

U.P./DALLAS GARLAND N.E.

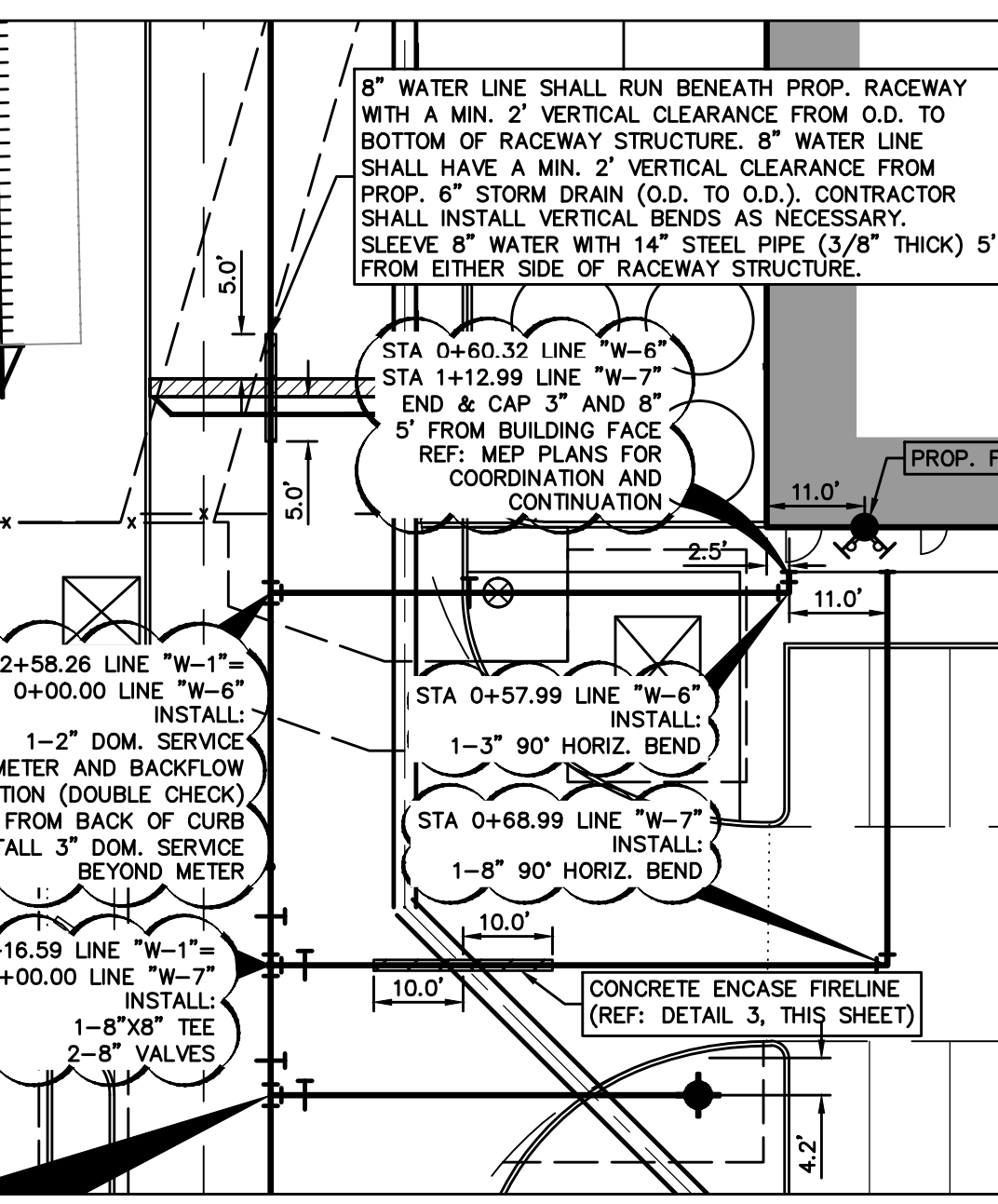
(A 100-FOOT RIGHT-OF-WAY)

