

ADDENDUM NO. 5
WATER SYSTEM IMPROVEMENTS
CONTRACT 18-01
GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS
CONTRACT 18-02
INDUSTRIAL PARK 500,000 GALLON ELEVATED WATER STORAGE TANK
DAYTON, TENNESSEE
WAUFORD PROJECT NO. 4630

Date of Addendum: July 17, 2019

Bid Opening: August 27, 2019

1. Advertisement for Bids, Pages AB-1 through AB-3:

Replace with the attached Advertisement for Bids, Page AB-1** through AB-3**.
2. Information for Bidders, Page IB-1:

Replace with the attached Information for Bidders, Page IB-1**.
3. Bid Form, Page BF-1 through BF-13:

Replace with the attached Bid Form, Pages BF-1** through BF-14**.
4. Agreement, Page 25:

Replace with the attached Agreement, Page 25*.
5. Detailed Specifications, Section 1. General Scope and Special Provisions, Contracts 18-01 and 18-02, Pages DS 1-1 through DS 1-2:

Replace with the attached Detailed Specifications, Pages DS 1-1* through DS 1-2*.
6. Detailed Specifications, Section 4. Water Line and Appurtenances, Contracts 18-01 and 18-02, Pages DS 4-1 through DS 4-2, and DS 4-12:

Replace with the attached Detailed Specifications, Pages DS 4-1* through DS 4-2*, and DS 4-12*.
7. Detailed Specifications, Section 6. Basis of Payment, Contracts 18-01 and 18-02, Pages DS 6-1 through DS 6-5:

Replace with the attached Detailed Specifications, Page DS 6-1* through DS 6-5*.

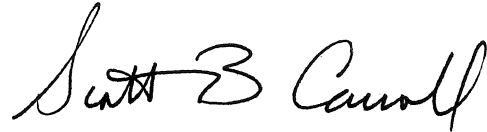
8. Plans, Sheets 1 through 11:

Revise as shown on attached Plans, Sheets 1 through 11.

9. Plans, Sheets 12 through 13:

Add attached Plans, Sheets 12 through 13.

J. R. WAUFORD & COMPANY,
CONSULTING ENGINEERS, INC.



Scott B. Carroll, P.E.
Tennessee License No. 116799

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ADVERTISEMENT FOR BIDS
WATER SYSTEM IMPROVEMENTS
DAYTON, TENNESSEE

Separate sealed BIDS for the construction of Water System Improvements for the City of Dayton, Tennessee, will be received at City Hall, 399 First Street, Dayton, Tennessee 37321, until **2:00 P.M. local time, August 27, 2019**, at which time and place they will be publicly opened and read aloud. Bids being mailed for this work should be mailed to Thomas W. Solomon, City Manager, City of Dayton, Tennessee, P.O. Box 226, Dayton, Tennessee 37321, and each bidder shall be responsible for their delivery by the above noted time.

The work involved is in two (2) contracts and consists of the following generally described work:

CONTRACT 18-01
GREENWAY BOULEVARD AND BACK VALLEY
ROAD WATER LINE EXTENSIONS

- Four Lump Sum connections
- 2,449 L.F. of **12-inch** DIP Water Line installed via open cut methods
- 92 L.F. of **12-inch** Restrained Joint DIP Water Line installed in existing casing pipe
- **388 L.F. of 12-inch** Restrained Joint DIP Water Line installed via open cut methods
- **516 L.F.** of 6-inch Water Line installed via open cut methods
- Access Road
- 14th Avenue Tank Altitude Valve
- Bryan College Tank Altitude Valve
- Tank Site Grading
- Fencing

The allotted time for construction of Contract 18-01 is **270** calendar days; liquidated damages for non-completion are \$1,000 per calendar day.

CONTRACT 18-02
INDUSTRIAL PARK 500,000 GALLON ELEVATED
WATER STORAGE TANK

- 500,000-Gallon Elevated Water Storage Tank

The allotted time for construction of Contract 18-02 is **270** calendar days. Liquidated damages are one thousand dollars (\$1,000.00) per calendar day. The Owner will consider a delayed work order to start construction when site grading is complete and tank steel is ready to ship.

The CONTRACT DOCUMENTS may be examined at the following locations:

J. R. Wauford & Company, 908 West Broadway, Maryville, TN 37801

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Associated General Contractors of East Tennessee, Inc., 101 West 21st Street,
Chattanooga, TN 37408

Builders Exchange of Tennessee, 300 Clark Street, Knoxville, TN 37921

ConstructConnect, 30 Technology Parkway South, Suite 100, Norcross, GA 30092

DODGE Data & Analytics for scanning to their website at www.construction.com

Nashville Contractors Association, 7430 Burleson Lane, Murfreesboro, TN 37129

This project is funded by a grant through the Appalachian Regional Commission Project No. TN-19214.

Copies of the Plans and Project Manual which contains the Specifications and Contract Documents may be obtained at the office of J. R. Wauford & Company, Consulting Engineers, Inc. located at 908 West Broadway, Maryville, TN 37801 upon a non-refundable payment of \$250.00 for each set. Inquiries should be directed to Scott B. Carroll, P.E., Project Manager, scottc@jrwauford.com. Each potential bidder shall include with his payment his contractor's license number, bonding limit and license expiration date.

Each bidder must deposit with his bid, security in the amount, form and subject to the conditions provided in the Instructions for Bidders.

All bidders shall comply with all provisions of TCA 50-9-113 as it relates to Drug-Free Workplace requirements. The Contractor shall complete the Drug-Free Work Place Affidavit of the Prime Bidder form and submit it with his/her bid. The Contractor shall be responsible for any of its Subcontractor(s) compliance with said law.

All bidders shall comply with all provisions of Chapter 878 of TCA 12-4-1 as it relates to certification of compliance regarding illegal immigrants. The Contractor shall complete the Statement of Compliance Certificate Illegal Immigrants and submit it with his/her bid. The Contractor shall be responsible for any of its Subcontractor's compliance with said law.

In compliance with TCA 12-4-126(a) and (b) the ENGINEER will not issue addenda less than forty-eight (48) hours before the bid opening date and time; further, any questions concerning the bid documents shall be received by the ENGINEER before ninety-six (96) hours prior to the bid opening date and time.

The successful bidder is required to furnish both an acceptable performance bond and payment bond each in the amount of one hundred percent (100%) of the contract price.

All bidders must be licensed general contractors as required by the Contractor's Licensing Act of 1976 of the General Assembly of the State of Tennessee and qualified for the type of construction being bid upon. EACH BIDDER SHALL WRITE ON THE OUTSIDE OF THE ENVELOPE CONTAINING THE BID THE CONTRACTOR'S LICENSE NUMBER, THE EXPIRATION DATE, AND THAT PART OF THE CLASSIFICATION APPLYING TO THIS BID. If this is not done, the bid will not be opened.

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Each Bidder shall abide by the provisions of TCA 62-6-119(b) which states in part:

“(b) Any person or entity involved in the preparation of the invitation to bid or comparable bid documents shall direct that the name, license number, expiration date thereof, and license classification of the contractors applying to bid for the prime contract and for the [masonry over \$100,000] electrical, plumbing, heating, ventilation, and air conditioning contracts, and for each vertical closed loop geothermal heating and cooling project, the company name, Tennessee department of environment and conservation license number, classification (G, L or G,L) and the expiration date, appear on the outside of the envelope containing the bid except when the bid is in an amount less than twenty-five thousand dollars (\$25,000) [masonry over \$100,000]. When the bid is less than twenty-five thousand dollars (\$25,000), the name of the contractor only may appear on the outside of the envelope containing the bid, and upon opening the envelope, if such bid is in excess of twenty-five thousand dollars (\$25,000), the same shall automatically be disqualified. Only one (1) contractor in each classification may be listed. Prime contractor bidders who are to perform the electrical, plumbing, heating, ventilation and air conditioning or the geothermal heating and cooling must be so designated upon the outside of the envelope. Failure of any bidder to comply therewith shall void such bid and the envelope containing such bid shall not be opened or considered. It is the duty and responsibility of the awarding person or entity who received the envelope containing the bid to verify only the completeness of the required licensure information prior to the opening of the envelope. Prior to the opening of the envelope, the names of all contractors listed thereon shall be read aloud at the official bid opening and incorporated into the bid. Prior to awarding a contract, the awarding person or entity and its authorized representatives shall verify the accuracy, correctness and completeness of the information required hereby.”

* The above is interpreted to apply to all bids by GENERAL CONTRACTORS which exceed \$25,000.

The Owner reserves the right to reject any and all bids, to waive informalities, and to negotiate with the apparent qualified best bidder or bidders to such extent as may be necessary.

No bidder may withdraw his bid for 90 days, while the Owner considers the bids. Mutually agreed upon time extensions may be made if necessary.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the contract, Section 3, Segregated Facility, Section 109 and E.O. 11246.

DAYTON, TENNESSEE
/s/

Honorable Gary S. Louallen
Mayor

INFORMATION FOR BIDDERS

1. Receipt and Opening of Bids

The City of Dayton, Tennessee (herein called the "Owner"), invites bids on the form attached hereto, all blanks of which must be appropriately filled in. Bids will be received by the Owner at the office of

_____ until _____ o'clock A.M. (P.M.)
C.S.T./E.S.T., 20____, and then at said office publicly opened and read aloud. The envelopes containing the bids must be sealed, addressed to _____ at _____ and designated as bid for _____.

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof.

2. Preparation of Bid:

Each bid must be submitted on the prescribed form and accompanied by Certification of Bidder Regarding Equal Employment Opportunity, Certification of Bidder Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion, Certification of Bidder Regarding Section 3 and Segregated Facilities, and Drug-Free Workplace Affidavit. All blank spaces for bid prices must be filled in, in ink or typewritten, in both words and figures, and the foregoing Certifications must be fully completed and executed when submitted.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the bidder, his/her address, the name of the project for which the bid is submitted, license number, expiration date thereof, and license classification of the contractors applying to bid for the prime contract, and for the electrical, plumbing, heating, ventilation, and air conditioning contracts, and all other information required by State law..

All bidders must be licensed General Contractors as required by the Contractor's Licensing Act of 1994 of the General Assembly of the State of Tennessee, and qualified for the type of construction being bid upon. Each bidder shall write on the outside of the envelope containing its bid: 1) its Contractor's license number; 2) that part of the classification applying to the bid. If this is not done, the bid will not be opened.

BID FORM

An Individual ()
A Partnership ()
A Corporation ()
A Limited Liability Company ()

Date _____

1. BID for Water System Improvements for the City of Dayton as Owner.

I
WE _____
Name of Bidder

Address of Bidder

the undersigned, as Bidder, propose to furnish all necessary labor, machinery, tools, apparatus, materials, equipment, service and other necessary supplies, in strict accordance with the terms and conditions of the Detailed Specifications and Contract Documents hereto attached and referred to herein for the construction of Contract 18-01 – Greenway Boulevard and Back Valley Road Water Line Extensions and Contract 18-02 – Industrial Park 500,000 Gallon Elevated Water Storage Tank for the City of Dayton and do such other work incidental thereto as may be ordered by the Engineer, at the unit or lump sum prices listed herein.

2. The Bidder declares that he has examined the sites of the work and informed himself fully in regard to all conditions pertaining to the places where the work is to be done; that he has examined these Detailed Specifications and Contract Documents for the work and has read all special provisions furnished prior to the opening of bids; and that he has satisfied himself relative to the work to be performed.
3. BIDS shall include sales tax and all other applicable taxes and fees.
4. Amounts are to be shown in both words and numerals. In case of discrepancy, the amount shown in words will govern.
5. The unit and lump sum prices shall include all labor, materials, shoring, overhead, profit, insurance, *etc.*, to cover the finished work of the several kinds called for.
6. The Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

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7. The Bidder agrees that his Bid shall be good and may not be withdrawn for a period of 90 calendar days after the scheduled closing time for receiving bids.

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
1.	Lump Sum	Connection No. 1, connect new 12-inch water line to existing 10-inch water line at Station 1+33 of Water Line "W-1", including tee, bends, 10-inch water line and tapping sleeve and valve, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
2.	Lump Sum	Connection No. 2, connect new 16-inch water line to existing 12-inch water line at Station 5+58 of Water Line "W-1", including 10-inch water line, tee and tapping sleeve and valve, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
3.	Lump Sum	Connection No. 3, connect new 12-inch water line to existing 10-inch water line at Station 21+70 of Water Line "W-1", including 10-inch water line, tee, valve and tapping sleeve and valve, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
4.	Lump Sum	Connection No. 4, connect new 6-inch water line to existing 6-inch water line at Station 5+16 of Water Line "W-2", including tapping sleeve and valve, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
5.	2,449 L.F.	12-inch Class 350 DIP water line via open cut methods, complete in place, including fittings, excavation and all bedding materials For _____ _____ Dollars _____ Cents, per linear foot	\$ _____	\$ _____
6.	92 L.F.	12-inch Class 350 Restrained Joint DIP water line installed in steel casing pipe, complete in place, including fittings, excavation and all bedding materials For _____ _____ Dollars _____ Cents, per linear foot	\$ _____	\$ _____

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
7.	388 L.F.	12-inch Class 350 Restrained Joint DIP water line via open cut methods, complete in place, including fittings, excavation and all bedding materials For _____ _____ Dollars _____ Cents, per linear foot	\$ _____	\$ _____
8.	516 L.F.	6-inch Class 350 DIP Restrained Joint water line, complete in place, including fittings, excavation and all bedding materials For _____ _____ Dollars _____ Cents, per linear foot	\$ _____	\$ _____
9.	1 Each	12-inch gate valve , valve box and concrete pad, complete in place For _____ _____ Dollars _____ Cents, per each	\$ _____	\$ _____
10.	1 Each	16x12-inch reducer , including all excavation and all bedding materials, complete in place For _____ _____ Dollars _____ Cents, per each	\$ _____	\$ _____

BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY
ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
11.	1 Each	6-inch gate valve, valve box and concrete pad, complete in place For _____ _____ Dollars _____ Cents, per each	\$ _____	\$ _____
12.	50 C.Y.	Undercutting of trench and crushed stone for backfill where directed by the Engineer For _____ _____ Dollars _____ Cents, per cubic yard	\$ _____	\$ _____
13.	50 C.Y.	Class "C" Concrete for Kickers, Anchors, and Encasements For _____ _____ Dollars _____ Cents, per cubic yard	\$ _____	\$ _____
14.	1,700 C.Y.	Crushed stone (Size No. 67) for backfill under paved areas, or directed by the Engineer For _____ _____ Dollars _____ Cents, per cubic yard	\$ _____	\$ _____

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
15.	50 C.Y.	Crushed Stone Class "A" Grade "D" compacted for Traffic Bound Surfacing and/or Base Course and/or Backfill where water lines are constructed under existing paved surfaces and where directed by the Engineer For _____ _____ Dollars _____ Cents, per cubic yard	\$ _____	\$ _____
16.	50 C.Y.	Asphaltic concrete paving mix (hot mix) for patching streets and drives For _____ _____ Dollars _____ Cents, per cubic yard	\$ _____	\$ _____
17.	2,500 S.Y.	Rip-rap, hand placed, where shown on the Plans or directed by the Engineer For _____ _____ Dollars _____ Cents, per square yard	\$ _____	\$ _____

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
18.	Lump Sum	Install Access Road including stone, wire mesh, concrete, drainage piping, headwalls, and rip-rap, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
19.	Lump Sum	Install 14th Avenue Tank Altitude Valve including structure, piping, bends, connections, and all incidentals, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
20.	Lump Sum	Install Bryan College Tank Altitude Valve including structure, piping, bends, connections, and all incidentals, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
21.	Lump Sum	Tank Site Grading including hauling of material, and all incidentals, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
22.	440 L.F.	Install Fencing including post, connections, gates, and all incidentals, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, linear foot	\$ _____	\$ _____
23.	Lump Sum	Install Temporary Access Road including stone, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
24.	1 Each	1-inch Air Release Valve as shown on the Detail of the Plans including valve, and valve box, (Stone and Class "C" concrete will be paid for at unit prices) complete in place, as shown on the Plans and specified herein For _____	\$ _____	\$ _____
		Dollars _____ Cents, each		
		TOTAL BID AMOUNT BID FORM A CONTRACT 18-01 ITEMS 1 – 24 INCLUSIVE	\$ _____	

8. BID FORM A – CONTRACT 18-01 – GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS (cont'd)

Deductive Alternate No. 1

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
18.	Lump Sum	DEDUCTION Install Access Road including stone, wire mesh, CONCRETE , drainage piping, headwalls, and rip-rap, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
25.	Lump Sum	ADDITION Install Access Road including stone, ASPHALT , drainage piping, headwalls, and rip-rap, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
DEDUCTIVE ALTERNATE NO. 1 AMOUNT CONTRACT NUMBER 18-01 SUBTRACT ITEM 18 ADD ITEM 25				\$ _____

* Note: This item is a negative number.

* Note: This item is a positive number.

8. BID FORM B – CONTRACT 18-02 – INDUSTRIAL PARK 500,000 GALLON
ELEVATED WATER STORAGE TANK

ITEM NUMBER	APPROXIMATE QUANTITY	DESCRIPTION WITH UNIT BID PRICE WRITTEN IN WORDS	UNIT PRICE	TOTAL PRICE
1.	Lump Sum	Install 500,000 Gallon Elevated Water Storage Tank and Foundation including structure, and all incidentals, complete in place, as shown on the Plans For _____ _____ Dollars _____ Cents, lump sum		\$ _____
TOTAL BID AMOUNT BID FORM B CONTRACT 18-02 ITEM 1 INCLUSIVE				\$ _____

9. Time of Commencement and Completion

The Bidder further proposes and agrees hereby to commence the work with adequate force and equipment on a date to be specified in a written order of the Engineer, and complete all work within the calendar days shown:

Contract 18-01 – Within **270** consecutive calendar days
Contract 18-02 – Within **270** consecutive calendar days

10. Liquidated Damages

The Bidder further understands that if work is not completed within the time specified, that any additional engineering and resident construction observation costs incurred by the Owner due to the Contractor exceeding the time allowed for completion plus other damages, including the revenue lost from the project's water customers, will be deducted on a per calendar basis from the compensation otherwise due him in accordance with the General Conditions for each day thereafter, Sundays and holidays included, that work remains uncompleted.

The following sum is agreed by the parties to be liquidated damages:

Contract 18-01: One thousand (\$1,000.00) Dollars per calendar day
Contract 18-02: One thousand (\$1,000.00) Dollars per calendar day

11. Time Limit for Execution of Documents

The undersigned further agrees that, in case of failure on his part to execute the contract and the Bond(s) in the six (6) counterparts within then (1) consecutive calendar days after written notice being given of the award of the Contract, the check of Bid Bond accompanying this bid and the monies payable thereon shall be paid into the funds of the City of Dayton as liquidated damages for such failure; otherwise, the check or bid bond accompanying this BID FORM shall be returned to the undersigned.

12. Bid Guaranty

Attached hereto is a certified check on the _____ Bank of _____ or a Bid Bond on the form provided for the sum of 5% of Bid Dollars (\$ _____) made payable to the City of Dayton to insure that the Contractor will enter into the Construction Contract and Contract Bond.

13. Interested Parties

The undersigned, as Bidder, hereby declares that the only person or persons interested in the BID FORM as principal or principals is or are named herein, and that no other person than herein mentioned has any interest in this BID FORM or

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in the Contract to be entered into; that this BID FORM is made without connection with any other person, company or parties making a bid or proposal and that it is in all respects fair and in good faith without collusion or fraud.

<u>NAME</u>	<u>ADDRESS</u>
_____	_____
_____	_____
_____	_____
_____	_____

14. Addenda

I hereby certify that I have received, read and examined the following numbered Addenda: __, ____, ____, ____, ____, ____, ____,

BY: _____
Name of Bidder

Address of Bidder

Signature of Authorized Representative

Title

ATTEST (For Corporations)

(Name)

Title

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20____, by and between _____, herein called "Owner", acting herein through its _____, and _____,

STRIKE OUT (a corporation) (a partnership)
INAPPLICABLE (an individual doing business as _____)
TERMS
of _____, County of _____, and State of _____, hereinafter called "Contractor".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned, to be made and performed by the OWNER, the CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows: Water System Improvements, Contract 18-01, Greenway Boulevard and Back Valley Road Water Line Extensions & Contract 18-02, Industrial Park 500,000 Gallon Elevated Water Storage Tank hereinafter called "the project", for the sum of _____

_____ Dollars (\$_____) and all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract; and at this (its or their) own property cost and expense to furnish all the materials , supplies, machinery, equipment, tools, superintendence, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal, the General Conditions, Supplemental General Conditions and Special Conditions of the Contract, the plans, which include all maps, plats, blue prints, and other drawings and printed or written explanatory matter thereof, the specifications and contract documents therefore as prepared by _____, herein entitled "the Architect/Engineer", and as enumerated in Paragraph 1 of the Supplemental General Conditions, all of which are made a part hereof and collectively evidence and constitute the contract.

The Contractor hereby agrees to commence work under this contract on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within _____ consecutive calendar days thereafter. The Contractor further agrees to pay, as liquidated damages, the sum of \$_____ for each consecutive calendar day thereafter as hereinafter provided in Paragraph 3 of the Supplemental General Conditions.

The OWNER agrees to pay the CONTRACTOR in current funds for the performance of the contract, subject to additions and deductions, as provided in the General Conditions of the Contract, and to make payments on account thereof as provided in Paragraph 3, "Payments to Contractor", of the Supplemental General Conditions.

IN WITNESS WHEREOF, the parties to these presents have executed this contract in six (6) counterparts, each of which shall be deemed an original, in the year and day first above mentioned.

(Seal)

ATTEST:

(Owner)

(Secretary)

By: _____

(Witness)

(Title)

(Seal)

(Contractor)

(Secretary)

By: _____

(Witness)

(Title)

(Address and Zip Code)

NOTE: Secretary of the Owner should attest. If Contractor is a corporation, Secretary should attest.

SECTION 1

GENERAL SCOPE AND SPECIAL PROVISIONS
CONTRACTS 18-01 AND 18-02

1. Scope

The work to be accomplished under these Detailed Specifications consists of furnishing all labor, materials, equipment and services necessary for the construction of the Greenway Boulevard and Back Valley Road Water Line Extensions and the Industrial Park 500,000 Gallon Elevated Water Storage Tank for the City of Dayton, Tennessee.

The work involved is in two (2) contracts and consists of the following generally described work:

CONTRACT 18-01
GREENWAY BOULEVARD AND BACK VALLEY
ROAD WATER LINE EXTENSIONS

- Four Lump Sum connections
- 2,449 L.F. of **12-inch** DIP Water Line installed via open cut methods
- 92 L.F. of **12-inch** Restrained Joint DIP Water Line installed in existing casing pipe
- **388 L.F. of 12-inch** Restrained Joint DIP Water Line installed via open cut methods
- **516 L.F.** of 6-inch Water Line installed via open cut methods
- Access Road
- 14th Avenue Tank Altitude Valve
- Bryan College Tank Altitude Valve
- Tank Site Grading
- Fencing

The allotted time for construction of Contract 18-01 is **270** calendar days; liquidated damages for non-completion are \$1,000 per calendar day.

CONTRACT 18-02
INDUSTRIAL PARK 500,000 GALLON ELEVATED
WATER STORAGE TANK

- 500,000-Gallon Elevated Water Storage Tank

The allotted time for construction of Contract 18-02 is **270** calendar days; liquidated damages for non-completion are \$1,000 per calendar day.

2. Execution and Coordination of the Work

It is intended that the work required by these Contracts be accomplished so as to cause the minimum interference with the normal operation of the existing utilities of the City of Dayton. Connections to existing facilities shall be carefully coordinated with the Owner and Engineer.

Although every effort will be made to cause the minimum amount of interference with the Contractor's work, the interest of the Owner in regard to the existing facilities must take precedence over the construction work; therefore, the right is reserved by the Owner to put any facilities that may be shut down for construction work back into service when an emergency arises.

3. Temporary Traffic Control Plan

When work is conducted within the right-of-way of transportation agencies or city or county roadways, the Contractor shall provide temporary traffic control (TTC) in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). TTC devices shall include but shall not be limited to signs, barricades, flagmen and channelization devices. The Contractor shall provide TTC for all roadway users including motorists, bicyclists and pedestrians. All TTC shall be in accordance with the Americans with Disabilities Act of 1990, Title II, Paragraph 35.130.

4. Time of Completion and Liquidated Damages

Time is of the essence on this contract and work on this contract shall be prosecuted in a timely manner.

Time of completion after notice to proceed will be as follows:

Contract 18-01 – **Two hundred seventy (270)** consecutive calendar days

Contract 18-02 – **Two hundred seventy (270)** consecutive calendar days

If the work is not completed within the time specified, liquidated damages in the amount of \$1,000 per calendar day will be deducted from the compensation otherwise due to the Contractor(s) in accordance with the Contract Documents for each calendar day thereafter, Sundays and holidays included, that the work remains uncompleted.

The Contractor's attention is called to **Article 4** of the General Conditions regarding contract completion date time extensions.

SECTION 4

WATER LINE AND APPURTENANCES
CONTRACTS 18-01 AND 18-02

1. Scope

The work covered under this section of these Detailed Specifications consists of furnishing all labor, materials, equipment and services necessary for the construction of Water System Improvements, Greenway Boulevard and Back Valley Road Water Line Extensions and the Industrial Park 500,000 Gallon Elevated Water Storage Tank for the City of Dayton, Tennessee as generally outlined hereinafter and as specifically described in these Detailed Specifications. The work will be delivered under one contract with the approximate quantities and descriptions as follows:

CONTRACT 18-01
GREENWAY BOULEVARD AND BACK VALLEY
ROAD WATER LINE EXTENSIONS

- Four Lump Sum connections
- 2,449 L.F. of **12-inch** DIP Water Line installed via open cut methods
- 92 L.F. of **12-inch** Restrained Joint DIP Water Line installed in existing casing pipe
- **388 L.F. of 12-inch** Restrained Joint DIP Water Line installed via open cut methods
- **516 L.F.** of 6-inch Water Line installed via open cut methods
- Access Road
- 14th Avenue Tank Altitude Valve
- Bryan College Tank Altitude Valve
- Tank Site Grading
- Fencing

The allotted time for construction of Contract 18-01 is **270** calendar days; liquidated damages for non-completion are \$1,000 per calendar day.

CONTRACT 18-02
INDUSTRIAL PARK 500,000 GALLON ELEVATED
WATER STORAGE TANK

- 500,000-Gallon Elevated Water Storage Tank

The allotted time for construction of Contract 18-02 is **270** calendar days; liquidated damages for non-completion are \$1,000 per calendar day.

2. Location of Lines

The Water Line shall be laid to such lines and grades as shown on the Plans and to insure appropriate depths of cover and that fire hydrants have sufficient depth and function properly. The final location as constructed may be varied by the Contractor(s) with the approval of the Engineer provided (1) the proposed location is approved by the Owner and any agency or legal entity having jurisdiction, and (2) the effect lessens the project cost. The final location in any event may be varied by necessity due to construction conditions at the direction of the Engineer due to requirements of the Owner, the property owners, or other agency or legal entity having jurisdiction.

3. Pipeline Materials for Water Lines

a. General

The pipe for underground water lines shall be Class 350 Ductile Iron Pipe.

b. Ductile Iron Pipe

(1) Materials, Manufacture and Joints

Ductile iron pipe shall be centrifugally cast, manufactured and tested in accordance with the ANSI/AWWA Standard C150/A21.50 for Ductile Cast Iron, Grade 60-42-10. The nominal wall thickness for each pipe size and Pressure Class shall be as follows:

<u>Size</u>	<u>Pressure Class</u>	<u>Wall Thickness (Inches)</u>
12-inch	350	0.28
8-inch	350	0.25
6-inch	350	0.25

The pipe shall be manufactured and tested in accordance with the requirements of ANSI Specification A21.51.

Pipe shall be push-on type joint incorporating a single molded rubber ring gasket unless otherwise indicated and shall be furnished tar coated outside and the manufacturer's standard cement lined inside to comply with ANSI Specification A21.4.

(2) Joint Lengths and Joint Deflection

Standard joint length shall be 20 feet; however, shorter lengths may be used in order to achieve the alignment or grade required. The maximum allowable joint deflection for DIP pipe

13. Inspection of Lines - During Construction

The Contractor shall notify the Engineer when pipe will be received on the job so that arrangements may be made for inspecting and unloading and stringing, as well as inspecting the pipe proper and examining for the stamp of the independent laboratory.

BEFORE THE CONTRACTOR BACKFILLS ANY OF THE LINES, THEY SHALL BE FIRST INSPECTED BY THE ENGINEER, AND THE ENGINEER SHALL GIVE THE CONTRACTOR PERMISSION TO PROCEED WITH THE BACKFILLING. If any joints, pipes, or other workmanship or materials are found to be defective, they shall be removed and replaced by the Contractor without any extra compensation.

14. Testing of Water Lines

Testing of lines shall comply with the provisions of AWWA C600 as summarized below, or similar approved procedures which will insure equal or better results. Leakage shall not exceed the following values at the test pressure shown on the following table:

<u>Allowable Leakage / 1,000 Feet</u>		
<u>Pipe Size</u>	<u>Test Pressure (psi)</u>	<u>Allowable Leakage (gallons/hour)</u>
12-inch	200	1.15
6-inch	200	0.57

The Contractor shall furnish all gauges, meters, pumps, and other equipment required and shall maintain said equipment in condition for accurate testing as determined by the Engineer. Where practicable, pipelines shall be tested in lengths between line valves or plugs of no more than three thousand (3,000) feet. Where leaks are visible at exposed joints and/or evident on the surface when joints are covered, the pipe shall be rejoined and leakage minimized regardless of total leakage as shown by test.

