



BOONVILLE

City of Boonville

October 16, 2023

7:00 PM

City Council Chambers

525 E. Spring Street

Boonville MO 65233

Meeting Live streamed <https://www.youtube.com/user/cityofboonvillemo> & Channel 3 with Suddenlink Cable TV

I. Call to order – Pledge and Prayer

A. Brad Atkinson

II. Roll Call

III. Hearing of Citizens' Comments

IV. Approval of Minutes

A. October 2 meeting minutes

V. Consent Items

A. Consider Pay Request No. 3- Final from Smico Contracting in the amount of **\$24,232.36** for WWTP Repair Project.

B. Consider Change Order No.1 from Smico Contracting Group in the amount of <**\$15,000**> for WWTP Repair Project.

C. Consider Change Order No. 2 From Frech Paving Co. in the amount of **\$20,569.15** for roadway improvements 2023.

VI. Presentation of Accounts and Claims

VII. Unfinished Business

A. Second Reading of Ordinance 2023-028 Authorizing and Approving Agreements and Easements with Climavision Properties, LLC for Radar Systems on Water Tower

VIII. New Business

A. First Reading of Bill No. 2023-029 Approving a Final Site Plan for 5 Star Truck Wash

IX. Reports of Standing Committees

A. Police Board

B. Planning and Zoning Commission

X. Reports of City Officials

XI. Miscellaneous

XII. Adjourn

- Alliance Water

NOTICE: The City of Boonville will comply with the Americans with Disabilities Act (ADA). Individuals who require an accommodation due to disability to attend this meeting should contact our office at (660) 882-2332 or Relay Missouri, 1-800-735-2966 TTY at least 48 hours in advance.



October 2, 2023
7:00 PM
City Council Chambers
525 E. Spring Street
Boonville MO 65233

I. Call to order – Pledge and Prayer

A. Drew Davis

Call to order – Pledge and Prayer The Boonville City Council met in Regular Session on October 2, 2023, at 7:00 p.m. in the Council Chambers located at 525 East Spring Street, Boonville, Missouri. The following officers were present; Susan Meadows, Mayor Pro-tem, Kate Fjell, City Administrator; Amber Davis, City Clerk; and Randy Ayers, Sergeant at Arms. Mayor Ned Beach and Interim City Counselor, Doug Abele were absent. The meeting was called to order. Drew Davis led the prayer, after the pledge of allegiance.

II. Roll Call

The following Council representatives were present: Drew Davis, Brad Atkinson, Steve Young, Susan Meadows, Andrew Cowherd, Sy Harvell, Barry Elbert, and Whitney Venable.

III. Hearing of Citizens' Comments

IV. Approval of Minutes

A. September 18 council minutes

The minutes stand as corrected

V. Consent Items

VI. Presentation of Accounts and Claims

Ms. Davis read the ordinance appropriating money, in its entirety, and a second time, by title only, since a copy of the ordinance had been made available prior to the meeting. Mr. Venable moved and Mr. Davis seconded the motion to approve the ordinance appropriating money. Roll call was taken. Ayes: Davis, Atkinson, Young, Meadows, Cowherd, Harvell, Elbert, and Venable. Total (8) Opposed: None (0). Absent: None (0).

VII. Unfinished Business

- A.** Second Reading of Bill No. 2023-027 Approving a final site plan for QuikTrip located at 1802 West Ashley Road

Mr. Cowherd moved and Mr. Venable seconded the motion to approve the bill. . Roll call was taken. Ayes: Davis, Atkinson, Young, Meadows, Cowherd, Harvell, Elbert, and Venable.
Total (8) Opposed: None (0). Absent: None (0).

VIII. New Business

- A.** First Reading of Ordinance 2023-028 Authorizing and Approving Agreements and Easements with Climavision Properties, LLC for Radar Systems on Water Tower

Ms. Davis read, by title only, a copy of the bill

IX. Reports of Standing Committees

- A.** Boonville Housing Authority

Minutes are in the packet

X. Reports of City Officials

- A.** City Administrator

Ms. Fjell asked Public Works Director, Jeff Ditto to come before the council and talk about all of the water main breaks that have been happening around town. Mr. Ditto passed out a list to the council of the break locations. Mr. Ditto stated that most of the valves that have been at these leak locations need to be replaced along with most of the water lines. Mr. Cowherd gave a shot out to the city workers about how hard they have been working on trying to fix these leaks.

- B.** Mayor

None

- C.** City Clerk

None

- D.** Economic Developer

Gigi Quinlan McAreavy provided the council with an update on the local economic development activities including housing at Kemper, housing at the old corn cob pipe factory, CDL classes provided by State Fair Community College, and other projects and development in the area.

XI. Miscellaneous

None

XII. Adjourn

With no further discussion, Mr. Young moved, and Mr. Venable seconded the motion to Adjourn at 7:32 p.m. and the voice vote was unanimous.

APPLICATION AND CERTIFICATE FOR PAYMENT (PAY ESTIMATE)

Original _____ of 6
Page _____ of

PROJECT NO: 454-292

PROJECT NAME: WWTP REPAIR PROJECT

CONTRACTOR: Smico Contracting Group, LLC

OWNER: City Boonville MO

APPLICATION NO:

3 FINAL

APPLICATION DATE:

25-Sep-23

PERIOD FROM:

06/15/23 to 09/12/23

ORIGINAL CONTRACT SUM: \$160,677.14

NET CHANGE BY CHANGE ORDERS: \$ (15,000.00)

CONTRACT SUM TO DATE: \$145,677.14

TOTAL COMPLETED & STORED TO DATE: \$145,677.14

RETAINAGE 10%: \$0.00

TOTAL EARNED LESS RETAINAGE: \$145,677.14

LESS PREVIOUS CERTIFICATES OF PAYMENT: \$121,444.78

CURRENT PAYMENT DUE: \$24,232.36

CONTRACT TIME LIMIT DATE: March 12, 2022

ORDER NO.	DATE APPROVED	ADDITIONS	DEDUCTIONS
1	10/3/2023		\$15,000.00
TOTALS		\$0.00	\$15,000.00

NET CHANGE BY CHANGE ORDERS: \$ (15,000.00)

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates for Payment were issued and payments received from the Owner, and that current payment shown herein is now due.

In accordance with the Contract Documents, based on site observations and the data comprising this application, the Engineer certifies to the Owner that to the best of the Engineer's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED OF \$ 24,232.36
(Attach explanation if amount certified differs from the amount applied for. Initial all figures on this Application and on the Continuation Sheet that are changed to conform to the amount certified.)

CONTRACTOR:

BY:

DATE: 9-27-2023

OWNER:

BY:

ENGINEER:

BY:

MECO ENGINEERING COMPANY, INC.
ENGINEERS * SURVEYORS



2701 INDUSTRIAL DRIVE
JEFFERSON CITY, MO 65109

(573)893-5558

Pay Estimate No.2 WWTP Repair Project

Item No	Description	Contract Quantity	Unit	Unit Price	Total	In Place Prev. Pay App	Installed This Period	\$ Installed This Pay App	Total in Place	Left to Finish	Unit
1	Mobilization	1	LS	\$ 4,243.00	\$ 4,243.00		1	0	\$0.00	\$4,243.00	0 LS
2	Removal of Improvements	4.1	SY	\$ 300.00	\$ 1,230.00		4.1	0	\$0.00	\$1,230.00	0 SY
3	Subgrade Compaction	4.1	SY	\$ 195.12	\$ 799.99		4.1	0	\$0.00	\$799.99	0 SY
4	Geotextile Separation Fabric	4.1	SY	\$ 40.00	\$ 164.00		4.1	0	\$0.00	\$164.00	0 SY
5	4" MoDOT Type 5 Aggregate Base	4.1	SY	\$ 195.12	\$ 799.99		4.1	0	\$0.00	\$799.99	0 SY
6	6" PCC Repair	4.1	SY	\$ 600.00	\$ 2,460.00		4.1	0	\$0.00	\$2,460.00	0 SY
7	Crack Filling	232	LF	\$ 4.63	\$ 1,074.16		232	0	\$0.00	\$1,074.16	0 LF
8	Headwork Repair	1	LS	\$ 16,121.00	\$ 16,121.00		1	0	\$0.00	\$16,121.00	0 LS
9	East Clarifier Repair and Lining	1	LS	\$107,385.00	\$107,385.00		0.9	0.1	\$10,738.50	\$107,385.00	0.0 LS
10	Manhole Adjustment and Lining	1	EA	\$ 11,400.00	\$ 11,400.00		1	0	\$0.00	\$11,400.00	0 EA
11	Contingency	1	LS	\$ 15,000.00	\$ 15,000.00		0	0	\$0.00	\$0.00	1 LS

Contract Total	\$	160,677.14		\$10,738.50	\$145,677.14
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**CONTRACT CHANGE ORDER
SECTION 00941**

Change Order No. 1
Project No. 454-292 WWTP REPAIR PROJECT

Sheet of
Original _ of 6

Recommended: MECO Engineering Co., Inc.
(Engineer)

To: Smico Contracting Group, LLC
(Contractor)

From: City of Boonville MO

(Owner)

You are hereby directed to make the following changes:

I. Reason for change and effect on completion time (if any):
Remove Contingency from Project

II. Cost of work affected by this Change Order:

Item No.	Item Description	Bid Amount			Previous Change Orders		This Change Order		Revised Contract
		Quantity/Units	Unit Price	Value	C.O. #	Quantity Changed	Increase Qty. Decrease Qty.	Amount Added or Deducted	Quantity/Unit
11	Contingency	1 LS	\$ 15,000.00	\$15,000.00			-1 LS	\$ (15,000.00)	0 LS
Total This Sheet:								(\$15,000.00)	

1. Original Contract Amount: \$160,677.14
 2. Add or Deduct This Order Totals: (\$15,000.00)
 3. Add or Deduct Previous:
 (Line 4 of previous order)
 4. Total Add or Deduct to Date (2+3): (\$15,000.00)
 5. Revised Contract Amount (1+4): \$145,677.14

10/1/23
Recommended: [Signature] Engineer - MECO Engineering Company Date

Ordered: Owner Date

9-27-2023
Accepted: [Signature] Contractor Date

Change Order is subject to all provisions of the Contract Documents and is not in effect unless signed by all parties.

CONTRACT CHANGE ORDER
SECTION 00941

Change Order No. 2
Project No. 454-297
Project Name: Roadway Improvements 2023

Sheet of
Original _ of 6

Recommended: MECO Engineering Co., Inc.

(Engineer)

To: Frech Paving Co.

(Contractor)

From: City of Booville MO

(Owner)

You are hereby directed to make the following changes:

1. Reason for change and effect on completion time (if any):

Line Item 5: There were not any unsuitable material areas on the project therefore it is a deduct back to the City.
Line Item 6: There were not any unsuitable material areas on the project therefore, it is a deduct back to the City.
Line Item 7: Krohn Street after 2 years had areas in the road where the subgrade had failed under the asphalt therefore a full depth repair was required.
Line Item 8: Krohn Street after 2 years had areas in the road where the subgrade had failed under the asphalt therefore a full depth repair was required.
Line Item 9: Krohn Street after 2 years had areas in the road where the subgrade had failed under the asphalt therefore a full depth repair was required.
Line Item 10: The rest of the contingency was used for the extra construction that took place for this change order.
Line Item 18: Nelson Street needed an elevation change for the road to drain properly therefore the curb and gutter need to be risen and approaches need to be reconstructed.
Line Item 19: Nelson Street needed an elevation change for the road to drain properly therefore the curb and gutter need to be risen and approaches need to be reconstructed.
Line Item 20: Nelson Street needed an elevation change for the road to drain properly therefore extra edge milling and sweeping were required.
Line Item 21: Krohn Street after 2 years had areas in the road where the subgrade had failed under the asphalt therefore a full depth repair was required.
Line Item 22: On Main Street there was a water line break therefore a patch repair was required.

II. Cost of work affected by this Change Order:

Item No.	Item Description	Bid Amount		Previous Change Orders		This Change Order		Revised Contract
		Quantity/Units	Unit Price	Value	C.O. #	Quantity Changed	Increase Qty. Decrease Qty.	Amount Added or Deducted
5	Remove Unsuitable Materials	10 CY	\$82.50	\$825.00				
6	Rock Backfill in Unsuitable Areas	10 CY	\$82.50	\$825.00				
7	Subgrade Compaction	63 SY	\$1.60	\$100.80	CO#1	-360 SY	-10 CY	-\$825.00
8	Geotextile Separation Fabric	0 SY	\$2.95	\$0.00	CO#1	-360 SY	315 SY	\$504.00
9	6" Type 5 Aggregate	0 SY	\$13.05	\$0.00	CO#1	-360 SY	315 SY	\$929.25
16	Contingency	1 LS	\$40,000.00	\$40,000.00	CO#1	-0.88 LS	-0.12 LS	-\$4,616.50
18	Tear Out Approach	SY	\$105.20	\$0.00			17 SY	\$1,788.40
19	Pour New Approach	SY	\$250.50	\$0.00			17 SY	\$4,258.50
20	Additional Edge Milling / Sweeping	LS	\$1,000.00	\$0.00			1 LS	\$1,000.00
21	3" Base Asphalt	SY	\$26.57	\$0.00			315 SY	\$8,369.55
22	Main Street Water Line Break Patch Repair	SY	\$122.40	\$0.00			48 SY	\$5,875.20
Total This Sheet:								\$20,569.15

1. Original Contract Amount: \$164,810.70
2. Add or Deduct This Order Totals: \$20,569.15
3. Add or Deduct Previous: \$0.00
4. Total Add or Deduct to Date (2+3): \$20,569.15
5. Revised Contract Amount (1+4): \$185,379.85

Recommended: MECO Engineering Company

Date

Ordered: Owner

Date

Accepted: Contractor

Date

ORDINANCE APPROPRIATING MONEY

Be it Ordained by the Council of the City of Boonville as follows:

Section 1: For the purpose of paying salaries and various accounts against the City of Boonville, which have been allowed by the Council, at the regular meeting thereof on **October 16, 2023** the sum of **\$706,701.05**

General Fund	\$136,378.58
Sanitation	\$22,039.50
CIP Tax	\$23,116.24
Water Works	\$47,743.93
Capital Projects	\$0.00
Waste Water	\$56,466.94
Tourism	\$13,689.77
Gaming	\$132,157.81
Parks/Water	\$275,108.28
Kemper Sales Tax	\$0.00
Economic Development Projects	\$0.00

Section 2: The Accountant is hereby authorized and instructed to draw checks on the respective City bank accounts, in favor of the persons whose salaries and accounts have been allowed as above, amounting to **\$706,701.05** being the total amount of money above appropriated.

Section 3: This ordinance shall take effect and be in force from and after its passage. First reading on **October 16, 2023** read for the second time this **October 16, 2023** since a copy was made available prior to the meeting.

Approved **October 16, 2023**

Mayor

Endorsed **October 16, 2023** : I hereby certify that a sufficient sum of money stands to the credit of the City, unappropriated, in the various funds to meet the requirements of this ordinance.

Accountant

AN ORDINANCE OF THE CITY OF BOONVILLE, MISSOURI AUTHORIZING AND APPROVING AGREEMENTS/EASEMENTS WITH CLIMAVISION OPERATING, LLC FOR THE INSTALLATION OF A RADAR SYSTEM ON A CITY WATER TOWER FOR IMPROVED WEATHER FORECASTING; PROVIDING AN EFFECTIVE DATE THEREFORE; AND REPEALING ALL ORDINANCES IN CONFLICT WITH THIS ORDINANCE.

WHEREAS, Climavision Operating, LLC expressed an interest in installing radar systems on a water tower in Boonville, Missouri for enhanced and more accurate weather forecasting in Boonville and central Missouri; and

WHEREAS, following the presentation from Climavision Operating, LLC to the Boonville City Council on September 18th, 2023, the Council responded favorably to the proposal, recognizing that the weather radar will enable Cooper County EMA and emergency services provide more accurate weather information to citizens and improve planning for weather events; and

WHEREAS, the radar system is installed and maintained by Climavision Operating, LLC at no cost to the City of Boonville; and

WHEREAS, Climavision Operating, LLC will repair the water tower to pre radar system installation at no cost to the City of Boonville; and

WHEREAS, pending final engineering, the City and Climavision Operating, LLC intend to install the radar on the Hwy B water tower (“hospital water tower”).

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOONVILLE, MISSOURI, AS FOLLOWS:

SECTION 1: That the City of Boonville, Missouri hereby authorizes, approves, and accepts the lease agreement and easement with Climavision Operating, LLC as set forth in **Exhibit “A”** attached hereto and made a part hereof as fully as if set forth herein verbatim.

SECTION 2: This Ordinance shall take effect and be in full force from and after its passage and approval.

SECTION 3: That all ordinances or parts of ordinances in conflict with this ordinance are hereby repealed.

FIRST READING: October 2, 2023

READ FOR THE SECOND TIME AND PASSED THIS 16th DAY OF OCTOBER 2023, AFTER A COPY OF THIS ORDINANCE AND REFERENCE AGREEMENT HAS BEEN MADE AVAILABLE FOR PUBLIC INSPECTION PRIOR TO ITS FIRST AND SECOND READINGS.

President of the Council

APPROVED THIS 16th DAY OF OCTOBER 2023.

Ned Beach, Mayor

ATTEST:

Amber Davis, City Clerk

LEASE AGREEMENT

THIS LEASE AGREEMENT (“Lease”) is made this _____ day of _____, 2023 (“Today’s Date”) by and between the City of Boonville, Missouri, a municipal corporation, having an address of 401 Main Street, Boonville, Missouri (“Landlord”) and CLIMAVISION OPERATING, LLC having an address of 552 E. MARKET STREET (SUITE 201) LOUISVILLE, KY 40202 (“Tenant”).

1. PREMISES. Landlord hereby leases to Tenant, and Tenant hereby leases from Landlord, space on a water tower structure owned and operated by Landlord and certain land (collectively, the "Premises"), namely said tower being located at _____ (lat/long) (the "Tower"), said demised space on the Tower being that area used to install and attach the radar system as shown on Exhibit "A" attached hereto (“Radar System”), and said demised land being a tract of land upon which a concrete pad, utility meter(s), emergency generator, and control cabinet will be placed thereon, (“Ground Equipment”), as depicted on Exhibit "B" attached hereto, together with non-exclusive easements on property adjacent thereto and improvements thereon for access, parking, utilities, inspection, maintenance, installation, construction, operation, repair, removal, and placement at, from, of, and on the Tower and the tract of land for the Ground Equipment, all as more specifically described in this Lease (including but not limited to the non-exclusive Access Easement and Utility Easement described in Section 6 and on Exhibits "A" and “B”).

2. USE. Tenant has the right to use the Premises for the purposes of installing, constructing, maintaining, upgrading, repairing, operating, inspecting, and removing (i) the Radar System, and (ii) the Ground Equipment (together Radar System and Ground Equipment constituting “Site Improvements”), as further described in this Lease. Tenant shall submit construction plans to Landlord and obtain written approval of Landlord before beginning any construction activities on the Premises. With Landlord’s prior approval of Tenant’s construction plans, Tenant, or its agents or contractors, shall install the Site Improvements and utility lines thereto on the Tower in accordance with good and accepted engineering practices. Tenant has the right to make alterations of the Radar System or Ground Equipment from time to time, so long as such alterations do not adversely affect the structural integrity to the Tower or interfere with its use as a water tower and the alternations are approved in advance by Landlord. Tenant shall have the rights to (i) select the position on the water tank on which the Radar System will be located, and (ii) run electrical and communications lines to and from and to the Radar System and Ground Equipment, provided, however, that installation of the Radar System and Ground Equipment shall not be done so as to cause the water tank to be structurally inadequate or to interfere with Landlord’s use of the water tank. Tenant has the right to place logo on radar referenced in Exhibit A. Landlord agrees that Tenant may access, and Landlord shall grant access to, the Premises for regular maintenance and as needed for urgent maintenance, provided that Tenant shall provide notice to Landlord prior to accessing the Premises for such purposes.

Landlord Contact details for notification purposes:

Name: Ms. Kate Fjell

Title: City Administrator

Tower Lease v3.0 last revised 07/21/2023

Office number: (660) 882-2332

Email:

Back-up Contact in case of urgent requests:

Name: Doug Abele

Title: Legal Counselor

Cell number: 660-621-1611

Office number: 660-882-6611

Email: dabele@c-magic.com

Please notify radarops@climavision.com if this point of contact changes.

Provided that Tenant complies with the terms of this Lease, nothing contained herein shall be deemed to give any third party the right to use or occupy any portion of the ground space occupied by the Ground Equipment or any area of the Tower actually occupied by the equipment of Tenant.

Landlord acknowledges that Tenant's plans as presently submitted for the Premises do not interfere with Landlord's current water tank operations. In the event that Landlord subsequently determines that Tenant's operation of the Radar System interferes materially and unreasonably with Landlord's water tank operations, then Landlord shall so notify Tenant and shall provide specific deficiencies for Tenant to address such interference (Landlord acknowledging that operation of the Radar System on the Tower is essentially feasible and any notice shall not be designed to make operation of the Radar System impractical). Tenant shall have ninety (90) days to cure such deficiencies and remove such unreasonable interference. In the event Tenant does not cure the deficiencies within the aforementioned ninety (90) day period, Landlord may terminate this Lease with written notice to Tenant and Tenant shall completely remove the Radar System and equipment in accordance with Section 7 below.

3. INITIAL TERM; RENT. INITIAL TERM; RENT. This Lease shall commence ninety days after Today's Date on _____ ("Lease Commencement Date"), and shall continue for a period of twenty (20) years from such Lease Commencement Date (the "Initial Term"), provided that the Landlord shall have the right to terminate this Lease upon notice to Tenant in the event it is not provided access to the Data twelve (12) months from Lease Commencement Date, provided further that it has not been granted Data access prior to its notification of termination. During the Initial Term, the Tenant shall pay to Landlord rent in kind in the form of access, and a limited license, to the weather data collected from the Radar System (the "Data"). Access to the Data will be provided to county leadership and public safety officials via a link to secure, password protected website. Landlord will be given a password to access the Data and such password may be used by the Landlord and any of its employees, provided that it shall be kept confidential and secure. Landlord shall have a limited, nonexclusive, nontransferable, royalty-free license to use and modify the Data solely for its internal county governmental purposes, including for forecasting, public alerts, and emergency preparation activities to improve response and enhance safety. In no event shall Landlord redistribute, publish, transfer, sell or otherwise provide the Data or any parts thereof to any other person. All Data is provided to Landlord 'AS IS' and without warranty of any kind, express or implied, and Landlord acknowledges and agrees that Tenant shall have no liability whatsoever arising from Landlord's use or distribution of such Data.

4. **EXTENSION OF TERM.** Tenant shall have the option to extend the term of this Lease for one (1) additional consecutive twenty (20) year period. Said option for the extended term shall be deemed automatically exercised without notice by Tenant to Landlord unless Tenant gives Landlord written notice of its intention not to exercise such option, in which case, the term of this Lease shall expire at the end of the then current term. All references herein to the term of this Lease shall include the term as it is extended as provided in this Lease. The annual rental for the extended term shall be the same as the prior term and shall be payable in the same manner as the annual rental for the initial term.

5. **GOVERNMENT APPROVALS.** Landlord shall cooperate with Tenant's efforts to obtain and maintain in effect all certificates, permits, licenses and other approvals ("Permits") required by governmental authorities for Tenant's use of the Premises. Tenant will perform all acts and bear all expenses as necessary to obtain and maintain any required Permits. Landlord agrees to execute and deliver any applications, maps, certificates, or other documents and to provide such other information that may be required in connection with Tenant's obtaining the Permits. If at any time during the term of this Lease, Tenant is unable to use the Premises for weather surveillance in the manner intended by Tenant due to imposed zoning conditions or requirements, or in the event that any necessary Permit is finally rejected or any previously issued Permit is canceled, expires, lapses, or is otherwise withdrawn or terminated by the applicable governmental authority, or soil boring tests or radio frequency propagation tests are found to be unsatisfactory so that Tenant will be unable to use the Premises for weather surveillance in the manner intended by Tenant, Tenant shall have the right to terminate this Lease by written notice to Landlord. Upon such termination, this Lease shall become null and void and Landlord and Tenant shall have no other further obligations to each other, other than Tenant's obligation to remove its property as hereinafter provided.

6. **ACCESS AND UTILITIES:** Subject to the final sentence of this Section, Tenant and its employees, agents, contractors, and utility companies are hereby given and granted a non-exclusive easement for ingress, egress, and regress to and from the Premises and easements over, under, upon, and across the Building and adjoining lands and rights-of-way owned by Landlord on a twenty-four (24) hour daily basis for the purpose of erection, installation, operation, inspection, repair, maintenance, and removal of the Site Improvements and other necessary appurtenances and an easement thereon for telephone lines, power lines, cables, and wires used in connection with the Site Improvements ("Access Easement"). Access Easement for ingress, egress, and regress and such easement for utilities shall be over existing roads, parking lots, and/or roads on the property. Tenant shall have the right but not the obligation to improve the Access Easement by grading, graveling, or paving it; provided, however that Tenant shall be obligated to repair any damage to such easement property caused by Tenant, or its agents or employees. Landlord grants to Tenant and to such power or telephone company ("Utility Company" or "Utility Companies") a non-exclusive easement for such utilities as may be reasonably necessary to serve the Premises over that property (the "Utility Easement"). The Utility Easement shall be for the installation, operation, inspection, maintenance, and repair (whether by Tenant or by Tenant's designated Utility Companies) of necessary utilities from the point of connection with the Utility Companies' distribution networks to the Building and Radar System. The Utility Easement shall be sufficiently wide for providing the applicable utilities to the Premises. It is understood that Tenant and the utility companies providing services to Tenant shall have access to all areas of the Premises and other lands and rights-of-way owned or leased by Landlord and described on Exhibits A and B as necessary for installation, operation, inspection,

upgrade, maintenance, and/or repair of such services. Landlord shall advise Tenant of any utility company requesting an easement under, over, upon and/or across the Premises. Tenant shall be solely responsible for and promptly pay all charges for gas, electricity, telephone service, or any other utility used or consumed by Tenant on the Premises. If necessary, Tenant shall have an electrical current meter and gas meter installed at the Premises for Tenant's electrical usage, and gas usage respectively and the cost of such meter(s) of installation, maintenance, upgrade, and repair thereof shall be paid for by Tenant. Notwithstanding anything to the contrary in the foregoing, prior to it or its contractors accessing the Tower and any secured area on the Premises, Tenant, its contractors and utility companies shall provide notice to Landlord at least three (3) business days in advance of such access (more immediate notice and access obtaining in the case of an emergency).

7. TENANT TERMINATION RIGHT; REMOVAL OR REPLACEMENT OF TOWER. Subject to Section 9, Tenant shall the right terminate this Lease at any time upon six (6) months' notice to Landlord. In the event that Landlord decides to remove or replace the Tower, Landlord shall give Tenant six (6) months' notice of its intent to remove or replace same. If the Tower is not replaced, then at the expiration of said six (6) months' notice period, this Lease shall terminate, and Tenant shall remove all of its Radar System and in accordance with Section 9 below, provided, however, that if Landlord has another water tower suitable, in the reasonable judgement of Tenant, for the placement of the Radar System, it shall offer Tenant space on such water tower for the Radar System and Ground Equipment on the same terms provided herein. If the Tower is replaced either at the Premises or at another location ("Replaced Tower"), then Tenant shall have the right, at its option exercisable upon notice to Landlord prior to the aforementioned six (6) months' notice period, to lease space on the Replaced Tower and Premises (or surrounding land if at different location) for the Site Improvements on the same terms as provided herein.

8. OPERATION.

(a) Tenant shall operate the Radar System in compliance with all present and future rules and regulations imposed by any local, state, or Federal authority having jurisdiction with respect thereto including, without limitation, the rules and regulations of the Federal Communications Commission (hereinafter referred to as the "FCC") and the Federal Aviation Administration (hereinafter referred to as the "FAA"). Prior to the erection, construction, or installation of the Site Improvements, or making any modifications thereto, Tenant shall comply with the following:

(i) All plans and specifications for the Site Improvements and any subsequent modifications thereto shall be submitted to the Landlord for review by Landlord or Landlord's engineers and/or consultants;

(ii) All plans shall comply with all provisions of any approved Permit;

(iii) Tenant shall obtain any required approvals of all Federal, state, and local agencies and all Permits. Upon request, Tenant shall promptly deliver to Landlord written proof of compliance with all applicable Federal, state, and local laws, rules, and regulations.

(b) The Radar System shall be clearly marked to show Tenant's name, address,

telephone number and the name of the person to contact in case of emergency, FCC call sign, frequency(s), and location. All coaxial cable shall be identified in the same manner at the bottom and at the top of each transmission line.

(c) If Tenant obtains telephone service, it shall be Tenant's sole expense, and the telephone lines installed for the benefit of Tenant and the location thereof shall be approved by Landlord.

(d) Tenant shall have a separate electric meter if required by Landlord, and Tenant shall pay separately and directly to the electricity supplier for the installation of the meter and for any electricity used by Tenant's Radar System or Site Improvements.

9. MAINTENANCE AND REMOVAL OF EQUIPMENT.

(a) Tenant at its own cost and expense shall be responsible for maintenance and repair of the Site Improvements, in accordance with all applicable laws, rules and regulations and this Lease.

(b) RF Exposure to Maintenance Workers

(i) The Tenant shall furnish the Landlord a certified engineering report that clearly identifies the distance from its antennas in which the maximum RF exposure limits will be exceeded by maintenance workers engaged in painting, repairing, or servicing the water tank or tower support structure. The report shall be in accordance with the maximum radio frequency exposure limits adopted by the Federal Communications Commission (FCC) for non-ionizing radiation. Calculations shall be based upon the combined radiation of all co-located cellular, paging, and wireless transmitters at the water tank site.

(ii) The Tenant shall provide a 24-hour telephone number for the purpose of contacting someone who can turn off the transmitters when Landlord must do maintenance on the water tank or tower support structure if it is necessary to approach the RF restricted zone around the antennas. Tenant hereby informs Landlord that the minimum amount of time necessary to respond to such a request is three (3) business days.

For water tank maintenance notifications, email radarops@climavision.com.

Alternate contact information is below:

Tara Leigh Goode
552 East Market Street, Suite 201
Louisville, KY 40202
Tara.goode@climavision.com
859.473.4433

Other than emergency maintenance, Landlord shall use best efforts to minimize

maintenance on the Tower that affects the operation of the Radar System. Subject to the foregoing, Landlord agrees to furnish Tenant with a schedule of any routine or planned maintenance of the water tank or tower support structure that may require workers to be within any maximum RF exposure area when such schedule is developed.

(c) Upon the expiration or earlier termination of this Lease, Tenant shall remove all of Tenant's Radar System and the generator on the Ground Equipment from the Premises. Any and all removal of Tenant's Radar System and generator shall be performed in a workmanlike manner without any interference, damage or destruction to any other equipment structures or operations at the Premises or any other equipment of other licensees thereon, and shall be done at the sole expense of the Tenant. Any and all interference or damage caused to the Premises or equipment of other licensees by such removal shall be promptly eliminated or repaired by and at the expense of the Tenant.

11. LIABILITY AND INDEMNITY. Tenant agrees to indemnify and save the Landlord harmless from all third party claims (including costs and expenses of defending against such claims) arising or alleged to arise from any negligent act, negligent omission, or intentional tort of Tenant or Tenant's agents, employees, or contractors occurring during the term of this Lease in or about the Premises. Tenant agrees to use and occupy the Premises at Tenant's own risk and hereby releases Landlord from all claims for any damage or injury to persons or property to the full extent permitted by law. It is understood and agreed, however, that this hold harmless and indemnification does not apply to damage or injury to persons or property caused by the negligence of Landlord. The provisions of this Section 11 shall survive the termination of this Lease. Landlord shall be liable for any damage to the Radar System or Tenant equipment caused by it, its contractors or its invitees to the Premises.

12. DAMAGE OR DESTRUCTION OF THE SITE. If Tenant's Radar System is placed upon a structure of Landlord's which is destroyed in whole or in part by fire, storm, or other causes to the extent that Tenant's Radar System cannot function, then Tenant, in its sole discretion, may elect to terminate this Lease by giving written notice thereof to Landlord within thirty (30) days of the date said destruction (in whole or in part) occurred. If this Lease is canceled, the payments required herein shall terminate as of the date of such casualty. Landlord shall not be responsible or liable to Tenant for any loss, damage or expense that may be occasioned by any structural or power failure or by the destruction of or damage to the Tower.