LEGEND

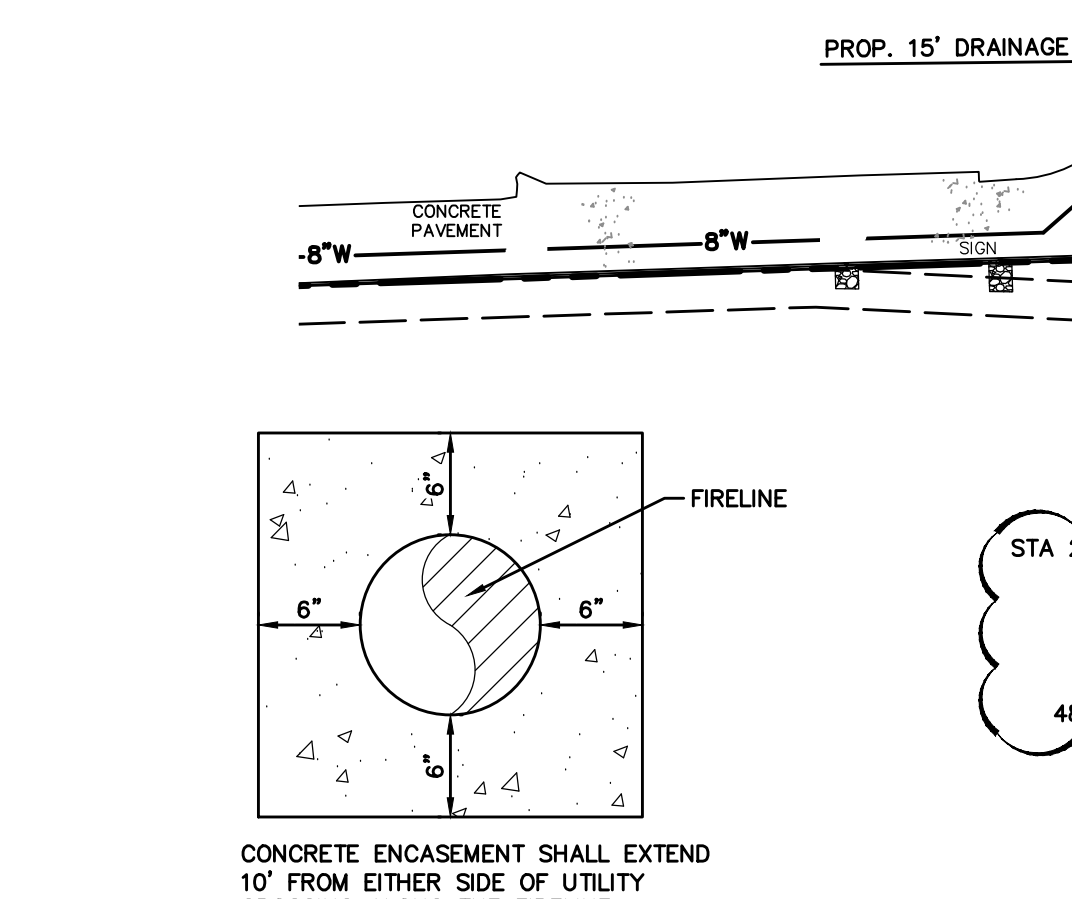
- B₁ BOLLARD
- EM₀ ELECTRIC METER
- PP₀ POWER POLE
- LS₀ LIGHT STANDARD
- WM₀ WATER METER
- WV₀ WATER VALVE
- ICV₀ IRRIGATION CONTROL VALVE
- FH₀ FIRE HYDRANT
- MN₀ MANHOLE
- TSC₀ TRAFFIC SIGNAL CONTROL
- TSP₀ TRAFFIC SIGNAL POLE
- TELE₀ TELEPHONE BOX
- FL₀ FLOOD LIGHT
- FP₀ FLAG POLE
- TSN₀ TRAFFIC SIGN
- IRS 1/2-INCH IRON ROD
- (C.M.) W/PACHECO KOCH" CAP SET
- CONTROLLING MONUMENT
- PROPERTY LINE
- FENCE
- OVERHEAD UTILITY LINE
- UNDERGROUND ELECTRIC LINE
- UNDERGROUND TELEPHONE LINE
- UNDERGROUND CABLE LINE
- 6" UNDERGROUND WATER LINE
- 6" UNDERGROUND SANITARY SEWER LINE

