



**NOTICE
GLENPOOL UTILITY SERVICE AUTHORITY
SPECIAL MEETING**

A Special Session of the Glenpool Utility Service Authority will be held at 6:00 p.m. immediately following the Glenpool City Council Meeting on March 15, 2021 at Glenpool City Hall, City Council Chambers, 12205 S. Yukon Ave., 3rd Floor, Glenpool, Oklahoma.

NOTE: The Glenpool Utility Service Authority will be assembled for the meeting at the City Council Chambers, 12205 S. Yukon Ave, Glenpool, Oklahoma. Members of the public are invited to attend the in-person meeting, or join a live broadcast at this link:

<https://us02web.zoom.us/j/89753555435?pwd=QzdFVjA1b0lKa1lSUFlKbUNrUUxtZ09>

Meeting ID: 897 5355 5435

Passcode: 974088

One tap mobile

+13462487799, US (Houston)

+14086380968, US (San Jose)

Dial by your location

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

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Find your local number: <https://us02web.zoom.us/j/89753555435?pwd=QzdFVjA1b0lKa1lSUFlKbUNrUUxtZ09>

The GUSA Board welcomes comments from citizens of Glenpool who wish to address any item on the agenda.

- Speakers attending in **PERSON** are required to complete the Request to Speak form located on the agenda table and return to the City Clerk **PRIOR TO THE CALL TO ORDER.**
- Speakers attending via **ZOOM** are required to complete the Request to Speak form located on our website: <https://glenpoolonline.civicweb.net/document/19057/Request%20to%20Speak%20Form.pdf> and email it to the City Clerk: Wknight@cityofglenpool.com **PRIOR TO 6:00 PM MARCH 15, 2021.**

AGENDA

	Page
A) Call to Order - Timothy Lee Fox, Chairman	
B) Roll Call, Declaration of Quorum – Wendy Knight, Secretary; Timothy Lee Fox, Chairman	
C) Scheduled Business	
1) Discussion and possible action to accept the public sanitary sewer improvements serving <i>Scissortail</i> addition: <i>Blocks 1-3</i> , tabled from March 1, 2021. (Lynn Burrow, Community Development Director GUSA Presentation Acceptance of Sanitary Sewer Improvements - Scissortail	3 - 7
2) Discussion and possible action to approve the Contract Bid received from Beytco, Inc. for the Hickory Street Sanitary Sewer Liftstation Rehab Project in a total amount not to exceed \$97,990.00, to be funded from the approved FY 2020/2021 Budget Item No. 02-6-16-6278: Sewer Improvements, and to authorize the City Manager to execute the	8 - 32

same.

(Lynn Burrow, Community Development Director)

[GUSA Presentation Hickory Street Liftstation Contract Award](#)

D) Adjournment

This notice and agenda was posted at Glenpool City Hall, 12205 S. Yukon Ave., Glenpool, Oklahoma, on March 11, 2021, by 4:00 pm.

Signed: Wendy Knight

Secretary



MEMORANDUM

**TO: CHAIRMAN AND BOARD OF TRUSTEES
GLENPOOL UTILITY SERVICES AUTHORITY**

**FROM: LYNN BURROW, PE
COMMUNITY DEVELOPMENT DIRECTOR**

**RE: ACCEPTANCE OF PUBLIC SANITARY SEWER IMPROVEMENTS
SERVING SCISSORTAIL ADDITION: BLOCKS 1 THRU 3**

DATE: MARCH 1, 2021

BACKGROUND

This item is for Board consideration and action regarding the approval and acceptance for ownership of certain sanitary sewer improvements constructed to serve Scissortail Addition: Blocks 1 thru 3 located on the north side of 151st Street - east of Elwood Avenue per the attached 'As-Built' construction documents. These sanitary sewer improvements were permitted for construction by the Oklahoma Department of Environmental Quality (ODEQ) and were inspected by City Staff during construction for compliance with the approved construction plans as well as State and City design criteria. The attached Maintenance Bond issued by the General Contractor for the Scissortail project (Ira M. Green Construction Company) covers 100% of the total cost of the sanitary sewer facilities in question for the required one-year period from GUSA acceptance.

Staff Recommendation:

Staff recommends that the Board approve the acceptance of these facilities for ownership as illustrated - including the corresponding 'As-Built' construction documents supported by the required one-year Maintenance Bond.

Attachments:

- A. 'As-Built' Sanitary Sewer Facilities Construction Plans
- B. Associated Maintenance Bond



Swiss Re
Corporate Solutions

1450 American Lane, Suite 1100
Schaumburg, IL 60173

**MAINTENANCE
BOND**

BOND NO. 2290687

KNOW ALL MEN BY THESE PRESENTS;

That We, Ira M. Green Construction Company

17211 S. 4170 Road, Claremore, OK 74017

(hereinafter called the "Principal"), as Principal, and North American Specialty Insurance Company

a corporation duly licensed to transact business in the State of Oklahoma

(hereinafter called the "Surety"), as Surety, are held and firmly bound unto City of Glenpool

12205 S. Yukon Ave., Glenpool, OK 74033

(hereinafter called the "Obligee"), in the sum of

One million, nine hundred forty-seven thousand, eight hundred sixty-eight & 10/100 (\$ 1,947,868.10),

for the payment of which sum well and truly to be made, we, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this 19th date of August, 2019

WHEREAS, the said Principal has heretofore entered into a contract with said Oblige dated 12th day of August, 2019 for:

Sanitary Sewer System, Lift Station & Force Main, Storm Sewer and Paving System to Serve Scissortail - Phase I

WHEREAS, the said Principal is required to guarantee the work installed under said contract, against defects in materials or workmanship which may occur within a period of one (1) year from and after acceptance of said project by owner

In no event shall losses paid under this bond aggregate more than the amount of this bond.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH, that said Principal shall faithfully carry out and perform the said guarantee, and shall, on due notice, repair and make good at its own expense any and all defects in materials or workmanship in the said work which may develop during the period specified above or shall pay over, make good and reimburse to the said obligee all losses sustained by reason of failure or default of said Principal so to do, then this obligation shall be null and void; otherwise shall remain in full force and effect.

Ira M. Green Construction Company

Principal

By: [Signature]

Name/Title

North American Specialty Insurance Company

By: [Signature]

Jamie Burris,

Attorney-in-Fact

BND 251S REV (09/01)

SWISS RE CORPORATE SOLUTIONS

**NORTH AMERICAN SPECIALTY INSURANCE COMPANY
WASHINGTON INTERNATIONAL INSURANCE COMPANY**

GENERAL POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, THAT North American Specialty Insurance Company, a corporation duly organized and existing under laws of the State of New Hampshire, and having its principal office in the City of Kansas City, Missouri, and Washington International Insurance Company, a corporation organized and existing under the laws of the State of New Hampshire and having its principal office in the City of Kansas City, Missouri, each does hereby make, constitute and appoint:

JOHN K. DEER, VAUGHN P. GRAHAM, VAUGHN P. GRAHAM, JR., STEPHEN M. POLEMAN, TRAVIS E. BROWN, DEBORAH L. RAPER, JAMIE BURRIS, SHELLY R. SAMSEL, MARK D. NOWELL, CATHY COMBS, VICKI WILSON, AUSTIN K. GREENHAW, CLAYTON HOWELL, CAREY L. KENNEMER, RANDY D. WEBB, AARON WOOLSEY and GARY TILES

JOINTLY OR SEVERALLY

Its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its act and deed, bonds or other writings obligatory in the nature of a bond on behalf of each of said Companies, as surety, on contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract or suretyship executed under this authority shall exceed the amount of:

FIFTY MILLION (\$50,000,000.00) DOLLARS

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both North American Specialty Insurance Company and Washington International Insurance Company at meetings duly called and held on the 9th of May, 2012:

"RESOLVED, that any two of the Presidents, any Managing Director, any Senior Vice President, any Vice President, any Assistant Vice President, the Secretary or any Assistant Secretary be, and each or any of them hereby is authorized to execute a Power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings and all contracts of surety, and that each or any of them hereby is authorized to attest to the execution of any such Power of Attorney and to attach therein the seal of the Company: and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be binding upon the Company when so affixed and in the future with regard to any bond, undertaking or contract of surety to which it is attached."



By 
Steven P. Anderson, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company

By 
Michael A. Ito, Senior Vice President of Washington International Insurance Company
& Senior Vice President of North American Specialty Insurance Company



IN WITNESS WHEREOF, North American Specialty Insurance Company and Washington International Insurance Company have caused their official seals to be hereunto affixed, and these presents to be signed by their authorized officers this 11th day of JULY, 2019.

**North American Specialty Insurance Company
Washington International Insurance Company**

State of Illinois
County of Cook SS:

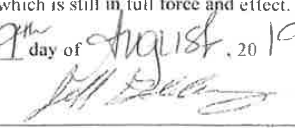
On this 11th day of JULY, 2019, before me, a Notary Public personally appeared Steven P. Anderson, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company and Michael A. Ito, Senior Vice President of Washington International Insurance Company and Senior Vice President of North American Specialty Insurance Company, personally known to me, who being by me duly sworn, acknowledged that they signed the above Power of Attorney as officers of and acknowledged said instrument to be the voluntary act and deed of their respective companies.




M. Kenny, Notary Public

I, Jeffrey Goldberg, the duly elected Assistant Secretary of North American Specialty Insurance Company and Washington International Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of a Power of Attorney given by said North American Specialty Insurance Company and Washington International Insurance Company, which is still in full force and effect.

IN WITNESS WHEREOF, I have set my hand and affixed the seals of the Companies this 19th day of August, 2019


Jeffrey Goldberg, Vice President & Assistant Secretary of
Washington International Insurance Company & North American Specialty Insurance Company

Sheet Index

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SANITARY SEWER PLAN	SS3-SS4
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CITY OF GLENPOOL STANDARD DETAILS (ATTACHED)

Legend

A/C	AIR CONDITIONER UNIT/PAD
AGAI	4-GRADE AREA INLET
AMH	ACCESS MANHOLE
BAW	BUILDING SETBACK LINE
BC	BARBED WIRE FENCE
BM	BOTTOM OF CURB
BOP	BENCHMARK
BOP	BEGINNING OF PROJECT
CA	CHAIN LINK FENCE
CCI	CONCRETE CURB INLET
CICI	CAST IRON CURB INLET
CONC	CONCRETE
CPED	CABLE/TV PEDESTAL
CY	CUBIC YARDS
EOP	END OF PROJECT
ELEC	ELECTRIC
EPED	ELECTRIC PEDESTAL
ESMT	EASEMENT
EX	EXISTING
F/E	FENCE EASEMENT
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOWLINE
FLT	THROAT FLOWLINE
FP	FLAG POLE
GLT	GROUND LIGHT
GM	GAS METER
GRSR	GAS RISER
GUY	DOWN GUY
GV	GAS VALVE
HDPE	HIGH DENSITY POLYETHYLENE
IPF	IRON PIN FOUND
LF	LINEAR FEET
LVA	LIMITS OF NO ACCESS
LP	LIGHT POLE
MA/E	MUTUAL ACCESS EASEMENT
MB	MAILBOX
OD/E	OVERLAND DRAINAGE ESMT
OE	OVERHEAD ELECTRIC
OL	ORNAMENTAL LIGHT
PG	PROPOSED GRADE
PP	POWER POLE
RWE	RESTRICTED W/ EASEMENT
RCP	REINFORCED CONC. PIPE
RET WALL	RETAINING WALL
S/W	SIDEWALK
SD	STORM DRAIN
SDMH	STORMWATER MANHOLE
SF	SQUARE FEET
SGAI	SINGLE GRADE AREA INLET
SPHD	SPRINKLER HEAD
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSLH	SANITARY SEWER LAMPHOLE
SSMH	SANITARY SEWER MANHOLE
SY	SQUARE YARD
TC	TOP OF CURB
TG	TOP OF GRATE
TP	TOP OF PAVING
TPED	TELEPHONE PEDESTAL
TR	TOP OF RIM
TS	TRAFFIC SIGN
TW	TOP OF WALL
UE	UTILITY EASEMENT
UG	UNDERGROUND GAS LINE
UTMH	UTILITY MANHOLE
W/DIP	WITH UNDERGROUND RISER
WL	WATERLINE
WLMH	WATERLINE MANHOLE
WM	WATER METER
WRSR	WATER SPIGOT
WV	WATER VALVE

Disclaimer

THESE PLANS AND DRAWINGS ARE NOT TO BE CHANGED IN ANY FORM OR MANNER WHATSOEVER WITHOUT FIRST OBTAINING THE EXPRESS WRITTEN PERMISSION AND CONSENT OF ENGINEERED BY DESIGN, PLLC. ANY CHANGES MADE FROM THESE PLANS WITHOUT CONSENT OF ENGINEERED BY DESIGN, PLLC ARE UNAUTHORIZED, AND SHALL RELIEVE ENGINEERED BY DESIGN, PLLC OF RESPONSIBILITY FOR ALL CONSEQUENCES ARISING OUT OF SUCH CHANGE(S).