13. INSURANCE. Tenant shall keep in full force and effect during the Initial Term and any renewal period of this Lease a comprehensive general liability insurance policy, including blanket contractual and completed operations coverage with limits of liability of at least \$2,000,000.00 in respect to bodily injury, including death, arising from any one occurrence, and \$2,000,000.00 in respect of damage to property arising from any one occurrence. Said insurance policy shall be endorsed to include Landlord as an additional insured. Tenant shall, prior to the installation of the Radar System, furnish to Landlord a certificate of insurance confirming that the insurance coverage as specified herein is in full force and effect. All of Tenant's insurance requirements may be satisfied through any combination of excess liability and/or umbrella policies.

14. END OF AGREEMENT – EQUIPMENT. The Radar System, Ground Equipment, with the exception of the concrete pad, and site improvements of every kind and nature constructed,

erected, installed, or placed by Tenant on the Tower, shall be and remain the property of Tenant and none shall be treated as fixtures or become part of the property of Landlord.

15. NOTICES. All notices required to be given hereunder shall be given in writing, certified or registered mail, or by overnight courier at the respective addresses of the parties set forth herein or at such other address as may be designated in writing by either party. Notice by overnight courier shall be deemed given the next business day after sent and if given by mail shall be deemed given three days after the date of mailing thereof as follows:

Tenant's address for notice purposes is:

CLIMAVISION

ATTN: TARA GOODE or EMILY PAWSAT

552 E. MARKET STREET (SUITE 201) LOUISVILLE, KY 40202

PARTNERSHIPS@CLIMAVISION.COM

Landlord's address for notice purposes is:

CITY OF BOONVILLE, MISSOURI

ATTN: CITY ADMINISTRATOR, KATE FJELL

401 MAIN STREET

BOONVILLE, MO 65233

and a separate copy to:

DOUGLAS ABELE

BOONVILLE CITY ATTORNEY

422 E. SPRING STREET

BOONVILLE, MO 65233

16. DEFAULT. Subject to Paragraph 2 with respect to interference with water tower operations, this Lease may be terminated upon the failure of a party to comply with the terms of the Lease and such party fails to cure the default within thirty (30) days of receipt of notice from the non-defaulting party, provided that no default shall occur if the nature of the cure is such that it cannot reasonably be cured within said thirty (30) day period and the defaulting party has commenced the cure within said period and diligently pursues the cure to completion. The following, which shall not be exclusive, shall constitute a default by Tenant hereunder: (i) abandonment of either the Radar System or Ground Equipment; (ii) the filing of any case, proceeding or other action under any existing or future law of any jurisdiction, domestic or foreign, relating to bankruptcy, insolvency, reorganization or relief of debtors, seeking to have an order of relief entered with respect to Tenant; or seeking reorganization, arrangement, adjustment, winding-up, liquidation, dissolution, composition or other relief with respect to Tenant or its debts; or (iii) the making by Tenant of an assignment or any other arrangement for the general benefit of creditors under any state statute. In the case of an uncured Tenant default, Landlord shall be entitled at Landlord's option to terminate this Agreement and to remove Tenant Radar System, site improvements, or other personal property on the Premises at Tenant's cost and expense. The rights and remedies stated in this Lease are not exclusive and the parties, in the event of a breach hereof or a dispute, are entitled to pursue any of the remedies provided herein, by law or in equity.

17. SUBLETTING AND ASSIGNMENT BY TENANT. Tenant may, with Landlord's written consent (which shall not be unreasonably withheld), assign or sublet any or all of Tenant's

interest in this Lease, any part thereof, the leaseholder's interest of Tenant created hereby and/or any or all of Tenant's right, title, and interest in and to any or all of the Radar System and Ground Equipment, except that Tenant may assign or pledge this Lease without the consent of Landlord to any bank or financial institution in connection with a financing. Any said assignee or sublessee of this Lease shall be bound by the terms of this Lease.

18. DEBT SECURITY. Tenant may, without Landlord's consent, pledge, mortgage, convey by deed of trust, assign, create a security interest in, or otherwise execute and deliver any and all instruments for the purpose of securing any bona fide indebtedness or evidence thereof any or all of Tenant's interest in this Lease, any part thereof, the leaseholder's interest of Tenant created hereby, and any and all of Tenant's right, title, and interest in and to any and all of the Radar System and Ground Equipment. Promptly on Tenant's or Tenant's lender's request, Landlord shall execute and deliver, and shall assist in facilitating the execution and delivery of, all documents requested by any of the Tenant's lenders which are consistent with the terms of this Agreement including but not limited to waivers of Landlord's right to levy or distrain upon for rent any of Tenant's property given as security for a debt, consents that none of the described improvements shall become fixtures, consents as to procedure for any of Tenant's lenders' sale of the Radar System and Ground Equipment, consents to Tenant's assignment to any lender(s) of any and all of Tenant's interest in or to this Lease and the Radar System and Ground Equipment. Failure of Landlord and all other necessary persons and entities to execute and deliver to any of Tenant's lender(s) all document requested by said lender(s) in conformance with this agreement shall entitle Tenant to terminate this Lease immediately without any further obligation to Landlord.

19. TITLE. Landlord represents and warrants to Tenant that Landlord has good and marketable title to the Premises, Access Easement, and Utility Easement, free and clear of all liens, encumbrances, and exceptions. Landlord shall warrant and defend the same to Tenant against the claims and demands of all persons and entities.

20. INSPECTIONS. Landlord, shall permit Tenant during the term of this Lease and any extension thereof, free ingress and egress to the Premises by Tenant and its employees, agents and contractors to conduct strength analyses, subsurface boring tests, radio frequency tests and such other tests, investigations and similar activities as Tenant may deem necessary, at the sole cost of Tenant. Tenant and its employees, agents, and contractors shall have the right to bring the necessary vehicles and equipment onto the Premises and the surrounding property ("Landlord's Surrounding Property") to conduct such test, investigations, and similar activities. Tenant shall indemnify and hold Landlord harmless against any loss or damage for personal injury and physical damage to the Premises, Landlord's Surrounding Property, or the property of third parties resulting from any such tests, investigations and similar activities.

21. SURVEYS. Landlord also hereby grants to Tenant the right to survey the Premises and Landlord's Surrounding Property or portion thereof, at Tenant's sole expense, and the legal description of the Premises.

22. TOWER ANALYSIS. Landlord agrees to furnish Tenant, promptly on Tenant's request, with true copies of all structural or other analyses performed on the Tower within the two (2) years preceding Tenant's possession of space on the Tower. In the absence of said Tower analyses or if the most recent analyses are insufficient for Tenant's needs, Landlord, at Tenant's request, agrees to cooperate with Tenant in acquiring new analyses of the Tower. If Tenant requests any new

analyses of the Tower, Tenant shall be responsible for coordinating the said new analyses, and the cost of the new analyses shall be paid solely by Tenant. Notwithstanding the foregoing, in the event Tenant determines after reviewing any Tower analyses that the Tower is not structurally appropriate for Tenant's needs, Tenant may, at Tenant's option, either terminate this Lease or with the written consent of the Landlord pay the additional cost of reinforcing or otherwise making the Tower structurally appropriate for Tenant's use, provided all local, State, and Federal laws, rules, and regulations are adhered to at Tenant's expense in the construction process.

23. OTHER CONDITIONS AND PROVISIONS. (a) Notwithstanding the provisions of Section 22, except if Landlord in its reasonable discretion based on sound engineering principles determines that the Tower has become structurally unsound should be withdrawn from use as a water storage facility or has become hazardous or dangerous to persons or property for any reason or except if the Leased Premises, Access Easement, or Utility Easement are damaged due to Tenant's negligence or Tenant's agents' or contractors' negligence, Landlord, at Landlord's expense, shall maintain in good condition and repair the Tower, Landlord's land surrounding the Tower, the Access Easement, and the Utility Easement. Landlord has the responsibility of observing Tower lights requirements and keeping applicable records (including records of notification to Federal Aviation Administration of any failure or repairs of the Tower and any corrections of same). If Landlord has the duty to maintain and repair the Tower, Premises, Access Easement and/or Utility Easement and if Landlord fails to maintain and repair as required hereunder so as to render all or any part of the Leased Premises, Access Easement, or Utility Easement materially unusable for Tenant's intended use, rent shall abate while Landlord, at Landlord's expense, promptly restores the Leased Premises, Access Easement, and Utility Easement to its condition prior to such damage; provided, however, in the event Landlord fails to so repair the Leased Premises, Access Easement or Utility Easement, as the case may be, within thirty (30) days of said damage, Tenant shall have the right to; (i) terminate this Lease without further obligations from Tenant to Landlord hereunder and without affecting Tenant's remedies permitted by law, equity, and/or this Lease for Landlord's breach of this Lease; (ii) hold Landlord in default pursuant to Section 11, or (iii) to the extent feasible, repair or have qualified contractor repair the Leased Premises, Access Easement or Utility Easement, in a reasonable manner, as the case may be, and charge Landlord for the repairs with the right to withhold access to the Data until such reimbursement has been made by the Landlord,

(b) During the term of this Lease and its extensions, Landlord will not give, grant, or convey any future interest in or lease, license, or permission to use the Leased Premises, Access Easement, or Utility Easement if such transfer or use in any way adversely affects or interferes with Tenant's use of its Radar System and the Premises, Access Easement, or Utility Easement. In the event of any adverse effect or interference, Landlord shall take all steps necessary to correct and eliminate the adverse effect or interference within a reasonable time, including but not limited to Landlord taking prompt action to terminate or revoke the said other use, interest, lease, license, or permission, or otherwise remove the grantee and any interfering antenna(s) or other equipment from the Leased Premises, Access Easement, or Utility Easement.

(c) Landlord shall comply with all local, State, and Federal laws, rules, and regulations required by it to be performed as Landlord hereunder and owner of the Tower.

(d) Tenant shall comply with all local, State, and Federal laws, rules, regulations required by it to be performed as Tenant hereunder.

24. **QUIET ENJOYMENT.** Landlord covenants that Tenant shall peaceably and quietly hold and enjoy the right to use the Leased Premises, Access Easement, and Utility Easement on the terms and conditions and for the purposes stated herein during the term of this Lease, as it may be extended, without hindrance, ejection, or molestation by Landlord or any person or persons claiming under Landlord. .

25. **BINDING ON SUCCESSORS.** The covenants and conditions contained herein shall apply to and bind the heirs, successors, executors, administrators and assigns of the parties.

26. **GOVERNING LAW.** The parties intend that this Lease and the relationship of the parties shall be governed by the laws of the state of the address of the landlord first stated above.

27. **ENTIRE AGREEMENT.** All of the representations and obligations of the parties are contained herein, and no modification, waiver or amendment of this Lease or of any of its conditions or provisions shall be binding upon a party unless agreed to in writing by the other party.

28. **SEVERABILITY.** If any section, subsection, term or provision of this Lease or the application thereof to any party or circumstance shall, to any extent, be invalid or unenforceable, the remainder of said section, subsection, term or provision of this Lease or the application of same to parties or circumstances other than those to which it was held invalid or unenforceable, shall not be affected thereby and each remaining section, subsection, term or provision of this Lease shall be valid or enforceable to the fullest extent permitted by law.

29. **FURTHER ASSURANCES.** Each of the parties agree to do such further acts and things and to execute and deliver such additional agreements and instruments as the other may reasonably require to consummate, evidence or confirm this Lease.

30. **WAIVER OF LANDLORD'S LIENS.** Landlord hereby waives any and all lien rights it may have, statutory or otherwise concerning the Tenant's Facilities or any portion thereof which shall be deemed personal property for the purposes of this Lease, whether or not the same is deemed real or personal property under applicable laws, and Landlord gives Tenant and its mortgagees the right to remove all or any portion of the same from time to time, whether before or after a default under this Lease, in Tenant's and/or its mortgagee's sole discretion and without Landlord's consent.

31. **HAZARDOUS MATERIALS.** As of the Lease Commencement Date of this Lease: (1) Tenant hereby represents and warrants that it shall not use, generate, handle, store or dispose of any Hazardous Material in, on, under, upon or affecting the Property in violation of any applicable law or regulation, and (2) Landlord hereby represents and warrants that (i) it has no knowledge of the presence of any Hazardous Material located in, on, under, upon or affecting the Property in violation of any applicable law or regulation; (ii) no notice has been received by or on behalf of Landlord from any governmental entity or any person or entity claiming any violation of any applicable environmental law or regulation in, on, under, upon or affecting the Property; and (iii) it will not permit itself or any third party to use, generate, handle, store or dispose of any Hazardous Material in, on, under, upon, or affecting the Property in violation of any applicable law or regulation. Landlord and Tenant shall each indemnify, defend and hold the other harmless from

and against all Losses (specifically including, without limitation, attorneys', engineers', consultants' and experts' fees, costs and expenses) arising from (i) any breach of any representation or warranty made in this Paragraph by such party; and/or (ii) environmental conditions or noncompliance with any applicable law or regulation that result, in the case of Tenant, from operations in or about the Property by Tenant or Tenant's agents, employees or contractors, and in the case of Landlord, from the ownership or control of, or operations in or about, the Property by Landlord or Landlord's predecessors in interest, and their respective agents, employees, contractors, tenants, guests or other parties. The provisions of this Paragraph shall apply as of the Lease Commencement Date of this Lease and survive termination of this Lease. "Hazardous Material" means any solid, gaseous or liquid wastes (including hazardous wastes), regulate TITLE:_____d substances, pollutants or contaminants or terms of similar import, as such terms are defined in any applicable environmental law or regulation, and shall include, without limitation, any petroleum or petroleum products or by-products, flammable explosives, radioactive materials, asbestos in any form, polychlorinated biphenyls and any other substance or material which constitutes a threat to health, safety, property or the environment or which has been or is in the future determined by any governmental entity to be prohibited, limited or regulated by any applicable environmental law or regulation.

IN WITNESS WHEREOF, the undersigned have executed this Lease as of the date (Today's Date) first above written .

LANDLORD:

CITY OF BOONVILLE, MISSOURI

ATTEST:

SIGNATURE: _____

SIGNATURE: _____

NAME: _____

NAME: _____

TITLE: _____

TITLE: _____

TENANT:

CLIMAVISION

ATTEST:

SIGNATURE: _____

SIGNATURE: _____

NAME: _____

NAME: _____

TITLE: _____

TITLE: _____

BILL NO: 2023-029

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF BOONVILLE, MISSOURI APPROVING THE FINAL SITE PLAN FOR 5 STAR TRUCK WASH AT 1610 MID AMERICA INDUSTRIAL COURT, BOONVILLE, COOPER COUNTY, MISSOURI; PROVIDING AN EFFECTIVE DATE THEREFORE AND REPEALING ALL ORDINANCES IN CONFLICT WITH THIS ORDINANCE.

WHEREAS, 5 Star Truck wash is proposing to improve the property at 1610 Mid America Industrial Court; and

WHEREAS, City staff met and communicated with property owner's engineer to work out the details of construction and site planning and to ensure the plans are in compliance with the City's zoning ordinances and planning standards; and

WHEREAS, final plans were presented to the Planning and Zoning Commission, which voted on October 10, 2023, to approve the final site plans. The plans include **Exhibit A**, herein incorporated, and attached hereto this ordinance. The Commission has recommended their approval by the Council.

WHEREAS, the City Council has evaluated the site plans for compatibility with the use of abutting sites, the safety and convenience of vehicle and pedestrian traffic and in view of the potential economic benefit to the City of Boonville and finds them to be appropriate to further economic development of the City.

NOW THEREFOR, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF BOONVILLE, MISSOURI AS FOLLOWS:

SECTION 1: That the final site plan as shown and indicated in **Exhibit A**, attached hereto and made a part hereof, at 1610 Mid American Industrial Court in the City of Boonville, Cooper County, Missouri should be and is hereby approved.

SECTION 2: This ordinance shall take effect and be in full force from and after its passage; and be approval granted herein shall be valid for a period not to exceed 12 months thereafter.

READ FOR THE FIRST TIME 16th DAY OF OCTOBER 2023

READ FOR THE SECOND TIME AND PASSED THIS 6TH DAY OF NOVEMBER 2023, AFTER A COPY OF THIS ORDINANCE AND REFERENCED PLANS HAVE BEEN MADE AVAILABLE FOR PUBLIC INSPECTION PRIOR TO ITS READING.

PRESIDENT OF THE COUNCIL

APPROVED THIS 6TH DAY OF OCTOBER 2023

Ned Beach, Mayor

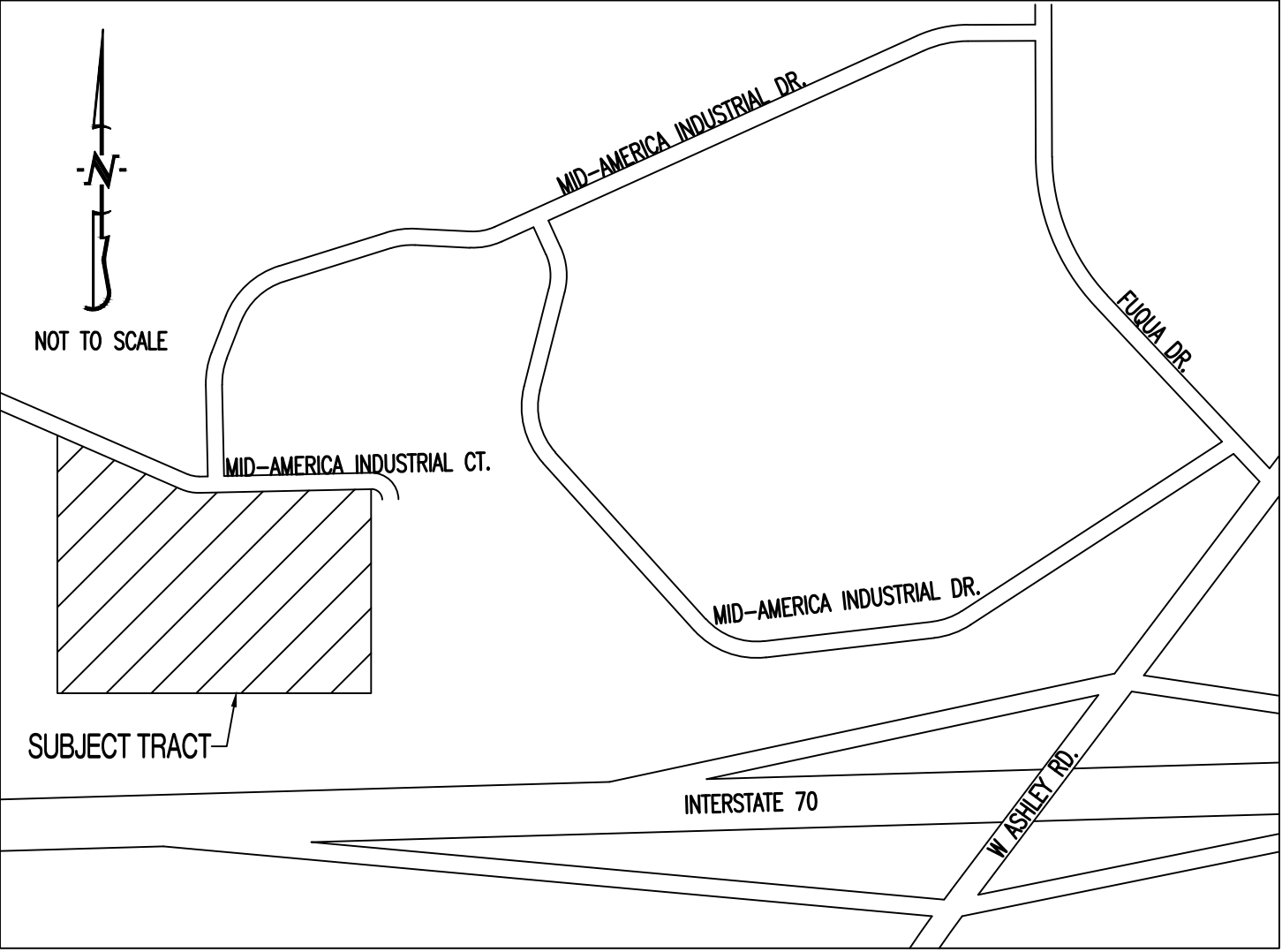
ATTEST:

Amber Davis, City Clerk

5 STAR TRUCK WASH

MID AMERICA INDUSTRIAL COURT, BOONVILLE MO

LOCATION MAP



FLOOD PLAIN STATEMENT:

THIS TRACT IS LOCATED IN ZONE X UNSHADED – AREAS DETERMINED TO BE OUTSIDE THE 1% ANNUAL CHANCE FLOOD AS SHOWN ON THE FEMA F.I.R.M. PANEL 29053C0150C & 29053C0135C, DATED MAY 3, 2011.

LEGAL DESCRIPTION:

LOT 14A OF MID-AMERICA INDUSTRIAL CENTRE, PLAT 3.

UTILITY COMPANIES:

LOCATES:

MISSOURI ONE CALL INC.
1022 B NORTHEAST DRIVE
JEFFERSON CITY, MO 65109
1-800-344-7483



ELECTRIC:

AMEREN MISSOURI ELECTRIC
301 2ND ST. BOONVILLE, MO 65233
314-554-4930

CO-MO ELECTRIC COOP.
29868 HIGHWAY 5
TIPTON, MISSOURI
660-433-5521

NATURAL GAS:

AMEREN MISSOURI GAS
BOONVILLE, MO
314-554-4942

TELEPHONE:

AT&T DISTRIBUTION
220 E. 5TH ST.
SEDALIA, MO 65201
660-829-0990

MNA-BLUEBIRD
2005 W. BROADWAY BLDG. A, SUITE 215,
COLUMBIA, MO 65203
573-777-4200

SANITARY SEWER:

CITY OF BOONVILLE
1200 LOCUST STREET
BOONVILLE, MO 65233
(660) 882-5257

FIBER OPTIC:

CO-MO ELECTRIC COOP.
29868 HIGHWAY 5
TIPTON, MISSOURI
660-433-5521

SUDENLINK COMMUNICATIONS
102 N WOODBINE RD
SAINT JOSEPH, MO 64506
(844) 874-7558

TELEVISION:

SUDENLINK COMMUNICATIONS
102 N WOODBINE RD
SAINT JOSEPH, MO 64506
(844) 874-7558

WATER:

CITY OF BOONVILLE
1200 LOCUST STREET
BOONVILLE, MO 65233
(660) 882-5257

COOPER COUNTY CPWSD 1
223 MAIN ST.
BOONVILLE, MO 65233
(660) 882-6455

GENERAL NOTES:

ANY PUBLIC STREET, STORM DRAIN, AND SANITARY SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE CITY OF BOONVILLE SPECIFICATIONS AND STANDARDS.

CONTRACTOR WILL BE RESPONSIBLE FOR PLACEMENT AND MAINTENANCE OF TRAFFIC CONTROL DEVICES NECESSARY TO COMPLETE THEIR PORTION OF WORK. THE DEVICES AND METHODS EMPLOYED WILL COMPLY WITH THE CURRENT VERSION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THIS LOT CONTAINS APPROXIMATELY 9.40 ACRES.

THIS LOT IS ZONED C-2 (CENTRAL COMMERCIAL DISTRICT).

THE STORM SEWER NETWORK DESIGN FOR THIS PROJECT IS BASED ON OPEN CHANNEL FLOW; THEREFORE THE HYDRAULIC GRADE LINE IS AT OR LESS THAN THE CROWN OF THE PIPE.

EXISTING UTILITIES SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL COORDINATE LOCATES (HORIZONTAL AND VERTICAL) PRIOR TO ANY EXCAVATION.

ALL EXCAVATION TO BE IN ACCORDANCE WITH SECTIONS 319.010-319.050, REVISED STATUTES OF THE STATE OF MISSOURI. SUCH COMPLIANCE SHALL NOT, HOWEVER, EXCUSE ANY PERSON MAKING ANY EXCAVATION FROM DOING SO IN A CAREFUL AND PRUDENT MANNER, NOR SHALL IT EXCUSE SUCH PERSON FROM LIABILITY FOR ANY DAMAGE OR INJURY TO UNDERGROUND UTILITIES RESULTING FROM THE EXCAVATION.

A GEOTECHNICAL EVALUATION HAS BEEN PERFORMED BY TERRACON. REFER TO REPORT NUMBER 15205021 DATED MARCH 18, 2020.

REFER TO STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR NARRATIVE REPORT AND BMP DESCRIPTIONS AND DETAILS.

ALL SLOPES ARE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.

IT IS THE INTENT OF THESE PLANS TO COMPLY WITH THE REQUIREMENTS OF THE MOENR CLEAN WATER COMMISSION.

ALL DISTURBED AREAS WITHIN THE "LIMITS OF DISTURBANCE" SHALL BE FINE GRADED, SEEDED, AND MULCHED.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL EROSION CONTROL DEVICES AND REMOVING THEM ONCE THE SITE IS STABILIZED.

ALL SANITARY SEWER PIPE TO BE PVC SDR 35 UNLESS OTHERWISE NOTED.

ALL SEWERLINES SHALL BE CONSTRUCTED AT LEAST 10 FEET HORIZONTALLY, EDGE TO EDGE, FROM ANY WATERLINE AND AT LEAST 24 INCHES VERTICALLY BETWEEN THE OUTSIDE LIMITS OF THE SANITARY SEWER AND WATERLINE. FOR CONDITIONS OTHER THAN THOSE IDENTIFIED ABOVE, CONTACT THE ENGINEER FOR SPECIFIC INSTRUCTIONS.

ALL HDPE PIPE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS. REFER TO DETAIL FOR PIPE BEDDING REQUIREMENTS.

IN ORDER TO TERMINATE A STATE OPERATING PERMIT THE MISSOURI DEPARTMENT OF NATURAL RESOURCES (MDNR) REQUIRES THAT THE PERMITTEE SUBMIT A COMPLETED FORM H (INCLUDED WITH THE APPROVAL PERMIT) TO THE MDNR. A PERMIT IS ELIGIBLE FOR TERMINATION WHEN EITHER PERENNIAL VEGETATION, PAVEMENT, BUILDINGS, OR STRUCTURES USING PERMANENT MATERIALS COVER ALL AREAS THAT HAVE BEEN DISTURBED. VEGETATIVE COVER SHALL BE AT LEAST 70% OF FULLY ESTABLISHED PLANT DENSITY OVER 100% OF THE DISTURBED AREA.

LAND DISTURBANCE SITES SHOULD BE INSPECTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 48 HOURS AFTER ANY STORM EVENT EQUAL TO OR GREATER THAN A 2-YEAR, 24-HOUR STORM HAS CEASED DURING A NORMAL WORK DAY OR WITHIN 72 HOURS IF THE RAIN EVENT CEASES DURING A NON-WORK DAY SUCH AS A WEEKEND OR HOLIDAY. ANY DEFICIENCIES SHALL BE NOTED IN A WEEKLY REPORT OF THE INSPECTION AND CORRECTED WITHIN SEVEN CALENDAR DAYS OF THE REPORT.

TOTAL DISTURBED AREA ON SITE ≈ 2.0 AC.

MISSOURI DNR LAND DISTURBANCE PERMIT NUMBER TO BE DETERMINED PRIOR TO CONSTRUCTION.

Sheet List Table

Sheet Number	Sheet Title	ORIGINAL 07/28/2023	REVISION 1 CITY COMMENTS 09/20/2023	REVISION 2	REVISION 3
CE 0	COVER SHEET	X	X		
CE 1	DEMOLITION PLAN	X	X		
CE 2	EROSION CONTROL PLAN	X			
CE 3	GRADING PLAN	X	X		
CE 4	UTILITY PLAN	X	X		
CE 5	SITE PLAN	X	X		
CE 6	STORM PROFILES AND DETAILS	X	X		
CE 7	SITE DETAILS	X	X		
CE 8	PRIVATE SPECIFICATIONS	X			

LEGEND OF SYMBOLS:

=====	EXISTING CURB	FF=XXXX	FINISHED FLOOR OF STRUCTURE
=====	PROPOSED CURB	XXX.XX TC	PROPOSED TOP OF CURB ELEVATION
=====	RIP RAP	XXX.XX TP	PROPOSED TOP OF PAVEMENT ELEVATION
=====	EXISTING STRUCTURE	XXX.XX FG	PROPOSED FINISHED GRADE ELEVATION
=====	EXISTING TREELINE	XXX.XX TW	PROPOSED TOP OF WALL
=====	PROPOSED TREELINE	XX	LOT NUMBER
=====	EDGE OF WATERWAY	X	STORM SEWER STRUCTURE LABEL
=====	EXISTING WATERLINE	X	SANITARY SEWER STRUCTURE LABEL
=====	PROPOSED WATERLINE	HP.	HIGH POINT
=====	EXISTING GAS LINE	LP.	LOW POINT
=====	PROPOSED GAS LINE	EXISTING SIGNS	EXISTING SIGNS
=====	EXISTING UNDERGROUND TELEPHONE	EXISTING POWER POLE	EXISTING POWER POLE
=====	EXISTING UNDERGROUND CABLE TELEVISION	EXISTING GAS VALVE	EXISTING GAS VALVE
=====	EXISTING HIGH VOLTAGE ELECTRIC	EXISTING WATER VALVE	EXISTING WATER VALVE
=====	EXISTING OVERHEAD ELECTRIC	EXISTING GAS METER	EXISTING GAS METER
=====	EXISTING UNDERGROUND ELECTRIC	EXISTING WATER METER	EXISTING WATER METER
=====	EXISTING OVERHEAD ELEC. & TV	EXISTING FIRE HYDRANT	EXISTING FIRE HYDRANT
=====	EXISTING OVERHEAD ELEC., TV & TELE.	MANHOLE	MANHOLE
=====	EXISTING SANITARY SEWER	EXISTING SANITARY SEWER LATERAL	EXISTING SANITARY SEWER LATERAL
=====	PROPOSED SANITARY SEWER	PROPOSED SANITARY SEWER LATERAL	PROPOSED SANITARY SEWER LATERAL
=====	EXISTING MINOR CONTOUR	PROPOSED TRACER WIRE TEST STATION BOX	PROPOSED TRACER WIRE TEST STATION BOX
=====	EXISTING MAJOR CONTOUR	EXISTING AIR CONDITIONER	EXISTING AIR CONDITIONER
=====	PROPOSED MINOR CONTOUR	EXISTING TELEPHONE PEDESTAL	EXISTING TELEPHONE PEDESTAL
=====	PROPOSED MAJOR CONTOUR	EXISTING ELECTRICAL TRANSFORMER	EXISTING ELECTRICAL TRANSFORMER
=====	100 YEAR FLOOD PLAIN	EXISTING ELECTRIC METER	EXISTING ELECTRIC METER
=====	FLOODWAY	EXISTING LIGHT POLE	EXISTING LIGHT POLE
=====	ORDINARY HIGH WATER MARK	EXISTING GUY WIRE	EXISTING GUY WIRE
=====	STREAM SIDE BUFFER		
=====	OUTER STREAM BUFFER		

REVISIONS:

NO.	DATE
ORIGINAL	07/28/2023
1	09/20/2023

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

ANDREW T. GREENE
MO LICENSE: 2020000043

PREPARED BY:
CROCKETT
ENGINEERS & ARCHITECTS
1009 W. WILSON BLVD., SUITE 100
COLUMBIA, MISSOURI 65203
(314) 487-0590
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000000001

OWNER:
THOMSEN TRUCK PROPERTIES, LLC
3311 ROAD
PALMIRA, NEBRASKA 68448

5 STAR TRUCK WASH
MID AMERICA INDUSTRIAL COURT
BOONVILLE, COOPER COUNTY, MISSOURI

DRAWING INCLUDES:

COVER SHEET

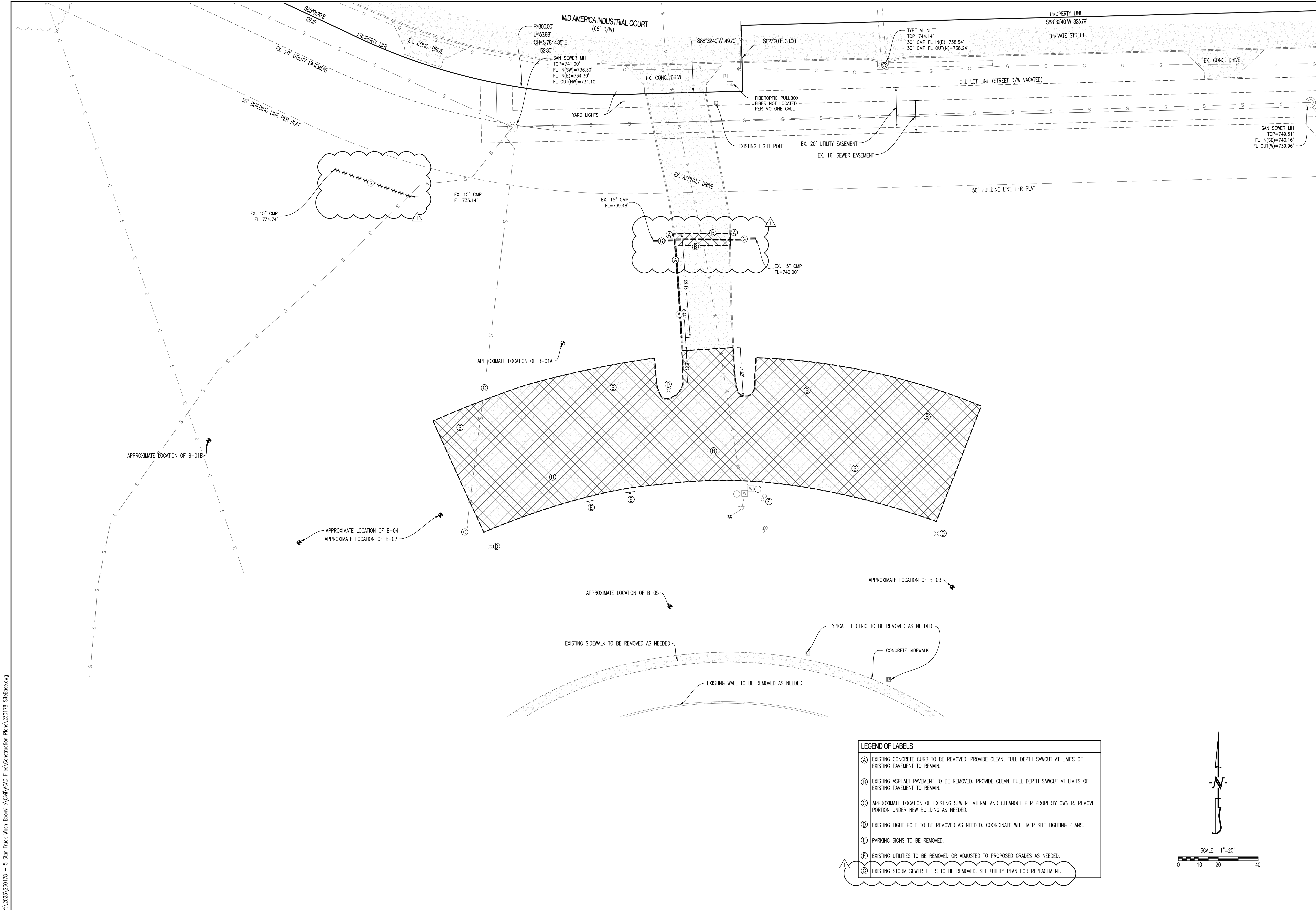
DESIGNED: ATG

DRAWN: NMD

PROJECT NO.: 230178

SHEET:

CE 0



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CROCKETT
ENGINEERS & CONSULTANTS
1000 W. N. Road, Suite 100
Boonville, Missouri 65003
(370) 447-0592
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
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PALMYRA, NEBRASKA 68448

5 STAR TRUCK WASH

MID AMERICA INDUSTRIAL COURT

BOONVILLE, COOPER COUNTY, MISSOURI

DRAWING INCLUDES:

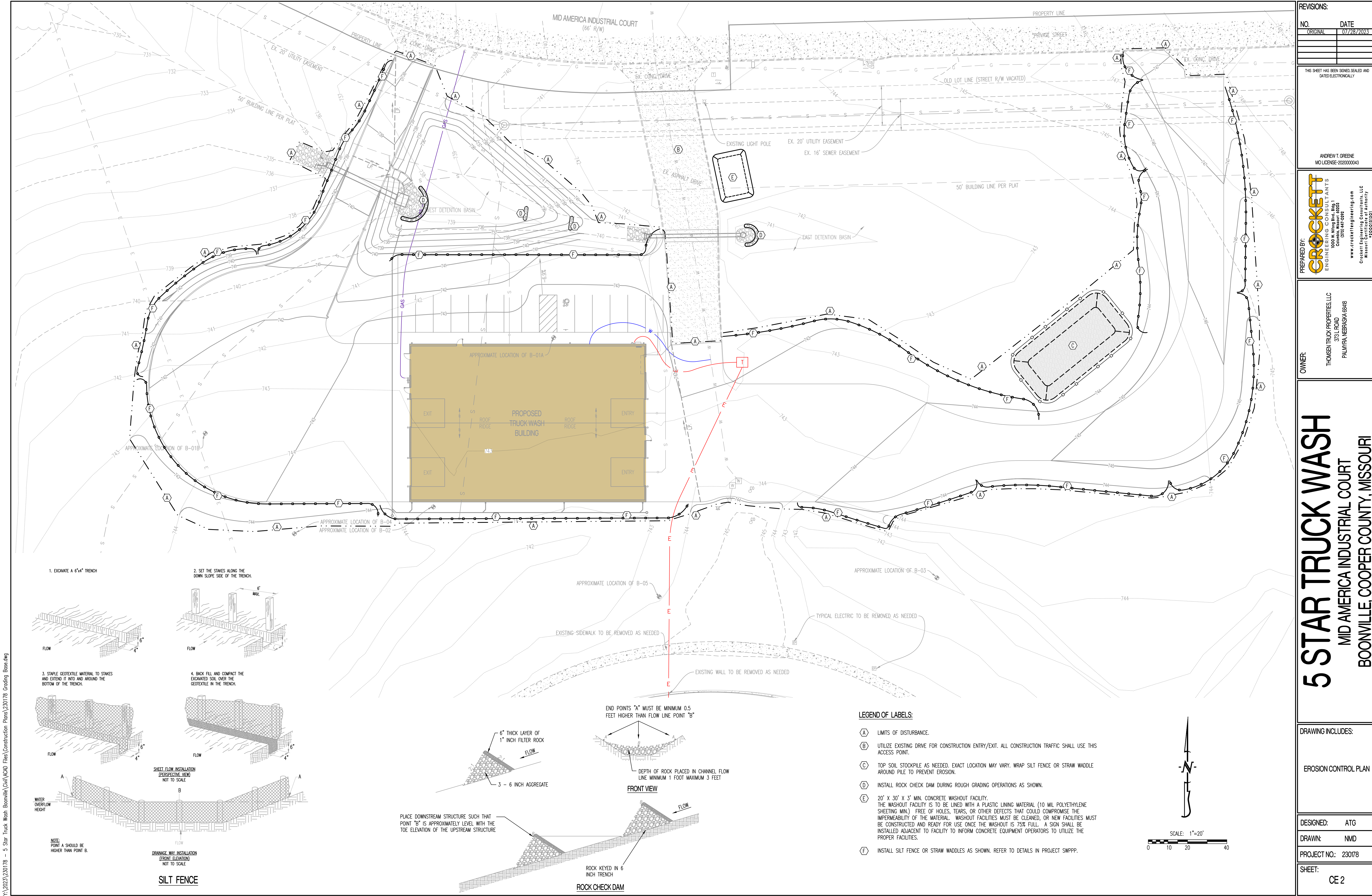
DEMOLITION PLAN

DESIGNED: ATG

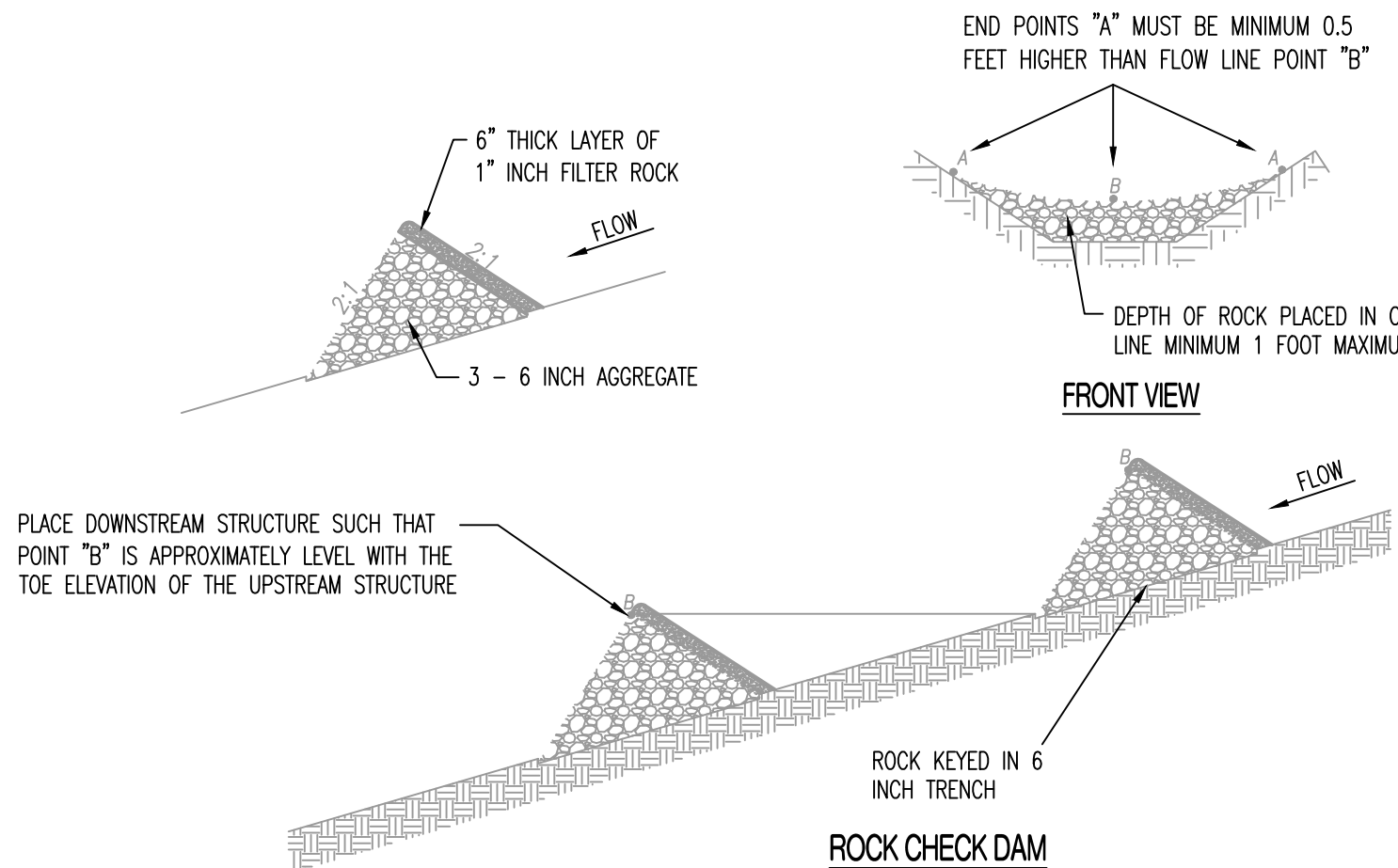
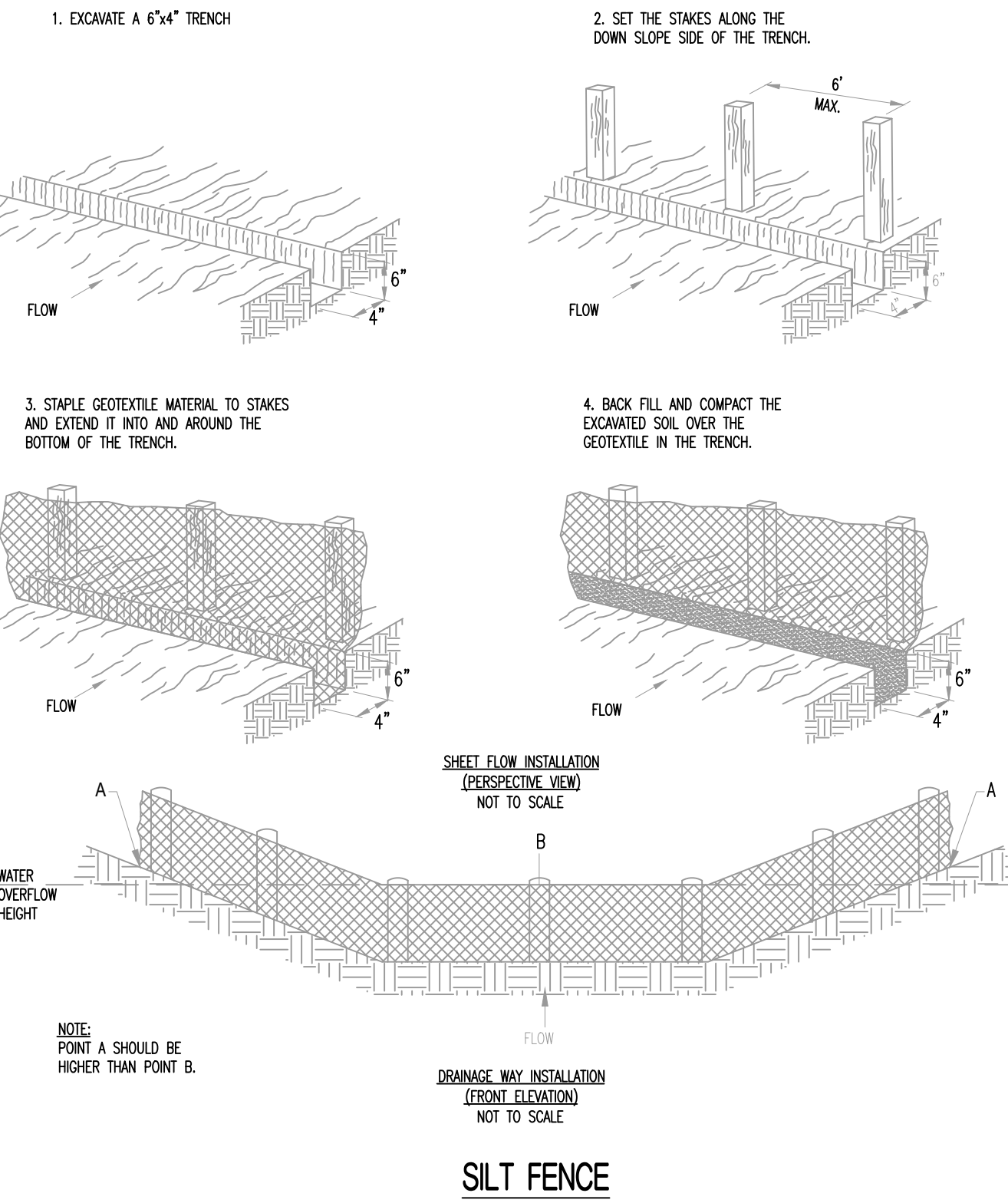
DRAWN: NMD

PROJECT NO: 230178

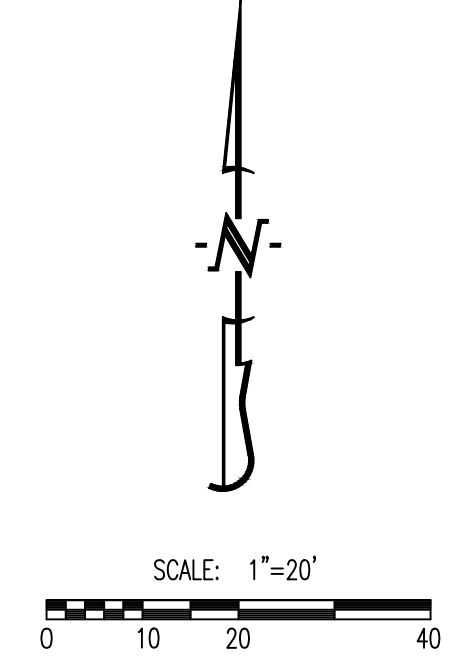
SHEET: CE1



Y:\2023\230178 - 5 Star Truck Wash Boonville Civil\A00 Files\Construction Plans\230178 Grading Base.dwg



- LEGEND OF LABELS:
- (A) LIMITS OF DISTURBANCE.
 - (B) UTILIZE EXISTING DRIVE FOR CONSTRUCTION ENTRY/EXIT. ALL CONSTRUCTION TRAFFIC SHALL USE THIS ACCESS POINT.
 - (C) TOP SOIL STOCKPILE AS NEEDED. EXACT LOCATION MAY VARY. WRAP SILT FENCE OR STRAW WADDLE AROUND PILE TO PREVENT EROSION.
 - (D) INSTALL ROCK CHECK DAM DURING ROUGH GRADING OPERATIONS AS SHOWN.
 - (E) 20' X 30' X 3' MIN. CONCRETE WASHOUT FACILITY. THE WASHOUT FACILITY IS TO BE LINED WITH A PLASTIC LINING MATERIAL (10 MIL POLYETHYLENE SHEETING MIN.) FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COULD COMPROMISE THE IMPERMEABILITY OF THE MATERIAL. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED AND READY FOR USE ONCE THE WASHOUT IS 75% FULL. A SIGN SHALL BE INSTALLED ADJACENT TO FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE PROPER FACILITIES.
 - (F) INSTALL SILT FENCE OR STRAW WADDLES AS SHOWN. REFER TO DETAILS IN PROJECT SWPPP.



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ANDREW T. GREENE
MO LICENSE 2020000043

PREPARED BY:

CROCKETT
ENGINEERS & PLANNERS
1000 W. Kings Blvd., Ste. 300
Columbia, Missouri 65203
(314) 487-0592
www.crockettengineering.com
Crockett Engineering Consultants, LLC
Missouri Certificate of Authority
#000000001

OWNER:

THOMSEN TRUCK PROPERTIES, LLC
331 L ROAD
PALMIRA, NEBRASKA 68448

5 STAR TRUCK WASH

MID AMERICA INDUSTRIAL COURT

BOONVILLE, COOPER COUNTY, MISSOURI

DRAWING INCLUDES:

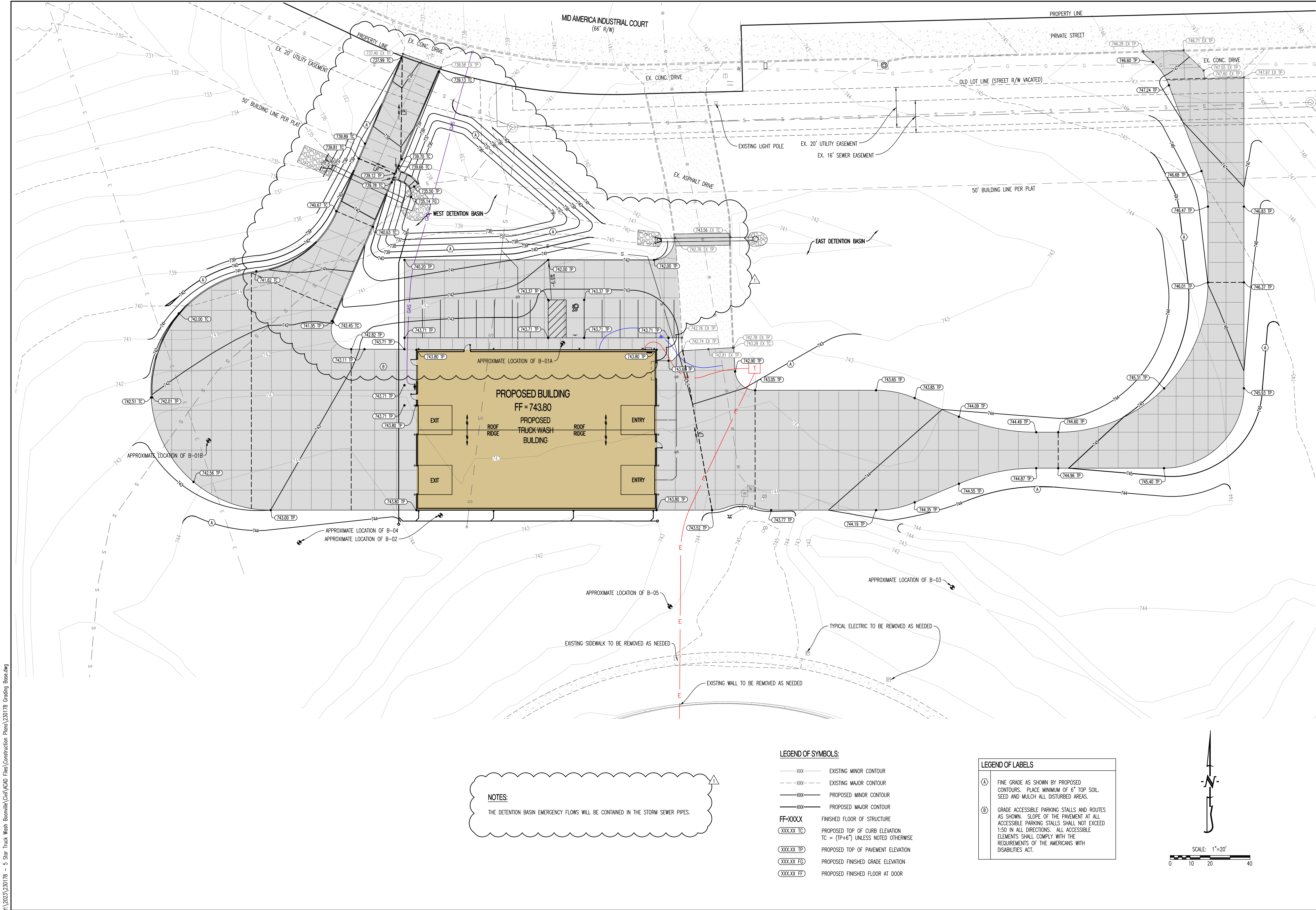
EROSION CONTROL PLAN

DESIGNED: ATG

DRAWN: NMD

PROJECT NO: 230178

SHEET: CE 2



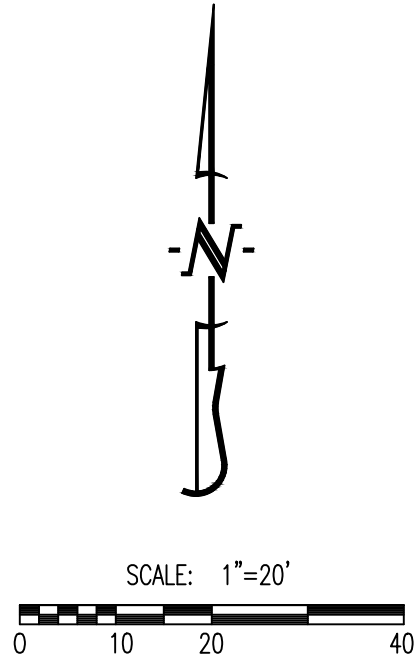
NOTES:
THE DETENTION BASIN EMERGENCY FLOWS WILL BE CONTAINED IN THE STORM SEWER PIPES.

LEGEND OF SYMBOLS:

- XX----- EXISTING MINOR CONTOUR
- - - - -XX- - - - - EXISTING MAJOR CONTOUR
- XX----- PROPOSED MINOR CONTOUR
- XX----- PROPOSED MAJOR CONTOUR
- FF=XXXX FINISHED FLOOR OF STRUCTURE
- XXX.XX TC PROPOSED TOP OF CURB ELEVATION
TC = (TP+6") UNLESS NOTED OTHERWISE
- XXX.XX TP PROPOSED TOP OF PAVEMENT ELEVATION
- XXX.XX FG PROPOSED FINISHED GRADE ELEVATION
- XXX.XX FF PROPOSED FINISHED FLOOR AT DOOR

LEGEND OF LABELS

- (A) FINE GRADE AS SHOWN BY PROPOSED CONTOURS. PLACE MINIMUM OF 6" TOP SOIL SEED AND MULCH ALL DISTURBED AREAS.
- (B) GRADE ACCESSIBLE PARKING STALLS AND ROUTES AS SHOWN. SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE PARKING STALLS SHALL NOT EXCEED 1:50 IN ALL DIRECTIONS. ALL ACCESSIBLE ELEMENTS SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT.



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1000 W. Kings Blvd., Suite 100
Columbia, Missouri 65203
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DRAWING INCLUDES:

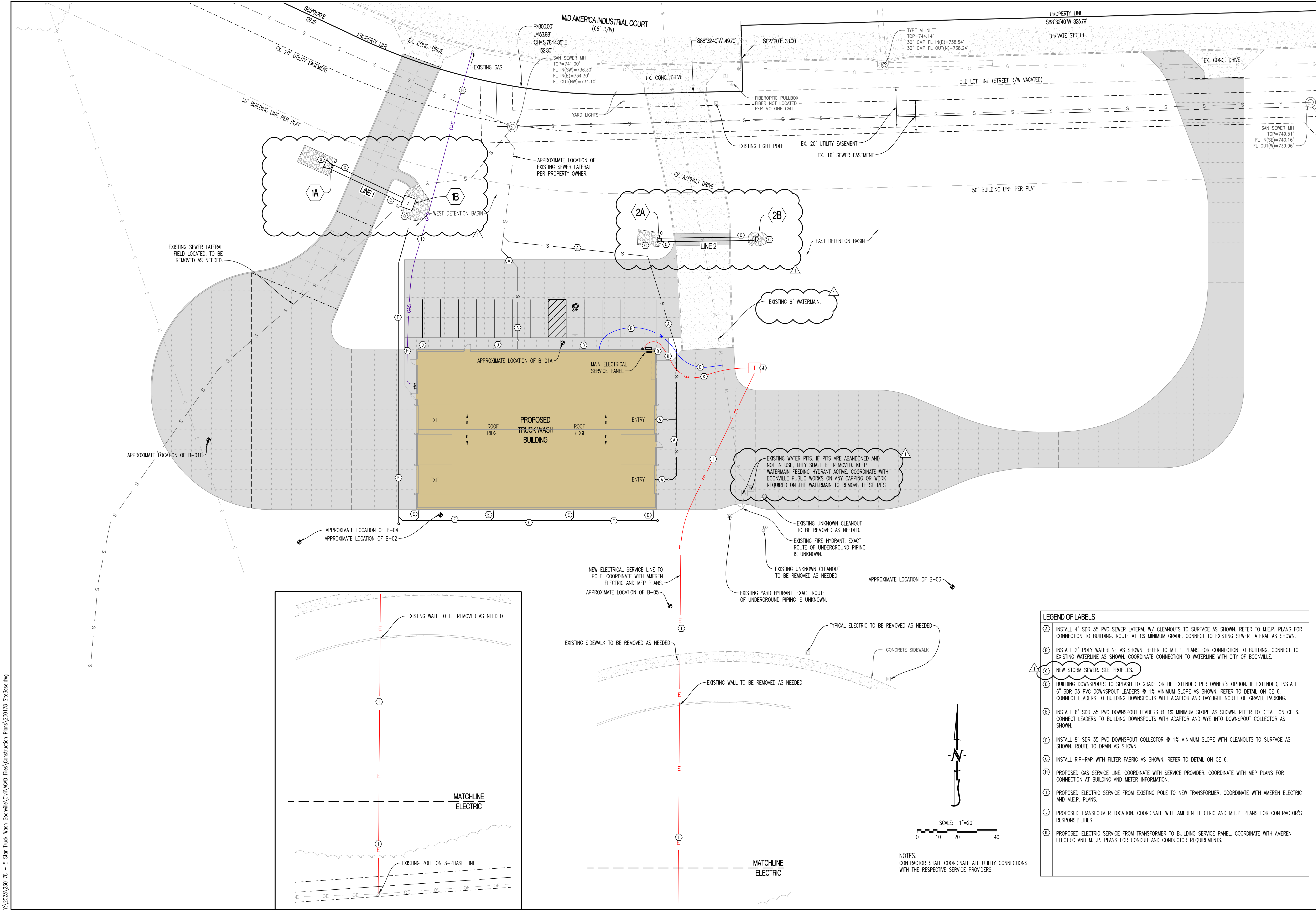
GRADING PLAN

DESIGNED: ATG

DRAWN: NMD

PROJECT NO: 230178

SHEET:
CE 3



LEGEND OF LABELS

1

6

INSTALL 4" SDR 35 PVC SEWER LATERAL W/ CLEANOUTS TO SURFACE AS SHOWN. REFER TO M.E.P. PLANS FOR CONNECTION TO BUILDING. ROUTE AT 1% MINIMUM GRADE. CONNECT TO EXISTING SEWER LATERAL AS SHOWN.

2

6

INSTALL 2" POLY WATERLINE AS SHOWN. REFER TO M.E.P. PLANS FOR CONNECTION TO BUILDING. CONNECT TO EXISTING WATERLINE AS SHOWN. COORDINATE CONNECTION TO WATERLINE WITH CITY OF BOONVILLE.

3

6

NEW STORM SEWER. SEE PROFILES.

4

6

BUILDING DOWNSPOUTS TO SPLASH TO GRADE OR BE EXTENDED PER OWNER'S OPTION. IF EXTENDED, INSTALL 6" SDR 35 PVC DOWNSPOUT LEADERS @ 1% MINIMUM SLOPE AS SHOWN. REFER TO DETAIL ON CE 6. CONNECT LEADERS TO BUILDING DOWNSPOUTS WITH ADAPTOR AND DAYLIGHT NORTH OF GRAVEL PARKING.

5

6

INSTALL 6" SDR 35 PVC DOWNSPOUT LEADERS @ 1% MINIMUM SLOPE AS SHOWN. REFER TO DETAIL ON CE 6. CONNECT LEADERS TO BUILDING DOWNSPOUTS WITH ADAPTOR AND WYE INTO DOWNSPOUT COLLECTOR AS SHOWN.

6

6

INSTALL 8" SDR 35 PVC DOWNSPOUT COLLECTOR @ 1% MINIMUM SLOPE WITH CLEANOUTS TO SURFACE AS SHOWN. ROUTE TO DRAIN AS SHOWN.

7

6

INSTALL RIP-RAP WITH FILTER FABRIC AS SHOWN. REFER TO DETAIL ON CE 6.

8

6

PROPOSED GAS SERVICE LINE. COORDINATE WITH SERVICE PROVIDER. COORDINATE WITH MEP PLANS FOR CONNECTION AT BUILDING AND METER INFORMATION.

9

6

PROPOSED ELECTRIC SERVICE FROM EXISTING POLE TO NEW TRANSFORMER. COORDINATE WITH AMEREN ELECTRIC AND M.E.P. PLANS.

10

6

PROPOSED TRANSFORMER LOCATION. COORDINATE WITH AMEREN ELECTRIC AND M.E.P. PLANS FOR CONTRACTOR'S RESPONSIBILITIES.

11

6

PROPOSED ELECTRIC SERVICE FROM TRANSFORMER TO BUILDING SERVICE PANEL. COORDINATE WITH AMEREN ELECTRIC AND M.E.P. PLANS FOR CONDUIT AND CONDUCTOR REQUIREMENTS.

NOTES:

CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH THE RESPECTIVE SERVICE PROVIDERS.