0 25 50 100 150
GRAPHIC SCALE IN FEET

2 WATER DETAIL
SCALE: 1"=20'



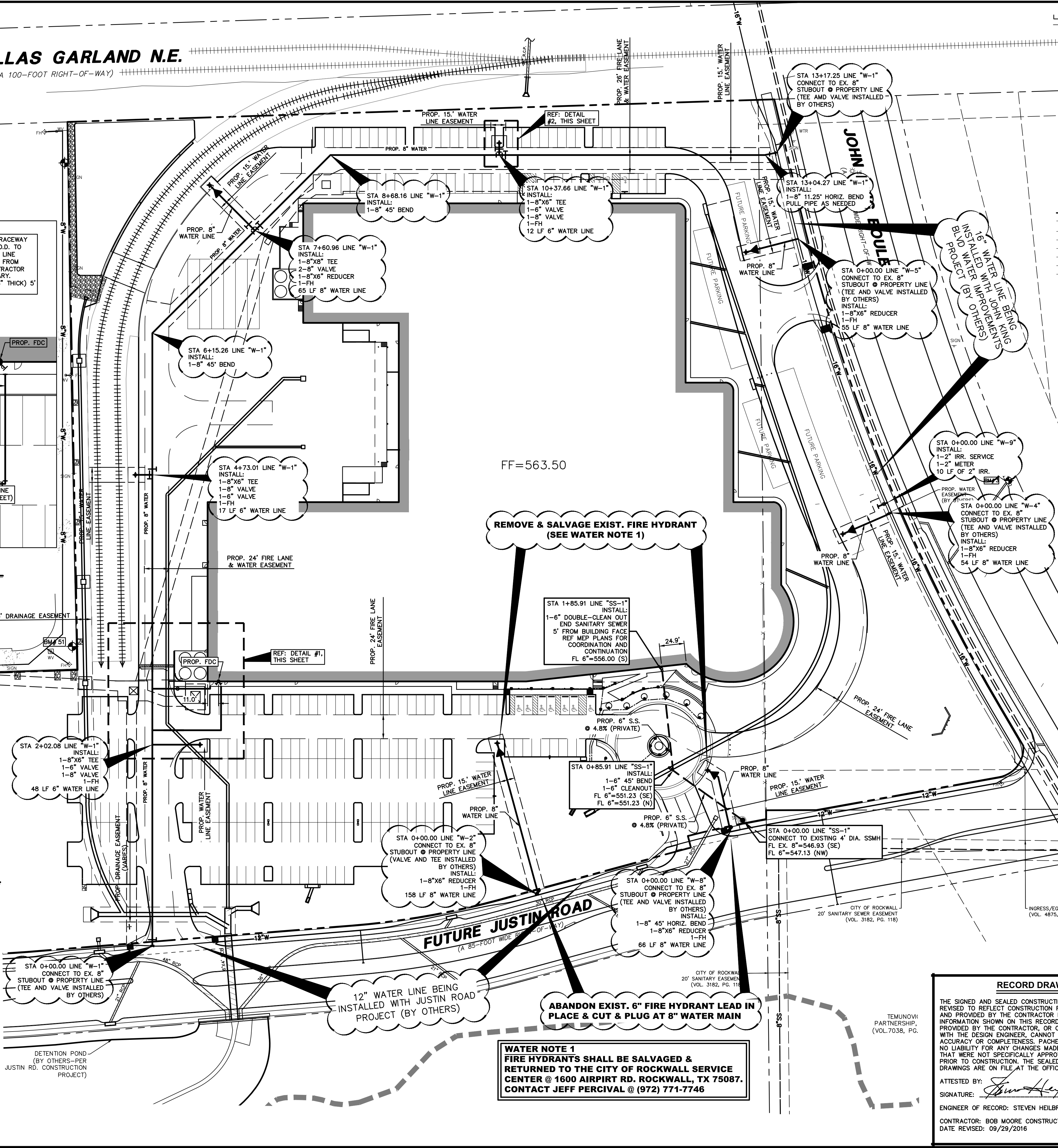
1 WATER DETAIL
SCALE: 1"=20'