Owner / Developer

SUMMIT PROPERTIES, INC
P.O. BOX 35218
TULSA, OK 74153
PHONE: (918) 289-6355
MR. JARED LEMONS

Surveyor

FRITZ LAND SURVEYING, LLC
2017 WEST 91ST STREET
TULSA, OKLAHOMA 74132
PHONE: (918) 231-0575
EMAIL: fritzlandsurveying@gmail.com
C.A. # 5848 EXPIRES: 6-30-2020

Engineer

ENGINEERED BY DESIGN, PLLC
P.O. BOX 15567
DEL CITY, OKLAHOMA 73155
PHONE: (918) 809-8253
ahale@engineeredbydesign.pro
C.A. # 7655 EXPIRES 6-30-2020

Sanitary Sewer Plans

Scissortail

BLOCKS 1-3

A SUBDIVISION IN THE CITY OF GLENPOOL, TULSA COUNTY, OKLAHOMA BEING A PART OF THE SW/4 OF SECTION THIRTEEN (13), TOWNSHIP SEVENTEEN (17) NORTH, RANGE TWELVE (12) EAST OF THE INDIAN BASE AND MERIDIAN.



Location Map

SCALE: 1"=200'



Scale: 1" = 100'

Summary

SUBDIVISION CONTAINS EIGHTY-EIGHTY (88) LOTS IN THREE (3) BLOCKS AND FOUR (4) RESERVE AREAS

ADS Benchmark

5/8" REBAR - 1 1/2" ALUMINUM CAP-FLUSH-STAMPED "533", SET NORTHEAST OF 141ST STREET SOUTH AND ELWOOD AVENUE. ELEVATION = 715.276' (NAVD 1988)

RECORD PLANS

To the best of my knowledge, from the information available, these "Record Plans" are in substantial compliance with the field construction.

By: *[Signature]*
Date: 12/21/2020



EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN.
ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH CURRENT CITY OF GLENPOOL ENGINEERING STANDARD SPECIFICATIONS, INCLUDING O.D.T. 2009 EDITION AND APPLICABLE SUPPLEMENTS.

CONSULTANTS



ENGINEERED BY DESIGN

Engineered by Design, PLLC
P.O. Box 15567 Del City, OK 73155
Ph: 405-234-0980
CA# 7655 - Expires 6/30/2022



P.O. Box 548
Bixby, Oklahoma 74008
Phone: (918) 798-8356

PROJECT NAME

Scissortail

BLOCKS 1-3

Glenpool, Oklahoma
Project No. 2032

SEAL



REVISIONS

ISSUE DATE

12/21/2020

SCALE

1"=100'

SHEET NAME

COVER SHEET

SHEET NO.

SS1

Sheet Index

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PUMP STATION DETAIL SHEET	FM8
STANDARD LIFT STATION CONSTRUCTION DETAILS	FM9-FM10
LIFT STATION SERVICE AREA MAP	FM11

Legend

A/C	AIR CONDITIONER UNIT/PAD
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Lift Station & Force Main Plans

Scissortail

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General Construction Notes

- ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH CURRENT OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) AND CITY OF GLENPOOL STANDARDS AND SPECIFICATIONS.
- EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN AND LOCATIONS HAVE BEEN VERIFIED BY THE OWNERS OF SAID LINES. THE EXACT LOCATIONS AND NOTIFICATIONS OF THE PROPER AGENCY IS THE RESPONSIBILITY OF THE CONTRACTOR PRIOR TO ANY EXCAVATION.
- AFTER CONSTRUCTION IS COMPLETE, ALL DISTURBED AREAS SHALL BE RESEEDDED ACCORDING TO CURRENT OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDED AREAS UNTIL GROWTH IS ESTABLISHED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY WORK ORDERS AND PERMITS FROM OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) AND CITY OF GLENPOOL, INCLUDING PROVISIONS OF BONDS AND INSURANCE AS REQUIRED.
- ALL GRADES ARE BASED ON NAVD 1988 U.S.G.S. VERTICAL DATUM.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL FOR ANY WORK WITHIN STREET RIGHT OF WAY. TRAFFIC CONTROL SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), CURRENT EDITION, OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) AND CITY OF GLENPOOL STANDARDS AND SPECIFICATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER TRAFFIC CONTROL IS IN PLACE FOR CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROPERLY MAINTAINING TRAFFIC CONTROL DEVICES THROUGHOUT THE DURATION OF THE WORK. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL PLANS TO OKLAHOMA DEPARTMENT OF TRANSPORTATION (ODOT) AND THE CITY OF GLENPOOL AS REQUIRED.
- ENGINEER'S STATEMENT THIS PROJECT COMPLIES WITH ALL OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY (ODEQ) REQUIREMENTS. ENTIRE PROJECT IS WITHIN CORPORATE LIMITS OF CITY OF GLENPOOL.

Sanitary Sewer Notes

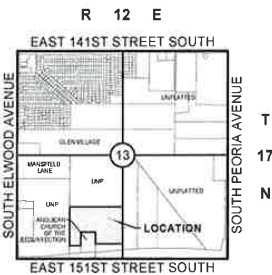
- ALL SANITARY SEWER COLLECTION SYSTEMS SHALL BE DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF GLENPOOL SUBDIVISION CODE AND CONSTRUCTED IN ACCORDANCE WITH THE CURRENT CITY OF GLENPOOL STANDARD CONSTRUCTION SPECIFICATIONS.
- PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR SHALL PARTICIPATE IN A PRE-CONSTRUCTION CONFERENCE WITH THE DEPARTMENT OF COMMUNITY DEVELOPMENT. AT THIS CONFERENCE THE CONTRACTOR SHALL FURNISH CERTIFICATION FROM THE MANUFACTURER/SUPPLIER THAT ALL MATERIALS MEET APPLICABLE SPECIFICATIONS. CERTIFICATIONS SHALL BE SUPPLIED IN FIVE (5) COPIES WITH THREE (3) COPIES STAMPED AND APPROVED, BY THE CITY, RETURNED TO THE CONTRACTOR. MATERIALS SHALL NOT BE INSTALLED UNTIL THEY HAVE BEEN APPROVED BY THE CITY.
- ALL SANITARY SEWER COLLECTION SYSTEM CONSTRUCTION SHALL BE INSPECTED BY THE CITY OF GLENPOOL UTILITY INSPECTORS.
- POLY PIPE SHALL BE USED AT ANY POINT WHERE CONCRETE ENCASEMENT IS SPECIFIED, OR WHERE A WATER MAIN IS WITHIN TWO (2) FEET OF THE SEWER.
- CONCRETE ENCASEMENT WILL BE REQUIRED AT ANY POINT WHERE CENTERLINE CUT TO ORIGINAL GROUND IS 30 INCHES OR LESS AND IN LOCATIONS WHERE WATERLINE AND STORM SEWER CROSSINGS ARE LESS THAN 2.0 FEET VERTICAL CLEARANCES FROM EACH OTHER.
- ALL TAPS SHALL BE INSTALLED DURING LATERAL CONSTRUCTION.
- SPECIAL RISERS SHALL BE INSTALLED FOR EACH LOT WHERE THE MAIN SEWER DEPTH WILL BE FIFTEEN (15) FEET OR GREATER BELOW FINISHED GRADE. FURNISH AS-BUILT DRAWINGS SHOWING EXACT LOCATION OF RISERS.
- BEDDING, BACKFILL, AND COMPACTION SHALL BE IN ACCORDANCE WITH CITY OF GLENPOOL STANDARD DRAWINGS. STREET BACKFILL AND COMPACTION REQUIREMENTS SHALL EXTEND TWO (2) FEET BACK OF CURB WHEN REPLACING A SEWER IN SERVICE 3/8 INCH CHIPS SHALL BE USED FOR BEDDING AND INITIAL BACKFILL.
- TAPS ON EXISTING LINES, THAT DID NOT HAVE TAPS INSTALLED DURING CONSTRUCTION, SHALL BE INSTALLED BY SANITARY SEWER CONTRACTOR IN ACCORDANCE WITH CITY OF GLENPOOL STANDARD DRAWINGS.
- WHEN WORKING IN OR ADJACENT TO EXISTING SUBDIVISIONS ONLY ONE (1) DAYS WORTH OF TRENCH MAY BE OPEN AT A GIVEN TIME. THIS REQUIREMENT MAY BE MODIFIED, IN WRITING BY THE ENGINEERING AND CONSTRUCTION DIRECTOR, FOR A SPECIFIC PROJECT.
- ROAD CLOSURES MUST BE COORDINATED A MINIMUM OF TWENTY FOUR (24) HOURS IN ADVANCE. ROADS WILL NOT BE CLOSED FOR OVER EIGHT (8) HOURS WITHOUT WRITTEN PERMISSION FROM THE ENGINEERING AND CONSTRUCTION DIRECTOR.
- DIG THROUGH LOCATOR TAPE WILL BE BURIED 2 FEET ABOVE THE SEWER LINE.
- SERVICE LINES RUNNING ACROSS ROADWAYS SHALL BE SCHEDULE 40 PVC, BACKFILL WITH FLOWABLE FILL IN PLACE.

Summary

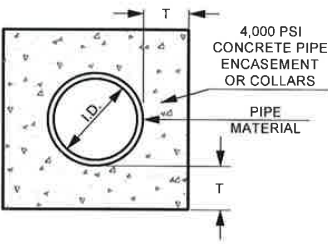
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ADS Benchmark

5/8" REBAR - 1 1/2" ALUMINUM CAP-FLUSH-STAMPED "533", SET NORTHEAST OF 141ST STREET SOUTH AND ELWOOD AVENUE. ELEVATION = 715.276' (NAVD 1988)



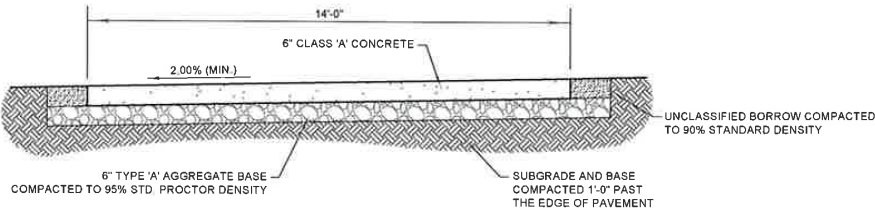
Location Map
SCALE: 1"=200'



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

NOTE: FOR COLLARS, THE CONCRETE ENCASEMENT SHALL BE PLACED TO A MINIMUM OF TWELVE (12") INCHES ON EITHER SIDE OF THE JOINT.

PIPE ENCASEMENT AND COLLARS



Driveway Typical Section

SCALE: NONE

UNDISTURBED EARTH	NON-PAVED AREAS	PAVED AREAS
FINAL BACKFILL	EXCAVATED MATERIAL	CRUSHED ROCK
SELECT FILL	SAND	SAND
INITIAL BACKFILL	SAND	SAND
6" MIN 12" MAX	SAND	SAND
BEDDING MIN 4"	SAND	SAND

NOTES:

- SELECT FILL CONSISTS OF EXCAVATED MATERIALS CONTAINING NO ROCKS LARGER THAN 2 INCHES.
- CRUSHED ROCK SHALL BE ODOT TYPE A BASE.
- COMPACTION REQUIREMENTS:
 - NON-PAVED AREAS: 90% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS AND 85% FOR COHESIVE SOILS.
 - PAVED AREAS: 95% MAXIMUM STANDARD PROCTOR DENSITY FOR COHESIONLESS SOILS.
- IN AREAS WHERE WATER INFILTRATION CANNOT BE CONTROLLED, BEDDING AND INITIAL BACKFILL SHALL BE MATERIAL CONFORMING TO ODOT SECTION 703.04(A).
- FLOWABLE FILL MAY BE SUBSTITUTED FOR SELECT FILL IN ROAD CROSSING.
- PLACE A MYLAR WARNING TAPE (MARKED "SANITARY SEWER") ATOP THE INITIAL BACKFILL FOR THE ENTIRE LENGTH OF THE LINE.



EXISTING UNDERGROUND LINES HAVE BEEN SHOWN TO THE EXTENT KNOWN. ALL CONSTRUCTION TO BE IN STRICT ACCORDANCE WITH CURRENT CITY OF GLENPOOL ENGINEERING STANDARD SPECIFICATIONS, INCLUDING ODOT 2009 EDITION AND APPLICABLE SUPPLEMENTS.

