

ADDENDUM NO. 2

for

**LIFT STATION NO. 7 REPAIRS
PROJECT NO. 2011-S-1**

for

CITY OF GRAND ISLAND, NEBRASKA

November 2011

TO: All Bidders on LIFT STATION NO. 7 REPAIRS
PROJECT NO. 2011-S-1, GRAND ISLAND, NEBRASKA

RE: Addendum to expand bidding alternative in Arthur and Grant
repair method.

LETTING DATE: November 16, 2011 2:00p.m.

The purpose of this Addendum is to:

- A. Contractor's Bid, remove pages indexed as "CB-1 thru CB-7" and replace with indexed pages "CB-1 (Addendum No.2) thru CB-8 (Addendum No.2)"
- B. Add in Division 1A; Special Provisions, section 223.0 Measurement and Payment (Arthur to Grant Option 2).

Add in Division 1A; Special Provisions, section 224.0 Sanitary Sewer.

Add in Division 1A; Special Provisions, section 225.0 Salvaging and Replacement of Topsoil.

Add in Division 1A; Special Provisions, section 226.0 Low Strength Fill
- C. ADD in Appendix "D", Standard Detail Drawings; Standard Plan 129-A, 130-B, and 132.
- D. ADD in Drawing entitled Sanitary Sewer Project 2011-S-1; Lift Station #7, Addendum No.2, Sheets 1 thru 4.
- E. Contractors Questions
 - a. Question: *Can the Force main under bike trail be moved out from under the concrete slab?*

Response: It is in the best interest of the project to maintain pipe alignment as proposed in the contract drawings.

b. Question: *Who applies for railroad "Right of Entry Permit"?*


Response: The roles and responsibility is outlined in Appendix "C", Pipe Line Crossing Agreement of the contract documents. The contractor shall bear responsibility requirements stated in Exhibit B of Pipe Line Crossing Agreement.

c. Question: *Who pays for railroad protective liability insurance?*

Response: The contractor shall be required to maintain on its own behalf and any subcontractors working within the railway right-of-way to maintain such insurance outlined in Exhibit C of Pipe Line Crossing Agreement.

d. Question: *Who does the sampling and testing of dewatering wells for the project?*

Response: The contractor shall work jointly with the city's representative for the project in documentation to well operations. Samples bottles shall be provided and tested thru the lab technician at the waste water treatment plant.



John Collins, P.E.
Director of Public Works

Acknowledged by _____
Signature of Bidder

CONTRACTOR'S BID

LIFT STATION NO. 7 REPAIRS
PROJECT NO. 2011-S-1
CITY OF GRAND ISLAND, NEBRASKA

CONTRACTOR'S BID

TO THE MEMBERS OF THE COUNCIL
CITY OF GRAND ISLAND
GRAND ISLAND, NEBRASKA

THE UNDERSIGNED BIDDER, having examined the plans, specifications, general and special conditions, and other proposed contract documents, and all addenda thereto and being acquainted with and fully understanding (a) the extent and character of the work covered by this Bid, (b) the location, arrangement, and specified requirements for the proposed work, (c) the location, character, and condition of existing streets, roads, highways, railroad, pavements, surfacing, walks, driveways, curbs, gutters, trees, sewers, utilities, drainage courses and structures, and other installations, both surface and underground which may affect or be affected by the proposed work, (d) the nature and extent of the excavations to be made and the handling and re-handling of excavated materials, (e) the location and extent of necessary or probable dewatering requirements, (f) the difficulties and hazards to the work which might be caused by storm and flood water, (g) local conditions relative to labor, transportation, hauling and rail delivery facilities, and (h) all other factors and conditions affecting or which may be affected by the work.

HEREBY PROPOSES to furnish all required materials, supplies, equipment, tools and plans, to perform all necessary labor and supervision, and to construct, install, erect, equip and complete all work stipulated in, required by and in accordance with the contract documents and the plans, specifications and other documents referred to therein (as altered, amended or modified by all addenda thereto) for and in consideration of the following prices:

BELTLINE FORCEMAIN No.	Item	Estimated Quantity		Firm Unit Price	Total Price
1.	Bore and install 8" HDPE Forcemain	3,517.0	L.F.	_____	_____
2.	Open Trench and Install 8" DR11 HDPE Forcemain	100.0	L.F.	_____	_____
3.	Install 8" HDPE (Factory) 45 ⁰ Elbows	4.0	EA.	_____	_____
4.	Install 8" DR11 M.J. Adapter w/Kit @ Sta 34+36.26	1.0	EA.	_____	_____
5.	Build 4' Diameter Manhole	1.0	EA.	_____	_____
6.	Build 4' Diameter Manhole Extra Depth	7.86	V.F.	_____	_____
7.	Remove 8' x 54" Tunnel Liner & Seal (2) 54" Ends w/Concrete	1.0	L.S.	_____	_____

BELTLINE FORCEMAIN; Cont.		Estimated		Firm	Total
No.	Item	Quantity		Unit Price	Price
8.	Remove Top One Half (1/2) 24" C.I.P. (3'x1') For New Manhole F.L.	1.0	L.S.	_____	_____
9.	Install Thrust Blocks As Per Std Plan No. 134A and 134B.	2.0	EA.	_____	_____
10.	Install Thrust Blocks Per Std. Plan No. 134.	2.0	EA.	_____	_____
11.	Remove 10" Tree	1.0	EA.	_____	_____
12.	Dry Bore and Install 16" Steel (0.3125 thk.) Tunnel Liner	110.0	L.F.	_____	_____
13.	Rehab Manhole No. 83-A	12.86.0	V.F.	_____	_____
14.	Install Manhole Entrance as per Special Detail "A".	1.0	L.S.	_____	_____
15.	Install Tracer Ribbon in bore Holes and Trenches	500.0	L.F.	_____	_____
16.	Install 1/8" (316) Tracer Wire	3,517.0	L.F.	_____	_____
17.	Install Tracer Wire Access Box	4.0	EA.	_____	_____
18.	Construction Dewatering	1.0	L.S.	_____	_____
TOTAL FOR BELTLINE FORCEMAIN				\$ _____	

STOLLEY AND BLAINE		Estimated		Firm	Total
No.	Item	Quantity		Unit Price	Price
1.	Install 5' x 8" Point Repair Liner Sleeve	3.0	EA.	_____	_____
TOTAL FOR STOLLEY AND BLAINE				\$ _____	

ARTHUR TO GRANT (Option 1), Pipe Lining No.	Item	Estimated Quantity		Firm Unit Price	Total Price
1.	Install 8" Cure In Place Pipe	623.0	L.F.	_____	_____
2.	Install Top Hat Cut-Out	16.0	EA.	_____	_____
3.	Install 8"-10" Top Hat	16.0	EA.	_____	_____
4.	Install 24" Top Hat	2.0	EA.	_____	_____
5.	Remove and Replace Service at Sta. 3 + 64 South	1.0	EA.	_____	_____
6.	Remove and Replace Service at Sta 5 + 12 North	1.0	EA.	_____	_____
7.	Rehab Manholes 84-79, 84-95A, and 84-95				
	Mobilization	1.0	L.S.	_____	_____
	Remove Steps	12.0	EA.	_____	_____
	Infiltration Leak M.H. Sidewall	2.0	EA.	_____	_____
	Infiltration Leak Bench & Invert	2.0	EA.	_____	_____
	M.H. Rehab Cementitious Lining	35.36	V.F.	_____	_____
	M.H. Rehab Epoxy Lining	35.36	V.F.	_____	_____
8.	Remove and Replace Extra Fence	1.0	L.F.	_____	_____
9.	Remove and Replace extra Sanitary Sewer Service	1.0	L.S.	_____	_____
10.	Construction Dewatering	1.0	L.S.	_____	_____

TOTAL FOR ARTHUR TO GRANT (Option 1)

