

# WATER DISTRIBUTION SYSTEM IMPROVEMENTS

## TO SERVE

# JABARA ROAD RECONSTRUCTION AND T-HANGARS EXPANSION

PRIVATE PROJECT NO. 1801 PPW (607853)

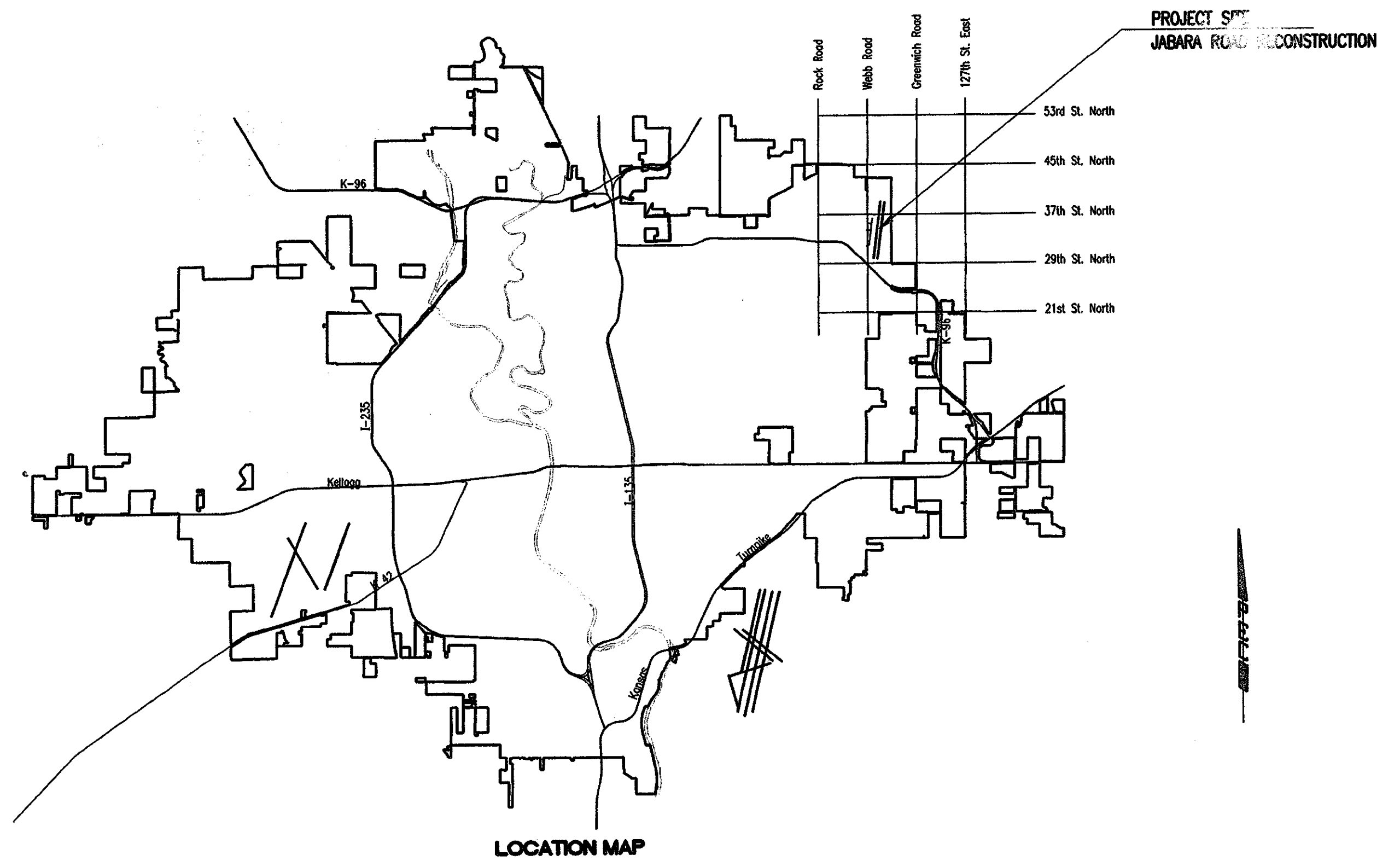
## CITY OF WICHITA, KANSAS

GARY JANZEN, P.E. - CITY ENGINEER

As-Built Plans  
 Contractor: Pearson Excavating  
 Superintendent: Dean Boatwright(Cornejo)  
 Foreman: Scott Bratcher  
 Client: City of Wichita  
 Inspecting Firm: Schwab Eaton  
 Inspector: Caleb Wilson  
 PDF by: CFW/ 01/27/15

**INDEX OF SHEETS**

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SHEET NO. W6	STANDARD WATERLINE DETAILS
SHEET NO. W7	MISCELLANEOUS WATER DETAILS
SHEET NO. 31-33	EROSION CONTROL BMP DETAILS



LOCATION MAP

APPROVED AS NOTED  
 BY CITY ENGINEER OF WICHITA  
 & BY WICHITA FIRE DEPARTMENT

Water Mains (Engineering) Rebecca Paul 5/6/14

Water Mains (Water) Greg York 5-7-14

Fire Prot. Line DWD 5-7-14

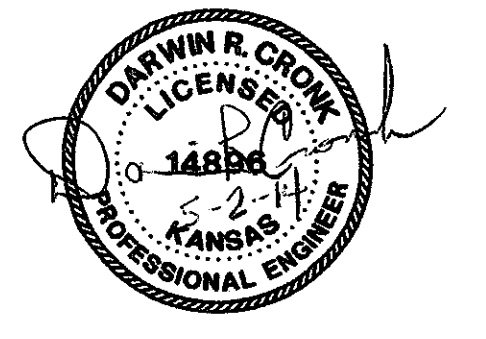
**NOTE TO CONTRACTORS**

**PUBLIC PROPERTY:**  
 Inspection and testing for the waterline is to be provided by a Licensed Consulting Engineering Firm under contract with the Contractor. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed 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 the City Engineer. All Construction and Materials shall comply with the City of Wichita Specifications and Standards (on file and available in the City Engineer's Office).

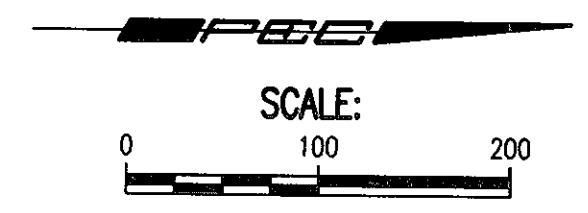
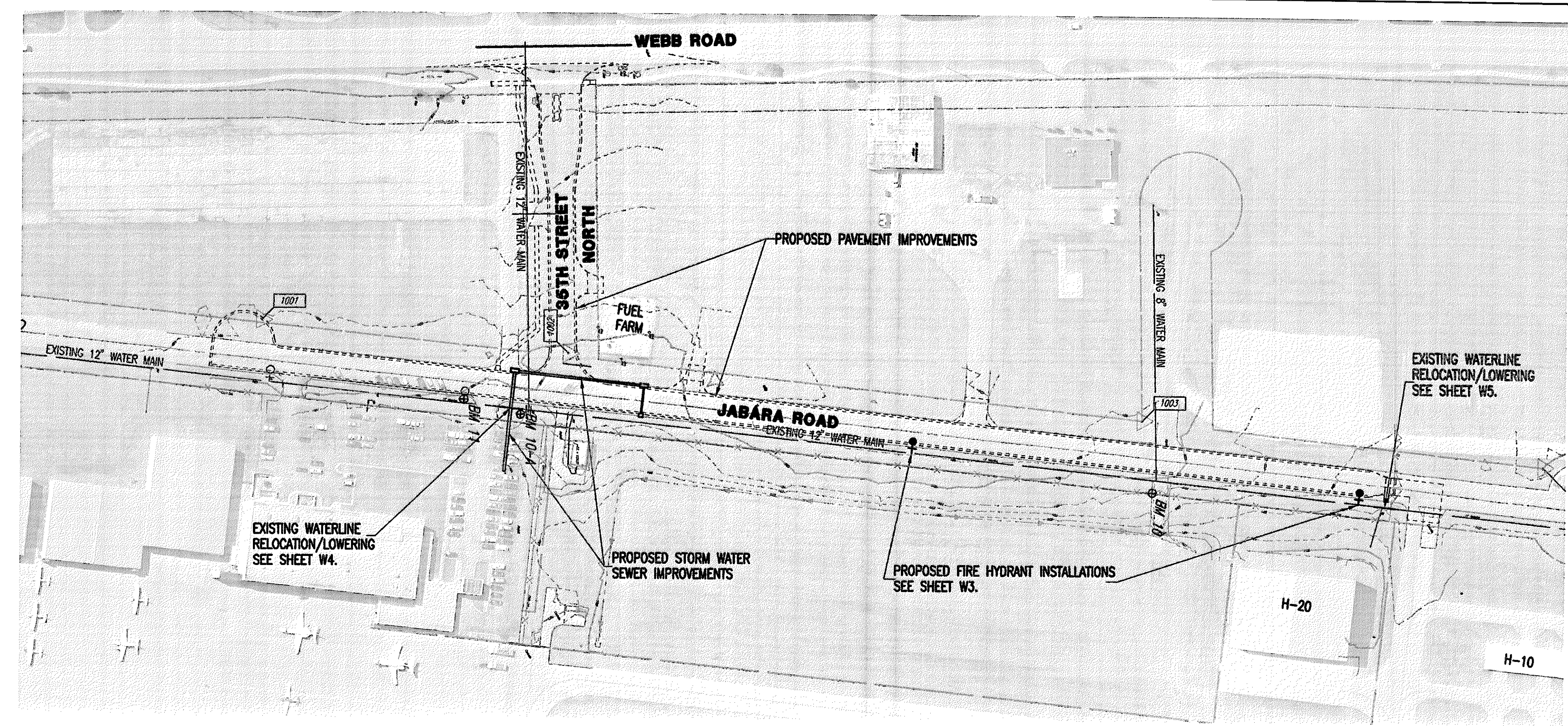
**PRIVATE PROPERTY:**  
 Installation and testing for the fire protection line is to be performed by a City of Wichita licensed fire protection contractor in accordance with the fire codes as adopted by the City of Wichita. All materials and construction practices for the fire protection line shall comply 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 the City of Wichita Fire Department and by a licensed Consulting Engineering Firm under contract with the Contractor.  
 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.