CONSULTANTS



ENGINEERED BY DESIGN

Engineered by Design, PLLC
P.O. Box 15567 Del City, OK 73155
Ph: 405-234-0980
CA# 7655 - Expires 6/30/2020



20 East Dewes Avenue
Bixby, Oklahoma 74008
Phone: (918) 798-8356

PROJECT NAME

Scissortail

BLOCKS 1-3

Glenpool, Oklahoma
Project No. 2032

SEAL



REVISIONS

ISSUE DATE

12/27/2018

SCALE

N/A

SHEET NAME

COVER SHEET

SHEET NO.

FM1



MEMORANDUM

**TO: CHAIRMAN AND BOARD OF TRUSTEES
GLENPOOL UTILITY SERVICES AUTHORITY**

**FROM: LYNN BURROW, PE
COMMUNITY DEVELOPMENT DIRECTOR**

**RE: HICKORY STREET SANITARY SEWER LIFTSTATION REHAB.
PROJECT: PUBLIC BID APPROVAL AND CONSTRUCTION
CONTRACT AWARD**

DATE: MARCH 15, 2021

BACKGROUND:

This is a request for Board consideration and action regarding the review and approval of the attached Public Bid Tabulation and the resulting proposed Construction Contract Award covering improvements designed and approved for the total rehabilitation of an existing sanitary sewer liftstation facility located within and serving a portion of Brentwood II Addition. The final engineering design documents for this project were completed by Midwest Engineering Group, LLC and approved by City Staff in May, 2019. Subsequently, the project was publicly advertised and placed for public bid on February 3rd, 2021. A Pre-Bid meeting was held on February 19th, 2021 and bids accepted and publicly read on February 26th. The attached Bid Tabulation lists the Contractors that attended these meetings and those that submitted Contract Bids covering the specified scope of work for the base project. As noted in the Bid Tabulation, Beytco Construction, Inc. is the low Bidder on the project with a total bid amount of \$97,990.00

STAFF RECOMMENDATION:

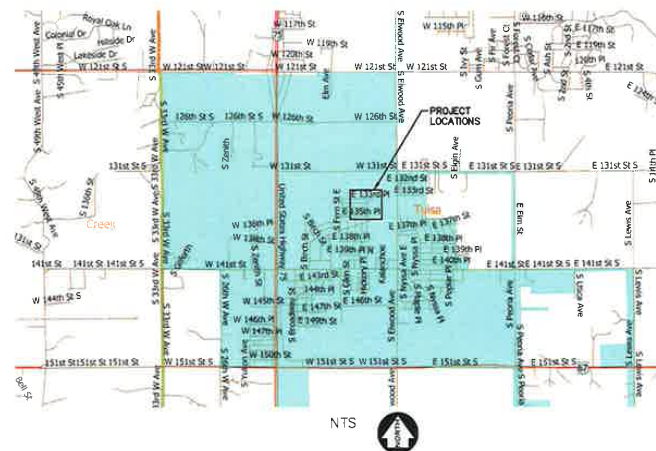
Midwest Engineering Group and City Staff have reviewed the submitted bids for completeness, required bonding, and supporting contract documents and are in turn recommending Low Bidder approval by the Authority. If so approved, Staff is requesting authorization be given to the City Manager to enter into a Contract Agreement with Beytco, Inc. in an amount not to exceed \$97,990.00 to be funded from the approved FY 2020/2021 Annual Budget under Account No. 02-6-16-6278: Sewer Improvements.

Attachments:

- A. Construction Plans
- B. Project Manual & Contract Agreement
- C. Engineer's Estimate of Cost
- D. Bid Advertisement
- E. Pre-Bid & Bid Meeting Documentation
- F. Bid Tabulation Documents
- G. Engineer's Letter of Recommendation
- H. Notice of Award

- CONTRACTOR SHALL NOTIFY ALL UTILITY OWNERS SO THAT EXISTING UTILITIES CAN BE LOCATED PRIOR TO ANY EXCAVATION.
- UPON EXCAVATION, SHOULD ANY EXISTING UTILITY BE DAMAGED, THE UTILITY OWNER SHALL BE NOTIFIED SO THAT REPAIRS CAN BE MADE BEFORE BACK-FILLING THE TRENCH.
- SERVICE LINES, AS WELL AS MAINS, SHALL BE LOCATED SUCH THAT THEY WILL NOT INTERFERE WITH SEWER TILE FIELDS. PIPE LINES SHALL NOT BE LAID ACROSS HOG PENS OR LIVESTOCK FEED PENS. A MINIMUM DISTANCE OF TWENTY-FIVE (25) FEET SHALL BE MAINTAINED BETWEEN ALL POTABLE WATER LINES AND ALL SEPTIC TANKS, WASTE STABILIZATION PONDS, OR OPEN SEWAGE DISCHARGE LOCATIONS, POTENTIAL SOURCES OF POLLUTION, I.E., UNDERGROUND CHEMICAL STORAGE TANK, ETC. VIOLATIONS OF THIS RULE SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. A MINIMUM OF TWO (2) FEET OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER AND SEWER LINES WHERE THEY CROSS. WATERLINES SHALL ALWAYS CROSS ABOVE FORCE MAINS. A MINIMUM OF TEN (10) FEET OF HORIZONTAL SEPARATION SHALL BE MAINTAINED WHEN THEY RUN PARALLEL. AT POINTS WHERE WATER LINES CROSS A GRAVITY SEWER LINE, CONTRACTOR SHALL REPLACE THE SEWER LINE WITH PVC PIPE FOR A DISTANCE OF TEN (10) FEET AWAY FROM EACH SIDE OF LINE, UNLESS THAT WATER LINE IS MORE THAN TWO (2) FEET ABOVE THE SEWER LINE. THE PVC PIPE IS TO CONFORM TO ASTM D3034 WITH MINIMUM WALL THICKNESS OF 30R41, ASTM F797, OR ASTM F704, WITH GASKETED PUSH-ON JOINTS IN CONFORMANCE WITH ASTM D3212 AND IS TO BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PURSUANT TO THE MOST RECENT REVISION OF KOWE'S MINIMUM STANDARDS OF DESIGN FOR WATER POLLUTION CONTROL FACILITIES. THE CONTRACTOR SHALL BE PAID HIS BID PRICE FOR PVC PIPE. IN CASE NO BID PRICE HAS BEEN ESTABLISHED, A PRICE SHALL BE AGREED UPON PRIOR TO PERFORMING THE WORK.
- POTABLE WATER PIPES AND SEWERS LAID PARALLEL TO EACH OTHER SHALL BE IN SEPARATE TRENCHES WITH UNDISTURBED EARTH BETWEEN IN ADDITION TO HAVING A MINIMUM HORIZONTAL SPACING OF AT LEAST TEN (10) FEET AS MEASURED FROM EDGE TO EDGE.
- IN CASES WHERE THE GRAVITY SEWER LINE IS ABOVE THE WATER LINE, THE SEWER LINE SHALL BE ENCASED WITH SIX (6) INCHES OF CONCRETE TO A DISTANCE OF TEN (10) FEET ON EACH SIDE OF THE WATER LINE.
- AT PLACES WHERE THE EXCAVATION INTERSECTS WITH EXISTING GAS LINES, THE CONTRACTOR SHALL NOTIFY THE OWNER SO THE GAS LINE CAN BE INSPECTED BEFORE BACK-FILLING. THE TRENCH BACK-FILL SHALL BE HAND COMPACTED FOR THREE (3) FEET IN EITHER DIRECTION TO AN ELEVATION OF 1 FOOT ABOVE THE GAS LINE. BACK-FILL WITH ORIGINAL MATERIAL, SAND, OR LIMESTONE SCREENINGS.
- ALL EXISTING WATER LINE AND VALVE LOCATIONS SHOWN HAVE BEEN INTERPRETED FROM THE BEST INFORMATION AVAILABLE. THE ACTUAL NUMBER, LOCATIONS AND SIZES MAY VARY AND CONTRACTOR SHALL ANTICIPATE THIS.
- UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM INFORMATION PROVIDED BY OWNERS FOR ACTUAL FIELD LOCATIONS CALL 811 OR 1-800-522-8543 PRIOR TO EXCAVATION.
- PROPERTY PINS DISTURBED DURING CONSTRUCTION SHALL BE RESET BY A LICENSED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- ALL PUBLIC AND PRIVATE PROPERTY, SUCH AS UTILITIES, ROADS, DRIVES, MAIL BOXES, FENCES, POLES, ETC., DAMAGED AS A RESULT OF CONSTRUCTION, SHALL BE RESTORED TO ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER. ALL TREES OR SHRUBS, DAMAGED AS A RESULT OF CONSTRUCTION, THAT ARE NOT SCHEDULED FOR REMOVAL SHALL BE REPLACED, IN KIND AND SIZE, BY THE CONTRACTOR AT NO ADDITIONAL COST TO OWNER.
- ALL PAVEMENT CROSSINGS ARE TO BE BORED AND ENCASED. ALL GRAVEL SURFACE CROSSINGS ARE TO BE ENCASED.
- PROPOSED WATER LINES ARE SHOWN WITH AN APPROXIMATE ALIGNMENT, ACTUAL INSTALLATION SHALL FOLLOW EASEMENT RESTRICTIONS.
- CONTRACTOR IS PROHIBITED FROM BORING BENEATH EXISTING STRUCTURES.
- EXCEPT WHERE SPECIFICALLY NOTED, WATERLINE CASING MAY BE EITHER STEEL OR PLASTIC.
- ALL YARDS SHALL BE CLEANED UP AND RESEEDED WITHIN SEVEN (7) DAYS OF INSTALLATION OF WATERLINE.
- ALL DISTRIBUTED AREAS, EXCEPT IN YARDS, SHALL BE CLEANED UP, SEEDED AND MULCHED, IF IN RESEEDING MONTHS, WITHIN 30 DAYS INSTALLATION OF WATERLINE.
- DRIVEWAY SHALL BE BACKFILLED IMMEDIATELY TO ALLOW THRU TRAFFIC.
- ALL FITTINGS ARE HAVE RESTRAINED JOINTS WITH STAINLESS STEEL BOLTS.
- CONTRACTOR SHALL CONDUCT A CONDUCTIVITY TEST ON ALL TRACER WIRE INSTALLED.

CITY OF GLENPOOL HICKORY STREET SANITARY SEWER LIFT STATION UPGRADES TULSA COUNTY, OK



TULSA COUNTY, OKLAHOMA

SHEET INDEX

01	COVER SHEET
02	LIFT STATION SITE PLAN
03	LIFT STATION CROSS SECTION
04	LIFT STATION PLAN VIEW
05	LIFT STATION BILL OF MATERIALS
06-08	MISC. DETAILS
09-10	GLENPOOL STANDARD DETAILS
11-12	ELECTRICAL DETAILS

UTILITY OWNERS

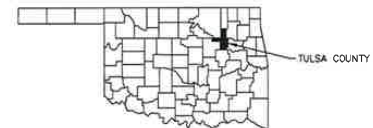
GAS -	800-458-4251	OKLAHOMA NATURAL GAS
ELECTRIC -	800-272-0741	OKLAHOMA GAS & ELECTRIC
	918-758-0833	EAST CENTRAL ELECTRIC CO-OP (SOUTH)
WATER/SEWER -	918-322-5442	CITY OF GLENPOOL

BID QUESTIONS

Holly Powers - 620-431-8474 Project Manager



NOTE:
THE UTILITIES SHOWN HEREIN ARE REPRESENTATIONAL ONLY AND ARE IN NO WAY INTENDED TO SHOW THEIR EXACT LOCATION, NOR IS THIS INFORMATION TO BE CONSTRUED AS A COMPLETE INVENTORY OF ALL UTILITIES AT THIS LOCATION. IT IS THE EXCAVATOR'S RESPONSIBILITY TO HAVE ANY UTILITIES LOCATED BEFORE DIGGING.



