

The City of Durant encourages participation from all its citizens. If participation at any public meeting is not possible due to a disability, notification to the City Clerk at least 48 hours prior to the scheduled meeting is encouraged in order to make the necessary accommodations. The City of Durant may waive the 48-hour rule if interpreters for the deaf (signing) or translation services for limited English proficient (LEP) individuals are not the necessary accommodation.

DURANT CITY UTILITIES AUTHORITY

6:00 PM

**Roscoe J. Hatfield
Council Chambers
300 West Evergreen
Durant, Oklahoma**

September 13, 2022

AGENDA

CALL TO ORDER

ROLL CALL

ORDER OF BUSINESS

1. Consent Items

To help streamline meetings and allow the focus to be on other items requiring strategic thought, the "Consent Items" portion of the agenda groups the routine, procedural, and self-explanatory non-controversial items together. These items are voted on in a single motion (one vote). However, any Council member requesting further information on a specific item thus removes it from the "Consent Items" section for individual attention and separate vote.

- a. Consider Approval of Regular Meeting Minutes of August 9, 2022
- b. Consider Approval of Special Called Meeting Minutes of August 31, 2022

2. Consider Items Removed from Consent

3. Information Items

- a. Solid Waste Collection Monthly Report - August 2022
- b. Solid Waste Disposal Monthly Report - August 2022
- c. Utility Line Maintenance Monthly Report - August 2022
- d. Waste Water Treatment Plant Monthly Reports - August 2022
- e. Water Treatment Plant Monthly Report - August 2022

4. Administration

- a. Discussion, Consideration and Possible Action to Approve a Sewer Line Extension

- b. Discussion, Consideration and Possible Action to Approve a Quote on Transfer Trailers for the Landfill that is above the Approved Amount in the Capitol Improvement Budget.

5. Public Hearings

6. Executive Session

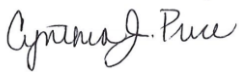
- a. Consider Entering Into Executive Session to Discuss the Purchase of Real Property Interests Along Cemetery Road and Rodeo Road. Permitted under 25 O.S. 307(B)(3)
- b. Consider Action Pursuant to Executive Session Item 6(a).

7. New Business

ADJOURNMENT

CERTIFICATE

This is to certify that in conformity with the Oklahoma Open Meeting Act, public notice of the date, time and place of this meeting was filed with the City Clerk of Durant on the 9th day of November, 2022 and that an agenda of said meeting was posted at the place of such meeting at 5:20 p.m. on the 9th day of September, 2022.



Cynthia J. Price, City of Durant



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Cynthia Price, City Clerk
Re: Consider Approval of Regular Meeting Minutes of August 9, 2022

Council Information / Action Requested

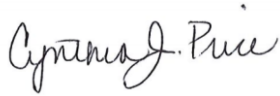
Approval of Regular Meeting Minutes of August 9, 2022

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. Durant City Utilities Authority Minutes 08092022 cjp

This is to certify that in conformity with the Oklahoma Open Meeting Act, public notice of the date, time and place of this meeting was filed with the City Clerk of Durant on the 9th day of November, 2021 and that an agenda of said meeting was posted at the place of such meeting at 11:45 a.m. on the 5th day of August, 2022.



Cynthia J. Price, City of Durant

**MINUTES OF THE MEETING OF DURANT CITY UTILITIES AUTHORITY
August 9, 2022 AT 6:00 PM
Roscoe J. Hatfield Council Chambers
300 West Evergreen
Durant, Oklahoma**

CALL TO ORDER

Chairman Grube called the meeting to order at 6:28 p.m.

ROLL CALL

Present:

Trustee Steve Brittingham
Trustee Humphrey Miller
Trustee Curtis Morris
Vice Chairman Danny Sherrer
Chairman Oden Grube
City Attorney Tom Marcum
City Clerk Cynthia J. Price

Absent:

City Manager John Dean

ORDER OF BUSINESS

1. Consent Items

To help streamline meetings and allow the focus to be on other items requiring strategic thought, the "Consent Items" portion of the agenda groups the routine, procedural, and self-explanatory non-controversial items together. These items are voted on in a single motion (one vote). However, any Council member requesting further information on a specific item thus removes it from the "Consent Items" section for individual attention and separate vote.

- a. Consider Approval of Regular Meeting Minutes of July 12, 2022

Motion To: Approve Consent Item as Presented

Motion By: Curtis Morris

Seconded By: Humphrey Miller

Ayes: Brittingham, Miller, Morris, Sherrer, Grube

Nays: None

Abstain: None

2. Consider Items Removed from Consent

3. Information Items

- a. Solid Waste Collection Monthly Report - July 2022
- b. Solid Waste Disposal Monthly Report- July 2022
- c. Waste Water Treatment Plant Monthly Reports - July 2022
- d. Water and Sewer Line Maintenance Monthly Report - July 2022
- e. Water Treatment Plant Monthly Reports - July 2022

4. Administration

5. New Business

EXECUTIVE SESSION

- 1. Consider Entering into Executive Session to Discuss the Purchase of Real Property Interests Along Cemetery Road and Rodeo Road. Permitted under 25 O.S. 307(B)(3).**

Tabled

- a. Consider Action Pursuant to Executive Session Item 1.

ADJOURNMENT

Motion To: Adjourn Meeting

Motion By: Humphrey Miller

Seconded By: Danny Sherrer

Ayes: Brittingham, Miller, Morris, Sherrer, Grube

Nays: None

Abstain: None



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Cynthia Price, City Clerk
Re: Consider Approval of Special Called Meeting Minutes of August 31, 2022

Council Information / Action Requested

Approval of Special Called Meeting Minutes of August 31, 2022

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. Special Called Durant City Utilities Authority Minutes 08312022 cjp

This is to certify that in conformity with the Oklahoma Open Meeting Act, public notice of the date, time and place of this meeting was filed with the City Clerk of Durant on the 29th day of August, 2022 and that an agenda of said meeting was posted at the place of such meeting at 1:30 p.m. on the 29th day of August, 2022.



Cynthia J. Price, City of Durant

**MINUTES OF THE MEETING OF DURANT CITY UTILITIES AUTHORITY
August 31, 2022 AT 2:00 PM
Roscoe J. Hatfield Council Chambers
300 West Evergreen
Durant, Oklahoma**

CALL TO ORDER

Chairman Grube called the meeting to order at 2:10 p.m.

ROLL CALL

Present:

Trustee Steve Brittingham
Trustee Humphrey Miller
Trustee Curtis Morris
Vice Chairman Danny Sherrer
Chairman Oden Grube
City Attorney Tom Marcum
Interim City Manager Lisa Taylor
City Clerk Cynthia J. Price

Absent:

None

ORDER OF BUSINESS

1. Administration

- a. Discussion, Consideration and Possible Action on Approval of a Security Service Agreement with Rockin 4 Security LLC to Conduct Surveillance at the City Landfill During the Night Time Hours (C-2022-60)

No action taken.

ADJOURNMENT

Motion To: Adjourn Meeting

Motion By: Steve Brittingham

Seconded By: Humphrey Miller

Ayes: Brittingham, Miller, Morris, Sherrer, Grube

Nays: None

Abstain: None



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From:
Re: Information Items

Council Information / Action Requested

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Jared Dillingham, Superintendent
Re: Solid Waste Collection Monthly Report - August 2022

Solid Waste Collection Monthly Report- August 2022

Council Information / Action Requested

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. Monthly Report August 2022



THE CITY OF DURANT

Office of the Solid Waste Manager

SOLID WASTE PROJECTS

August 2022

A. Work Completed:

1. Hauled 31.97 tons of extra hauling
2. Hauled 30 loads of extra hauling
3. Picked up and delivered 10 sharps
4. No abatement this month
5. Cleaned Sunny Side rd. 1 times
6. Replaced 5 dumpsters with new
7. Cleaned dead ends of Cemetery rd. 0 time

B. Work Planned For September 2022

1. Replace dumpsters
2. Pick up trash

C. Work Planned For January 1, 2022 – December 31, 2022

1. Pick up trash
2. Replace dumpsters

D. Projects Planned And Requested For Authorization:

None



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Kenny Cooper, Supervisor
Re: Solid Waste Disposal Monthly Report - August 2022

Council Information / Action Requested

Information only.

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. Solid Waste Disposal Monthly Report - August 2022



THE CITY OF DURANT

Office of the Solid Waste Superintendent

SOLID WASTE DISPOSAL PROJECTS SCHEDULE *August 2022*

A. Work Completed for August:

1. Covered C & D Site
2. Hauled MSW To SORD
3. Number of rolloff containers in service end of month 132
4. Number of rolloff containers added to service during month 19
5. Number of rolloff containers removed from service during month 12
6. Number of loaded rolloff containers emptied during month 399

B. Work Planned For September:

1. Continue Covering C&D site
2. Haul MSW To SORD
3. Continue Picking up, Delivering

C. Work Planned For Jan. '22 – Dec. '22:

Approx. Start – Finish Date:

1. Haul trash to Ardmore 1-2022 thru 12-2022

D. Projects Planned And Requested For Authorization:

1. None.



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Randy Cantrell, Crew Leader
Re: Utility Line Maintenance Monthly Report - August 2022

Council Information / Action Requested

Information only.

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. AUGUST 2022 MONTHLY REPORT FOR M&O

M & O MONTHLY REPORT

AUGUST 2022

WATER LEAKS	44
WATER TAPS	4
SEWER TAPS	2

DISCONNECTS AUGUST 30TH

REGULAR WORK ORDERS FROM THE
UTILITY OFFICE, WE HAD 430 WORK ORDERS

CORE AND MAIN HAS THE COLLECTOR AFTER BEING REPAIRED
BY NEPTUNE. THE DRIVE BY IS STAYING STEADY AT LESS THAN
3% EVEN WITH THE COLLECTOR BEING OUT.



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Ray Anthony, Superintendent
Re: Waste Water Treatment Plant Monthly Reports - August 2022

Council Information / Action Requested

Information only.

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. WWTP LAB Report
2. WWTP Plant Report
3. WWTP Plant Work Done Report



THE CITY OF DURANT

Office of the Wastewater Treatment Plant

Lab Report

8/1/22 to 8/31/22

Tests Processed

<u>60</u> Bac-T's	<u>50</u> React's
<u>90</u> BOD's	<u>36</u> COD
<u>25</u> TSS's	<u>50</u> MLSS
<u>35</u> NH3's	<u>50</u> Volatile Analysis
<u>62</u> DO's	<u>62</u> pH's
<u>09</u> Ecoli's	<u>1</u> FOG's
<u>20</u> cBOD's	<u>0</u> Total Solids
<u>22</u> Settleable Solids	<u>50</u> Settleometer Test
<u>1</u> Pretreatment Inspections	

Work Projects

- Data entry
- Reports (water test results), Make copies and envelope
- Purchase Orders, copy, file
- Equipment calibrations and maintenance
- Sampling and process readings
- Quality Assurance, Quality Control tests
- Laboratory Testing
- Filing
- Daily/Weekly laboratory and WWTP building cleaning
- Monthly, Quarterly, Bi-annual, Yearly reports
- Ordering Lab chemicals and supplies
- Water Billing
- Storm water monitoring
- Storm water Report
- Pre-Treatment



The City of Durant

Office of the Wastewater Treatment Plant

PROJECTS SCHEDULE

WORK PLANNED FOR SEPTEMBER 2022

- 1: MONITORING OF SBR SE VALVES TO DETERMINE FURTHER FAILURES (Daily)
- 2: CLEAN CLARIFIER WEIRS (Monthly)
- 3: VEHICLE INSPECTION (Weekly)
- 4: GETTING LAGOON AERATOR'S AT HEADWORKS FIXED (Ongoing)
- 5: WAS FEED PUMP #2 VFD DRIVE REPAIRED (Ongoing)
- 6: CHECK CLARIFIER OIL (Weekly)
- 7: CK TORQUE & OVERLOAD & GREASE CHAIN ON CLARIFIER (Weekly)
- 8: FIX CHOCTAW SCREEN PRESS PUMP (Ongoing)
- 9: BRIDGE FILTER REPAIR (Ongoing)
- 10: WALK-THRU INSPECTION (Monthly)
- 11: WASH DOWN HEADWORKS STEP SCREEN (Daily)
- 12: CLEAN UV TROUGHS, FLUME, AND MANUALLY CHECK U.V. BULBS (Weekly)
- 13: CHECK ELECTRIC MANHOLES (Monthly)
- 14: CLEAN OUT BUILDINGS (Weekly)
- 15: VALVE TO LAGOONS AT HEADWORKS (Ongoing)
- 16: WASH DOWN CASINO STEPSCREEN (Daily)
- 17: CHECK ALL AUTOMATIC VALVES (Daily)
- 18: SCUM PUMP STATION PUT ON FLOATS (Ongoing)
- 19: INSTALL NEW LEVEL CONTROL AT HEADWORKS (Ongoing)
- 20: GRIT PUMPS AT HEADWORKS HEATERS INSTALLED (Ongoing)
- 21: CONVERT SAMPLER TO WORK WITH WONDERWARE (Ongoing)
- 22: SBR #4 EFFLUENT VALVE REPAIRED (Ongoing)



The City of Durant

Office of the Wastewater Treatment Plant

PROJECTS SCHEDULE

WORK DONE FOR AUGUST 2022

- 1: MONITORING OF SBR SE VALVES TO DETERMINE FURTHER FAILURES (Daily)
- 2: CLEAN CLARIFIER WEIRS (Monthly)
- 3: VEHICLE INSPECTION (Monthly)
- 4: GETTING LAGOON AERATOR'S AT HEADWORKS FIXED (Ongoing)
- 5: CONVERT SAMPLER TO WORK WITH WONDERWARE (Ongoing)
- 6: CHECK CLARIFIER OIL (Weekly)
- 7: CK TORQUE & OVERLOAD & GREASE CHAIN ON CLARIFIER (Weekly)
- 8: FIX CHOCTAW SCREEN PRESS PUMP (Ongoing)
- 9: BRIDGE FILTER REPAIR (Ongoing)
- 10: WALK-THRU INSPECTION (Monthly)
- 11: WASH DOWN HEADWORKS STEP SCREEN (Daily)
- 12: CLEAN UV TROUGHS, FLUME, AND MANUALLY CHECK U.V. BULBS (Weekly)
- 13: CHECK ELECTRIC MANHOLES (Monthly)
- 14: CLEAN OUT BUILDINGS (Monthly)
- 15: VALVE TO LAGOONS FIXED AT HEADWORKS (Ongoing)
- 16: WASH DOWN CASINO STEPSCREEN (Daily)
- 17: CHECK ALL AUTOMATIC VALVES (Daily)
- 18: SCUM PUMP STATION PUT ON FLOATS (Ongoing)
- 19: INSTALL NEW LEVEL CONTROL AT HEADWORKS (Ongoing)



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Anthony Smallwood, Water Treatment Plant Manager
Re: Water Treatment Plant Monthly Report - August 2022

Council Information / Action Requested

Information only.

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:

1. OK1010601 ClO2 MOR August2022
2. OK1010601 Fluoride MOR August2022
3. OK1010601 LT2 MOR August2022
4. OK1010601 Monthly Report August2022
5. OK1010601 MOR August2022 Page #1
6. OK1010601 MOR August2022 Page #2

CHLORINE DIOXIDE AND CHLORITE MOR

Section 1: Data Entry

Date	ClO2 Used?	ClO2 POE	ClO2 Dist.			Chlorite POE	Chlorite Dist.			
			1st	2nd	3rd		1st	2nd	3rd	Avg
1	yes	0.3				0.8				####
2	yes	0.2				0.7				####
3	yes	0.3				0.6				####
4	yes	0.3				0.4				####
5	yes	0.1				0.6				####
6	yes	0.3				0.2				####
7	yes	0.3				0.6				####
8	yes	0.6				0.7				####
9	yes	0.1				0.8				####
10	yes	0.7				0.7				####
11	yes	0.1				0.8				####
12	yes	0.2				0.9				####
13	yes	0.2				0.7				####
14	yes	0.1				0.9				####
15	yes	0.2				0.9				####
16	yes	0.3				0.8				####
17	yes	0.2				0.7				####
18	yes	0.1				0.6				####
19	yes	0.2				0.5				####
20	yes	0.2				0.6				####
21	yes	0.3				0.6				####
22	yes	0.6				0.6				####
23	yes	0.2				0.5				####
24	yes	0.1				0.6				####
25	yes	0.1				0.5				####
26	yes	0.1				0.6				####
27	yes	0.1				0.7				####
28	yes	0.1				0.8				####
29	yes	0.3				0.7				####
30	yes	0.2				0.5				####
31	yes	0.1				0.7				####

Month August Year 2022
PWS Name Durant Water Treatment Plant

PWSID 1010601
Plant Name WTP
Total 31

Section 2: Summary of Chlorine Dioxide Daily Monitoring

a. Number of Samples Collected 31.0
b. Number of Point of Entry Samples Exceeded MRDL of 0.8 mg/L 0.0

*For every day the MRDL is exceeded, three chlorine dioxide samples must be taken the next day in the distribution system. Notify your PWS Engineer. Samples results need to be recorded in ClO2 Dist. columns.*Refer to CHLORINE DIOXIDE MONITORING AND COMPLIANCE FACT SHEET for further instructions.*

c. Number of Distribution Samples Exceeding MRDL of 0.8 mg/L 0.0

****VERY IMPORTANT. THIS IS A TIER 1 VIOLATION. THIS VIOLATION MUST BE IMMEDIATELY REPORTED TO DEQ AND TO ALL PERSON SERVED BY THE SYSTEM WITHIN 24 HOURS.****

Section 3: Summary of Chlorite Daily Monitoring

a. Number of Samples Collected 31.0
b. Number of Point of Entry Samples Exceeded MCL of 1.0 mg/L 0.0

*For every day the MCL exceeded, three chlorite samples must be taken the next day in the distribution system. Enter sample results in Chlorite Dist. columns and then average. *Refer to CHLORITE MONITORING AND COMPLIANCE FACT SHEET for further instructions.*

c. Number of Distribution Average exceeding MCL of 1.0 mg/L 0.0

Phillip Hightower
Signature of owner or operator
Phillip Hightower
Printed name

9/1/2022
Date
90404
Operator License #

Send Form by 10th of Following Month to:
Water Quality Division Attn DBP Coord.
P.O. Box 1677 Oklahoma City, Oklahoma 73101-1677



Oklahoma State Department of Health / Oklahoma Department of Environmental Quality
MONTHLY OPERATION REPORT
RECORD OF FLUORIDE APPLICATION

PWSID 1010601 SYSTEM Durant Ok (SW) MONTH August
Type of Material Applied* Hydrofluorosilicic Acid Year 2022

Date	Water Treated (1000s of Gallons)	Applied		Residual Fluoride (F), ppm			
		lbs.	PPM of F	Raw		Distribution	
				(1)	(2)	(1)	(2)
1	6863	94	0.3	0.00	0.00	0.45	0.48
2	7459	102	0.3	0.00	0.00	0.44	0.34
3	7238	99	0.3	0.00	0.00	0.38	0.53
4	7452	102	0.3	0.00	0.09	0.19	0.66
5	7820	107	0.3	0.00	0.00	0.44	0.46
6	7344	102	0.3	0.00	0.00	0.57	0.30
7	6529	90	0.3	0.04	0.00	0.37	0.41
8	6981	128	0.4	0.00	0.00	0.12	0.61
9	7770	142	0.4	0.02	0.00	0.37	0.30
10	7634	140	0.4	0.00	0.03	0.31	0.32
11	7950	146	0.4	0.33	0.27	0.74	0.79
12	7871	144	0.4	0.00	0.07	0.73	0.30
13	7916	145	0.4	0.00	0.00	0.43	0.29
14	7865	144	0.4	0.00	0.00	0.76	0.30
15	7614	139	0.4	0.12	0.00	0.60	0.54
16	7962	146	0.4	0.00	0.00	0.71	0.08
17	9134	167	0.4	0.03	0.00	0.32	0.02
18	8802	161	0.4	0.00	0.00	0.48	-0.04
19	7257	133	0.4	0.00	0.08	0.29	0.60
20	6286	115	0.4	0.00	0.00	0.51	0.42
21	6849	125	0.4	0.00	0.00	0.72	0.38
22	6727	123	0.4	0.00	0.00	0.68	0.58
23	6347	116	0.4	0.00	0.05	0.50	1.02
24	5378	98	0.4	0.00	0.00	0.35	0.64
25	5105	93	0.4	0.16	0.06	0.76	0.69
26	6065	111	0.4	0.01	0.00	0.67	0.54
27	6353	116	0.4	0.00	0.00	0.60	0.55
28	6379	117	0.4	0.11	0.04	0.62	0.51
29	5860	107	0.4	0.00	0.00	0.48	0.50
30	6094	112	0.4	0.00	0.00	0.44	0.54
31	5119	94	0.4	0.00	0.14	0.51	0.83
Total	218023	3758	11.7	0.82	0.83	15.54	14.49
Average	7033	121	0.38	0.03	0.03	0.50	0.47

* Example: Sodium Fluoride, Sodium Fluorosilicate (Sodium Silicofluoride), and Fluorosilicic Acid (Hydrofluorosilicic Acid).

It is required that this report be received by the 10th of the following month.

Send to: OSDH – Dental Health Services
1000 NE 10TH ST
OKLAHOMA CITY, OK 73117-1299

AND

Oklahoma Department of Environmental Quality
PO BOX 1677
OKLAHOMA CITY, OK 73101-1677

I hereby certify the above to be correct to the best of my knowledge.

Signed Phillip Hightower
Title Public Works Director
City City of Durant

Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)
Monthly Operating Report Addendum
INSTRUCTIONS

Instructions: Answer all of the following questions for each individual filter at both plants. **If any IFE measurement is above 0.15 NTU complete and attach the Turbidity Trigger Evaluation form.** Do **not** report IFE turbidities less than 15 minutes after a filter backwash or if the filter is not contributing to the CFE (i.e. filter not operating, filter to waste or recycling, etc.).

Log Requirements

Your system is required to achieve a 2.0-log *Cryptosporidium* credit to be in compliance with the LT2ESWTR. This includes a minimum log credit of 1.0 through the addition of chlorine dioxide, a 0.5-log credit for combined filter performance and a 0.5-log credit for individual filter performance.

- To obtain a 0.5-log *Cryptosporidium* removal credit for IFE turbidity you must meet **both** of the following requirements:
 - IFE turbidity must be less than 0.15 NTU in at least 95 percent of values recorded at **each** filter.
 - No individual filter may have a measured turbidity greater than 0.3 NTU in two consecutive measurements taken 15 minutes apart.
- To obtain a 0.5-log *Cryptosporidium* removal credit for the CFE turbidity the measurements taken for the month at each plant must be equal to or less than 0.15 NTU in at least 95 percent of the measurements.
- The amount of *Cryptosporidium* inactivation log credit your system may receive is determined by the CT provided in the treatment process. The LT2ESWTR requires CT to be calculated at least once per day with both C (chlorine dioxide concentration) and T (contact time) measured during peak hourly flow. Log credit for chlorine dioxide as a function of CT and water temperature is determined using the chlorine dioxide CT table (see reverse) for *Cryptosporidium* inactivation.
 - Log credit should be calculated separately for each section of the raw water line. Total log credit for the raw water line is the sum of the log credit for each section of the raw water line.
 - Log credit should be calculated separately for each clarifier, taking into account the volume of water through each clarifier. Total log credit for the clarifiers should only include the lower of the two clarifier log credits.
 - Total daily log credit is the sum of the log credits for each section of the raw water line and the lower log credit of the two clarifiers.

Note: The LT2ESWTR requires all systems utilizing chlorine dioxide for disinfection to adhere to the Disinfectant Byproducts Rule (DBPR) regarding chlorine dioxide and chlorite monitoring. This requirement also includes the completion and submission of the *Chlorine Dioxide and Chlorite Monitoring and Reporting Form*.

CT Values (mg-min/L) for *Cryptosporidium* Inactivation by chlorine Dioxide¹

Log credit	Water Temperature, °C										
	≤ 0.5	1	2	3	5	7	10	15	20	25	30
0.25	159	153	140	128	107	90	69	45	29	19	12
0.50	319	305	279	256	214	180	138	89	58	38	24
1.00	637	610	558	511	429	360	277	179	116	75	49
1.50	956	915	838	767	643	539	415	268	174	113	73
2.00	1275	1220	1117	1023	858	719	553	357	232	150	98
2.50	1594	1525	1396	1278	1072	899	691	447	289	188	122
3.00	1912	1830	1675	1534	1289	1079	830	536	347	226	147

¹Systems may use this equation to determine log credit between the indicated values:

$$\text{Log credit} = (0.001506 \times (1.09116)^{\text{Temp}}) \times \text{CT}$$



Oklahoma DEQ
Water Quality Division
P.O. Box 1677
Oklahoma City, OK 73101
(405) 702-8100 Fax (405) 702-8101

Durant WTP
OK1010601
Water Treatment Plant—TP001
Month/Year: Month Year

Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)

Monthly Operating Report Addendum

1) INDIVIDUAL FILTER EFFLUENTS (IFEs)

New Water Treatment Plant
Filter #1
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Filter #2
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Filter #3
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Filter #4
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Old Water Treatment Plant
Filter #1
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 193
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Filter #2
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Filter #3
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒
Filter #4
1. Was turbidity measured every 15 minutes? Yes ☒ No ☐
2. Total number of turbidity samples: 2976
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
5. Were there 2 consecutive 15 minute measurements greater than 0.3 NTU? Yes ☐ No ☒

2) COMBINED FILTER EFFLUENTS (CFEs)

New Water Treatment Plant
1. Was turbidity measured every 4 hours? Yes ☒ No ☐
2. Total number of turbidity samples: 186
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0
Old Water Treatment Plant
1. Was turbidity measured every 4 hours? Yes ☒ No ☐
2. Total number of turbidity samples: 186
3. Number of turbidity samples greater than 0.15 NTU: 0
4. Percent of turbidity samples greater than 0.15 NTU: 0

3) CHLORINE DIOXIDE

Raw Water Line
1. Was the concentration of chlorine dioxide present in each section of the raw water line measured at least once daily during the peak hourly flow? Yes ☒ No ☐
2. Was the contact time for each section of the raw water line calculated at least once per day during peak hourly flow? Yes ☒ No ☐
3. Was the minimum water temperature determined every day? Yes ☒ No ☐
4. Was the log credit for each section of the raw water line calculated daily? Yes ☒ No ☐
Clarifiers
1. Was the concentration of chlorine dioxide present in each clarifier measured at least once daily during the peak hourly flow? Yes ☒ No ☐
2. Was the contact time for each clarifier calculated at least once per day during peak hourly flow? Yes ☒ No ☐
3. Was the minimum water temperature determined every day? Yes ☒ No ☐
4. Was the log credit for each clarifier calculated daily? Yes ☒ No ☐

4) LOG INACTIVATION CREDIT

IFE Credit
1. For the individual filters, were at least 95% of each filter’s turbidity measurements less than or equal to 0.15 NTU? Yes ☒ (answer question 2) No ☐ (log credit 0.0)
2. Did any individual filter have a measured turbidity greater than 0.3 NTU in two consecutive measurements taken 15 minutes apart? Yes ☐ (log credit 0.0) No ☒ (log credit 0.5)
CFE Credit
1. For the combined filters, were at least 95% of each filter’s turbidity measurements less than or equal to 0.15 NTUs? Yes ☒ (log credit 0.5) No ☐ (log credit 0.0)
Chlorine Dioxide Credit
1. Was the required minimum log credit of 1 achieved each day? Yes ☒ (log credit 1.0) No ☐ (log credit 0.0)
Total Log Credit: #

Comments:

#1 Old Plant filter was put online on 08/29/2022 at 1100.