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CROCKETT ENGINEERS & PLANNERS

1000 W. Niles Blvd., Suite 100
Boonville, Missouri 65033
(370) 447-0592
www.crockettengineering.com
Missouri Certificate of Authority #000000001

OWNER:

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331 L ROAD
PALMIRA, NEBRASKA 68448

5 STAR TRUCK WASH

MID AMERICA INDUSTRIAL COURT

BOONVILLE, COOPER COUNTY, MISSOURI

DRAWING INCLUDES:

UTILITY PLAN

DESIGNED:

ATG

DRAWN:

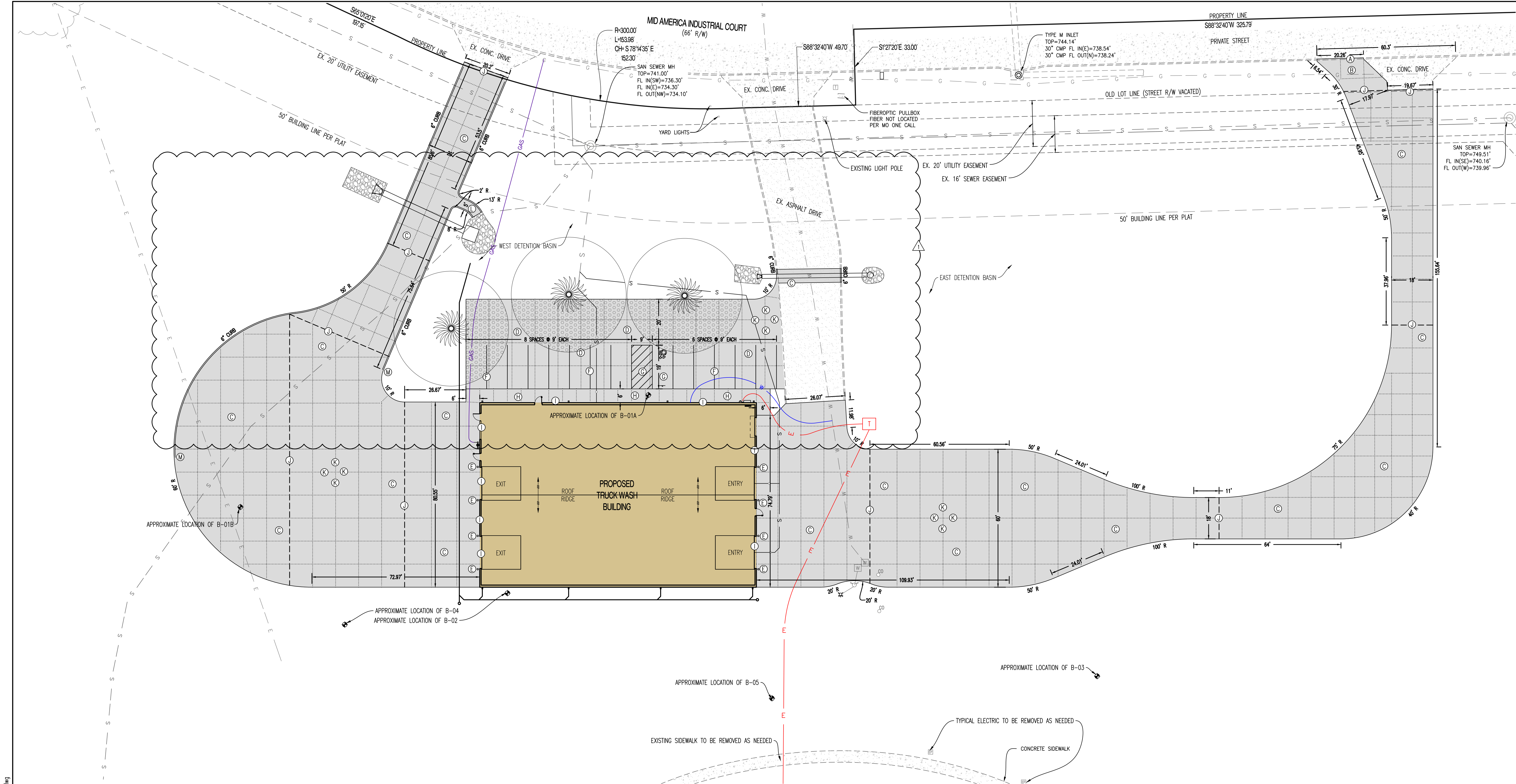
NMD

PROJECT NO:

230178

SHEET:

CE 4



LANDSCAPE COMPLIANCE:

SECTION 15.4 - SCREENING AND BUFFERING BETWEEN ZONING DISTRICTS:

WEST: NO REQUIREMENT
EAST: NO REQUIREMENT
SOUTH: NO REQUIREMENT

SECTION 15.5 - PARKING LOT LANDSCAPING:

STANDARD CANOPY TREES NEEDED TO SHADE AT LEAST 35% OF THE PARKING LOT AT MATURITY.
TOTAL PARKING LOT AREA = 5,380 SQ.FT.
35% = 1,883 SQ.FT.

ASSUME 1 STANDARD CANOPY TREE REACHES 50' WIDTH AT MATURITY

TOTAL SHADED AREA OF PARKING LOT FOR 3 TREES AT MATURITY = 2,340 SQ.FT.

PARKING LOT LANDSCAPING PLANTING TABLE:				
SYMBOL	QUANTITY	TYPE	ALLOWABLE SPECIES	SIZE
	3	STANDARD CANOPY TREE	SYCAMORE, OAK, HICKORY, MAPLE, ETC.	2.0" CALIPER

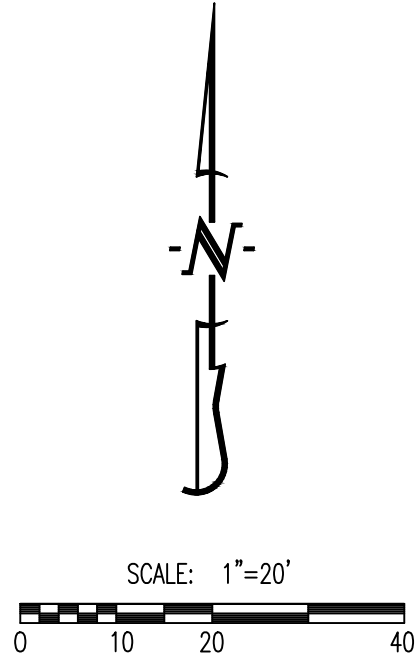
CALCULATIONS:

TOTAL LAND AREA:	9.40 AC
PARKING SUMMARY:	
SPACES REQUIRED:	
USE C-2 - 9,650 SQFT FLOOR SPACE	
(1 SPACE PER 1,000 SQFT):	10 SPACES
SPACES PROVIDED:	14 SPACES
ADA ACCESSIBLE SPACES PROVIDED:	1 SPACES

GENERAL NOTES:

1) THE PAVEMENT JOINTS SHOWN ARE A GRAPHICAL REPRESENTATION OF A POSSIBLE JOINT LAYOUT. CONTRACTOR TO PROVIDE SHOP DRAWINGS WITH JOINT LAYOUT FOR APPROVAL BY ENGINEER PRIOR TO POURING OF PAVEMENT.

- LEGEND OF LABELS**
- Ⓐ PERFORM HORIZONTAL SAWING OF CURB AS REQUIRED FOR NEW DRIVEWAY APPROACH.
 - Ⓑ WIDEN EXISTING DRIVEWAY ONTO PRIVATE STREET WITH HEAVY DUTY CONCRETE AS SHOWN. REFER TO PAVEMENT CROSS SECTION ON CE 7.
 - Ⓒ CONSTRUCT HEAVY DUTY CONCRETE W/ INTEGRAL CURB WHERE SHOWN. REFER TO PAVEMENT CROSS SECTION ON CE 7.
 - Ⓓ CONSTRUCT LIGHT DUTY CONCRETE AS SHOWN. REFER TO PAVEMENT CROSS SECTION ON CE 7.
 - Ⓔ INSTALL BOLLARDS. REFER TO DETAIL ON CE 7.
 - Ⓕ PAINT 4" PARKING STALL STRIPES AS SHOWN, COLOR WHITE. TYPICAL ALL STALLS EXCEPT ADA ACCESSIBLE STALLS. REFER TO PLAN FOR WIDTH AND DEPTH OF STALLS.
 - Ⓖ CONSTRUCT ADA ACCESSIBLE PARKING AREA WITH SIGNAGE AS SHOWN. PAINT 4" STRIPE AND ACCESSIBLE SYMBOL, COLOR BLUE. PAINT HATCH AREA AS SHOWN, COLOR BLUE. CONTRACTOR TO VERIFY SLOPE OF THE PAVEMENT AT ALL ACCESSIBLE STALLS SHALL NOT EXCEED 1:50. REFER TO DETAILS ON CE 7.
 - Ⓗ CONSTRUCT 4" THICK CONCRETE SIDEWALK AGAINST BUILDING AS SHOWN (MAXIMUM CROSS SLOPE AT 1:50). REFER TO CROSS-SECTIONS ON CE 7.
 - Ⓛ INSTALL 3/4" EXPANSION JOINT BETWEEN BUILDING AND PAVEMENT.
 - Ⓜ INSTALL 1" EXPANSION JOINT OR TYPE A ALTERNATE EXPANSION JOINT IN PAVING. REFER TO DETAIL ON CE 7.
 - Ⓚ INSTALL TYPE C SAW JOINT IN PAVEMENT (TYPICAL).
 - Ⓦ CONSTRUCT CONCRETE FLUME AS SHOWN. REFER TO DETAIL ON CE 7.
 - Ⓢ TRANSITION FROM 6" CURB TO 0" CURB. REFER TO GRADING PLAN.



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PREPARED BY:

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1000 W. Kings Blvd., Suite 100
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5 STAR TRUCK WASH

MID AMERICA INDUSTRIAL COURT

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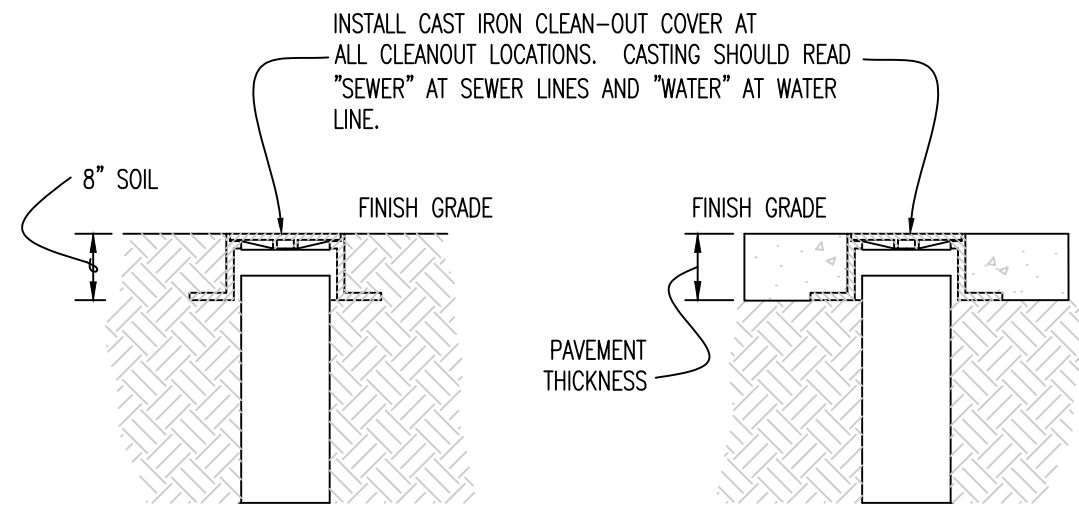
SITE PLAN

DESIGNED: ATG

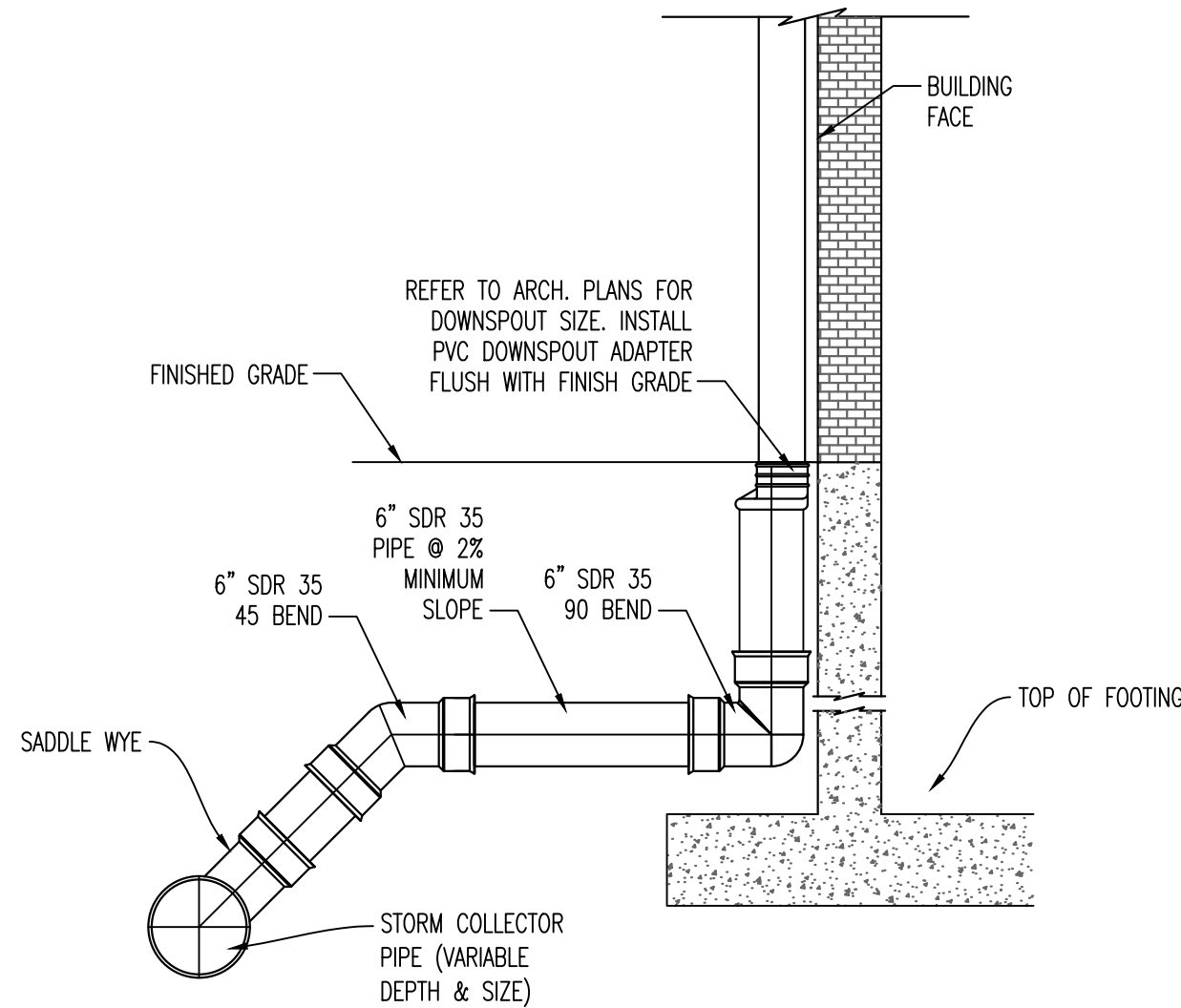
DRAWN: NMD

PROJECT NO: 230178

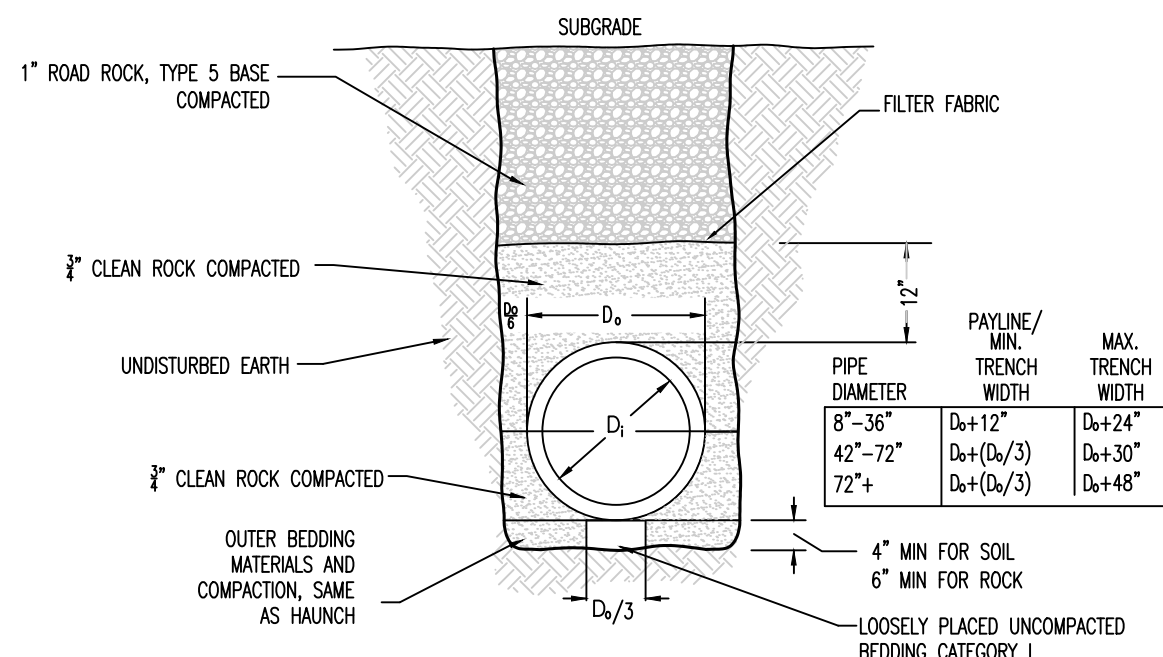
SHEET: CE 5



CLEANOUT COVERS

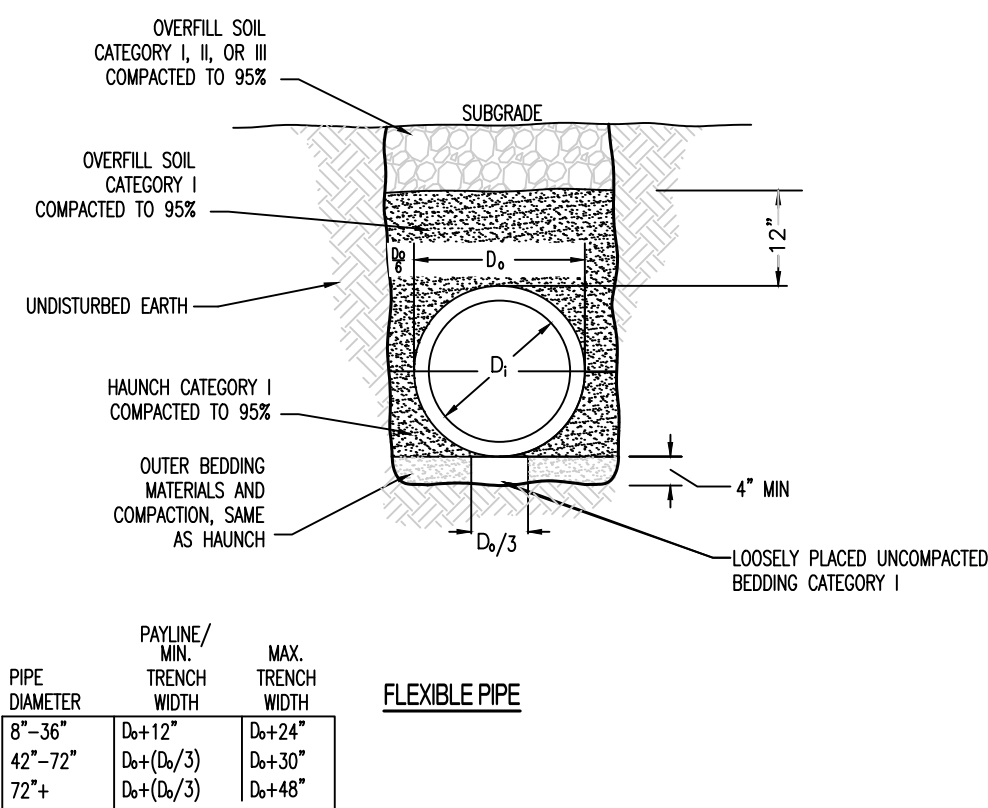


ROOF DRAIN DETAIL



FLEXIBLE PIPE

PRIVATE PIPE EMBEDMENT (UNDER PAVEMENT)



FLEXIBLE PIPE

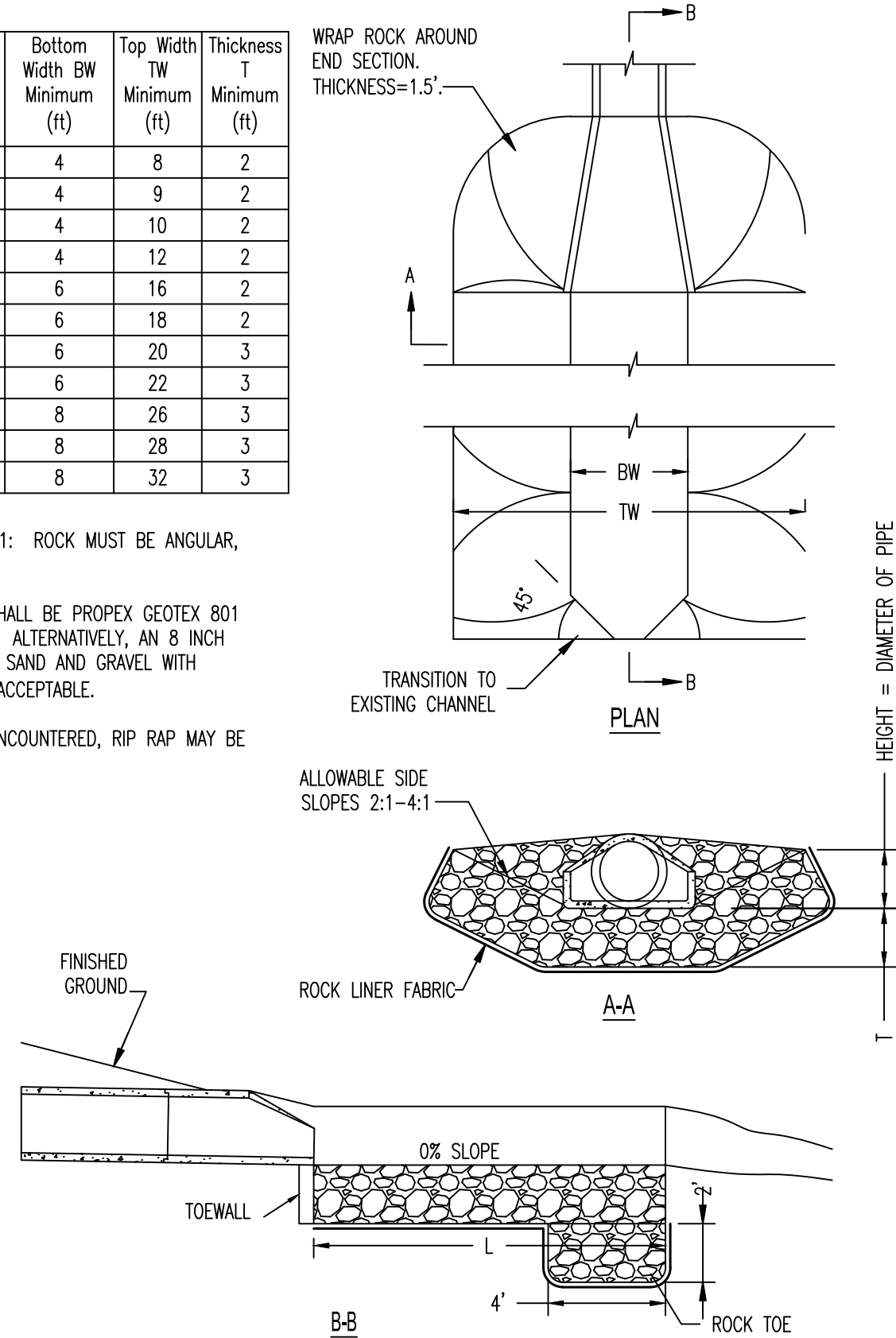
PRIVATE PIPE EMBEDMENT (NOT UNDER PAVEMENT)

Pipe Size (in)	Maximum Pipe Slope (%)	Length L (ft)	Bottom Width BW Minimum (ft)	Top Width TW Minimum (ft)	Thickness T Minimum (ft)
12	3.50	12	4	8	2
15	2.60	15	4	9	2
18	2.00	16	4	10	2
24	1.70	20	4	12	2
30	1.40	24	6	16	2
36	1.00	28	6	18	2
42	0.80	32	6	20	3
48	0.65	36	6	22	3
54	0.55	40	8	26	3
60	0.45	44	8	28	3
72	0.40	48	8	32	3

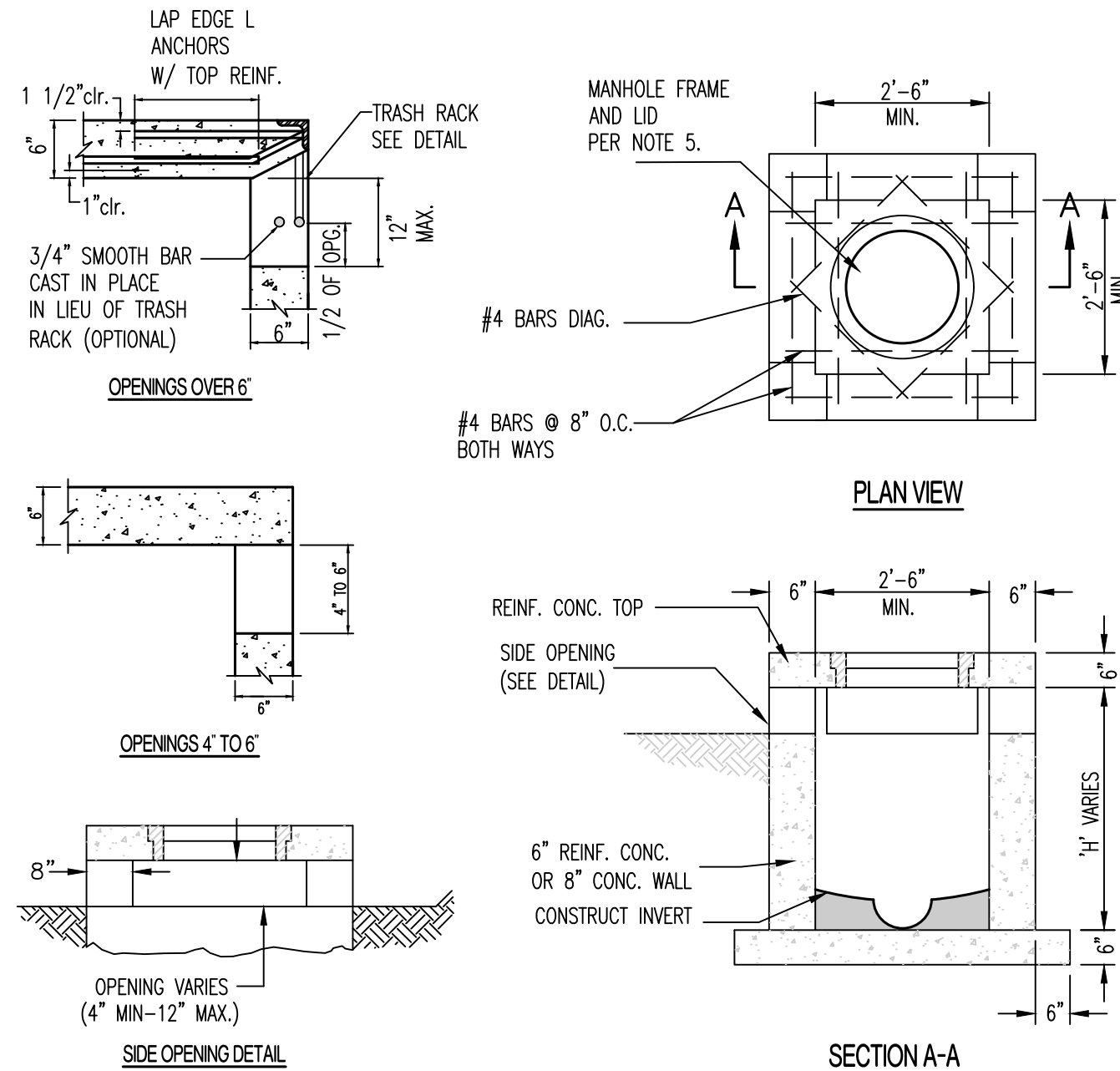
RIP RAP TO BE TYPE 1: ROCK MUST BE ANGULAR, HARD AND DURABLE.

ROCK LINER FABRIC SHALL BE PROPEX GEOTEX 801 OR APPROVED EQUAL. ALTERNATIVELY, AN 8 INCH BED OF WELL GRADED SAND AND GRAVEL WITH GRAVEL UP TO 3" IS ACCEPTABLE.

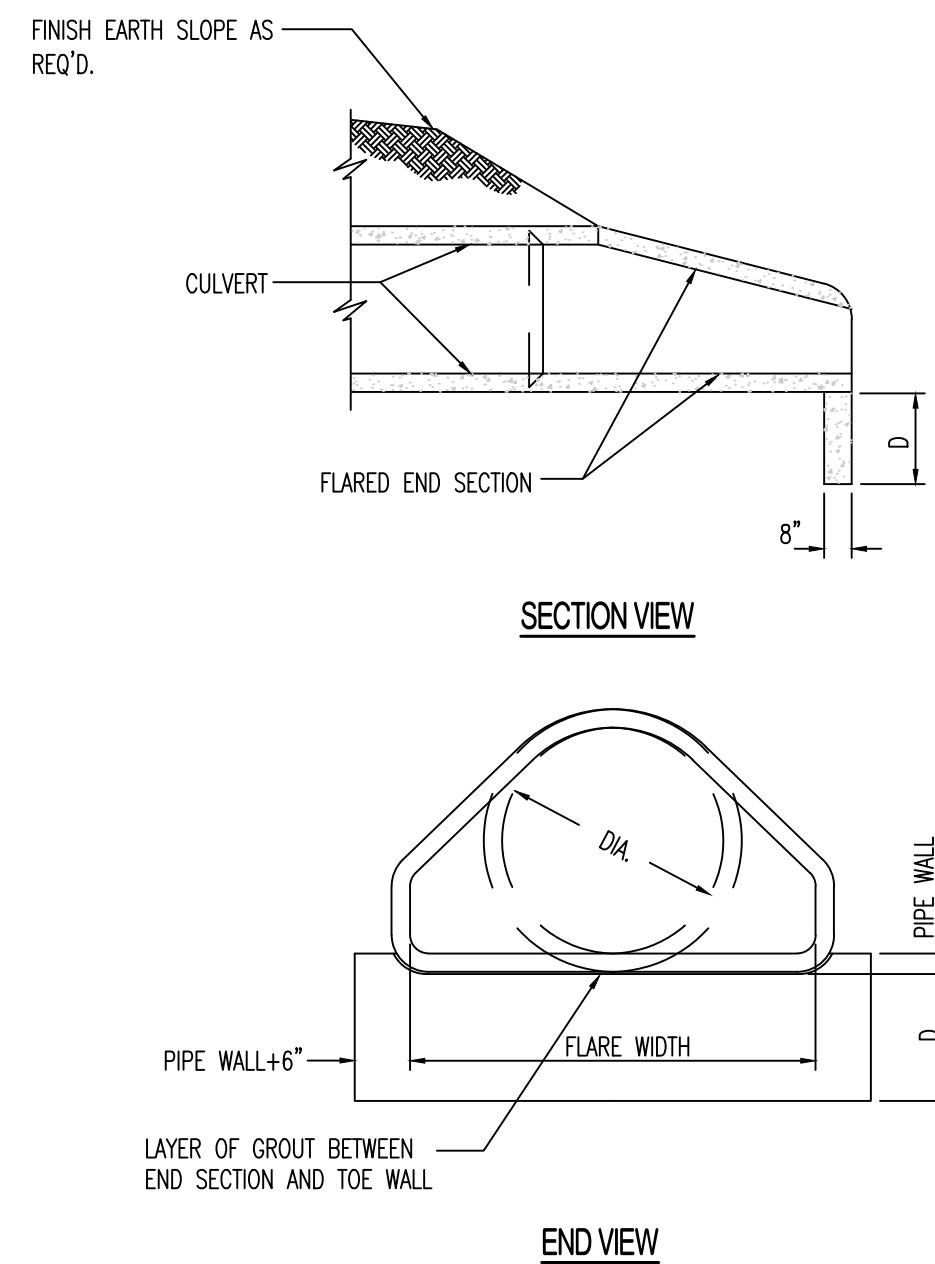
WHERE BEDROCK IS ENCOUNTERED, RIP RAP MAY BE OMITTED.