DESIGNED BY: D.C.	7
DRAWN BY: G.S.	6
CHECKED BY: D.C.	5
ISSUE DATE: 03-27-21	4
	3
	2
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DESIGNED BY: D.C.	7
DRAWN BY: G.S.	6
CHECKED BY: D.C.	5
ISSUE DATE: 03-27-21	4
	3
	2
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25A N Main Sapulpa, OK 74066
TEL: 918.264.9405

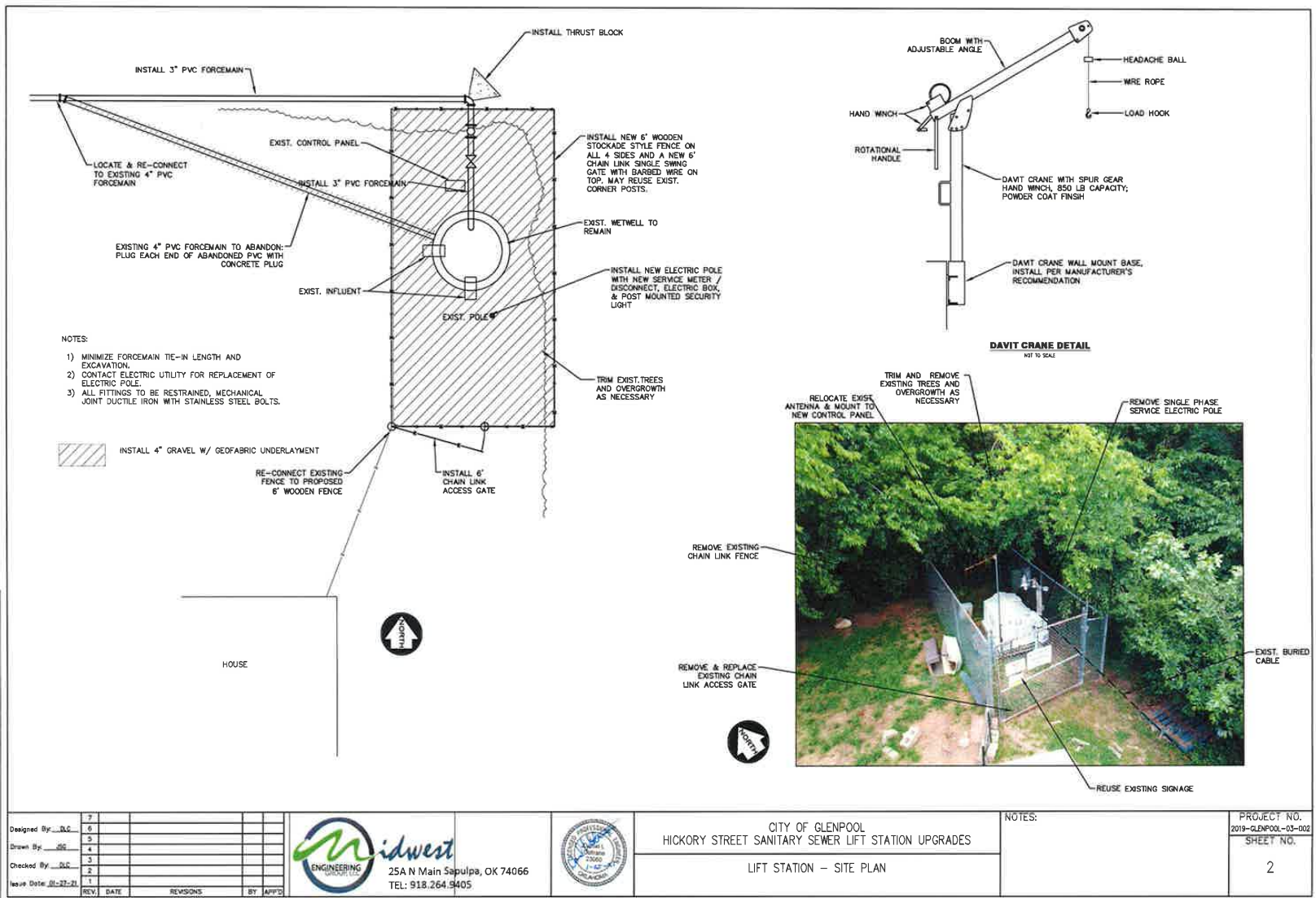


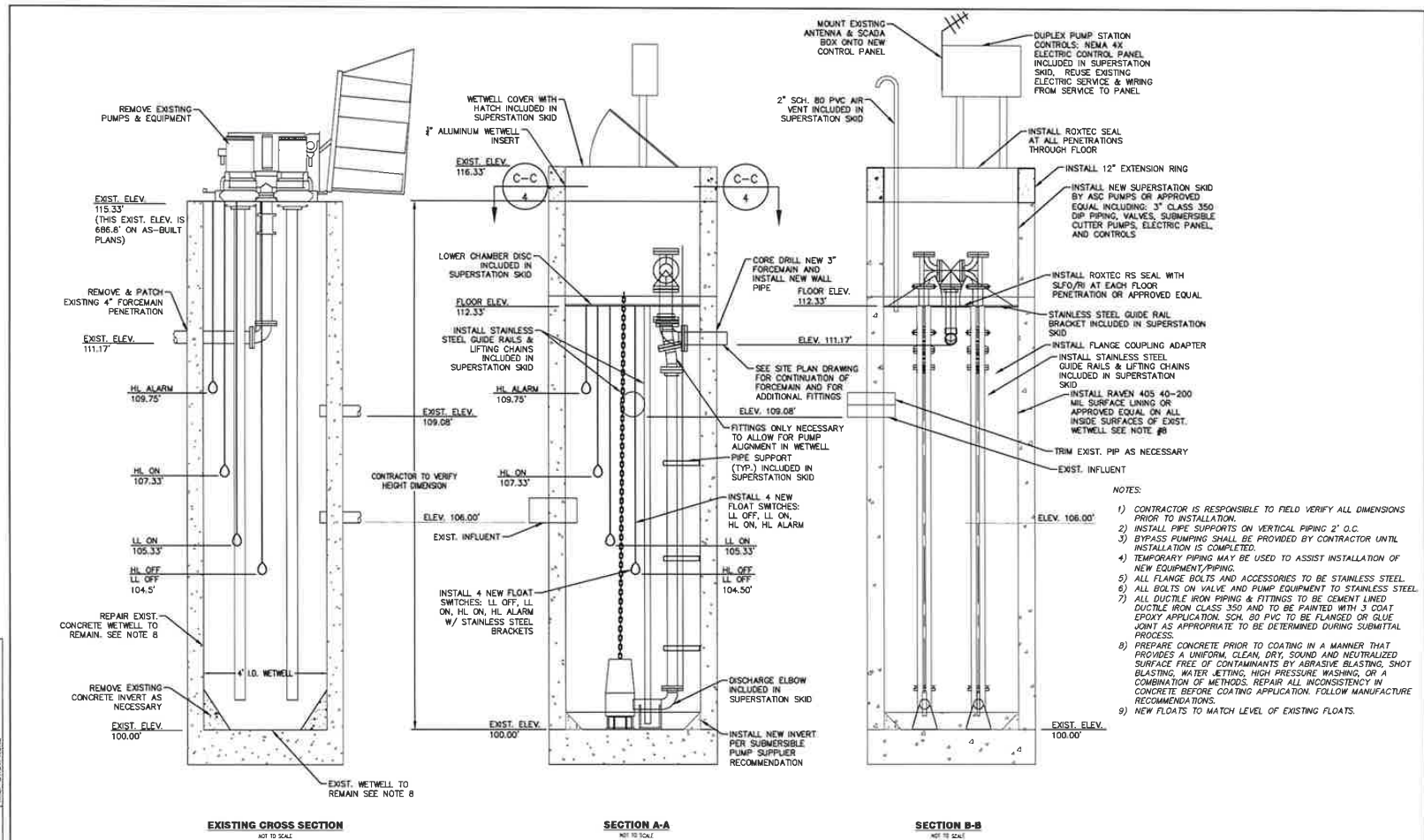
CITY OF GLENPOOL
HICKORY STREET SANITARY SEWER LIFT STATION UPGRADES
COVER SHEET

NOTES:

PROJECT NO.
2019-GLENPOOL-03-002
SHEET NO.

1





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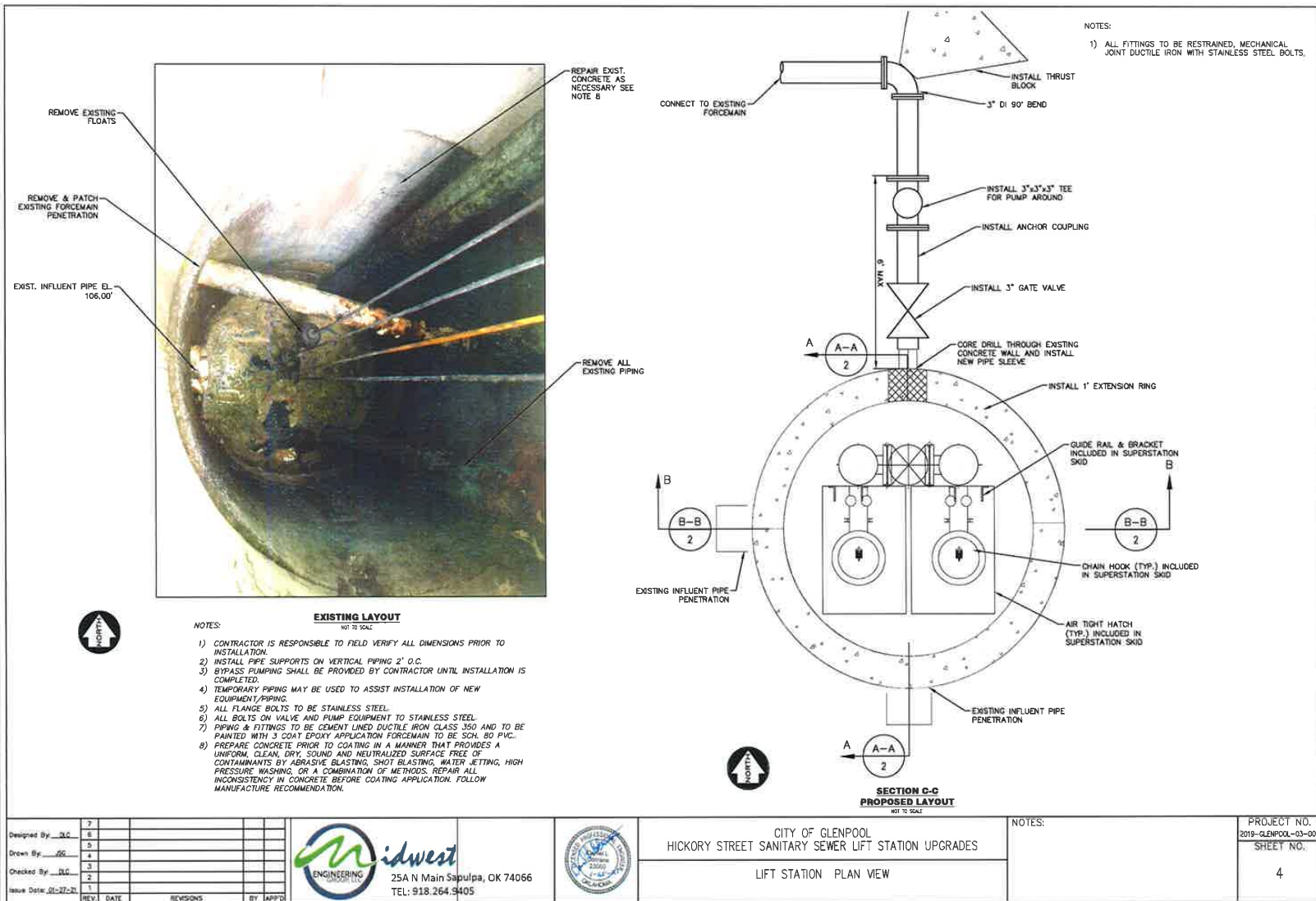
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Midwest
ENGINEERING
25A N Main Sapulpa, OK 74066
TEL: 918.264.9405

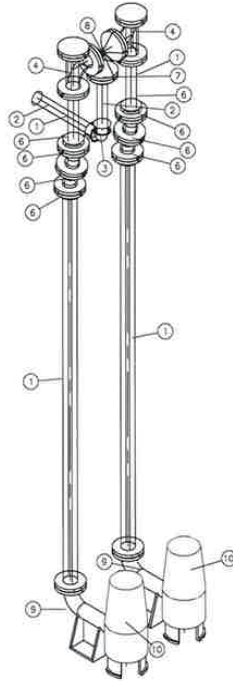


CITY OF GLENPOOL
HICKORY STREET SANITARY SEWER LIFT STATION UPGRADES
LIFT STATION CROSS SECTION

NOTES:	PROJECT NO. 2019-GLENPOOL-03-002
	SHEET NO. 3



DESIGNED BY: J. L. JONES
DRAWN BY: J. L. JONES
CHECKED BY: J. L. JONES
DATE: 01-22-21
PROJECT NO.: 2019-GLENPOOL-03-002
SHEET NO.: 5



