REGULAR MEETING
OF THE BOARD OF DIRECTORS OF
RURAL WATER, SEWER AND SOLID WASTE MANAGEMENT DISTRICT #20
PITTSBURG COUNTY, OKLAHOMA

NOTICE AND AGENDA

Saturday, June 15, 2024 at 9:00 am
Location: 10 Boulevard, Unit G, Carlton Landing, Oklahoma, 74432

1. Call to Order and Roll Call of Members Present and Absent and declare quorum present

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 Board member requesting further information on a specific item thus removes it from the "Consent Items" section for individual attention and separate vote.

2. Approval of Minutes:
   a. Regular Meeting of the RWD#20 on May 18, 2024

3. Consider, discuss, and possibly vote to approve, amend, revise, or deny payment of the Invoices

4. Acknowledgement of receipt of New Applications, Transfers and Forfeitures

5. Items Removed from Consent Agenda

6. Consider, discuss and possible vote to amend, revise, approve or deny Humphreys Partners 2009, LLC Line Extension Application for water lines for Phase 8, Carlton Landing or take any other appropriate action.
   Exhibit: Water Sewer Line Ext Application Phase 8 6-15-24; 2732046-CARLTON LANDING PHASE 8-WATER; 2732046-CARLTON LANDING PHASE 8-SEWER; 2732046-CARLTON LANDING PHASE 8-FM

7. Staff Report, Legal Report, Comments, and Recommendations to the Governing Body
   RWD20 - BS as of 05-31-24; RWD20 - P&L as of 05-31-24
8. Comments and questions by the governing body members regarding future items for consideration

9. Adjournment

I certify that the foregoing Notice and Agenda was posted in prominent view at 10 Boulevard, Carlton Landing, Oklahoma, also known as “the High School Classroom”.

At 4:00 PM on the ___th day of June 2024, being at least 24 hours prior to the Regular Meeting described above.

_____ Greg Buckley

Signature of Person Posting the Agenda Printed Name of Person Posting the Agenda

REGULAR MEETING
OF THE BOARD OF DIRECTORS OF
RURAL WATER, SEWER AND SOLID WASTE MANAGEMENT DISTRICT #20
PITTSBURG COUNTY, OKLAHOMA

MEETING MINUTES
NOTICE AND AGENDA

Saturday, May 18, 2024 at 9:00 am
Location: 10 Boulevard, Unit G, Carlton Landing, Oklahoma, 74432

1. Call to Order and Roll Call of Members Present and Absent and declare quorum present
   Meeting called to order at 9:00 am. Conner, Nieto, Scott, Greco present. Hensley was absent.

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 Board member requesting further information on a specific item thus removes it from the "Consent Items" section for individual attention and separate vote.

2. Approval of Minutes:
   a. Annual Meeting of the RWD#20 on April 20, 2024

3. Consider, discuss, and possibly vote to approve, amend, revise, or deny payment of the Invoices

4. Acknowledgement of receipt of New Applications, Transfers and Forfeitures

5. Items Removed from Consent Agenda
   Conner made a motion to approve items 1-5. Scott seconded. All voted aye. Motion carried.

6. Consider, discuss, and possibly vote to amend, revise approve or deny authorizing the General Manager to enter into an Agreement with the City of Eufaula to accept our waste sludge, or take any other appropriate action. $60 per 2,000 gallons - 18K gallon built up over time. Matt Rodebush is to haul. 2K every six weeks. Look to haul twice a year. Agreement has to be in place for DEQ to approve. Conner made a motion to approve, Greco seconded. All ayes. Motion carried.

7. Consider, discuss, and possibly vote to amend, revise, approve or deny a pay as you go migration from Badger Meter and AMI System to Zenner Meter and Fenix AMI System, or take any other appropriate action. Blanks voiced concern about lids getting covered & cracked by contractors & owners. End coders need to be toward the top. Start to switch by blocks. No issues so far. Conner motion, Greco second.

8. Staff Report, Legal Report, Comments, and Recommendations to the Governing Body
   Blanks requests backup pump for lift stations. Scott to talk to Greenly about getting with Blanks on pumps. Wall reported on Bankruptcy.

9. Comments and questions by the governing body members regarding future items for consideration

10. Adjournment Meeting adjourned at 9:36 am.

I certify that the foregoing Notice and Agenda was posted in prominent view at 10 Boulevard,

CarIton Landing, Oklahoma, also known as “the High School Classroom”.

At 4:00 PM on the ___th day of May 2024, being at least 24 hours prior to the Regular Meeting described above.

_____ Greg Buckley

Signature of Person Posting the Agenda Printed Name of Person Posting the Agenda

APPLICATION – LINE EXTENSION

THE UNDERSIGNED APPLICANT submits herewith this Application seeking approval of the proposed line extension, drawings, specifications and materials list submitted herewith.

The complete legal name of the undersigned Applicant is Humphreys Partners 2009, LLC and the Applicant is a Oklahoma Limited Liability Co. (specify individual, corporation, partnership, limited liability company, etc.).

The Applicant warrants and represents that the Applicant is the owner of the property over which the proposed line extension is proposed to be constructed or has all necessary easements and authorizations and authority required to submit this Application.

The Applicant acknowledges and agrees that this application is submitted pursuant to the Line Extension Policy (the "Policy") of Rural Water, Sewer and Solid Waste Management District No. 20, Pittsburg County, Oklahoma (the "District") a true and correct copy of which is attached hereto, marked exhibit "A" and made a part hereof by this reference. The Applicant acknowledges that it has reviewed said Policy and agrees to all provisions, terms and conditions thereof and agrees to be bound thereby.

The Applicant agrees that all notices, requests, approvals, consents, and other communications required or permitted hereunder or by the Policy shall be in writing and shall be personally delivered to the addressee as set forth below or sent to such addressee by (a) personal delivery or (b) first class U.S. mail, registered or certified, return receipt requested, postage prepaid; or (c) U.S. express mail, Federal Express, UPS, or other, similar overnight courier service to the addresses of each party specified below the signature lines against a signed delivery receipt. Notices shall be deemed given: (a) if personally delivered, on the day personally delivered; or (b) if mailed, on the 2nd business day following deposit in the US mail; or (c) if sent via overnight delivery or courier, upon delivery against a signed delivery receipt. *Neither facsimile nor e-mail communication shall constitute Notice.* All notices shall be addressed as follows:

If to DISTRICT Rural Water, Sewer And Solid Waste Management District No. 20, Pittsburg Co.
44 Water Street
Carlton Landing, OK 74432

If to APPLICANT Humphreys Partners 2009, LLC (Name of Applicant)
Attn: its President or Chief Executive Officer
29 Water Street
Carlton Landing, OK 74432

Submitted herewith are the proposed line extension, drawings, specifications, bill of materials and application fee. If the proposed line extension crosses any property not owned by the Applicant, appropriate right of way easements are also submitted herewith.

Humphreys Partners 2009, LLC
(Print Legal Name of Applicant)

Signature: _____
Name: Grant Humphreys
Title: Manager
a duly authorized agent

State of Oklahoma
County of Pittsburg
Signed or attested before me on 6-7-24 by
Grant Humphreys

(Notary Seal)

LINDSEY GIBSON
Notary Public - State of Oklahoma
Commission Number 23011769
My Commission Expires Aug 30, 2027

_____
(Signature of notarial officer)
My commission expires: 8-30-27
My commission number: 23011769

APPLICATION AND APPLICATION FEE RECEIVED

6-11-24
(Date)
J. Gregory Buckley
(Name of person receiving Application)

LINE EXTENSION ACCEPTED BY DISTRICT'S BOARD OF DIRECTORS

_____
(Acceptance Date)

_____
Chairman of the Board

_____
Board Secretary

LINE EXTENSION POLICY

WHEREAS, Rural Water, Sewer and Solid Waste Management District No 20, Pittsburg County, Oklahoma (the "District") is a duly organized statutory rural water and sewer district; and

WHEREAS, from time to time an owner of realty located within District's service area but which is at that time not serviced by the District because of a lack of existing service lines to such owner's property may desire to acquire water and/or sewer service for such owner's property; and

WHEREAS, District desires to promote and provide water and/or sewer service through its service area where feasible in accordance with District's *Bylaws*, and its rules and regulations as from time to time promulgated; and

WHEREAS, District desires to enact a comprehensive, uniform policy to deal with such development issues;

NOW, THEREFORE, be it resolved that District's duly constituted Board of Directors does hereby adopt this *Line Extension Policy.*

Submission of Application and Drawings. When an owner of real property desiring to construct a line extension to obtain water and/or sewer service (the "Applicant") desires a line extension, the Applicant shall submit to the District's manager;

1) A form of application (the "Application") in such form as manager may from time to time designate which shall set forth information as the District may require;

2) A satisfactory drawing of Applicant's proposed line extension including such construction detail, specifications and bill of materials as District's manager may require;

3) If the Applicant does not own all of the property the proposed line extension will cross, acceptable right of way easements in favor of the District duly executed and acknowledged by all owners of all such property in form and substance acceptable to District; and

4) The non-refundable application fee which may from time to time be established by the District. The application fee shall be $250.00 until changed or modified by the District's Board of Directors.

The Application shall have attached thereto a true and correct copy of this Policy. By submitting the Application, the Applicant shall be deemed to have read, approved and agreed to be bound by this Policy and each and every term, provision and condition hereof.

District's Review. Upon receipt of Applicant's Application, District's Manager shall, at their discretion, submit same to the District's engineers for review and approval (at Applicant's sole cost and expense). Upon completion of the review, the Manger shall place the Application on the agenda of the District's next regularly scheduled meeting of its Board of Directors and notify the Applicant of such setting. At such meeting the Manager shall (I) note to the Board the results of the review of the Application; and (ii) recommend to the Board whether the line extension Application should be; (I) approved as submitted by the Applicant; or (ii) rejected as submitted by the Applicant; or (iii) approved with modifications. Thereupon the Board shall either approve the Application as submitted or approve the Application with modifications or reject the Application. The applicant shall promptly be notified of the Board's action. (The subject of any approved Application may hereafter be referred to as the "Approved Line Extension.")

District's Discretion. The determinations whether; (I) any Application should be approved; and (ii) any proposed line extension is in fact an appropriate extension or modification of the District's then existing distribution system and (iii) whether the District's existing facilities and resources are adequate to support the proposed line extension; shall all be in the District's absolute, final and unappealable discretion.

Submission to Governmental Agencies. If the Application is approved (either as submitted or as modified) by the District's Board of Directors, it shall be promptly submitted by the Manager (as approved by the Board) for review (at Applicant's sole cost and expense) to all governmental or regulatory bodies or agencies as may be required by law. The Manager shall notify District's Board of Directors and the Applicant of the results of all such review.

System Installation. Only upon final approval of the Application and the Approved Line Extension by all governmental or regulatory bodies or agencies as may be required – including, but not limited to the Oklahoma Department of Health, the Oklahoma Department of Environmental Quality and the Board of County Commissioners of the county where the proposed extension is located – and upon issuance of any documentation of such approval as may be required by the District or its engineers and upon issuance of any permits as may be required by any applicable law, statute, ordinance, rule or regulation. Applicant shall promptly, at Applicant's sole cost and expense, do all things required (including, but not limited to, furnish all necessary management, supervision, labor, tools, supplies, equipment, layout, services, sundries, appurtenances, testing, rights of way and easements, surveys and any other act or thing required) to complete the line extension in strict conformity with the District's then existing Waterline Construction Specifications and/or Sewer Line Construction Specifications and the Application as approved by the District. The line extension shall be installed by a duly licensed and insured contractor approved by the District in a good and workmanlike manner and in accordance with established practice and standards recognized by engineers and the trade. District's manager and engineers shall be authorized to inspect all completed work (at applicant's sole cost and expense). Such inspections shall not in any manner relieve Applicant of any obligation to perform all of Applicant's work strictly in accordance with the Application as approved. District shall have the right to reject installation of workmanship which is non-conforming or is defective, or to require the correction thereof. Rejected installation or workmanship shall be satisfactorily corrected

without charge to District. If the Applicant fails or refuses to correct such rejected workmanship or installation, within such reasonable time as may from time to time be fixed by District's written notice, then, and in such event, District may remove same, and have such defective workmanship or installation corrected, all at the expense of the Applicant. In case any dispute arises between Applicant and District's manager and/or engineers as to the manner of performing the work, same shall be resolved in the sole discretion of District's manager, whose decision shall be final.

Notice to Inspect. Applicant shall timely provide District's manager reasonable and adequate advance notice before covering *any* installed portion of the Approved Line Extension whereupon said manager shall promptly, within a reasonable time, inspect such installation and notify Applicant of the results thereof.

Inspection Expenses. Applicant shall compensate District for all inspections completed by District's manager or its engineers at the actual cost to the District.

Compliance with Laws. Applicant shall install and complete the extension in strict conformity with all applicable county, municipal, state and federal ordinances, statutes, regulations and requirements. Specifically, by way of illustration, but not limitation, Applicant's installation of the Approved Line Extension shall be subject to final approval by the Oklahoma State Department of Health and/or the Oklahoma Department of Environmental Quality.

Completion. When Applicant's installation of the Approved Line Extension is complete, Applicant shall so notify the District's Manager in writing who shall thereupon complete any final inspection. Upon (I) Manager's approval of the installation and (ii) all required approvals thereof by any governmental authorities or agencies having jurisdiction thereof, the Approved Line Extension shall be deemed completed and Manager shall promptly notify the Applicant in writing of the District's acceptance of the Approved Line Extension and of the District's acceptance date thereof (the "Acceptance Date"). *Until such time as District issues its notice of acceptance of the Project, no water may be sold or distributed through the Approved Line Extension nor will the District approve any water service application or Benefit Unit subscription. No sewer shall be discharged into the approved line extension or any other service connected unless approved by the District.*

Warranty. The Applicant warrants that the Approved Line Extension shall be installed free from material defects in workmanship and free from material discrepancies and deviations from the approved Application. The period of this express warranty shall be sixty (60) months from and after the Acceptance date. In the event of the existence of any such defects or deviations, Applicant shall promptly, upon District's written notice, take all such steps and actions as may be necessary to rectify same, and in the case of the failure or refusal of Applicant to do so, within a reasonable time, District may employ and pay such persons as may be necessary to amend and make good such defects or deviations, and all expenses consequent or incidental thereto shall be the responsibility of Applicant.

Maintenance. Applicant shall maintain the Approved Line Extension, at Applicant's sole cost and expense, and at District's direction, for a period of twelve (12) months from and after the formal Acceptance Date. A Maintenance Bond shall be provided for each project. For a Developer who has successfully completed at least five line extensions including the maintenance period and is in good standing, may in lieu of a Bond provide a $7,500.00 escrow account to be held jointly by the Developer and RWD#20. Any interest earned from the escrow account shall go to the Developer. The escrow account may cover all open and outstanding line extension maintenance periods, provided Developer is in good standing with RWD#20.

Ownership. The Approved Line Extension, when completed and when accepted by District, shall, *by virtue of this Policy and the Applicant's submission of its Application, and without any further action by Applicant* (including, without limitation, the execution and delivery of any bill of sale or similar document) thereafter be deemed the property of District free and clear of any and all claims of whatsoever nature, whether of Applicant or those claiming by, through or under applicant, and Applicant shall indemnify District and hold it harmless of and from the claims of any third party claiming or to claim by, through or under Applicant. The Applicant will further, at District's request, convey and assign to the District unencumbered fee title to any portion of the Approved Line Extension as may be required by District, including, but not limited to, all extensions, easements and facilities appurtenant thereto. District's acceptance of the line extension *shall not* be deemed to constitute in any manner whatsoever any assumption by the District of any of Applicant's liabilities or obligations incurred in connection with the construction and maintenance of the line extension, from all of which Applicant shall indemnify and hold District harmless.

Service. Upon completion of the Approved Line Extension, and acceptance thereof by the District, water and/or sewer service may be provided to Applicant, or Applicant's successors in interest then owning realty adjacent to the Approved Line Extension, only in conformity with all then existing rules, regulations and bylaws of District as duly and lawfully from time to time adopted and promulgated. It is expressly understood and agreed that nothing shall obligate District to provide water or sewer to any Applicant in contravention of District's then existing rules, regulations and bylaws nor shall District's approval of the Application or the acceptance of the Approved Line Extension obligate District to extend its services beyond the line extension or to any other project, improvement or future improvement undertaken by the Applicant.

No Pressure Pumps. Applicant understands and agrees that, in addition to compliance with all of District's construction standards, that no pressure pumps may ever be utilized in the withdrawal of water from any fire hydrant or riser which may ever be installed within or constitute a part of the Approved Line Extension.

Costs and Expenses. Applicant shall be solely responsible for payment or prompt reimbursement of all of District's direct expenses (legal, engineering and otherwise) incurred in the processing of any application and the completion and testing of any Approved Line Extension regardless of whether specified herein.

Costs of Enforcement. If any legal action is commenced for the enforcement of any provision of this Policy the successful or prevailing party shall be entitled to recover reasonable attorney fees and other costs incurred in that action or proceeding, in addition to any other relief to which the party is entitled.

Relationship of Parties. Nothing herein contained shall be deemed or construed to create, between the District and any applicant, a partnership or joint venture or any similar relationship.

No Third Party Beneficiaries. Nothing herein contained shall be deemed or construed to create any right or cause of action in or on behalf of, any person or entity other than the District and any applicant.

Compulsory Mediation. If a *bona fide* dispute arises out of or relates to this Policy, or any alleged breach hereof or any of an Applicant's obligations arising hereunder or by virtue of an Applicant's application, and if the dispute cannot be satisfactorily settled nor resolved by agreement, it shall be a ***mandatory, condition precedent*** to the institution of legal proceedings relating thereto (or any other dispute resolution procedure) that the aggrieved party shall first – by notice to the other party to the dispute – initiate a mediation. The parties hereto agree in such event to endeavor in good faith to settle any such dispute by a mediation administered by Dispute Resolution Consultants, Inc. or such other private mediation service provider to which the parties may mutually agree.

Binding Arbitration. If a *bona fide* dispute arises out of or relates to this Policy, or any alleged breach hereof or any of an Applicant's obligations arising hereunder or by virtue of an Applicant's application, and if the dispute is not satisfactorily resolved after resort to the compulsory mediation requirement herein above set forth, then any such dispute, controversy or claim ***shall*** be resolved by binding arbitration to be administered by the American Arbitration Association under its Commercial Arbitration rules, and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. Any such arbitration will be held as promptly as possibly at such time and place within Tulsa County, Oklahoma, as the arbitrator(s) may determine and that Oklahoma law shall apply to the resolution of any dispute to be arbitrated hereunder. Further, the exclusive jurisdiction and venue of any litigation arising out of or relating to Policy shall be the District Court within and for Tulsa County, Oklahoma, or, if jurisdictional requirements are otherwise met, the United States District Court for the Northern District of Oklahoma.

WATERLINE CONSTRUCTION SPECIFICATIONS

101 GENERAL

Water lines and appurtenances shall be constructed to the Oklahoma State Department of Environmental Quality Specs.
Specifications shall incorporate the provisions of the AWWA Standards and/or manufacturer recommended installation procedure.

102 TRENCHING

All trenches for water lines shall be dug in a uniform manner. No ditches shall have humps of dirt or rock and shall be left with a smooth bottom for sand bed.

103 BEDDING AND BACKFILL

A minimum of four (4) inches of uniformly spread sand or clean dirt shall be place in the bottom of all water line ditches before any water line pipe or pipe fittings are installed. The trench shall be back filled around the pipe with sand bedding. The height of sand bedding may be decreased to six (6) inches only with express permission of the District if remaining backfill material contains no clods or stones larger than three (3) inches in diameter and the material meets the approval of the District. Clean dirt may be used for fill material upon approval of the District.

104 WATER LINE DEPTH

Depth of the water line ditch shall be such that a minimum of 30" of cover is over the top of the pipe in all situations except that 24" will be allowed when the water line crosses under a drainage ditch.

105 WATER LINE MATERIAL AND SPECIFICATIONS

Water line material specifications on type, grade, pressure, and quality shall be as follows:

1. Polyvinyl chloride pressure pipe shall be PVC 1120. Pipe shall be SDR21-200 psi. Pipe shall conform to ASTM D2241; ASTM 1599 for short burst pressure test; ASTM 1598 for long term pressure test; pipe shall have elastomeric seals in bell end.

2. Water tap and service lines shall be tough tube with approved fittings only. All service lines shall be provided with an approved meter can and yoke.

3. All valves, tees, and bends shall be of D.I. mechanical joint type with 200 psi working pressure. All valves will have two (2) inch square operating nuts. All valves shall have an

adjustable type valve box placed over the valve at the finished ground level. All flanges on tees and valves will be mega-lug. All MJ fittings will have mega-lug flanges.

4. Coated tracer wire must be attached to the waterline and two (2) inch wide detectable water tape must be installed on top of bedding twelve (12) inches above pipe level.

5. Pipe larger than two (2) inch that passes through a casing must be yellowmine pipe.

106 THRUST BLOCKS

All valves, tees, bends, and fire hydrants shall be blocked against a solid ditch bank wall with 3,000 pound per square inch, twenty-eight (28) day concrete.

107 DEAD END MAINS

All water main dead ends shall have an above ground flush hydrant with watch valve. All cul-de-sacs will be looped to avoid dead end lines.

108 TESTING AND DISINFECTING WATERLINES

Testing and disinfecting of water mains will be performed by the Contractor. The contractor shall provide all the water, labor, materials, and equipment required for testing and disinfecting. All water mains shall be tested in accordance with Standard Specifications for installation of Cast Iron Water Mains, AWWA Designation C-600. The pressure test of 150 psi shall be for thirty (30) minute duration. If the line passes the test without significant pressure drop, a leakage test shall be made at the normal operating pressure under which the line is to operate for a two (2) hour testing duration.

All leaks detected shall be repaired. Before being connected to the treated water system and before being placed in service, all mains shall be disinfected in accordance with Disinfecting Water Mains, AWWA Designation C-601.

109 WATER/SEWER LINE CROSSINGS

Sewers crossing water mains shall be laid to provide a minimum vertical distance of twenty-four (24) inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to prevent damage to the water main. No sewer lines joint shall be less than ten (10) feet from a water line. No septic lines will be located within ten (10) feet of water main or service lines.

110 WATER LINE CASINGS

All casings required for water lines shall be equal to water pipe.

111 FIRE HYDRANTS

Fire hydrants shall be buried a minimum of three (3) feet below finished grade. Fire hydrants shall rest on a solid base consisting of a 4" x 18" x 16" concrete cap block. Concrete shall be poured behind the hydrant base against a solid ditch wall. Concrete blocking shall stay three (3) inches below the base flange of the hydrant so the hydrant barrel weep-holes will not be blocked. One (1) inch gravel shall be placed around the base flange and twelve (12) inches above the base flange of the hydrant. On all fire hydrant installations there shall be a six (6) inch valve placed just ahead of the hydrant in the water main. All fire hydrants shall be set to have a minimum clearance of eighteen (18) inches and a maximum clearance of thirty (30) inches from the finished grade to the bottom of the first hose connection. Hydrants will not be set on any line smaller than six (6) inches and subject to approval of the District.

All fire hydrants shall be two-way hydrants with two; 2.5" National Standard Thread Hose Nozzles with a 1.5" pentagon-operating nut (open left).

112 VALVES

112.01 GATE VALVES THREE (3) INCH OR LARGER IN SIZE

Except as modified or otherwise provided herein, AWWA C500 shall govern the design, component materials, construction, and manufacture of all gate valves three (3) inches or larger in size. Valves shall be Mueller resilient seat types.

Resilient seated gate valves shall be from body and shall be in accordance with AWWA C-509-80 or latest revisions thereof and shall have the following design features:

All valves shall have a working pressure of 200 psi and shall be hydrostatically tested from both directions and shell tested at 400 psi. In order to pass all tests there will be absolutely no leaking. The body, bonnet, and stuffing box shall be flanged together with ASTM A-307 Grade B bolts and nuts.

Stems shall be matched from modified manganese bronze rod with an integral forged thrust collar machined to size and shall be interchangeable with stems in existing double disc gate valves of the same size and manufacturer.

Stem seals shall be one "O" ring below the thrust collar forming a lubricant reservoir between to isolate and lubricate the thrust collars, bearing surfaces and "O" rings. An anti-fraction washer shall also be placed above the thrust collar to further accommodate operating torque.

Valve discs shall have an integrally cast ASTM B-62 bronze stem nut to provide disc rigidity and a positive travel stop to prevent over compression of the resilient seat. The disc shall be open to flow on one side to prevent collection of corrosive products and debris.

All internal ferrous metal surfaces (machined or cast) shall be factory spray coated with a two component thermoset epoxy to a nominal thickness of 4 mil and the exterior shall be coated with asphalt varnish.

112.02 CHECK VALVES

Check valves shall be manufactured in conformity with all applicable requirements of AWWA C-500, relative to materials, minimum body thickness, valve ends, body seat rings, workmanship, painting, markings and testing.

Check valves, which are installed six (6) inch or larger pump discharge piping shall be of the unobstructed waterway, quick closing, spring-loaded type. Increasing check valves shall be M & H 60-SL or Rensselaer H-342. Equal end size check valves shall be M & H 60-SL, Mueller A2600-6-02 or Rensselaer H-341. Spring-loaded horizontal swing check valves shall be provided with stainless steel shafts, with both ends extending through bronze bushed bearings and outside stuffing boxes.

Unless otherwise specified, all other check valves three (3) inches or larger in size shall be flanged, iron body, horizontal swing type with all seats, seat rings, pins, bushings, and other parts subject to wear constructed of bronze. Check valves 2.5" or smaller shall be bronze regrinding horizontal swing check valves. Threaded end check valves shall be Cane 36, Fairbanks 0605, Jenkins 762-A, or OIC 236.

113 INSTALLATION OF WATER MAINS

Before excavation of the water supply trench is started, all intersecting sewer lines, house sewer lines, and sewer within ten (10) feet of the water line shall be located, mapped, and means taken to prevent discharge or waste into the trench. If any sewer is disturbed, it must be carefully restored immediately to a tight operating condition.

Pipe laying operations should be suspended during rains or whenever the trench cannot be kept waterless. A tight plug should be placed in the open end of a main at all times when work is not in progress.

MAINTENANCE BOND

(Line Extension)

WHEREAS, the undersigned, Humphreys Partners 2009, LLC (the "Applicant") has submitted an Application for Approval of Line extension dated the 7th day of June, 2024, whereunder the name of the proposed Project is Land Development, Phase 8, Carlton Landing; and

WHEREAS, the undersigned is required to maintain the Project for a period for twelve (12) months from and after the Acceptance Date and provide the District with a maintenance bond to insure Applicant's performance of its maintenance obligations.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

That the undersigned Applicant, having a mailing address of 29 Water Street, Carlton Landing, OK 74432 as Principal and (same) as Surety, are jointly and severally, firmly held and bound unto Rural Water, Sewer and Solid Waste Management District No 20, Pittsburg County, Oklahoma (the "District") in the sum of $ 7,500.00, lawful money of the United States of America, same being the amount of the completed Project cost are as verified by the Applicant's engineer, for the payment of which sum well and truly to be made, we hereby bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

The Condition of this Bond is such that the said Principal and Surety herein names do hereby agree and bind themselves unto the District that the Project, including materials, workmanship and all work done under the aforesaid Application were such that the same shall endure without need of any repair whatsoever for a period of one (1) year from and after the formal Acceptance of said

Project by resolution of the District's Board of Directors that at the expense of said Principal/Applicant and/or Surety, that such Project shall be kept and maintained in good order and repair for a period of one (1) year as herein provided, and that all trenches, excavations or ditches that may sink or settle, shall promptly be filled without any notice being given, and that all breaks or failures occurring or arising from any cause whatsoever within said period of one (1) year, shall be promptly be repaired and at all times during the said period of one (1) year, maintained by said Principal/Applicant and/or Surety, without notice being given; and it being further agreed that upon the neglect, failure or refusal of the Principal/Applicant to make any needed repairs or backfills upon said project or any work connected therewith within ten (10) calendar days after notice to said Principal by letter deposited in the United States mail, addressed to said Principal at the address for notices set forth within its Application that said Principal/Applicant and Surety shall jointly and severally be liable to the District for the costs and expenses of making such repairs or backfills, or making good such defects or imperfections.

NOW THEREFORE, if the said Principal/Applicant and Surety shall faithfully and securely keep and perform all of the obligations herein provided to be kept and performed by them, or either of them, then this obligation shall be null and void and of no force and effect, otherwise to be and remain in full force and effect at all times are herein provided.

All terms used herein shall have the meanings assigned thereto in the District's Line Extension Application and the District's Line Extension Policy.

Signed, sealed and delivered this 7th day of June, 2024.

Applicant / Principal:	Surety:
_____	_____
By: Grant Humphreys	By: _____
Title: Manager	Title: _____
and duly authorized agent.	and duly authorized agent and attorney-in-fact.

(ATTACH A CERTIFIED COPY OF THE SURETY'S AGENT'S POWER OF ATTORNEY)

SEWER LINE CONSTRUCTION SPECIFICATIONS

101 GENERAL

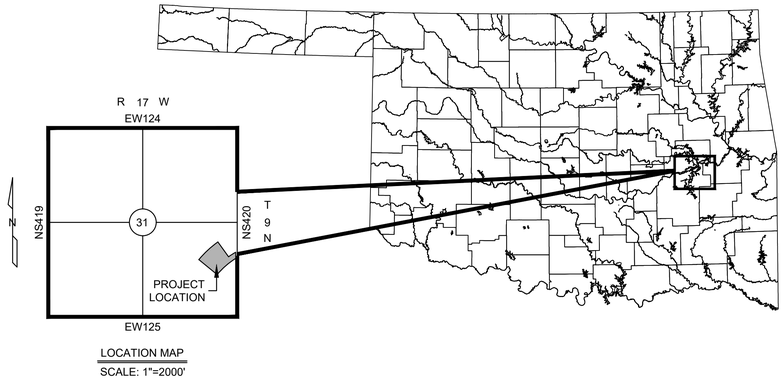
Sewer lines and appurtenances shall be constructed to the Oklahoma State Department of Environmental Quality Specs.

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY	AS-BUILT
	WATER LINE QUANTITIES			
1.	6" WATER LINE (C900 PVC)	LF	3259	
2.	4" WATER LINE (C900 PVC)	LF	15	
3.	6"x 6" TAPPING SLEEVE (MJ)	EA	2	
4.	6" TAPPING VALVE & BOX	EA	2	
5.	6"x 6" TEE	EA	8	
6.	6"x 4" TEE	EA	5	
7.	6" GATE VALVE & BOX	EA	4	
8.	4" GATE VALVE & BOX	EA	5	
9.	6"x 90° BEND	EA	3	
10.	6"x 45° BEND	EA	10	
11.	6"x 11 1/4° BEND	EA	1	
12.	6" SOLID SLEEVE	EA	2	
13.	6" PLUG w/ 2" BLOW OFF	EA	2	
14.	FIRE HYDRANT	EA	5	
15.	12" RISER (IF REQD)	EA	5	
16.	SINGLE SHORT SERVICE (SSS)	EA	35	
17.	SINGLE LONG SERVICE (SLS)	EA	26	
18.	REMOVE EXIST. 6" PLUG w/ 2" BLOW OFF	EA	2	
19.	TYPE 'A' BACKFILL	CY	147	
20.	SAND BACKFILL (AS NECESSARY)	LS	1	
21.	DISINFECTION & TESTING	LS	1	

EROSION CONTROL QUANTITIES (PRIVATE)

NO	ITEM	UNIT	QTY
	GRADING CONTRACTOR		
1.	CONSTRUCTION ENTRANCE	EA	1
2.	SILT FENCE	LF	1363
	PAVING CONTRACTOR		
1.	SEED ALL DISTURBED AREAS	LS	1
2.	CONCRETE WASHOUT	EA	1



LOCATION MAP
SCALE: 1"=2000'

CARLTON LANDING PHASE 8
WATER LINE PLANS

WATER - GENERAL NOTES

1. ALL FILL AREAS INDICATED SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY PRIOR TO CONSTRUCTION.
2. ALL WORK NOT CLASSIFIED AS A "PAY ITEM" SHALL BE CONSIDERED INCIDENTAL CONSTRUCTION, THE COST OF WHICH SHALL BE INCLUDED IN THE COST OF OTHER BID ITEMS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION: DAMAGE TO ANY UTILITIES OR STRUCTURE DURING EXCAVATION AND CONSTRUCTION OF PROPOSED WATER MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ALL CAST IRON OR DUCTILE IRON FITTINGS MUST BE CONCRETE LINED IN ACCORDANCE WITH AWWA C104/21.4-80. DUCTILE IRON PIPE NOMINAL WALL THICKNESS SHALL BE 0.34" FOR 12" DIAMETER PIPE, 0.30" FOR 8" DIAMETER PIPE AND 0.28" FOR 6" DIAMETER PIPE.
5. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL MEASUREMENTS PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE.
6. WATER LINE TESTING AND DISINFECTION SHALL BE DONE IN ACCORDANCE WITH OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY REGULATIONS, OAC 252:625-17-4 AND AWWA STANDARD SPECIFICATIONS. LEAKAGE MUST NOT EXCEED 10 GAL/INCH PER DIAMETER OF PIPE PER MILE OF PIPE PER 24 HOURS AT 150psi TESTING PRESSURE.
7. THE CONTRACTOR IS RESPONSIBLE FOR THE PROMPT REPLACEMENT AND/OR REPAIR OF ALL TRAFFIC CONTROL DEVICES AND APPURTENANCES DAMAGED OR DISTURBED DUE TO CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
9. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
10. THE CONTRACTOR MAY BE REQUIRED TO INSTALL ADDITIONAL EROSION CONTROL DEVICES BEFORE FLUSHING WATER LINE TO MINIMIZE EROSION AND TO REMAIN IN COMPLIANCE WITH LOCAL AND FEDERAL NPDES PERMIT REQUIREMENTS.
11. THE CONTRACTOR SHALL DISPOSE OF WATER FLUSHED FROM THE LINES TO A LOCATION APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IN NO CASE SHALL THE WATER BE FLUSHED INTO THE PAVING SUBGRADE.
12. DISINFECT ALL WATER LINES ACCORDING TO AWWA STANDARD SPECIFICATIONS. OBTAIN SAFE BACTERIOLOGICAL SAMPLES ON 2 CONSECUTIVE DAYS BEFORE PLACING THE WATER LINE INTO SERVICE.

POLYVINYL CHLORIDE PIPE (PVC) INSTALLATION NOTES

1. PIPE - PVC PRESSURE PIPE SHALL BE AWWA C-900, PRESSURE CLASS 200 AND WITH A MINIMUM DIMENSION RATIO OF FOURTEEN (DR-14).
2. FITTINGS - FITTINGS SHALL BE MECHANICAL JOINT TYPE AS SPECIFIED UNDER DUCTILE IRON FITTINGS. ALL FITTINGS SHALL HAVE POLYETHYLENE ENCASEMENT TUBING WITH A THICKNESS OF 8 MIL.
3. TRACER WIRE (CONDUCTOR) - INSTALL ONE (1) STRAND OF NUMBER TWELVE (12) GAUGE COPPER TRACER WIRE ALONG TOP OF ALL PVC PIPING. BRING TO TOP OF GROUND AND ANCHOR ALL VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES.
4. JOINT RESTRAINTS - THE JOINTS SHALL BE RESTRAINED USING CONCRETE THRUST BLOCK OR MECHANICAL JOINT RESTRAINT FOR AWWA C-900. JOINT RESTRAINTS SHALL BE MANUFACTURED BY EBBA IRON SALES, INC., OR UNI-FLANGE BY THE FORD METER BOX CO., INC., OR APPROVED EQUAL.
5. WATER SERVICE CONNECTIONS - WATER SERVICE CONNECTIONS SHALL BE STAINLESS STEEL SADDLE AND GASKET.

CARLTON LANDING

SHEET NO.	
W1	TITLE SHEET, SUMMARY OF QUANTITIES, & VICINITY MAP
FP1-FP2	FINAL PLAT
W2	WATER LINE GENERAL LAYOUT
W3-W7	WATER LINE PLAN & PROFILE
W-STD-01	WATER STANDARD DETAILS
W-STD-02	WATER STANDARD DETAILS
W-STD-03	WATER STANDARD DETAILS
W-STD-04	WATER STANDARD DETAILS
EC	EROSION CONTROL PLAN
ERO-D1 - ERO-D3	EROSION CONTROL PLAN

840-5032
1-800-522-6543

PREPARED BY:

7.14.2023

TIMOTHY W. JOHNSON — DATE
Reg. P.E. No. 12277

CONSULTING ENGINEER
REGISTERED PROFESSIONAL ENGINEER
TIMOTHY W. JOHNSON
12277
OKLAHOMA

RENEWAL DATE: 04/30/2024

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8078 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

FINAL PLAT
of

CARLTON LANDING PHASE 8

BEING A PART OF SE/4, SEC. 31, T9N, R17E, I.M.

AN ADDITION TO THE TOWN OF CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

OWNER'S CERTIFICATE AND DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That HUMPHREYS PARTNERS 2009, LLC (the "Town Founder"), hereby certifies that it is the owner of, and the only persons, firms or companies having title or interest in and to the land shown on the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma (the "Phase 8 Plat"). The Town Founder has caused the same to be surveyed and platted into lots, as shown herein, which represents a correct survey of all property included therein under this Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma, being a part of the Southeast Quarter (SE/4), Section Thirty-one (31), Township Nine (9) North, Range Seventeen (17) East of the Indian Meridian, Pittsburg County, Oklahoma.

All private lots included in this Phase 8 Plat are located within Increment District Number One as created by Town of Carlton Landing in accordance with the Local Development Act, Title 62 Oklahoma Statutes and adopted through Ordinance No. 26 on September 5, 2015.

Each lot included in this Phase 8 Plat is subject to a Declaration of Covenants, Conditions and Restrictions for Carlton Landing which was recorded on November 8, 2010 in Book 1837, Page 352 with the Pittsburg County Clerk (the "Declaration").

All roadways and common areas defined in this Phase 8 Plat are private and shall be maintained by Carlton Landing Association Inc.

Signed by the Manager this _____ day of _____, 2022.

HUMPHREYS PARTNERS 2009, LLC

By: _____
Grant Humphreys, Manager

STATE OF OKLAHOMA
SS
COUNTY OF _____

Before me, the undersigned, a notary public in and for said county and state on this _____ day of _____, 2022, personally appeared Grant Humphreys, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Manager, and duly acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such company for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

Witness my hand and seal this _____ day of _____, 2022.

My Commission Expires: _____ _____
Notary Public
My Commission No.: _____

COUNTY TREASURER'S CERTIFICATE

I, _____, do hereby certify that I am the duly qualified and acting County Treasurer of Pittsburg County and that the tax records of said county show that all taxes for the year 2021 and prior years are paid on the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma, and that the required statutory security has been deposited in the offices of the County Treasurer guaranteeing the current year's taxes.

In witness thereof said County Treasurer has caused this instrument to be executed this _____ day of _____, 2022.

_____
County Treasurer

CERTIFICATE OF PLANNING COMMISSION

I, _____, Planning Director for the Town of Carlton Landing, hereby certify that the Town of Carlton Landing Planning Commission duly approved the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma at a meeting the_____day of _____, 2022.

_____
Planning Director

ACCEPTANCE OF FINAL PLAT BY MAYOR OF CARLTON LANDING

Be it resolved by the Mayor of the Town of Carlton Landing that the Final Plat of **CARLTON LANDING PHASE 8 a**n addition to Pittsburg County, Oklahoma is hereby accepted.

Accepted by the Mayor this_____day of _____, 2022.

_____
Mayor

REGISTERED PROFESSIONAL LAND SURVEYOR'S CERTIFICATE

I, Matthew Johnson, a Professional Land Surveyor in the State of Oklahoma, do hereby certify that the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma, consisting of 2 sheets, represents a careful survey made under my supervision on the _____ day of _____, 2022, and that the plat of survey is an accurate representation of said survey and that all monuments shown hereon actually exist.

I further certify that this plat of survey meets the Oklahoma Minimum Standards for the Practice of Land Surveying as adopted by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors.

Witness my hand and seal this _____ day of _____, 2022.

_____
Matthew Johnson, P.L.S. No. 1807

STATE OF OKLAHOMA
SS
COUNTY OF OKLAHOMA

Before me, the undersigned, a notary public within and for said county and state, personally appeared Matthew Johnson, to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed.

Witness my hand and seal this _____ day of _____, 2022.

My Commission Expires: _____ _____
Notary Public
My Commission No.: _____

PROPERTY DESCRIPTION

A tract of land being a part of the Southeast Quarter (SE/4) of Section Thirty-one (31), Township Nine (9) North, Range Seventeen (17) East of the Indian Meridian, Pittsburg County, Oklahoma, being more particularly described as follows:

Commencing at the Northeast (NE) Corner of said Southeast Quarter (SE/4);

THENCE South 01°21'54" East, along and with the East line of said Southeast Quarter (SE/4), a distance of 844.47 feet to the POINT OF BEGINNING;

THENCE continuing South 01°21'54" East, along and with the East line of said Southeast Quarter (SE/4), a distance of 168.88 feet to the Northeast (NE) Corner of the recorded plat CARLTON LANDING PHASE 6;

THENCE along and with the North line of said plat CARLTON LANDING PHASE 6 the following two (2) calls:

1. on a non-tangent curve to the left having a radius of 2,127.00 feet, a chord bearing of South 48°56'55" West, a chord length of 688.22 feet and an arc length of 691.26 feet;
2. North 50°56'07" West, a distance of 663.08 feet;

THENCE departing said North line on a non-tangent curve to the right having a radius of 2,810.00 feet, a chord bearing of North 47°10'51" East, a chord length of 728.28 feet and an arc length of 730.33 feet;

THENCE South 35°44'32" East, a distance of 513.01 feet;

THENCE on a non-tangent curve to the right having a radius of 2,297.00 feet, a chord bearing of North 57°36'17" East, a chord length of 232.07 feet and an arc length of 232.17 feet to the POINT OF BEGINNING.

Containing 452,475 square feet or 10.3874 acres, more or less.

Basis of Bearing: Grid North as established by state plane datum (Oklahoma State Plane South Zone NAD83)

This property description was prepared on the _____ day of _____, 2022, by Matthew Johnson, Licensed Professional Surveyor, No. 1807.

OWNER'S NOTARY	COUNTY TREASURER	SURVEYOR	SURVEYOR'S NOTARY
		LICENSED PROFESSIONAL LAND SURVEYOR MATTHEW JOHNSON 1807 STATE OF OKLAHOMA	

FINAL PLAT
of

CARLTON LANDING PHASE 8

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8078 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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FINAL PLAT

of

CARLTON LANDING PHASE 8

BEING A PART OF SE/4, SEC. 31, T9N, R17E, I.M.

AN ADDITION TO THE TOWN OF CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

Curve Table						
Curve #	Length	Radius	Tangent	Chord Length	Chord Direction	Delta
C1	691.26'	2127.00'	348.71'	688.22'	S48°56'55"W	018°37'15"
C2	730.33'	2810.00'	367.24'	728.28'	N47°10'51"E	014°53'29"
C3	232.17'	2297.00'	116.18'	232.07'	N57°36'17"E	005°47'28"
C4	815.56'	2285.00'	412.16'	811.24'	S50°06'51"W	020°27'00"
C5	670.67'	2585.00'	337.23'	668.79'	S47°13'34"W	014°51'55"
C6	717.08'	2760.00'	360.57'	715.06'	S47°11'25"W	014°53'10"

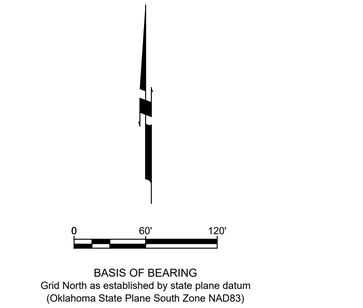
NOTES:

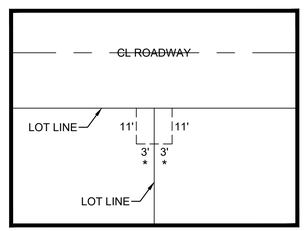
1. This plat is submitted by HUMPHREYS PARTNERS 2009, LLC. The plat consists of private lots, common areas and private roadways (collectively, the "Platted Property").
2. All private lots included in this plat are located within Increment District Number One as created by Town of Carlton Landing in accordance with the Local Development Act, Title 62 Oklahoma Statutes and adopted through Ordinance No. 26 on September 5, 2015.
3. Each lot included in this plat is subject to a Declaration of Covenants, Conditions and Restrictions for Carlton Landing which was recorded on November 8, 2010 in Book 1837, Page 352 with the Pittsburg County Clerk (the "Declaration").
4. All roadways and common areas defined in this plat are private and shall be maintained by Carlton Landing Association Inc.