I hereby certify the above to be correct to the best of my knowledge.

Printed Name: Phillip Hightower Signature: *Phillip Hightower* Date: 9/1/2022

Title: Public Works Director Op. Cert. No.: B90404

* The Department of Environmental Quality may at any time request additional information or perform an audit.



THE CITY OF DURANT

Office of the Water Treatment Plant

Water Treatment Plant Projects Schedule August 2022 Monthly Report

A. Work Completed

1. Calibrate lab instruments daily
2. Maintained Water Plant
3. Cleaned all buildings weekly
4. Backwashed filters as needed
5. Backwashed raw pumps weekly
6. Hooked up chlorine tanks and checked for leaks
7. Unload chemicals as they arrived
8. Pulled sludge as needed
9. Run daily chlorine dioxide samples on raw line
10. Flushed alum pumps
11. Inspected fire extinguishers
12. Pulled required water samples and send to ODEQ
13. Clean turbidity meters as needed
14. Cleaned screens on CLO2 generator as needed
15. Mowed and weedeated Plant grounds when needed
16. Continue training Stephen Mills, Jacob Eppler, Frank Enea, Lance Canoy, Tyler Weaver, and Marc Brittain
17. Treated 218,023,000 gallons of water
18. Exercise welder, diesel pump, and generator
19. Underdrains installed on #1 Filter, waiting on parts to repair actuators
20. Repaired South CLO2 Generator
21. Repaired 2" Water line in Fluoride Building
22. Repaired parking brake on Gator
23. Repaired office and lab A/C
24. Completed Lead and Copper sampling
25. Repaired broken polymer line

B. Work Planned for September-October

1. Repair #1 raw Pump
2. Repair #3 raw Pump
3. Have towers inspected and cleaned
4. Replace underdrains in Old Plant Filters
5. Install pad for generator at Chlorites
6. Empty, clean, and paint Alum tanks
7. New SCADA installed in Old Plant
8. Install back up backwash pump
9. Replace level indicator at Ground Storage
10. Repair Cardinal Glass Pump #2
11. Install Rip Rap at Raw Pump Station

Approx Start/Finish Date

Waiting on Quotes
Waiting on Quotes
Time permitting
Will complete filters 3 and 4 time permitting
Weather and time permitting
Weather and time permitting
Will start the week of 9/12/2022
Will start the week of 9/12/2022
Weather and time permitting
Waiting on Quotes
Communicating with OWRB and Waiting on Quotes

C. Projects Planned and Requested for Authorization

None at this Time



OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
MONTHLY OPERATIONAL REPORT (MOR)- LT2 ADDENDUM NEEDED
CONVENTIONAL OR DIRECT FILTRATION (Free Chlorine)

Plant: **DWT**

PWSID: **1010601**

County: **Bryan**

Month/Year: **August 2022**

Durant Utilities Authority
System

P.O. Box 578
Address

Durant, OK
City

74702
Zip

Instructions:

If there are no combined filter turbidity readings or free chlorine residual sample results at the entry point to the distribution system due to the plant not running, write **OFF** in the box.

Two (2) distribution chlorine residuals **must be taken daily**, even if the plant is not running.

Mail the original by the 10th of the following month to:
Oklahoma DEQ, Water Quality Division, P.O. Box 1677, Oklahoma City, OK 73101

Combined Filter Turbidity	
Total number of turbidity readings required	186
Total number of turbidity readings	186
Number of turbidity readings above 1 NTU	0
HIGHEST turbidity reading	0.14
Number of turbidity readings above 0.15 NTU	0
Percent of turbidity readings above 0.15 NTU	0.00%
Free Chlorine-Entry Point to Distribution	
Total number of chlorine residual samples	185
Number of samples below 1.0 mg/L	0
Free Chlorine-Distribution	
Total number of chlorine residual samples	62
Number of samples below 0.2 mg/L	0

Individual Filter Turbidity - Complete Entire Checklist
1. Was Each Filter Monitored continuously while the plant was running? ☐ No ☒ Yes
2. Was each filter monitored every 15 minutes while the plant was running? ☐ No ☒ Yes
3. Was there a failure of the continuous monitoring equipment? ☒ No ☐ Yes
4. Did the same filter exceed 1.0 NTU in two consecutive 15 minute readings? ☒ No ☐ Yes*
5. Was individual filter level greater than 0.5 NTU in two consecutive measurements after being on line for more than four hours? ☒ No ☐ Yes*
6. Did the same filter exceed 1.0 NTU in two consecutive 15 minute readings for three months in a row? ☒ No ☐ Yes* (Submit a Self-Assessment of the filter(s) within 14 days of the exceedance)
7. Did the same filter exceed 2.0 NTU in two consecutive 15 minute readings for two months in a row? ☒ No ☐ Yes* (Contact DEQ to schedule a Comprehensive Performance Evaluation)

				# of Readings***	COMBINED FILTER TURBIDITY						FREE CHLORINE RESIDUAL								COMMENTS
DAY	RAW	SET	SET		2400-0400	0400-0800	0800-1200	1200-1600	1600-2000	2000-2400	ENTRY POINT TO DISTRIBUTION						DISTRIBUTION SYSTEM		
											12am	4am	8am	12pm	4pm	8pm			
1	9.80	2.25	2.22	6	0.11	0.07	0.14	0.10	0.09	0.06	2.8	3.1	2.9	2.8	2.3	2.6	2.0	2.2	
2	10.20	3.64	2.22	6	0.09	0.10	0.08	0.05	0.06	0.06	2.7	2.7	2.7	2.1	2.0	2.5	2.5	2.0	
3	15.80	2.60	2.43	6	0.06	0.06	0.06	0.05	0.06	0.10	2.5	2.7	2.7	2.6	2.2	2.6	2.0	2.0	
4	5.57	2.15	5.70	6	0.13	0.12	0.08	0.13	0.12	0.07	2.6	2.7	2.7	2.5	2.5	2.9	2.3	1.9	
5	2.23	3.39	2.92	6	0.09	0.07	0.07	0.11	0.07	0.10	2.9	2.8	2.7	2.4	2.1	2.4	2.3	2.1	
6	5.53	2.22	2.41	6	0.08	0.12	0.14	0.14	0.14	0.13	2.6	2.7	2.7	2.3	2.0	2.8	2.2	2.0	
7	7.95	2.49	2.47	6	0.12	0.09	0.08	0.08	0.07	0.07	3.0	2.7	2.8	2.8	3.3	2.7	1.0	0.4	
8	11.80	2.49	2.25	6	0.09	0.11	0.09	0.08	0.13	0.12	2.7	2.7	2.7	2.4	2.4	2.0	2.3	1.7	
9	59.60	5.46	3.56	6	0.13	0.12	0.09	0.09	0.10	0.10	2.1	2.3	2.4	1.3	2.1	3.0	1.4	1.2	
10	6.37	3.23	2.80	6	0.12	0.09	0.09	0.08	0.12	0.11	2.9	2.3	2.4	2.2	2.3	2.4	2.1	1.9	
11	6.50	2.28	2.89	6	0.08	0.08	0.09	0.12	0.08	0.08	2.4	2.4	2.2	2.2	2.0	2.3	1.4	0.3	
12	1.39	2.58	2.16	6	0.09	0.09	0.08	0.08	0.08	0.08	2.4	2.4	2.4	2.1	2.0	2.4	1.6	1.7	
13	0.00	1.93	2.20	6	0.13	0.13	0.13	0.14	0.08	0.07	2.5	2.5	2.3	2.2	2.0	2.4	1.4	1.2	
14	6.84	2.98	2.56	6	0.08	0.08	0.08	0.09	0.08	0.08	2.4	2.4	2.3	2.1	2.0	2.5	1.2	1.2	
15	6.84	2.36	2.35	6	0.14	0.08	0.13	0.12	0.14	0.12	2.6	2.3	2.0	2.2	2.1	2.7	1.9	1.1	
16	2.22	2.27	2.26	6	0.14	0.08	0.08	0.07	0.07	0.07	2.7	3.0	2.8	2.5	2.3	2.8	1.6	2.3	
17	2.22	2.54	2.57	6	0.07	0.12	0.08	0.08	0.07	0.06	2.9	3.2	2.9	2.6	2.4	2.6	2.6	1.7	
18	10.60	1.51	1.32	6	0.13	0.13	0.14	0.10	0.10	0.11	2.6	2.6	2.4	2.5	2.2	2.0	1.8	1.3	
19	10.62	1.69	2.26	6	0.12	0.12	0.12	0.07	0.07	0.06	2.0	2.1	2.2	2.1	2.0	2.1	1.4	1.4	
20	6.46	2.50	1.85	6	0.06	0.06	0.06	0.06	0.06	0.07	2.6	2.7	2.7	2.5	1.1	2.1	1.7	2.1	
21	7.41	1.84	2.57	6	0.07	0.10	0.09	0.09	0.08	0.08	2.5	2.0	2.2	2.1	2.2	2.1	1.7	0.9	
22	31.50	1.72	2.32	6	0.09	0.13	0.07	0.06	0.05	0.05	2.4	2.8	2.9	3.2	3.0	3.0	1.4	2.2	
23	18.90	2.28	2.40	6	0.13	0.05	0.04	0.04	0.06	0.04	3.2	3.4	3.2	2.9	2.6	2.4	2.3	1.1	
24	14.76	3.22	2.88	6	0.10	0.05	0.05	0.05	0.05	0.05	2.4	2.5	2.5	2.3	2.0	1.9	0.3	1.8	
25	14.74	2.48	2.05	6	0.13	0.05	0.05	0.05	0.05	0.05	2.0	2.1	2.2	2.3	2.0	2.1	1.5	1.7	
26	13.09	2.31	3.61	6	0.12	0.14	0.05	0.05	0.08	0.05	2.1	2.3	2.3	2.2	1.9	2.1	1.8	1.9	
27	10.60	2.99	3.45	6	0.05	0.05	0.05	0.05	0.05	0.05	2.1	2.1	2.1	2.1	2.1	2.1	1.3	1.6	
28	14.70	5.21	2.62	6	0.05	0.13	0.06	0.06	0.05	0.05	2.3	2.2	1.3	2.3	2.1	2.5	1.2	1.9	
29	9.09	2.32	2.27	6	0.14	0.13	0.06	0.06	0.05	0.05	2.5	2.6	2.6	2.4	2.1.4	2.5	2.0	2.2	
30	7.24	2.98	2.98	6	0.06	0.07	0.07	0.06	0.06	0.06	2.5	2.6	2.5	2.5	2.4	2.2	2.3	1.8	
31	10.58	3.30	3.15	6	0.07	0.08	0.09	0.06	0.05	0.04	2.2	2.1	2.2	2.7	2.6	2.6	1.4	1.3	

*** Number of Readings: You are required to sample the combined effluent for every four hours that the filters are in operation. You must fill out Filter Operation on the 'Chemical and Process Control tab.'

* If you answered Yes to questions 4, 5 (>10,000 population only), 6, or 7, you must complete the Turbidity Trigger Form, follow instruction on the form, and attach it to this MOR.

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
MONTHLY OPERATIONAL REPORT (MOR)
CONVENTIONAL OR DIRECT FILTRATION (Free Chlorine)

Plant: DWT
PWSID: 1010601
County: Bryan
Month: August 2022

Durant Utilities Authority										P.O. Box 578										Durant, OK										74702										
System										Address										City										ZIP										
D a y	WATER TREATED (in 1,000 gal)	FILTER OPERATION								WASH WATER IN 1000 GALS.	CHEMICALS USED-LBS.							ALKALINITY - RAW				ALKALINITY - FILTERED				pH			CaCO3 STABILITY Method:	HARDNESS (ppm)		Special Test Fe, Mn or Other		REMARKS						
		FILTERS USED-HOURS									ALUM	POLYM ER	Caustic	Fluoride	Chlorite	OTHER	CHLORINE		AM	PM	AM	PM																		
		1	2	3	4	5	6	7	8								PRE	POST					"P"	"P"	TOTAL	TOTAL	"P"	"P"		TOTAL	TOTAL	RAW	FILT		FILT	RAW	FILT	RAW	FILT	
1	6863.0	0	24	23	24	24	24	24	24	36.0	2300.0	0.0	0.0	94.0	290.0		159.0	101.0	0.0	0.0	230.0	240.0	0.0	0.0	230.0	210.0	8.0	7.5	7.5	232.0	240.00	240.00								
2	7459.0	0	24	24	24	23	24	24	23	66.0	2200.0	0.0	0.0	102.0	290.0		313.0	227.0	0.0	0.0	230.0	120.0	0.0	0.0	206.0	218.0	8.0	7.4	7.2	206.0	250.00	248.00								
3	7238.0	0	24	24	24	24	24	24	24	0.0	2400.0	0.0	0.0	99.0	290.0		195.0	125.0	0.0	0.0	230.0	244.0	0.0	0.0	212.0	218.0	7.9	7.4	7.2	218.0	250.00	246.00								
4	7452.0	0	23	24	23	24	23	23	24	127.0	2400.0	0.0	0.0	102.0	290.0		205.0	135.0	0.0	0.0	242.0	248.0	0.0	0.0	210.0	214.0	8.4	7.7	7.5	210.0	244.00	244.00								
5	7820.0	0	24	23	24	23	24	24	24	59.0	2400.0	0.0	0.0	107.0	290.0		205.0	135.0	0.0	0.0	244.0	242.0	0.0	0.0	228.0	210.0	8.4	7.7	7.1	220.0	242.00	240.00								
6	7344.0	0	24	23	24	24	24	24	23	27.0	2900.0	0.0	0.0	102.0	290.0		205.0	175.0	0.0	0.0	240.0	230.0	0.0	0.0	214.0	204.0	8.5	7.6	7.6	220.0	230.00	240.00								
7	6529.0	0	24	24	24	24	24	24	24	0.0	2600.0	0.0	0.0	90.0	290.0		0.0	180.0	0.0	0.0	222.0	249.0	0.0	0.0	216.0	208.0	8.4	7.7	7.5	224.0	236.00	250.00								
8	6981.0	0	23	24	23	24	24	23	24	102.0	2300.0	0.0	0.0	128.0	290.0		0.0	240.0	0.0	0.0	224.0	242.0	0.0	0.0	216.0	216.0	8.3	7.6	7.5	220.0	242.00	262.00								
9	7770.0	0	24	23	24	24	23	24	24	60.0	2600.0	0.0	0.0	142.0	290.0		189.0	121.0	0.0	0.0	238.0	248.0	0.0	0.0	218.0	220.0	8.4	7.6	7.6	224.0	244.00	246.00								
10	7634.0	0	24	24	24	23	23	23	23	120.0	2800.0	0.0	0.0	140.0	290.0		160.0	120.0	0.0	0.0	230.0	240.0	0.0	0.0	200.0	212.0	8.5	7.7	7.7	220.0	248.00	246.00								
11	7950.0	0	24	24	24	24	24	24	24	0.0	2600.0	0.0	0.0	146.0	290.0		160.0	120.0	0.0	0.0	230.0	240.0	0.0	0.0	216.0	210.0	8.5	7.8	7.6	214.0	248.00	256.00								
12	7871.0	0	23	24	23	24	24	24	24	60.0	2600.0	0.0	0.0	144.0	290.0		160.0	120.0	0.0	0.0	234.0	242.0	0.0	0.0	210.0	206.0	8.3	7.7	7.6	212.0	230.00	224.00								
13	7916.0	0	24	23	24	23	23	23	23	148.0	2800.0	0.0	0.0	145.0	290.0		175.0	125.0	0.0	0.0	240.0	256.0	0.0	0.0	228.0	228.0	8.4	7.6	7.4	220.0	244.00	240.00								
14	7865.0	0	24	24	24	24	24	24	24	0.0	2200.0	0.0	0.0	144.0	290.0		245.0	175.0	0.0	0.0	244.0	252.0	0.0	0.0	226.0	216.0	8.4	7.4	7.6	226.0	250.00	258.00								
15	7614.0	0	23	23	23	24	23	24	24	120.0	2800.0	0.0	0.0	139.0	290.0		210.0	150.0	0.0	0.0	240.0	244.0	0.0	0.0	228.0	218.0	8.8	8.2	7.9	222.0	234.00	240.00								
16	7962.0	0	24	24	24	23	24	23	23	105.0	2600.0	0.0	0.0	146.0	290.0		171.0	109.0	0.0	0.0	240.0	242.0	0.0	0.0	230.0	216.0	8.5	7.7	7.6	224.0	240.00	242.00								
17	9134.0	0	23	24	24	24	24	24	24	30.0	8000.0	0.0	0.0	167.0	290.0		293.0	187.0	0.0	0.0	236.0	102.0	0.0	0.0	230.0	160.0	8.2	7.7	7.3	216.0	250.00	256.00								
18	8802.0	0	24	24	23	24	23	23	24	100.0	6800.0	0.0	963.0	161.0	290.0		296.0	144.0	0.0	0.0	102.0	106.0	0.0	0.0	76.0	70.0	7.9	6.9	6.9	216.0	130.00	128.00								
19	7257.0	0	23	23	24	24	23	24	24	135.0	3200.0	0.0	0.0	133.0	290.0		162.0	118.0	0.0	0.0	238.0	228.0	0.0	0.0	64.0	116.0	8.1	6.8	7.0	110.0	222.00	108.00								
20	6286.0	0	24	24	24	24	24	24	24	0.0	1800.0	0.0	0.0	115.0	290.0		108.0	52.0	0.0	0.0	228.0	236.0	0.0	0.0	180.0	214.0	8.2	7.4	7.6	102.0	230.00	210.00								
21	6849.0	0	23	24	23	24	24	24	24	63.0	5800.0	0.0	0.0	125.0	290.0		205.0	135.0	0.0	0.0	250.0	180.0	0.0	0.0	218.0	206.0	8.4	7.4	7.4	112.0	230.00	228.00								
22	6727.0	0	24	24	24	23	24	23	23	105.0	6200.0	0.0	0.0	123.0	290.0		201.0	129.0	0.0	0.0	204.0	208.0	0.0	0.0	186.0	150.0	7.9	7.3	7.1	126.0	210.00	216.00								
23	6347.0	0	24	23	24	24	23	24	24	71.0	3200.0	0.0	0.0	116.0	290.0		115.0	75.0	0.0	0.0	198.0	226.0	0.0	0.0	140.0	158.0	8.2	7.2	7.1	194.0	214.00	222.00								
24	5378.0	0	23	24	23	24	24	24	24	66.0	2600.0	0.0	0.0	98.0	290.0		77.0	83.0	0.0	0.0	230.0	238.0	0.0	0.0	190.0	214.0	8.0	7.3	7.3	190.0	240.00	220.00								
25	5105.0	0	24	24	24	23	24	23	23	105.0	2400.0	0.0	0.0	93.0	290.0		77.0	83.0	0.0	0.0	230.0	252.0	0.0	0.0	192.0	202.0	8.1	7.4	7.5	184.0	240.00	228.00								
26	6065.0	0	23	23	23	24	23	24	24	274.0	3000.0	0.0	0.0	111.0	290.0		87.0	93.0	0.0	0.0	240.0	240.0	0.0	0.0	218.0	202.0	8.0	7.3	7.4	212.0	228.00	234.00								
27	6353.0	0	24	24	24	24	24	24	24	0.0	3000.0	0.0	0.0	116.0	290.0		330.0	310.0	0.0	0.0	250.0	248.0	0.0	0.0	208.0	220.0	8.2	7.4	7.5	218.0	246.00	238.00								
28	6379.0	0	24	24	24	24	23	24	24	70.0	3000.0	0.0	0.0	117.0	290.0		159.0	101.0	0.0	0.0	230.0	252.0	0.0	0.0	206.0	220.0	8.1	7.4	7.2	216.0	244.00	240.00								
29	5860.0	12	23	24	24	24	23	24	23	103.0	3600.0	0.0	0.0	107.0	290.0		159.0	101.0	0.0	0.0	228.0	248.0	0.0	0.0	216.0	212.0	8.3	7.5	7.3	222.0	236.00	240.00								
30	6094.0	24	24	23	23	24	24	24	24	66.0	5200.0	0.0	0.0	112.0	290.0		183.0	117.0	0.0	0.0	176.0	162.0	0.0	0.0	222.0	180.0	8.0	7.5	7.4	220.0	176.00	240.00								
31	5119.0	24	24	24	24	23	23	24	24	70.0	2900.0	0.0	0.0	94.0	290.0		140.0	120.0	0.0	0.0	220.0	240.0	0.0	0.0	154.0	148.0	7.9	7.1	7.0	220.0	236.00	194.00								
Tot	218023.0	60.0	734.0	734.0	735.0	735.0	733.0	735.0	736.0	2288.0	101200.0		963.0	3758.0	8990.0		5344.0	4206.0																						
Avg	7033.0	1.9	23.7	23.7	23.7	23.7	23.6	23.7	23.7	73.8	3264.5		31.1	121.2	290.0		172.4	135.7			226.4	224.0			199.6	196.6	8.2	7.5	7.4	202.3	232.4	229.8								
Power Costs	\$40,464.57																																							
Labor Costs	\$49,250.80																																							
Chemicals	\$48,341.62																																							
Supplies	\$8,976.02																																							
Repairs	\$6,287.67																																							
Testing Cost	\$1,560.00																																							
TOTAL	\$154,880.68																																							
Cost per thousand gallons	\$0.71																																							
										Ave Rate of Wash (Vert. in/min)																				I hereby certify the above to be correct to the best of my knowledge.										
										Ave Wash Period (Minutes)																				Signed <u>Phillip Hightower</u>										
										% Wash Water Used										1.05%										Print <u>Phillip Hightower</u>										
										Ave. Head Loss for Washing																				Title <u>Public Works Director</u>										
																														DEQ Form # 630-577 Revised 5/21/2018										
																														Oper. Cert. No. <u>90404</u>										



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From:
Re: Administration

Council Information / Action Requested

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Phillip Hightower, Public Works Director
Re: Discussion, Consideration and Possible Action to Approve a Sewer Line Extension

A Developer has asked to extend a Sewer line that is in the county. The Developer built some duplexes on West Wilson Street a year and half ago and was permitted to build a sewer line and connect it to the city sewer. He is now wanting to build more duplexes and is asking to tie a sewer line into the line he tied into City sewer a year and half ago.

Council Information / Action Requested

Approve or deny sewer line extension.

City Staff Information / Action Follow-up, if Council authorizes this action:

If approved sign DEQ permit

ATTACHMENTS:

1. Wilson St Durant Sewer Plans 8.22.22 (6)

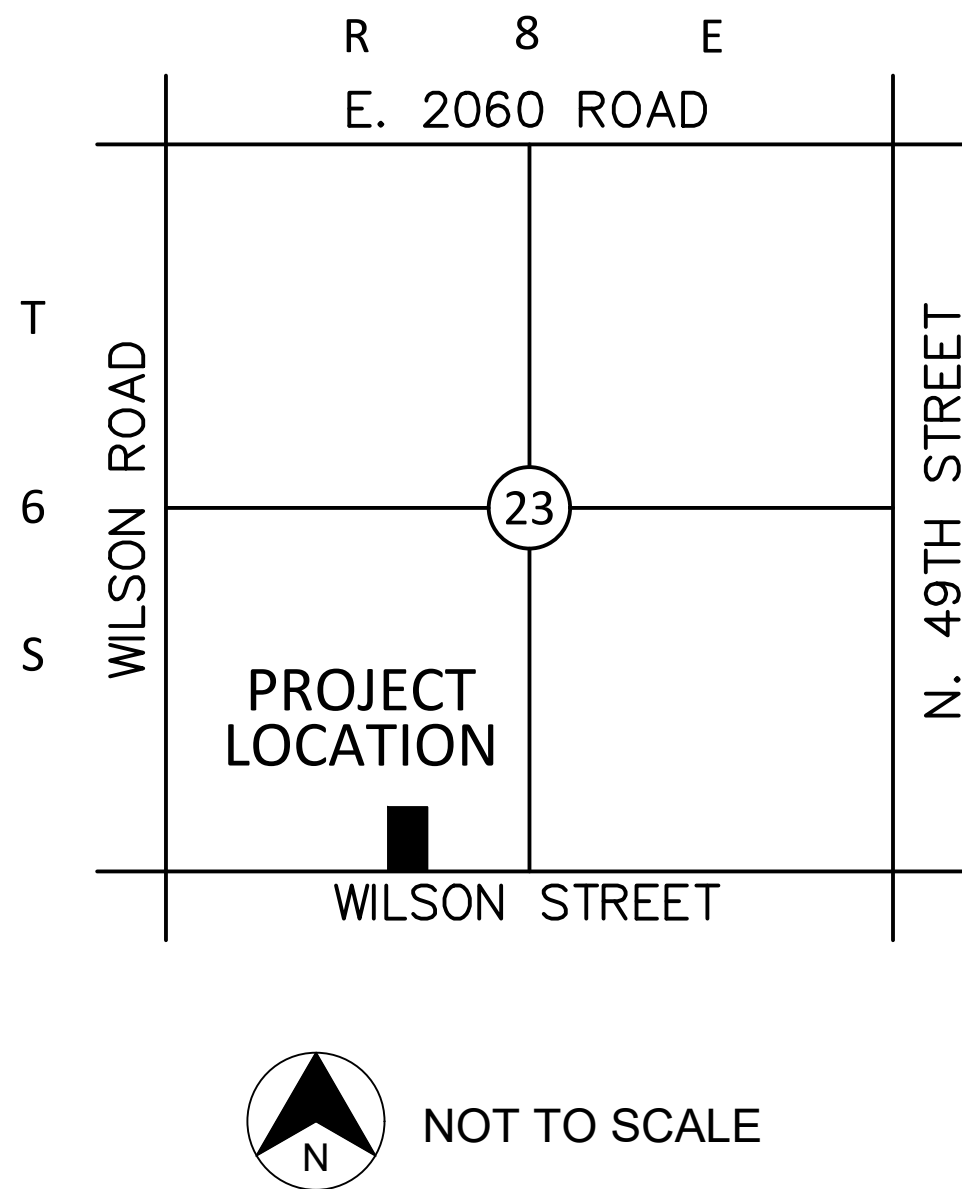
SUMMARY OF QUANTITIES				
ITEM #	ITEM	UNIT	QUANTITY	AS-BUILT
1.	8" SANITARY SEWER PIPE	L.F.	719	
2.	MANHOLE - COMPLETE 0'-6"	EA	3	
3.	0' - 8' TRENCH	L.F.	651	
4.	8' - 10' TRENCH	L.F.	45	
5.	10' - 12' TRENCH	L.F.	23	
6.	CRUSHED ROCK BEDDING	C.Y.	119	
7.	LEAKAGE TESTING	L.S.	1	
8.	DEFLECTION TESTING	L.S.	1	
9.	MANHOLE TESTING	L.S.	1	
EROSION CONTROL QUANTITIES (BY CONTRACTOR)				
1.	SILT FENCE	L.F.	740	