ISOMETRIC-BOM
NOT TO SCALE

BILL OF MATERIAL				
ITEM	MARK	QTY	SIZE	DESCRIPTION
1	1	3"	DI, AWWA C151, FLG/PE, 150 PSI FLANGE, 350 PSI PIPE, CLASS 60R SCH 80 PVC	251.93'
2	1	3"	PIPE, SCH 80, PVC (OR DI, AWWA C110 OR C153)	35.45'
3	1	3"	ELL, 90 DEG, SCH 80, SOC X SOC, PVC (OR DI, AWWA C110 OR C153)	
4	2	3"	DI, AWWA C110 OR C153, FLG, 150 PSI, DISCHARGE CHECK VALVE	
5	4	3"	DI, AWWA C110 OR C153, FLG, 150 PSI, 11.25 EDR SCH 80 PVC	
6	4	3"	DI, FLG, 150 PSI, FLANGED COUPLING ADAPTOR SCH 80 PVC	
7	1	3"	DI, FLG, 150 PSI, MEGA FLANGE ADAPTOR (OR SCH 80 PVC)	
8	1	3"	3-WAY DISCHARGE MANIFOLD/PLUG VALVE, FLG/FLG, 150 PSI, PRATT BALLCENTRIC	
9	2	3"	DISCHARGE BASE ELBOW	
10	2	3"	SUBMERSIBLE CUTTER PUMP	

- NOTES:
- 1) BOM IS INTENDED TO ASSIST IN IDENTIFYING FITTING AND VALVES. IT IS NOT INTENDED TO INCLUDE ALL COMPONENTS. DIMENSIONS MAY VARY BASED ON MANUFACTURER.
 - 2) FIELD VERIFY LENGTH REQUIRED.
 - 3) TEMPORARY PIPING MAY BE USED TO ASSIST INSTALLATION OF NEW EQUIPMENT AND PIPING.
 - 4) VERIFY CONCENTRICITY/ECCENTRICITY OF REDUCER WITH SUBMERSIBLE PUMP MANUFACTURER.
 - 5) ALL FLANGE BOLTS TO BE STAINLESS STEEL.
 - 6) ALL BOLTS ON VALVE AND PUMP EQUIPMENT TO STAINLESS STEEL.
 - 7) ALL DUCTILE IRON PIPING & FITTINGS TO BE CEMENT LINED, DUCTILE IRON CLASS 350 AND TO BE PAINTED WITH 3 COAT EPOXY APPLICATION. SCH 80 PVC TO BE FLANGED OR GLUE JOINT AS APPROPRIATE TO BE DETERMINED DURING SUBMITTAL PROCESS.

PUMP DATA:
No of Units: 2
Rated Total Head (feet): 50'
Flow: 100 gpm at 50 ft
Minimum Pump Discharge Size: 3"
Horsepower: 5 hp
Max Operating Speed: 3500 rpm
Variable Frequency Drive: Yes
Available Power: Single Phase

Designed By: J. L. JONES	7				
Drawn By: J. L. JONES	5				
Checked By: J. L. JONES	4				
Issue Date: 01-22-21	3				
	2				
	1				
REV	DATE	REVISIONS	BY	APP'D	



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TEL: 918.264.9405

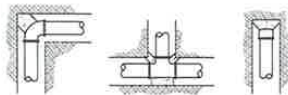


CITY OF GLENPOOL
HICKORY STREET SANITARY SEWER LIFT STATION UPGRADES
LIFT STATION BILL OF MATERIAL

NOTES:

PROJECT NO.
2019-GLENPOOL-03-002
SHEET NO.

5



THRUST BLOCKING, NEEDED

1. CHANGES IN DIRECTION, AS AT TEES, BENDS, AND CROSSES
2. CHANGES IN SIZE, AS AT REDUCERS
3. STOPS, AS AT A DEAD END
4. VALVES, AT WHICH THRUST DEVELOPS WHEN CLOSED

NOTES:

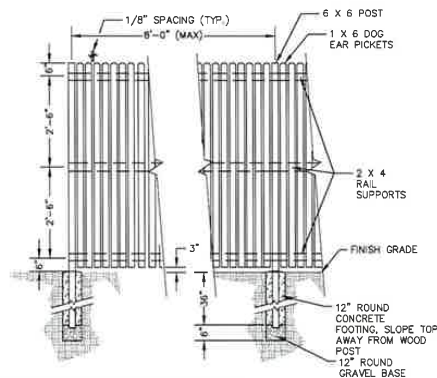
1. USE 3,000 PSI CONCRETE IN ALL BLOCKING
2. ALL RESTRICTIVE AREAS SHALL BE ON UNDISTURBED EARTH
3. BLOCKING SHALL BE PLACED SO THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIR

THRUST BLOCKING SET FORTH IN THE FOLLOWING TABLE IS BASED ON WATER TEST PRESSURE OF 150 PSI AND SOIL BEARING PRESSURE OF 3,000 PSI. USE A MINIMUM THICKNESS OF 4 INCHES OR THE DIAMETER OF THE PIPE, WHICHEVER IS GREATER. THE LENGTH OF CONTACT SURFACE WITH THE PIPE SHALL BE THE PIPE DIAMETER PLUS 4 INCHES. THRUST BLOCKING SHALL BE PLACED AS SHOWN. ANY DEVIATION SHALL BE AT THE DIRECTION OF THE ENGINEER.

PIPE SIZE	90° BEND		45° BEND		225° BEND		DEAD END/TEE	
	RES. AREA SQ. FT.	VOL. CU. FT.	RES. AREA SQ. FT.	VOL. CU. FT.	RES. AREA SQ. FT.	VOL. CU. FT.	RES. AREA SQ. FT.	VOL. CU. FT.
10"	.21	.50	.11	.50	.06	.50	.15	.50
8"	.13	.50	.16	.50	.09	.50	.21	.50
6"	.07	.50	.08	.50	.13	.50	.33	.50
4"	.03	.50	.03	.50	.03	.50	.49	.50
3"	.01	.50	.01	.50	.01	.50	.88	.50
2"	.01	.50	.01	.50	.01	.50	1.25	.50
1"	.01	.50	.01	.50	.01	.50	1.75	.50
1/2"	.01	.50	.01	.50	.01	.50	2.00	.50
1/4"	.01	.50	.01	.50	.01	.50	2.32	.50
1/8"	.01	.50	.01	.50	.01	.50	2.65	.50
3/16"	.01	.50	.01	.50	.01	.50	2.98	.50
1/16"	.01	.50	.01	.50	.01	.50	3.30	.50

THRUST BLOCKING DETAIL

NOT TO SCALE

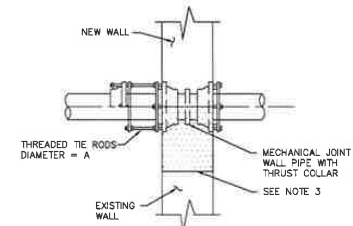


WOOD PRIVACY FENCE DETAIL

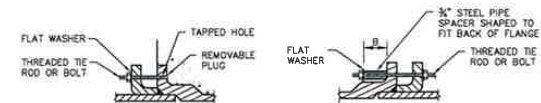
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WOOD FENCE NOTES:

1. FENCE LUMBER TO BE ACQ TREATED OR APPROVED EQUAL.
2. USE TWO HOT-DIPPED GALVANIZED SPIRAL SHANK DECK/PATIO NAILS AT EACH CONNECTION.
3. AT POSTS, NAILS SHALL BE 16d AND AT PICKETS NAILS SHALL BE 10d.



PIPE SIZE	A TIE ROD DIAMETER	B SPACER LENGTH	MIN. NO. OF TIE RODS
4" TO 12"	3/8"	2 1/2"	2
14" TO 24"	3/4"	3 1/2"	6



NOTES:

1. EXCEPT WHERE TIE RODS ARE REQUIRED, BOLTS FOR FOLLOWER RINGS SHALL BE BOLT-STUDS ON WALL PIPES AND TEE HEAD BOLTS IN OTHER LOCATIONS.
2. ALL BOLT HOLES IN WALL PIPES SHALL BE TAPPED AND SIZED IN ACCORDANCE WITH COLUMN A. WALL PIPES SHALL BE ORIENTED SUCH THAT THE BOLT HOLES STRADDLE THE TOP (SIDE IN VERTICAL PIPING) CENTERLINE.
3. CUT OUT EXISTING CONCRETE WALL AND INSTALL NEW WALL PIPE WITH EPOXY GROUT.

MECHANICAL JOINT WALL PIPE

NOT TO SCALE

DESIGNED BY: D.C.	DATE: 1/27/2019
DRAWN BY: J.S.	DATE: 1/27/2019
CHECKED BY: D.C.	DATE: 1/27/2019
ISSUE DATE: 01-22-19	

REV	DATE	REVISIONS	BY	APP'D
1				



25A N Main Sapulpa, OK 74066
TEL: 918.264.9405



CITY OF GLENPOOL
HICKORY STREET SANITARY SEWER LIFT STATION UPGRADES

MISC. DETAILS

NOTES:

PROJECT NO.
2019-GLENPOOL-03-002
SHEET NO.

6

ROCK CHECK DAM NOTES:

CONSTRUCTION SPECIFICATIONS AND INSTALLATION:

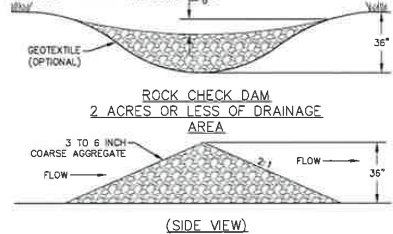
1. THE DRAINAGE AREA OF THE DITCH OR SWALE BEING PROTECTED SHALL NOT EXCEED 2 ACRES WHEN A COARSE AGGREGATE IS USED ALONE AND SHALL NOT EXCEED 10 ACRES WHEN A COMBINATION OF CLASS I RIPRAP AND COARSE AGGREGATE IS USED. AN EFFORT SHOULD BE MADE TO EXTEND THE STONE TO THE TOP OF CHANNEL BANKS.
2. THE MAXIMUM HEIGHT OF THE DAM SHALL BE 3 FEET. THE CENTER OF THE CHECK DAM IS AT THE SAME ELEVATION AS THE TOP OF THE OUTER EDGES.
3. FOR ADDED STABILITY, THE BASE OF THE CHECK DAM CAN BE KEYS INTO THE SOIL APPROXIMATELY 6 INCHES.
4. THE MAXIMUM SPACING BETWEEN THE DAMS SHOULD BE SUCH THAT THE TOE OF THE UPSTREAM DAM IS AT THE SAME ELEVATION AS DOWNSTREAM DAM.
5. STONE SHOULD BE PLACED ACCORDING TO THE CONFIGURATION BELOW. HAND OR MECHANICAL PLACEMENT WILL BE NECESSARY TO ACHIEVE COMPLETE COVERAGE OF THE DITCH OR SWALE AND TO INSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES.
6. GEOTEXTILE MAY BE USED UNDER THE STONE TO PROVIDE A STABLE FOUNDATION AND TO FACILITATE REMOVAL OF THE STONE.

INSPECTION AND MAINTENANCE:

1. CHECK DAMS SHOULD BE CHECKED FOR SILT ACCUMULATION AFTER EACH STORM EVENT 1/2-INCH OR GREATER. SILT SHOULD BE REMOVED WHEN IT REACHES ONE HALF OF THE ORIGINAL HEIGHT OF THE DAM.
2. REGULAR INSPECTIONS SHOULD BE MADE TO ENSURE THAT THE CENTER OF THE DAM IS LOWER THAN THE EDGES. EROSION CAUSED BY HIGH FLOWS AROUND THE EDGES OF THE DAM SHOULD BE CORRECTED.

REMOVAL OF PRACTICE:

1. UNLESS THEY ARE TO BE PERMANENT, CHECK DAMS MUST BE REMOVED WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED. IN TEMPORARY DITCHES AND SWALES, CHECK DAMS SHOULD BE REMOVED WHEN A PERMANENT LINING CAN BE INSTALLED. IN THE CASE OF GRASS-LINED DITCHES, CHECK DAMS SHOULD BE REMOVED WHEN THE GRASS HAS MATURED SUFFICIENTLY TO PROTECT THE DITCH OR SWALE. THE AREA BENEATH THE CHECK DAMS SHOULD BE SEEDED AND MULCHED IMMEDIATELY AFTER THEY ARE REMOVED. THE BAG OF FILTER CLOTH UNDERNEATH THE STONE WILL MAKE REMOVAL OF THE STONE EASIER.



SPACING BETWEEN ROCK CHECK DAMS

ROCK CHECK DAM
NOT TO SCALE

GENERAL EROSION CONTROL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING THE STORM WATER POLLUTION PREVENTION PLAN (PPP) AT THE TIME THE PROJECT BREAKS GROUND. A COPY OF THE PPP SHALL BE AVAILABLE ON SITE AT ALL TIMES. THE PLAN SHOULD FOLLOW CLOSELY TO THE E.P.A. GUIDANCE DOCUMENT, **STORM WATER MANAGEMENT FOR CONSTRUCTION ACTIVITIES - DEVELOPING POLLUTION PREVENTION PLANS AND BEST MANAGEMENT PRACTICES**, U.S. E.P.A., OFFICE OF WATER, EPA 832-R-92-005 (SEPTEMBER 1992).

2. THE EROSION CONTROL FEATURES, NOTES AND SPECIFICATIONS IN THE PPP REPRESENT THE MINIMUM REQUIREMENTS ACCEPTABLE. LOCATIONS ARE TYPICAL AND MAY VARY ACCORDING TO CONTRACTORS STAGING AND LIMITS OF CONSTRUCTION. THE CONTRACTOR SHALL ADJUST, MODIFY AND ADD TO THE PLAN AS NECESSARY TO CONTROL EROSION, SILTATION AND POLLUTION.

3. IT SHALL BE EACH CONTRACTOR'S RESPONSIBILITY TO CONTROL EROSION AND PREVENT POLLUTION FOR ALL WORK WHICH THEY ARE DIRECTLY INVOLVED.

EROSION CONTROL DEVICES ALONG THE DOWN SLOPE SIDE OF THE PROJECT SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF ANY GRADING WORK.

5. WHEN POSSIBLE, WITHOUT ADVERSELY AFFECTING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL: MINIMIZE THE AMOUNT OF SURFACE AREA WHICH IS EXPOSED AT ONE TIME, LEAVE GRADED AREAS WITH A ROUGH TEXTURE, CONSTRUCT TEMPORARY TERRACES DURING GRADING OPERATIONS, AND LIMIT UNNECESSARY VEHICLE TRAFFIC IN GRADED AREAS.

6. THE SPILLAGE OF DEBRIS, INCLUDING THE TRACKING OF SOIL OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE AVOIDED. THEREFORE THE CONTRACTOR SHALL PROVIDE STABILIZED DRIVES AT ALL ACCESS LOCATIONS AS NECESSARY AND SHALL REMOVE PROMPTLY ANY MATERIAL WHICH FINDS ITS WAY INTO THE PUBLIC RIGHT-OF-WAY.

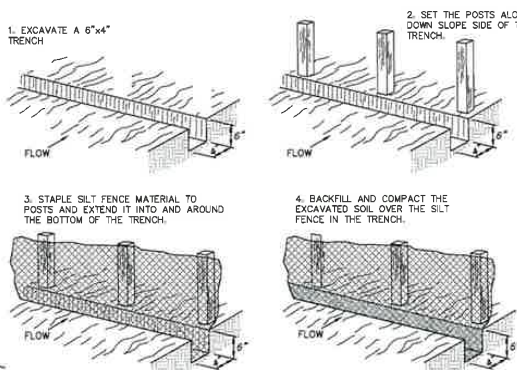
7. STRAW BALE DIKES OR SILT FENCES SHALL BE PLACED ON A CONTOUR ELEVATION ALONG THE DOWNHILL SIDE AND FOR THE FULL EXTENT OF THE DISTURBED AREAS WITHIN THE CONSTRUCTION LIMITS. THE LAST FIVE FEET ON EACH END OF RUN OF SILT FENCE/STRAW BALE DIKE SHALL BE PLACED FACING UPHILL AT 90 DEGREES TO THE CONTOUR LINE.

8. THE CONTRACTOR SHALL PREVENT SILT FROM ENTERING THE STORM SEWER SYSTEM. STRAW BALE DIKES/SILT FENCE PLACED AROUND ALL STORM SEWER INLETS EXCEPT DURING CONSTRUCTION OPERATIONS WHICH REQUIRE THEIR REMOVAL IS ONE METHOD OF MEETING THE ABOVE REQUIREMENT.

9. EACH CONTRACTOR SHALL INSPECT THEIR EROSION CONTROL DEVICES EVERY 7 DAYS OR WITHIN 24 HOURS OF A STORM OF 0.5 INCHES OR MORE IN DEPTH. THE CONTRACTOR SHALL REPAIR DAMAGE, CLEAN OUT SILT AND ADD ADDITIONAL CONTROL DEVICES AS NEEDED AS SOON AS PRACTICABLE AFTER INSPECTION. DEFICIENCIES MUST BE CORRECTED WITHIN 7 DAYS OF INSPECTION.

10. ALL AREAS UPON REACHING FINAL GRADE SHALL BE BROUGHT TO FINAL PLAN CONDITION (PAVED, MULCHED AND SEEDED, SOODED, OR OTHER) AS SOON AS POSSIBLE. EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL SOIL DISTURBING ACTIVITIES ARE COMPLETE AND A UNIFORM PERENNIAL COVER WITH A DENSITY OF 70 % (MINIMUM) FOR UNPAVED AREAS IS ESTABLISHED.

11. WHERE GRADED AREAS DRAIN ONTO PAVED AREAS, SILT FENCE/STRAW BALE DIKE SHALL BE PLACED AT THE BACK OF CURB TO PREVENT SILT FROM ENTERING THE PAVED AREAS. WHEN THESE EROSION CONTROL DEVICES ARE NOT PLACED ON THE CONTOUR, THEN THEY SHALL HAVE INSTALLED AT 50' INTERVALS A 5' LENGTH PLACED AT 90 DEGREES TO THE MAIN LENGTH.



SILT FENCE DETAIL
NOT TO SCALE

SILT FENCE NOTES:

INSTALLATION:

1. THE HEIGHT OF SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
2. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SECURELY SPICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MAX 6 INCH OVERLAP.
3. DIG A TRENCH AT LEAST 6 INCHES DEEP AND 4 INCHES WIDE ALONG THE TRENCH ALIGNMENT.
4. DRIVE POSTS AT LEAST 24 INCHES INTO THE GROUND ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 6 FEET APART.
5. EXTRA-STRENGTH SEDIMENT FENCE FABRIC SHALL BE USED. POST FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE SEDIMENT FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING A MINIMUM OF ONE INCH LONG, HEAVY-DUTY WIRE STAPLES OR TIE-WIRES, AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. PLACE THE BOTTOM 1 FOOT OF FABRIC IN THE MINIMUM-OF-6-INCH DEEP TRENCH, LAPPING TOWARD THE UPSLOPE SIDE. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
7. IF A SILT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE, PLACED ON A CONTOUR, WITH THE ENDS ORIENTED UPSLOPE. EXTRA-STRENGTH SILT FABRIC SHALL BE USED WITH A MAXIMUM 3-FOOT SPACING OF POSTS.
8. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SILT STORAGE AREA IN THE UPSLOPE SIDE OF THE FENCE. PROVIDE GOOD ACCESS IN AREA OF HEAVY SILTATION FOR CLEAN OUT AND MAINTENANCE.
9. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

TROUBLESHOOTING:

1. DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES, BEFORE FENCE INSTALLATION SO UTILITIES ARE NOT DISTURBED.
2. GRADE ALIGNMENT OF FENCE NEEDED TO PROVIDE A BROAD, NEARLY LEVEL AREA UPSTREAM OF FENCE TO ALLOW SILT COLLECTION AREA.

INSPECTION MAINTENANCE:

1. INSPECT SILT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SILT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SILT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEANOUT. SILT ACCUMULATION SHOULD NOT EXCEED 1/2 THE HEIGHT OF THE FENCE.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SILT DEPOSITS, AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.

DESIGNED BY: J.C.	7
DRAWN BY: J.C.	6
CHECKED BY: J.C.	5
ISSUED DATE: 01-22-21	4
	3
	2
	1

REV	DATE	REVISIONS	BY	APPD
1				
2				
3				
4				
5				
6				
7				



25A N Main Sapulpa, OK 74066
TEL: 918.264.9405



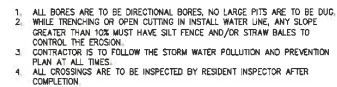
CITY OF GLENPOOL
HICKORY STREET SANITARY SEWER LIFT STATION UPGRADES
EROSION CONTROL DETAILS

NOTES:

PROJECT NO.
2019-GLENPOOL-03-002
SHEET NO.
7



1. GRADING & SEEDING WILL BE REQUIRED.
2. COMPACT BACK FILL TO 90% STANDARD DENSITY.
3. MINIMUM OF 42" OF COVER AT BOTTOM OF CROSSING.
4. CROSSINGS ARE SUBJECT TO PERMIT LIMITATIONS AND MITIGATION MEASURES. COPIES OF THESE MEASURES ARE AVAILABLE UPON REQUEST.
5. FOLLOW ALL EROSION CONTROL PROCEDURES AND POLICIES AS STATED PER PLAN.



1. POSTS WHICH SUPPORT A SILT FILTER SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RINFLOW SOURCE AND SPACED AT A MAX. 8' APART OR AT SILT FENCE MANUFACTURER SPECIFICATIONS, WHICHEVER IS STRICTER. SILT FILTER SHALL BE TRENCHED IN WITH A DEEP OR MECHANICAL TRENCHER SO THAT THE DOWN SLOPE FACE OF THE TRENCH BEHIND THE FILTER AND PERFORATED FABRIC SHALL BE AT LEAST 12" DEEP. THE TRENCH SHOULD BE APPROXIMATELY 8" SPACE 3-4" DEEP TO ALLOW FOR THE SILT FENCE TO LEAD IN THE GROUND

2. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WHEN THIS IS IN TURN ATTACHED TO THE FENCE POSTS, AND SHOULD NOT EXCEED 18" ABOVE THE GROUND SURFACE.

3. WHEN A SILT FENCE SUPPORT SHALL BE A MINIMUM 12" ABOVE THE GROUND SURFACE, AN OPENING WHENEVER SUPPORT SHALL BE INSTALLED FOR FLOWS LOWER THAN 200 CFS.

4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

5. WHEN A SILT FENCE SUPPORT SHALL BE A MINIMUM 12" ABOVE THE GROUND SURFACE, AN OPENING SHALL BE REQUIRED TO ALLOW FOR DRAINAGE.

6. WHEN A SILT FENCE SHALL BE USED TO PREVENT EROSION, IT SHALL BE INSTALLED SO AS NOT TO BLOCK OR IMPAIR STORM FLOW OR DRAINAGE.

7. FABRIC TRAPPED BY THIS PRACTICE SHALL BE UNIFORMLY DISTRIBUTED ON THE SOURCE AREA PRIOR TO TOPSLOPING.

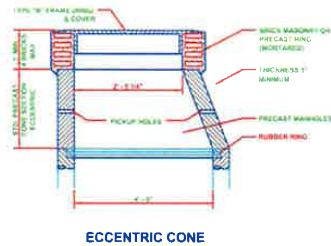
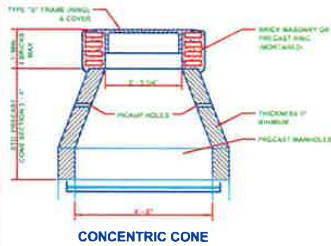
8. SILT FENCE SHALL BE MARI-FLOX FILTER FABRIC OR APPROVED EQUIV.

Designed By: <u>RLC</u>	7				
	6				
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Drawn By: <u>AG</u>	4				
	3				
Checked By: <u>RLC</u>	2				
Issue Date: <u>01-27-21</u>	1				
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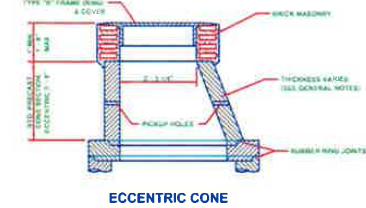
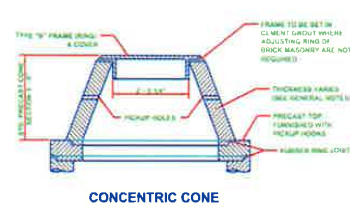


PROJECT NO.	2019-GLENPOOL-03-002
SHEET NO.	8

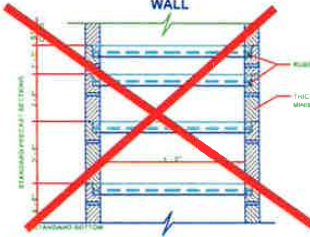
STANDARD DETAIL FOR 4' DIA. CONES



STANDARD DETAIL FOR LARGER THAN 4' DIA. CONES



STANDARD 4' DIA. MANHOLE WALL



STANDARD FOR LARGER THAN 4' DIA. MANHOLE WALL



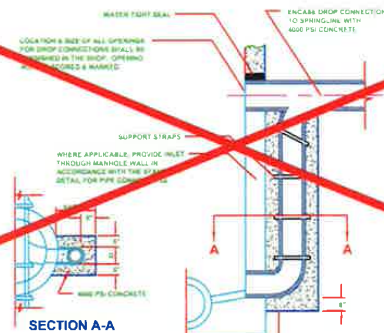
MANHOLE-PIPE CONNECTION



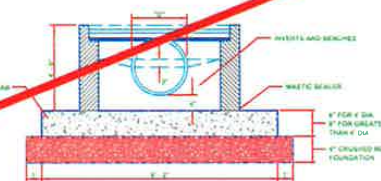
NOTE:
1. ALL PIPE SHALL BE STANDARD
2. ALL OPENINGS SHALL BE REINFORCED WITH 4" DIA. STEEL PIPE