- ● DENOTES FND. #3 BAR w/CAP STAMPED "J&A 1484" UNLESS OTHERWISE NOTED
- ○ DENOTES SET #3 BAR w/CAP STAMPED "J&A 1484" UNLESS OTHERWISE NOTED
- △ DENOTES SET NAIL IN "1484 J&A SHINER" UNLESS OTHERWISE NOTED

LEGEND:

P.O.C. = POINT OF COMMENCEMENT
P.O.B. = POINT OF BEGINNING
R/W = RIGHT OF WAY
= LIMITS OF NO ACCESS
NR = NOT RADIAL
B/L = BUILDING LIMIT LINE
U/E = UTILITY EASEMENT
D/E = DRAINAGE EASEMENT





* TYPICAL UTILITY EASEMENT

********** NOTE **********

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYORS AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS; AND THAT SAID FINAL PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 11 SECTION 41-108 OF THE OKLAHOMA STATE STATUTES.

FINAL PLAT

of

CARLTON LANDING PHASE 8

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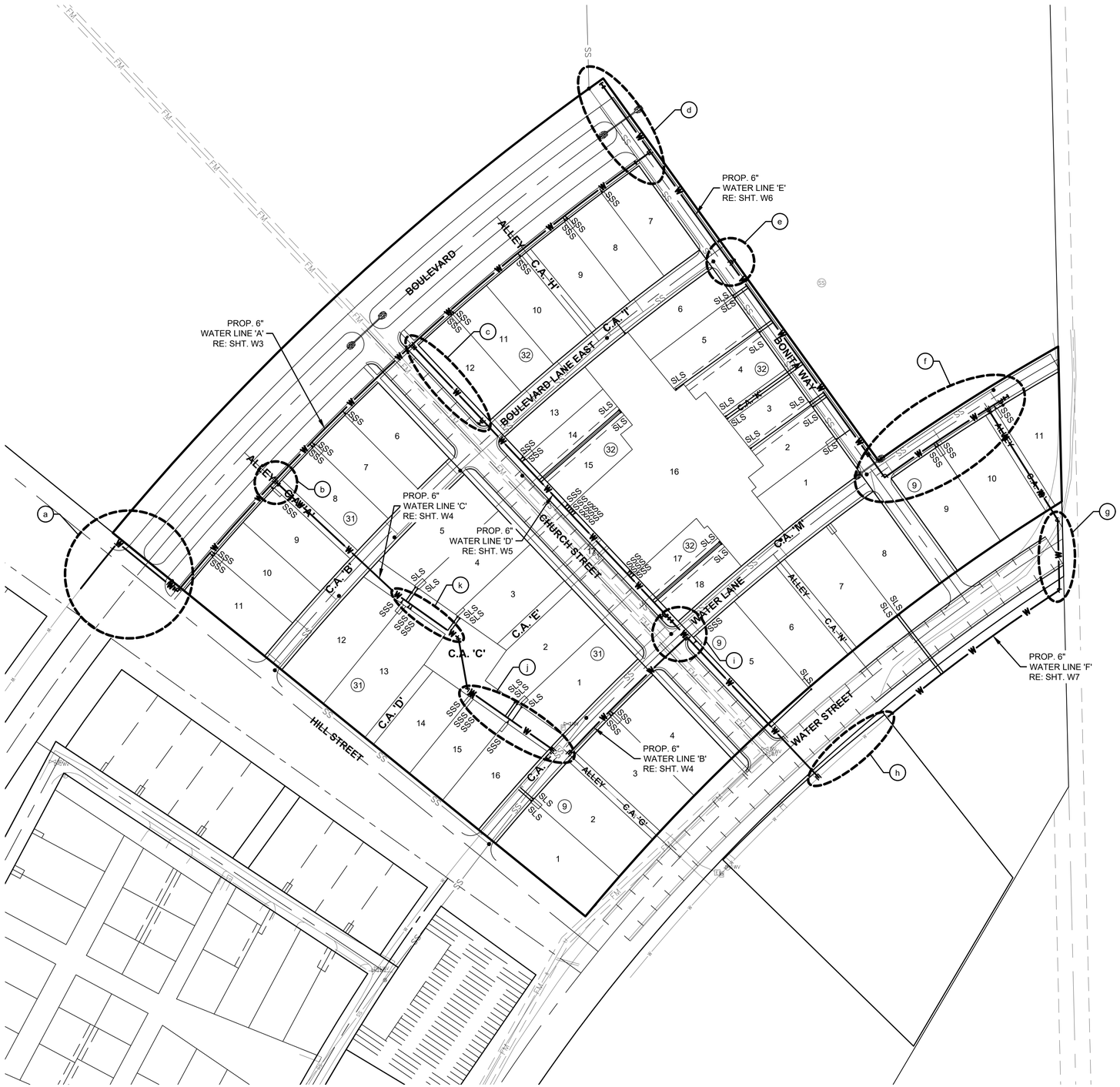
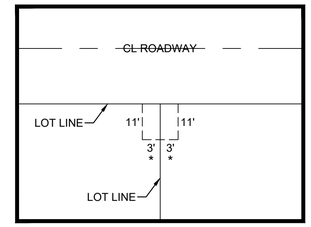




* TYPICAL UTILITY EASEMENT

(a) 1-6"x 4" TEE
1-6" GATE VALVE & BOX
1-4" GATE VALVE & BOX
2-6"x 90° BEND
1-6" SOLID SLEEVE
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)

(b) 1-6"x 6" TEE
1-6" GATE VALVE & BOX

(c) 1-6"x 6" TEE
1-6"x4" TEE
1-6" GATE VALVE & BOX
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)

(d) 1-6"x 6" TEE
2-6" GATE VALVE & BOX
1-6" PLUG w/ 2" BLOW-OFF

(e) 1-6"x 4" TEE
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)

(f) 1-6"x 6" TEE
1-6"x4" TEE
3-6" GATE VALVE & BOX
1-4" GATE VALVE & BOX
1-6"x 90° BEND
2-6"x 45° BEND
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)
1-6" PLUG w/ 2" BLOW-OFF

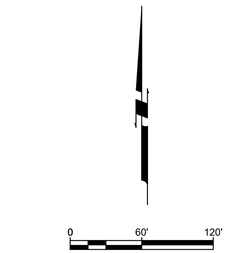
(g) 2-6"x 45° BEND

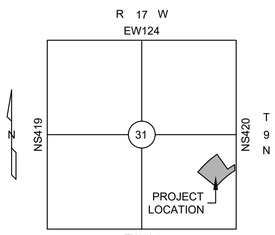
(h) 1-6"x 6" TAPPING SLEEVE (MJ)
1-6" TAPPING VALVE & BOX
1-6" SOLID SLEEVE

(i) 1-6"x 6" TEE
1-6"x4" TEE
1-6" GATE VALVE & BOX
1-4" GATE VALVE & BOX
4-6"x 45° BEND
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)

(j) 2-6"x 6" TAPPING SLEEVE (MJ)
2-6" TAPPING VALVE & BOX
1-6"x 45° BEND

(k) 1-6"x 45° BEND
1-6"x 11 1/4° BEND





LOCATION MAP
SCALE: 1"=2000'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

REVISIONS		
NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8070 www.jaokc.com
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CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

WATER LINE GENERAL LAYOUT

Proj. No.:
Date: 07-14-23
Scale: 1"=60'
Checked By:
Approved By:

SHEET NUMBER
W2

XDWG FILE LOCATION:C:\Users\MATTHEW.WATTS\Desktop\2732046 - CARLTON LANDING PHASE 8\Drawings\Plan
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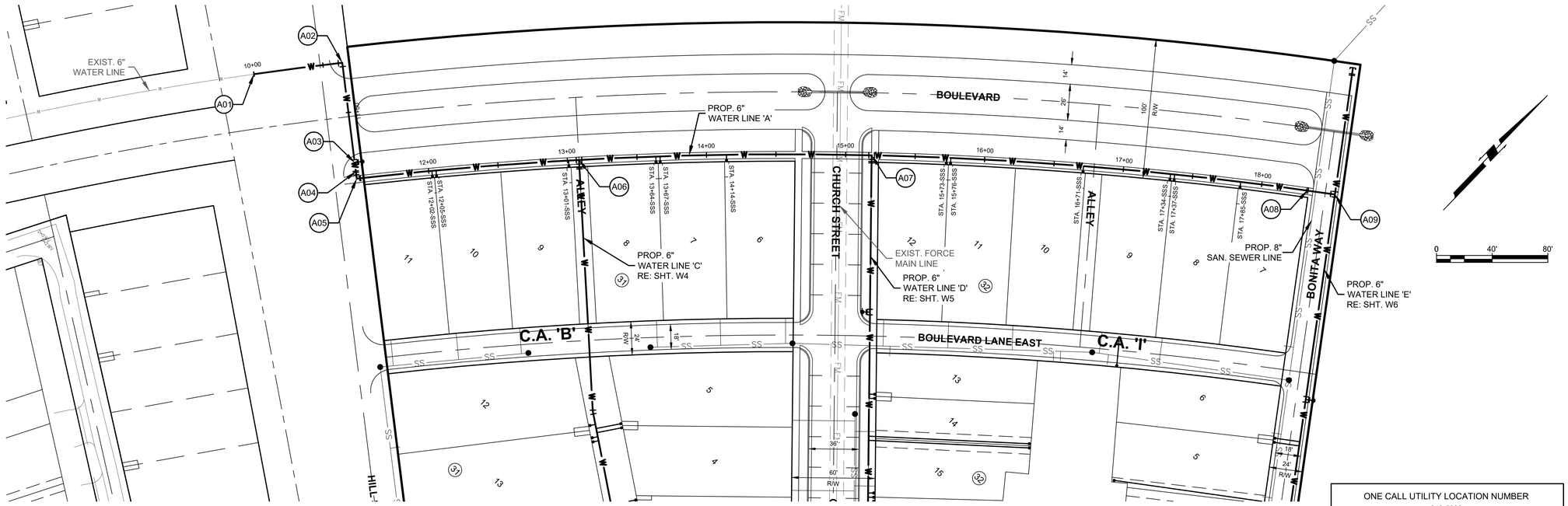


ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

A01 STA. 10+00-CL LINE 'A'
REMOVE EXIST. 6" PLUG w/ 2" BLOW-OFF
CONST. 1-6" SOLID SLEEVE
N=690878.00
E=2702466.25
FL=625.90

A02 STA. 10+63.96-CL LINE 'A'
CONST. 1-6"x 90° BEND
FL=625.90

A03 STA. 11+36.29-CL LINE 'A'
CONST. 1-6"x 4" TEE
3 LF 4" WATER LINE
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)
FL=625.90

A04 STA. 11+42.97-CL LINE 'A'
CONST. 1-6" GATE VALVE & BOX
FL=625.90

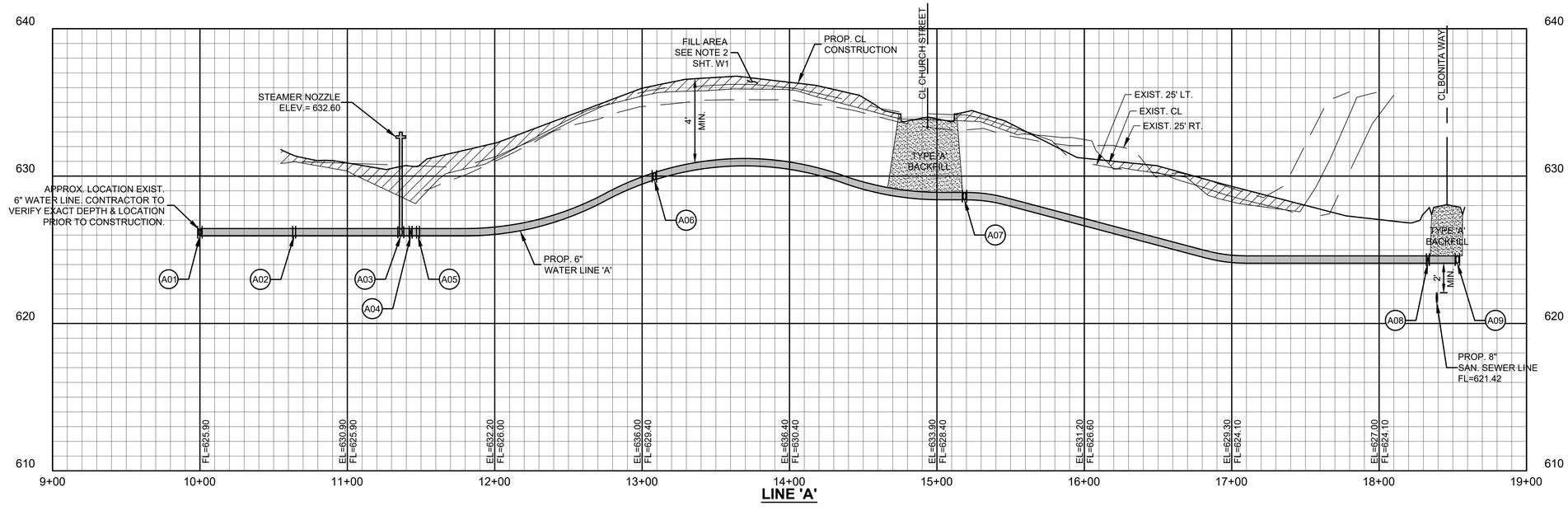
A05 STA. 11+47.97-CL LINE 'A'
CONST. 1-6"x 90° BEND
FL=625.90

A06 STA. 13+08.35-CL LINE 'A'=
STA. 10+00-CL LINE 'C'
CONST. 1-6"x 6" TEE
FL=629.70

A07 STA. 15+18.70-CL LINE 'A'=
STA. 10+00-CL LINE 'D'
CONST. 1-6"x 6" TEE
FL=628.40

A08 STA. 18+33.11-CL LINE 'A'
CONST. 1-6" GATE VALVE & BOX
FL=624.10

A09 STA. 18+53.11-CL LINE 'A'=
STA. 10+00-CL LINE 'E'
CONST. 1-6"x 6" TEE
FL=624.10



LINE 'A'

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8076 www.jaokc.com
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• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

WATER LINE PLAN & PROFILE LINE 'A'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
W3

ACAD FILE: G:\PROJECTS\2023\2320046 Pitts. Co\PLANS\W\2320046-W-TYPICAL SECTION.dwg
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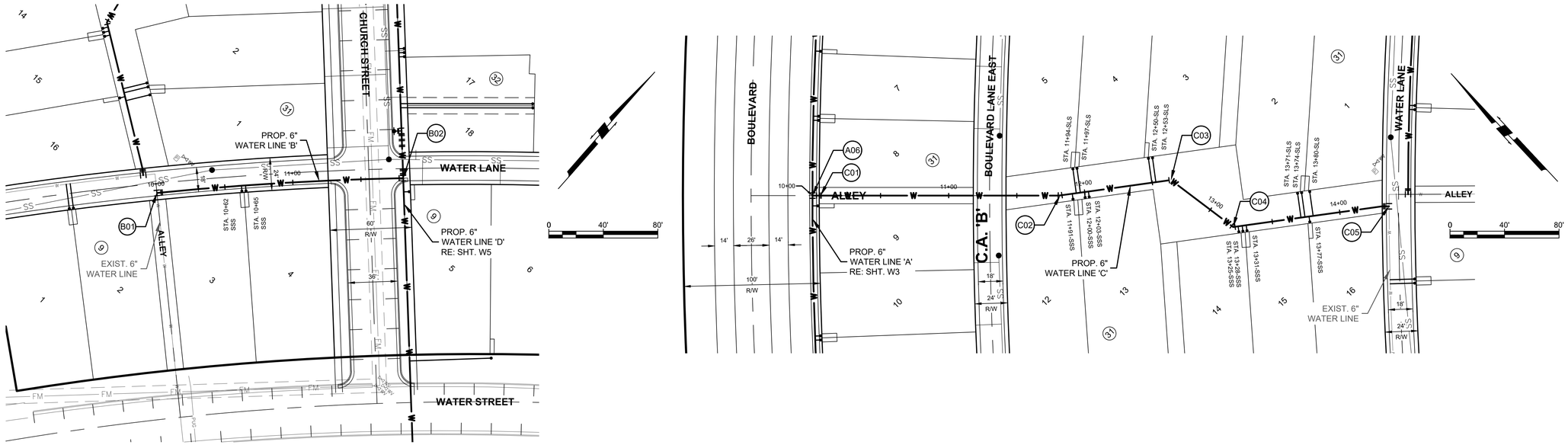


ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

B01 STA. 10+00-CL LINE 'B'
CONST. 1-6"x 6" TAPPING SLEEVE (MJ)
1-6" TAPPING VALVE & BOX
N=690697.72
E=2702997.54
FL=619.00

B02 STA. 11+81.03-CL LINE 'B'= STA. 14+37.04-CL LINE 'D'
CONST. 1-6"x 6" TEE
FL=624.40

A06 STA. 10+00-CL LINE 'C'= STA. 13+08.35-CL LINE 'A'
1-6"x 6" TEE
FL=629.70

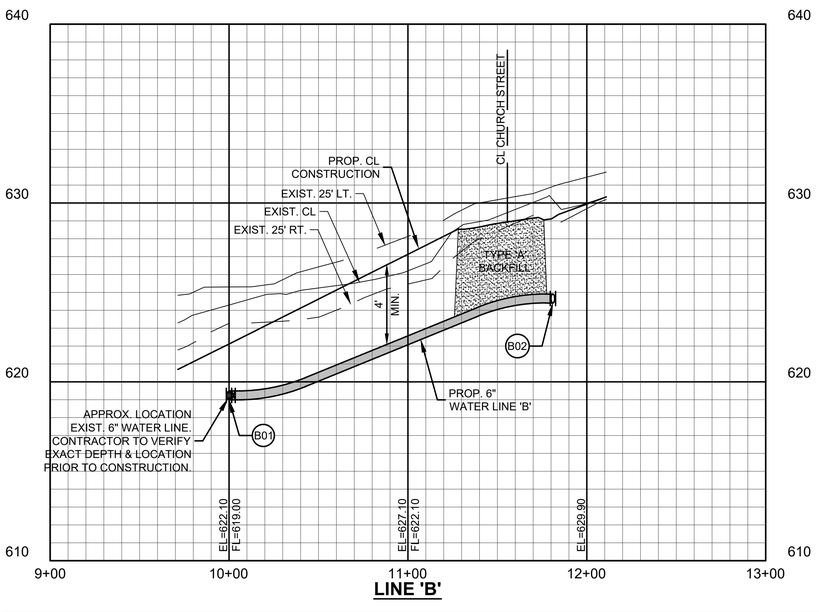
C01 STA. 10+06-CL LINE 'C'
CONST. 1-6" GATE VALVE & BOX
FL=629.70

C02 STA. 11+81.72-CL LINE 'C'
CONST. 1-6"x 11 1/4" BEND
FL=626.10

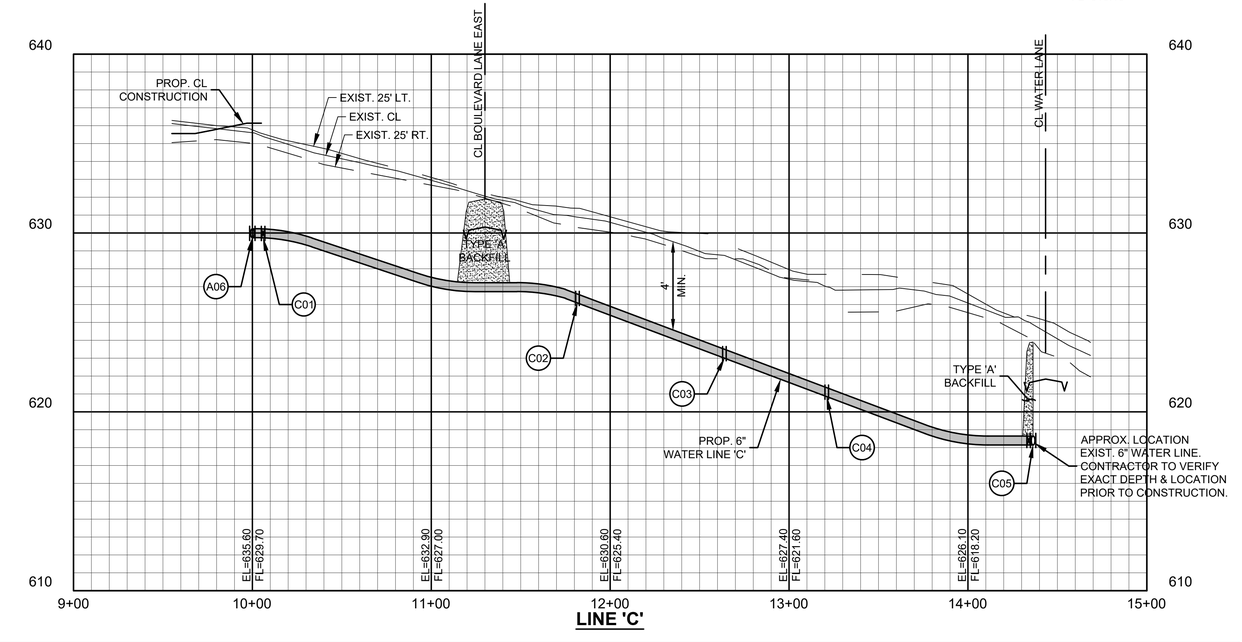
C03 STA. 12+63.88-CL LINE 'C'
CONST. 1-6"x 45° BEND
FL=623.00

C04 STA. 13+21.05-CL LINE 'C'
CONST. 1-6"x 45° BEND
FL=620.90

C05 STA. 14+36.42-CL LINE 'C'
CONST. 1-6"x 6" TAPPING SLEEVE (MJ)
1-6" TAPPING VALVE & BOX
N=690700.88
E=2702981.34
FL=618.10



LINE 'B'



LINE 'C'

NO.	REVISIONS DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8070 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

WATER LINE PLAN & PROFILE LINES 'B' & 'C'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
W4

ACAD FILE: G:\2702\2702046 Phase 8\PW\W4\W4 Plan & Profile.dwg 2702046-Title Block.dwg 2702046-LOC.dwg 2702046-hdy.dwg 2702046-tbl QUANTITIES.dwg
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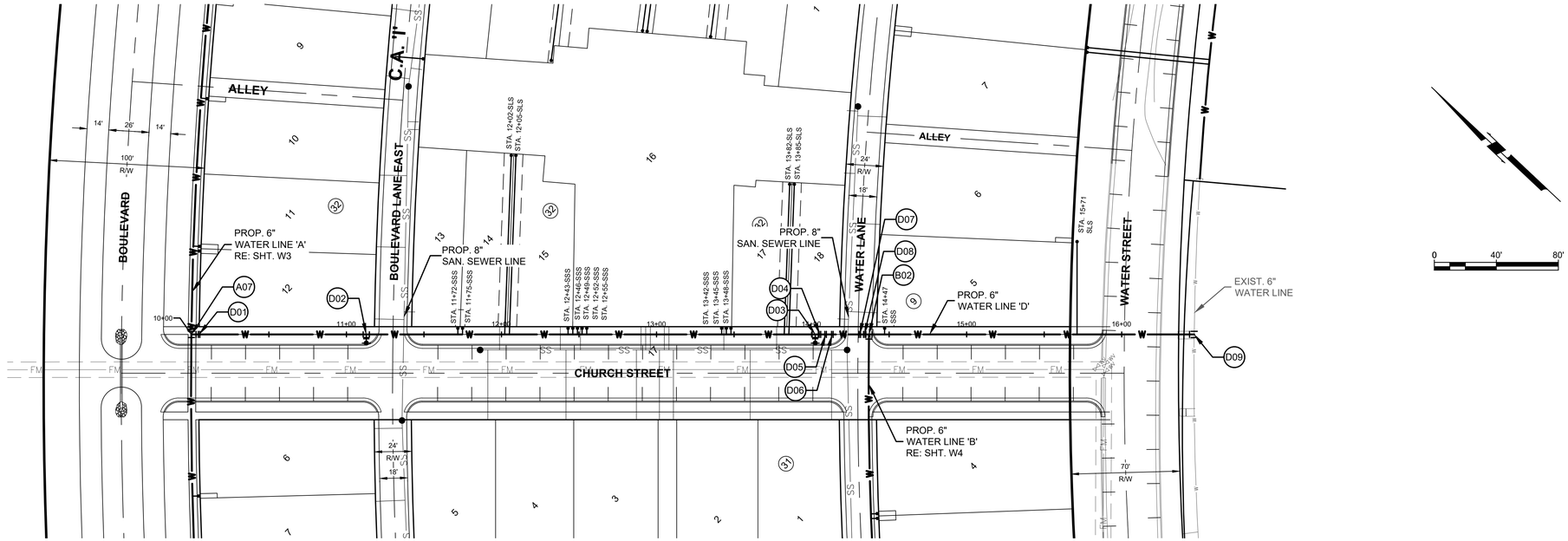


A07 STA. 10+00-CL LINE 'D'= STA. 15+18.70-CL LINE 'A'
1-6"x 6" TEE
FL=628.40

D01 STA. 10+05-CL LINE 'D'
CONST. 1-6" GATE VALVE & BOX
FL=628.40

D02 STA. 11+12.83-CL LINE 'D'
CONST. 1-6"x 4" TEE
3 LF 4" WATER LINE
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)
FL=624.60

D03 STA. 14+02.36-CL LINE 'D'
CONST. 1-6"x 4" TEE
3 LF 4" WATER LINE
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)
FL=625.60

D04 STA. 14+05.36-CL LINE 'D'
CONST. 1-6" GATE VALVE & BOX
FL=625.50

D05 STA. 14+09.06-CL LINE 'D'
CONST. 1-6"x 45° BEND (VERT.)
FL=625.50

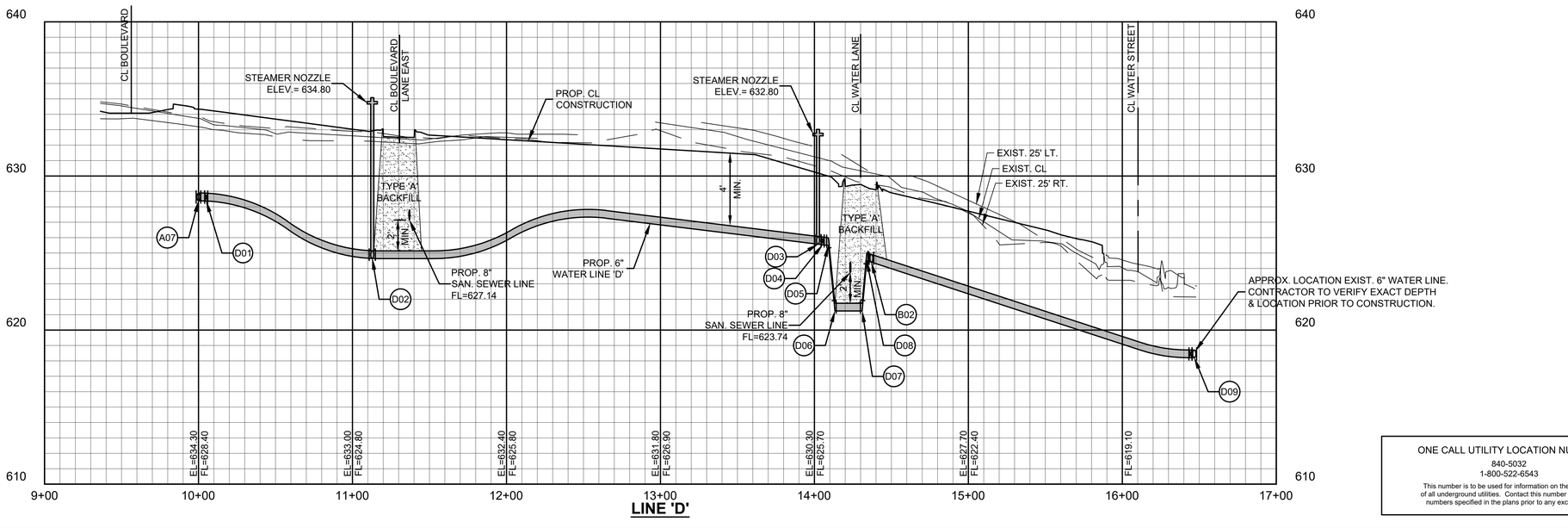
D06 STA. 14+13.36-CL LINE 'D'
CONST. 1-6"x 45° BEND (VERT.)
FL=621.20

D07 STA. 14+31.04-CL LINE 'D'
CONST. 1-6"x 45° BEND (VERT.)
FL=621.20

D08 STA. 14+34.04-CL LINE 'D'
CONST. 1-6"x 45° BEND (VERT.)
FL=624.50

B02 STA. 14+37.04-CL LINE 'D'= STA. 11+81.03-CL LINE 'B'
1-6"x 6" TEE
FL=624.40

D09 STA. 16+46.73-CL LINE 'D'
CONST. 1-6"x 6" TAPPING SLEEVE (MJ)
1-6" TAPPING VALVE & BOX
N=690672.17
E=2703269.91
FL=618.20



LINE 'D'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

NO.	REVISIONS DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 www.jaokc.com
FAX (405) 235-8070
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

WATER LINE PLAN & PROFILE LINE 'D'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
W5

K:\OKC-DIV\2732046\Proj\ENGR\WATER\Plan-Profile\2732046-PP1.dwg 2732046-LOC.dwg 2732046-tsty.dwg 2732046-EC QUANTITIES.dwg
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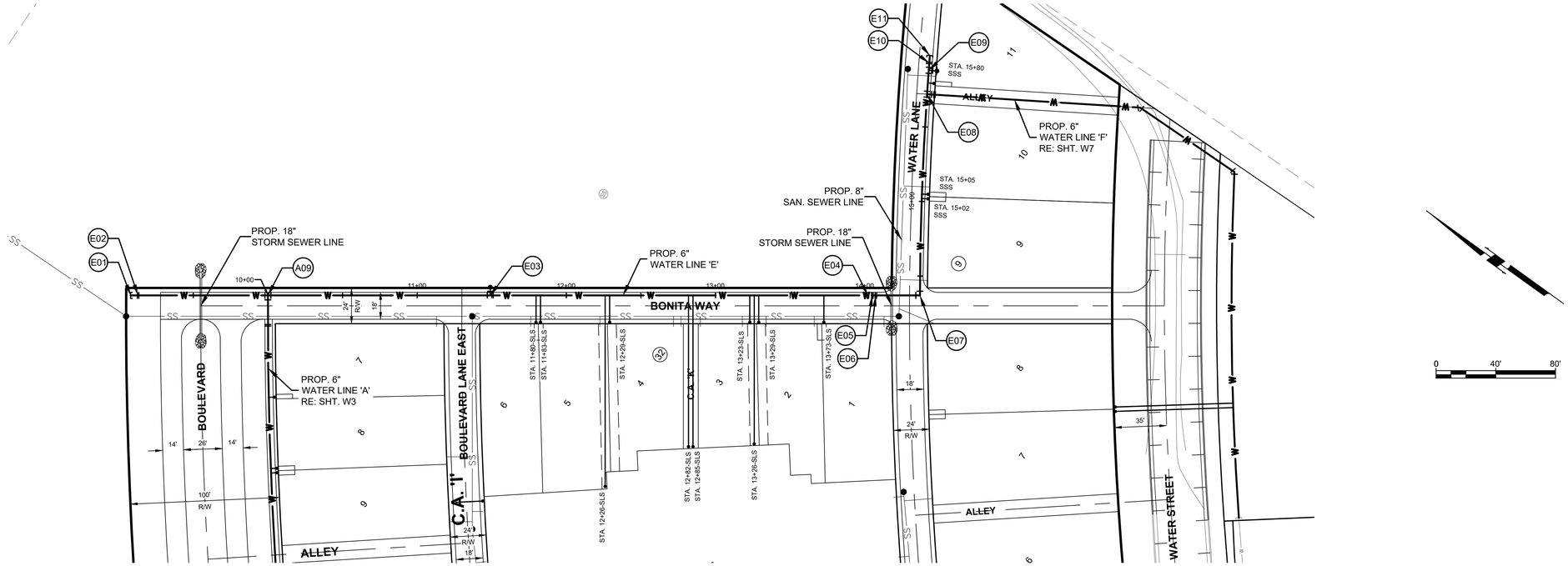


E01 STA. 9+08-CL LINE 'E'
CONST. 1-6" PLUG w/ 2" BLOW-OFF
FL=620.20

E02 STA. 9+13-CL LINE 'E'
CONST. 1-6" GATE VALVE & BOX
FL=620.20

A09 STA. 10+00-CL LINE 'E'= STA. 18+53.11-CL LINE 'A'
1-6"x 6" TEE
FL=624.10

E03 STA. 11+49.01-CL LINE 'E'
CONST. 1-6"x 4" TEE
3 LF 4" WATER LINE
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)
FL=630.80

E04 STA. 14+02.10-CL LINE 'E'
CONST. 1-6" GATE VALVE & BOX
FL=628.90

E05 STA. 14+05.10-CL LINE 'E'
CONST. 1-6"x 45° BEND (VERT.)
FL=628.80

E06 STA. 14+07.45-CL LINE 'E'
CONST. 1-6"x 45° BEND (VERT.)
FL=626.50

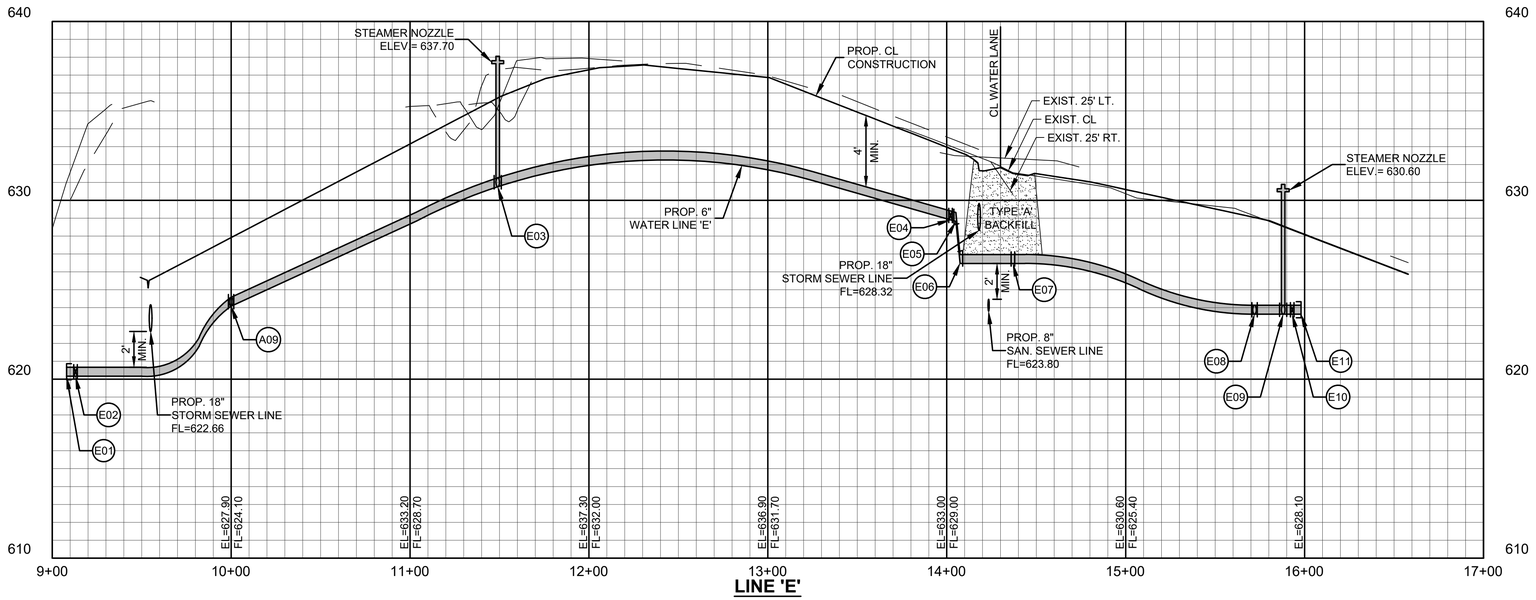
E07 STA. 14+36.99-CL LINE 'E'
CONST. 1-6"x 90° BEND
FL=626.50

E08 STA. 15+72.03-CL LINE 'E'= STA. 10+00-CL LINE 'F'
CONST. 1-6"x 6" TEE
FL=623.60

E09 STA. 15+88.05-CL LINE 'E'
CONST. 1-6"x 4" TEE
3 LF 4" WATER LINE
1-4" GATE VALVE & BOX
1-FIRE HYDRANT
1-12" RISER (IF REQ'D)
FL=623.60

E10 STA. 15+93.05-CL LINE 'E'
CONST. 1-6" GATE VALVE & BOX
FL=623.60

E11 STA. 15+98.05-CL LINE 'E'
CONST. 1-6" PLUG w/ 2" BLOW-OFF
FL=623.60



LINE 'E'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

REVISIONS

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104 www.jaokc.com
(405) 235-8075 FAX (405) 235-8070
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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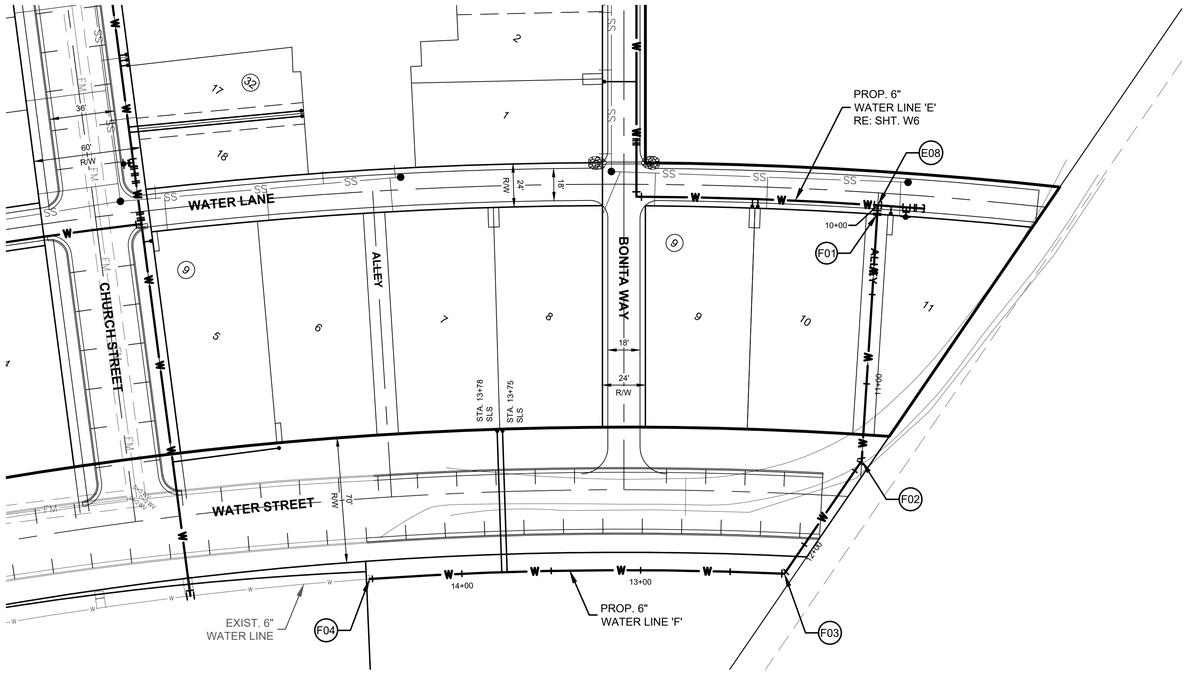
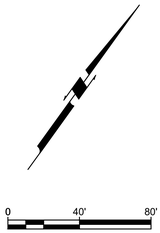
CARLTON LANDING PHASE 8
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA
WATER LINE PLAN & PROFILE
LINE 'E'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
W6





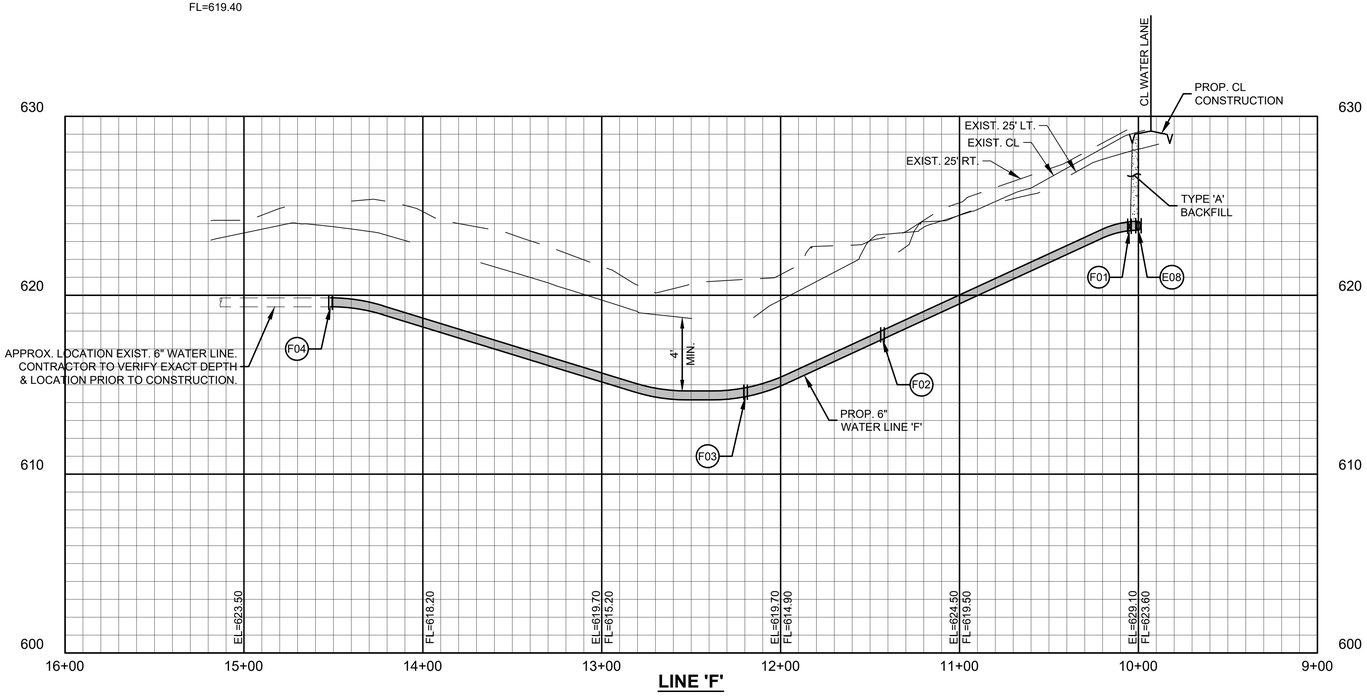
(F04) STA. 14+51.61-CL LINE 'F'
REMOVE EXIST. 6" PLUG w/ 2" BLOW-OFF
CONST. 1-6" SOLID SLEEVE
N=690738.35
E=2703345.69
FL=619.40

(F03) STA. 12+19.63-CL LINE 'F'
CONST. 1-6"x 45° BEND
FL=614.30

(F02) STA. 11+43.11-CL LINE 'F'
CONST. 1-6"x 45° BEND
FL=617.50

(F01) STA. 10+05-CL LINE 'F'
CONST. 1-6" GATE VALVE & BOX
FL=623.60

(E08) STA. 10+00-CL LINE 'F'= STA. 15+72.03-CL LINE 'E'
1-6"x 6" TEE
FL=623.60



LINE 'F'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

REVISIONS		
NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 www.jaokc.com
FAX (405) 235-8070
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

WATER LINE PLAN & PROFILE LINE 'F'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

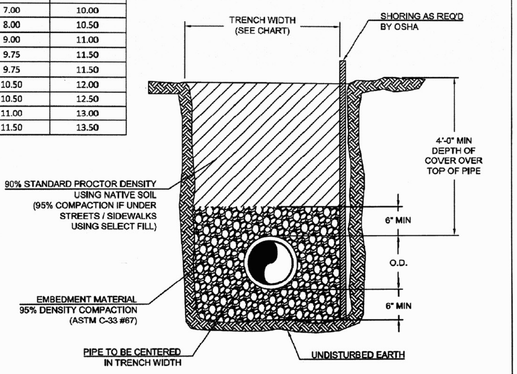
SHEET NUMBER
W7

PLOTTED: Friday, November 07, 2014 1:44:23 PM
FILE PATH: Z:\STANDARD DETAILS & WATER METER SPECIFICATIONS\UPDATED STANDARD DETAILS 2014\WATER\FINAL SHEETS\WAT-STD-DET-2014-SIGNED.DWG

WATER STANDARD DETAIL

BEDDING & TRENCHING DETAILS - STEEL PIPE

Pipe Nominal Size (Inches)	Minimum Trench Width (Feet)	Maximum Trench Width (Feet)
48	7.00	10.00
54	8.00	10.50
60	9.00	11.00
64	9.75	11.50
66	9.75	11.50
72	10.50	12.00
78	10.50	12.50
84	11.00	13.00
90	11.50	13.50



STEEL PIPE ≥ 48"

NOTE:
1. EMBEDMENT MATERIAL TO BE FREE FROM REFUSE, ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES.