SUMMARY OF QUANTITIES				
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9.	MANHOLE TESTING	L.S.	1	
EROSION CONTROL QUANTITIES (BY CONTRACTOR)				
1.	SILT FENCE	L.F.	740	

BEING PART OF THE SW $\frac{1}{4}$, SECTION 23, TOWNSHIP 6 SOUTH,
RANGE 8 EAST
CITY OF DURANT, BRYAN COUNTY, OKLAHOMA

[illegible]

	BOUNDARY LINE		EX. POWER POLE
	RIGHT OF WAY LINE		PROP. POWER POLE
	EASEMENT LINE		EX. TELEPHONE PED.
	EXISTING CONCRETE CURB AND GUTTER		EX. TELEPHONE MANHOLE
	PROPOSED CONCRETE CURB AND GUTTER		EX. TRAFFIC SIGNAL LIGHT
	PROPOSED FIRE LANE STRIPING		EX. TRAFFIC CONTROL BOX
	OVERHEAD ELECTRIC		EX. FLAG POLE
	UNDERGROUND ELECTRIC		EX. YARD LIGHT
	GAS LINE		EX. GREASE TRAP
	UNDERGROUND TELEPHONE		EX. SS MANHOLE
	UNDERGROUND FIBER OPTIC		EX. GAS METER
	SANITARY SEWER		PROP. GAS METER
	WATERLINE		EX. ELECT. MANHOLE
	BENCHMARK		EX. STORM MANHOLE
	FIRE HYDRANT		EX. BOLLARD
	WATER VALVE		PROP. INLETS (SEE GRADING PLAN FOR TYPE)
	EX. WATER METER PIT		VERTICAL SEPARATION REQUIREMENT
	EX. WATER METER		
	PROP. WATER METER		
	EX. SPRINKLER VALVE		
	EX. AUTO SPRINKLER		
	EX. ELECT. PEDESTAL		
	EX. ELECT. TRANSFORMER		
	EX. ELECT. METER		
	PROP. ELECT. METER		
	EX. AIR CONDITIONER		
	EX. SIGNAGE		
	EX. LIGHT POLE		
	PROP. LIGHT POLE		
	EX. BOLLARD		

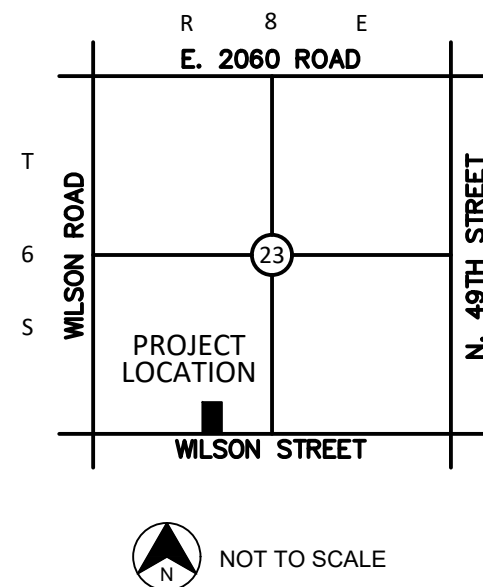


GENERAL NOTES:

1. THE CONTRACTOR SHALL SATISFY HIMSELF CONCERNING THE ACCURACY OF ALL MEASUREMENTS BEFORE CONSTRUCTING ANY PERMANENT STRUCTURE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH SURFACE AND SUB-SURFACE CONDITIONS. THE BASE BID AS SHOWN IN THE PROPOSAL SHALL INCLUDE COSTS FOR UNCLASSIFIED EXCAVATING OF EARTH AND ROCK, FOR DE-WATERING AND STABILIZING UNSUITABLE SOILS SUCH AS QUICKSAND OR OTHER UNSUITABLE MATERIALS AND FOR ANY OTHER HAZARD THAT MAY BE ENCOUNTERED.
3. ALL SANITARY SEWER TRENCHES BETWEEN LOTS AND IN STREET RIGHT-OF-WAY SHALL BE BACKFILLED IN ACCORDANCE WITH CITY OF DURANT STANDARD SPECIFICATIONS FOR SANITARY SEWERS.
4. MANHOLE TOP OF RIM ELEVATIONS SHOWN IN THE PLANS ARE APPROXIMATE ONLY. CONSTRUCT MANHOLES WITH NECESSARY HEIGHT TO LEAVE THE RIM 0.50 FEET ABOVE THE FINISHED GRADE OR 3" ABOVE THE TOP OF CURB.
5. CRUSHED ROCK SHALL BE USED ONLY FOR BEDDING OF ALL PIPES. LOCATIONS WHERE CRUSHED ROCK IS USED MUST BE SHOWN ON THE WYE SHEETS. CRUSHED ROCK TICKETS SHALL BE TURNED INTO CEDAR CREEK CONSULTING IN ORDER TO RECEIVE PAYMENT. THE MAXIMUM PAY QUANTITY FOR CRUSHED ROCK THAT QUANTITY REQUIRED TO FILL A NEAT MINIMUM WIDTH DITCH, LISTED IN THE TRENCH WIDTH TABLE, FROM 6" BELOW THE FLOWLINE OF THE PIPE TO 6" ABOVE THE TOP OF PIPE.
6. SAND BACKFILL SHALL BE PLACED IN ALL DITCHES UP TO THE GROUND LEVEL WHERE LINES CROSS UNDER PROPOSED OR EXISTING PAVING. SAND BACKFILL SHALL BE COMPACTED BY WATER CONSOLIDATION. THE MAXIMUM PAY QUANTITY FOR SAND BACKFILL IS THAT QUANTITY REQUIRED TO FILL A NEAT MINIMUM WIDTH DITCH, LISTED IN THE TRENCH WIDTH DETAIL, FROM THE FLOWING OF THE PIPE TO THE PAVEMENT SUBGRADE ELEVATION, TO 5' BACK OF CURB ON EACH SIDE OF THE STREET. ANY ADDITIONAL SAND REQUIREMENTS ARE CONSIDERED INCIDENTAL. IN ORDER TO RECEIVE PAYMENT FOR SAND, THE DELIVERY TICKETS MUST BE ATTACHED TO THE INVOICE FORWARDED TO CEDAR CREEK CONSULTING FOR REVIEW.
7. ALL FILL AREAS TO BE 90% STANDARD PROCTOR DENSITY AND SHALL BE PLACED AND COMPACTED IN SIX (6") INCH LIFTS FOR HAND-TAMPED EQUIPMENT AND THIRTY (30") INCH LIFTS FOR SELF-PROPELLED OR POWER-DRIVEN EQUIPMENT TO THE FOLLOWING MINIMUM PERCENT OF STANDARD PROCTOR DENSITY OR RELATIVE DENSITY AS DETERMINED BY ASTM D-698. "TESTS FOR MOISTURE-DENSITY RELATIONS OF SOILS AND SOIL-AGGREGATE MIXTURES". AND ASTM D-2049 "TESTS FOR RELATIVE DENSITY OF COHESIONLESS SOILS". RESPECTIVELY. ASTM-D698 TEST SHALL BE CONDUCTED ON COHESIVE OR FINE-GRAINED SOILS, WHERE ASTM TEST D-2049 SHALL BE PERFORMED ON COHESIONLESS (GRANULAR) SOILS. COHESIVE BACKFILL MATERIAL SHALL REACH THE INDICATED COMPACTION LEVELS AT PLUS OR MINUS THREE (3%) PERCENT OF OPTIMUM MOISTURE CONTENT. THE LIFT THICKNESS SHALL BE REDUCED, IF NECESSARY, TO MEET THE COMPACTION REQUIREMENTS SPECIFIED HEREIN.
8. ALL WORK AND/OR MATERIALS NOT CLASSIFIED AS A "CONTRACT PAY ITEM" SHALL BE CONSIDERED INCIDENTAL AND THE COST THEREOF SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS WHICH ARE CLASSIFIED FOR PAYMENT.
9. ALL SANITARY SEWER BY-PASS LINES SHALL BE FREE FROM ANY LEAKS AS TO ELIMINATE CONTAMINATION DURING BY-PASS OPERATIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OR REPAIR OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROMPT REPLACEMENT AND/OR REPAIR OF ALL TRAFFIC CONTROL DEVICES AND APPURTENANCES DAMAGED DUE TO CONSTRUCTION.
12. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
13. A STORM WATER DISCHARGE PERMIT IS REQUIRED BEFORE ANY LAND DISTURBING ACTIVITY CAN BEGIN.
14. CONSTRUCTION ACTIVITIES THAT RESULT IN LAND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE (1) ACRE, OR LESS THAN ONE (1) ACRE IF THEY ARE A PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT AT LEAST ONE (1) ACRE MUST ALSO OBTAIN A PERMIT FROM ODEQ (FORM 605-002a) FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. THIS MEANS THAT LAND DISTURBING OF ONE (1) ACRE OR MORE MUST PERMIT WITH ODEQ AND THE CITY OF DURANT STORM WATER QUALITY.
15. A WORK ZONE PERMIT MUST BE OBTAINED FROM THE TRAFFIC MANAGEMENT DIVISION AT LEAST TWO (2) WORKING DAYS PRIOR TO THE START OF WORK AND/OR PLACING OR REMOVING ANY BARRICADES OR MODIFYING EXISTING TRAFFIC CONTROL DEVICES.
16. FINAL CLEAN UP - UPON COMPLETION OF THE WORK AND BEFORE ACCEPTANCE AND FINAL PAYMENT WILL BE MADE, THE CONTRACTOR SHALL REMOVE FROM THE SITE ALL MACHINERY AND EQUIPMENT, AND ANY SURPLUS AND DISCARD MATERIALS, RUBBISH, TEMPORARY STRUCTURES AND STUMPS OR PORTIONS OF TREES. MATERIALS CLEARED FROM THE SITE MUST BE DISPOSED OF SATISFACTORILY.



LOCATION MAP:



PROJECT:

WILSON
STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
DRAWING DATE: 08.22.22
ISSUE DATE: 08.22.22

SEAL:



SUBMITTAL:

PERMIT SET

REVISIONS:

MARK	DATE	DESCRIPTION

MARK	DATE	DESCRIPTION
------	------	-------------

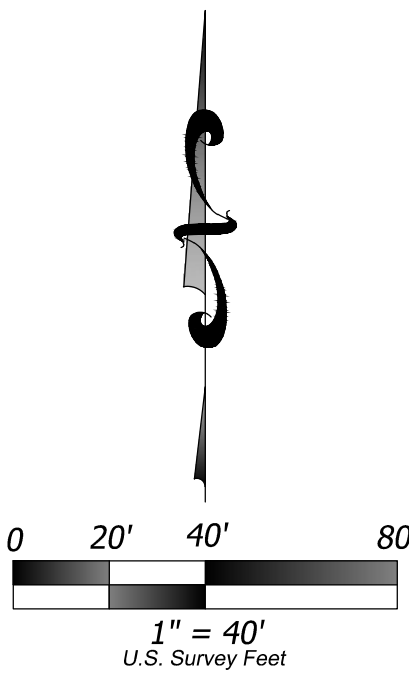
THESE PLANS AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF CEDAR CREEK CONSULTING INC. THIS SHEET IS NOT TO BE USED FOR CONSTRUCTION UNLESS THE ISSUE DATE IN THE TITLE BLOCK COINCIDES WITH OR POST DATES THE DRAWING DATE. ANY CHANGES MADE TO THIS SHEET WITHOUT THE WRITTEN CONSENT OF CEDAR CREEK CONSULTING INC. ARE UNAUTHORIZED, AND SHALL RELIEVE CEDAR CREEK CONSULTING OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH CHANGES.

DRAWING TITLE:

COVER SHEET

SHEET:

C0.00

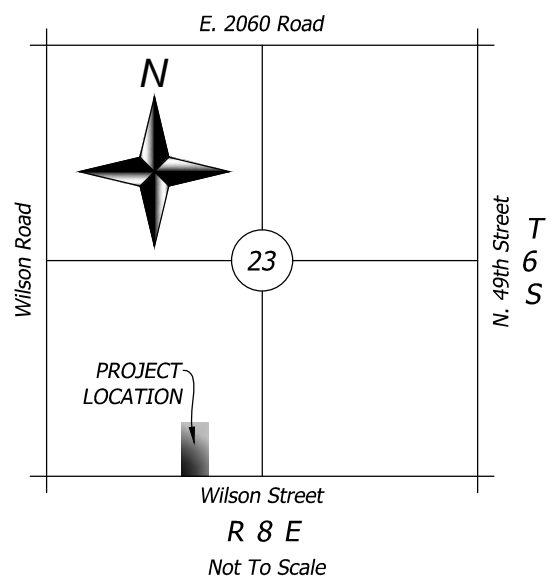


Northwest Corner of the SW/4
Sect. 23, T6S, R8E, 14M
Found 1/4" Iron Pin
Matching OCCR April 4, 2013

Calculated Northeast Corner of the SW/4
Sect. 23, T6S, R8E, 14M

North Quarter Corner of
Sect. 23, T6S, R8E, 14M
Found 3/8" Iron Pin
Matching OCCR April 26, 2018

East Quarter Corner of
Sect. 23, T6S, R8E, 14M
Found 1/4" Iron Pin
Matching OCCR January 19, 2000



UTILITY NOTE

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantee that the underground utilities shown compromise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that utilities are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.



LEGEND

	POWER POLE		GAS METER
	LIGHT POLE		GAS VALVE
	GUY ANCHOR		GAS MASKER
	ELECTRIC METER		OIL PIPELINE MARKER
	ELECTRIC BOX		MAIL BOX
	ELEC. TRANSFORMER		SIGN
	ELEC. MANHOLE		FLAG POLE
	ELEC. PEDESTAL		FIRE HYDRANT
	ELEC. PULL BOX		WATER MANHOLE
	SPOT LIGHT		WATER METER
	SANITARY SEWER MANHOLE		DOWN SPOUT
	SANITARY SEWER CLEANOUT		AIR CONDITIONER
	STORM SEWER MANHOLE		TELEPHONE RISER
	TELEPHONE RISER		TRAFFIC SIGNAL
	TELEPHONE MANHOLE		TRAFFIC SIGNAL BOX
	TELEPHONE MARKER		TRAFFIC SIGNAL PULL BOX
	TELEPHONE PULL BOX		GREASE TRAP
	FIBER OPTIC MARKER		KEY PAD
	FIBER OPTIC PULL BOX		COLUMN
	CABLE TV PEDESTAL		SECTION CORNER
	CABLE MARKER		QUARTER CORNER
	CABLE TV PULL BOX		SET IRON PIN W/CAP
	IRRIGATION CONTROL VALVE		SET MAG NAIL W/WASHER
	SPRINKLER HEAD		FOUND MONUMENT
	ROLLARD		RIGHT OF WAY MARKER
	FIRE DEPARTMENT CONNECT		YARD HYDRANT/SPICKET
	PROPANE TANK		BENCHMARK
	WATER LINE		WELLHEAD
	GAS LINE		SATELLITE DISH
	SANITARY SEWER LINE		CHAIN LINK FENCE
	TELEPHONE LINE		WOOD PANEL FENCE
	ELECTRIC LINE		MASONRY FENCE
	OVERHEAD POWERLINE		IRON FENCE
	BARBED WIRE FENCE		FIBER OPTIC LINE
	S.I.P.-SET IRON PIN		LOT LINE
	I.P.-FOUND IRON PIN		EASEMENT LINE
	H/C-HANDICAP		SECTION LINE
	C/C-CORRUGATED METAL PIPE		B/L-BUILDING LIMIT LINE
	R/C-REINFORCED CONCRETE PIPE		U/E-UTILITY EASEMENT

NOTE: ALL MONUMENTS SET ARE CAPPED 1/2" IRON PINS OR MAG NAILS WITH WASHERS BOTH BEING STAMPED "GOLDEN CA 7365" UNLESS NOTED OTHERWISE

Southwest Corner of the SW/4
Sect. 23, T6S, R8E, 14M
Found 1-1/4" Pipe
Matching OCCR May 8, 2013

Southwest Corner of the SW/4
Sect. 23, T6S, R8E, 14M
Found Brass ODOT Monument
Matching OCCR March 21, 2011

LEGAL DESCRIPTION

The E/2 SW/4 SE/4 SW/4 of Section 23, Township 6 South, Range 8 East of the Indian Base and Meridian, Bryan County, Oklahoma, according to the Government Survey thereof, Containing 218.095 Sq. Ft. or 5.0067 Acres, more or less.

GENERAL NOTES

- Said described property in, by graphical plotting only, located within an area having a Zone Designation "X" Unshaded by FEMA, on Flood Insurance Rate Map No. 40013C0170E, dated June 2, 2011.
- The Property has direct access to Wilson Street, both being a dedicated public street.
- There is no observed evidence of current earth moving work, building construction or building additions.
- There are no proposed changes in street right of way lines, to the best of my knowledge. There is no observed evidence of recent street or sidewalk construction or repairs.
- There is no observed evidence of site use as a solid waste dump, sump or sanitary landfill.
- A assumed bearing of South 89° 04' 18" West as the South line of the SW/4 per Oklahoma State Plane Grid South was used as the basis of bearing for this survey.
- This survey was conducted without the benefit of a Title Commitment, there may be matters benefiting or burdening the subject property unknown to the surveyor.
- All unit of measurements are US Survey feet (Ground).

TOPOGRAPHIC SURVEY

I, Troy Dee, certify that this project was completed under my direct and responsible charge from an actual survey made under my supervision; that this ground survey was performed at the 95% percent confidence level to meet Federal Geographic Data Committee Standards; that this survey was performed to meet the requirements for a topographic/planimetric survey and meets the Oklahoma Minimum Technical Standards for the practice of land surveying as adopted by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors. The original data was obtained on July 22, 2022; that the survey was completed on August 2, 2022; that contours shown as broken lines may not meet the stated standard; and all coordinates are based on Oklahoma State Plane Grid South "NAD 83" and realization all elevations are based on NAVD 88.

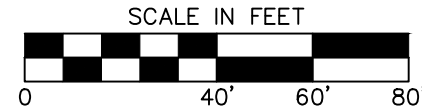
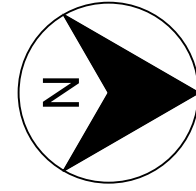


August 2, 2022

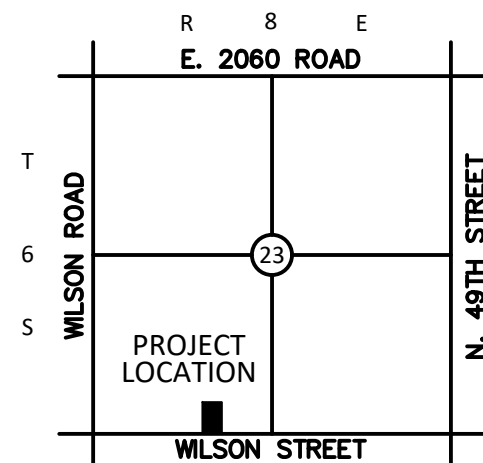
TOPOGRAPHIC SURVEY
OF
WILSON STREET 5 ACRES
Prepared By
GOLDEN
LAND SURVEYING

4131 N.W. 122nd St., Suite 100, Oklahoma City, Oklahoma 73120
C.A.# 7263 / Exp. Date =6/30/2024
Telephone: (405) 802-7883 Email: troy@goldenls.com

Sheet 1 Of 1



LOCATION MAP:



PROJECT:

WILSON STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
DRAWING DATE: 08.22.22
ISSUE DATE: 08.22.22

SEAL:



SUBMITTAL:

PERMIT SET

REVISIONS:

MARK DATE DESCRIPTION

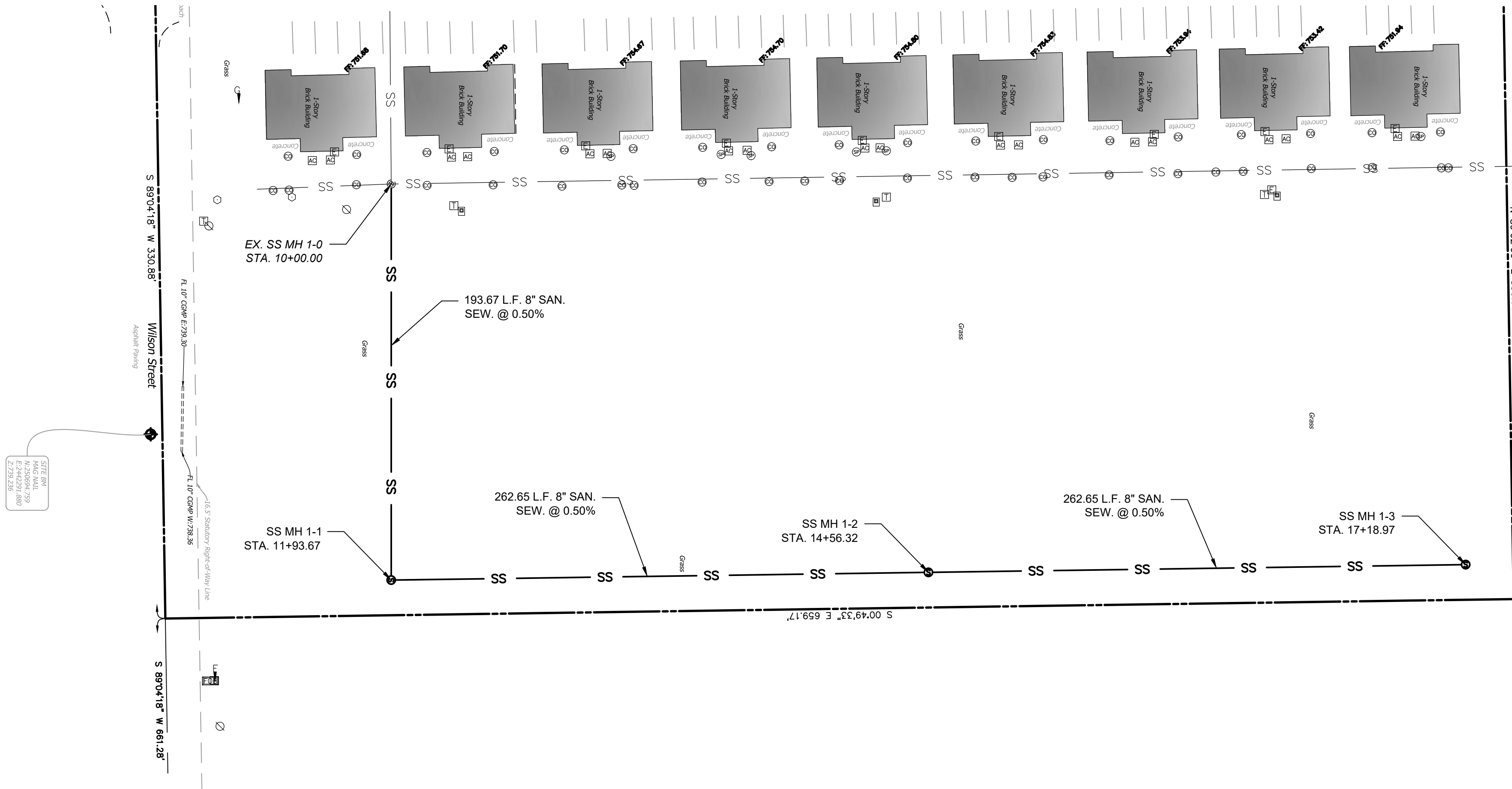
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DRAWING TITLE:

SANITARY SEWER
PLAN & PROFILE

SHEET:

C1.00

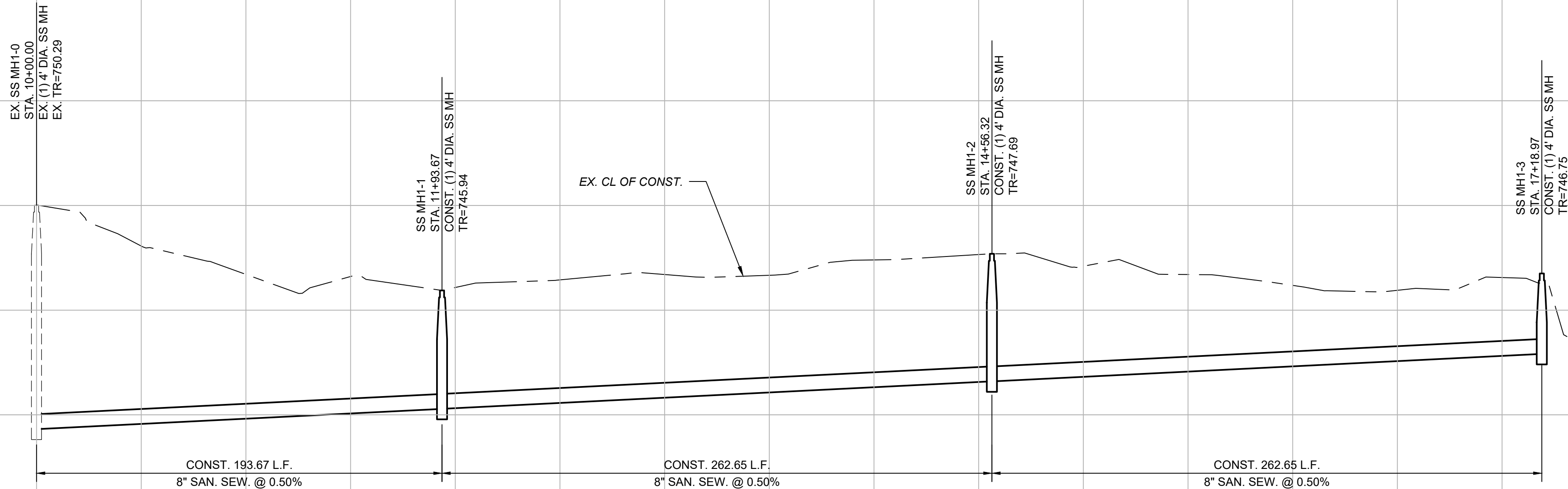


SANITARY SEWER LINE PLAN

SCALE: 1" = 40'

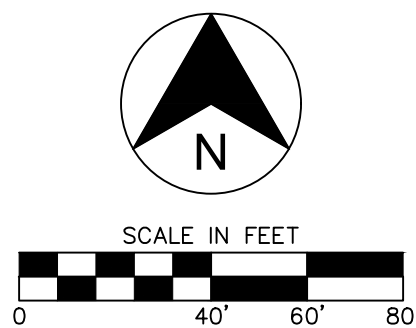
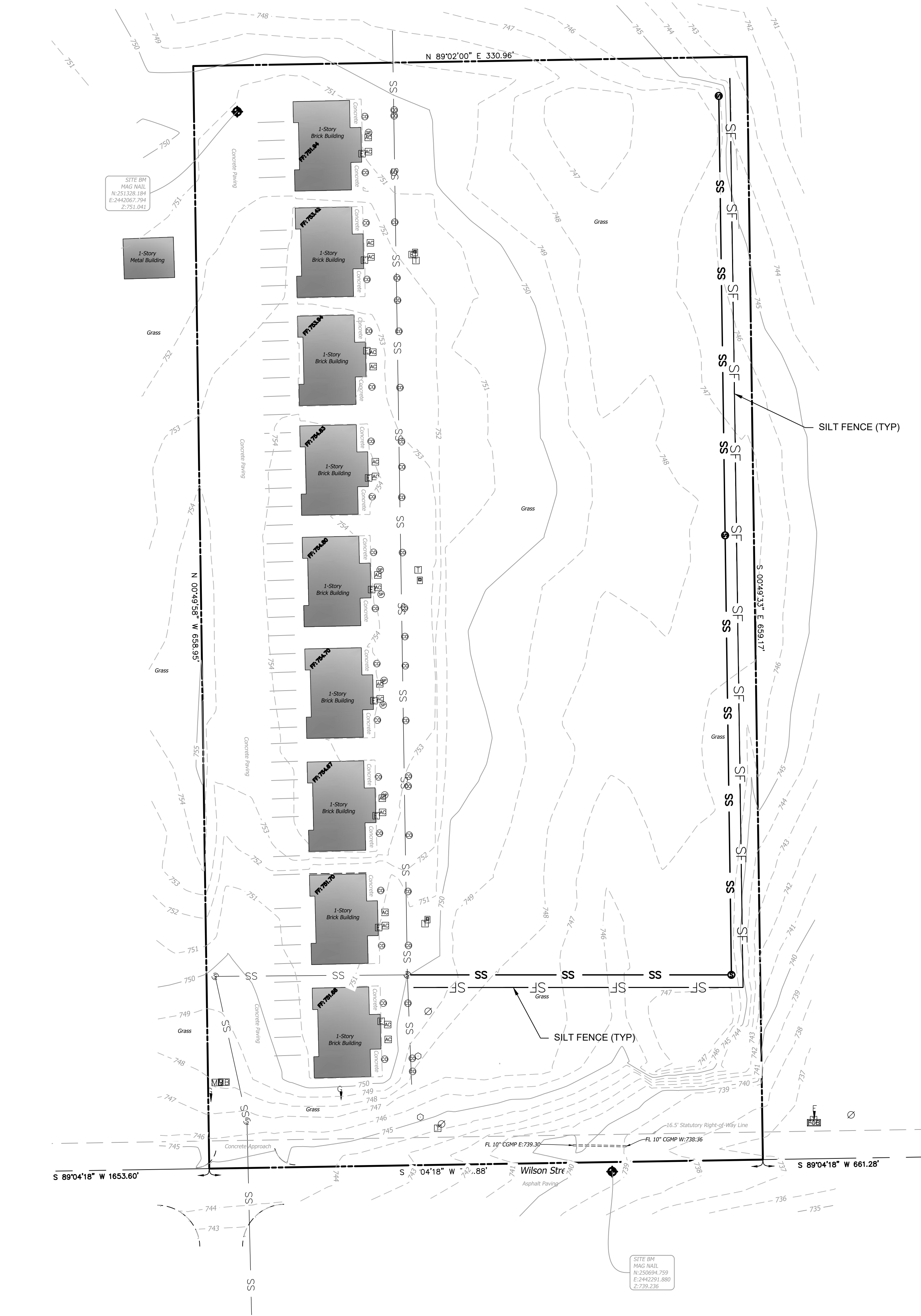
NOTES:

- FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- CONTRACTOR SHALL FIELD LOCATE AND VERIFY UTILITY CROSSINGS PRIOR TO CONSTRUCTION.



