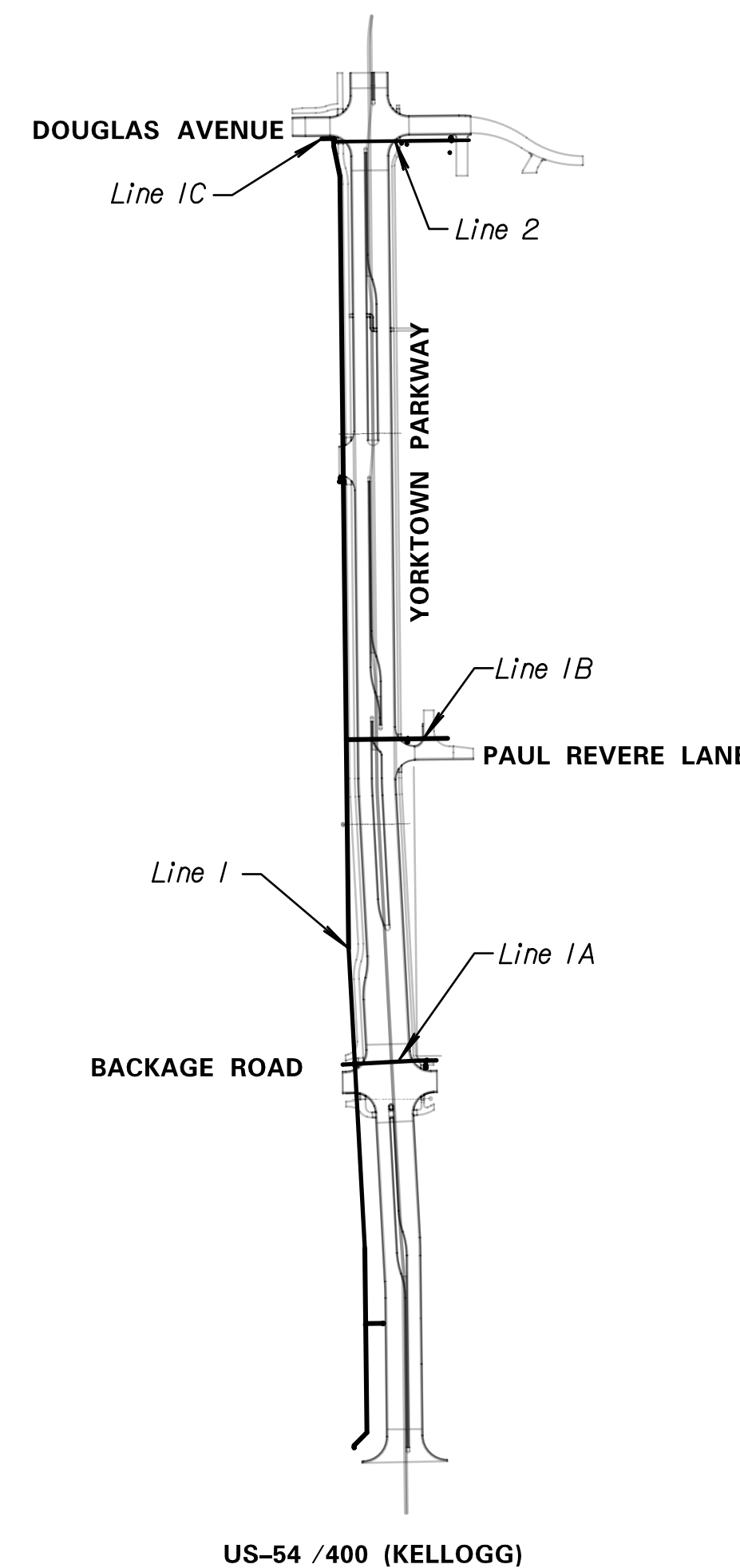
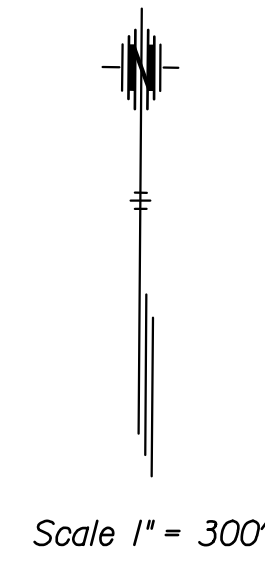


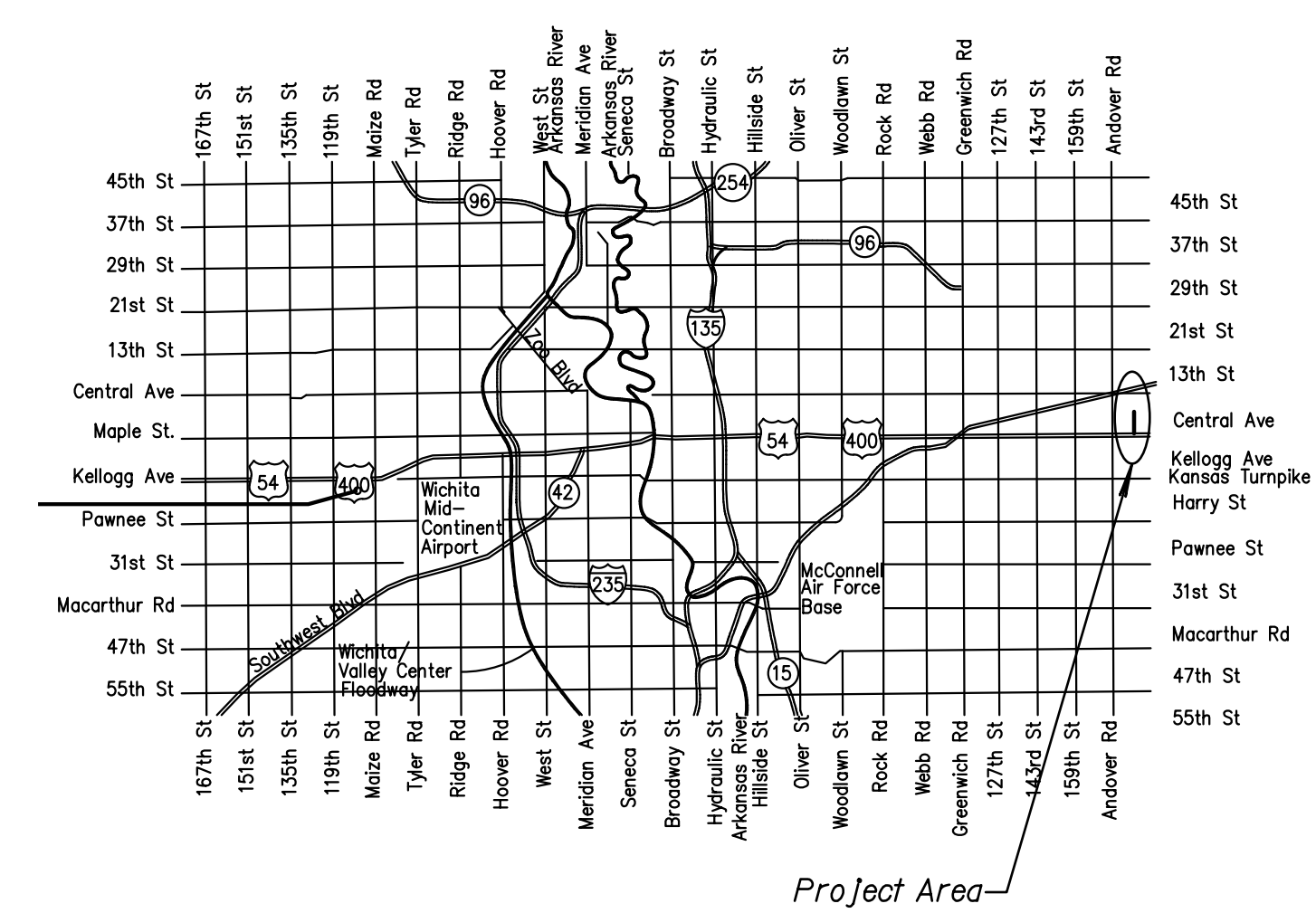
GENERAL NOTES

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City of Wichita Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows.  
Kansas One-Call 687-2470  
The Contractor must notify the following in case of an emergency:  
AT&T 1-800-246-8464  
City of Wichita Water & Sewer 1-316-219-8921  
City of Wichita Stormwater 1-316-268-4090  
City of Wichita Traffic 1-316-268-4034  
Cox Communications 1-888-249-3530  
Kansas Gas Service 1-888-482-4950  
Westar Energy 1-800-544-4857  
City of Andover 1-316-733-1303
- Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the City Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to reestablish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- The Engineering Division shall field locate water valves one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match final grades by the contractor.
- The Contractor shall notify the inspecting engineer and Tom Mason at 316-268-4574 with the City of Wichita with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
- All elevations shown are NAVD 88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
- All applicable fees (tap, equity, in lieu of & main benefit) must be paid before any connections can be made on this project. Quotes can be obtained on fees by calling 316-268-4555.
- City maintenance of water mains ends at right-of-way or easement line or within two feet of vault.
- Opening and closing of water valves shall be done slowly to prevent damage to the water distribution system from water hammer. All valves closed by the contractor must be reopened as new construction permits. The project inspector must ascertain that any valve closed by the Contractor is reopened. The Contractor will be permitted to operate water valves only when the project inspector assigned to the project is present.
- Connections to existing water lines shall not be paid for directly, but shall be considered INCIDENTAL to other items in the bid.
- The Contractor shall lay a Tracer Wire and Set Test Stations along all water pipe installed in accordance with City Specifications and Tracer Wire Detail on detail sheet 153, cost is SUBSIDIARY to pipe installation.
- The contractor shall provide materials for temporary blowoff of waterlines. Connections to the existing waterline(s) shall be made with clean, swabbed pipe and flushed upon completion of tie-ins.
- Temporary Blowoff Valves necessary to flush lines at existing water line tie-ins shall not be paid for directly, but shall be considered INCIDENTAL to other items in the bid.
- Requests for short term water interruptions shall be made to the City Water Distribution Division and will be subject to their approval. The Contractor shall give written notice to any property owner, business, and/or tenants that will have water service interrupted at least 5 days in advance. Such notifications should indicate the time and date that the water will be turned off and when the service will be restored. No business, property owner, and/or tenants shall be without water service for more than 8 hours. Proposed tie in locations which will affect water service to property owners shall be preformed during non-peak hours.
- The Contractor must schedule the connections to the existing main with the City such that there is a minimum disruption of service. Connections shall be made during periods of low water usage. The Contractor shall submit his proposed schedule for completing work for City approval at least 10 days prior to beginning construction.
- Deflections at pipe joint or couplings shall not exceed the pipe manufactures recommended maximum. Where deflections are greater than the maximum allowed, the contractor shall utilize fittings.
- Any existing joint exposed during excavation shall be replaced if within four feet of proposed joint.
- Valves 12 inch and larger are to be operated by the City Water Distribution Division, 48 hours of advance notice is required with the water Dispatch at 316-291-8921.
- All wet taps shall be installed by the City of Wichita. The Contractor will reimburse the City for tapping fees prior to tap being made. Unless noted on plans.
- Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.
- Existing underground utilities are shown at estimated depths. The Contractor shall verify the exact depths of underground utilities that are critical to the construction before beginning work. The cost for this shall be SUBSIDIARY to the project.
- The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractors expense.
- The Contractor shall understand that utilities may have been relocated to new locations and that additional coordination with Utility Companies may be required. The Contractor shall be required to work around existing utilities within the right-of-way.
- Contractor shall verify horizontal and vertical location, type size and class of existing waterlines prior to making connections. The existing waterline locations as shown on the plans are approximate. The contractor shall make adjustments as required and approved by the Engineer. Provisions and installation of pipe adaptors, short sections of pipe, and couplers shall be SUBSIDIARY to other pay items of work.
- Contractor shall not start work on the project until the Project Inspector is assigned to the project and is present on the site. Any work done without inspection will be required to be uncovered for inspection.
- The bid item "Fire Hydrant Installation" shall include installation of a New Fire Hydrant, thrust blocking, fittings and all necessary adjustments required to bring the hydrant into complete and working order.
- All existing waterline structures (i.e. water valve assemblies, fire hydrant assemblies, ect.) called out for removal in the plans shall be taken to the City of Wichita Water Department Material Yard located at 1701 Sim Park Drive.
- Contractor shall make minor adjustments to the new construction if required by the location of any existing utility at no cost to the owner. Should a conflict occur Contractor shall contact Engineer and utility owner as shown in plans.
- Contractor shall obtain all permissions and permits as required for disposal of any materials. The Contractor shall hold the Owner and Engineer harmless from any claims related to the transporting or disposal of demolition materials. The cost for this effort shall be SUBSIDIARY to the project.
- The Contractor shall be responsible for all traffic control measures to facilitate construction as shown in the construction phasing plan. The Contractor shall erect and maintain traffic control devices in accordance with the Manual of Uniform Traffic Control Devices (Latest Edition) subject to the Engineer's approval.
- All pipe 11.00 LF or less shall be Ductile Iron Cement Lined (DICTL) pipe.
- Waterlines shall have a minimum depth of bury of 48 inches from proposed improvements, unless shown otherwise.

# WATER DISTRIBUTION SYSTEM TO SERVE ANDOVER, KANSAS YORKTOWN PARKWAY FROM KELLOGGUS-54 TO DOUGLAS AVENUE 2187 PPW



**AS-BUILT PLANS**  
**CONTRACTOR: Mies Construction**  
**SUPEERINTENDENT: Dallas Mies**  
**INSPECTOR/FIRM: Richard Milner/ Transystems**



VICINITY MAP

INDEX OF SHEETS

|           |   |
|-----------|---|
| 143       | Cover Sheet                             |
| 144       | Coordinate Data & Summary of Quantities |
| 145 - 149 | Waterline 1 Plan Sheets                 |
| 150       | Waterline 1A Plan Sheet                 |
| 151       | Waterline 1B Plan Sheet                 |
| 152       | Waterline 2 Plan Sheet                  |
| 153 - 155 | Waterline Detail Sheets                 |

APPROVED AS NOTED  
BY WICHITA PUBLIC WORKS  
ENGINEERING DIVISION  
& BY WICHITA FIRE DEPARTMENT

Engineering *Keith Galochy* 11-27-18  
Utilities *[Signature]* 11-27-18  
Fire Dept. *[Signature]* AFR 11-27-18

NOTE TO CONTRACTORS

**Public Property:**  
Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection is to be in accordance with the City of Wichita standard construction engineering practices and certified by a Professional Engineer Licensed in the state of Kansas. No work shall be performed in dedicated easements or public right-of-way by the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the City or Wichita Specifications and Standards and Special Provision (on file and available in the City Engineer's Office) or on the City's Website.

**Private Property:**  
Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All material and construction practices for the fire protection line shall comply with the fire codes as adopted by the City of Wichita (available from the City of Wichita Fire Department). The Contractor shall not commence work without notification and approval of the Wichita Fire Department. Inspection of the fire protection line is to be provided by a licensed Engineering Firm under contract with the Owner/Developer and the Fire Department. The contractor shall not start work until the project inspector is assigned to the project and present on the site. Any work done without inspection will be required to be uncovered for inspection.

An approved copy of these plans signed by City staff are required on-site.

NOVEMBER 2018

PREPARED BY

245 N. WACO, SUITE 222  
WICHITA, KANSAS 67202  
MAIN: 316-303-3000  
FAX: 316-303-0156



**PROJECT SURVEY CONTROL & DATUM BENCHMARK**

Horizontal - Kansas State Plane Coordinates  
(SPCS KS-South- CAF= 0.999885195)

Vertical - BM #10-17 Railroad spike in south face of power pole on the northeast corner of US-54 and Yorktown Road  
Rt. 31.03, Sta. 101+27.91  
N:1684,340,9510  
E:1,710,116,9450  
Datum: NAVD88 - Elev.=1333.46'

**BENCHMARKS**

BM #10-17  
Railroad spike in south face of power pole on the northeast corner of US-54 and Yorktown Road  
N 1,684,340.9510  
E 1,710,116.9450  
31.03' Rt., Sta. 101+27.91, Elev. = 1,333.46'

BM #11-17  
Cut on Northeast Corner of Curb Inlet on North Side of Douglas Ave. West of Yorktown Rd.  
N:1,686,953.1527  
E:1,710,058.2798  
41.86' Rt., & Sta. 127+41.46, Elev. = 1329.98'

**UTILITY OWNERS**

City of Andover  
Les Mangus  
Public Works Director  
1609 E. Central Ave.  
Andover, KS 67002  
(316) 733-1303  
Water, Storm Sewer

City of Andover  
Steve Anderson  
City Engineer  
1609 E. Central Ave.  
Andover, KS 67002  
(316) 733-1303  
Water, Storm Sewer

City of Andover  
Bill Braitsch  
Street Superintendent  
1609 E. Central Ave.  
Andover, KS 67002  
(316) 733-8290  
(316) 239-8041 (cell)

City of Andover  
Brian Walls  
1609 E. Central Ave.  
Andover, KS 67002  
(316) 733-2621  
Sanitary Sewer

City of Wichita Water Dept.  
Greg Lolley  
455 N. Main  
Wichita, KS 67202  
(316) 268-4334  
Water Main

Butler County RWD #5  
Terry Brown  
700 N. Main  
Benton, KS 67017  
(316) 461-9427  
Rural Water

AT&T  
Jason Edwards  
154 N. Broadway  
Room 210  
Wichita, KS 67202  
(316) 268-2008  
Telephone, Fiber Optic

Cox Communications  
Pat Rath  
901 George Washington Blvd.  
Wichita, KS 67211  
(316) 260-7170  
Cable Television

OneGas - Kansas Gas Service  
Adam Knolla  
1021 E. 26th St.  
Wichita, KS 67219  
(316) 832-3123  
Gas

Westar Energy  
Shane Price  
1900 E. Central  
Wichita, KS 67201  
(316) 261-6315  
Electrical

Zayo Group  
Jeff Capp  
8200 East 32nd Street N.  
Suite 1807  
Wichita, KS 67226  
(316) 833-9032  
Fiber Optic

**RECAPITULATION OF QUANTITIES**

| BID ITEM                | QUANTITY  | UNIT |
|-------------------------|-----------|------|
| MD Tylon Joint Pipe     | 34        | L.F. |
| AWWA C900 / DR18        | 630       | L.F. |
| MD Tylon Joint Pipe     | Δ 52      | L.F. |
| AWWA C900 / DR18        | 2547 2557 | L.F. |
| MD Tylon Joint Pipe     | Δ 24 14   | L.F. |
| CLOW 2638               | 1         | EA.  |
| CLOW 2638               | 9         | EA.  |
| M&H Valve Co 4500       | 5         | EA.  |
| CLOW 2545               | 1         | EA.  |
| CLOW 2545               | 4         | EA.  |
| CLOW 2545               | 1         | EA.  |
|                         | 764       | L.F. |
|                         | 10        | L.F. |
|                         | 3         | EA.  |
|                         | 2         | EA.  |
| Δ Blow Off Assembly, 2" | 4         | EA.  |
| Valve Adjustment        | 1         | EA.  |
| Pipe Removed, WL        | 35        | L.F. |

**FIRE HYDRANTS REQUIRED**

| STATION   | BURY LINE ELEVATION | TOP OF PIPE ELEVATION | FIRE HYDRANT BURY REQUIRED † | VALVE STEM EXT. REQUIRED (ft) † |
|-----------|---------------------|-----------------------|------------------------------|---------------------------------|
| 302+54.00 | 1,333.22            | 1,329.64              | 4.2'                         | -                               |
| 319+03.67 | 1,335.93            | 1,330.58              | 5.9'                         | -                               |
| 601+62.81 | 1,332.97            | 1,328.10              | 5.5'                         | -                               |
| 501+29.12 | 1,330.41            | 1,326.07              | 4.9'                         | -                               |
| 402+29.75 | 1,330.27            | 1,326.60              | 4.3'                         | -                               |

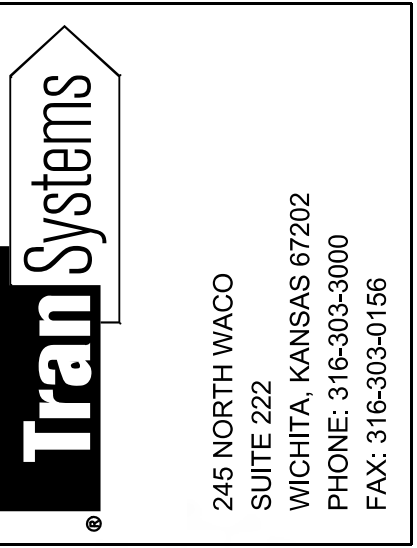
† For Details See Sheet 153 (WL-101)

**Utility Notes:**

Visual indications of utilities are as shown. Underground locations shown, as furnished by their lessors, are approximate and should be verified in the field at the time of construction. For actual field locations of underground utilities, call 1-800-344-7233. Verification of utilities is the Contractor's responsibility.

**SUMMARY OF WATERLINE ITEMS  
(For Information Only)**

| WATERLINE LINE NO. | DICL PIPE - 6" WATERLINE (L.F.) | PIPE - 8" WATERLINE (L.F.) | DICL PIPE - 8" WATERLINE (L.F.) | PIPE - 12" WATERLINE (L.F.) | DICL PIPE - 12" WATERLINE (L.F.) | 6" VALVE ASSEMBLY ANCHORED (EA.) | 8" VALVE ASSEMBLY ANCHORED (EA.) | 12" VALVE ASSEMBLY ANCHORED (EA.) | FIRE HYDRANT (EA.) | FIRE HYDRANT ASSEMBLY (EA.) | REMOVE FIRE HYDRANT ASSEMBLY (EA.) | FILL SAND (FLUSH & VIBRATE) (L.F.) | 8" PIPE CUT & CAP (EA.) | 8" MJ CAP (EA.) | 2" BLOW OFF ASSEMBLY (EA.) | PIPE REMOVED (L.F.) |
|--------------------|---------------------------------|----------------------------|---------------------------------|-----------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------------------|--------------------|-----------------------------|------------------------------------|------------------------------------|-------------------------|-----------------|----------------------------|---------------------|
| Line 1             | 34.00                           | -                          | Δ 14.00                         | 2546.69 2557                | Δ 24.00 14                       | 1                                | 6                                | 5                                 | 1                  | 1                           | -                                  | 204.99                             | -                       | 2               | -                          | -                   |
| Line 1A            | -                               | 165.64                     | 18.17                           | -                           | -                                | -                                | 1                                | -                                 | -                  | 1                           | -                                  | 138.80                             | -                       | -               | 2                          | -                   |
| Line 1B            | -                               | 180.59                     | 15.80                           | -                           | -                                | -                                | 1                                | -                                 | -                  | 1                           | -                                  | 155.01                             | -                       | -               | 1                          | -                   |
| Line 1C            | -                               | 18.70                      | 4.30                            | -                           | -                                | -                                | -                                | -                                 | -                  | -                           | -                                  | -                                  | -                       | -               | -                          | 25.00               |
| Line 2             | -                               | 265.38                     | -                               | -                           | -                                | -                                | 1                                | -                                 | -                  | 1                           | 1                                  | 265.38                             | 3                       | -               | 1                          | 10.00               |
| TOTAL              | 34.00                           | 630.31                     | Δ 52.27                         | 2546.69 2557                | Δ 24.00 14                       | 1                                | 9                                | 5                                 | 1                  | 4                           | 1                                  | 764.18                             | 3                       | 2               | 4                          | 35.00               |



CONSULTANTS:

YORKTOWN PARKWAY IMPROVEMENTS FROM KELLOGG TO DOUGLAS  
ANDOVER, KANSAS

| REVISIONS: | MARK | DATE | DESCRIPTION |
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|            |      |      |             |
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PROJ NO: P125170005  
SCALE: N/A  
DATE: 12/14/2018  
DESIGNED BY: DAN  
DRAWN BY: DAN  
CHECKED BY: MDB

SHEET TITLE:  
**WATERLINE SUMMARY OF QUANTITIES**

SHEET NO.  
144

Δ 12-12-2018 - Updated Quantities as necessary & Updated bid item name

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Sta. 120+22.09, 66.92' Lt. =  
Sta. 319+03.67, 8.00' Lt. Water Line 1  
Install 1 - 8" MJ Cap (W)  
N 1,686,232.6037  
E 1,709,957.6045

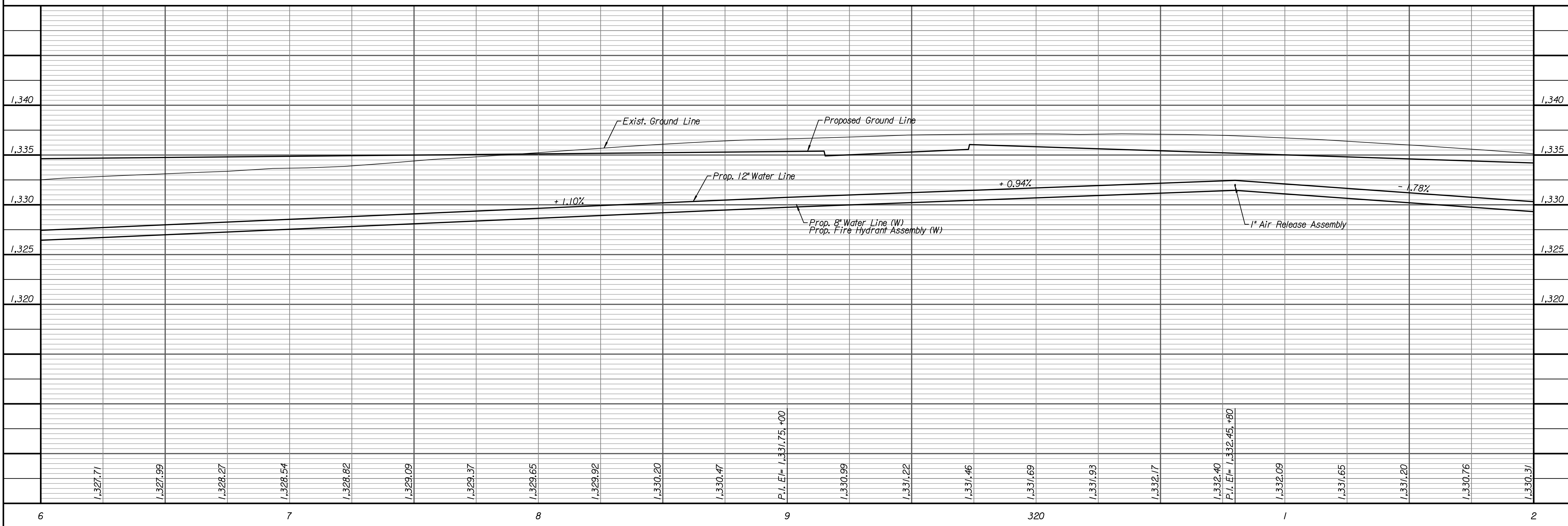
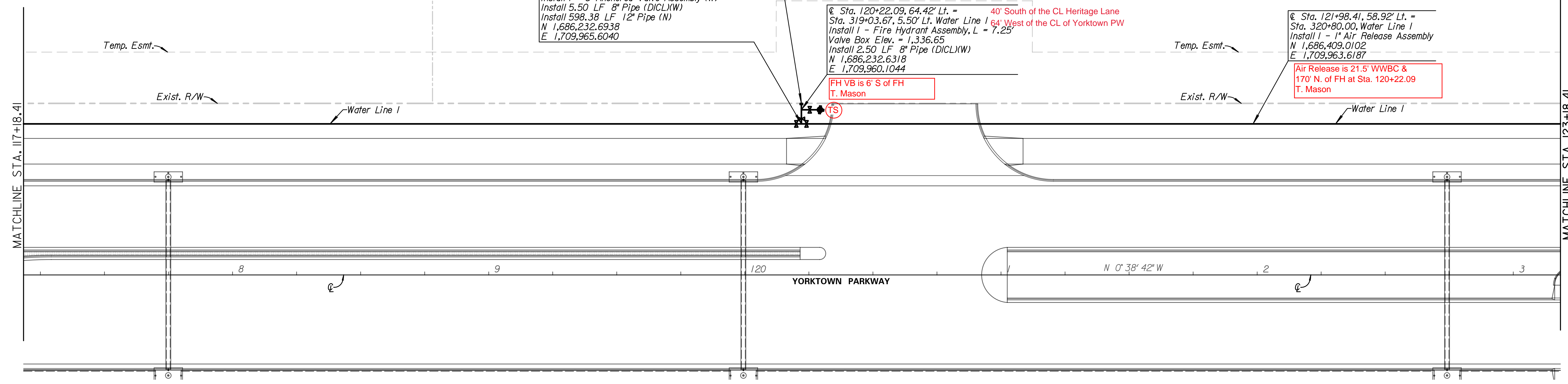
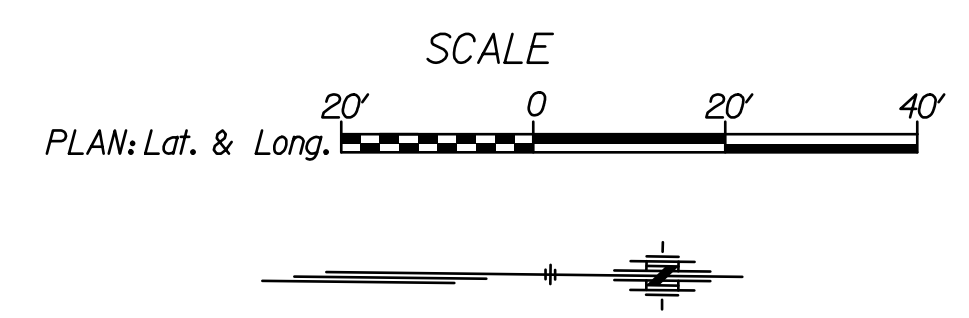
Sta. 120+22.09, 58.92' Lt. = 40' South of the CL Heritage Lane  
Sta. 319+03.67, Water Line 1 59' West of the CL of Yorktown PW  
Install 1 - 12" x 8" Tee (W)  
Install 2 - 12" Anchored Valve Assembly (S & N)  
Install 1 - 8" Anchored Valve Assembly (W)  
Install 5.50 LF 8" Pipe (DCL)(W)  
Install 598.38 LF 12" Pipe (N)  
N 1,686,232.6938  
E 1,709,965.6040

Sta. 120+22.09, 64.42' Lt. = 40' South of the CL Heritage Lane  
Sta. 319+03.67, 5.50' Lt. Water Line 1 64' West of the CL of Yorktown PW  
Install 1 - Fire Hydrant Assembly, L = 7.25'  
Valve Box Elev. = 1,336.65  
Install 2.50 LF 8" Pipe (DCL)(W)  
N 1,686,232.6318  
E 1,709,960.1044

Sta. 121+98.41, 58.92' Lt. =  
Sta. 320+80.00, Water Line 1  
Install 1 - 1" Air Release Assembly  
N 1,686,409.0102  
E 1,709,963.6187

Air Release is 21.5' WWBC &  
170' N. of FH at Sta. 120+22.09  
T. Mason

FH VB is 6' S of FH  
T. Mason



**Tran Systems**  
245 NORTH WACO  
SUITE 222  
WICHITA, KANSAS 67202  
PHONE: 316-303-3000  
FAX: 316-303-0166



CONSULTANTS:

**YORKTOWN PARKWAY IMPROVEMENTS  
FROM KELLOGG TO DOUGLAS**  
ANDOVER, KANSAS

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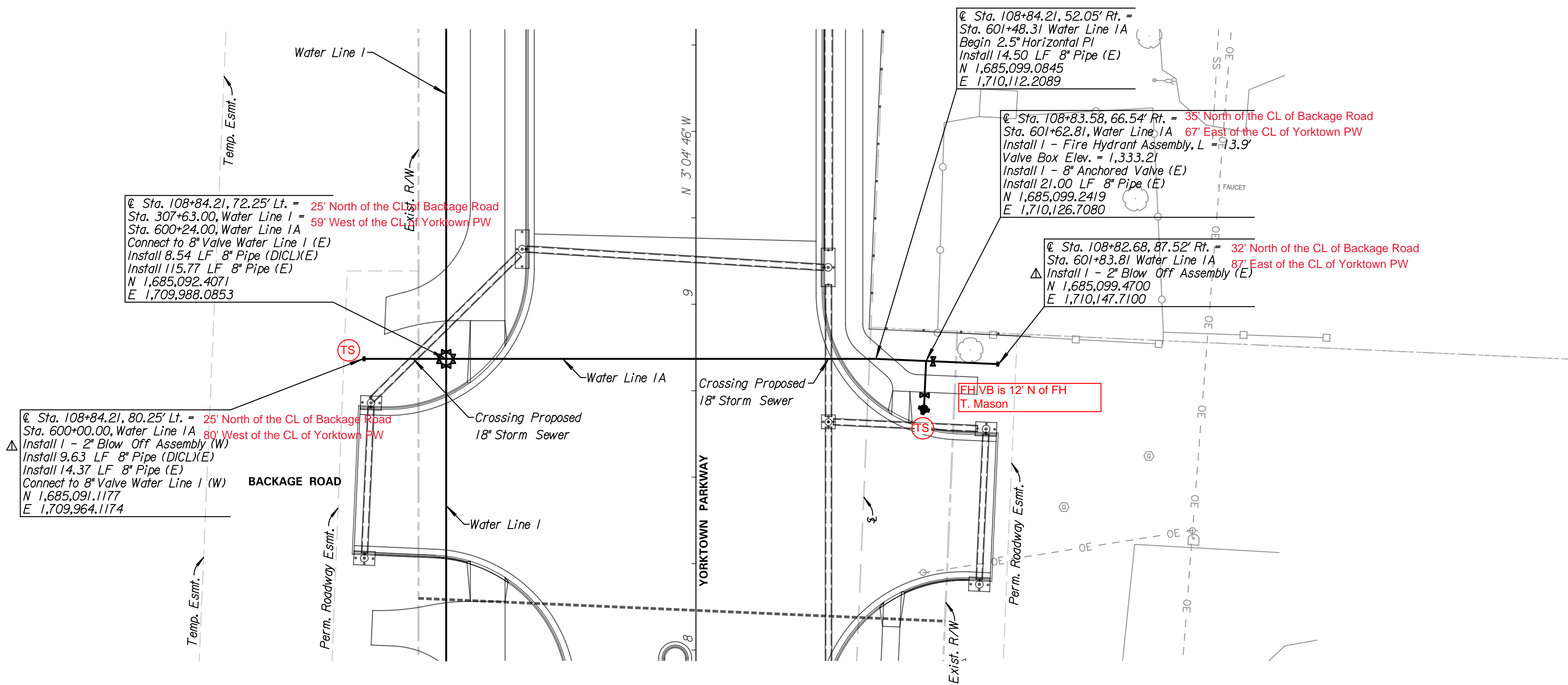
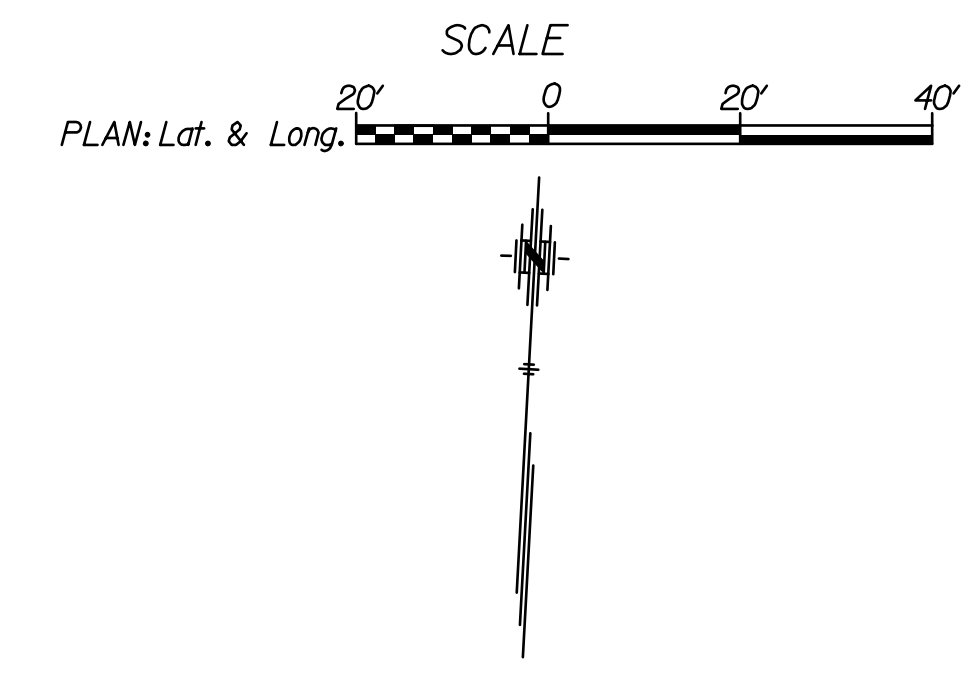
PROJ NO: P125170005  
SCALE: 1"=20'  
DATE: 12/14/2018  
DESIGNED BY: DAN  
DRAWN BY: DAN  
CHECKED BY: MDB

SHEET TITLE:  
**YORKTOWN PKWY  
WATERLINE 1  
STA. 316+00.00 TO  
STA. 322+00.00**

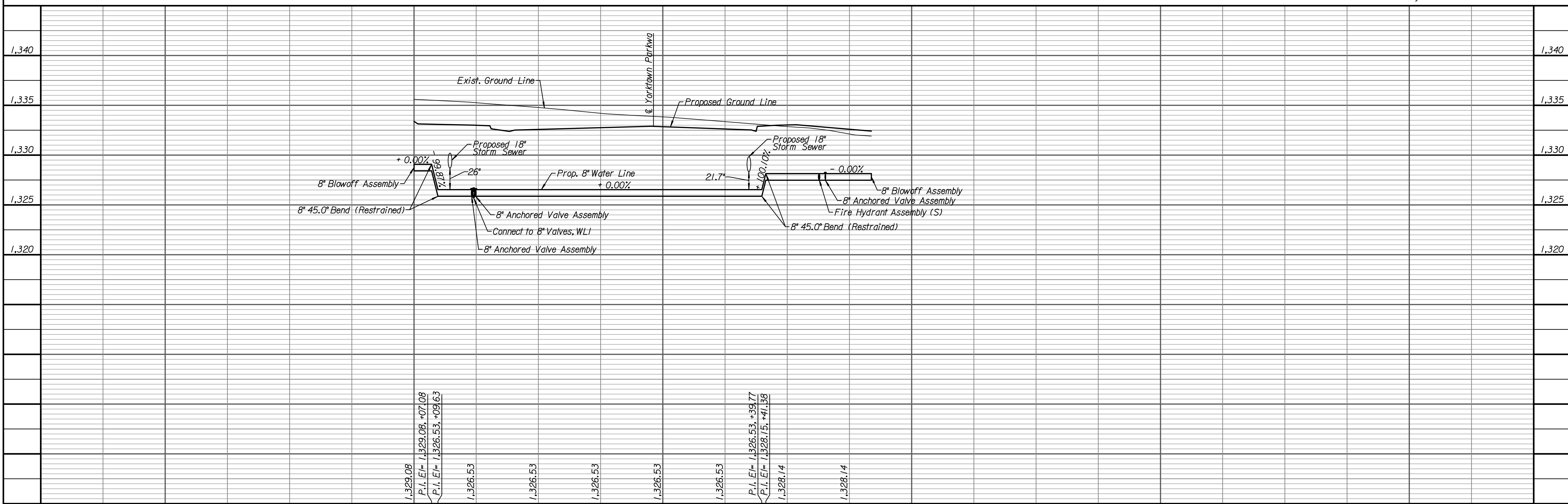
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**148**  
SHEET 148 OF 199

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△ 12-12-2018 - Adjusted Note to 2" Blowoff Assembly



**Tran Systems**  
245 NORTH WACO  
SUITE 222  
WICHITA, KANSAS 67202  
PHONE: 316-303-3000  
FAX: 316-303-0166



CONSULTANTS:

**YORKTOWN PARKWAY IMPROVEMENTS  
FROM KELLOGG TO DOUGLAS**  
ANDOVER, KANSAS

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PROJ NO: P125170005  
SCALE: 1"=20'  
DATE: 12/14/2018  
DESIGNED BY: DAN  
DRAWN BY: DAN  
CHECKED BY: MDB

SHEET TITLE:  
**BACKAGE ROAD  
WATERLINE 1A  
STA. 600+00.00 TO  
STA. 601+83.81**

SHEET NO.  
**150**  
SHEET 150 OF 199

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CONSULTANTS:

**YORKTOWN PARKWAY IMPROVEMENTS  
 FROM KELLOGG TO DOUGLAS**  
 ANDOVER, KANSAS

| REVISIONS: | MARK | DATE | DESCRIPTION |
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PROJ NO: P125170005  
 SCALE: 1"=20'  
 DATE: 12/14/2018  
 DESIGNED BY: DAN  
 DRAWN BY: DAN  
 CHECKED BY: MDB

SHEET TITLE:  
**PAUL REVERE LANE  
 WATERLINE 1B  
 STA. 510+00.00 TO  
 STA. 502+08.03**

SHEET NO.  
**151**  
 SHEET 151 OF 199

Colin F & Tina M Turner  
 234 S Yorktown Road  
 Andover, KS 67002

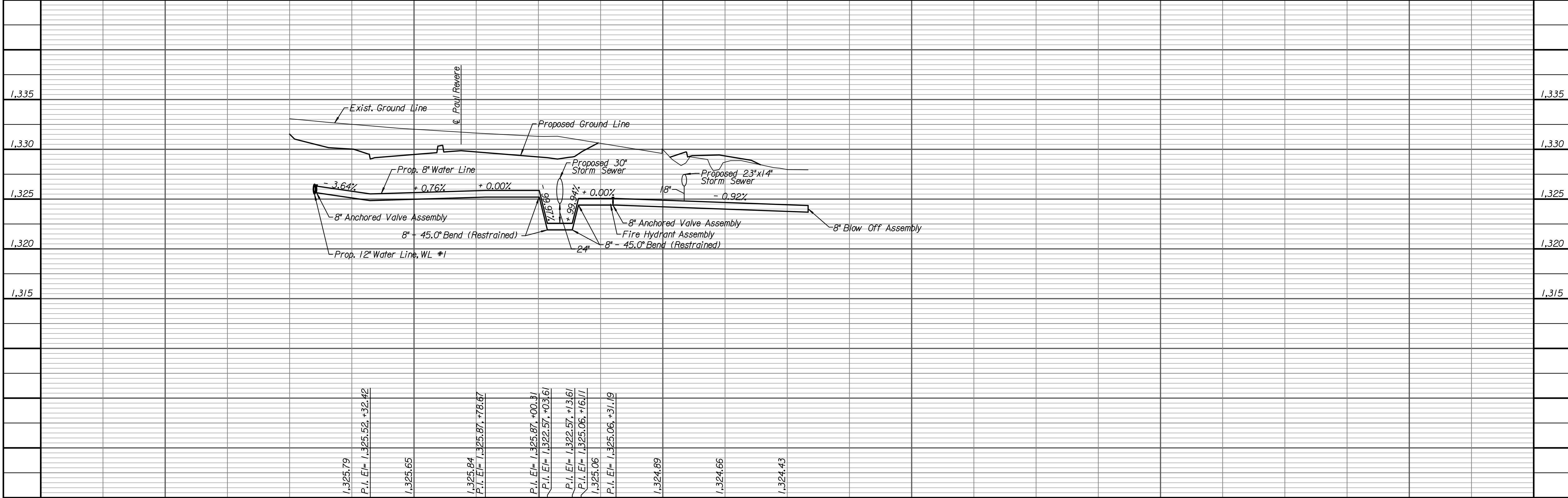
☉ Sta. 115+16.97, 58.92' Lt. = 28' North of the CL of Douglas Ave.  
 Sta. 313+98.56, Water Line 1 = 59' West of the CL of Yorktown PW  
 Sta. 500+10.00, Water Line 1B =  
 Connect to 8" Anchored Valve Assembly (E)  
 Install 15.80 LF 8" Pipe (D)(L)(E)  
 Install 103.33 LF 8" Pipe (E)  
 N 1,685,727.6115  
 E 1,709,971.2912

☉ Sta. 115+16.97, 139.46' Rt. = 28' North of the CL of Paul Revere Lane  
 Sta. 502+08.38 Water Line 1B 139' East of the CL of Yorktown PW  
 Install 1 - 2" Blow Off Assembly (E)  
 N 1,685,729.8226  
 E 1,710,167.6585

☉ Sta. 115+16.97, 60.20' Rt. = 28' North of the CL of Paul Revere Lane  
 Sta. 501+29.12, Water Line 1B 60' East of the CL of Yorktown PW  
 Install 1 - 8" Anchored Valved Assembly (E)  
 Install 1 - Fire Hydrant Assembly, L = 6.0'  
 Valve Box Elev. = 1,330.13  
 Install 77.26 LF 8" Pipe (E)  
 N 1,685,728.9527  
 E 1,710,090.4054

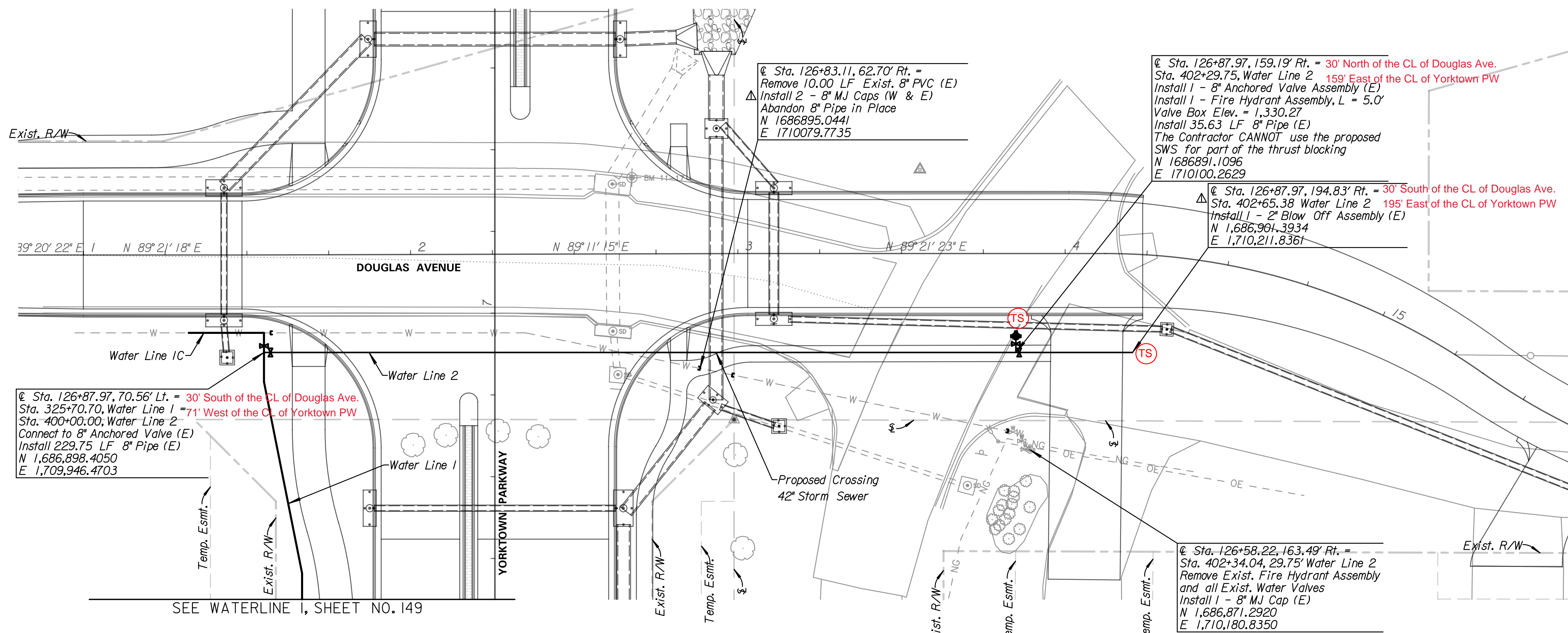
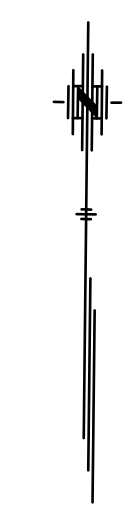
FH VB is 4' N of FH  
 T. Mason

△ 12-12-2018 - Adjusted Note to 2" Blowoff Assembly



|          |                            |
|----------|----------------------------|
| 1,325.79 | P.I. El = 1,325.52, +32.42 |
| 1,325.65 |                            |
| 1,325.84 | P.I. El = 1,325.87, +78.67 |
| 1,325.87 | P.I. El = 1,325.87, +00.31 |
| 1,322.57 | P.I. El = 1,322.57, +03.61 |
| 1,322.57 | P.I. El = 1,322.57, +13.61 |
| 1,325.06 | P.I. El = 1,325.06, +16.11 |
| 1,325.06 | P.I. El = 1,325.06, +31.19 |
| 1,324.89 |                            |
| 1,324.66 |                            |
| 1,324.43 |                            |

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Sta. 126+83.11, 62.70' Rt. =  
Remove 10.00 LF Exist. 8" PVC (E)  
Install 2 - 8" MJ Caps (W & E)  
Abandon 8" Pipe in Place  
N 1686895.0441  
E 1710079.7735

Sta. 126+87.97, 159.19' Rt. = 30' North of the CL of Douglas Ave.  
Sta. 402+29.75, Water Line 2 159' East of the CL of Yorktown PW  
Install 1 - 8" Anchored Valve Assembly (E)  
Install 1 - Fire Hydrant Assembly, L = 5.0'  
Valve Box Elev. = 1,330.27  
Install 35.63 LF 8" Pipe (E)  
The Contractor CANNOT use the proposed  
SWS for part of the thrust blocking  
N 1686891.1096  
E 1710100.2629

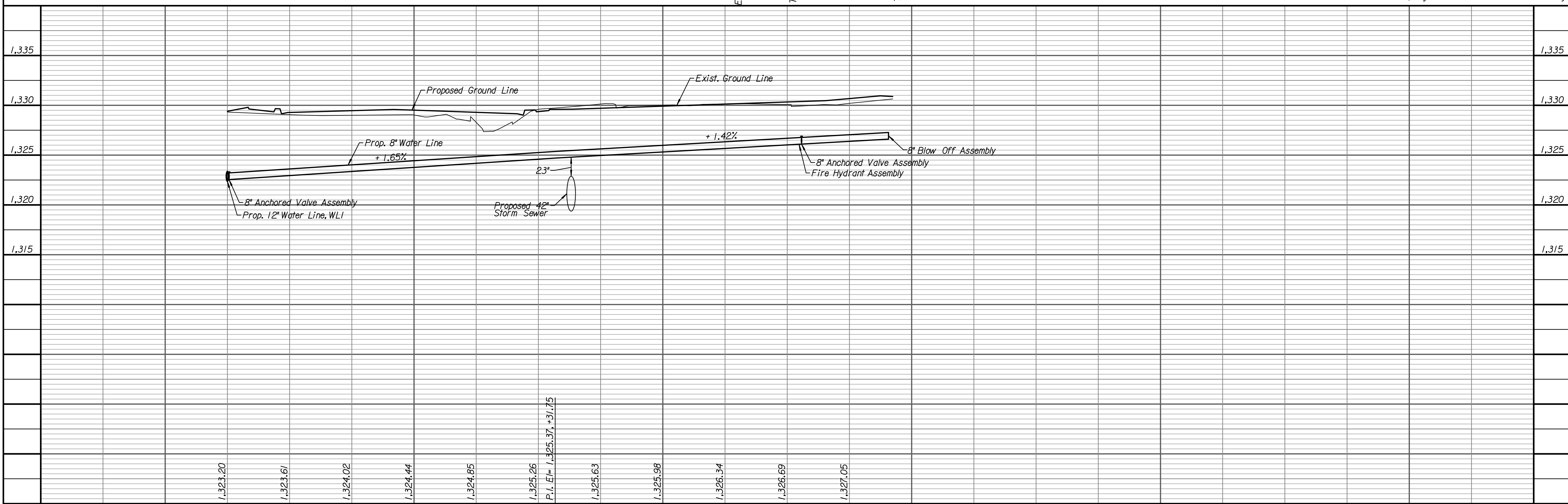
Sta. 126+87.97, 194.83' Rt. = 30' South of the CL of Douglas Ave.  
Sta. 402+65.38 Water Line 2 195' East of the CL of Yorktown PW  
Install 1 - 2" Blow Off Assembly (E)  
N 1,686,901,3934  
E 1,710,211,8361

Sta. 126+87.97, 70.56' Lt. = 30' South of the CL of Douglas Ave.  
Sta. 325+70.70, Water Line 1 = 71' West of the CL of Yorktown PW  
Sta. 400+00.00, Water Line 2  
Connect to 8" Anchored Valve (E)  
Install 229.75 LF 8" Pipe (E)  
N 1,686,898,4050  
E 1,709,946,4703

Sta. 126+58.22, 163.49' Rt. =  
Sta. 402+34.04, 29.75' Water Line 2  
Remove Exist. Fire Hydrant Assembly  
and all Exist. Water Valves  
Install 1 - 8" MJ Cap (E)  
N 1,686,871,2920  
E 1,710,180,8350

12-12-2018 - Relocated Cut and Caps  
for the proposed storm sewer & adjusted  
the note, adjusted note to 2" Blowoff Assembly

SEE WATERLINE 1, SHEET NO. 149



**Tran Systems**  
245 NORTH WACO  
SUITE 222  
WICHITA, KANSAS 67202  
PHONE: 316-303-3000  
FAX: 316-303-0166



CONSULTANTS:

**YORKTOWN PARKWAY IMPROVEMENTS  
FROM KELLOGG TO DOUGLAS**  
ANDOVER, KANSAS

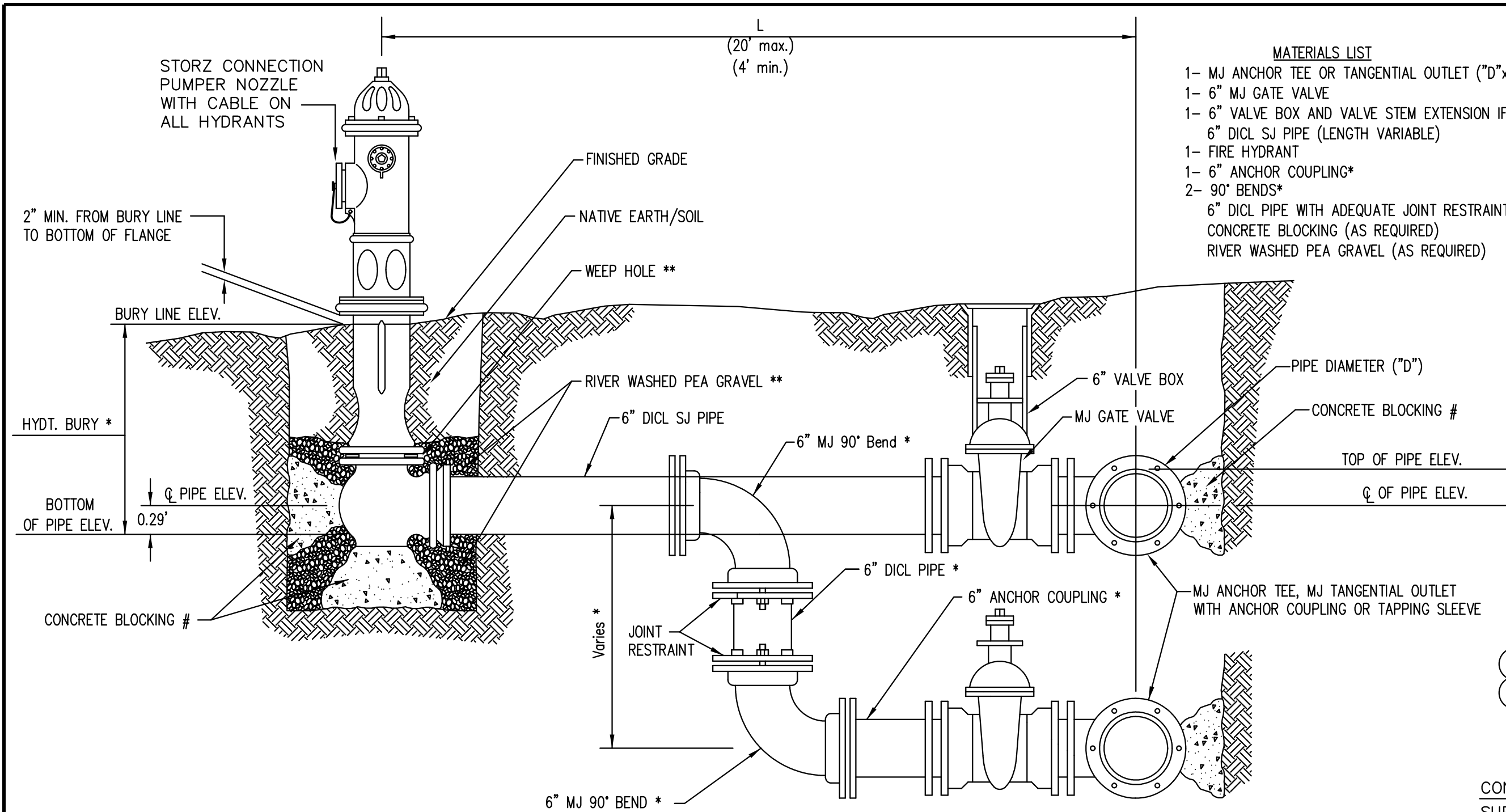
| REVISIONS: | MARK | DATE | DESCRIPTION |
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PROJ NO: P125170005  
SCALE: 1"=20'  
DATE: 12/14/2018  
DESIGNED BY: DAN  
DRAWN BY: DAN  
CHECKED BY: MDB

SHEET TITLE:  
**DOUGLAS AVENUE  
WATERLINE 2  
STA. 400+00.00 TO  
STA. 402+67.38**

SHEET NO.  
**152**  
SHEET 152 OF 199

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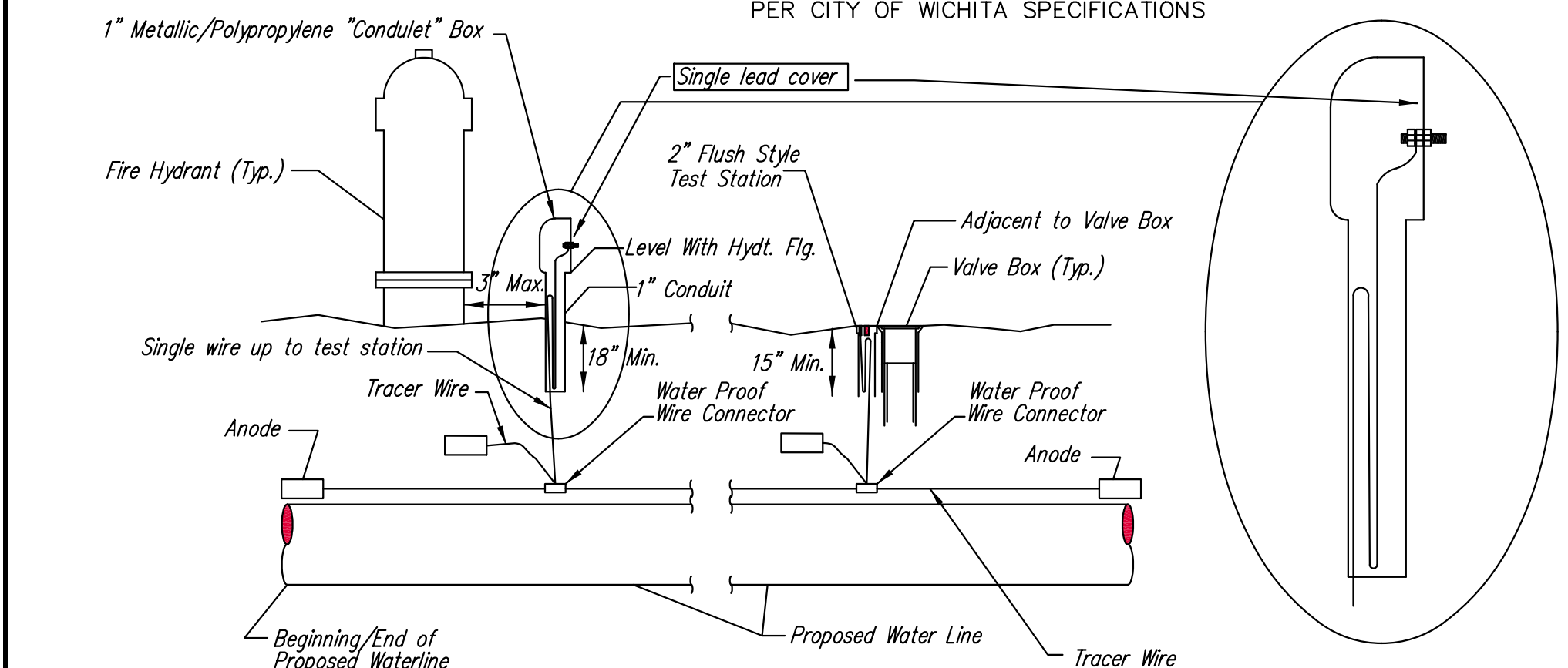
- MATERIALS LIST**
- 1- MJ ANCHOR TEE OR TANGENTIAL OUTLET ("D"x 6")
  - 1- 6" MJ GATE VALVE
  - 1- 6" VALVE BOX AND VALVE STEM EXTENSION IF REQUIRED \*
  - 6" DI CL SJ PIPE (LENGTH VARIABLE)
  - 1- FIRE HYDRANT
  - 1- 6" ANCHOR COUPLING\*
  - 2- 90° BENDS\*
  - 6" DI CL PIPE WITH ADEQUATE JOINT RESTRAINT \*
  - CONCRETE BLOCKING (AS REQUIRED)
  - RIVER WASHED PEA GRAVEL (AS REQUIRED)

\* IF THE REQUIRED HYDRANT BURY IS IN EXCESS OF 5', BUT LESS THAN 7', CONTRACTOR SHALL USE STANDARD 5' HYDRANT BURY AND HYDRANT BARREL EXTENSIONS AS NECESSARY. IF THE REQUIRED HYDRANT BURY IS GREATER THAN 7', CONTRACTOR SHALL USE 5' HYDRANT BURY, 2-MJ 90° BENDS, 6" ANCHOR COUPLING AND 6" DI CL PIPE AS NECESSARY FOR VERTICAL ADJUSTMENT. THE CONTRACTOR SHALL PROVIDE ADEQUATE THRUST BLOCKING AT HYDRANT AND MEGALUGS, OR SIMILAR RESTRAINT BETWEEN 90° BENDS TO SECURE ALL FITTINGS DURING TESTING AND OPERATION. THE CONTRACTOR SHALL PROVIDE A VALVE STEM EXTENSION PER DETAIL THIS SHEET.

\*\* CAUTION: WEEP HOLES TO BE KEPT CLEAR DURING CONSTRUCTION AND BACKFILL. CONCRETE FOR THRUST BLOCKING SHALL NOT OBSTRUCT WEEP HOLES. PLACE 1 CUBIC FOOT OF RIVER WASHED PEA GRAVEL AROUND EACH WEEP HOLE.

# CONCRETE THRUST BLOCKING SHALL BE KEPT CLEAR OF BOLTS, NUTS, AND MJ ACCESSORIES.

**FIRE HYDRANT ASSEMBLY**  
PER CITY OF WICHITA SPECIFICATIONS



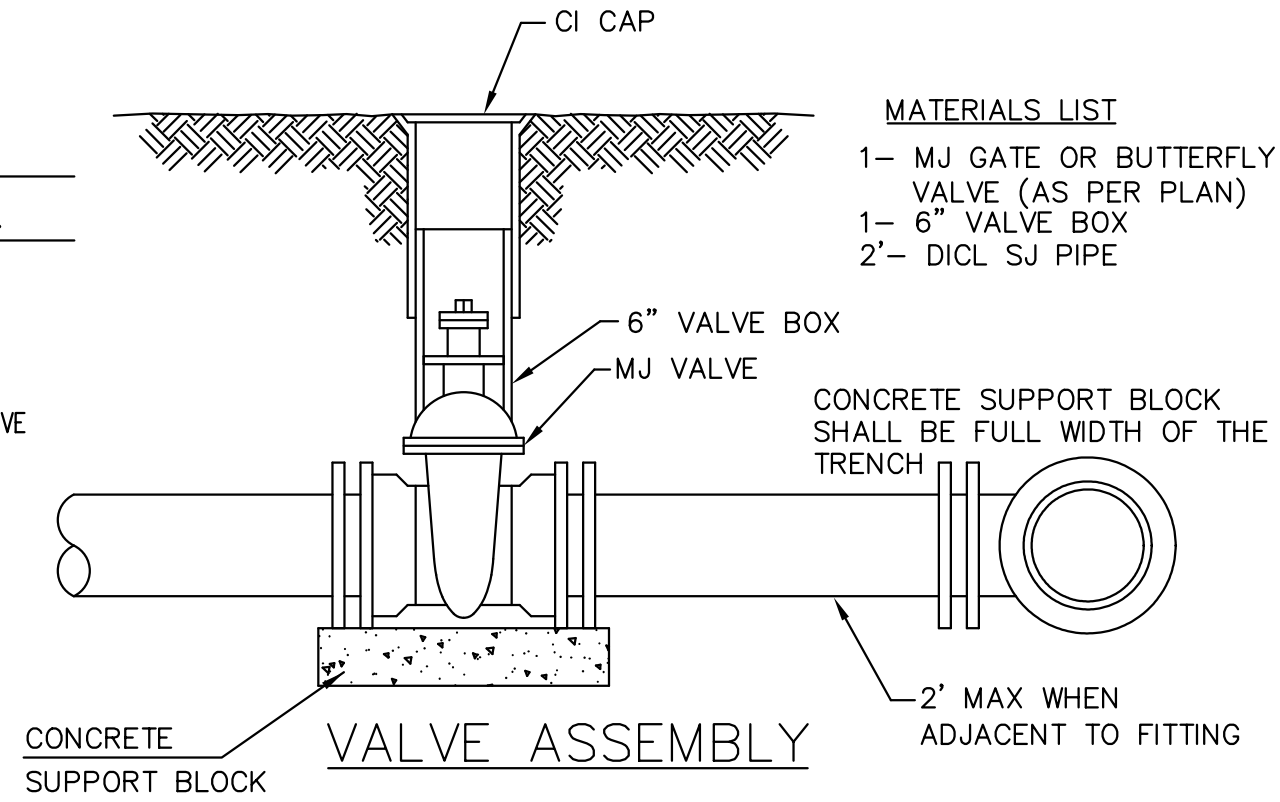
**TRACER WIRE**  
Conductive type pipe locator/tracer wire shall be install to locate all waterline pipe regardless of pipe material. The wire shall extend the entire length of the proposed pipe. The wire shall be taped to the waterline and pulled with the pipe. A waterproof connector shall be used at splice locations. A complete list of approved tracer wire and waterproof connectors can be found on the City of Wichita's website at [www.wichita.gov](http://www.wichita.gov).

**WIRE**  
The tracer wire shall be Blue No. 12 AWG CCS with 45 mil HDPE insulation. To allow for grade adjustment, a minimum of 12" of excess wire shall be coiled at the bottom of the test station for all wires. Wire connectors shall be installed per manufacturer recommendations. Contractor shall attach wire being installed with proposed water main to any tracer wire installed with adjacent waterline projects.

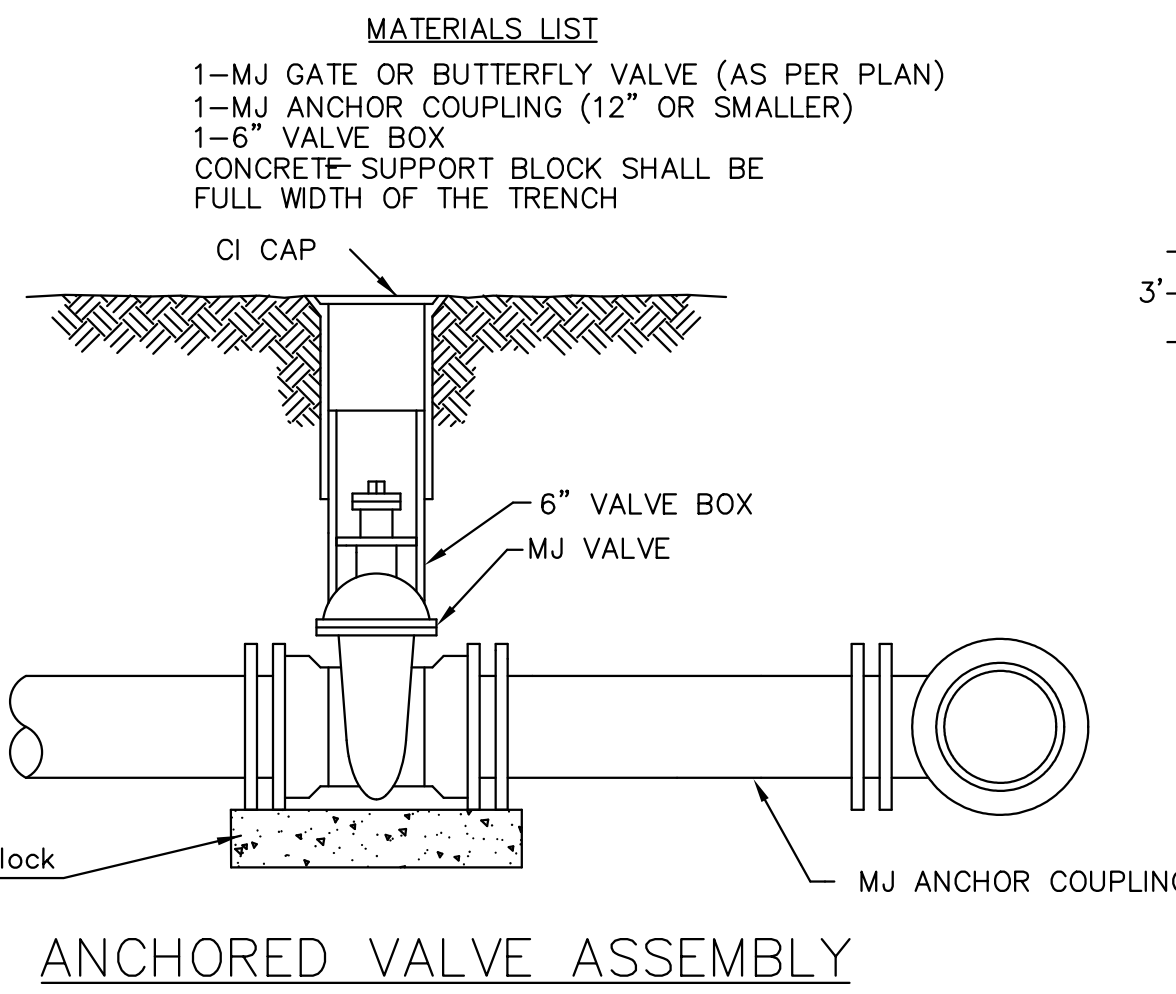
**TEST STATIONS**  
The test station for fire hydrant application shall be a 1" "condulet" style station as manufactured by AGRA Industries with a removable solid cover having a single lead extending from the face or approved equal. The "conduit" style test station shall be attached to a 1" rigid galvanized conduit with a minimum length of 36" and plastic end bushing. The flush style shall have the word "WATER" stamped or molded into the lid. The test station for valve applications shall be a 2" flush style test station with wire connector on lid. Model # T2PH7B1LP Handley Industries or CD14\*TP SnakePit as manufactured by Copperhead Industries or approved equal. The flush style shall have the word "WATER" stamped or molded into the lid. All test stations shall be manufactured using molded blue tops or sufficiently coated with blue enamel paint. The tracer wire and the anode wire shall be install to allow 12" of wire within the test station. The location of all test stations shall be recorded, and shown in the as-built drawings. Flush style test stations shall not be installed in pavement or sidewalk unless approved by the Engineer. Contractor shall extend tracer wire & move flush mount test station to nearest location out of pavement or sidewalk.

**ANODES**  
The anodes shall be 3 lb. bare zinc or magnesium. The anodes shall be buried at the same elevation as the waterline at each test station. The anodes shall be connected to 12 AWG CCS which shall be extended to the test station.

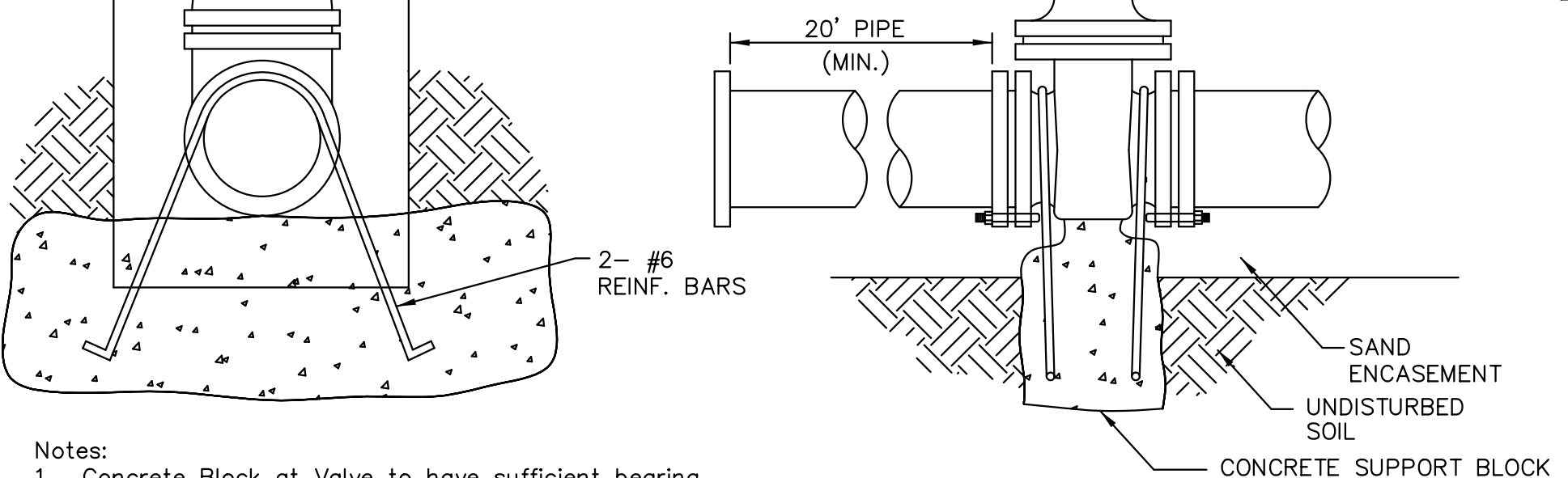
**TRACER WIRE DETAIL**  
COST IS SUBSIDIARY TO PIPE INSTALLATION



- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1- 6" VALVE BOX
  - 2- DI CL SJ PIPE



- MATERIALS LIST**
- 1- MJ GATE OR BUTTERFLY VALVE (AS PER PLAN)
  - 1- CI MJ CAP WHEN NECESSARY
  - 1- 6" VALVE BOX
  - 20' OF PIPE (BID WITH PIPE)
  - 2 - #6 REINF. BARS
  - CONCRETE SUPPORT BLOCK SHALL BE FULL WIDTH OF THE TRENCH

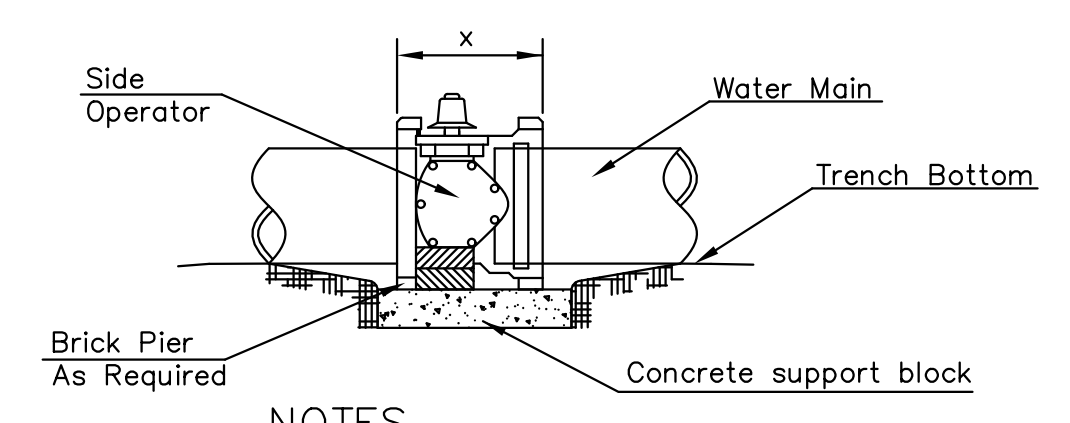


Notes:

- Concrete Block at Valve to have sufficient bearing in undisturbed soil to prevent thrust movement as shown in table at right. Field Engineer to determine thrust loading of undisturbed soil and final size of thrust block.
- The thrust block shall be constructed such that bolts, nuts, and other MJ accessories are kept clear of concrete.
- All valves at dead ends and at other locations as called out on the plans shall be blocked as shown here.

| THRUST AT VALVES |                                 |
|------------------|---------------------------------|
| VALVE            | THRUST AT 150 #/in <sup>2</sup> |
| 4"               | 1809 lbs.                       |
| 6"               | 4245 lbs.                       |
| 8"               | 7540 lbs.                       |
| 12"              | 16965 lbs.                      |

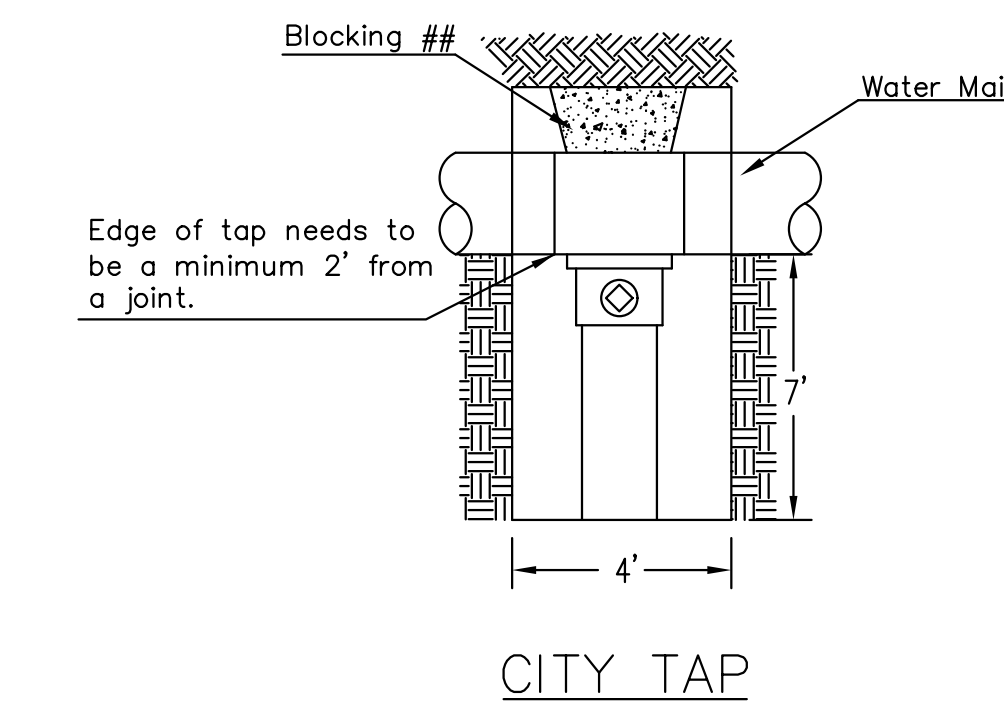
**ANCHORED VALVE ASSEMBLY, SPECIAL**



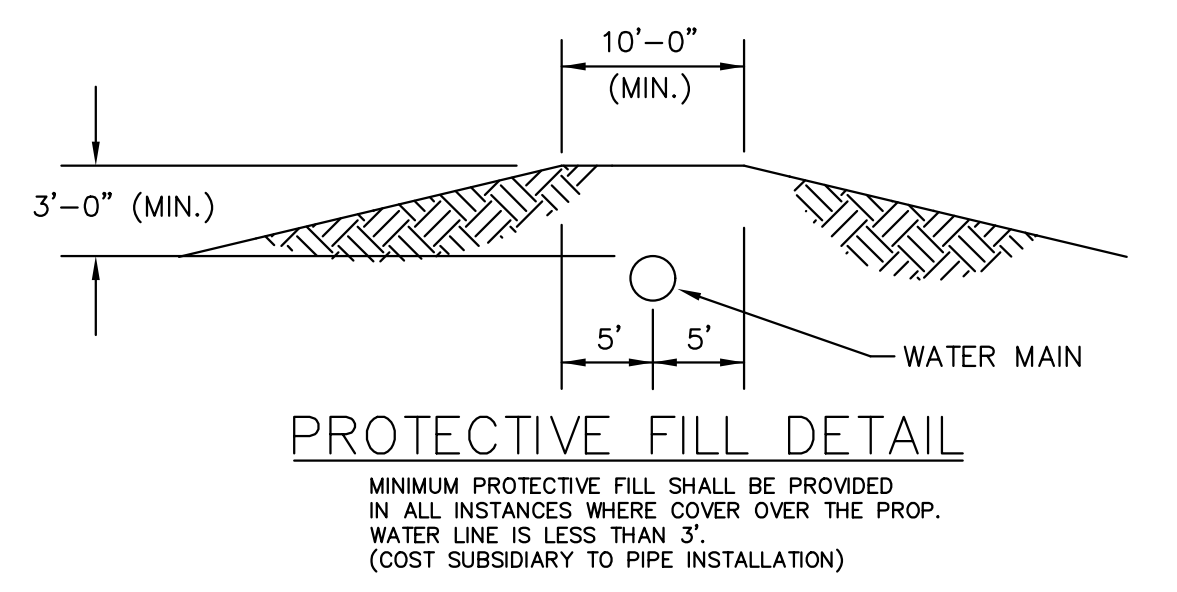
**NOTES**

- This detail covers Butterfly Valve installation, inclusive, regardless of type of pipe or joint used. 24" and larger lines to be detailed on plans.
- 6" Valve Box and Cover required per City of Wichita Std. Specifications.
- Conc. Support Block to be full width of trench.

**CONCRETE SUPPORT BLOCKING FOR BUTTERFLY VALVE INSTALLATION**

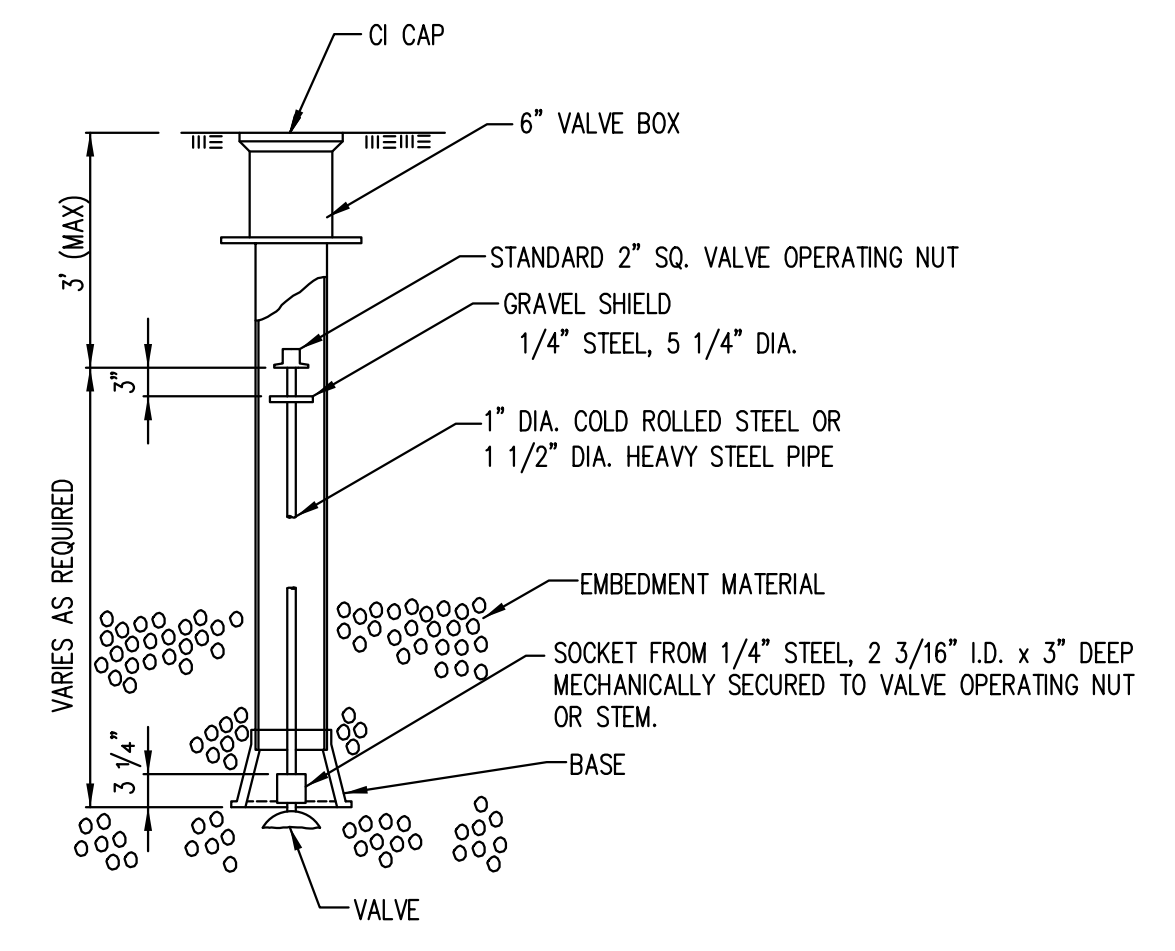


## When the City of Wichita makes tap, blocking is to be done by Contractor



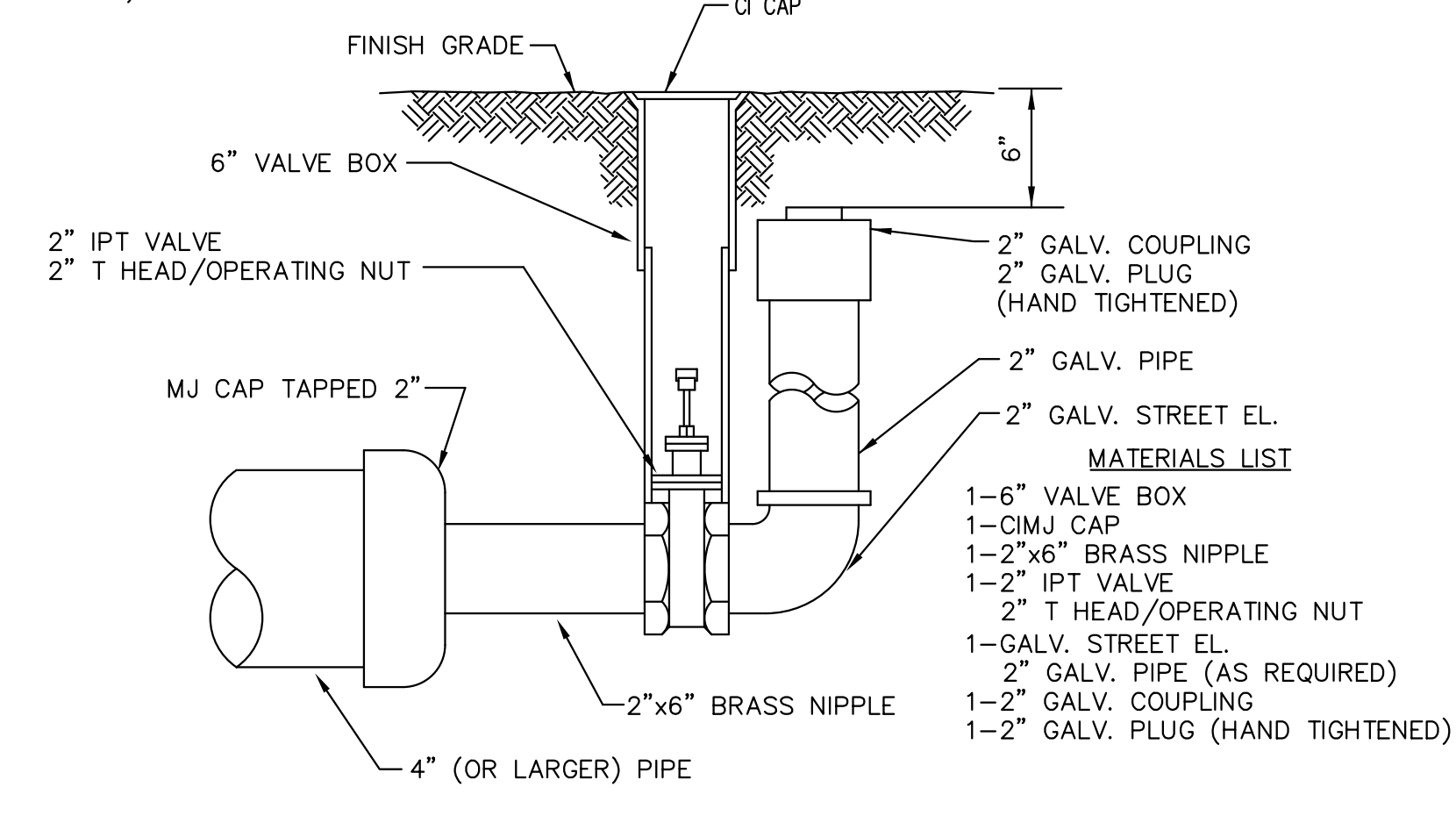
**PROTECTIVE FILL DETAIL**

MINIMUM PROTECTIVE FILL SHALL BE PROVIDED IN ALL INSTANCES WHERE COVER OVER THE PROP. WATER LINE IS LESS THAN 3". (COST SUBSIDIARY TO PIPE INSTALLATION)



**VALVE STEM EXTENSION DETAIL**

NOTE: ONE VALVE STEM EXTENSION FOR EACH VALVE BURIED GREATER THAN 5'.



**2" BLOWOFF ASSEMBLY**

**Tran Systems**  
245 NORTH WACO  
SUITE 222  
WICHITA, KANSAS 67202  
PHONE: 316-303-3000  
FAX: 316-303-0166

PROFESSIONAL ENGINEER  
STATE OF KANSAS  
20585  
11-26-2016

CONSULTANTS:

**YORKTOWN PARKWAY IMPROVEMENTS FROM KELLOGG TO DOUGLAS**  
ANDOVER, KANSAS

| REVISIONS: | MARK | DATE | DESCRIPTION |
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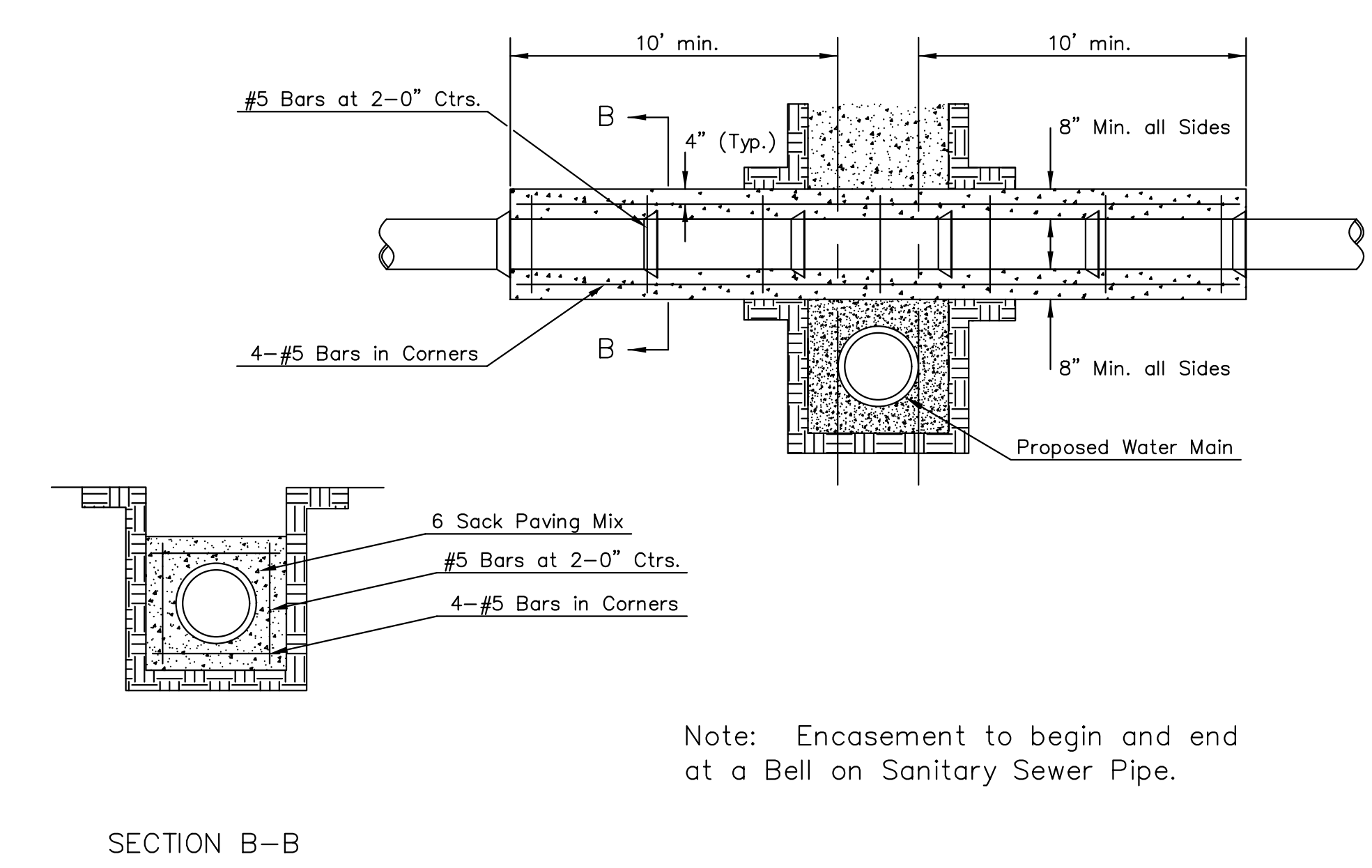
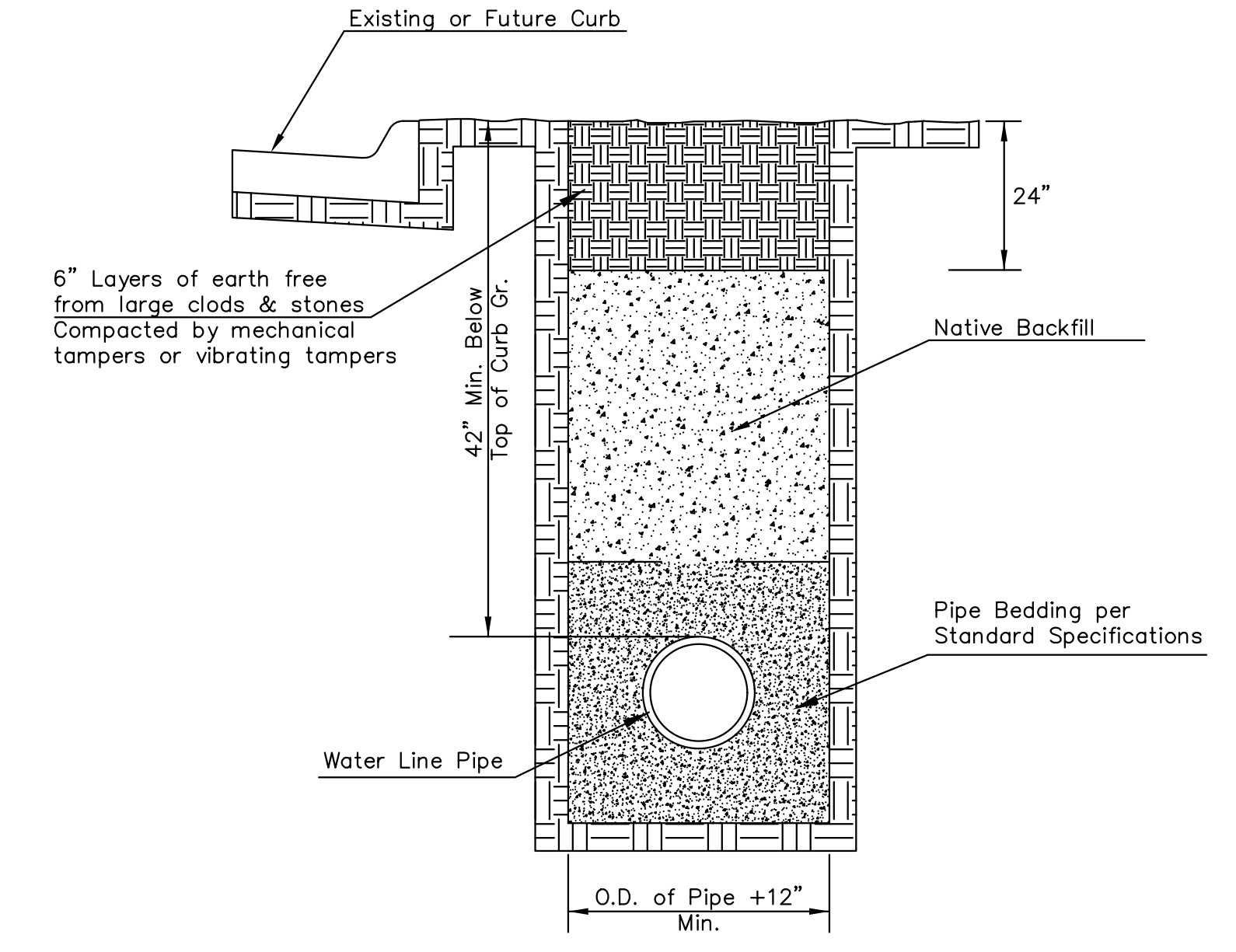
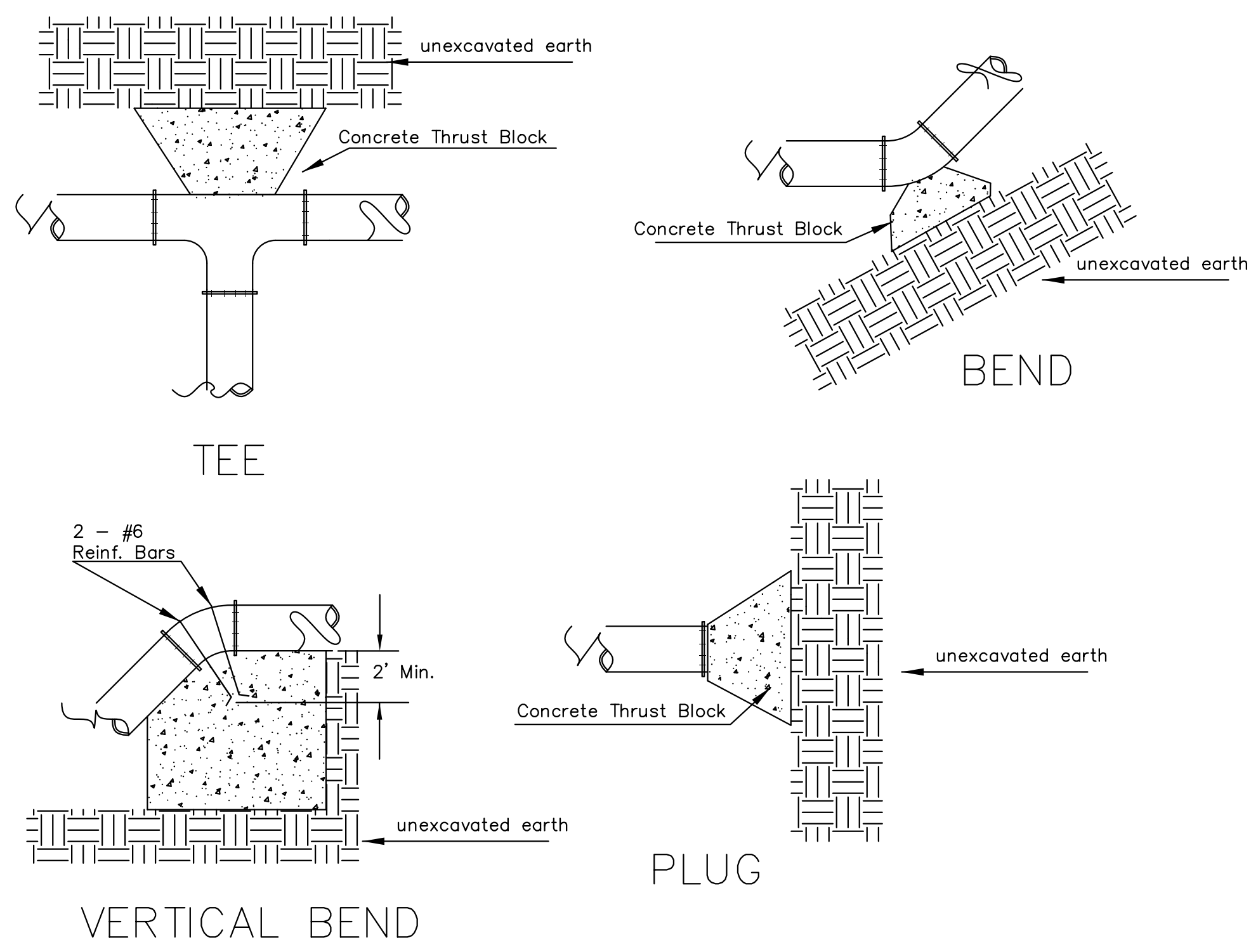
PROJ NO: P125170005  
SCALE: N/A  
DATE: 12/14/2018  
DESIGNED BY: DAN  
DRAWN BY: DAN  
CHECKED BY: MDB

**SHEET TITLE:**  
**STANDARD WATER ASSEMBLY DETAILS**

**SHEET NO.**  
153  
SHEET 153 OF 199

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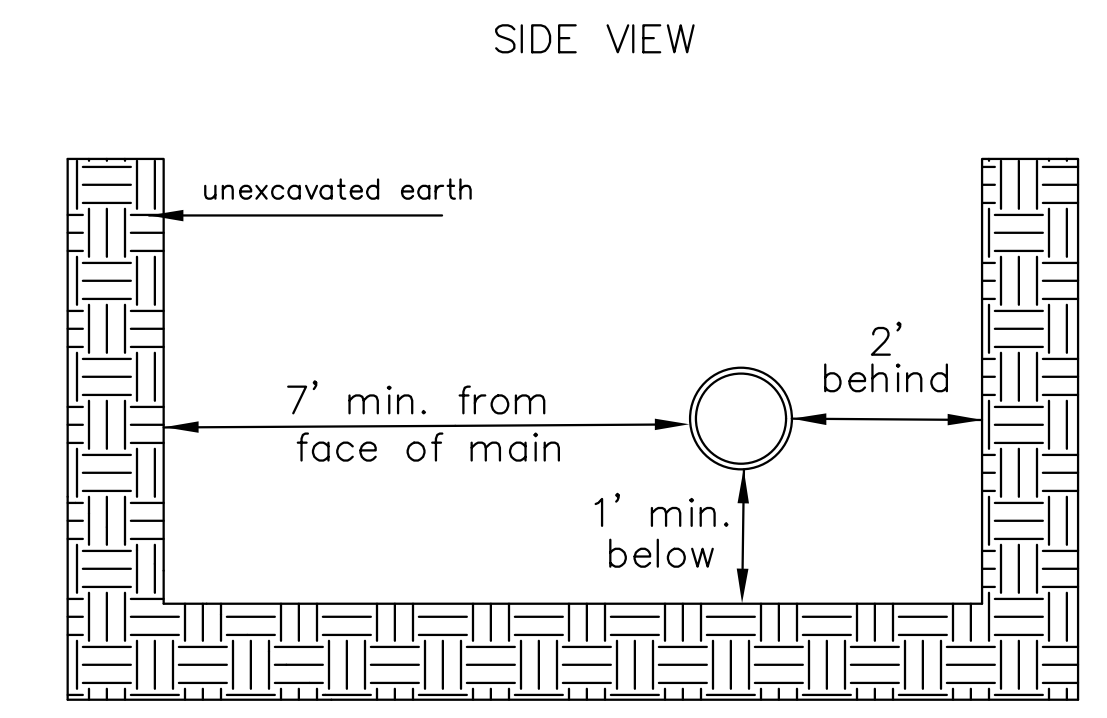


| PIPE SIZE | THRUST AT FITTINGS IN TONS-AT 150#/IN <sup>2</sup> P |      |       |         |         |       |
|-----------|--|------|-------|---------|---------|-------|
|           | PLUG   | 90°  | 45°   | 22 1/2° | 11 1/4° | TEE   |
| 6"        | 2.8  | 3.95 | 2.15  | 1.09    | .55     | 2.8   |
| 8"        | 4.9  | 6.95 | 3.75  | 1.90    | .96     | 4.9   |
| 12"       | 11.4   | 16.1 | 8.75  | 4.45    | 2.25    | 11.4  |
| 16"       | 20.15  | 28.5 | 15.4  | 7.85    | 3.95    | 20.15 |
| 20"       | 31.15  | 44.0 | 23.85 | 12.15   | 6.10    | 31.15 |
| 24"       | 44.55  | 63.0 | 34.1  | 17.4    | 8.75    | 44.55 |

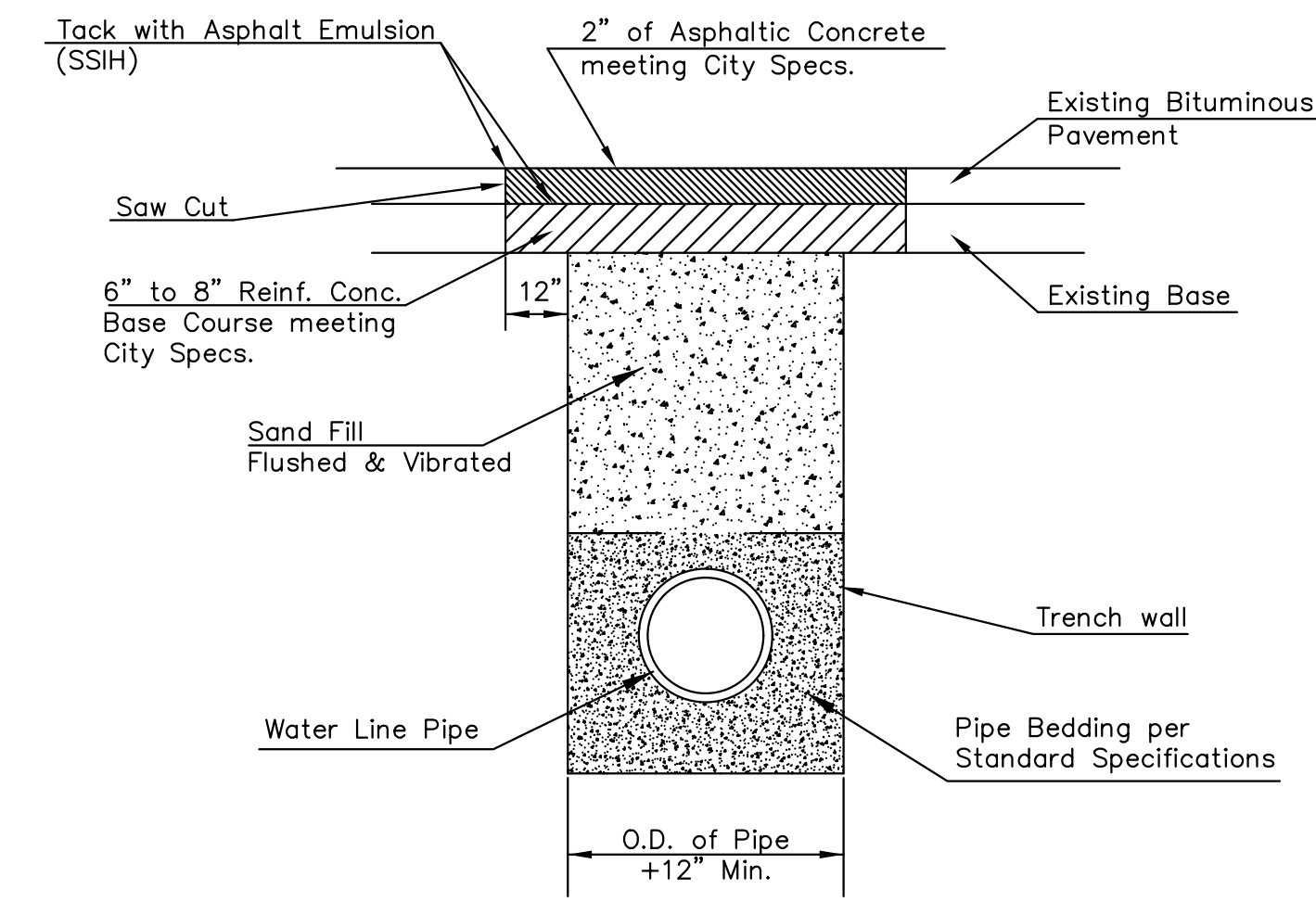
TYPICAL THRUST BLOCKS

TRENCH COMPACTION IN ROAD RIGHT-OF-WAY

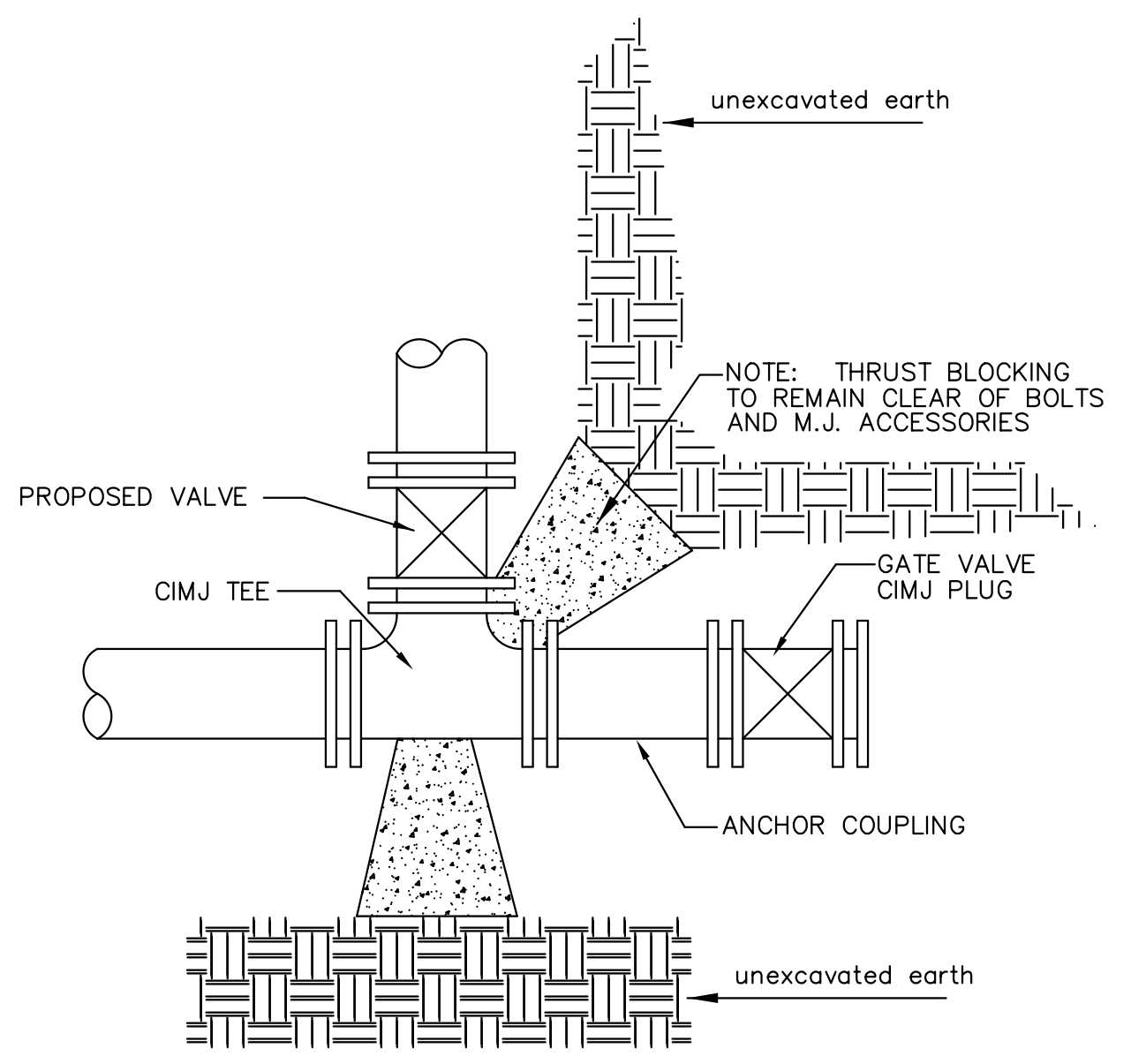
REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER



SIDE VIEW

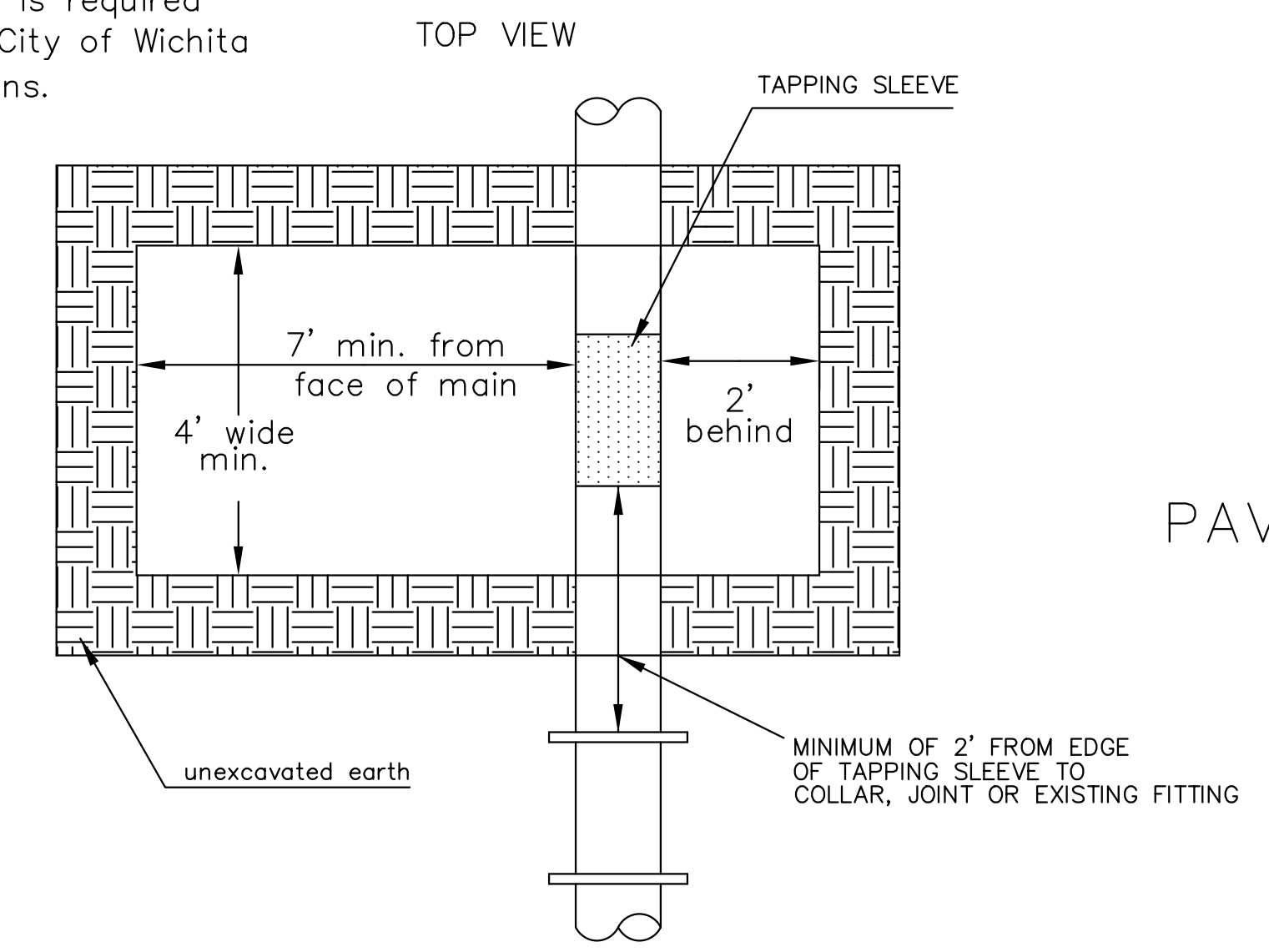


PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS



KEY BLOCK DETAIL

Note: When shoring is required it is to be per The City of Wichita Standard Specifications.



EXCAVATION FOR WET TAP

\* PLANS GOVERN UNLESS OTHERWISE NOTED ON PLANS

**Tran Systems**  
 245 NORTH WACO  
 SUITE 222  
 WICHITA, KANSAS 67202  
 PHONE: 316-303-3000  
 FAX: 316-303-0166

Professional Engineer  
 License No. 20585  
 11-26-2015  
 KANSAS PROFESSIONAL ENGINEERS

CONSULTANTS:

YORKTOWN PARKWAY IMPROVEMENTS FROM KELLOGG TO DOUGLAS  
 ANDOVER, KANSAS

| REVISIONS: | MARK | DATE | DESCRIPTION |
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PROJ NO: P125170005  
 SCALE: N/A  
 DATE: 12/14/2018  
 DESIGNED BY: DAN  
 DRAWN BY: DAN  
 CHECKED BY: MDB

SHEET TITLE:  
 MISCELLANEOUS WATER DETAILS

SHEET NO.  
 155  
 SHEET 155 OF 199

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