3 FIRE LINE ENCASUREMENT AT UTILITY CROSSINGS
NOT TO SCALE

BENCH MARK LIST

BM A "X" CUT ON THE CENTER OF CURB INLET AT THE EDGE OF SIDEWALK ±25' FROM CURB RETURN AT NORTHWEST INTERSECTION OF JUSTIN ROAD AND INDUSTRIAL PARKWAY	ELEV=561.99 FT
BM B "X" CUT ON SOUTHEAST CORNER OF SIDEWALK NEXT TO HEADWALL ON WEST SIDE OF JOHN KING BOULEVARD ±1,700' NORTH OF INTERSTATE-30	ELEV=563.49 FT
BM 3 "X" CUT SET AT CENTER OF CONCRETE CURB INLET IN THE EAST SIDE OF JOHN KING BOULEVARD ±450' SOUTH OF A RAILROAD	ELEV=564.76 FT
BM 50 "X" CUT IN CONCRETE FOUND, ±41' SOUTH OF THE NORTHERMOST NORTHWEST CORNER OF THE SUBJECT PROPERTY AND ±3' WEST OF THE EDGE OF CONCRETE.	ELEV=565.60 FT
BM 51 "X" CUT IN CONCRETE SET, ±879' EAST OF THE CENTERLINE OF INDUSTRIAL BOULEVARD, ±526' SOUTH OF THE RAILROAD RIGHT-OF-WAY LINE; ±4' WEST OF THE CONCRETE RETAINING WALL AND ±18' NORTH OF A FIRE HYDRANT.	ELEV=561.88 FT