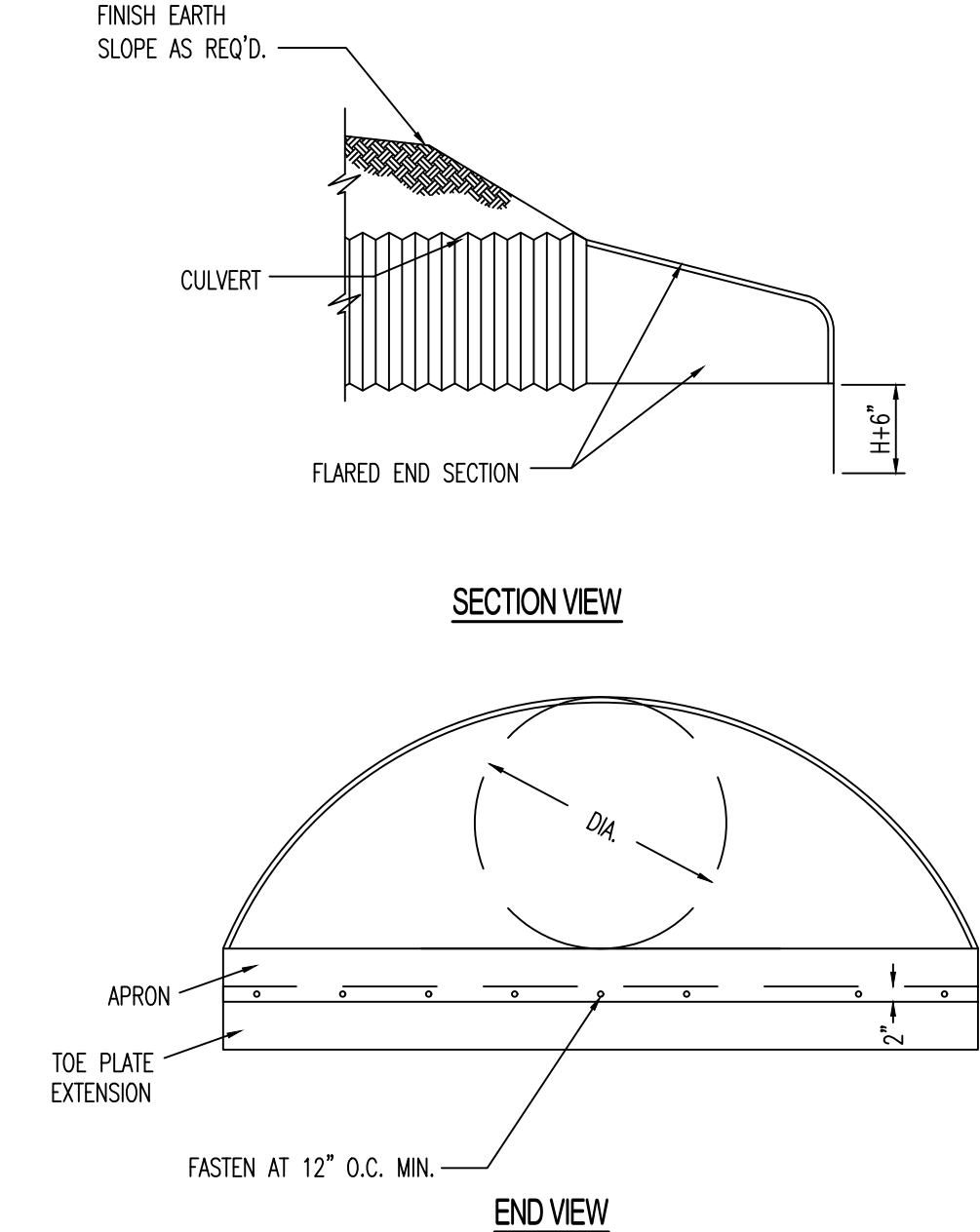
RIP RAP WITH FILTER FABRIC



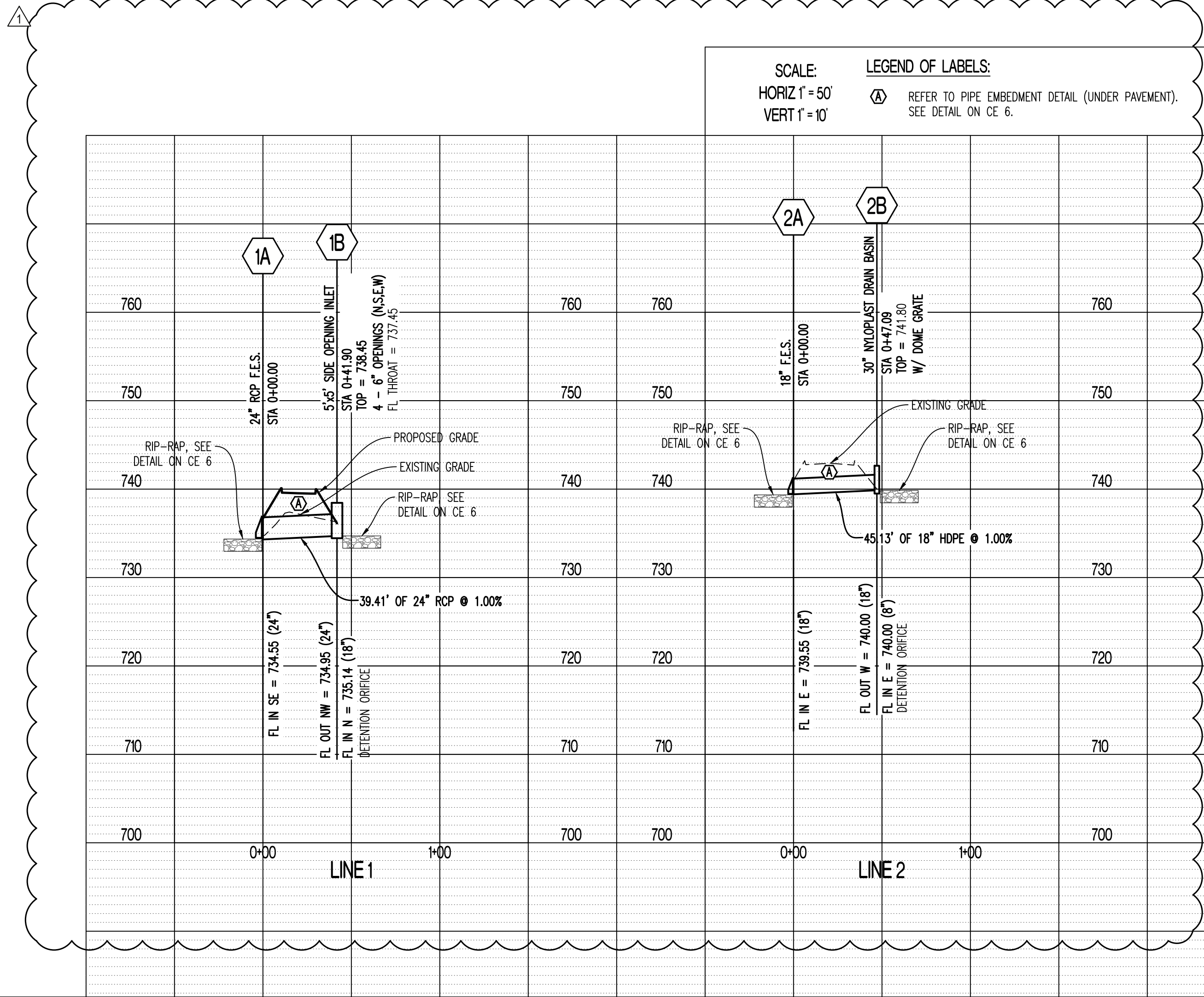
SIDE OPENING INLET



TOEWALL & END SECTION FOR RCP



END SECTION FOR HDPE AND CMP



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1000 W. Illinois Blvd., Suite 100
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331 ROAD
PALMIRA, NEBRASKA 68448

5 STAR TRUCK WASH
MID AMERICA INDUSTRIAL COURT
BOONVILLE, COOPER COUNTY, MISSOURI

DRAWING INCLUDES:
STORM PROFILES AND DETAILS

DESIGNED: ATG
DRAWN: NMD
PROJECT NO.: 230178
SHEET:
CE 6



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2	09/20/2023
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ANDREW T. GREENE MO. LICENSE: 20200000043	
PREPARED BY:  ENGINEERING CONSULTANTS 1000 W. Wilson Blvd., Steg. 1 Columbia, Missouri 65203 www.crockettengineering.com Crockett Engineering Consultants, LLC Missouri #26000131601	
OWNER:	THOMSEN TRUCK PROPERTIES, LLC 373 L ROAD PALMIRA, NEBRASKA 68418
5 STAR TRUCK WASH MID AMERICA INDUSTRIAL COURT BOONVILLE, COOPER COUNTY, MISSOURI	
DRAWING INCLUDES:	
SITE DETAILS	
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DRAWN:	NMD
PROJECT NO.:	230178
SHEET:	CE 7

PAVEMENT MARKING:

PAINT FOR PARKING LOT STRIPING SHALL BE CHLORINATED RUBBER CONFORMING TO TT-11P15F EPOXY PAVEMENT MARKING MATERIAL WITHOUT GLASS BEADS. PAINT TYPE MUST BE COMPATIBLE WITH THE SURFACES TO BE PAINTED.

PAINP SHALL BE APPLIED PER THE FOLLOWING COLOR CODE: WHITE FOR STANDARD PARKING SPACE LINES AND SIDEWALK CROSSINGS. BLUE FOR ACCESSIBLE PARKING STIAL AND SYMBOLS AND ASSOCIATED CROSS-HATCHED AREAS.

MATERIALS SHALL INCLUDE STANDARD COMMERCIAL GRADE MASKING MATERIALS, SCRAPERS, CLEANING SOLVENTS, AND OTHER MATERIALS REQUIRED FOR THE WORK. USE MATERIALS SPECIFIED BY MANUFACTURER'S DIRECTION LABEL ON CONTAINER.

DELIVER MATERIALS TO THE SITE IN ORIGINAL CONTAINERS WITH SEALS UNBROKEN AND LABELS INTACT. PROTECT ALL PAINT FROM FREEZING. DO NOT ALLOW PAINT TO SETTLE, OME, OR THICKEN IN THE CONTAINER. READILY STIR WITH A PADDLE TO A SMOOTH CONSISTENCY. PAINT SHALL ARRIVE ON THE JOB COURD-MIXED EXCEPT FOR TINTING OF UNDERCOATS AND POSSIBLE TINTING.

PRIOR TO BEGINNING CLEANING OR PAINTING OPERATIONS, CONTRACTOR SHALL PROTECT ALL ITEMS OR SURFACES NOT INCLUDED IN AREA TO BE PAINTED. PROTECT VEHICLES, EQUIPMENT, STRUCTURES, OR OTHER ITEMS FROM PAINT SPATTERS, OVER SPRAY, OR DAMAGE.

CONTRACTOR SHALL PROVIDE BARRICADES AND ANY SIGNAGE NEEDED TO PROTECT ALL PAINTED AREAS FROM PEDESTRIAN AND VEHICULAR TRAFFIC UNTIL ACHIEVING SUFFICIENT DRYING TIME.

PERFORM PAINTING AS SOON AS FEASIBLE AND PRACTICAL AFTER THE FINISHING OF THE PAVEMENT OR AS DIRECTED BY THE OWNERS REPRESENTATIVE. ADEQUATE LIGHTING SHALL BE AVAILABLE AT THE TIME OF PAINTING. EXAMINE ALL SURFACES TO RECEIVE PAINT TO MAKE SURE THERE ARE NO DEFECTS IN THE SURFACE TO BE STRIPED. DO NOT PAINT OVER RUST, SCALE, GREASE, OIL, FUEL, DUST, WET PAVEMENT, OR OTHER CONDITIONS DETRIMENTAL TO PAINT ADHESION. REMOVE GREASE, OIL, OR FUEL ON ANY SURFACE BEFORE PAINTING. CORRECT ALL SURFACE DEFECTS BEFORE PAINTING. CONTRACTOR SHALL EXAMINE AREAS TO BE PAINTED. NOTIFY THE OWNERS REPRESENTATIVE IN WRITING OF CONDITIONS THAT MIGHT DELAY TIMELY COMPLETION OF THE WORK.

PAINTING SHALL NOT BE PERFORMED WHEN THE AMBIENT TEMPERATURE IS LESS THAN 55 DEGREES FAHRENHEIT, OR WHILE THE SURFACE IS DAMP. THE SURFACE MUST BE FIVE DEGREES OR MORE ABOVE THE DEW POINT TEMPERATURE DURING PAINTING OPERATIONS AND WHILE PAINT IS DRYING.

AREAS TO BE PAINTED SHALL RECEIVE ONE COAT OF PAINT NOT LESS THAN 25 MILS THICKNESS WET PER MDOOT 620.9 THROUGH 620.9.3.4.2. IN LOCATIONS REQUIRING MULTIPLE COATS, PRIOR COAT SHALL BE DRY TO MANUFACTURER'S RECOMMENDATIONS BEFORE APPLYING THE NEXT COAT. FINISHED WORK SHALL BE UNIFORM, OF APPROVED COLOR, FREE OF RUNS, DRIPS, DEFECTIVE BRUSHING, SPRAYING, AND CLOGGING. PARKING LINES AND SYMBOLS SHALL BE NEAT AND WELL DEFINED. ONLY SKILLED APPLICATORS SHALL APPLY PAINT. OWNERS REPRESENTATIVE SHALL APPROVE APPLICATION TECHNIQUES.

REMOVE PAINT SPATTER FROM ADJACENT AREAS OR AREAS NOT DESIGNATED TO RECEIVE PAINT. CONTRACTOR SHALL REPAIR OR TOUCH UP ANY SURFACES IF EXPOSED TO VEHICULAR AND PEDESTRIAN TRAFFIC, TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE, AT NO ADDITIONAL COST TO THE OWNER. WHEN COLOR, DIRT, STAINS, EXISTING PAINT, ETC., SHOW THROUGH THE FINAL COAT, REPAINT THE SURFACE UNTIL THE FILM IS UNIFORM IN FINISH, COVERAGE, COLOR, AND APPEARANCE.

CONCRETE PAVING JOINT SEALANTS:

DELIVER MATERIALS TO PROJECT SITE IN ORIGINAL UNOPENED CONTAINERS OR BUNDLES WITH LABELS INDICATING MANUFACTURER, PRODUCT NAME AND DESIGNATION, COLOR, EXPIRATION DATE, POT LIFE, CURING TIME, AND MIXING INSTRUCTIONS FOR MULTICOMPONENT MATERIALS.

STORE AND HANDLE MATERIALS TO COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS TO PREVENT THEIR DETERIORATION OR DAMAGE DUE TO MOISTURE, HIGH OR LOW TEMPERATURES, CONTAMINANTS, OR OTHER CAUSES.

- DO NOT PROCEED WITH INSTALLATION OF JOINT SEALANTS UNDER THE FOLLOWING CONDITIONS:
1. WHEN AMBIENT AND SUBSTRATE TEMPERATURE CONDITIONS ARE OUTSIDE LIMITS PERMITTED BY JOINT SEALANT MANUFACTURER OR ARE BELOW 40 DEG F.
 2. WHEN JOINT SUBSTRATES ARE WET OR COVERED WITH FROST.
 3. WHERE JOINT NOTIS ARE LESS THAN THOSE ALLOWED BY JOINT-SEALANT MANUFACTURER FOR APPLICATIONS INDICATED.
 4. WHERE CONTAMINANTS CAPABLE OF INTERFERING WITH ADHESION HAVE NOT YET BEEN REMOVED FROM JOINT SUBSTRATES.

PROVIDE JOINT SEALANTS, BACKING MATERIALS, AND OTHER RELATED MATERIALS THAT ARE COMPATIBLE WITH ONE ANOTHER AND WITH JOINT SUBSTRATES UNDER CONDITIONS OF SERVICE AND APPLICATION, AS DEMONSTRATED BY JOINT-SEALANT MANUFACTURER BASED ON TESTING AND FIELD EXPERIENCE.

COLD-APPLIED JOINT SEALANTS ARE TO BE TYPE NS SILICONE SEALANT FOR CONCRETE: SINGLE-COMPONENT, LOW-MODULUS, NEUTRAL-CURING, NONSAG SILICONE SEALANT COMPLYING WITH ASTM D 5893 FOR TYPE NS. PRODUCTS ALLOWED ARE: CRAFTCO INC.; ROADSAVER SILICONE , DOW CORNING CORPORATION; 888, PECORA NS 301, OR APPROVED EQUAL.

CONTRACTOR TO PROVIDE JOINT-SEALANT BACKER MATERIALS THAT ARE NONSTAINING, ARE COMPATIBLE WITH JOINT SUBSTRATES, SEALANTS, PRIMER, AND OTHER JOINT FILLERS, AND ARE APPROVED FOR APPLICATIONS INDICATED BY JOINT-SEALANT MANUFACTURER BASED ON FIELD EXPERIENCE AND LABORATORY TESTING. ROUND BACKER RODS FOR COLD-APPLIED SEALANTS: ASTM D 5249, TYPE 3, OF DIAMETER AND DENSITY REQUIRED TO CONTROL SEALANT DEPTHAND PREVENT BOTTOM-SIDE ADHESION OF SEALANT.

PRIOR TO JOINT INSTALLATION, CONTRACTOR IS TO EXAMINE JOINTS INDICATED TO RECEIVE JOINT SEALANTS, WITH INSTALLER PRESENT, FOR COMPLIANCE WITH REQUIREMENTS FOR JOINT CONFIGURATION, INSTALLATION TOLERANCES, AND OTHER CONDITIONS AFFECTING JOINT- SEALANT PERFORMANCE. PROCEED WITH INSTALLATION ONLY AFTER UNSATISFACTORY CONDITIONS HAVE BEEN CORRECTED.

CLEAN OUT JOINTS IMMEDIATELY BEFORE INSTALLING JOINT SEALANTS TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS.

COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS FOR PRODUCTS AND APPLICATIONS INDICATED, UNLESS MORE STRINGENT REQUIREMENTS APPLY.

COMPLY WITH RECOMMENDATIONS IN ASTM C 1193 FOR USE OF JOINT SEALANTS AS APPLICABLE TO MATERIALS, APPLICATIONS, AND CONDITIONS INDICATED.

INSTALL BACKER MATERIALS OF TYPE INDICATED TO SUPPORT SEALANTS DURING APPLICATION AND AT POSITION REQUIRED TO PRODUCE CROSS-SECTIONAL SHAPES AND DEPTHS OF INSTALLED SEALANTS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY. DO NOT LEAVE GAPS BETWEEN ENDS OF BACKER MATERIALS. DO NOT STRETCH, TWIST, PUNCTURE, OR TEAR BACKER MATERIALS. REMOVE ABSORBENT BACKER MATERIALS THAT HAVE BECOME WET BEFORE SEALANT APPLICATION AND REPLACE THEM WITH DRY MATERIALS.

- INSTALT SEALANTS USING PROVEN TECHNIQUES THAT COMPLY WITH THE FOLLOWING AND AT THE SAME TIME BACKING ARE INSTALLED:
1. PLACE SEALANTS SO THEY DIRECTLY CONTACT AND FULLY WET JOINT SUBSTRATES.
 2. COMPLETELY FILL RECESSES PROVIDED FOR EACH JOINT CONFIGURATION.
 3. PRODUCE UNIFORM, CROSS-SECTIONAL SHAPES AND DEPTHS RELATIVE TO JOINT WIDTHS THAT ALLOW OPTIMUM SEALANT MOVEMENT CAPABILITY.

IMMEDIATELY AFTER SEALANT APPLICATION AND BEFORE SKINNING OR CURING BEGINS, TOOL SEALANTS ACCORDING TO REQUIREMENTS SPOCIFIED BELOW TO FORM SMOOTH, UNIFORM BEADS OF CONSTRUCTION INDICATED; TO ELIMINATE AIR POCKETS; AND TO ENSURE CONTACT AND ADHESION OF SEALANT WITH SIDES OF JOINT. REMOVE EXCESS SEALANTS FROM SURFACES ADJACENT TO JOINT.USE TOOLING AGENTS THAT ARE APPROVED IN WRITING BY JOINT-SEALANT MANUFACTURER AND THAT DO NOT DISCOLOR SEALANTS OR ADJACENT SURFACES.

PROVIDE JOINT CONFIGURATION TO COMPLY WITH JOINT-SEALANT MANUFACTURER'S WRITTEN INSTRUCTIONS, UNLESS OTHERWISE INDICATED.

PROVIDE RECESSED JOINT CONFIGURATION FOR SILICONE SEALANTS OF RECESS DEPTH AND AT LOCATIONS INDICATED.

CLEAN OFF EXCESS SEALANTS OR SEALANT SHEARS ADJACENT TO JOINTS AS THE WORK PROGRESSES BY METHODS AND WITH CLEANING MATERIALS APPROVED BY MANUFACTURERS OF JOINT SEALANTS AND OF PRODUCTS IN WHICH JOINTS OCCUR.

PROTECT JOINT SEALANTS DURING AND AFTER CURING PERIOD FROM CONTACT WITH CONTAMINATING SUBSTANCES AND FROM DAMAGE RESULTING FROM CONSTRUCTION OPERATIONS OR OTHER CAUSES SO SEALANTS ARE WITHOUT DETERIORATION OR DAMAGE AT TIME OF SUBSTANTIAL COMPLETION. IF, DESPITE SUCH PROTECTION, DAMAGE OR DETERIORATION OCCURS, CUT OUT AND REMOVE DAMAGED OR DETERIORATED JOINT SEALANTS IMMEDIATELY AND REPLACE WITH JOINT SEALANT SO INSTALLATIONS WITH REPAIRED AREAS ARE INDISTINGUISHABLE FROM THE ORIGINAL WORK.

EARTHMOVING:

CONTRACTOR TO SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL AND PRODUCT USED.

COMPACTION REQUIREMENTS ARE AS FOLLOWS:

1. UNDER STEPS, PAVEMENTS, AND WALKWAYS, 95 PERCENT STANDARD PROCTOR MINIMUM DENSITY, ASTM D 698.
2. UNDER LAWNS OR UNPAVED AREAS, 85 PERCENT, ASTM D 698.

GRADING TOLERANCES OUTSIDE BUILDING LINES ARE AS FOLLOWS:

1. LAWNS, UNPAVED AREAS, AND WALKS, PLUS OR MINUS 1 INCH.
2. PAVEMENTS, PLUS OR MINUS 1/2 INCH.
3. ALL ADA ROUTES AND PARKING ARE TO MEET ADA REQUIREMENTS AT ALL TIMES.

ALL ACTIVITIES WILL BE CONTAINED WITHIN CONSTRUCTION BOUNDARIES INDICATED ON SITE PLAN. SPECIFIED EXCAVATION REQUIREMENTS, PRECAUTIONS, AND PROTECTIVE SYSTEMS WILL BE OBSERVED AT ALL TIMES.

MOVEMENT OF TRUCKS AND EQUIPMENT ON OWNER'S PROPERTY WILL BE IN ACCORDANCE WITH OWNER'S INSTRUCTIONS.

TOPSOIL WILL BE STRIPPED FROM THE CONSTRUCTION SITE, STOCKPILED, AND RESPREAD AT AND OF PROJECT. EXCESS SHALL BE DISPOSED OF LEGALLY OFF SITE.

TRENCHES SHALL NOT BE BACKFILLED UNTIL ALL REQUIRED TESTS ARE COMPLETED AND THE UTILITY SYSTEMS, AS INSTALLED, ARE IN OPERATING CONDITION.

EXCAVATION IS UNCLASSIFIED AND INCLUDES EXCAVATION TO SUBGRADE REGARDLESS OF MATERIALS ENCOUNTERED. REPAIR EXCAVATIONS BEYOND ELEVATIONS AND DIMENSIONS INDICATED AS FOLLOWS:

1. AT STRUCTURE: CONCRETE OR COMPACTED STRUCTURAL FILL.
 2. ELSEWHERE: BACKFILL AND COMPACT AS DIRECTED.
- MAINTAIN STABILITY OF EXCAVATIONS; CONTRACTOR TO BE RESPONSIBLE FOR DESIGN AND COORDINATION OF SHORING AND BRACING AS REQUIRED. PREVENT SURFACE AND SUBSURFACE WATER FROM ACCUMULATING IN EXCAVATIONS. STOCKPILE SATISFACTORY MATERIALS FOR REUSE, ALLOW FOR PROPER DRAINAGE AND DO NOT STOCKPILE MATERIALS WITHIN DRIP LINE OF TREES TO REMAIN.

COMPACT MATERIALS AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 698 BY AERATION OR WETTING TO THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY:

1. STRUCTURE, PAVEMENT, WALKWAYS: SUBGRADE AND EACH FILL LAYER TO 95% (-2%+4%) OF STANDARD PROCTOR MAXIMUM DRY DENSITY TO SUITABLE DEPTH. COMPACTION TESTING SHALL BE PERFORMED IMMEDIATELY PRIOR TO THE PLACEMENT OF REINFORCING STEEL AND NEW PAVING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING TESTING WITH OWNERS DESIGNATED TESTING AGENCY.
2. UNPAVED AREAS: TOP 6" OF SUBGRADE AND EACH FILL LAYER TO 90% MAXIMUM DRY DENSITY.
3. A PROOF-ROLL SHALL BE REQUIRED OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE COURSE. PROOF ROLLING SHALL CONSIST OF PASSING A LOADED, 20-TON, TANDDEM DUMP TRUCK OVER THE PREPARED SUBGRADE SOIL WITH A MAXIMUM ALLOWABLE DISPLACEMENT OF 1". ANY AREAS THAT DISPLACE MORE THAN 1" SHALL BE COMPACTED UNTIL THIS CRITERION IS MET, OR THOSE AREAS MAY BE EXCAVATED AND BACKFILLED WITH COMPACTED TYPE 1 AGGREGATE USED FOR BASE MATERIAL. ALL PROOF ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE.
4. CUT AREAS UNDER PROPOSED ASPHALT OR CONCRETE PAVEMENTS SHALL BE CUT AND COMPACTED. AFTER GRADING TO SUBGRADE ELEVATION, SCARIFY THE TOP SIX INCHES OF THE SUB-BASE AND COMPACT AS OUTLINED ABOVE.

PLACE ACCEPTABLE MATERIALS IN LAYERS NOT MORE THAN 8" LOOSE DEPTH FOR MATERIALS COMPACTED BY HEAVY EQUIPMENT AND NOT MORE THAN 4" LOOSE DEPTH FOR MATERIALS COMPACTED BY HAND EQUIPMENT TO SUBGRADES INDICATED AS FOLLOWS:

1. STRUCTURAL FILL: USE UNDER FOUNDATIONS, SLABS OR GRADE IN LAYERS AS INDICATED.
2. DRAINAGE FILL: USE UNDER DESIGNATED BUILDING SLABS, AT FOUNDATION DRAINAGE AND ELSEWHERE AS INDICATED.
3. LANDSCAPE AREA FILL:
 - 3.1. ALL SUB-GRADE AREAS SHALL BE "TRIPPED" TO A MINIMUM 6" DEEP AND A MAXIMUM OF 12" APART IN OPPOSITE DIRECTIONS WITH MINMAL TRAFFIC TO FOLLOW.
 - 3.2. ANY FILL SOIL WITHIN 36" OF FINISHED GRADE IN LAWN AND PLANTER AREAS SHALL BE COHESIVE SOILS IN SOIL CLASSIFICATIONS GROUPS ML, CL, CH OR A COMBINATION THEREOF; FREE OF ROCK OR GRAVEL LARGER THAN 1" IN ANY DIMENSION, DEBRIS, WASTE, FROZEN MATERIAL, VEGETATION AND OTHER DELETERIOUS MATTER.
4. SUB-BASE MATERIAL: USE UNDER PAVEMENT, WALKS, STEPS, PIPING AND CONDUIT.

GRADE TO WITHIN 1/2" ABOVE OR BELOW REQUIRED SUBGRADE AND WITHIN A TOLERANCE OF 1/2" IN 10'.

PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. RECOMPACT AND REGRADE SETTLED, DISTURBED AND DAMAGED AREAS AS NECESSARY TO RESTORE QUALITY, APPEARANCE, AND CONDITION OF WORK.

CONTROL EROSION TO PREVENT RUNOFF INTO SEWERS OR DAMAGE TO SLOPED OR FLAT AREAS.

CONTROL DUST TO PREVENT HAZARDS TO ADJACENT PROPERTIES AND VEHICLES. IMMEDIATELY REPAIR OR REMEDY DAMAGE CAUSED BY DUST INCLUDING AIR FILTERS IN EQUIPMENT AND VEHICLES. CLEAN SOLID SURFACES.

DISPOSAL OF EXCAVATION WASTE AND UNSUITABLE MATERIALS SHALL BE THE RESPONSIBILITY OF THE SITE WORK CONTRACTOR. NO SPECIFIC OR PRE-APPROVED LOCATION IS BEING PROVIDED BY THE OWNER.

SITE CLEARING & DEMOLITION:

IT IS THE INTENT THAT THE DEMOLITION BE COMPLETE AND ADEQUATE FOR THE INTENDED PURPOSE. THIS WORK SHALL INCLUDE THE REMOVAL OF ALL ITEMS, WHETHER IN VIEW OR HIDDEN UNDERNEATH THE SURFACE OF THE GROUND, REGARDLESS OF WHETHER SHOWN ON THE DRAWINGS OR ENCOUNTERED DURING CONSTRUCTION.

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING MATERIALS, METHODS OF WORK, AND DISPOSAL OF EXCESS WASTE MATERIALS.

ERECT BARRIERS TO PROTECT PERSONNEL, STRUCTURES AND UTILITIES REMAINING INTACT.

PROTECT ALL EXISTING OBJECTS INTENDED TO REMAIN. IN CASE OF DAMAGE, MAKE REPAIRS OR REPLACEMENTS NECESSARY AT NO ADDITIONAL COST TO THE OWNER.

MINIMIZE INTERFERENCE WITH ROADS, STREETS, DRIVEWAYS, SIDEWALKS, AND ADJACENT FACILITIES.

DO NOT CLOSE OR OBSTRUCT STREETS, SIDEWALKS, ALLEYS OR PASSAGeways WITHOUT PERMISSION FROM AUTHORITIES HAVING JURISDICTION.

IF CLOSURE IS PERMITTED, PROVIDE SIGNAGE INDICATING CLOSURE AND SIGNAGE TO DIRECT TRAFFIC TO ALTERNATE ROUTE.

MOISTEN SURFACES AS REQUIRED TO PREVENT DUST FROM BEING A NUISANCE TO THE PUBLIC, NEIGHBORS, AND CONCURRENT PERFORMANCE OF OTHER WORK ON THE SITE.

THE CONTRACTOR SHALL LOCATE EXISTING UTILITY LINES AND SERVICES TRAVERSING THE SITE AND DETERMINE THE REQUIREMENTS FOR THEIR PROTECTION. THE CONTRACTOR SHALL PRESERVE ACTIVE UTILITIES ON THE SITE THAT ARE DESIGNATED TO REMAIN.

BEFORE STARTING SITE OPERATIONS, THE CONTRACTOR SHALL DISCONNECT OR ARRANGE FOR THE DISCONNECTION OF ALL UTILITY SERVICES DESIGNATED TO BE REMOVED. THE CONTRACTOR SHALL PERFORM ALL SUCH WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY COMPANY OR AGENCY INVOLVED.

IN REMOVING PAVEMENT, CURB AND GUTTER, SIDEWALKS, ETC., WHERE A PORTION IS LEFT IN PLACE, REMOVAL SHALL BE TO AN EXISTING JOINT OR TO A JOINT SAWED TO A MINIMUM DEPTH OF 2" WITH A TRUE SAW LINE AND A VERTICAL FACE. REMOVE SUFFICIENT PAVEMENT TO PROVIDE FOR PROPER GRADE AND CONNECTIONS IN THE NEW WORK REGARDLESS OF ANY LIMITS INDICATED ON THE DRAWING.

EXISTING CASTINGS AND CULVERTS, IF SALVAGEABLE AND REMOVED INTACT, REMAIN THE PROPERTY OF THE CONTRACTOR.

ALL SEWERS AND DRAINAGE PIPES, WHICH HAVE BEEN OR ARE TO BE ABANDONED, SHALL BE PERMANENTLY SEALED AT THE ENDS WITH BULKHEADS CONSISTED OF CONCRETE, HAVING A MINIMUM THICKNESS OF 8".