PIPE DIA. (INCHES)	WALL & RING DIAMETER (INCHES)	A	B	C	D
8.00" - 8.50"	10"	8.50"	8.50"	8.50"	8.50"
8.50" - 9.00"	10"	9.00"	9.00"	9.00"	9.00"
9.00" - 9.50"	10"	9.50"	9.50"	9.50"	9.50"
9.50" - 10.00"	10"	10.00"	10.00"	10.00"	10.00"
10.00" - 10.50"	10"	10.50"	10.50"	10.50"	10.50"
10.50" - 11.00"	10"	11.00"	11.00"	11.00"	11.00"
11.00" - 11.50"	10"	11.50"	11.50"	11.50"	11.50"
11.50" - 12.00"	10"	12.00"	12.00"	12.00"	12.00"
12.00" - 12.50"	10"	12.50"	12.50"	12.50"	12.50"
12.50" - 13.00"	10"	13.00"	13.00"	13.00"	13.00"
13.00" - 13.50"	10"	13.50"	13.50"	13.50"	13.50"
13.50" - 14.00"	10"	14.00"	14.00"	14.00"	14.00"
14.00" - 14.50"	10"	14.50"	14.50"	14.50"	14.50"
14.50" - 15.00"	10"	15.00"	15.00"	15.00"	15.00"
15.00" - 15.50"	10"	15.50"	15.50"	15.50"	15.50"
15.50" - 16.00"	10"	16.00"	16.00"	16.00"	16.00"
16.00" - 16.50"	10"	16.50"	16.50"	16.50"	16.50"
16.50" - 17.00"	10"	17.00"	17.00"	17.00"	17.00"
17.00" - 17.50"	10"	17.50"	17.50"	17.50"	17.50"
17.50" - 18.00"	10"	18.00"	18.00"	18.00"	18.00"
18.00" - 18.50"	10"	18.50"	18.50"	18.50"	18.50"
18.50" - 19.00"	10"	19.00"	19.00"	19.00"	19.00"
19.00" - 19.50"	10"	19.50"	19.50"	19.50"	19.50"
19.50" - 20.00"	10"	20.00"	20.00"	20.00"	20.00"

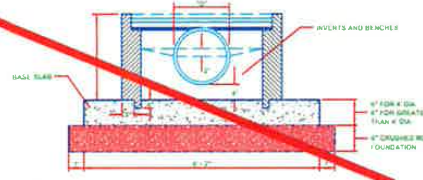
MANHOLE DROP CONNECTION



MANHOLE BASE SECTIONS

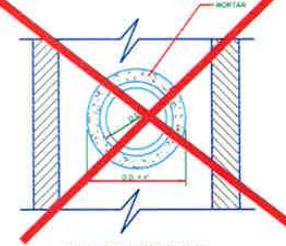


BASE RISER SECTION WITH MASTIC SEALER OPTION "A"



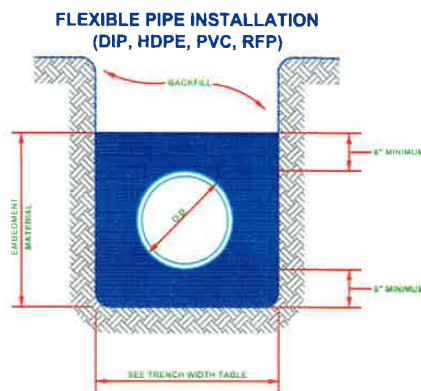
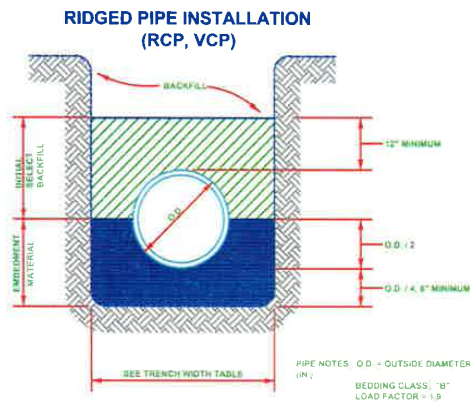
BASE RISER SECTION WITH PREFORMED SOCKET OPTION "B"

ABOVE INVERT PIPE CONNECTION



SANITARY SEWER STANDARD
DETAILS FOR PRECAST REINFORCED
CONCRETE MANHOLES
CITY OF GLENPOOL, OKLAHOMA
COMPANY NAME
ADDRESS, ETC.
ADDRESS, ETC.

REVISION	DATE	BY	CHKD	APP'D
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REINFORCED CONCRETE PIPE (RCP) MINIMUM PIPE DESIGN

1. HIGHWAYS – Minimum pipe class for diameter twenty-four (24") inches to one hundred-two (102") inches meeting the requirements of ASTM C-76 shall be as follows:

MAXIMUM DEPTH OF COVER (feet)	MINIMUM CLASS
10	III
15	IV
18	IV

For maximum depth of cover of thirty (30") feet, pipes ranging from twenty-four (24") inches to fifty-four (54") inches in diameter shall be designed and manufactured in accordance with ASTM C-455 and shall have the following minimum three-edge bearing strength for 0.01 crack (D 9.01) in pounds per linear foot of inside diameter:

PIPE NOMINAL SIZE (in.)	D ₃ (psi/linear ft. per ft. of inside diameter)
24	3200
27	3050
30	3050
33	3475
36	3475
42	3450
48	3300
54	3325

Pipes ranging in diameter from sixty (60") to one hundred-two (102") inches in diameter shall be class V for a minimum depth of cover of thirty (30") feet when manufactured in accordance with ASTM C-76.

2. RAILROADS – Minimum pipe class for 60" Reinforced concrete pipe shall be twenty-four (24") inches to one hundred-two (102") inches in diameter meeting the requirements of ASTM C-76, or ASTM C-455 shall be as follows:

- MAXIMUM DEPTH OF COVER TEN (10) FEET – Diameters twenty-four (24") inches to one hundred-two (102") inches shall be Class VI
- MAXIMUM DEPTH OF COVER FIFTEEN (15) FEET – diameters twenty-four (24") inches to forty-two (42") inches shall be Class V and forty-eight (48") inches to one hundred-two (102") inches shall be Class VI
- MAXIMUM DEPTH OF COVER TWENTY (20) FEET – Diameter twenty-four (24") inches to one hundred-two (102") inches shall be Class V
- MAXIMUM DEPTH OF COVER TWENTY-FIVE (25) FEET – Diameter twenty-four (24") inches shall have D 0.01 of thirty-one hundred (3100) psi; pound/linear foot per foot of inside diameter. Diameters twenty-seven (27") inches to one hundred-two (102") inches shall be Class V

PIPE NOMINAL SIZE (in.)	D ₃ (psi/linear ft. per ft. of inside diameter)
24	3200
27	3125
30	3150
33	3575
36	3575
42	3550
48	3400
54	3225
60	3150

Diameters sixty-six (66") inches to one hundred-two (102") inches shall be Class V

BACKFILLING

DESCRIPTION – Backfill is that portion of the total backfill down to but not including the pipe embedment material. The backfill shall be only material approved by the Engineer consisting of loose earth, free of clods, stones, organic matter, debris or other objectionable material. All backfilling shall be done in such a manner as not to disturb or injure the pipe or structures over or against which it is being placed. Any pipe or structure injured or moved from its proper line or grade during backfilling operations shall be opened up and repaired then backfilled as herein specified. The placing of backfill material shall not begin until approved for so doing has been given by the Engineer, and backfilling about structures or portion of structures shall be done immediately when so ordered by the Engineer. The top surface of all backfill shall be neatly graded off when selected topsoil, or seed or other material is removed and piled separately, such material shall be carefully replaced in a manner satisfactory to the Engineer. The top twelve inches of backfill shall be of as good quality as the original topsoil, which is removed.

2. COMPACTING REQUIREMENTS – All backfill shall be placed and compacted in six (6") inch lifts for hand-lamped equipment and thirty (30") lifts of self-propelled or power driven equipment to the following minimum percent of Standard Proctor Density of Related Density as determined by ASTM D-698 – "Test for Moisture-Density Relations of Soil and Soil Aggregate Mixtures", and ASTM D-2922 "Test for Relative Density of Cohesive Soils", respectively. ASTM Test D-2949 shall be performed on cohesionless (granular) soils. Cohesive backfill material shall reach the indicated compaction levels at plus (1) or minus (1) three (3%) percent of optimum moisture content. The lift thickness shall be reduced, if necessary, to meet the compaction requirements specified herein.

General Location	Percent Compaction (%)	
	Standard Proctor Density (ASTM D-698)	Standard Proctor Density (ASTM D-454)
Under Traffic Area or Improved Existing Surfaces	95	75
Urban & Residential Areas	90	70
Unimproved & Other Areas	85	70

3. COMPACTING METHODS – Compacting methods may vary depending on the materials or as approved by the Engineer.

4. COHESIVE MATERIALS – Compaction of cohesive materials may be obtained by the use of impact type equipment in confined areas, pneumatic tampers and engine driven rammers may also be used. In relatively narrow trenches, self propelled rammers may also be used. In wide trenches, sheepfoot rollers may be used.

EMBEDMENT MATERIAL

Embedment is that material to be placed from a minimum of six (6") inches below bottom of the pipe to the same level (half pipe diameter) or to a minimum of six (6") inches above top of pipe for rigid and flexible pipes, respectively. The remaining material to be placed over the embedment is considered backfill.

MATERIAL MATERIAL REQUIREMENTS

1. GENERAL – Embedment material for all rigid and flexible pipes shall be sand or in areas that is unstable crushed rock meeting the requirement of either ASTM D-221, Class 1A, or ASTM C-33, Number 57 or 67 and gradations shown below:

Nominal Sieve Size	Percent Passing		
	ASTM D-221, Class 1A	ASTM C-33, Number 57	ASTM C-33, Number 67
1/2 inch	100%	100%	100%
1/4 inch	100%	95 to 100%	100%
3/8 inch	100%	95 to 100%	100%
1/2 inch	25 to 80%	25 to 80%	25 to 80%
3/8 inch	25 to 80%	25 to 80%	25 to 80%
Number 4	10%	0 to 10%	0 to 10%
Number 8	5 to 5%	0 to 5%	0 to 5%
Number 20	5%	0 to 5%	0 to 5%

2. COMPACTING REQUIREMENTS – All embedment material shall be placed in six (6") inch lifts to the following minimum percent of Standard Proctor Density as determined by ASTM D-698 – "Tests for Moisture-Density Relations of Soil-Aggregate Mixtures", and ASTM D-2949 – "Test for Relative Density of Cohesive Soils", respectively.

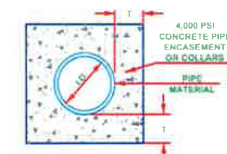
Compaction Test	Compaction Requirement
Standard Proctor Density	85%
Relative Density	75%

3. COMPACTING METHODS – All embedment material shall be compacted in accordance with the methods described in Part "C" of "Backfilling."

TRENCH WIDTH TABLE

Pipe Nominal Size (inches)	Minimum Trench Width (feet)	Maximum Trench Width (feet)
12	3.00	3.00
15	3.25	3.00
18	3.50	3.00
21	3.75	3.25
24	4.00	3.50
27	4.25	3.75
30	4.50	4.00
33	4.75	4.25
36	5.00	4.50
42	5.25	5.00
48	5.50	5.50
54	6.00	6.00
60	6.50	6.50
66	7.00	7.00
72	7.50	7.50
78	8.00	8.00
84	8.50	8.50
90	9.00	9.00
96	9.50	9.50
102	10.00	10.00

PIPE ENCASEMENT AND COLLARS



NOMINAL DIAMETER (INCHES)	T (INCHES)
12"	6"
18" & 24"	8"
30" & 36"	10"
42"	12"

NOTE: FOR COLLARS, THE CONCRETE ENCASEMENT SHALL BE PLACED TO A MINIMUM OF TWELVE (12") INCHES ON EITHER SIDE OF THE JOINT.

SANITARY SEWER PIPE INSTALLATION DETAILS

CITY OF GLENPOOL, OKLAHOMA

COMPANY NAME
ADDRESS, ETC.
ADDRESS, ETC.