SANITARY SEWER LINE PROFILE

SCALE:
HORIZ: 1" = 40'
VERT: 1" = 4'



NOTE: CONTRACTOR SHALL ENSURE WILSON STREET TO REMAIN FREE AND CLEAR OF ALL CONSTRUCTION DEBRIS AND REMAIN PROTECTED DURING CONSTRUCTION.

EROSION CONTROL NOTES

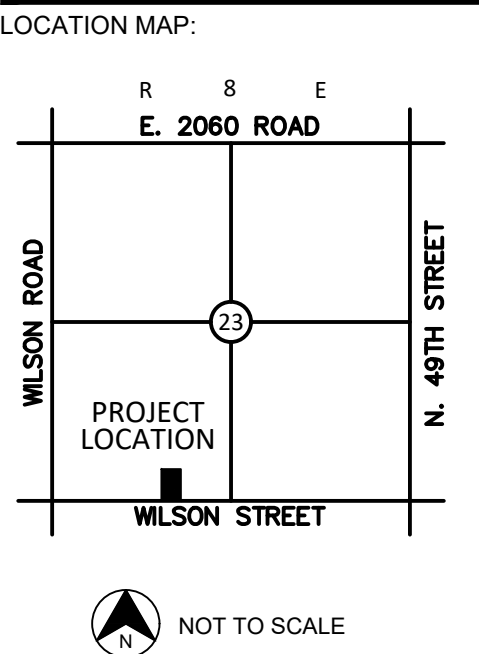
- A. SEDIMENT BASINS ARE ATTRACTIVE TO CHILDREN AND CAN BE VERY DANGEROUS. IN ALL CASES, LOCAL ORDINANCES AND REGULATIONS REGARDING HEALTH AND SAFETY MUST BE ADHERED TO.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF OKLAHOMA NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- C. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.
- D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- E. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- F. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- G. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- H. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLotation BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- I. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- J. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- K. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.
- L. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 14 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- M. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.
- N. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- O. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- P. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- Q. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE PLAN AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
- R. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- S. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO PREVENT EROSION.
- T. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- U. A 3' STRIP OF SOD SHALL BE PLACED ALONG THE EDGE OF ALL PAVING TO ACT AS A SEDIMENT BUFFER AND AID IN THE ESTABLISHMENT OF VEGETATION.

LEGEND

- BOUNDARY LINE
- RIGHT OF WAY LINE
- EASEMENT LINE
- EXISTING CONCRETE CURB AND GUTTER
- PROPOSED CONCRETE CURB AND GUTTER
- PROPOSED FIRE LANE STRIPING
- OHE OVERHEAD ELECTRIC
- UGE UNDERGROUND ELECTRIC
- GAS GAS LINE
- UGT UNDERGROUND TELEPHONE
- FO UNDERGROUND FIBER OPTIC
- SS SANITARY SEWER
- 8"W WATERLINE
- BENCHMARK
- FIRE HYDRANT
- WATER VALVE
- EX. WATER METER PIT
- EX. WATER METER
- PROP. WATER METER
- EX. SPRINKLER VALVE
- EX. AUTO SPRINKLER
- EX. ELECT. PEDESTAL
- EX. ELECT. TRANSFORMER
- EX. ELECT. METER
- PROP. ELECT. METER
- EX. AIR CONDITIONER
- EX. SIGNAGE
- EX. LIGHT POLE
- PROP. LIGHT POLE
- EX. BOLLARD
- EX. POWER POLE
- PROP. POWER POLE
- EX. TELEPHONE PED.
- EX. TELEPHONE MANHOLE
- EX. TRAFFIC SIGNAL LIGHT
- EX. TRAFFIC CONTROL BOX
- EX. FLAG POLE
- EX. YARD LIGHT
- EX. GREASE TRAP
- EX. SS MANHOLE
- PROP. SS MANHOLE
- EX. GAS METER
- PROP. GAS METER
- EX. ELECT. MANHOLE
- EX. STORM MANHOLE
- PROP. INLETS (SEE GRADING PLAN FOR TYPE)
- LIMITS OF DISTURBANCE
- SILT FENCE
- TEMPORARY DIVERSION DIKE
- SODDING
- INLET PROTECTION
- CONCRETE WASHOUT AREA

SEQUENCE OF CONSTRUCTION

- PHASE 1
 - 1. A PRE-CONSTRUCTION MEETING SHALL BE HELD BY THE GENERAL CONTRACTOR'S MANAGER, AND THE OPERATOR'S ENGINEER PRIOR TO LAND DISTURBING ACTIVITIES.
 - 2. PREPARE AND PULL ALL NECESSARY PERMITS.
 - 3. CONSTRUCT TEMPORARY CONSTRUCTION EXITS AT LOCATIONS SHOWN ON THE SWPPP PLANS AND PREPARE TEMPORARY PARKING AND STORAGE AREA. UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WELL WASH, CONCRETE WASHOUT, MASONS AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., DENOTE THEM ON THE SITE MAPS IMMEDIATELY AND NOTE ANY CHANGE IN THE LOCATIONS AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS.
 - 4. CONSTRUCT THE SILT FENCES ON THE SITE. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMP'S. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORMWATER PRE-CONSTRUCTION MEETING WITH ENGINEER AND ALL GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
 - 5. INSTALL PUBLIC WATER, SEWER AND BOX CULVERT
 - 6. DEMO, CLEAR AND GRUB THE SITE.
 - 7. BEGIN GRADING THE SITE.
 - 8. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
 - 9. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY SEEDED AND WATERED.
- PHASE 2
 - 1. INSTALL UTILITIES, UNDER DRAINS, STORM SEWERS, CURB AND GUTTERS.
 - 2. INSTALL INLET PROTECTION DEVICES.
 - 3. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
 - 4. FINALIZE PAVEMENT SUBGRADE PREPARATION.
 - 5. INSTALL BASE MATERIAL AS REQUIRED FOR PAVEMENT.
 - 6. PAVE LOT.
 - 7. REMOVE TEMPORARY CONSTRUCTION EXITS ONLY PRIOR TO PAVEMENT CONSTRUCTION IN THESE AREAS. (THESE AREAS TO BE PAVED LAST)
 - 8. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS SHALL BE TEMPORARILY SEEDED AND WATERED.
 - 9. FINE GRADE AND INSTALL PERMANENT SEEDING AND PLANTINGS.
 - 10. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS DEvised. (ONLY IF SITE IS STABILIZED)
 - 11. REMOVE INLET PROTECTIONS AROUND INLETS AND MANHOLES NO MORE THAN 48 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.



PROJECT: WILSON STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
DRAWING DATE: 08.22.22
ISSUE DATE: 08.22.22

SEAL:

SUBMITTAL:

PERMIT SET

REVISIONS:

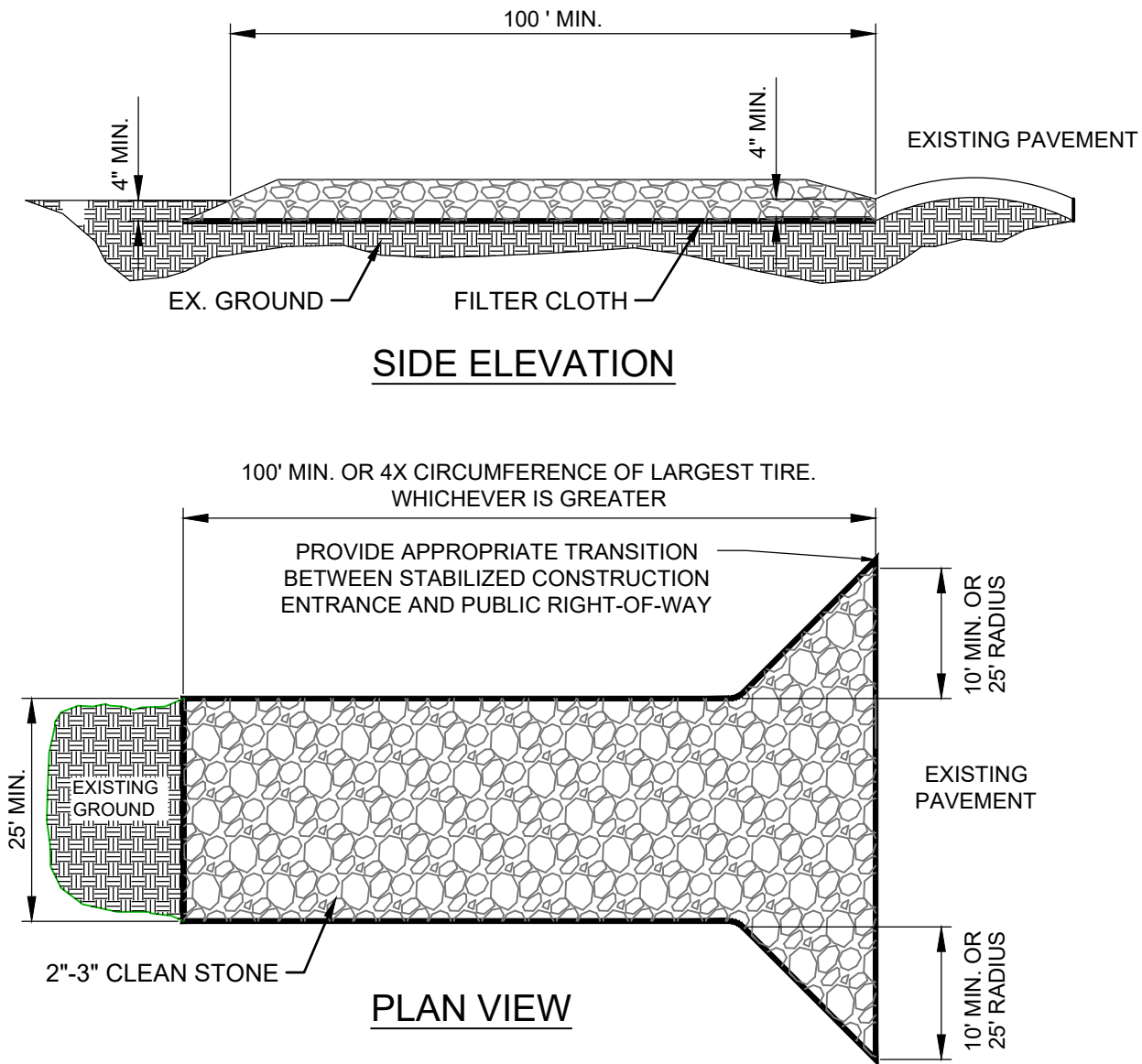
MARK	DATE	DESCRIPTION

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DRAWING TITLE:

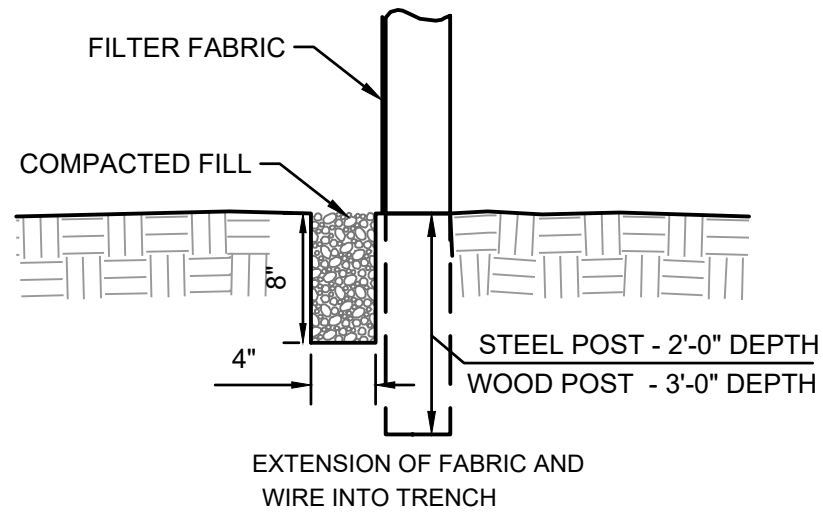
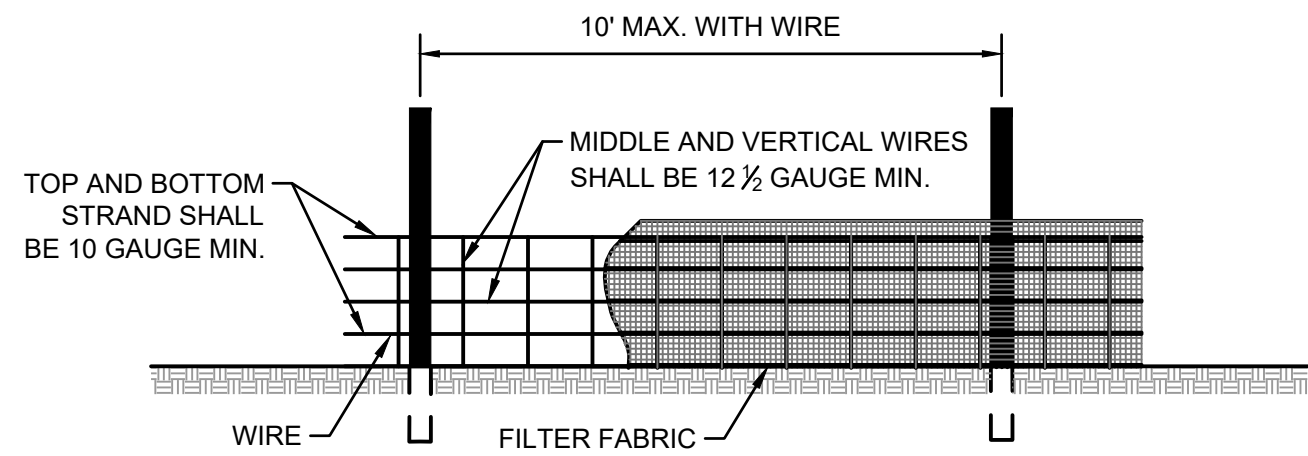
EROSION CONTROL PLAN

SHEET: C2.00



STABILIZED CONSTRUCTION ENTRANCE

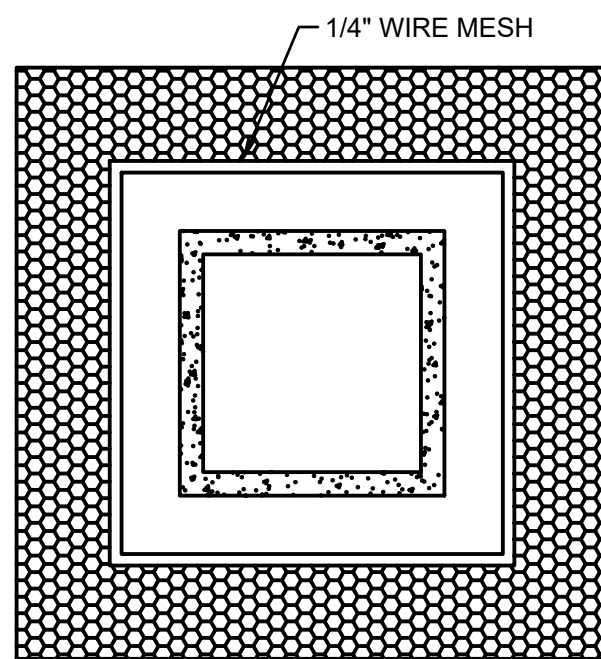
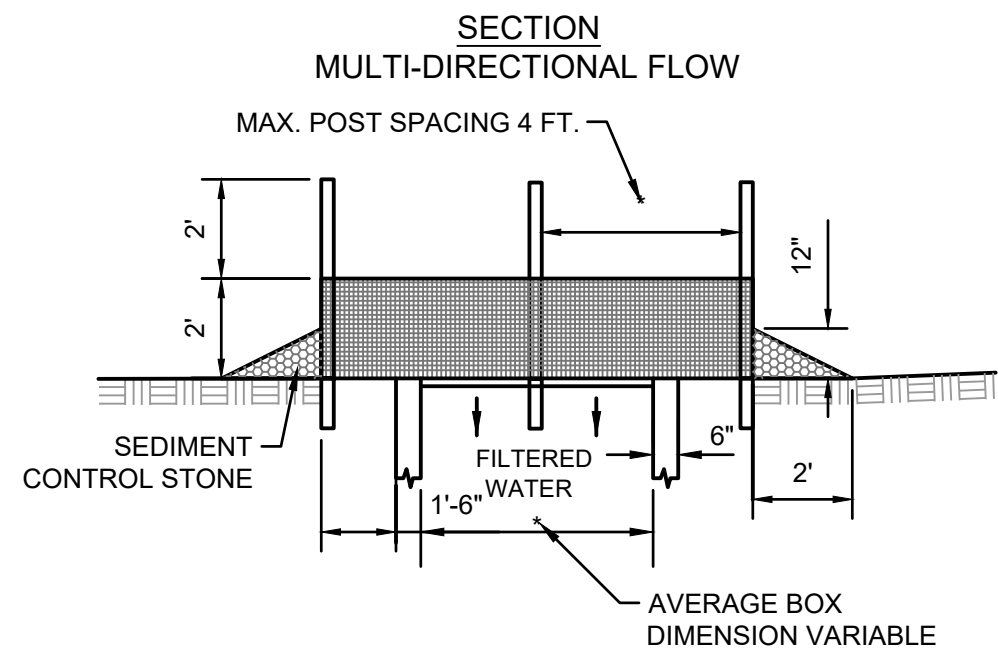
NOT TO SCALE



- NOTES:
1. WIRE SHALL BE A MINIMUM OF 32" IN WIDTH AND SHALL HAVE A MINIMUM OF 6 LINE WIRES WITH 12" STAY SPACING.
 2. FILTER FABRIC SHALL BE A MINIMUM OF 36" IN WIDTH AND SHALL BE FASTENED ADEQUATELY TO THE WIRE.
 3. STEEL POST SHALL BE 5'-0" IN HEIGHT AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 4. WOOD POST SHALL BE 6'-0" IN HEIGHT AND 3" IN DIAMETER.

SILT FENCE DETAIL

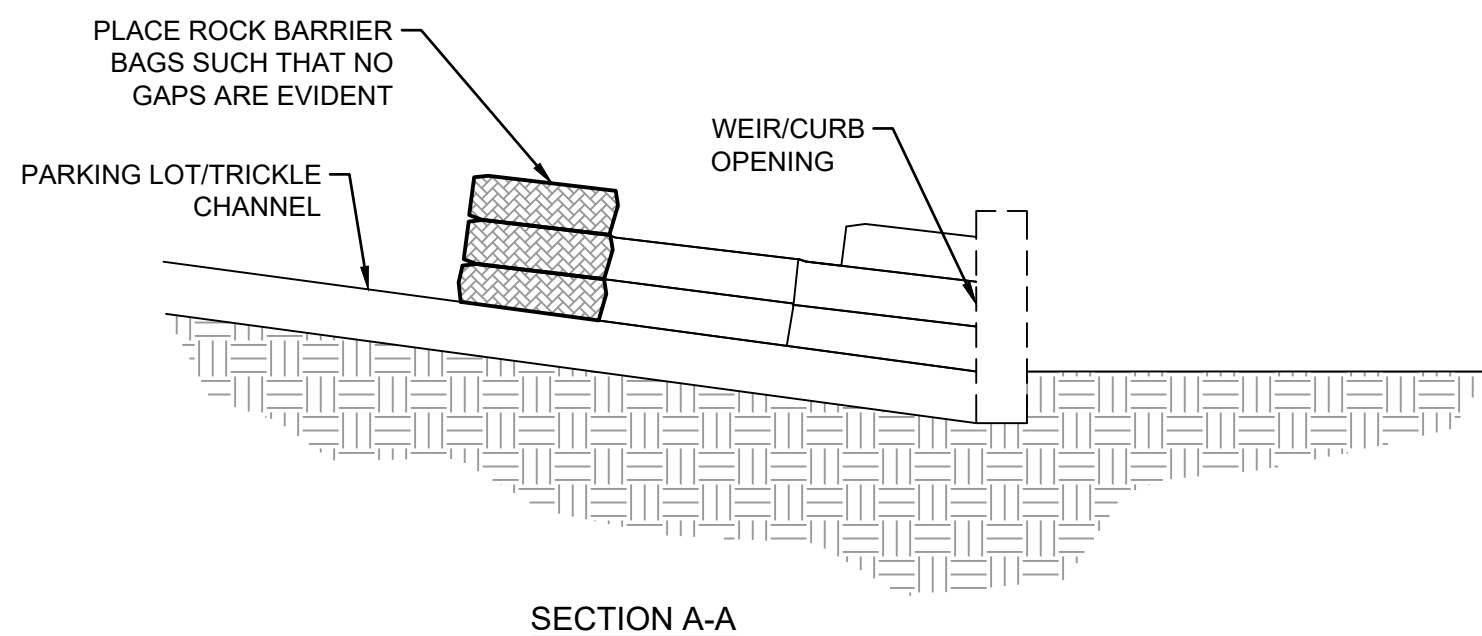
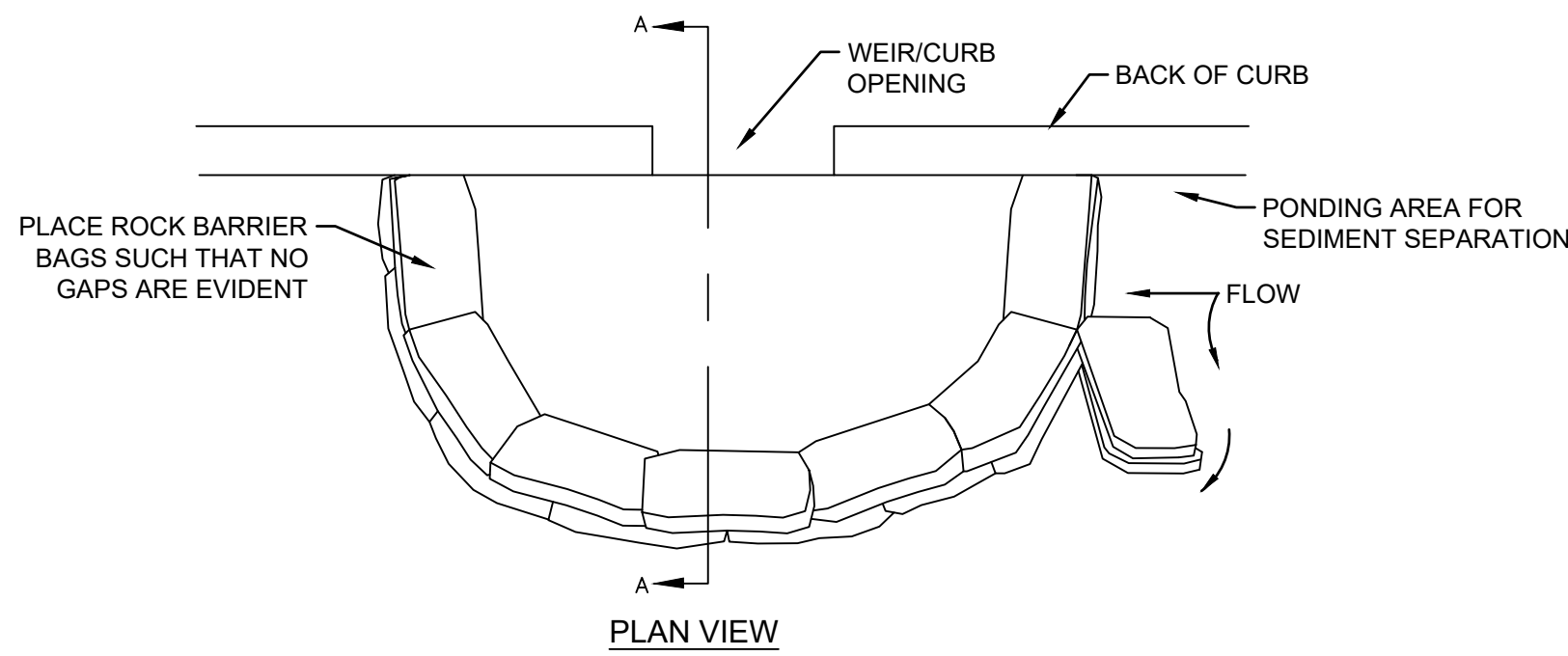
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- NOTES:
1. SEDIMENT CONTROL STONE SHALL BE 3/4" WASHED STONE.
 2. WIRE MESH SHALL BE HARDWARE CLOTH 23 GAUGE MIN. AND SHALL HAVE 1/4" INCH MESH OPENINGS.
 3. TOP OF WIRE MESH SHALL BE A MINIMUM OF ONE FOOT BELOW THE SHOULDER OR ANY DIVERSION POINT.
 4. STEEL POST SHALL BE 5 FT. IN HEIGHT, BE INSTALLED 1.5 FT. DEEP MINIMUM, AND BE OF THE SELF-FASTENER ANGLE STEEL TYPE.
 5. WOOD POST SHALL BE 6 FT. IN HEIGHT, BE INSTALLED TO 1.5 FT. DEEP MINIMUM, AND BE 3 INCHES IN DIAMETER.
 6. POST SPACING SHALL BE A MAXIMUM OF 4 FT.