Duration of test shall be not less than two (2) hours where joints are exposed and not less than eight (8) hours where joints are covered. The Contractor shall start the eight hour test at 8:00 a.m. local time and stop the test at 4:00 p.m. local time. If requested, the Contractor shall supply a cover, latch, and locking mechanism for the test apparatus to accept a padlock supplied by the Owner. Lines which fail to meet the leakage requirements shall be repaired and retested until test requirements are met. All pipe, fittings, and other materials found to be defective under test shall be removed and replaced at the Contractor's expense.

SECTION 6
BASIS OF PAYMENT
CONTRACTS 18-01 AND 18-02

1. General

The Contractor(s) for Contracts 18-01 and 18-02 shall furnish all necessary tools, labor, machinery, apparatus, materials, equipment, service and other necessary supplies and do all work including all excavation and backfilling at the unit or lump sum prices for the items listed in the BID FORM.

ROCK EXCAVATION, SHEETING, SHORING AND BRACING OF EXCAVATIONS AND BEDDING AS SHOWN ON THE PLANS ARE NOT SEPARATE PAY ITEMS.

These items refer to and are the same items listed in the BID FORM, and constitute all of the pay items. Any other items of work listed in these Detailed Specifications or shown on the Plans shall be considered incidental to the following items.

2. Contract 18-01 – Greenway Boulevard and Back Valley Road Water Line Extensions

a. Connections to Existing Water Lines

Payment for making connections including furnishing and installing all fittings, valves, pipe and appurtenances of the sizes and at the locations shown on the Plans will be made at the contract unit price each as shown in the BID FORM, complete in place.

b. Water Lines

Water lines where shown on the Plans or directed by the Engineer will be paid for at the contract unit price per linear foot for the class, size and type listed in the BID FORM, complete in place, including pipe, rock excavation, trenching, jointing, removal of water, crushed stone bedding as shown on the Plans, backfilling and all incidentals thereto. The quantity of water line to be paid for shall be the length of the pipe measured along the centerline of the completed pipelines without deducting the length of any tees, fittings, or air release valves. The depth of cut is measured vertically from the ground elevation at the centerline to the invert of the pipe. ROCK EXCAVATION AND BEDDING AS SHOWN ON THE PLANS ARE NOT SEPARATE PAY ITEMS.

c. Class 350 Restrained Joint Ductile Iron Pipe Installed in Steel Casing Pipe

Restrained joint Class 350 ductile iron water line installed in steel casing pipe as shown on the Plans will be paid for at the contract unit price per linear foot as shown in the BID FORM including all incidentals, complete in place.

d. Butterfly Valves and Boxes

Payment for furnishing and installing butterfly valves and boxes of the size shown in the BID FORM will be made at the contract unit price each, box and 2'-0" square by 6-inch thick concrete pad and cast aluminum plaque complete in place.

e. Tapping Sleeve Assemblies

Payment for furnishing and installing tapping sleeve assemblies of the size shown in the BID FORM will be made at the contract unit price each, complete in place.

f. Undercutting of Trench and Stone for Undercutting

Where undercutting and stone refill of the trench is directed by the Engineer, the crushed stone used to bring the trench back to grade will be paid for at the contract unit price per cubic yard as shown in the BID FORM. The quantity will be computed from a plane 6 inches below the invert of the pipe to the bottom of the ordered extra excavation using the actual ditch width but not exceeding the maximum width allowed by these Detailed Specifications. Excavation of undercutting is NOT a separate pay item. The Contractor(s) will furnish the Engineer a duplicate weigh slip for all such undercutting material delivered to the job for records as a check on computations.

g. Crushed Stone for Traffic Bound Surfacing, Base Course and/or Backfill Where Required by the Engineer

Where directed by the Engineer, crushed stone backfill above the water line pipe bedding as shown on the Plans or specified hereinbefore will be paid for at the contract unit price per theoretical cubic yard of material furnished and placed, and mechanically tamped in 6-inch layers, as shown in the BID FORM. The theoretical quantity will be computed from the bottom of the ditch to the completed surface using either the actual ditch width or the maximum specified width of the ditch, whichever is smaller. The specified trench width is the nominal diameter of pipe plus 18 inches. ANY ADDITIONAL TRENCH WIDTH WILL BE CONSIDERED OVER-

BREAKAGE WHICH SHALL BE BACKFILLED AT THE CONTRACTOR'S EXPENSE.

h. Class "A" Concrete for Sidewalks, Roadways, Driveways and Paved Ditch Removal and Replacement

Class "A" concrete for sidewalks, roadways, driveways and paved ditch removal and replacement will be paid for at the contract unit price per cubic yard shown in the BID FORM, complete in place. Price of reinforcement shall be included in the cost of the concrete.

i. Class "C" Concrete for Cradles, Anchors and Encasement

Class "C" concrete for kickers, anchors, and encasement will be paid for at the contract unit price per cubic yard shown in the BID FORM, complete in place. The price of any necessary bolts, strips or other metal fittings shall be included in the cost of the concrete.

j. Asphaltic Concrete Pavement

Asphaltic concrete pavement will be paid for at the contract unit price per square yard shown in the BID FORM, complete in place, including primer. The Contractor(s) shall replace all other damaged pavement at his own expense.

ANY DISTURBANCE BEYOND THE MAXIMUM ALLOWABLE WIDTH OF FIVE (5) FEET FOR PAY ITEMS WILL BE CONSIDERED CONTRACTORS NEGLIGENCE AND SHALL BE REPAIRED AND/OR REPLACED AT THE CONTRACTORS EXPENSE.

k. Rip-Rap

Rip-rap will be paid for at the contract unit price per cubic yard shown in the BID FORM, complete in place.

l. Access Road

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to install concrete or asphalt (Deductive Alternate) access road, complete in place, including drainage piping and rip rap at the lump sum price in the BID FORM.

m. 14th Avenue Tank Altitude Valve

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to install the 14th Avenue Tank Altitude Valve and Structure, complete in place, including site piping and connections at the lump sum price in the BID FORM.

n. Bryan College Tank Altitude Valve

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to install the Bryan College Tank Altitude Valve and Structure, complete in place, including site piping and connections at the lump sum price in the BID FORM.

o. Tank Site Grading

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to grade the tank site for the installation of Industrial Park 500,000 Gallon Elevated Water Storage Tank.

p. Fencing

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to for the installation of fencing at the Industrial Park Tank Site, 14th Avenue Tank Site, and Bryan College Tank Site.

q. Temporary Access Road

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to install gravel temporary access road, complete in place, including gravel only at the lump sum price in the BID FORM.

r. Air-Release Valves

Payment for standard air-release valve of the size shown on the Plans will be made at the contract unit price each as shown in the BID FORM, including valve assembly and box, complete in place.

3. Contract 18-02 – Industrial Park 500,000 Gallon Elevated Water Storage Tank
 - a. 500,000 Elevated Water Storage Tank

The Contractor shall furnish all necessary labor, machinery, tools, apparatus, materials, equipment, services, and other necessary supplies to erect and complete the 500,000 gallon elevated water storage tank and foundation, complete in place, including site piping, connections and painting at the lump sum price in the BID FORM.

WATER SYSTEM IMPROVEMENTS

FOR THE CITY OF

DAYTON, TENNESSEE

CONTRACT 18-01

GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER
LINE EXTENSIONS

CONTRACT 18-02

INDUSTRIAL PARK 500,000 GALLON ELEVATED WATER STORAGE TANK

TO BE CONSTRUCTED UNDER A GRANT FROM THE APPALACHIAN REGIONAL COMMISSION
ARC PROJECT NO. TN-19214

PROJECT NO. 4630 NOVEMBER 2018

WAUFORD

J. R. Wauford & Company, Consulting Engineers, Inc.
Maryville, Tennessee
(865)984-9638
www.jrwauford.com

ADDENDUM NO. 5
7/17/19 RSS



Know what's below.
Call before you dig.



INDEX OF DRAWINGS

SHEET	DESCRIPTION
1.	WATER SYSTEM KEY MAP
2.	WATER LINE "W-1" - STA. 0+00 TO STA. 15+00
3.	WATER LINE "W-1" - STA. 15+00 TO E.O.L.
4.	WATER LINE "W-2" - STA. 0+00 TO E.O.L.
5.	PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK ACCESS ROAD PLAN & PROFILE
△ 6.	PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK SITE GRADING PLAN
7.	EXISTING 14TH AVENUE WATER TANK SITE AND PROPOSED ALTITUDE VALVE VAULT
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9.	DETAIL SHEET
△ 10.	PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK SITE GRADING PLAN, SPARE VALVE VAULT, AND DETAILS
11.	PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK
△ 12.	TEMPORARY TANK ACCESS ROAD STA. 0+00 TO STA. 5+00
△ 13.	TEMPORARY TANK ACCESS ROAD STA. 5+00 TO STA. 9+70.17

CITY OFFICIALS

MAYOR

GARY S. LOUALLEN

VICE MAYOR

STEVE E. RANDOLPH

COUNCILMEN

BOBBY J. DOSS

WILLIAM C. "BILLY" GRAHAM

JIM LEWIS

CITY MANAGER

THOMAS W. SOLOMON

SUPERINTENDENT OF WATER DEPARTMENT

PAUL M. (MIKE) PATRICK

CITY ATTORNEY

SUSAN E. ARNOLD

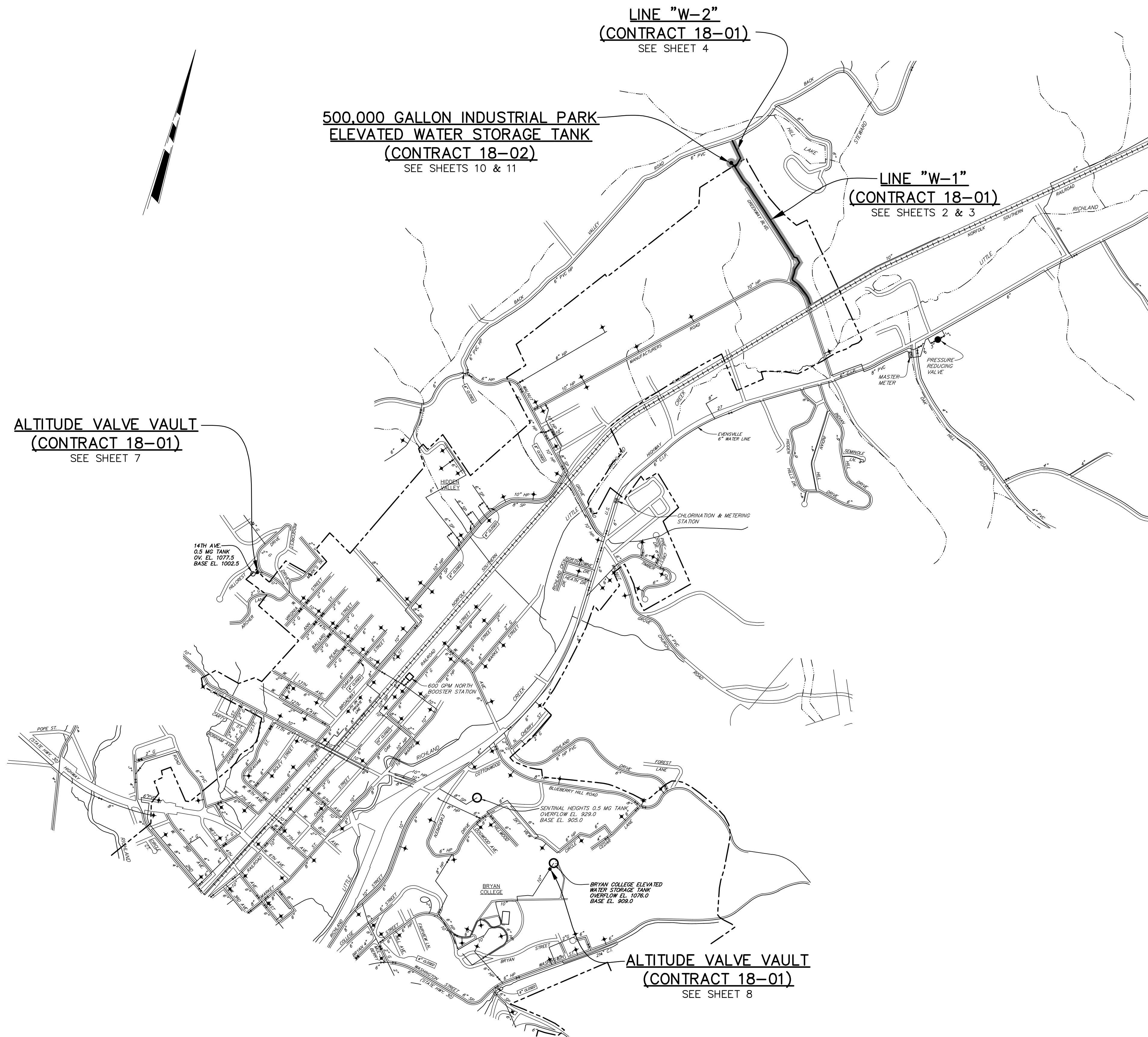
APPROVED: 
THOMAS W. SOLOMON, CITY MANAGER

KEY MAP LEGEND

- 6" EXISTING WATER LINES
- EXISTING WATER TANK
- PROPOSED WATER LINE
- PROPOSED WATER TANK
- PROPOSED ALTITUDE VALVE VAULT


LEGEND FOR PLAN SHEETS

- PROPOSED**
- WATER LINE
 - ⊕ GATE VALVE ASSEMBLY
- EXISTING**
- 4" W WATER LINE
 - S SEWER LINE
 - 2" G GAS LINE
 - UGT UNDERGROUND TELEPHONE CABLE
 - RIGHT-OF-WAY
 - PROPERTY LINE
 - PAVED SURFACE
 - UNPAVED SURFACE
 - ++++ RAILROAD TRACKS
 - TOP / TOE OF BANK
 - DITCH LINE OR CREEK
 - TREE LINE
 - TREE
 - HEDGE ROW
 - BUSH
 - x-x- FENCE LINE
 - ⊗ WATER METER
 - ⊗ GAS METER
 - ⊕ VALVES
 - ⊕ FIRE HYDRANT
 - ⊕ POWER POLE & GUY WIRE
 - + SIGNS
 - MAILBOX
 - CATCH BASIN
 - ⊕ RIGHT-OF-WAY MONUMENT
 - PROPERTY PIN
 - ⊕ BENCH MARK

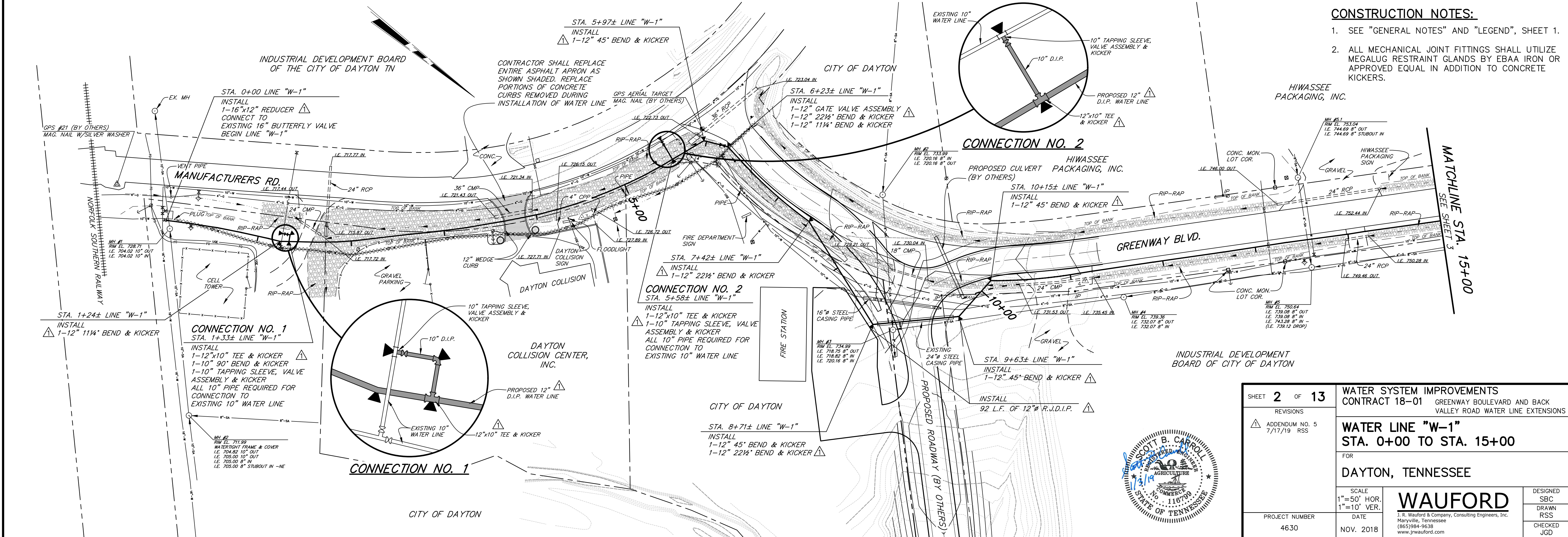
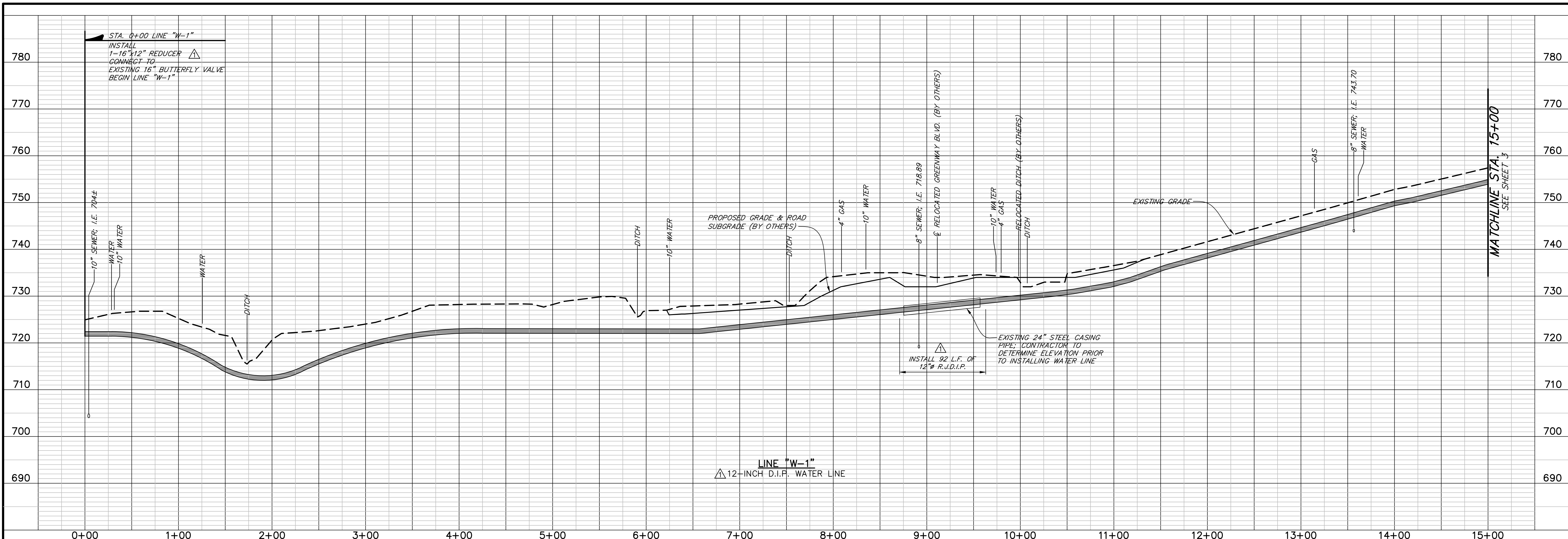


GENERAL NOTES:

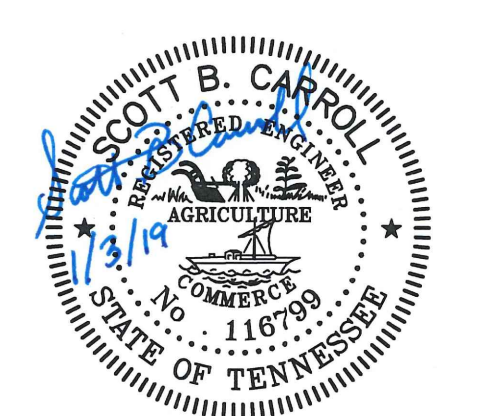
1. AT LEAST THIRTY (30) DAYS PRIOR TO THE DATE ON WHICH CONSTRUCTION IS SCHEDULED TO BEGIN, THE CONTRACTOR SHALL SUBMIT, ON BEHALF OF THE OWNER, A "NOTICE OF INTENT FOR GENERAL NPDES PERMIT TO DISCHARGE STORM WATER ASSOCIATED WITH CONSTRUCTION ACTIVITY" IN ACCORDANCE WITH TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION RULE CHAPTER 0400-40-10. THE CONTRACTOR IS REQUIRED TO SIGN A FORM PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES WHICH STATES THAT HE UNDERSTANDS THE CONDITIONS OF THE GENERAL PERMIT AND ACCEPTS RESPONSIBILITY FOR COMPLIANCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING TERMINATION OF SAID PERMITS FROM TDEC.
2. THE CONTRACTOR SHALL BE SOLELY AND STRICTLY LIABLE FOR ANY VIOLATIONS OF STATE OR FEDERAL WATER POLLUTION LAWS, REGULATIONS OR STANDARDS CAUSED DURING CONSTRUCTION BY THE CONTRACTOR'S FORCES OR SUBCONTRACTORS AND SHALL PAY ANY PENALTIES LEVIED BY ANY AGENCY DUE TO SAID VIOLATIONS.
3. THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF CONSTRUCTION.
4. THE LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED PRIOR TO THE CONTRACTOR COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY REQUIRED MODIFICATIONS IMMEDIATELY.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND/OR REPLACEMENT OF ALL EXISTING DRAINAGE CULVERTS DISTURBED DURING CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR THIS WORK.
6. THE NAMES OF PROPERTY OWNERS, PROPERTY LINES, STREET AND ROAD RIGHTS-OF-WAY SHOWN ON THESE PLANS WERE OBTAINED FROM RHEA COUNTY TAX MAPS AND THE RHEA COUNTY TAX ASSESSOR. THIS INFORMATION IS ONLY GENERAL IN NATURE AND IS NOT GUARANTEED BY THE ENGINEER.
7. THE DEPTH OF COVER SHOWN APPLIES AS A MINIMUM MEASURED FROM THE EXISTING GROUND SURFACE TO THE TOP OF THE PIPELINE. EXTRA DEPTH REQUIRED TO AVOID CROSS DRAINS OR UTILITIES, TO ACCOMMODATE BORING OR FOR AIR RELEASE PURPOSES IS NOT A PAY ITEM.

SHEET 1 OF 13		WATER SYSTEM IMPROVEMENTS	
REVISIONS		CONTRACTS 18-01 AND 18-02	
ADDENDUM NO. 5 7/17/19 RSS		WATER SYSTEM KEY MAP	
		FOR DAYTON, TENNESSEE	
SCALE 1"=1000'	DESIGNED SBC	 J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865) 984-9638 www.jrwauford.com	
PROJECT NUMBER 4630	DRAWN RSS		
	CHECKED JGD	DATE NOV. 2018	

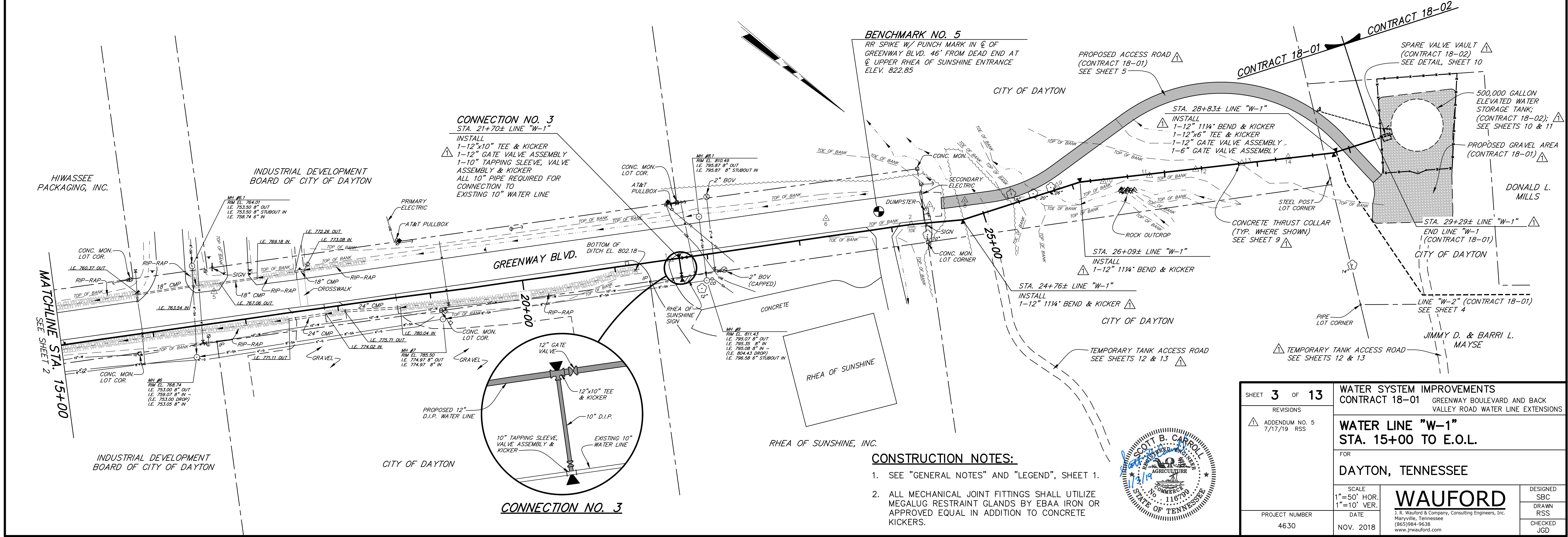
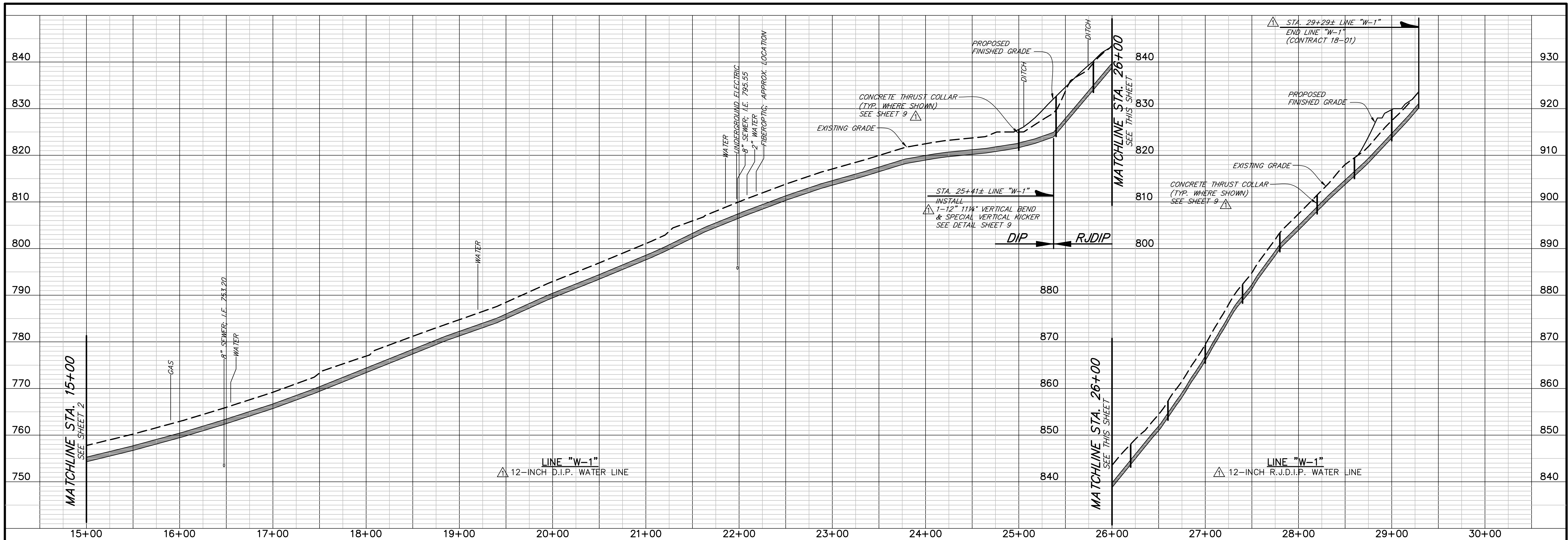




- CONSTRUCTION NOTES:**
- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
 - ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.