RECEIVED		NO.	DATE	ADDRESS, ETC.		AMOUNT
				COMPANY ADDRESS CITY STATE ZIP		
				PHONE NO. FAX NO. E-MAIL		
				NAME TITLE POSITION		
				SIGNATURE DATE		

PROJECT MANUAL
for
“HICKORY STREET” SANITARY SEWER
LIFT STATION UPGRADE PROJECT
GLENPOOL UTILITY SERVICES AUTHORITY
CITY OF GLENPOOL, OKLAHOMA
FEBRUARY, 2021

Midwest Engineering Group, LLC
25A N Main
Sapulpa, OK 74066
(918) 264-9405

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MEG PN: 2019-GLENPOOL-03-002

“HICKORY STREET” SANITARY SEWER
LIFT STATION UPGRADE PROJECT

GLENPOOL UTILITY SERVICES AUTHORITY
GLENPOOL, OKLAHOMA

PROJECT MANUAL

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Bid Bond	EJCDC C-430 (02)
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Supplementary Conditions	EJCDC C-800 (14)
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Payment Bond	EJCDC C-615 (03)
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Certificate of Substantial Completion	EJCDC C-625 (01)
Affidavit of Contractor	(02)
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Section 01019 - Contract Considerations	
Section 01025 - Measurement and Payment	
Section 01039 - Coordination and Meetings	
Section 01300 - Submittals	
Section 01400 - Quality Control	
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Section 03100 - Concrete Form Work	

Section 03200 - Concrete Reinforcement
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Section 03600 - Grout

DIVISION 4 - MASONRY

Not Used

DIVISION 5 - METALS

Section 05090 - Anchor Bolts
Section 054300 - Unistrut

DIVISION 6 - WOOD AND PLASTIC

Not Used

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

Not Used

DIVISION 8 - DOORS AND WINDOWS

Not Used

DIVISION 9 - FINISHES

Section 09900 - Painting

DIVISION 10 - SPECIALTIES

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DIVISION 11 - EQUIPMENT

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DIVISION 12 - FURNISHINGS

Not Used

DIVISION 13 - SPECIAL CONSTRUCTION

Not Used

DIVISION 14 - CONVEYING SYSTEMS

Not Used

DIVISION 15 - MECHANICAL

Section 15100 - Process and Miscellaneous Valves

DIVISION 16 - ELECTRICAL

Section 16050 - Basic Electrical
Section 16483 - Adjustable Frequency Drives

SPECIFICATIONS AND CONTRACT DOCUMENTS

FOR

**“HICKORY STREET” SANITARY SEWER
LIFT STATION UPGRADE PROJECT**

**GLENPOOL UTILITY SERVICES AUTHORITY
CITY OF GLENPOOL, OKLAHOMA**

FEBRUARY 2021



I HEREBY CERTIFY THAT THE SPECIFICATIONS LISTED BELOW WERE PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER EXISTING UNDER THE LAWS OF THE STATE OF OKLAHOMA.

Daniel L. Coltrane, P.E.
Midwest Engineering Group, LLC

Division 1 - General Requirements

- Section 01010 - Summary of Work
- Section 01019 - Contract Considerations
- Section 01025 - Measurement and Payment
- Section 01039 - Coordination and Meetings
- Section 01300 - Submittals
- Section 01400 - Quality Control
- Section 01500 - Construction Facilities and Temporary Controls
- Section 01600 - Material and Equipment
- Section 01700 - Contract Closeout
- Section 01750 - Starting of Systems

Division 2 - Sitework

- Section 02320 - Earthwork and Trenching
- Section 02530 - Piping System Products
- Section 02535 - Piping Systems Installation
- Section 02605 - Precast Manholes & Vaults
- Section 02730 - Aggregate Surfacing
- Section 02820 - Chain Link Fencing
- Section 02822 - Wood Fencing
- Section 02923 - Sodding

Division 3 - Concrete

- Section 03100 - Concrete Form Work
- Section 03200 - Concrete Reinforcement
- Section 03300 - Cast-In-Place Concrete
- Section 03600 - Grout

Division 5 - Metals

- Section 05090 - Anchor Bolts
- Section 054300 - Unistrut

Division 9 - Finishes

- Section 09900 - Painting

Division 11 - Equipment

- Section 10951 - Access Hatches
- Section 11313 - Sewage Pump Station Package

Division 15 - Mechanical

- Section 15100 - Process and Miscellaneous Valves

Division 16 - Electrical

- Section 16050 - Basic Electrical
- Section 16483 - Adjustable Frequency Drives

OPINION OF PROBABLE COSTS (PROPOSAL) HICKORY CREEK LS

City of Glenpool

Project: Hickory Creek LS

Midwest Engineering Group

Project Number: 2019-Glenpool-03-002

Date: 1-26-2021

BID ITEM	Description	Unit	Quantity	Unit Price	Total Price
1	Submersible Vortex Pumps	EA	2	\$ 5,000	\$ 10,000
2	Wetwell	EA	1	\$ 50,000	\$ 50,000
3	Pump Around	EA	1	\$ 5,500	\$ 5,500
4	Fencing & Gate	LF	60	\$ 75	\$ 4,500
5	Control Panel	LS	1	\$ 11,500	\$ 11,500
6	Lining	VF	16	\$ 250	\$ 4,000
7	Demolition	LS	1	\$ 5,000	\$ 5,000
9	By-Pass Pumping	Day	10	\$ 1,850	\$ 18,500
10	Project Contingency	-	10%	-	\$ 10,900
Estimated Construction Cost				\$	119,900



City of Glenpool Sanitary Sewer Liftstation Rehabilitation

Hickory Street Liftstation

Pre-Bid Meeting

Date: February 19, 2021

Affiliation:

Contact Information:

Danny Caltrane

Midwest- dcaltrane@midwest-engineers.com

Trenton Morris

Midwest t.morris@midwest-engineers.com

Kevin Starbuck

Starbuck Trucking@yahoo.com

LEONARD GARDNER

L.E.L. CONSTRUCTION, INC.

Clayton Howard

Howard Construction Inc.

Rob Worley

City of Glenpool Public Works

Dakota Bartles

Velocity (Bypass Pumping)

Tony Little

Sunrise Construction ok@gmail.com

12205 S. Yukon, Glenpool, OK 74033 OFFICE: 918-322-5409 FAX: 918-209-4641

Mayor Tim Fox, Vice-Mayor Momodou Ceesay, Councilors: Joyce Calvert, Brandon Kearns, and Jacqueline Lund

City Manager David Tillotson, Assistant City Manager Susan White, City Clerk Wendy Knight

www.glenpoolonline.com

Taylor Omara Beyko, Inc.

beatthyb@prodigy.net



City of Glenpool Sanitary Sewer Liftstation Rehabilitation

Hickory Street Liftstation

Bid Meeting

Date: February 26, 2021

Affiliation:

Total Bid Price: *Name:*

Grant Koobles

Starbuck Trucking

Circle B Underground

Dai Den

Midwest Engineering Group

Randy Coltrane

Beyco, Inc.

Taylor O'Mara

Sunrise Construction

Lori Little

Rob Werley

City of Glenpool Public Works

12205 S. Yukon, Glenpool, OK 74033 OFFICE: 918-322-5409 FAX: 918-209-4641
Mayor Tim Fox, Vice-Mayor Momodou Ceesay, Councilors: Joyce Calvert, Brandon Kearns, and Jacqueline Lund
City Manager David Tillotson, Assistant City Manager Susan White, City Clerk Wendy Knight
www.glenpoolonline.com

"Oak Street" Lift Station Improvements Project
City of Glenpool, OK

MEG PN: 2019-GLENPOOL-03-001

February 26, 2021

Company Name	General Base Bid	Bid Bond or Certified Check
Dwyco	97,990.-	✓
Circle D	231,702.54	✓
Starbuck Trucking	127,690.-	✓
Sunrise Const	136,550.-	✓
Young Contracting	308,120.-	✓
Engineer's Estimate	\$ 119,900.00	

"Hickory Street" Lift Station Improvements Project
City of Glenpool, OK

MEG PN: 2019-GLENPOOL-03-002

February 26, 2021

Company Name	General Base Bid	Bid Bond or Certified Check
Beytco, Inc.	\$ 97,990.00	x
Circle B Underground, LLC	\$ 231,702.54	x
Starbuck Trucking, LLC	\$ 127,690.10	x
Sunrise Construction, LLC	\$ 136,550.00	x
Young Contracting, LLC	\$ 208,120.00	x
Engineer's Estimate	\$ 119,900.00	

BASE BID - no Addendums

				Engineer's Estimate		Beytco, Inc.		Circle B Underground, LLC		Starbucks Trucking, LLC		Sunrise Construction, LLC		Young Contracting, LLC	
No	Item	Unit	Est. Quantity	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price	Bid Unit Price	Bid Price
1	Super Station Skid Package w/ VFD's	LS	1	\$ 17,220.00	\$ 17,220.00	\$ 76,879.00	\$ 76,879.00	75,478.40	\$75,478.40	35,090.00	\$35,090.00	88,000.00	\$88,000.00	57,400.00	\$57,400.00
2	Demoition of Existing Equipment	LS	1	\$ 5,000.00	\$ 5,000.00	\$ 1,050.00	\$ 1,050.00	20,600.00	\$20,600.00	8,100.00	\$8,100.00	3,000.00	\$3,000.00	25,500.00	\$25,500.00
3	Wetwell Rehabilitation	LS	1	\$ 50,000.00	\$ 50,000.00	\$ 2,253.00	\$ 2,253.00	19,776.00	\$19,776.00	32,000.00	\$32,000.00	8,000.00	\$8,000.00	10,300.00	\$10,300.00
4	Wetwell Liner	LF	12	\$ 250.00	\$ 3,000.00	\$ 450.00	\$ 5,400.00	1,974.16	\$23,689.92	1,250.00	\$15,000.00	1,125.00	\$13,500.00	2,600.00	\$31,200.00
5	6' Privacy Fence (Wooden) w/ Gate	LF	55	\$ 76.00	\$ 4,180.00	\$ 132.00	\$ 7,260.00	101.97	\$5,608.35	81.82	\$4,500.10	110.00	\$6,050.00	64.00	\$3,520.00
6	Site Work	LS	1	\$ 5,000.00	\$ 5,000.00	\$ 2,871.00	\$ 2,871.00	55,723.00	\$55,723.00	18,000.00	\$18,000.00	5,500.00	\$5,500.00	33,000.00	\$33,000.00
7	Reconnection to Ex. Electrical Service and SCADA System	LS	1	\$ 11,500.00	\$ 11,500.00	\$ 1,158.00	\$ 1,158.00	14,655.87	\$14,655.87	6,000.00	\$6,000.00	2,500.00	\$2,500.00	31,200.00	\$31,200.00
8	Bypass Pumping	LS	1	\$ 24,000.00	\$ 24,000.00	\$ 1,119.00	\$ 1,119.00	16,171.00	\$16,171.00	9,000.00	\$9,000.00	10,000.00	\$10,000.00	16,000.00	\$16,000.00
Total of All Unit Price Bid Items					\$119,900.00		\$97,990.00		\$231,702.54		\$127,690.10		\$136,550.00		\$208,120.00



February 26, 2021

VIA EMAIL

City of Glenpool, OK/GUSA
Mr. Lynn Burrow, Director of Community Development
12205 S Yukon Avenue
Glenpool, OK 74033

Re: Contract Award Recommendation for Hickory Street Sanitary Sewer Lift Station Upgrades

Mr. Burrow,

Midwest Engineering Group, LLC reviewed the contractor's bid responses received at the bid opening in Glenpool, OK on February 26, 2021 and found them to be consistent with the information requested. Based on this available information, Midwest Engineering Group, LLC recommends that City of Glenpool/GUSA awards the contract for the Hickory Street Sanitary Sewer Lift Station Upgrades Project to the lowest responsive responsible bidder, which is Beytco, Inc.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Danny Coltrane'.

Danny Coltrane, P.E.
Midwest Engineering Group, LLC

NOTICE OF AWARD

Date of Issuance: 02/26/2021

Owner: GLENPOOL UTILITY SERVICES AUTHORITY Owner's Contract No.:
Engineer: MIDWEST ENGINEERING GROUP Engineer's Project No.: 2019-GLENPOOL-03-002
Project: "HICKORY STREET" LIFT STATION UPGRADES PROJECT Contract Name:

Bidder:

Bidder's Address:

TO BIDDER:

You are notified that Owner has accepted your Bid dated February 26, 2021 for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

Complete work for the City of Glenpool Hickory Street Sanitary Sewer Lift Station Upgrades

[describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is: \$ 97,990.00 Dollars.

3 unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☒ a set of the Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner 3 counterparts of the Agreement, fully executed by Bidder.
2. Deliver with the executed Agreement(s) the Contract security *[e.g., performance and payment bonds]* and insurance documentation as specified in the Instructions to Bidders and General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any):

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner:

Authorized Signature

By:

Title:

Copy: Engineer