\$ _____

ARTHUR TO GRANT (Option 2), Open Dig No.	Item	Estimated Quantity		Firm Unit Price	Total Price
1.	Build 4' Diameter, Type 2 Manhole	3.0	EA.	_____	_____
2.	Build 4' Diameter, Type 2 Manhole Extra Depth	8.6	L.F.	_____	_____
3.	Build 8" PVC Gravity Sewer	624.0	L.F.	_____	_____
4.	Build Residential Service Lateral	16.0	EA.	_____	_____
5.	Restore Property Corners	16.0	EA.	_____	_____
6.	Restore Surface	13,900.0	SQ/FT	_____	_____
7.	Remove and Replace Concrete Sidewalk	10.0	L.F.	_____	_____
8.	Rehab Manholes 84-79				
	Mobilization	1.0	L.S.	_____	_____
	Remove Steps	4.0	EA.	_____	_____
	Infiltration Leak M.H. Sidewall	1.0	EA.	_____	_____
	Infiltration Leak Bench & Invert	1.0	EA.	_____	_____
	M.H. Rehab Cementitious Lining	10.71	V.F.	_____	_____
	M.H. Rehab Epoxy Lining	10.71	V.F.	_____	_____
9.	Abandon 8" V.C.P. Sanitary Sewer	624.0	L.F.	_____	_____
10.	Remove and Replace Extra Fence	1.0	L.F.	_____	_____
11.	Remove and Replace extra Sanitary Sewer Service	1.0	L.F.	_____	_____
12.	Construction Dewatering	1.0	L.S.	_____	_____
TOTAL FOR ARTHUR TO GRANT (Option 2)				\$ _____	

BARBARA AND GRETCHEN No.	Item	Estimated Quantity		Firm Unit Price	Total Price
1.	Remove 10" V.C.P. Sanitary Sewer Pipe	26.0	L.F.	_____	_____
2.	Build 10" P.V.C. Sanitary Sewer Pipe	26.0	L.F.	_____	_____
3.	Remove 10" x 6" V.C.P. Wye	1.0	EA.	_____	_____
4.	Install 10" x 6" P.V.C. Tee	1.0	EA.	_____	_____
5.	Remove 6" V.C.P. Sanitary Sewer Pipe	8.0	L.F.	_____	_____
6.	Build 6" P.V.C. Sanitary Sewer Pipe (Licensed Plumber)	8.0	L.F.	_____	_____
7.	Construction Dewatering	1.0	L.S.	_____	_____

TOTAL FOR BARBARA AND GRETCHEN \$ _____

Total for Beltline Forcemain \$ _____

Total for Stolley and Blaine \$ _____

Total for Arthur to Grant (Option 1) \$ _____

Total for Arthur to Grant (Option 2) \$ _____

Total for Barbara and Gretchen \$ _____

**TOTAL BID – W/ OPTION 1
LIFT STATION NO. 7 REPAIRS
PROJECT NO. 2011-S-1** \$ _____

**TOTAL BID – W/ OPTION 2
LIFT STATION NO. 7 REPAIRS
PROJECT NO. 2011-S-1** \$ _____

EXPERIENCE DATA:

Each bidder shall supply the following data on his experience:

Name of Bidder: _____

Project Owner/Contact/Phone No. Project Location Completion Date

Additional Data: _____

INSURANCE: Bidder acknowledges that bid includes compliance with the attached insurance requirements.

ADDENDA:

Bidder acknowledges that the following Addendums were received and considered in Bid preparation.

<u>ADDENDUM NO.</u>	<u>DATE</u>	<u>SIGNATURE</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Bidder acknowledges that Addenda Number(s) _____ were received and considered in Bid preparation.

Exceptions shall be listed in the following blanks. If additional space is required for exception explanation, please reference and attach a letter to bid. Reference shall not be made to other attachments for exceptions and supplementary terms. Failure to outline such exceptions as specifically stated herein will require the successful bidder to comply with these specifications. In case of conflict between the bid and these specifications, these specifications shall govern unless specific exceptions are listed by the bidder.

Exceptions to specifications, pages _____

_____.

The undersigned bidder agrees to furnish the required bond and to enter into a contract within 15 days after acceptance of this Bid, and further agrees to complete all work covered by the foregoing bid in accordance with specified requirements. **No work shall commence until the Certificate of Insurance and bonds**

(when required) are approved by the City and the contract is executed. The proposed work can commence after the contract is signed and the required bond is approved. This work shall substantially complete all work 230 calendar days after issuance of Notice to Proceed, final completion 30 calendar days thereafter.

Enclosed herewith is the required bid guarantee in the amount of

_____ Dollars (\$_____)

which the undersigned bidder agrees is to be forfeited to and become the property of the City of Grand Island, Nebraska, as damages should this Bid be accepted and a contract be awarded to them and they fail to enter into a contract in the form prescribed and to furnish the required bond within 15 days, but otherwise the aforesaid bid guarantee will be returned upon his signing the contract and delivering the approved bond.

In submitting this bid it is understood that the right is reserved by the City to reject any and all bids; to waive irregularities therein and to accept whichever bid that may be in the best interest of the City. It is understood that this bid may not be withdrawn until after 45 days from bid opening.

In submitting this bid, the bidder states that bidder fully complies with, and will continue to comply with, applicable State fair labor standards as required by section 73-102 RRS, 1943 and also complies with, and will continue to comply with, section 48-657 RRS, 1943 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska.

The undersigned bidder hereby certifies (a) that this bid is genuine and is not made in the interest of or in the behalf of any undisclosed person, firm or corporation, and is not submitted in conformity with any agreement or rules of any group, association, organization or corporation, (b) that they have not directly or indirectly induced or solicited any person, firm or corporation to refrain from bidding, (c) that they have not sought, by collusion or otherwise, to obtain for himself an advantage over any other bidder or over the City of Grand Island, and (d) that they have not directly or indirectly induced or solicited any other bidder to put in a false or sham bid.

DATED _____

SIGNATURE OF BIDDER:

If an Individual: _____ doing business

as _____

If a Partnership: _____

by _____, member of firm.

If a Corporation: _____

by _____ (Seal)
Title

BUSINESS ADDRESS OF BIDDER

MATERIALS QUESTIONNAIRE

The Bidder shall enter in the spaces provided the names of the manufacturers of materials which Bidder proposes to furnish, and shall submit this Material Questionnaire with its Bid. Owner will review and evaluate the information before award of the Contract.

Only one manufacturer's name shall be listed for each item of material. Upon award of a contract, the named manufactures material shall be furnished. Substitutions will be permitted only if named manufactures material does not meet the requirements of the Contract Documents, the manufacturer is unable to meet the delivery requirements of the construction schedule, or the manufacturer is dilatory in complying with the requirements of the Contract Documents. Substitutions shall be subject to concurrence of Owner and shall be confirmed by Change Order.

Preliminary acceptance of material listed by manufacturer's name shall not in any way constitute a waiver of the specifications covering such equipment; final acceptance will be based on full conformity with the Contract Documents.

Failure to furnish all information requested or entering more than one manufacturer's name for any item in this Equipment Questionnaire may be cause for rejection of the Bid.

Material	Manufacturer
1. Lining system in gravity sanitary sewer rehabilitation	_____
2. Point Repair Liner Sleeve	_____
3. Manhole repair cementitious coating system	_____
4. Manhole repair epoxy coating system	_____

DIVISION 1A, SPECIAL PROVISIONS

223.0 *Measurement and Payment*

223.1 General. **Arthur to Grant (Option 2)**

- 1) Build 4' Diameter, Type 2 Manhole. Reference Division V, Storm and Sanitary Sewers, Section 29.03 Manholes. Manhole drop entrance in 8" pipe or for concrete to form the invert and wall of the manhole at Station 0+00 shall be measured and paid for at no separate or additional payment.
- 2) Build 4' Diameter, Type 2 Manhole; Extra Depth. Reference Division V, Storm and Sanitary Sewers, Section 29.03 Manholes. The proposed grades shown on plans are subject to change on the evaluation of service lateral pothole report. The contractor will be provided a negotiated change order to reflect investigative changes in the work.
- 3) Build 8" PVC Gravity Sewer. Reference Division V, Storm and Sanitary Sewers, Section 29.01 Sewer Pipe in Place.
- 4) Build Residential Service Lateral. Payment will be made for each sewer service line at the contract unit price as set forth in the Contractor's Bid. The unit payment shall be considered full compensation for pothole survey, permitting, licensed plumber, excavation, abandonment, disposal, new service material, compaction and backfill.
- 5) Restore Property Corners. Payment will be made for each property corner at the contract unit price as set forth in the Contractor's Bid restored by a licensed land surveyor.
- 6) Restore Surface. Restore Surface will be measured and paid for on a square-foot basis for the entire Arthur to Grant construction. The square-foot payment shall be considered full compensation for salvaging or replacing topsoil, grading, seeding and mulching, sodding, and all other related work and appurtenances for reconstructing the entire project area.
- 7) Remove and Replace Concrete Sidewalk. Concrete Sidewalk removal and replacement shall be measured and paid for at the contract unit price as set forth in the Contractor's Bid. The total payment quantity shall be the lesser of either plan quantity or measured quantity. In other words, the pay quantity for the Contractor will not exceed the plan quantity. Removal shall include disposal at no separate or additional cost. Plan quantities may be exceeded if additional work is ordered by the Engineer's Field Representative. Concrete pavement removal is not a pay item, place shoring as required to protect concrete pavement.
- 8) Rehab Manholes 84-79. Rehab of manholes shall be measured and paid for at contract unit prices for each section. Mobilization, remove steps, leak MH sidewall, leak bench and invert, and vertical feet of cementitious lining and vertical feet of epoxy lining.
- 9) Abandon 8" V.C.P. Sanitary Sewer. Payment will be made for each sewer service line at the contract unit price as set forth in the Contractor's Bid. The unit payment shall be considered full compensation for excavation, manhole abandonment, disposal, low

strength fill, service lateral vent conduit, service lateral fill and abandonment, compaction and backfill.

- 10) Remove and Replace Extra Fence. The contractor shall remove and replace fence as determined by the City Engineer or their representative and shall be paid on a lineal foot basis set in the bid documents if fence needs to be moved for extra service removal and replacement.
- 11) Remove and Replace extra Sanitary Sewer Service. The Contractor shall replace a Sanitary Sewer service as determined by the City Engineer or their representative and shall be paid on a linear-foot basis set in the bid documents if extras are needed.
- 10) Construction Dewatering. Dewatering will be measured and paid for on a lump-sum basis for the entire Arthur to Grant construction. The lump-sum payment shall be considered full compensation for installation of wells, sand points, pumps, discharge, energy, and all other related work and appurtenances for dewatering the entire project.

224.0 *Sanitary Sewer*

224.1 General. This contract includes furnishing all the equipment, labor, and materials in installing complete the gravity sanitary sewer as shown on the accompanying drawings.

224.2 Trench Excavation and Backfill. Trench excavation and backfill shall be in accordance with Division V, Storm and Sanitary Sewers, Paragraph 27.07 Trench Backfill, Paragraph 27.08 Backfill under Pavement, and Paragraph 27.09 Non-shrinkable Backfill (Density Testing Required).

224.3 Pipe Bedding. Pipe bedding shall be Class "C".

224.4 Pipe Through Manholes. Pipe shall be laid in a continuous run through manholes unless otherwise indicated by elevation on the plans.

224.5 Manhole Steps. In lieu of Deeter No. 1603 cast iron steps, the manholes shall be furnished with Copolymer Polypropylene Plastic PSI-PF manufactured by M.S. Industries, Inc., or approved equal.

224.6 Manhole Rings and Covers. All manhole rings and covers shall be Deeter No. 1030.

224.7 Pipe Length. PVC pipe shall be installed in lengths standard to the pipe manufacturing industry.

224.8 Bedding and Backfill Material. Materials used for bedding and backfill shall be well graded granular material obtained from the excavation. Clay materials shall not be used in the pipe bedding and backfill below the crown of the pipe.

224.9 Cleaning of Lines. The sanitary sewer Contractor is responsible for cleaning of all sewer lines prior to testing. No soil or debris shall be allowed to be flushed downstream.

224.10 TV Inspection. Television inspection is a separate Contract from the sewer line construction. The TV inspection will be completed within thirty (30) days of sewer line

construction completion. Final payment for sewer line construction will not be made until after completion of TV inspection and repair of any defects found.

224.11 Pipe Materials. Either PVC or VCP pipe may be used in this construction. All manhole stub-outs shall be PVC.

224.12 Pipe Gaskets. Pipe gaskets shall be protected from direct sunlight exposure. Pipe with gaskets in place can be stored out of doors for only one construction season. Gaskets can be used only once. If pipes are joined and separated, a new gasket must be installed.

224.13 Reshaping Disturbed Areas. Disturbed areas shall be put back to the original shape before excavation. This includes farm fields, ditches, and roadways. No separate or additional payment will be made for restoring disturbed areas outside the construction limits. Grades will be established by the City prior to excavation.

224.14 Fill Material. Fill material may be required when re-establishing grades in excavated areas after obtaining density. No separate or additional payment will be made for furnishing and compacting fill material.

224.15 Property Corners. It shall be the Contractor's responsibility to protect existing property corners. If property corners are disturbed or destroyed during construction, it shall be the Contractor's obligation to employ a licensed land surveyor to replace those damaged or destroyed corners. No extra or additional payment will be made for restoration of property corners not within the construction limits.

225.0 Salvaging and Replacement of Topsoil

225.1 General. This work shall consist of salvaging topsoil from areas requiring excavations and replacing the topsoil after construction.

225.2 Quality of Topsoil. Topsoil shall consist of friable surface soil up to one foot (1') in depth, reasonably free of grass, roots, weeds, sticks, stones and other foreign materials.

225.3 Excavation. After the site has been cleaned and grubbed, the topsoil shall be removed to a depth of one-foot (1') and shall be stockpiled at locations approved by the Engineer. Objectionable materials encountered during excavation shall be removed and buried at locations approved by the Engineer or otherwise removed from the construction site.

225.4 Spreading. Spreading shall not be done when the ground or topsoil is frozen, excessively wet or otherwise in a condition detrimental to the work. Surfaces designated to be covered shall be lightly scarified just prior to the spreading operation. Where compacted fills are designated to be covered to topsoil, the topsoil shall be placed concurrently with the fill and shall be bonded to the compacted fill with the compacting equipment. After placement is completed, the surface of the topsoil shall be restored to the grade prior to construction.

225.5 Sodding. Contractor shall protect existing lawns and landscaping at the site. Any lawns or landscaping disturbed shall be placed in kind. Seeding of disturbed areas will not be permitted. Sodding shall be used to replace lawns. Existing sprinkler systems are to be protected and preserved. Where removal is necessary, sprinkler loops and zones shall be re-routed or capped to

prevent any entire area (Zone or Loop) from being isolated. Contractor shall provide watering services for areas where sprinkler loops have been capped.

225.6 Measurement and Payment. No separate or additional payment will be made for salvaging and spreading topsoil, and sodding. Salvaging and spreading topsoil, and sodding shall be considered subsidiary to items for which Restore Surface payment is made.

226.0 ***Low Strength Fill***

226.1 General.

226.2 Abandoning Pipe-and-Filling Annular Space. This work consists of the Contractor providing and installing Controlled Low-Strength Material (CLSM) to fill abandoned pipes or other structures at the location shown on the plans and in accordance with these specifications.

226.3 Experience. The Contractor shall have a record of experience and quality of work placing CLSM, including but not limited to:

1. Workers, including the Contractor's superintendent and/or foreman, shall be fully qualified to perform the work and have had previous experience under similar conditions with safe and proper abandonment of pipelines, and
2. Developing a mix design, batching, mixing, handling, and placing this material.

226.4 Controlled Low-Strength Material (CLSM). Controlled low-strength material is a self-compacting, cementitious fill material with unconfined compression strength of 30 to 200 psi. The mix shall consist of water, Portland cement and sand. Fly ash and fluidizer may be approved in the mix design if test data are submitted to indicate the above characteristics are met.

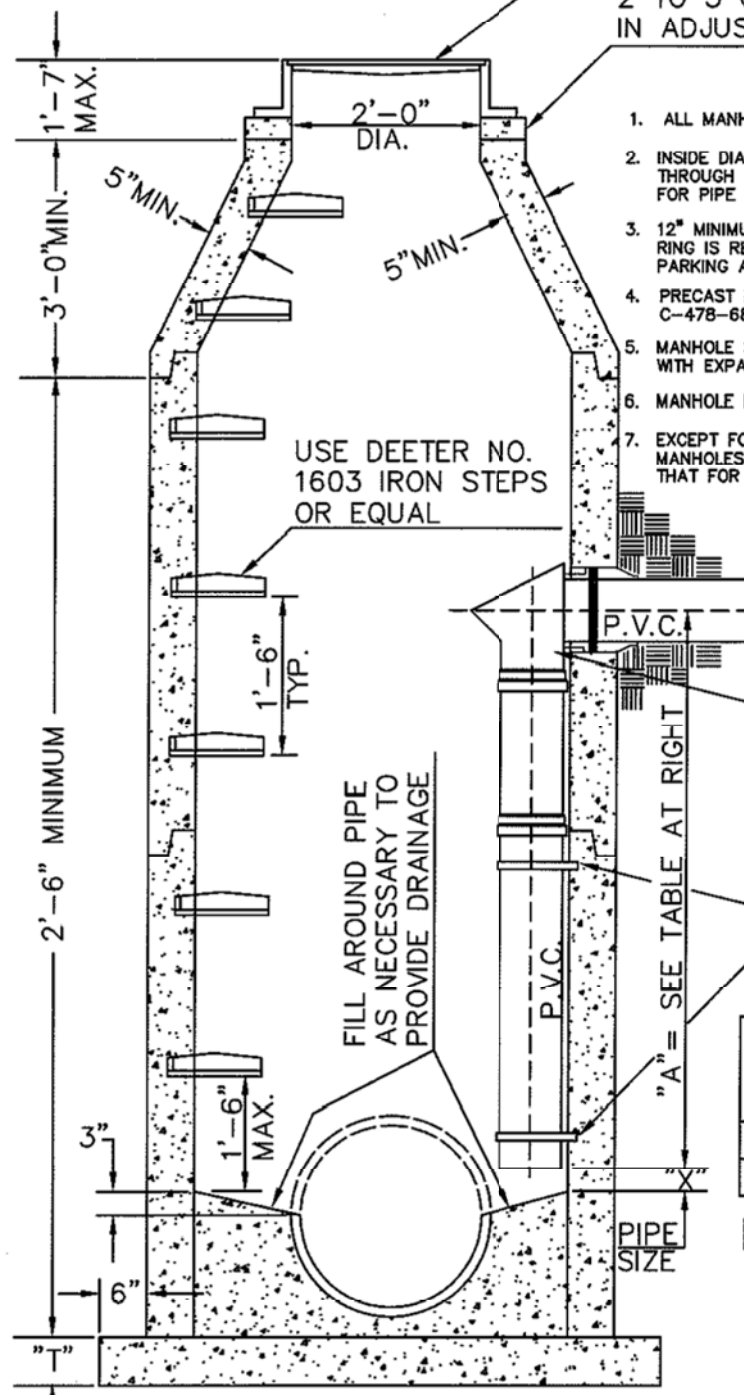
226.5 Submittals. The Contractor shall provide one or more mix designs that will meet the criteria for approval, prior to placement.

226.6 Installation of CLSM. The designated section of gravity sewer main to be abandoned shall be completely filled with CLSM. Place fill material under sufficient pressure flow conditions into properly vented open system until fill material emerges from vent pipes. Material shall be continuously injected while closely monitoring volume and injection rates to ensure the annulus space is being entirely filled and voids eliminated. Continue placement of CLSM above the top of the pipe at each end, forming a water tight plug. Place compacted backfill and restoration of the area as required.

MANHOLE RING & COVER TO BE DEETER NO. 1030 OR EQUAL, WITH MACHINED EDGES & MINIMUM WEIGHT OF 450 LBS.

SEE STANDARD PLAN NO. 130-A FOR DETAIL OF RING & COVER & PLAN VIEW

USE ADJUSTING RINGS OR 2 TO 5 CENTERS OF BRICK IN ADJUSTING RING TO GRADE



MANHOLE NOTES

1. ALL MANHOLES RINGS TO BE SET IN MORTAR.
2. INSIDE DIAMETER OF MANHOLES TO BE 4'-0" FOR PIPE THROUGH 24", 5'-0" FOR PIPE 27" THROUGH 36", & 6'-0" FOR PIPE 42" THROUGH 48" IN SIZE.
3. 12" MINIMUM THICKNESS ADJUSTING RINGS UNDER MANHOLE RING IS REQUIRED WHEN MANHOLE IS LOCATED IN ROADWAYS, PARKING AREAS, SIDEWALKS, ETC.
4. PRECAST MANHOLE CIRCULAR SECTIONS TO BE PER A.S.T.M. C-478-68*
5. MANHOLE STEPS IN PRECAST MANHOLES TO BE GROUTED WITH EXPANDING GROUT.
6. MANHOLE INVERTS SHALL BE POURED CONCRETE. *
7. EXCEPT FOR DROP ASSEMBLY, THE CONSTRUCTION OF DROP MANHOLES INCLUDING MATERIALS SHALL BE SIMILAR TO THAT FOR A STANDARD MANHOLE

* ALL CONCRETE TO CONFORM TO DIVISION II CONCRETE PAVING SPECIFICATIONS.

NOTE: USE INSIDE DROP BOWL & APPURTENANCES "DURAN" OR APPROVED EQUAL

STRAP DROP STRUCTURE TO MANHOLE WALL AT 3'-0" INTERVALS

"A" = SEE TABLE AT RIGHT

I.D. INCOMING PIPE	I.D. DROP PIPE	"A" MINIMUM
4"	4"	2'-0"
6"	6"	2'-0"

NOTE: DROP PIPE ANY LARGER THAN 6" CAN ONLY BE INSTALLED IN A MANHOLE WITH PERMISSION OF THE PUBLIC WORKS DEPT. MANHOLE SIZE MAY VARY.

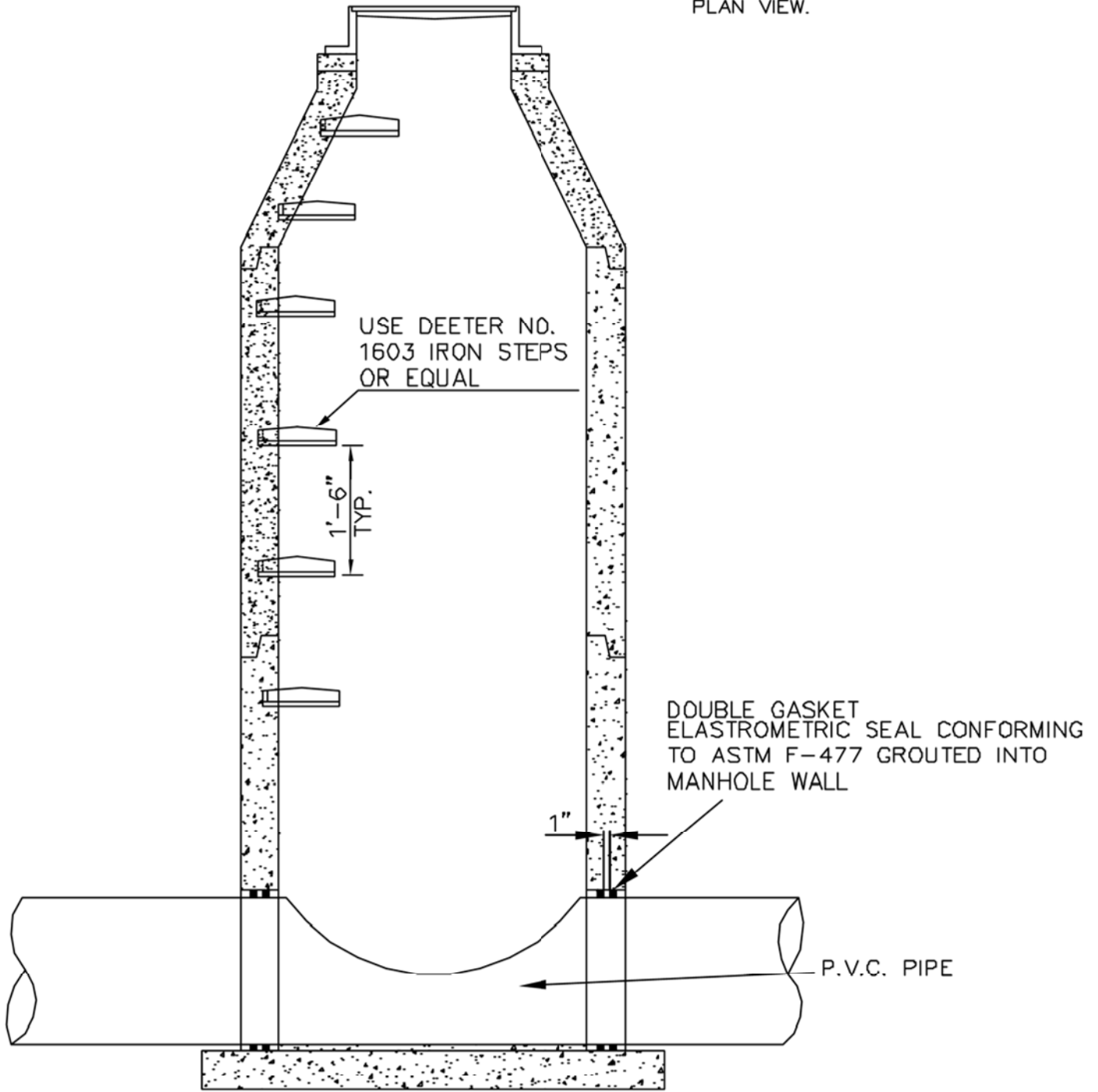
NOT TO SCALE

"T" = 6" FOR 4' DIAMETER MANHOLE
 "T" = 8" FOR 5" DIAMETER MANHOLE

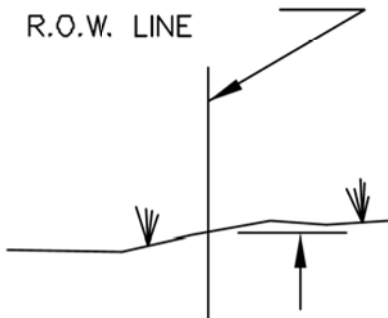
REVISED 4/13/11

NOTE:

SEE STANDARD PLAN NO. 130
FOR DETAIL OF MANHOLE.
SEE STANDARD PLAN NO.130-A
FOR DETAIL OF RING & COVER &
PLAN VIEW.



PROPERTY LINE OR
R.O.W. LINE



5' BURY OR 1' ABOVE
ALL TIME GROUNDWATER
HIGH - WHICHEVER IS
HIGHEST

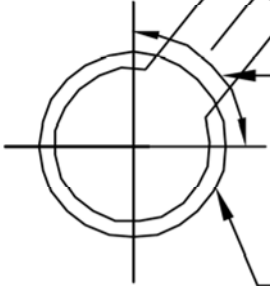


P.V.C. &
CAP

"FURNCO"
OR EQUAL

EXISTING
SERVICE

REMOVE EXISTING BELL



CONSTRUCT "T" OR "SADDLE"
IN UPPER QUADRANT OF MAIN
ONLY

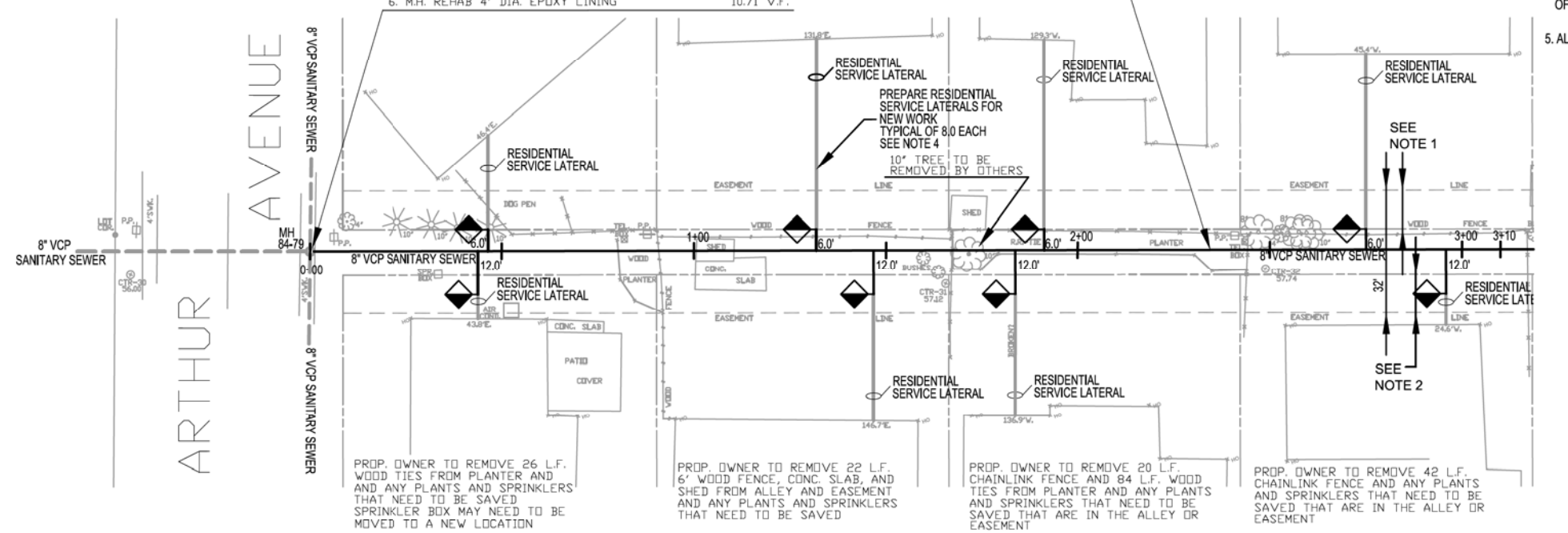
CITY MAIN

OKLAHOMA

AVENUE

- STA. 0+00
REHAB M.H. 84-79
1. MOBILIZATION 1 EACH
 2. REMOVE STEPS 4 EACH
 3. INFILTRATION LEAK M.H. SIDEWALL 1 EACH
 4. INFILTRATION LEAK BENCH & INVERT 1 EACH
 5. M.H. REHAB 4' DIA. CEMENTITIOUS LINING 10.71 V.F.
 6. M.H. REHAB 4' DIA. EPOXY LINING 10.71 V.F.

STA. 0+00 TO STA. 3+10
PROVIDE LOW STRENGTH FILL IN
310 L.F. 8" V.C.P.



NOTES:

1. 10' NORTH CONSTRUCTION EASEMENT, OBTAIN ENGINEER AUTHORIZATION PRIOR TO ENTRANCE.
2. 10' SOUTH CONSTRUCTION EASEMENT.
3. LOW STRENGTH FILL SHALL CONFORM TO NEBRASKA DEPARTMENT OF ROADS (NDOR) STANDARD SPECIFICATIONS; DIVISION 1000, MATERIAL DETAILS; 1003 FLOWABLE FILL.
4. POT HOLE EXISTING LATERALS AT LIMITS OF CONSTRUCTION. DOCUMENT TOP OF PIPE ELEVATION, MATERIAL OF CONSTRUCTION, AND SIZE OF SERVICE. PROVIDE RECORDS TO ENGINEER PRIOR TO NEW CONSTRUCTION WORK.
5. ALLOW ABANDONED SERVICE LATERALS TO VENT IN LOW STRENGTH FILL APPLICATION. SAND FILL ALL VOIDS.

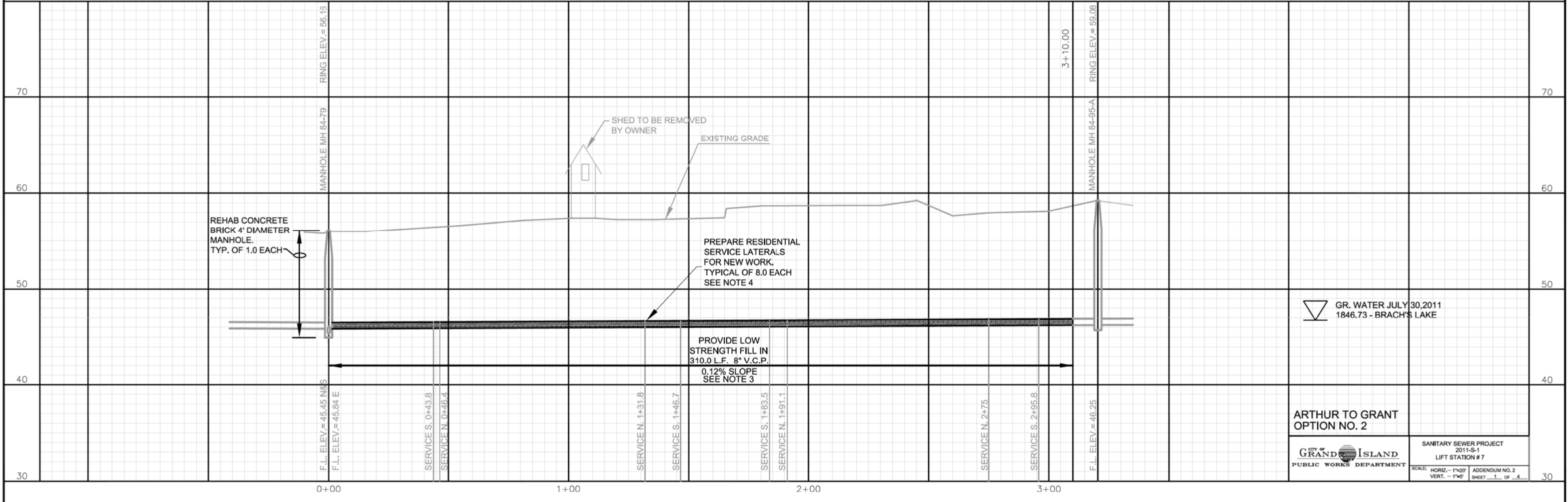


This document was originally approved and sealed on 11-08-2011, by TERRY A. BROWN a licensed professional engineer in the State of NEBRASKA, E-8731

PHOENIX

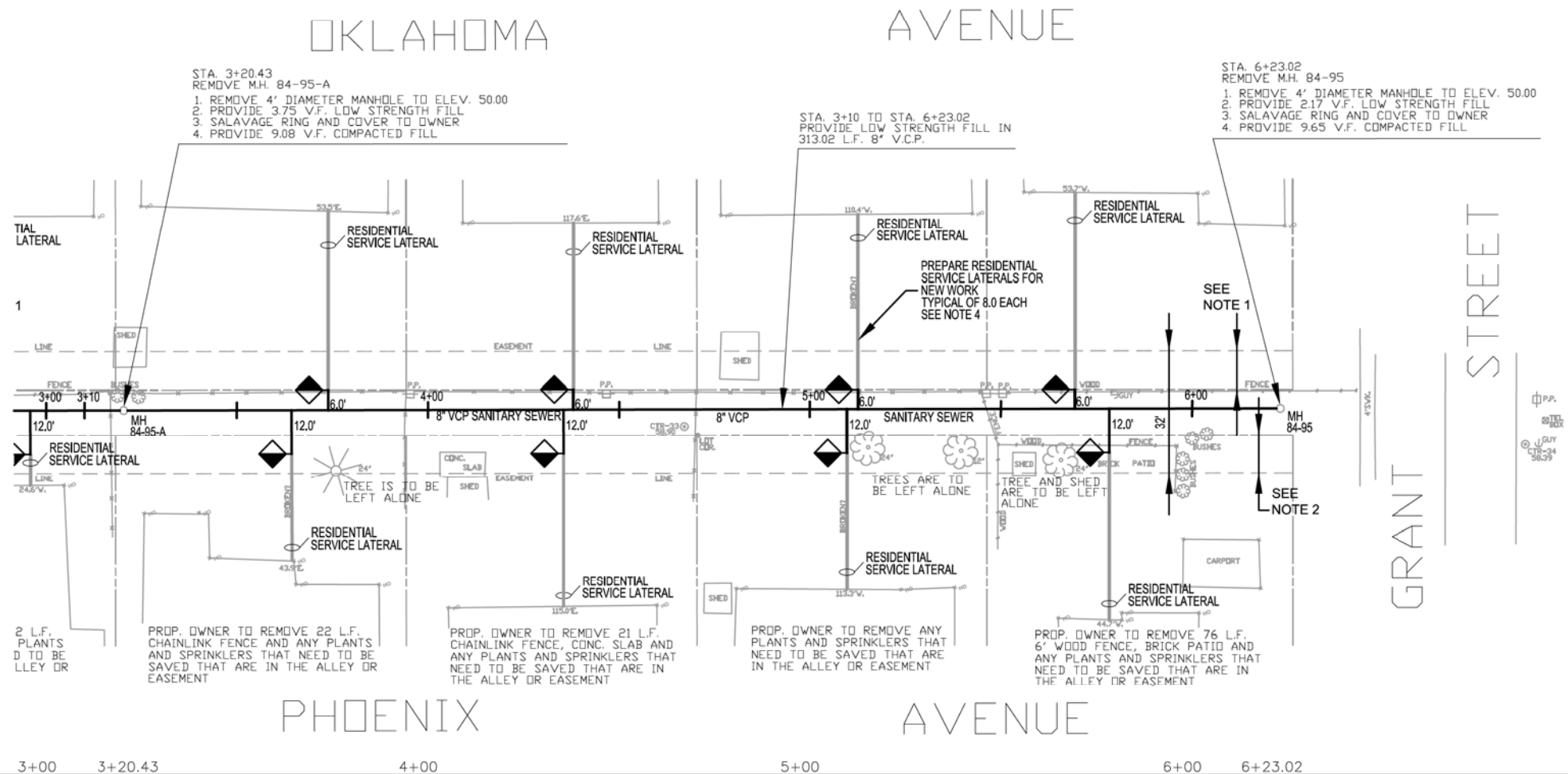
AVENUE

0+00 1+00 2+00 3+00 3+20.43

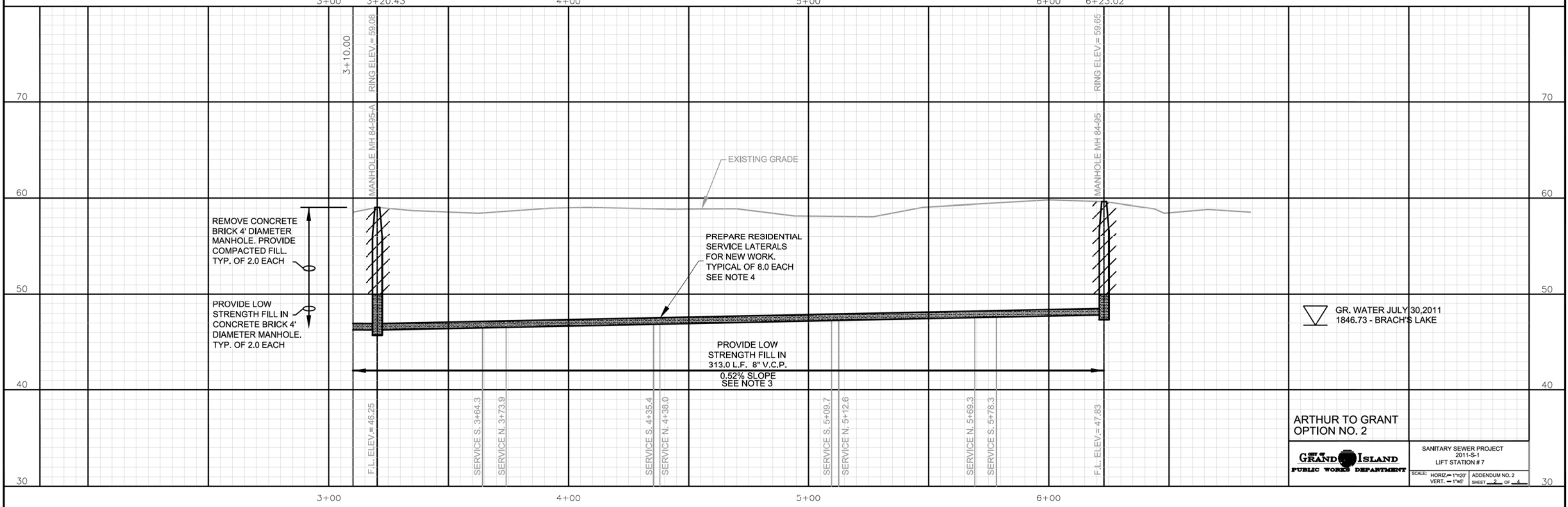


NOTES.

1. 10' NORTH CONSTRUCTION EASEMENT, OBTAIN ENGINEER AUTHORIZATION PRIOR TO ENTRANCE.
2. 10' SOUTH CONSTRUCTION EASEMENT.
3. LOW STRENGTH FILL SHALL CONFORM TO NEBRASKA DEPARTMENT OF ROADS (NDOR) STANDARD SPECIFICATIONS; DIVISION 1000, MATERIAL DETAILS; 1003 FLOWABLE FILL.
4. POT HOLE EXISTING LATERALS AT LIMITS OF CONSTRUCTION, DOCUMENT TOP OF PIPE ELEVATION, MATERIAL OF CONSTRUCTION, AND SIZE OF SERVICE. PROVIDE RECORDS TO ENGINEER PRIOR TO NEW CONSTRUCTION WORK.
5. ALLOW ABANDONED SERVICE LATERALS TO VENT IN LOW STRENGTH FILL APPLICATION. SAND FILL ALL VOIDS.



This document was originally approved and sealed on 11-08-2011, by TERRY A. BROWN a licensed professional engineer in the State of NEBRASKA, E-8731



GR. WATER JULY 30, 2011
1846.73 - BRACH'S LAKE

ARTHUR TO GRANT
OPTION NO. 2

GRAND ISLAND
PUBLIC WORKS DEPARTMENT
SANITARY SEWER PROJECT
2011-S-1
LIFT STATION # 7

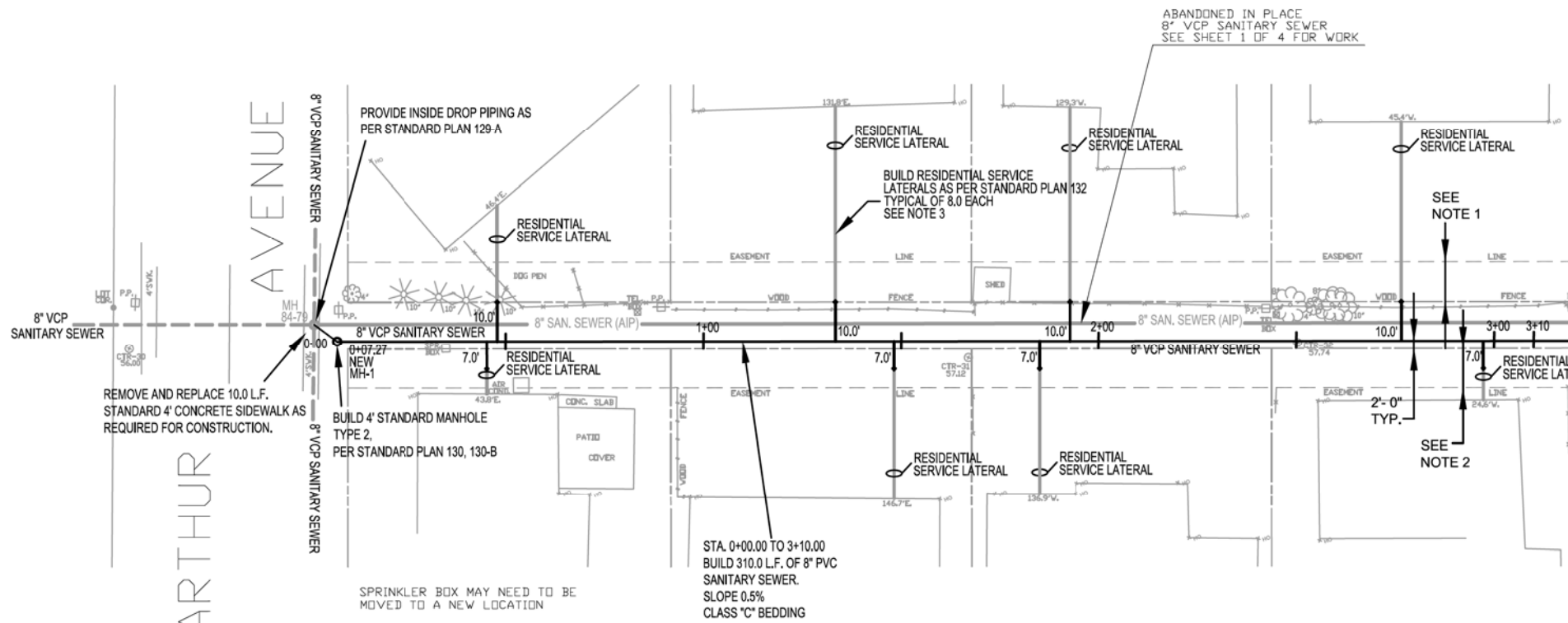
SCALE: HORIZ - 1"=20'
VERT. - 1"=5'
SHEET 2 OF 4

OKLAHOMA

AVENUE

NOTES:

- 10' NORTH CONSTRUCTION EASEMENT, OBTAIN ENGINEER AUTHORIZATION PRIOR TO ENTRANCE.
- 10' SOUTH CONSTRUCTION EASEMENT.
- RESIDENTIAL SERVICE LATERAL UNIT SHALL COMPOSE OF MAIN LINE TEE CONNECTION, HORIZONTAL LENGTH (SHOWN ON PLANS), VERTICAL LENGTH (CONTRACTOR CONFIRMED), TWO (2) ANGLED FITTINGS, AND COUPLING.

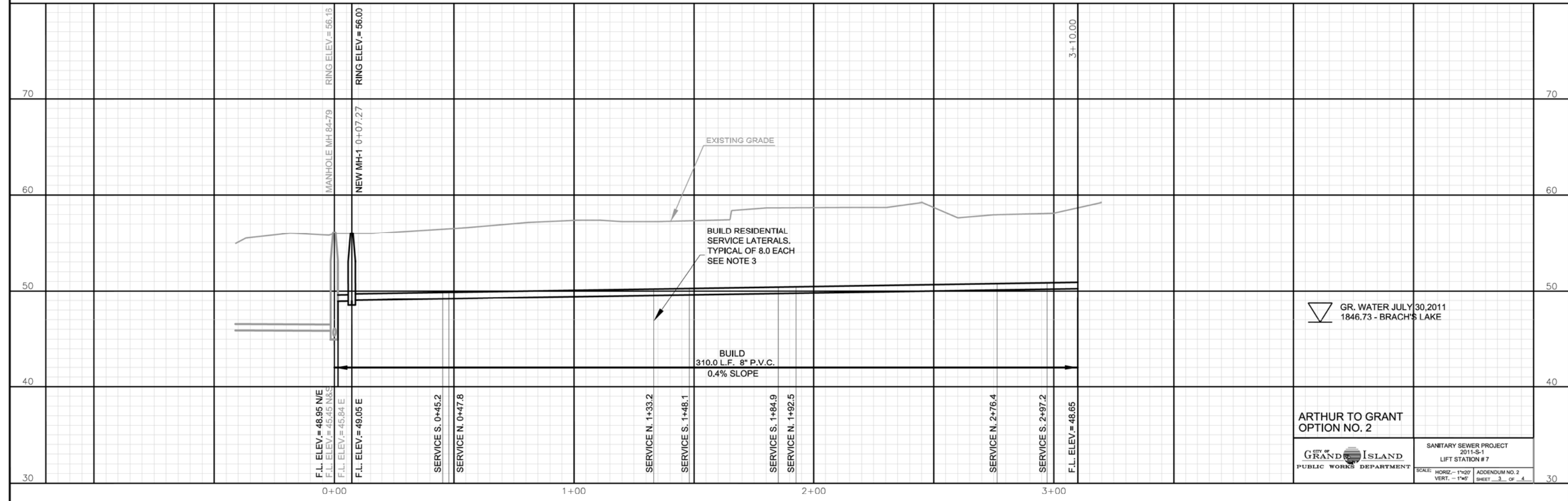


ARTHUR AVENUE

PHOENIX AVENUE



This document was originally approved and sealed on 11-08-2011, by TERRY A. BROWN a licensed professional engineer in the State of NEBRASKA, E-8731