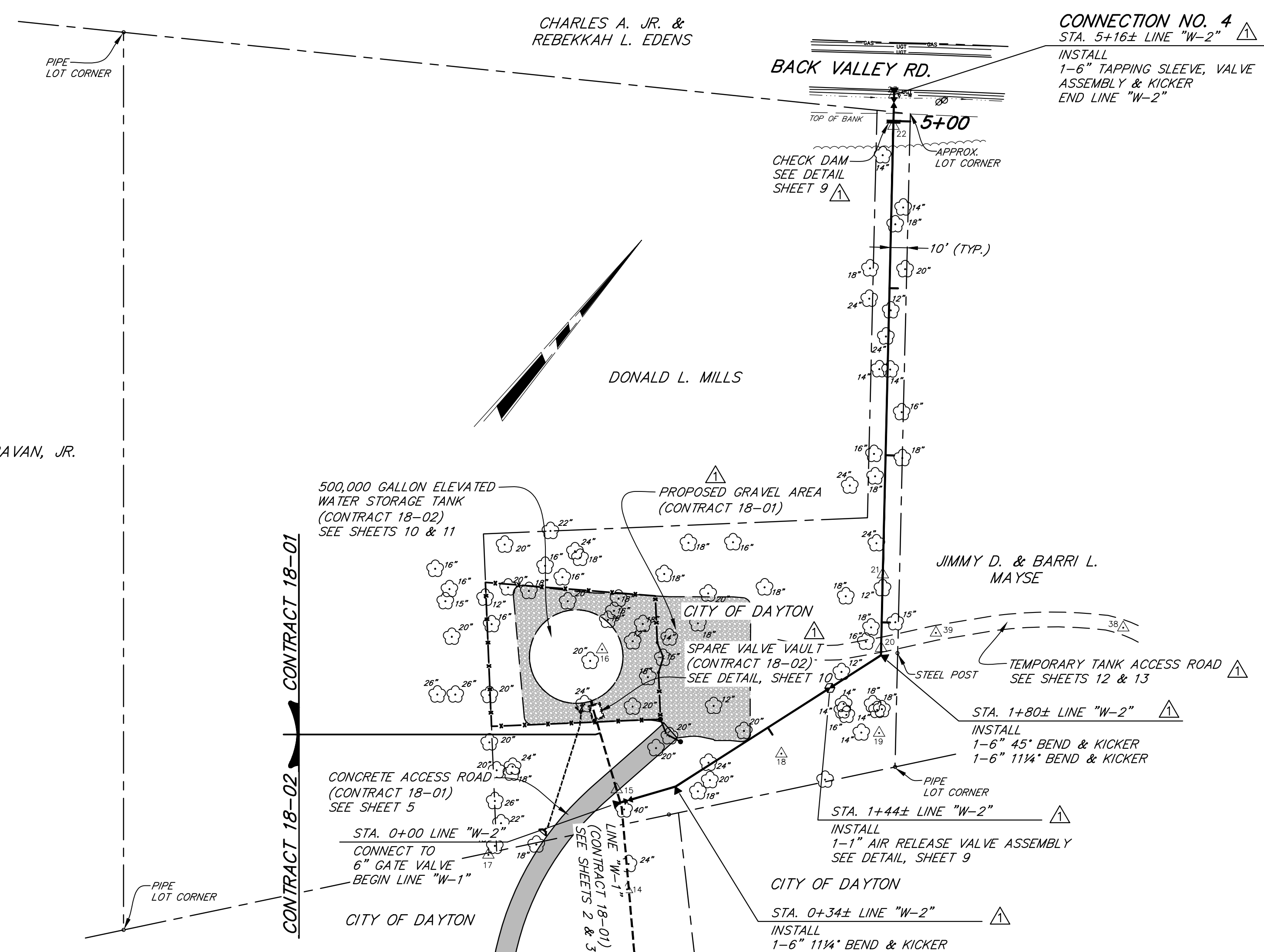
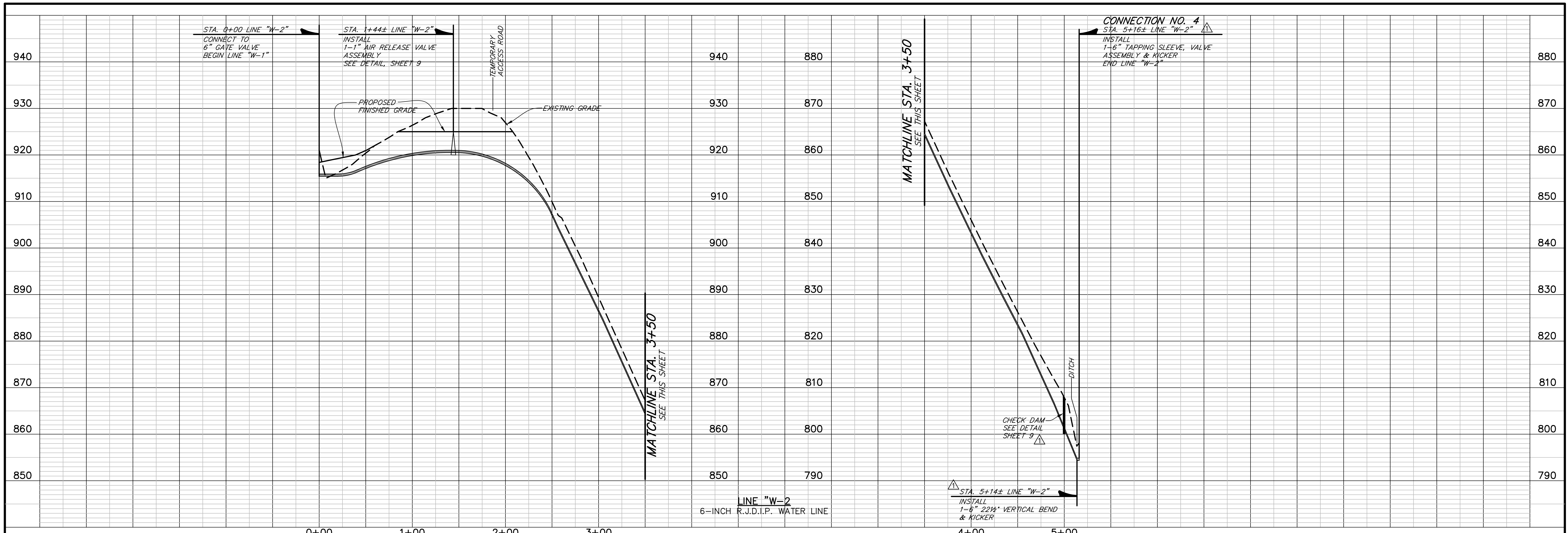
SHEET 2 OF 13		WATER SYSTEM IMPROVEMENTS CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
REVISIONS		FOR	
ADDENDUM NO. 5 7/17/19 RSS		DAYTON, TENNESSEE	
PROJECT NUMBER 4630		DATE NOV. 2018	
SCALE 1"=50' HOR. 1"=10' VER.		DESIGNED SBC	
DRAWN RSS		CHECKED JGD	
 J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865)984-9638 www.jrwauford.com			



- CONSTRUCTION NOTES:**
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 - ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.



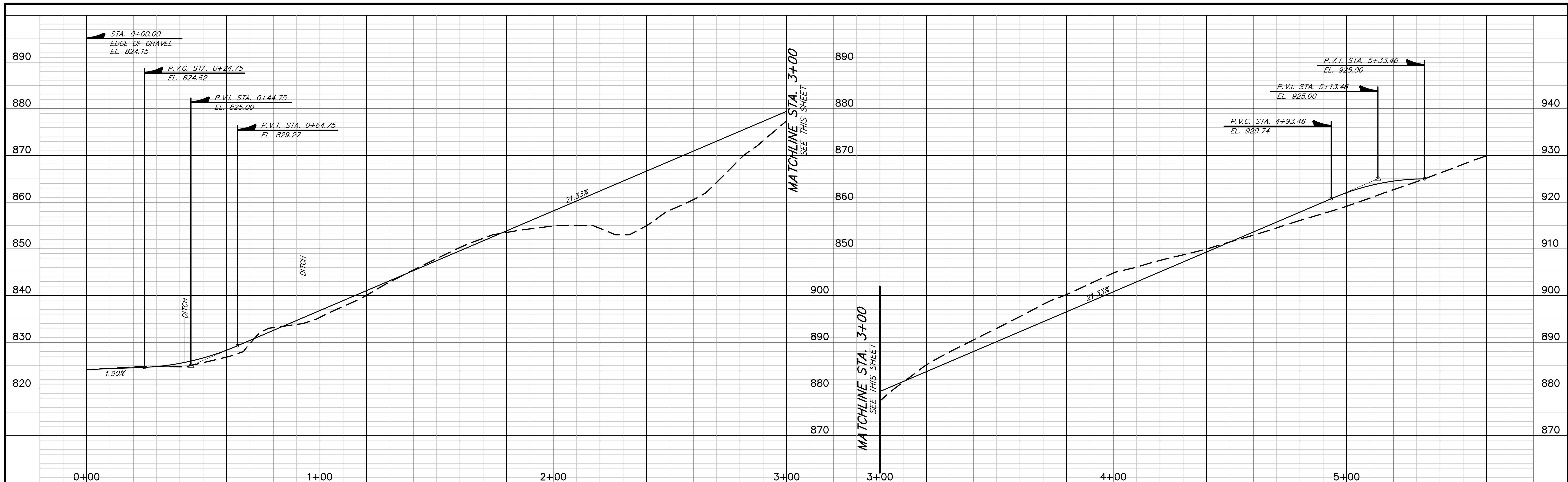
SHEET 3 OF 13		WATER SYSTEM IMPROVEMENTS CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
REVISIONS		FOR	
ADDENDUM NO. 5 7/17/19 RSS		WATER LINE "W-1" STA. 15+00 TO E.O.L.	
		DAYTON, TENNESSEE	
SCALE	DESIGNED	WAUFORD	
1"=50' HOR.	SBC	J. R. Wauford & Company, Consulting Engineers, Inc.	
1"=10' VER.	DRWN	Maryville, Tennessee	
PROJECT NUMBER	RSS	(865)984-9638	
4630	CHECKED	www.jrwauford.com	
DATE	JGD		
NOV. 2018			



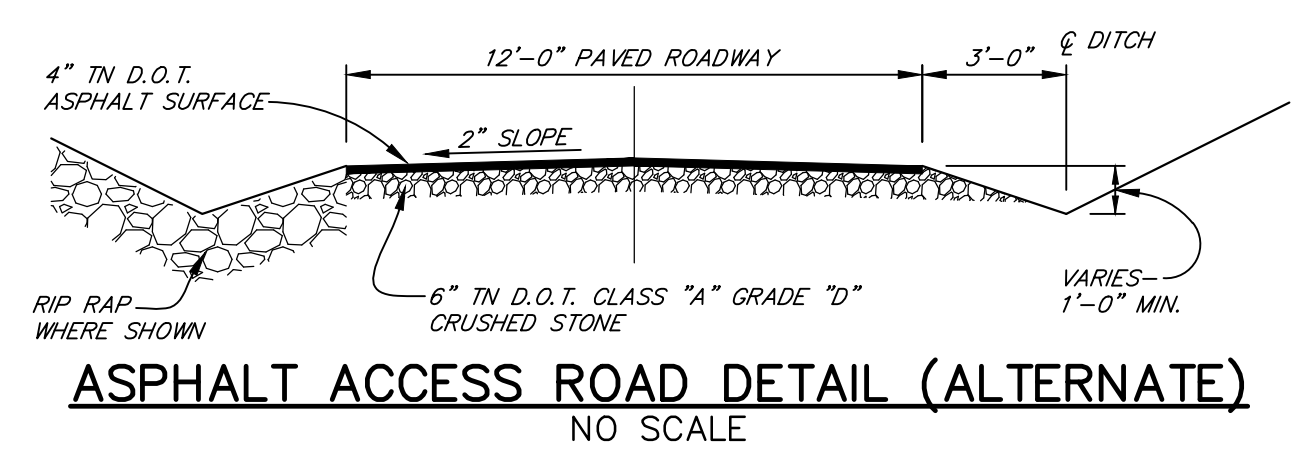
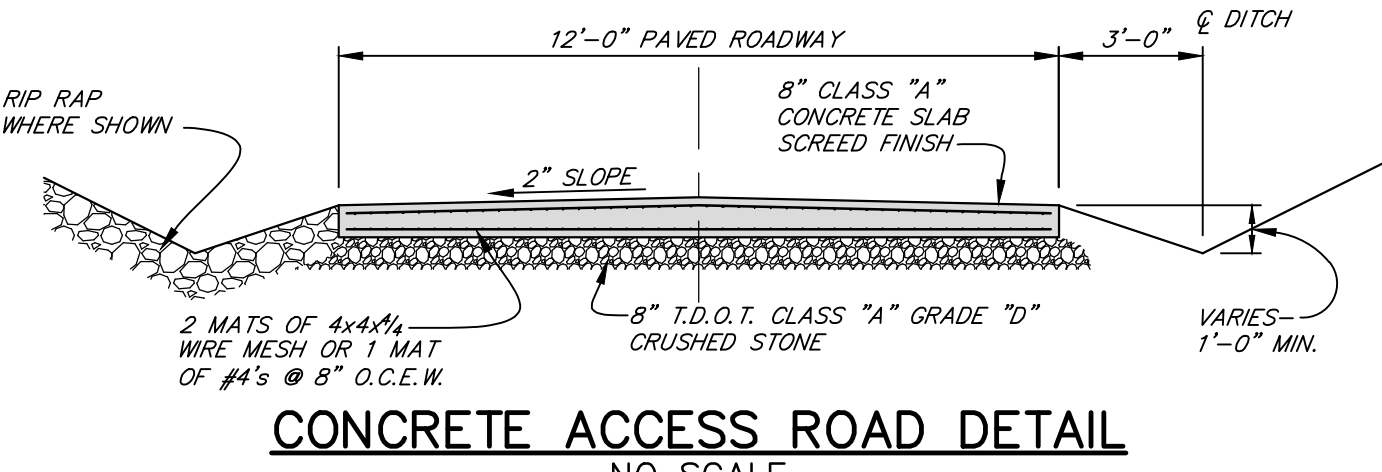
- CONSTRUCTION NOTES:**
- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
 - ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.



SHEET 4 OF 13		WATER SYSTEM IMPROVEMENTS	
REVISIONS		CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
ADDENDUM NO. 5 7/17/19 RSS		WATER LINE "W-2"	
		STA. 0+00 TO E.O.L.	
		FOR	
		DAYTON, TENNESSEE	
SCALE	1"=50' HOR. 1"=10' VER.	WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865)984-9638 www.jrwauford.com	DESIGNED SBC
PROJECT NUMBER	4630		DRAWN RSS
DATE	NOV. 2018	CHECKED JGD	

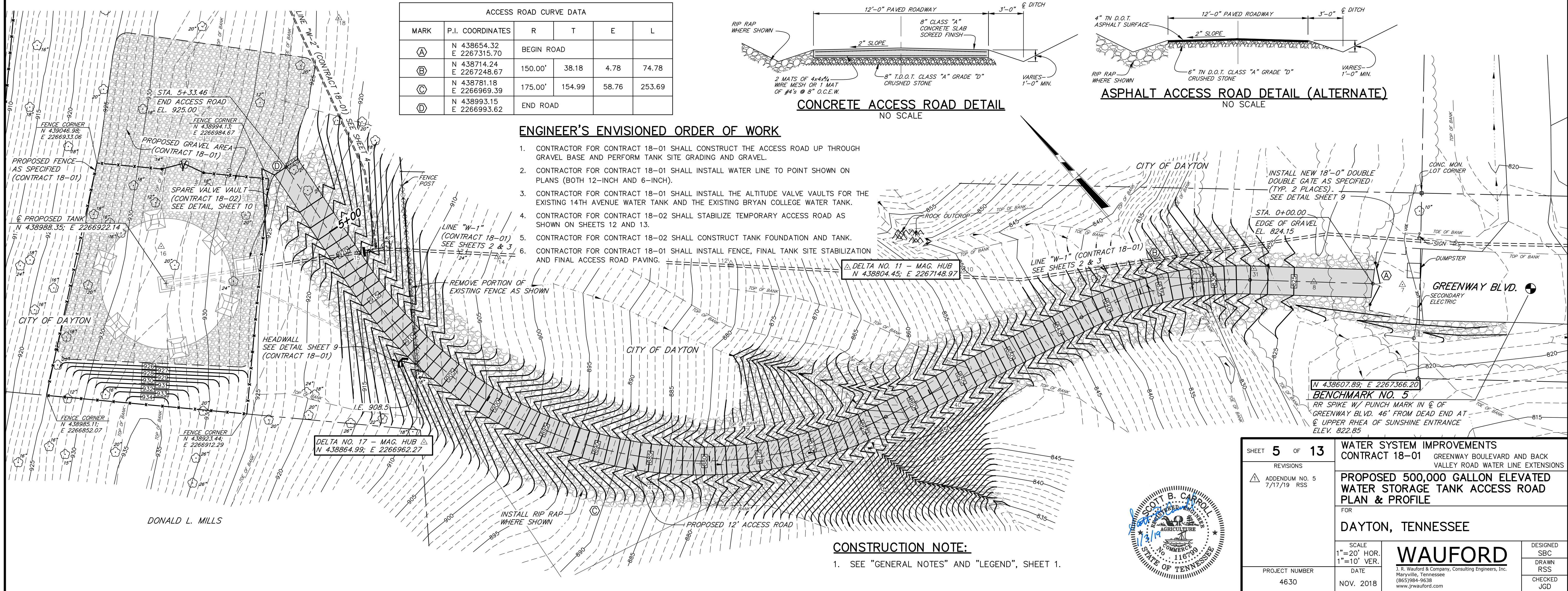


ACCESS ROAD CURVE DATA					
MARK	P.I. COORDINATES	R	T	E	L
A	N 438654.32 E 2267315.70	BEGIN ROAD			
B	N 438714.24 E 2267248.67	150.00'	38.18	4.78	74.78
C	N 438781.18 E 2266969.39	175.00'	154.99	58.76	253.69
D	N 438993.15 E 2266993.62	END ROAD			



ENGINEER'S ENVISIONED ORDER OF WORK

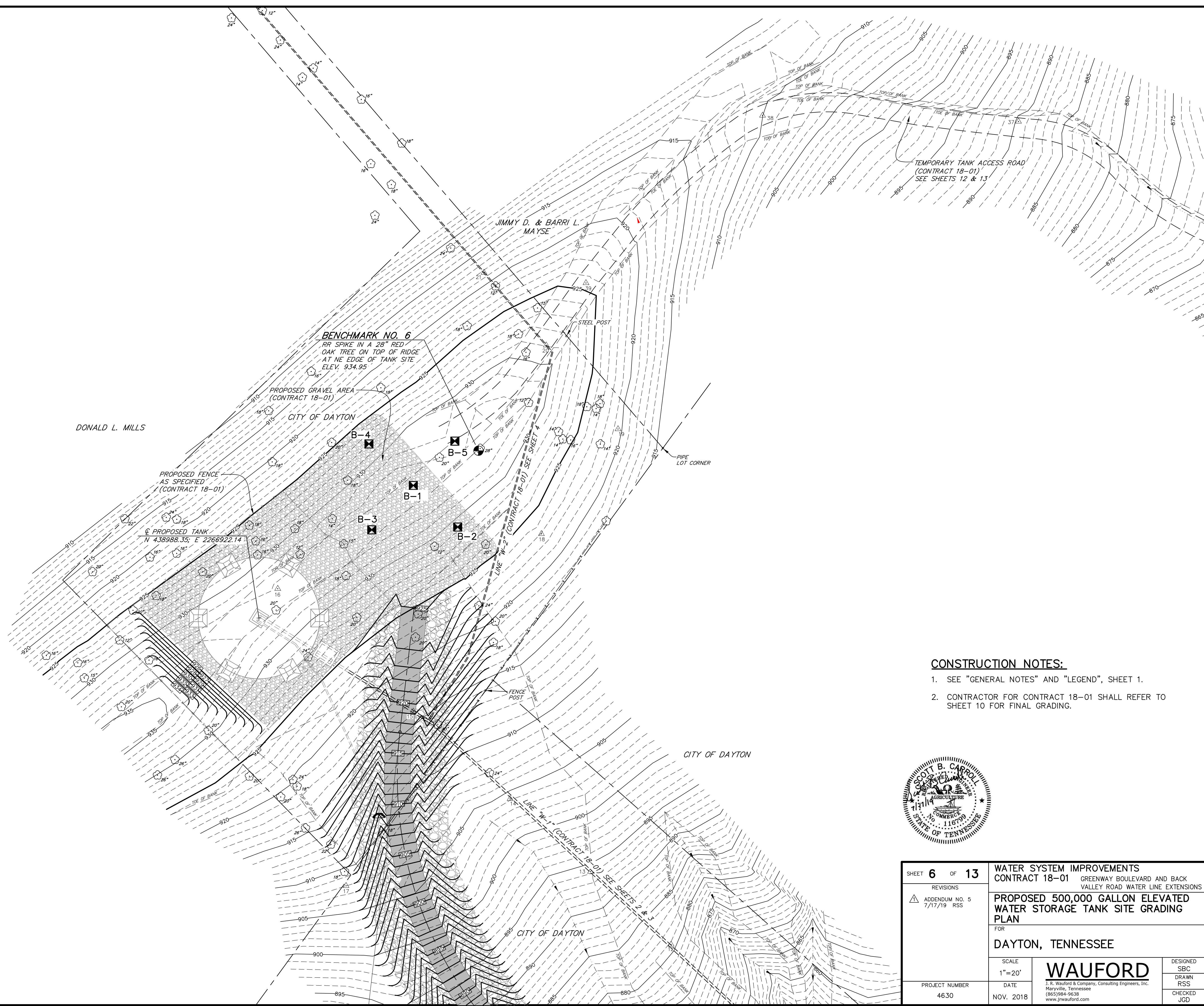
1. CONTRACTOR FOR CONTRACT 18-01 SHALL CONSTRUCT THE ACCESS ROAD UP THROUGH GRAVEL BASE AND PERFORM TANK SITE GRADING AND GRAVEL.
2. CONTRACTOR FOR CONTRACT 18-01 SHALL INSTALL WATER LINE TO POINT SHOWN ON PLANS (BOTH 12-INCH AND 6-INCH).
3. CONTRACTOR FOR CONTRACT 18-01 SHALL INSTALL THE ALTITUDE VALVE VAULTS FOR THE EXISTING 14TH AVENUE WATER TANK AND THE EXISTING BRYAN COLLEGE WATER TANK.
4. CONTRACTOR FOR CONTRACT 18-02 SHALL STABILIZE TEMPORARY ACCESS ROAD AS SHOWN ON SHEETS 12 AND 13.
5. CONTRACTOR FOR CONTRACT 18-02 SHALL CONSTRUCT TANK FOUNDATION AND TANK.
6. CONTRACTOR FOR CONTRACT 18-01 SHALL INSTALL FENCE, FINAL TANK SITE STABILIZATION AND FINAL ACCESS ROAD PAVING.



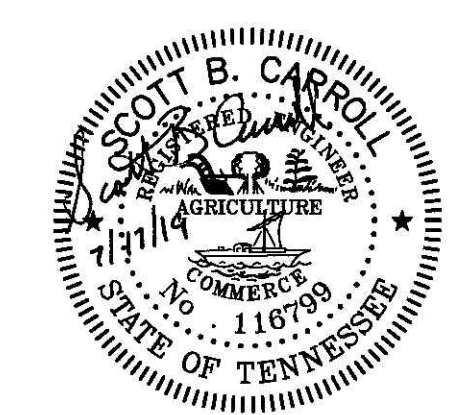
CONSTRUCTION NOTE:
1. SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.