ABANDON STORM OR SANITARY SEWER STRUCTURES BY BREAKING THE CONCRETE BOTTOM OF THE STRUCTURE INTO PIECES NO LARGER THAN 12" IN ANY DIRECTION AND REMOVING THE TOP OF THE STRUCTURE TO 3" BELOW FINISHED GRADE. PLUG ALL PIPES WITH CONCRETE AND FILL STRUCTURE WITH 1" CLEAN GRAVEL.

ALL DEBRIS INCLUDING PAVEMENTS SHALL BE DISPOSED OF OFF-SITE.

DO NOT STORE OR BURN MATERIALS ON-SITE UNLESS PERMITTED BY THE GOVERNING JURISDICTION.

MATERIAL ACQUIRED THROUGH DEMOLITION, OTHER THAN THOSE REQUIRED TO COMPLETE THE CONSTRUCTION PROJECT AND DESIGNATED FOR RETURN TO OWNER, WILL BECOME THE PROPERTY OF THE CONTRACTOR AND WILL BE REMOVED FROM THE SITE. THE MATERIAL WILL BE DISPOSED OF IN A LEGAL MANNER.

THE CONTRACTOR'S OPERATIONS SHALL BE RESTRICTED TO THOSE AREAS INSIDE THE CONSTRUCTION LIMITS INDICATED ON THE DRAWINGS. IF LIMITS ARE NOT INDICATED, RESTRICT WORK TO THE OWNER'S PROPERTY, EASEMENT, OR PUBLIC RIGHTS-OF-WAY.

COMPLETE WORK WITHIN PUBLIC RIGHTS-OF-WAY UNDER THE PERMISSION OF THE GOVERNING AGENCY.

THE CONTRACTOR IS RESPONSIBLE FOR THE ADJUSTMENT OF ALL MANHOLES, CASTINGS, WATER VALVES IRRIGATION BOXES, CLEAN OUTS AND ETC. WITHIN THE GRADING LIMITS TO MATCH THE FINISHED SURFACE. ADJUSTMENTS SHALL BE COORDINATED WITH THE UTILITY COMPANIES AND THE COST FOR ALL ADJUSTMENTS SHALL BE INCIDENTAL TO CONSTRUCTION UNLESS NOTED AS A BID ITEM. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO UTILITY STRUCTURES AND APPURTENANCES THAT OCCURS DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

WATER SERVICE PIPING:

ALL CONSTRUCTION SHALL COMPLY WITH STANDARDS OF MISSOURI DEPARTMENT OF NATURAL RESOURCES FOR POTABLE-WATER-SERVICE PIPING, INCLUDING MATERIALS, INSTALLATION, TESTING, AND DISINFECTION. THEY SHALL ALSO COMPLY WITH ASTM F 645 FOR SELECTION, DESIGN, AND INSTALLATION OF THERMOPLASTIC WATER PIPING. PIPING MATERIALS SHALL BEAR LABEL, STAMP, OR OTHER MARKINGS OF SPECIFIED TESTING AGENCY.

PREPARATION FOR TRANSPORT, PREPARE VALVES, INCLUDING YARD HYDRANTS, ACCORDING TO THE FOLLOWING:

1. ENSURE THAT VALVES ARE DRY AND INTERNALLY PROTECTED AGAINST RUST AND CORROSION.
2. PROTECT VALVES AGAINST DAMAGE TO THREADED ENDS AND FLANGE FACES.
3. SET VALVES IN BEST POSITION FOR HANDLING. SET VALVES CLOSED TO PREVENT RATTLING.

DURING STORAGE: USE PRECAUTIONS FOR VALVES, INCLUDING FIRE HYDRANTS, ACCORDING TO THE FOLLOWING:

1. DO NOT REMOVE END PROTECTORS UNLESS NECESSARY FOR INSPECTION, THEN REINSTALL FOR STORAGE.
2. PROTECT FROM WEATHER. STORE INDOORS AND MAINTAIN TEMPERATURE HIGHER THAN AMBIENT DEW-POINT TEMPERATURE. SUPPORT OFF THE GROUND OR PAVEMENT IN WATERIGHT ENCLOSURES WHEN OUTDOOR STORAGE IS NECESSARY.

USE SLING TO HANDLE VALVES AND FIRE HYDRANT IF SIZE REQUIRES HANDLING BY CRANE OR LIFT. RIG VALVES TO AVOID DAMAGE TO EXPOSED PARTS. DO NOT USE HANDWHEELS OR STEMS AS LIFTING OR RIGGING POINTS.

DELIVER PIPING WITH FACTORY-APPLIED END CAPS. MAINTAIN END CAPS THROUGH SHIPPING, STORAGE, AND HANDLING TO PREVENT PIPE-END DAMAGE AND TO PREVENT ENTRANCE DIRT, DEBRIS, AND MOISTURE.

PROTECT STORED PIPING FROM MOISTURE AND DIRT. ELEVATE ABOVE GRADE. DO NOT EXCEED STRUCTURAL CAPACITY OF PIPE WHEN STORING INSIDE. PROTECT FLANGES, FITTINGS, AND SPECIALTIES FROM MOISTURE AND DIRT. STORE PLASTIC PIPING PROTECTED FROM DIRECT SUNLIGHT. SUPPORT TO PREVENT SAGGING AND BENDING.

PIPING UP TO 2" IN SIZE SHALL BE HIGH-DENSITY POLYETHYLENE (HDPE). SD89 C3S PREMIUM GRADE PIPE, AWWA C801, ASTM D3035, NSF 14 AND 61, 200 PSI PRESSURE RATING.

PLASTIC PIPE-FLANGE GASKET, BOLTS, AND NUTS: TYPE AND MATERIAL RECOMMENDED BY PIPING SYSTEM MANUFACTURER, UNLESS OTHERWISE INDICATED.

REFER TO 'EARTH MOVING' FOR EXCAVATING, TRENCHING, AND BACKFILLING.

USE PIPE, FITTINGS, AND JOINING METHODS FOR PIPING SYSTEMS ACCORDING TO THE FOLLOWING APPLICATIONS.

1. TRANSITION COUPLINGS AND SPECIAL FITTINGS WITH PRESSURE RATINGS AT LEAST EQUAL TO PIPING PRESSURE RATING MAY BE USED, UNLESS OTHERWISE INDICATED.
2. DO NOT USE FLANGES OR UNIONS FOR UNDERGROUND PIPING.
3. FLANGES, UNIONS, GROOVED-END-PIPE COUPLINGS, AND SPECIAL FITTING MAY BE USED, INSTEAD OF JOINTS INDICATED, ON ABOVEGROUND PIPING AND PIPING IN VAULTS.

TRENCH BOTTOM SHALL BE GRADED TO PROVIDE A SMOOTH, FIRM, STABLE, AND ROCK-FREE FOUNDATION THROUGHOUT THE LENGTH OF THE PIPING. ALL ROCK GREATER THAN ONE INCH IN DIAMETER FOUND IN THE TRENCH SHALL BE REMOVED FOR A DEPTH OF SIX INCHES BELOW THE BOTTOM OF THE PIPE AND REPAIRED WITH SUITABLE BEDDING MATERIAL. UNSUITABLE, SOFT, AND UNSUITABLE MATERIALS SHALL BE REMOVED AT THE SURFACE UPON WHICH PIPES ARE TO BE LAID AND BACKFILL WITH CRUSHED STONE AS INDICATED ON THE DRAWINGS. LAYERS OF CRUSHED STONE SHALL BE INSTALLED IN THE BOTTOM OF TRENCH AS INDICATED ON THE DRAWINGS. SHAPE STONE LAYER TO FIT BOTTOM OF PIPING. DIG BELL HOLES AT EACH PIPE JOINT TO RELIEVE THE BELLS OF ALL LOADS AND TO ENSURE CONTINUOUS BEARING OF THE PIPE BARREL ON THE FOUNDATION.

PIPE SEPARATION SHALL BE AS FOLLOWS:

1. MAINTAIN AT LEAST A TEN FOOT (10') HORIZONTAL SEPARATION OF WATER MAINS FROM ANY EXISTING OR PROPOSED SANITARY SEWER. THE DISTANCE MUST BE MEASURED EDGE TO EDGE. INSTALLATION OF THE WATER MAIN CLOSER TO A SANITARY SEWER IS ACCEPTABLE WHERE THE WATER MAIN IS LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF LOCATED ON ONE (1) SIDE OF THE SANITARY SEWER AT AN ELEVATION SO THE BOTTOM OF THE WATER MAIN IS AT LEAST EIGHTEEN INCHES (18") ABOVE THE TOP OF THE SANITARY SEWER.
2. PROVIDE A MINIMUM VERTICAL DISTANCE OF EIGHTEEN INCHES (18") BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SANITARY SEWER WHERE WATER MAINS CROSS THE SANITARY SEWER MAINS; THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SANITARY SEWER. AT CROSSEINGS, ONE (1) FULL LENGTH OF WATER PIPE MUST BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SANITARY SEWER LINE AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SANITARY SEWER PIPES MAY BE REQUIRED.
3. PROVIDE AT LEAST A TEN-FOOT (10') HORIZONTAL SEPARATION BETWEEN WATER MAINS AND SANITARY SEWER FORCE MAINS. THERE SHALL BE AN EIGHTEEN-INCH (18") VERTICAL SEPARATION AT CROSSEINGS.
4. LOCATE WATER MAINS SO THAT THEY DO NOT PASS THROUGH OR COME IN CONTACT WITH ANY SANITARY SEWER MANHOLE.

INSTALLATION OF PIPE AND PIPE FITTINGS:

1. PVC (POLYVINYL CHLORIDE) PIPE: INSTALL IN ACCORDANCE WITH AWWA C905.
2. ALL DUCTILE IRON PIPE, FITTINGS, VALVES, BELL END RESTRAINTS, ETC. SHALL BE WRAPPED WITH A POLYETHYLENE COVER CONFORMING TO AWWA C105, AND INSTALLED PER AWWA C600.
3. PIPE SHALL BE INSTALLED IN CLEAN CONDITION, AND SHALL NEVER BE LAID IN TRENCHES WITH STANDING WATER. THE TRENCH SHALL BE DETAILED DURING INSTALLATION OF THE WATER LINE. OPEN PIPE ENDS SHALL BE PROTECTED WITH A HARD CAP OR INFLATABLE PLUG AT THE END OF THE WORK DAY. NO PLYWOOD OR DUTTAPE COVERINGS WILL BE ALLOWED.

BACKFILL:

1. UNDER PIPE: ALL BACKFILL UNDER THE BARREL OF THE PIPE SHALL BE FREE FROM DEBRIS, ORGANIC MATTER, AND STONES LARGER THAN ONE INCH, AND SHALL BE TAMPED INTO PLACE. SAND OR CRUSHED STONE AGGREGATE (95% PASSING A 1/2" SCREEN BUT NOT MORE THAN 10% PASSING A #200 SIEVE) ARE ACCEPTABLE SUBSTITUTES FOR SOIL.
2. ADJACENT TO AND TOP OF PIPE: THE FIRST ONE FOOT OF BACKFILL OVER THE TOP OF PIPE SHALL BE 3/4-INCH MINUS WASTE ROCK WITH FINES" UNCLEANED CRUSHED STONE AGGREGATE OR SUITABLE SOIL. BACKFILL SHALL BE FREE OF DEBRIS, BRUSH, ROOTS AND STONES OR RUBBLE MORE THAN ONE INCH.
3. ROUGH FINAL GRADING OF SUBGRADE AND THE PLACEMENT OF FINAL TOPSOIL SHALL BE DETAILED ON THE DRAWINGS.
4. ALL SIDEWALKS, PAVING, ETC. WHICH ARE REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AND SHALL MATCH EXISTING.

IDENTIFICATION

1. INSTALL CONTINUOUS PLASTIC UNDERGROUND WARNING TAPE DURING BACK-FILLING OF TRENCH FOR UNDERGROUND WATER PIPING. TAPE SHALL BE LOCATED TWENTY-FOUR (24) INCHES ABOVE PIPE, DIRECTLY OVER EACH WATER LINE.

BURY PIPING WITH DEPTH OF COVER OVER TOP AT LEAST 42 INCHES (750 MM), WITH TOP AT LEAST 12 INCHES (300 MM) BELOW LEVEL OF MAXIMUM FROST PENETRATION, AND ACCORDING TO THE FOLLOWING:

1. UNDER DRIVEWAYS: WITH AT LEAST 42 INCHES (910 MM) COVER OVER TOP
2. IN LOOSE GRAVELLY SOIL AND ROCK: WITH AT LEAST 12 INCHES (300 MM) ADDITIONAL COVER.

CONCRETE:

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF THE CURRENT ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 305 SPECIFICATIONS FOR HOT WATER CONCRETE, AND ACI 308 SPECIFICATIONS FOR COLD WEATHER CONCRETE, WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

1. CONCRETE SHALL DEVELOP THE FOLLOWING 28-DAY MINIMUM COMPRESSIVE STRENGTH:

FOUNDATIONS	-	3,000 PSI
CAST-IN-PLACE WALLS	-	3,500 PSI
FLOOR SLAB	-	4,000 PSI
EXTERIOR SLABS, WALLS AND CURBS	-	4,000 PSI
2. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR ENGINEERED FILL.
3. CHLORIDE- BASED ADMIXTURES ARE PROHIBITED IN ALL CONCRETE.
4. REINFORCING STEEL SHALL CONFORM TO ASTM A615, A616, OR A617, GRADE 60.
5. ALL CONTINUOUS REINFORCING STEEL THAT MEETS AT A CORNER SHALL BE TIED TOGETHER WITH A CORNER BAR THAT HAS SUFFICIENT LAP DISTANCE IN EACH DIRECTION.
6. CONTINUOUS REINFORCING BARS LAP LENGTH SHALL BE A MINIMUM OF 48 BAR DIAMETERS UNLESS NOTED OTHERWISE.
7. CONCRETE SLUMP SHALL BE A MAXIMUM OF 4 +/- 1" (ASTM C- 143) AS DELIVERED IN THE FIELD. CONTRACTOR MAY USE CHEMICAL ADMIXTURES TO ATTAIN A MAXIMUM SLUMP OF 8" FOR WORKABILITY. NO WATER MAY BE ADDED TO THE CONCRETE MIX ON SITE UNLESS WATER IS WITHHELD AT THE BATCHING FACILITY. IF WATER IS WITHHELD AT THE BATCHING FACILITY IT SHOULD BE REFLECTED ON THE LOAD TICKET. THE TOTAL AMOUNT OF WATER IN THE MIX SHALL NOT EXCEED WHAT IS NOTED ON THE APPROVED MIXED. THIS SHALL BE NOTED IN THE SPECIAL INSPECTOR'S RECORDS.
8. CONCRETE EXPOSED TO WEATHER, VEHICLES, AND/OR BIDDING CHEMICALS SHALL BE AIR-ENTRAINED WITH 6% (+/-) 1.5% ENTRAINED AIR BY VOLUME AT POINT OF DISCHARGE. DO NOT ALLOW AIR CONTENT OF TROWELED FINISHED FLOORS TO EXCEED 3%.
9. SUBMIT CONCRETE MIX PROPORTIONS PRIOR TO START OF WORK. DO NOT BEGIN CONCRETE PRODUCTION UNTIL MIXES HAVE BEEN REVIEWED AND ARE ACCEPTABLE TO THE ENGINEER.
10. READY MIX CONCRETE SHALL COMPLY WITH REQUIREMENTS OF ASTM C94.
11. CONCRETE WORK EXECUTION
 - A. CONSTRUCT FORMS TO CORRECT SIZE, SHAPE, ALIGNMENT, ELEVATION AND POSITION; AND TO SUPPORT VERTICAL AND LATERAL LOADS.
 - B. POSITION, SUPPORT, AND SECURE REINFORCEMENT AGAINST DISPLACEMENT. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE, UNLESS NOTED OTHERWISE ON THE DRAWINGS:

CAST AGAINST AND EXPOSED TO EARTH.....	3 INCHES
EXPOSED TO EARTH OR WEATHER.....	2 INCHES
NOT EXPOSED TO WEATHER OR	
IN CONTACT WITH EARTH.....	1 1/2 INCHES
 - C. PROVIDE CONTROL JOINTS IN SLABS-ON-GRADE AT NOT GREATER THAN 15 FEET ON CENTER IN EACH DIRECTION. SAW CUT CONTROL JOINTS MINIMUM 1/4 OF SLAB DEPTH, AS SOON AFTER SLAB FINISHING WITHOUT DISLODGING AGGREGATE.
 - D. STEEL TROWEL FINISH ALL INTERIOR CONCRETE SLABS, BROOM FINISH ALL EXTERIOR CONCRETE SLABS.
 - E. CURE ALL CONCRETE IN COMPLIANCE WITH ACI 301, USING A LIQUID TYPE MEMBRANE, NON-RESIDUAL, CURING COMPOUND COMPLYING WITH ASTM C309. ASSURE COMPATIBILITY WITH FINISH FLOOR COVERING.
12. FLUNT AND CHERT WILL BE LIMITED TO 1% MAXIMUM, BY WEIGHT OF THE COURSE AGGREGATE, IN ALL EXPOSED CONCRETE (CAST-IN-PLACE OR PRECAST). LIGNITE WILL BE LIMITED TO 0.5% BY WEIGHT OF THE FINE AGGREGATE IN ALL EXPOSED CONCRETE.

SANITARY SEWER LATERAL AND CONNECTION TO MAIN:

SUBMITTALS: PIPE AND FITTINGS, NON-PRESSURE AND PRESSURE COUPLINGS

DELIVERY, STORAGE, AND HANDLING: DO NOT STORE PLASTIC MANHOLES, PIPE, AND FITTINGS IN DIRECT SUNLIGHT. PROTECT PIPE, PIPE FITTINGS, AND SEALS FROM DIRT AND DAMAGE. HANDLE MANHOLES ACCORDING TO MANUFACTURER'S WRITTEN RIGGING INSTRUCTIONS.

DO NOT INTERRUPT SEWER SERVICE TO OTHER CONNECTED FACILITIES.

SEWER LATERAL PIPING SHALL BE A MINIMUM OF 4" DIA.

PIPE AND FITTINGS FOR PRIVATE SERVICE LATERALS THAT CONNECT TO THE PUBLIC SEWER MAIN AT A DEPTH OF 15 FEET OR LESS SHALL AT A MINIMUM BE SD28 35 SOLID WALL PVC SEWER PIPE AND SHALL CONFORM TO ASTM D-3034. PIPE AND FITTINGS FOR PRIVATE SERVICE LATERALS THAT CONNECT TO THE PUBLIC SEWER MAIN AT A DEPTH DEEPER THAN 15 FEET BUT LESS THAN 20 FEET SHALL AT A MINIMUM BE SD28 26 HEAVY WALL PVC GRAVITY SEWER PIPE AND CONFORM TO ASTM D-3034.

SERVICE CONNECTIONS SHALL NOT BE WITHIN FIVE (5) FEET OF A MANHOLE OR CLEANOUT OR DIRECTLY INTO A CLEANOUT.

CLEANOUTS: CLEANOUTS ARE REQUIRED ON SERVICE LINES OUTSIDE A BUILDING FOOTPRINT AND AT HORIZONTAL OR VERTICAL BENDS IN A SERVICE LINE. THE DEFLECTION SHOULD UTILIZE A WYE WITH THE CLEANOUT AS AN UPSTREAM EXTENSION OF THE DOWNSTREAM LINE'S ALIGNMENT. CLEANOUT CAP MATERIAL SHALL BE CAST IRON. FRAME AND CASTING SHALL BE NEENAH R-1976, DEETER 1830, OR EQUAL. PVC SHALL NOT EXTEND ABOVE GRADE.

TRACE WIRE & TEST STATIONS: TRACER WIRE SHALL BE #14 AWG SOLID, STEEL CORE SOFT DRAWN HIGH STRENGTH TRACER WIRE, 250# AVERAGE TENSILE BREAK LOAD, 30 MIL HIGH MOLECULAR WEIGHT (HMWPE) OR HIGH DENSITY (HDPE) POLYETHYLENE JACKET COMPLYING WITH ASTM-D-1248, 30 VOLT RATING. JACKET COLOR SHALL BE GREEN. NO THIN INSULATED WIRE SHALL BE ALLOWED. TRACER WIRE SHALL BE COPPERHEAD INDUSTRIES HS-OCS OR APPROVED EQUAL. THE TRACER WIRE SHALL BE TAPED TO THE PIPE AT THE THREE O'CLOCK POSITION EVERY 5 FEET. THE TRACER WIRE ENDS WILL TERMINATE AT A TRACER WIRE TEST STATION. TRACER WIRE SHALL HAVE MOISTURE RES

**CITY OF BOONVILLE
Boonville Police Board
AGENDA**

October 9, 2023

7:00 P.M.

**Boonville Police Department
401 East Morgan Street
Boonville, Missouri**

Due to lack of agenda items the October 9, 2023 Police Board Meeting has been cancelled.

The next Police Board Meeting will be held on January 8, 2024 at 7:00 PM.

Chief Randy Ayers

**CITY OF BOONVILLE
PLANNING AND ZONING COMMISSION MEETING
MINUTES OF SEPTEMBER 12, 2023**

VOTING MEMBERS PRESENT

- 1) Steve Hage, Building Inspector
- 2) Ned Beach
- 3) Heather Overstreet
- 4) Drew Davis
- 5) Clark Greis

VOTING MEMBERS ABSENT: Matt Billings, Josh Snoddy

STAFF/PRESENTERS/GUESTS

- 1) Jeff Ditto
- 2) Kate Fjell
- 3) Bryan Thompson, 5 Star Truck Wash

NOTICES AND EXHIBITS: Posted and available on October 4, 2023, at 9:35p.m. at City Hall.

1. **CALL TO ORDER:** Ms. Fjell called the meeting to order at 6:13 p.m. Roll call was taken with seven (5) of eight (8) members present constituting a quorum.
2. **MINUTES:** The Minutes stand as presented
3. **HEARING OF PUBLIC COMMENTS:** None
4. **OLD BUSINESS:**
None
5. **NEW BUSINESS:**
 - a. 5 Star Truck Wash Final Site Plan
Mr. Hage presented the final site plan for 5 Star Truck Wash, located at 1610 Mid America Industrial Court. Mr. Hage stated that there were revisions to the plan following comments from Scott Vogler, City Engineer focusing on stormwater control and detention, paving the staff parking lot, and relocating the handicap parking. All of these items have been completed and staff and the City Engineer have no further comments.

Mr. Davis asked Mr. Thompson how long construction would take. Mr. Thompson stated about 7 months depending on weather. Mr. Davis also asked how many people the truck wash would employ. Mr. Thompson stated 25-35 people.

With no further comments, Mr. Beach moved and Mr. Hage seconded a motion to approve the final site plan. Roll Call was taken. Ayes: Hage, Beach, Overstreet, Davis, Greis (5). Nays: None, Abstain: None

6. MISCELLANEOUS:

Ms. Fjell stated that she and Steve Hage had met with the new owners of the Corn Cob Pipe Factory on Vine Street. Their plan is to rehab and build 48 apartments. They will utilize federal and state historic tax credits to help finance the project.

Mr. Hage stated that he wanted to follow up on the discussion at the last meeting regarding the traffic at Ashley Road by the high school. He stated that as the school year has gone on, much of the traffic has resolved itself, although there will be further discussions and planning by the school as they plan for increased enrollments. Ms. Fjell stated that Dr. Harvey plans to create a working group to review the issue and identify potential long-term solutions.

7. ADJOURN: A motion was made to adjourn the meeting by Steve Hage and seconded by Ned Beach at 6:33pm.

Respectfully submitted,

Kate Fjell, City Administrator

Approved by:

Matt Billings, Chairman



Boonville Police Department
401 E. Morgan St.
Boonville, MO. 65233
Chief of Police Randy Ayers
Phone: 660-882-2727
Office: 660-882-4016
Fax: 660-882-6604
randy.ayers@boonvillepd.org

Gaming Projects

- 2 Dodge Durango AWD vehicles have been purchased and are currently in service on the patrol fleet.
- K-9 "Zero" (German Shepherd Malinois) has been purchased and was picked up by Cpl. Barger on 09/28/2023.
- A K-9 kennel was purchased and has water and electricity run to it for care of "Zero".
- The 10-week K-9 / Handler training for Cpl. Barger and "Zero" has been paid for and begins mid October.

Capital Projects

- 2 laptop computers have been purchased from Ininitech and placed into patrol vehicles.
- 1 desktop computer has been purchased to replace the Assistant Chief's computer.
- 1 laptop computer purchased for the SRO's office at the Boonville High School.
- 2 monitors purchased for the SRO's office.
- 1 printer purchased for SRO's office.
- 1 external hard drive purchased for SRO's office.
- 1 battery backup was purchased for the radio / server room to replace a bad battery backup.

From: [Tim Carmichael](#)
To: [Kate Fjell](#); [Amber Davis](#)
Subject: RE: Capital Projects mid year update
Date: Monday, October 2, 2023 9:32:50 AM

Kate and Amber

All I had this year were purchasing 4 more SCBA at a cost of \$20,800. We have not taken delivery yet.

Tim

From: Kate Fjell <kate.fjell@boonville-mo.org>
Sent: Monday, October 2, 2023 8:37 AM
To: Tim Carmichael <tjc101@boonville-mo.org>; randy.ayers <randy.ayers@boonvillepd.org>; Jeff Ditto <jeff.ditto@boonville-mo.org>; Paul Linhart <plinhart@boonville-mo.org>; Katie Gibson <katie.gibson@boonville-mo.org>; Teresa Studley <teresa.studley@boonville-mo.org>
Cc: Amber Davis <Amber.davis@boonville-mo.org>
Subject: Capital Projects mid year update

Hey all –

If you can compile a mid-year update on all your capital projects that we had planned to complete this fiscal year.

You can just send them to me or Amber for inclusion in the 10.16.23 Council Packet.

Kate

City Administrator

City of Boonville
401 Main Street
Boonville, MO 65233
660-882-2332

From: [Paul Linhart](#)
To: [Amber Davis](#)
Subject: Capital Projects Update
Date: Monday, October 2, 2023 1:14:17 PM

Amber.

Purchased a Zero Turn Mower-\$18,500

DR Vacuum and parts- \$3,500

In the process of purchasing another mower for \$39,450.32

And working on finalizing the Uniloader Lease which will turn into a purchase of \$49,465.29

PAUL LINHART / Director of Parks and Recreation

1221 Eleventh St.

plinhart@boonville-mo.org

660-882-7447/ 660-621-0276

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	1	SECURITY CAMERAS FOR SEVERAL LOCATIONS WITH CITY	
Department:	Gen. Admin/IT	Estimated Cost:	\$250,000
Project Length:	2024-2029	Funding Source:	Gaming funding
Impact on the operating budget:	This project will progress over several years. It will be a huge benefit to the City of Boonville. It will save the city by cutting down on vandalism costs.		
Description:	Cameras have been installed at City Services, Tourism Center, Aquatic Center, Rolling Hills Park, Kemper Park, and Lions Park. I am awaiting on Lions Park being added to the City's Fiber Ring. This will help with the camera speeds at that location. We will be replacing and installing new cameras at following locations: City Hall (401 Main St - 3), Council Chambers (525 E. Spring St - 8), Katy Bridge (100 Bridge Ave - 2), WTP (901 Riviera Dr - 6), WWTP (1545 Cauthon Dr - 6), Airport (20044 Pearre Lane - 8), Soccer Fields (1734 W. Ashley Rd - 8). Possibly 2 to 3 NVR systems (put at PD) to accommodate all the cameras. This will take several fiscal years to complete. 2024-2025 FY: 2 NVR SYSTEMS TO BE ADDED, AND 4 SCREENS PUT ON WALL AT POLICE DEPARTMENT FOR SURVEILLANCE, 2025-2026 FY: WTP - 6, WWTP - 6, Council Chambers - 8. 2026-2027 FY: City Hall - 3, Airport - 8, Soccer Fields - 8. 2027-2028 -- Police Department and Animal Shelter, and Katy Bridge -- 2 or 3.		

Priority #:	2	COUNCIL CHAMBER MAINTENANCE	
Department:	Gen. Admin.	Estimated Cost:	\$10,000
Project Length:	2023-2024	Funding Source:	??
Impact on the operating budget:	??		
Description:	Paul is working on this. 4-5 foot ladder for fire escape on West side of building for fire escape access for Railroad Display in basement of Chambers; Outdoor Coolant Lines need rewrapped with foam.		

Priority #:	3	KITCHEN IN CITY HALL	
Department:	Admin.	Estimated Cost:	\$20,000
Project Length:	2023-2024	Funding Source:	??
Impact on the operating budget:	Minimal		
Description:	Septagon is putting a proposal together on this cost. Need to update the kitchen in City Hall. Put in cabinets, backsplash, and larger sink. Might install cabinets to South Kitchen Wall, as well.		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	7	WINDOWS AT CITY HALL	
Department:	Gen. Admin.	Estimated Cost:	\$50,000
Project Length:	2023-2024	Funding Source:	??
Impact on the operating budget:	??		
Description:	New windows for City Hall. They would include Doug Abele's office as well. This is a guesstimate.		

Priority #:	9	PARKS & REC TYLER PROGRAM (INCODE ADD-ON)	
Department:	Gen Admin/Parks/IT	Estimated Cost:	\$30,000
Project Length:	2024-2025	Funding Source:	CIP??
Impact on the operating budget:	There would be an annual maintenance/service agreement with Tyler Technologies for this program. The cost of the program is a guesstimate based on previous program costs. Guessing on the high end.		
Description:	This program will take care of Shelter Reservations and payment options for the reservations. This program will make it possible to do this 24/7 and be available to the citizens at all times.		

Priority #:	5	NEW CARPET and PAINTING IN DOUG ABELE'S OFFICE	
Department:	Admin.	Estimated Cost:	\$50,000
Project Length:	20YR-20YR	Funding Source:	??
Impact on the operating budget:	??		
Description:	This is a part of the proposal for the Kitchen Remodel that Septagon is working on. Getting new Carpet for Doug Abele's office is completely necessary. Especially after the Racoon Incident!!! :(		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	6	NEW HVAC SYSTEM IN DOUG ABELE'S OFFICE	
Department:	Gen. Admin.	Estimated Cost:	Guesstimate of \$75,000
Project Length:	2023-2024	Funding Source:	???
Impact on the operating budget:	??		
Description:	This is a part of the proposal that Septagon is working on. Getting new HVAC System for Doug Abele's office is completely necessary.		

Priority #:	8	FIBER AT WATER TREATMENT PLANT	
Department:	Gen. Admin	Estimated Cost:	\$40,000
Project Length:	2025-2026	Funding Source:	??
Impact on the operating budget:	??		
Description:	This job would be incorporated with the camera system being installed at the Water Treatment Plant. There is already existing fiber at the River Pump House, making it possible to put a camera there with ease. But by putting fiber in the fenced area at the water treatment plant, while putting in the camera system at the same time (cameras need the fiber), we will be able to eliminate 3 radio's that the water plant talks to. This will make the whole entire water system fiber. This would need to be completed at the same time the camera system would be installed at the water treatment plant. It is anticipated that the cameras would be installed in 2024-2025. This would be able to eliminate the radio system that the water plant currently talks through to their important computer software which maintains the water levels in the towers, etc. The fiber is going to be required to install the cameras at the water treatment plant, therefore if the fiber is going to be installed, just extend the project to incorporate all of the needs of the plant and do the job once, not twice!!		

Priority #:	10	Bulding Inspector Permit Module	
Department:	General Admin	Estimated Cost:	\$8,000 - \$13,000
Project Length:	2025-2026	Funding Source:	GAMING
Impact on the operating budget:	Moving permits online will assist in improving efficiency and better tracking of permits. This will make the building department more efficient, which with increased building projects in the City may eliminate or delay the need of additional staffing.		
Description:	Purchasing an online module for building permits. This will enable deveopers to submit and staff to issue and track permits more efficiently. Also, in the future this will lead into the City's ability to take online payments for permit applications.		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	11	COMPREHENSIVE PLAN	
Department:	Admin	Estimated Cost:	\$50,000
Project Length:	2024-2025	Funding Source:	Gaming, Grant, Etc.
Impact on the operating budget:	Help to drive and focus the funding and staffing of the City by charting a plan for future growth.		
Description:	Help to drive and focus the funding and staffing of the City by charting a plan for future growth.		