INLET PROTECTION DETAIL

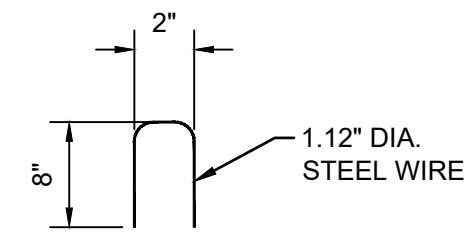
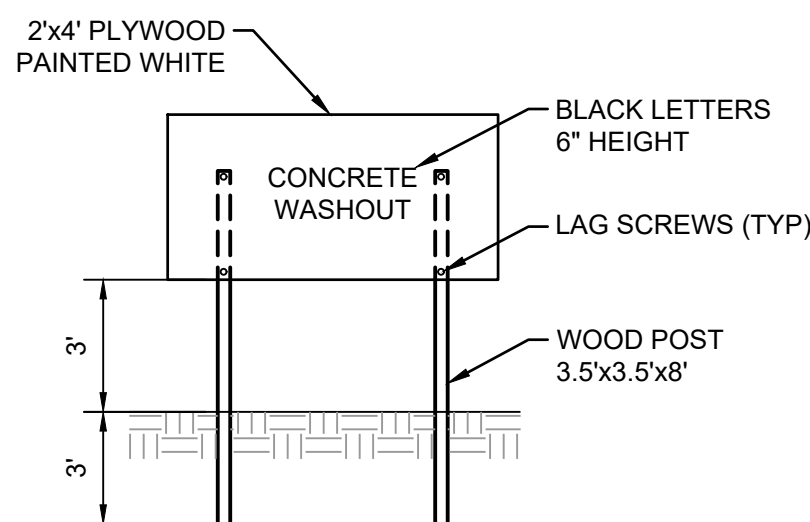
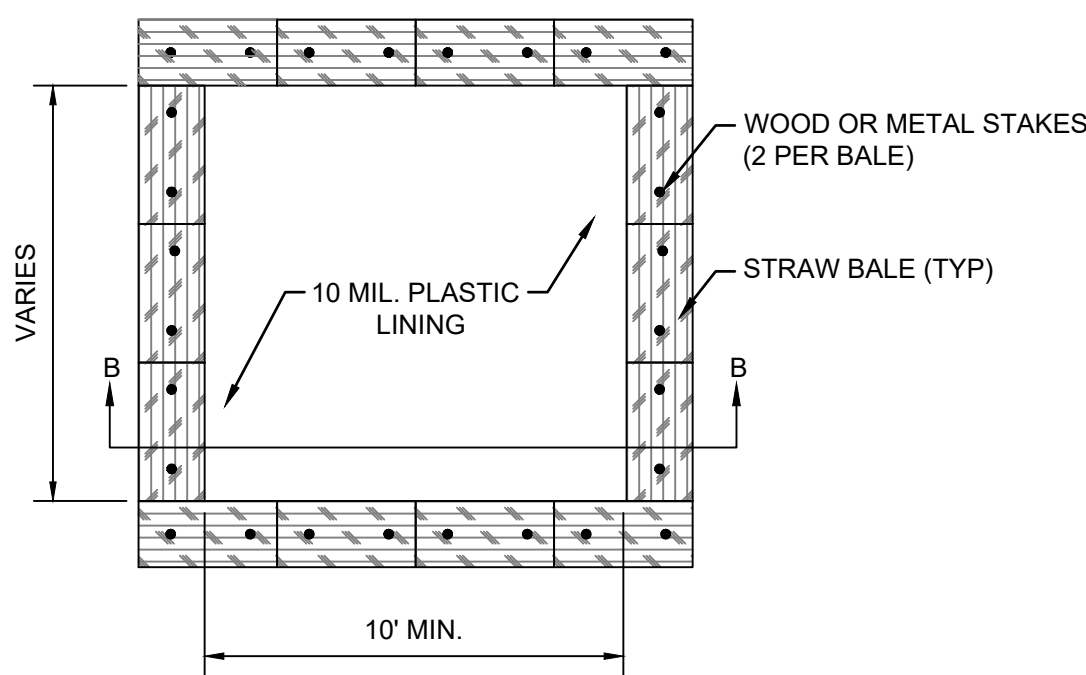
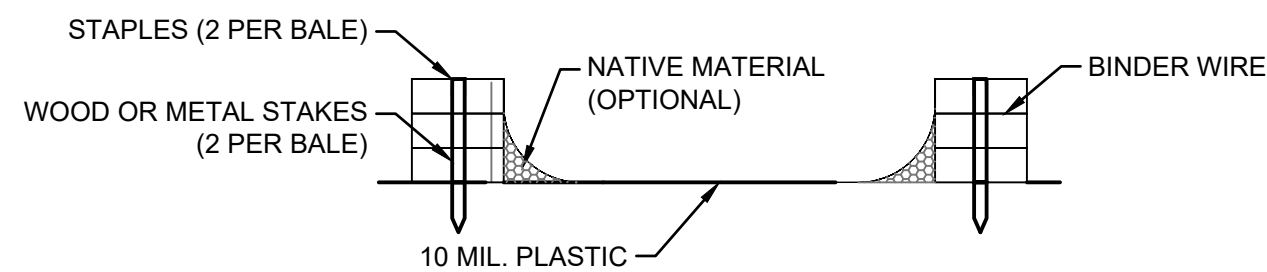
NOT TO SCALE



- NOTES:
1. PLACE CURB TYPE ROCK BAG BARRIER ON GENTLY SLOPING PAVING, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
 2. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.
 3. LEAVE ON ROCKBAG GAP IN THE TOP ROW ON THE SIDE AWAY FROM FLOW, TO PROVIDE A SPILLWAY; OR IN THE CENTER IF PONDING IS NEEDED ON BOTH SIDES.
 4. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT, SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET PROTECTION DETAIL

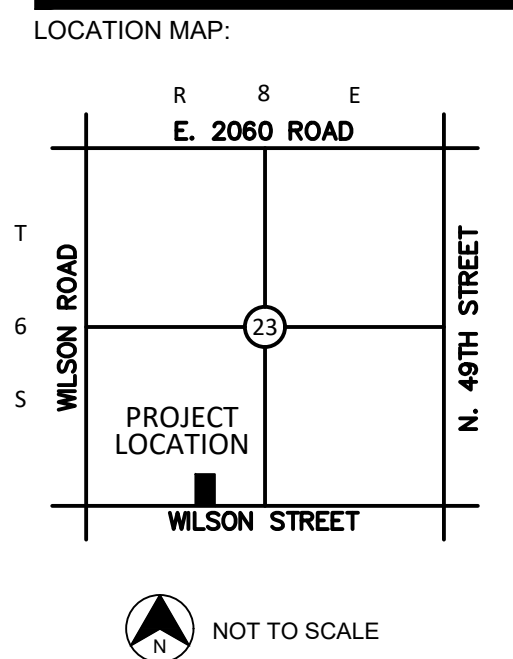
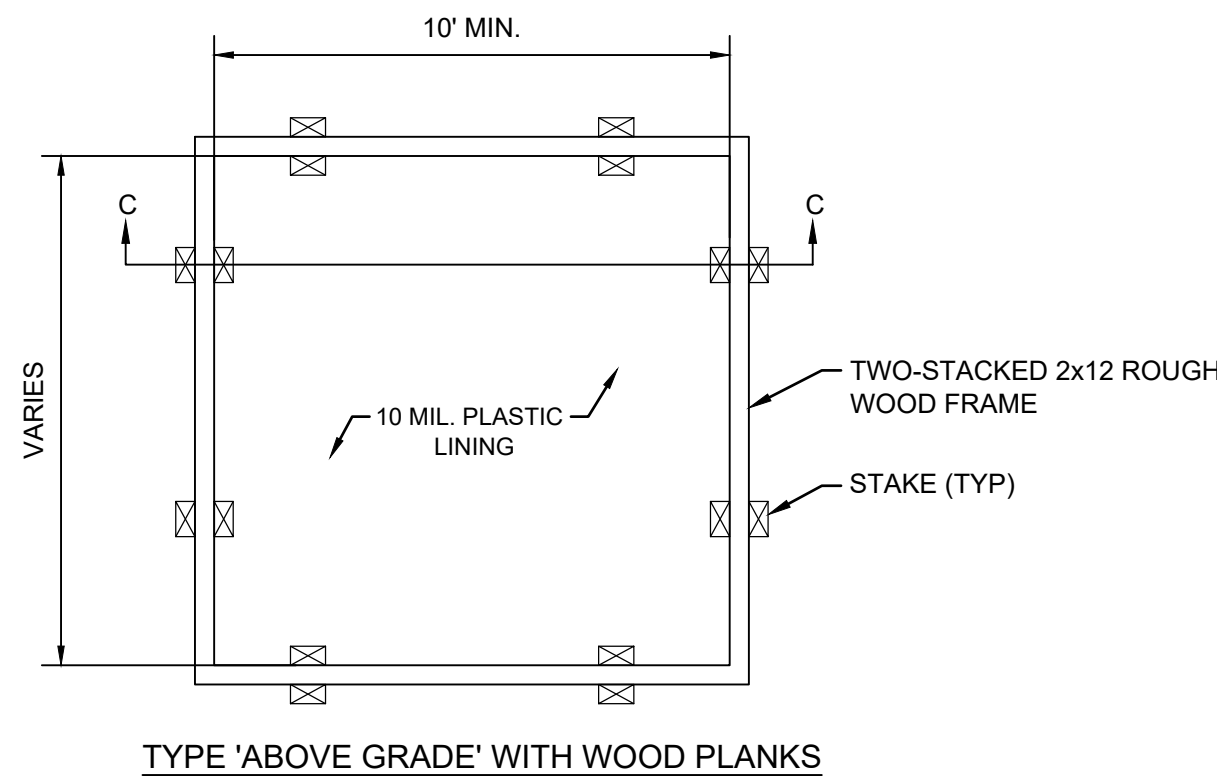
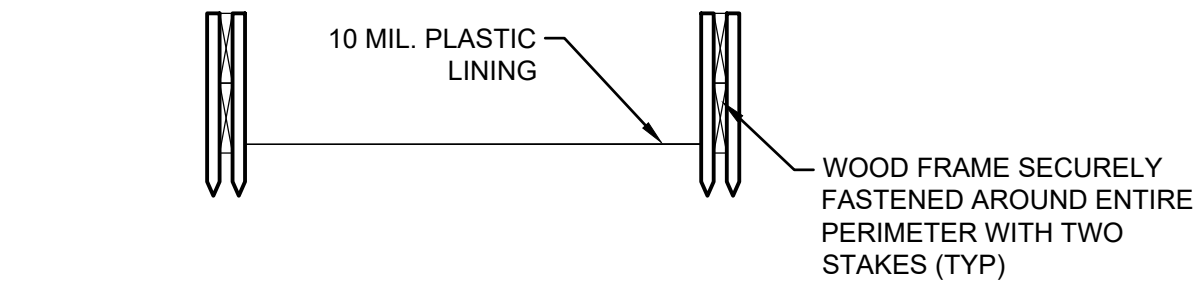
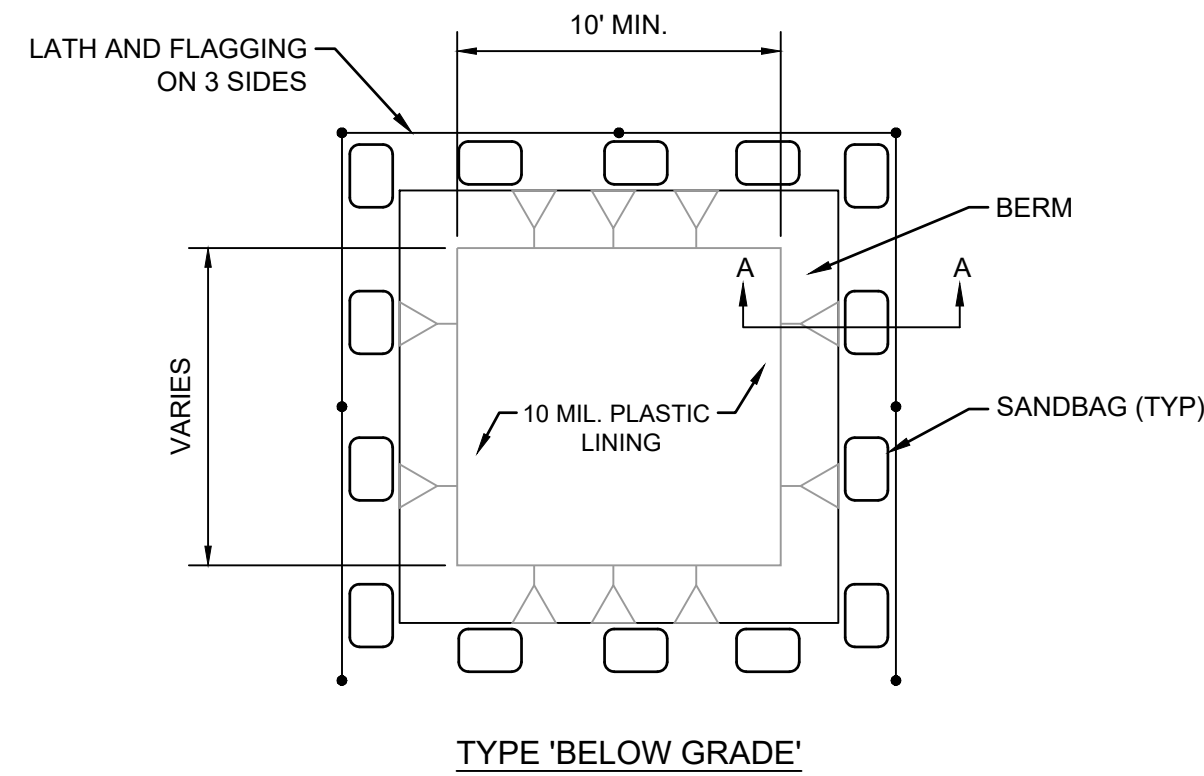
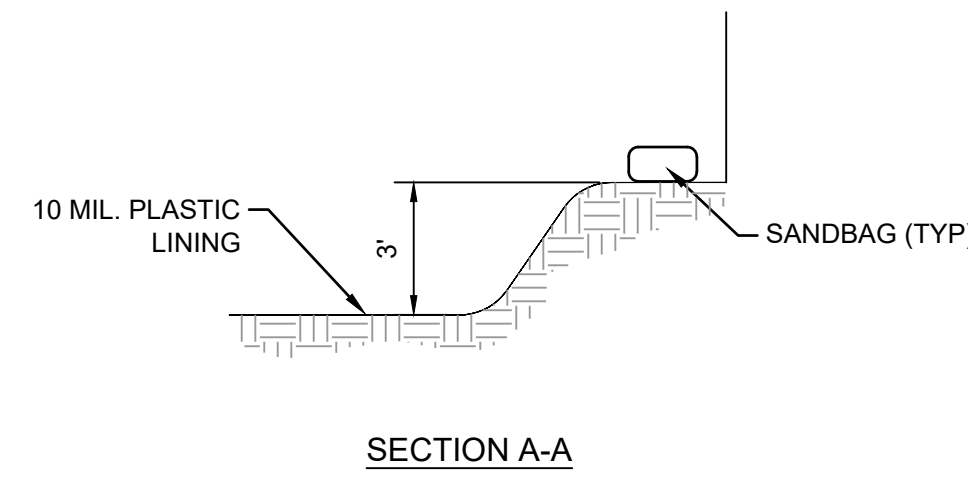
NOT TO SCALE



- NOTES:
1. ACTUAL LAYOUT TO BE DETERMINED IN THE FIELD.
 2. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30' OF THE TEMPORARY CONCRETE WASHOUT FACILITY
 3. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF OR RECYCLED.
 4. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE CAUSE BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHALL BE BACKFILLED, REPAIRED AND STABILIZED TO PREVENT EROSION.

CONCRETE WASHOUT DETAIL

NOT TO SCALE



WILSON STREET

DURANT, OKLAHOMA

PROJECT NUMBER: 22108
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SUBMITTAL: PERMIT SET

REVISIONS:

MARK DATE DESCRIPTION

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DRAWING TITLE:

EROSION CONTROL DETAILS

SHEET:

C2.01

SANITARY SEWER STANDARD DETAIL

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03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-00
OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF OKLAHOMA CITY STANDARD SPECIFICATIONS FOR CONSTRUCTION OF PUBLIC IMPROVEMENTS.
- ALL WORK NOT CLASSIFIED AS A CONTRACT PAY ITEM SHALL BE CONSIDERED AS AN INCIDENTAL AND NOT PAID FOR DIRECTLY.
- ALL EXCAVATION UNDER EXISTING PAVEMENT SHALL BE BACKFILLED WITH CRUSHER RUN ROCK. ALL EXCAVATION UNDER FUTURE PAVEMENT SHALL BE BACKFILLED WITH SAND.
- PIPE LEAKAGE TESTS SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE OKLAHOMA CITY SEWER REQUIREMENTS. LEAKAGE SHALL NOT EXCEED 50 GALLONS PER INCH OF NORMAL PIPE PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM.
- DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE PIPE. THE TEST SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE FOR AT LEAST THIRTY (30) DAYS. NO PIPE SHALL EXCEED A DEFLECTION OF MORE THAN FIVE (5%) PERCENT. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL AND MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO NINETY-FIVE (95%) PERCENT OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
- POLYVINYL CHLORIDE (PVC) PIPES SHALL CONFORM TO ASTM F-794 FOR OPEN PROFILE PIPE AND ASTM F-1803 FOR CLOSED PROFILE PIPE. REGARDLESS OF SIZE, OPEN PROFILE WALL PIPE WILL BE ALLOWED ONLY ON SECTIONS OF PIPE WHERE THERE ARE NO APPARENT SERVICE CONNECTIONS.
- SPECIAL SANITARY SEWER PIPE SHALL BE REQUIRED TO SATISFY MINIMUM HORIZONTAL AND VERTICAL CLEARANCE REQUIREMENTS FROM WATERLINES, WELLS AND PETROLEUM STORAGE TANKS, AS ESTABLISHED BY THE OKLAHOMA STATE DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ).
- SPECIAL PVC PIPE SHALL CONFORM TO ASTM D-2241 AND SDR 32.5 FOR SIZES FOUR (4") INCHES TO THIRTY-SIX (36") INCHES, OR AWWA C-900 AND AWWA C-905; WITH A MINIMUM DR RATING OF DR18 FOR PIPE SIZES FOUR (4") INCHES TO TWELVE (12") INCHES AND A MINIMUM DR RATING OF DR32.5 FOR PIPE SIZES GREATER THAN TWELVE (12") INCHES.
- DUCTILE IRON PIPE (DIP) SHALL CONFORM TO THE REQUIREMENTS OF AWWA C-151.
 - EXTERIOR COATING -- THE EXTERIOR SURFACES OF DUCTILE IRON PIPE, SPECIFICATIONS AND FITTINGS SHALL BE COATED WITH AN ASPHALTIC COATING IN ACCORDANCE WITH ASTM A746, SECTION 6.1; OF AWWA E-151. THE COATING SHALL HAVE A MINIMUM THICKNESS OF ONE (1) MIL.
 - INTERIOR COATING -- INTERIOR SURFACES OF PIPE AND FITTINGS SHALL BE LINED WITH FORTY (40) MILS OF VIRGIN POLYETHYLENE COMPLYING WITH ASTM D-1248 OR MADISON POLYETHYLENE LINING, CORPORATE II TX-5 MINUTE NUMBER 17115, MANUFACTURED BY MADISON CHEMICALS, INC., CANADA, OR APPROVED EQUAL. THE LINING MATERIALS SHALL BE COMPOUNDED WITH A MINIMUM OF TWO (2%) PERCENT CARBON BLACK TO RESIST ULTRA VIOLET RAYS.
 - THICKNESS -- UNLESS OTHERWISE SPECIFIED, DUCTILE IRON PIPE SHALL MEET THE REQUIREMENTS IN THE FOLLOWING TABLE AS SHOWN IN DETAIL S-02.

GENERAL CONSTRUCTION NOTES

03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-01
OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

DIP PIPE THICKNESS REQUIREMENTS

DEPTH OF COVER (feet)	Standard Pressure Class (AWWA C-151)	Nominal Thickness (inches)
>50' or ≥30'	Standard Pressure Class (AWWA C-151)	Nominal Thickness (inches)
>20' or ≥25'	Standard Pressure Class (AWWA C-151)	Nominal Thickness (inches)
>15' or ≥20'	Standard Pressure Class (AWWA C-151)	Nominal Thickness (inches)
>10' or ≥15'	Standard Pressure Class (AWWA C-151)	Nominal Thickness (inches)
≤10'	Standard Pressure Class (AWWA C-151)	Nominal Thickness (inches)
Pipe Nominal Thickness (inches)		

GENERAL CONSTRUCTION NOTES

03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-02
OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

1. HIGHWAYS

MINIMUM PIPE CLASSES FOR DIAMETER TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") MEETING THE REQUIREMENTS OF ASTM C-76 SHALL BE AS FOLLOWS:

MAXIMUM DEPTH OF COVER (FT)	MINIMUM CLASS
10	III
15	IV
25	V

FOR MAXIMUM DEPTH OF COVER THIRTY FEET (30') PIPES RANGING FROM TWENTY FOUR INCHES (24") TO FIFTY FOUR INCHES (54") IN DIAMETER SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ASTM C-655 AND SHALL HAVE THE FOLLOWING MINIMUM THREE-EDGE BEARING STRENGTH FOR 0.01 INCH CRACK (D0.01) IN POUNDS PER LINEAL FOOT PER FOOT OF INSIDE DIAMETER.

PIPE NOMINAL SIZE (INCHES)	D _{0.01} (LB./LINEAL FT./FT. OF INSIDE Ø)
24	3200
27	3050
30	3050
33	3475
36	3475
42	3450
48	3300
54	3125

PIPES RANGING IN DIA. FROM SIXTY INCHES (60") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS V FOR A MINIMUM DEPTH OF COVER OF THIRTY FEET (30') WHEN MANUFACTURED IN ACCORDANCE WITH ASTM C-76.

2. RAILROADS

MINIMUM PIPE CLASSES FOR E-80 RAILROAD LIVE LOAD FOR PIPE SIZE TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") IN DIA. MEETING THE REQUIREMENTS OF ASTM C-76, OR ASTM C-655 SHALL BE AS FOLLOWS:

- A. MAXIMUM DEPTH OF COVER TEN FEET (10')-- DIA. TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS VI.
B. MAXIMUM DEPTH OF COVER FIFTEEN FEET (15') DIA. TWENTY FOUR INCHES (24") TO FORTY TWO INCHES (42") SHALL BE CLASS V AND DIA. FORTY EIGHT INCHES (48") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS VI
C. MAXIMUM DEPTH OF COVER TWENTY FEET (20')-- DIA. TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS V.
D. MAXIMUM DEPTH OF COVER TWENTY FIVE FEET (25') DIA. TWENTY FOUR INCHES (24") SHALL HAVE D0.01 OF THIRTY ONE HUNDRED POUNDS/LINEAL FOOT PER FOOT OF INSIDE DIA. (3100 LB/LF). DIAMETERS TWENTY SEVEN INCHES (27") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS V.
E. MAXIMUM DEPTH OF COVER THIRTY FEET (30')-- DIA. TWENTY FOUR INCHES (24") TO SIXTY INCHES (60") SHALL HAVE THE FOLLOWING D0.01

PIPE NOMINAL SIZE (INCHES)	D _{0.01} (LB./LINEAL FT./FT. OF INSIDE Ø)
24	3300
27	3125
30	3150
33	3575
36	3575
42	3550
48	3400
54	3225
60	3100

DIAMETERS TWENTY FOUR INCHES (24") TO ONE HUNDRED TWO INCHES (102") SHALL BE CLASS V.

REINFORCED CONCRETE PIPE MINIMUM DESIGN

03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-03
OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

VITRIFIED CLAY PIPE (VCP)
MINIMUM PIPE DESIGN
ASTM C-700

PIPE NOMINAL SIZE (INCHES)	MINIMUM THREE-EDGE BEARING STRENGTH (LB/FT)	MAXIMUM DEPTH OF COVER (FT)
4	2000	25
6	2000	25
8	2200	20
10	2400	18
12	2600	16
15	2900	15
18	3300	14
21	3850	14
24	4400	14
27	4700	13
30	5000	13
33	5500	13
36	6000	13
39	6500	13
42	7000	12

VITRIFIED CLAY PIPE DESIGN

03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-04
OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

- GENERAL -- WHEN CALLED FOR ON THE PLANS OR SPECIFIED, MANHOLES SHALL BE TESTED, BEFORE ACCEPTANCE, BY EITHER PERFORMING EXFILTRATION OR VACUUM TEST. THE ENGINEER SHALL DETERMINE WHICH TEST SHALL BE PERFORMED.
- EXFILTRATION TEST -- ALL INCOMING AND OUTGOING LINES (INCLUDING SERVICES) SHALL BE PLUGGED AND THE MANHOLE FILLED WITH WATER UP TO THE BOTTOM OF THE MANHOLE RING. IF THE WATER LOSS EXCEEDS THE MAXIMUM ALLOWABLE AS SHOWN, THE MANHOLE SHALL BE CONSIDERED TO HAVE FAILED THE TEST. THE CONTRACTOR SHALL DRAIN, PERFORM THE NECESSARY REPAIRS AS DIRECTED BY THE ENGINEER, AND THEN RESET THE MANHOLE UNTIL IT PASSES, ALL AT NO ADDITIONAL COST TO THE CITY.
- VACUUM TESTING -- ALL INCOMING AND OUTGOING SEWER AND SERVICE LINES SHALL BE PLUGGED. THE PLUGS RESTRAINED AND THE VACUUM TESTER HEAD PLACED ON THE MANHOLE RING AND SEALED. A VACUUM OF TEN (10") INCHES Hg (MERCURY) SHALL THEN BE DRAWN ON THE MANHOLE AND THE TIME MEASURES FOR THE VACUUM TO DROP TO NINE (9") INCHES Hg. THE TIME MEASURED SHALL BE NOT LESS THAN THAT SHOWN ON THE FOLLOWING TABLE.