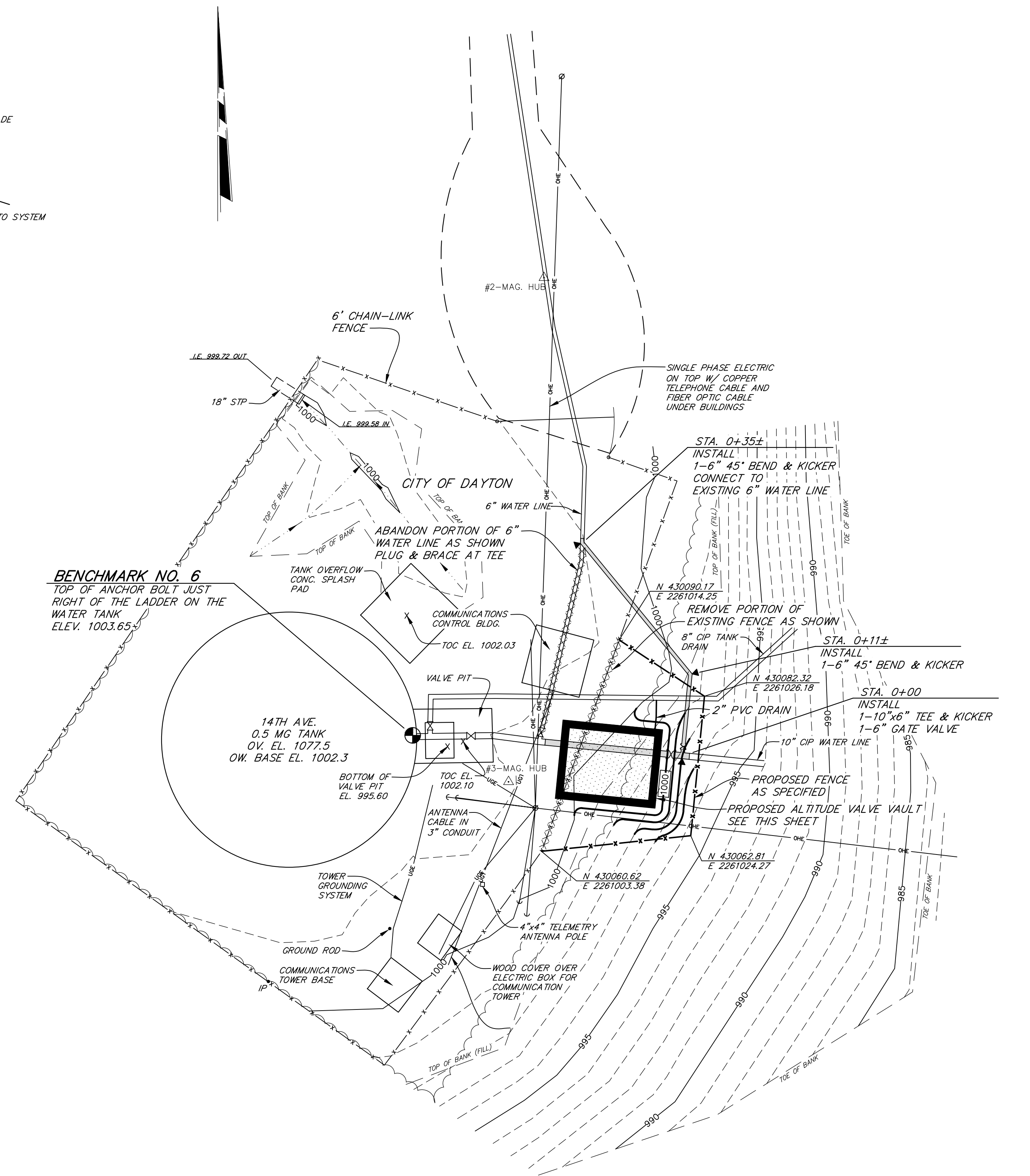
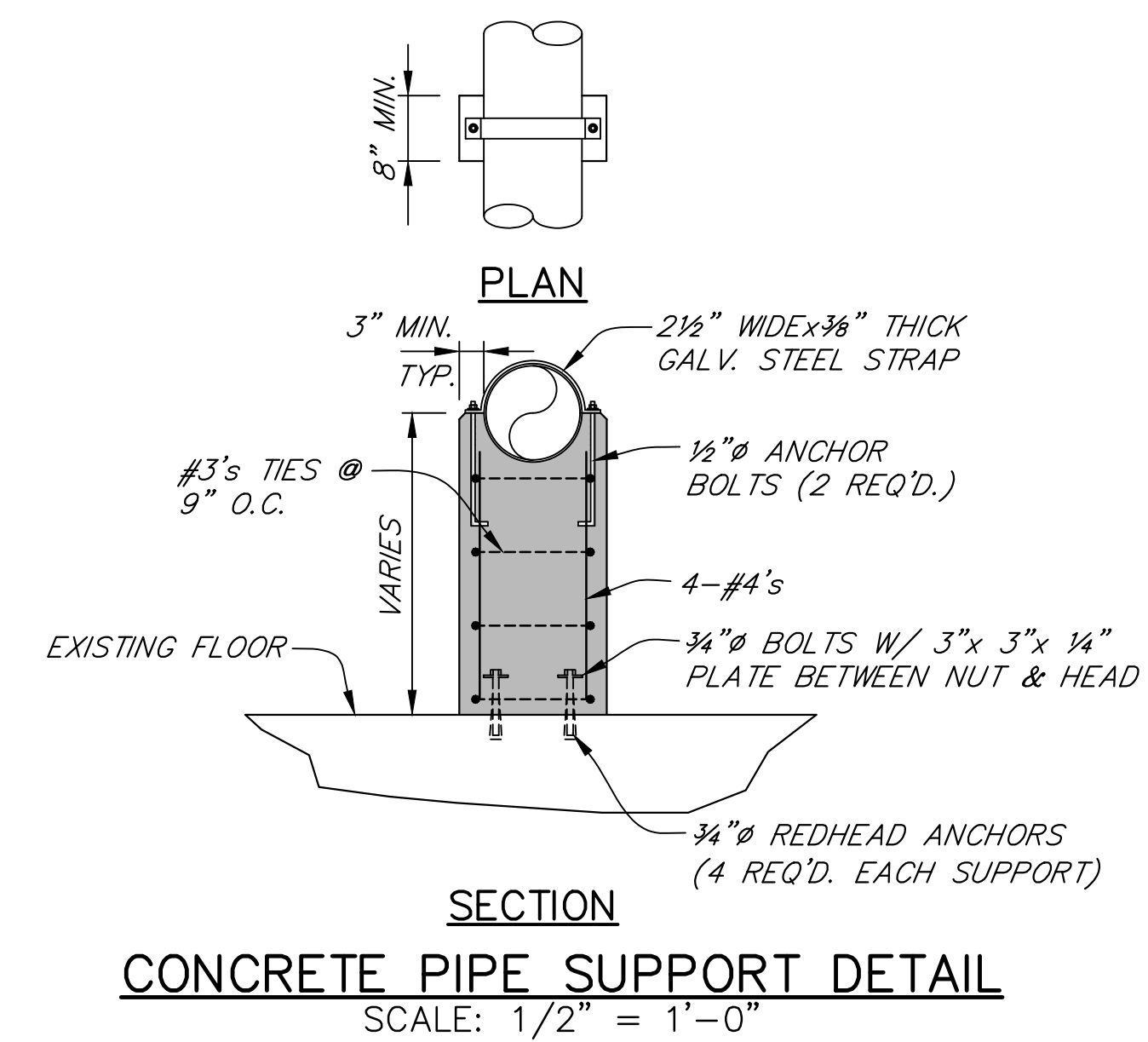
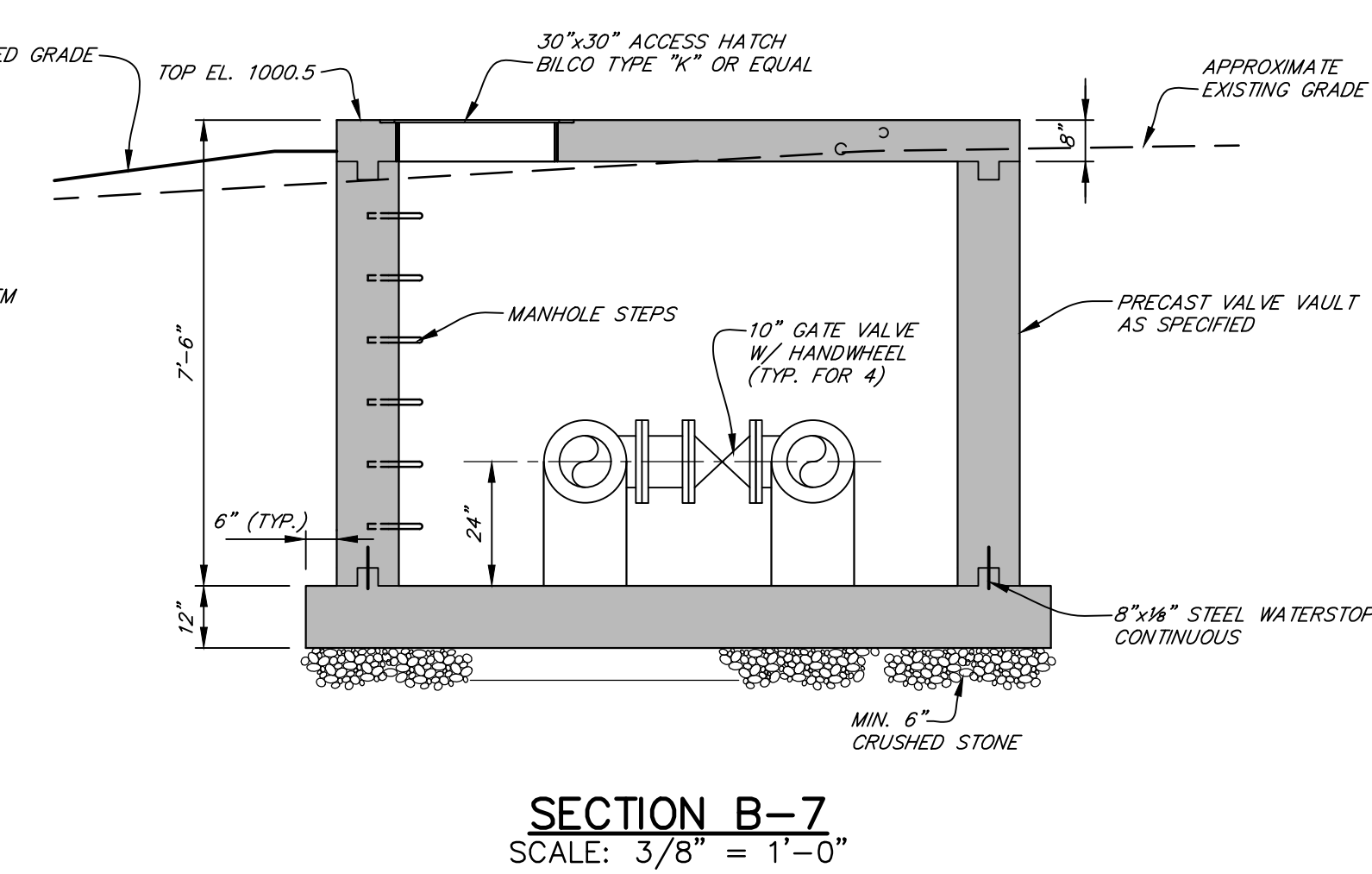
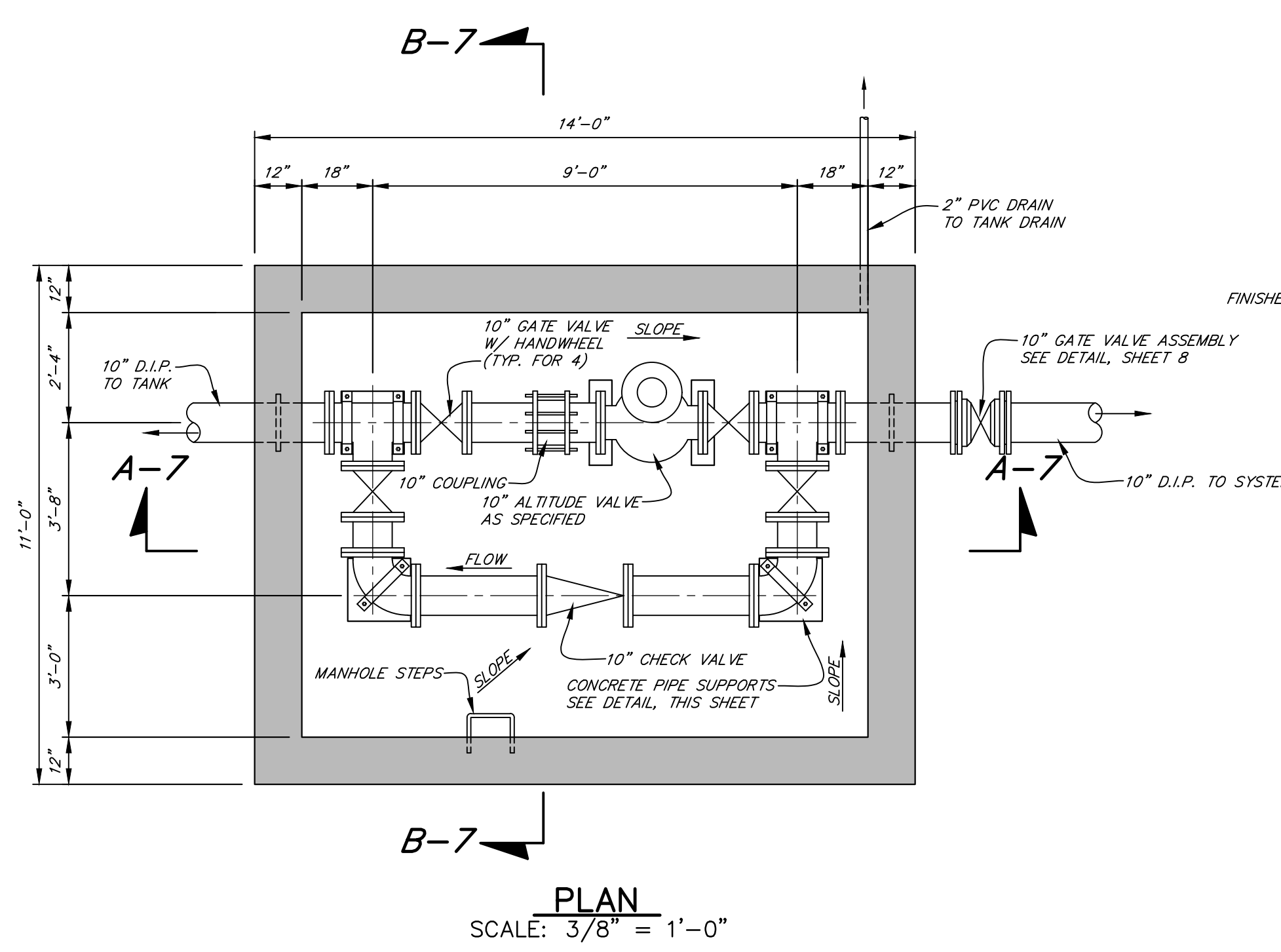
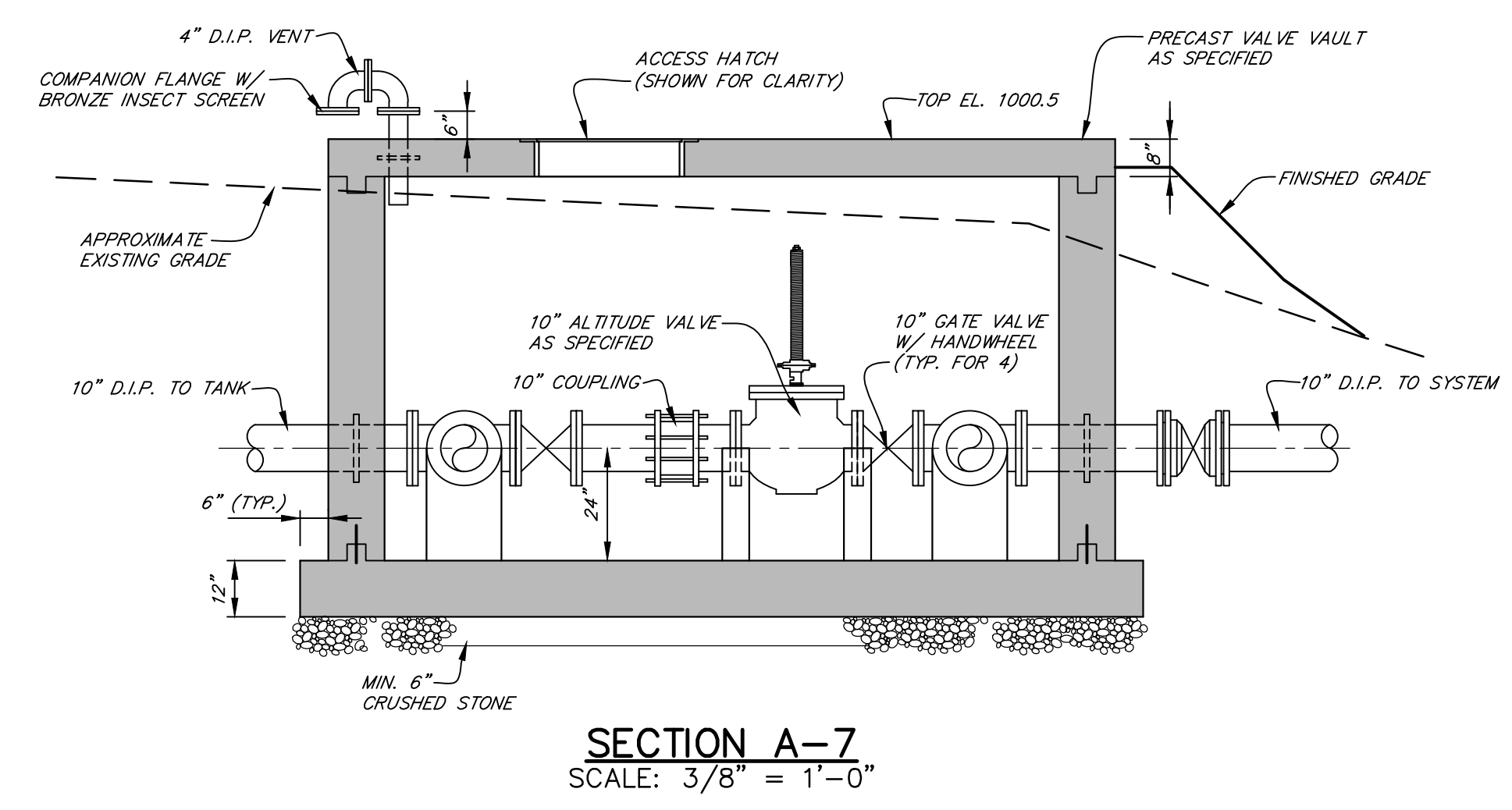
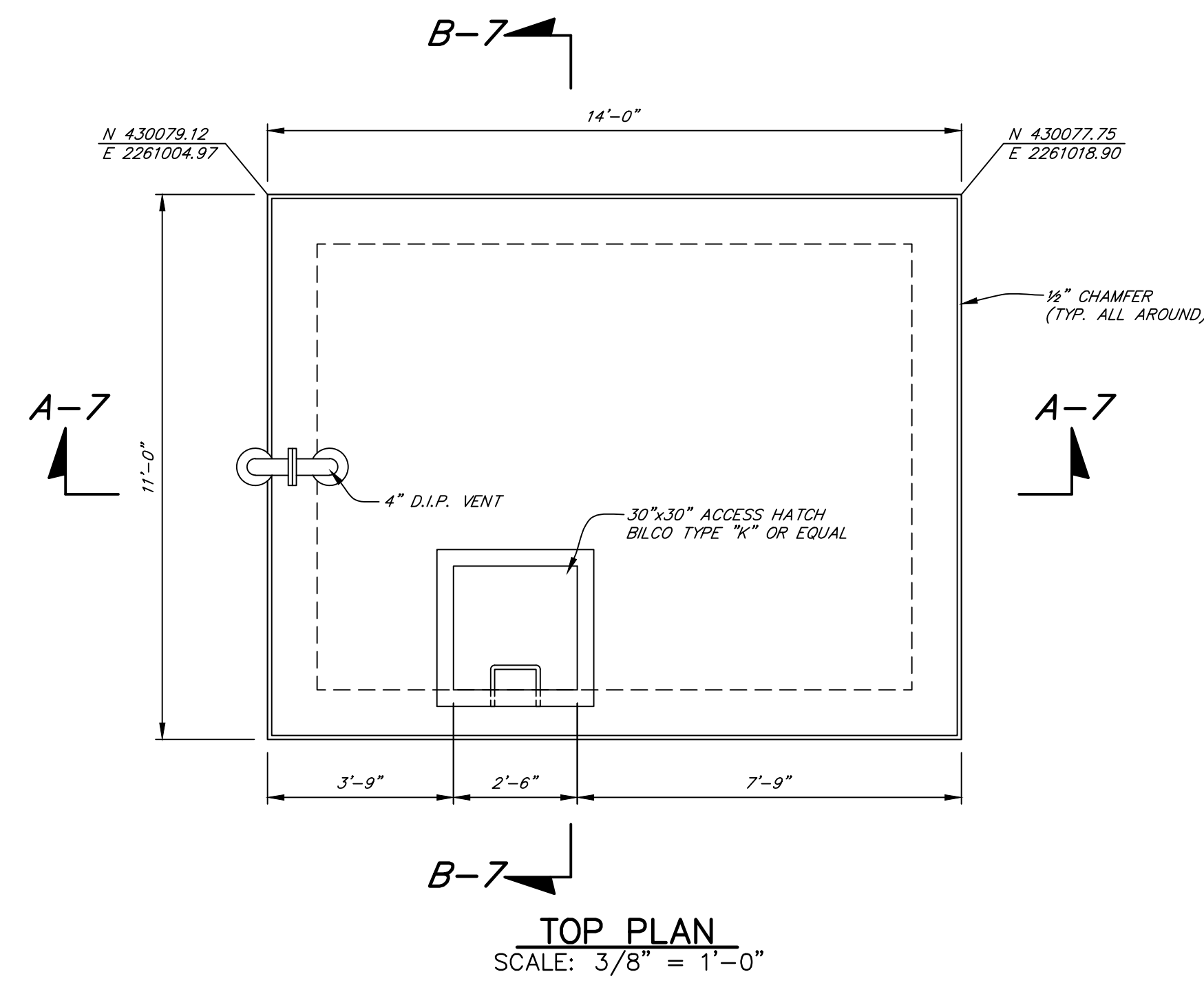
SHEET 5 OF 13		WATER SYSTEM IMPROVEMENTS CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
REVISIONS ADDENDUM NO. 5 7/17/19 RSS		PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK ACCESS ROAD PLAN & PROFILE	
PROJECT NUMBER 4630		FOR DAYTON, TENNESSEE	
DATE NOV. 2018		SCALE 1"=20' HOR. 1"=10' VER.	
DESIGNED SBC		DRAWN RSS	
CHECKED JGD		 WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865)984-9638 www.jrwauford.com	



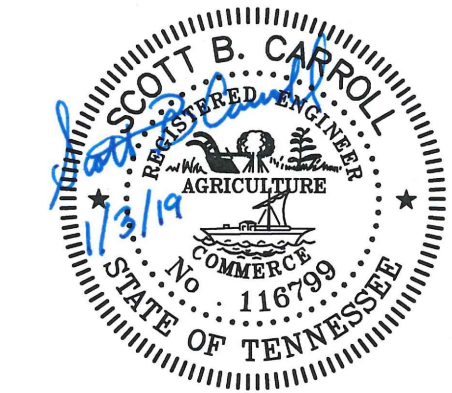
- CONSTRUCTION NOTES:**
1. SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
 2. CONTRACTOR FOR CONTRACT 18-01 SHALL REFER TO SHEET 10 FOR FINAL GRADING.



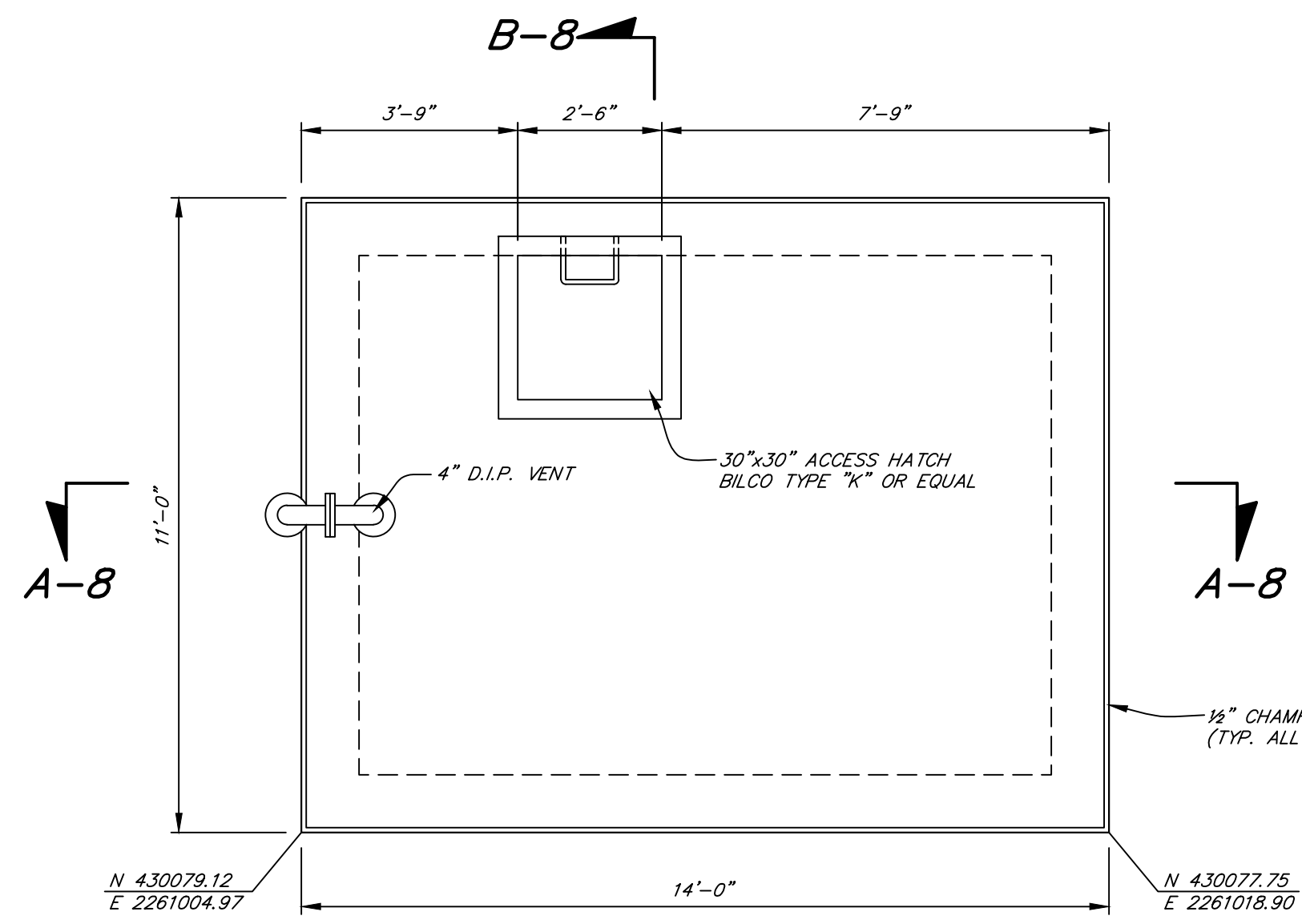
SHEET 6 OF 13		WATER SYSTEM IMPROVEMENTS	
REVISIONS		CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
▲ ADDENDUM NO. 5 7/17/19 RSS		PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK SITE GRADING PLAN FOR DAYTON, TENNESSEE	
SCALE	1" = 20'	DESIGNED	SBC
PROJECT NUMBER	4630	DRAWN	RSS
DATE	NOV. 2018	CHECKED	JGD
		WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865) 984-9638 www.jrwauford.com	



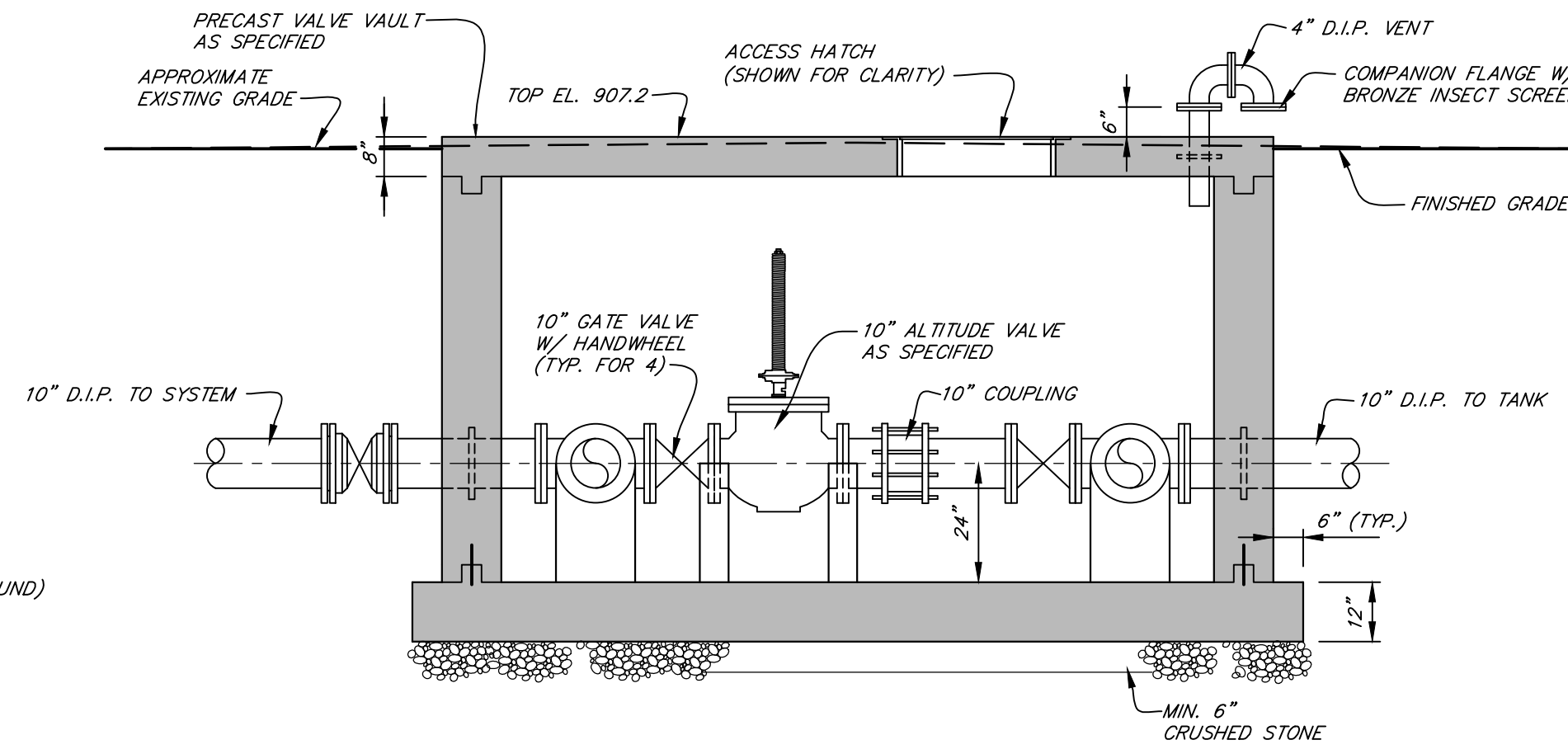
- CONSTRUCTION NOTES:**
- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
 - ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.



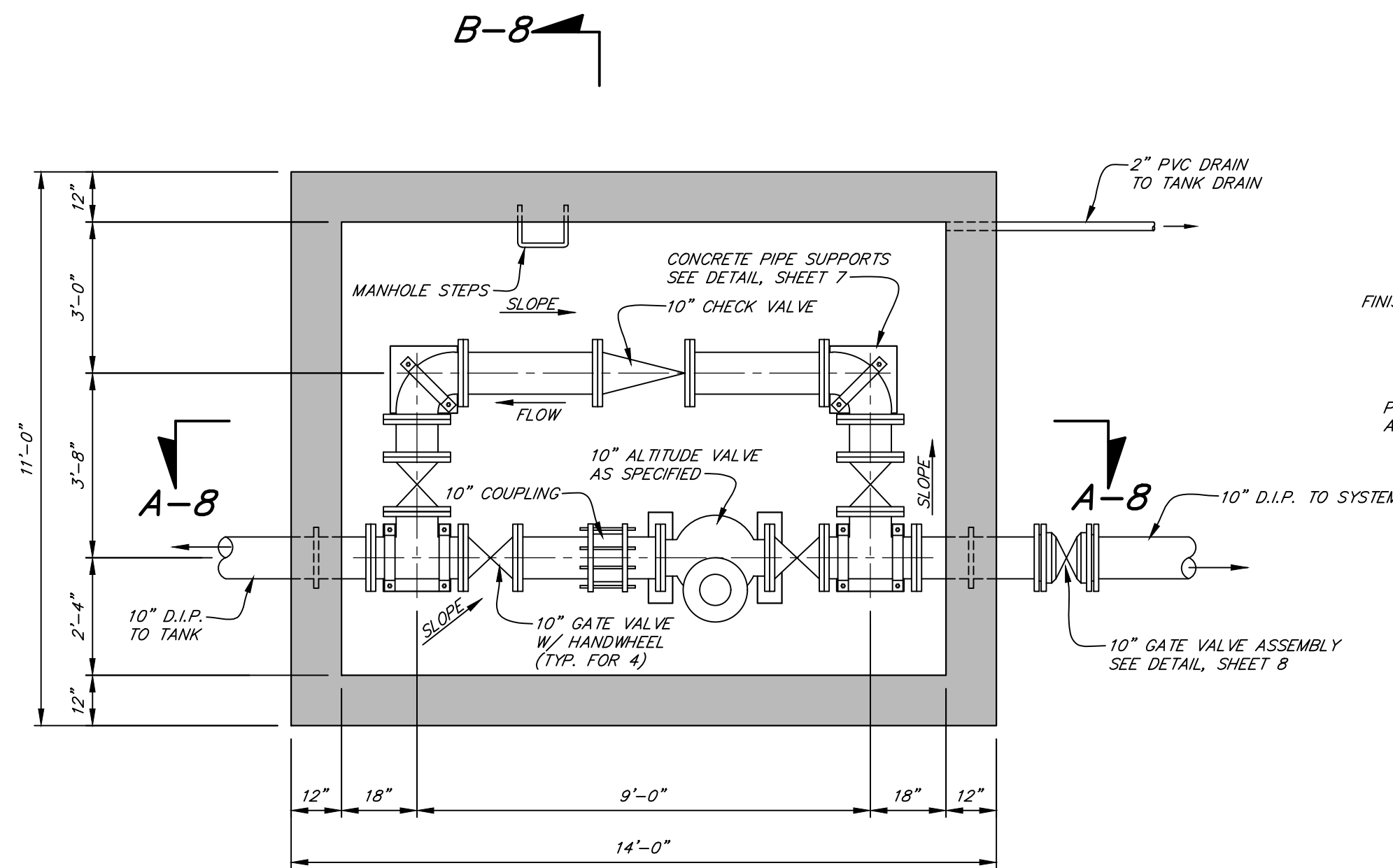
SHEET 7 OF 13		WATER SYSTEM IMPROVEMENTS	
REVISIONS		CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
		EXISTING 14TH AVENUE WATER TANK SITE PLAN AND PROPOSED ALTITUDE VALVE VAULT	
		FOR DAYTON, TENNESSEE	
SCALE	AS SHOWN	WAUFORD	DESIGNED SBC
PROJECT NUMBER	DATE		DRAWN RSS
4630	NOV. 2018	J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865)984-9638 www.jrwauford.com	CHECKED JGD