- WATER & SANITARY SEWER GENERAL NOTES**
- ALL WATER MAINS SHALL BE PVC C900, DR 14, CLASS 200. FIRE PROTECTION SERVICES SHALL BE PVC C900, DR 14, CLASS 305 AND INSTALLED IN ACCORDANCE WITH THE DESIGN AND SPECIFICATIONS OF THE FIRE PROTECTION PLANS TO BE PREPARED BY A LICENSED FIRE PROTECTION CONTRACTOR.
 - WATER AND SANITARY SEWER SERVICES SHALL MEET PLUMBING CODE REQUIREMENTS.
 - ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 48 INCHES ABOVE IMPROVED FINISHED GRADE, UNLESS OTHERWISE NOTED.
 - SANITARY SEWER PIPE SHALL BE PVC SDR-35.
 - WHERE WATER MAINS AND SANITARY SEWERS ARE INSTALLED, THEY SHALL BE INSTALLED NO CLOSER TO EACH OTHER THAN NINE FEET IN ALL DIRECTIONS AND PARALLEL LINES MUST BE INSTALLED IN SEPARATE TRENCHES. WHERE THE NINE FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE FOLLOWING GUIDELINES SHALL APPLY:
 - WHERE A SANITARY SEWER PARALLELS A WATERLINE, THE SEWER SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC MEETING ASTM SPECIFICATIONS WITH A PRESSURE RATING OF 150 PSI FOR BOTH THE PIPE AND JOINTS. THE VERTICAL SEPARATION SHALL BE A MINIMUM OF TWO FEET BETWEEN OUTSIDE DIAMETERS AND THE HORIZONTAL SEPARATION SHALL BE A MINIMUM OF FOUR FEET BETWEEN OUTSIDE DIAMETERS. THE SEWER SHALL BE LOCATED BELOW THE WATERLINE.
 - WHERE A SANITARY SEWER CROSSES A WATERLINE AND THE SEWER IS CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC WITH A MINIMUM PRESSURE RATING OF 150 PSI, AN ABSOLUTE MINIMUM DISTANCE OF 12 INCHES BETWEEN OUTSIDE DIAMETERS SHALL BE MAINTAINED AND WATERLINE SHALL BE ENCASED.
 - WHERE A SANITARY SEWER CROSSES UNDER A WATERLINE AND THE SEWER IS CONSTRUCTED OF ABS TRUSS PIPE, SIMILAR SEMI-RIGID PLASTIC COMPOSITE PIPE, CLAY PIPE, OR CONCRETE PIPE WITH GASKETED JOINTS, A MINIMUM TWO FOOT SEPARATION DISTANCE SHALL BE MAINTAINED. IN ADDITION, THE SEWER SHALL BE LOCATED BELOW THE WATERLINE WHERE POSSIBLE AND ONE LENGTH OF THE SEWER PIPE MUST BE CENTERED ON THE WATERLINE.
 - WHERE A SANITARY SEWER CROSSES OVER A WATERLINE ALL PORTIONS OF THE SEWER WITHIN NINE FEET OF THE WATERLINE SHALL BE CONSTRUCTED OF CAST IRON, DUCTILE IRON, OR PVC PIPE WITH A PRESSURE RATING OF AT LEAST 150 PSI USING APPROPRIATE ADAPTERS. IN LIEU OF THIS PROCEDURE, THE NEW CONVEYANCE MAY BE ENCASED IN A JOINT OF 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FIVE FEET INTERVALS WITH SPACERS OR BE FILLED TO THE SPRING LINE WITH WASHED SAND. THE ENCASUREMENT PIPE SHOULD BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEAL.
 - THE SANITARY SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO BE INSTALLED PARALLEL TO AN EXISTING SEWER THAT SHOWS NO EVIDENCE OF LEAKAGE AND THE WATERLINE IS INSTALLED ABOVE THE SEWER A MINIMUM OF TWO FEET VERTICALLY AND FOUR FEET HORIZONTALLY.
 - THE SANITARY SEWER NEED NOT BE DISTURBED WHERE A NEW WATERLINE IS TO CROSS OVER BY TWO FEET OR MORE AN EXISTING SEWER SHOWING NO EVIDENCE OF LEAKAGE. SHOULD EXCAVATION FOR THE WATERLINE PRODUCE EVIDENCE THAT THE SEWER IS LEAKING, THE SEWER MUST BE REPAIRED OR REPLACED AS DESCRIBED IN SUBPARAGRAPH (6.C) OR (6.D).
 - CONTRACTOR TO VERIFY ALL EXISTING SEWER FLOW LINES BEFORE BEGINNING CONSTRUCTION.
 - CONTRACTOR SHALL TIE A ONE INCH WIDE PIECE OF RED PLASTIC FLAGGING TO THE END OF SEWER SERVICE AND SHALL LEAVE A MINIMUM OF 36 INCHES OF FLAGGING EXPOSED AFTER BACKFILL. AFTER CURB AND PAVING IS COMPLETED, CONTRACTOR SHALL MARK THE LOCATION OF THE SEWER SERVICE ON THE CURB OR ALLEY IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
 - ALL SANITARY SEWER LINES SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD CITY SPECIFICATIONS.
 - THE UTILITY CONTRACTOR SHALL INSTALL THE WATER SERVICES TO A POINT TWO FEET BACK OF THE CURB LINE AT A DEPTH OF 12 INCHES. THE METER BOX SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR AFTER THE PAVING CONTRACTOR HAS COMPLETED THE FINE GRADING BEHIND THE BACK OF THE CURB. EACH SERVICE LOCATION SHALL BE MARKED ON THE CURB WITH A BLUE LETTER "W" BY THE UTILITY CONTRACTOR AND TIED TO PROPERTY CORNERS ON THE "RECORD DRAWINGS."
 - ALL METER BOXES SHALL BE LOCATED IN NON-TRAFFIC AREAS.
 - TRENCH BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG 3RD EDITION ITEM 504.2 AND SHALL BE MECHANICALLY COMPACTED IN 6-INCH LIFTS TO THE TOP OF SUBGRADE TO A MINIMUM OF 95% STANDARD PROCTOR DENSITY IN ACCORDANCE WITH NCTCOG THIRD EDITION ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
 - EMBEDMENT SHALL CONFORM TO THE REQUIREMENTS OF NCTCOG ITEM 504.5 UNLESS OTHERWISE SHOWN ON THESE PLANS OR STATED IN THE STANDARD CITY SPECIFICATIONS.
 - VALVE BOXES SHALL BE FURNISHED AND SET ON EACH GATE VALVE. AFTER THE FINAL CLEAN-UP AND ALIGNMENT HAS BEEN COMPLETED, THE UTILITY CONTRACTOR SHALL POUR A 24"x24"x6" CONCRETE BLOCK AROUND ALL VALVE BOX TOPS LEVEL WITH THE FINISHED GRADE.
 - CONTRACTOR SHALL RECONNECT ALL EXISTING SERVICES AND MAINTAIN EXISTING SERVICES THROUGHOUT CONSTRUCTION.
 - IF REQUIRED DUE TO CONSTRUCTION, POWER POLES TO BE BRACED OR RELOCATED AT CONTRACTOR'S EXPENSE.
 - BLUE EMS DISKS SHALL BE INSTALLED ON THE WATER LINE AT EVERY CHANGE IN DIRECTION, VALVE, SERVICE AND FIRE HYDRANT.