Priority #:	TOP TOP #1	Camera Replace for Council Chambers for YouTube meetings	
Department:	Admin	Estimated Cost:	\$10,000
Project Length:	2024-2025	Funding Source:	??
Impact on the operating budget:	??		
Description:	The main camera for the city council meetings is dying. I need a replacement for this camera and a joy stick will come with this camera as well. It is on it's last leg and I anticipate it's death very soon!! This is very important for our City Council Meeting Streaming. I understand that I will want to be replacing and adding a few cameras to this location in the bigger project above; however this 1 camera and joy stick needs to be fixed now. A bandaid is fine, until we do the overhaul project		

Priority #:	12	FIRE ALARM REPLACEMENT AT COUNCIL CHAMBERS	
Department:	Admin	Estimated Cost:	Awaiting Costs from Tech Electronics
Project Length:	2024-2025	Funding Source:	??
Impact on the operating budget:	Unknown Impact.		
Description:	This is a part of the proposal that Septagon is working on. The current fire alarm in the building is outdated and uses old technology. There have been many upgrades to technology since the system was installed. The upgraded system will work much better with our Fiber Phone System.		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	13	FIRE ALARM REPLACEMENT AT CITY HALL & OFFICE UPSTAIRS	
Department:	Admin.	Estimated Cost:	Awaiting Costs from Tech Electronics
Project Length:	2024-2025	Funding Source:	??
Impact on the operating budget:	Unknown Impact.		
Description:	This is a part of the proposal that Septagon is working on. The current fire alarm in the building is outdated and uses old technology. There have been many upgrades to technology since the system was installed. The upgraded system will work much better with our Fiber Phone System.		

Priority #:	14	DOOR LOCKS FOR ALL CITY BUILDINGS AND KEY FOBS	
Department:	Multiple	Estimated Cost:	\$50,000
Project Length:	2024-2029	Funding Source:	??
Impact on the operating budget:	This should assist the City of Boonville in knowing who has accessed certain buildings. This may help with security for city offices. Unknown impact.		
Description:	We have implemented a Door Lock system that is compatible with the Boonville Police Dept. and City Hall that was purchased through Tech Electronics. The main frame will remain at BPD. The following buildings need Door Locks: Council Chambers, City Services, Parks Office, Tourism, Pool, Water Treatment Plant, Wastewater Treatment Plant, Fire Dept., Animal Control. After the main buildings, we can look at adding Water Towers and Parks Buildings.		

Priority #:	15	EXHAUST FAN IN WOMEN'S BATHROOM	
Department:	Gen. Admin.	Estimated Cost:	\$500
Project Length:	2023-2024	Funding Source:	??
Impact on the operating budget:	Minimal impact on Budget		
Description:	Not Done. The Women's Bathroom at City Hall needs a Commercial Exhaust Fan. I don't really think we need to have the exhaust go outside. I am wondering if we can just release the air up into the area above the drop ceiling. I believe anything can help.		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	4	FIRE DEPT PHONE SYSTEM	
Department:	FIRE DEPT.	Estimated Cost:	\$6,430
Project Length:	2023-2024	Funding Source:	?? (CIP 05-01)
Impact on the operating budget:	Minimal		
Description:	DONE!!! 5 NEC PHONES - Purchase phone system that will be compatible with the other phone systems at City Hall, Police Dept., City Services, and Animal Shelter.		

Priority #:	TOP TOP #1	KEMPER HVAC SYSTEM FOR STATE FAIR BUILDING	
Department:	Parks Dept.	Estimated Cost:	\$300,000
Project Length:	2023-2024	Funding Source:	??
Impact on the operating budget:	LARGE IMPACT		
Description:	Currently being installed now. New HVAC System at State Fair Building for the 1st and 2nd Floors. The system that was installed previously was a Daikin, just like what was at city hall, and it is not working, just like City Hall's was not. Need a brand new system.		

Priority #:	16	AWNING COVER AT CITY HALL	
Department:	GEN. ADMIN.	Estimated Cost:	\$8,182
Project Length:	2024-2025	Funding Source:	??
Impact on the operating budget:	Minimal		
Description:	The awning at City Hall is in need for repair. It has discolored and is showing signs of aging. We need to replace the awning.		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	17	PHONES AT WASTEWATER TREATMENT & WATER TREATMENT PLANTS	
Department:	GEN. ADMIN.	Estimated Cost:	\$12,000 Guess-timate
Project Length:	2024-2025	Funding Source:	??
Impact on the operating budget:	Minimal		
Description:	10-14 NEC PHONES total- Purchase phone system that will be compatible with the other phone systems at City Hall, Police Dept., City Services, Animal Sheter, and Fire Dept.		

Priority #:	18	4 SAMSUNG 70 INCH TV'S FOR COUNCIL CHAMBERS	
Department:	GEN. ADMIN.	Estimated Cost:	\$5,000
Project Length:	2024-2025	Funding Source:	??
Impact on the operating budget:	Minimal		
Description:	The current Samsung televisions that are at the council chambers are a bit smaller making it difficult to see presentations. I feel that 70 inch televisions would be helpful for council and citizens.		

Priority #:	19	LIDAR GPS	
Department:	GEN. ADMIN.	Estimated Cost:	unknown at this time
Project Length:	2027-2028	Funding Source:	??
Impact on the operating budget:	Possibly Large Impact		
Description:	The LIDAR GPS System is a ground penetrating system that will assist in finding water lines, sewer lines, electric lines, phone lines, etc. that will assist in collecting data for our GIS System.		

CITY OF BOONVILLE CAPITAL IMPROVEMENT PLAN FY 2023-24 TO 2028-29

Priority #:	20	LARGE SCANNER FOR MAPS	
Department:	GEN. ADMIN.	Estimated Cost:	\$20,000
Project Length:	2026-2027	Funding Source:	??
Impact on the operating budget:	Minimal		
Description:	The large map scanner will make it possible to be able to preserve the data that we have on the paper maps, yet be able to go paperless; which is very important because we are bursting at the seams.....		

Priority #:		PROJECT TITLE	
Department:		Estimated Cost:	\$0
Project Length:	20yr-20yr	Funding Source:	
Impact on the operating budget:			
Description:			

Priority #:		PROJECT TITLE	
Department:		Estimated Cost:	\$0
Project Length:	20yr-20yr	Funding Source:	
Impact on the operating budget:			
Description:			

FY 2023-24 Capital Projects/Purchases

Water (06)

Budget Category	Budget Number	Amount	Description	
06 Water	02-4019	10,000	Jack hammer Attachment for Eqpt	DONE
	02-4080	\$25,000	Water Line Pierre Lane to Airport	Starting Novem
	07-4010	40,000	Dump Truck Contribution (220K Total)	still on order
	07-4010	65,000	Truck – Fleet rotation	DONE
	07-4020	40,000	GIS Development Contribution (143 Total)	IN the works
	07-4030	30,000/53,000	Meter Reading Equipment	DONE
	07-4153	\$45,000	Rebuild River Pump (roll over from FY 22-23)	DONE
	07-4080	\$351,000	Hwy 87 water line Contribution (1.5M total FY 23-24)	NOT DONE
	07-4172	\$3000	Fencing at WTP	NOT DONE
	07-4172	\$30,000	Meco Review Intake pipe/pipe lining intake pipe	NOT DONE

Wastewater (08)

08 Wastewater	05-4080	96,000	Lift Station Maintenance	Partial Done
	08-4010	40,000	Dump Truck Contribution (220K Total)	still on order
	08-4020	40,000	GIS Development Contribution (143 Total)	IN the works
	08-4030	30,000/7,000	Meter reading Equipment	DONE
	08-4100	70,000	Rupp Pump	DONE
	08-4100	10,000	Belts for belt press	NOT DONE
	08-4173	160,000	Smi-Co repairs at EQ Basin (roll over)	DONE
	08-4174	200,000	Instituform	DONE

Sanitation

17 Gaming	01-4361	85,000	New Scale at Transfer Station	DONE
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Police

05 CIP	01-6020	5000	Vehicles	
	01-6050	15,000	Computer Equipment/Replacement (officer, car, office)	
17 Gaming	01-4328	80,000	Police cars	
	01-4455	40,000	Mustang, In car cameras	
	01-4361	22,000	New K9 and Training	

Fire

05 CIP	01-7020	32,000	Save – SCBA Units	
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Animal Control

05 CIP	01-8010	10,000	Save- Vests and equipment	
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Parks

05 CIP	01-5025	65,000	Lawn Mower	
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	01-5025	7000	Lawn Mower (zero turn)
	01-5025	5500	DR Leaf Vacuum
	01-5025	10,000	John Deere Unaloder equipment lease
	01-5050	15,000	Security Cameras
	01-5045	42,000	Rolling Hills playground (rollover)
	01-5060	10,000	Deck Chairs at pool
	01-2300	8000	New drinking fountains at parks
	01-5500	82,000	Pool painting (roll over)
	01-5800	35,000	Parks Truck Contribution (65,000 total)
17 Gaming	01-4355	30,000	Parks Truck Contribution (65,000 total)

Streets

05 CIP	01-3100	40,000	Rt B Shoulders	Next year
	01-3100	40,000	Woodland Park Concrete Street Repair	Partial done
	01-3100	40,000	Dump Truck Contribution (220K Total)	Still on order
17 Gaming	01-4355	100,000	Dump Truck Contribution (220K Total)	Still on order
	01-4355	16,500	New Paint Stripping Machine	DONE
	01-4355	60,000	Signal Box for Morgan and Main Lights	Due late Octob
	01-4355	60,000	Streets Truck Fleet rotation	DONE
	01-4355	10,000	Equipment Attachments	1/2 done
	01-4342	175,000	Street Repairs	DONE

General Admin/City Wide Projects

17 Gaming	01-4355	10,000	City hall Kitchen remodel	
	01-4355	500	City Hall bathroom fan in women's bathroom	
	01-4361	63000	GIS Development Contribution (143K total)	In the works
	01-4361	150,000	Security Cameras Lions Park and Kemper Park	
	01-4361	200,000	Kemper Science Hall HVAC	

Equipment Leases: 43,900 (Streets/Water/Sewer)

1. Hydraulic Excavator- 25,600
 - a. 06-07-4160 3300
 - b. 06-07-4172 5750
 - c. 17-01-4355 6000
 - d. 21-01-3040 10,550
2. John Deere Backhoe – 13,100
 - a. 17-01-4355 – 7000
 - b. 17-01-4361 -4100
 - c. 08-08-4160- 2000
3. Cat Trackloader- 11,000
 - a. 08-08-4160 5500
 - b. 06-07-4150 5500

DONE

Unfunded Capital Items



Missouri Gaming Commission State/Local Allocation of Gaming Revenues

For the Period 9/1/2023 through 9/30/2023
Year beginning 9/1/2023

RPT MGC/3

Gaming Date	Day	Admission Tax Remitted	Gaming Tax Remitted	Total Tax Remitted	State & Local Portion of Adm Tax	State Portion of Gaming Tax	Local Portion of Gaming Tax	Total Local Adm & Gaming Tax
09/01/2023	Friday	\$9,758.00	\$71,923.39	\$81,681.39	\$4,879.00	\$64,731.05	\$7,192.34	\$12,071.34
09/02/2023	Saturday	\$12,180.00	\$83,868.46	\$96,048.46	\$6,090.00	\$75,481.61	\$8,386.85	\$14,476.85
09/03/2023	Sunday	\$9,692.00	\$60,176.21	\$69,868.21	\$4,846.00	\$54,158.59	\$6,017.62	\$10,863.62
09/04/2023	Monday	\$7,528.00	\$59,888.81	\$67,416.81	\$3,764.00	\$53,899.93	\$5,988.88	\$9,752.88
09/05/2023	Tuesday	\$3,844.00	\$23,656.46	\$27,500.46	\$1,922.00	\$21,290.81	\$2,365.65	\$4,287.65
09/06/2023	Wednesday	\$4,538.00	\$36,754.85	\$41,292.85	\$2,269.00	\$33,079.37	\$3,675.48	\$5,944.48
09/07/2023	Thursday	\$4,120.00	\$39,032.08	\$43,152.08	\$2,060.00	\$35,128.87	\$3,903.21	\$5,963.21
09/08/2023	Friday	\$7,330.00	\$47,498.79	\$54,828.79	\$3,665.00	\$42,748.91	\$4,749.88	\$8,414.88
09/09/2023	Saturday	\$9,916.00	\$89,634.81	\$99,550.81	\$4,958.00	\$80,671.33	\$8,963.48	\$13,921.48
09/10/2023	Sunday	\$5,434.00	\$32,140.55	\$37,574.55	\$2,717.00	\$28,926.50	\$3,214.05	\$5,931.05
09/11/2023	Monday	\$3,498.00	\$22,259.29	\$25,757.29	\$1,749.00	\$20,033.36	\$2,225.93	\$3,974.93
09/12/2023	Tuesday	\$3,844.00	\$32,309.47	\$36,153.47	\$1,922.00	\$29,078.52	\$3,230.95	\$5,152.95
09/13/2023	Wednesday	\$4,652.00	\$43,225.07	\$47,877.07	\$2,326.00	\$38,902.56	\$4,322.51	\$6,648.51
09/14/2023	Thursday	\$5,050.00	\$40,848.05	\$45,898.05	\$2,525.00	\$36,763.25	\$4,084.80	\$6,609.80
09/15/2023	Friday	\$8,644.00	\$65,329.82	\$73,973.82	\$4,322.00	\$58,796.84	\$6,532.98	\$10,854.98
09/16/2023	Saturday	\$10,138.00	\$67,219.77	\$77,357.77	\$5,069.00	\$60,497.79	\$6,721.98	\$11,790.98
09/17/2023	Sunday	\$5,880.00	\$41,178.57	\$47,058.57	\$2,940.00	\$37,060.71	\$4,117.86	\$7,057.86
09/18/2023	Monday	\$3,786.00	\$21,111.31	\$24,897.31	\$1,893.00	\$19,000.18	\$2,111.13	\$4,004.13
09/19/2023	Tuesday	\$4,160.00	\$29,191.86	\$33,351.86	\$2,080.00	\$26,272.67	\$2,919.19	\$4,999.19
09/20/2023	Wednesday	\$4,630.00	\$37,085.12	\$41,715.12	\$2,315.00	\$33,376.61	\$3,708.51	\$6,023.51
09/21/2023	Thursday	\$5,104.00	\$33,698.82	\$38,802.82	\$2,552.00	\$30,328.94	\$3,369.88	\$5,921.88
09/22/2023	Friday	\$8,178.00	\$64,636.83	\$72,814.83	\$4,089.00	\$58,173.15	\$6,463.68	\$10,552.68
09/23/2023	Saturday	\$9,792.00	\$61,837.03	\$71,629.03	\$4,896.00	\$55,653.33	\$6,183.70	\$11,079.70
09/24/2023	Sunday	\$9,894.00	\$103,989.49	\$113,883.49	\$4,947.00	\$93,590.54	\$10,398.95	\$15,345.95
09/25/2023	Monday	\$4,024.00	\$32,223.06	\$36,247.06	\$2,012.00	\$29,000.75	\$3,222.31	\$5,234.31
09/26/2023	Tuesday	\$3,958.00	\$31,655.19	\$35,613.19	\$1,979.00	\$28,489.67	\$3,165.52	\$5,144.52
09/27/2023	Wednesday	\$4,700.00	\$33,190.31	\$37,890.31	\$2,350.00	\$29,871.28	\$3,319.03	\$5,669.03
09/28/2023	Thursday	\$5,842.00	\$49,500.31	\$55,342.31	\$2,921.00	\$44,550.28	\$4,950.03	\$7,871.03
09/29/2023	Friday	\$9,844.00	\$70,420.83	\$80,264.83	\$4,922.00	\$63,378.75	\$7,042.08	\$11,964.08
09/30/2023	Saturday	\$10,684.00	\$87,513.02	\$98,197.02	\$5,342.00	\$78,761.72	\$8,751.30	\$14,093.30
Casino Report Totals:		\$200,642.00	\$1,512,997.63	\$1,713,639.63	\$100,321.00	\$1,361,697.87	\$151,299.76	\$251,620.76
Casino YTD Totals		\$200,642.00	\$1,512,997.63	\$1,713,639.63	\$100,321.00	\$1,361,697.87	\$151,299.76	\$251,620.76

*Note : The figures contained in this report may be subject to adjustment.





REPORT OF OPERATIONS

Boonville, Missouri

Water Treatment Plant

September 2023

Submitted by Alliance Water Resources, Inc.

October 16, 2023

City Council Meeting

OUR MISSION

We partner with communities to deliver the finest water and wastewater services available at a competitive price. We are committed to keeping water safe and clean while serving people and taking care of communities with improved technical operations, careful management and financial oversight, and ensured regulatory compliance.

Alliance Water Resources, Inc.

**206 S. Keene St.
Columbia, MO
65201**

(573)874-8080

October 2023

Administrative

Repair and Chemical Expense Report September 2023

Description	Budgeted	Actual Spent	Remaining
Repair Expense	\$38,800.00	\$25,438.54	\$13,361.46
Chemical Expense	\$293,550.00	\$230,568.65	\$62,981.35

Treatment, Operations, and Maintenance

- Normal operations, filter maintenance, and UV System calibration checks were performed this month.
- The staff replaced a broken motor/pump coupler on Pump #1 at the Main St Booster Pump Station.
- Shannahan Crane was here at the Drinking Water Treatment Plant to perform annual crane inspections on all the cranes and hoist.
- The staff changed the air filters in the Electronic Air Cleaner System in the Lab and the HVAC system in the Water Treatment Plant.
- Midway Electric was here to investigate the reason for the circuit breaker tripping out on High Service Pump #1. They found loose terminal bolts in the main circuit breaker panel and both pump panels.
- The staff cleaned the water supply line to the water level transducer at the Hospital Water Tower.
- The staff cleaned the intake screen on the 576K Exhaust Fan and greased the bearings.
- The staff greased the bearings on the Updraft Aerator.
- The staff cleaned the intake screens on the Filter Room Exhaust Fans.
- The staff cleaned the HVAC outdoor units of the Water Treatment Plant and UV Control Room.
- The staff isolated the Krohn St Water Tower from the water distribution system and drained it. Utility Services Group will clean, sandblast, and paint the interior of the tank.
- The staff assisted the Water Distribution Crew with 2 water main breaks by shutting down the operations of the Main St Booster Pump Station.
- The staff installed the Flash Mixer in the Secondary Flash Mixer Basin in the Basin Building. The flash mixer was repaired by Alliance Pump.

Project Updates

- None at this time.

Safety

- The staff conducted its Monthly Safety meeting.
- The staff conducted its monthly check of chlorine leak detector sensors.
- The staff conducted its weekly inspection of emergency eyewash stations and emergency showers.
- The staff conducted its monthly crane inspection in the Chlorine Storage Room.
- The staff conducted annual ladder inspection on all ladders in the Water Treatment Plant.

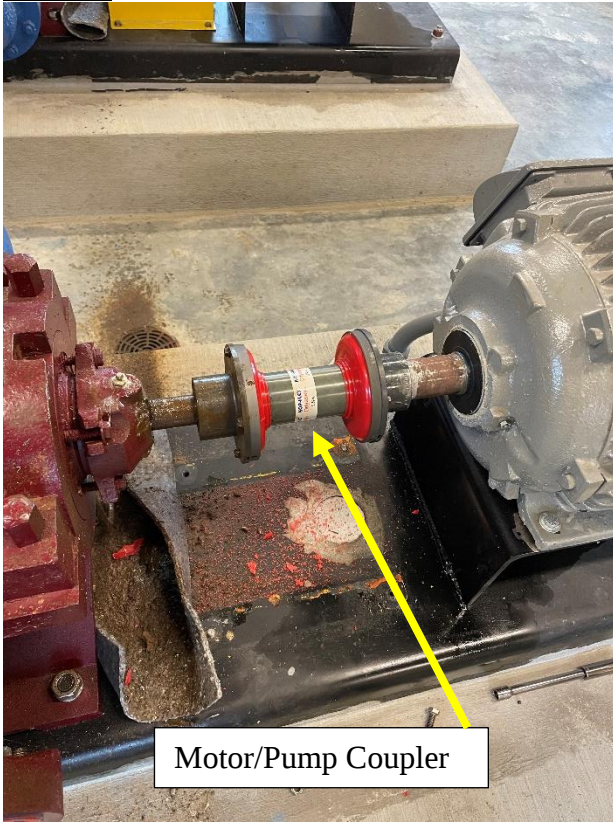
Regulatory

- The staff collected ten water samples throughout the water distribution system for Total Coliform and E-Coli testing.
- The staff collected monthly water samples for (TOC) Total Organic Compound testing, quarterly (TTHM) Total Trihalomethane testing, and Diquat testing. The samples were shipped to the State Health Lab and to private labs outside of Missouri.

Concerns for the Month.

- None at this time

Photos



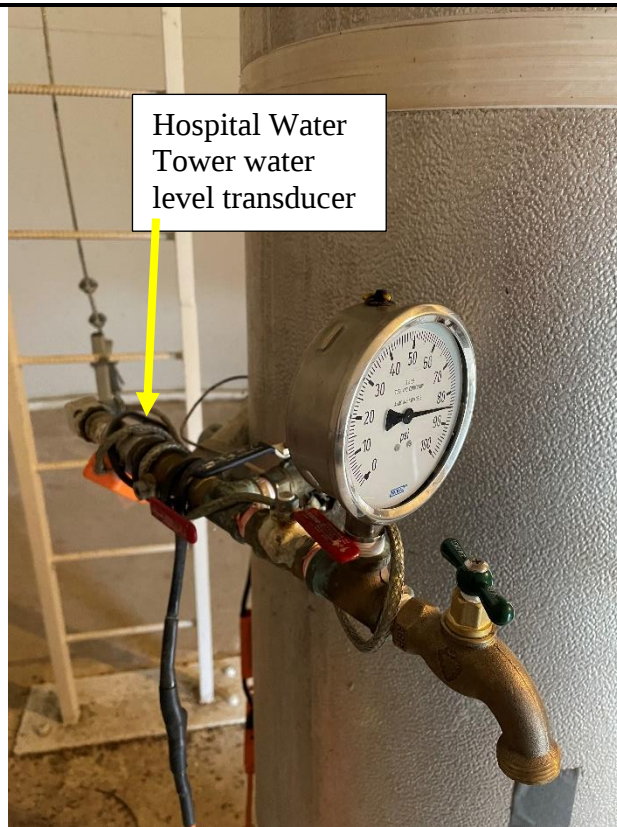
Motor/Pump Coupler



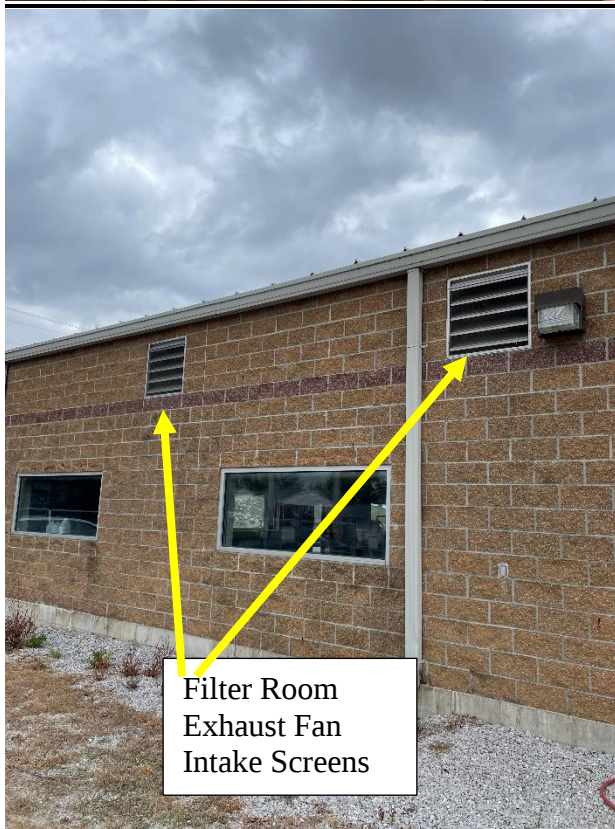
Overhead Crane



High Service
Pump Circuit
Breaker Panel



Hospital Water
Tower water
level transducer





MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
MICROBIOLOGICAL ANALYSIS REPORT

PUBLIC WATER SYSTEM NAME			LABORATORY NAME		LABORATORY TELEPHONE NUMBER WITH AREA CODE		
STREET ADDRESS			CERTIFICATION NUMBER				
CITY		ZIP CODE					
COUNTY		ID NUMBER		SAMPLE COLLECTOR NAME OR INITIALS			
SAMPLE DATE MO/DAY/YR	SAMPLE TYPE	COLLECTION POINT	SAMPLE LOCATION ID	SAMPLE RESULTS		CHLORINE RESIDUAL (mg/L)	
				TOTAL COLIFORM	FECAL E-COLI	TOTAL	FREE
TOTAL ROUTINE SAMPLE ANALYZED			MONITORING VIOLATION ☐ Yes ☐ No			MCL VIOLATION ☐ Yes ☐ No	
TITLE			DATE				
SIGNATURE							

INSTRUCTIONS FOR COMPLETING MICROBIOLOGICAL ANALYSIS REPORT

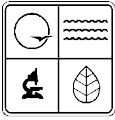
This form must be completed and forwarded to the Missouri Department of Natural Resources, Water Protection Program - Public Drinking Water Branch, P.O. Box 176, Jefferson City, Missouri 65102 as soon as the water system's monthly monitoring is completed, but in no case later than the 10th of the month following the month for which monitoring was done.

1. **Address Block** - Complete the name and address of the public water system. The 7-digit public water system identification number must be entered to account for the samples.
2. **Laboratory Name** - Complete the laboratory name and certification number.
3. **Sample Date** - Enter the date the sample was taken using two digits for the month, day and year.
4. **Collection Point** - Give the address or name of the sample collection point. On repeat samples also indicate if the sample was taken from the upstream, downstream or original location.
5. **Sample Type** - Indicate the type of sample by putting the corresponding letter in the box. There are 4 types of samples as follows:
 - R. Routine** - Regular monthly samples.
 - P. Repeats** - A series of three or four repeats (four if the water system is only required to take 1 routine per month) must be taken for each sample that tests positive for coliform. All must be taken on the same day, within 24 hours of being notified of the coliform positive sample. One must be taken from the site of the original bad sample, one within five service connections upstream and one five service connections downstream. The fourth, if necessary, may be collected anywhere within the 10 service connections.
 - WL. Source/Well: Groundwater systems** that do not provide 4-log treatment must collect a "Source/Well" sample in addition to the Repeat samples. One Source/Well sample is required at each well in service for each total coliform positive routine sample. If the water system is only required to take 1 routine per month, the Source sample can count as a fourth Repeat sample, but must be listed as a Source/Well sample.
 - L. Replacement** - All routine and repeat samples not analyzed for various reasons listed below (LA, OUT, CR, BIT, etc.) are invalid and must be replaced with a single sample from the same location within 24 hours of being notified. Any other sample previously submitted but not analyzed should also be replaced.
 - S. Special** - Any sample that does not count for the systems monitoring record, such as samples used to check disinfection practices on repairs or new construction.
6. **Sample Location ID** - ID number to identify routine sampling points. Also, used to tie repeat samples to the original positive sample. The ID Number can be up to 10 characters.
7. **Sample Results** - Sample results must be reported in the following fashion:

Code

P	A sample that is positive for total coliform, fecal coliform or E. coli. The total coliform count may be indicated in lieu of P.
A	A sample where total coliform, fecal coliform or E. coli. are absent.
LA	Sample was not analyzed due to lab accident.
CWO	Confluent bacterial growth without coliform.
TWO	Bacterial growth too numerous to count without coliform.
OUT	Sample was not analyzed because more than 30 hours expired between collection of the sample and receipt for examination.
CR	Sample was not analyzed because the chlorine residual was too high.
QNS	Sample was not analyzed because the quantity of water was insufficient.
INC	Sample was not analyzed due to incomplete or inaccurate information on the sample card.
BTF	Sample was not analyzed because the bottle was too full.
MBN	Sample was not analyzed because the sample bottle was not numbered.
PD	Sample was not analyzed because it was post dated.
BCT	Sample was not analyzed because bottle cap was too tight.
BIT	Sample was not analyzed because bottle was broken in transit.
HSD	Sample was not analyzed because of excessive sediment.
NSC	Samples was not analyzed because of nonstandard container.

8. **Chlorine Residual** - If the sample is from a chlorinated supply, the chlorine residual measured at the sample collection point must be registered.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM – PUBLIC DRINKING WATER BRANCH
**DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER
SYSTEMS < 10,000 POPULATION**

PWS NAME City of Boonville		PWS ID MO 3010089	MONTH September
ADDRESS 901 Riviera Dr		TELEPHONE NUMBER WITH AREA CODE (660) 537-6909	YEAR 2023
CITY Boonville	ZIP CODE 65233	COUNTY Cooper	PLANT Main Plant

SEE INSTRUCTIONS

DISTRIBUTION DISINFECTION 1. Number of samples analyzed, A: <u>10</u> 2. Number of samples below 0.2 mg/L, B: <u>0</u> $[(A-B)/A] \times 100 = C: \underline{100}$ % meeting minimum disinfection required. 3. Avg. disinfectant residual for the month <u>2.03</u> mg/l	TURBIDITY 1. Total number measurements taken monthly, A: <u>210</u> 2. Number of measurements below 0.3 NTU, B: <u>210</u> $[B/A] \times 100 = C: \underline{100}$ % meeting turbidity requirements.
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Date	Hours of operation	Finished water temperature (C)	Lowest disinfectant at entrance to distribution system (mg/L)	Highest turbidity measurement of the day	Duration disinfectant fell below 0.5 mg/L free Cl ₂ or 1 mg/L chloramines	Value of turbidity measurements that exceed	
			☐ Free Chlorine ☒ Chloramines			1NTU	5 NTU
1	10.00	29	1.55	.06	0	0	0
2	8.50	28	1.99	.06	0	0	0
3	7.75	28	1.63	.05	0	0	0
4	10.25	28	1.70	.05	0	0	0
5	7.50	28	1.58	.05	0	0	0
6	8.75	28	1.88	.05	0	0	0
7	8.00	28	1.87	.05	0	0	0
8	8.25	27	1.86	.05	0	0	0
9	7.25	27	1.68	.05	0	0	0
10	8.00	26	1.79	.05	0	0	0
11	9.00	26	1.50	.05	0	0	0
12	5.75	26	1.78	.04	0	0	0
13	8.25	26	1.78	.08	0	0	0
14	9.00	25	1.89	.07	0	0	0
15	6.25	25	1.96	.06	0	0	0
16	6.25	25	2.00	.06	0	0	0
17	5.75	25	1.98	.05	0	0	0
18	6.25	24	2.03	.05	0	0	0
19	6.25	24	1.94	.06	0	0	0
20	6.75	24	1.95	.05	0	0	0
21	6.25	24	1.99	.05	0	0	0
22	11.50	24	1.91	.05	0	0	0
23	6.00	24	2.17	.05	0	0	0
24	10.25	24	2.08	.05	0	0	0
25	6.75	23	2.07	.05	0	0	0
26	6.25	23	2.03	.04	0	0	0
27	8.75	23	1.56	.06	0	0	0
28	6.50	23	2.15	.05	0	0	0
29	7.00	24	2.09	.05	0	0	0
30	6.00	24	1.47	.05	0	0	0
31							

NAME OF PERSON PREPARING REPORT Matthew Bishop	SIGNATURE OF RESPONSIBLE OFFICIAL	DATE 10/6/2023
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INSTRUCTIONS: DISINFECTION AND TURBIDITY REPORT FOR SURFACE WATER SYSTEMS <10,000 POPULATION

Please fill out information completely and legibly.

Distribution Disinfection

1. On line 1, enter the total number of samples from the distribution system analyzed for residual disinfectant concentration (total chlorine or combined chlorine) during the month. The residual disinfectant concentration measurements must be taken at the same time and location as your routine monthly coliform samples. This is the value for A.
2. On line 2, enter the number of samples for the distribution systems that had less than 0.2 mg/L residual disinfectant concentration. This is the value for B.
3. Subtract B, from A. (A-B). Divide that number by A. Then multiply by 100. This will give you the value for C. For example: if A= 20 and B= 3, then $C = [(20-3)/20] \times 100 = 85\%$
4. On line 3, enter the arithmetic average for all residual disinfectant samples taken during the month.