W-04 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

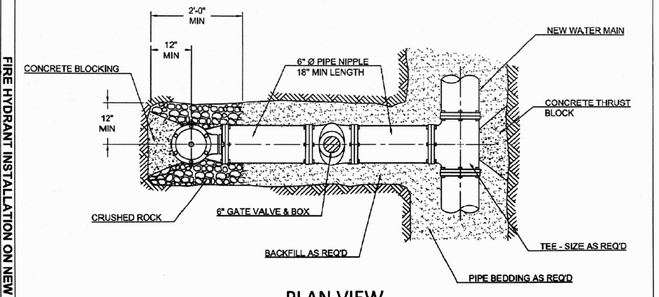
WATER STANDARD DETAIL INDEX

DRAWING NUMBER		ISSUED DATE
W-01	BEDDING & TRENCHING DETAILS - PVC PIPE	6/13/14
W-02	BEDDING & TRENCHING DETAILS - DIP < 12"	6/13/14
W-03	BEDDING & TRENCHING DETAILS - DIP > 12"	6/13/14
W-04	BEDDING & TRENCHING DETAILS - STEEL PIPE	6/13/14
W-05	FIRE HYDRANT INSTALLATION ON NEW MAIN - PAGE 1 OF 2	6/13/14
W-06	FIRE HYDRANT INSTALLATION ON NEW MAIN - PAGE 2 OF 2	6/13/14
W-07	FIRE HYDRANT INSTALLATION ON EXISTING MAIN - PAGE 1 OF 2	6/13/14
W-08	FIRE HYDRANT INSTALLATION ON EXISTING MAIN - PAGE 2 OF 2	6/13/14
W-09	FIRE HYDRANT NOZZLES THREAD DETAILS	10/30/14
W-10	CAST IRON VALVE BOX, LID & EXTENSION - PAGE 1 OF 2	6/13/14
W-11	CAST IRON VALVE BOX, LID & EXTENSION - PAGE 2 OF 2	6/13/14
W-12	WATER MANHOLE COVER	6/13/14
W-13	PVC PIPE TRACER WIRE INSTALLATION	6/13/14
W-14	2" AIR / VACUUM RELEASE VALVE INSTALLATION	6/13/14
W-15	2" BLOW OFF INSTALLATION	6/13/14
W-16	GUARD POST INSTALLATION DETAIL	6/13/14
W-17	REVERSE TAP INSTALLATION	6/13/14
W-18	PIPE BORING AND CASING INSTALLATION - PAGE 1 OF 2	6/13/14
W-19	PIPE BORING AND CASING INSTALLATION - PAGE 2 OF 2	6/13/14
W-20	SINGLE SHORT SERVICE REPLACEMENT	6/13/14
W-21	SINGLE LONG SERVICE REPLACEMENT	6/13/14
W-22	SINGLE SHORT SERVICE NEW INSTALLATION	6/13/14
W-23	SINGLE LONG SERVICE NEW INSTALLATION	6/13/14
W-24	METER BOX FOR GRASSY AREAS - PAGE 1 OF 2	6/13/14
W-25	METER BOX FOR GRASSY AREAS - PAGE 2 OF 2	6/13/14
W-26	METER BOX FOR PAVED AREAS	6/13/14
W-27	METER BOX LID FOR PAVED AREAS - 5/8" TO 1"	6/13/14
W-28	METER BOX LID FOR PAVED AREAS - 1-1/2" TO 2"	6/13/14
W-29	WATER METER VAULT INSTALLATION - PAGE 1 OF 6	6/13/14
W-30	WATER METER VAULT INSTALLATION - PAGE 2 OF 6	6/13/14
W-31	WATER METER VAULT INSTALLATION - PAGE 3 OF 6	6/13/14
W-32	WATER METER VAULT INSTALLATION - PAGE 4 OF 6	6/13/14
W-33	WATER METER VAULT INSTALLATION - PAGE 5 OF 6	6/13/14
W-34	WATER METER VAULT INSTALLATION - PAGE 6 OF 6	6/13/14
W-35	FIRE FLOW METER VAULT INSTALLATION - PAGE 1 OF 5	6/13/14
W-36	FIRE FLOW METER VAULT INSTALLATION - PAGE 2 OF 5	6/13/14
W-37	FIRE FLOW METER VAULT INSTALLATION - PAGE 3 OF 5	6/13/14
W-38	FIRE FLOW METER VAULT INSTALLATION - PAGE 4 OF 5	6/13/14
W-39	FIRE FLOW METER VAULT INSTALLATION - PAGE 5 OF 5	6/13/14
W-40	METER RELOCATION FOR STREET RESURFACING / SIDEWALKS / ADA RAMPS	6/13/14
W-41	HORIZONTAL THRUST BLOCK - BENDS - PAGE 1 OF 3	6/13/14
W-42	HORIZONTAL THRUST BLOCK - BENDS - PAGE 2 OF 3	6/13/14
W-43	HORIZONTAL THRUST BLOCK - BENDS - PAGE 3 OF 3	6/13/14
W-44	HORIZONTAL THRUST BLOCK - TEES, PLUGS, VALVES - PAGE 1 OF 2	6/13/14
W-45	HORIZONTAL THRUST BLOCK - TEES, PLUGS, VALVES - PAGE 2 OF 2	6/13/14
W-46	VERTICAL THRUST BLOCK - BENDS - PAGE 1 OF 2	6/13/14
W-47	VERTICAL THRUST BLOCK - BENDS - PAGE 2 OF 2	6/13/14

W-00 | DATE: 10/30/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: 11/03/14 | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

FIRE HYDRANT INSTALLATION ON NEW MAIN



PLAN VIEW

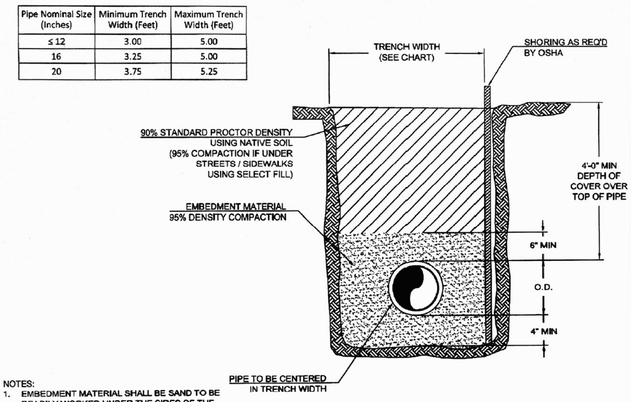
NOTES:
1. HYDRANT COLOR IS AS FOLLOWS:
   (a) "INTERNATIONAL ORANGE" (SW 4081) FOR PUBLIC
   (b) "SAFETY RED" (SW 4082) FOR PRIVATE
2. SEE DETAIL W-43 & W-44 FOR THRUST BLOCK SIZING.
3. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.

W-05 | 1 OF 2 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

BEDDING & TRENCHING DETAILS - PVC PIPE

Pipe Nominal Size (Inches)	Minimum Trench Width (Feet)	Maximum Trench Width (Feet)
≤ 12	3.00	5.00
16	3.25	5.00
20	3.75	5.25



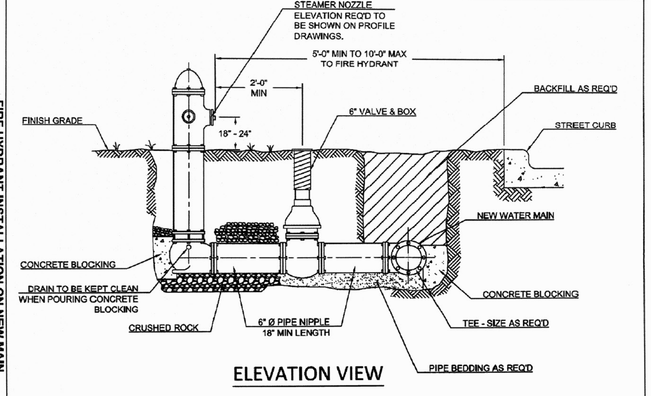
PVC PIPE

NOTES:
1. EMBEDMENT MATERIAL SHALL BE SAND TO BE READILY WORKED UNDER THE SIDES OF THE PIPE. IT SHALL BE FREE FROM REFUSE, ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES.
2. SEE DETAIL W-13 FOR TRACER WIRE INSTALLATION.

W-01 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

FIRE HYDRANT INSTALLATION ON NEW MAIN



ELEVATION VIEW

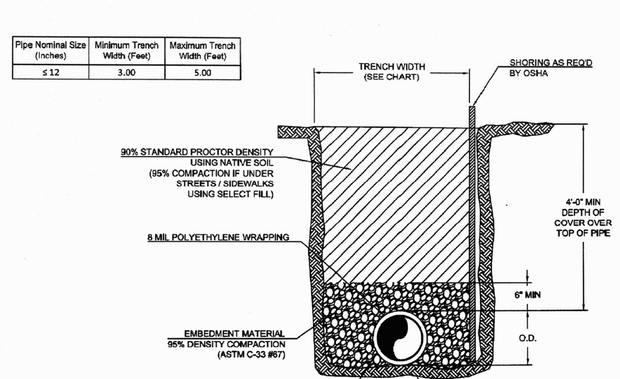
NOTES:
1. HYDRANT COLOR IS AS FOLLOWS:
(a) "INTERNATIONAL ORANGE" (SW 4081) FOR PUBLIC
(b) "SAFETY RED" (SW 4082) FOR PRIVATE
2. SEE DETAIL W-43 & W-44 FOR THRUST BLOCK SIZING.
3. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.

W-06 | 2 OF 2 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

BEDDING & TRENCHING DETAILS - DIP ≤ 12"

Pipe Nominal Size (Inches)	Minimum Trench Width (Feet)	Maximum Trench Width (Feet)
≤ 12	3.00	5.00



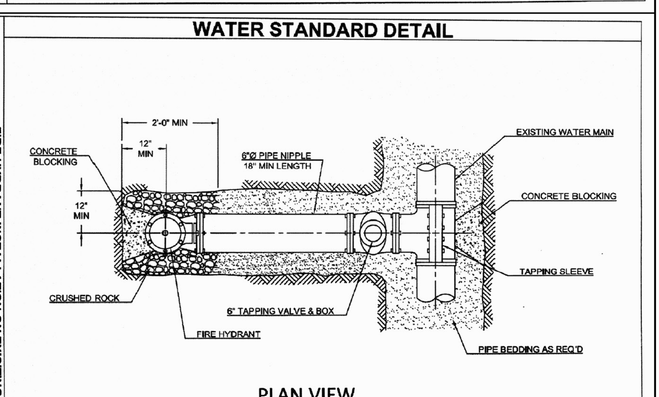
DUCTILE IRON PIPE ≤ 12"

NOTE:
1. EMBEDMENT MATERIAL TO BE FREE FROM REFUSE, ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES.

W-02 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

FIRE HYDRANT INSTALLATION ON EXISTING MAIN



PLAN VIEW

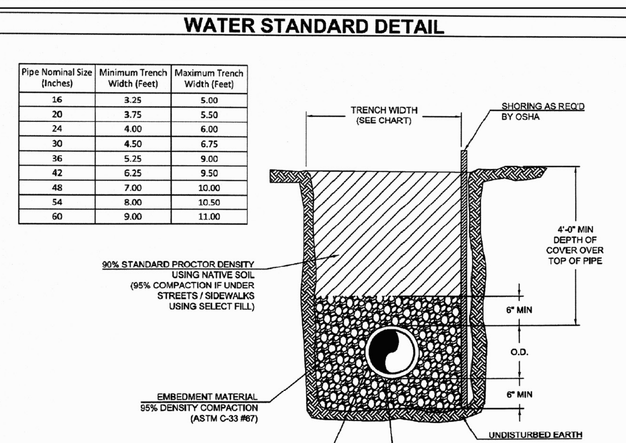
NOTES:
1. HYDRANT COLOR IS AS FOLLOWS:
(a) "INTERNATIONAL ORANGE" (SW 4081) FOR PUBLIC
(b) "SAFETY RED" (SW 4082) FOR PRIVATE
2. SEE DETAIL W-43 & W-44 FOR THRUST BLOCK SIZING.
3. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.

W-07 | 1 OF 2 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

WATER STANDARD DETAIL

BEDDING & TRENCHING DETAILS - DIP > 12"

Pipe Nominal Size (Inches)	Minimum Trench Width (Feet)	Maximum Trench Width (Feet)
16	3.25	5.00
20	3.75	5.50
24	4.00	6.00
30	4.50	6.75
36	5.25	9.00
42	6.25	9.50
48	7.00	10.00
54	8.00	10.50
60	9.00	11.00



DUCTILE IRON PIPE > 12"

NOTE:
1. EMBEDMENT MATERIAL TO BE FREE FROM REFUSE, ORGANIC MATERIAL, COBBLES, BOULDERS, LARGE ROCKS OR STONES.

W-03 | DATE: 06/13/14 | APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER | DATE: | APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR | DATE: 6/1/14

SHEET NUMBER: W-STD-01

SCALE: AS SHOWN

DRAWN BY: | DATE:
CHECKED BY: MW/SE/JW | JDS | 11/07/14

WATER STANDARD DETAILS

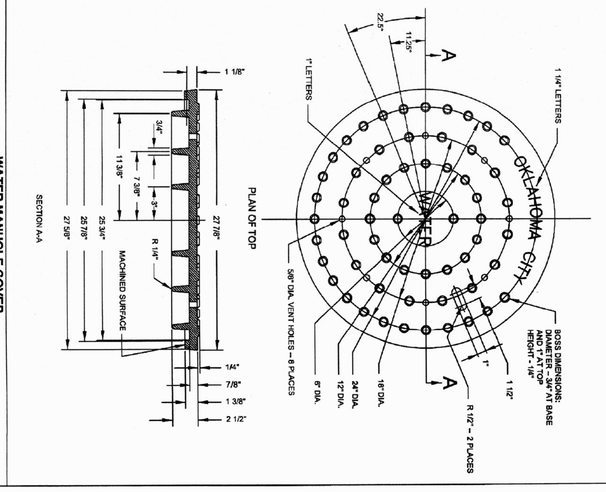
NO.	DATE	DESCRIPTION
1	11/07/14	STD DRAWING W-00 MODIFIED

The City of Oklahoma City
Utilities Department
Engineering Division

PLOTTED: Friday, November 07, 2014 1:41:37 PM
FILE PATH: Z:\STANDARD DETAILS & WATER METER SPECIFICATIONS\UPDATED STANDARD DETAILS 2014\WATER\FINAL SHEETS\WAT-STD-DET-2014-SIGNED.DWG

WATER STANDARD DETAIL

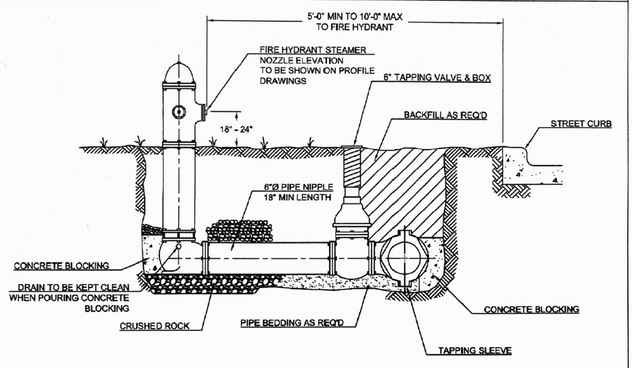
WATER MANHOLE COVER



APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-12

WATER STANDARD DETAIL

FIRE HYDRANT INSTALLATION ON EXISTING MAIN



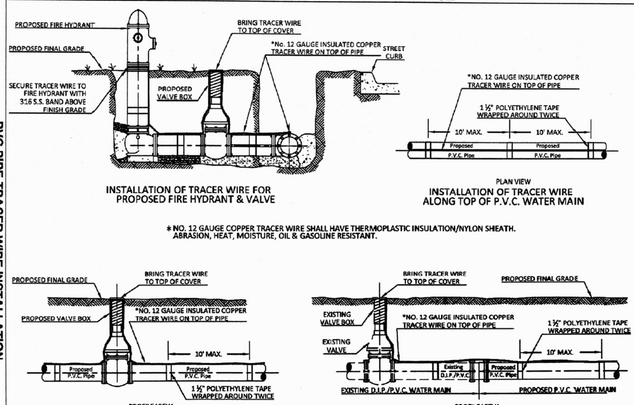
ELEVATION VIEW

NOTES:
1. HYDRANT COLOR IS AS FOLLOWS:
   (a) "INTERNATIONAL ORANGE" (SW 4081) FOR PUBLIC
   (b) "SAFETY RED" (SW 4082) FOR PRIVATE
2. SEE DETAIL W-43 & W-44 FOR THRUST BLOCK SIZING.
3. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.

APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-08 — 2 OF 2

WATER STANDARD DETAIL

PVC PIPE TRACER WIRE INSTALLATION

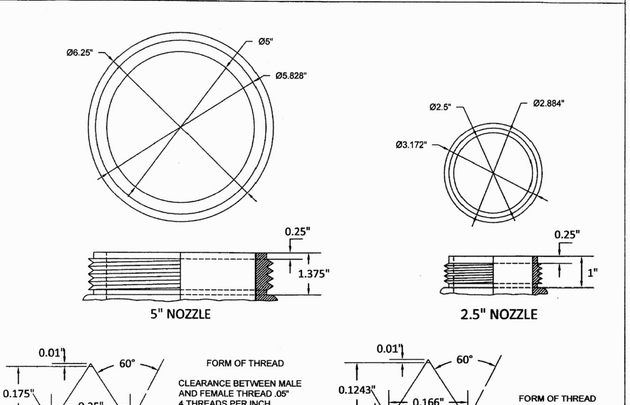


NOTES:
1. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.
2. WHEN EXISTING DIP/PVC MAIN IS TO BE EXTENDED WITH A PVC MAIN, THE CONTRACTOR SHALL EXCAVATE ALONG THE TOP OF EXISTING MAIN TO THE NEAREST EXISTING VALVE AND INSTALL A TRACER WIRE ON TOP OF EXISTING PING, AS SHOWN IN DETAIL.

APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-13

WATER STANDARD DETAIL

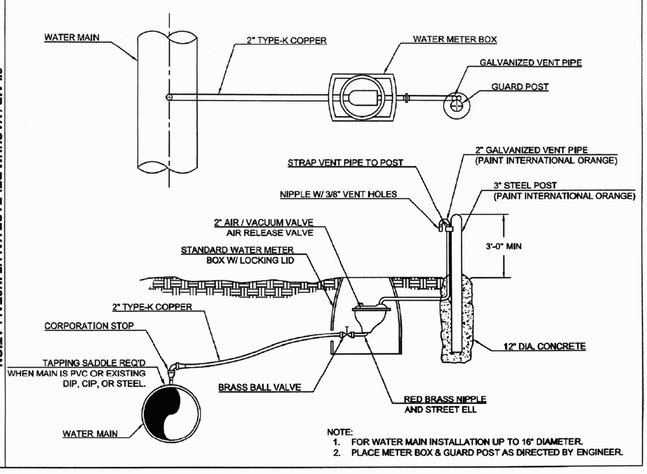
FIRE HYDRANT NOZZLES THREAD DETAILS



APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 10/30/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 11/03/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-09

WATER STANDARD DETAIL

2" AIR / VACUUM RELEASE VALVE INSTALLATION

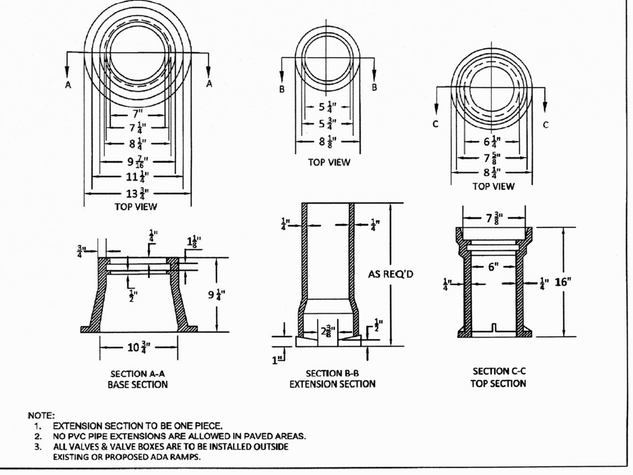


NOTE:
1. FOR WATER MAIN INSTALLATION UP TO 16" DIAMETER.
2. PLACE METER BOX & GUARD POST AS DIRECTED BY ENGINEER.

APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-14

WATER STANDARD DETAIL

CAST IRON VALVE BOX, LID & EXTENSION

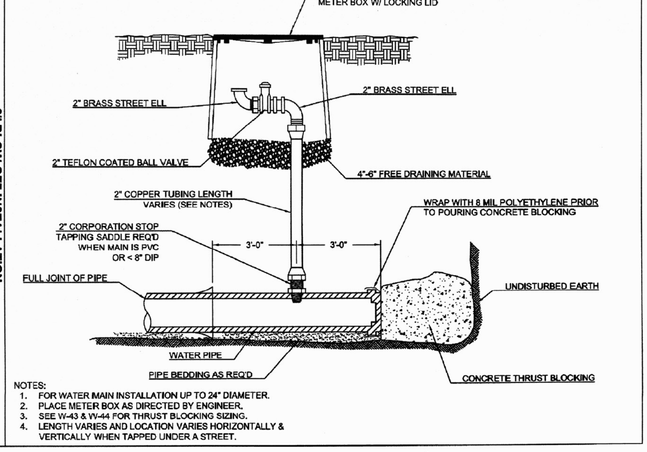


NOTE:
1. EXTENSION SECTION TO BE ONE PIECE.
2. NO PVC PIPE EXTENSIONS ARE ALLOWED IN PAVED AREAS.
3. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.

APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-10 — 1 OF 2

WATER STANDARD DETAIL

2" BLOW OFF INSTALLATION

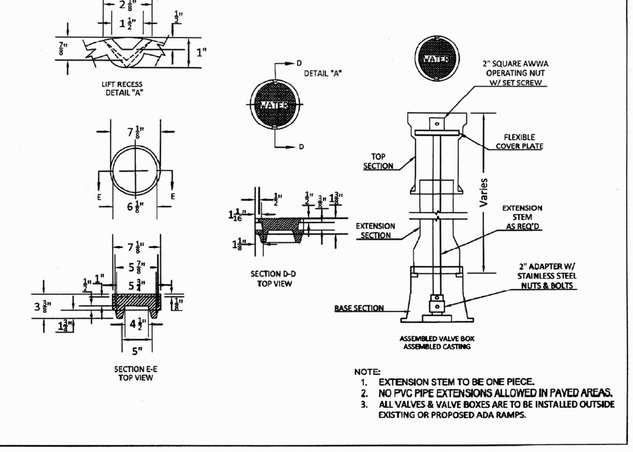


NOTES:
1. FOR WATER MAIN INSTALLATION UP TO 24" DIAMETER.
2. PLACE METER BOX AS DIRECTED BY ENGINEER.
3. SEE W-43 & W-44 FOR THRUST BLOCKING SIZING.
4. LENGTH VARIES AND LOCATION VARIES HORIZONTALLY & VERTICALLY WHEN TAPPED UNDER A STREET.

APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-15

WATER STANDARD DETAIL

CAST IRON VALVE BOX, LID & EXTENSION



NOTE:
1. EXTENSION STEM TO BE ONE PIECE.
2. NO PVC PIPE EXTENSIONS ALLOWED IN PAVED AREAS.
3. ALL VALVES & VALVE BOXES ARE TO BE INSTALLED OUTSIDE EXISTING OR PROPOSED ADA RAMPS.

APPROVED BY: ERIC J. WERNER, P.E., CITY ENGINEER — DATE: 06/13/14
APPROVED BY: MARSHA W. SLAUGHTER, P.E., UTILITIES DIRECTOR — DATE: 6/13/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-11 — 2 OF 2

SHEET NUMBER: W-STD-02
SCALE: AS SHOWN
DRAWN BY: — DATE: 11/07/14
CHECKED BY: MW/SE/JW — JDS

WATER STANDARD DETAILS

NO.	DATE	DESCRIPTION
1	11/07/14	STD DRAWING W-09 MODIFIED

The City of Oklahoma City
Utilities Department
Engineering Division

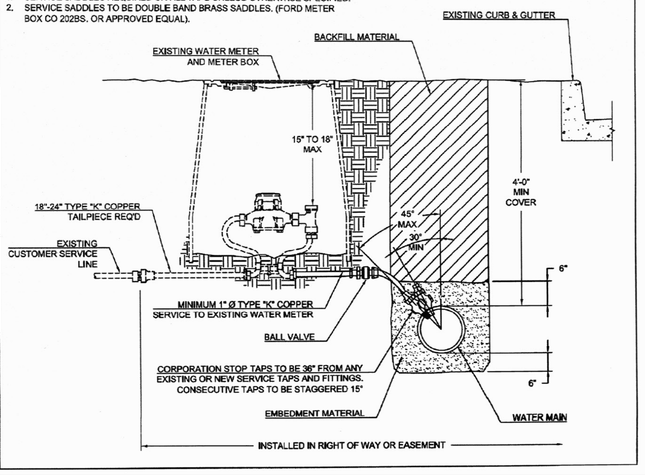
PLOTTED: Tuesday, August 26, 2014 10:19:03 AM
FILE PATH: Z:\STANDARD DETAILS & WATER METER SPECIFICATIONS\UPDATED STANDARD DETAILS 2014\WATER\FINAL SHEETS\WAT-STD-DET-2014-SIGNED.DWG

WATER STANDARD DETAIL

SINGLE SHORT SERVICE REPLACEMENT

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-20

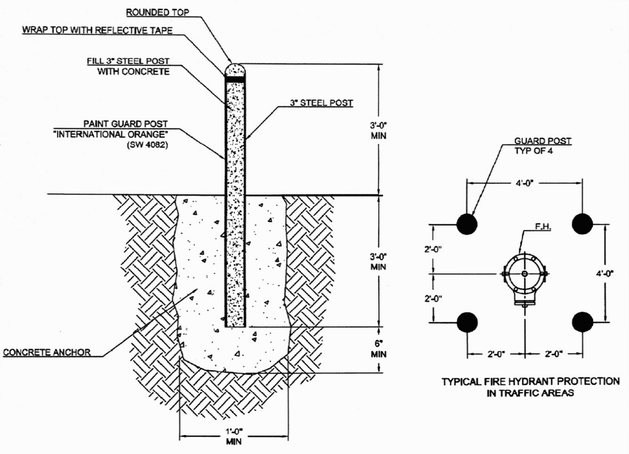
NOTE:
1. SERVICE SADDLES REQUIRED ON ALL TAPS UNLESS OTHERWISE SPECIFIED.
2. SERVICE SADDLES TO BE DOUBLE BAND BRASS SADDLES. (FORD METER BOX CO 202BS. OR APPROVED EQUAL).



WATER STANDARD DETAIL

GUARD POST INSTALLATION DETAIL

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-16



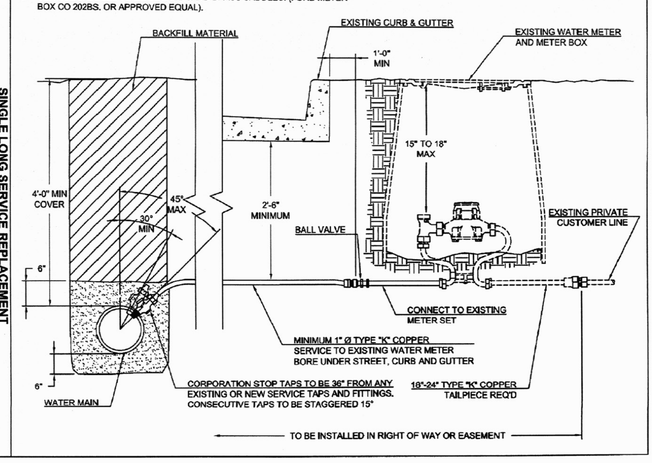
TYPICAL FIRE HYDRANT PROTECTION IN TRAFFIC AREAS

WATER STANDARD DETAIL

SINGLE LONG SERVICE REPLACEMENT

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-21

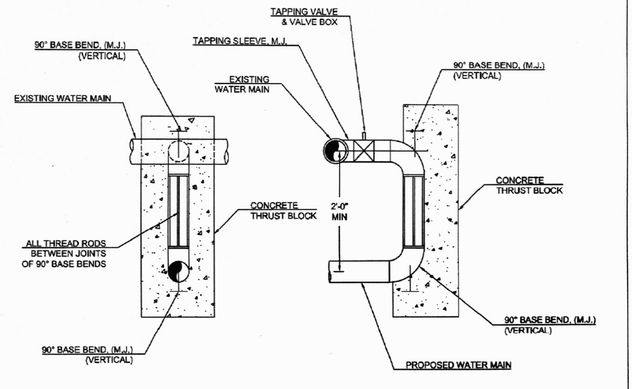
NOTE:
1. SERVICE SADDLES REQUIRED ON ALL TAPS UNLESS OTHERWISE SPECIFIED.
2. SERVICE SADDLES TO BE DOUBLE BAND BRASS SADDLES. (FORD METER BOX CO 202BS. OR APPROVED EQUAL).



WATER STANDARD DETAIL

REVERSE TAP INSTALLATION

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-17



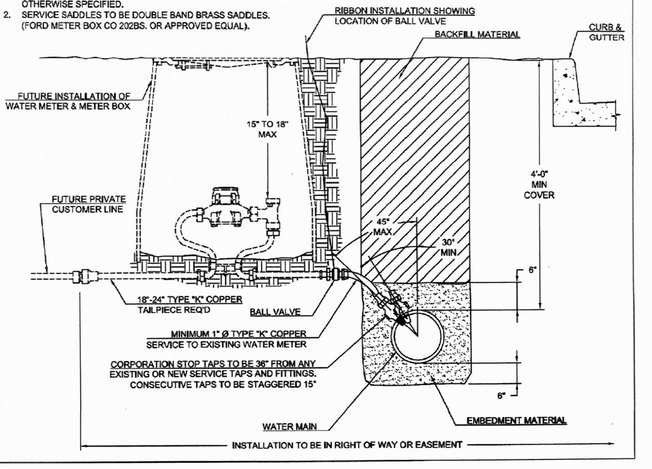
NOTE:
RESTRAIN JOINT SYSTEM OPTIONS:
(A) MEGA-LUG TYPE JOINT RESTRAINT SYSTEM ON ALL JOINTS.
(B) STAINLESS STEEL ALL THREAD RODS B/W 90° VERTICAL BASE BENDS.

WATER STANDARD DETAIL

SINGLE SHORT SERVICE NEW INSTALLATION

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-22

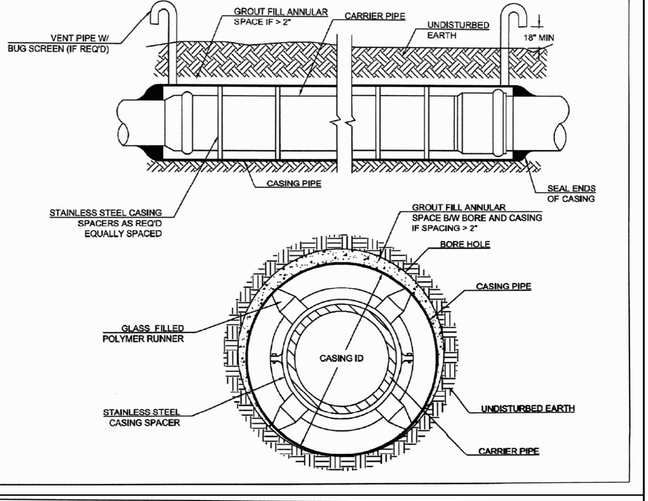
NOTE:
1. SERVICE SADDLES REQUIRED ON ALL TAPS UNLESS OTHERWISE SPECIFIED.
2. SERVICE SADDLES TO BE DOUBLE BAND BRASS SADDLES. (FORD METER BOX CO 202BS. OR APPROVED EQUAL).



WATER STANDARD DETAIL

PIPE BORING AND CASING INSTALLATION

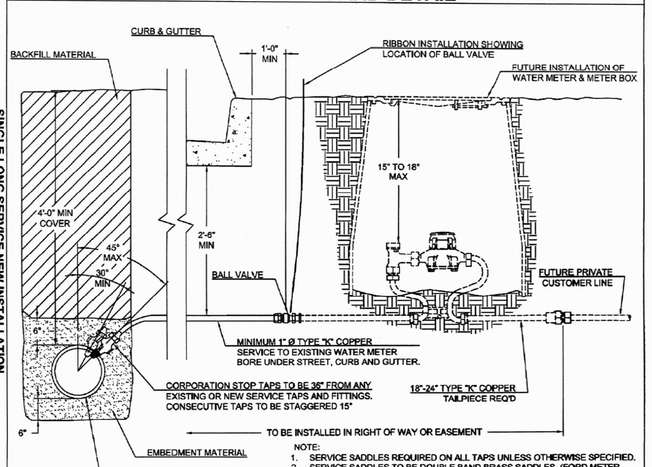
06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-18 — 1 OF 2



WATER STANDARD DETAIL

SINGLE LONG SERVICE NEW INSTALLATION

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-23



NOTE:
1. SERVICE SADDLES REQUIRED ON ALL TAPS UNLESS OTHERWISE SPECIFIED.
2. SERVICE SADDLES TO BE DOUBLE BAND BRASS SADDLES. (FORD METER BOX CO 202BS. OR APPROVED EQUAL).

WATER STANDARD DETAIL

PIPE BORING AND CASING INSTALLATION

06/13/14 DATE — APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE:
OKLAHOMA CITY UTILITIES DEPARTMENT
APPROVED BY: MARSHA W. SLAUGHTER, P.E. UTILITIES DIRECTOR — DATE: 6/11/14
W-19 — 2 OF 2

NOTE:

SEALED CASING ENDS - NEOPRENE RUBBER END SEALS SECURED WITH 316 STAINLESS STEEL BANDING REQUIRED

PLUGGED PIPE ENDS - BOTH ENDS OF THE CASING PIPE SHALL BE PLUGGED WITH A NON-SHRINK GROUT OR CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI OR GROUTED MASONRY. EACH PLUG SHALL BE A MINIMUM LENGTH OF 18", GROUTING PRESSURE SHALL NOT EXCEED THE PIPE MANUFACTURER'S RECOMMENDATIONS.

VENT PIPES - VENT PIPES SHALL BE INSTALLED ON BOTH ENDS OF CASING FOR BORINGS THAT CROSS ODOT ROADS AND RAILROAD CROSSINGS. VENTS SHALL BE 2" DIA FOR CASING SIZES =< 30-IN. VENTS SHALL BE 4" DIA FOR CASING SIZES > 30-IN. VENTS SHALL HAVE A 90 DEG BEND TO POINT TOWARDS THE GROUND AND SHALL BE PAINTED INTERNATIONAL ORANGE. BUG SCREEN SHALL BE INCLUDED ON THE OPEN END OF VENT PIPE.

CASING PIPE SIZE - STEEL CASING PIPE SHALL HAVE THE FOLLOWING MINIMUM DIAMETERS: SEE TABLE 1

CASING PIPE THICKNESS - STEEL CASING PIPE SHALL HAVE THE FOLLOWING MINIMUM THICKNESS(ES), IN INCHES, FOR THE INDICATED MAXIMUM DEPTH OF COVER(S), IN FEET: SEE TABLE 2

CASING MATERIAL - STEEL CASING PIPE SHALL CONFORM WITH ASTM A-139, STANDARD SPECIFICATION FOR ELECTRIC-FUSION (ARC) - WELDED STEEL PIPE (NPS4 AND OVER). THE STEEL MATERIAL SHALL BE NEW, SMOOTH WALL, CARBON STEEL, GRADE B, WITH A MINIMUM TENSILE STRENGTH AND MINIMUM THIRTY-FIVE-THOUSAND (35,000 PSI) POUNDS PER SQUARE INCH YIELD STRENGTH

TABLE 1
RECOMMENDED CASING SIZING

PIPE NOMINAL SIZE (INCHES)	SUGGESTED CASING PIPE INSIDE DIAMETER (INCHES)	PIPE NOMINAL SIZE (INCHES)	SUGGESTED CASING PIPE INSIDE DIAMETER (INCHES)
4	8 TO 10	20	28 TO 30
6	10 TO 12	24	31 TO 33
8	14 TO 16	30	36 TO 42
10	16 TO 18	36	42 TO 48
12	18 TO 20	42	54 TO 60
16	20 TO 22	48	60 TO 66
18	24 TO 26		

TABLE 2
CASING PIPE THICKNESS

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

SHEET NUMBER: W-STD-03
SCALE: AS SHOWN
DRAWN BY: JDS — DATE: 08/07/14
CHECKED BY: MW/SE/JW

WATER STANDARD DETAILS

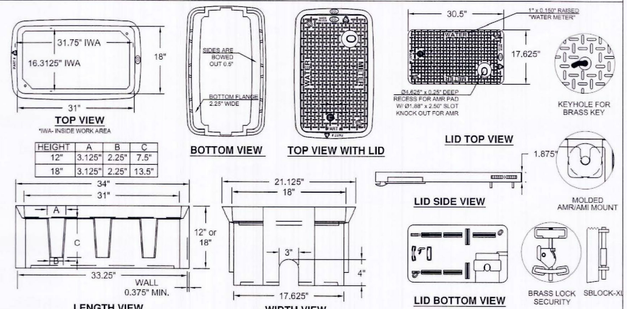
NO.	DATE	DESCRIPTION

The City of Oklahoma City
Utilities Department
Engineering Division

PLOTTED: Friday, June 05, 2015 5:01:23 PM
FILE PATH: \\CI.OKC\OKC\WW-ENGINEERINGSHARE1\STANDARD DETAILS & WATER METER SPECIFICATIONS\UPDATED WATER METER 2015\FINAL\WAT-STD-DET-2015-SIGNED.DWG

WATER STANDARD DETAIL

1 1/2" TO 2" METER BOX 21" X 34" GRASS AND PAVED AREAS

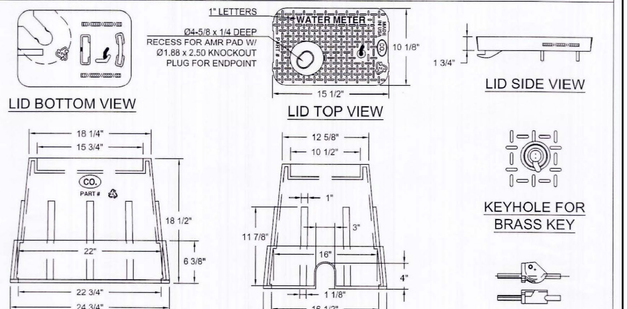


TYPICAL SPECIFICATIONS:
THE METER BOX SHALL BE HIGH-DENSITY POLYETHYLENE OF ONE-PIECE MOLDED CONSTRUCTION WITHOUT A FOAMING AGENT FOR DURABILITY AND IMPACT STRENGTH AND SHALL HAVE A SINGLE WALL DESIGN. THE METER BOX SHALL BE ABLE TO WITHSTAND AN H-20 LOADING IN NON DELIBERATE OR INCIDENTAL TRAFFIC AREAS. THE METER BOX SHALL BE BLACK TO PREVENT UV DEGRADATION. THE BOX SHALL HAVE CRUSH RESISTANT RIBBING ALONG THE OUTSIDE OF THE BOX. THE BOX SHALL BE DESIGNED IN SUCH A WAY AS TO HAVE AN INTEGRAL FLANGE TYPE LID AS SPECIFIED ON THE DRAWING. THE BOX SHALL HAVE REMOVABLE PRE-CUT PIPE ENTRY AREAS LOCATED ON THE CENTER OF EACH END (SHORT SIDE) OF THE BOX FOR SINGLE METER INSTALLATIONS. THE BOX SHALL BE DESIGNED IN SUCH A WAY AS TO BE SECURELY STACKABLE. THE BOX SHALL WEIGH NO MORE THAN 24 LBS FOR 12" HEIGHT AND 35 LBS FOR 18" HEIGHT FOR SAFETY AND EASE OF HANDLING, TRANSPORT AND INSTALLATION. ALL DIMENSIONS ARE MINIMUM PRODUCTION MEASUREMENTS AND SHALL BE IN ACCORDANCE WITH THE ABOVE DRAWING (S) FOR THE APPROPRIATE SIZE METER. COVER SHALL BE ANTI-FLOAT BLACK REBAR MOLDED POLYMER LID WITH A SINGLE WALL DESIGN AND A MINIMUM WALL DESIGN AND MINIMUM THICKNESS AS SPECIFIED. THE LID WEIGHT SHALL BE A MINIMUM OF 37 LBS. THE LID SHALL NOT HAVE A FOAMING PLASTIC OR BLOWING AGENT THAT CREATES AIR POCKETS. LID SHALL CONTAIN A MOLDED KEY HOLE DESIGN AND SECURITY BRASS LOCK. LID SHALL HAVE AN INTEGRAL MOLDED SLIDE MOUNT FOR AMR DEVICE THAT SHALL BE MOLDED AS A ONE PIECE UNIT AS SPECIFIED IN THE ABOVE DRAWING. THE LID SHALL CONTAIN THE TREAD PATTEN AS ILLUSTRATED WITH DIMENSION PER TREAD OF 0.188" X 0.938" X 0.150" DEEP. LID SHALL CONTAIN THE NAME OF THE MANUFACTURER AND PART NUMBER.THE METER BOX SHALL AND LID BE MANUFACTURED BY DFW PLASTICS, INC. OR APPROVED EQUIVALENT.