Manhole Depth (feet)	Maximum Allowable Water Loss
≤ 8	One (1") inch over Five (5) minutes
≥ 8	One - Eighth (1/8") inch per vertical foot of depth over five (5) minutes

Manhole Internal Diameter (feet)	Time Measured (seconds)
4	60
5	60
6	60
7	70

MANHOLE TESTING

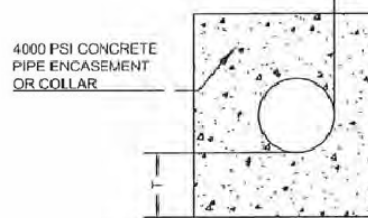
03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-05
OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

TRENCH WIDTH TABLE

PIPE NOMINAL SIZE (IN.)	MIN. TRENCH WIDTH (FT.)	MAX TRENCH WIDTH (FT.)
≤ 12	3.00	5.00
15	3.25	5.00
18	3.50	5.00
21	3.75	5.25
24	4.00	6.00
27	4.25	6.25
30	4.50	6.75
33	4.75	8.25
36	5.25	9.00
42	6.25	9.50
48	7.00	11.00
54	8.00	11.50
60	9.00	12.00
66	9.75	13.00
72	10.50	13.00
78	10.50	13.50
84	11.00	14.00
90	11.50	14.50
96	12.00	15.00
102	12.50	15.50

PIPE ENCASEMENT AND COLLAR DETAIL



NOMINAL DIAMETER (IN.)	T (IN.)
≤ 18"	6"
> 18" & ≤ 30"	8"
> 30" & ≤ 42"	10"
> 42"	12"

NOTE: For Collars the concrete encasement shall be placed to a minimum of twelve (12") inches on either side of the joint.

EMBEDMENT MATERIAL

EMBEDMENT MATERIAL IS THE MATERIAL TO BE PLACED FROM A MINIMUM OF SIX-INCHES (6") BELOW THE BOTTOM OF THE PIPE TO THE SPRINGLINE (HALF THE PIPE DIAMETER) OR TO A MINIMUM OF SIX-INCHES (6") ABOVE THE TOP OF THE PIPE FOR RIGID AND FLEXIBLE PIPES, RESPECTIVELY. THE REMAINING TO BE PLACED OVER THE EMBEDMENT MATERIAL WILL BE CONSIDERED BACKFILL.

MINIMUM MATERIAL REQUIREMENTS

1. GENERAL

EMBEDMENT MATERIAL FOR ALL RIGID AND FLEXIBLE PIPES SHALL BE CRUSHED ROCK MEETING THE REQUIREMENTS EITHER OF ASTM D-2321, CLASS 1A, OR ASTM C-33, NO. 57 OR 67 IN GRADATIONS SHOWN BELOW.

NOMINAL SIEVE REQUIREMENT	ASTM D-2321 CLASS 1A	ASTM C-33 NO. 57	ASTM C-33 NO. 67
1 1/2" IN.	100%	100%	-
1" INCH	-	95 TO 100%	100%
3/4" INCH	-	-	90 TO 100%
7/8" INCH	-	25 TO 60%	-
3/8" INCH	-	-	20 TO 55%
NO. 4	≤ 10%	0 TO 10%	0 TO 10%
NO. 8	-	0 TO 5%	0 TO 5%
NO. 200	≤ 5%	-	-

2. COMPACTION REQUIREMENTS

ALL EMBEDMENT MATERIAL SHALL BE PLACED AND COMPACTED IN SIX INCH (6") LIFTS TO THE FOLLOWING MINIMUM PERCENT OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D-698. TESTS FOR MOISTURE DENSITY RELATIONS OF SOIL - AGGREGATE MIXTURES" AND ASTM D-2049, "TEST FOR RELATED DENSITY OF COHESIONLESS SOILS", RESPECTIVELY.

COMPACTION TEST	COMPACTION REQUIREMENT
STANDARD PROCTOR DENSITY	95%
RELATIVE DENSITY	75%

3. COMPACTION METHODS

ALL EMBEDMENT MATERIAL SHALL BE COMPACTED IN ACCORDANCE WITH THE METHODS DESCRIBED IN PART "3" OF "BACKFILLING REQUIREMENTS"

EMBEDMENT MATERIAL & TRENCH WIDTH TABLE

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OKLAHOMA CITY UTILITIES DEPARTMENT			

SANITARY SEWER STANDARD DETAIL

1. DESCRIPTION

BACKFILL IS THAT PORTION OF THE TOTAL TRENCH BACKFILL DOWN TO BUT NOT INCLUDING THE PIPE EMBEDMENT MATERIAL. THE BACKFILL SHALL BE ONLY MATERIAL APPROVED BY THE ENGINEER CONSISTING OF LOOSE EARTH FREE OF CLODS, STONES, ORGANIC MATTER, DEBRIS OR OTHER OBJECTIONABLE MATERIAL. ALL BACKFILLING SHALL BE DONE IN SUCH A MANNER AS NOT TO DISTURB OR DAMAGE THE PIPE OR STRUCTURES OVER OR AGAINST WHICH IT IS BEING PLACED. ANY PIPE OR STRUCTURE DAMAGED OR MOVED FROM ITS PROPER LINE OR GRADE DURING BACKFILLING OPERATIONS SHALL BE OPENED UP AND REPAIRED AND THEN REBACKFILLED AS HEREIN SPECIFIED. THE PLACING OF BACKFILL MATERIAL SHALL NOT BEGIN UNTIL APPROVAL FOR SO DOING HAS BEEN GIVEN BY THE ENGINEER, BUT BACKFILLING ABOUT STRUCTURES OR PORTIONS OF STRUCTURES SHALL BE DONE IMMEDIATELY WHEN SO ORDERED BY THE ENGINEER. THE TOP SURFACE OR OTHER MATERIAL IS REMOVED AND PILED SEPARATELY. SUCH MATERIAL SHALL BE CAREFULLY REPLACED IN A MANNER APPROVED BY THE ENGINEER. THE TOP TWELVE INCHES (12") OF BACKFILL MATERIAL SHALL BE OF AS GOOD OR BETTER QUALITY AS THE ORIGINAL TOP SOIL WHICH WAS REMOVED.

2. COMPACTION REQUIREMENTS

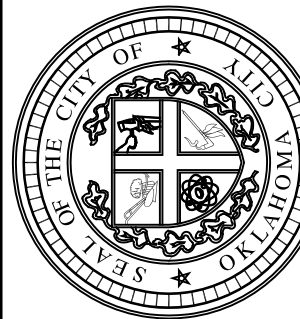
ALL BACKFILL SHALL BE PLACED AND COMPACTED IN SIX INCH (6") LIFTS OR HAND-TAMPED EQUIPMENT AND THIRTY INCH (30") LIFTS FOR SELF-PROPELLED OR POWER DRIVEN EQUIPMENT TO THE FOLLOWING MINIMUM PERCENT OF STANDARD PROCTOR DENSITY OR RELATED DENSITY AS DETERMINED BY ASTM D-698, "TESTS FOR MOISTURE-DENSITY RELATIONS OF SOILS AND SOIL AGGREGATE MIXTURES", AND ASTM D-2049, "TEST FOR RELATED DENSITY OF COHESIONLESS SOILS", RESPECTIVELY. ASTM D-2049 SHALL BE PERFORMED ON COHESIONLESS (GRANULAR) SOILS. COHESIVE BACKFILL MATERIAL SHALL REACH THE INDICATED COMPACTION LEVELS AT PLUS OR MINUS THREE PERCENT (3%) OF OPTIMUM MOISTURE CONTENT. THE LIFT THICKNESS SHALL BE REDUCED, IF NECESSARY, TO MEET THE COMPACTION REQUIREMENTS SPECIFIED HEREIN:

GENERAL LOCATION	PERCENT COMPACTION	
	STANDARD PROCTOR DENSITY ASTM D-698	RELATIVE DENSITY TEST ASTM - 2049
UNDER TRAFFIC AREA OR IMPROVED EXISTING SURFACES	95	75
URBAN & RESIDENTIAL AREAS	90	70
UNDEVELOPED & OTHER AREAS	85	70

BACKFILLING REQUIREMENTS

03/13/14 DATE	APPROVED BY: ERIC J. WENGER, P.E., CITY ENGINEER	DATE: 3/14/14	S-07
OKLAHOMA CITY UTILITIES DEPARTMENT			

The City of
Oklahoma City
Utilities Department
Engineering Division



NO. DATE DESCRIPTION

SANITARY SEWER
STANDARD DETAILS

DATE: 03/14/14
DRAWN BY: JDS
CHECKED BY: MWS/EJW

SCALE:
AS SHOWN

SHEET NUMBER
S-STD-01

SANITARY SEWER STANDARD DETAIL

3. COMPACTION METHODS

COMPACTION METHODS MAY VARY DEPENDING ON THE MATERIAL OR AS APPROVED BY THE ENGINEER

A. COHESIVE MATERIALS

COMPACTION OF COHESIVE MATERIALS MAY BE OBTAINED BY USE OF IMPACT TYPE EQUIPMENT IN CONFINED AREAS, PNEUMATIC TAMPERS AND ENGINE DRIVEN RAMMERS MAY ALSO BE USED. IN RELATIVELY NARROW TRENCHES, SELF-PROPELLED RAMMERS MAY BE USED. IN WIDE TRENCHES, SHEEPSFOOT ROLLERS MAY BE USED.

B. COHESIONLESS MATERIALS

COHESIONLESS MATERIALS ARE GRANULAR MATERIALS CLASSIFIED AS NON-PLASTIC. IN GENERAL, VIBRATORY EQUIPMENT MAY BE USED FOR PROPER COMPACTION. IN CONFINED AREAS, VIBRATORY PLATES MAY BE USED. FOR WIDER TRENCHES, VIBRATORY ROLLERS MAY BE USED.

C. FLOODING OR JETTING

WHEN APPROVED BY THE ENGINEER, MATERIALS MAY ALSO BE COMPACTED OR SETTLED BY FLOODING WHERE ADEQUATE QUANTITIES OF WATER ARE AVAILABLE FROM THE CITY'S WATER SYSTEM, PRIVATELY OWNED PONDS, CREEKS OR OTHER SOURCES LOCATED WITHIN THREE HUNDRED FEET (300') OF THE TRENCH. WATER SHALL BE USED TO PRODUCE A SEMI-FLUID MASS ALONG AND OUT OF THE TRENCH AT STREAM CROSSINGS OR OTHER PLACES OF ABRUPT CHANGES IN GROUND PROFILE. THE CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS WITH THE CITY FOR THE PURCHASE OF WATER FROM THE CITY WATER MAINS, AND WITH OWNERS OF WATER PROCURED FROM PRIVATELY OWNED WATER SOURCES. NO ADDITIONAL COMPENSATION SHALL BE ALLOWED TO THE CONTRACTOR FOR SETTLING THE BACKFILL BY JETTING. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR TRENCH EXCAVATION AND BACKFILL OR OTHER PAY ITEMS THE CONTRACTOR MAY ELECT.

4. COMPACTION REQUIREMENTS

ALL BACKFILL SHALL BE TESTED BY AN APPROVED LABORATORY FOR COMPLIANCE OF THE COMPACTION REQUIREMENTS.

5. SURFACE RESTORATION

UPON COMPLETION OF BACKFILLING PROCEDURES, THE CONTRACTOR SHALL REPLACE ALL SURFACE MATERIALS AND SHALL RESTORE PAVING, CURBING, SIDEWALKS, GUTTERS, SHRUBBERY, FENCES, SOD AND OTHER SURFACES DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN THE CONDITION BEFORE WORK BEGAN.

SANITARY SEWER STANDARD DETAIL

FLEXIBLE PIPE INSTALLATION DETAIL
(DIP, HDPE, PVC & RFP)

This diagram illustrates the standard installation for flexible pipes. A central circular pipe is shown within a trench. The pipe is surrounded by a layer of bedding material, represented by a stippled pattern. Above the bedding is a layer of backfill, indicated by a cross-hatched pattern. The trench walls are also shown with a stippled pattern. Key dimensions and labels include: 'EMBEDMENT MATERIAL' for the vertical distance from the top of the bedding to the top of the trench; 'PIPE OD' for the pipe's outside diameter; 'TRENCH WIDTH' for the horizontal distance between the trench walls; '6" MIN' for the minimum vertical clearance above and below the bedding; and '6" MIN' for the minimum horizontal clearance from the pipe to the trench walls.

BACKFILL

EMBEDMENT MATERIAL

PIPE OD

TRENCH WIDTH

6" MIN

6" MIN

RIGID PIPE INSTALLATION DETAIL
(RCP & VCP)

This diagram illustrates the standard installation for rigid pipes. A central circular pipe is shown within a trench. The pipe is surrounded by a layer of bedding material, represented by a stippled pattern. Above the bedding is a layer of backfill, indicated by a cross-hatched pattern. The trench walls are also shown with a stippled pattern. Key dimensions and labels include: 'INITIAL BACKFILL (SELECT FILL)' for the vertical distance from the top of the bedding to the top of the trench; 'EMBEDMENT MATERIAL' for the vertical distance from the top of the bedding to the top of the trench; 'PIPE OD' for the pipe's outside diameter; 'TRENCH WIDTH' for the horizontal distance between the trench walls; '12" MIN' for the minimum vertical clearance above the bedding; 'OD/2' for the vertical distance from the center of the pipe to the top of the bedding; 'OD/4' for the vertical distance from the center of the pipe to the bottom of the bedding; and '6" MIN' for the minimum horizontal clearance from the pipe to the trench walls.

BACKFILL

INITIAL BACKFILL (SELECT FILL)

EMBEDMENT MATERIAL

PIPE OD

TRENCH WIDTH

12" MIN

OD/2

OD/4

6" MIN

OD=PIPE OUTSIDE DIAMETER (RL)
BEDDING CLASS: "B"
LOAD FACTOR = 1.2

Diagram illustrating the construction of a manhole. The diagram shows a cross-section of a brick masonry or precast ring (mortared) resting on a concrete pad. The concrete pad is shown with a minimum thickness of 4 inches, and the crushed rock backfill is shown with a minimum thickness of 6 inches. The diagram also indicates a minimum 1'-0" clearance above the manhole structure.

Labels in the diagram include:

- BRICK MASONRY OR PRECAST RING (MORTARED)
- CONCENTRIC OR ECCENTRIC CONE
- CONCRETE PAD
- VARIABLES (4" MIN.)
- 6" MIN. CRUSHED ROCK
- MINIMUM 1'-0"

NOTES:

- CAST-IN-PLACE NON-REINFORCED CONCRETE AND BRICK MANHOLES
 - THE EXISTING CONE AND WALL, IF NECESSARY, SHALL BE REMOVED TO A LEVEL WHICH WILL ALLOW INSTALLATION OF NEW CONE TO THE PROPER GRADE. THE EXPOSED CUT-OFF SURFACES OF THE EXISTING MANHOLE WALL SHALL BE CLEANED BY REMOVING LOOSE MATERIAL AND WETTED. PRIOR TO CONSTRUCTION OF CONCRETE PAD, ALL LOOSE BACKFILL AROUND THE MANHOLE WALL SHALL BE REMOVED AND REPLACED WITH COMPACTED CRUSHED ROCK. THE NEW CONCRETE PAD SHALL BE CONSTRUCTED, AND A NEW CONE SHALL BE FORMED OR PLACED TO THE PROPER GRADE USING FIFTEEN THOUSAND (15000 PSI) POUNDS PER SQUARE INCH MORTAR.
- PRECAST REINFORCED CONCRETE MANHOLES
 - PRECAST SECTIONS SHALL BE REMOVED TO A LEVEL WHERE THE NEW CONE CAN BE INSTALLED TO THE DESIRED GRADE. INSTALLATION SHALL BE IN ACCORDANCE WITH THE APPROPRIATE STANDARD DETAIL FOR PRECAST MANHOLE CONES. A NEW RUBBER GASKET SHALL BE USED TO SEAL EACH SECTION.

Diagram illustrating the standard detail for a sanitary sewer manhole.

The diagram shows a cross-section of a manhole structure. The top part shows an "ABANDONED MANHOLE" with a note indicating to "REMOVE EXIST. TOP 2'-0" OF MANHOLE".

The main structure is a brick manhole. The interior is filled with "COMPACTED SAND BACKFILL". The bottom is labeled "CONC. FILL BOTTOM OF M.H. TO TOP OF PIPE".

On the left side, an "EX. SAN. SEWER" pipe is shown with a "PLUG" at its end. On the right side, another "EX. SAN. SEWER" pipe is shown with a "PLUG" at its end. A dimension of "12'" is indicated for the width of the manhole at the bottom.

NOTE: SALVAGED MATERIALS, INCLUDING RING AND COVER SHALL BE DELIVERED TO THE LINE MAINTENANCE DIVISION OF THE WATER AND WASTEWATER UTILITIES DEPARTMENT.

SEWER SLEEVING STANDARD DETAIL

NOTES:

TWO TYPES OF EMBEDMENT PLUGS MAY BE USED, AT THE CONTRACTORS OPTION, AS FOLLOWS:

1. CLAY PLUGS
 - 1.1. THE EMBEDMENT AND BACKFILL MATERIAL SHALL BE SELECT CLAY SEPARATED FROM EXCAVATED MATERIAL AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. THIS MATERIAL SHALL BE FREE OF CLODS, CLUMPS, DEBRIS, ORGANIC MATERIAL AND STONES. ALL CLAY PLUG MATERIAL SHALL BE COMPACTED TO A MINIMUM OF NINETY (90%) PERCENT OF STANDARD PROCTOR DENSITY (ASTM D-698) AT PLUS OR MINUS THREE (3%) PERCENT OF OPTIMUM MOISTURE CONTENT.
2. FLOWABLE FILL PLUGS
 - 2.1. FLOWABLE FILL PLUGS SHALL CONSIST OF A PORTLAND CEMENT GROUT HAVING A MINIMUM TWENTY-EIGHT (28) DAY COMPRESSIVE STRENGTH OF FIVE HUNDRED (500 PSI) POUNDS PER SQUARE INCH.

SANITARY SEWER STANDARD DETAIL

1. MANHOLES SHALL BE CONSTRUCTED AS SPECIFIED IN ASTM C-478.

2. THE MINIMUM WALL THICKNESS IS SPECIFIED IN THE FOLLOWING TABLE AND SHALL NOT BE LESS THAN ONE-TWELFTH (1/12) OF THE INTERNAL DIAMETER OF THE LARGEST CONE OR RISER OR FIVE-INCHES (5") WHICHEVER IS GREATER.

MANHOLE INTERNAL DIAMETER (FEET)	MINIMUM WALL THICKNESS (INCHES)
4	5
5	5
6	6
7	7
8	8

3. MINIMUM DEPTH OF MANHOLE TO BE 6'-0".

4. ALL LIFTING HOLES PROVIDED IN EACH SECTION SHALL BE REPAIRED WITH A MIXTURE OF CEMENT & SAND GROUT FIRMLY PACKED INTO ENTIRE ORIFICE.

5. ALL INSIDES SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNEPEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.

6. WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLES AND TESTED FOR COMPRESSIVE STRENGTH.

7. ACCEPTANCE OF THE MANHOLE STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.

STANDARD TRANSITION SECTION & MINIMUM

4 FT. - 5 FT. - or 6 FT.

LIFTING HOLES

REINFORCING WIRE PER ASTM C-478

8 FT. - 7 FT. - or 6 FT.

SANITARY SEWER STANDARD DETAIL

NOTE:

1. ALL CONCRETE FOR MANHOLE STRUCTURE AND BASE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI
2. PRECAST MANHOLES SHALL BE CONSTRUCTED AS PER ASTM C-478
3. ALL INSIDE SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNESEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.
4. MINIMUM DEPTH OF MANHOLE TO BE 6'-0".

The diagram illustrates a cross-section of a sanitary sewer manhole. At the top, a horizontal line represents the ground surface. Below it, the manhole structure is shown, including the walls and a base. The walls are labeled 'MH WALL SECTION' and 'O-RING SEAL'. The base is labeled '2 FT MIN BASE HEIGHT SECTION'. Inside the manhole, a circular pipe is shown with a '2" SLOPE TO TROUGH' and an 'INVERT AND BENCH'. The pipe is labeled 'PIPE OD'. The manhole is surrounded by a '6" CRUSHED ROCK FOUNDATION' and a '2" SLOPE TO TROUGH'. The foundation is labeled '#4 BARS 8" O.C. BOTH WAYS'. The entire structure is set in 'UNDISTURBED EARTH'. A 'A-LOK GASKET SYSTEM FOR PIPE PENETRATION' is shown at the bottom of the manhole wall.

1. MANHOLES SHALL BE CONSTRUCTED AS SPECIFIED IN ASTM C-478

2. THE MINIMUM WALL THICKNESS IS SPECIFIED IN THE FOLLOWING TABLE AND SHALL NOT BE LESS THAN ONE-TWELTH ($\frac{1}{12}$) OF THE INTERNAL DIAMETER OF THE LARGEST CONE OR RISER OF FIVE-INCHES (5") WHICHEVER IS GREATER.

MANHOLE INTERNAL DIAMETER (FEET)	MINIMUM WALL THICKNESS (INCHES)
4	5
5	5
6	6
7	7
8	8

3. MINIMUM DEPTH OF MANHOLE TO BE 6'-0".

4. ALL LIFTING HOLES PROVIDED IN EACH SECTION SHALL BE REPAIRED WITH A MIXTURE OF CEMENT & SAND GROUT FIRMLY PACKED INTO ENTIRE ORIFICE.

5. ALL INSIDE SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNEDEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.

6. WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLES AND TESTED FOR COMPRESSIVE STRENGTH.

7. ACCEPTANCE OF THE MANHOLE STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.

Diagram of a concentric concrete manhole section. The diagram shows a cross-section of a manhole with a central vertical shaft. The top is labeled "BRICK MASONRY OR PRECAST RING (MORTARED)". The side walls are labeled "STANDARD RING & LID". The bottom is labeled "LIFTING HOLES". The internal diameter is labeled "4'-0\"". The external diameter is labeled "4'-0\"". The wall thickness is labeled "1'-6\" MAX CONE SECTION 3'-0\"". The bottom is labeled "REINFORCING WIRE PER ASTM C-478". The diagram also shows "RUBBER O-RING GASKET MATERIAL" at the bottom.

Diagram of an eccentric concrete manhole section. The diagram shows a cross-section of a manhole with a central vertical shaft. The top is labeled "BRICK MASONRY OR PRECAST RING (MORTARED)". The side walls are labeled "STANDARD RING & LID". The bottom is labeled "LIFTING HOLES". The internal diameter is labeled "4'-0\"". The external diameter is labeled "4'-0\"". The wall thickness is labeled "1'-6\" MAX CONE SECTION 3'-0\"". The bottom is labeled "REINFORCING WIRE PER ASTM C-478". The diagram also shows "RUBBER O-RING GASKET MATERIAL" at the bottom.

CONCENTRIC CONE

ECCENTRIC CONE

S-STD-02

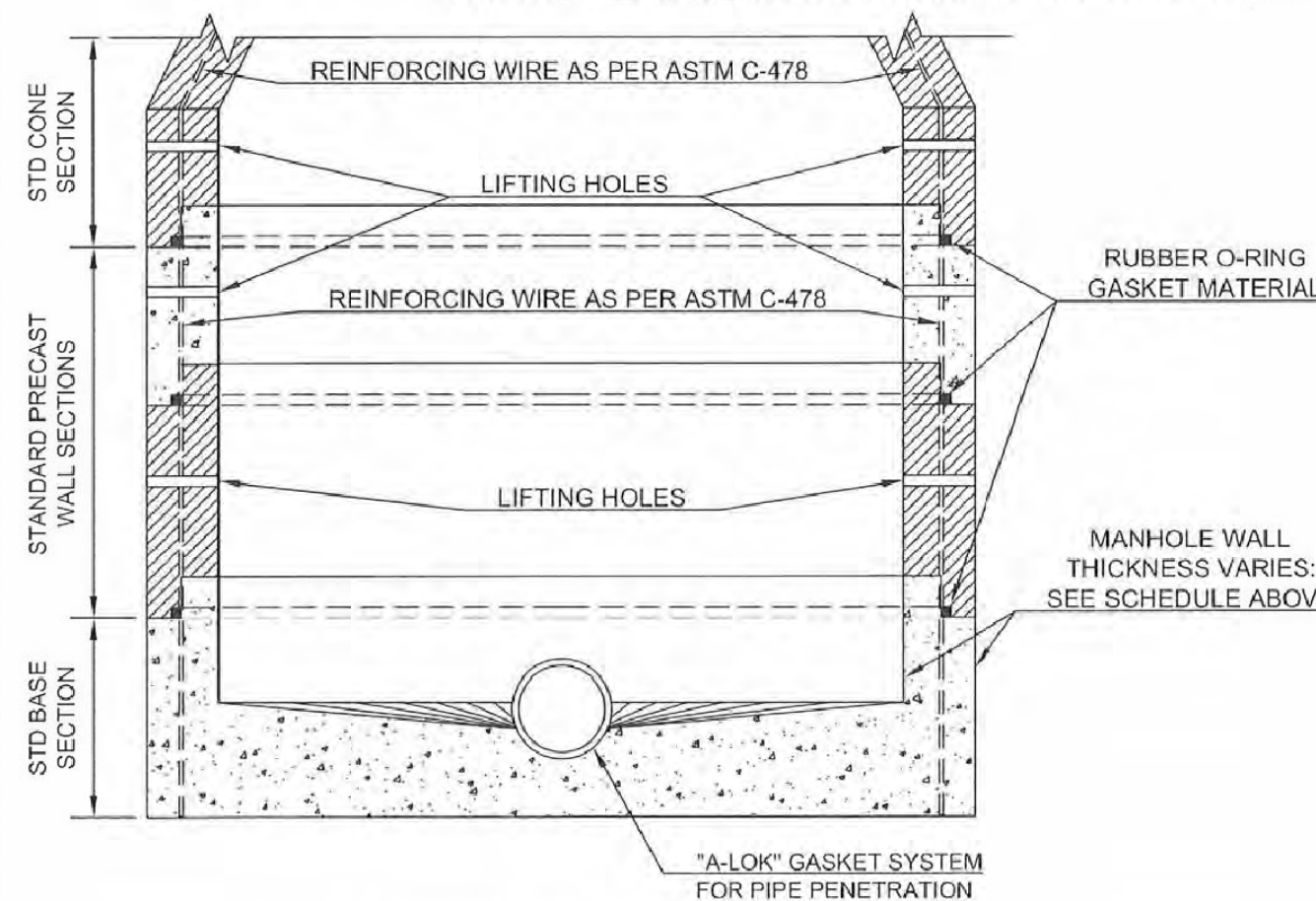
PLOTTED: Friday, March 28, 2014 3:10:52 PM
FILE PATH: Z:\STANDARD DETAILS & WATER METER SPECIFICATIONS\UPDATED STANDARD DETAILS 2014\SEWERWORKING\SAN-SEW-STNDS-2014-SIGNED.DWG

SANITARY SEWER STANDARD DETAIL

- MANHOLES SHALL BE CONSTRUCTED AS SPECIFIED IN ASTM C-478.
- THE MINIMUM WALL THICKNESS IS SPECIFIED IN THE FOLLOWING TABLE AND SHALL NOT BE LESS THAN ONE-TWELTH ($\frac{1}{12}$) OF THE INTERNAL DIAMETER OF THE LARGEST CONE OR RISER OR FIVE-INCHES (5") WHICHEVER IS GREATER.