GR. WATER JULY 30, 2011
1846.73 - BRACH'S LAKE

ARTHUR TO GRANT
OPTION NO. 2

CITY OF GRAND ISLAND
PUBLIC WORKS DEPARTMENT

SANITARY SEWER PROJECT
2011-S-1
LIFT STATION # 7

SCALE: HORIZ. - 1"=20'
VERT. - 1"=5'

ADDENDUM NO. 2
SHEET 3 OF 4

0+00

1+00

2+00

3+00

0+00

1+00

2+00

3+00

F.L. ELEV. = 48.95 N/E
F.L. ELEV. = 45.45 N/S
F.L. ELEV. = 45.84 E
F.L. ELEV. = 49.05 E

SERVICE S. 0+45.2
SERVICE N. 0+47.8

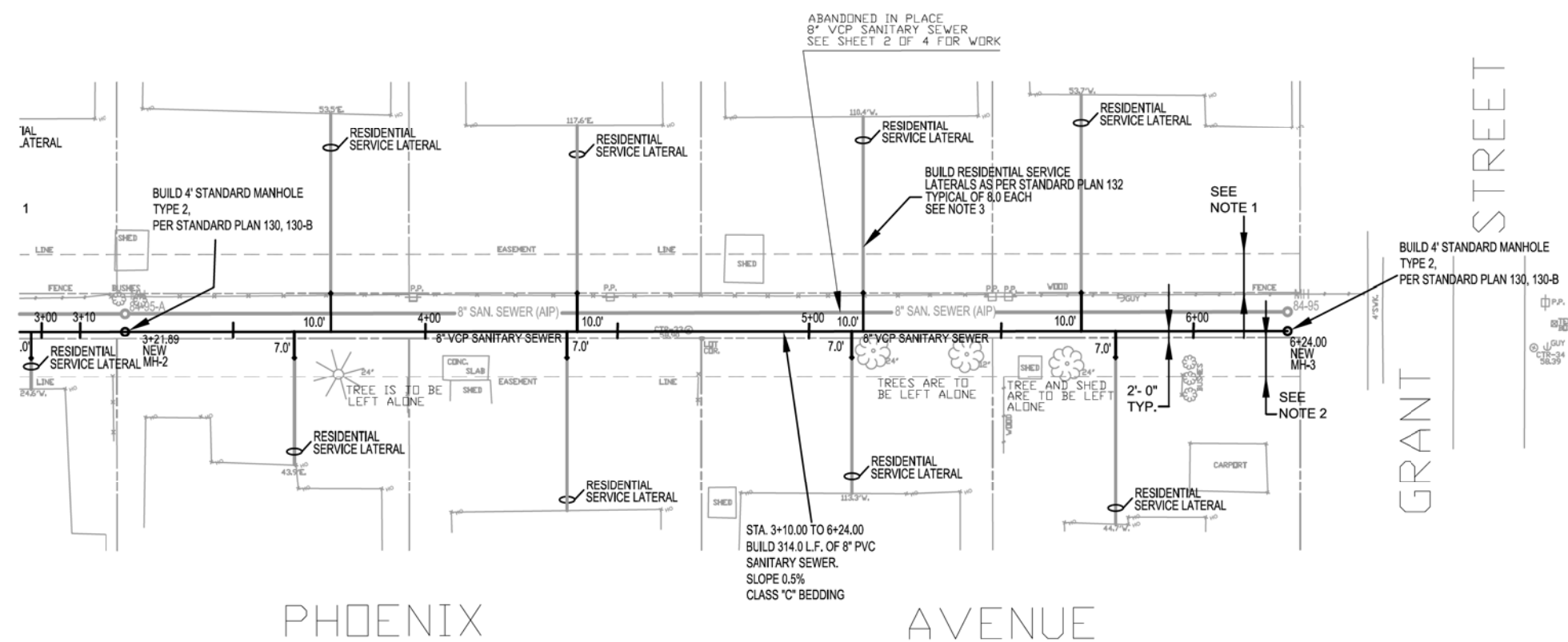
SERVICE N. 1+33.2
SERVICE S. 1+48.1

SERVICE S. 1+84.9
SERVICE N. 1+92.5

SERVICE N. 2+76.4
SERVICE S. 2+97.2
F.L. ELEV. = 48.65

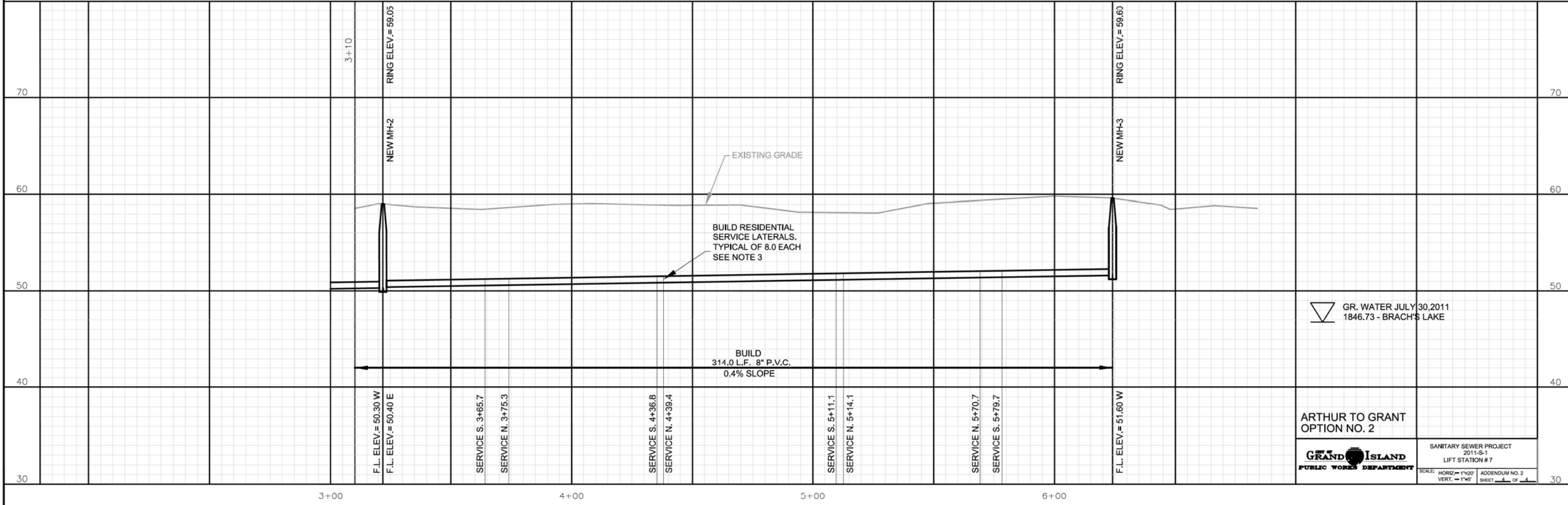
OKLAHOMA AVENUE

- NOTES:
1. 10' NORTH CONSTRUCTION EASEMENT, OBTAIN ENGINEER AUTHORIZATION PRIOR TO ENTRANCE.
 2. 10' SOUTH CONSTRUCTION EASEMENT.
 3. RESIDENTIAL SERVICE LATERAL UNIT SHALL COMPOSE OF MAIN LINE TEE CONNECTION, HORIZONTAL LENGTH (SHOWN ON PLANS), VERTICAL LENGTH (CONTRACTOR CONFIRMED), TWO (2) ANGLED FITTINGS, AND COUPLING.



This document was originally approved and sealed on 11-08-2011, by TERRY A. BROWN a licensed professional engineer in the State of NEBRASKA, E-8731

3+00 3+21.89 4+00 5+00 6+00 6+24.00



GR. WATER JULY 30, 2011
1846.73 - BRACH'S LAKE

ARTHUR TO GRANT
OPTION NO. 2



SANITARY SEWER PROJECT
2011-S-1
LIFT STATION # 7

SCALE: HORIZ. = 1"=20'
VERT. = 1"=5'

SHEET 7 OF 7