Turbidity:

- 1 On line 1, enter the total number of combined filter turbidity measurements taken during the month. This is the value for A.
- 2 On line 2, enter the number of combined filter turbidity measurements taken during the month, which are less than or equal to 0.3 NTU. This is the value for B.
- 3 Divide B, by A. (B/A). Then multiply that number by 100. This will give you the value for C. For example: if A = 120 and B = 117, then $C = (117/120) \times 100 = 97.5\%$

Hours of operation:

For each day, record the number of hours each water treatment plant was in operation.

Finished Water Temperature

For each day, record the temperature of water entering the distribution.

Lowest Residual Disinfectant at Entrance to Distribution System:

For each day, record the lowest measurement of residual disinfectant concentration (mg/L) in water entering the distribution system (free available chlorine or chloramines).

Duration Residual Disinfectant Fell Below Requirement:

For each day, record the duration (hours, tenths) of each period (if any) when the residual disinfectant concentration in water entering the distribution system fell below 0.5 mg/L free chlorine or 1 mg/L chloramines. Note: should this occur the public water system must notify the department as soon as possible, but no later than by the end of the next business day.

The Highest Turbidity Reading for the Day:

For each day, record the highest turbidity reading on the combined plant effluent during the plants operational period.

Value of Turbidity Measurements that exceed 1 NTU and 5 NTU:

For each day, record the value of any turbidity measurements taken during the month, which exceed 1 NTU and 5 NTU. Note: should this occur the public water system must notify the department as soon as possible, but no later than the end of the next business day.

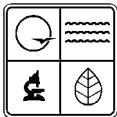
INDIVIDUAL FILTER MONITORING AND REPORTING

- 1 Was each filter continuously monitored for turbidity and results recorded every 15 minutes? Yes
- 2 Was there a failure of the continuous turbidity monitoring equipment? No
If yes on 2, was the equipment repaired within 5 working days or 14 days with department approval? N/A
If yes on 2, was grab sampling done every four hours until failure corrected? N/A
- 3 Was any individual filter turbidity level >1.0 NTU in two consecutive measurements taken 15 minutes apart? No
If yes, perform follow-up actions step 1.
- 4 Was any individual filter level for three months in a row > 1.0 NTU in two consecutive recordings taken 15 minutes apart? No
If YES, perform follow-up actions step 2
- 5 Was any individual filter turbidity level > 2.0 NTU in two consecutive recordings taken 15 minutes apart for two consecutive months? No
If YES, perform follow-up actions step 3

FOLLOW-UP ACTIONS to PERFORM

1. Report filter numbers, turbidity measurements that exceed 1 NTU and dates the exceedances occurred and causes if known.
2. Conduct a self-assessment of the filters within 14 days of the triggering event. The system must report the date self-assessment was triggered and the date it was completed.
3. The system must arrange to have a comprehensive performance evaluation performed not later than 60 days following the triggering event. The evaluation must be completed and submitted to the department within 120 days following the triggering event.

The Missouri Department of Natural Resources-Public Drinking Water Branch recommends contacting your local regional office if any individual filter exceeds 1.0 NTU, the lowest trigger in the individual filter standards.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM – PUBLIC DRINKING WATER BRANCH
MONTHLY UV OPERATION REPORT

1. PUBLIC WATER SYSTEM NAME		PWS ID		2. MONTH / YEAR	
ADDRESS		TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS	
CITY		ZIP CODE		COUNTY	
3.	4.	5.	6.	7.	8.
Unit	Total Run Time (hrs)	Total Volume (MG)	Dosage (mJ/cm²)	Number of Off-Specification Events	Total Off-Specification Volume (MG)
9. TOTAL VOLUME OF OFF-SPECIFICATION WATER PRODUCED (MG) [A]			10. TOTAL VOLUME OF WATER PRODUCED (MG) [B]		
11. PERCENT OF OFF-SPECIFICATION WATER PRODUCED $([A]/[B]*100)$			12. PERCENT OF OFF-SPECIFICATION WATER PRODUCED <5 PERCENT ☐ YES ☐ NO		
13. Of the _____ sensors, _____ have been checked for calibration and _____ were within the acceptable range of tolerance.					
14. The following reactors had a sensor correction factor		Unit	Sensor correction factor		
15. COMMENTS					
16. NAME OF PERSON PREPARING REPORT		17. SIGNATURE OF RESPONSIBLE OFFICIAL		DATE	

INSTRUCTIONS FOR COMPLETING MONTHLY UV OPERATION REPORT

This form must be completed and forwarded to the Missouri Department of Natural Resources, Water Protection Program - Public Drinking Water Branch, P.O. Box 176, Jefferson City, MO 65102-0176 as soon as the water system's monthly monitoring is completed, but in no case later than the 10th day of the month following the month for which monitoring was done

1. **Address Block** - Complete the name, 7-digit public water system identification number and address of the public water system.
2. **Month** - Enter the month and year for which the monitoring was completed.
3. **Unit** - Enter the unit name/number identifying each UV reactor unit.
4. **Total Run Time** (hrs) – Enter the total number of hours that each UV reactor unit was operating.
5. **Total Volume** (MG) – Enter the total volume of water passing through each UV reactor unit in million gallons.
6. **Dosage** (mJ/cm²) – Enter the lowest UV dosage delivered by each UV reactor unit in millijoules per square centimeter. (This will be below the dosage required for log removal if there was an off-specification event.)
7. **Number of Off-Specification Events** – Enter the number of off-specification events for each UV reactor unit. An off-specification event is when the actual dosage drops below the required dosage for log removal. (The required dosages for log removal are provided in the table below.)

UV Dose Requirements (mJ/cm²)

Target Pathogen	Log Inactivation							
	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Cryptosporidium	1.6	2.5	3.9	5.8	8.5	12	15	22
Giardia	1.5	2.1	3.0	5.2	7.7	11	15	22
Virus	39	58	79	100	121	143	163	186

8. **Total Off-Specification Volume** (gal) – Enter the total volume of off-specification water produced by each UV reactor unit in million gallons.
9. **Total Volume of Off-Specification Water Produced** (MG) – Enter the total sum of the volumes entered in column 8. This is the value for [A].
10. **Total Volume of Water Produced** (MG) – Enter the total sum of the volumes entered in column 5. This is the value for [B].
11. **Percent of Off-Specification Water Produced** – Divide [A] by [B]. Then multiply that number by 100. For example: if [A] = 2 and [B] = 150, then $2 \div 150 \times 100 = 1.33$ percent
12. **Facility Meets Off-Specification Requirement** – If item 11 is less than 5 percent, mark yes. If item 11 is greater than 5 percent, mark no.
13. **Sensor Calibration** - Enter the number of sensors, how many were checked for calibration, and how many were within the acceptable range of tolerance.
14. **Sensor Correction Factor** – Enter the unit name/number identifying each UV reactor unit and the corresponding sensor correction factor if applicable.
15. **Comments** – Enter any additional comments.
16. **Name of Person Preparing Report** – Enter the name of the person who prepared the report.
17. **Signature of Responsible Official** – Signature of responsible official.

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Permit Number	Outfall Number
MO0004081	FACA
Monitoring Period	
9/1/23	9/30/23
NODI:	*****

Parameters	Reporting Requirements			Unit	Reporting Requirements		Unit
Flow, in conduit or thru treatment plant	*****	*****	*****	*****	0.778	0.233	Mgal/d
Mon. Location.: End of Pipe	*****:*****	*****:*****	*****:*****		Monthly Avg.:Monitoring Required	Daily Max.:Monitoring Required	
Sample Type: Record							
Frequency: Monthly							
Solids accumulation rate tot dry weight	*****	0.001	0.001	g/m3/d	*****	*****	*****
Mon. Location.: End of Pipe	*****:*****	Monthly Avg.:Monitoring Required	Daily Max.:Monitoring Required		*****:*****	*****:*****	
Sample Type: Calculated							
Frequency: Monthly							
Water treatment additives	*****	*****	*****	*****	5.616	0.16	ton/mo
Mon. Location.: End of Pipe	*****:*****	*****:*****	*****:*****		Monthly Avg.:Monitoring Required	Daily Max.:Monitoring Required	
Sample Type: Calculated							
Frequency: Monthly							
Comments: Outfall #1 and #3							

Boonville WTP
Boonville
BOONVILLE, MO, Cooper

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Northeast Regional Office
1709 Prospect Drive
Macon, MO, 63552

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

eSignature Russell Gerling	Submission Date October 6, 2023	User Phone Number (573)476-4395
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MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Environmental Services Program
PO Box 176 Jefferson City MO 65102-0176

Results of Sample Analyses

Report Date: 9/14/2023

Test Group: 2023 August TOC mailing

Order ID: WO230719200



PDW-2023Aug-3446

Public Drinking Water Branch
MO3010089
Boonville PWS

Todd Baslee
NEW WATER PLANT
901 RIVIERA DR
BOONVILLE MO 65233

Sample:2313322



Site: Boonville PWS

Site Number: MO3010089

Sample Location and Type: MISSOURI RIVER (Raw Water) /IN 30015

County: Cooper

Collected 08/10/23 08:30

Public Drinking Water Supply

Analyte	Result	MCL	SS	Qualifier(s)
Analysis: Alkalinity - PWS Result by Field Dependent				
Alkalinity - PWS Result	118 mg/L			
Analysis: Total Organic Carbon by Standard Methods 5310-C				
Total Organic Carbon	4.39 mg/L			

Sample:2313323



Site: Boonville PWS

Site Number: MO3010089

Sample Location and Type: BOONVILLE - TREATMENT PLANT (Treatment Plant) /TP 50234

County: Cooper

Collected 08/10/23 09:30

Public Drinking Water Supply

Analyte	Result	MCL	SS	Qualifier(s)
Analysis: Total Organic Carbon by Standard Methods 5310-C				
Total Organic Carbon	2.07 mg/L			

MCL- A Maximum Contaminant Level (MCL) is the legal threshold limit on the amount of a substance that is allowed in drinking water under the Federal Safe Drinking Water Act. MCLs are health based, legally enforceable standards. Drinking water results below the MCLs are considered safe.

*Lead and Copper samples have an Action Level (AL) and not an MCL. The AL levels for Lead and Copper are shown in the MCL column.

SS- Secondary Drinking Water Regulations (secondary standards) are non-enforceable guidelines regulating contaminants that may cause aesthetic effects in drinking water as taste, color or odor. It is recommended that water systems comply with secondary standards but water systems are not required to comply.

The analysis of this sample was performed in accordance with procedures approved or recognized by the U. S. Environmental Protection Agency.

If you have any questions, please contact the Public Drinking Water Branch's chemical monitoring coordinator Brent Weis at 573-751-3458.

Units used in this report:

mg/L milligrams per liter

Richard Kirsch

Richard Kirsch
Laboratory Manager
Environmental Services Program
Division of Environmental Quality

Company WO Summary

WO Range

9/3/2023

WO #	Site	WO Title	Status	Start / Due	Completed / Closed	Time on Hold	Type	Category	Hours	Costs			
										Labor	Parts	Invoice	Total
4004400	Boonville	Clean pH Probe	Closed	9/3/2023 9/6/2023	9/5/2023 9/5/2023		PM	Lab Equipment and Process Analyzers	00:00	.00	.00	.00	.00
4008361	Boonville	AWR LM TRUCK WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/5/2023 9/8/2023	9/5/2023 9/5/2023		PM	Vehicle	00:00	.00	.00	.00	.00
4008362	Boonville	TRUCK 23 WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/5/2023 9/8/2023	9/5/2023 9/5/2023		PM	Vehicle	00:00	.00	.00	.00	.00
4008364	Boonville	CAR 19 WEEKLY WALK AROUND INSPECTION	Closed	9/5/2023 9/8/2023	9/7/2023 9/7/2023		PM	Vehicle	00:00	.00	.00	.00	.00
4008430	Boonville	Clean Screens on Aerator	Closed	9/5/2023 9/8/2023	9/5/2023 9/5/2023		PM	Cleaning	00:00	.00	.00	.00	.00
4011536	Boonville	Check Oil On Air Compressor	Closed	9/6/2023 9/9/2023	9/12/2023 9/12/2023		PM	General	00:00	.00	.00	.00	.00
4012067	Boonville	Ladder Inspections	Closed	9/7/2023 9/12/2023	9/15/2023 9/15/2023		PM	Safety	00:00	.00	.00	.00	.00
4017237	Boonville	Clean or Replace Lab Air Cleaner Filter Over Lab Desk	Closed	9/10/2023 9/13/2023	9/12/2023 9/12/2023		PM	HVAC	00:00	.00	.00	.00	.00
4017238	Boonville	Clean or Replace Lab Air Cleaner Filter Over Lab Work Area	Closed	9/10/2023 9/13/2023	9/12/2023 9/12/2023		PM	HVAC	00:00	.00	.00	.00	.00
4017245	Boonville	Check and Replace Filter as Needed & Check Coils At River Pumphouse	Closed	9/10/2023 9/15/2023	9/12/2023 9/12/2023		PM	HVAC	00:00	.00	.00	.00	.00
4017246	Boonville	Check HVAC Filter & Coils In Main Plant Replace or Clean	Closed	9/10/2023 9/13/2023	9/12/2023 9/12/2023		PM	HVAC	00:00	.00	.00	.00	.00
4017247	Boonville	Check, Clean or Replace HVAC Filters & Wash Coils on North Unit	Closed	9/10/2023 9/13/2023	9/12/2023 9/12/2023		PM	HVAC	00:00	.00	.00	.00	.00
4017248	Boonville	Check, Clean or Replace HVAC Filters & Wash Coils on South Unit	Closed	9/10/2023 9/13/2023	9/12/2023 9/12/2023		PM	HVAC	00:00	.00	.00	.00	.00
4019883	Boonville	Sensor Check - UV Tower Line	Closed	9/12/2023 9/15/2023	9/18/2023 9/18/2023		PM	General	00:00	.00	.00	.00	.00
4019884	Boonville	Sensor Check - UV	Closed	9/12/2023	9/18/2023		PM	General	00:00	.00	.00	.00	.00

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Company WO Summary

WO Range

9/3/2023

WO #	Site	WO Title	Status	Start / Due	Completed / Closed	Time on Hold	Type	Category	Hours	Costs			
										Labor	Parts	Invoice	Total
		Transfer Line		9/15/2023	9/18/2023								
4019887	Boonville	CAR 19 WEEKLY WALK AROUND INSPECTION	Closed	9/12/2023	9/12/2023		PM	Vehicle	00:00	.00	.00	.00	.00
				9/15/2023	9/12/2023								
4019888	Boonville	TRUCK 23 WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/12/2023	9/13/2023		PM	Vehicle	00:00	.00	.00	.00	.00
				9/15/2023	9/13/2023								
4019889	Boonville	AWR LM TRUCK WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/12/2023	9/12/2023		PM	Vehicle	00:00	.00	.00	.00	.00
				9/15/2023	9/12/2023								
4021816	Boonville	AWR Safety Meeting	Closed	9/13/2023	9/15/2023		PM	Safety	00:00	.00	.00	.00	.00
				9/16/2023	9/15/2023								
4022586	Boonville	High Service Building Exhaust Fan	Closed	9/12/2023	9/12/2023		WO	General	00:00	.00	.00	.00	.00
				12/11/2023	9/12/2023								
4023401	Boonville	Check and Clean Filters on 1.0 MG Clearwell	Closed	9/13/2023	9/14/2023		PM	Cleaning	00:00	.00	.00	.00	.00
				9/16/2023	9/14/2023								
4023402	Boonville	Check Oil On Air Compressor	Closed	9/13/2023	9/13/2023		PM	General	00:00	.00	.00	.00	.00
				9/16/2023	9/13/2023								
4025506	Boonville	Lubricate Both Aerator Blowers	Closed	9/15/2023	9/21/2023		PM	General	00:00	.00	.00	.00	.00
				9/18/2023	9/21/2023								
4026576	Boonville	Chlorine Hoist Monthly Check	Closed	9/15/2023	9/14/2023		PM	Safety	00:00	.00	.00	.00	.00
				9/18/2023	9/14/2023								
4026577	Boonville	Chlorine Sensor Check - Storage Room	Closed	9/15/2023	9/18/2023		PM	Safety	00:00	.00	.00	.00	.00
				9/18/2023	9/18/2023								
4026578	Boonville	Chlorine Sensor Check - Feed Room	Closed	9/15/2023	9/18/2023		PM	Safety	00:00	.00	.00	.00	.00
				9/18/2023	9/18/2023								
4031637	Boonville	CAR 19 WEEKLY WALK AROUND INSPECTION	Closed	9/19/2023	9/18/2023		PM	Vehicle	00:00	.00	.00	.00	.00
				9/22/2023	9/18/2023								
4031638	Boonville	TRUCK 23 WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/19/2023	9/20/2023		PM	Vehicle	00:00	.00	.00	.00	.00
				9/22/2023	9/20/2023								
4031639	Boonville	AWR LM TRUCK WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/19/2023	9/21/2023		PM	Vehicle	00:00	.00	.00	.00	.00
				9/22/2023	9/21/2023								
4035301	Boonville	Check Oil On Air Compressor	Closed	9/20/2023	9/21/2023		PM	General	00:00	.00	.00	.00	.00
				9/23/2023	9/21/2023								

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Company WO Summary

WO Range

9/3/2023

WO #	Site	WO Title	Status	Start / Due	Completed / Closed	Time on Hold	Type	Category	Hours	Costs			
										Labor	Parts	Invoice	Total
4043440	Boonville	CAR 19 WEEKLY WALK AROUND INSPECTION	Closed	9/26/2023 9/29/2023	9/27/2023 9/27/2023		PM	Vehicle	00:00	.00	.00	.00	.00
4043441	Boonville	TRUCK 23 WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/26/2023 9/29/2023	9/27/2023 9/27/2023		PM	Vehicle	00:00	.00	.00	.00	.00
4043443	Boonville	AWR LM TRUCK WEEKLY VEHICLE WALK AROUND INSPECTION	Closed	9/26/2023 9/29/2023	9/29/2023 9/29/2023		PM	Vehicle	00:00	.00	.00	.00	.00
4046485	Boonville	Check Oil On Air Compressor	Closed	9/27/2023 9/30/2023	9/27/2023 9/27/2023		PM	General	00:00	.00	.00	.00	.00
										.00	.00	.00	.00



REPORT OF OPERATIONS

Boonville, Missouri

Wastewater Treatment Plant

September 2023

Submitted by Alliance Water Resources, Inc.

October 16, 2023

City Council Meeting

OUR MISSION

We partner with communities to deliver the finest water and wastewater services available at a competitive price. We are committed to keeping water safe and clean while serving people and taking care of communities with improved technical operations, careful management and financial oversight, and ensured regulatory compliance.

Alliance Water Resources, Inc.

**206 S. Keene St.
Columbia, MO
65201**

(573)874-8080

September 2023

Administrative

Repair and Chemical Expense Report September 2023

Description	Budgeted	Actual Spent	Remaining
WWTP Repair Expense	\$40,000.00	\$10,399.86	\$29,600.14
LS Repair Expense	\$50,000.00	\$1,122.54	\$48,877.46
Chemicals	\$95,000.00	\$48,124.89	\$46,875.11

Treatment, Operations, and Maintenance

- The staff performs weekly maintenance/housekeeping on the Bar Screen, Grit Collector, Oxidation Ditch, Clarifiers, Effluent Channel including the UV Disinfection System, and Digester Blowers.
- Shannahan Crane was here at the Wastewater Treatment Plant and Lift Stations to perform annual inspections on cranes and hoist.
- Clarifier #2 failed to operate on a weekend and is creating an unusual noise. The staff changed over to Clarifier #1. The noise is under investigation by Alliance Pump and Mechanical.

Project Updates

- Systems Manufacturing was here to install a new flow meter at the Effluent Channel.

Safety

- The staff conducted its Monthly Safety meeting.
- The staff installed safety chains at locations where a fall hazard was.
- The staff replace all the Safety Life Rings/Ropes with Life Ring covers.

Regulatory

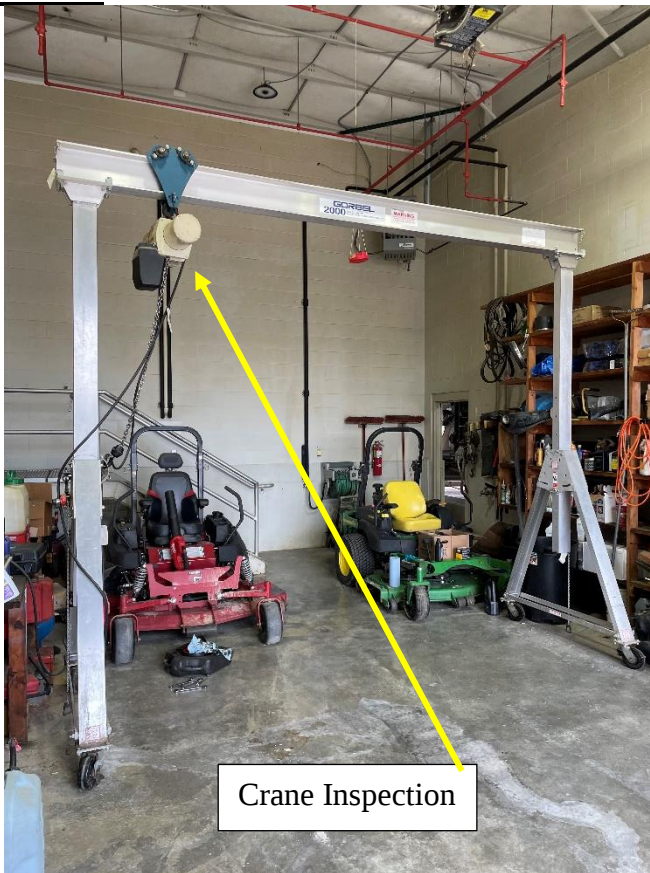
- The staff documents daily Flow through the Wastewater Treatment Plant, outside air temperature, rainfall, and weather conditions.
- The staff collected daily water samples throughout the Wastewater Treatment Plant for Dissolved Oxygen (DO) testing, temperature, and pH testing.
- The staff collected weekly water samples from the Effluent of the Wastewater Treatment Plant for E-Coli testing, Biochemical Oxygen Demand (BOD) testing, and Total Suspended Solids (TSS) testing.

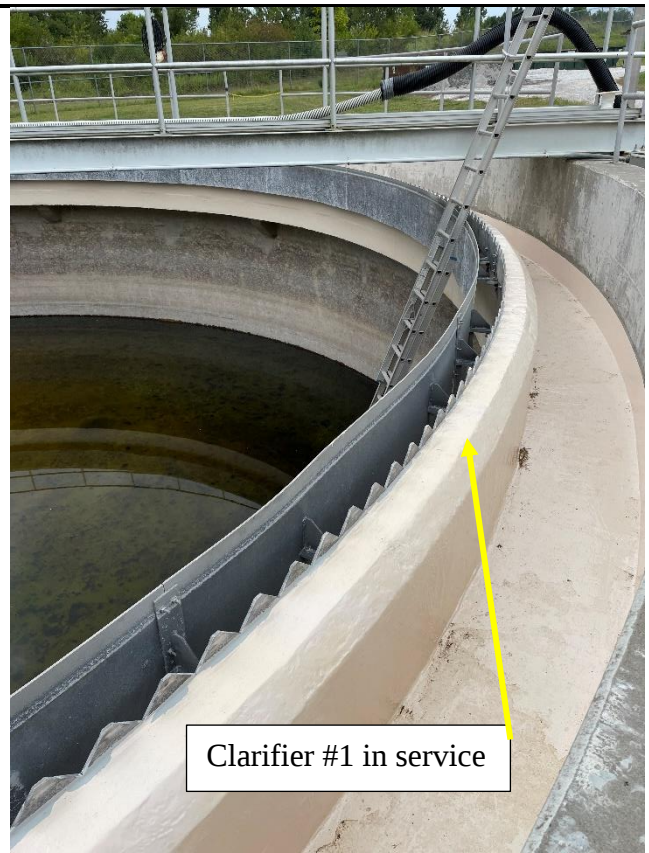
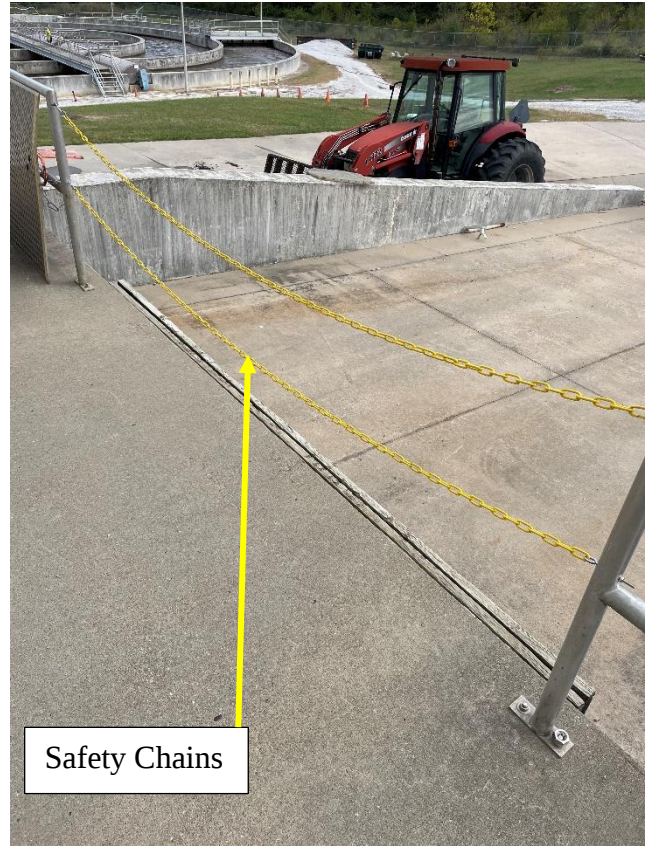
- The staff collected monthly water samples from the Influent of the Wastewater Treatment Plant for Biochemical Oxygen Demand (BOD) testing, Total Suspended Solids (TSS) testing, and Ammonia testing. This is for monitoring purposes only and determining Wastewater Treatment Plant Percent Removal.
- The staff collected monthly water samples from the Influent of the Wastewater Treatment Plant for Total Phosphorus testing, Total Kjeldahl Nitrogen testing, and Nitrite+Nitrate testing. These water sample are transported to Inovatia Laboratories in Fayette, Mo. This is for monitoring purposes only.
- The staff collected monthly water samples from the Effluent of the Wastewater Treatment Plant for Ammonia testing.
- The staff collected monthly water samples from the Effluent of the Wastewater Treatment Plant for Oil & Grease testing, Total Phosphorus testing, Total Kjeldahl Nitrogen testing, and Nitrite+Nitrate testing. These water sample are transported to Inovatia Laboratories in Fayette, Mo. This is for monitoring purposes only.

Concerns for the Month.

- None at this time

Photos





State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Permit Number	Outfall Number
MO0040738	001M
Monitoring Period	
9/1/23	9/30/23
NODI:	*****

Parameters	Reporting Requirements			Unit	Reporting Requirements		Unit
Flow, in conduit or thru treatment plant	*****	*****	*****	*****	0.990	0.630	Mgal/d
Mon. Location.: End of Pipe	*****:*****	*****:*****	*****:*****		Daily Max.:Monitoring Required	Monthly Avg.:Monitoring Required	
Sample Type: Total Measured							
Frequency: Monthly							
BOD, 5-day, 20 deg. C	*****	1.90	1.52	mg/L	*****	*****	*****
Mon. Location.: End of Pipe	*****:*****	Weekly Avg.:45	Monthly Avg.:30		*****:*****	*****:*****	
Sample Type: 24 Hour Composite							
Frequency: Weekly							
Total Suspended Solids (TSS)	*****	2.00	1.63	mg/L	*****	*****	*****
Mon. Location.: End of Pipe	*****:*****	Weekly Avg.:45	Monthly Avg.:30		*****:*****	*****:*****	
Sample Type: 24 Hour Composite							
Frequency: Weekly							
Escherichia coli (E. coli)	*****	5.2	2.7	#/100mL	*****	*****	*****
Mon. Location.: End of Pipe	*****:*****	7 Day Geo.:1030	30 Day Geo. Mean:206		*****:*****	*****:*****	
Sample Type: Grab							
Frequency: Weekly							
Nitrite plus nitrate total (as N)	24.1	*****	24.1	mg/L	*****	*****	*****
Mon. Location.: End of Pipe	Daily Max.:Monitoring Required	*****:*****	Monthly Avg.:Monitoring Required		*****:*****	*****:*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Phosphorus, total (as P)	3.68	*****	3.68	mg/L	*****	*****	*****
Mon. Location.: End of Pipe	Daily Max.:Monitoring Required	*****:*****	Monthly Avg.:Monitoring Required		*****:*****	*****:*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, Kjeldahl, total (as N)	1.02	*****	1.02	mg/L	*****	*****	*****
Mon. Location.: End of Pipe	Daily Max.:Monitoring Required	*****:*****	Monthly Avg.:Monitoring Required		*****:*****	*****:*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

pH	7.6	*****	7.7	SU	*****	*****	*****
Mon. Location.: End of Pipe	Minimum:6.5	*****:*****	Maximum:9.0		*****:*****	*****:*****	
Sample Type: Grab							
Frequency: Weekly							
BOD, 5-day, percent removal	*****	*****	99.5	%	*****	*****	*****
Mon. Location.: End of Pipe	*****:*****	*****:*****	Monthly Avg. Min.:85		*****:*****	*****:*****	
Sample Type: Calculated							
Frequency: Monthly							
Suspended Solids, percent removal	*****	*****	99.3	%	*****	*****	*****
Mon. Location.: End of Pipe	*****:*****	*****:*****	Monthly Avg. Min.:85		*****:*****	*****:*****	
Sample Type: Calculated							
Frequency: Monthly							
Nitrogen, ammonia total (as N)	0.097	*****	0.097	mg/L	*****	*****	*****
Mon. Location.: End of Pipe	Daily Max.:8.4	*****:*****	Monthly Avg.:1.2		*****:*****	*****:*****	
Sample Type: 24 Hour Composite							
Frequency: Monthly							

Comments:

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Permit Number	Outfall Number
MO0040738	INFIM
Monitoring Period	
9/1/23	9/30/23
NODI:	*****

Parameters	Reporting Requirements			Unit	Reporting Requirements		Unit
BOD, 5-day, 20 deg. C	*****	*****	340	mg/L	*****	*****	*****
Mon. Location.: Influent	*****.*	*****.*	Monthly Avg.:Monitoring Required		*****.*	*****.*	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Total Suspended Solids (TSS)	*****	*****	250	mg/L	*****	*****	*****
Mon. Location.: Influent	*****.*	*****.*	Daily Max.:Monitoring Required		*****.*	*****.*	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, ammonia total (as N)	85.4	*****	85.4	mg/L	*****	*****	*****
Mon. Location.: Influent	Daily Max.:Monitoring Required	*****.*	Monthly Avg.:Monitoring Required		*****.*	*****.*	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Phosphorus, total (as P)	7.40	*****	7.40	mg/L	*****	*****	*****
Mon. Location.: Influent	Daily Max.:Monitoring Required	*****.*	Monthly Avg.:Monitoring Required		*****.*	*****.*	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrogen, Kjeldahl, total (as N)	53.5	*****	53.5	mg/L	*****	*****	*****
Mon. Location.: Influent	Daily Max.:Monitoring Required	*****.*	Monthly Avg.:Monitoring Required		*****.*	*****.*	
Sample Type: 24 Hour Composite							
Frequency: Monthly							
Nitrite plus nitrate total (as N)	<0.300	*****	<0.300	mg/L	*****	*****	*****
Mon. Location.: Influent	Daily Max.:Monitoring Required	*****.*	Monthly Avg.:Monitoring Required		*****.*	*****.*	
Sample Type: 24 Hour Composite							
Frequency: Monthly							

Comments:

Boonville WWTP
401 Main Street
BOONVILLE, MO, Cooper

State of Missouri
Department of Natural Resources
National Pollutant Discharge Elimination System (NPDES)
Discharge Monitoring Report (DMR)

Northeast Regional Office
1709 Prospect Drive
Macon, MO, 63552

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

eSignature Richard Arnold	Submission Date October 6, 2023	User Phone Number (660)882-4024
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