05/28/15 DATE
APPROVED BY: ERIC J. WERKER, P.E. - CITY ENGINEER DATE: 6/4/15
APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 6/4/15
OKLAHOMA CITY UTILITIES DEPARTMENT
W-28

WATER STANDARD DETAIL

5/8" TO 1" METER BOX FOR GRASSY AREAS

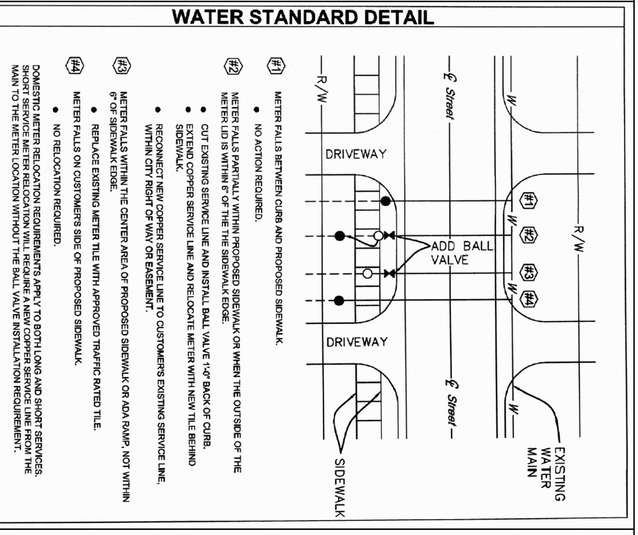


TYPICAL SPECIFICATIONS:
THE METER BOX SHALL BE HIGH-DENSITY POLYETHYLENE OF ONE-PIECE MOLDED CONSTRUCTION WITHOUT A FOAMING AGENT FOR DURABILITY AND IMPACT STRENGTH AND SHALL HAVE A SINGLE WALL DESIGN. THE METER BOX SHALL BE ABLE TO WITHSTAND AN H-20 LOADING IN NON DELIBERATE OR INCIDENTAL TRAFFIC AREAS. THE METER BOX SHALL BE BLACK. THE BOX SHALL HAVE CRUSH RESISTANT RIBBING ALONG THE OUTSIDE OF THE BOX. THE BOX SHALL BE DESIGNED IN SUCH A WAY AS TO HAVE AN INTEGRAL FLANGE TYPE LID AS SPECIFIED ON THE DRAWING. THE BOX SHALL HAVE REMOVABLE PRE-CUT PIPE ENTRY AREAS LOCATED ON THE CENTER OF EACH END (SHORT SIDE) OF THE BOX FOR THE SINGLE METER INSTALLATIONS. THE BOX SHALL BE DESIGNED IN SUCH A WAY TO BE SECURELY STACKABLE. THE BOX SHALL WEIGH NO MORE THAN 13 LBS. ALL DIMENSIONS ARE PRODUCTION MEASUREMENTS AND SHALL BE IN ACCORDANCE WITH THE ABOVE DRAWING. COVER SHALL BE ANTI-FLOAT BLACK REBAR MOLDED POLYMER LID WITH A SINGLE WALL DESIGN AND A MINIMUM WALL THICKNESS AS SPECIFIED. THE LID WEIGHT SHALL BE A MINIMUM OF 8 LBS. THE LID SHALL NOT HAVE A FOAMING PLASTIC OR BLOWING AGENT THAT CREATES AIR POCKETS. LIDS SHALL CONTAIN A MOLDED KEY HOLE DESIGN AND SECURITY BRASS LOCK. LID SHALL HAVE AN INTEGRAL MOLDED SLIDE MOUNT FOR AMR DEVICE THAT SHALL BE MOLDED AS A ONE PIECE. THE LID SHALL CONTAIN TREAD PATTERN AS ILLUSTRATED WITH DIMENSION PER TREAD OF 0.188" X 0.938" X 0.150" DEEP. LID SHALL CONTAIN THE NAME OF THE MANUFACTURER AND PART NUMBER. THE METER BOX AND LID SHALL BE MANUFACTURED BY DFW PLASTICS, INC. OR APPROVED EQUIVALENT.

05/28/15 DATE
APPROVED BY: ERIC J. WERKER, P.E. - CITY ENGINEER DATE: 6/4/15
APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 5/28/15
OKLAHOMA CITY UTILITIES DEPARTMENT
W-24

WATER STANDARD DETAIL

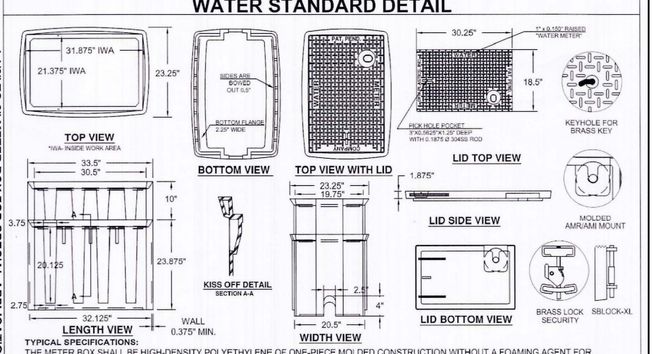
METER RELOCATION FOR STREET RESURFACING, SIDEWALKS, & ADA RAMPS



06/13/14 DATE
APPROVED BY: ERIC J. WERKER, P.E. - CITY ENGINEER DATE:
APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 6/1/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-29

WATER STANDARD DETAIL

11 1/2" TO 2" METER BOX FOR SPECIAL APPLICATION IN PAVED AREA



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05/28/15 DATE
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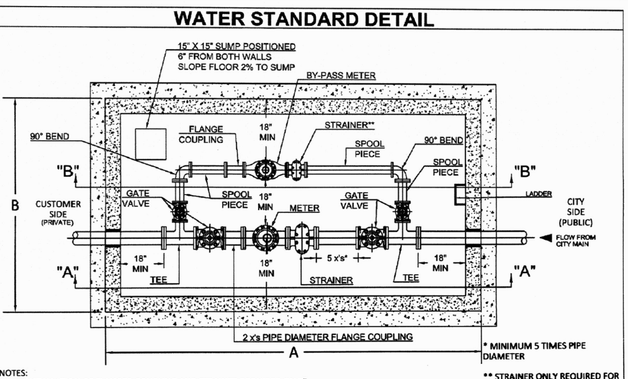
APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 5/28/15
OKLAHOMA CITY UTILITIES DEPARTMENT
W-25

WATER STANDARD DETAIL

WATER METER VAULT INSTALLATION — 1 OF 6



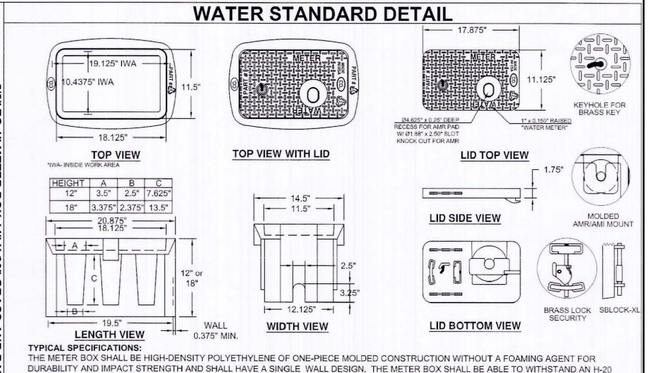
NOTES:
1. INSTALLATION OF FLANGED COUPLING AND STRAINER REQUIRED ON 3" BY-PASS METERS AND LARGER.
2. ALL DUCTILE IRON JOINTS INSIDE THE VAULT SHALL BE FLANGED.
3. PROVIDE STRAIGHT PIPE UPSTREAM AND DOWNSTREAM OF METER/STRAINER IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
4. HATCH COVER TO BE HALLIDAY OR EQUAL WITH SAFETY FALL GRATING.
5. FOR WALL AND FLOOR STEEL REINFORCEMENT REQUIREMENTS, SEE METER VAULT SHEET W-35.

Meter Size	By-Pass Size	A	B
3"	2"	12'-2"	7'-10"
4"	2"	13'-8"	7'-10"
6"	3"	16'-4"	8'-2"

06/13/14 DATE
APPROVED BY: ERIC J. WERKER, P.E. - CITY ENGINEER DATE:
APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 6/1/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-30

WATER STANDARD DETAIL

5/8" TO 1" METER BOX 14" X 20" GRASS AND PAVED AREAS



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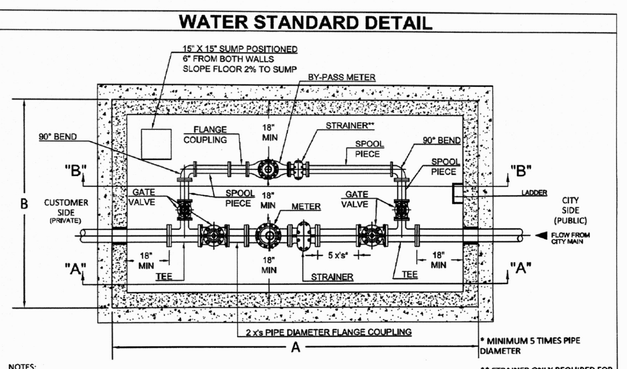
OKLAHOMA CITY UTILITIES DEPARTMENT
W-26

WATER STANDARD DETAIL

WATER METER VAULT INSTALLATION — 1 OF 8



NOTES:
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2. ALL DUCTILE IRON JOINTS INSIDE THE VAULT SHALL BE FLANGED.
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4. HATCH COVER TO BE HALLIDAY OR EQUAL WITH SAFETY FALL GRATING.
5. FOR WALL AND FLOOR STEEL REINFORCEMENT REQUIREMENTS, SEE METER VAULT SHEET W-35.

Meter Size	By-Pass Size	A	B
3"	2"	12'-2"	7'-10"
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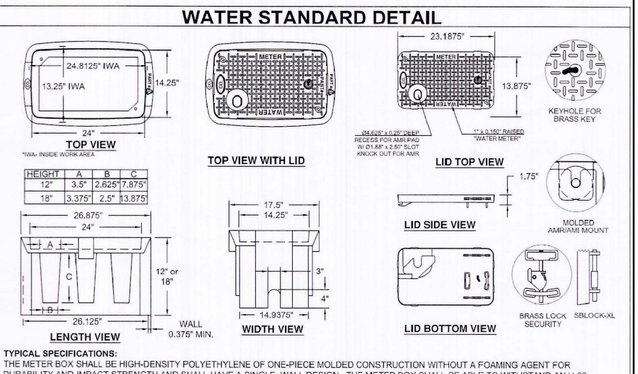
6"	3"	16'-4"	8'-2"

06/13/14 DATE
APPROVED BY: ERIC J. WERKER, P.E. - CITY ENGINEER DATE:
APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 6/1/14
OKLAHOMA CITY UTILITIES DEPARTMENT
W-30

WATER STANDARD DETAIL

11 1/2" TO 2" METER BOX 17" X 26" GRASS AND PAVED AREAS



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APPROVED BY: MARSHA W. SLAUGHTER, P.E. - UTILITIES DIRECTOR DATE: 5/28/15
OKLAHOMA CITY UTILITIES DEPARTMENT
W-27

SHEET NUMBER: W-STD-04
SCALE: AS SHOWN
DRAWN BY: MWRPP DATE: 06/05/15
CHECKED BY: MWRSEW

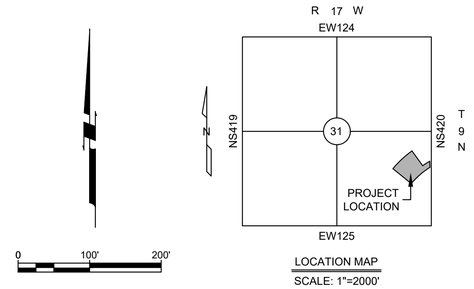
WATER STANDARD DETAILS

NO.	DATE	DESCRIPTION
1	6/4/2015	METER BOX DETAILS REVISED

The City of Oklahoma City
Utilities Department
Engineering Division

EROSION CONTROL - GENERAL NOTES

1. INSTALL PERIMETER EROSION CONTROL DEVICES PRIOR TO REMOVING TOPSOIL OR BEGINNING GRADING ACTIVITIES.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE IN AN AREA DRAINING INTO THE POLLUTION CONTROL SYSTEM.
3. CONSTRUCT ROCK BAG DITCH CHECKS AS SHOWN ON THE APPROVED PLANS AND AS NECESSARY TO PREVENT EROSION DAMAGE PRIOR TO PAVING.
4. AFTER ALL PRECIPITATION OF 0.5 INCHES OR GREATER, EROSION CONTROL FACILITIES SHALL BE INSPECTED AND MAINTAINED AS NECESSARY. COMPLETED INSPECTION FORMS SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
5. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY 7 DAYS. COMPLETED INSPECTION FORMS SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
7. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
8. MAINTAIN ALL FACILITIES UNTIL ALL PAVEMENT AND/OR GROUND COVER IS ESTABLISHED. ANY DISTURBED AREA WHICH WILL NOT SEE CONSTRUCTION ACTIVITY FOR 14 DAYS OR MORE SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 14 DAYS OF THE LAST DISTURBANCE.
9. A PERSON IN RESPONSIBLE CHARGE SHALL BE AVAILABLE DURING CONSTRUCTION HOURS TO SUPERVISE IMPLEMENTATION AND MAINTENANCE OF THE POLLUTION PREVENTION PLAN AND TO ASSIST WITH INSPECTIONS BY ANY REGULATORY AGENCY.
10. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 14 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 14 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT, SEED, SOD, MULCH OR OTHER MANNER CONSISTENT WITH THE APPROVED PLANS.
11. CONTRACTOR IS TO INSTALL ALL EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION. (COST TO BE INCLUDED IN BID ITEM FOR EROSION CONTROL.)
12. 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 PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT TOTALS 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 EUFAULA, STORM WATER QUALITY.
13. DETENTION PONDS AND SEDIMENT BASINS SHALL BE CONSTRUCTED FIRST BEFORE MASS GRADING BEGINS.



LOCATION MAP
SCALE: 1"=2000'

EROSION CONTROL QUANTITIES (PRIVATE)

NO	ITEM	UNIT	QTY
	GRADING CONTRACTOR		
1.	CONSTRUCTION ENTRANCE	EA	1
2.	SILT FENCE	LF	1363
	PAVING CONTRACTOR		
1.	SEED ALL DISTURBED AREAS	LS	1
2.	CONCRETE WASHOUT	EA	1

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8076 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

EROSION CONTROL PLAN

Proj. No.:
Date: 07-14-23
Scale: 1"=100'
Checked By:
Approved By:

SHEET NUMBER
EC

A-XCT LD: 10/27/2006 Proj= 27120646.01 Dsn= 7/11/2023 2:44 PM Drwn= Plotted: 7/11/2023 2:44 PM By: Drwn= Plotted
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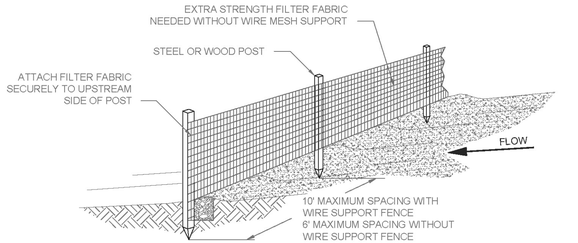
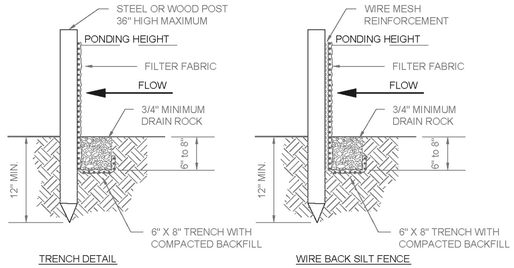
SILT FENCE





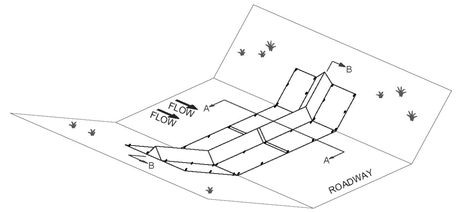
TRENCH DETAIL

WIRE BACK SILT FENCE

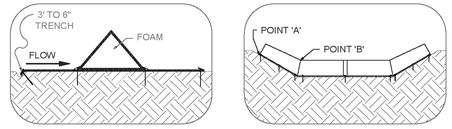
NOTES:

1. MUST BE INSTALLED PROPERLY TO AVOID NOTICE OF VIOLATION.
2. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
3. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. ACCUMULATED SEDIMENT SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE FENCE HEIGHT.
4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

TRIANGULAR SILT DIKES



SILT DAM UNIT
CUT SECTION

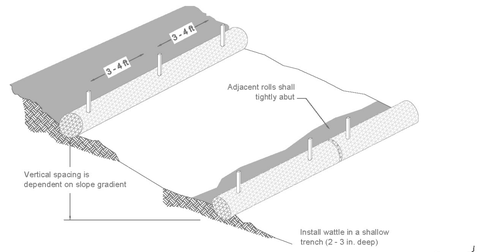


DETAIL A--A DETAIL B--B

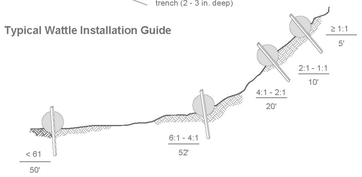
NOTES:

1. STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTERS OF THE 7' UNIT AS SHOWN IN DETAILS.
2. POINT 'A' MUST BE HIGHER THAN POINT 'B' TO ENSURE THAT THE WATER FLOWS OVER THE DAM AND NOT AROUND THE ENDS.

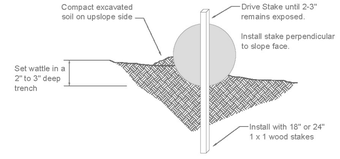
STRAW WATTLE INSTALLATION



Typical Wattle Installation Guide



Typical Wattle Spacing based on Slope Gradient



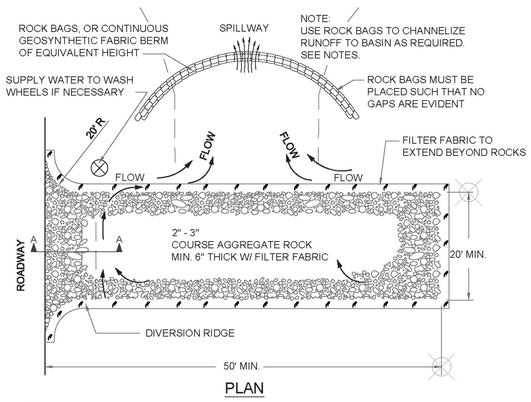
Enrichment Detail

NOTES:

1. Begin at the location where the wattle is to be installed by excavating a 2 - 3" deep x 9" wide trench along the contour of the slope. Excavated soil should be placed up-slope from the anchor trench.
2. Place the wattle in the trench so that it contours to the soil surface. Compact the soil from the excavated trench against the wattle on the uphill side. Adjacent wattles should tightly abut.
3. Secure the wattle with 18 - 24" stakes every 3 - 4' With a stake on each end. Stakes should be driven through the middle of the wattles leaving at least e - 3" of stake extending above, the wattle stakes should be driven perpendicular to slope face.

TEMPORARY ROCK CONSTRUCTION ENTERANCE / EXIT

SECTION A -- A

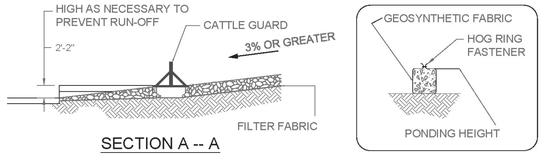


PLAN

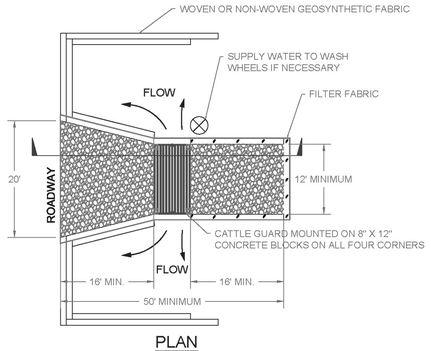
NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.

TEMPORARY ROCK CONSTRUCTION ENTERANCE / EXIT - STEEP GRADES



SECTION A -- A



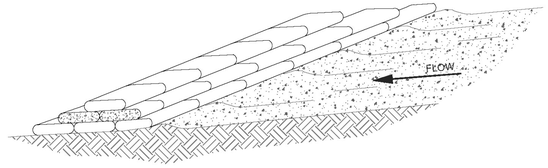
PLAN

NOTES:

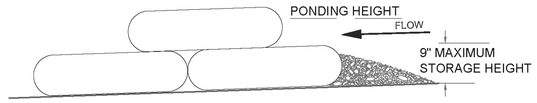
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE A MOUNTED CATTLE GUARD AND SEDIMENT PONDS TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3 WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON THE CATTLE GUARD. FIRST WASH ONE SET OF TIRES THEN, MOVE FORWARD TO WASH THE SECOND SET OF TIRES. THE GUARD IS TO BE MOUNTED ON 8" X 12" CEMENT BLOCK ON AN AREA OF STABILIZED CRUSHED STONE WITH A DRAIN INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN ON BOTH SIDES.

ROCK BAG SILT FENCE



SANDBAG BARRIER



ROCK BAG DETAIL

NOTES:

1. A 'REASONABLE' DESIGN SIZE PARTICLE MUST BE SELECTED.
2. SIZE DISTRIBUTION OR UPSTREAM SOIL PARTICLES MUST BE EVALUATED.
3. INFLOW AND OUTFLOW FROM THE SYSTEM FOR A SPECIFIC FREQUENCY STORM MUST BE KNOWN.
4. POND VOLUME IS DIRECTLY PROPORTIONAL TO THE DISCHARGE RATE OF THE SYSTEM.
5. POND VOLUME IS INVERSELY PROPORTIONAL TO THE MASS OF THE DESIGN SIZE SUSPENDED PARTICLE.
6. A SYSTEM MUST PROVIDE SUFFICIENT FLOW TO ALLOW FOR DEPOSITION OF DESIGN PARTICLES.
7. THE PONDING HEIGHT MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
8. ROCK BAG SILT BARRIER SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
9. PLACE ROCK BAG SUCH THAT NO GAPS ARE EVIDENT.
10. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
11. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

The City of Oklahoma City
Public Works Department
Engineering Division

APPROVED BY: ERIC J. WENGER, P.E.
CITY ENGINEER
DATE: 03-28-13

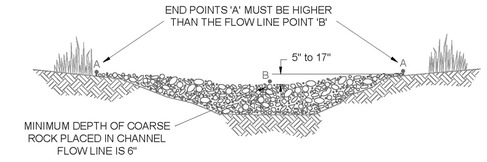
DRAWN: VSC

DATE: 03-28-13

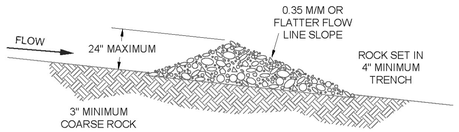
STORM WATER QUALITY EROSION CONTROL DRAWINGS

Drawing Number
ERO-D1

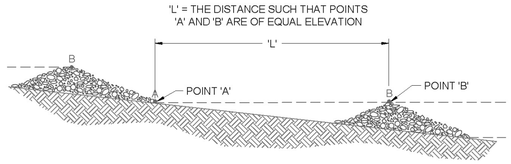
Craig\ci.okc\okc\pw-cad\ACAD-ERO\ERO-D1 VSC 03-28-13



VIEW LOOKING UPSTREAM



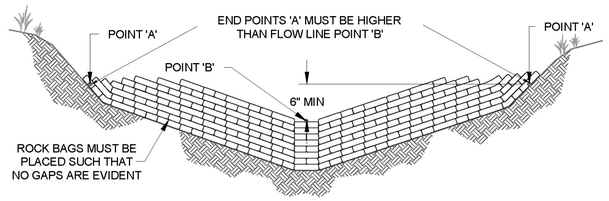
SIDE VIEW



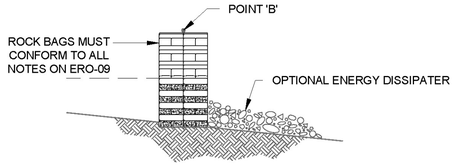
SPACING BETWEEN CHECK DAMS

D-50 OF ROCK (MM)	DOWNSTREAM FLOWLINE SLOPE OF STRUCTURE (M / M) 0.35	0.30	0.25	0.20	0.15	0.10 MAXIMUM WATER DEPTH OVER ROCK (MM)
75	15	18	20	25	33	48
150	30	36	41	50	66	100

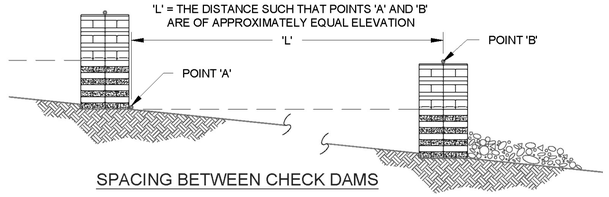
ROCK CHECK DAMS



VIEW LOOKING UPSTREAM

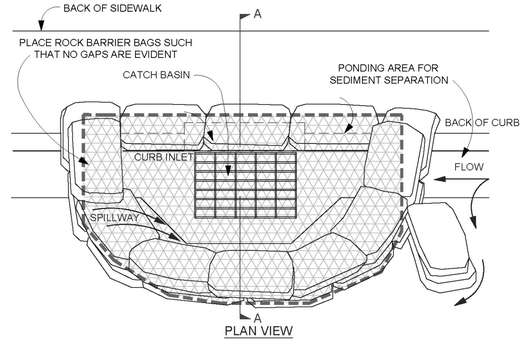


SIDE VIEW

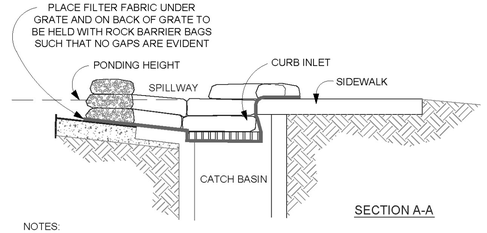


SPACING BETWEEN CHECK DAMS

ROCK BAG CHECK DAMS



PLAN VIEW

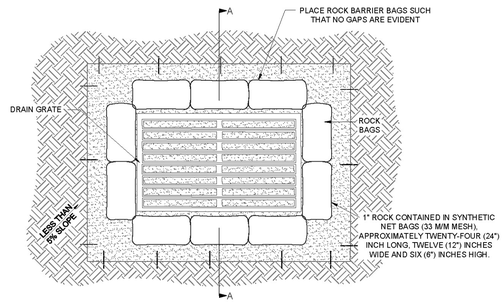


SECTION A-A

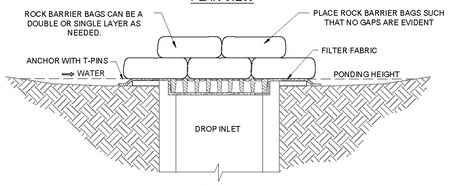
NOTES:

1. PLACE CURB TYPE ROCK BAG BARRIER ON GENTLY SLOPING STREET, 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 ONE SANDBAG 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.

ROCK BAG CURB INLET BARRIER



PLAN VIEW

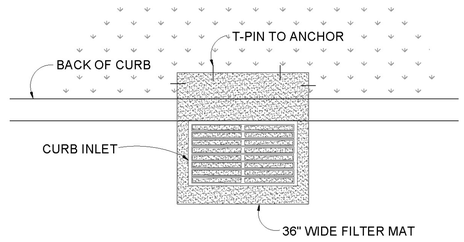


SECTION

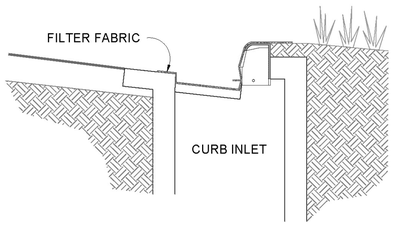
NOTE:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. USE T-PINS TO ANCHOR FIBER MAT INTO THE SOIL.
3. A "REASONABLE" DESIGN SIZE PARTICLE TO CAPTURE MUST BE SELECTED.
4. SIZE DISTRIBUTION OF UPSTREAM SOIL PARTICLES MUST BE EVALUATED.
5. INFLOW AND OUTFLOW FROM THE SYSTEM FOR A SPECIFIC FREQUENCY STORM MUST BE KNOWN.
6. POND VOLUME IS DIRECTLY PROPORTIONAL TO THE DISCHARGE RATE OF WATER FROM THE SYSTEM.
7. POND VOLUME IS INVERSELY PROPORTIONAL TO THE MASS OF THE DESIGN SIZE SUSPENDED PARTICLE.
8. A SYSTEM MUST PROVIDE SUFFICIENT FLOW TO ALLOW FOR DEPOSITION OF DESIGN SIZE PARTICLES.
9. THE PONDING HEIGHT MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

ROCK BAG / FILTER MAT DROP INLET SEDIMENT BARRIER



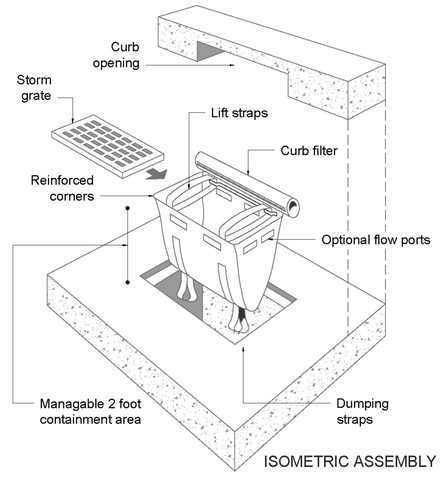
PLAN VIEW



NOTES:

1. USE FILTER MAT SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET, WITH MINIMAL NEED, WHERE WATER CAN FILTER AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET FILTER MAT SEDIMENT BARRIER

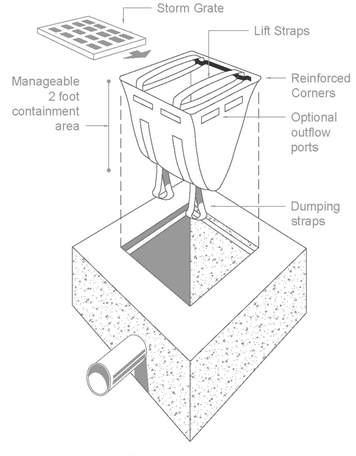


ISOMETRIC ASSEMBLY

NOTES:

1. Remove the grate from the catch basin.
2. Stand grate on end. Move the top lifting straps out of the way and place grate into the unit so that the grate is below the top straps and above the lower straps. The grate should be cradled between the upper and lower straps.
3. Holding the lifting straps, insert the grate into the inlet, being careful that the grate remains in place and being careful not to damage the unit.
4. Remove all accumulated sediment and debris from the vicinity of unit after each storm event.
5. After each storm event and at regular intervals, look into the unit. If the unit is more than 1/3 full of accumulated sediment, the unit must be emptied.
6. To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of contents. Holding the dumping straps on the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.

CURB INLET SEDIMENT BAG



ISOMETRIC ASSEMBLY

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5. After each storm event and at regular intervals, look into the unit. If the unit is more than 1/3 full of accumulated sediment, the unit must be emptied.
6. To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of contents. Holding the dumping straps on the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.

DROP INLET SEDIMENT BAG

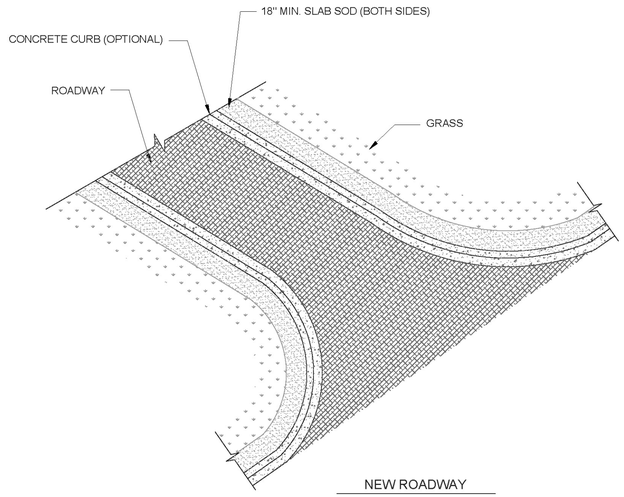
The City of Oklahoma City
Public Works Department
Engineering Division

APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE: 03-28-13
DRAWN: VSC
DATE: 03-28-13

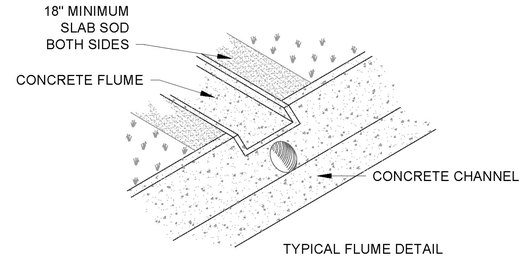
STORM WATER QUALITY EROSION CONTROL DRAWINGS

Drawing Number
ERO-D2

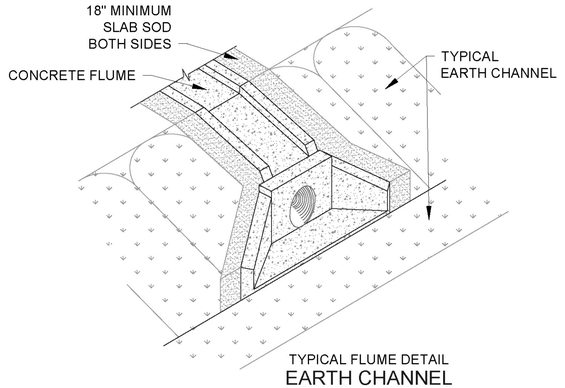
Craig\ci.okc\okc\pw-cad\ACAD-ERO\ERO-D2 VSC 03-28-13



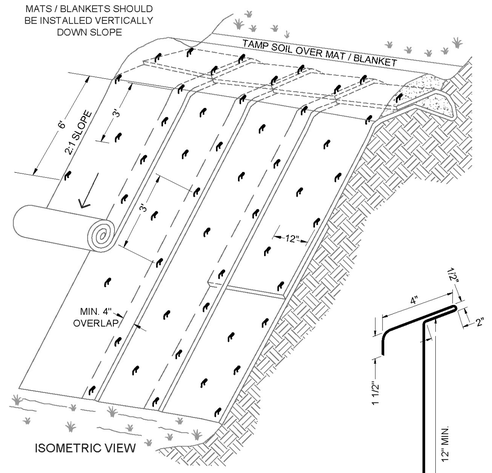
NEW ROADWAY



TYPICAL FLUME DETAIL
CONCRETE CHANNEL



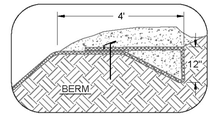
TYPICAL FLUME DETAIL
EARTH CHANNEL



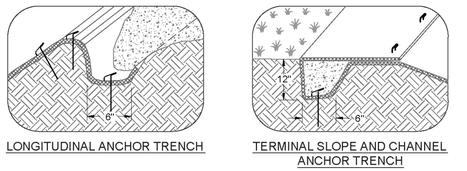
TYPICAL SLOPE
SOIL STABILIZATION

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS CLODS, STICKS AND GRASS. MATS / BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

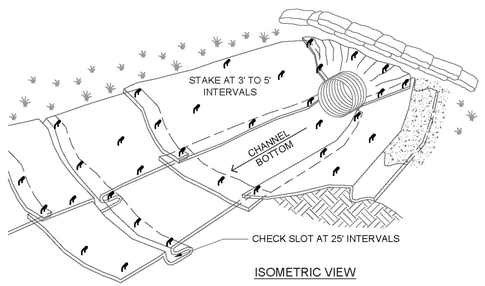


NEW ROADWAYS

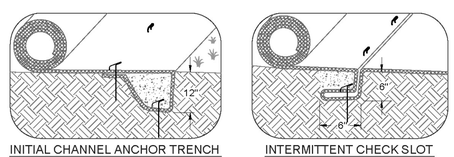


LONGITUDINAL ANCHOR TRENCH

TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH



ISOMETRIC VIEW



INITIAL CHANNEL ANCHOR TRENCH

INTERMITTENT CHECK SLOT

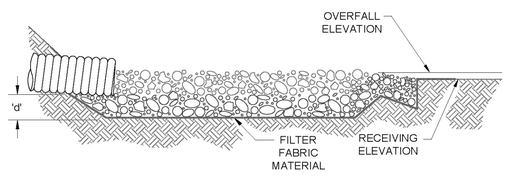
NOTES:

1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURE'S SPECIFICATIONS.
2. STAKING OF STAPLING LAYOUT PER MANUFACTURES SPECIFICATIONS.

EROSION BLANKET / TURF REINFORCEMENT MAPS

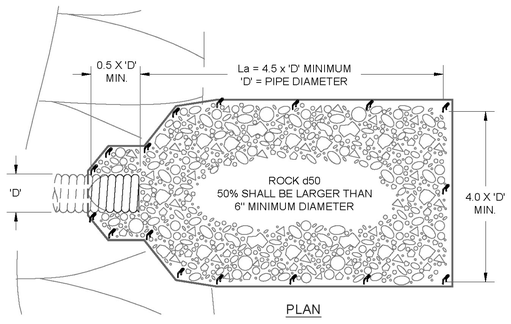
CHANNEL INSTALLATION

CONCRETE FLUME



THICKNESS ('d') = 1.5 x MAXIMUM DIAMETER - 6" MINIMUM

SECTION



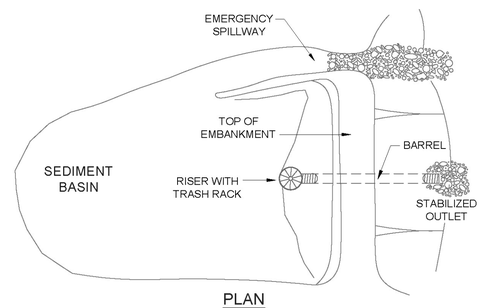
PLAN

NOTES:

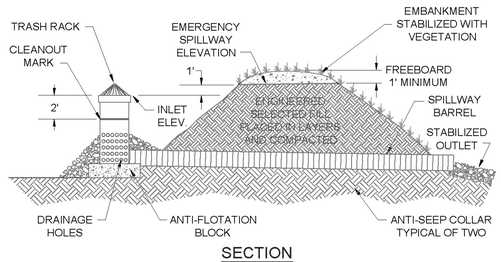
1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC.

ENERGY DISSIPATER

EROSION BLANKET / TURF REINFORCEMENT MAPS - SLOPE INSTALLATION



PLAN

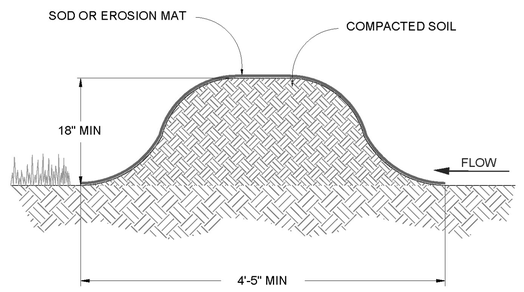


SECTION

NOTES:

1. THE TEMPORARY SEDIMENT BASIN, DESIGNED BY A QUALIFIED PROFESSIONAL, IS REQUIRED FOR DISTURBED AREAS GREATER THAN 5 ACRES WITHIN A DRAINAGE AREA LESS THAN 100 ACRES.
2. ACCUMULATED SEDIMENT SHALL BE CLEANED OUT WHEN BASIN REACHES APPROXIMATELY, 50% CAPACITY.
3. THE SEDIMENT BASIN WILL BE REMOVED WITHIN THREE YEARS.

TYPICAL SEDIMENT BASIN



TYPICAL EARTH DIKE

NOTES:

1. INSPECT AND REPAIR EARTH DIKE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. STABILIZE BERM WITH SOD OR EROSION BLANKETS.

TYPICAL EARTH DIKE

The City of Oklahoma City
Public Works Department
Engineering Division

APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE: 03-28-13
DRAWN: VSC
DATE: 03-28-13

STORM WATER QUALITY EROSION CONTROL DRAWINGS

Drawing Number
ERO-D3

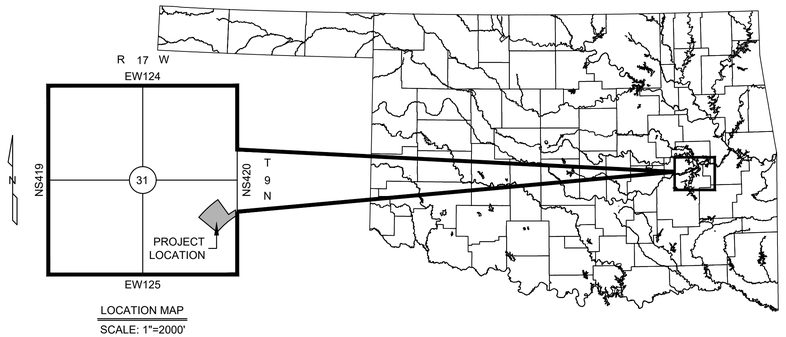
Craig\ci.okc\okc\pw-cad\ACAD-ERO\ERO-D3 VSC 03-28-13

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY	AS-BUILT
	SANITARY SEWER QUANTITIES			
	8" SANITARY SEWER LINE (SDR 35)	LF	3,437	
	4' DIA. MANHOLE	EA	17	
	EXTRA DEPTH MANHOLE WALL	VF	14	
	SEWER SERVICE CONNECTION (8"x 4" WYE)	EA	594	
	4" RISER PIPE	VF	37	
	4" SERVICE LINE	LF	783	
	TRENCHING (0'-6')	LF	1019	
	TRENCHING (6'- 8')	LF	1845	
	TRENCHING (8'- 10')	LF	267	
	TRENCHING (10'- 12')	LF	84	
	TRENCHING (12'- 14')	LF	91	
	TRENCHING (14'- 16')	LF	162	
	TYPE 'A' BACKFILL	CY	29	
	CRUSHED ROCK BEDDING (AS NECESSARY)	LS	1	
	PIPE LEAKAGE TEST	LS	1	
	PIPE DEFLECTION TEST	LS	1	
	MANHOLE TEST	LS	1	

EROSION CONTROL QUANTITIES (PRIVATE)

NO	ITEM	UNIT	QTY
	GRADING CONTRACTOR		
1.	CONSTRUCTION ENTRANCE	EA	1
2.	SILT FENCE	LF	1363
	PAVING CONTRACTOR		
1.	SEED ALL DISTURBED AREAS	LS	1
2.	CONCRETE WASHOUT	EA	1



LOCATION MAP

SCALE: 1"=2000'

CARLTON LANDING PHASE 8
SANITARY SEWER PLANS

SANITARY SEWER - GENERAL NOTES

1. ALL WORK NOT CLASSIFIED AS A "PAY ITEM" SHALL BE CONSIDERED INCIDENTAL CONSTRUCTION, THE COST OF WHICH SHALL BE INCLUDED IN THE COST OF OTHER BID ITEMS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION: DAMAGE TO ANY UTILITIES OR STRUCTURES DURING EXCAVATION AND CONSTRUCTION OF PROPOSED SANITARY SEWER MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. VITRIFIED CLAY PIPE JOINT MATERIAL SHALL CONFORM WITH ASTM C-425-72.
4. PLACE ONE CUBIC FOOT OF 3500 PSI CONCRETE AROUND EACH WYE.
5. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL MEASUREMENTS PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPT REPLACEMENT AND/OR REPAIR OF TRAFFIC CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
8. ALL SANITARY SEWER BY-PASS LINES SHALL BE FREE FROM ANY LEAKS AS TO ELIMINATE CONTAMINATION DURING BY-PASS OPERATIONS.
9. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
10. ALL FILL AREAS SHALL BE COMPLETED PRIOR TO PIPE REPLACEMENT.

EXFILTRATION TEST

1. PIPE LEAKAGE TEST SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE OKLAHOMA STATE DEPARTMENT OF HEALTH ENGINEERING BULLETIN NO. 0587, "STANDARDS FOR WATER POLLUTION CONTROL FACILITIES," PARAGRAPH 21.32, ADOPTED APRIL 2, 1987. LEAKAGE SHALL NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM. THE AIR TEST, IF USED, SHALL CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828-80, ENTITLED, "LOW PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES."

DEFLECTION TEST

1. DEFLECTION TEST SHALL BE PERFORMED ON ALL PIPE AND SHALL BE CONDUCTED AFTER THE FINAL BACKFILL HAS BEEN IN PLACE AT LEAST 30 DAYS.
2. NO PIPE SHALL EXCEED A DEFLECTION OF 5%.
3. IF THE DEFLECTION TEST IS TO BE RUN USING A RIGID BALL OR MANDREL, IT SHALL HAVE A DIAMETER EQUAL TO 95% OF THE INSIDE DIAMETER OF THE PIPE. THE TEST SHALL BE PERFORMED WITHOUT MECHANICAL PULLING DEVICES.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST ASSOCIATED WITH THIS TEST.

CARLTON LANDING

SHEET INDEX	
SHEET NO.	DESCRIPTION
S1	TITLE SHEET, SUMMARY OF QUANTITIES, & VICINITY MAP
FP1-FP2	FINAL PLAT
S2	SANITARY SEWER GENERAL LAYOUT
S3-S7	SANITARY SEWER PLAN & PROFILE
EC	EROSION CONTROL PLAN
ERO-D1 - ERO-D3	EROSION CONTROL DETAILS

ONE CALL UTILITY LOCATION NUMBER

840-5032

1-800-522-6543

This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

PREPARED BY:

7.14.2023

TIMOTHY W. JOHNSON — DATE

Reg. P.E. No. 12277

CONSULTING ENGINEER — REGISTERED PROFESSIONAL ENGINEER — TIMOTHY W. JOHNSON 12277 — OKLAHOMA

RENEWAL DATE: 04/30/2024

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8078 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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FINAL PLAT
of

CARLTON LANDING PHASE 8

BEING A PART OF SE/4, SEC. 31, T9N, R17E, I.M.

AN ADDITION TO THE TOWN OF CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

OWNER'S CERTIFICATE AND DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That HUMPHREYS PARTNERS 2009, LLC (the "Town Founder"), hereby certifies that it is the owner of, and the only persons, firms or companies having title or interest in and to the land shown on the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma (the "Phase 8 Plat"). The Town Founder has caused the same to be surveyed and platted into lots, as shown herein, which represents a correct survey of all property included therein under this Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma, being a part of the Southeast Quarter (SE/4), Section Thirty-one (31), Township Nine (9) North, Range Seventeen (17) East of the Indian Meridian, Pittsburg County, Oklahoma.

All private lots included in this Phase 8 Plat are located within Increment District Number One as created by Town of Carlton Landing in accordance with the Local Development Act, Title 62 Oklahoma Statutes and adopted through Ordinance No. 26 on September 5, 2015.

Each lot included in this Phase 8 Plat is subject to a Declaration of Covenants, Conditions and Restrictions for Carlton Landing which was recorded on November 8, 2010 in Book 1837, Page 352 with the Pittsburg County Clerk (the "Declaration").

All roadways and common areas defined in this Phase 8 Plat are private and shall be maintained by Carlton Landing Association Inc.

Signed by the Manager this _____ day of _____, 2022.

HUMPHREYS PARTNERS 2009, LLC

By: _____
Grant Humphreys, Manager

STATE OF OKLAHOMA
SS
COUNTY OF _____

Before me, the undersigned, a notary public in and for said county and state on this _____ day of _____, 2022, personally appeared Grant Humphreys, to me known to be the identical person who subscribed the name of the maker thereof to the foregoing instrument as its Manager, and duly acknowledged to me that he executed the same as his free and voluntary act and deed and as the free and voluntary act and deed of such company for the uses and purposes therein set forth. Given under my hand and seal the day and year last above written.

Witness my hand and seal this _____ day of _____, 2022.

My Commission Expires: _____ _____
Notary Public
My Commission No.: _____

COUNTY TREASURER'S CERTIFICATE

I, _____, do hereby certify that I am the duly qualified and acting County Treasurer of Pittsburg County and that the tax records of said county show that all taxes for the year 2021 and prior years are paid on the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma, and that the required statutory security has been deposited in the offices of the County Treasurer guaranteeing the current year's taxes.

In witness thereof said County Treasurer has caused this instrument to be executed this _____ day of _____, 2022.

_____
County Treasurer

CERTIFICATE OF PLANNING COMMISSION

I, _____, Planning Director for the Town of Carlton Landing, hereby certify that the Town of Carlton Landing Planning Commission duly approved the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma at a meeting the_____day of _____, 2022.

_____
Planning Director

ACCEPTANCE OF FINAL PLAT BY MAYOR OF CARLTON LANDING

Be it resolved by the Mayor of the Town of Carlton Landing that the Final Plat of **CARLTON LANDING PHASE 8 a**n addition to Pittsburg County, Oklahoma is hereby accepted.

Accepted by the Mayor this_____day of _____, 2022.

_____
Mayor

REGISTERED PROFESSIONAL LAND SURVEYOR'S CERTIFICATE

I, Matthew Johnson, a Professional Land Surveyor in the State of Oklahoma, do hereby certify that the Final Plat of CARLTON LANDING PHASE 8, an addition to the Town of Carlton Landing, Pittsburg County, Oklahoma, consisting of 2 sheets, represents a careful survey made under my supervision on the _____ day of _____, 2022, and that the plat of survey is an accurate representation of said survey and that all monuments shown hereon actually exist.

I further certify that this plat of survey meets the Oklahoma Minimum Standards for the Practice of Land Surveying as adopted by the Oklahoma State Board of Registration for Professional Engineers and Land Surveyors.

Witness my hand and seal this _____ day of _____, 2022.

_____
Matthew Johnson, P.L.S. No. 1807

STATE OF OKLAHOMA
SS
COUNTY OF OKLAHOMA

Before me, the undersigned, a notary public within and for said county and state, personally appeared Matthew Johnson, to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that he executed the same as his free and voluntary act and deed.

Witness my hand and seal this _____ day of _____, 2022.

My Commission Expires: _____ _____
Notary Public
My Commission No.: _____

PROPERTY DESCRIPTION

A tract of land being a part of the Southeast Quarter (SE/4) of Section Thirty-one (31), Township Nine (9) North, Range Seventeen (17) East of the Indian Meridian, Pittsburg County, Oklahoma, being more particularly described as follows:

Commencing at the Northeast (NE) Corner of said Southeast Quarter (SE/4);

THENCE South 01°21'54" East, along and with the East line of said Southeast Quarter (SE/4), a distance of 844.47 feet to the POINT OF BEGINNING;

THENCE continuing South 01°21'54" East, along and with the East line of said Southeast Quarter (SE/4), a distance of 168.88 feet to the Northeast (NE) Corner of the recorded plat CARLTON LANDING PHASE 6;

THENCE along and with the North line of said plat CARLTON LANDING PHASE 6 the following two (2) calls:

1. on a non-tangent curve to the left having a radius of 2,127.00 feet, a chord bearing of South 48°56'55" West, a chord length of 688.22 feet and an arc length of 691.26 feet;
2. North 50°56'07" West, a distance of 663.08 feet;

THENCE departing said North line on a non-tangent curve to the right having a radius of 2,810.00 feet, a chord bearing of North 47°10'51" East, a chord length of 728.28 feet and an arc length of 730.33 feet;

THENCE South 35°44'32" East, a distance of 513.01 feet;

THENCE on a non-tangent curve to the right having a radius of 2,297.00 feet, a chord bearing of North 57°36'17" East, a chord length of 232.07 feet and an arc length of 232.17 feet to the POINT OF BEGINNING.

Containing 452,475 square feet or 10.3874 acres, more or less.

Basis of Bearing: Grid North as established by state plane datum (Oklahoma State Plane South Zone NAD83)

This property description was prepared on the _____ day of _____, 2022, by Matthew Johnson, Licensed Professional Surveyor, No. 1807.

OWNER'S NOTARY	COUNTY TREASURER	SURVEYOR	SURVEYOR'S NOTARY
		LICENSED PROFESSIONAL LAND SURVEYOR MATTHEW JOHNSON 1807 STATE OF OKLAHOMA	

FINAL PLAT
of

CARLTON LANDING PHASE 8

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8078 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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ACAD FILE: H:\2732\2732046 Phase 8\2732046-FPLT.dwg, 7/14/2023 2:33 PM, Christie Stone
XREFS LOADED: 2732046-LOC.dwg 2732046-bdy.dwg

FINAL PLAT

of

CARLTON LANDING PHASE 8

BEING A PART OF SE/4, SEC. 31, T9N, R17E, I.M.

AN ADDITION TO THE TOWN OF CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

Curve Table						
Curve #	Length	Radius	Tangent	Chord Length	Chord Direction	Delta
C1	691.26'	2127.00'	348.71'	688.22'	S48°56'55"W	018°37'15"
C2	730.33'	2810.00'	367.24'	728.28'	N47°10'51"E	014°53'29"
C3	232.17'	2297.00'	116.18'	232.07'	N57°36'17"E	005°47'28"
C4	815.56'	2285.00'	412.16'	811.24'	S50°06'51"W	020°27'00"
C5	670.67'	2585.00'	337.23'	668.79'	S47°13'34"W	014°51'55"
C6	717.08'	2760.00'	360.57'	715.06'	S47°11'25"W	014°53'10"

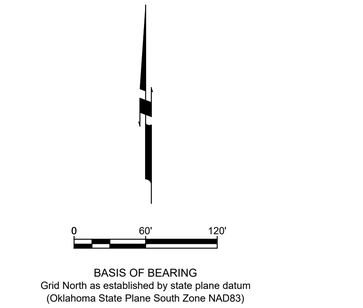
NOTES:

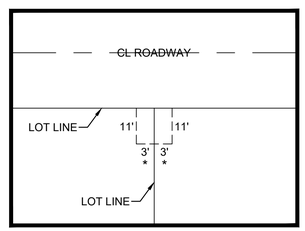
1. This plat is submitted by HUMPHREYS PARTNERS 2009, LLC. The plat consists of private lots, common areas and private roadways (collectively, the "Platted Property").
2. All private lots included in this plat are located within Increment District Number One as created by Town of Carlton Landing in accordance with the Local Development Act, Title 62 Oklahoma Statutes and adopted through Ordinance No. 26 on September 5, 2015.
3. Each lot included in this plat is subject to a Declaration of Covenants, Conditions and Restrictions for Carlton Landing which was recorded on November 8, 2010 in Book 1837, Page 352 with the Pittsburg County Clerk (the "Declaration").
4. All roadways and common areas defined in this plat are private and shall be maintained by Carlton Landing Association Inc.

- ● DENOTES FND. #3 BAR w/CAP STAMPED "J&A 1484" UNLESS OTHERWISE NOTED
- ○ DENOTES SET #3 BAR w/CAP STAMPED "J&A 1484" UNLESS OTHERWISE NOTED
- △ DENOTES SET NAIL IN "1484 J&A SHINER" UNLESS OTHERWISE NOTED

LEGEND:

P.O.C. = POINT OF COMMENCEMENT
P.O.B. = POINT OF BEGINNING
R/W = RIGHT OF WAY
= LIMITS OF NO ACCESS
NR = NOT RADIAL
B/L = BUILDING LIMIT LINE
U/E = UTILITY EASEMENT
D/E = DRAINAGE EASEMENT





* TYPICAL UTILITY EASEMENT

********** NOTE **********

THIS SURVEY MEETS THE OKLAHOMA MINIMUM STANDARDS FOR THE PRACTICE OF LAND SURVEYORS AS ADOPTED BY THE OKLAHOMA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS; AND THAT SAID FINAL PLAT COMPLIES WITH THE REQUIREMENTS OF TITLE 11 SECTION 41-108 OF THE OKLAHOMA STATE STATUTES.

FINAL PLAT

of

CARLTON LANDING PHASE 8

Johnson & Associates
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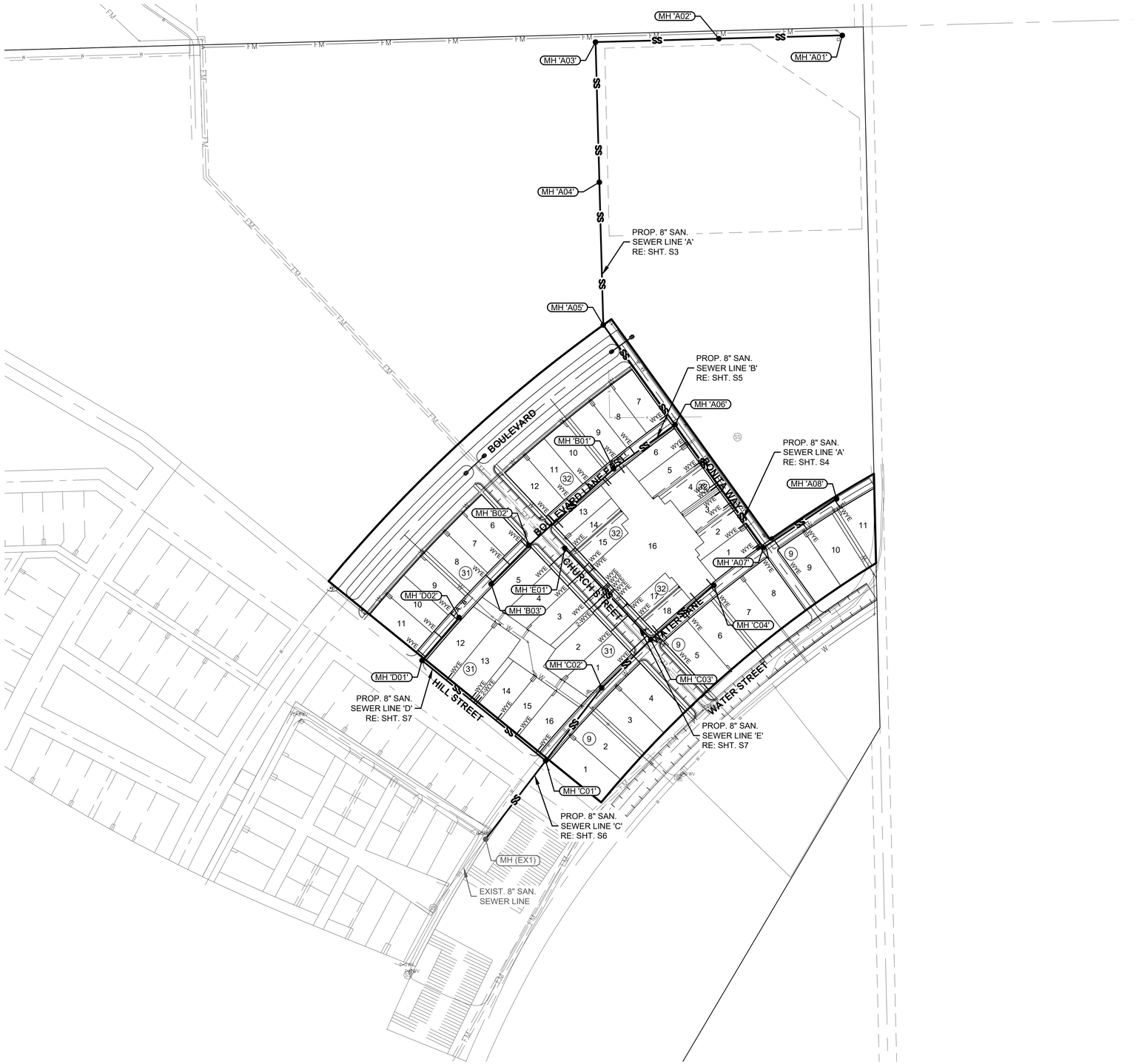
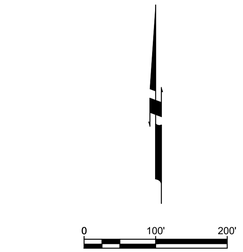
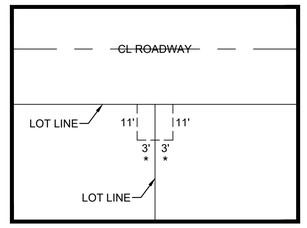




LOCATION MAP
SCALE: 1"=2000'



* TYPICAL UTILITY EASEMENT

STRUCTURE TABLE

MANHOLE NAME	NORTHING	EASTING
(EX1)	N=690451.3985	E=2702797.5836
A01	N=691969.7185	E=2703471.0846
A02	N=691963.3737	E=2703238.1315
A03	N=691957.0289	E=2703005.1785
A04	N=691692.2992	E=2703012.3887
A05	N=691422.5714	E=2703019.7351
A06	N=691234.2681	E=2703155.2559
A07	N=691002.2095	E=2703322.2672
A08	N=691094.1985	E=2703460.4148
B01	N=691150.8725	E=2703039.3794
B02	N=691006.3352	E=2702879.5389
B03	N=690933.6319	E=2702807.8775
C01	N=690599.4880	E=2702910.8901
C02	N=690737.0019	E=2703016.8287
C03	N=690828.3789	E=2703109.2962
C04	N=690930.8416	E=2703228.5220
D01	N=690788.8470	E=2702677.5901
D02	N=690869.8672	E=2702747.4307

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

NO.	DESCRIPTION	DATE

REVISIONS

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8076 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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CARLTON LANDING PHASE 8

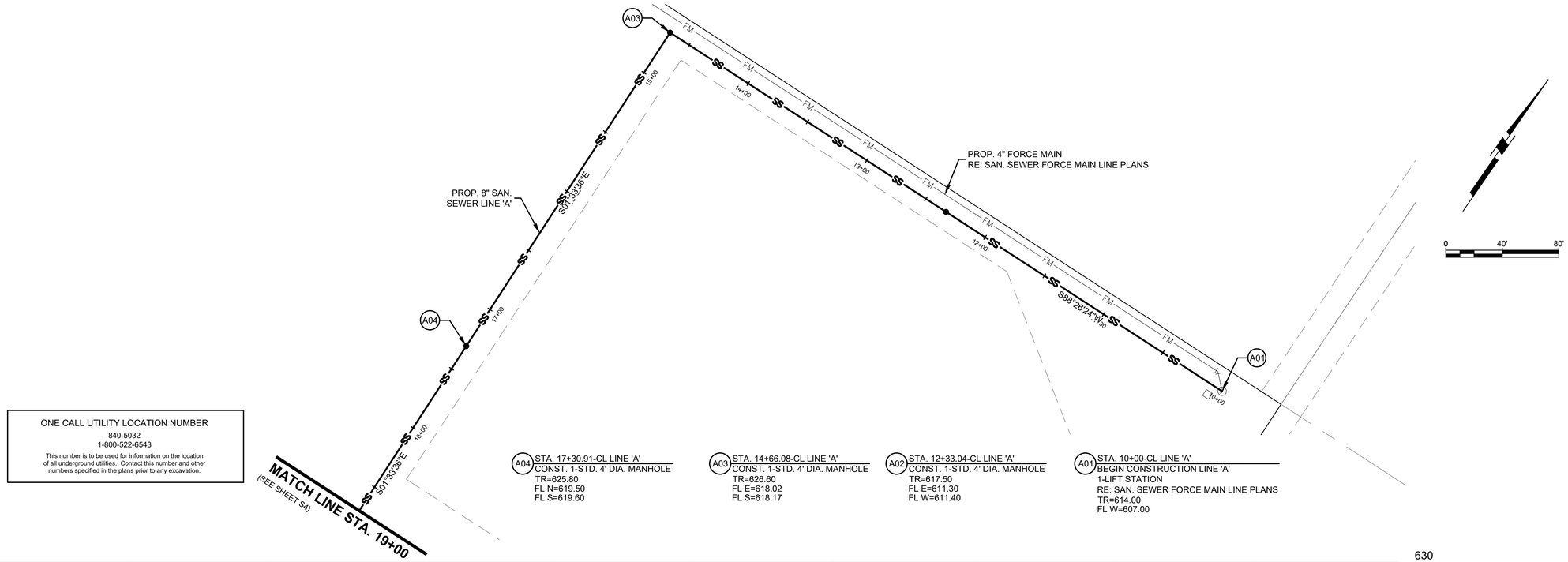
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

SANITARY SEWER GENERAL LAYOUT

Proj. No.:
Date: 07-14-23
Scale: 1"=100'
Checked By:
Approved By:

SHEET NUMBER
S2

XREFS LOADED: 2732046-BASE.dwg 2732046-PFL1.dwg 2732046-LOC.dwg 2732046-topo.dwg 2732046-EC QUANTITIES.dwg 2732046-bdy.dwg
LAST EDIT: 07/27/2023 Plotted: 07/28/2023 11:15:51 AM by Chase Sim



ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
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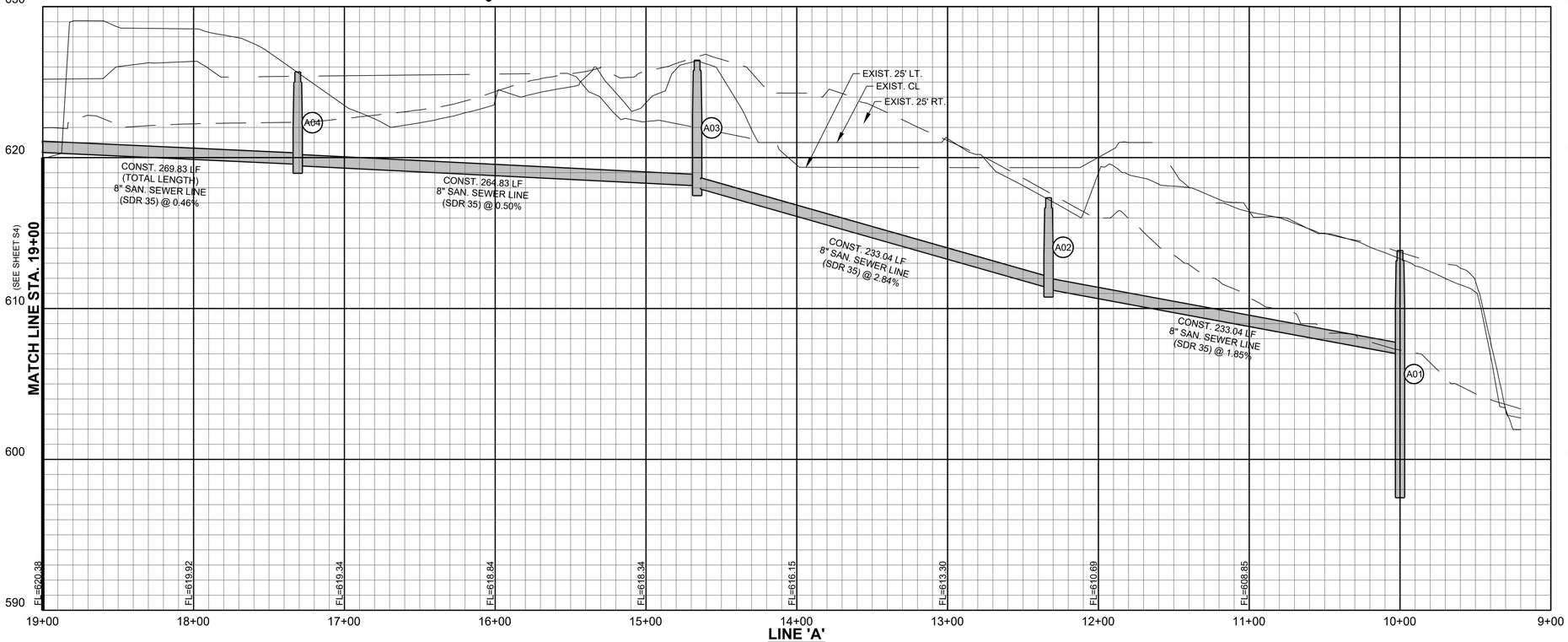
A04 STA. 17+30.91-CL LINE 'A'
CONST. 1-STD. 4' DIA. MANHOLE
TR=625.80
FL N=619.50
FL S=619.60

A03 STA. 14+66.08-CL LINE 'A'
CONST. 1-STD. 4' DIA. MANHOLE
TR=626.60
FL E=618.02
FL S=618.17

A02 STA. 12+33.04-CL LINE 'A'
CONST. 1-STD. 4' DIA. MANHOLE
TR=617.50
FL E=611.30
FL W=611.40

A01 STA. 10+00-CL LINE 'A'
BEGIN CONSTRUCTION LINE 'A'
1-LIFT STATION
RE: SAN. SEWER FORCE MAIN LINE PLANS
TR=614.00
FL W=607.00



NO.	DESCRIPTION	DATE

REVISIONS

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8070 www.jaokc.com
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CARLTON LANDING PHASE 8

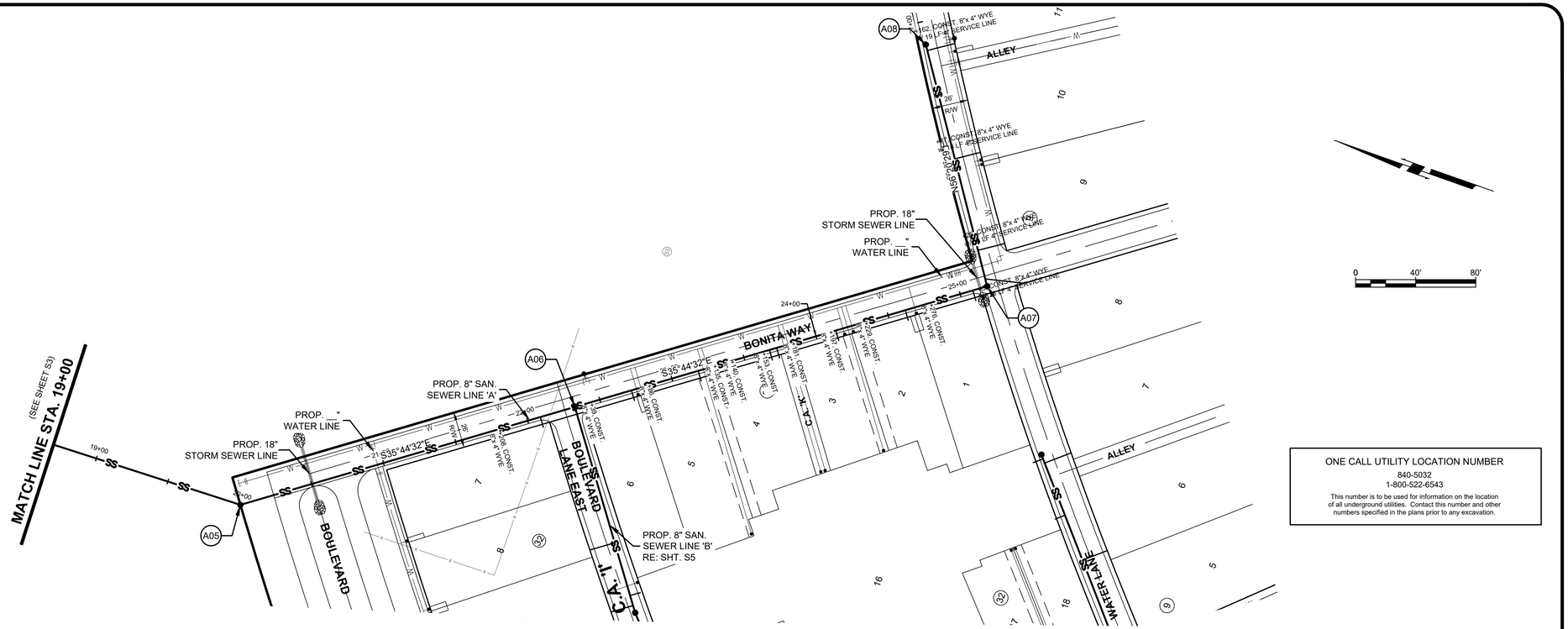
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

SANITARY SEWER PLAN & PROFILE
LINE 'A'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
S3

PLOT DT: 10/27/2023 Plotted By: ERICSON-BEER, TYLER
XREFS LOADED: 2732046-BKGD.dwg 2732046-PPL1.dwg 2732046-LOC.dwg 2732046-topo.dwg 2732046-EC QUANTITIES.dwg 2732046-tidy.dwg

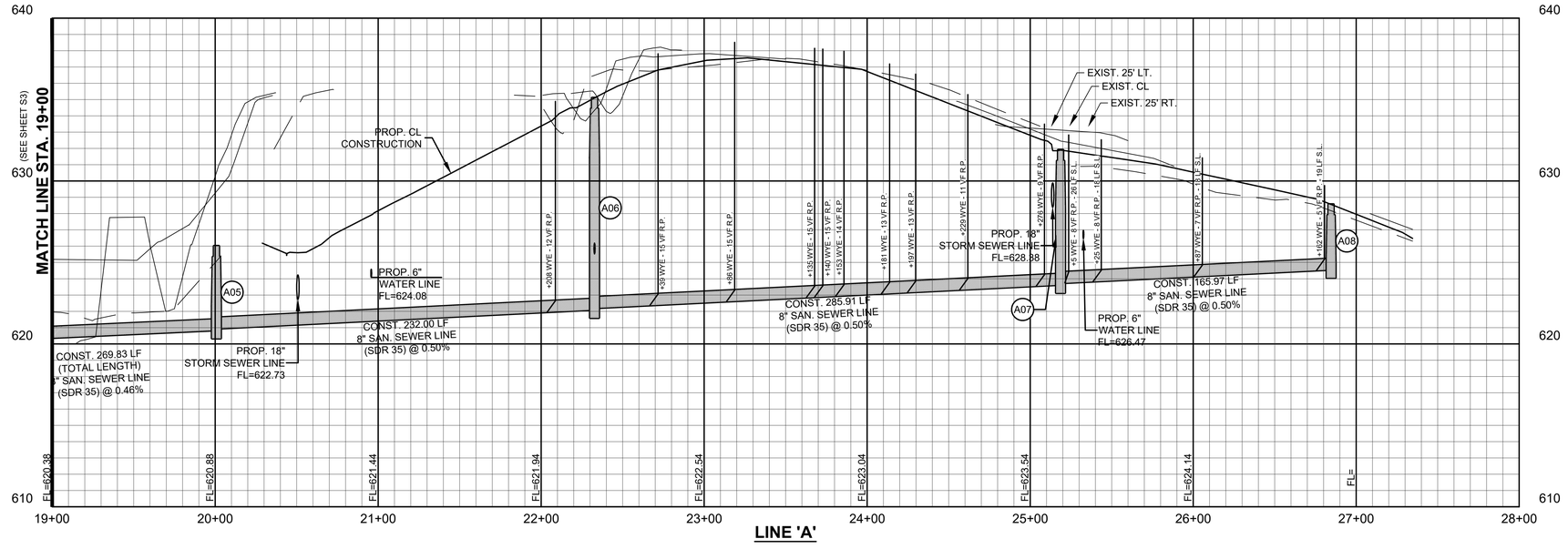


A05 STA. 20+00.73-CL LINE 'A'
CONST. 1-STD. 4' DIA. MANHOLE
TR=626.20
FL N=620.84
FL SE=620.94

A06 STA. 22+32.73-CL LINE 'A'=
STA. 10+00-CL LINE 'B'
CONST. 1-STD. 4' DIA. MANHOLE
TR=635.30
FL NW=622.10
FL SE=622.20
FL SW=625.52

A07 STA. 25+18.64-CL LINE 'A'
CONST. 1-STD. 4' DIA. MANHOLE
TR=632.10
FL NW=623.63
FL NE=623.73

A08 STA. 26+84.62-CL LINE 'A'
END CONSTRUCTION LINE 'A'
CONST. 1-STD. 4' DIA. MANHOLE
TR=628.80
FL SW=624.56



NO.	DESCRIPTION	DATE
	REVISIONS	

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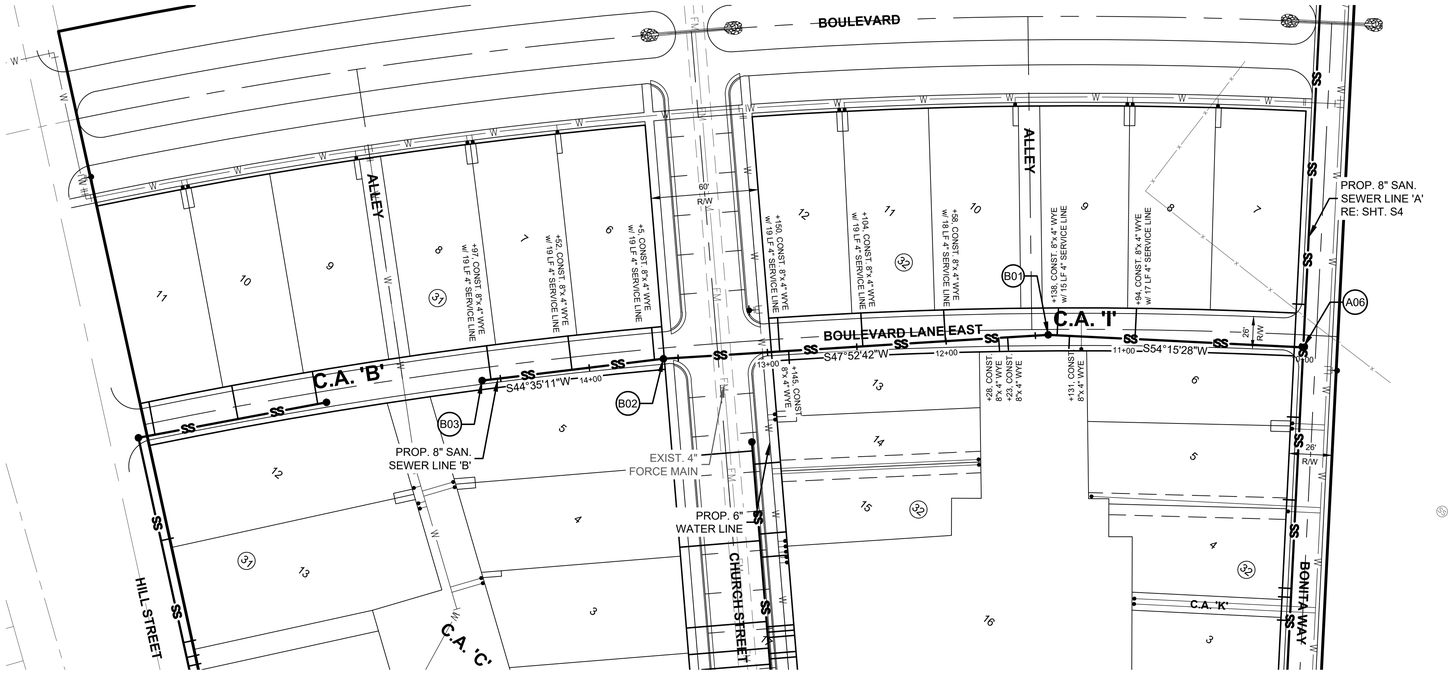
CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

SANITARY SEWER PLAN & PROFILE LINE 'A'

Proj. No.:	
Date:	07-14-23
Scale: (Horiz.)	1"=40'
(Vert.)	1"= 4'
Checked By:	
Approved By:	

SHEET NUMBER
S4

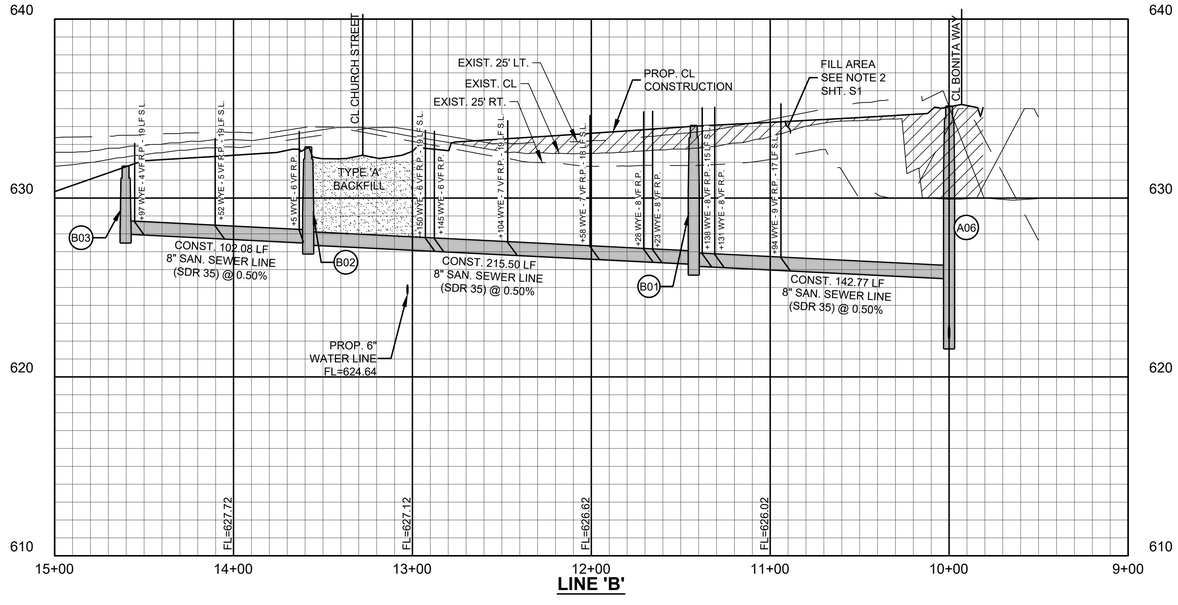


B03 STA. 14+60.35-CL LINE 'B'
END CONSTRUCTION LINE 'B'
CONST. 1-STD. 4' DIA. MANHOLE
TR=631.90
FL NE=628.02

B02 STA. 13+58.27-CL LINE 'B'
CONST. 1-STD. 4' DIA. MANHOLE
TR=633.00
FL NE=627.41
FL SW=627.51

B01 STA. 11+42.77-CL LINE 'B'
CONST. 1-STD. 4' DIA. MANHOLE
TR=634.20
FL NE=626.24
FL SW=626.34

A06 STA. 10+00-CL LINE 'B'=
STA. 22+32.73-CL LINE 'A'
BEGIN CONSTRUCTION LINE 'B'
1-STD. 4' DIA. MANHOLE
TR=635.30
FL NW=622.10
FL SE=622.20
FL SW=625.52



LINE 'B'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

NO.	DESCRIPTION	DATE

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CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

SANITARY SEWER PLAN & PROFILE LINE 'B'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
S5

XREFS LOADED: 2732046-BHDD.dwg 2732046-PFL1.dwg 2732046-LOC.dwg 2732046-topo.dwg 2732046-EC QUANTITIES.dwg 2732046-tidy.dwg
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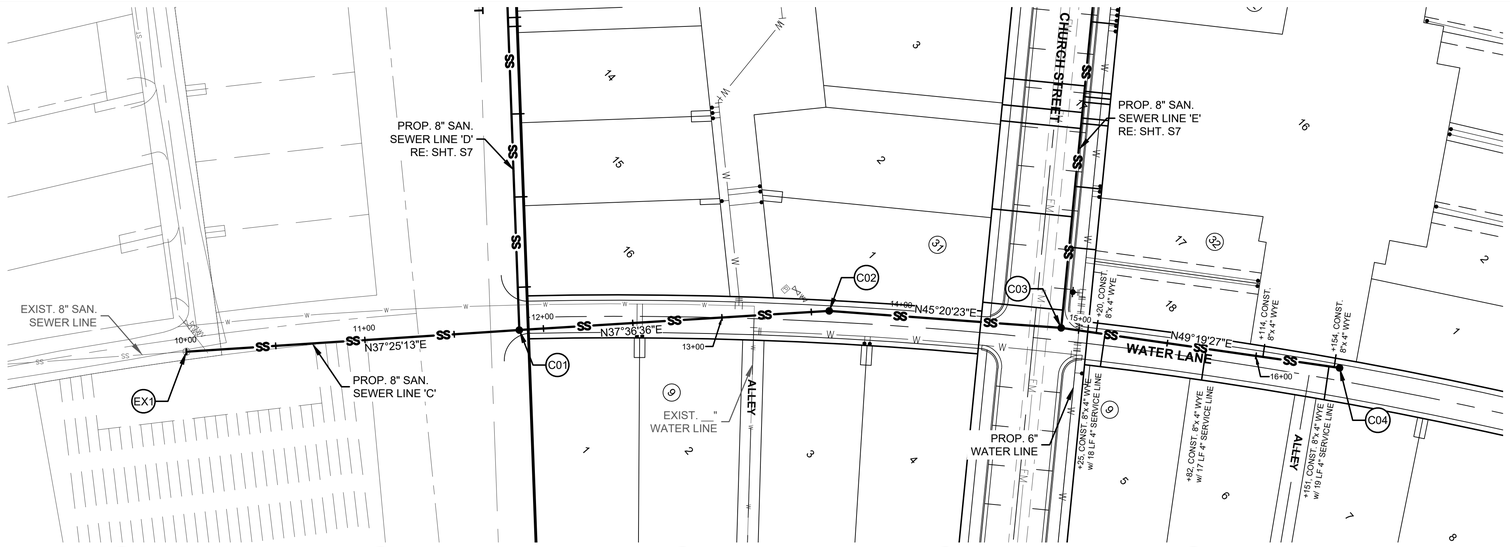


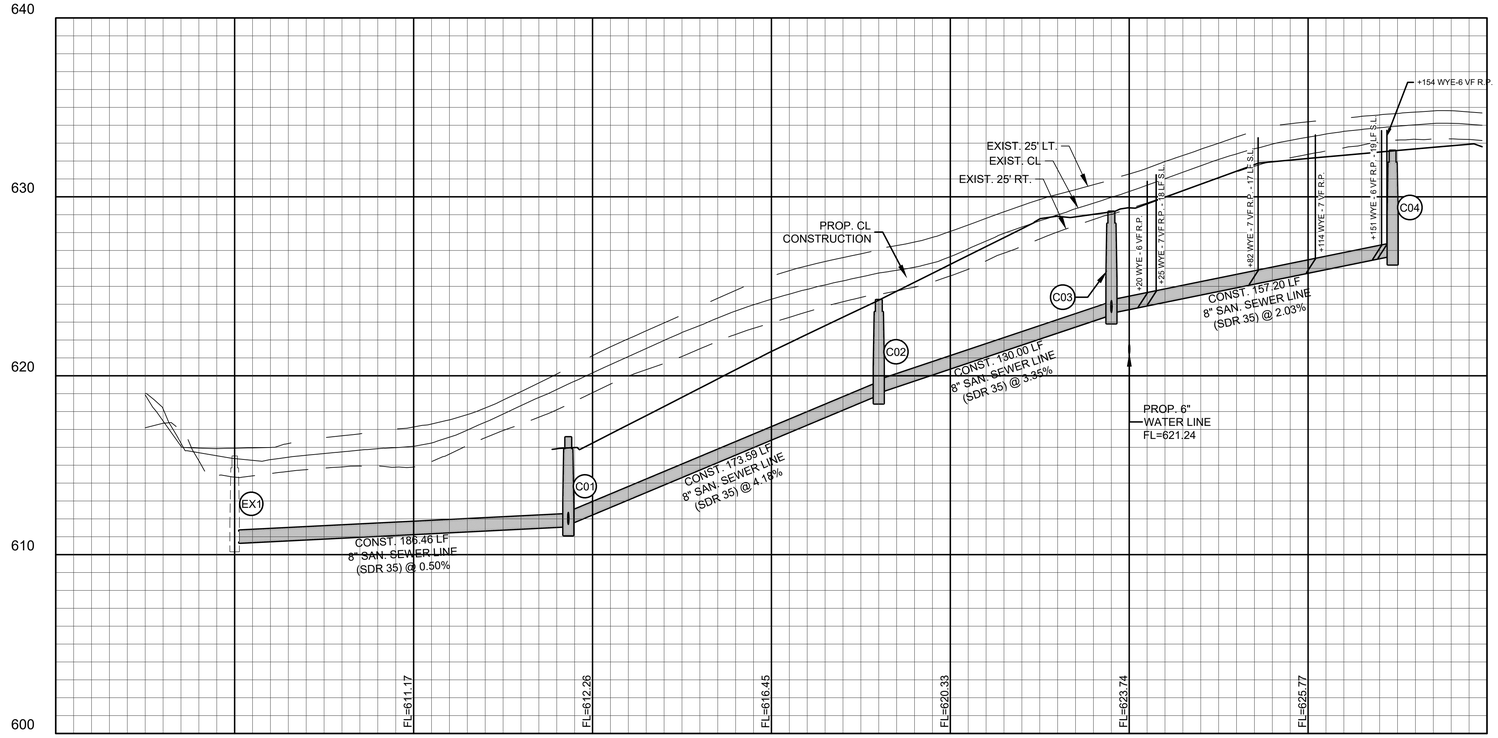
EX1 STA. 10+00-CL LINE 'C'
BEGIN CONSTRUCTION LINE 'C'
EXIST. SAN. SEWER MANHOLE
TR=615.52
FL NE=610.66

C01 STA. 11+86.46-CL LINE 'C'=
STA. 10+00-CL LINE 'D'
CONST. 1-STD. 4' DIA. MANHOLE
TR=616.70
FL SW=611.59
FL NE=611.69
FL NW=611.69

C02 STA. 13+60.05-CL LINE 'C'
CONST. 1-STD. 4' DIA. MANHOLE
TR=624.40
FL SW=618.96
FL NE=619.08

C03 STA. 14+90.05-CL LINE 'C'=
STA. 10+00-CL LINE 'E'
CONST. 1-STD. 4' DIA. MANHOLE
TR=629.40
FL SW=623.44
FL NE=623.54
FL NW=623.54

C04 STA. 16+47.26-CL LINE 'C'
END CONSTRUCTION LINE 'C'
CONST. 1-STD. 4' DIA. MANHOLE
TR=632.80
FL SW=626.73



ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

REVISIONS

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8370 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

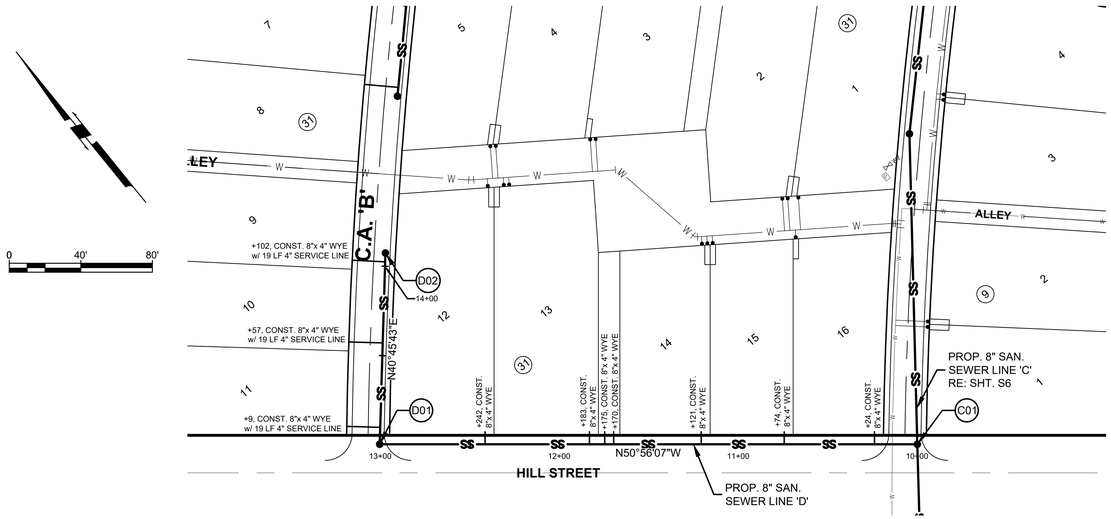
CARLTON LANDING PHASE 8

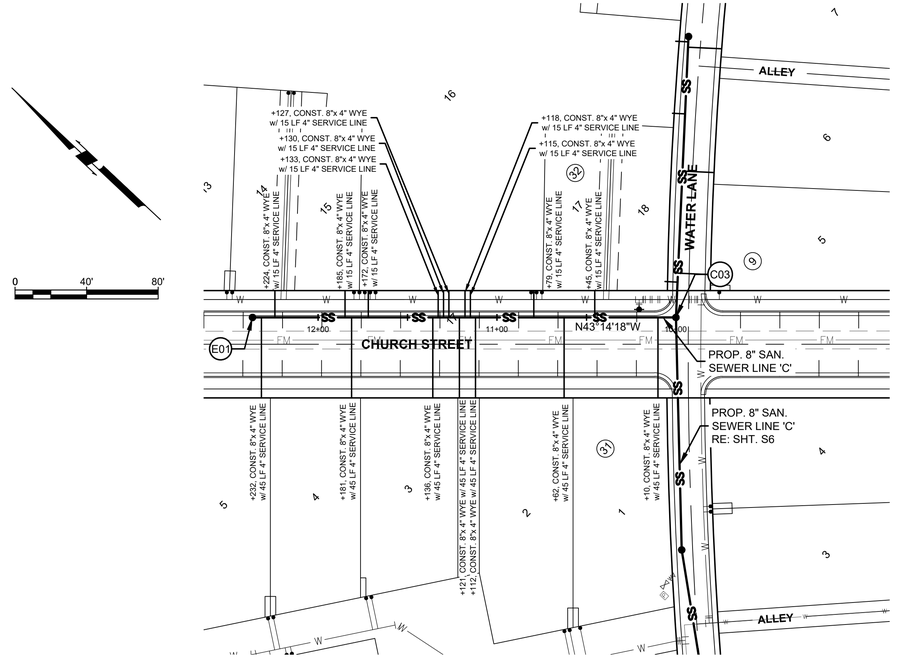
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

SANITARY SEWER PLAN & PROFILE LINE 'C'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
S6





D02 STA. 14+07.44-CL LINE 'D'
END CONSTRUCTION LINE 'D'
CONST. 1-STD. 4' DIA. MANHOLE
TR=628.90
FL SW=624.66

D01 STA. 13+00.48-CL LINE 'D'
CONST. 1-STD. 4' DIA. MANHOLE
TR=624.90
FL SE=620.71
FL NE=620.82

C01 STA. 10+00-CL LINE 'D'=
STA. 11+86.46-CL LINE 'C'
BEGIN CONSTRUCTION LINE 'D'
1-STD. 4' DIA. MANHOLE
TR=616.70
FL SW=611.59
FL NE=611.69
FL NW=611.69

E01 STA. 12+36.67-CL LINE 'E'
END CONSTRUCTION LINE 'E'
CONST. 1-STD. 4' DIA. MANHOLE
TR=632.00
FL SE=625.75

C03 STA. 10+00-CL LINE 'E'=
STA. 14+90.05-CL LINE 'C'
BEGIN CONSTRUCTION LINE 'E'
1-STD. 4' DIA. MANHOLE
TR=629.40
FL SW=623.44
FL NE=623.54
FL NW=623.54

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
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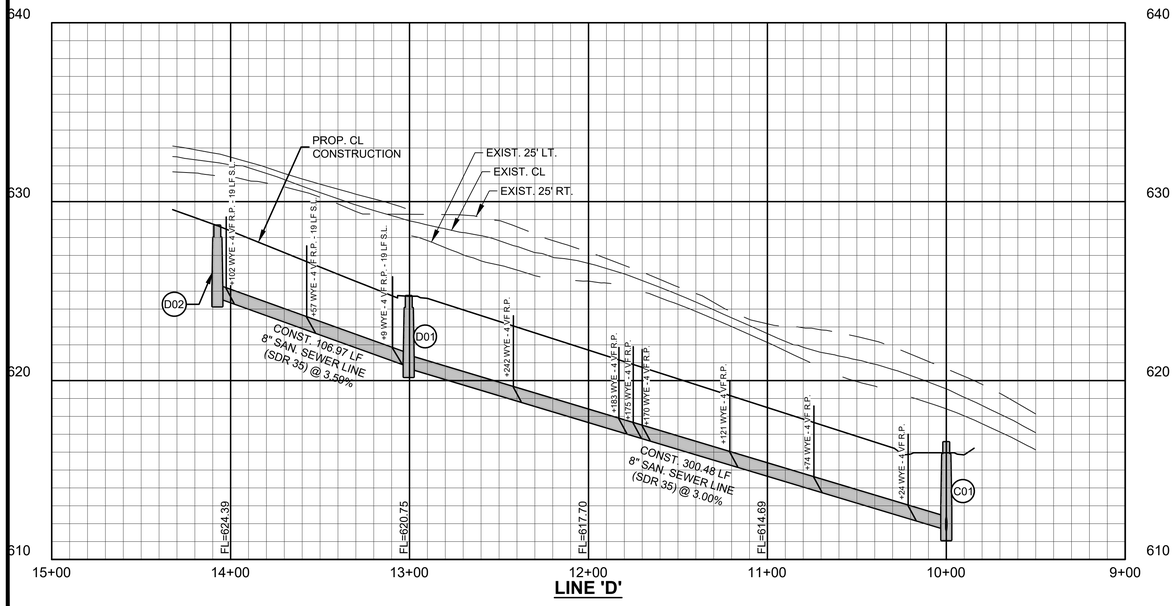
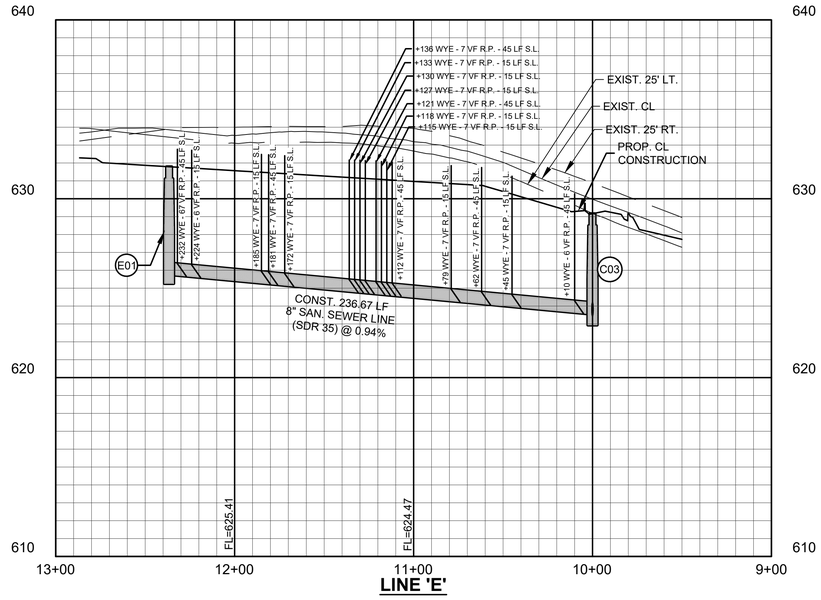




REVISIONS

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 www.jaokc.com
FAX (405) 235-8670
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA
SANITARY SEWER PLAN & PROFILE
LINES 'D' & 'E'

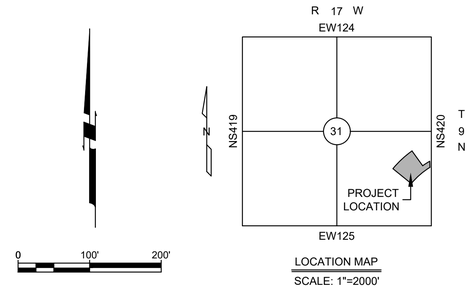
Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
S7

4:\04 ENGINEERING\2732046-PRECISE GRADING\CAD\2732046-PRECISE GRADING.dwg 2732046-PP-L.dwg 2732046-LOC.dwg 2732046-topo.dwg 2732046-EC QUANTITIES.dwg 2732046-bdy.dwg
XREFS LOADED:

EROSION CONTROL - GENERAL NOTES

1. INSTALL PERIMETER EROSION CONTROL DEVICES PRIOR TO REMOVING TOPSOIL OR BEGINNING GRADING ACTIVITIES.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE IN AN AREA DRAINING INTO THE POLLUTION CONTROL SYSTEM.
3. CONSTRUCT ROCK BAG DITCH CHECKS AS SHOWN ON THE APPROVED PLANS AND AS NECESSARY TO PREVENT EROSION DAMAGE PRIOR TO PAVING.
4. AFTER ALL PRECIPITATION OF 0.5 INCHES OR GREATER, EROSION CONTROL FACILITIES SHALL BE INSPECTED AND MAINTAINED AS NECESSARY. COMPLETED INSPECTION FORMS SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
5. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST ONCE EVERY 7 DAYS. COMPLETED INSPECTION FORMS SHALL BE KEPT ON SITE AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
7. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
8. MAINTAIN ALL FACILITIES UNTIL ALL PAVEMENT AND/OR GROUND COVER IS ESTABLISHED. ANY DISTURBED AREA WHICH WILL NOT SEE CONSTRUCTION ACTIVITY FOR 14 DAYS OR MORE SHALL BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 14 DAYS OF THE LAST DISTURBANCE.
9. A PERSON IN RESPONSIBLE CHARGE SHALL BE AVAILABLE DURING CONSTRUCTION HOURS TO SUPERVISE IMPLEMENTATION AND MAINTENANCE OF THE POLLUTION PREVENTION PLAN AND TO ASSIST WITH INSPECTIONS BY ANY REGULATORY AGENCY.
10. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 14 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND MULCH WITHIN 14 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT, SEED, SOD, MULCH OR OTHER MANNER CONSISTENT WITH THE APPROVED PLANS.
11. CONTRACTOR IS TO INSTALL ALL EROSION CONTROL MEASURES PRIOR TO CONSTRUCTION. (COST TO BE INCLUDED IN BID ITEM FOR EROSION CONTROL.)
12. 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 PART OF A LARGER COMMON PLAN OF DEVELOPMENT OR SALE THAT TOTALS 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 EUFAULA, STORM WATER QUALITY.
13. DETENTION PONDS AND SEDIMENT BASINS SHALL BE CONSTRUCTED FIRST BEFORE MASS GRADING BEGINS.



LOCATION MAP
SCALE: 1"=2000'

EROSION CONTROL QUANTITIES (PRIVATE)

NO	ITEM	UNIT	QTY
	GRADING CONTRACTOR		
1.	CONSTRUCTION ENTRANCE	EA	1
2.	SILT FENCE	LF	1363
	PAVING CONTRACTOR		
1.	SEED ALL DISTURBED AREAS	LS	1
2.	CONCRETE WASHOUT	EA	1

ONE CALL UTILITY LOCATION NUMBER
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CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

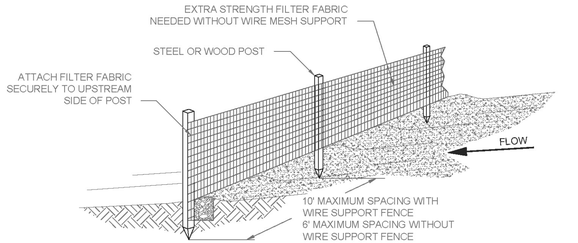
EROSION CONTROL PLAN

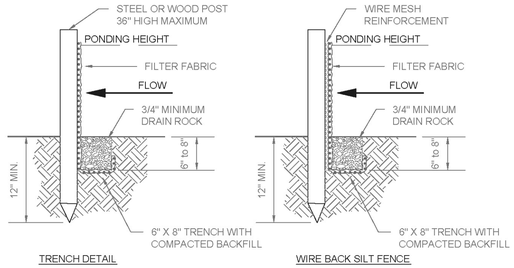
Proj. No.:
Date: 07-14-23
Scale: 1"=100'
Checked By:
Approved By:

SHEET NUMBER
EC

A-XCT LD: 10/27/2006 Proj= 27120646.01 Dsn= 7/11/2023 2:44 PM Drwn= Plotted: 7/11/2023 2:44 PM By: Drwn= Plotted
XREFS LOADED: 27120646#00.dwg 27120646-FPLT.dwg 27120646-LCC.dwg 27120646-top.dwg 27120646-topo.dwg 27120646-EC QUANTITIES.dwg

SILT FENCE





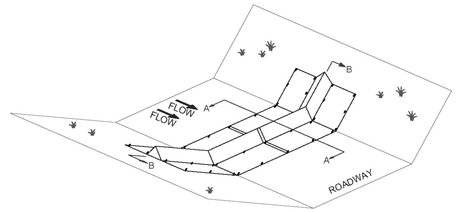
TRENCH DETAIL

WIRE BACK SILT FENCE

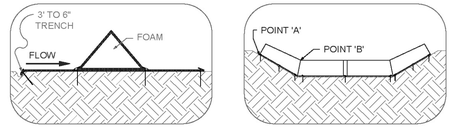
NOTES:

1. MUST BE INSTALLED PROPERLY TO AVOID NOTICE OF VIOLATION.
2. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
3. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. ACCUMULATED SEDIMENT SHOULD BE REMOVED FROM THE FENCE BASE WHEN THE SEDIMENT REACHES ONE-THIRD TO ONE-HALF THE FENCE HEIGHT.
4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

TRIANGULAR SILT DIKES



SILT DAM UNIT
CUT SECTION

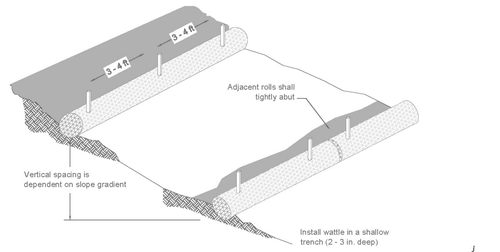


DETAIL A--A DETAIL B--B

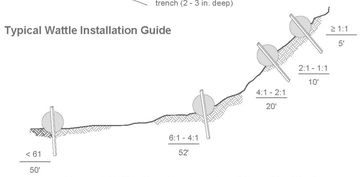
NOTES:

1. STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTERS OF THE 7' UNIT AS SHOWN IN DETAILS.
2. POINT 'A' MUST BE HIGHER THAN POINT 'B' TO ENSURE THAT THE WATER FLOWS OVER THE DAM AND NOT AROUND THE ENDS.

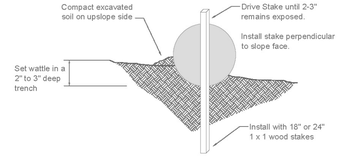
STRAW WATTLE INSTALLATION



Typical Wattle Installation Guide



Typical Wattle Spacing based on Slope Gradient



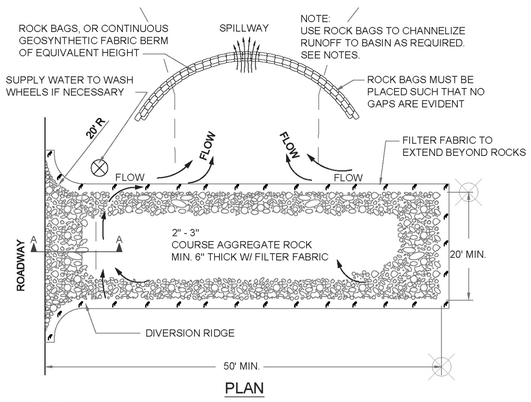
Enrichment Detail

NOTES:

1. Begin at the location where the wattle is to be installed by excavating a 2 - 3" deep x 9" wide trench along the contour of the slope. Excavated soil should be placed up-slope from the anchor trench.
2. Place the wattle in the trench so that it contours to the soil surface. Compact the soil from the excavated trench against the wattle on the uphill side. Adjacent wattles should tightly abut.
3. Secure the wattle with 18 - 24" stakes every 3 - 4' With a stake on each end. Stakes should be driven through the middle of the wattles leaving at least e - 3" of stake extending above, the wattle stakes should be driven perpendicular to slope face.

TEMPORARY ROCK CONSTRUCTION ENTERANCE / EXIT

SECTION A -- A

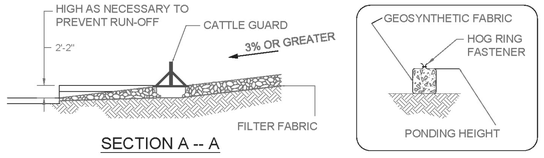


PLAN

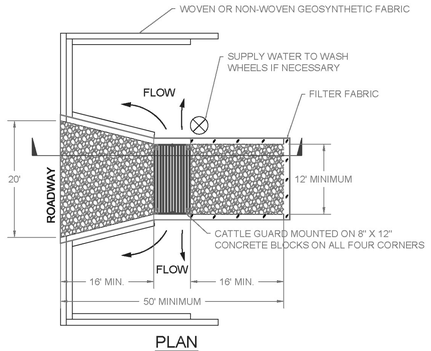
NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. BAGS OF WOVEN GEOTEXTILE FABRIC, FILLED WITH GRAVEL MUST BE LAYERED SUCH THAT NO GAPS ARE EVIDENT.

TEMPORARY ROCK CONSTRUCTION ENTERANCE / EXIT - STEEP GRADES



SECTION A -- A



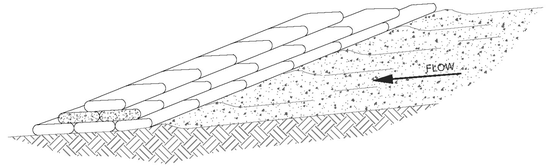
PLAN

NOTES:

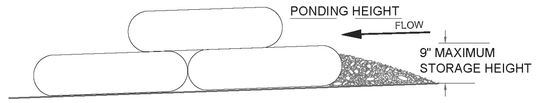
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE A MOUNTED CATTLE GUARD AND SEDIMENT PONDS TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

3 WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON THE CATTLE GUARD. FIRST WASH ONE SET OF TIRES THEN, MOVE FORWARD TO WASH THE SECOND SET OF TIRES. THE GUARD IS TO BE MOUNTED ON 8" X 12" CEMENT BLOCK ON AN AREA OF STABILIZED CRUSHED STONE WITH A DRAIN INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN ON BOTH SIDES.

ROCK BAG SILT FENCE



SANDBAG BARRIER



ROCK BAG DETAIL

NOTES:

1. A 'REASONABLE' DESIGN SIZE PARTICLE MUST BE SELECTED.
2. SIZE DISTRIBUTION OR UPSTREAM SOIL PARTICLES MUST BE EVALUATED.
3. INFLOW AND OUTFLOW FROM THE SYSTEM FOR A SPECIFIC FREQUENCY STORM MUST BE KNOWN.
4. POND VOLUME IS DIRECTLY PROPORTIONAL TO THE DISCHARGE RATE OF THE SYSTEM.
5. POND VOLUME IS INVERSELY PROPORTIONAL TO THE MASS OF THE DESIGN SIZE SUSPENDED PARTICLE.
6. A SYSTEM MUST PROVIDE SUFFICIENT FLOW TO ALLOW FOR DEPOSITION OF DESIGN PARTICLES.
7. THE PONDING HEIGHT MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.
8. ROCK BAG SILT BARRIER SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
9. PLACE ROCK BAG SUCH THAT NO GAPS ARE EVIDENT.
10. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
11. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

The City of Oklahoma City
Public Works Department
Engineering Division

APPROVED BY: ERIC J. WENGER, P.E.
CITY ENGINEER
DATE: 03-28-13

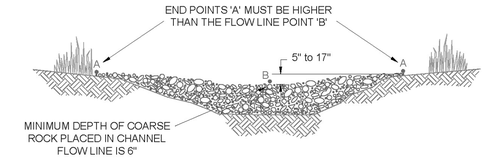
DRAWN: VSC

DATE: 03-28-13

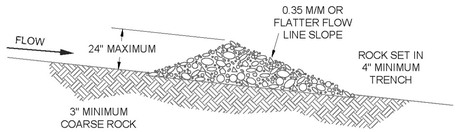
STORM WATER QUALITY EROSION CONTROL DRAWINGS

Drawing Number
ERO-D1

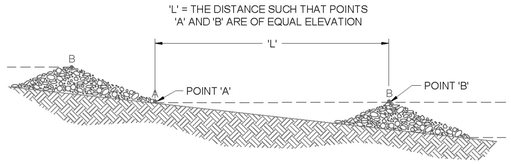
Craig\ci.okc\okc\pw-cad\ACAD-ERO\ERO-D1 VSC 03-28-13



VIEW LOOKING UPSTREAM



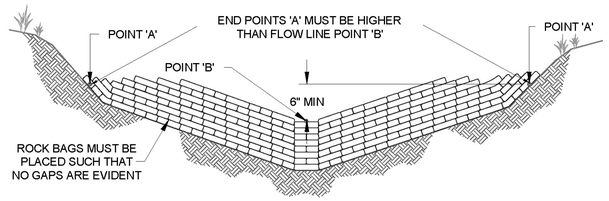
SIDE VIEW



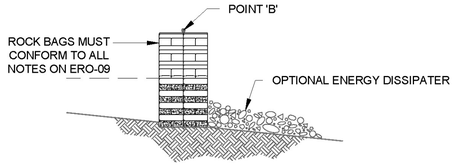
SPACING BETWEEN CHECK DAMS

D-50 OF ROCK (MM)	DOWNSTREAM FLOWLINE SLOPE OF STRUCTURE (M / M) 0.35	0.30	0.25	0.20	0.15	0.10 MAXIMUM WATER DEPTH OVER ROCK (MM)
75	15	18	20	25	33	48
150	30	36	41	50	66	100

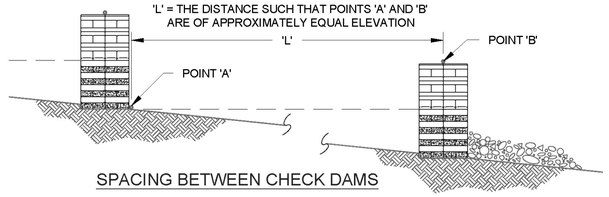
ROCK CHECK DAMS



VIEW LOOKING UPSTREAM

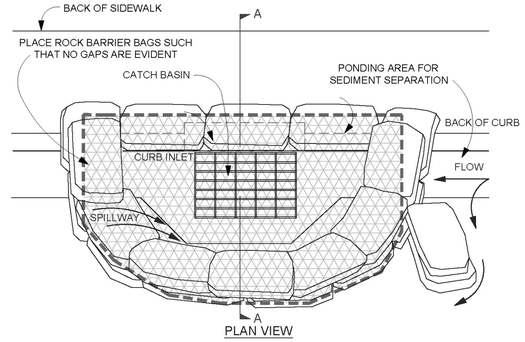


SIDE VIEW

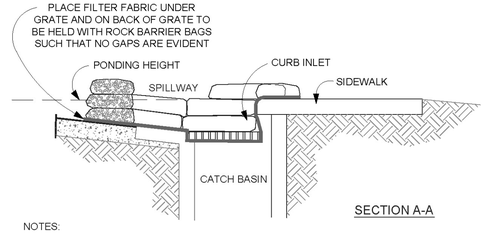


SPACING BETWEEN CHECK DAMS

ROCK BAG CHECK DAMS



PLAN VIEW

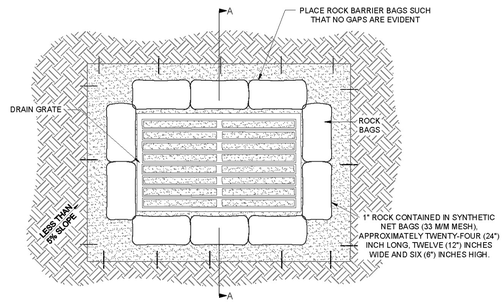


SECTION A-A

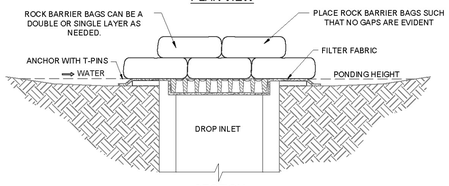
NOTES:

1. PLACE CURB TYPE ROCK BAG BARRIER ON GENTLY SLOPING STREET, 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 ONE SANDBAG 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.

ROCK BAG CURB INLET BARRIER



PLAN VIEW

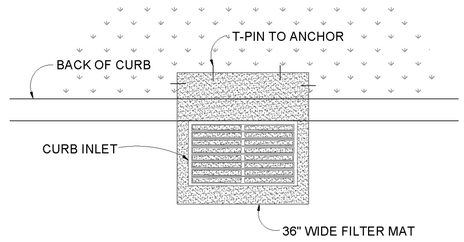


SECTION

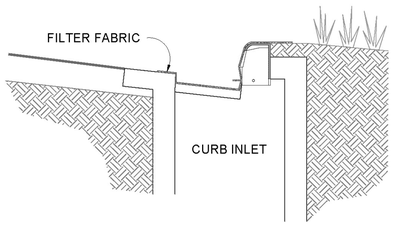
NOTE:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%)
2. USE T-PINS TO ANCHOR FIBER MAT INTO THE SOIL.
3. A "REASONABLE" DESIGN SIZE PARTICLE TO CAPTURE MUST BE SELECTED.
4. SIZE DISTRIBUTION OF UPSTREAM SOIL PARTICLES MUST BE EVALUATED.
5. INFLOW AND OUTFLOW FROM THE SYSTEM FOR A SPECIFIC FREQUENCY STORM MUST BE KNOWN.
6. POND VOLUME IS DIRECTLY PROPORTIONAL TO THE DISCHARGE RATE OF WATER FROM THE SYSTEM.
7. POND VOLUME IS INVERSELY PROPORTIONAL TO THE MASS OF THE DESIGN SIZE SUSPENDED PARTICLE.
8. A SYSTEM MUST PROVIDE SUFFICIENT FLOW TO ALLOW FOR DEPOSITION OF DESIGN SIZE PARTICLES.
9. THE PONDING HEIGHT MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

ROCK BAG / FILTER MAT DROP INLET SEDIMENT BARRIER



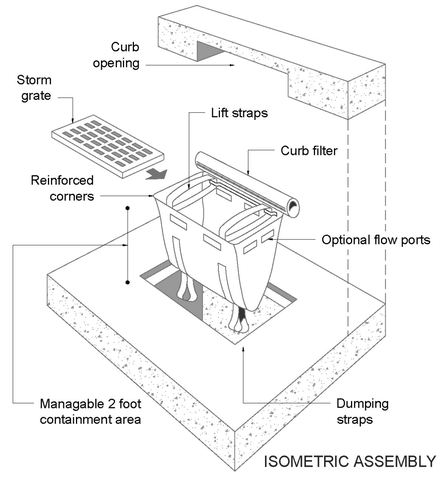
PLAN VIEW



NOTES:

1. USE FILTER MAT SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET, WITH MINIMAL NEED, WHERE WATER CAN FILTER AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.
2. BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.
3. INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

CURB INLET FILTER MAT SEDIMENT BARRIER

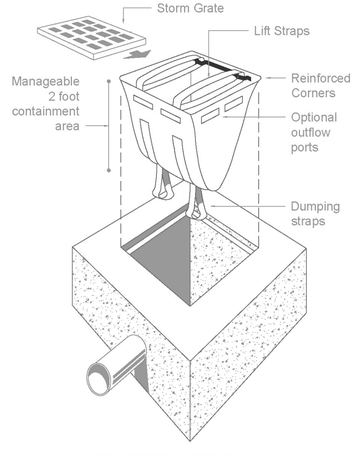


ISOMETRIC ASSEMBLY

NOTES:

1. Remove the grate from the catch basin.
2. Stand grate on end. Move the top lifting straps out of the way and place grate into the unit so that the grate is below the top straps and above the lower straps. The grate should be cradled between the upper and lower straps.
3. Holding the lifting straps, insert the grate into the inlet, being careful that the grate remains in place and being careful not to damage the unit.
4. Remove all accumulated sediment and debris from the vicinity of unit after each storm event.
5. After each storm event and at regular intervals, look into the unit. If the unit is more than 1/3 full of accumulated sediment, the unit must be emptied.
6. To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of contents. Holding the dumping straps on the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.

CURB INLET SEDIMENT BAG



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6. To empty the unit, using the lifting straps lift the unit out of the inlet and remove the grate. Transport the unit to an appropriate location for removal of contents. Holding the dumping straps on the bottom of the unit, turn the unit upside down, emptying the contents. Reinstall unit as above.

DROP INLET SEDIMENT BAG

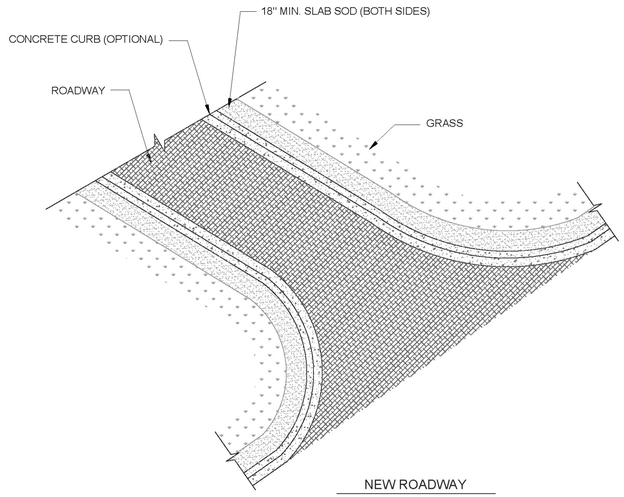
The City of Oklahoma City
Public Works Department
Engineering Division

APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE: 03-28-13
DRAWN: VSC
DATE: 03-28-13

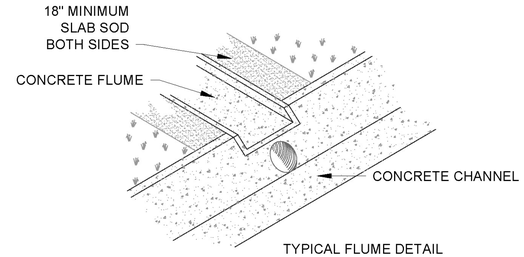
STORM WATER QUALITY EROSION CONTROL DRAWINGS

Drawing Number
ERO-D2

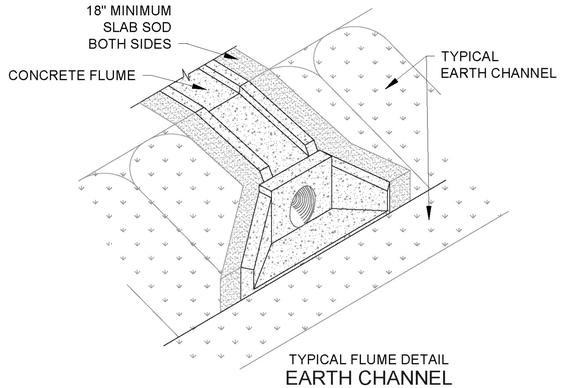
Craig\ci.okc\okc\pw-cad\ACAD-ERO\ERO-D2 VSC 03-28-13



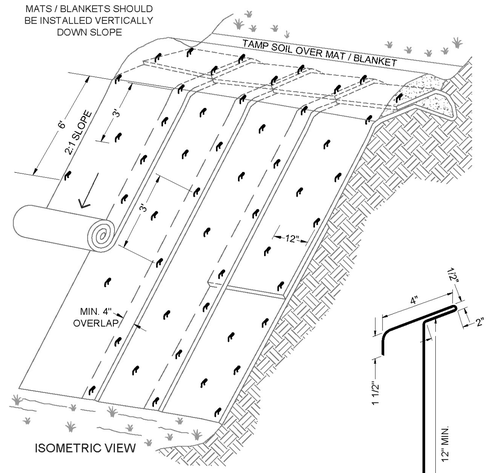
NEW ROADWAY



TYPICAL FLUME DETAIL
CONCRETE CHANNEL



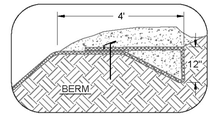
TYPICAL FLUME DETAIL
EARTH CHANNEL



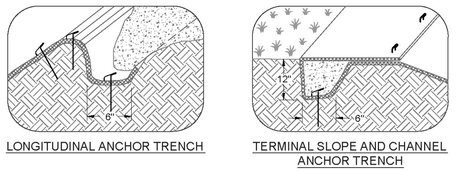
TYPICAL SLOPE
SOIL STABILIZATION

NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS CLODS, STICKS AND GRASS. MATS / BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.

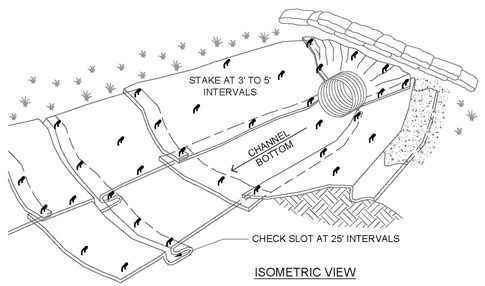


NEW ROADWAYS

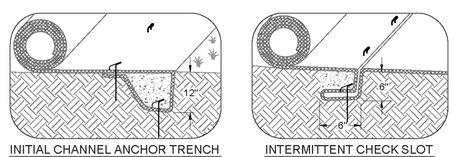


LONGITUDINAL ANCHOR TRENCH

TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH



ISOMETRIC VIEW



INITIAL CHANNEL ANCHOR TRENCH

INTERMITTENT CHECK SLOT

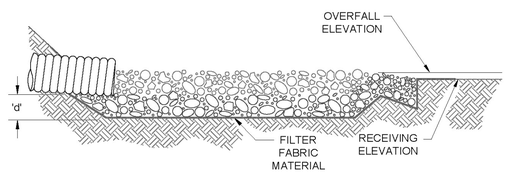
NOTES:

1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURE'S SPECIFICATIONS.
2. STAKING OF STAPLING LAYOUT PER MANUFACTURES SPECIFICATIONS.

EROSION BLANKET / TURF REINFORCEMENT MAPS

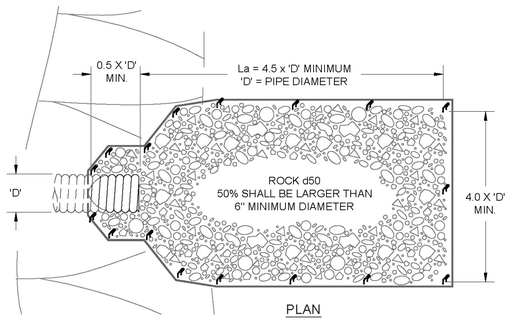
CHANNEL INSTALLATION

CONCRETE FLUME



THICKNESS ('d') = 1.5 x MAXIMUM DIAMETER - 6" MINIMUM

SECTION



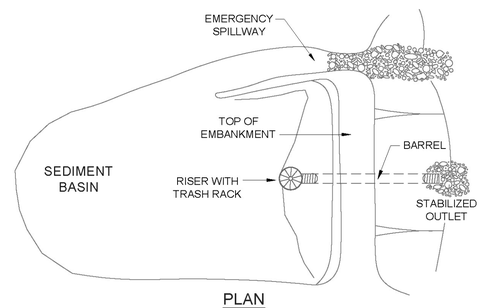
PLAN

NOTES:

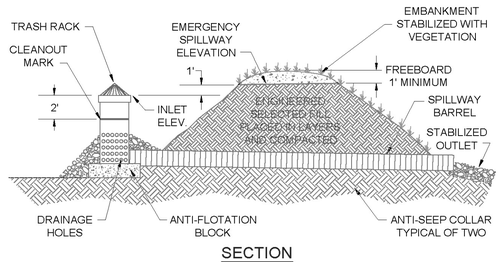
1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC.

ENERGY DISSIPATER

EROSION BLANKET / TURF REINFORCEMENT MAPS - SLOPE INSTALLATION



PLAN

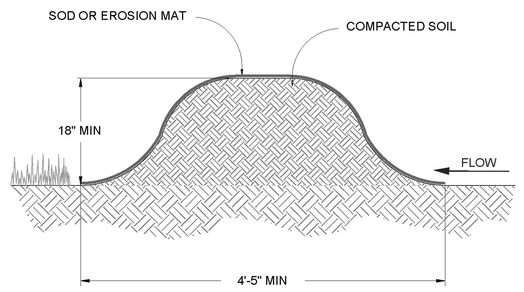


SECTION

NOTES:

1. THE TEMPORARY SEDIMENT BASIN, DESIGNED BY A QUALIFIED PROFESSIONAL, IS REQUIRED FOR DISTURBED AREAS GREATER THAN 5 ACRES WITHIN A DRAINAGE AREA LESS THAN 100 ACRES.
2. ACCUMULATED SEDIMENT SHALL BE CLEANED OUT WHEN BASIN REACHES APPROXIMATELY, 50% CAPACITY.
3. THE SEDIMENT BASIN WILL BE REMOVED WITHIN THREE YEARS.

TYPICAL SEDIMENT BASIN



TYPICAL EARTH DIKE

NOTES:

1. INSPECT AND REPAIR EARTH DIKE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. STABILIZE BERM WITH SOD OR EROSION BLANKETS.

TYPICAL EARTH DIKE

The City of Oklahoma City
Public Works Department
Engineering Division

APPROVED BY: ERIC J. WENGER, P.E. CITY ENGINEER — DATE: 03-28-13
DRAWN: VSC
DATE: 03-28-13

STORM WATER QUALITY EROSION CONTROL DRAWINGS

Drawing Number
ERO-D3

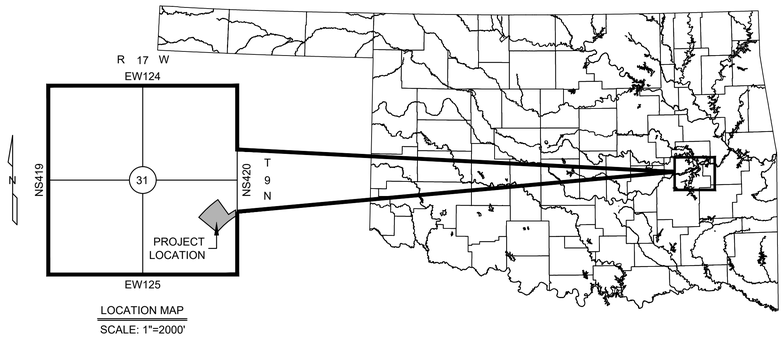
Craig\ci.okc\okc\pw-cad\ACAD-ERO\ERO-D3 VSC 03-28-13

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY	AS-BUILT
	FORCE MAIN QUANTITIES			
1.	4" SANITARY FORCE MAIN (SDR-11)	LF	1,213	
2.	4"x45° BEND	EA	1	
3.	TRENCHING (0'- 6' DEPTH)	LF	1,213	
4.	CRUSHED ROCK (AS NECESSARY)	LS	1	
5.	PIPE LEAKAGE TEST	LS	1	
6.	LIFT STATION (COMPLETE)	LS	1	

EROSION CONTROL QUANTITIES (PRIVATE)

NO	ITEM	UNIT	QTY
	GRADING CONTRACTOR		
1.	CONSTRUCTION ENTRANCE	EA	1
2.	SILT FENCE	LF	1363
	PAVING CONTRACTOR		
1.	SEED ALL DISTURBED AREAS	LS	1
2.	CONCRETE WASHOUT	EA	1



LOCATION MAP

SCALE: 1"=2000'

CARLTON LANDING PHASE 8
FORCE MAIN SEWER PLANS

SANITARY SEWER - GENERAL NOTES

1. ALL WORK NOT CLASSIFIED AS A "PAY ITEM" SHALL BE CONSIDERED INCIDENTAL CONSTRUCTION, THE COST OF WHICH SHALL BE INCLUDED IN THE COST OF OTHER BID ITEMS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION: DAMAGE TO ANY UTILITIES OR STRUCTURES DURING EXCAVATION AND CONSTRUCTION OF PROPOSED SANITARY SEWER MAINS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. VITRIFIED CLAY PIPE JOINT MATERIAL SHALL CONFORM WITH ASTM C-425-72.
4. PLACE ONE CUBIC FOOT OF 3500 PSI CONCRETE AROUND EACH WYE.
5. THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE ACCURACY OF ALL MEASUREMENTS PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROMPT REPLACEMENT AND/OR REPAIR OF TRAFFIC CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ALL EROSION CONTROL DEVICES DAMAGED DUE TO CONSTRUCTION.
8. ALL SANITARY SEWER BY-PASS LINES SHALL BE FREE FROM ANY LEAKS AS TO ELIMINATE CONTAMINATION DURING BY-PASS OPERATIONS.
9. A COPY OF THE EROSION CONTROL SITE PLAN MUST BE ON SITE AT ALL TIMES AND MADE AVAILABLE TO THE INSPECTOR UPON REQUEST.
10. ALL FILL AREAS SHALL BE COMPLETED PRIOR TO PIPE PLACEMENT.

EXFILTRATION TEST

1. PIPE LEAKAGE TEST SHALL BE PERFORMED BY THE CONTRACTOR IN ACCORDANCE WITH THE OKLAHOMA STATE DEPARTMENT OF HEALTH ENGINEERING BULLETIN NO. 0587, "STANDARDS FOR WATER POLLUTION CONTROL FACILITIES," PARAGRAPH 21.32, ADOPTED APRIL 2, 1987. LEAKAGE SHALL NOT EXCEED 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY FOR ANY SECTION OF THE SYSTEM. THE AIR TEST, IF USED, SHALL CONFORM TO THE TEST PROCEDURE DESCRIBED IN ASTM C-828-80, ENTITLED, "LOW PRESSURE AIR TEST OF VITRIFIED CLAY PIPE LINES."

CARLTON LANDING

SHEET INDEX

SHEET NO.	DESCRIPTION
FM1	TITLE SHEET, SUMMARY OF QUANTITIES, & VICINITY MAP
FM2	FORCE MAIN GENERAL LAYOUT
FM3-FM4	FORCE MAIN PLAN & PROFILE
LS1-LS5	LIFT STATION

ONE CALL UTILITY LOCATION NUMBER

840-5032

1-800-522-6543

This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

PREPARED BY:

7.14.2023

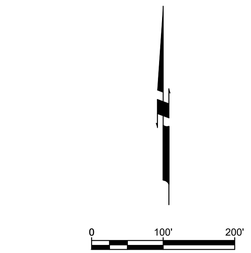
TIMOTHY W. JOHNSON — DATE

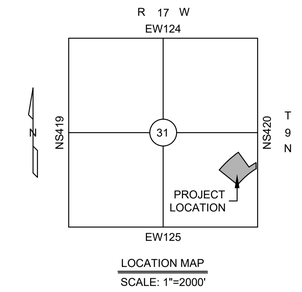
Reg. P.E. No. 12277

CONSULTING ENGINEER — REGISTERED PROFESSIONAL ENGINEER — TIMOTHY W. JOHNSON 12277 — OKLAHOMA

RENEWAL DATE: 04/30/2024

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8078 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •





LOCATION MAP
SCALE: 1"=2000'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
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REVISIONS		
NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8076 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
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CARLTON LANDING PHASE 8

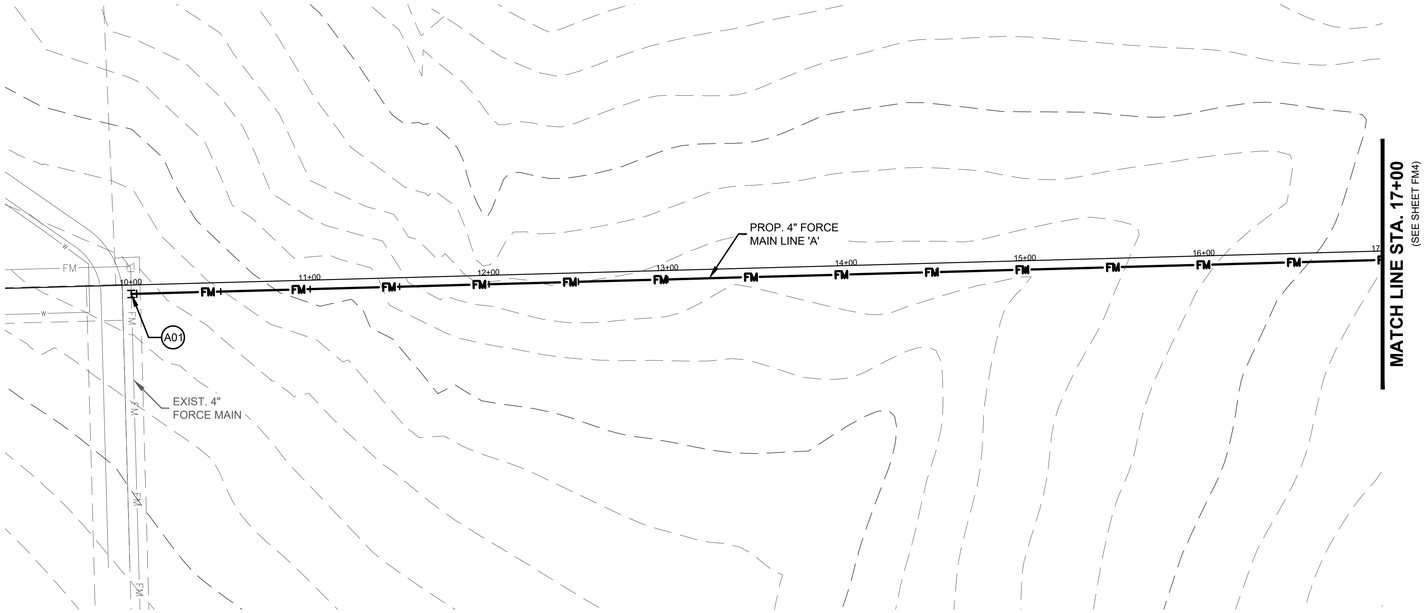
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

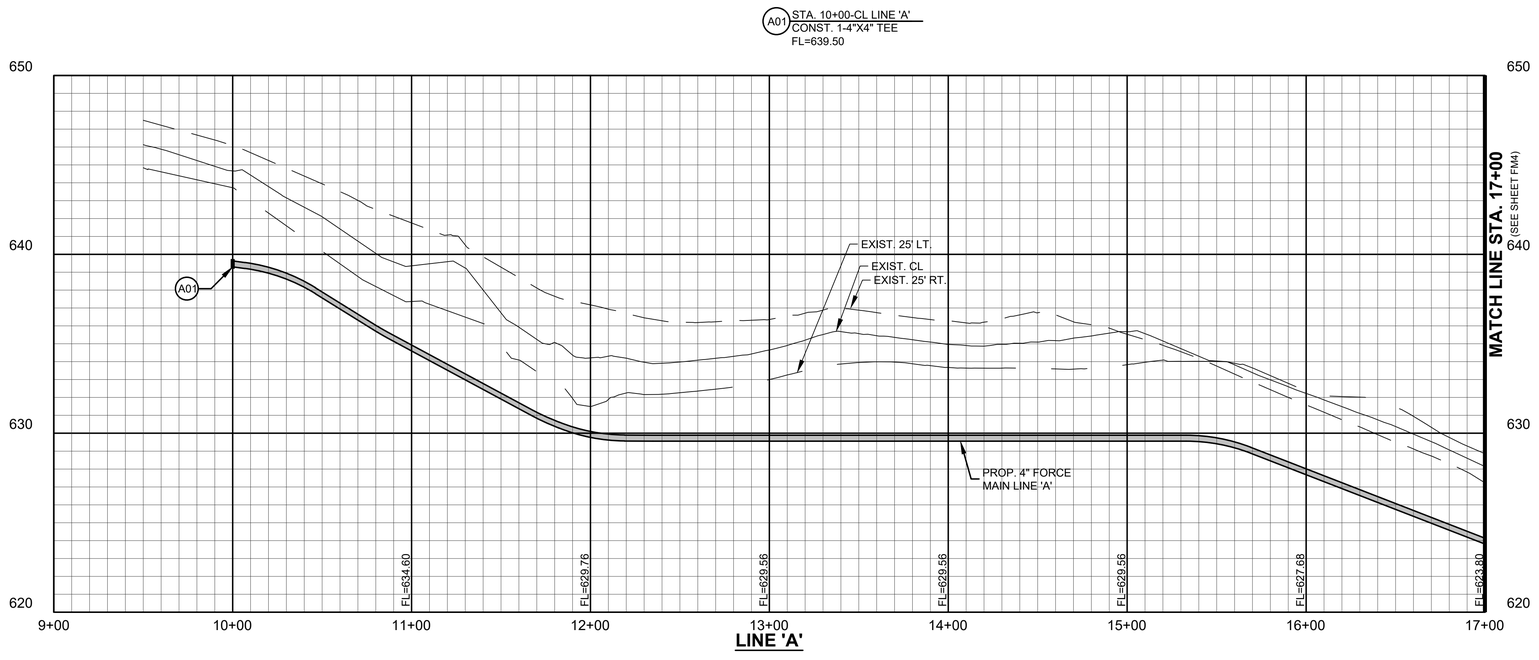
FORCE MAIN GENERAL LAYOUT

Proj. No.:
Date: 07-14-23
Scale: 1"=100'
Checked By:
Approved By:

SHEET NUMBER
FM2

A:\CAD\CE_SUTTON\2023\Dwgs-SUTTON\Plan-SUTTON-FM.dwg 7/14/2023 4:47 PM Carlton Dev
XREFS LOADED: 2732046--topo.dwg 2732046--BNDD.dwg 2732046--PH1.dwg 2732046--LOC.dwg 2732046--tidy.dwg 2732046--EC QUANTITIES.dwg





STREET NAME

SURROUNDING PROPERTY

20

0 40' 80'

ONE CALL UTILITY LOCATION NUMBER
840-5032
1-800-522-6543
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NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
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Certificate of Authorization #1484 Exp. Date: 06-30-2025
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CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

FORCE MAIN PLAN & PROFILE
LINE 'A'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
FM3

CAD FILE: I:\2732\CAD\SS Files-ENTIRE\FM.dwg - 7/14/2023 1:01 PM - Travis Wise
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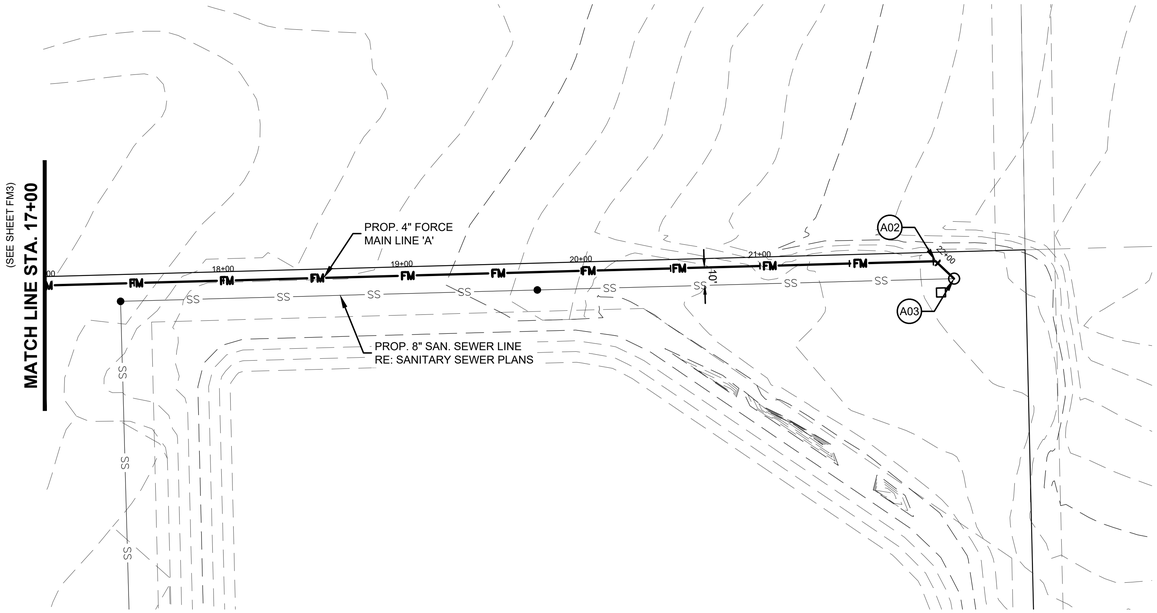
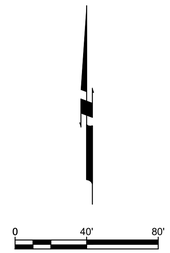
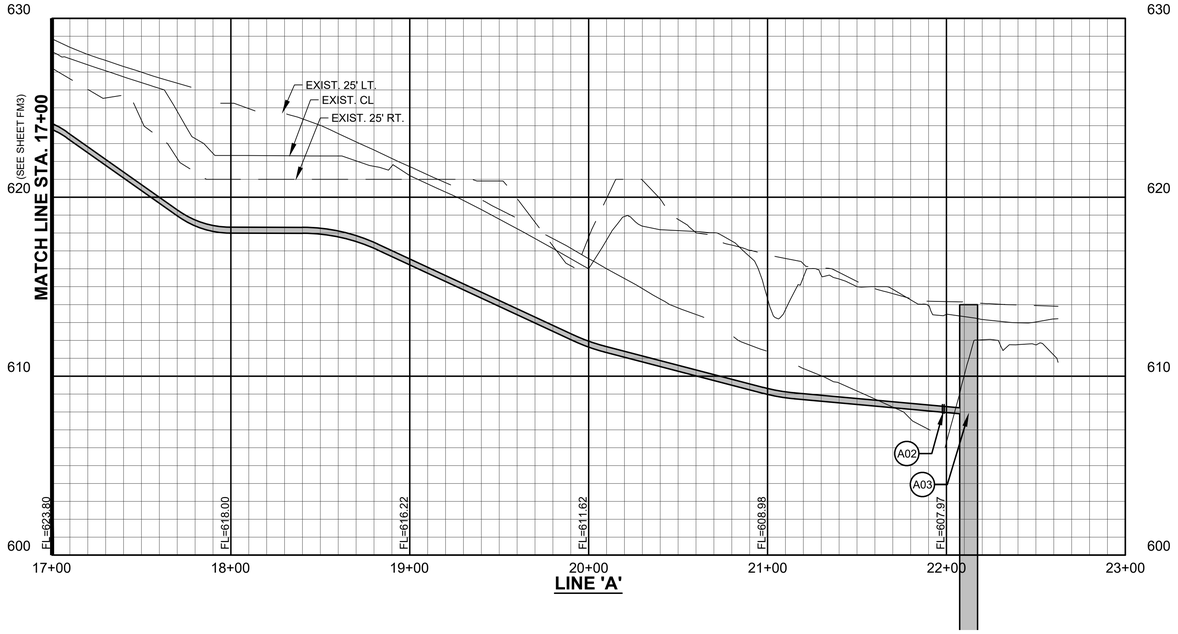




A02 STA. 21+98.26-CL LINE 'A'
CONST. 1-4"x 45° BEND
FL=608.20

A03 STA. 22+12.40-CL LINE 'A'
CONST. 1-LIFT STATION
TR=614.00
FL=607.90 (DISCHARGE)
FL=607.00 (IN-GRAVITY MAIN)



ONE CALL UTILITY LOCATION NUMBER
840-5032
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REVISIONS		
NO.	DESCRIPTION	DATE

Johnson & Associates
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Certificate of Authorization #1484 Exp. Date: 06-30-2025
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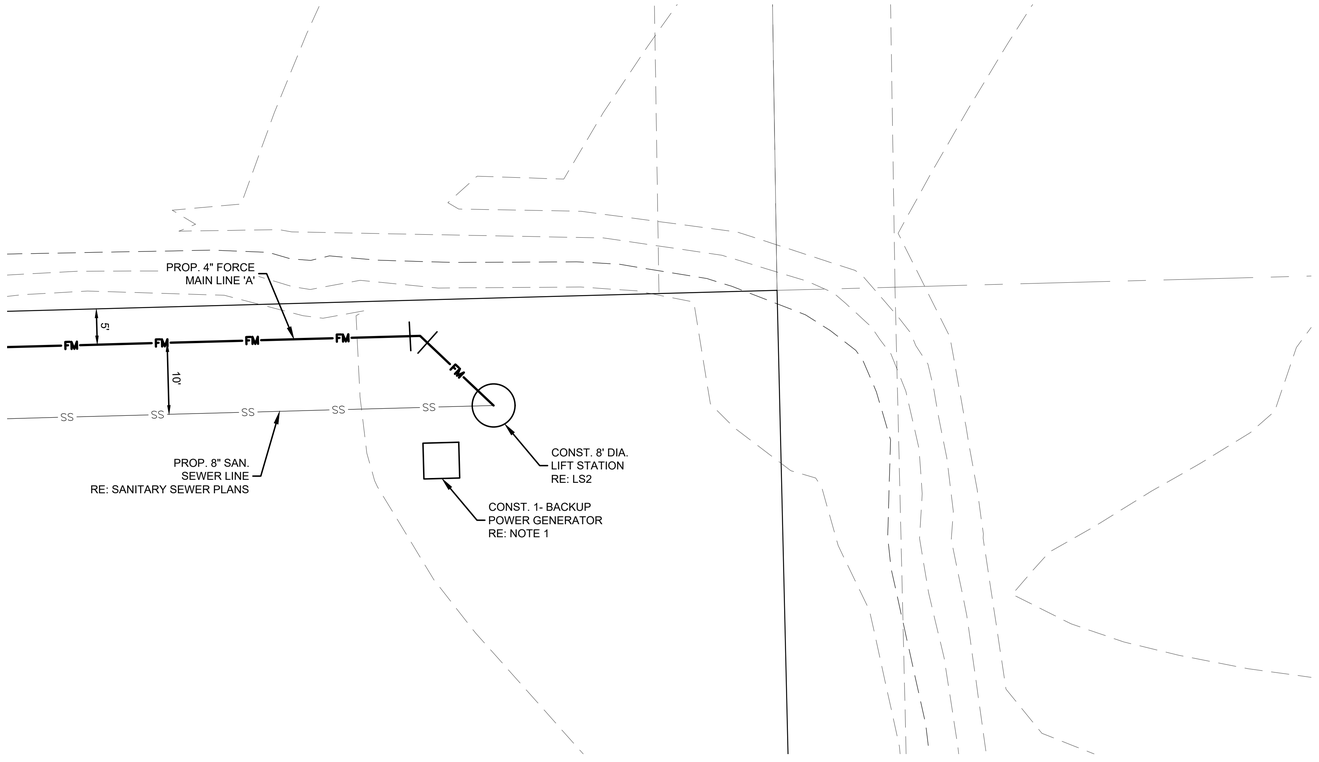
CARLTON LANDING PHASE 8

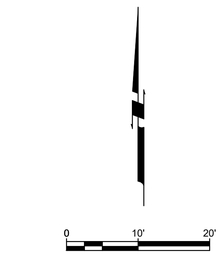
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

FORCE MAIN PLAN & PROFILE
LINE 'A'

Proj. No.:
Date: 07-14-23
Scale: (Horiz.) 1"=40'
(Vert.) 1"= 4'
Checked By:
Approved By:

SHEET NUMBER
FM4





LOCATION MAP

SCALE: 1"=2000'

NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL ONE (1) EMERGENCY BACKUP 50 KW 60 HZ POWER GENERATOR SET WITH AUTOMATIC TRANSFER SWITCH.
2. GENERATOR SHALL BE GENERAC SG 050 (OR APPROVED EQUAL). FUEL TYPE SHALL BE LIQUID PROPANE.
3. CONTRACTOR SHALL FURNISH AND INSTALL ALL WIRING AND EQUIPMENT NECESSARY FOR CONNECTION TO LIFT STAION.
4. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS AND BE IN COMPLIANCE WITH ALL APPLICABLE NATIONAL AND LOCAL ELECTRICAL CODES AND REGULATIONS.
5. THE LIFT STATION WILL HAVE ALL NECESSARY EMERGENCY ALARM SYSTEMS REQUIRED BY ODEQ.

ONE CALL UTILITY LOCATION NUMBER

840-5032
1-800-522-6543

This number is to be used for information on the location of all underground utilities. Contact this number and other numbers specified in the plans prior to any excavation.

REVISIONS

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8070 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8

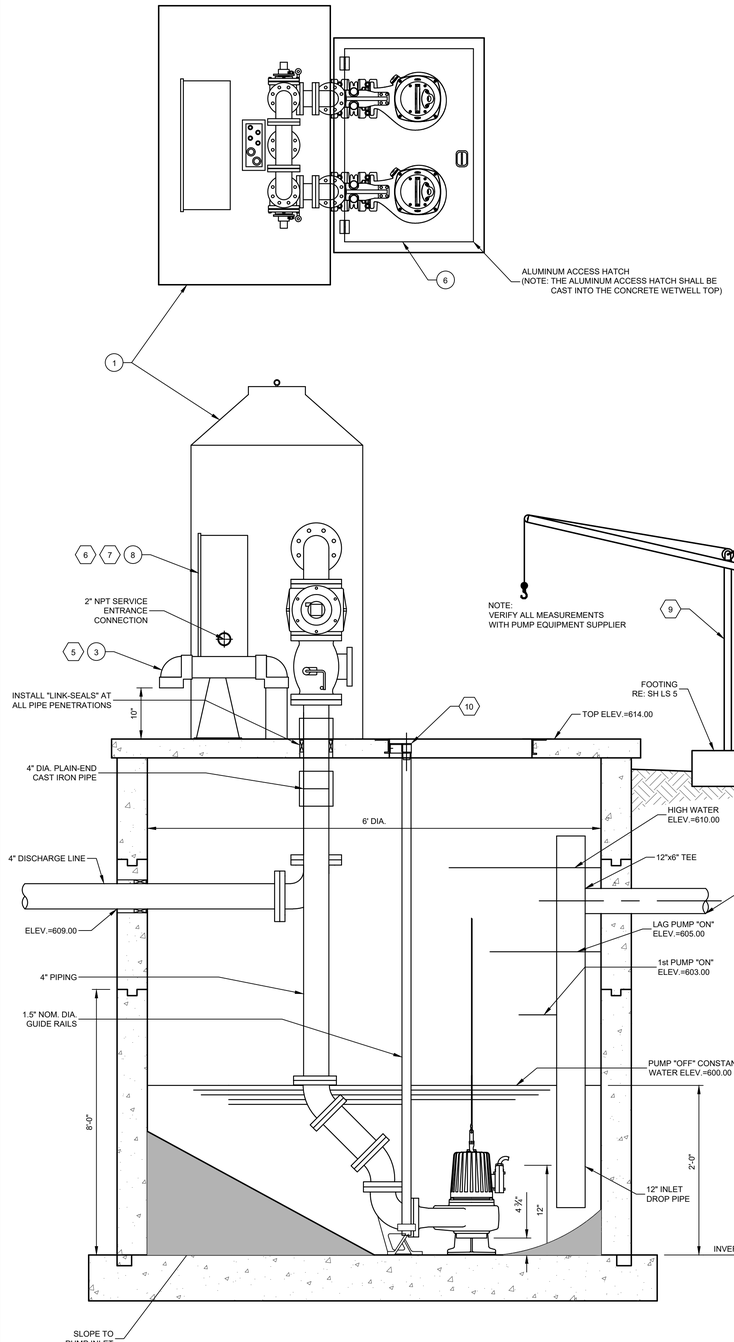
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

LIFT STATION SITE PLAN

Proj. No.: _____
Date: 07-14-23
Scale: 1"=10'
Checked By: _____
Approved By: _____

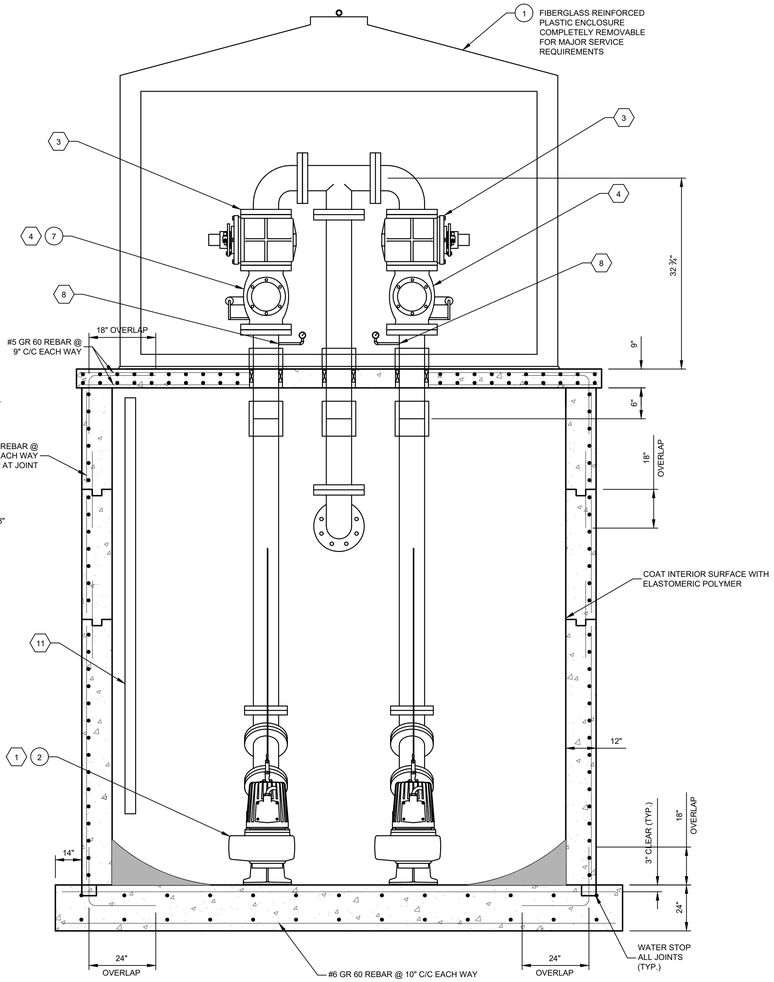
SHEET NUMBER

LS1



SIDE ELEVATION VIEW

SCALE: NTS



FRONT ELEVATION VIEW

SCALE: NTS

LEGEND

(#) LIFT STATION NOTES

(#) LIFT STATION COMPONENTS

LIFT STATION COMPONENT NOTES

1. CONTRACTOR SHALL INSTALL A FACTORY BUILT FIBERGLASS ENCLOSURE CONTAINING SYSTEM VALVING; ALL COMPONENTS SHALL BE MOUNTED ON A REINFORCED CONCRETE BASE, PRECAST OR CAST-IN-PLACE, SUITABLE FOR A SIX (6) FOOT DIAMETER WET WELL OPENING.
2. CONTRACTOR SHALL INSTALL DUPLEX SUBMERSIBLE PUMPS AND MOTORS PROVIDING MINIMUM DESIGN CAPABILITIES OF: 122 GPM @ 54' TDH; AND MOTORS RATED AT 230 VOLT, 3 PHASE WITH VARIABLE SPEED DRIVES.
3. WET WELL SHALL HAVE A WELL VENT WITH SCREEN.
4. CONTRACTOR SHALL INSTALL A THERMOSTATICALLY CONTROLLED EXHAUST FAN CAPABLE OF EXCHANGING THE COMPLETE VOLUME OF AIR WITHIN THE WET WELL A MINIMUM OF EVERY TWO MINUTES.
5. GUIDE RAIL SYSTEM AND FITTINGS INCLUDING BOLTS, ANCHORS AND ESSENTIAL HARDWARE SHALL BE CONSTRUCTED OF STAINLESS STEEL.
6. LOCKABLE ALUMINUM HATCHES SHALL BE INSTALLED. (FLYGT SAFETY-HATCH OR EQUAL)
7. A CHECK VALVE AND A GATE VALVE SHALL BE INSTALLED FOR EACH PUMP AND ITS PIPING SYSTEM.
8. A CONTROL PANEL FOR THE LIFT STATION SHALL BE PROVIDED (MULTI-TRODE) AND SHALL CONTAIN THE FOLLOWING EQUIPMENT:
   - A. EXTERIOR MAIN CONNECTION WITH A TERMINAL BLOCK
   - B. MAIN BREAKERED DISCONNECT (CONTRACTOR SUPPLIED)
   - C. CIRCUIT BREAKERS (EACH PUMP)(SQUARE D)
   - D. ACROSS THE LINE NEMA RATED STARTERS (SQUARE D)
   - E. OVERLOAD RELAYS (SQUARE D)
   - F. MOISTURE AND TEMPERATURE MOTOR PROTECTION
   - G. PHASE PROTECTION (MULTI-TRODE)
   - H. LIGHTNING PROTECTION
   - I. MVC 400 FOR 480 VOLTS AS SECONDARY SURGE PROTECTION
   - J. OPTIONS FOR ALARM FUNCTIONS TO BE REMOTELY MONITORED.
   - K. CONTROL CIRCUITS (BREAKER PROTECTION) (MULTI-TRODE)
   - L. H.O.A. SWITCHES
   - M. PUMP ALTERNATOR RELAY (MULTI-TRODE)
   - N. PUMP RUN INDICATORS
   - O. ELAPSED TIME INDICATORS FOR EACH PUMP
   - P. PUMP SEQUENCE SELECTOR SWITCH
   - Q. RECEPTACLE
   - R. PUMP START DELAY (ONE PUMP)
   - S. LIQUID LEVEL CONTROL SYSTEM (ULTRASONIC PROBE TYPE CONTROLLER) (MULTI-TRODE)
9. ENCLOSURE HEATER (MANUFACTURER SUPPLIED)
10. ALL INTERIOR WET WELL SURFACES SHALL BE COATED WITH AN ELASTOMERIC COATING APPLIED PER THE MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
11. PUMP MANUFACTURER SHALL SUPPLY A STAINLESS STEEL HOIST SYSTEM WITH STAINLESS STEEL BRACKETS.
12. CONTRACTOR SHALL PROVIDE ELECTRICAL POWER TO THE PUMP AS FOLLOWS: 3 PHASE 60 HERTZ, 4 WIRE, 230 VOLTS.
13. AN ALUMINUM PLAQUE SHALL BE FASTENED TO THE LIFT STATION AND SHALL CONTAIN THE FOLLOWING INFORMATION:
    - A. CONTRACTOR'S NAME
    - B. DATE OF CONSTRUCTION
    - C. SIZE OF PUMPS (5 HP)
    - D. SIZE OF FORCE MAIN. (4" DIA.) (PUMP DISCHARGE= 3" DIA.)
    - E. DESIGN FLOW (122 GPM); TDH (54 FT)
14. CONTRACTOR SHALL PROVIDE 5 COPIES OF OPERATING MANUALS, TECHNICAL SPECIFICATIONS AND WRITTEN DESCRIPTIVE MATERIALS FOR THE SUBMERSIBLE PUMPS PROVIDED AS WELL AS VALVE DESCRIPTIONS, SWITCH SCHEMATICS, ANCHORING REQUIREMENTS. CONTRACTOR SHALL PROVIDE SUCH DOCUMENTATION FOR ALL EQUIPMENT INSTALLED AS PART OF THE LIFT STATION AND ITS AUXILIARY FUNCTIONAL MECHANICAL AND ELECTRONIC PARTS, BACK-UP PUMP(S) AND TELEMETRY DEVICES.

ITEM	DESCRIPTION	MATERIAL AND SIZE
(1)	PUMPS	HYDROMATIC - HPGFH/HPGFHX-500 OR EQUAL
(2)	BASE	CAST CONCRETE
(3)	DEZURIK PLUG VALVE	4" ECCENTRIC PLUG VALVES
(4)	DEZURIK CHECK VALVE	4", LEVER AND WEIGHT
(5)	WET WELL VENT	PVC, 4" MIN. DIA.
(6)	DUPLEX CONTROL PANEL	NEMA 3R, STAINLESS STEEL
(7)	ACCESSORY PANEL	STAINLESS STEEL
(8)	PRESSURE GAUGE	4½" DIAL, LIQUID FILLED, ASHCROFT TYPE 1009 OR EQUAL (0-200 PSI)
(9)	HALLIDAY HOIST	HOIST WITH HAND WINCH, SOCKET, CABLE AND HOOK, 1000# CAPACITY, 36" REACH
(10)	GUIDE RAILS	1.5" NOM. 304SS
(11)	LEVEL PROBE	10 STEP CONDUCTIVE LEVEL SENSOR

GENERAL NOTES

1. CONTRACTOR SHALL FURNISH AND INSTALL UNDERGROUND WIRING AS REQUIRED TO PROVIDE ELECTRICITY FOR THE SITE. THERE SHALL BE NO OVERHEAD ELECTRICAL WIRES. ALL ELECTRICAL WORK SHALL MEET THE REQUIREMENTS AND BE IN COMPLIANCE TO NATIONAL AND LOCAL ELECTRICAL CODES AND REGULATIONS.
2. CONTRACTOR SHALL COMPACT SUBBASE UNDER CONCRETE SURFACE TO 95% STANDARD PROCTOR DENSITY
3. CHAMFER ALL EXPOSED EDGES.
4. PUMP CONTROL PANEL, LEVEL PROBE, FLOAT SWITCHES, AND PUMP STATION MONITORING SHALL BE FURNISHED AS A COMPLETE PACKAGE BY ONE SUPPLIER.
5. STAINLESS STEEL GUIDE RAIL BRACKETS AND HARDWARE SHALL BE FURNISHED BY PUMP MANUFACTURER AND INSTALLED AS RECOMMENDED BY THE PUMP MANUFACTURER.
6. WIRING AND CONDUIT FROM PUMPS SHALL BE SEALED GAS TIGHT AT THE ENTRANCE TO THE CONTROL PANEL W/ NON- HARDENING COMPOUND.
7. PUMP CABLES, LEVEL PROBE AND FLOAT CONTROL CABLES SHALL BE OF SUFFICIENT LENGTH TO REACH INTO JUNCTION BOX WITHOUT SPLICES.
8. UNSUPPORTED GUIDE RAILS SHALL NOT EXCEED 20'-0". USE HARDWARE FROM PUMP SUPPLIER FOR GUIDE RAIL SUPPORTS AND BRACKETS.
9. ALL NUTS AND BOLTS TO BE STAINLESS STEEL.
10. THE SUBMERSIBLE PUMP POWER CORDS SHALL BE PROTECTED BY GFI CIRCUITRY.
11. ALL HARDWARE, INCLUDING GUIDE RAIL HOLDER, SUPPORTS, FLOAT HANGERS, ACCESSORIES, AND OTHER METAL ITEMS INSIDE WET WELL SHALL BE STAINLESS STEEL TYPE 316.
12. PIPE AND FITTINGS SHALL BE DUCTILE IRON CLASS 53 WITH FLANGES FOR 150 psi WORKING PRESSURE WITH BOLT HOLES MATCHING CLASS 125 ANSI B16.1 AND CLASS 150 ANSI B16.5.

NO.	DESCRIPTION	DATE

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CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

LIFT STATION DETAILS

Proj. No.:
Date: 07-14-23
Scale: N.T.S.
Checked By:
Approved By:

SHEET NUMBER
LS2

SECTION 11310

SUBMERSIBLE GRINDER PUMPING SYSTEM

PART 1 - GENERAL

1.01 SCOPE OF WORK

A. CONTRACTOR SHALL PROVIDE A COMPLETE SUBMERSIBLE PUMPING SYSTEM. THE SYSTEM SHALL BE A COMPLETE, FULLY INTEGRATED PROCESS SYSTEM PROVIDED BY A SINGLE COORDINATING SUPPLIER WHO SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS REQUIRED AND SHALL SUPERVISE THE INSTALLATION, START-UP, AND TESTING USING QUALIFIED TECHNICIANS AND OTHER SPECIALISTS. THE SUPPLIER SHALL COORDINATE THE EQUIPMENT REQUIREMENTS WITH THE MECHANICAL AND ELECTRICAL REQUIREMENTS OF THE CONTRACT DOCUMENTS, SHALL INTEGRATE THE EQUIPMENT FURNISHED WITH THE REQUIREMENTS SHOWN ON THE ELECTRICAL DRAWINGS, AND PROVIDE COMPLETE INSTALLATION AND INTERCONNECTION DRAWINGS AND DIAGRAMS REQUIRED FOR INSTALLATION, START-UP, TESTING AND ADJUSTMENT.

B. THE PUMPING SYSTEM FOR THE LIFT STATION SHALL CONSIST OF TWO (2) SUBMERSIBLE GRINDER PUMPS, THE ELECTRICAL COMPONENTS, CHECK VALVES, PLUG VALVES, ACCESS HATCH COVERS, AND A LEVEL CONTROL SYSTEM AS SHOWN ON THE CONTRACT PLANS.

1.02 DELIVERY, STORAGE, HANDLING

A. INDIVIDUAL EQUIPMENT COMPONENTS SHALL BE CRATED IN STRUCTURALLY ADEQUATE PACKING CONTAINERS TO PREVENT DAMAGE DURING SHIPPING, FACILITATE EASE OF HANDLING AND TO PROVIDE SUITABLE PROTECTION FROM WEATHER FOR EXTENDED STORAGE AT THE JOBSITE PRIOR TO INSTALLATION. PACKING CONTAINERS SHALL BE PERMANENTLY LABELED WITH APPROPRIATE EQUIPMENT IDENTIFICATION, SHIPPING ADDRESS AND RETURN ADDRESS. PACKING LIST SHALL BE PROVIDED WITH EQUIPMENT AT TIME OF DELIVERY.

B. ELECTRICAL EQUIPMENT SHALL BE KEPT THOROUGHLY DRY AT ALL TIMES AND SHALL BE STORED INDOORS. EQUIPMENT STORAGE SHALL BE PROTECTED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EQUIPMENT SHALL NOT BE STORED DIRECTLY ON THE GROUND.

C. CONTRACTOR SHALL UTILIZE EQUIPMENT AND TOOLS OF ADEQUATE SIZE SUITABLE FOR UNLOADING, TRANSPORTING, STORING AND SUPPORTING THE EQUIPMENT DURING INSTALLATION. CAUTION SHALL BE EMPLOYED TO PREVENT EQUIPMENT DAMAGE RESULTING FROM ABRUPT CONTACT WITH OTHER MATERIALS OR EQUIPMENT.

1.03 QUALITY ASSURANCE

A. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT THE SUBMERSIBLE PUMPING SYSTEM IS AN INTEGRATED SYSTEM WHICH SHALL BE FURNISHED, FACTORY ASSEMBLED AND INTEGRATED BY ONE MANUFACTURER OR SUPPLIER WHO SHALL PROVIDE ALL OF THE EQUIPMENT AND APPURTENANCES REGARDLESS OF THE MANUFACTURER OF THE VARIOUS COMPONENTS ALL UNDER THE SUBMERSIBLE PUMPING SYSTEM PAY ITEMS. SUBSTITUTION OF FUNCTIONS SPECIFIED WILL BE SUBJECT TO APPROVAL OF THE ENGINEER.

B. THE MATERIALS OR EQUIPMENT SO SPECIFIED HAVE BEEN SELECTED AS BEING SUITABLE FOR THE SERVICE ANTICIPATED AND WILL BE REGARDED AS STANDARD. THE CONTRACTOR SHOULD PREPARE HIS BID ON THE BASIS OF THE PARTICULAR EQUIPMENT AND MATERIALS SPECIFIED. THE AWARDING OF THE CONTRACT WILL CONSTITUTE A CONTRACTUAL OBLIGATION ON THE PART OF THE CONTRACTOR TO FURNISH THE SPECIFIED EQUIPMENT AND MATERIALS.

C. PUMP SUBSTITUTIONS: IN ORDER TO ALLOW SUFFICIENT TIME FOR THE ENGINEER TO EVALUATE THE TYPE AND QUALITY OF EQUIPMENT BEING OFFERED BY THE MANUFACTURERS OR COORDINATING SUPPLIER NOT SPECIFIED, THE LATTER SHALL SUBMIT FIFTEEN (15) DAYS PRIOR TO THE DATE SET FOR THE OPENING OF BIDS ON THIS PROJECT, THE FOLLOWING DESCRIPTIVE LITERATURE AND DRAWINGS FOR ALL EQUIPMENT BEING OFFERED UNDER THIS ITEM. FAILURE TO PROVIDE A COMPLETE SYSTEM AND EQUIPMENT DESCRIPTION MAY RESULT IN NON-ACCEPTANCE OF THE EQUIPMENT MANUFACTURER IF A BIDDER PROPOSES THIS ALTERNATE EQUIPMENT WITH THEIR BID:

1. SPECIFICATIONS AND DRAWINGS SHOWING THE DIMENSIONS AND DETAILED DESCRIPTION OF THE EQUIPMENT OFFERED.
2. GENERAL INSTALLATION, PIPING AND WIRING DETAILS AND ARRANGEMENTS FOR INSTRUMENTS AND ACCESSORIES.
3. COST DEDUCT TO USE THE SUBSTITUTION OVER THE SPECIFIED EQUIPMENT.

THE MANUFACTURER OR SUPPLIER SUBMITTING EQUIPMENT TO BE CONSIDERED AS A SUBSTITUTION SHALL PAY THE ENGINEER FOR HIS/HER TIME TO REVIEW THE INFORMATION. ENGINEERING FEES AND REQUIRED TIME TO REVIEW SHALL BE DETERMINED BY THE REVIEWING ENGINEER.

EQUIPMENT SUBSTITUTIONS THAT HAVE BEEN DEEMED ACCEPTABLE WILL BE LISTED BY ADDENDUM NO LATER THAN FIVE (5) DAYS BEFORE THE BID DATE.

E. THE ENTIRE SYSTEM SHALL BE DESIGNED, COORDINATED AND SUPPLIED BY A COMPANY REGULARLY ENGAGED IN THE BUSINESS OF DESIGNING AND FABRICATING PUMPING SYSTEMS FOR A MINIMUM OF FIFTEEN (15) YEARS. ACCEPTABLE PUMP MANUFACTURERS ARE HYDROMATIC PUMP AS PROVIDED BY HAYNES EQUIPMENT COMPANY, OKLAHOMA CITY, OKLAHOMA, (405) 755-1357.

1.04 WARRANTY

A. THE MANUFACTURER SHALL WARRANT THE EQUIPMENT TO BE OF QUALITY CONSTRUCTION, FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP. THE WARRANTY SHALL BECOME EFFECTIVE UPON ACCEPTANCE BY THE OWNER OR OWNER'S AUTHORIZED AGENT, OR SIX (6) MONTHS AFTER DATE OF SHIPMENT, WHICHEVER OCCURS FIRST.

B. THE EQUIPMENT, APPARATUS, AND PARTS FURNISHED SHALL BE WARRANTED FOR A PERIOD OF ONE (1) YEAR, EXCEPTING ONLY THOSE ITEMS THAT ARE NORMALLY CONSUMED IN SERVICE, SUCH AS OIL, GREASE, PACKING GASKETS, O-RINGS, ETC. THE MANUFACTURER SHALL BE SOLELY RESPONSIBLE FOR THE WARRANTY OF THE EQUIPMENT AND ALL COMPONENTS.

C. UPON REQUEST FROM THE ENGINEER AND/OR THE OWNER, THE MANUFACTURER SHALL DEMONSTRATE PROOF OF FINANCIAL RESPONSIBILITY WITH RESPECT TO PERFORMANCE AND DELIVERY DATE. IN ADDITION, THE MANUFACTURER SHALL PROVIDE PROOF OF EVIDENCE OF FACILITIES, EQUIPMENT, AND SKILLS REQUIRED TO PRODUCE THE EQUIPMENT SPECIFIED HEREIN AND PROVIDE TECHNICAL SERVICE AND REPLACEMENT PARTS.

D. COMPONENTS FAILING TO PERFORM AS SPECIFIED BY THE ENGINEER, OR AS REPRESENTED BY THE MANUFACTURER, OR PROVEN DEFECTIVE IN SERVICE DURING THE WARRANTY PERIOD, SHALL BE REPLACED, REPAIRED, OR SATISFACTORILY MODIFIED BY THE MANUFACTURER WITHOUT COST OF PARTS OR LABOR TO THE OWNER.

PART 2 - PRODUCTS

2.01 SUBMERSIBLE PUMPS

A. GENERAL

FURNISH AND INSTALL A QUANTITY OF TWO (2) PULL-UP SUBMERSIBLE GRINDER PUMPING units. THE PUMPS SHALL BE CLOCKWISE ROTATION AND CONSTRUCTED TO AUTOMATICALLY CONNECT TO THE DISCHARGE PIPING WHEN LOWERED INTO PLACE.

B. CONDITIONS OF OPERATION

EACH PUMP SHALL BE CAPABLE OF PROVIDING THE FOLLOWING HYDRAULIC CONDITIONS WHEN PUMPING DOMESTIC SEWAGE:

PUMP	HYDROMATIC HPGFH
CAPACITY	122 GPM
TOTAL DYNAMIC HEAD	54 FT.
MOTOR HP	5 HP
MAXIMUM SPEED	1750 RPM

C. THE PUMP VOLUTE, MOTOR AND SEAL HOUSING SHALL BE HIGH QUALITY GRAY CAST IRON, ASTM A-48, CLASS 30. THE PUMP DISCHARGE SHALL BE FITTED WITH A 3" STANDARD ASA 125 LB. FLANGE, FACED AND DRILLED. ALL EXTERNAL MATING PARTS SHALL BE MACHINED AND NITRILE O-RING SEALED ON A BEVELED EDGE. GASKETS SHALL NOT BE ACCEPTABLE. ALL FASTENERS EXPOSED TO THE PUMPED LIQUIDS SHALL BE 300 SERIES STAINLESS STEEL.

2.02 ELECTRICAL POWER CORD

A. ELECTRICAL POWER CORD SHALL BE SOOW, W, OR GGC, WATER RESISTANT 600V, 90°C, UL AND CSA APPROVED AND APPLIED DEPENDENT ON AMP DRAW FOR SIZE.

B. THE POWER CABLE ENTRY INTO THE CORD CAP ASSEMBLY SHALL FIRST BE MADE WITH A COMPRESSION FITTING. EACH INDIVIDUAL LEAD SHALL BE STRIPPED DOWN TO BARE WIRE AT STAGGERED INTERVALS, AND EACH STRAND SHALL BE INDIVIDUALLY SEPARATED. THIS AREA OF THE CORD CAP SHALL THEN BE FILLED WITH AN EPOXY COMPOUND POTTING WHICH WILL PREVENT WATER CONTAMINATION TO GAIN ENTRY EVEN IN THE EVENT OF WICKING OR CAPILLARY ACTION.

C. THE POWER CORD LEADS SHALL THEN BE CONNECTED TO THE MOTOR LEADS WITH EXTRA HEAVY CONNECTORS WITH A SCREWED WIRE-TO-WIRE CONNECTION.

2.03 MOTOR

A. THE STATOR, ROTOR AND BEARINGS SHALL BE MOUNTED IN A SEALED SUBMERSIBLE TYPE HOUSING. THE STATOR WINDINGS SHALL HAVE CLASS F INSULATION (155°C OR 311°F) OR CLASS H INSULATION (180°C OR 356°F) AND A DIELECTRIC OIL-FILLED MOTOR, NEMA B DESIGN.

B. THE PUMP AND MOTOR SHALL BE SPECIFICALLY DESIGNED SO THAT THEY MAY BE OPERATED PARTIALLY OR COMPLETELY SUBMERGED IN THE LIQUID BEING PUMPED.

C. STATORS SHALL BE SECURELY HELD IN PLACE WITH A REMOVABLE END RING AND THREADED FASTENERS SO THEY MAY BE EASILY REMOVED. NO SPECIAL TOOLS SHALL BE REQUIRED FOR PUMP AND MOTOR DISASSEMBLY.