MANHOLE INTERNAL DIAMETER (FEET)	MINIMUM WALL THICKNESS (INCHES)
4	5
5	5
6	6
7	7
8	8

- ALL LIFTING HOLES PROVIDED IN EACH SECTION SHALL BE REPAIRED WITH A MIXTURE OF CEMENT AND SAND GROUT FIRMLY PACKED INTO ENTIRE ORIFICE.
- ALL INSIDE SURFACES OF PRECAST MANHOLES SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNESEC SERIES 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.
- WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLES AND TESTED FOR COMPRESSIVE STRENGTH.
- ACCEPTANCE OF THE MANHOLE STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.



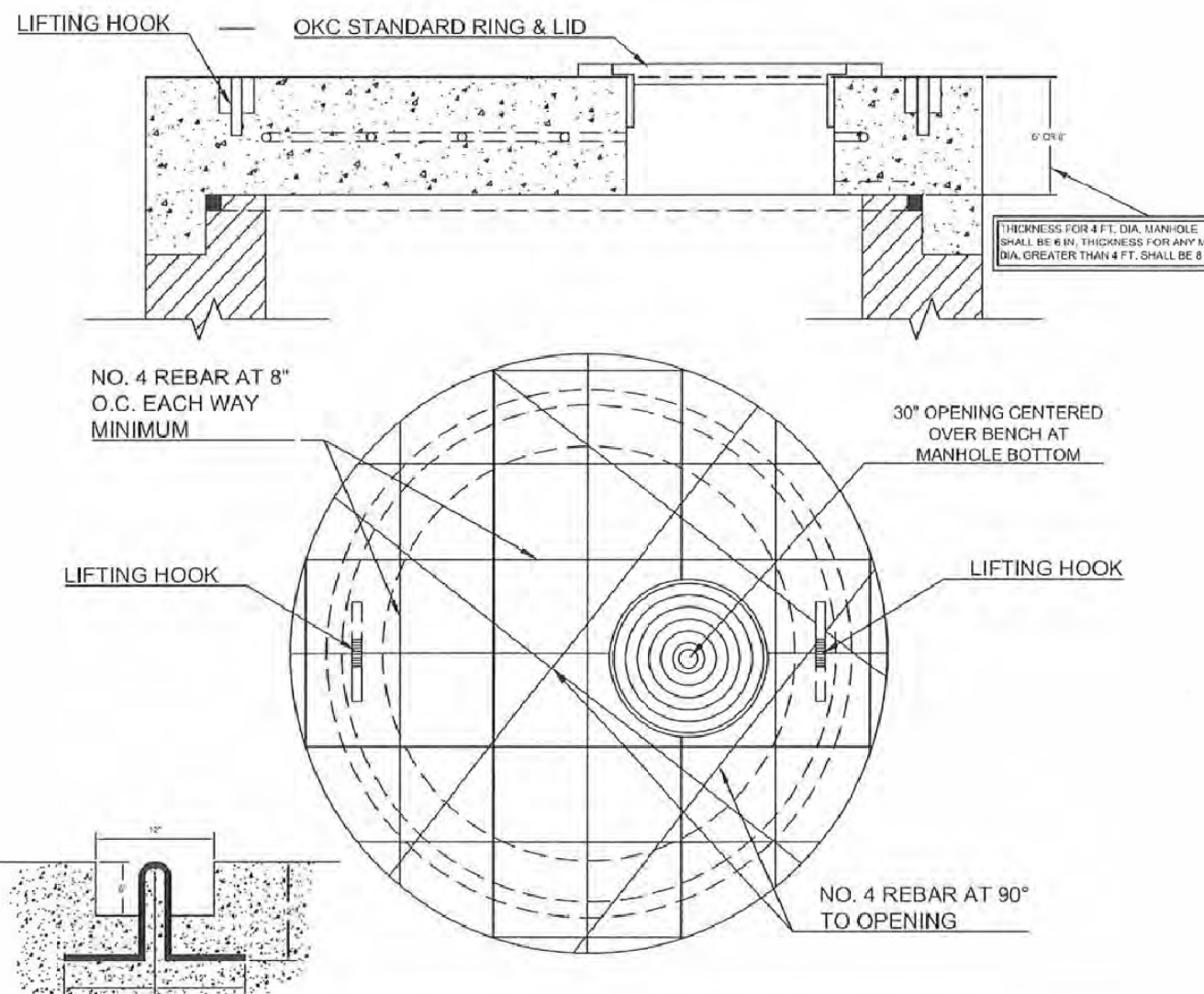
PRECAST MANHOLE WALL DETAIL

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-16
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

- MANHOLE TOPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C-478 LIFTING HOOKS SHALL BE CONSTRUCTED AS PER MANUFACTURERS RECOMMENDATION.
- ALL INSIDE SURFACES OF PRECAST FLAT TOP SHALL BE COATED WITH A DRY FILM THICKNESS OF NOT LESS THAN EIGHT (8) MILS OF TNESEC 69 HI-BUILD EPOXOLINE II, OR APPROVED EQUAL.
- WHEN DIRECTED BY THE ENGINEER, A SET OF THREE (3) CYLINDERS, THREE-INCHES (3") IN DIAMETER SHALL BE CUT FROM RANDOMLY SELECTED MANHOLE TOPS AND TESTED FOR A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
- ACCEPTANCE OF THE MANHOLE TOP STRUCTURE SHALL BE BASED ON THE CONFORMANCE AND PERFORMANCE OF MATERIALS REQUIRED IN ASTM C-478 AND THE ENGINEER'S INSPECTION OF THE INSTALLED PRODUCT.

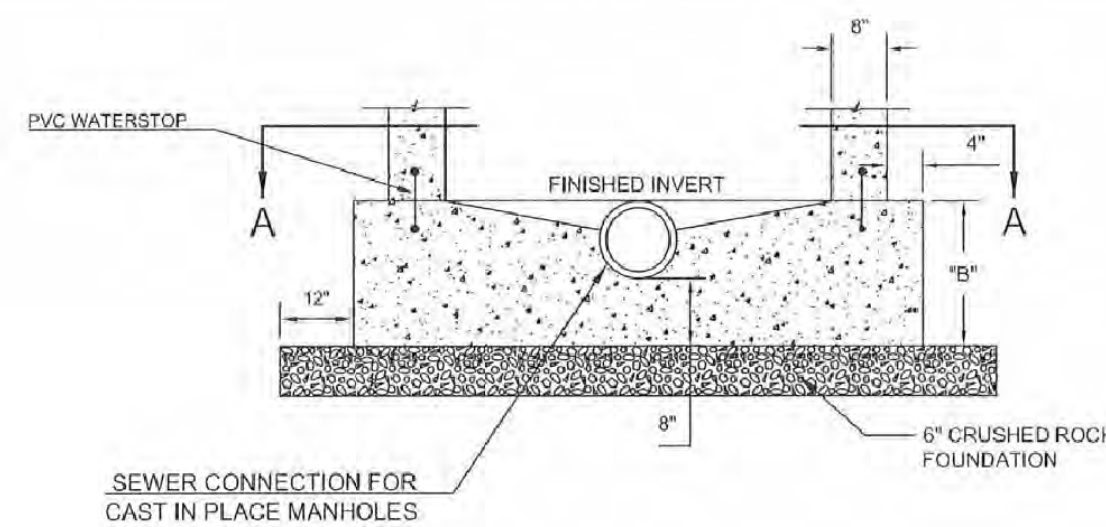


PRECAST REINFORCED CONCRETE FLAT SLAB MANHOLE TOP

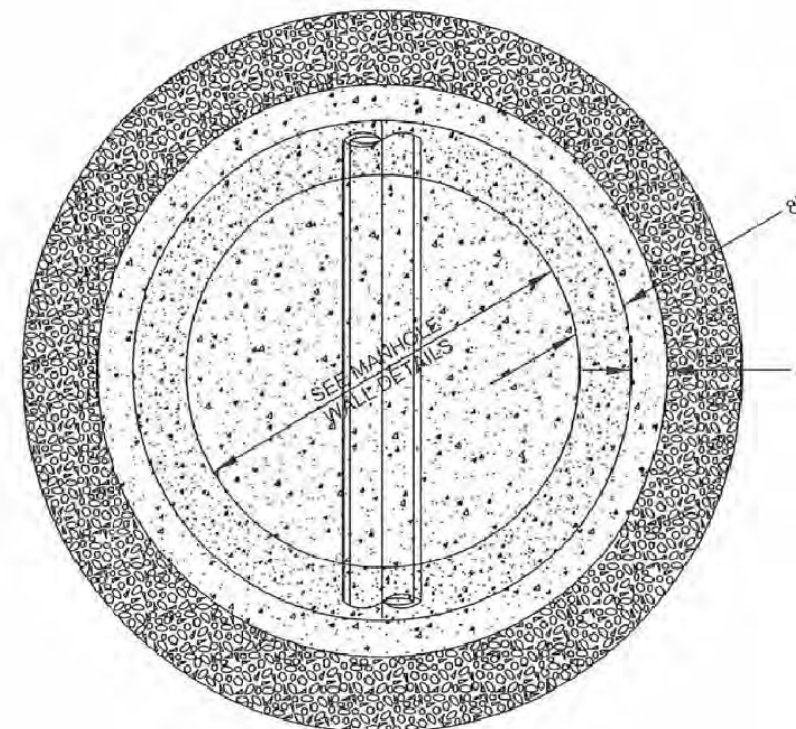
03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-17
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



PIPE DIAMETER	"B"
8"	1'-8"
10"	1'-10"
12"	2'-1"
15"	2'-4"
18"	2'-8"
21"	3'-0"
24"	3'-3"



SECTION A-A

CAST-IN-PLACE CONCRETE MANHOLE BASE SECTION

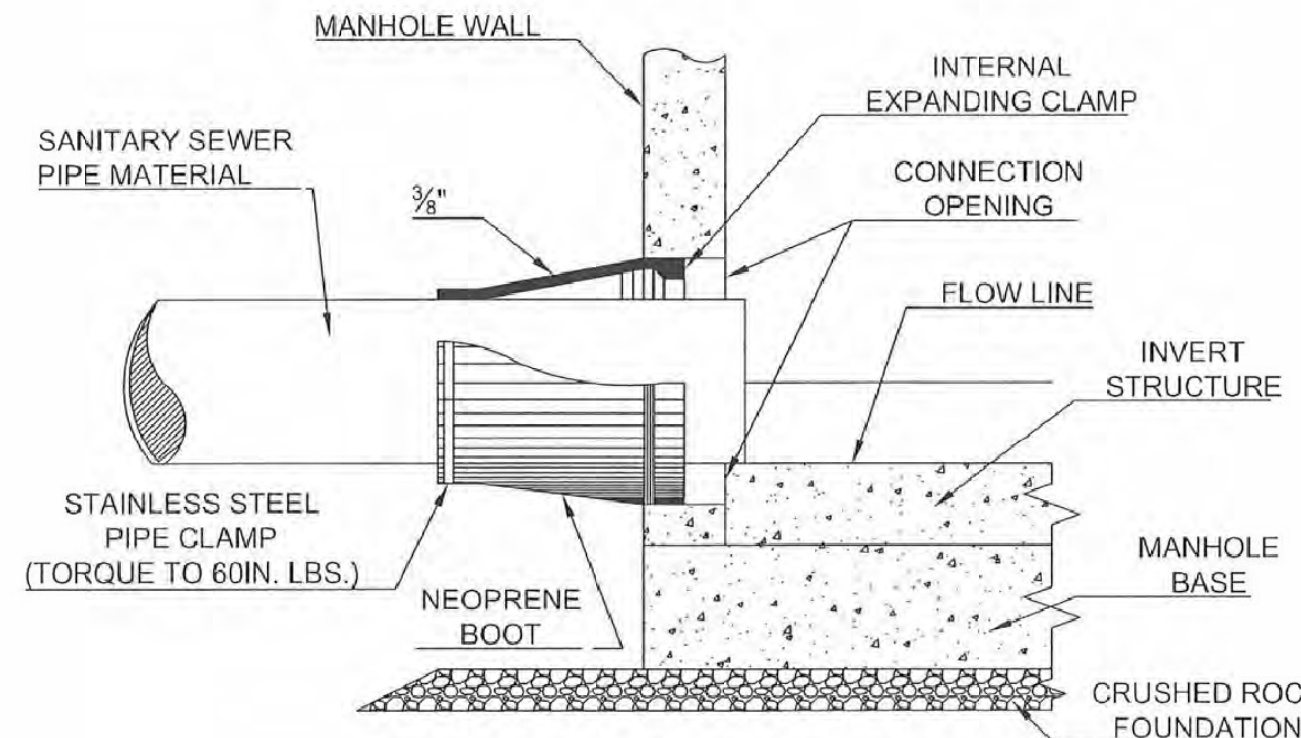
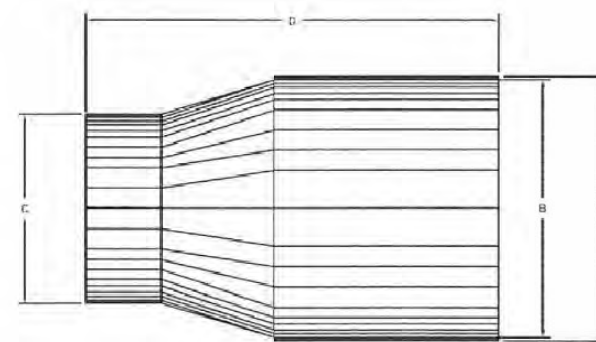
03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-18
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

- NOTE*
- ALL PIPE CLAMPS SHALL BE STAINLESS STEEL
 - NEOPRENE EPDM BLENDED COMPOUND BOOT SHALL MEET ASTM C-923

SUGGESTED PIPE O.D. RANGE (IN.)	HOLE & BOOT DIAMETER DIMENSIONS
3 1/2" - 4 1/2"	7" 6 3/4" 4 1/2" 6"
5 1/4" - 7"	12" 10 3/4" 6 1/2" 8"
7" - 8 1/2"	12" 10 3/4" 8" 8"
8 1/2" - 9 1/2"	12" 10 3/4" 8 1/2" 8"
9 1/2" - 11"	16" 14 1/2" 10 1/2" 8"
10 1/2" - 12"	16" 14 1/2" 12" 8"
12" - 13 1/2"	16" 14 1/2" 13 1/2" 8"
14 1/2" - 16 1/2"	20" 18 1/2" 15 1/2" 8"
16 1/2" - 17 1/2"	20" 18 1/2" 17" 8"
18 1/2" - 21 1/2"	24" 22 1/2" 20 1/2" 8"



MANHOLE PIPE CONNECTION FOR CAST IN PLACE MANHOLES

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-19
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

- GENERAL -- Cast iron rings, tops, covers, grating and all cast iron fitting shall be sound, true to form and thickness, and neatly finished and shall fit together in a satisfactory manner. Castings shall be clean, uniform and whole without blow or sand holes, deposit, hard spots, shrinkage distortion or any other surface defects which would impair serviceability. Casting surfaces shall be smooth and well-cleaned by shot blasting or other approved cleaning method. Plugging or filling holes or other defects shall not be permitted. Parting fins and pouring gates shall be removed. Sharp edges resulting from fabrication shall be dulled by acceptable method to ensure safety in handling. Casting shall conform to the requirements of the Standard Specification for Grey Iron Fittings ASTM A-48, Class "30 B" for rings and "35 B" for covers and the approved Standard Details for Manhole Rings and Covers.

All rings and covers shall be accurately and carefully placed. All rings shall be beaded in a substantial layer of mortar, shall have a full bearing and shall be set to the exact grade. Unless other wise shown, top of covers shall be flush with or slightly above the surrounding surface. When each cover is placed in any position on the ring, the side play shall not exceed one-eighth ($\frac{1}{8}$ ") inch in any direction.

- RINGS -- Rings may be manufactured in accordance with the Standard Detail for Reversible Manhole Rings.

- COVERS --
 - GENERAL -- Manhole covers may be manufactured in accordance with the appropriate Standard Details for Vented or Non-Vented Covers.
 - COATING -- When called for on the plans or specified, the underside of all manhole covers shall be given one (1) coat of asphalt varnish after visual inspection and approval on the job site.
 - APPLICATION -- All lids (covers) in street right-of-way shall be non-vented and include rainguard inflow protectors.
- CASTING WEIGHTS -- The minimum weight of casting will be not less than shown below:

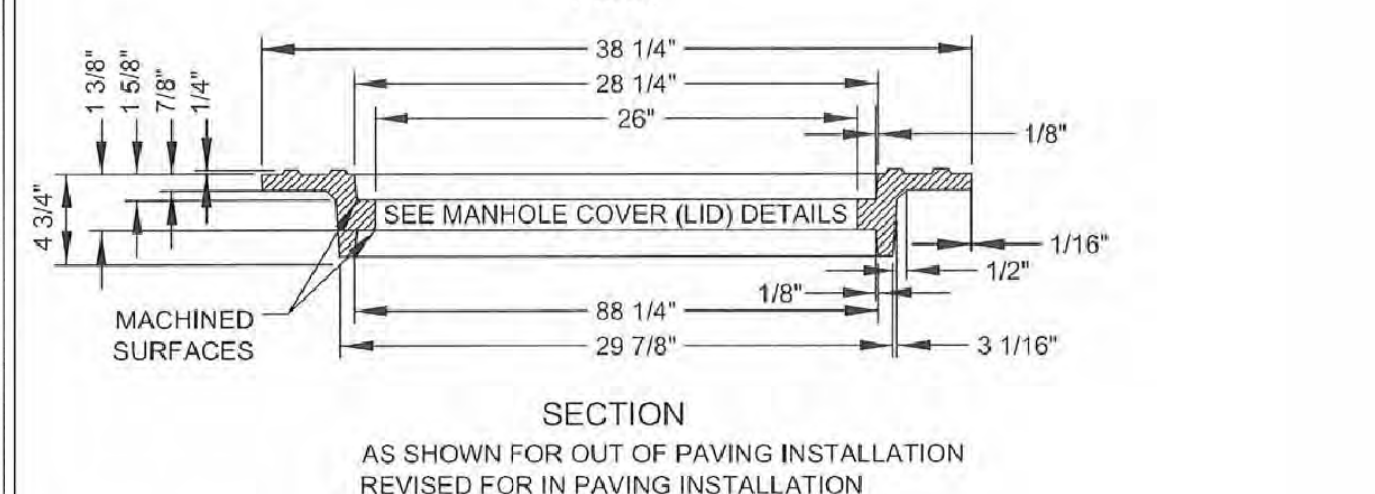
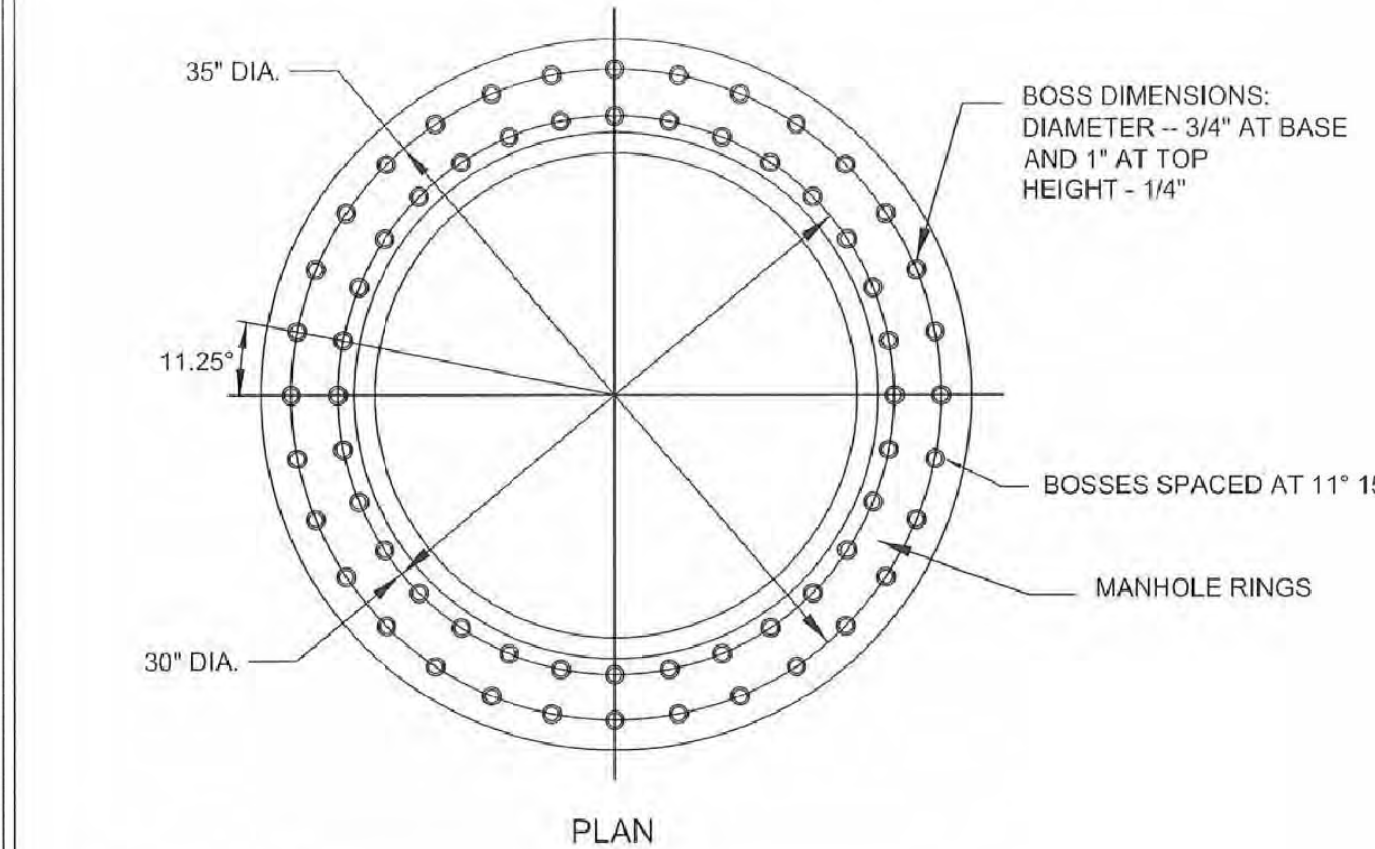
Ring Only	200 LBS
Cover Only	150 LBS
Totals	350 LBS

MANHOLE LID / RING GENERAL NOTES

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-20
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



GENERAL NOTES:

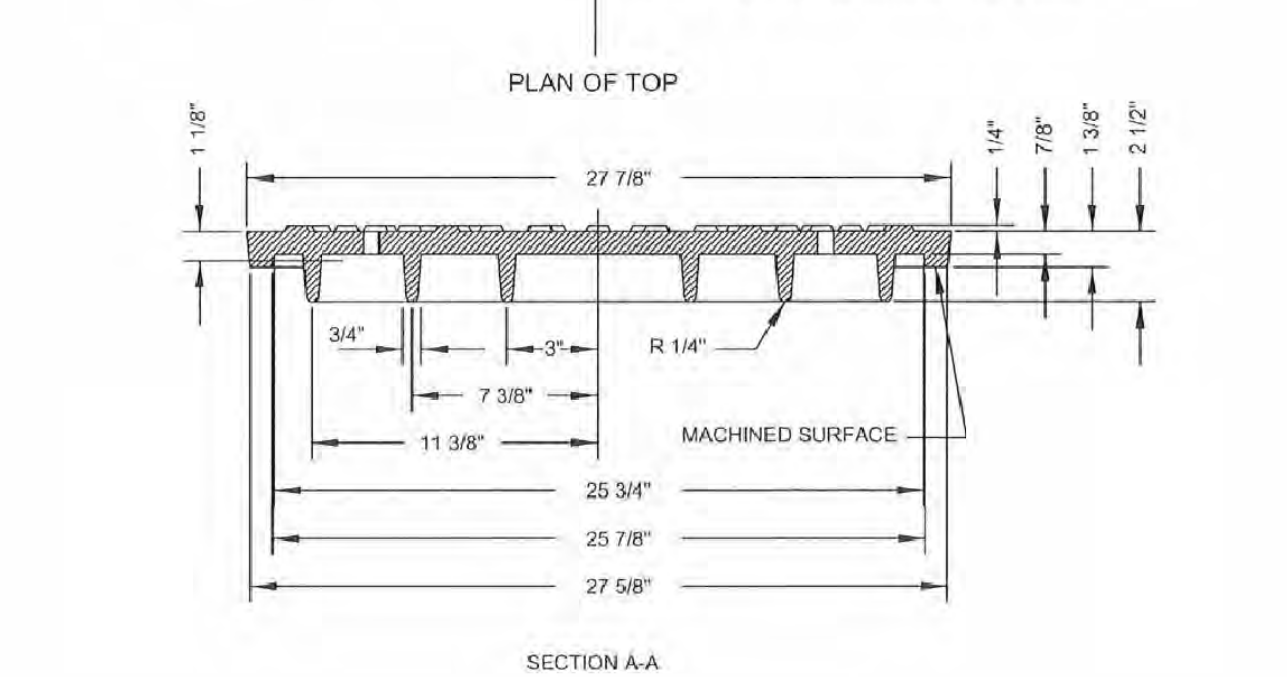
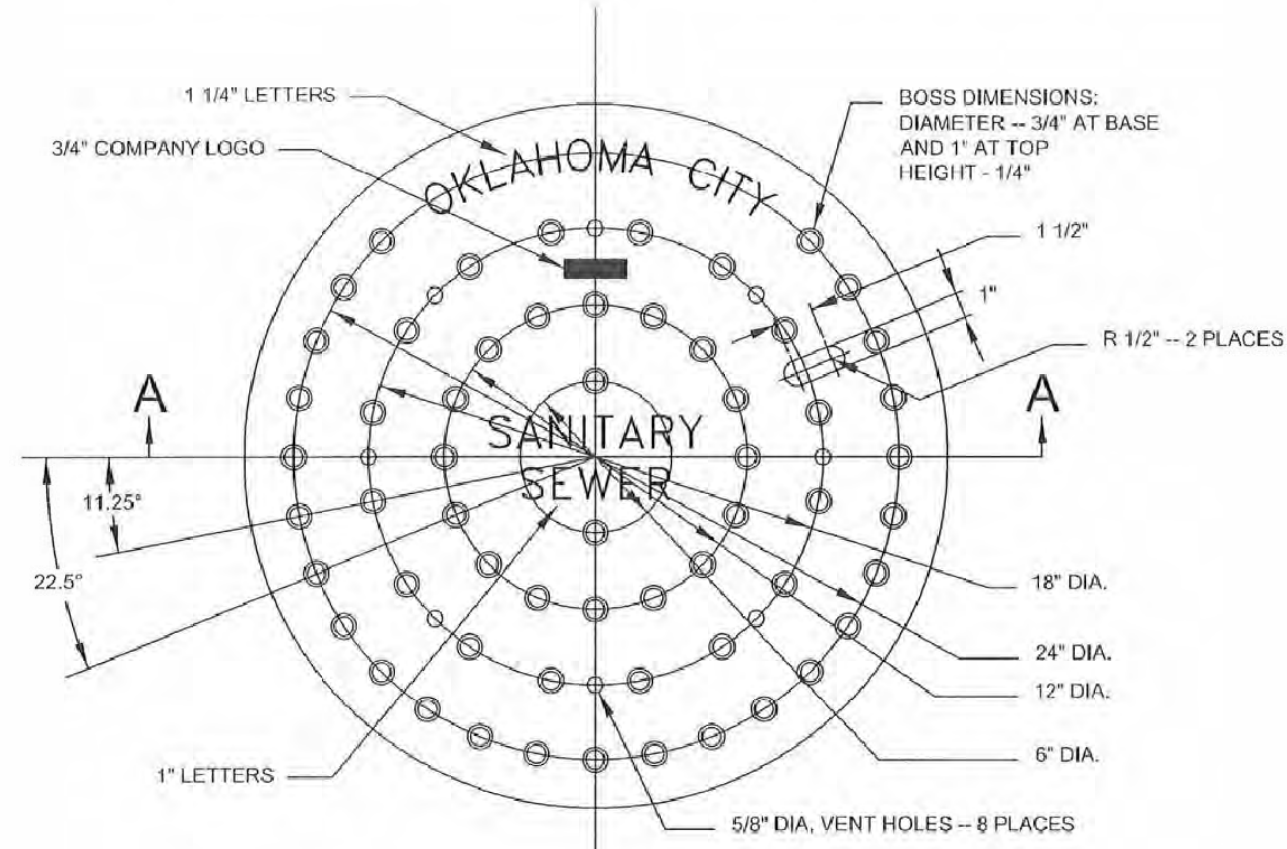
- FINISH EXCESS IRON AND FINIS; MACHINE SEATING SURFACES FLAT TO NOTE DIMENSIONS.
- FILLETS SHALL BE $\frac{1}{4}$ " UNLESS OTHERWISE SPECIFIED.
- UNLESS OTHERWISE SHOWN, ALL DIMENSIONS ARE IN INCHES.