WATER NOTE 1
FIRE HYDRANTS SHALL BE SALVAGED & RETURNED TO THE CITY OF ROCKWALL SERVICE CENTER @ 1600 AIRPIRV RD. ROCKWALL, TX 75087. CONTACT JEFF PERCIVAL @ (972) 771-7746

RECORD DRAWING

THE SIGNED AND SEALED CONSTRUCTION DOCUMENT HAS BEEN REVISED TO REFLECT CONSTRUCTION RECORDS MAINTAINED AND PROVIDED BY THE CONTRACTOR FOR THIS PROJECT. THE INFORMATION SHOWN ON THIS RECORD DRAWING, WHICH WAS PROVIDED BY THE CONTRACTOR, OR OTHERS NOT ASSOCIATED WITH THE DESIGN ENGINEER, CANNOT BE VERIFIED FOR ACCURACY OR COMPLETENESS. PACHECO KOCH SHALL ASSUME NO LIABILITY FOR ANY CHANGES MADE DURING CONSTRUCTION THAT WERE NOT SPECIFICALLY APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION. THE SEALED CONSTRUCTION DRAWINGS ARE ON FILE AT THE OFFICES OF PACHECO KOCH.

ATTESTED BY: *Steven Heilbrun*
SIGNATURE:
ENGINEER OF RECORD: STEVEN HEILBRUN, P.E.
CONTRACTOR: BOB MOORE CONSTRUCTION, INC.
DATE REVISED: 09/29/2016

NO.	DATE	REVISION
09/29/2016		RECORD DRAWINGS
06/01/2016		EXISTING FIRE HYDRANT REMOVAL
10/20/2015		RACEWAY
09/24/2015		ASI 26

Pacheco Koch
7557 RAMBLER ROAD, SUITE 1400
DALLAS, TX 75231 972.235.3031
TX REG. ENGINEERING FIRM F-14439
TX REG. SURVEYING FIRM LS-101938-05

WATER & SANITARY SEWER PLAN
CHANNELL BTS
NWC JUSTIN RD. & JOHN KING BLVD.
CHANNELL SUBDIVISION LOT 2, BLOCK A
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
SMH/MG	MG	NOV 2014	1"=50'			C5.1

09/29/2016 3:09PM
 M: DWG-32-3273-14192U.DWG
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CHANNELL BTS-LOT 2 BLOCK A CHANNELL SUBDIVISION