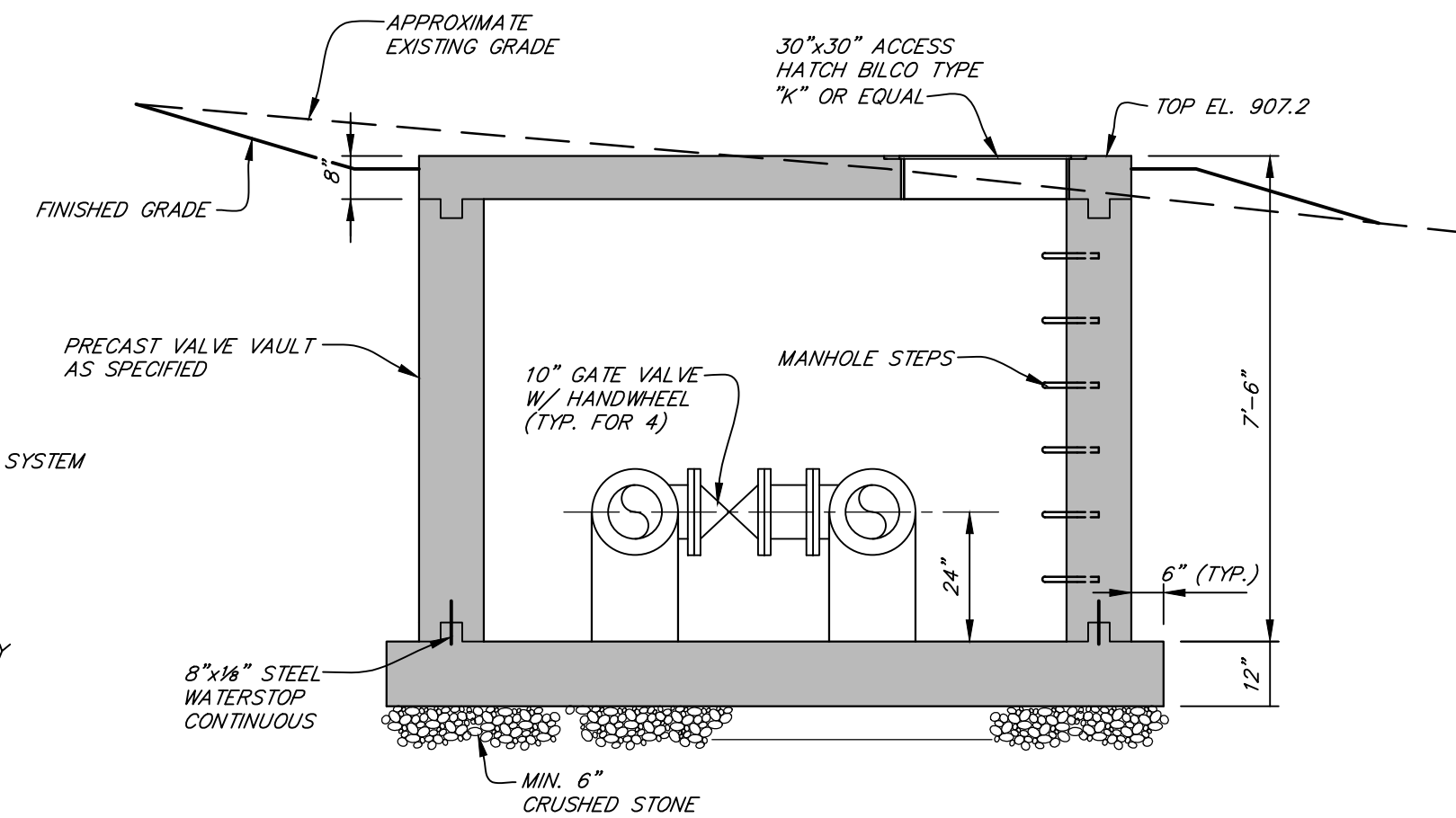
TOP PLAN
SCALE: 3/8" = 1'-0"



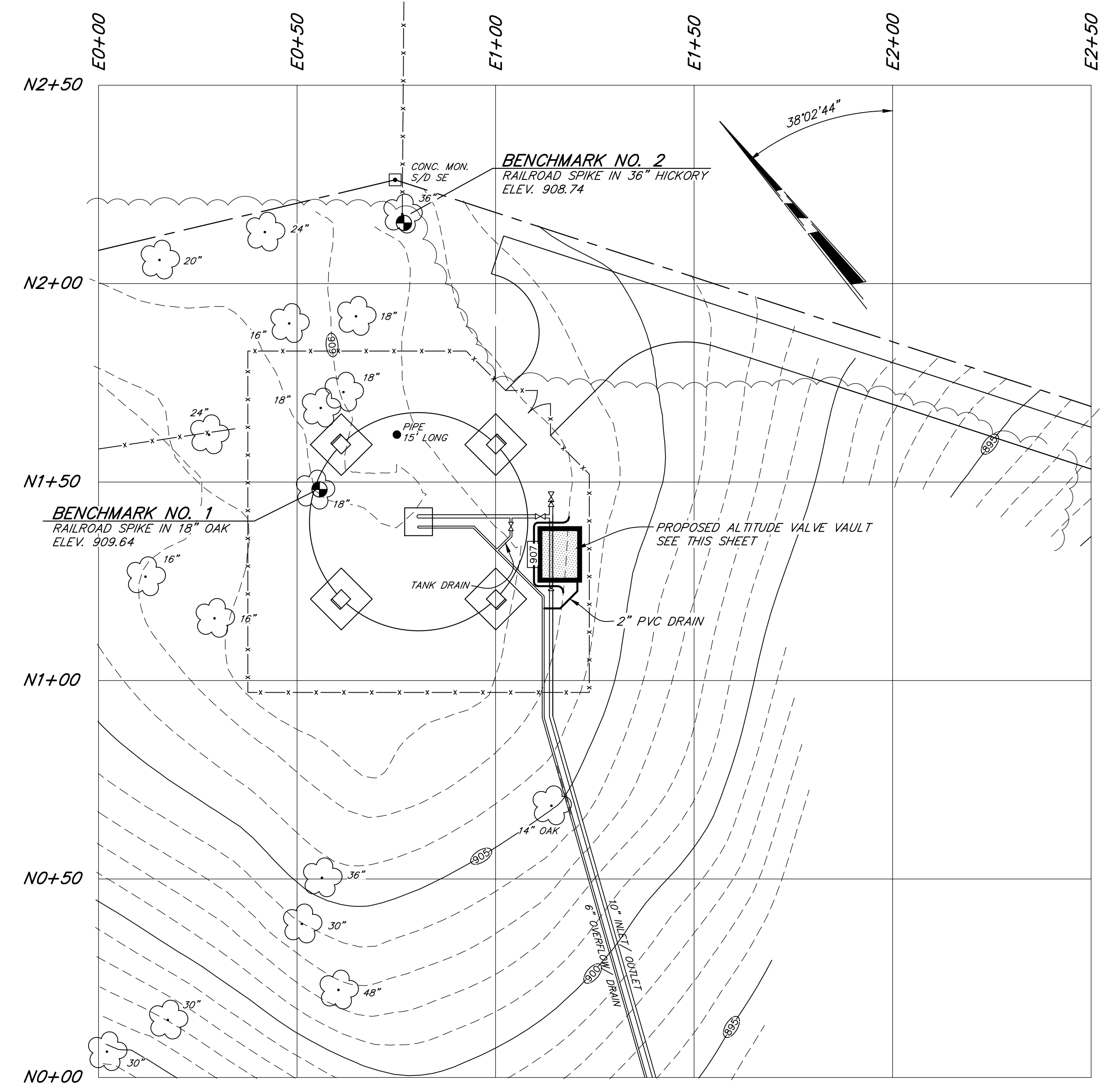
SECTION A-8
SCALE: 3/8" = 1'-0"



PLAN
SCALE: 3/8" = 1'-0"



SECTION B-8
SCALE: 3/8" = 1'-0"

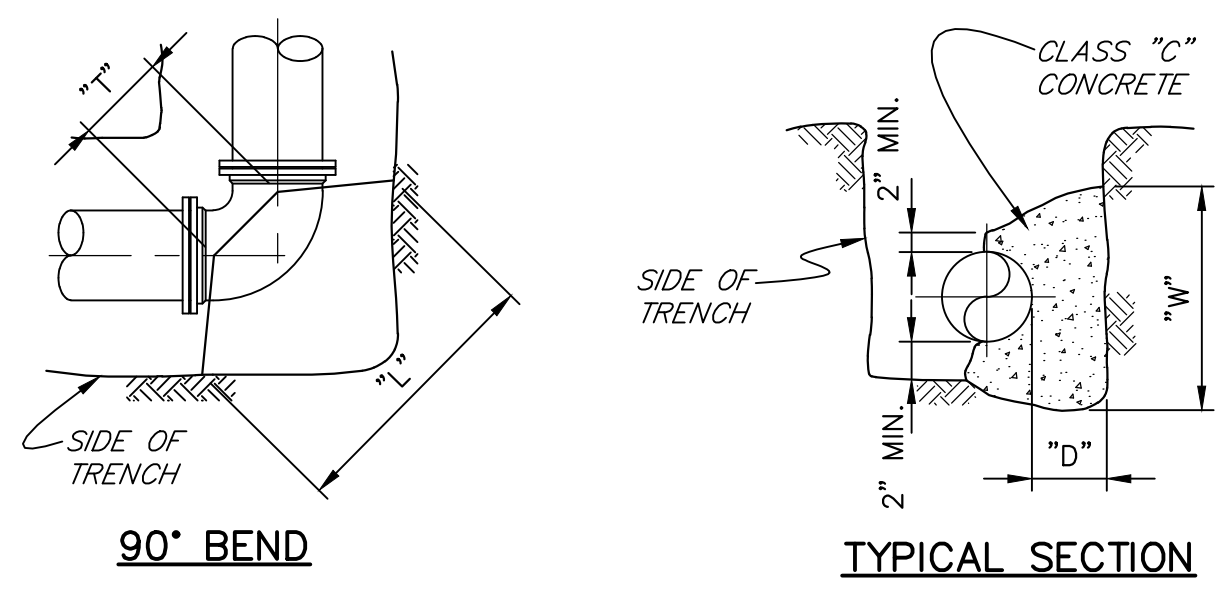


BRYAN COLLEGE TANK SITE PLAN
SCALE: 1" = 20'

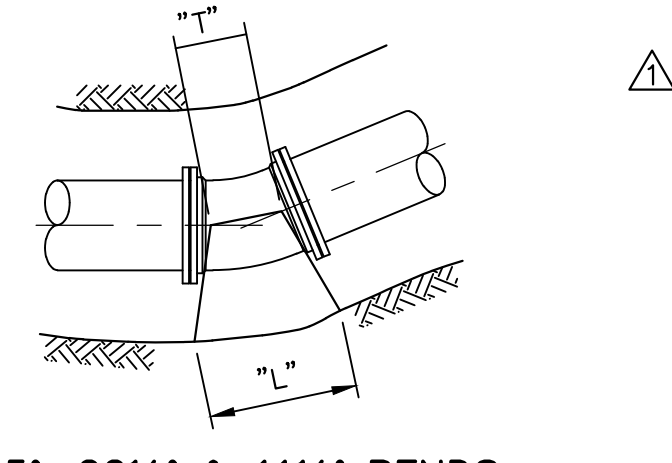
- CONSTRUCTION NOTES:**
- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
 - ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.



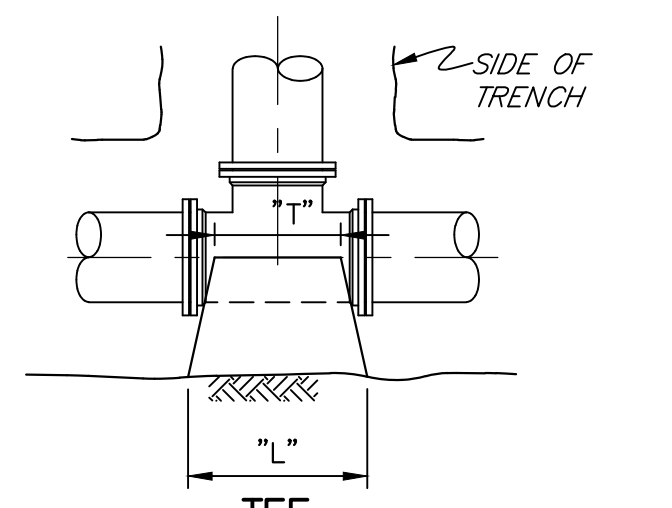
SHEET 8 OF 13	WATER SYSTEM IMPROVEMENTS CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
REVISIONS	EXISTING BRYAN COLLEGE WATER TANK SITE PLAN AND PROPOSED ALTITUDE VALVE VAULT	
	FOR DAYTON, TENNESSEE	
SCALE AS SHOWN	WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865) 984-9638 www.jrwauford.com	DESIGNED SBC DRAWN RSS CHECKED JGD
PROJECT NUMBER 4630	DATE NOV. 2018	



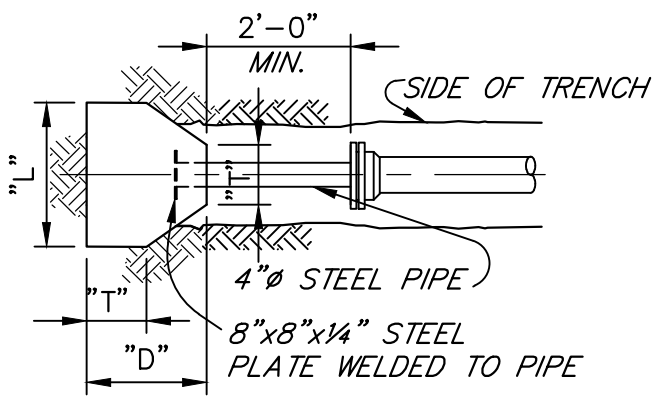
90° BEND
TYPICAL SECTION



45°, 22 1/2° & 11 1/4° BENDS



TEE



PLUG

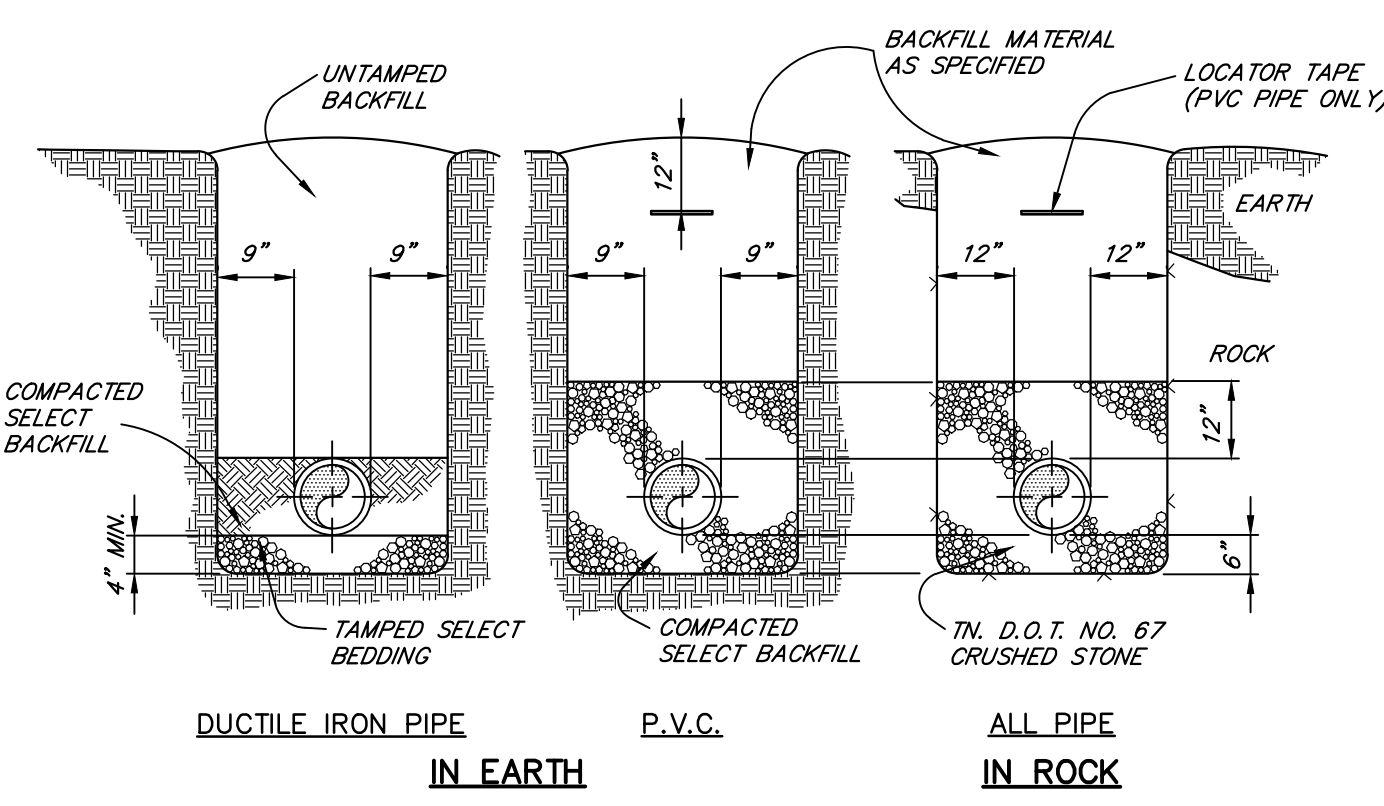
BEARING PRESSURE	
3000 PSF	
PSI = 200	
90° BEND	
SIZE	6" 12"
D	14 25
L	28 58
W	28 50
T	8 10
45° BEND	
SIZE	6" 12"
D	10 20
L	21 40
W	21 40
T	6 11
22 1/2° & 11 1/4° BENDS	
SIZE	6" 12"
D	8 14
L	15 28
W	15 28
T	6 11
TEE	
SIZE	6" 12"
D	12 23
L	24 45
W	24 45
T	12 19
PLUG	
SIZE	6" 12"
D	28 23
L	24 45
W	24 45
T	14 12

DIMENSIONS ARE IN INCHES

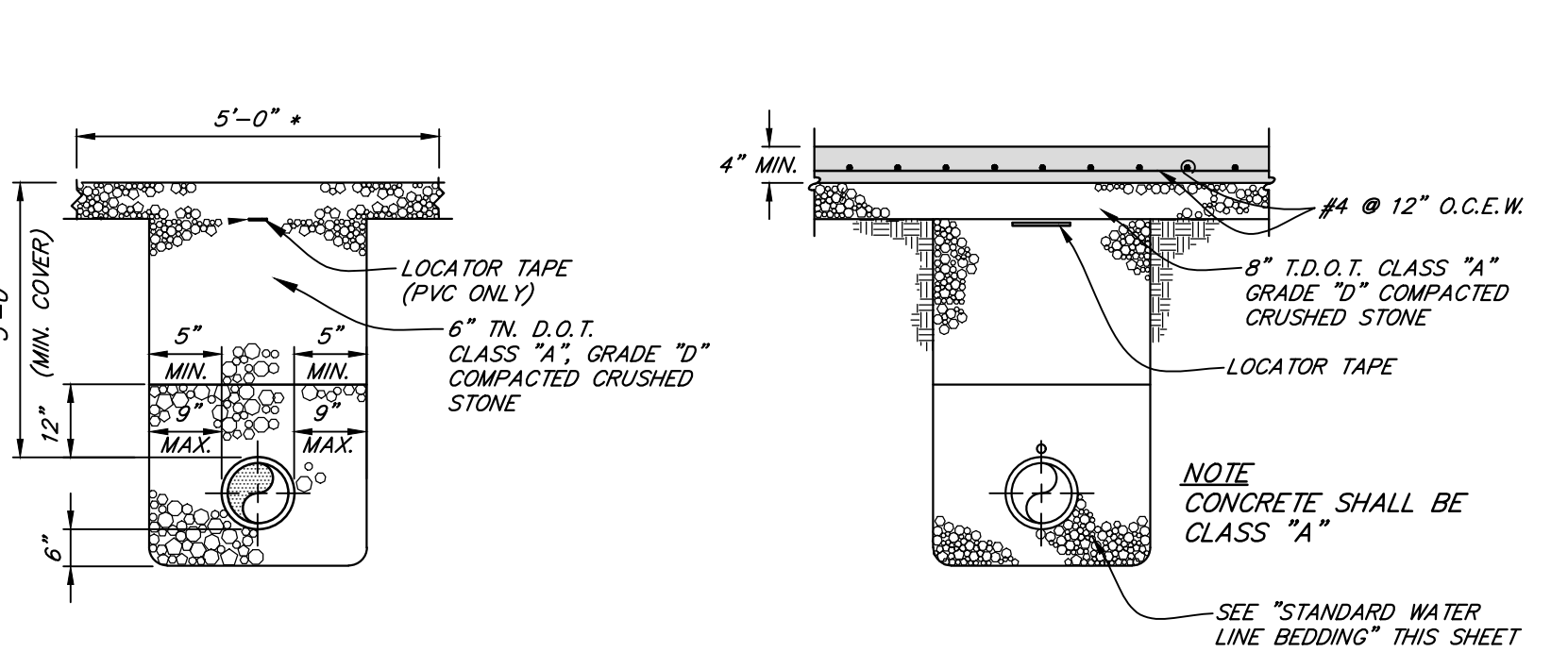
NOTES

- FOR TEE WITH BRANCH UNEQUAL TO RUN, USE TEE TYPE KICKER WITH D, L & W DIMENSIONS THE SAME AS THOSE FOR PLUG WITH SAME DIMENSIONS AS BRANCH OF TEE. SELECT T DIMENSION FROM TEE TABLE UNDER COLUMN HEADED BY THE SIZE OF THE BRANCH.
- IF EXACT SIZE OF PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE
- DIMENSION D MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. CONCRETE BLOCKING MUST BE POURED AGAINST UNDISTURBED EARTH.

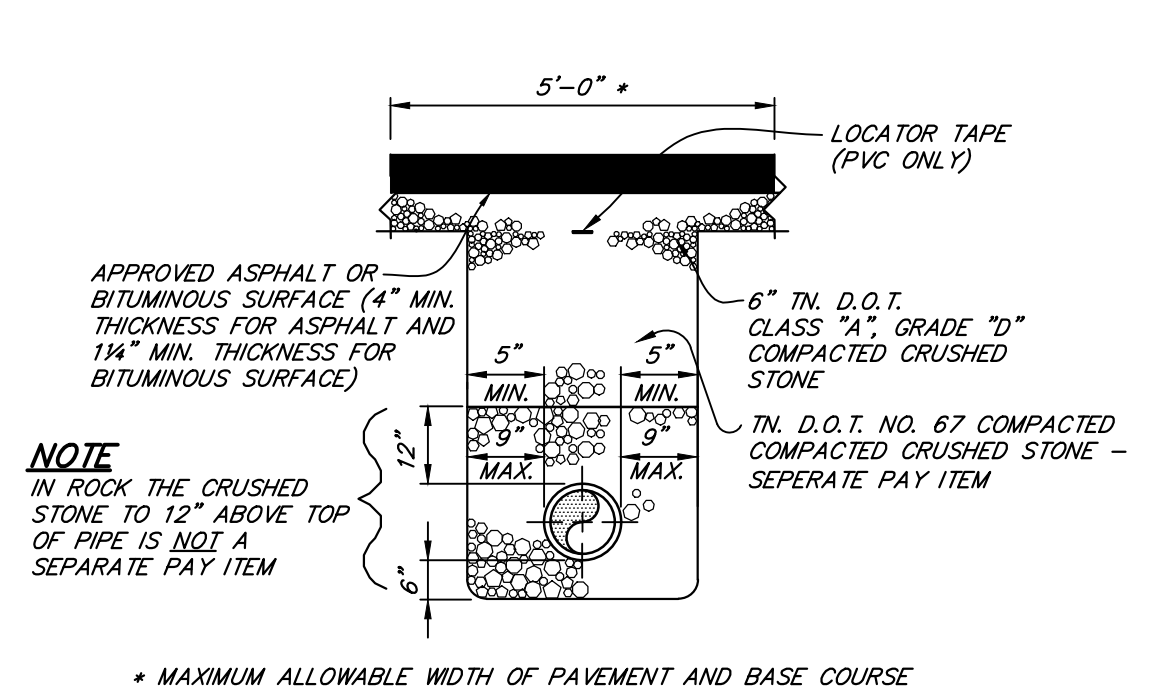
CLASS "C" CONCRETE BLOCKING FOR PIPE (KICKERS)



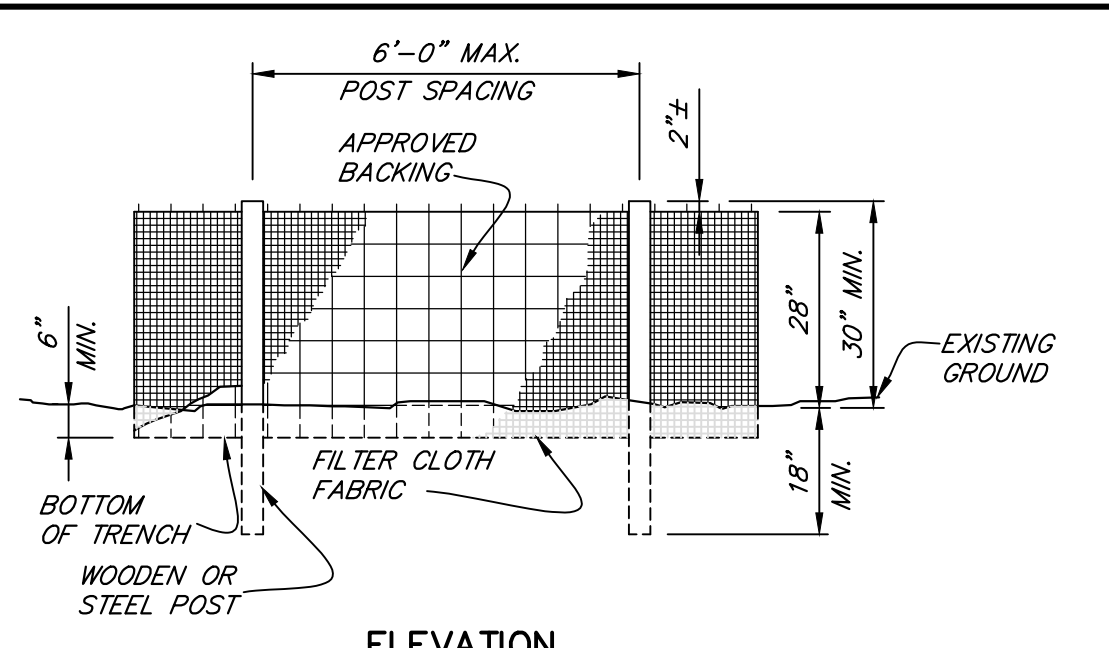
STANDARD WATER LINE BEDDING



GRAVEL SURFACE CONCRETE DRIVEWAY REPLACEMENT



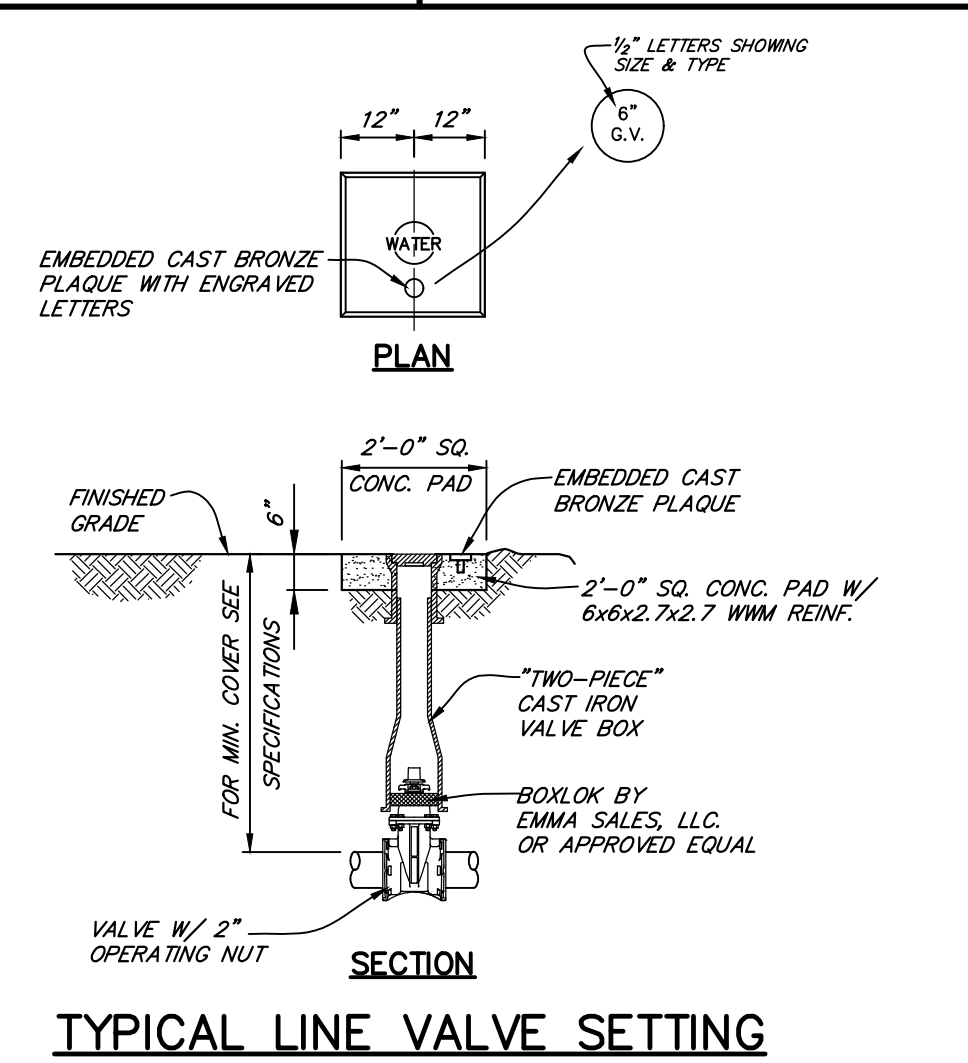
ASPHALT OR BITUMINOUS SURFACE



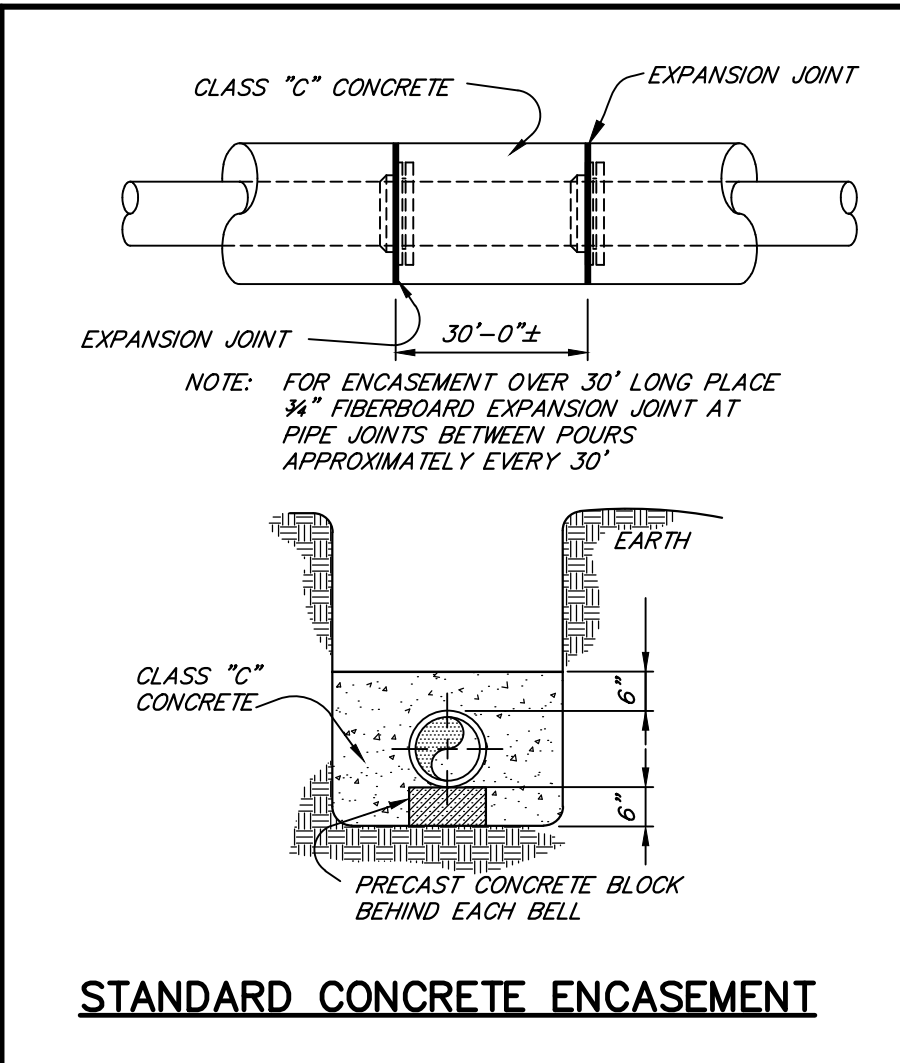
STANDARD TEMPORARY SILT FENCE

- NOTES:**
- FILTER CLOTH SHALL HAVE APPROVED BACKING OR A BUILT-IN REINFORCED STRUCTURE AS RECOMMENDED BY THE MANUFACTURER TO SUPPORT THE FILTER CLOTH.
 - A PREASSEMBLED SILT FENCE MEETING THE REQUIREMENTS OF THIS DRAWING IS ACCEPTABLE IN LIEU OF A FIELD CONSTRUCTED SILT FENCE
 - SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN SPECIFICATIONS FOR FURTHER DETAILS AND REQUIREMENTS.

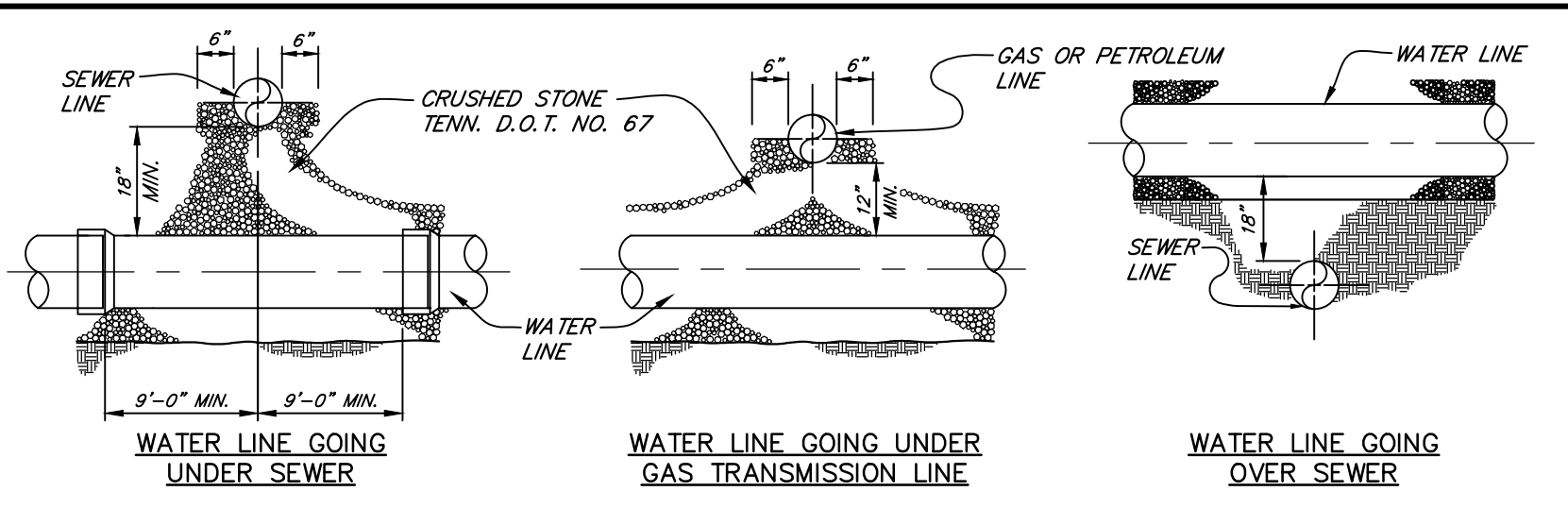
STANDARD TEMPORARY SILT FENCE



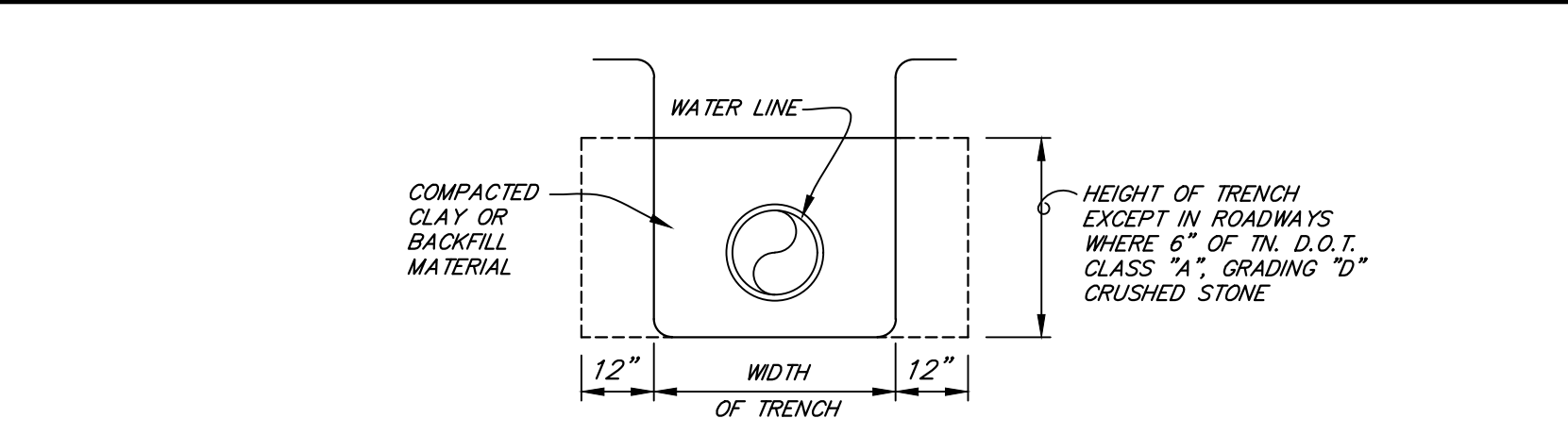
TYPICAL LINE VALVE SETTING



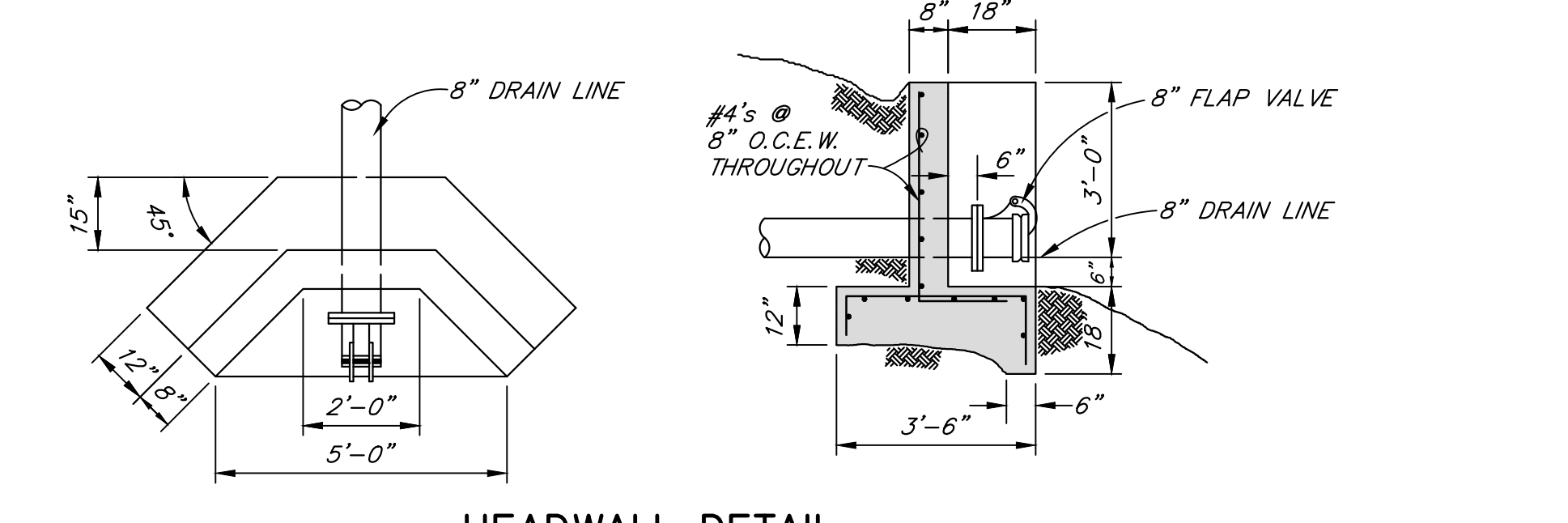
STANDARD CONCRETE ENCASEMENT



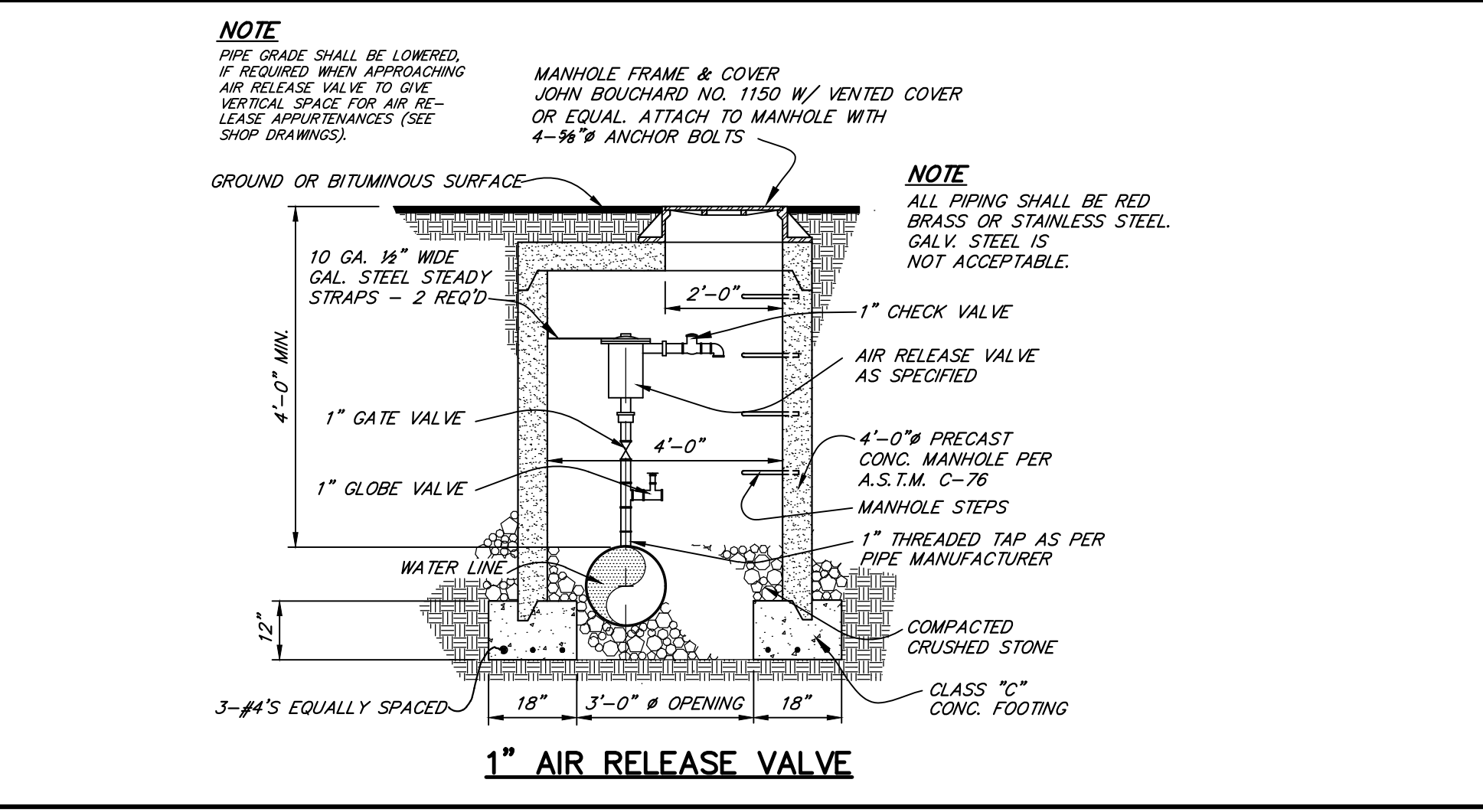
TYPICAL PIPE CROSSING



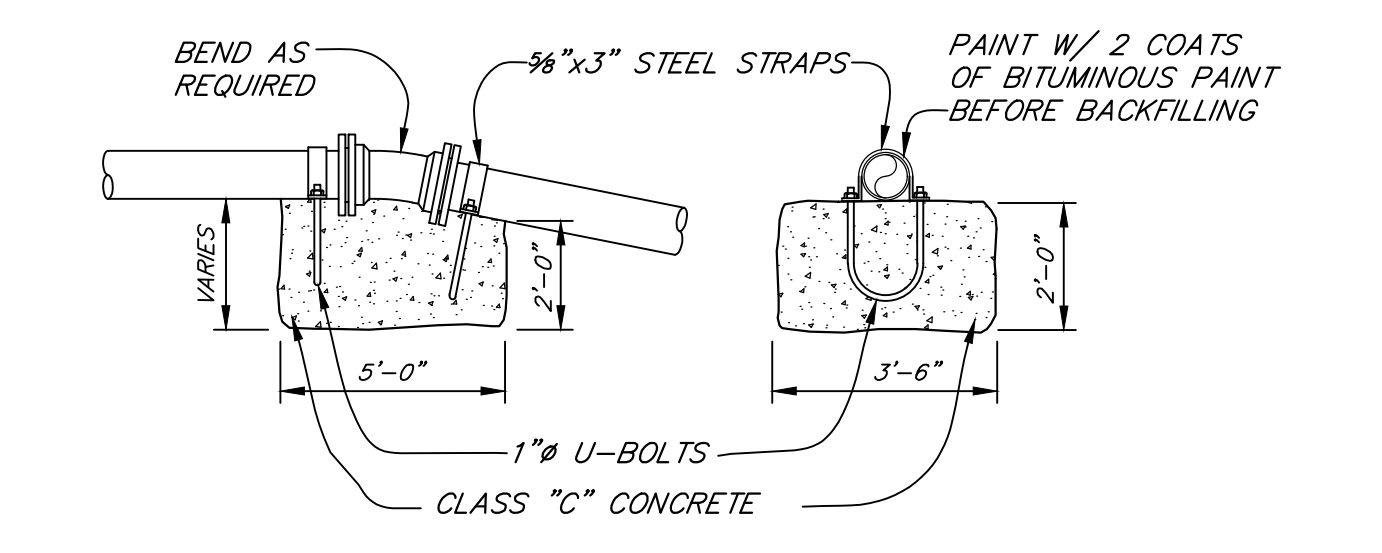
CHECK DAM DETAIL



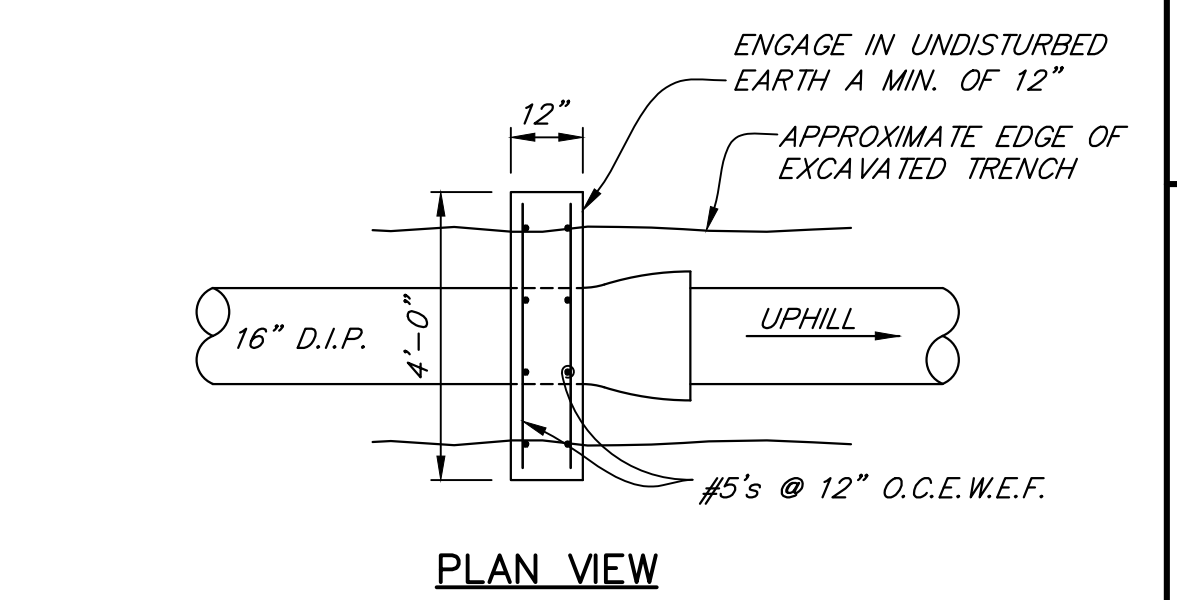
HEADWALL DETAIL



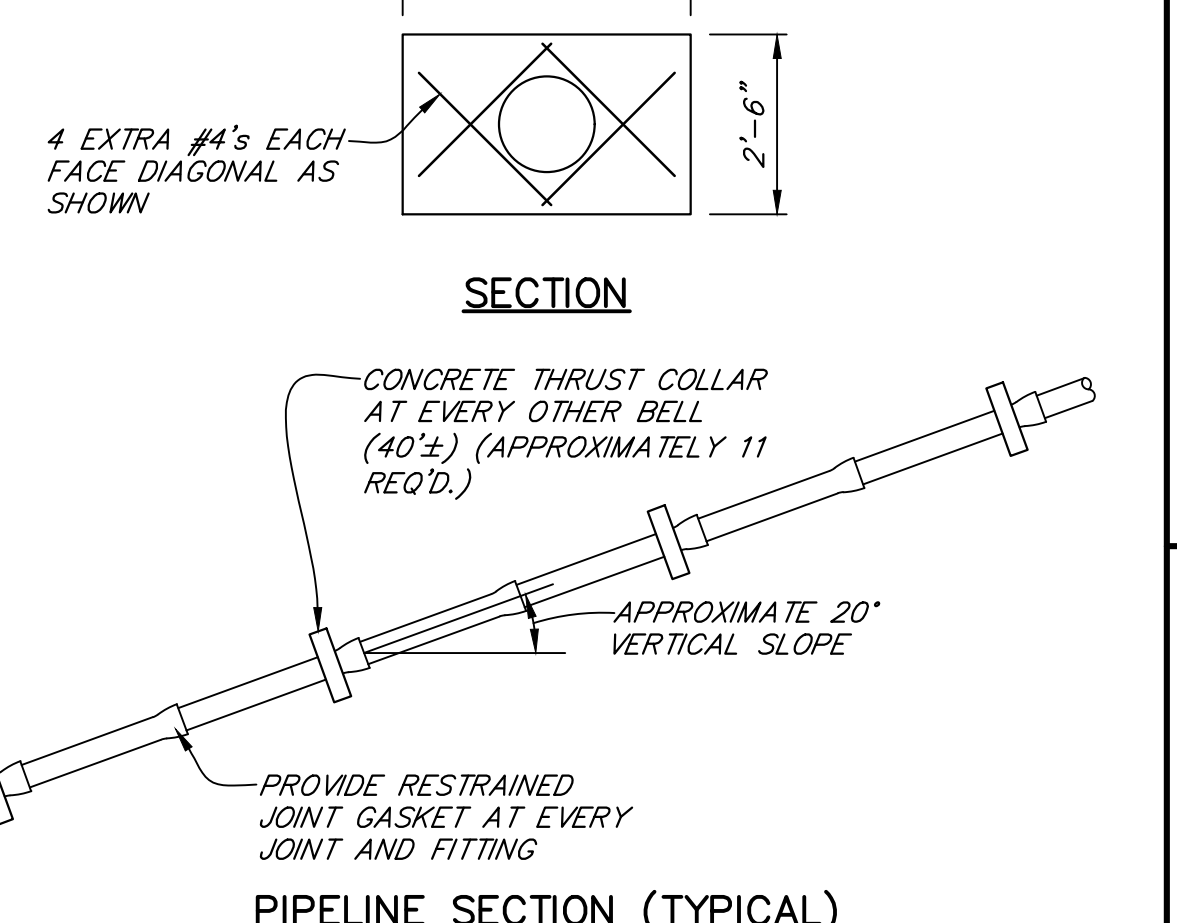
1" AIR RELEASE VALVE



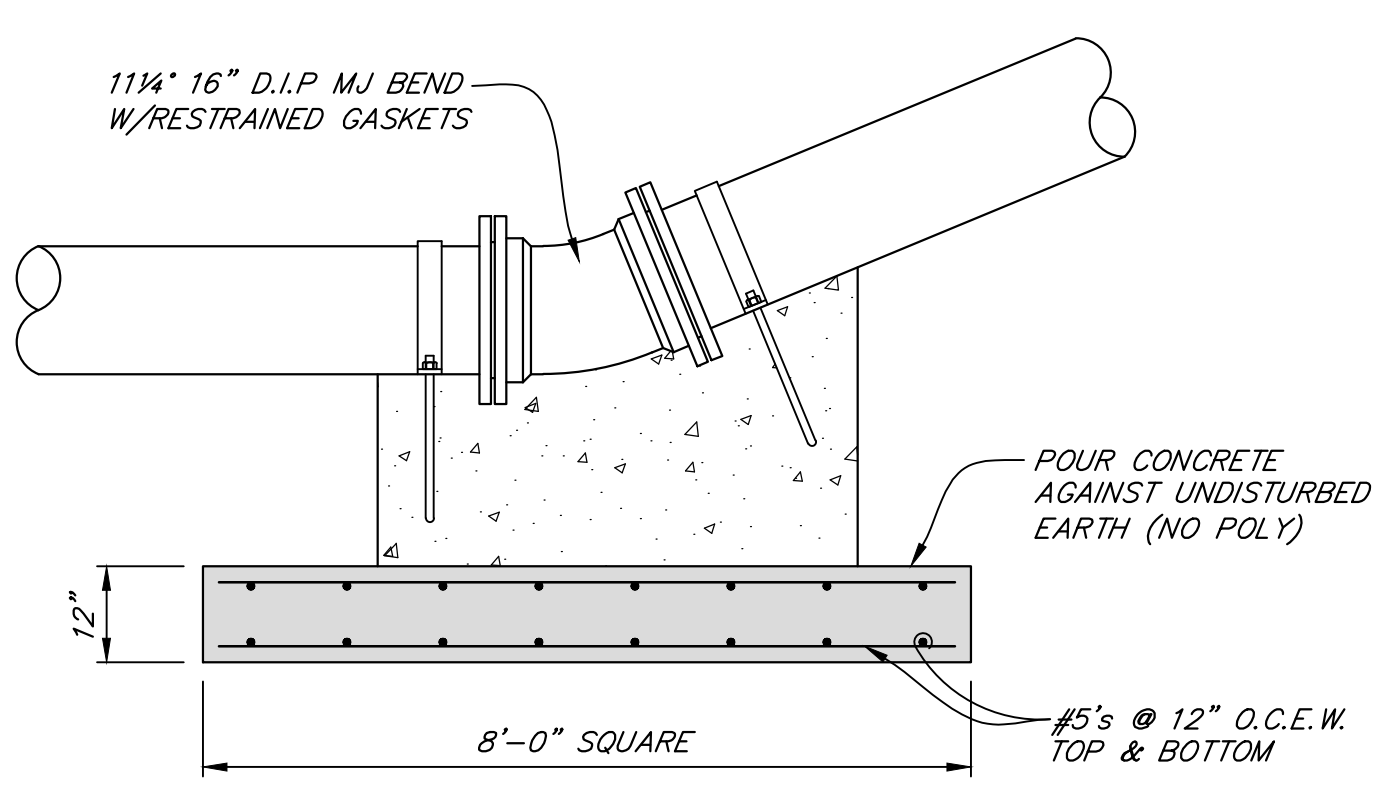
VERTICAL ANCHORING DETAIL



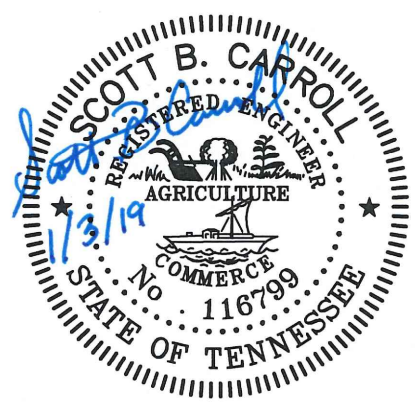
PIPELINE SECTION (TYPICAL)



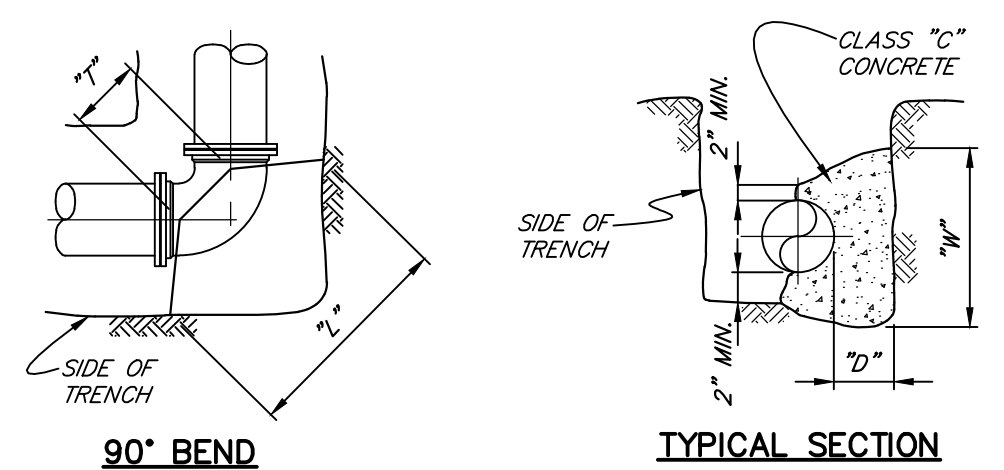
THRUST COLLAR DETAIL



SPECIAL VERTICAL KICKER AT STA. 25+41.1



SHEET 9 OF 13	WATER SYSTEM IMPROVEMENTS	
REVISIONS	CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
ADDENDUM NO. 5 7/17/19 RSS	DETAIL SHEET	
	FOR DAYTON, TENNESSEE	
SCALE	WAUFORD	
NO SCALE	J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865)984-9638 www.jrwauford.com	
PROJECT NUMBER	DATE	DESIGNED
4630	NOV. 2018	SBC
		DRAWN
		RSS
		CHECKED
		JGD



SOIL BEARING PRESSURE = 3000 PSF
TEST PRESSURE = 200 PSI

90° BEND	
SIZE	8"
D	16
L	38
W	38
T	10

45° BEND	
SIZE	8"
D	12
L	28
W	28
T	8

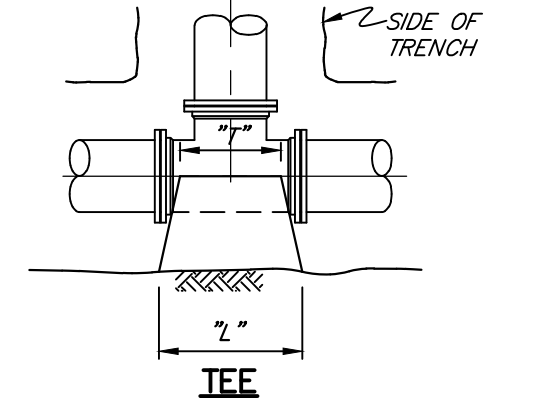
22½° & 11¼° BENDS	
SIZE	8"
D	10
L	20
W	20
T	9

TEE	
SIZE	8"
D	14
L	27
W	27
T	16

PLUG	
SIZE	8"
D	32
L	30
W	30
T	28

DIMENSIONS ARE IN INCHES

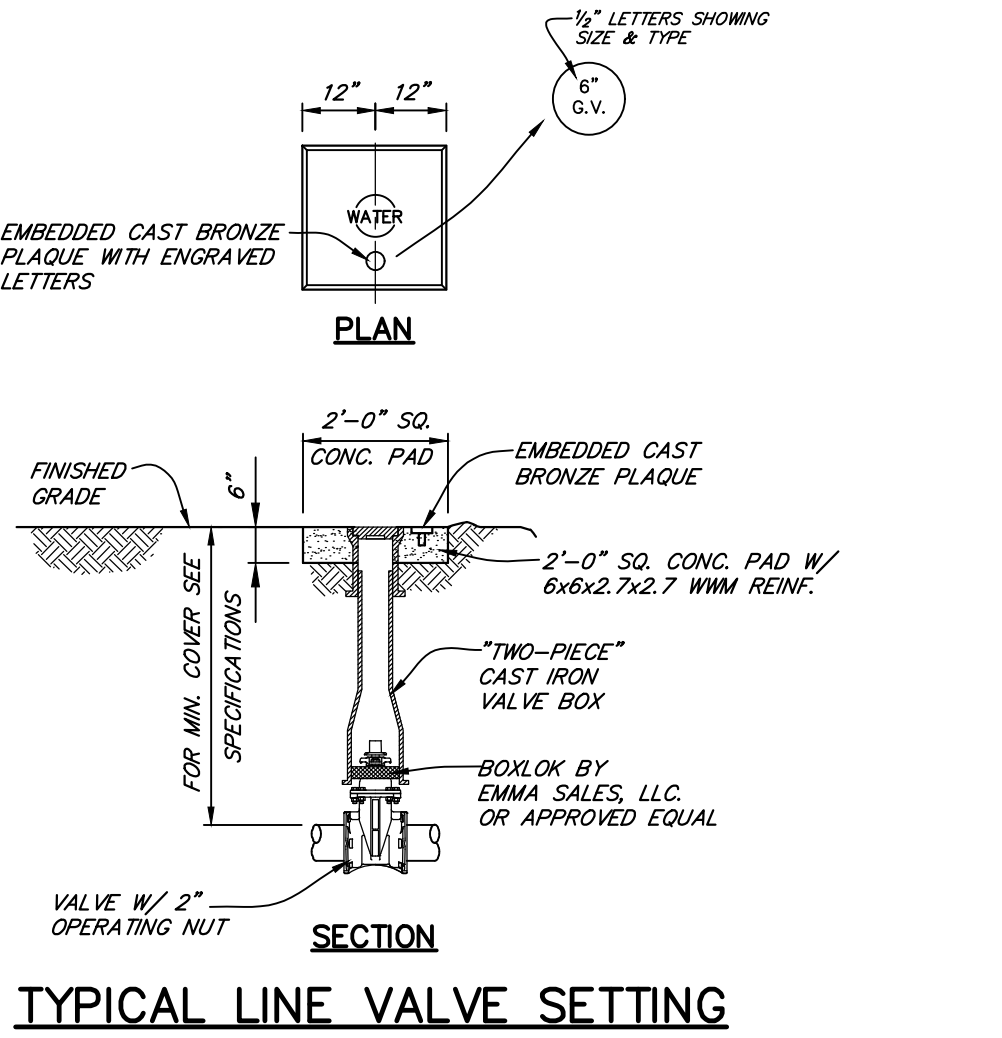
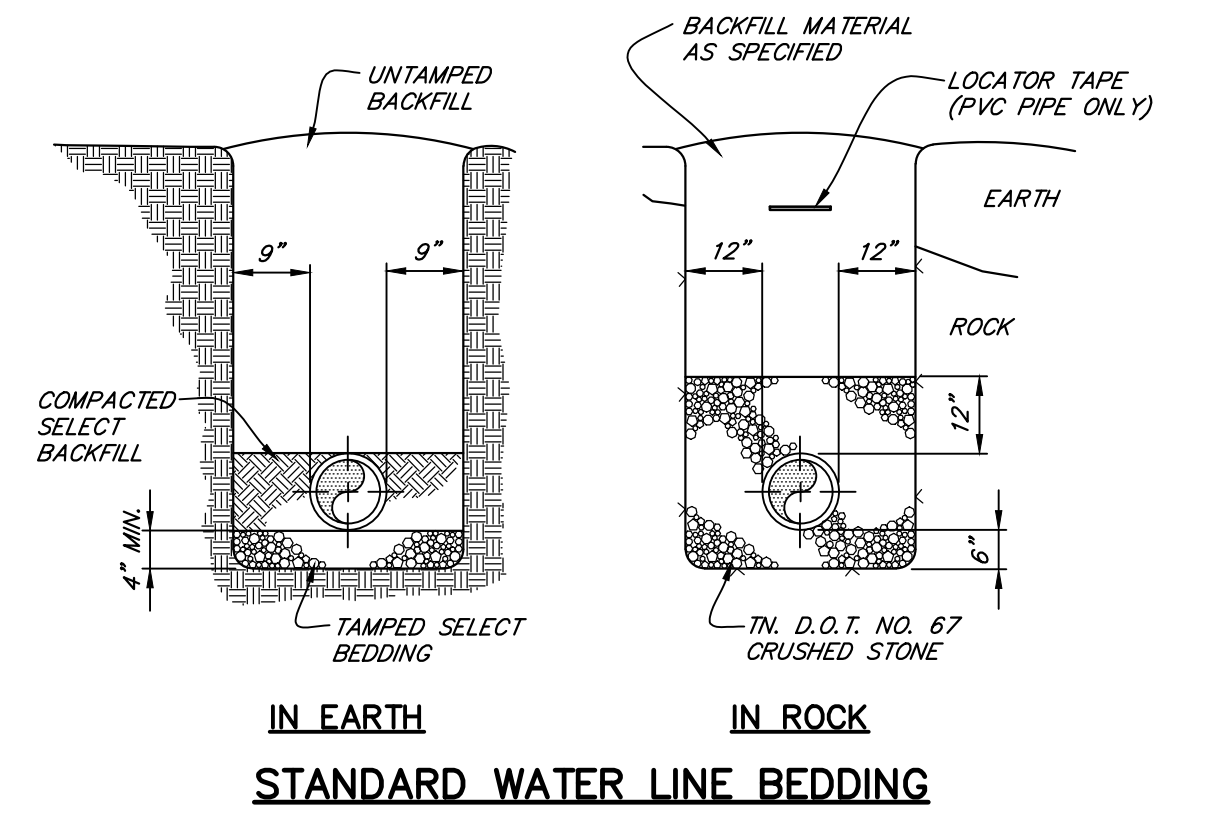
45°, 22½° & 11¼° BENDS



NOTES

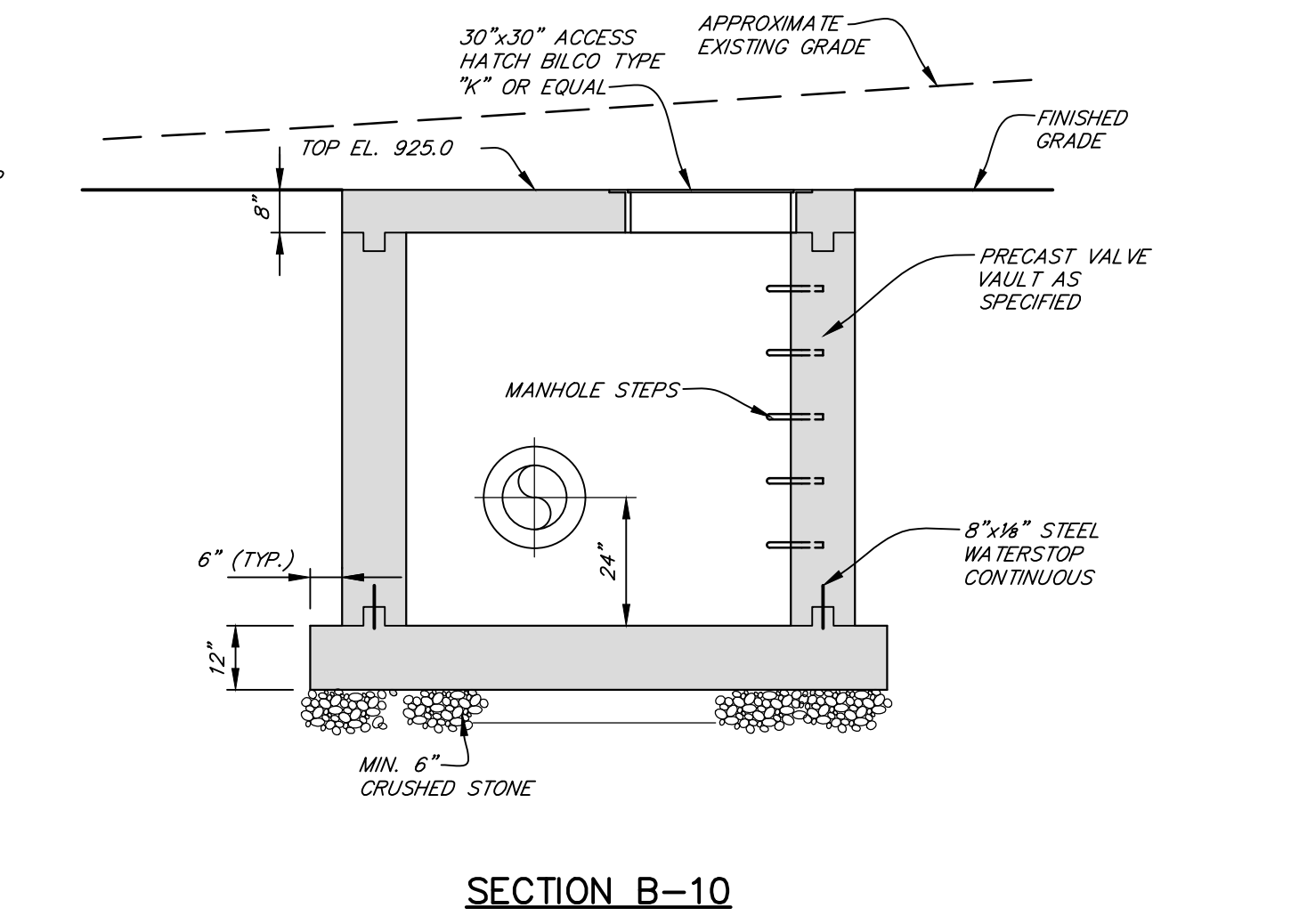
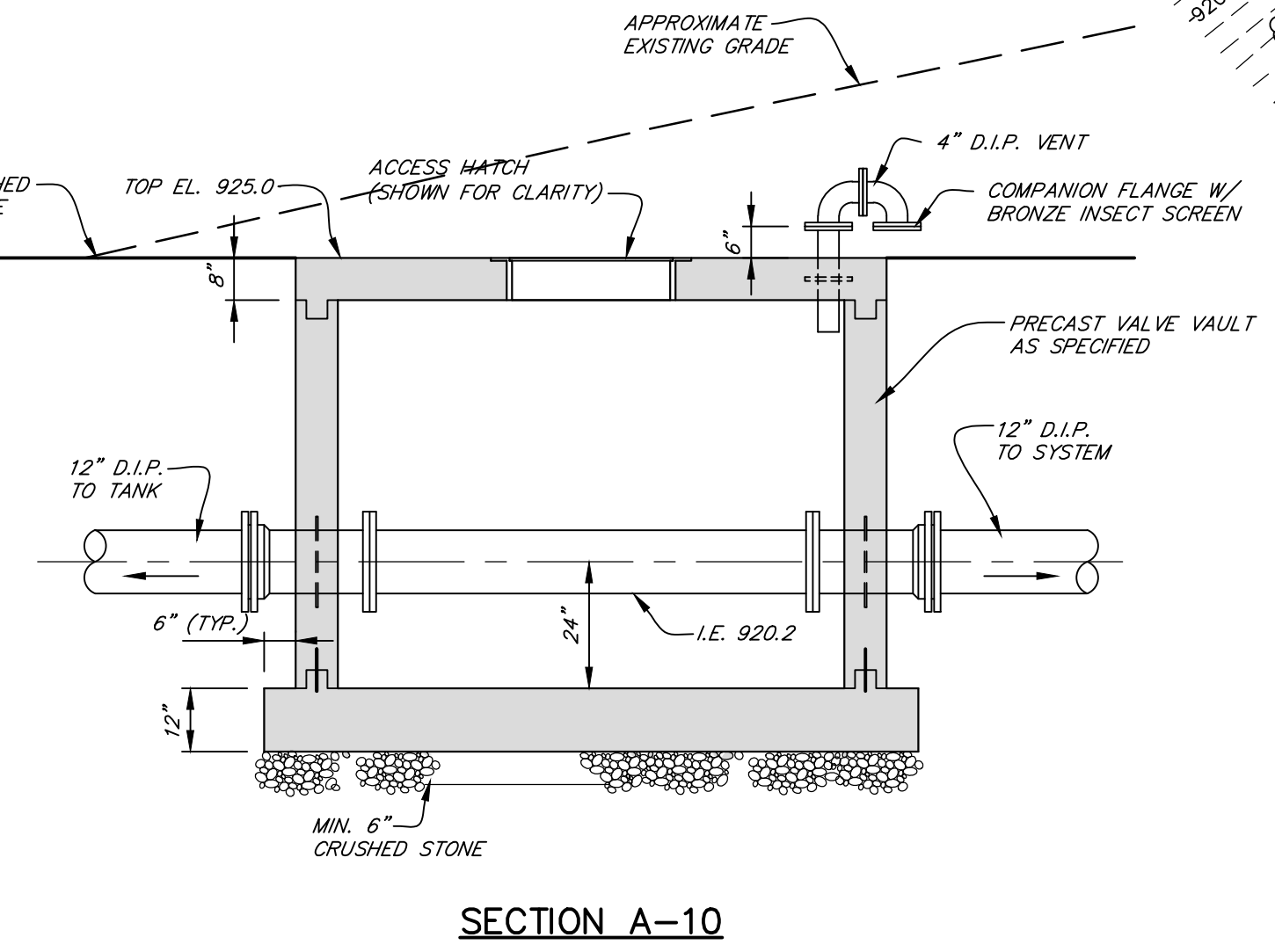
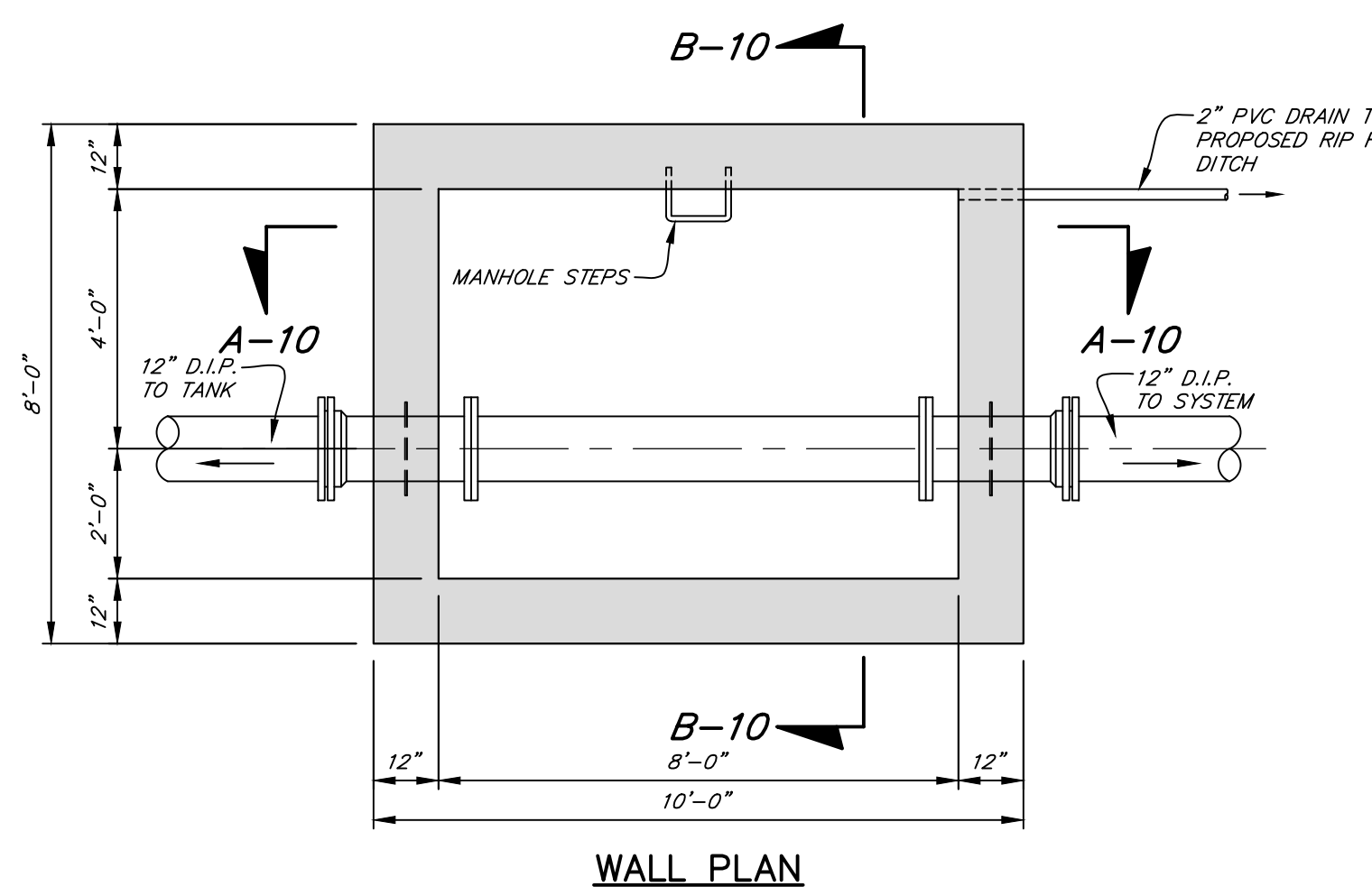
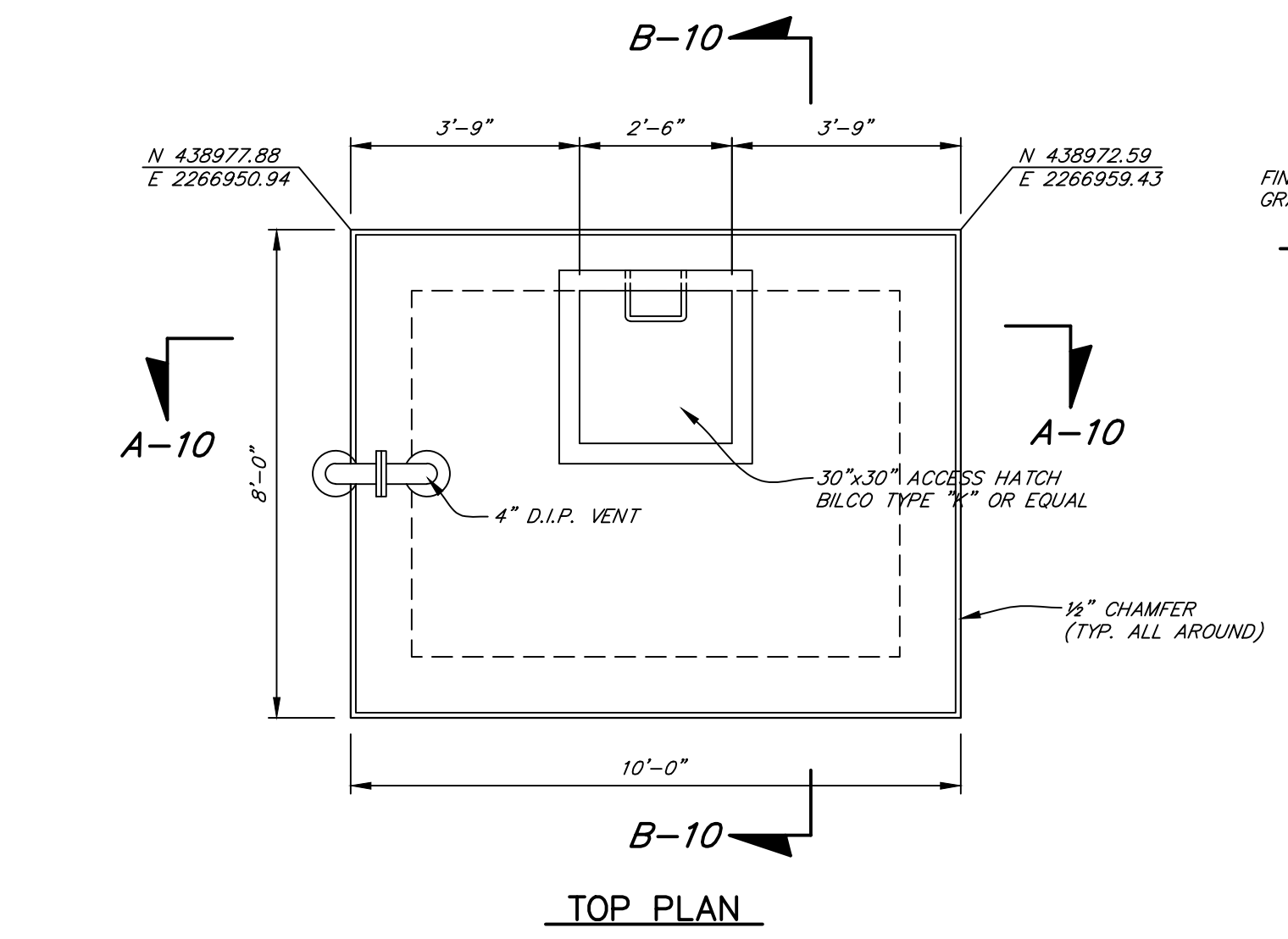
- FOR TEE WITH BRANCH UNEQUAL TO RUN, USE TEE TYPE KICKER WITH D, L & W DIMENSIONS THE SAME AS THOSE FOR PLUG WITH SAME DIMENSIONS AS BRANCH OF TEE. SELECT DIMENSION FROM TEE TABLE UNDER COLUMN HEADED BY THE SIZE OF THE BRANCH.
- IF EXACT SIZE OF PIPE BLOCKING IS NOT SHOWN, USE NEXT LARGER SIZE.
- DIMENSION D MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. CONCRETE BLOCKING MUST BE POURED AGAINST UNDISTURBED EARTH.

CONCRETE BLOCKING FOR PIPE (KICKERS)

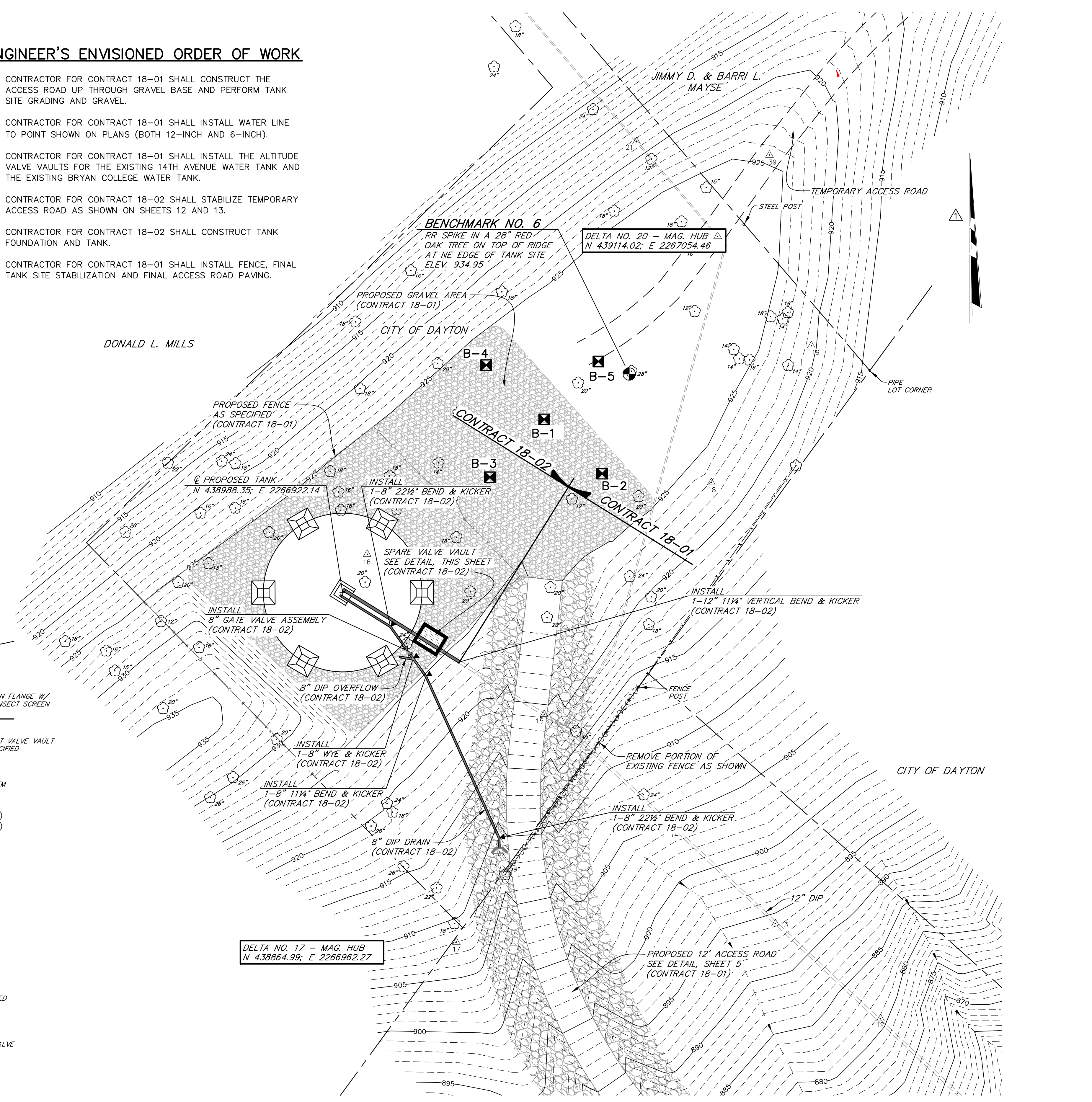


ENGINEER'S ENVISIONED ORDER OF WORK

- CONTRACTOR FOR CONTRACT 18-01 SHALL CONSTRUCT THE ACCESS ROAD UP THROUGH GRAVEL BASE AND PERFORM TANK SITE GRADING AND GRAVEL.
- CONTRACTOR FOR CONTRACT 18-01 SHALL INSTALL WATER LINE TO POINT SHOWN ON PLANS (BOTH 12-INCH AND 6-INCH).
- CONTRACTOR FOR CONTRACT 18-01 SHALL INSTALL THE ALTITUDE VALVE VAULTS FOR THE EXISTING 14TH AVENUE WATER TANK AND THE EXISTING BRYAN COLLEGE WATER TANK.
- CONTRACTOR FOR CONTRACT 18-02 SHALL STABILIZE TEMPORARY ACCESS ROAD AS SHOWN ON SHEETS 12 AND 13.
- CONTRACTOR FOR CONTRACT 18-02 SHALL CONSTRUCT TANK FOUNDATION AND TANK.
- CONTRACTOR FOR CONTRACT 18-01 SHALL INSTALL FENCE, FINAL TANK SITE STABILIZATION AND FINAL ACCESS ROAD PAVING.



SPARE VALVE VAULT
SCALE: 3/8" = 1'-0"

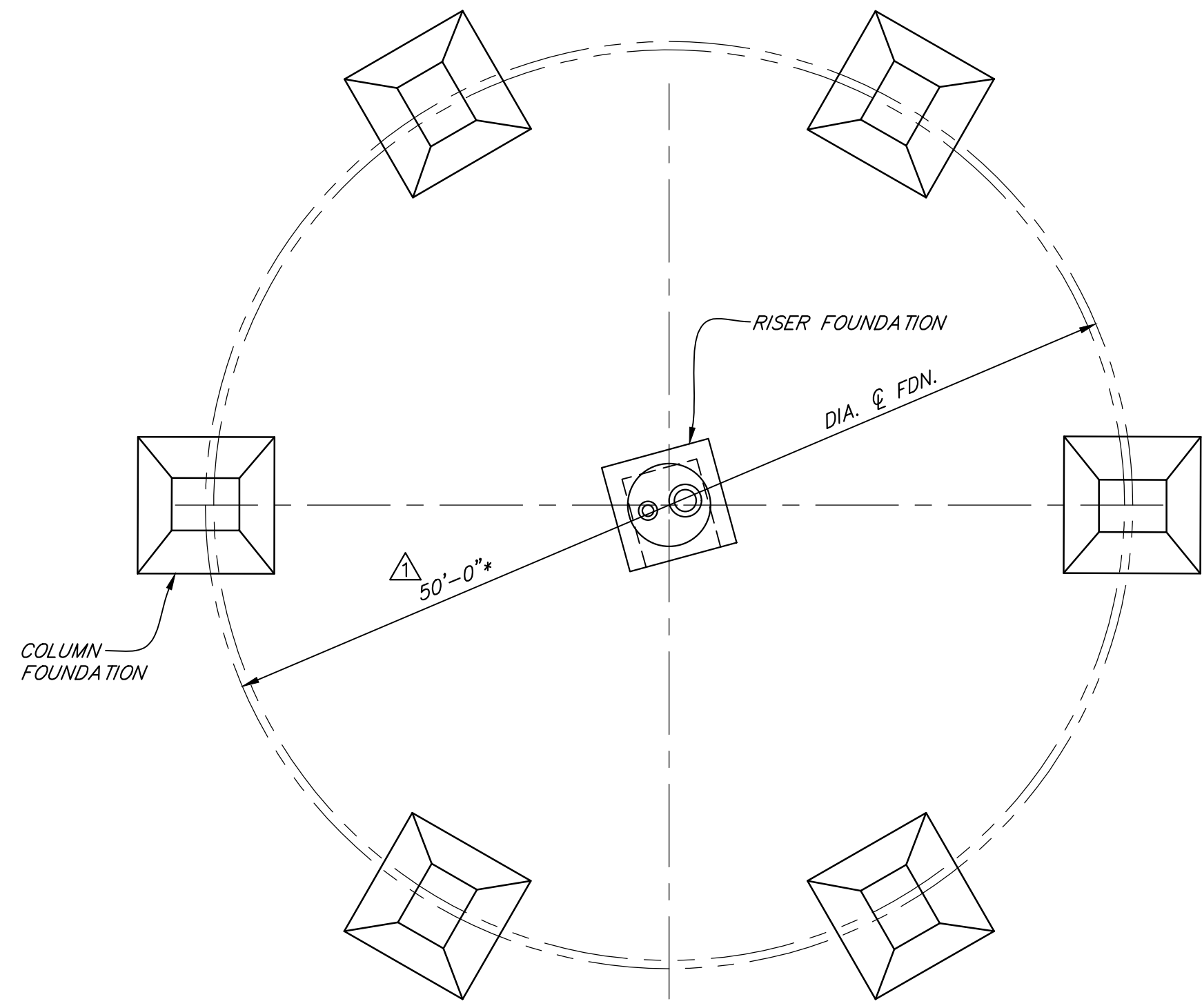


CONSTRUCTION NOTES:

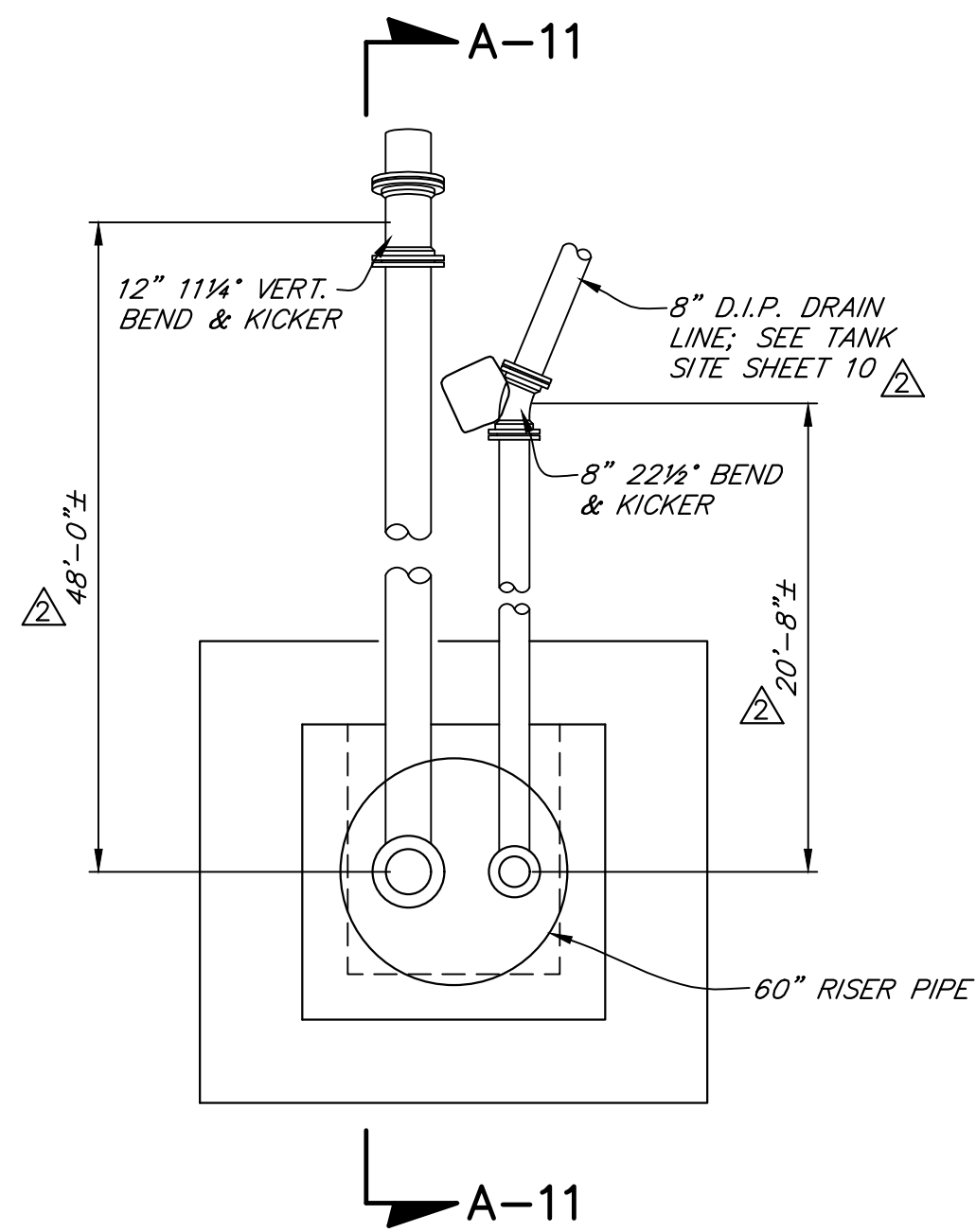
- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
- ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.



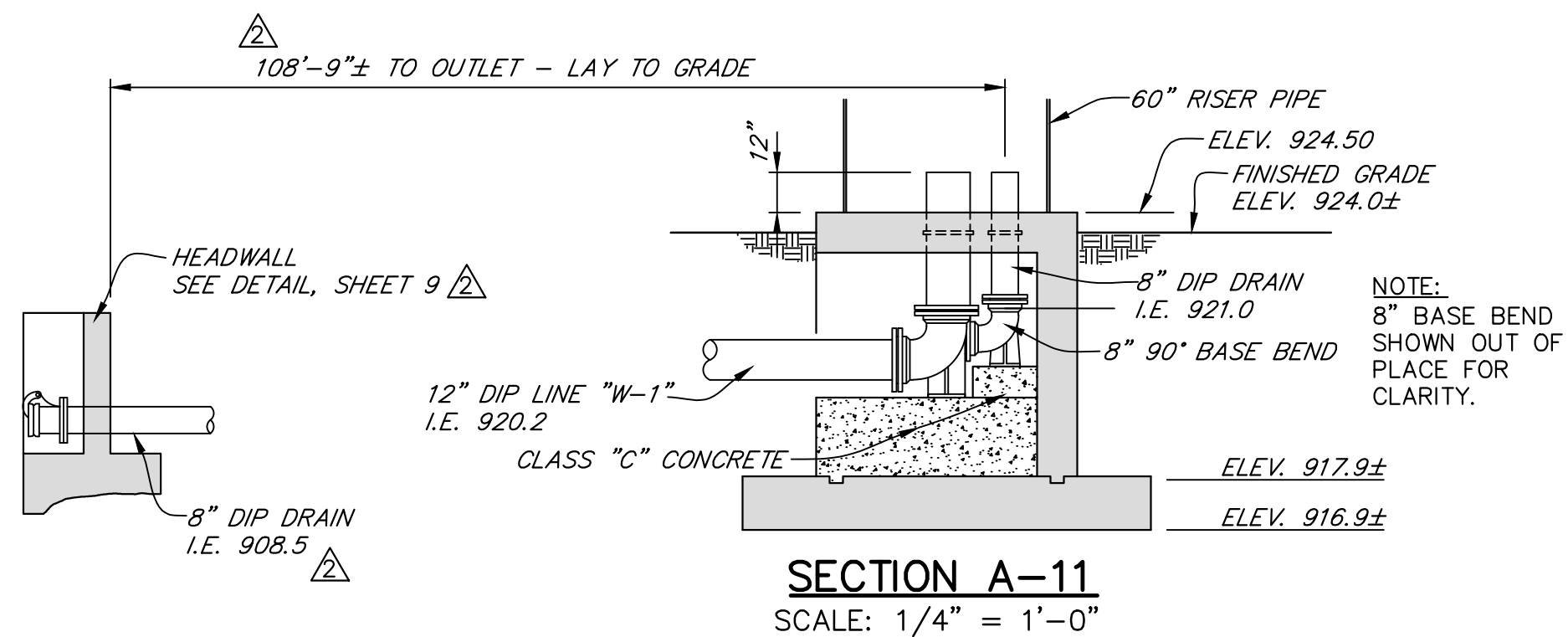
SHEET 10 OF 13		WATER SYSTEM IMPROVEMENTS CONTRACT 18-02 INDUSTRIAL PARK 500,000 GALLON ELEVATED WATER STORAGE TANK	
REVISIONS		PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK SITE GRADING PLAN, SPARE VALVE VAULT, AND DETAILS FOR DAYTON, TENNESSEE	
ADDENDUM NO. 4 5/31/19 RSS		SCALE	DESIGNED SBC
ADDENDUM NO. 5 7/17/19 RSS		AS SHOWN	DRAWN RSS
		PROJECT NUMBER 4630	CHECKED JGD
		DATE NOV. 2018	
		WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865)994-9638 www.jrwauford.com	



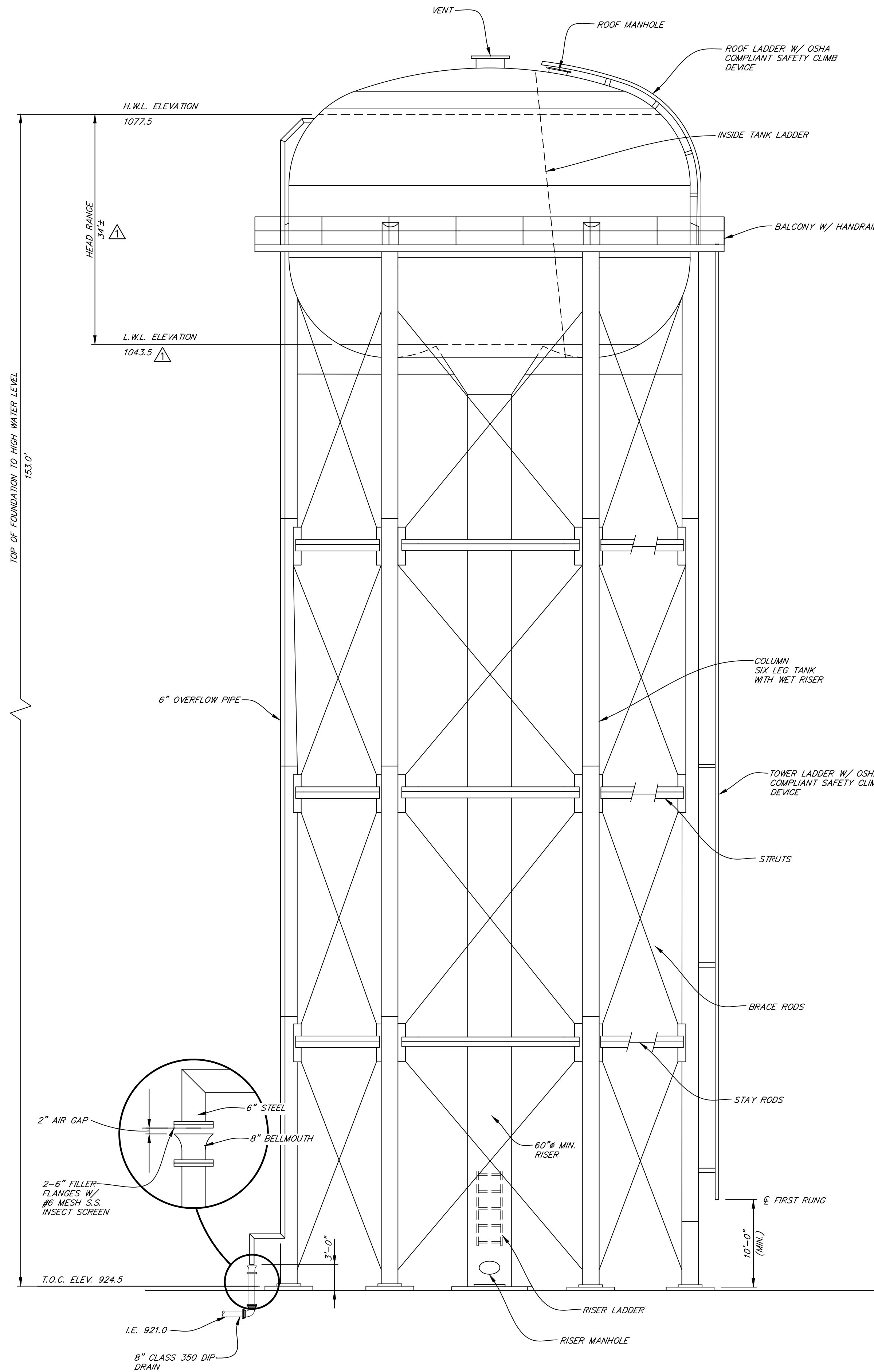
NEW TANK FOUNDATION PLAN
SCALE: 1/8" = 1'-0"
* DIMENSIONS MAY VARY.



CENTER PIER PLAN
SCALE: 1/4" = 1'-0"



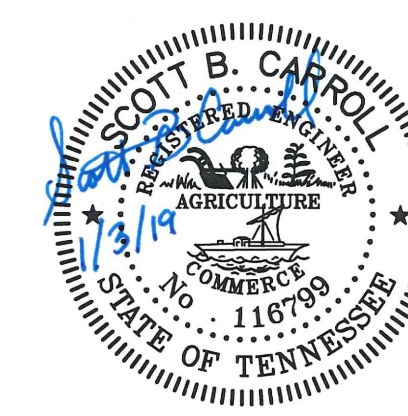
SECTION A-11
SCALE: 1/4" = 1'-0"



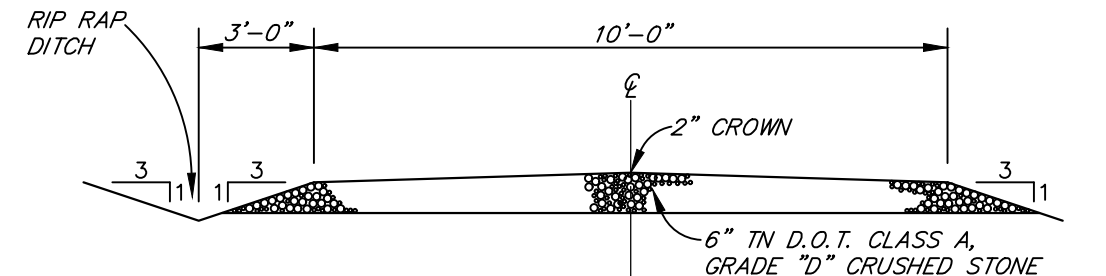
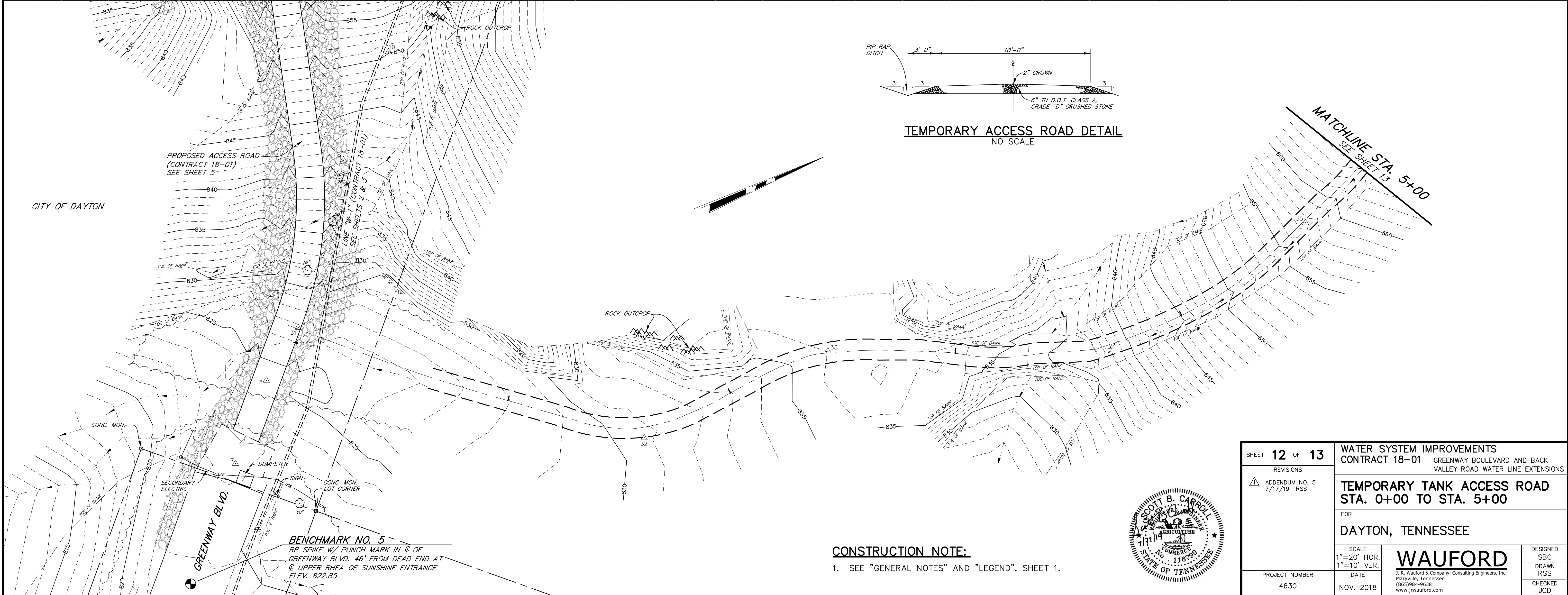
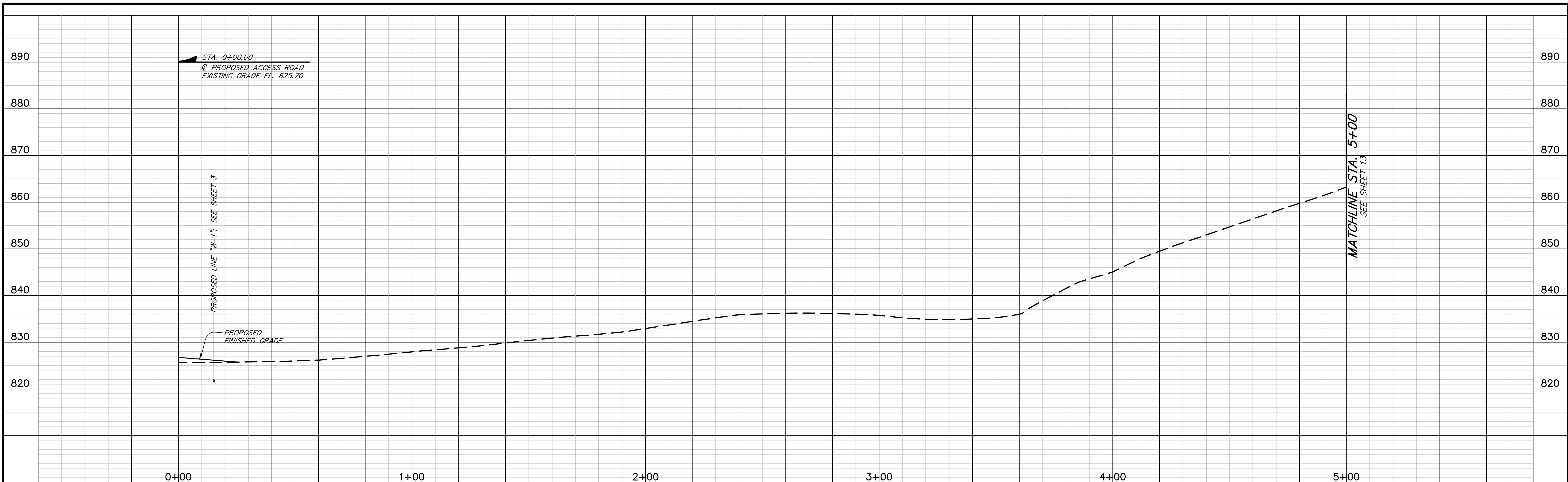
NEW 500,000 GALLON TANK ELEVATION
SCALE: 1/8" = 1'-0"

CONSTRUCTION NOTES:

- SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.
- ALL MECHANICAL JOINT FITTINGS SHALL UTILIZE MEGALUG RESTRAINT GLANDS BY EBAA IRON OR APPROVED EQUAL IN ADDITION TO CONCRETE KICKERS.
- THE TANK CONTRACTOR IS RESPONSIBLE FOR DESIGN OF THE FOUNDATION INCLUDING DEPTH AND REINFORCING STEEL.

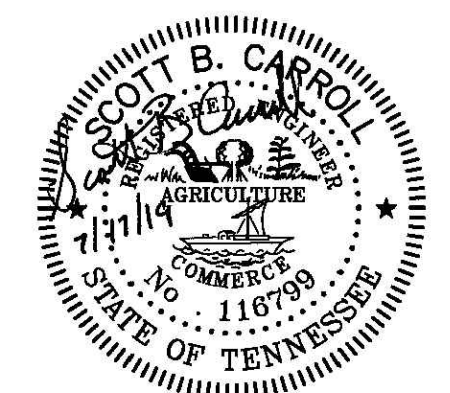


SHEET 11 OF 13		WATER SYSTEM IMPROVEMENTS CONTRACT 18-02 INDUSTRIAL PARK 500,000 GALLON ELEVATED WATER STORAGE TANK	
REVISIONS		FOR	
ADDENDUM NO. 4 5/31/19 RSS		PROPOSED 500,000 GALLON ELEVATED WATER STORAGE TANK	
ADDENDUM NO. 5 7/17/19 RSS		DAYTON, TENNESSEE	
SCALE	AS SHOWN	DESIGNED SBC	
PROJECT NUMBER 4630	DATE NOV. 2018	DRAWN RSS	CHECKED JGD
		WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865) 984-9638 www.jrwauford.com	

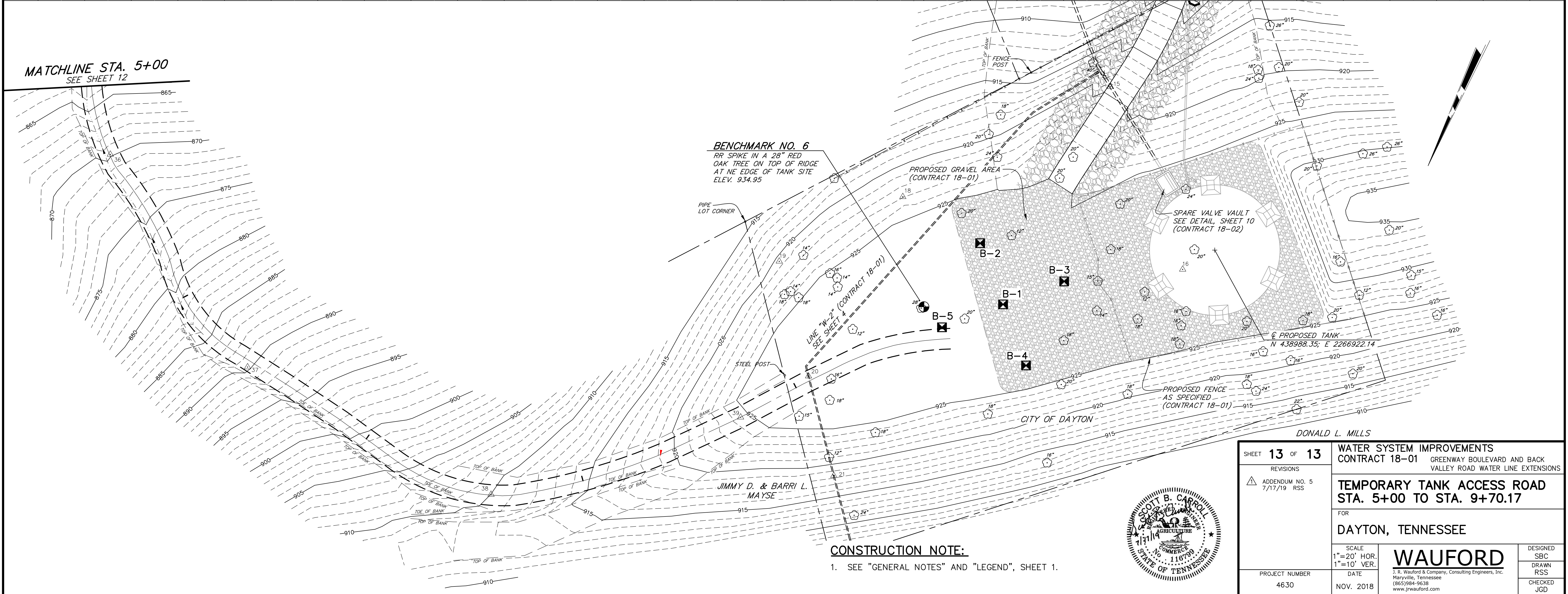
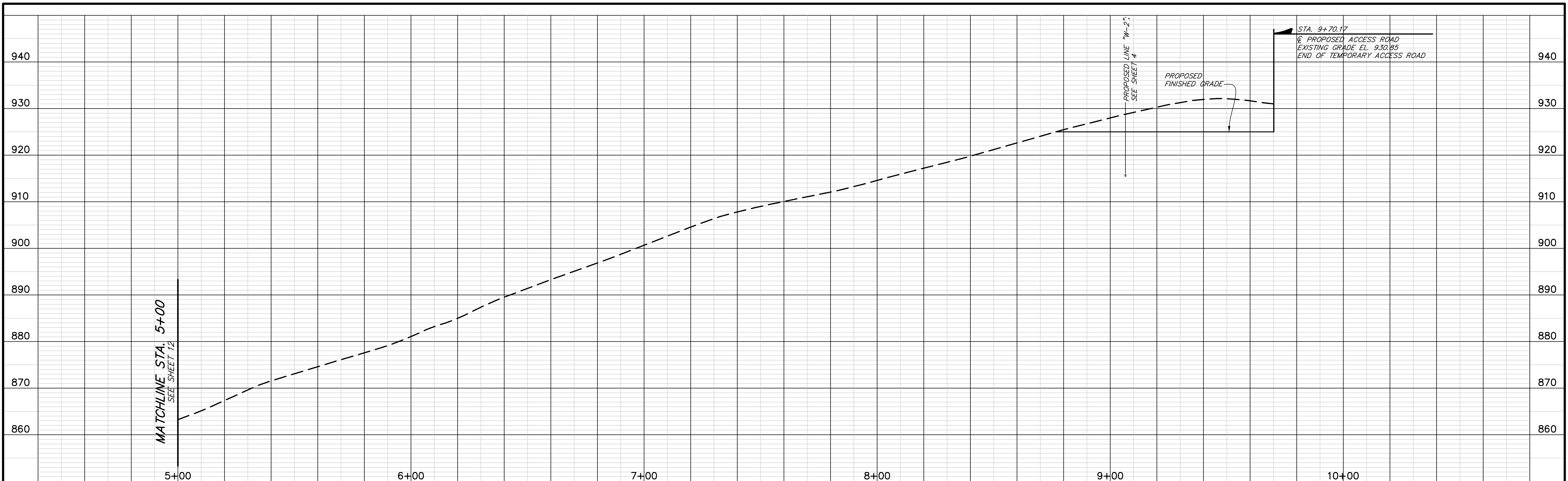


TEMPORARY ACCESS ROAD DETAIL
NO SCALE

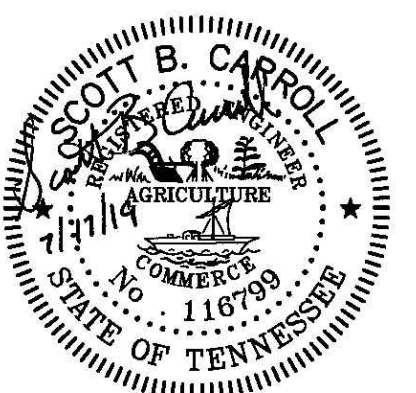
CONSTRUCTION NOTE:
1. SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.



SHEET 12 OF 13		WATER SYSTEM IMPROVEMENTS CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
REVISIONS		FOR	
ADDENDUM NO. 5 7/17/19 RSS		DAYTON, TENNESSEE	
SCALE 1"=20' HOR. 1"=10' VER.	DATE NOV. 2018	DESIGNED SBC DRAWN RSS CHECKED JGD	
PROJECT NUMBER 4630	 J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865) 984-9638 www.jrwauford.com		



CONSTRUCTION NOTE:
 1. SEE "GENERAL NOTES" AND "LEGEND", SHEET 1.



SHEET 13 OF 13		WATER SYSTEM IMPROVEMENTS	
REVISIONS		CONTRACT 18-01 GREENWAY BOULEVARD AND BACK VALLEY ROAD WATER LINE EXTENSIONS	
ADDENDUM NO. 5 7/17/19 RSS		TEMPORARY TANK ACCESS ROAD STA. 5+00 TO STA. 9+70.17	
FOR		DAYTON, TENNESSEE	
SCALE 1"=20' HOR. 1"=10' VER.	DESIGNED SBC	WAUFORD J. R. Wauford & Company, Consulting Engineers, Inc. Maryville, Tennessee (865) 984-9638 www.jrwauford.com	
PROJECT NUMBER 4630	DRAWN RSS		
DATE NOV. 2018	CHECKED JGD		