OF CONSTRUCTION, AND NOTHING ON THIS DRAWING EXPRESSED OR IMPLIED CHANGES THIS CONDITION. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING HOW THEY AFFECT THE WORK. SUBMITTAL OF A BID TO PERFORM THIS WORK IS AN ACKNOWLEDGMENT OF THESE RESPONSIBILITIES, AND THAT THEY HAVE BEEN FULLY CONSIDERED IN PLANNING OF THE WORK AND THE BID PRICE. NO CLAIMS FOR EXTRA CHARGES DUE TO THESE CONDITIONS WILL BE FORTHCOMING.

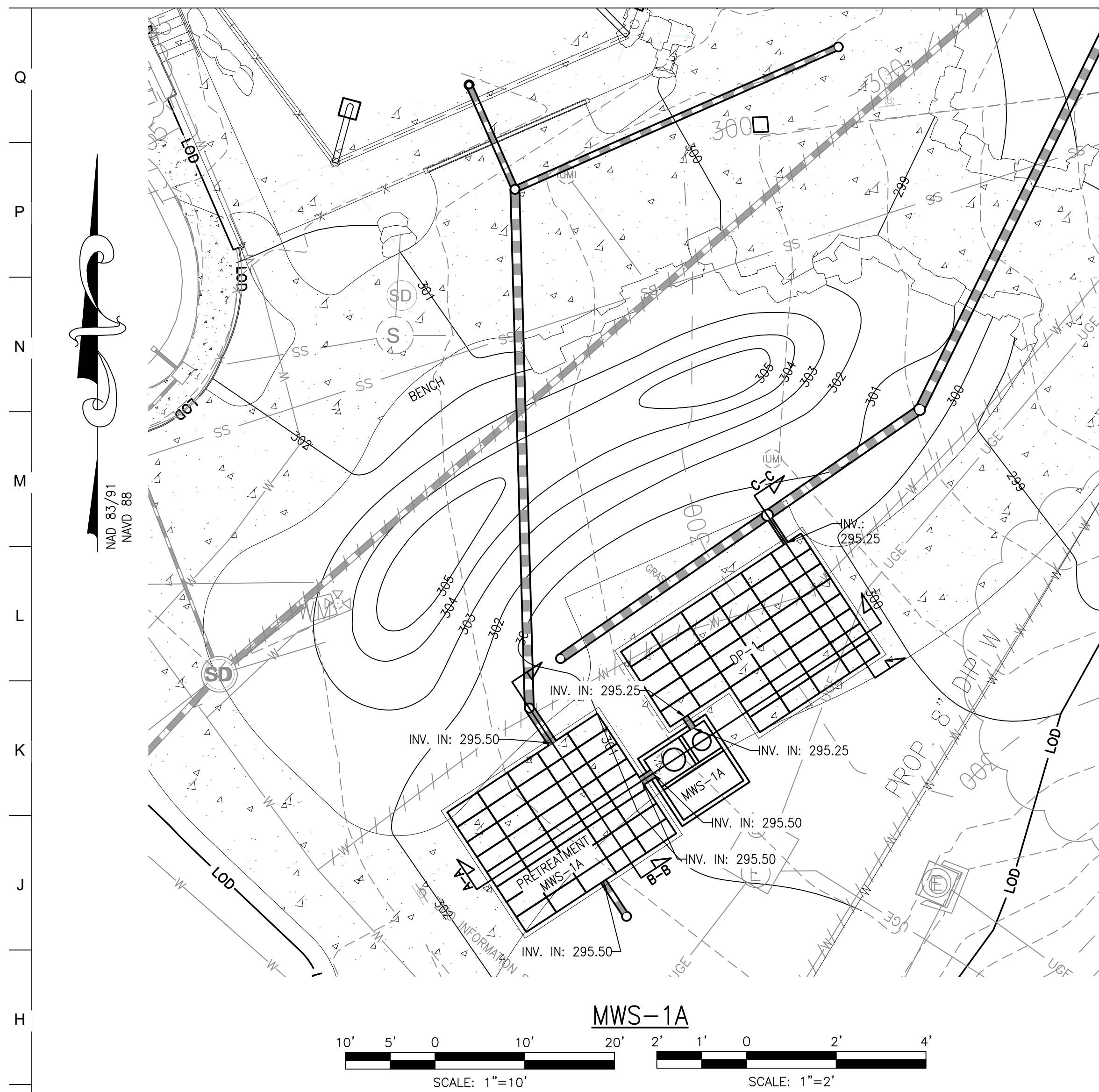
**SEAL:**

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14446, EXPIRES DATE 09/30/25.