REVERSIBLE MANHOLE RING

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-21
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL

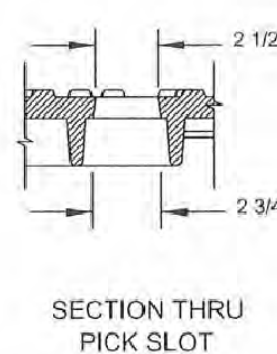
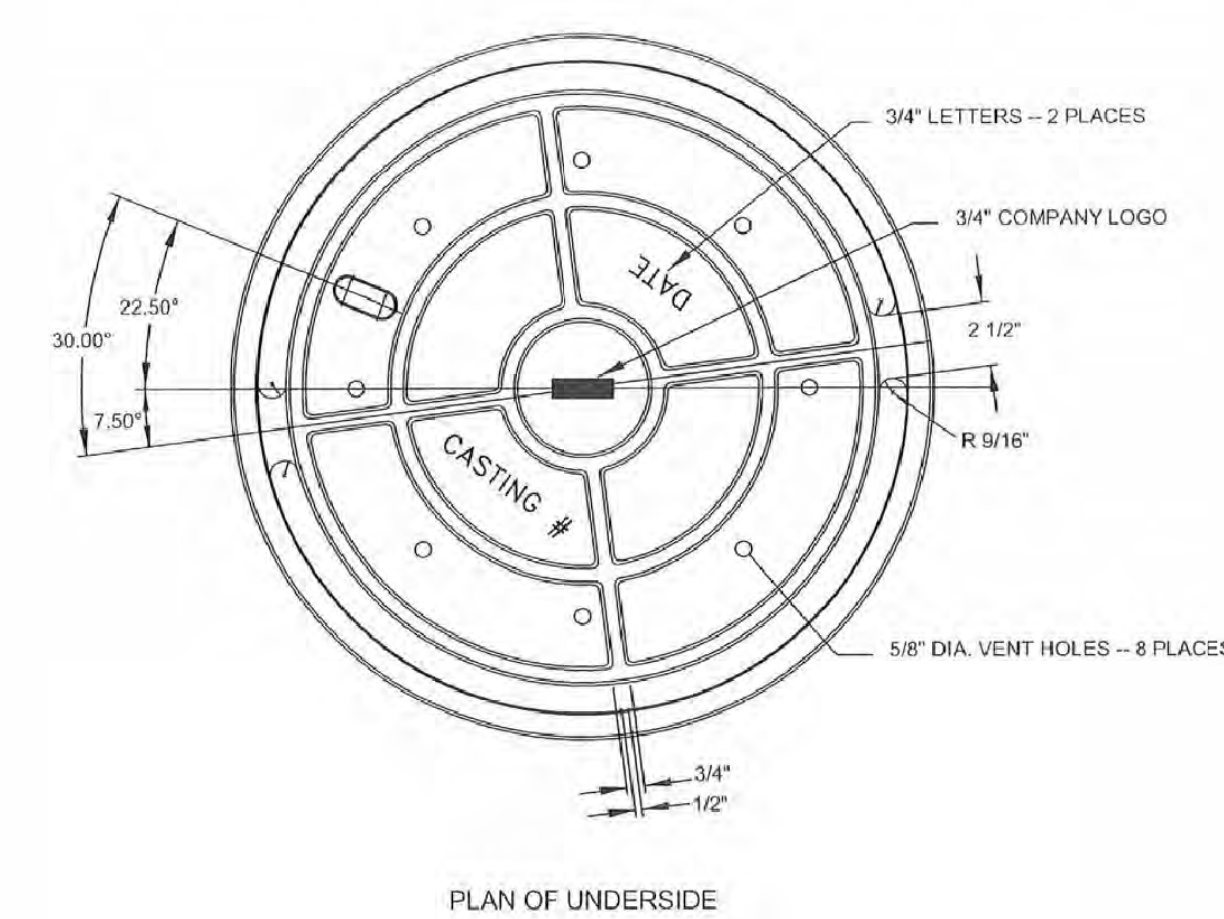


VENTED MANHOLE COVER

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-22
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

SANITARY SEWER STANDARD DETAIL



GENERAL NOTES:

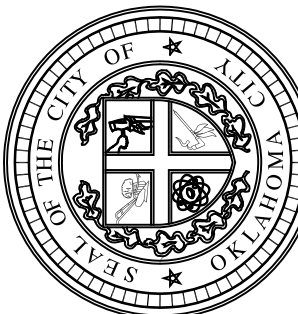
- FINISH EXCESS IRON AND FINIS; MACHINE SEATING SURFACES FLAT TO NOTE DIMENSIONS.
- FILLETS SHALL BE $\frac{1}{4}$ " UNLESS OTHERWISE SPECIFIED.
- UNLESS OTHERWISE SHOWN, ALL DIMENSIONS ARE IN INCHES.

VENTED MANHOLE COVER

03/13/14	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	APPROVED BY: <i>[Signature]</i> DATE: <i>3/14/14</i>	S-23
DATE	ERIC J. WENGER, P.E., CITY ENGINEER	MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR	

OKLAHOMA CITY UTILITIES DEPARTMENT

The City of
Oklahoma City
Utilities Department
Engineering Division



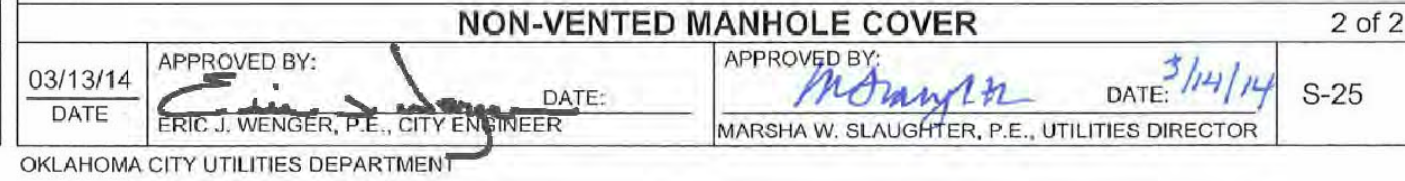
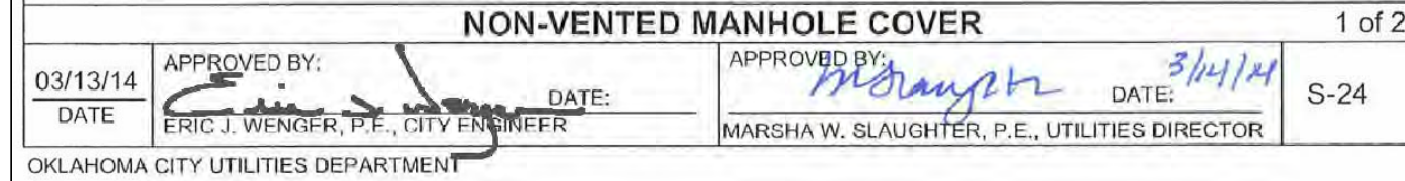
NO. DATE DESCRIPTION

SANITARY SEWER
STANDARD DETAILS

DATE: 03/14/14
DRAWN BY: JDS
CHECKED BY: MWS/EJW

SCALE:
AS SHOWN

SHEET NUMBER
S-STD-03

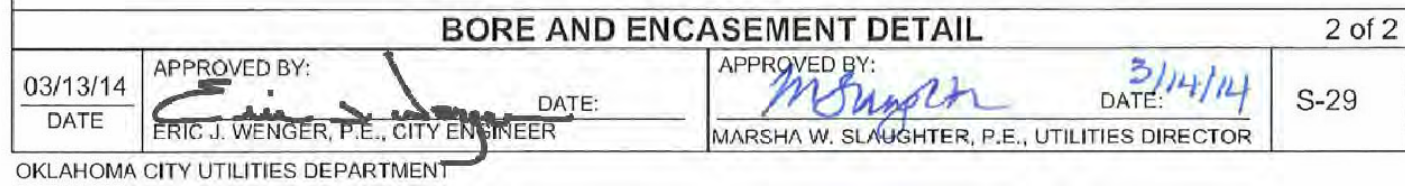
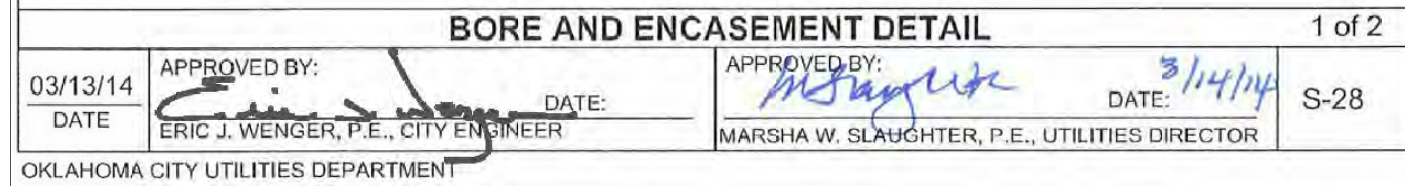


- | SERVICE CONNECTION INSTALLATION | | | | |
|---------------------------------|--|--|--|---------------|
| 13/14
ATE | APPROVED BY:

ERIC J. WENGER, P.E., CITY ENGINEER | DATE:

MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | APPROVED BY:

MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 3/14/14 |
| AHOMA CITY UTILITIES DEPARTMENT | | | S-27 | |



PIPE NOMINAL SIZE (inches)	SUGGESTED CASING PIPE INSIDE DIAMETER (inches)
4	6 to 10
6	10 to 12
8	14 to 16
10	16 to 18
12	18 to 20
15	20 to 22
18	24 to 26
24	31 to 33
27	33 to 36
30	36 to 42
36	42 to 48
42	54 to 60
48	60 to 66

OUTSIDE DIAMETER (INCHES)	UNDER HIGHWAY		UNDER RAILROAD		
	WALL THICKNESS (INCHES)	MAXIMUM COVER (FEET)	BNSF (UNCOATED) WALL THICKNESS (INCHES)	UNION PACIFIC WALL THICKNESS (INCHES)	MAXIMUM COVER (FEET)
≤ 12	0.1880	30	0.2500	0.2500	30
16	0.2500	30	0.3125	0.3125	30
18	0.2500	30	0.3125	0.3125	30
20	0.2500	30	0.3750	0.3750	30
24	0.2500	30	0.4375	0.4375	30
30	0.3220	30	0.5000	0.5000	30
36	0.3750	30	0.5625	0.5625	30
42	0.3750	25	0.5625	0.5625	30
48	0.4380	25	0.6250	0.6250	25
54	0.4380	25	0.6250	0.6250	25
60	0.4380	25	0.6250	0.6250	25
66	0.4380	20	BNSF RR	OVERPASS MUST BE APPROVED BY U.P.R.R.CO.	20

[illegible]

SANITARY SEWER STANDARD DETAILS

DATE:	03/14/14
DRAWN BY:	JDS
CHECKED BY:	MWS/EJW

SCALE:
AS SHOWN

SHEET NUMBER
S-STD-04



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Phillip Hightower, Public Works Director
Re: Discussion, Consideration and Possible Action to Approve a Quote on Transfer Trailers for the Landfill that is above the Approved Amount in the Capitol Improvement Budget.

We have three quotes from companies for the transfer trailers we are going to purchase for the Landfill. All three companies are over the original amount of \$400,000.00 that was budgeted for Capitol improvements. We are requesting that the quote from Warren Truck and Trailers LLC for \$432,800.00 be approved. The Landfill has the remaining balance in its budget to transfer to Capitol Improvements to cover this cost.

Council Information / Action Requested

Request that the quote from Warren Trucks and Trailer LLC for the amount of \$432,800.00 be approved.

City Staff Information / Action Follow-up, if Council authorizes this action:

Create a PO and order the trailers

ATTACHMENTS:

1. 3 New Trailer Quotes(1) Warren Truck and Trailer



Quote WTTLLC00012617 Page 1 of 3 Date 8/24/2022

Warren Truck and Trailer, LLC
15768 US HIGHWAY 271 NORTH
Talco TX 75487

Phone (888) 734-4400
Fax (903) 379-4400
WarrenTruckAndTrailer.com

Bill To	Ship To	Contact
CITY OF DURANT, OK P.O. BOX 578 DURANT OK 74702-0578	CITY OF DURANT, OK 300 W. EVERGREEN DURANT OK 74701	KENNY COOPER (580) 931-6600 Ext. 0000

Purchase Order No.		Customer ID	Salesperson ID	Shipping Method	Payment Terms	Req Ship Date	Master No.
		CIT701A	CHRIS	TOW AWAY	Net30	0/0/0000	10,020,568
QTY	Item Number	Description	UOM	Unit Price	Ext. Price		
4	WHET	HORIZONTAL EJECTOR TRAILER Q-12617 CITY OF DURANT WEI-005696 Length: 40' Width: 96" Yardage: 86 Material: Hardon 450 High Strength Steel Sidewall Height: 96" Sidewall Material: 1/8" AR-450 Sidewall Bracing: 3"x6"x 10 Ga. Formed Custom Bracing Spacing: Single Full Length Horizontal Side Brace Full length of Trailer. SC6" Shipchannel x 15.3# at Lower Inside Floor to Steel Wall Intersection as Guide for Ejector Panel. Floor: 3/16 AR-450 Crossmembers: 4" Jr. I-beam Crossmembers Spacing: 12" C/L	EA	\$104,500.00	\$418,000.00		
4	EJECTOR	Wear Surface: AR-450 Steel Guiderails/Rollers: No Face Plate/Snout: 3/16" Hardox AR-450 Cylinder: DAT96-84-412 Control Valve: 1 Oil Tank: None (On Tractor) Hoses: No Options Cylinder Support Carrage on UHMW Shoes.	Each	\$0.00	\$0.00		
4	COMPACTOR COMPATIBLE	Compactor Latch: Rear Corner Post Side Mount Latch Height: To be detirmined if order awarded.	Each	\$0.00	\$0.00		
4	BULKHEAD	Bulkhead Shape: Flat Bulkhead: Open Bulkhead Options: Wing Type Quick	Each	\$0.00	\$0.00		



Quote WTTLLC00012617 Page 2 of 3 Date 8/24/2022

Warren Truck and Trailer, LLC
15768 US HIGHWAY 271 NORTH
Talco TX 75487

Phone (888) 734-4400
Fax (903) 379-4400
WarrenTruckAndTrailer.com

Purchase Order No.		Customer ID	Salesperson ID	Shipping Method	Payment Terms	Req Ship Date	Master No.
		CIT701A	CHRIS	TOW AWAY	Net30	0/0/0000	10,020,568
QTY	Item Number	Description	UOM	Unit Price	Ext. Price		
4	TAILGATE	Connects Mounted on Front Bulkhead to match 1" Auroquip 5100-5516B Fitting (pressure) and 1-1/4" 5100-5520B Return Line. Tailgate Hinge: High Lift Door Tailgate Material: 10 Ga. Tailgate Hinge: Top Tailgate Panels: 3 Watertight Seal: 16" Seal Custom Tailgate: Hydraulic Powered High Lift Tailgate Note: See email from Mack on 10-11-19 regarding clearance on compactor latches.	Each	\$0.00	\$0.00		
4	TARP/ROOF SYSTEM	Roof: 1/8" Hardox AR-450 Roof Specs: Roof Braces Aligned to Match Vertical Side Braces, Rear 15' to be Braced with (2) Longitudinal Braces Between Cross Braces. Catwalk/Ladder: None.	Each	\$0.00	\$0.00		
4	RUNNING GEAR	Tires: 11R22.5 LR G Wheels: 22.5 X 8.25 Hub Piloted Steel Disc Wheels Drums: Cast Iron Drums 7.5" x 16.5" ABS: Haldex 2S/1M SubFrame: 10" I-Beam x 12lb/ft Axle Detail: TQ 25K Rated 96" Suspension: Hutch 9700 3 Leaf Spring Suspension Spacing: 49" King Pin Setting: 36" Landing Jack: Steel 2-Speed HD (Holland 160K Rated) Roadside Hubodometer: No Tire Carrier: No Mudflaps: Full Flaps Across Rear Bumper: HD Bumper w/ 2 Tow Hooks	Each	\$0.00	\$0.00		
4	FINISH	Body Finish: Medium Grey Metallic Running Gear Finish: Coach Black	Each	\$0.00	\$0.00		
4	LIGHTS	Std. Lights In accordance with FMVSS108 LED lights w/ sealed wiring harness with midmount turn signals. Rear Lights in Tailgate	Each	\$0.00	\$0.00		



Quote WTTLLC00012617 Page 3 of 3 Date 8/24/2022

Warren Truck and Trailer, LLC
15768 US HIGHWAY 271 NORTH
Talco TX 75487

Phone (888) 734-4400
Fax (903) 379-4400
WarrenTruckAndTrailer.com

Purchase Order No.		Customer ID	Salesperson ID	Shipping Method	Payment Terms	Req Ship Date	Master No.	
		CIT701A	CHRIS	TOW AWAY	Net30	0/0/0000	10,020,568	
QTY	Item Number	Description				UOM	Unit Price	Ext. Price
4	NOTE	FREIGHT IS A ROUGH ESTIMATE AND WOULD BE DETERMINED AT TRAILER SHIP DATE. CURRENT CUSTOM HOIST CYLINDER LEAD TIME APROXOMATELY 26 WEEKS. THIS MAKES OUR EXPECTED LEAD TIME FOR THE FIRST TRAILER AT 8 MONTHS.				Each	\$0.00	\$0.00

Quotation reviewed and accepted by:
(signed) _____
Please fax back to us for entry as an order
NOTE: Quotation good for 10 days only

Subtotal	\$418,000.00
Misc	\$0.00
Tax	\$0.00
Ship & Handling	\$14,800.00
Trade In Allowance	\$0.00
Total	\$432,800.00

Texoma Mfg., LLC

P.O. Box 1940

Durant, Ok 74702

Estimate

Date	Estimate #
7/20/2022	1602

Name / Address
City of Durant Accounts Payable PO Box 578 Durant, OK 74702

			Project
Description	Qty	Cost	Total
65 YD TRANSFER TRAILER 84" H X 96" OAW X 39' OAL, CLOSED TOP TANDEM 22.5K AXLES W/ABS HUTCH SUSPENSION, 11R22.5 TIRES, 8.25X22 STEEL WHEELS HYDRAULIC EJECTOR, OPERATED W/TRUCK WETLINE REAR DOOR TO HAVE OPENING FOR 54"H X 76" PACKER FIXED LANDING GEAR (NO DROP LEG) MEET ALL DOT REQUIREMENTS	3	118,777.00	356,331.00
		Total	\$356,331.00

Customer Signature _____



Somerset Welding & Steel, Inc.
10558 Somerset Pike

Somerset, PA 15501
Phone: (814) 444-3400 Fax: (814) 443-2621

Quote: 87858 #2
Type: SPO
Order:
PO No:
Stock: N

Eng/Auth
07/28/22 14:21
Page 1

Customer
CITY OF DURANT
1620 BLANCHARD RD.
DURANT OK 74701
Attn: Kenny Cooper
Phone: 580-380-6255
End User: CITY OF DURANT

CSID:103807

Brief Description
Steel Pushout Trailer

Number of Units: 2
Sales Rep: Todd Imes
(814) 521-7156
Inside Sales: Ed Lyons
Warranty Yrs: 1
Entered By: JAJ

BODY:	LENGTH	45'
	WIDTH	96" Wide
	HEIGHT	96"
	STYLE	Closed Top
SIDES:	SIDE FRONT	12 gauge HT
	SIDE REAR	10 gauge HT
	SIDE POSTS	12 gauge HT
	POST SPACING	18" REAR 1/3, 24" FRONT 2/3's
	HORIZONTAL BRACING	3 ROWS LAST 1/3
	TOP RAIL	6" x 3" x 3/16" Tube
	SIDE LADDERS	Drivers Side Front
ROOF:	MATERIAL	12 Ga. Hi-Ten
	POST MATERIAL	12 Ga. Hi-Ten
	POST SPACING	Same as Sides
	ROOF BRACES	Same as Sides
	ROOF OPENING	* * None * *
FLOOR:	MATERIAL	3/16 HT
	CROSSMEMBER	4" (7.7 LB/FT) "I" BEAM
TAILGATE:	HARDWARE TYPE	Barndoor (P.S. Hinge)
	STYLE	Dutch Door
	SHEET	10 gauge HT
	HEIGHT	96 "
	LADDER	* * None * *
	CONTROLS	Manual Gate Latch
	COMPACTOR	Side Grab Hook-up
	RUBBER SEAL	Rubber seal
RUNNING GEAR:	SUSPENSION	Reyco 21B 52K 9 Leaf 96"
	AXLES	Hend. D22 #25000 .58 Wall 96" wide trailer
	SLACK ADJUSTERS	Haldex Auto-Slack Adjusters
	HUBS AND DRUMS	Walther Hub piloted short stud
	TIRE STYLE	DUAL
	WHEELS OUTSIDE	Wheel 22.5x8.25 10H.P.White
	WHEELS INSIDE	Wheel 22.5x8.25 10H.P.White
	TIRES	Goodyear Marathon LHT 11R22.5 14PL
	BRAKES	4S/2M Tandem Air Brake System
	SUSPENSION SUB-FRAME	1/4" Formed Channel (Tandem)
HYDRAULICS:	ENGINE (POWER SOURCE)	* * None * *
	PUMP	
	HYD FUNCTIONS	Push Out
	TELESCOPIC CYLINDERS	CUSTOM DAT95-103-438
	HYD CONTROLS	Manual on Trailer
	HOOK UP	Tank on Tractor, Valve on Trlr
	Quick Couplers	5100 Series Quick Couplers
	Coupler size	1"P, 1-1/4"R, 1-1/4"R
	TANK	Customer Supplied(On Chassis)
EJECTOR:	MODEL	For 45' Push-out
	MATERIAL	1/4 HT
	GUIDE SHOES	Standard Steel
FRAME:	LANDING GEAR	Holland MK V w/Wheel/Skid Foot
	KING PIN	Standard King Pin

(Continued on Next Page)

Somerset Welding & Steel, Inc.
10558 Somerset Pike

Quote: 87858 # 2

Eng/Auth

Page 2

Somerset, PA 15501
Phone: (814) 444-3400 Fax: (814) 443-2621Order:
PO No:
Stock: NCustomerCITY OF DURANT
1620 BLANCHARD RD.
DURANT OK 74701
Attn: Kenny Cooper
Phone: 580-380-6255
End User: CITY OF DURANT

CSID:103807

Brief Description

Steel Pushout Trailer

Number of Units: 2 Warranty Yrs: 1
Sales Rep: Todd Imes Entered By: JAJ
Inside Sales: Ed Lyons

MISC:	KING PIN SETTING	15"
	DOCUMENT HOLDER	Betts Document Holder
	MUDFLAPS	J & J Mudflaps (Std)
	MUDSHIELD	Standard Mudshield
LIGHTS:	LIGHT PACKAGE	LED Light Pkg., In Gate
	MID TURN SIGNALS	LED Amber Mid-Turns
PAINT:	BODY	One Color Genesis Paint

----- (Included Equipment) -----

Price / Unit Including Options:	\$113,800.00
Delivery Charge / Unit:	4,800.00
Total / Unit:	\$118,600.00
Total Due All Units:	\$237,200.00
Appx. Weight:	28,882 lbs
Terms: NET ON DELIVER	

Special Remarks:

Unless indicated above, F.E.T., and sales tax are NOT included in price.

NOTE: If a purchase order is required for payment, the purchase order must be provided before we enter this quote as an order and order any material for this job.

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Please review carefully. If you have any questions, contact this office or your sales representative. If there are no questions, please sign and return one of the enclosed copies. We must have a signed copy of this quotation before we process and fabricate your order. J&J reserves the right to requote due to high cost increases in materials from our vendors and market fluctuations.

Payment
Terms: NET ON DELIVERPRICE SUBJECT TO CHANGE
AFTER 7 DAYS**If accepted, changes to orders within two weeks of scheduled production will incur a \$150.00 administrative fee plus the option cost and may delay scheduled delivery.**

By: _____ Date: _____

(Customer Signature)



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Lisa Taylor, Interim City Manager/Economic Development Director
Re: Consider Entering Into Executive Session to Discuss the Purchase of Real Property Interests Along Cemetery Road and Rodeo Road. Permitted under 25 O.S. 307(B)(3)

Council Information / Action Requested

Enter Into Executive Session to Discuss the Purchase of Real Property Interests Along Cemetery Road and Rodeo Road. Permitted under 25 O.S. 307(B)(3)

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS:



The City of Durant

Memorandum

Date: 9/13/2022
To: Mayor and City Council
From: Lisa Taylor, Interim City Manager/Economic Development Director
Re: Consider Action Pursuant to Executive Session Item 6(a).

Council Information / Action Requested

City Staff Information / Action Follow-up, if Council authorizes this action:

ATTACHMENTS: