X-28388

CURRENT CONSTRUCTION STANDARDS FOR DEVELOPMENTS DATED SEPTEMBER 6, 2024 SHALL GOVERN ON THIS PROJECT.

City Project No. 105900
IPRC Project No. 24-0208
Water Project No. WSL-2022-2192
FID No. 30114-0200431-105900-E07685

THE CITY OF FORT WORTH, TEXAS
PLANS FOR CONSTRUCTION OF

8" WATER LINE IMPROVEMENTS
TO SERVE

JOHN PETER SMITH HOSPITAL PEC

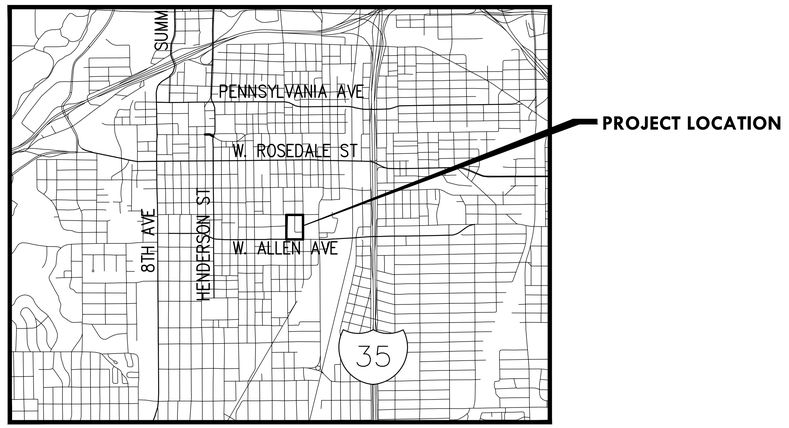
(JOHN PETER SMITH HOSPITAL SITE, LOT 1, BLK 1)

MATTIE PARKER
MAYOR

JAY CHAPA
CITY MANAGER

LAUREN PRIEUR, P.E.
CITY ENGINEER, TRANSPORTATION AND PUBLIC WORKS DEPARTMENT

CHRISTOPHER P. HARDER, P.E.
DIRECTOR, WATER DEPARTMENT



Location Map
N.T.S.

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4	Water Layout & Survey Control
5	W. Allen Ave Sta 6+50 to End
6	Allen Traffic Control Plan
7	Traffic Control Details
8	Water Details (1 OF 3)
9	Water Details (3 OF 3)

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Council District	9

October 2026

This document is for interim review and is not intended for construction, bidding or permit purposes.

SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

IPRC Project No.	24-0208
City Project No.	105900
Water Project No.	WSL-2022-2192
FID No.	30114-0200431-105900-E07685

Owned/Developed by:

Tarrant County Hospital District (dba JPS Health Network)

Prepared by:

teague nall & perkins
5237 N. Riverside Drive, Suite 100
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TBPE Registration No. F-230
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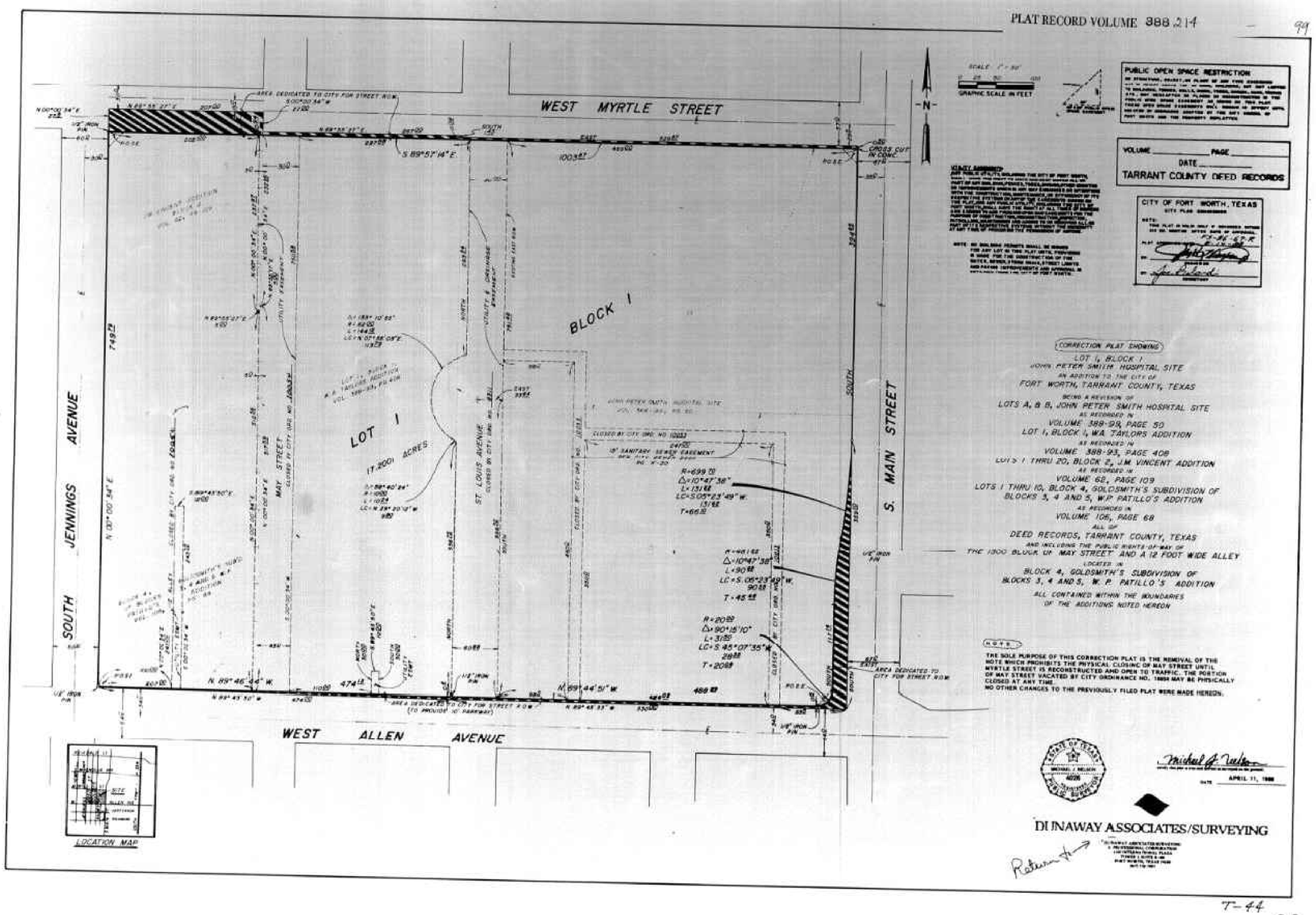
DIRECTOR'S DESIGNEE FOR CONSTRUCTION PLAN APPROVAL RESOLUTION NO. 01-10-2020 Date

Reviewed: Date
Project Manager

X-28388

TNP No. BKA 21233

Water Line Improvements to serve John Peter Smith Hospital



T-44

99

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

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GBPE No. PEF007431; TBAE No. BR 2673

FORT WORTH

scale	
horiz	N/A
vert	N/A
date	OCT 2026

tnp

THIS SHEET IS FOR INFORMATION ONLY

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements
Final Plat

tnp project BKA 21233
sheet 2

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-CAD\CAD\OFFSITE WATER\Water Lines Construction Plans\2 Final Plat.dwg at Oct 08, 2026-5:00pm by ARomero
Layout: 2 Final Plat Xref: PEF_BORDER-22x34.dwg

DIVISION 01 – GENERAL REQUIREMENTS

GENERAL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNERS OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE CITY AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION OR DATA, FOR LOCATING ALL UNDERGROUND FACILITIES, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION AND FOR THE SAFETY AND PROTECTION THEREOF AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THIS WORK SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED OWNERS (UTILITY COMPANIES) OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
   a. NOTIFY TEXAS 811 (1–800–DIG–TESS OR WWW.TEXAS811.ORG) TO LOCATE EXISTING UTILITIES PRIOR TO CONSTRUCTION.
   b. CAUTION! BURIED ELECTRIC LINES MAY EXIST ALONG THIS PROJECT. CONTACT ELECTRICAL PROVIDERS 48 HOURS PRIOR TO EXCAVATION :
      - CODY BOSSIO (ONCOR) 469–724–2759 cody.bossio@oncor.com
   c. CAUTION! BURIED GAS LINES MAY EXIST ALONG THIS PROJECT. CONTACT ATMOS 48 HOURS PRIOR TO EXCAVATION, AND WITHIN TWO (2) HOURS OF ENCOUNTERING A GAS LINE (BOB DAVISON: 817–207–2832)
   d. CAUTION! BURIED COMMUNICATION CABLES MAY EXIST ALONG THIS PROJECT. CONTACT COMMUNICATION COMPANIES 48 HOURS PRIOR TO EXCAVATION:
      - TOM GIBSON (AT&T) 432–934–5625 Tg4164@att.com
      - BRENT BASCOM (CHARTER) 817–298–3632 brent.bascom@charter.com
      - SHAUN GIESLER (CENTURY LINK) 813–202–7013 shaun.giesler@lumen.com
      - CAUTION! WHEN DOING WORK WITHIN 200 FEET OF ANY SIGNALIZED INTERSECTION, THE CONTRACTOR SHALL NOTIFY TRAFFIC MANAGEMENT DIVISION OF CITY OF FORT WORTH T/PW, 72 HOURS PRIOR TO EXCAVATION (THOMAS WILSON: 817–392–2637). THE CONTRACTOR SHALL PROTECT EXISTING SIGNAL HARDWARE, GROUND BOXES, DETECTION LOOPS, AND UNDERGROUND CONDUIT AT SIGNALIZED INTERSECTIONS. ANY DAMAGES AT SIGNALIZED INTERSECTIONS SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT THE CITY AT 817–392–8100 TO PERFORM CONDUIT LINE LOCATES AT SIGNALIZED INTERSECTIONS 72 HOURS PRIOR TO COMMENCING WORK AT THE INTERSECTION.
   e. THE CONTRACTOR SHALL NOTIFY THE CITY OF FORT WORTH PROJECT MANAGER 48 HOURS PRIOR TO THE START OF ANY EXCAVATION (GEORGE MARQUEZ P.E. : 817–392–6826)
2. THE LOCATION OF ALL DRIVEWAYS, RETAINING WALLS, STRUCTURES, ETC. WHICH MAY BE SHOWN ON THESE PLANS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXACT SIZE, LOCATION, ELEVATION, AND CONFIGURATION OF ALL STRUCTURES PRIOR TO CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE GENERAL SAFETY AT AND ADJACENT TO THE PROJECT AREA, INCLUDING THE PERSONAL SAFETY OF PUBLIC AND PRIVATE PROPERTY. CONTRACTOR SHALL PROVIDE TEMPORARY SANITARY SEWER FACILITIES TO AFFECTED PROPERTY OWNERS, IF NECESSARY PER SECTION 01 50 00 TEMPORARY FACILITIES AND CONTROLS. NOT A SEPARATE PAY ITEM.
4. CONTRACTOR'S PERSONNEL SHALL HAVE IDENTIFYING CLOTHING, HATS OR BADGES AT ALL TIMES WHICH IDENTIFY THE CONTRACTOR'S NAME, LOGO OR COMPANY.
5. THE CONTRACTOR SHALL DISTRIBUTE NOTICES (DOOR HANGER) TO ALL AFFECTED PROPERTY OWNERS PRIOR TO BEGINNING WORK ON EACH PROPERTY PER SECTION 01 35 13.
6. THE CONTRACTOR SHALL VIDEO ALL POTENTIALLY IMPACTED PRIVATE PROPERTY AREAS PRIOR TO WORK. VIDEOS SHALL INCLUDE DATE, NOTATION, AND AUDIO IDENTIFICATION OF PROPERTY ADDRESS AND MAIN/LATERAL NAME AND STATION NUMBER. THIS PRE–CONSTRUCTION VIDEO OF IMPACTED PROPERTIES SHALL BE CONSIDERED SUBSIDIARY WORK PER SECTION 01 32 33 PRECONSTRUCTION VIDEO.
7. CONTRACTOR'S PERSONNEL SHALL HAVE IDENTIFYING CLOTHING OR HATS AT ALL TIMES. THE CONTRACTOR SHALL ALSO HAVE IDENTIFICATION ON ALL VEHICLES.
8. CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO THE HOURS OF 7:00 AM TO 6:00 PM MONDAY THRU FRIDAY UNLESS APPROVED OR DIRECTED BY THE CITY. AT THE PRE–CONSTRUCTION MEETING, THE CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH SECTION 01 32 16, AND PROVIDE MONTHLY UPDATES ALONG WITH THE PROGRESS PAYMENT PER GENERAL CONDITIONS, SECTION 00 72 00, ARTICLE 6.04. ANY PROPOSED WORK BEYOND REGULAR WORKING HOURS WILL REQUIRE WRITTEN REQUEST BY THE CONTRACTOR PER GENERAL CONDITIONS, SECTION 00 72 00, ARTICLE 6.02.
9. SHOP DRAWINGS SHALL BE SUBMITTED TO THE CITY INSPECTOR, CITY PROJECT MANAGER AT THE PRE–CONSTRUCTION MEETING FOR REVIEW. ANY CONSTRUCTION ACTIVITY, MATERIALS, ETC. THAT ARE IDENTIFIED BY THE CITY AS NON–COMPLIANT WITH THE STANDARD DETAILS AND SPECIFICATIONS SHALL BE REMOVED AND REPLACED WITH MATERIALS THAT CONFORM WITH THE STANDARD DETAILS AND SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE. REFERENCE SECTION 01 33 00 SUBMITTALS AND SECTION 01 60 00 PRODUCT REQUIREMENTS, AND THE GENERAL CONDITIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING STREETS AND SIDEWALKS ADJACENT TO PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION PER SECTION 01 74 23. WORK ASSOCIATED WITH THIS ITEM IS CONSIDERED SUBSIDIARY TO VARIOUS ITEMS BID.
11. THE CONTRACTOR SHALL CLEAN UP AND RESTORE THE AREA OF OPERATIONS TO A CONDITION AS GOOD AS OR BETTER THAN THAT WHICH EXISTED PRIOR TO WORK, PER SECTION 01 74 23.
12. PRIOR TO SCHEDULING THE PROJECT FINAL, THE CONTRACTOR SHALL PROVIDE REDLINES, CUT SHEETS, FINAL APPROVED PIPE SHOP DRAWINGS, CCTV VIDEO/REPORTS, LINER RESULTS, ETC., PIPE REPORT AND SERVICE REPORT PER SECTIONS 01 77 19, 01 78 39, AND 33 01 31 TO THE CITY FOR REVIEW, REVISIONS, AND FINAL ACCEPTANCE.
13. WHEN IT IS REQUIRED THAT A CONTRACTOR WORK OR ENTER PRIVATE PROPERTY, THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER 48 HOURS PRIOR TO CONSTRUCTION PER SECTION 01 11 00. DO NOT STORE EQUIPMENT OR MATERIAL ON PRIVATE PROPERTY UNLESS AND UNTIL THE SPECIFIED APPROVAL OF THE PROPERTY OWNER HAS BEEN SECURED IN WRITING BY THE CONTRACTOR AND A COPY FURNISHED TO THE CITY.
14. THE CONTRACTOR SHALL REMOVE FROM THE PROJECT AREA ALL SURPLUS MATERIAL. THIS SHALL BE INCIDENTAL AND NOT A SEPARATE PAY ITEM. SURPLUS MATERIALS FROM EXCAVATION INCLUDING DIRT, TRASH, ETC. SHALL BE PROPERLY DISPOSED OF AT A SITE ACCEPTABLE TO THE CITY'S FLOOD PLAIN ADMINISTRATOR IF WITHIN THE CITY LIMITS. IF THE LOCATION IS NOT WITHIN THE CITY LIMITS, THE CONTRACTOR SHALL PROVIDE A LETTER STATING SO. SURPLUS MATERIAL MAY NOT BE PLACED IN NATURAL DRAINAGE WAY WITHOUT WRITTEN PERMISSION FROM THE AFFECTED PROPERTY OWNER AND THE CITY'S FLOOD PLAIN ADMINISTRATOR. IF THE CONTRACTOR PLACES EXCESS MATERIAL IN THE AREAS WITHOUT WRITTEN PERMISSION, CONTRACTOR SHALL RESPONSIBLE FOR ALL DAMAGE RESULTING FROM SUCH FILL AND SHALL REMOVE THE MATERIAL AT THEIR OWN COST.
15. COSTS ASSOCIATED WITH PROPOSED CONNECTIONS TO EXISTING FACILITIES SHALL BE INCLUDED IN EACH RESPECTIVE BID ITEM, IF NO SPECIFIC BID ITEM IS INCLUDED. NO SEPARATE PAY, EXCEPT AS SPECIFICALLY INDICATED WITHIN THESE PLANS OR THE CONTRACT DOCUMENTS.
16. CONTRACTOR SHALL CONTACT LOCAL SCHOOLS PRIOR TO BEGINNING CONSTRUCTION TO INFORM PRINCIPALS AND ADMINISTRATORS OF CONSTRUCTION IN THE AREA. A NOTE ON THE SCHOOL MARQUEE IS SUGGESTED TO INFORM PARENTS AND STUDENTS OF CONSTRUCTION, CONSTRUCTION DURATION, AND POSSIBLE ALTERNATIVE ROUTES AROUND CONSTRUCTION SITES. ONE LANE SHALL REMAIN OPEN AT ALL TIMES, AND ALL LANES OF TRAFFIC SHALL BE OPEN UP AT THE END OF EACH WORK DAY.
17. STREET USE PERMIT SHALL BE SUBMITTED PER SECTION 01 55 26 TO THE CITY INSPECTOR AND TPW FOR WORK IN CITY ROW.
18. THE CONTRACTOR SHALL REMOVE ALL FENCES, LOCATED WITHIN EASEMENTS, INTERFERING WITH CONSTRUCTION OPERATION AND PROVIDE TEMPORARY FENCING DURING CONSTRUCTION. REMOVED FENCES, WOODEN OR CHAIN LINK, SHALL BE REPLACED WITH A NEW FENCE OR UNDAMAGED ORIGINAL FENCING. ALL AFFECTED PROPERTY OWNERS SHALL BE NOTIFIED PRIOR TO CONSTRUCTION. REMOVAL AND REPLACEMENT OF EXISTING AND TEMPORARY FENCES PER SECTION 01 11 00 SUMMARY OF WORK, SHALL BE CONSIDERED SUBSIDIARY TO THE PROJECT COST AND REFLECTED IN THE UNIT BID PRICES FOR VARIOUS ITEMS LISTED IN THE PROPOSAL.

DIVISION 32 – EXTERIOR IMPROVEMENTS

GENERAL:

1. AT LOCATIONS WHERE THE CURB AND GUTTER ARE TO BE REPLACED, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE RE–ESTABLISHMENT OF EXISTING STREET AND GUTTER GRADES. IF BID ITEM FROM CONSTRUCTION STAKING IS NOT INCLUDED, ESTABLISHMENT OF GRADES SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK, THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS.
2. ALL DRIVEWAYS, WHICH ARE OPEN CUT, SHALL HAVE AT LEAST A TEMPORARY DRIVING SURFACE AT THE END OF EACH DAY. THE TEMPORARY SURFACE SHALL BE CONSIDERED AS A SUBSIDIARY ITEM OF WORK. THE COST OF WHICH SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS.
3. CONTRACTOR SHALL VERIFY WITH CITY PROJECT MANAGER THE LOCATION OF ALL CITY OWNED PARKLAND ASSOCIATED WITH AND ADJACENT TO THE PROJECT AND CITY OWNED LAND THAT IS MAINTAINED BY PARD. ADDITIONALLY, THE CONTRACTOR MAY NEED A SEPARATE AGREEMENT IN ORDER TO ACCESS CITY PARKLAND FOR STAGING AND/OR CONSTRUCTION. CONTACT PARK PLANNER AT 817–392–5764 TO VERIFY NEED FOR SEPARATE AGREEMENT.

SIDEWALKS AND CURB RAMPS:

1. THE CURB RAMP STANDARD DETAILS ARE INTENDED TO SHOW TYPICAL LAYOUTS FOR THE CONSTRUCTION OF THE CURB RAMPS. THE INFORMATION SHOWN ON THE STANDARD DETAILS MEET THE REQUIREMENTS SHOWN IN THE "2012 TEXAS ACCESSIBILITY STANDARDS" (TAS) AND THE "2010 ADA STANDARDS FOR ACCESSIBLE DESIGN" BY THE DEPARTMENT OF JUSTICE.
2. THE CONTRACTOR MAY NOT MAKE CHANGES TO THE SIDEWALK AND CURB RAMP LAYOUT WITHOUT APPROVAL OF THE CITY. THE CONTRACTOR MAY PROPOSE CHANGES TO THE SIDEWALK AND CURB RAMP LAYOUT DUE TO FIELD CONDITIONS, BUT ANY PROPOSED CHANGES MUST BE APPROVED BY THE CITY.
3. LANDINGS SHALL BE PROVIDED AT THE TOP OR BOTTOM OF CURB RAMPS, AS SHOWN ON DRAWINGS. THE LANDING CLEAR LENGTH SHALL BE 5 FEET MINIMUM FROM THE END OF RAMP. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARES. THE LANDING SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
4. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 5% (20:1) IN ANY DIRECTION.
5. CONTRACTOR SHALL PROTECT CONCRETE CURB AND GUTTER, DRIVEWAYS, AND SIDEWALKS THAT ARE NOT DESIGNATED FOR REMOVAL. REMOVAL AND REPLACEMENT OF THESE ITEMS SHALL BE AS DESIGNATED. AT LOCATIONS WHERE THE CURB AND GUTTER ARE TO BE REPLACED, THE CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR THE RE–ESTABLISHMENT OF EXISTING STREET AND GUTTER GRADES. ESTABLISHMENT OF GRADE SHALL BE PERFORMED PRIOR TO CONSTRUCTION AND IS NOT A SEPARATE PAY ITEM, BUT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT PRICE.
6. ALL DRIVEWAYS, SHALL HAVE AT LEAST A TEMPORARY RIDING SURFACE AT THE END OF EACH DAY. THE TEMPORARY SURFACE WILL BE CONSIDERED A NON–PAY ITEM.
7. CONTRACTOR SHALL SAW CUT EXISTING CURB AND GUTTER, PAVEMENT, DRIVEWAYS, SIDEWALKS AT AREAS WHERE PAVEMENT OR CONCRETE IS TO BE REMOVED. SAW CUTTING SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM BEING INSTALLED.
8. CONTRACTOR SHALL PROVIDE COMPACTED SUBGRADE AS NEEDED TO REPAIR DAMAGED DRIVES, STREETS, WALKS, AND PATIOS.

DIVISION 33 – UTILITIES

GENERAL:

1. WHEN IT IS REQUIRED THAT A CONTRACTOR WORK ON PRIVATE PROPERTY WITHIN UTILITY EASEMENTS, THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER 48 HOURS PRIOR TO CONSTRUCTION. ONCE THE PIPE HAS BEEN INSTALLED OR REHABILITATED, THE CONTRACTOR SHALL IMMEDIATELY COMMENCE SURFACE RESTORATION. SURFACE RESTORATION MUST BE COMPLETED TO THE OWNER'S SATISFACTION WITHIN TEN (10) WORKING DAYS. FAILURE TO MAINTAIN AND/OR COMPLETE SITE RESTORATION, AS NOTED ABOVE, MAY RESULT IN DEFERMENT OF FURTHER PIPE INSTALLATION ACTIVITIES.
2. EXISTING VERTICAL DEFLECTIONS AND PIPE SLOPES SHOWN ON THE PLANS WERE OBTAINED FROM RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. SOME PIPELINE SLOPES WERE ADJUSTED TO MATCH SURVEYED MANHOLE FLOW LINES. RIM ELEVATIONS, FLOW LINES, AND HORIZONTAL LOCATIONS OF EXISTING MANHOLES WERE DETERMINED FROM FIELD SURVEY. HOWEVER, IF CONFLICTS WITH PAVING, ADDITIONAL FILL, STORM SEWER, DRAINAGE HEADWALLS, INLETS, BRIDGE PIERS, EMBANKMENTS, MSE WALLS, RETAINING WALLS, ABOVE GROUND STRUCTURES, FRANCHISE UTILITIES, ETC. HAVE BEEN IDENTIFIED, THE UTILITIES IN CONFLICT SHALL BE LOCATED AND POTHOLED USING VACUUM EXCAVATION METHOD PER SECTION 33 05 30 PRIOR TO CONSTRUCTION OF THE MAIN. CONTRACTOR SHALL PROVIDE ALL POTHOLE DATA AND OTHER DOCUMENTATION OF THESE CONFLICTS (PLANS, SHOP DRAWINGS, SURVEY DATA, ETC.) TO THE CITY INSPECTOR, WATER ENGINEERING, WATER FIELD OPERATIONS, AS PLANS SHALL BE REVISED AND SUBMITTED FOR REVIEW BY THE CITY IN ORDER TO AVOID A CONFLICT.
3. MAINTAIN ALL EXISTING WATER AND SEWER CONNECTIONS TO CUSTOMERS IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF INTERRUPTIONS IN SERVICE FOR WATER AND SEWER SERVICES TO BE REINSTATED. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNIGHT.
4. PROVIDE AND FOLLOW APPROVED CONFINED SPACE ENTRY PROGRAM IN ACCORDANCE WITH OSHA REQUIREMENTS. CONFINED SPACES SHALL INCLUDE MANHOLES AND ALL OTHER CONFINED SPACES IN ACCORDANCE WITH OSHA'S PERMIT REQUIRED FOR CONFINED SPACES.
5. ONLY CITY PREQUALIFIED CONTRACTORS, BY APPROPRIATE WATER DEPARTMENT WORK CATEGORY, SHALL BE ALLOWED TO ADJUST VALVE BOXES, MANHOLES, RING & COVERS, ETC.
6. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCH SAFETY. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED WORK UTILIZING A TRENCH SAFETY PLAN PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, FOR THIS PROJECT, IN ACCORDANCE WITH OSHA EXCAVATION SAFETY STANDARDS, FEDERAL AND STATE REQUIREMENTS, PER SECTION 33 05 10. A TRENCH SAFETY PLAN SHALL BE SUBMITTED AT THE PRE–CONSTRUCTION MEETING. THIS WOULD ALSO INCLUDE A GROUND WATER CONTROL PLAN IF CONDITIONS MEETING CRITERIA OUTLINED IN SECTION 33 05 10 EXIST.
7. ALL EMBEDMENT AND BACKFILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 33 05 10. CONTRACTOR SHALL PROVIDE THE EMBEDMENT/BACKFILL DENSITY TEST PLAN WHICH OUTLINES TESTING NOTIFICATION, FREQUENCY, TESTING LAB, TEST METHODS, TEST RESULT FORMAT, CONTACT INFORMATION ETC. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR IN WRITING TO OBTAIN SAMPLES AND PERFORM STANDARD PROCTOR TEST IN ACCORDANCE WITH ASTM D698. UPON COMMENCING OF BACKFILL PLACEMENT, CONTRACTOR SHALL SCHEDULE A DEMONSTRATION OF MEANS AND METHODS TO OBTAIN THE REQUIRED DENSITIES. DEPTH OF LIFTS FOR BACKFILL SHALL NOT EXCEED 12–INCHES. TEST REPORTS SHALL BE POSTED WITHIN 48 HOURS. INCLUDES THE INSTALLATION OF THE TRENCH GEOTEXTILE FABRIC AND UTILITY MARKER TAPE IN ACCORDANCE WITH SECTION 33 05 26. ALL PAVEMENT REPAIR SHALL BE PER SECTIONS 32 01 17, 32 01 18, AND 32 01 29. ALL NON–CONFORMING WORK SHALL BE REMOVED AND REPLACED.
8. EXISTING UTILITY INFORMATION IS PROVIDED FOR INFORMATION ONLY. ALTHOUGH THIS DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE CITY AND THE ENGINEER NEITHER ASSUMES NOR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THE DATA.
9. EXISTING UTILITY CROSSINGS SHOWN ON THE PROFILE ARE FROM REFERENCE PLANS, AND FROM INFORMATION OBTAINED FROM THE UTILITY COMPANIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING UTILITIES.

WATER:

1. PROVIDE THRUST RESTRAINT BY MEANS OF RESTRAINING JOINTS AT FITTINGS AND CONCRETE BLOCKING. WHEN SPECIFICALLY INDICATED ON THE DRAWINGS, PROVIDE THRUST RESTRAINT AT DESIGNATED JOINTS BEYOND THE FITTINGS. EACH METHOD SHALL BE CAPABLE OF THRUST RESTRAINT INDEPENDENT OF THE OTHER SYSTEM. THE CONTRACTOR SHALL REFER TO CITY STANDARD DETAILS FOR AREA REQUIRED TO INSTALL CONCRETE BLOCKING.
2. ALL DUCTILE IRON MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED TO PIPE USING RETAINER GLANDS.
3. PROPOSED WATER MAINS SHALL HAVE A MINIMUM COVER OF 48–INCHES COVER ABOVE THE TOP OF PIPE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS OR DETAILS.
4. ALL WATER SERVICES SHALL BE INSTALLED ABOVE STORM SEWERS, EXCEPT WHERE SHOWN OTHERWISE IN THE DRAWINGS.
5. ELEVATION ADJUSTMENT AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS, OR JOINT DEFLECTIONS. JOINT DEFLECTIONS SHALL NOT EXCEED FIFTY PERCENT (50%) OF MANUFACTURER'S RECOMMENDATIONS.
6. TEMPORARY PRESSURE PLUGS REQUIRED FOR SEQUENCING OF CONSTRUCTION AND TESTING OF PROPOSED WATER LINES SHALL BE CONSIDERED SUBSIDIARY TO THE WORK AND SHALL BE INCLUDED IN THE PRICE BID IN THE PROPOSAL FOR VARIOUS BID ITEMS.
7. 12–INCH DIAMETER AND SMALLER WATER MAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 48–INCHES AND 16–INCH AND LARGER WATER MAINS SHALL BE INSTALLED A MINIMUM COVER OF 60–INCHES, MEASURED FROM TOP OF SURFACE (EXISTING AND PROPOSED) EXCEPT WHERE SHOWN OTHERWISE IN THESE PLANS.
8. VALVES SHALL BE INSTALLED WHERE DESIGNATED ON THESE PLANS IN ACCORDANCE AND SHOP DRAWINGS PROVIDED TO THE CITY INSPECTOR FOR REVIEW PER SECTION 33 12 20. VAULTS SHALL BE INSTALLED ON ALL MAINS 16–INCH DIAMETER AND LARGER PER SECTIONS 33 12 20, 33 05 16, AND 03 30 00.
9. FIRE HYDRANTS SHALL BE A MINIMUM OF 3 FT. BEHIND THE BACK OF CURB (MAXIMUM 9 FT.) AND IN LINE WITH THE PROPERTY/LOT LINES EXCEPT WHERE SHOWN OTHERWISE IN THESE PLANS. CONSTRUCTION AND SHOP DRAWING SUBMITTALS TO THE CITY INSPECTOR PER SECTION 33 12 40.
10. CONTRACTOR SHALL PROVIDE A CLEANING PLAN AND DISINFECTION PLAN FOR 24–INCH AND LARGER WATER MAINS, PRIOR TO CONSTRUCTION IN ACCORDANCE WITH SECTION 33 04 40, PART 1.5, SUBMITTALS. INSERT CLEANING PIG IN WATER MAIN WHERE DIRECTED. CLEANING PIG SHALL BE PROVIDED BY CONTRACTOR IN ACCORDANCE WITH SECTION 33 04 40. FLUSHING IS ONLY PERMITTED WHEN SPECIALLY DESIGNATED IN THE DRAWINGS, AND THE CONTRACTOR SHALL PROVIDE THE PLAN SUBMITTALS TO THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER FIELD OPERATIONS AND WATER ENGINEERING FOR REVIEW AT LEAST 1 WEEK PRIOR TO START OF CONSTRUCTION.
11. INSTALL CHLORINATION AND SAMPLING POINTS AT DESIGNATED LOCATIONS PER SECTION 33 04 40.
12. CORPORATION STOPS SHALL BE TESTED FOR FULL FLOW WHEN THE SYSTEM IS PRESSURE TESTED. CONSTRUCTION AND SHOP DRAWING SUBMITTALS PER SECTION 33 12 10.
13. ALL WATER MAINS CROSSING BELOW STORM SEWER LINES SHALL BE DUCTILE IRON PIPE PER SECTION 33 11 10 AND BACKFILLED WITH CLSM PER SECTION 03 34 13, UNLESS NOTED OTHERWISE.
14. CONTRACTOR SHALL PROVIDE PIPE SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS. DETAILED PIPE SHOP DRAWINGS/LAY SCHEDULE WATER MAINS 16–INCH DIAMETER AND LARGER, SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN TEXAS FOR DUCTILE IRON PIPE, CONCRETE, AND STEEL PIPE ARE REQUIRED SUBMITTALS BEFORE START OF CONSTRUCTION. ELEVATION ADJUSTMENT AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS, OR JOINT DEFLECTIONS (FOR EXAMPLE, PVC JOINT DEFLECTIONS NOT TO EXCEED 50% OF THE MANUFACTURER'S RECOMMENDATIONS PER SECTION 33 11 12). REFERENCE DUCTILE IRON, CONCRETE, AND STEEL PIPE PER SECTIONS 33 11 10, 33 11 13, 33 11 14, FOR THE DEFLECTION REQUIREMENTS. PRIOR TO SCHEDULING THE PROJECT FINAL, THE CONTRACTOR SHALL PROVIDE REDLINES, CUT SHEETS, FINAL APPROVED PIPE SHOP DRAWINGS, ETC., PIPE REPORT AND SERVICE REPORT PER SECTIONS 01 77 19, 01 78 39, AND 33 01 31 TO THE CITY FOR REVIEW, REVISIONS, AND FINAL ACCEPTANCE.
15. ALL NON–STANDARD BENDS SHALL BE MADE BY USING THE CLOSEST STANDARD MJ FITTINGS OR FITTINGS WITH THE REQUIRED JOINT DEFLECTIONS. JOINT DEFLECTIONS AND ASSOCIATED SHOP DRAWING SUBMITTALS, SHALL BE IN ACCORDANCE WITH SECTIONS 33 11 10, 33 11 11, 33 11 13, AND 33 11 14.
16. ALL EXISTING 3/4–INCH WATER SERVICE LINES SHALL BE REPLACED WITH 1–INCH TYPE K COPPER SERVICE LINES (PER ASTM B88), WITH 1–INCH CORPORATION STOPS AND IF REQUIRED 1–INCH TAPPING SADDLE AND 1–INCH X 3/4–INCH REDUCER AT THE 3/4–INCH CURB STOP AS DIRECTED BY THE ENGINEER. SHOP DRAWINGS SHALL INDICATE FLARED COPPER TUBING WITH THREAD DIMENSIONS PER AWWA C800 AND SERVICE SADDLES SHALL BE DOUBLE STRAP PER SECTION 33 12 10.
17. ALL EXISTING WATER METERS SHALL BE RELOCATED 3 FT. BEHIND THE CURB OR AS DIRECTED BY THE ENGINEER (SECTION 33 12 10).
18. THE CONTRACTOR SHALL INSTALL A 2–INCH TEMPORARY WATER SERVICE MAIN PER SECTION 33 04 30. LARGE DOMESTIC SERVICES (3–INCH AND LARGER) AND FIRE LINES SHALL REQUIRE A LARGER MAIN FOR TEMPORARY WATER SERVICE DURING CONSTRUCTION.
19. ALL PVC WATER MAINS 12–INCH DIAMETER AND SMALLER SHALL BE DR–14 PER SECTION 33 11 12. ALL DUCTILE IRON WATER MAINS SHALL BE POLY WRAPPED PER SECTION 33 11 10, 33 11 11. CATHODIC PROTECTION STUDY IS REQUIRED ON ALL PIPES OTHER THAN PVC. IN ACCORDANCE WITH THE RECOMMENDATIONS FROM THE CATHODIC PROTECTION STUDY, THE DRAWINGS AND SPECIFICATIONS FOR CATHODIC PROTECTION SHALL APPLY.
20. ALL WATER MAINS SHALL HAVE TEMPORARY PLUGS PER SECTIONS 33 04 40, 33 12 25 AND DETAIL AT THE END OF EACH WORK DAY. DEFLECT WATER MAINS AT JOINTS TO CLEAR CURB INLETS. MINIMUM HORIZONTAL SEPARATION FROM OUTER WALL OF MAIN TO OUTER WALL OF INLET SHALL BE 5 FEET. MINIMUM HORIZONTAL SEPARATION FROM OUTER WALL OF MAIN TO OUTER DIAMETER DRILLED SHAFTS, AND OUTER WALL OF HEADWALLS SHALL BE 10 FT.
21. UNLESS OTHERWISE NOTED ON THE PLANS, THE GATE VALVES SHALL BE INSTALLED TO LINE UP WITH THE PROPERTY/ROW LINE.
22. CONTRACTOR AND CITY INSPECTOR SHALL CONTACT WATER FIELD OPERATIONS PRIOR TO ALL ITEMS BEING REMOVED OR SALVAGED. CONTRACTOR SHALL PROVIDE THE DOCUMENTS TO THE CITY INSPECTOR FOR ALL ITEMS REMOVED AND SALVAGED TO WATER FIELD OPERATIONS WAREHOUSE. CONTACT WAREHOUSE SUPERVISOR AND DELIVER ALL SALVAGED MATERIALS TO THE WAREHOUSE LOCATED AT 1608 11TH AVE. FORT WORTH TX 76102.

SANITARY SEWER:

1. VERIFY THAT ALL CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE FOR SANITARY SEWER ONLY. NOTIFY CITY OF ANY DISCOVERED ILLICIT CONNECTIONS.
2. THE CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGES TO PROPERTIES, HOMES, AND BASEMENTS FROM BACKUP, WHICH MAY RESULT DURING THE INSTALLATION OF NEW PIPE AND/OR ABANDONMENT OF EXISTING PIPE. THE CONTRACTOR WILL BE ALLOWED TO OPEN CLEAN OUTS WHERE AVAILABLE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CLEAN UP ASSOCIATED WITH OPENING CLEAN OUTS.
3. FOR ALL SANITARY SEWER SERVICE CONNECTIONS AT MANHOLES, PROVIDE A HYDRAULIC SLIDE IN ACCORDANCE WITH THE DETAILS.
4. THE PROPOSED SANITARY SEWER LINES AT TIMES WILL BE LAID CLOSE TO OTHER EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITY POLES, GAS MAINS, TELEPHONE CABLES, SANITARY SEWER MAINS, WATER MAINS, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AT THE PRE–CONSTRUCTION MEETING PER SECTION 01 33 00 FOR SUPPORT/PROTECTION OF LARGE DIAMETER WATER MAINS (16–INCH AND LARGER) AND SANITARY SEWER MAINS (15–INCH AND LARGER) FOR REVIEW BY CITY INSPECTOR, WATER ENGINEERING, AND WATER FIELD OPERATIONS PRIOR TO CONSTRUCTION IN THESE AREAS. IN ADDITION, THE CONTRACTOR SHALL SUBMIT A CONTINGENCY PLAN AND EMERGENCY PLAN TO THE SAME PERSONNEL WHICH INCLUDES ACCEPTABLE PIPE MATERIALS ON–SITE FOR REPAIRS. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO EXISTING WATER AND SANITARY SEWER MAINS AS A RESULT OF THE CONTRACTOR'S OPERATIONS.
5. CONTRACTOR SHALL CONDUCT A PRE–CONSTRUCTION TELEVISION INSPECTION (CCTV) OF ALL EXISTING SANITARY SEWER LINES, WHICH ARE TO BE ABANDONED OR REHABILITATED VIA TRENCHLESS METHODS, TO VERIFY LOCATIONS OF ALL SANITARY SEWER SERVICE CONNECTIONS PRIOR TO CONSTRUCTION OF THE ENTIRE PROJECT. FORMAT OF THE CCTV VIDEO, PLAN EXHIBITS, AND REPORT SHALL BE IN ACCORDANCE WITH SECTION 33 01 31. REPORT SHALL CLEARLY IDENTIFY EXISTING SANITARY SEWER MAIN/LATERAL NUMBER, MANHOLES, STATION NUMBER (FROM AND TO), STREET ADDRESS, PIPE SIZE, PIPE MATERIAL, SERVICE LOCATIONS, PIPE MATERIAL CHANGES, ETC. COPIES OF THE CCTV VIDEO, LAYOUT, MARKED UP PLANS SHOWING LIMITS, AND REPORT SHALL BE PROVIDED TO THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER ENGINEERING, AND WATER FIELD OPERATIONS, AS THE SCHEDULE SHALL ALLOW FOR A REVIEW TIME OF 2 WEEKS.
6. CONTRACTOR SHALL ENSURE THAT ALL ACTIVE SERVICES CAN BE RECONNECTED AND/OR REROUTED TO THE NEW SANITARY SEWER MAIN/LATERAL PER SECTION 33 31 50. CONTACTOR SHALL NOTIFY THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER ENGINEERING, AND WATER FIELD OPERATIONS OF ANY POTENTIAL CONFLICTS PRIOR TO CONSTRUCTION, SO MODIFICATIONS TO THE PLANS CAN BE MADE IF NECESSARY. NOT A SEPARATE PAY ITEM, AS THIS WORK SHALL BE SUBSIDIARY TO THE PRE–CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER LINES.
7. CONTRACTOR SHALL BYPASS PUMP SEWAGE AROUND SECTION OF PIPE PRIOR TO BEING REPLACED OR REHABILITATED PER SECTION 33 03 10. NOT A SEPARATE PAY ITEM FOR LINES 15–INCH DIAMETER AND SMALLER. PAYMENT SHALL BE INCIDENTAL TO THE REPLACEMENT OF SEWER.
8. NEW MANHOLES SHALL BE CONSTRUCTED SUCH THAT THE MANHOLE COVER IS AT FINISHED SURFACE GRADE, OR AS NOTED ON THE PLANS. CONCRETE COLLARS PER SPECIFICATION 33 05 13 AND DETAIL SHALL BE INSTALLED WITH ALL NEW MANHOLES (INCLUDING MANHOLES OUTSIDE OF PAVEMENT AND/OR ON EASEMENTS), AS REQUIRED FOR THIS PROJECT. CONCRETE COLLARS IDENTIFIED IN THE FIELD THAT ARE NOT IN COMPLIANCE WITH THE SPECIFICATIONS AND DETAILS (I.E. INCORRECT COLLAR THICKNESS, NO STEEL REINFORCEMENT) SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
9. SANITARY SEWER SERVICES LARGER THAN 6–INCH DIAMETER SHALL CONNECT TO A MANHOLE. FOR ALL SANITARY SEWER SERVICE CONNECTIONS AT THE MANHOLE, CONTRACTOR SHALL PROVIDE A HYDRAULIC SLIDE IN ACCORDANCE WITH SECTION 33 39 20 AND STANDARD DETAIL.
10. SANITARY SEWER MANHOLES CALLED OUT FOR INTERIOR CORROSION PROTECTION SHALL CONFORM TO SECTION 33 39 60 LINER SYSTEM FOR SANITARY SEWER STRUCTURES. THIS SHALL INCLUDE MANHOLES ON MAINS WITH 3% OR GREATER GRADE, ALL DROP MANHOLES, SIPHONS, JUNCTION STRUCTURES ON LARGE COLLECTOR MAINS 15–INCH DIAMETER AND LARGER, AND OTHER MANHOLES WHERE TURBULENCE IS AN ISSUE.
11. ODOR CONTROL IS REQUIRED FOR ALL SANITARY SEWER MANHOLES IN CITY PARK AREAS, PUBLIC SPACES, NEAR RESIDENCES, OR OTHER AREAS AS DETERMINED BY THE CITY ON MAINS 15–INCH DIAMETER AND LARGER.

STORM DRAIN:

1. MAINTAIN THE EXISTING STORM DRAINAGE SYSTEM UNTIL THE PROPOSED SYSTEM IS IN SERVICE. IN NO CASE SHOULD THE CONTRACTOR LEAVE THE EXISTING STORM DRAIN OUT OF SERVICE WHEREBY RUNOFF WOULD CAUSE DAMAGE TO ADJACENT PROPERTY.
2. CONSTRUCT ALL DRAINAGE IMPROVEMENTS FROM THE DOWNSTREAM END TO THE UPSTREAM END TO ALLOW CONTINUED STORM DRAIN SERVICE. IF THE CONTRACTOR PROPOSES TO CONSTRUCT THE SYSTEM OTHERWISE, THE CONTRACTOR SHALL SUBMIT A SEQUENCING PLAN TO THE CITY FOR APPROVAL.

DIVISION 34 – TRANSPORTATION

CONDUIT:

1. A CONTINUOUS GROUNDED SYSTEM SHALL BE PROVIDED IN PVC CONDUIT BY RUNNING 1 NO. 8 BARE COPPER STRANDED GROUND WIRE IN CONDUIT BETWEEN FOUNDATIONS AND GROUNDING AT EACH FOUNDATION GROUND ROD.
2. GROUNDING SHALL NOT EXCEED 25 OHMS AT EACH GROUND ROD.
3. ALL CONDUITS SHALL BE SCHEDULE 80 PVC.

TRAFFIC CONTROL:

1. THE CONTRACTOR SHALL SUBMIT A WORK SCHEDULE, TRAFFIC CONTROL PLAN, AND ACQUIRE A STREET–USE PERMIT FROM TPW DEPARTMENT, AT 200 TEXAS STREET. CONTACT CHUCK MCLURE (817–392–7219).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PEDESTRIANS AND MOTORISTS IN THE AREA OF THE TRAFFIC SIGNAL CONSTRUCTION SITE.
3. ROADS AND STREETS SHALL BE KEPT OPEN TO TRAFFIC AT ALL TIMES. CONTRACTOR SHALL ARRANGE CONSTRUCTION SO AS TO CLOSE ONLY ONE LANE OF A ROADWAY AT A TIME.
4. ALL CONSTRUCTION OPERATIONS SHALL BE CONDUCTED TO PROVIDE MINIMAL INTERFERENCE TO TRAFFIC. ALL TRAFFIC SIGNAL EQUIPMENT INSTALLATIONS SHALL BE ARRANGED SO AS TO PERMIT CONTINUOUS MOVEMENT OF TRAFFIC IN ALL DIRECTIONS AT ALL TIMES.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY SIGNAGE NECESSARY DURING CONSTRUCTION.
6. UNLESS OTHERWISE NOTED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SIGNAL INDICATIONS AND TIMING ARE ADJUSTED AND MAINTAINED TO ENSURE SAFETY IN WORK ZONE AT ALL TIMES.
7. ANY TRAFFIC SIGNAL MODIFICATIONS DURING CONSTRUCTION ARE SUBSIDIARY TO TRAFFIC CONTROL PLAN (TCP) PAY ITEM.
8. ANY TRAFFIC SIGNAL MODIFICATIONS SHALL BE IN COMPLIANCE WITH THE LATEST VERSION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND THE CITY OF FORT WORTH STANDARDS.
9. THE CONTRACTOR SHALL SUBMIT ANY PROPOSED TRAFFIC SIGNAL MODIFICATIONS TO THE TRAFFIC SIGNAL ENGINEERING SECTION FOR THEIR APPROVAL TEN (10) DAYS PRIOR TO ANY CHANGES.
10. TWO–WAY TRAFFIC MUST BE MAINTAINED AT ALL TIMES. ONE LANE OF TRAFFIC AROUND CONSTRUCTION OPERATIONS IN PROGRESS WITH ADEQUATE SAFEGUARDS WILL BE ACCEPTABLE ON MINOR STREETS ONLY, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

ELECTRIC SERVICE:

1. INSTALL THE REQUIRED ELECTRIC SERVICES AND OBTAIN AN ELECTRICAL SERVICE PERMIT IN EACH INSTANCE, COST OF WHICH WILL BE PAID BY THE CONTRACTOR.
2. THE ELECTRICAL SERVICE SHALL COMPLY WITH CITY LIGHTING STANDARDS, SPECIFICATIONS AND DETAILS AS APPLICABLE PER PLANS.

LUMINAIRES:

1. THE PRE–QUALIFIED LIGHTING CONTRACTOR SHALL SUBMIT A CONTRACTOR MATERIAL PACKAGE ALONG WITH A COPY OF APPLICABLE PLAN SHEETS OF THE PROJECT TO THE TRANSPORTATION PUBLIC WORKS, STREET LIGHT DEPARTMENT FOR REVIEW AND APPROVAL BEFORE PURCHASING ANY LIGHTING MATERIAL FOR SAID PROJECT. ALL MATERIALS LOCATED WITHIN THE CITY LIGHTING SYSTEM SHALL BE AN APPROVED PRODUCT.
2. THE CITY WILL NOT FURNISH LIGHTING SYSTEM MATERIAL TO THE CONTRACTOR. THE PRE–QUALIFIED LIGHTING CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING SYSTEM IN ACCORDANCE WITH THE LATEST CITY STANDARD SPECIFICATIONS, CITY DETAILS, AND PLANS.
3. THE LIGHTING SYSTEM MUST FOLLOW THE CURRENT CITY LIGHTING STANDARDS, SPECIFICATIONS, AND DETAILS. CONTACT THE CITY STREET LIGHT SECTION FOR DIRECTION ON LIGHT POLE TYPES ALLOWED AND DESIGN REQUIREMENTS.

EROSION CONTROL NOTES

1. SOIL EROSION AND SEDIMENT CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH CITY OF FORT WORTH EROSION REGULATIONS.
2. RESPONSIBILITY FOR INSTALLATION, ROUTINE INSPECTION, AND MAINTENANCE OF EROSION CONTROL SHOULD BE DEFINED AND ASSIGNED TO APPROPRIATE PERSON(S) PRIOR TO COMMENCEMENT OF ANY SOIL DISTURBING ACTIVITY.
3. EROSION CONTROL MEASURES MUST BE CONSTRUCTED AND FUNCTIONAL BEFORE ANY GRADING OR LAND DISTURBANCE TAKES PLACE.
4. TEMPORARY OR PERMANENT SOIL STABILIZATION MUST BE APPLIED TO ALL DENUDED AREAS WHEN FINAL GRADE IS REACHED ON ANY PORTION OF SITE. TEMPORARY SOIL STABILIZATION MUST BE APPLIED TO DISTURBED AREAS LEFT DORMANT FOR 14 DAYS.
5. IN THE EVENT THAT MEASURES BEING USED ARE DEEMED TO BE INEFFECTIVE BY CITY INSPECTORS, ADDITIONAL MEASURES OR CHANGES IN THE ORIGINAL PLAN MAY BE REQUIRED BY THE CITY OF FORT WORTH.
6. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED BY THE SITE FOREMAN DAILY, ANY STRUCTURE OR CONTROL DEVICE WHICH IS DAMAGED OR INOPERATIVE WILL BE REPAIRED OR REPLACED IMMEDIATELY.
7. SANITARY FACILITIES SHALL BE PROVIDED ON THE SITE & REGULARLY SERVICED AS RECOMMENDED BY THE SUPPLIER. TRASH & DEBRIS SHALL BE STORED IN COVERED BINS OR ENCLOSURES.
8. CONSTRUCTION ENTRANCES/EXITS SHOULD BE LIMITED AND PROTECTION PROVIDED TO PREVENT TRACKING OF SOILS ONTO CITY STREETS.
9. REMOVE SILT OR SEDIMENTS FROM STREETS, CURBS, GUTTERS, FLUMES, HANDICAP ACCESS RAMPS, CURB INLETS, STORM DRAINS, AND ANY OTHER PUBLIC DRAINAGE FACILITIES DAILY OR AS ACCUMULATION OCCURS.
10. EROSION CONTROL SHOULD BE EVALUATED TO DETERMINE THE EFFECTIVENESS OF THOSE DEVICES BY THE PERSON ASSIGNED TO INSPECT EROSION CONTROL DEVICES, AND CHANGES MADE IF NECESSARY.
11. SOIL TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED DAILY IF FEASIBLE, OR WHEN VISIBLY ACCUMULATED SEDIMENT HAS BEEN DEPOSITED. DISCHARGED SEDIMENT SHALL BE REMOVED AS SOON AS POSSIBLE.
12. USING WASH WATER TO WASH SEDIMENT FROM STREETS IS PROHIBITED.

PARD COMMENTS FOR CITY–MAINTAINED ROW

1. CONTRACTOR NEEDS TO MOW GRASS IN THE RIGHT A WAYS, MEDIANS, OR ROUNDABOUTS IN THEIR CONSTRUCTION AND STAGING AREAS. IN THE EVENT THEY ARE BLOCKING THE ROW, MEDIAN, OR ROUNDABOUT THEY NEED TO MAINTAIN THESE AREAS ALSO. ONCE CONSTRUCTION IS COMPLETE ROW OR MEDIANS SHOULD BE IN THE SAME OR BETTER CONDITION WITH 90% ESTABLISHMENT OF GRASS IF NOT ROCK OR CONCRETE.

CITY TREES (CONTACT CITY FORESTER 817–392–5729, 817–392–5739):

10. PER CHAPTER 33, PARK & RECREATION–FORESTRY SECTION (PARD–FORESTRY) HAS JURISDICTION OVER TREES ON CITY–OWNED PROPERTY INCLUDING RIGHT–OF–WAY. APPROVAL OF PLANS DOES NOT CONSTITUTE APPROVAL TO PROCEED WITH WORK UNTIL CORRESPONDING PERMIT HAS BEEN ISSUED. PERMITS FOR REMOVAL, PLANTING OR PRUNING OF CITY–OWNED TREES SHALL BE OBTAINED FROM PARD–FORESTRY. PRUNING REQUIRED FOR PRECONSTRUCTION PURPOSES REQUIRES THE UTILIZATION OF AN ISA–CERTIFIED ARBORIST, AS STATED IN THE PERMIT, AT NO EXPENSE TO PARD. CONTACT PARD–FORESTRY: WWW.FORTWORTHTEXAS.GOV/DEPARTMENTS/PARKS/SERVICES/FORESTRY OR CITYTREEPERMITS@FORTWORTHTEXAS.GOV OR 817/392–5729 OR 817/392–5739.
    a. TREE PROTECTION SHALL BE PUT IN PLACE BEFORE GRADING/CONSTRUCTION BEGINS, BE INSPECTED BY CITY FORESTER AND REMAIN UNTIL COMPLETION OF THE PROJECT.
    i. 4–FOOT TALL, CHAIN LINK FENCING INSTALLED AT THE TREE DRIPLINE WITH BILINGUAL SIGN ON PROTECTIVE FENCING IN ENGLISH AND SPANISH THAT READS, "KEEP OUT, TREE PROTECTION AREA" ("NO ENTRE, ÁREA DE PROTECCIÓN DE ÁRBOLES").
    ii. NO ENTRY, GRADING, EXCAVATION, PARKING OR STORING OF EQUIPMENT OR SUPPLIES INSIDE THE PROTECTIVE TREE FENCING WITHOUT CITY FORESTER APPROVAL.
    iii. ALL WORK INSIDE PROTECTIVE TREE FENCING TO BE DONE BY HAND, UNLESS PRIOR APPROVAL GIVEN BY CITY FORESTER.
    iv. ROOTS 2–INCH OR LARGER SHALL NOT BE CUT WITHOUT CITY FORESTER APPROVAL. ROOTS SHALL BE CLEAN CUT WITH A SAW.
    v. ALL CUTS ON OAK TREES, INCLUDING ROOTS, SHALL BE PAINTED WITH GENERAL PURPOSE SPRAY PAINT WITHIN 30 MINUTES OF EXPOSURE TO PREVENT OAK WILT SPREAD.
    b. ASSESSMENT OF DAMAGES TO TREES
    i. THE CONTRACTOR WILL CHECK TREES IN THE CONTRACT AREA BEFORE CONTRACT WORK BEGINS, ANY DAMAGE WILL BE NOTED AND REPORTED TO THE CONTRACT ADMINISTRATOR.
    ii. THE CONTRACT ADMINISTRATOR WILL CONDUCT RANDOM CHECKS OF THE TREES DURING THE CONTRACT PERIOD.
    iii. A CHECK OF ALL TREES MAY BE MADE AT THE END OF THE CONTRACT PERIOD. CITY FORESTER, CONTRACT ADMINISTRATOR, AND CONTRACTOR WILL ATTEND THE INSPECTION.
    iv. DAMAGES SHALL BE DOCUMENTED BY MEMO TO THE CITY FORESTER WITH COPY TO CONTRACT FILE AND THE CONTRACTOR.
    v. CONTRACTOR MAY HAVE THE OPTION OF REPLACEMENT OR PAYMENT FOR SEVERELY DAMAGED TREES AT A LOCATION TO BE DESIGNATED BY PARD. REPLACEMENT SHALL BE MADE ON A CALIPER INCH PER CALIPER INCH BASIS WITH A MINIMUM SIZE OF REPLACEMENT TREE OF 2–INCH IN CALIPER FOR TREES DAMAGED OR REMOVED WHICH ARE LESS THAN 30–INCH DBH AND 2–INCH PER INCH FOR TREES WHICH ARE 30–INCH DBH OR GREATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANTING, WATERING, MULCHING AND MAINTENANCE OF REPLACEMENT TREES FOR A PERIOD OF NOT LESS THAN 2–YEARS. ANY TREE THAT DOES NOT SURVIVE THE 2–YEAR ESTABLISHMENT PERIOD SHALL BE COMPENSATED FOR BY THE CONTRACTOR TO TREE FUND AT A RATE OF $200 PER CALIPER INCH.
    vi. SLIGHT DAMAGE SHALL BE DEFINED, IN THE OPINION OF THE CITY FORESTER, AS DAMAGE THAT MAY COMPARTMENTALIZE. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: SCARRING OF THE TRUNK INTO THE CAMBIAL LAYER Y ' TO 2–INCH IN WIDTH, BUT LESS THAN 1 /3 TRUNK CIRCUMFERENCE; OR BREAKING OF LIMBS LESS THAN 2–INCH IN DIAMETER OR LIMBS LESS THAN 1 /3 TRUNK CALIPER, WHICHEVER IS LESS. SLIGHT DAMAGE SHALL ALSO INCLUDE: REMOVAL OR LAYING DOWN OF PROTECTIVE TREE FENCING PRIOR TO END OF CONSTRUCTION; STORING EQUIPMENT OR SUPPLIES WITHIN THE CRITICAL ROOT ZONE (CRZ); OR DISPOSING OF PAINT OR CONCRETE WITHIN THE CRZ, BUT NOT CLOSER TO THE TRUNK THAN 50% RADIUS OF THE CRZ. SLIGHT DAMAGE TO TREES SHALL BE ASSESSED AT A RATE OF $100.00 FOR EACH INSTANCE. EACH DAY TREE FENCING IS NOT PROPERLY PLACED, EQUIPMENT OR SUPPLIES ARE STORED WITHIN CRZ, OR FILL IS STORED WITHIN THE CRZ SHALL BE CONSIDERED ONE INSTANCE.
    vii. MODERATE DAMAGE SHALL BE DEFINED, IN THE OPINION OF THE CITY FORESTER, AS DAMAGE THAT CONTRIBUTES TO THE POOR HEALTH AND REDUCED LONGEVITY OF THE TREE. EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO: SCARRING OF THE TRUNK INTO THE CAMBIAL LAYER GREATER THAN 2–INCH, BUT LESS THAN 1 /3 THE TRUNK CIRCUMFERENCE; OR BREAKING OF LIMBS MORE THAN 2–INCH IN DIAMETER, BUT LESS THAN 1/3 TRUNK CALIPER. MODERATE DAMAGE SHALL ALSO INCLUDE: COMPACTION OF SOIL; GRADING OR FILLING IN 20% OF THE CRZ ON 1 OF 4 SIDES, BUT OUTSIDE THE 50% RADIUS OF THE CRZ; OR DISPOSING OF PAINT OR CONCRETE WITHIN 50% RADIUS OF THE CRZ. MODERATE DAMAGES SHALL BE CALCULATED AT A RATE OF % THE ASSESSED VALUE OF THE TREE PER EACH INSTANCE OF DAMAGE.
    viii. SEVERE DAMAGE OR REMOVAL OF TREES IS SUBJECT TO PENALTY OF $200 PER DIAMETER INCH OF TREES REMOVED OR DAMAGED FOR TREES LESS THAN 30–INCH DBH OR $400 PER DIAMETER INCH FOR TREES 30–INCH DBH OR GREATER. SEVERE DAMAGE OR REMOVAL SHALL INCLUDE, BUT IS NOT LIMITED TO: SCARRING OF THE TRUNK TO THE CAMBIAL LAYER GREATER THAN 1/3 THE TRUNK CIRCUMFERENCE; UPROOTING OR CAUSING A TREE TO LEAN; OR DAMAGE TO A SCAFFOLDING BRANCH OR ANY BRANCH GREATER THAN 1/3 OF TRUNK CALIPER. SEVERE DAMAGE SHALL ALSO INCLUDE: COMPACTION OF SOIL, GRADING OR FILLING MORE THAN 20% OF THE CRZ, OR WITHIN 50% RADIUS OF THE CRZ, OR ON MORE THAN ONE OF 4 SIDES. CUTTING 1 /3 OF THE BUTTRESS ROOTS WITHIN 3 TIMES THE DISTANCE OF THE DBH OF THE TRUNK, OR CUTTING 4 ROOTS 4–INCH OR GREATER IN DIAMETER WITHIN 4–FEET OF THE TRUNK SHALL ALSO BE CONSIDERED SEVERE DAMAGE.
    ix. BRANCHES SHALL BE MEASURED AT THE POINT OF ATTACHMENT OR AT THE LATERAL TO WHICH THE BRANCH WOULD BE PRUNED BACK TO ACCORDING TO ANSI STANDARDS. TREES CALIPER SHALL BE MEASURED ACCORDING TO ACCEPTED INDUSTRY STANDARDS. TREES GREATER THAN 6–INCH IN CALIPER SHALL BE MEASURED USING DIAMETER AT BREAST HEIGHT (DBH). TREES THAT MUST BE REMOVED DUE TO DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REMOVED BY THE FORESTRY SECTION'S TREE REMOVAL CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
    x. All DAMAGES SHALL BE PAID TO THE CITY TREE FUND. FAILURE TO REPLACE OR PAY FOR DAMAGED TREES SHALL RESULT IN A BREACH OF CONTRACT AND THE CONTRACTOR WILL BE AUTOMATICALLY ASSESSED DAMAGES. DAMAGES AS DESCRIBED HEREIN SHALL BE DEDUCED FROM PAYMENTS OTHERWISE DUE THE CONTRACTOR.

WATER STUDY NUMBER: WSL–2022–2192

no.	revision	by	date

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FORT WORTH

scale
horiz N/A
vert N/A
date OCT 2026

tnp

This document is for interim review and is not intended for construction, bidding or permit purposes.

SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

City of Fort Worth, Texas

John Peter Smith Hospital Water Line Improvements

General Notes

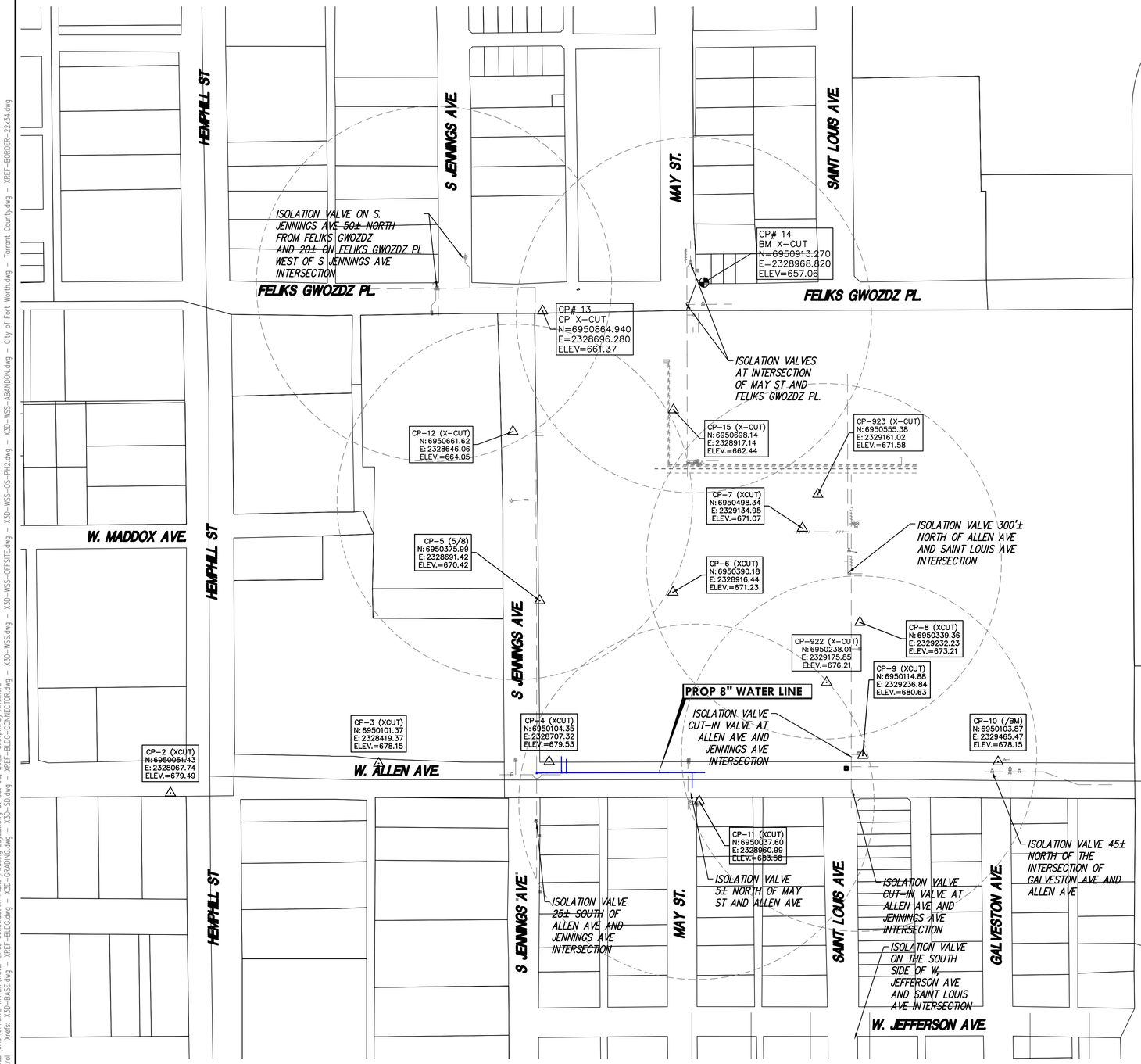
tnp project BKA 21233

sheet **3**

WSL-2022-2192

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE WATER\Water Lines Construction Plans\4 General Notes & Legend.dwg at Oct 08, 2026–5:01pm by ARomero
Layout: 3 General Notes Xrefs: XREF-BORDER-22x34.dwg – X3D-BASE.dwg – XREF-BLDG.dwg – X3D-WSS.dwg – X3D-SD.dwg



GRAPHIC SCALE

100 0 50 100 200

GRAPHIC SCALE: 1" = 100'

WSL-2022-2192

COORDINATE CONTROL TABLE			
Point #	Northing	Easting	Desc
1	6950047.30	2327639.72	(/BM)
2	6950051.43	2328067.74	(XCUT)
3	6950101.37	2328419.37	(XCUT)
4	6950104.35	2328707.32	(XCUT)
5	6950375.99	2328691.42	(5/8)
6	6950390.18	2328916.44	(XCUT)
7	6950498.34	2329134.95	(XCUT)
8	6950339.36	2329232.23	(XCUT)
9	6950114.88	2329236.84	(XCUT)
10	6950103.87	2329465.47	(/BM)
11	6950037.60	2328960.99	(XCUT)
12	6950661.62	2328646.06	(X-CUT)
13	6950864.94	2328696.28	(X-CUT)
14	6950913.27	2328968.82	(X-CUT)
15	6950698.14	2328917.14	(X-CUT)
922	6950238.01	2329175.85	(X-CUT)
923	6950555.38	2329161.02	(X-CUT)

NUMBER OF WATER SAMPLING TABLE		
LOCATION OF WATER SAMPLING	NUMBER OF SAMPLES	
1000 LF OF PIPE	2	EA
DEAD END OF WATER MAIN	0	EA
BRANCHED OFF THE MAIN (LONGER THAN 20 FT)	4	EA
FIRE LINE	3	EA
HYDRANT	2	EA
SUBTOTAL	11	EA
TOTAL SAMPLE TESTED (2 CONSECUTIVE PASSING)	22	EA
CONTINGENCY (25%)	27.5	
TOTAL ESTIMATED COST FOR WATER SAMPLING ($30/EA)	$825.00	

NOTES:

1. ALL CONSTRUCTION SHALL REMAIN WITHIN R.O.W. AND PROPOSED WATER FACILITY EASEMENTS.
2. EROSION CONTROL – INSTALL SILT FENCE AND/OR FILTER LOG AROUND EXCAVATED AREA TO CONTROL SEDIMENTATION LOSS.
3. CONTRACTOR SHALL MATCH EXISTING GRADES WHEN COVERING (UTILITY/WATER/SEWER/GAS) LINES TO INSURE THEY DO NOT POND, ALTER, OR CHANNELIZE ANY STORMWATER.

UTILITY NOTE:

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

SPECIAL NOTES:

1. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL VERTICAL AND HORIZONTAL CHANGES IN DIRECTION (TEE, BENDS, ELBOWS, CROSSES), CHANGE IN PIPE DIAMETER (REDUCERS), PLUGS, VALVES AND OTHER LOCATIONS UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR DETAILS. WHERE APPROPRIATE SOIL BEARINGS CANNOT BE ACHIEVED FOR A THRUST BLOCK, RESTRAINED JOINTS SHALL BE PROVIDED.
2. CUT-IN VALVES OR TEES TO BE INSTALLED AFTER 6 PM ON WEEKDAYS OR AFTER 2 PM ON WEEKENDS. COORDINATE WITH CITY INSPECTION AND AFFECTED PROPERTY OWNER OR MANAGER PRIOR TO ISOLATION VALVE SHUT OFF.
3. ALL ABANDONED LINES TO BE FILLED WITH FLOWABLE FILL. SAWCUT, REMOVE & REPLACE PAVING WHERE EXISTING LINE IS CAPPED.

NOTES:

RADIUS OF CURVATURE/JOINT DEFLECTION:
MINIMUM RADIUS OF CURVE AND MAXIMUM DEFLECTION ANGLE OF PIPE JOINTS WILL BE RESTRICTED TO 50% OF MANUFACTURER'S RECOMMENDATION, AFTER WHICH THE USE OF HORIZONTAL OR VERTICAL BENDS WILL BE REQUIRED. NO BENDING OF PIPE IS ALLOWED. DCM 5.6.1

ALL WATER SHEETS ALL VERTICAL AND HORIZONTAL FITTINGS AND VALVES SHALL BE DESIGNED WITH RESTRAINED JOINTS IN ADDITION TO CONCRETE THRUST BLOCKING. ANCHOR TEES OR ANCHOR COUPLINGS SHOULD BE USED TO SECURE ALL BRANCH VALVES TO FITTINGS. DCM 5.6.3

ALL WATER SHEETS– ALL WATER LINE PVC PIPE SHOULD BE IN ACCORDANCE WITH AWWA C900, DR-14 SPECIFICATION– 33 11 12 PART 2 B

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

teague nall and perkins, inc
5237 N. Riverside Dr, Suite 100
Ft Worth, Texas 76137
817.336.5773 ph 817.336.2813 fx
www.tnpinc.com
TBPE: F-230; TBPLS: 10011600, 10011601, 10194381
GBPE No. PEF007431; TBAE No. BR 2673

FORT WORTH

scale	
horiz	1" = 100'
vert	N/A
date	OCT 2026

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SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements

Water Layout & Survey Control

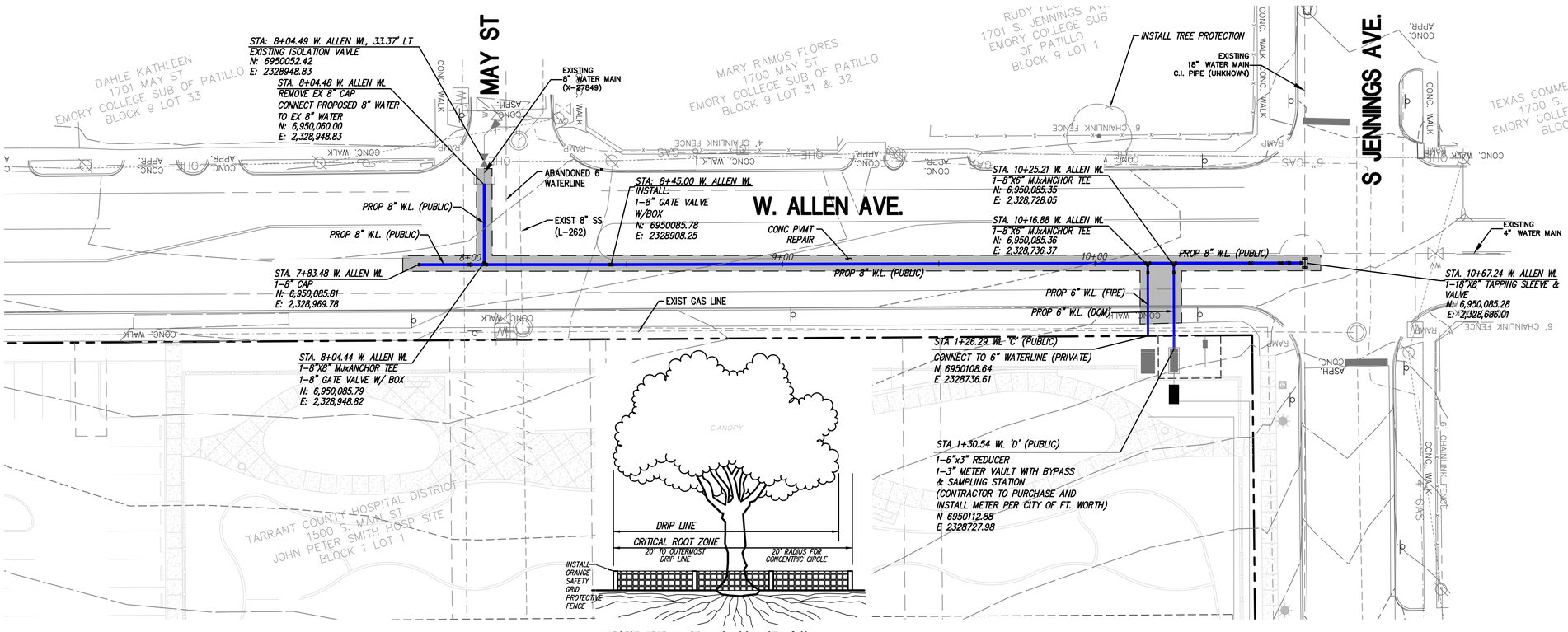
tnp project BKA 21233

sheet 4

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE WATER\Water Lines Construction Plans\Phasing Layout.dwg ct: Oct 08, 2026-5:01pm by ARomero
Layout: 4_Water Layout & Survey Control Xrefs: X3D-BASE.dwg XREF-BLDG.dwg X3D-GRADING.dwg X3D-SD.dwg XREF-BLDG-CONNECTOR.dwg X3D-WGS.dwg X3D-WGS-OFFSITE.dwg

WSL-2022-2192



TREE PROTECTION DETAIL
N.T.S.

GRAPHIC SCALE
20 0 10 20 40
GRAPHIC SCALE: 1" = 20'

NOTES:

RADIUS OF CURVATURE/JOINT DEFLECTION: MINIMUM RADIUS OF CURVE AND MAXIMUM DEFLECTION ANGLE OF PIPE JOINTS WILL BE RESTRICTED TO 50% OF MANUFACTURER'S RECOMMENDATION, AFTER WHICH THE USE OF HORIZONTAL OR VERTICAL BENDS WILL BE REQUIRED. NO BENDING OF PIPE IS ALLOWED. DCM 5.6.1

ALL WATER SHEETS ALL VERTICAL AND HORIZONTAL FITTINGS AND VALVES SHALL BE DESIGNED WITH RESTRAINED JOINTS IN ADDITION TO CONCRETE THRUST BLOCKING. ANCHOR TEES OR ANCHOR COUPLINGS SHOULD BE USED TO SECURE ALL BRANCH VALVES TO FITTINGS. DCM 5.6.3

ALL WATER SHEETS– ALL WATER LINE PVC PIPE SHOULD BE IN ACCORDANCE WITH AWWA C900, DR–14 SPECIFICATION– 33 11 12 PART 2 B

WATER SERVICES (THIS SHEET)		
SIZE	SERVICE	QUANTITY
3"	DOMESTIC	1
6"	FIRE	1

NOTES:

1. ALL CONSTRUCTION SHALL REMAIN WITHIN R.O.W. AND PROPOSED WATER FACILITY EASEMENTS.
2. EROSION CONTROL – INSTALL SILT FENCE AND/OR FILTER LOG AROUND EXCAVATED AREA TO CONTROL SEDIMENTATION LOSS.
3. CONTRACTOR SHALL MATCH EXISTING GRADES WHEN COVERING (UTILITY/WATER/SEWER/GAS) LINES TO INSURE THEY DO NOT POND, ALTER, OR CHANNELIZE ANY STORMWATER.

UTILITY NOTE:

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

SPECIAL NOTES:

1. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL VERTICAL AND HORIZONTAL CHANGES IN DIRECTION (TEE, BENDS, ELBOWS, CROSSES). CHANGE IN PIPE DIAMETER (REDUCERS), PLUGS, VALVES AND OTHER LOCATIONS UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS FOR DETAILS. WHERE APPROPRIATE SOIL BEARINGS CANNOT BE ACHIEVED FOR A THRUST BLOCK, RESTRAINED JOINTS SHALL BE PROVIDED.
2. CUT–IN VALVES OR TEES TO BE INSTALLED AFTER 6 PM ON WEEKDAYS OR AFTER 2 PM ON WEEKENDS. COORDINATE WITH CITY INSPECTION AND AFFECTED PROPERTY OWNER OR MANAGER PRIOR TO ISOLATION VALVE SHUT OFF.
3. ALL ABANDONED LINES TO BE FILLED WITH FLOWABLE FILL. SAWCUT, REMOVE & REPLACE PAVING WHERE EXISTING LINE IS CAPPED. SUBMIT CONTACT LIST WITH HOURS OF OPERATION.

WATER STUDY NUMBER: WSL–2022–2192

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GBPE No. PEF007431; TBAE No. BR 2673

FORT WORTH

scale	
horiz	1" = 20'
vert	1" = 4'
date	OCT 2026

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SCOTT A. GIBSON, P.E. Date: October 8, 2026

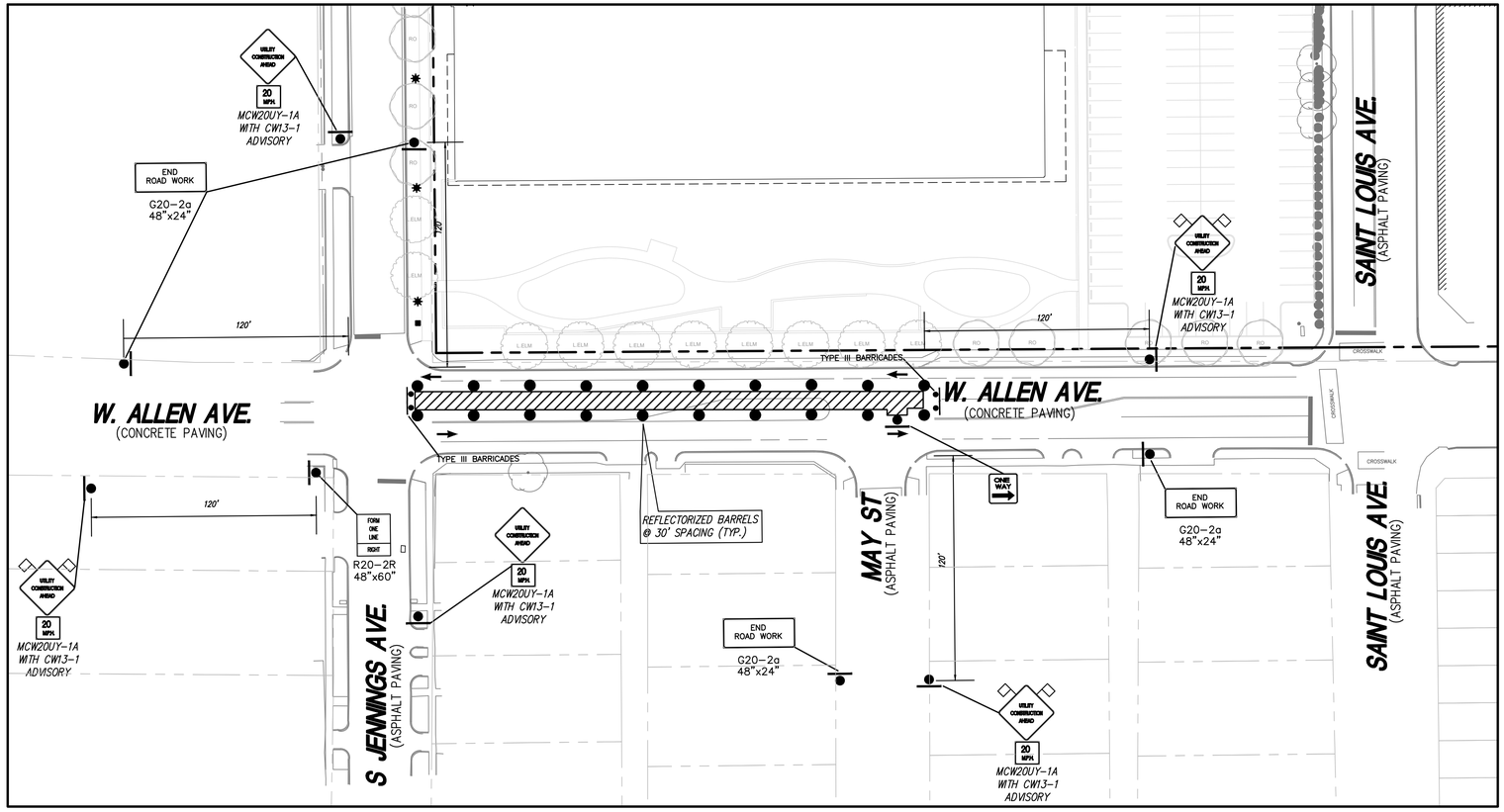
Tx. Reg. # 89290

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements
8" Water Line Plan & Profile
W. Allen Ave Sta 6+50 to End

tnp project BKA 21233
sheet 5

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE WATER\Water Lines Construction Plans\W. Allen Ave Begin to Sta 6+50.dwg at Oct 08, 2026 - 5:01pm by ARomero
Layout: 5 W. Allen Ave Sta 6+50 to End Xrefs: XREF-BORDER-22x34.dwg - X3D-WSS-ISS-PH2.dwg - X3D-WSS.dwg - X3D-WSS-ABANDON.dwg - X3D-WSS-OFFSITE.dwg - X3D-WSS-BASE.dwg - XREF-BLDG-CONNECTOR.dwg



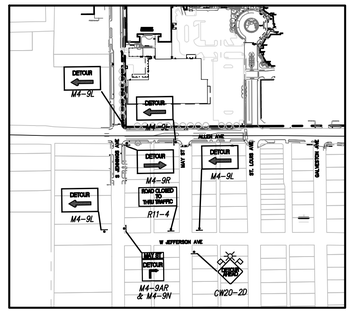
ALLEN AVE TRAFFIC ROUTE

GENERAL NOTES FOR TRAFFIC CONTROL PLAN

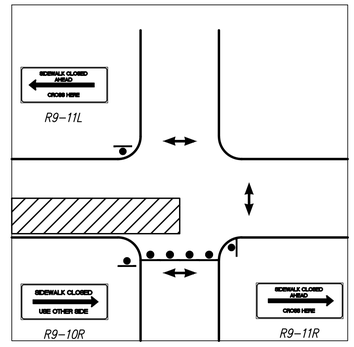
1. ALL TRAFFIC CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), LATEST REVISION.
2. THE CONTRACTOR SHALL COVER EXISTING SIGNS AND OBLITERATE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH THE INTENT OF THIS TRAFFIC CONTROL PLAN.
3. THE CONTRACTOR SHALL UNCOVER EXISTING SIGNS AND REPLACE PAVEMENT MARKINGS IN-KIND AS ORIGINALLY CONFIGURED AT THE END OF CONSTRUCTION OPERATIONS AND PRIOR TO FINAL ACCEPTANCE BY THE OWNER.
4. ALL GROUND MOUNTED SIGNS SHALL BE INSTALLED AT THE SIDE OF THE ROAD NO CLOSER THAN 6' AND NO FURTHER THAN 12' FROM THE EDGE OF PAVEMENT AT A HEIGHT AT LEAST 5', MEASURED FROM THE BOTTOM OF THE SIGN TO THE NEAR EDGE OF THE PAVEMENT
5. ALL TEMPORARY SIGNS, BARRICADES, WARNING LIGHTS AND OTHER MISCELLANEOUS TRAFFIC CONTROL MEASURES SHALL BE REMOVED AND ORIGINAL TRAFFIC CONTROL MEASURES REPLACED AT THE END OF THE CONTRACTOR'S CONSTRUCTION ACTIVITIES.
6. THE TEMPORARY TRAFFIC CONTROL MEASURES SHOWN ON THESE PLANS ARE TO BE CONSIDERED AN ESTABLISHED MINIMUM. ADDITIONAL SIGNS, BARRICADES OR OTHER WARNING DEVICES SHALL BE FURNISHED WHEN NECESSARY TO SAFELY GUIDE TRAFFIC THROUGH THE CONSTRUCTION AREA.
7. ACCESS TO AND FROM SAINT LOUIS AVE SHALL BE MAINTAINED AT ALL TIMES
8. TYPE III BARRICADES SHALL INCORPORATE ALTERNATING ORANGE AND WHITE RETRO-REFLECTIVE STRIPES SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES TOWARDS THE CENTER OF THE BARRICADE.
9. TYPICAL TRAFFIC CONTROL MEASURES ARE IDENTIFIED FOR WORK ZONE PROVIDED. CONTRACTOR SHALL UTILIZED THOSE GENERAL GUIDELINES AND APPLICATION FOR CONSTRUCTION OF THE ENTIRE WATERLINE.
10. PROVIDE MINIMUM LANE WIDTHS OF 10 FT THROUGH TRAFFIC CONTROL ZONES.
11. ANY PROPOSED ROAD CLOSURES THAT WILL LAST MORE THAN 10 CALENDAR DAYS IN A ROW WILL REQUIRE AN M&C (ALLOW 4 TO 6 WEEKS FOR REVIEW AND APPROVAL). ELECTRONIC MESSAGE BOARDS (EMB'S) TO BE PLACED ON-SITE, ON EITHER END, A MINIMUM OF 10 BUSINESS DAYS PRIOR TO CLOSING THE ROAD. PLEASE BE SURE TO PLAN ACCORDINGLY IN ADVANCE SO THERE WILL BE NO DELAYS. NOTIFICATIONS FOR DEVELOPER PROJECTS ARE TO BE MADE BY THE DEVELOPER OR CONTRACTOR. THE DEVELOPER/CONTRACTOR SHALL COORDINATE THE NOTIFICATIONS WITH CITY'S DEVELOPMENT SERVICES PROJECT MANAGER AND ASSIGNED CITY INSPECTOR. 11-15-2024

LEGEND

- FLAGGER/FLAGMAN
- TEMPORARY TRAFFIC DIRECTION DURING CONSTRUCTION
- NORMAL TRAFFIC DIRECTION
- SIGN
- REFLECTOR BARREL OR PANEL
- BARRICADE
- WORK ZONE



MAY ST INTERSECTION TRAFFIC DETOUR ROUTE



TYPICAL PEDESTRIAN ROUTING DETAIL

GRAPHIC SCALE

40 0 20 40 80

GRAPHIC SCALE: 1" = 40'

ALLEN AVE. INTERSECTION TRAFFIC CONTROL NOTE:

1. CONTRACTOR TO MAINTAIN, AT A MINIMUM, ONE CONTROLLED PEDESTRIAN CROSSING ROUTE AND TWO LANES ALONG ALLEN AVE AT ALL TIMES DURING CONSTRUCTION. ALL OPEN TRENCHES SHALL BE BACKFILLED OR COVERED AND ALL "ROAD CLOSED" SIGNS AND BARRICADES SHALL BE REMOVED BEFORE THE END OF EACH DAY'S CONSTRUCTION ACTIVITES. TRAFFIC SHALL BE OPENED TO TWO WAY TRAFFIC DURING NON-WORKING HOURS.

WATER STUDY NUMBER: WSL-2022-2192

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FORT WORTH

scale	
horiz	N/A
vert	N/A
date	OCT 2026

tnp

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SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements

Allen Traffic Control Plan

tnp project BKA 21233
sheet 6

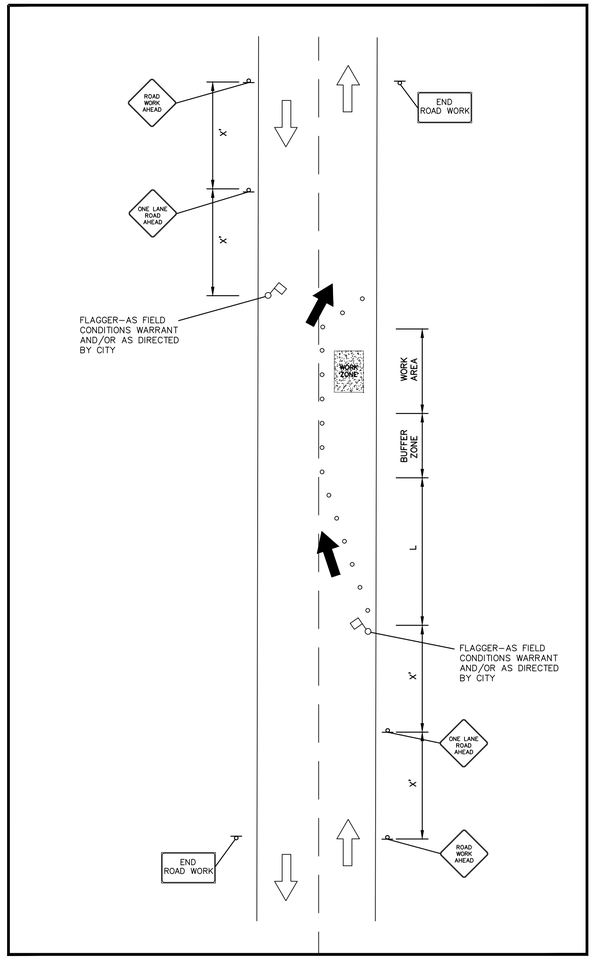
WSL-2022-2192

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-CAD\CAD\OFFSITE WATER\Water Lines Construction Plans\Traffic Control Plan.dwg at Oct 08, 2026 - 5:02pm by ARomero
Layout: 6 Allen Traffic Control Plan - X3D-WSS-ABANDON.dwg - X3D-WSS-OFFSITE.dwg - X3D-BASE.dwg - City of Fort Worth.dwg - Tarrant County.dwg
Xrefs: XREF-BKA21233-24244.dwg - XREF-BLDG.dwg - XREF-BLDG-CONNECTOR.dwg - X3D-WSS-05-PH2.dwg - X3D-WSS.dwg

GENERAL NOTES:

1. ALL TRAFFIC CONTROL MEASURES AND DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (T.M.U.T.C.D.).
2. THIS PLAN IS INTENDED TO BE A GENERAL GUIDE FOR CONSTRUCTION SEQUENCING. THE MEASURES SHOWN SHALL BE CONSIDERED MINIMUM REQUIREMENTS AND ADDITIONAL MEASURES SHALL BE IMPLEMENTED AND MAINTAINED AS NECESSARY TO COMPLY WITH TMUTCD REQUIREMENTS.
3. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN 48 HOURS PRIOR TO BEGINNING WORK FOR APPROVAL BY OWNER.
4. ALL TRAFFIC CONTROL FACILITIES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT UNTIL ALL CONSTRUCTION ACTIVITIES HAVE CEASED AND THE ROADWAY IMPROVEMENTS ARE FULLY OPEN TO THE PUBLIC.
5. IF, IN THE OPINION OF THE OWNER OR ENGINEER, ADDITIONAL TRAFFIC CONTROL FACILITIES ARE NECESSARY, THE CONTRACTOR SHALL PROVIDE SUCH MEASURES AT CONTRACTOR'S SOLE EXPENSE.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR PUBLIC SAFETY WITHIN AND ADJACENT TO THE PROJECT SITE. THE OWNER AND ENGINEER ASSUME NO RESPONSIBILITY FOR PROJECT SITE SAFETY.
7. ALL TRAFFIC CONTROL MEASURES SHALL BE PAID FOR UNDER THE ITEM FOR TRAFFIC CONTROL INCLUDING SIGNAGE, CHANNELIZATION DEVICES, FLAGMEN, TEMPORARY STRIPING, TEMPORARY RIDING SURFACES, TEMPORARY SHORING, LOW PROFILE CONCRETE TRAFFIC BARRIER ETC. NO SEPARATE PAYMENT SHALL BE MADE FOR ADDITIONAL MEASURES REQUIRED BY THE OWNER OR ENGINEER.
8. CONTRACTOR SHALL COVER, RELOCATE AND/OR TEMPORARILY REMOVE ANY CONFLICTING PAVEMENT MARKINGS OR REGULATORY SIGNS. NO SEPARATE PAY.
9. EXCEPT WHERE SPECIFICALLY NOTED, CONTRACTOR SHALL MAINTAIN ACCESS TO ALL INTERSECTING STREETS AND DRIVEWAYS AT ALL TIMES.
10. ALL TRAFFIC CONTROL DEVICES SHALL HAVE WORKING VISIBLE WARNING LIGHTS AS REQUIRED IN ACCORDANCE WITH THE CURRENT EDITION OF TMUTCD.
11. FOR TEMPORARY SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, CHANNELIZATION MUST BE MADE DOMINANT BY USING A VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTERLINE. IN SUCH LOCATONS, CHANNELIZING DEVICE SPACING OF 10 FEET IS REQUIRED.
12. FOR LONG TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED AND CENTERLINE STRIPING PROVIDED WHERE TWO WAY TRAFFIC IS IN ADJACENT LANES.
13. CONTRACTOR SHALL PROVIDE SIDEWALK CLOSURE, CROSSWALK CLOSURE AND/OR WALKWAY BYPASS WHEREVER PEDESTRIAN MOVEMENTS ARE AFFECTED BY CONSTRUCTION ACTIVITIES. ALL SIDEWALKS AND CROSSWALKS SHALL BE ACCESSIBLE WHEN CONTRACTOR IS NOT WORKING UNLESS OTHERWISE APPROVED BY THE CITY TRAFFIC ENGINEER.
14. THE USE OF TRAILER MOUNTED ARROW DISPLAYS WILL BE REQUIRED ON ALL LANE CLOSURES. THE CONTRACTOR SHALL PROVIDE ONE (1) STAND-BY UNIT IN GOOD WORKING CONDITION AT THE JOB SITE, READY FOR USE, IF HIS OPERATION REQUIRES 24-HOUR A DAY CLOSURE SET-UPS AND IF REQUIRED BY THE CITY.
15. TWO (2) PORTABLE MESSAGE SIGNS WILL BE REQUIRED ON THE PROJECT SITE FOR THE DURATION OF THE CONTRACT.



PLAN 221 TYPICAL TWO-WAY STREET LANE CLOSURE

NOT TO SCALE

TYPICAL TRANSITION LENGTHS AND SUGGESTED MAXIMUM SPACING OF DEVICES

POSTED SPEED MPH	FORMULA*	MINIMUM DESIRABLE TAPER LENGTHS (L) FEET 10' LANE OFFSET	11' LANE OFFSET	12' LANE OFFSET	SUGGESTED MAXIMUM DEVICE SPACING ON A TAPER (FEET)	ON A TANGENT (FEET)	SUGGESTED SIGN SPACING (FEET) "X" DIMENSION
30	$L=\frac{WS^2}{60}$	150	165	180	30	60-75	120
35		205	225	245	35	70-90	160
40		265	295	320	40	80-100	240
45	L=WS	450	495	540	45	90-110	320
50		500	560	600	50	100-125	400

*L-TAPER LENGTH IN FEET W=WIDTH OF OFFSET IN FEET S=POSTED SPEED

NOTE: BUFFER ZONE WILL BE 25 FEET (MAXIMUM).

LEGEND
- CHANNELIZING DEVICES
- FLAGGER
- BARICADE
- SIGN
- WORK ZONE

WATER STUDY NUMBER: WSL-2022-2192

WSL-2022-2192

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FORT WORTH

scale	
horiz	N/A
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tnp

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SCOTT A. GIBSON, P.E. Date: October 8, 2026

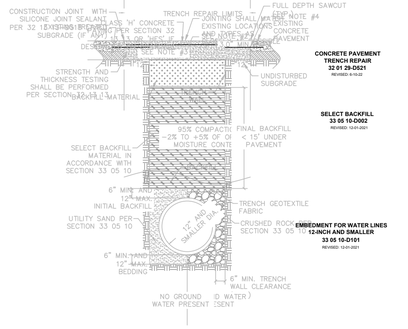
Tx. Reg. # 89290

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements
Traffic Control Details

tnp project BKA 21233
sheet 7

Drawing: T:\Projects\BKA21233\Eng C3D\CAD\OFFSITE WATER\Water Lines Construction Plans\Traffic Control Details (1 of 2).dwg at Oct 08, 2026 - 5:02pm by ABarrera
Layout: 7 Traffic Control Details
Xrefs: XREF-BORDER-22x34.dwg XREF-BLOCKS.dwg XREF-BLOCKCONNECTOR.dwg + X3D-WSS-OS-PH2.dwg + X3D-WSS.dwg + X3D-WSS-ABANDON.dwg + X3D-WSS-OFFSITE.dwg + X3D-BASE.dwg

NOTES:
1. FLOWABLE FILL IS REQUIRED TO BACKFILL ALL TRENCHES IN DOWNTOWN STREETS, AND OPTIONAL IN OTHER AREAS. BACKFILL SHALL MEET STANDARD SPECIFICATION 33 05 10.
2. FOR RESIDENTIAL STREET USE #4 BARS AT 18" O.C.E.W. AND 12" O.C.E.W. FOR ARTERIALS AND INDUSTRIAL STREETS.
3. REINFORCED CONCRETE PAVEMENT SHALL BE REPLACED TO A MINIMUM DEPTH OF 9" FOR RESIDENTIAL STREETS OR 11" FOR ARTERIAL AND INDUSTRIAL STREETS.
4. FOR RESIDENTIAL STREETS, USE #4X18" PREFORMED BARS, DOWEL AND EPOXYED A MIN 6" INTO EXISTING PAVEMENT AT 18" O.C. (TYP.), AND 12" O.C. FOR ARTERIAL AND INDUSTRIAL STREETS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF FORT WORTH STANDARD SPECIFICATIONS.



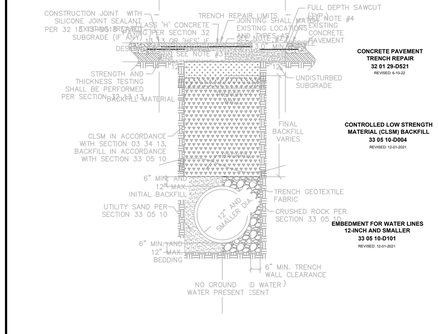
CONCRETE PAVEMENT TRENCH REPAIR
32 01 29-D521
REVISED: 6-15-22

SELECT BACKFILL
33 05 10-D002
REVISED: 12-01-2021

EMBEDMENT FOR WATER LINES 12-INCH AND SMALLER
33 05 10-D101
REVISED: 12-01-2021

FORT WORTH	CITY OF FORT WORTH, TEXAS **TRENCH EMBEDMENT & REPAIR FOR WATER LINES 12-INCH AND SMALLER**	

NOTES:
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2. FOR RESIDENTIAL STREET USE #4 BARS AT 18" O.C.E.W. AND 12" O.C.E.W. FOR ARTERIALS AND INDUSTRIAL STREETS.
3. REINFORCED CONCRETE PAVEMENT SHALL BE REPLACED TO A MINIMUM DEPTH OF 9" FOR RESIDENTIAL STREETS OR 11" FOR ARTERIAL AND INDUSTRIAL STREETS.
4. FOR RESIDENTIAL STREETS, USE #4X18" PREFORMED BARS, DOWEL AND EPOXYED A MIN 6" INTO EXISTING PAVEMENT AT 18" O.C. (TYP.), AND 12" O.C. FOR ARTERIAL AND INDUSTRIAL STREETS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF FORT WORTH STANDARD SPECIFICATIONS.

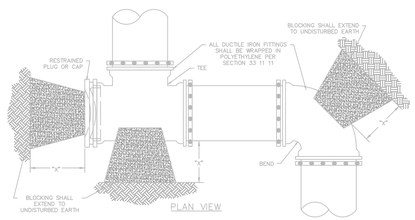


CONCRETE PAVEMENT TRENCH REPAIR
32 01 29-D521
REVISED: 6-15-22

CONTROLLED LOW STRENGTH MATERIAL (CLSM) BACKFILL
33 05 10-D004
REVISED: 12-01-2021

EMBEDMENT FOR WATER LINES 12-INCH AND SMALLER
33 05 10-D101
REVISED: 12-01-2021

FORT WORTH	CITY OF FORT WORTH, TEXAS **TRENCH EMBEDMENT & REPAIR FOR WATER LINES 12-INCH AND SMALLER**	



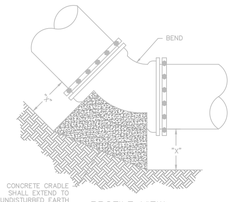
HORIZONTAL THRUST BLOCKING TABLE

PIPE SIZE	"x" DIM.**	PLUGS, TEES, DEAD-ENDS 90° BENDS MIN. AREA (SF)	45° BENDS MIN. AREA (SF)	22.5° BENDS MIN. AREA (SF)	11.25° BENDS MIN. AREA (SF)
6"	1'-6"	4.00*	4.00*	4.00*	4.00*
8"	1'-6"	5.65	8.00	4.33	4.00*
10"	1'-6"	8.84	12.50	6.76	4.00*
12"	1'-6"	12.73	17.99	9.74	4.95
16"	2'-0"	22.62	31.99	17.31	8.83
20"	2'-0"	35.34	49.98	27.05	13.79
24"	2'-0"	50.89	71.97	38.95	19.86

*MINIMUM THRUST BLOCKING SURFACE AREA SHALL BE 4 SQUARE FEET.
**HOMENSION "X" TO BE A MINIMUM OF ONE FOOT AND SIX INCHES, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH WALL.

NOTES:
1. THRUST BLOCKING AREAS SHOWN ARE BASED ON:
1.1. 225 PSI TEST PRESSURE
1.2. 3,000 PSF HORIZONTAL OR LATERAL BEARING PRESSURE FOR ACCEPTABLE SOILS
1.3. MINIMUM COVER OF 42"
1.4. A SAFETY FACTOR OF 1.5.
2. THE ENGINEER SHALL PROVIDE A SEPARATE BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF THRUST BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
4. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.
5. BLOCKING FOR WATER LINES LARGER THAN 24" SHALL BE DESIGNED FOR THE SPECIFIC LOCATION AND SHOWN ON THE DRAWINGS.
6. ALL DUCTILE IRON FITTINGS SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PRIOR TO PLACING OF BLOCKING.
7. CONCRETE MATERIAL SHALL CONFORM TO SECTION 03 30 00.

FORT WORTH	CITY OF FORT WORTH, TEXAS **HORIZONTAL THRUST BLOCKING**	REVISED: 12-30-2016 **33 11 00-D130**



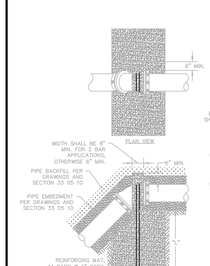
CONCRETE CRADLE TABLE

PIPE SIZE	"x" DIM.**	90° BENDS MIN. AREA (SF)	45° BENDS MIN. AREA (SF)	22.5° BENDS MIN. AREA (SF)	11.25° BENDS MIN. AREA (SF)
6"	1'-6"	4.50	4.00*	4.00*	4.00*
8"	1'-6"	8.00	4.33	4.00*	4.00*
10"	1'-6"	12.50	6.76	4.00*	4.00*
12"	1'-6"	17.99	9.74	4.96	4.00*
16"	2'-0"	31.99	17.31	8.83	4.43
20"	2'-0"	49.98	27.05	13.79	6.93
24"	2'-0"	71.97	38.95	19.86	9.98

*MINIMUM THRUST BLOCKING SURFACE AREA SHALL BE 4 SQUARE FEET.
**HOMENSION "X" TO BE A MINIMUM OF ONE FOOT AND SIX INCHES, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH BOTTOM.

NOTES:
1. THRUST BLOCKING AREAS SHOWN ARE BASED ON:
1.1. 225 PSI TEST PRESSURE
1.2. 3,000 PSF HORIZONTAL OR LATERAL BEARING PRESSURE FOR ACCEPTABLE SOILS
1.3. MINIMUM COVER OF 42"
1.4. A SAFETY FACTOR OF 1.5.
2. THE ENGINEER SHALL PROVIDE A SEPARATE BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF THRUST BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
4. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.
5. CRADLES FOR WATER LINES LARGER THAN 24" SHALL BE DESIGNED FOR THE SPECIFIC LOCATION AND SHOWN ON THE DRAWINGS.
6. ALL DUCTILE IRON FITTINGS SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PRIOR TO PLACING OF BLOCKING.
7. CONCRETE MATERIAL SHALL CONFORM TO SECTION 03 30 00.

FORT WORTH	CITY OF FORT WORTH, TEXAS **CONCRETE CRADLE**	REVISED: 12-30-2016 **33 11 00-D131**

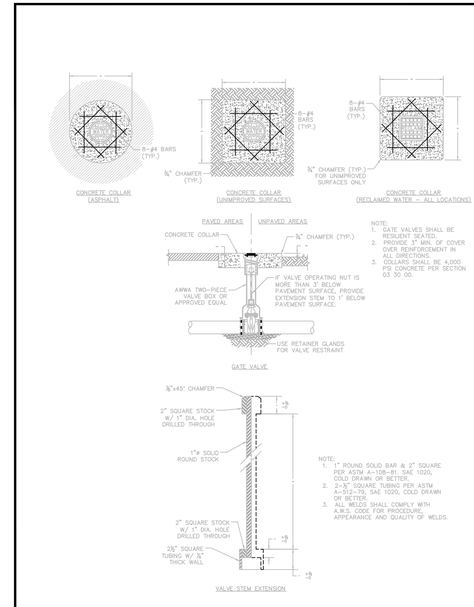


VERTICAL TIE-DOWN BLOCKING TABLE

PIPE SIZE	90° BENDS	45° BENDS MIN. VOLUME (CF)	MIN. #4 BARS	22.5° BENDS MIN. VOLUME (CF)	MIN. #4 BARS	11.25° BENDS MIN. VOLUME (CF)	MIN. #4 BARS
6"	ALL 90°	48.69	1	24.82	1	12.47	1
8"	SHALL BE	86.56	2	44.13	1	22.17	1
10"	SHALL BE	135.35	3	68.95	2	34.64	1
12"	RESTRAINED	194.16	4	99.25	2	49.85	2
16"		**256.50**	**5**	**130.75**	**3**	**35.69**	**2**

NOTES:
1. VERTICAL TIE-DOWN BLOCKING VOLUMES SHOWN ARE BASED ON:
1.1. 225 PSI TEST PRESSURE
1.2. 150 PCF CONCRETE DENSITY
1.3. A SAFETY FACTOR OF 1.5.
2. BAR QUANTITIES ARE BASED ON:
2.1. 30 KSI #4 STEEL REINFORCEMENT BAR
2.2. A FACTOR OF SAFETY OF 1.5
2.3. 3,000 PSI CONCRETE AT 28 DAYS.
3. THE ENGINEER SHALL PROVIDE A SEPARATE VERTICAL TIE-DOWN BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
4. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF VERTICAL TIE-DOWN BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
5. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.
6. WATER TESTING DEPTHS MAY VARY BUT SATISFACTION OF ABOVE MINIMUM VOLUMES MUST BE DEMONSTRATED.
7. KEEP CONCRETE CLEAR OF PIPE JOINTS AND BOLTS.
8. VERTICAL TIE-DOWN BLOCKING FOR LINES 16" AND LARGER SHALL BE DESIGNED FOR THE SPECIFIC LOCATION AND SHOWN ON THE DRAWINGS.
9. ALL DUCTILE IRON FITTINGS SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PRIOR TO PLACING OF BLOCKING.
10. CONCRETE MATERIAL SHALL CONFORM TO SECTION 03 30 00.

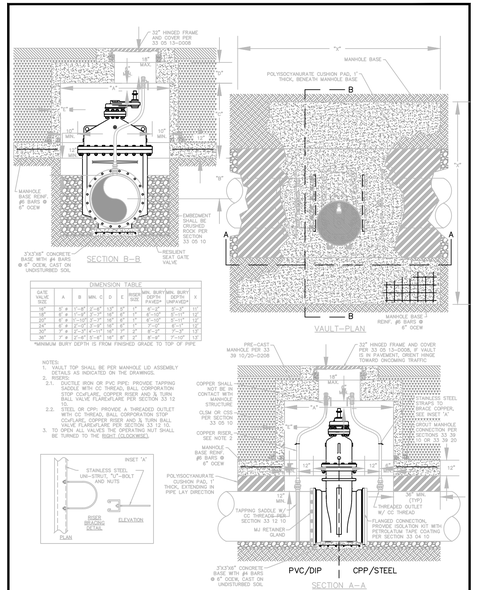
FORT WORTH	CITY OF FORT WORTH, TEXAS **VERTICAL TIE-DOWN BLOCKING**	REVISED: 12-30-2016 **33 11 00-D132**



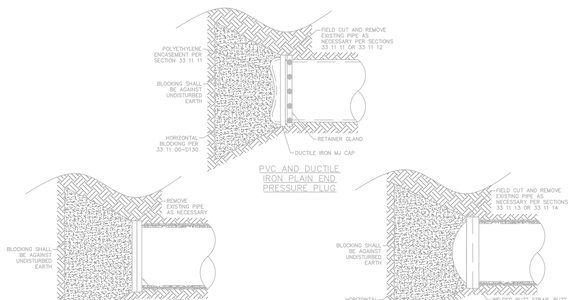
NOTE:
1. GATE VALVES SHALL BE RESILIENT SEATED.
2. PROVIDE 3" MIN. OF COVER OVER REINFORCEMENT IN ALL DIRECTIONS.
3. COLLARS SHALL BE 4,000 PSI CONCRETE PER SECTION 03 30 00.

NOTE:
1. 1" ROUND SOLID BAR & 2" SQUARE PER ASTM A-108-81, SAE 1020, COLD DRAWN OR BETTER.
2. 2-½" SQUARE TUBING PER ASTM A-512-79, SAE 1020, COLD DRAWN OR BETTER.
3. ALL WELDS SHALL COMPLY WITH A.W.S. CODE FOR PROCEDURE, APPEARANCE AND QUALITY OF WELDS.

FORT WORTH	CITY OF FORT WORTH, TEXAS **WATER DISTRIBUTION GATE VALVE & BOX (12" AND SMALLER)**	REVISED: 10-18-2018 **33 12 20-D126**



FORT WORTH	CITY OF FORT WORTH, TEXAS **WATER TRANSMISSION GATE VALVE & VAULT (16" - 36")**	REVISED: 08-31-2012 **33 12 20-D127**



NOTES:
1. ALL ABANDONMENT SHALL BE PER SECTION 02 41 14.
2. SURFACE REPAIR SHALL BE PER SECTIONS 32 01 29 OR 32 14 16 DEPENDING ON EXISTING SURFACE AND AS DESIGNATED ON THE PLANS.
3. CAST-IN-PLACE CONCRETE SHALL BE PER SECTION 03 30 00.
4. ALLOW CONCRETE BLOCKING TO CURE FOR 24 HOURS PRIOR TO PRESSURIZING WATER LINE.

FORT WORTH	CITY OF FORT WORTH, TEXAS **PVC, DUCTILE IRON, CONCRETE PRESSURE AND BURIED STEEL PIPE PRESSURE PLUGS**	REVISED: 08-31-2012 **02 41 14-D123**

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

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GBPE No. PEF007431; TBAE No. BR 2673

FORT WORTH

scale
horiz N/A
vert N/A
date OCT 2026

tnp

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SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

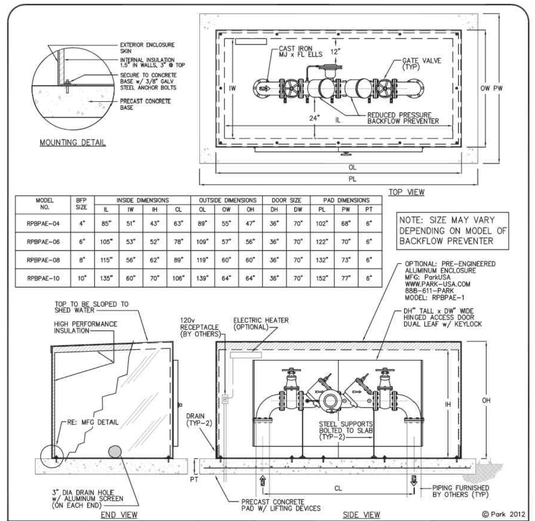
City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements

Water Details (1 OF 2)

tnp project BKA 21233
sheet **8**

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE_WATER\Water Lines Construction Plans\Water Details (1 OF 2).dwg at Oct 08, 2026-5:03pm by ARomero
Layout: 8 Water Details (1 OF 2)
Xrefs: ANSI_BORDER - 22x34.dwg



MODEL NO.	BFP SIZE	INSIDE DIMENSIONS				OUTSIDE DIMENSIONS			DOOR SIZE		PAD DIMENSIONS		
		IL	IW	IH	CL	OL	OW	OH	DH	DW	PL	PW	PT
RPBPAE-04	4"	85"	51"	43"	63"	89"	55"	47"	36"	70"	102"	68"	6"
RPBPAE-06	6"	105"	53"	52"	78"	109"	57"	56"	36"	70"	122"	70"	6"
RPBPAE-08	8"	115"	56"	62"	89"	119"	60"	60"	36"	70"	132"	73"	6"
RPBPAE-10	10"	135"	60"	70"	106"	139"	64"	64"	36"	70"	152"	77"	6"

NOTE: SIZE MAY VARY DEPENDING ON MODEL OF BACKFLOW PREVENTER

Specifications

GENERAL
The Model ERP aluminum enclosure is pre-engineered to provide protection to backflow preventers, meters, pumps, and other devices installed above ground. These water conveying devices are subject to freezing and vandalism. The enclosure is designed to be installed over the equipment after installation. The enclosure is equipped with access doors to provide adequate access to the equipment.

CONSTRUCTION
The enclosure shall be manufactured from all new materials. The exterior shall be fabricated with 0.090 aluminum, continuously welded. The access door(s) shall be of like material and hinged with a continuous hinge. The door shall be equipped with a 3-point locking mechanism. The interior of the enclosure shall be structurally lined with high performance, non-wicking insulation.

HEATER
Interior heaters (if required) shall be thermostatically controlled and be mounted to the interior wall of the enclosure. A GFI receptacle shall be provided by others to provide power to the electric heater.

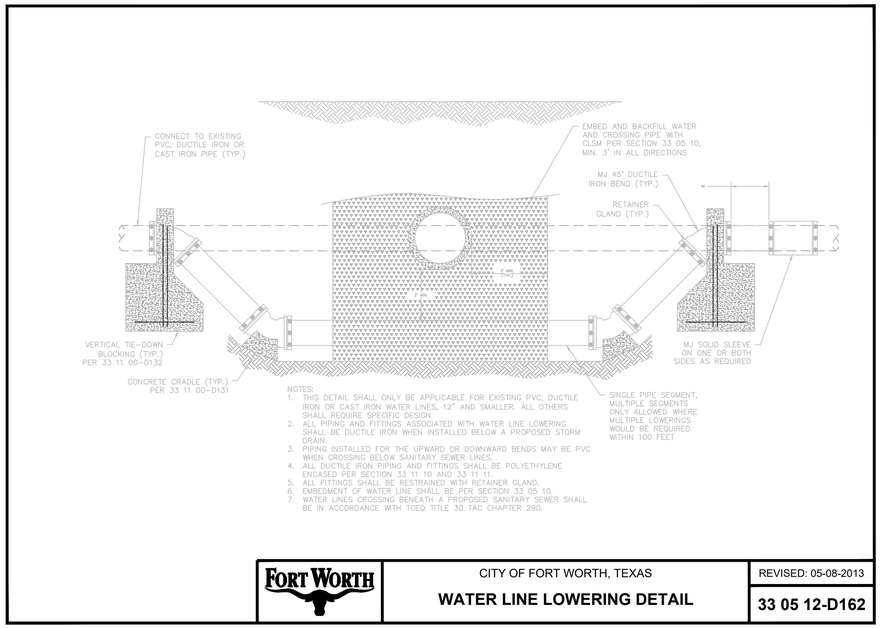
PROJECT :
CUSTOMER :
ENGINEER :
QUOTE :
DATE :

888.811.7878
www.park-usa.com

REDUCED PRESSURE BACKFLOW PREVENTER W/ INSULATED ENCLOSURE MODEL RPBPAE - 4" THRU 10"

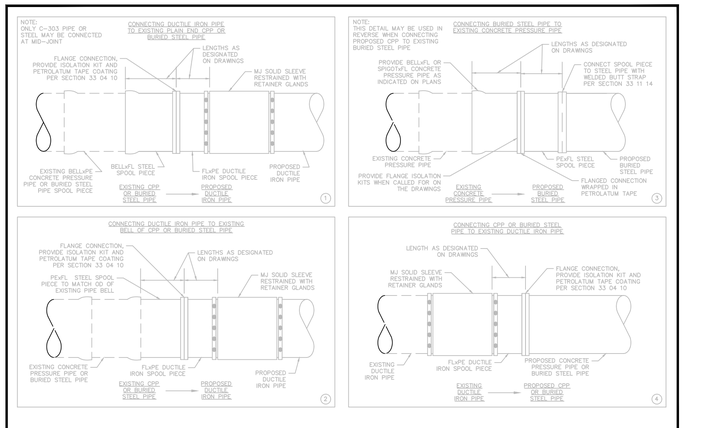
SCALE: NONE	DWG. NO. RPBPAE-1	REV. A
DATE: 2012		

1-11



NOTES:
1. THIS DETAIL SHALL ONLY BE APPLICABLE FOR EXISTING PVC, DUCTILE IRON OR CAST IRON WATER LINES, 12" AND SMALLER. ALL OTHERS SHALL REQUIRE SPECIFIC DESIGN.
2. ALL PIPING AND FITTINGS ASSOCIATED WITH WATER LINE LOWERING SHALL BE DUCTILE IRON WHEN INSTALLED BELOW A PROPOSED STORM DRAIN.
3. PIPING INSTALLED FOR THE UPWARD OR DOWNWARD BENDS MAY BE PVC WHEN CROSSING BELOW SANITARY SEWER LINES.
4. ALL DUCTILE IRON PIPING AND FITTINGS SHALL BE POLYETHYLENE ENCASED PER SECTION 33 11 10 AND 33 11 11.
5. ALL FITTINGS SHALL BE RESTRAINED WITH RETAINER GLAND.
6. EMBEDMENT OF WATER LINE SHALL BE PER SECTION 33 05 10.
7. WATER LINES CROSSING BENEATH A PROPOSED SANITARY SEWER SHALL BE IN ACCORDANCE WITH TCEQ TITLE 30 TAC CHAPTER 290.

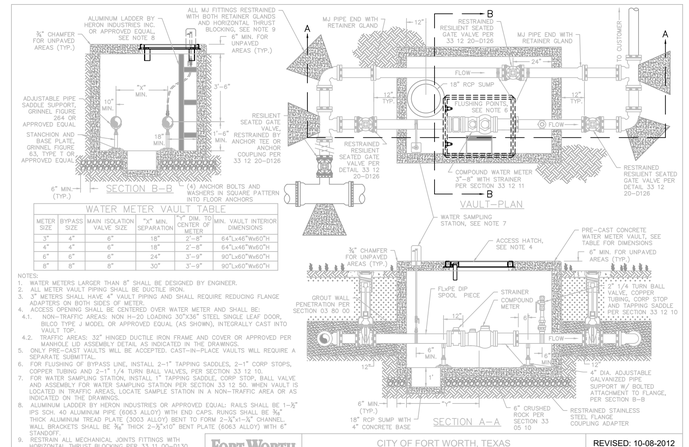
FORT WORTH	CITY OF FORT WORTH, TEXAS **WATER LINE LOWERING DETAIL**	REVISED: 05-08-2013 **33 05 12-D162**



NOTE:
ONLY C-303 PIPE OR STEEL MAY BE CONNECTED AT MO-JOINT

NOTE:
THIS DETAIL MAY BE USED IN REVERSE WHEN CONNECTING REPOSSED OPP TO EXISTING BURIED STEEL PIPE

FORT WORTH	CITY OF FORT WORTH, TEXAS **CONNECTION TO EXISTING WATER MAINS**	REVISED: 08-31-2012 **33 12 25-D129**



FORT WORTH	CITY OF FORT WORTH, TEXAS **COMBINATION TURBINE METER VAULT INSTALLATION WITH BYPASS**	REVISED: 10-08-2012 **33 12 11-D119**

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

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FORT WORTH

scale
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SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements

Water Details (2 OF 2)

tnp project	sheet
BKA 21233	9

WSL-2022-21192

Water Line Improvements to serve John Peter Smith Hospital

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE WATER\Water Lines Construction Plans\Water Details (1 OF 3).dwg ot Oct 08, 2026-5:03pm by ARomero
Layout: a Water Details (2 of 2)
Xrefs: XREF-BORDER-22x34.dwg