D. PUMP SHALL BE EQUIPPED WITH HEAT SENSORS. THE HEAT SENSOR SHALL BE A LOW RESISTANCE, BI-METAL DISC THAT IS TEMPERATURE SENSITIVE. IT SHALL BE MOUNTED DIRECTLY ON THE STATOR WINDINGS AND SIZED TO OPEN AT 120°C AND AUTOMATICALLY RESET AT 30- 35°C DIFFERENTIAL. THE SENSORS SHALL BE CONNECTED IN SERIES WITH MOTOR STARTER COIL SO THAT THE STARTER IS TRIPPED IF A HEAT SENSOR OPENS. THE MOTOR STARTER SHALL BE EQUIPPED WITH OVERLOAD HEATERS SO ALL NORMAL OVERLOADS ARE PROTECTED BY AN EXTERNAL HEATER BLOCK.

2.04 BEARINGS AND SHAFT

A. AN UPPER RADIAL BEARING AND A LOWER THRUST BEARING SHALL BE REQUIRED. THESE SHALL BE LUBRICATED BY THE DIELECTRIC OIL THAT FILLS THE MOTOR HOUSING.

B. THE SHAFT SHALL BE MACHINED FROM A SOLID 416 SERIES STAINLESS STEEL FORGING AND BE A DESIGN THAT IS OF LARGE DIAMETER WITH MINIMUM OVERHANG TO REDUCE SHAFT DEFLECTION AND PROLONG BEARING LIFE.

2.05 SEALS

A. THE ROTOR AND STATOR IN THE MOTOR HOUSING SHALL BE SEPARATED AND PROTECTED FROM THE PUMPED LIQUID BY AN OIL-FILLED SEAL HOUSING INCORPORATING TWO TYPE 21 CARBON CERAMIC MECHANICAL SEALS MOUNTED IN TANDEM. THIS SEAL HOUSING SHALL BE EQUIPPED WITH TWO MOISTURE SENSING PROBES INSTALLED BETWEEN THE SEALS, AND THE SENSING OF MOISTURE IN THE SEAL CHAMBER SHALL BE AUTOMATIC, CONTINUOUS, AND NOT REQUIRE THE PUMP BE STOPPED OR REMOVED FROM THE WETWELL.

2.06 IMPELLER

A. IMPELLER SHALL BE BRASS MULTIVANE, SEMI-OPEN, NON-OVERLOADING DESIGN. THEY CAN EITHER BE FACTORY OR FIELD TRIMMED TO MEET SPECIFIC PERFORMANCE CONDITIONS. IMPELLERS SHALL BE DYNAMICALLY BALANCED AT THE FACTORY AND MACHINED FOR THREADING ON TO THE PUMP SHAFT.

2.07 GRINDER CUTTERS

A. THE COMBINATION CENTRIFUGAL PUMP IMPELLER AND GRINDER UNIT SHALL BE ATTACHED TO THE COMMON MOTOR AND PUMP SHAFT MADE OF 416SS. THE GRINDER UNIT SHALL BE ON THE SUCTION SIDE OF THE PUMP IMPELLER AND DISCHARGE DIRECTLY INTO THE IMPELLER INLET, LEAVING NO EXPOSED SHAFT TO PERMIT PACKING OF GROUND SOLIDS. THE GRINDER SHALL CONSIST OF TWO STAGES. THE CUTTING ACTION OF THE SECOND STAGE SHALL BE PERPENDICULAR TO THE PLANE OF THE FIRST CUT FOR BETTER CONTROL OF THE PARTICLE SIZE. THE GRINDER SHALL BE CAPABLE OF GRINDING NORMAL DOMESTIC SEWAGE. BOTH STATIONARY AND ROTATING CUTTERS SHALL BE MADE OF 440C STAINLESS STEEL HARDENED TO ROCKWELL 60C AND GROUND TO CLOSE TOLERANCE.

B. THE UPPER(AXIAL) CUTTER AND STATIONARY CUTTER RING SHALL BE REVERSIBLE TO PROVIDE NEW CUTTING EDGES TO DOUBLE LIFE. THE STATIONARY CUTTER RING SHALL BE A SLIP FIT INTO THE SUCTION OPENING OF THE VOLUTE AND HELD IN PLACE BY THREE (3) 300 SERIES STAINLESS STEEL SCREWS AND A RETAINING RING. THE LOWER(RADIAL) CUTTER SHALL MACERATE THE SOLIDS AGAINST THE I.D. OF THE CUTTER RING AND EXTRUDE THEM THROUGH THE SLOTS OF THE CUTTER RING. THE UPPER(AXIAL) CUTTER SHALL CUT OFF THE EXTRUSIONS, AS THEY EMERGE FROM THE SLOTS OF THE CUTTER RING TO ELIMINATE ANY ROPING EFFECT THAT MAY OCCUR IN SINGLE STAGE CUTTING ACTION. THE UPPER(AXIAL) CUTTER SHALL FIT OVER THE HUB OF THE IMPELLER AND THE LOWER(RADIAL) CUTTER SHALL BE SLIP FIT AND SECURED BY MEANS OF PEG AND HOLE AND ROTATE SIMULTANEOUSLY WITH THE ROTATION OF THE SHAFT AND IMPELLER. THE GRINDING MECHANISM SHALL BE LOCKED TO THE SHAFT BY A 300 SERIES STAINLESS STEEL COUNTERSUNK WASHER IN CONJUNCTION WITH A 300 SERIES STAINLESS STEEL FLAT HEAD CAP SCREW THREADED INTO THE END OF THE SHAFT.

2.08 CONTROLS

A. ELECTRICAL POWER TO BE FURNISHED TO THE SITE WILL BE 1 PHASE, 60 HERTZ, 230 VOLTS.

B. THE CONTROL CIRCUITRY SHALL BE DESIGNED TO OPERATE ON 115 +/-10% VOLTS, 60 HERTZ, SINGLE PHASE CURRENT, AND SHALL CONTROL PUMPS DRIVEN BY 5 HP MOTORS AT 1750 RPM. THE CONTROL PANEL SHALL CONSIST OF CIRCUIT BREAKER AND CONTROLS FOR EACH PUMP MOTOR ACTUATED BY A LIQUID LEVEL CONTROL SYSTEM WITH ALL COMPONENTS MOUNTED IN ONE COMMON ENCLOSURE. THE CONTROL ASSEMBLY SHALL PROVIDE MEANS TO OPERATE EACH PUMP MANUALLY OR AUTOMATICALLY. WHEN OPERATED IN THE AUTOMATIC MODE, THE CONTROL ASSEMBLY SHALL PROVIDE MEANS TO AUTOMATICALLY ALTERNATE THE POSITION TO THE "LEAD", "LAG" AND SPARE PUMPS AFTER EACH PUMPING CYCLE.

C. THE PUMP STATION CONTROLS SHALL CONFORM TO THIRD PARTY SAFETY CERTIFICATION. THE PANEL SHALL BEAR A SERIALIZED UL LABEL LISTED FOR “ENCLOSED INDUSTRIAL CONTROL PANELS”. THE ENCLOSURE, AND ALL COMPONENTS SHALL BE MOUNTED ON THE SUB-PANEL OR CONTROL COVER SHALL CONFORM TO UL DESCRIPTIONS AND PROCEDURES.

D. PANEL ENCLOSURE

1. THE COMPLETE CONTROL ASSEMBLY SHALL BE CONTAINED IN ONE NEMA 3R STEEL ENCLOSURE.

2. ALL SEAMS SHALL BE FREE OF BURRS AND FREE OF OPEN VOIDS TO PREVENT LEAKAGE. THE ENCLOSURE SHALL BE CONSTRUCTED IN CONFORMANCE WITH APPLICABLE SECTIONS OF THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA). ENCLOSURE CONSTRUCTION TO BE NEMA 3 PER NEMA STANDARD ICS-1970, PARAGRAPH ICS1-110.12.

REVISIONS		
NO.	DESCRIPTION	DATE

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CARLTON LANDING PHASE 8
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA
LIFT STATION SPECIFICATIONS

Proj. No.:
Date: 07-14-23
Scale: N.T.S.
Checked By:
Approved By:

SHEET NUMBER
LS3

PLOT DATE: 07/27/2023 Plotted By: STEPHANIE Fri - 07/28/23 10:37A - On-site Xrefs
XREFS LOADED: 2732046-topo.dwg 2732046-BW2D.dwg 2732046-CPLT.dwg 2732046-LOC.dwg 2732046-lidy.dwg 2732046-EC QUANTITIES.dwg

3. THE ENCLOSURE SHALL BE EQUIPPED WITH A REMOVABLE INNER SWING PANEL FABRICATED OF STEEL, MOUNTED ON LIFT OFF HINGES. THE INNER SWING PANEL SHALL BE OF ADEQUATE SIZE TO COMPLETELY COVER ALL WIRING AND COMPONENTS MOUNTED ON THE BACK PANEL AND SHALL MAKE PROVISION FOR THE MOUNTING OF ALL BASIC AND OPTIONAL CONTROLS AND INSTRUMENTS. THE INNER SWING PANEL SHALL HAVE A MINIMUM HORIZONTAL SWING OF 90^{O} AND SHALL BE HELD IN THE CLOSED POSITION WITH STRAIGHT SLOT SCREWS.

4. THE DOOR SHALL BE MOUNTED ON A CONTINUOUS (PIANO-TYPE), VERTICAL, STEEL HINGE, SEALED AROUND ITS ENTIRE PERIMETER AND HELD IN THE CLOSED POSITION WITH A THREE PADLOCKABLE DRAW PULL LATCHES. THE DOOR SHALL HAVE A MINIMUM HORIZONTAL SWING OF 165^{O}.

5. THE ENCLOSURE SHALL BE FURNISHED WITH A REMOVABLE BACK PANEL FABRICATED OF STEEL, SECURED TO THE ENCLOSURE ON COLLAR STUDS. THE BACK PANEL SHALL BE OF ADEQUATE SIZE TO ACCOMMODATE ALL BASIC AND OPTIONAL COMPONENTS.

6. THERE SHALL BE NO HOLES IN THE ENCLOSURE FOR MOUNTING THE ENCLOSURE OR MOUNTING WITHIN THE ENCLOSURE.

7. ALL CONTROL WIRING SHALL CONFORM TO THE NATIONAL ELECTRIC CODE. WIRES CONNECTED TO COMPONENTS MOUNTED ON THE ENCLOSURE DOOR SHALL BE BUNDLED AND TIED IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE. BUNDLES SHALL BE MADE FLEXIBLE AT THE HINGED SIDE OF THE ENCLOSURE. ADEQUATE LENGTH AND FLEX SHALL BE PROVIDED TO ALLOW THE DOOR TO SWING TO ITS FULL OPEN POSITION WITHOUT UNDUE STRESS OR ABRASION ON THE WIRE OR INSULATION. BUNDLES SHALL BE HELD IN PLACE ON EACH SIDE OF THE HINGE BY MECHANICAL FASTENING DEVICES.

8. THE MOTOR CONTROL SHALL BE COMPLETELY WIRED AT THE FACTORY, EXCEPT FOR THE POWER FEEDER LINES, IN ACCORDANCE WITH APPLICABLE WIRING STANDARDS SET FORTH BY THE NATIONAL ELECTRIC CODE (NEC).

9. ALL COMPONENTS SHALL BE ELECTRICALLY GROUNDED TO A COMMON GROUND LUG MOUNTED ON THE CONTROL PANEL SUB PLATE. UPON INSTALLATION OF LIFT STATION, AND BEFORE CONNECTION OF ANY POWER FEEDER LINES, CONTRACTOR SHALL EXTEND GROUNDING WIRE FROM LUG TO EXTERNAL GROUND IN ACCORDANCE WITH LOCAL ELECTRICAL CODE.

E. COMPONENTS

1. ALL MOTOR BRANCH CIRCUIT BREAKERS, AND CONTROL RELAYS SHALL BE SECURELY FASTENED TO THE REMOVABLE BACK PANEL WITH SCREWS. PROPERLY SIZED NEMA RATED SQUARE-D CLASS 8536 MOTOR CONTACTORS SHALL BE PROVIDED.

2. A PROPERLY SIZED THERMAL-MAGNETIC AIR CIRCUIT BREAKER SHALL BE FURNISHED FOR EACH SUBMERSIBLE PUMP MOTOR, AND SHALL HAVE A SYMMETRICAL RMS INTERRUPTING RATING OF 14,000 AMPERES AT 460 VOLTS. ALL CIRCUIT BREAKERS SHALL BE SEALED BY THE MANUFACTURER AFTER CALIBRATION TO PREVENT TAMPERING. A MECHANICAL DISCONNECT MECHANISM SHALL BE INSTALLED ON EACH CIRCUIT BREAKER TO PROVIDE A MEANS OF DISCONNECTING POWER TO THE PUMP MOTORS. OPERATOR HANDLES FOR THE DISCONNECT MECHANISMS SHALL BE LOCATED ON THE EXTERIOR OF THE INNER SWING PANEL WITH INTERLOCKS WHICH PERMIT THE SWING PANEL TO BE OPENED ONLY WHEN THE CIRCUIT BREAKERS ARE IN THE "OFF" POSITION.

3. A PADLOCKING OPERATING MECHANISM SHALL BE INSTALLED ON EACH MOTOR CIRCUIT BREAKER. OPERATOR HANDLES FOR THE MECHANISM SHALL BE LOCATED ON THE EXTERIOR OF THE CONTROL COMPARTMENT DOOR, WITH INTERLOCKS WHICH PERMIT THE DOOR TO BE OPENED ONLY WHEN THE CIRCUIT BREAKERS ARE IN THE "OFF" POSITION.

4. A SWITCH SHALL BE PROVIDED TO PERMIT THE STATION OPERATOR TO SELECT AUTOMATIC ALTERNATION OF THE PUMPS, TO SELECT PUMP NUMBER ONE TO BE THE LEAD PUMP FOR EACH PUMPING CYCLE OR TO SELECT PUMP NUMBER TWO TO BE THE LEAD PUMP FOR EACH PUMPING CYCLE. SELECTOR SWITCH SHALL BE STANDARD DUTY, RATED NEMA 4X, WITH CONTACTS RATED NEMA A600 MINIMUM.

5. PUMP MODE SELECTOR SWITCHES SHALL BE CONNECTED TO PERMIT MANUAL START AND MANUAL STOP FOR EACH PUMP INDIVIDUALLY, AND TO SELECT AUTOMATIC OPERATION OF EACH PUMP UNDER CONTROL OF THE LIQUID LEVEL CONTROL SYSTEM. MANUAL OPERATION SHALL OVERRIDE THE LIQUID LEVEL CONTROL SYSTEM. SELECTOR SWITCH SHALL BE STANDARD DUTY, RATED NEMA 4X, WITH CONTACTS RATED NEMA A600 MINIMUM.

6. A PUMP ALTERNATION SHALL BE PROVIDED BY EITHER THE USE OF ELECTRICAL/MECHANICAL RELAY OR A PLC. PUMP ALTERNATOR SHALL OPERATE AFTER PUMP SHUTDOWN.

7. CONTROL PANEL SHALL BE EQUIPPED WITH 24 VDC LED PILOT LIGHT FOR EACH PUMP MOTOR. LIGHT SHALL BE WIRED IN PARALLEL WITH THE RELATED PUMP MOTOR STARTER TO INDICATE THAT THE MOTOR IS ON.

8. THE PUMP CONTROL PANEL SHALL BE EQUIPPED TO TERMINATE PUMP OPERATION DUE TO HIGH MOTOR WINDING TEMPERATURE OR MOISTURE IN THE MOTOR HOUSING AND SHALL UTILIZE THE CONTACTS IN THE PUMP MOTOR. IF EITHER EVENT SHOULD OCCUR, THE MOTOR STARTER WILL DROP OUT AND A MECHANICAL INDICATOR, VISIBLE ON THE INNER DOOR, SHALL INDICATE THE PUMP MOTOR HAS BEEN SHUTDOWN. THE PUMP MOTOR SHALL REMAIN LOCKED OUT UNTIL THE CONDITION HAS BEEN CORRECTED AND MANUALLY RESET. CONTROL PANEL SHALL BE EQUIPPED WITH ONE 24 VDC LED PILOT LIGHT FOR EACH PUMP MOTOR TO INDICATE A PUMP FAIL CONDITION.

9. THE MOTOR CONTROL CENTER SHALL BE EQUIPPED WITH A DUPLEX GROUNDING RECEPTACLE LOCATED ON THE EXTERIOR OF THE ENCLOSURE IN WEATHERPROOF BOX. THE RECEPTACLE CIRCUIT SHALL BE PROTECTED BY A 15 AMPERE THERMAL MAGNETIC CIRCUIT BREAKER.

10. LIFT STATION MANUFACTURER SHALL FURNISH 115 VOLT, A.C. 40-WATT, VAPOR-TIGHT ALARM LIGHT WITH RED GLOBE, GUARD AND MOUNTING HARDWARE. THE CONTRACTOR SHALL MOUNT, WIRE AND RUN CONDUIT TO THE LIGHT AS SHOWN ON THE PLANS. WIRING SHALL BE CONNECTED TO THE APPROPRIATE TERMINAL BLOCKS IN THE MOTOR CONTROL CENTER AS SHOWN ON THE LIFT STATION WIRING SCHEMATIC.

11. THE CONTROL PANEL SHALL BE EQUIPPED TO MONITOR THE INCOMING POWER AND SHUT DOWN THE PUMP WHEN REQUIRED TO PROTECT THE MOTORS FROM DAMAGE CAUSED BY PHASE REVERSAL, PHASE LOSS, VOLTAGE UNBALANCE GREATER THAN 5% OR VOLTAGE LESS THAN 83% OF NOMINAL. A TIME DELAY SHALL BE PROVIDED TO MINIMIZE NUISANCE TRIPS. THE MOTORS SHALL AUTOMATICALLY RESTART WHEN POWER CONDITIONS RETURN TO NORMAL. CONTROL PANEL SHALL BE EQUIPPED WITH A 24 VDC LED PILOT LIGHT TO INDICATE POWER FAILURE.

12. THE CONTROL CIRCUIT SHALL CONTAIN A PUMP DELAY CIRCUIT TO PREVENT BOTH PUMPS FROM SIMULTANEOUS STARTING FOLLOWING A POWER FAILURE.

13. AN ADEQUATELY SIZED CONTROL TRANSFORMER IN ENCLOSURE SUITABLE FOR MOUNTING OUTDOORS SHALL BE PROVIDED TO PROVIDE SINGLE PHASE 115 VOLT POWER FOR THE PUMP CONTROLS, DUPLEX RECEPTACLE, AND TELEMETRY SYSTEM. THE PRIMARY SIDE OF THE TRANSFORMER SHALL BE PROTECTED BY A THERMAL MAGNETIC AIR CIRCUIT BREAKER, SPECIFICALLY SIZED TO MEET THE POWER REQUIREMENTS OF THE TRANSFORMER. A MECHANICAL OPERATING MECHANISM SHALL BE INSTALLED ON THE CIRCUIT BREAKER TO PROVIDE A MEANS OF DISCONNECTING POWER TO THE TRANSFORMER. THE OPERATING HANDLE FOR THE MECHANISM SHALL BE LOCATED ON THE SWING DOOR OF THE CONTROL PANEL, WITH INTERLOCKS WHICH PERMIT THE SWING DOOR TO BE OPENED ONLY WHEN THE CIRCUIT BREAKER IS IN THE “OFF” POSITION.

14. A 120 VOLT AC ALARM HORN IN A WEATHERPROOF ENCLOSURE SHALL BE PROVIDED FOR REMOTE MOUNTING. THE HORN SHALL HAVE A SOUND OUTPUT OF NOT LESS THAN 85 DECIBELS AT TEN FEET. A PUSH TO SILENCE BUTTON SHALL ALSO BE PROVIDED.

15. AN ALARM SILENCE SWITCH AND RELAY SHALL BE PROVIDED TO PERMIT MAINTENANCE PERSONNEL TO DE-ENERGIZE THE EXTERNAL ALARM DEVICE WHILE CORRECTIVE ACTIONS ARE UNDERWAY. AFTER SILENCING THE ALARM DEVICE, MANUAL RESET OF THE SIGNAL RELAY SHALL PROVIDE AUTOMATIC RESET OF THE ALARM SILENCE RELAY.

16. THERE SHALL BE FURNISHED A SELF_CONTAINED COMPLETELY AUTOMATIC MONITORING AND ALARM CELLULAR DIALING SYSTEM.

a. ALARM NOTIFICATION METHOD OPTIONS SHALL BE: EMAIL, TEXT MESSAGES, VOICE PHONE CALLS, PROGRAMMABLE ALARM ESCALATION LEVELS, COMPREHENSIVE SCHEDULING PER INPUT/PROFILE/ALARM DESTINATION.

b. THE SYSTEM SHALL HAVE 12 UNIVERSAL INPUTS INCLUDING: NORMALLY OPEN/NORMALLY CLOSED DRY CONTACT, 2.8K/10K THERMISTOR, 4-20MA CURRENT LOOP, PULSE COUNT, 12-BIT RESOLUTION.

c. TEMPERATURE SENSING RANGE: -109 TO 168 DEG F

d. RELAY OUTPUT: PROGRAMMABLE, RATED FOR 1A 30VAC/1A 30 VDC

e. DATA LOGGING: UNLIMITED SAMPLE SECURELY STORED ON SERVERS, PROGRAMMABLE SAMPLING INTERVALS OF 1M TO 24HRS, USER PROGRAMMABLE CHANNEL SELECTION.

f. COMMUNICATION PORTS: ETHERNET 10/100 BASE-T

g. BATTERY BACKUP: 4.8V, 200MAHR NIMH BATTERY PACK, PROVIDING 8 HOURS OF BACKUP.

h. LOCAL INDICATORS: 12 ALARM STATUS LEDS - POWER, ONLINE, STANDBY, ETHERNET AND ACTIVITY.

i. POWER REQUIREMENTS WITH 12VDC PLUG-IN POWER SUPPLY.

j. DIMENSIONS: 12.5X12.2X7", WEIGHT: 10.5LBS

k. STANDARDS: FCC PART 15, CLASS A COMPLIANT

a. ENCLOSURE: NEMA 4 PLASTIC.

a. ANTENNA: 2G/3G/4G FREQUENCIES - 698-960/1710-2700MHZ, PEAK GAIN OF 5DBI, OMNI-DIRECTIONAL, IP66, -40 TO 176 DEG F.

E. LEVEL CONTROL SYSTEM

1. THE LEVEL CONTROL SYSTEM SHALL START AND STOP THE PUMP MOTORS IN RESPONSE TO CHANGES IN WET WELL LEVELS, AS SET FORTH HEREIN.

2. THE LEVEL CONTROL SYSTEM SHALL BE THE MERCURY FLOAT SWITCH TYPE, INCORPORATING FLOATS SECURED TO A VERTICAL PIPE IN THE WET WELL. RISING AND FALLING LIQUID LEVEL IN THE WET WELL CAUSES SWITCHES WITHIN THE FLOATS TO OPEN AND CLOSE, PROVIDING START AND STOP SIGNALS FOR THE LEVEL CONTROL COMPONENTS.

3. THE LEVEL CONTROL SYSTEM SHALL START THE MOTORS FOR ONE PUMP WHEN THE LIQUID LEVEL IN THE WET WELL RISES TO THE "LEAD PUMP START LEVEL". WHEN THE LIQUID IS LOWERED TO THE "PUMP STOP LEVEL", THE SYSTEM SHALL STOP THIS PUMP. THESE ACTIONS SHALL CONSTITUTE ONE PUMPING CYCLE. SHOULD THE WET WELL LEVEL RISE TO THE "LAG PUMP START LEVEL", THE SYSTEM SHALL START THE SECOND PUMP SO THAT BOTH PUMPS ARE OPERATING TO PUMP DOWN THE WELL. BOTH PUMPS SHALL STOP AT THE SAME "STOP" LEVEL. SHOULD EITHER THE LEAD OR LAG PUMP OR BOTH FAIL TO START, THE SPARE PUMP SHALL BE STARTED AND OPERATE ON THE FLOAT CONTROL SYSTEM.

4. THE LEVEL CONTROL SYSTEM SHALL UTILIZE THE PUMP ALTERNATOR TO SELECT FIRST ONE PUMP, THEN THE SECOND PUMP, THEN THE THIRD PUMP, TO RUN AS LEAD PUMP FOR A PUMPING CYCLE. ALTERNATION SHALL OCCUR AT THE END OF A PUMPING CYCLE.

5. PUMP STATION MANUFACTURER SHALL FURNISH FOUR (4) FLOAT SWITCH ASSEMBLIES FOR INSTALLATION BY THE CONTRACTOR. EACH SWITCH SHALL CONTAIN A MERCURY-TYPE SWITCH SEALED IN A POLYPROPYLENE HOUSING, AND WITH SUFFICIENT LENGTH OF CABLE, BUT NOT LESS THAN 20 FEET OF CABLE.

6. PUMP STATION MANUFACTURER SHALL FURNISH A SEPARATE FLOAT SWITCH ASSEMBLY, SIGNAL RELAY, FOR HIGH WATER ALARM FUNCTION. SHOULD THE WET WELL LEVEL RISE TO THE HIGHWATER ALARM LEVEL, THE FLOAT SWITCH ASSEMBLY AND RELAY SHALL ENERGIZE THE SIGNAL RELAY. THE SIGNAL RELAY SHALL COMPLETE A 115-VOLT AC CIRCUIT FOR AN EXTERNAL ALARM DEVICE. A STANDARD DUTY, NEMA 4X PILOT LIGHT MOUNTED IN THE CONTROL PANEL SHALL INDICATE THAT A HIGH WET WELL LEVEL EXISTS.

2.09 VALVES

A. PLUG VALVES SHALL BE DEZURIK TYPE PEC OR EQUAL WITH HANDWHEEL ACTUATOR PER THE SIZES SHOWN ON THE PROJECT PLANS.

B. SWING CHECK VALVES SHALL BE DEZURIK APCO TYPE CVS LEVER AND WEIGHT OR EQUAL PER THE SIZES SHOWN ON THE PROJECT PLANS.

2.10 HATCHES

A. THE S1R SINGLE LEAF SERIES ACCESS FRAMES AND COVERS AS MANUFACTURED BY HALLIDAY PRODUCTS, INC. OF ORLANDO, FLORIDA SHALL HAVE A 1/4" (7MM) THICK ONE-PIECE, MILL FINISH, EXTRUDED ALUMINUM FRAME, INCORPORATING A CONTINUOUS CONCRETE ANCHOR. DOOR PANELS SHALL BE 1/4 INCH (7MM) ALUMINUM DIAMOND PLATE, REINFORCED TO WITHSTAND A LIVE LOAD OF 300 LBS. PSF (1464 KG. PSM), UNIFORM LIVE LOAD. DOORS SHALL OPEN TO 90 DEGREES AND AUTOMATICALLY LOCK WITH T-316 STAINLESS STEEL HOLD OPEN ARMS WITH ALUMINUM RELEASE HANDLES. DOORS SHALL CLOSE FLUSH WITH THE FRAME. HINGES AND ALL FASTENING HARDWARE SHALL BE T-316 STAINLESS STEEL. UNIT SHALL LOCK WITH A NON-CORROSIVE LOCKING BAR AND HAVE A NON-CORROSIVE HANDLE. UNIT SHALL CARRY A LIFETIME GUARANTEE AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP.

2.11 PORTABLE HOIST

A. THE PORTABLE HOIST SHALL BE SERIES D2B36D WITH D2R HOIST SOCKET AS MANUFACTURED BY HALLIDAY PRODUCTS INC. OF ORLANDO, FLORIDA. THE UNIT SHALL BE SIZED TO FACILITATE EQUIPMENT PLACEMENT AND REMOVAL. THE PORTABLE HOIST SHALL BE ALL T-304 STAINLESS STEEL CONSTRUCTION WITH MARINE GRADE BRAKE WINCH AND 40 FEET 9M) OF ¼ INCH (7MM) T-304 STAINLESS STEEL CABLE WITH GALVANIZED SAFETY HOOK. THE DAVIT ARM SHALL ADJUST IN 1INCH 25MM) INCREMENTS FROM 24 TO 36 INCHES (610 TO 914MM) AND THE OVERALL UNIT HEIGHT SHALL BE 60" (1.5M). THE PORTABLE HOIST SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIAL AND OR WORKMANSHIP FOR A PERIOD OF 3 YEARS.

PART 3 EXECUTION

3.01 GENERAL

A. THE GENERAL CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR COORDINATION OF THE ENTIRE PROJECT, INCLUDING VERIFICATION ALL STRUCTURES, PIPING, COATING SYSTEMS AND EQUIPMENT COMPONENTS ARE COMPATIBLE. THE GENERAL CONTRACTOR SHALL INITIALLY OPERATE EACH EQUIPMENT SYSTEM, AND SHALL MAKE ALL NECESSARY ADJUSTMENTS SO THAT EACH SYSTEM IS PLACED IN PROPER OPERATING CONDITION.

B. EQUIPMENT AND MATERIALS UTILIZED FOR THIS PROJECT MUST BE APPROVED BY THE ENGINEER PRIOR TO INSTALLATION. APPROVAL FOR INSTALLATION OR INCORPORATION IN THIS PROJECT WILL BE MADE ONLY AFTER SUBMITTAL OR MANUFACTURER'S SHOP AND INSTALLATION DRAWINGS, TEST RESULTS OR OTHER DATA AS SPECIFIED HEREIN.

C. INSTALLATION OF EQUIPMENT SHALL BE IN FULL CONFORMANCE WITH THE MANUFACTURER'S SHOP DRAWINGS AND REQUIREMENTS AS APPROVED BY THE ENGINEER. WHEREVER A CONFLICT ARISES BETWEEN MANUFACTURER'S INSTRUCTIONS AND THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL FOLLOW THE ENGINEER'S DECISION AT NO ADDITIONAL COST TO THE OWNER.

3.02 WORKMANSHIP

A. HANDLE CAREFULLY AND PROTECT THE EQUIPMENT AND APPURTENANCES TO AVOID DAMAGE.

B. THE EQUIPMENT SHALL BE SAFELY SECURED TO THE WALL AND FLOOR IN ACCORDANCE WITH THE ENGINEER'S DESIGN DRAWINGS. ALL PLUMBING AND ELECTRICAL SHALL BE IN ACCORDANCE WITH STATE AND FEDERAL CODES TO ENSURE PROPER OPERATION OF THE PUMPING SYSTEM, AS-WELL-AS THE SAFETY OF PLANT PERSONNEL. ALL PIPING AND TUBING SHALL BE SEALED FOR LEAKS.

C. ANY EVIDENCE OF IMPROPER INSTALLATION SHALL BE CORRECTED BY THE CONTRACTOR. CARE DURING STORAGE, INSTALLATION AND STARTUP SHALL BE IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

3.03 MANUFACTURER'S SERVICES

A. THE CONTRACTOR SHALL REQUIRE THE MANUFACTURER TO FURNISH THE SERVICES OF A QUALIFIED FIELD ENGINEER TO PERFORM THE FOLLOWING FUNCTIONS IN THE DESIGNED PERIODS OF TIME. THESE SERVICES ARE TO BE PERFORMED AT THE JOBSITE.

1. CHECK-OUT OF INSTALLATION, START-UP OF EQUIPMENT AND INITIAL OPERATOR INSTRUCTION. THIS SERVICE SHALL TAKE PLACE AFTER ALL MECHANICAL EQUIPMENT ASSOCIATED WITH THE CONTROL SYSTEM IS INSTALLED AND MECHANICALLY OPERABLE.

2. AFTER EQUIPMENT IS FULLY OPERATIONAL, AND BEFORE OWNER WILL ASSUME RESPONSIBILITY FOR THE OPERATION OF THE EQUIPMENT, THE EQUIPMENT MANUFACTURER'S REPRESENTATIVE SHALL INSTRUCT THE OWNER'S OPERATING PERSONNEL IN THE CARE, MAINTENANCE AND PROPER OPERATION OF THE EQUIPMENT.

B. FIELD TEST

1. PRIOR TO EQUIPMENT STARTUP, ALL EQUIPMENT DESCRIBED HEREIN SHALL BE INSPECTED FOR QUIET OPERATION, PROPER CONNECTIONS, AND SATISFACTORY PERFORMANCE BY MEANS OF A FUNCTIONAL TEST.

2. THE PUMP AND MOTOR ASSEMBLY SHALL BE FIELD TESTED TO VERIFY VIBRATION IS NOT IN EXCESS OF THE LIMITS STATED IN THE LATEST REVISION OF HYDRAULIC INSTITUTE AND NEMA MG 1.

3. THE PUMP, MOTOR, AND CONTROLS SHALL BE GIVEN AN OPERATIONAL TEST IN ACCORDANCE WITH THE STANDARDS OF THE HYDRAULIC INSTITUTE. RECORDINGS OF THE TEST SHALL SUBSTANTIATE THE CORRECT PERFORMANCE OF THE EQUIPMENT AT THE DESIGN HEAD, CAPACITY, SPEED AND HORSEPOWER AS SPECIFIED HEREIN.

4. UNITS APPARENTLY FAILING TO MEET THE SPECIFICATIONS TO THE SATISFACTION OF THE ENGINEER MUST BE MORE ACCURATELY TESTED IN ACCORDANCE WITH HYDRAULIC INSTITUTE STANDARDS. IF THE PUMP FAILS THE SECOND TEST, THE UNIT WILL BE REJECTED, AND THE CONTRACTOR SHALL FURNISH A UNIT THAT WILL PERFORM AS SPECIFIED.

C. OPERATION AND MAINTENANCE MATERIALS

1. THE PUMP MANUFACTURER SHALL BE RESPONSIBLE FOR SUPPLYING WRITTEN INSTRUCTION, WHICH SHALL BE SUFFICIENTLY COMPREHENSIVE TO ENABLE THE OPERATOR TO OPERATE AND MAINTAIN THE PUMP AND ALL EQUIPMENT SUPPLIED BY THE MANUFACTURER. INSTRUCTIONS SHALL ASSUME THAT THE OPERATOR IS FAMILIAR WITH PUMPS, MOTORS, PIPING, VALVES, AND CONTROLS, BUT THAT HE HAS NOT PREVIOUSLY OPERATED AND/OR MAINTAINED THE EXACT EQUIPMENT SUPPLIED.

2. THE INSTRUCTION SHALL BE PREPARED AS A SYSTEM MANUAL APPLICABLE SOLELY TO THE PUMP AND EQUIPMENT SUPPLIED BY THE MANUFACTURER TO THESE SPECIFICATIONS, AND SHALL INCLUDE THOSE DEVICES AND EQUIPMENT SUPPLIED BY HIM.

3. OPERATION AND MAINTENANCE INSTRUCTION SHALL BE SPECIFIC TO THE EQUIPMENT SUPPLIED IN ACCORDANCE WITH THESE SPECIFICATIONS. INSTRUCTION MANUALS APPLICABLE TO MANY DIFFERENT CONFIGURATIONS AND PUMPS, AND WHICH REQUIRE THE OPERATOR TO SELECTIVELY READ PORTIONS OF THE INSTRUCTIONS SHALL NOT BE ACCEPTABLE.

D. ALL COSTS FOR THE ABOVE MANUFACTURER FUNCTIONS INCLUDING TRAVEL, LODGING, MEALS, AND INCIDENTALS SHALL BE CONSIDERED TO HAVE BEEN INCLUDED IN THE CONTRACTOR'S LUMP SUM BID PRICE.

REVISIONS

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8070 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8
CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA
LIFT STATION SPECIFICATIONS

Proj. No.:
Date: 07-14-23
Scale: N.T.S.
Checked By:
Approved By:

SHEET NUMBER
LS4

XREFS LOADED 2732046-Hatch.dwg 2732046-BKGD.dwg 2732046-Plot.dwg 2732046-LOC.dwg 2732046-Info.dwg 2732046-EC QUANTITIES.dwg
PLOT DATE: 10/27/2023 Plot By: STEVEN D. CRAIG Drawing Name:

SERIES DB PORTABLE HOIST

HALLIDAY PRODUCTS
www.HallidayProducts.com
Phone 800-298-1027
Fax 407-298-4534
Sales@HallidayProducts.com

STANDARD FEATURES:

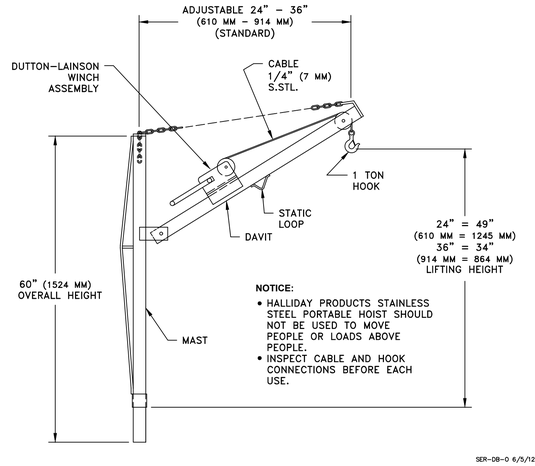
- TYPE-304 STAINLESS STEEL CONSTRUCTION
- 30 FEET (9 METERS) OF 1/4" (7 MM) STAINLESS STEEL CABLE
- GALVANIZED 1 TON HOOK
- DUTTON-LAINSON MARINE GRADE BRAKE WINCH
- ADJUSTABLE REACH IN 1" (25 MM) INCREMENTS
- 3 YEAR GUARANTEE

OPTIONS:

- TYPE-316 CONSTRUCTION
- ADDITIONAL CABLE AVAILABLE (SPECIFY LENGTH)
- STAINLESS STEEL WINCH
- STAINLESS STEEL HOOK
- OTHER REACHES AVAILABLE UPON REQUEST (CONSULT FACTORY)

STANDARD SIZES

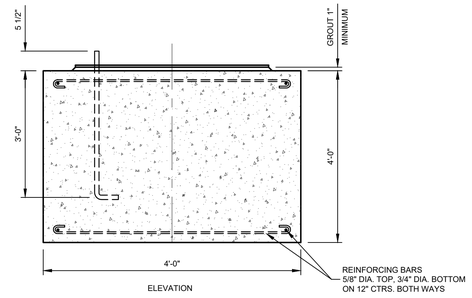
QTY.	MODEL NO.	MAX LOAD LBS. (KG.)	UNIT WT. LBS. (KG.)
	D1B36C	300 (136)	73 (33)
	D2B36D	1000 (454)	96 (44)
	D3B36E	1330 (603)	111 (50)



NOTICE:

- HALLIDAY PRODUCTS STAINLESS STEEL PORTABLE HOIST SHOULD NOT BE USED TO MOVE PEOPLE OR LOADS ABOVE PEOPLE.
- INSPECT CABLE AND HOOK CONNECTIONS BEFORE EACH USE.

SER-DB-0 6/5/12



CONCRETE ANCHOR DETAIL FOR
THERN SERIES 5110 DAVIT CRANE WITH SPUR GEAR WINCH

NOT TO SCALE

RECOMMENDED FOUNDATION CONCRETE

JIB CRANE FOUNDATION REQUIREMENTS ARE BASED ON A SOIL PRESSURE OF 2500 LBS. PER SQUARE FOOT

3000 LBS. P.S.I. (PER SQUARE INCH) COMPRESSIVE CONCRETE (5 BAG MIX-ONE YARD OF CONCRETE)

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Sheet: 1

REVISIONS

NO.	DESCRIPTION	DATE

Johnson & Associates
1 E. Sheridan Ave., Suite 200
Oklahoma City, OK 73104
(405) 235-8075 FAX (405) 235-8078 www.jaokc.com
Certificate of Authorization #1484 Exp. Date: 06-30-2025
• ENGINEERS • SURVEYORS • PLANNERS •

CARLTON LANDING PHASE 8

CARLTON LANDING, PITTSBURG COUNTY, OKLAHOMA

LIFT STATION SPECIFICATIONS

Proj. No.:
Date: 07-14-23
Scale: N.T.S.
Checked By:
Approved By:

SHEET NUMBER
LS5

ACAD FILE: H:\2752\2732046 Phase 8\2732046-PM.dwg, 7/14/2023 3:03 PM, Christie Stone
XREFS LOADED: 2732046-topo.dwg 2732046-BNDS.dwg 2732046-LOC.dwg 2732046-PPLT.dwg 2732046-bdy.dwg 2732046-EC QUANTITIES.dwg

Pittsburg County Rural Water & Sewer District #20
Balance Sheet
As of May 31, 2024

	May 31, 24	
ASSETS		
Current Assets		
Checking/Savings		
BOK - Checking - 6630		
Reserve Accounts		
Reserve -Asset Replacement	25,980.78	
Reserve - Operating Expenses	44,774.03	
Total Reserve Accounts		70,754.81
BOK - Checking - 6630 - Other		48,233.37
Total BOK - Checking - 6630		118,988.18
Total Checking/Savings		118,988.18
Accounts Receivable		
Accounts Receivable		29,425.96
Total Accounts Receivable		29,425.96
Other Current Assets		
Accrued Insurance		1,407.00
Prepaid Insurance		-277,388.09
Allowance for Doubtful Accounts		-24,964.01
Total Other Current Assets		-300,945.10
Total Current Assets		-152,530.96
Fixed Assets		
Land		109,000.00
Land for FEB		100,000.00
Accumulated Depreciation		-268,165.20
Sewer Utility		
Wastewater Treatment Plant		
Office Building	37,341.00	
Wastewater Treatment Plant - Other	131,352.82	
Total Wastewater Treatment Plant		168,693.82
Construction in Progress		
Aeration System	114,099.23	
Construction in Progress - Other	2,907,813.24	
Total Construction in Progress		3,021,912.47
System Start-Up Overhead		69,756.05
Engineering		90,249.58
Legal		16,832.58
Lift Station		240,286.30
Lift Station Enclosure		8,043.06
Force Main		73,416.00
Lagoons		260,550.74
Sewer Utility - Other		129,626.53
Total Sewer Utility		4,079,367.13
Water Utility		
System Start-Up Overhead		66,308.06
Engineering		53,777.50
Legal		16,832.58
System - Trunk & Distribution		189,356.79
Water Utility - Other		261,303.23
Total Water Utility		587,578.16
Total Fixed Assets		4,607,780.09

Pittsburg County Rural Water & Sewer District #20
Balance Sheet
As of May 31, 2024

	May 31, 24
Other Assets	
Water Meters	11,343.81
Deferred outflow - ARO	187,000.00
Total Other Assets	198,343.81
TOTAL ASSETS	**4,653,592.94**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
Accounts Payable	2,942.02
Total Accounts Payable	2,942.02
Other Current Liabilities	
OWRB Loan	2,928,726.16
Customer Application Deposits	40,315.13
Total Other Current Liabilities	2,969,041.29
Total Current Liabilities	2,971,983.31
Long Term Liabilities	
Asset Retirement Obligation-ARO	748,000.00
Notes Payable - HP 2009	887,092.65
Interest Payable - HP 2009	23,345.37
Total Long Term Liabilities	1,658,438.02
Total Liabilities	4,630,421.33
Equity	
Retained Earnings	-105,715.89
Net Income	128,887.50
Total Equity	23,171.61
TOTAL LIABILITIES & EQUITY	**4,653,592.94**

Pittsburg County Rural Water & Sewer District #20
Profit & Loss
May 2024

	May 24	
Ordinary Income/Expense		
Income		
Revenue		
Debt Surcharge		-75.00
Usage Fee Income		
Usage Fee - Construction	89.43	
Usage Fee - Water	36,020.39	
Usage Fee - Sewer	32,217.51	
Total Usage Fee Income		68,327.33
Trash Fee Income		13,787.99
Fee Income		
Return Check Fee Income	35.00	
Late Fee	1,039.76	
Transfer Fee	500.00	
Total Fee Income		1,574.76
Total Revenue		83,615.08
Total Income		83,615.08
Cost of Goods Sold		
COGS - Garbage Pickup		6,741.26
COGS - Water Usage		8,246.10
Total COGS		14,987.36
Gross Profit		68,627.72
Expense		
Wastewater Plant -Repair-Main.		16,773.90
Consent Order		1,500.00
Labor		9,000.00
Line Repair		7,199.34
Accounting		5,000.00
Bank Charges		12.00
Dues & Subscriptions		1,039.90
Lab Fees		1,140.00
Legal Fees		250.00
Repair & Maintenance		
Mowing	330.00	
Repair & Maintenance - Other	1,450.68	
Total Repair & Maintenance		1,780.68
Supplies		
Office Supplies	325.21	
Total Supplies		325.21
Utilities		2,070.99
Water Meter Expense		495.00
Total Expense		46,587.02
Net Ordinary Income		22,040.70
Other Income/Expense		
Other Expense		
Interest Expense		6,645.24
Total Other Expense		6,645.24
Net Other Income		-6,645.24
Net Income		**15,395.46**