## MAY 2014

PLANS PREPARED BY  
**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
 ENGINEERS  
 WICHITA, KANSAS



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**BENCHMARK LIST**

BM #10 - T-POST SET 1.0' WEST OF SOUTH GATE POST EAST SIDE JABARA ROAD.  
ELEV. = 1423.77

BM #10A - SQUARE CUT CENTER SOUTH SIDE ELECTRIC VAULT AT NW CORNER MIDWEST AVIATION.  
ELEV. = 1424.63

BM #11 - "+" CUT NW BOLT TOP FLANGE FIRE HYDRANT AT MIDWEST AVIATION.  
ELEV. = 1426.68

**CONTROL POINTS**

Pt. No. 1001  
N: 5,793.9305, E: 8,881.4090  
Set 1/2" Bar H.C.P.  
1. 30.5' E of W Edge Asph. Jabara Rd.  
2. 27.5' NE to Center of SS Manhole.

Pt. No. 1002  
N: 6,184.5499, E: 8,922.9591  
Set 1/2" Bar H.C.P.  
1. 39.8' N to SE Corner Post Fuel Depots.  
2. 33.0' NE to Center SS Manhole.  
3. 30.5' E to West Edge Asph. Jabara Rd.

Pt. No. 1003 = #73 R/W Corner Jabara Ct. S. R/W @ Jabara Rd. W. R/W  
Elev. = 1425.83  
N: 6,914.8290, E: 9,003.9874  
Fd. 1/2" Pipe @ R/W  
1. 12.8' NE to Center SS Manhole.  
2. 26.5' E to W Edge Asph. Jabara Rd.

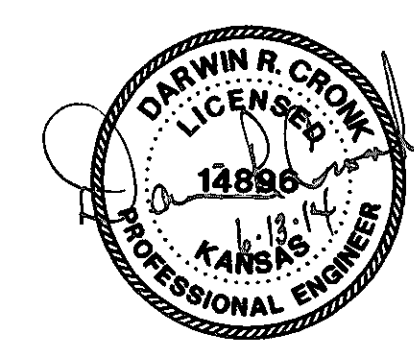
**GENERAL NOTES**

- ALL ELEVATIONS SHOWN ARE NGVD 29 DATUM.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE A MINIMUM ADVANCE NOTICE OF SEVENTY-TWO (72) HOURS TO UTILITY COMPANIES PRIOR TO STARTING ANY EXCAVATION AS FOLLOWS:  
  
KANSAS ONE-CALL 687-2470  
  
THE CONTRACTOR MUST NOTIFY THE FOLLOWING IN CASE OF AN EMERGENCY:  
  
COX COMMUNICATIONS 262-0661  
KANSAS GAS SERVICE 1(888)492-4950  
WESTAR ENERGY 383-8600  
BLACK HILLS ENERGY 1(800)-527-0357  
AT&T 1(800)-870-8390  
CITY OF WICHITA WATER DEPARTMENT 262-6000  
CITY OF WICHITA SEWER MAINTENANCE 262-6000
- ALL WATER MAINS AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF WICHITA, KANSAS STANDARD SPECIFICATIONS.
- THE WATER MAIN SHALL BE CONSTRUCTED ON THE ALIGNMENT SHOWN BY THE PLANS. 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 ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE. THE COST FOR ANY NECESSARY TREE TRIMMING, CLEARING AND/OR GRUBBING SHALL BE SUBSIDIARY TO SITE CLEARING.
- OPENING AND CLOSING 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. PROJECT INSPECTOR MUST ASCERTAIN THAT ANY VALVE CLOSED BY THE CONTRACTOR IS REOPENED. CONTRACTOR WILL BE PERMITTED TO OPERATE WATER VALVES ONLY WHEN THE PROJECT INSPECTOR ASSIGNED TO THE PROJECT IS PRESENT.
- THE 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 CONTRACTOR SHALL GIVE ALL PROPERTY OWNERS AND/OR TENANTS OF DEVELOPED PROPERTY DIRECTLY ABUTTING THE CONSTRUCTION OF THIS PROJECT A MINIMUM OF TEN (10) DAYS ADVANCE NOTICE PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR SHALL BE REQUIRED TO RE-ESTABLISH 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. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO SITE RESTORATION.
- THE CONTRACTOR SHALL RESTORE ALL DITCHES, SWALES, ROAD SHOULDERS, ENTRANCES, AND BANKLINES TO THEIR ORIGINAL SLOPES AND GRADES EXCEPT AS SHOWN OTHERWISE.
- NO SERVICES WILL BE INSTALLED AS PART OF THIS PROJECT.
- INTERURBAN TRAFFIC GENERATED OUTSIDE THE PROJECT AREA AND LOCAL BUSINESS OR RESIDENTIAL TRAFFIC GENERATED WITHIN THE PROJECT AREA ARE TO BE CARRIED THROUGH CONSTRUCTION AS FURTHER PROMULGATED BY PROJECT SPECIAL PROVISIONS. THE CONTRACTOR SHALL UTILIZE BARRICADES, SIGNS, GUARDS, AND FLAGMEN IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES INCLUDING ANY TREES REMOVED AND TREE TRIMMINGS AND EXCESS EXCAVATED MATERIAL SHALL BE DISPOSED OF ON SITES PROVIDED BY THE CONTRACTOR. THESE SITES SHALL ALSO BE APPROVED OF BY THE ENGINEER AS TO SUITABILITY, APPEARANCE, AND SITE LOCATION. LOCATIONS THAT, IN THE OPINION OF THE ENGINEER, 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 MAY REQUIRE ARCHAEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED DISPOSAL LOCATION.
- EXCESS SOIL, IF ANY, SHALL BE HAULED TO THE LOCATION SHOWN ON THE PLAN. SOIL SHALL BE STOCKPILED AND SEEDED WITH FESCUE SEED AFTER EARTHWORK IS COMPLETED. ASPHALT MILLINGS SHALL BE HAULED AND DISPOSED ON AIRPORT PROPERTY LOCATED APPROXIMATELY 600' SOUTH AND 1000' EAST OF 45TH STREET NORTH AND 2ND WEBB ROAD INTERSECTION.
- ALL LAWN/TURF AREAS DISTURBED BY CONSTRUCTION OF THE PROPOSED IMPROVEMENTS SHALL BE RESTORED WITH THE SAME GRASS/SOD AS EXISTING. RESTORATION OF DISTURBED AREAS SHALL INCLUDE, BUT NOT BE LIMITED TO, TOP SOIL PREPARATION, SEEDING, MULCH, AND/OR RESEEDING. ALL SEEDING/SODDING WORK SHALL BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD SPECIFICATIONS AND THE CITY OF WICHITA ADMINISTRATIVE REGULATION NO. AR78 WHICH GOVERNS CLEANUP AND RESTORATION OR REPLACEMENT FOLLOWING CONSTRUCTION. ALL COSTS FOR THIS WORK SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR "SITE RESTORATION".
- THE CONTRACTOR SHALL SEED ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH TEMPORARY RYE GRASS. RYE GRASS SEED SHALL BE PLANTED AT A MINIMUM RATE OF SIX (6) POUNDS PER ONE THOUSAND (1,000) SQUARE FEET. THIS TEMPORARY SEEDING MAY BE OMITTED ONLY IF OTHER SEEDING IS REQUIRED IN ACCORDANCE WITH GENERAL NOTE NO. 14 ABOVE. TEMPORARY SEEDING OR PERMANENT SEEDING/SODDING SHALL BE APPLIED WITHIN 14 DAYS AFTER THE AREA HAS BEEN DISTURBED.
- EACH BIDDER SHALL VISIT THE SITE OF THE PROJECT BEFORE SUBMITTING THE PROPOSAL FOR THIS WORK SO THAT HE WILL BE FULLY INFORMED OF THE EXISTING FIELD CONDITIONS AND THE OBSTACLES WHICH MIGHT BE ENCOUNTERED. UPON AWARD OF THE CONTRACT THE CONTRACTOR WILL NOT BE GRANTED ANY ADDITIONAL COMPENSATION WITH REGARDS TO TIME AND MONEY FOR CONDITIONS THAT MAY HAVE BEEN EVALUATED DURING ANY INSPECTION OF THE SITE.
- THE CONTRACTOR SHALL INSTALL AND/OR MAINTAIN EROSION CONTROL METHODS AS SPECIFIED ON SHEETS 31-33. THE WATERLINE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE EROSION CONTROL SHOWN THROUGH THE COMPLETION OF THIS PROJECT. INSTALLATION OF THESE BMP'S DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF ABATING SOIL EROSION.

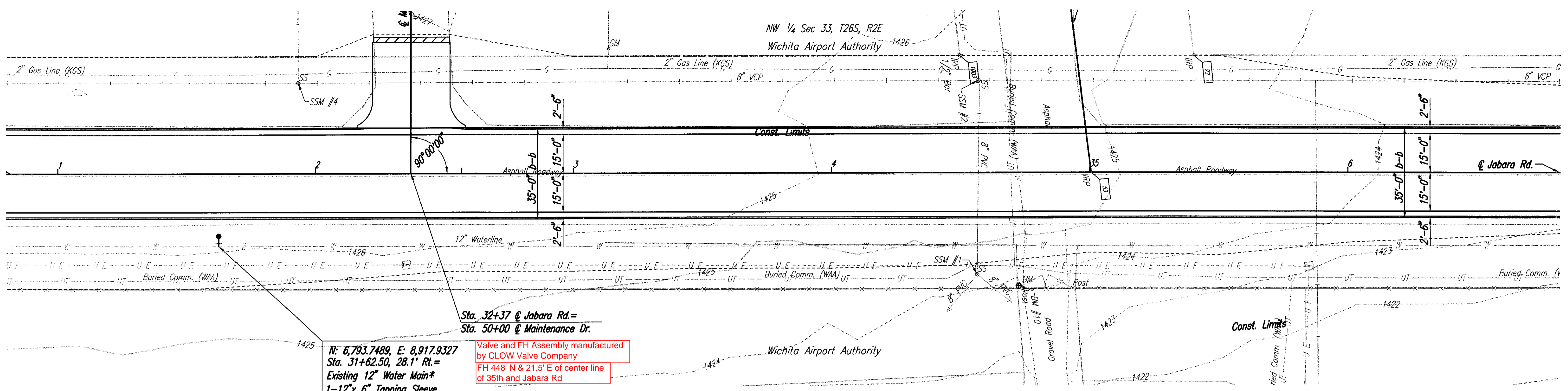
**LEGEND**

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- EXISTING WATER VALVE
- PROPOSED WATER VALVE
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- EXISTING BLOW OFF
- PROPOSED BLOW OFF

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**THE WICHITA AIRPORT AUTHORITY**  
 COLONEL JAMES JABARA AIRPORT  
 PAVING, DRAINAGE, & T-HANGAR IMPROVEMENTS  
**PPW KEY MAP AND GENERAL NOTES**  
 AIP PROJECT NO. 3-20-0089-XX  
**PEC** PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 303 SOUTH TOPEKA WICHITA, KS 67202  
 316-262-2691 www.pec1.com  
 Date JUNE 2014 Job No. 132-12588-0019



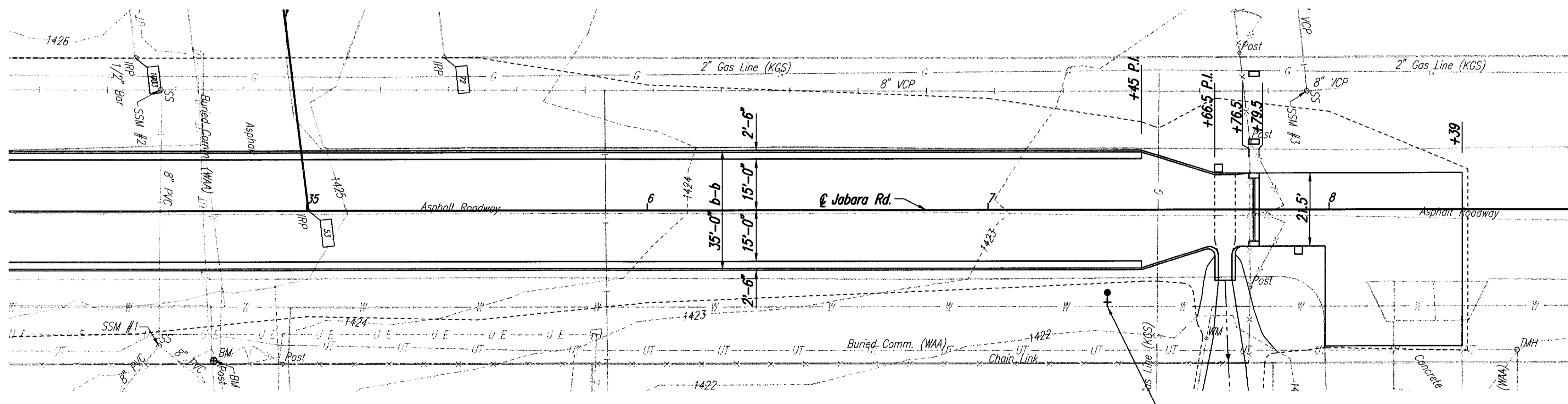
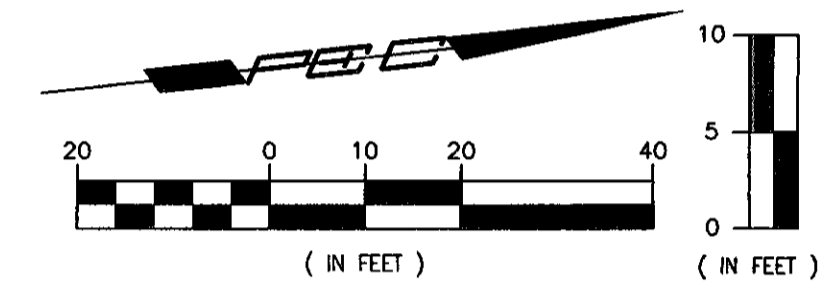
**Sta. 32+37 @ Jabara Rd. =**  
**Sta. 50+00 @ Maintenance Dr.**  
 N: 6,793.7489, E: 8,917.9327  
 Sta. 31+62.50, 28.1' Rt. =  
 Existing 12" Water Main\*  
 1-12"x 6" Tapping Sleeve  
 1-6" Tapping Valve  
 1-6" Valve Box  
 (To be furnished and set by City of Wichita Water Dept.)  
 Top Valve Box El.=1325.1  
 Contractor shall reimburse the City for this work.  
 2.0'-6" DI CL SJ Pipe φ (L=4' Min.)  
 1-Fire Hydrant  
 FH Bury Line El.=1325.1 See Sheet W6 for Fire Hydrant Detail.

Valve and FH Assembly manufactured by CLOW Valve Company  
 FH 448' N & 21.5' E of center line of 35th and Jabara Rd  
 FH valve is 3.5' East of FH

- UTILITIES**
- |                |                           |
|----------------|---------------------------|
| SANITARY SEWER | CITY OF WICHITA           |
| WATER          | CITY OF WICHITA           |
| ELECTRIC       | KG&E                      |
| GAS            | KANSAS GAS SERVICE        |
| SWB TELEPHONE  | SOUTHWESTERN BELL         |
| WAA TELEPHONE  | WICHITA AIRPORT AUTHORITY |

\* PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE THE EXISTING 12" WATERLINE AT STATIONS 31+62.50, RT. AND 37+35.0, RT. TO VERIFY PIPE SIZE, TYPE, FITTINGS, AND HORIZONTAL AND VERTICAL LOCATION. THE CONTRACTOR SHALL REPORT HIS FINDINGS TO THE ENGINEER SO THAT ANY NECESSARY PLAN MODIFICATIONS CAN BE MADE. ANY ADDITIONAL LABOR OR MATERIALS NECESSARY TO COMPLETE THE CONNECTION SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT.

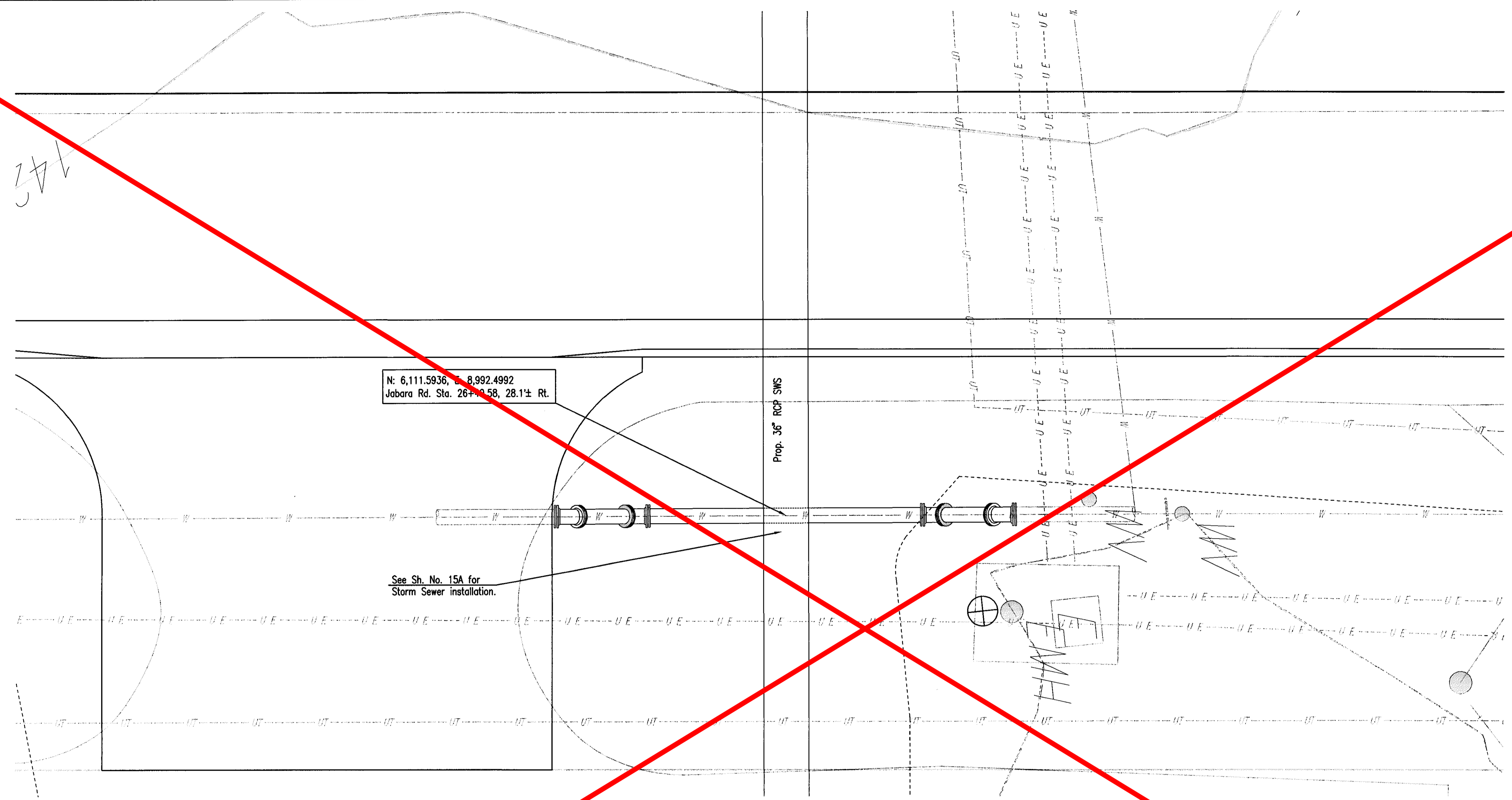
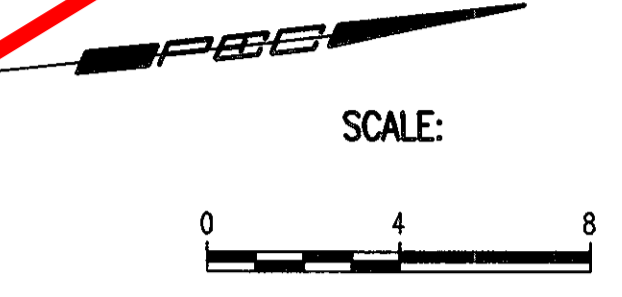
φ 6" DI CL SJ PIPE SHALL BE INCLUDED IN THE PRICE BID FOR FIRE HYDRANT.



**N: 7,364.0846, E: 8,967.4076**  
**Sta. 37+35.0, 28.1' Rt. =**  
 Existing 12" Water Main\*  
 1-12"x 6" Tapping Sleeve  
 1-6" Tapping Valve  
 1-6" Valve Box (To be furnished and set by City of Wichita Water Dept.)  
 Top Valve Box El.=1322.4  
 Contractor shall reimburse the City for this work.  
 2.0'-6" DI CL SJ Pipe φ (L=4' Min.)  
 1-Fire Hydrant  
 FH Bury Line El.=1322.5 See Sheet W6 for Fire Hydrant Detail.

Valve and FH Assembly manufactured by CLOW Valve Company  
 FH 1020' N & 23' E of center line of 35th and Jabara Rd  
 FH valve is 2.5' East of FH

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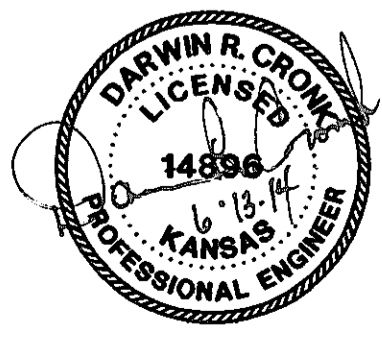
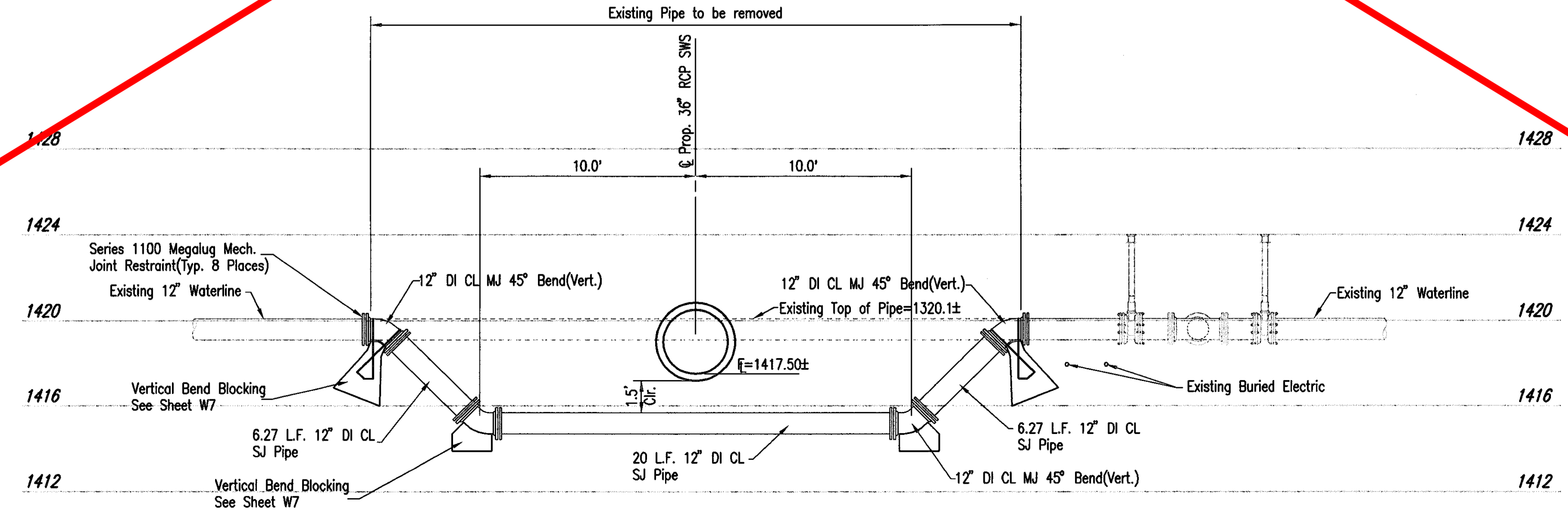
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 Jabara Rd. Sta. 26+49.58, 28.1± Rt.

See Sh. No. 15A for  
 Storm Sewer installation.

Prop. 36" RCP SMS

(EAST SIDE JABARA ROAD AND 35TH STREET NORTH)

The excavation for the fittings cut-in connections shall be made so existing pipe outlet is kept free and clear and is protected from contamination from any foreign materials. Proposed pipe shall be swabbed with a 1% Chlorine solution and flushed prior to installation.



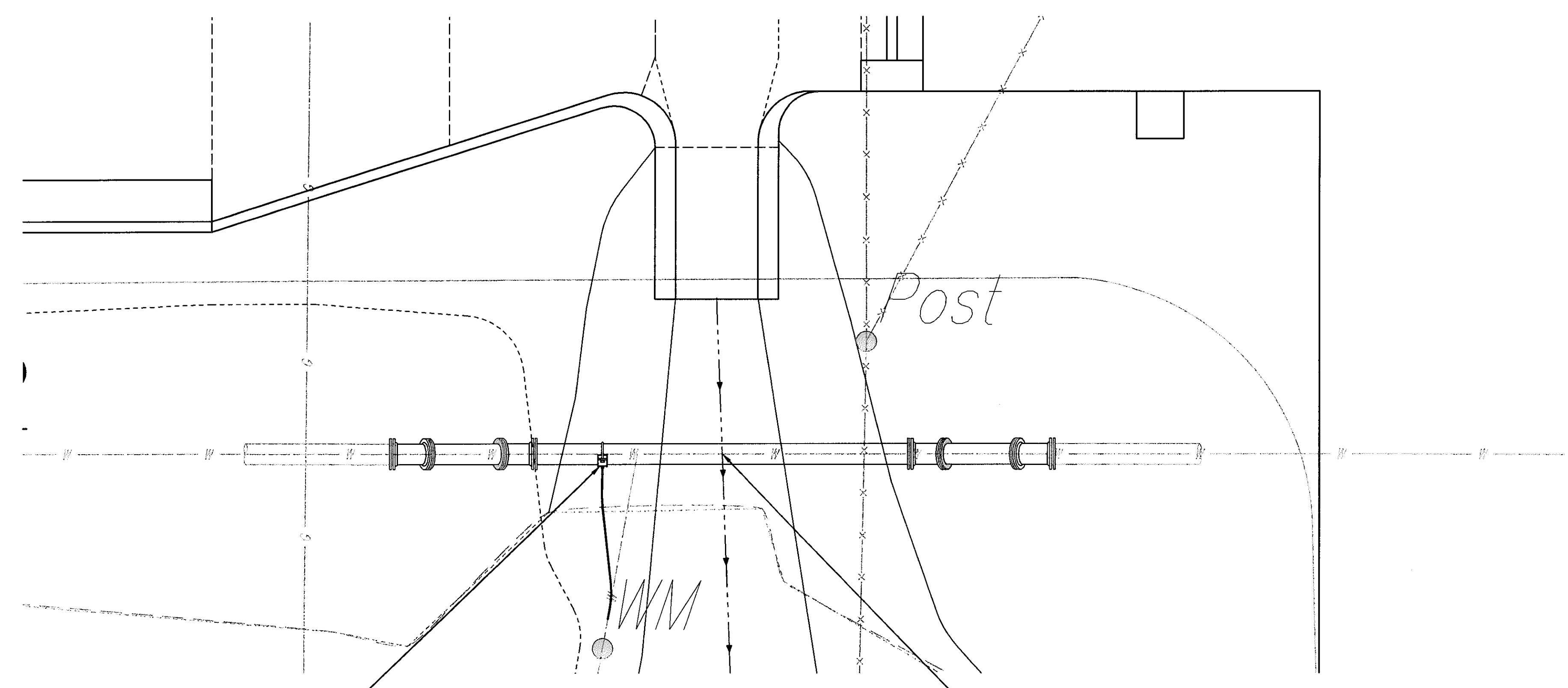
THE WICHITA AIRPORT AUTHORITY  
 COLONEL JAMES JABARA AIRPORT  
 PAVING, DRAINAGE, & T-HANGAR IMPROVEMENTS

**12" WATERLINE LOWERING DETAIL**  
 JABARA RD. STA. 26+49.58, 28.1± RT.  
 AIP PROJECT NO. 3-20-0001-XX

**PEC** PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
 303 SOUTH TOPEKA WICHITA, KS 67202  
 316-262-2691 www.pec1.com

Date JUNE 2014 Job No. 132-12588-019

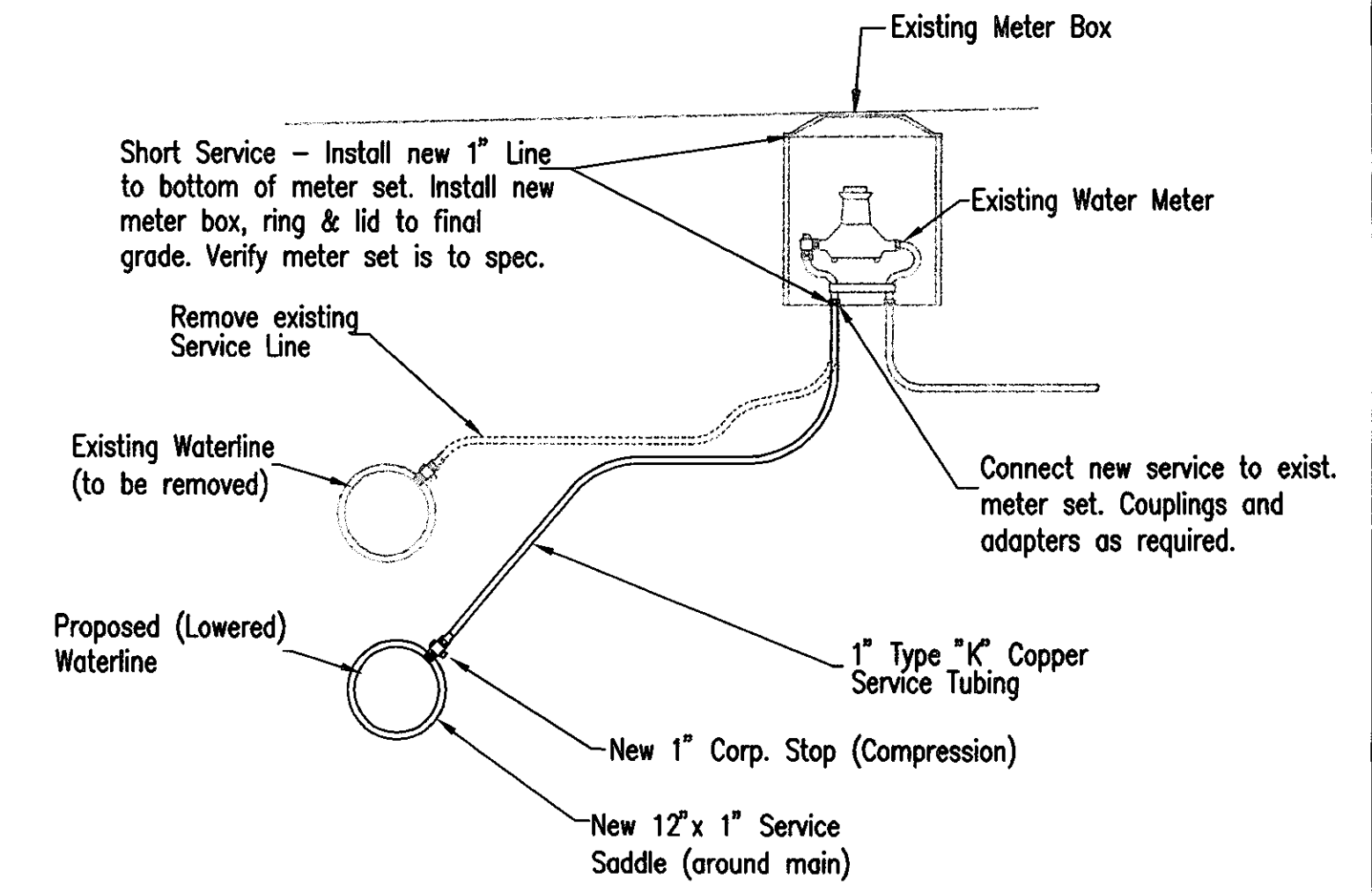
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 PLOT: 132-12588-019-01-01.dwg  
 PLOT: 132-12588-019-01-01.dwg



Provide 1-1" Service Tap and connect new service line to existing. See detail, this sheet.

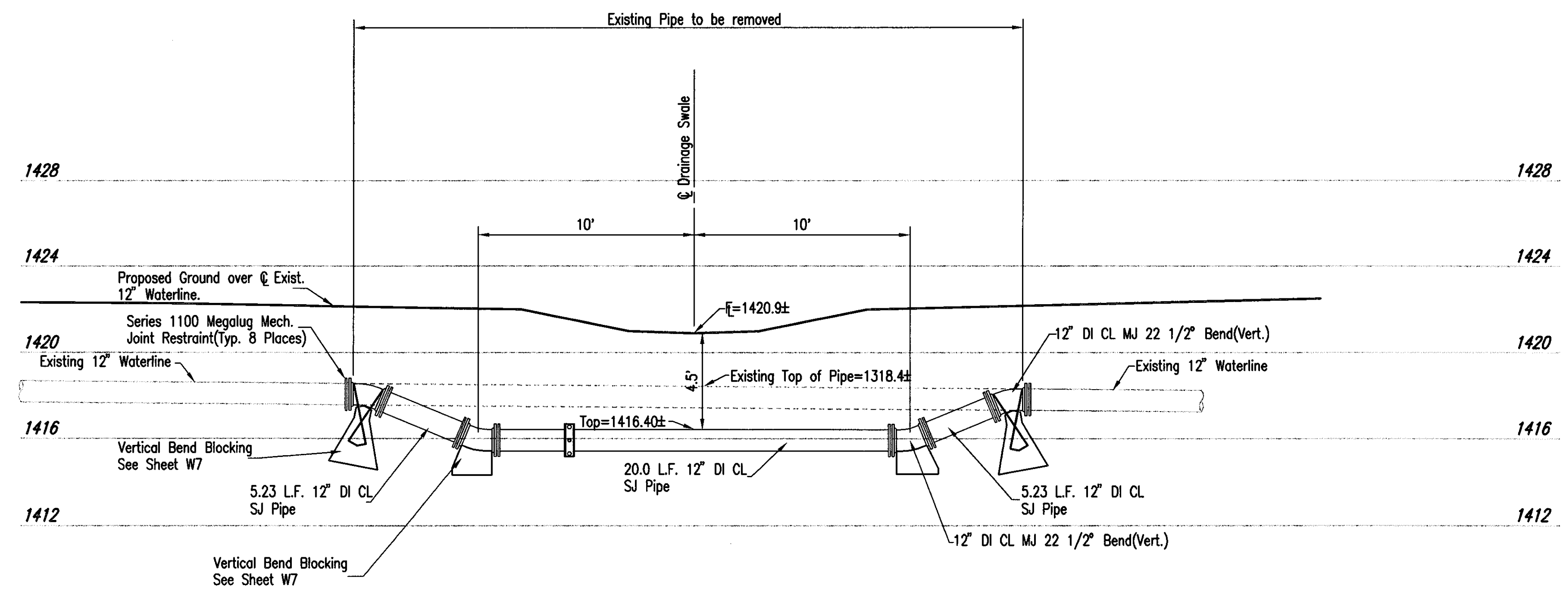
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Jabara Rd. Sta. 37+69.75, 28.3'± Rt.

(EAST SIDE JABARA ROAD, NEAR HANGAR H-20)

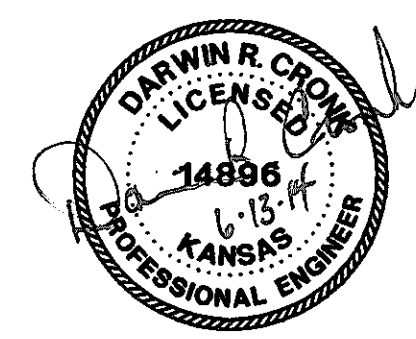


SERVICE CONNECTION DETAIL


The excavation for the fittings cut-in connections shall be made so existing pipe outlet is kept free and clear and is protected from contamination from any foreign materials. Proposed pipe shall be swabbed with a 1% Chlorine solution and flushed prior to installation.



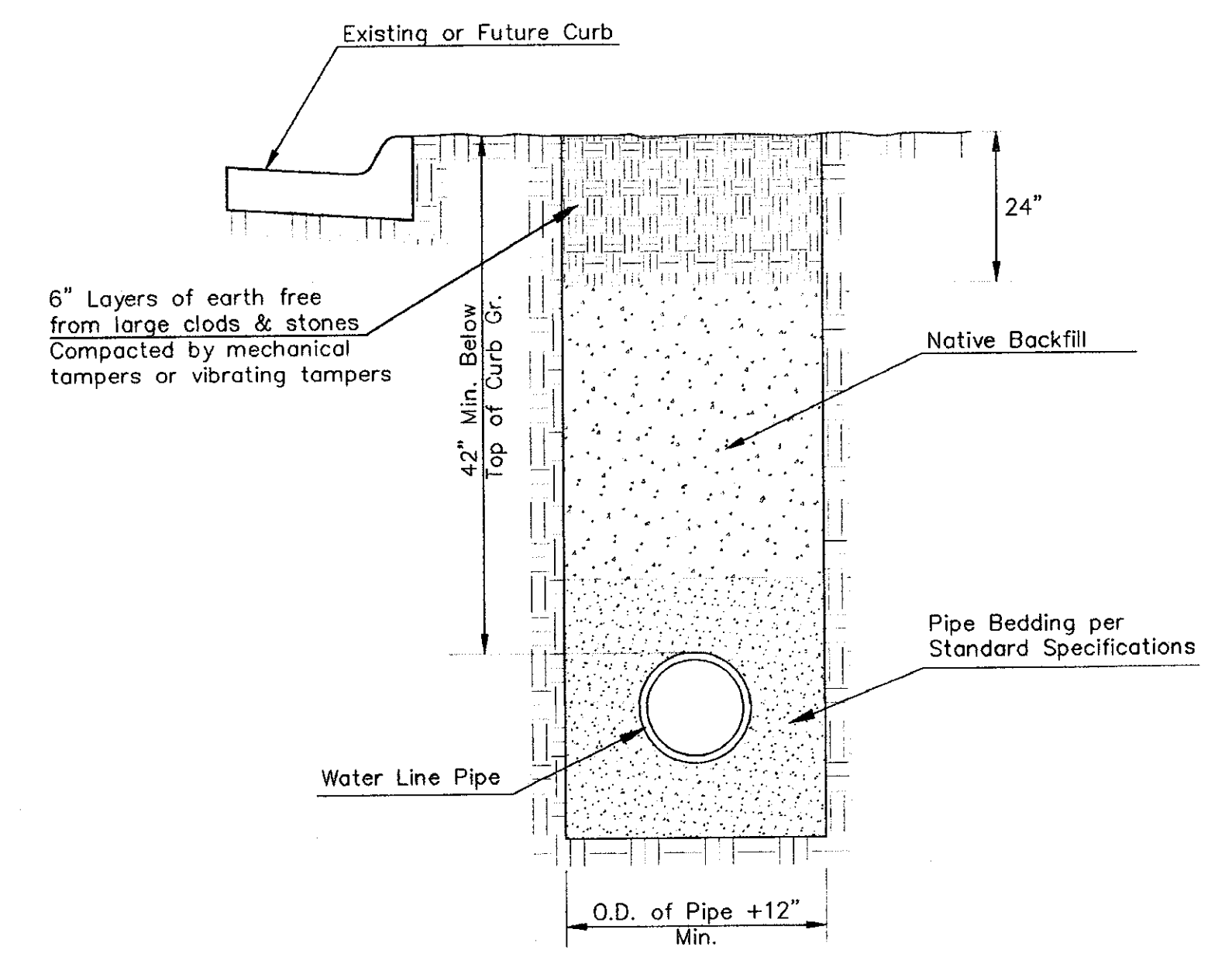
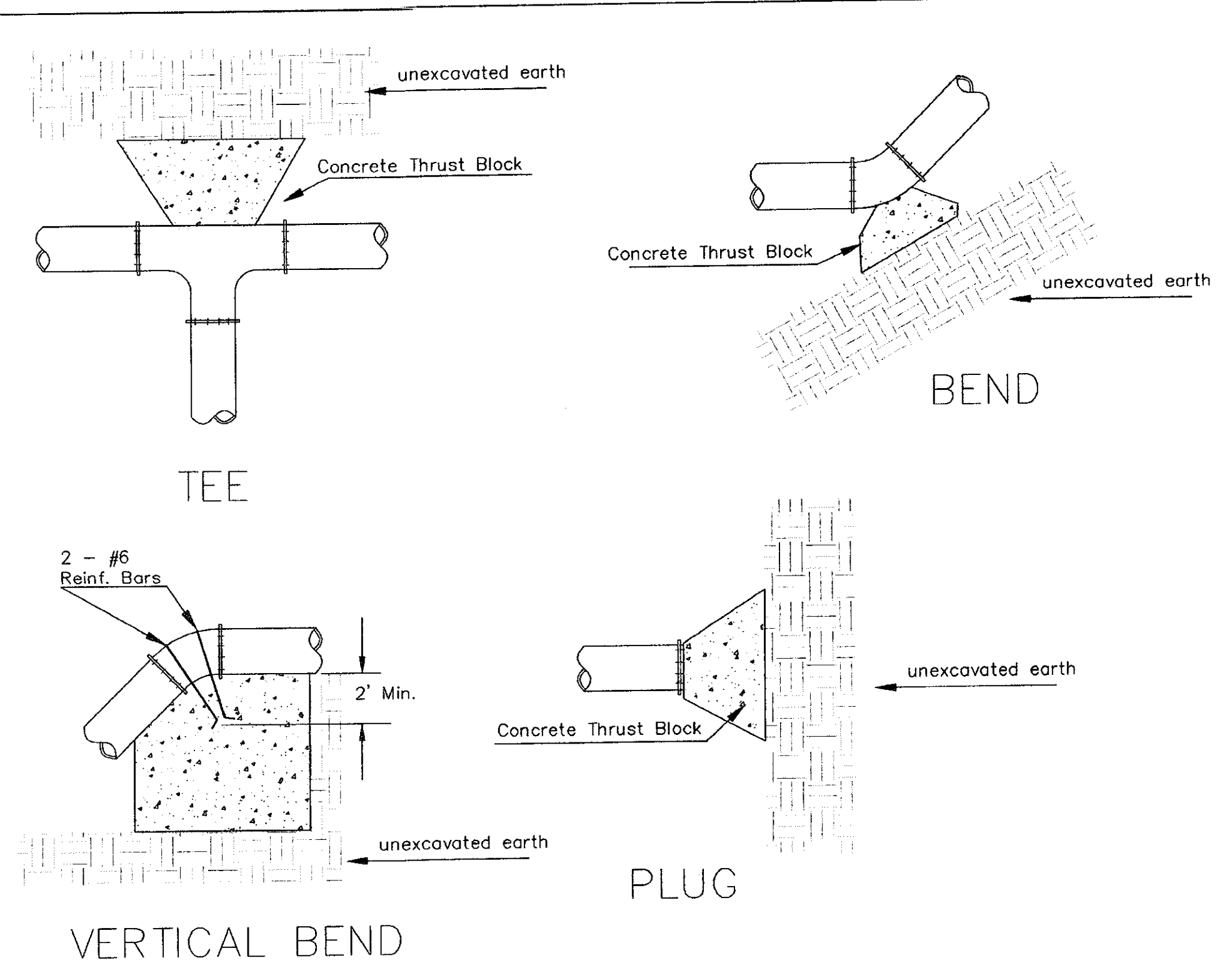
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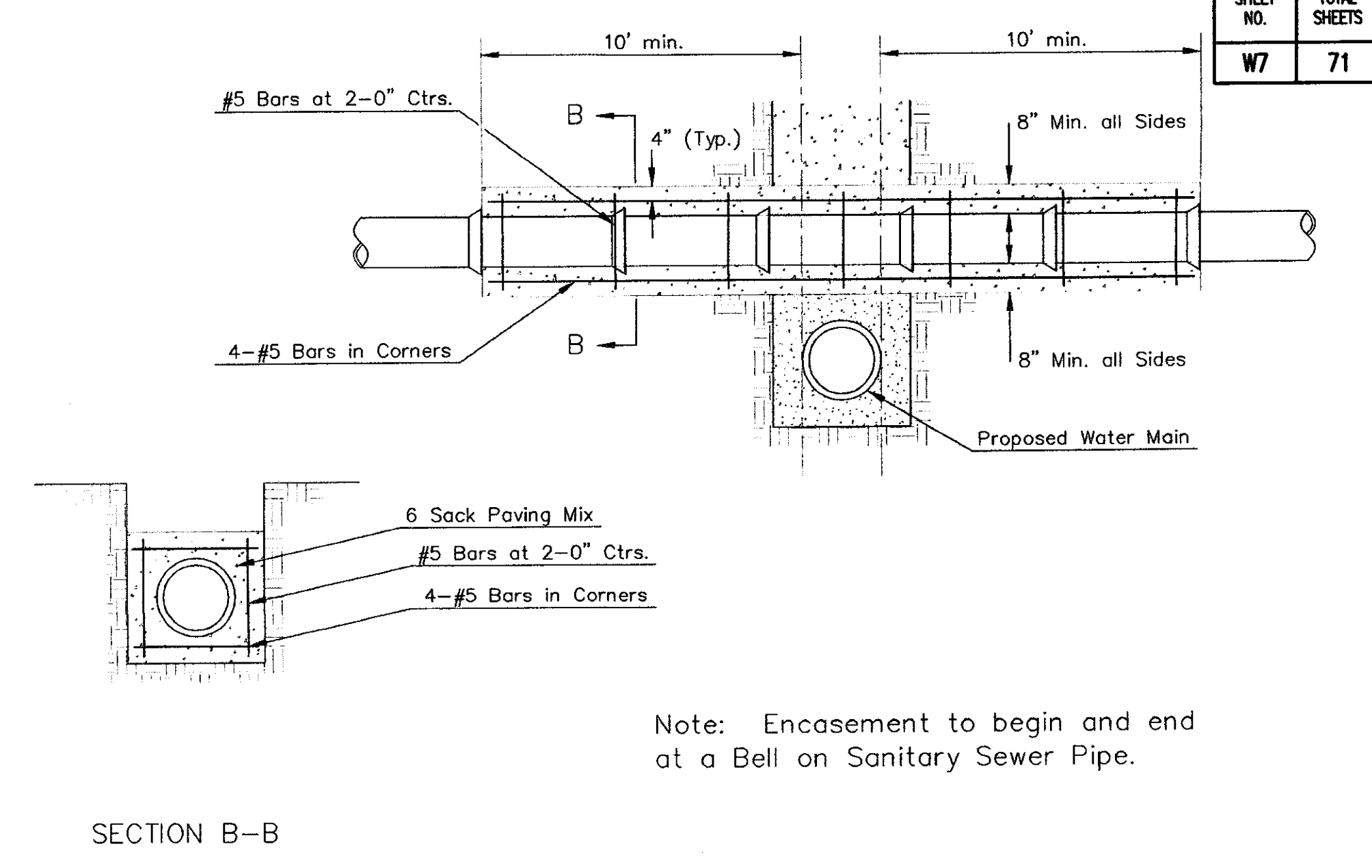
**BUILT TO PLAN**

THE WICHITA AIRPORT AUTHORITY COLONEL JAMES JABARA AIRPORT PAVING, DRAINAGE, & T-HANGAR IMPROVEMENTS	
<b>12" WATERLINE LOWERING DETAIL</b> JABARA RD. STA. 37+69.75, 28.3'± Rt. AIP PROJECT NO. 3-20-0089-XX	
	PROFESSIONAL ENGINEERING CONSULTANTS, P.A. 303 SOUTH TOPEKA WICHITA, KS 67202 316-262-2691 www.pec1.com
Date JUNE 2014	Job No. 132-12588-0019





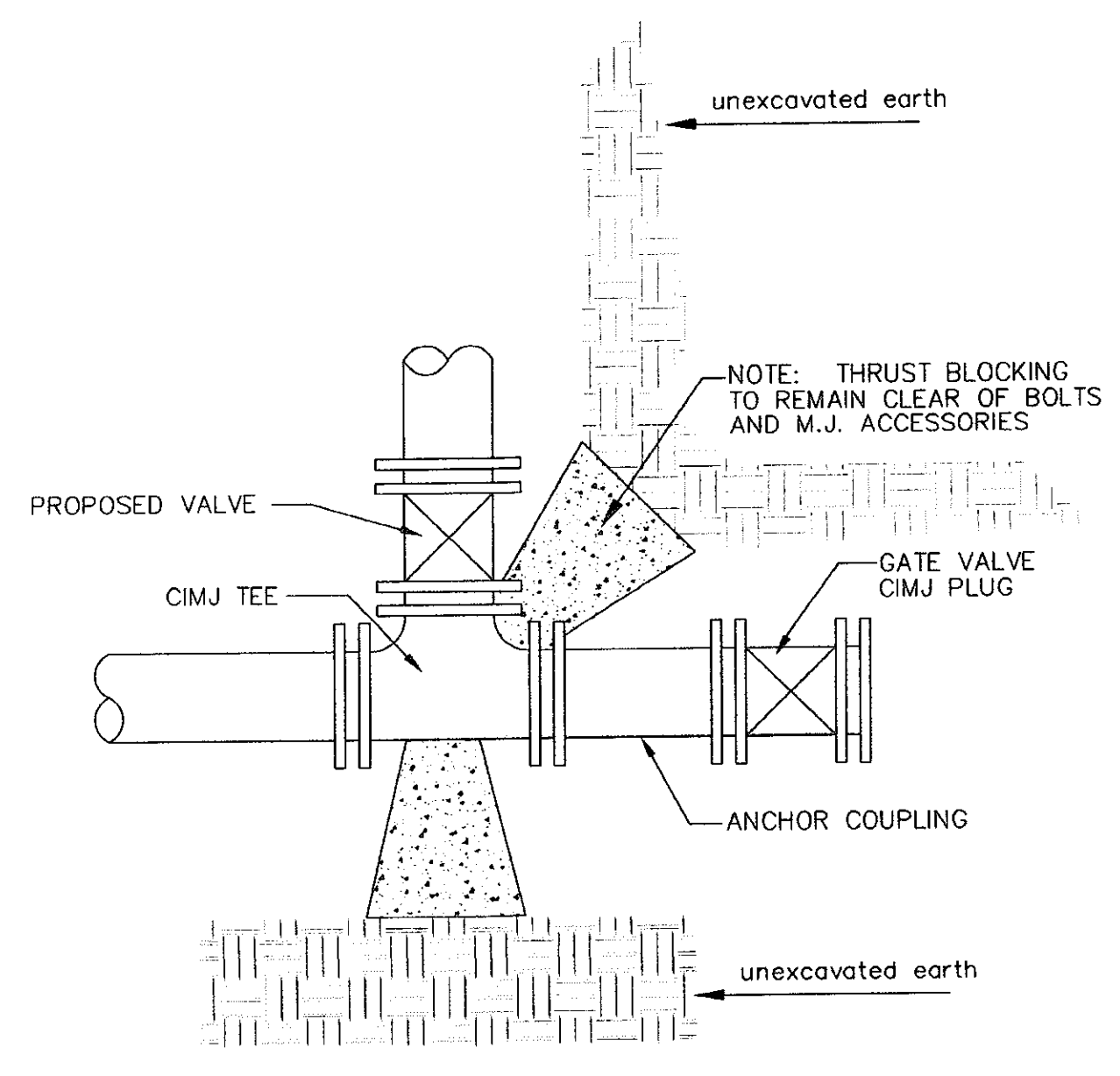
TRENCH COMPACTION IN ROAD RIGHT-OF-WAY



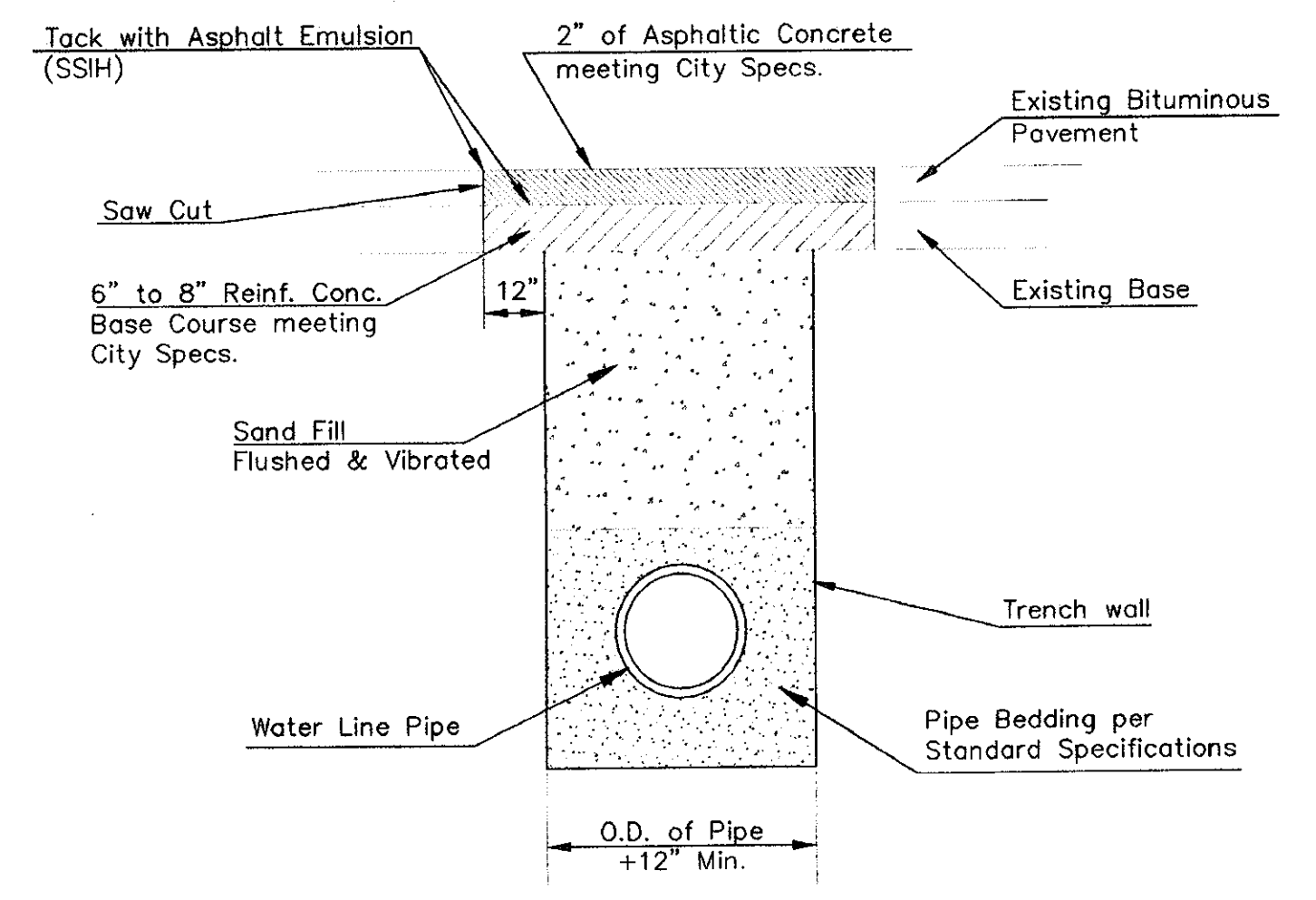
REINFORCED CONCRETE ENCASEMENT OF SANITARY SEWER

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

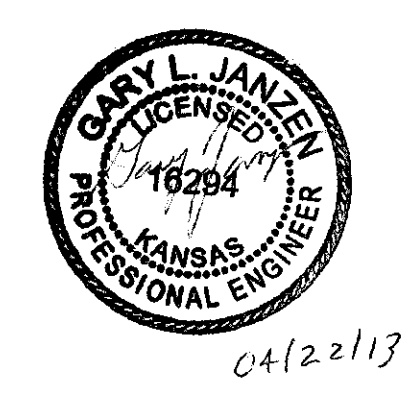


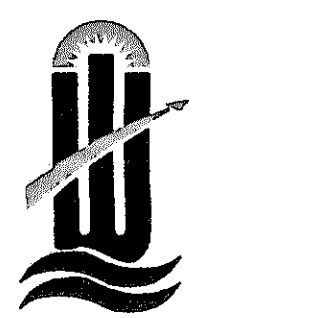
KEY BLOCK DETAIL



PAVEMENT REPLACEMENT & TRENCH COMPACTION UNDER EXISTING AND PROPOSED CITY ROADS

\* PLANS GOVERN UNLESS OTHERWISE NOTED ON PLANS





**CITY OF WICHITA**

PUBLIC WORKS & UTILITIES ENGINEERING DIVISION

**MISCELLANEOUS WATER DETAILS**

CITY ENGINEER  
**GARY JANZEN, P.E.**

PROJECT NUMBER	OCA NUMBER	DATE
		04/2013
CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202-1620 (316) 268-4501		SHEET
		_ of _

Saved 05-12-2014 8:33:57 AM by JDS  
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