DATE: PROJECT NO: 2023-10-04	
DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
 STORMWATER  
 MANAGEMENT  
 PLAN

**DRAWING NO:**  
**C600**



PROJECT NAME: MARYLAND ZOO RED PANDA EXHIBIT BALTIMORE CITY ESD NO. XXXX

AS-BUILT DATA FOR MODULAR WETLAND FACILITY  
\*TO BE COMPLETED BY THE PROJECT CONTRACTOR

FEATURE	DESIGN	*AS-BUILT
FACILITY DETAIL	MWS-L-8-8-V	
FACILITY LxW	9' x 9'	
TOP OF FACILITY	300.40	
MIN. TOP OF GRADE (3" MULCH)	300.65	
BOTTOM OF FACILITY (INTERNAL)	295.25	
BOTTOM OF FACILITY (EXTERNAL)	294.59	
INLET SIZE & TYPE		
INLET INVERT	295.50	
MWS INTERNAL WIER LENGTH / ELEVATION	3.5' / 298.12	
PRETREATMENT CHAMBER SIZE & TYPE	STORMBRIX 2'W X 4'L X 3'H	
TOTAL PRETREATMENT CHAMBER UNITS/VOLUME	40 UNITS / 745 C.F.	
PRETREATMENT CHAMBER INVERT	295.50	
OUTLET PIPE SIZE & TYPE	1.5 FT 8" PVC	
OUTLET INVERT	295.25	
OUTLET STRUCTURE COORDINATES (CENTER OF STRUCTURE)	BCSC: N 9,525.81 E -9,013.61 NAD83: N 603,665.47 E 1,412,048.42	

\* BYPASS PIPES TO BE CONNECTED AT UPSTREAM ACCESS STRUCTURE

DATE AS-BUILT ACCEPTED BY BALTIMORE CITY: \_\_\_\_\_

**MAINTENANCE AND LIABILITY**  
MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANT DRAINAGE STRUCTURES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE PROPERTY OWNER SHALL ALSO BE FULLY LIABLE FOR ALL DAMAGE OR INJURIES THAT MAY BE SUSTAINED BY ANY PERSON OR PROPERTY AS A RESULT OF ANY FAILURE OR MALFUNCTION OF THE STORMWATER MANAGEMENT FACILITY AND APPURTENANCES.

PRINT NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ TELEPHONE NUMBER \_\_\_\_\_

**AS-BUILT CERTIFICATION**  
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

PRINT NAME \_\_\_\_\_ SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_  
ADDRESS \_\_\_\_\_ TELEPHONE NUMBER \_\_\_\_\_

**CONTRACTOR AS-BUILT NOTE**

AS-BUILT PLANS AND CERTIFICATIONS ARE REQUIRED FOR THIS STORMWATER MANAGEMENT FACILITY. THESE MUST BE PREPARED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER. BALTIMORE CITY WILL NOT PERFORM THE INSPECTION OR PREPARE THE AS-BUILT PLANS OR CERTIFICATION. THE STORMWATER MANAGEMENT PERMIT SECURITY WILL NOT BE RELEASED UNTIL THE AS-BUILT PLANS AND CERTIFICATION ARE APPROVED BY BALTIMORE CITY. IN ORDER TO PREPARE THE REQUIRED AS-BUILT PLANS AND CERTIFICATIONS, THIS STORMWATER MANAGEMENT FACILITY MUST BE INSPECTED BY THE ENGINEER AT SPECIFIC STAGES DURING CONSTRUCTION AS REQUIRED BY THE CURRENT BALTIMORE CITY STORMWATER MANAGEMENT POLICY AND DESIGN MANUAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE PLANS.

**FACILITIES BEING CERTIFIED:**  
MODULAR WETLAND SYSTEM (MWS-1A)

"CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ONSITE INSPECTIONS AND MATERIAL TESTS CONDUCTED DURING CONSTRUCTION.

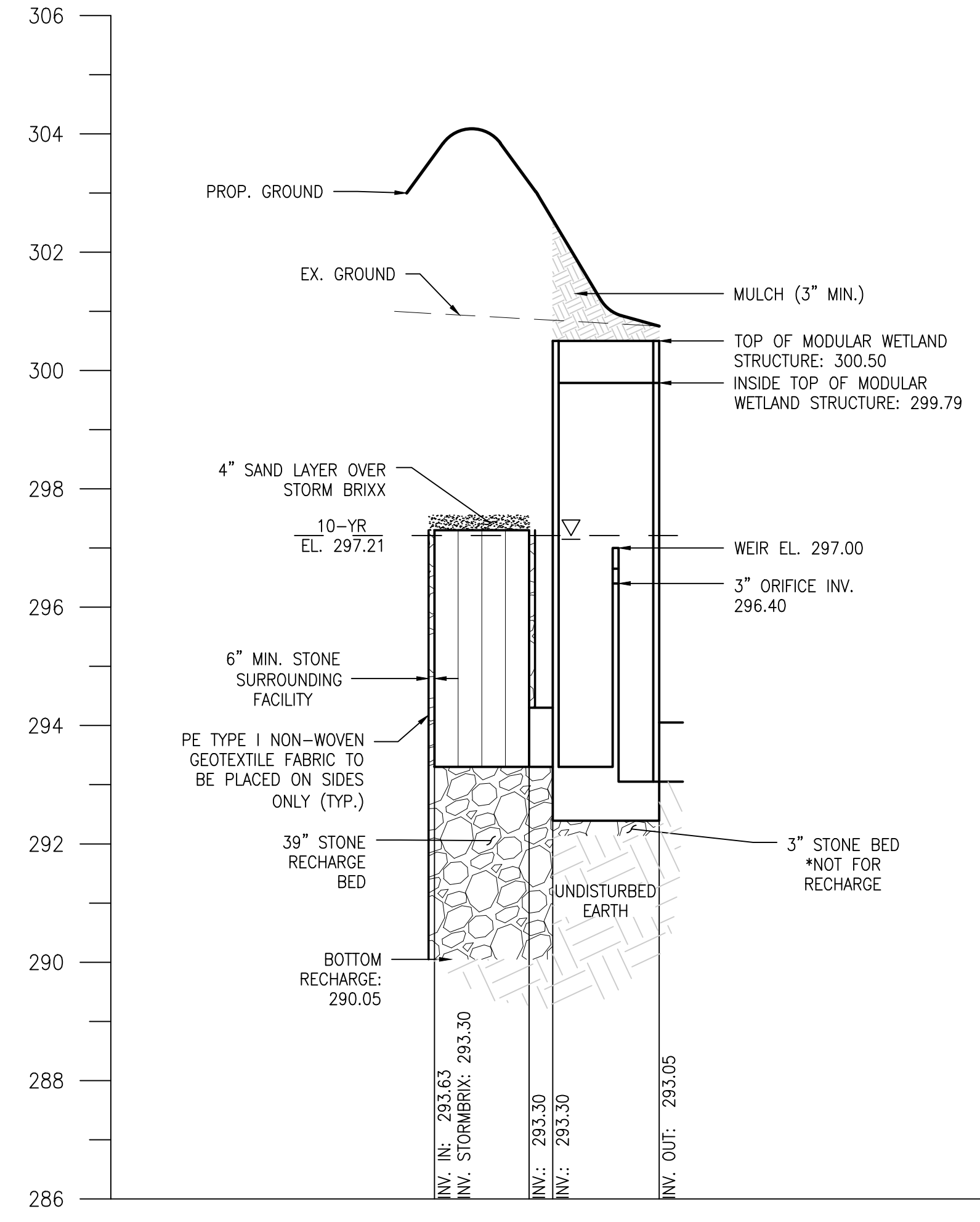
- NOTES:**
- ALL MATERIALS AND CONSTRUCTION PRACTICES SHALL BE IN ACCORDANCE WITH THE CURRENT MARYLAND STORMWATER DESIGN MANUAL AND CITY STANDARDS.
  - ROOF DRAINS SHALL NOT BE CONNECTED UNTIL APPROVAL BY THE CITY INSPECTOR, ALL ROOF AREAS ARE FREE OF DEBRIS, AND OUTLET PIPE INSTALLATION HAS BEEN COMPLETED.
  - SEE EROSION AND SEDIMENT CONTROL PLAN FOR EROSION AND SEDIMENT CONTROL MEASURES.
  - SEE LANDSCAPE PLANS FOR FACILITY PLANTING SCHEDULE AND REQUIREMENTS.

**LEGEND**

	PROPOSED BUILDING
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED 1.5" ASPHALT OVERLAY
	PROPOSED CURB
	PROPOSED CONCRETE WALK
	PROPOSED FENCELINE
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED UNDERGROUND ELECTR
	PROPOSED SANITARY LINE
	PROPOSED SANITARY CLEANOUT
	PROPOSED STORMDRAIN LINE
	PROPOSED STORMDRAIN MANHOLE
	PROPOSED WATER LINE
	PROPOSED SMALL SECTIONAL VAUL
	PROPOSED WATER VALVE
	PROPOSED DRAINAGE AREA

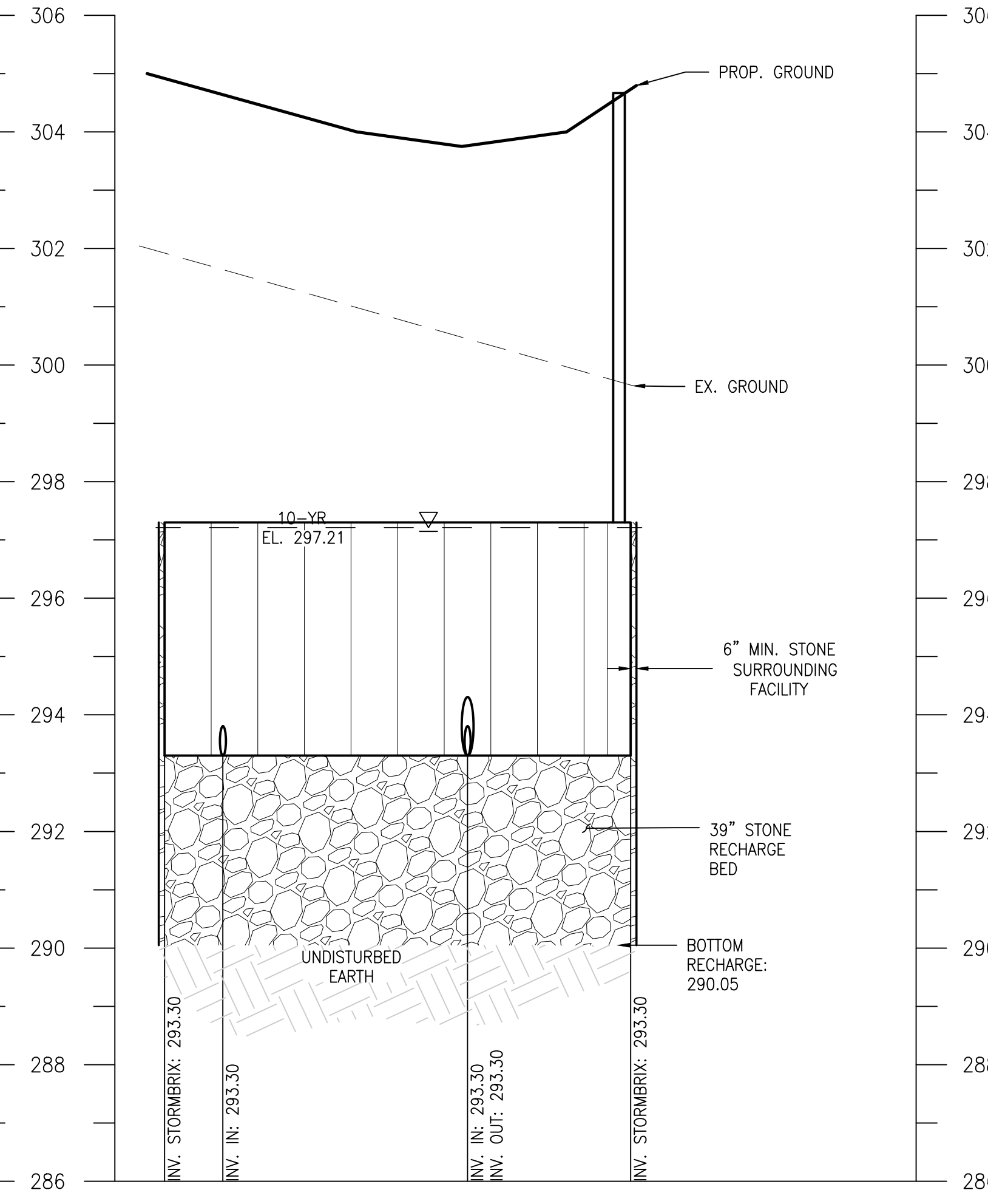
- AS-BUILT NOTE:**
- THE CONTRACTOR SHALL SUPPLY ALL OF THE FOLLOWING INFORMATION DURING AND AFTER THE CONSTRUCTION OF THE SWM SYSTEM. ALL REQUIRED DOCUMENTS SHALL BE SUBMITTED WITHIN THIRTY (30) DAYS OF THE DATE OF SUBSTANTIAL COMPLETION AS ACCEPTED BY THE OWNER:
- AS-BUILT TOPOGRAPHIC SURVEY BASED ON THE SAME DATUM AND BENCHMARKS AS THE ORIGINAL SURVEY USED IN DESIGN. THE AS-BUILT SURVEY SHALL SHOW THE FOLLOWING:
    - SIZE, ELEVATIONS, AND GRADES OF EXCAVATION FOR BMP(S).
    - SURFACE ELEVATIONS AND GRADES FOR EACH LAYER OF DIFFERENT MATERIAL IN THE BMP(S).
    - INVERT ELEVATIONS FOR ALL UNDERDRAINS, STORM PIPING, AND APPURTENANCE STRUCTURES IN THE BMP(S).
    - SURFACE ELEVATIONS AND SPOT GRADES OF THE COMPLETED BMP(S) IN LOCATIONS TO MATCH THE APPROVED SWM PLANS AND DETAILS. THE SURVEY SHALL BE IN AUTOCAD FORMAT. CONTACT THE ENGINEER FOR CADD STANDARDS TO BE USED.
  - MATERIAL TICKETS FOR ALL MATERIALS USED IN CONSTRUCTION OF THE BMP(S).
  - PHOTOGRAPHS OF CRITICAL INSPECTIONS INCLUDING, BUT NOT LIMITED TO:
    - PHOTOS OF EACH LAYER OF DIFFERENT MATERIAL IN THE BMP(S)
    - PHOTOS OF PLACEMENT OF ALL UNDERDRAINS, STORM PIPING, AND APPURTENANT STRUCTURES IN THE BMP(S).
    - PHOTOS OF THE COMPLETED BMP(S) INCLUDING ALL STABILIZATION AND LANDSCAPING.
  - COMPLETED AS-BUILT TABLES WITH THE INSPECTOR'S INITIALS IN ORIGINAL HANDWRITING - SEE THIS SHEET FOR REQUIRED INFORMATION.
  - AS-BUILT DEPTH TO INVERT OF THE VERTICAL UNDERDRAIN MANIFOLD MUST BE MARKED ON THE CAP.

- SWM SEQUENCE OF CONSTRUCTION**
- THIS SEQUENCE OF CONSTRUCTION SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE SEQUENCE OF CONSTRUCTION AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL DRAWINGS FOR THIS PROJECT. THE CONTRIBUTING DRAINAGE AREA INTO THESE SWM FACILITIES MUST EITHER BE STABILIZED PRIOR TO BEGINNING WORK, OR THE FLOW INTO THE FACILITY MUST BE DIVERTED AROUND THE CONSTRUCTION AREA. A STORMWATER MANAGEMENT APPROVAL MUST BE OBTAINED PRIOR TO THE CONSTRUCTION OF THIS FACILITY.
  - NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST THREE (3) WORKING DAYS PRIOR TO BEGINNING THIS WORK.
  - NOTIFY AS-BUILT ENGINEER, PROFESSIONAL ENGINEER WHO WILL BE PERFORMING THE AS-BUILT CERTIFICATION, AND GEOTECHNICAL ENGINEER OF THE SWM FACILITY AT LEAST FIVE (5) WORKING DAYS PRIOR TO BEGINNING THE WORK.
  - WITH THE WRITTEN APPROVAL OF THE CITY SEDIMENT CONTROL INSPECTOR, CONSTRUCT THE SWM FACILITIES IN ACCORDANCE WITH THE RESPECTIVE SEQUENCE OF CONSTRUCTION ON SHEET C700 ESC COVER SHEET.
  - PERMANENTLY STABILIZE THE DISTURBED AREAS AND INSTALL PROPOSED LANDSCAPE MATERIAL AS SHOWN ON THE PROPOSED LANDSCAPE PLANS.
  - WITHIN 30 DAYS OF THE COMPLETION OF THE STORMWATER MANAGEMENT FACILITY, SUBMIT FINAL "AS-BUILT" THROUGH PROJECTDOX.



MWS-1A SECTION A-A

SCALE: HORIZ. 1"=10'  
VERT. 1"=2'



MWS-1A SECTION B-B

SCALE: HORIZ. 1"=10'  
VERT. 1"=2'

HORIZONTAL DATUM: NAD 83(2011)  
VERTICAL DATUM: NAVD 88

BCNR # 11595



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**DATE:**

PROJECT NO: 2023-10.04

DRAWN BY	
CHECKED BY	
SUBMISSION	DATE
REVISION	DATE

**DRAWING TITLE:**  
MWS-1A  
SECTIONS

**DRAWING NO:**  
C610