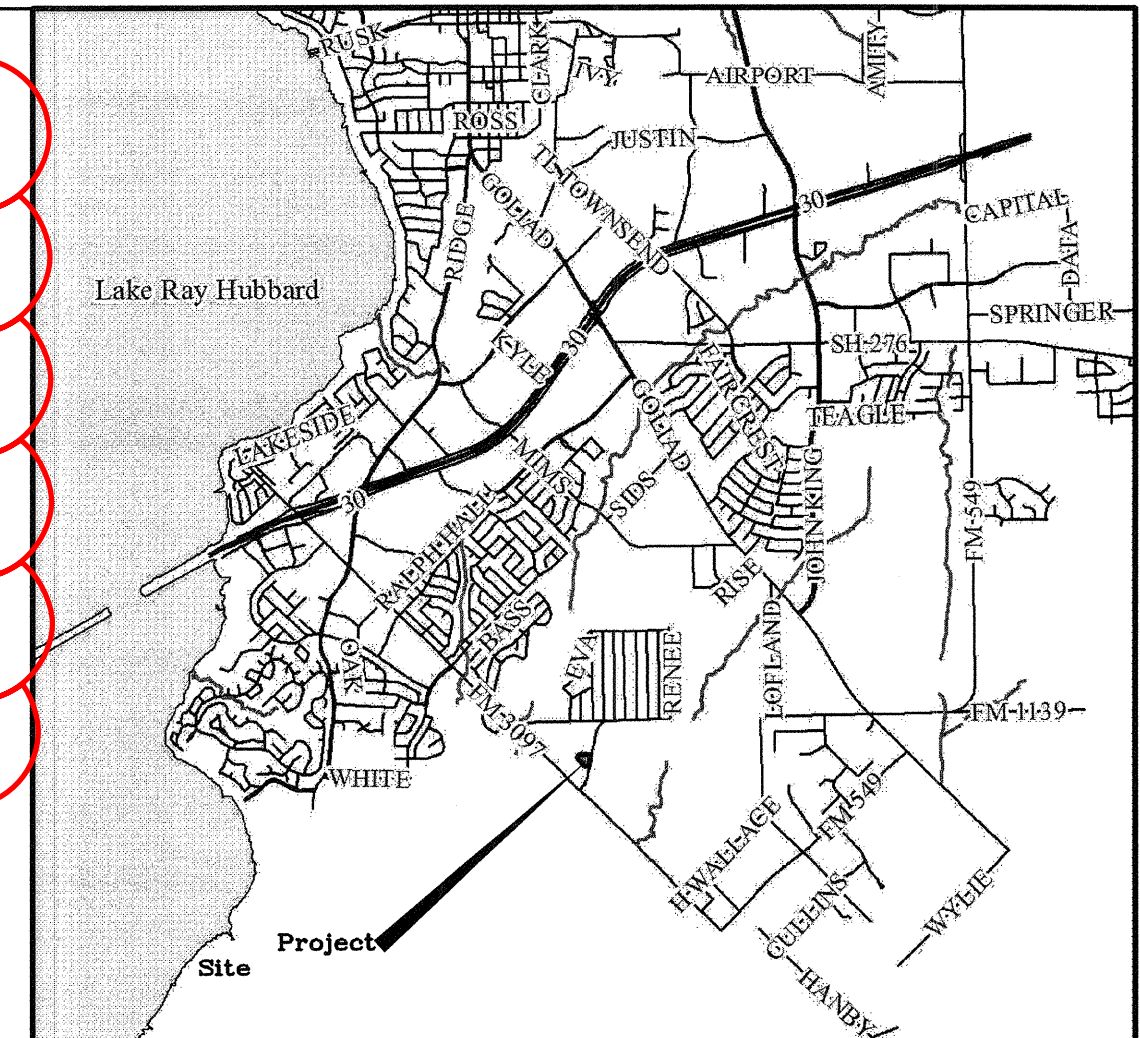


UTILITY SUBCONTRACTOR

TIOGA CONTRACTORS LLC. LIC. SCR-U-1771429
 136 S NORWOOD DR. HURST, TX 76053
 TEL: 682-224-0757
 CONTACT: RACE ARENDALL
 FIRE SPRINKLER RME-U-1774120

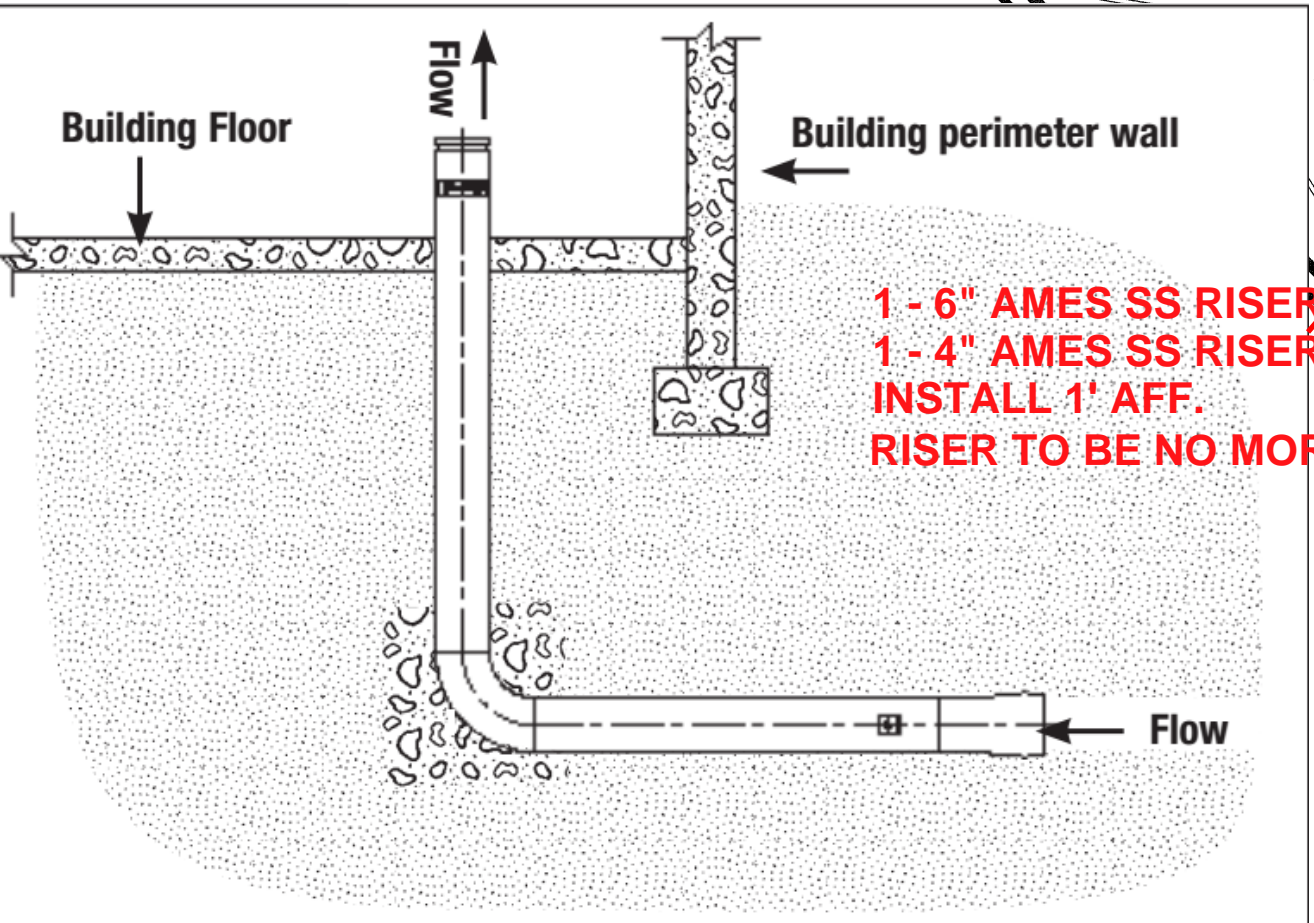
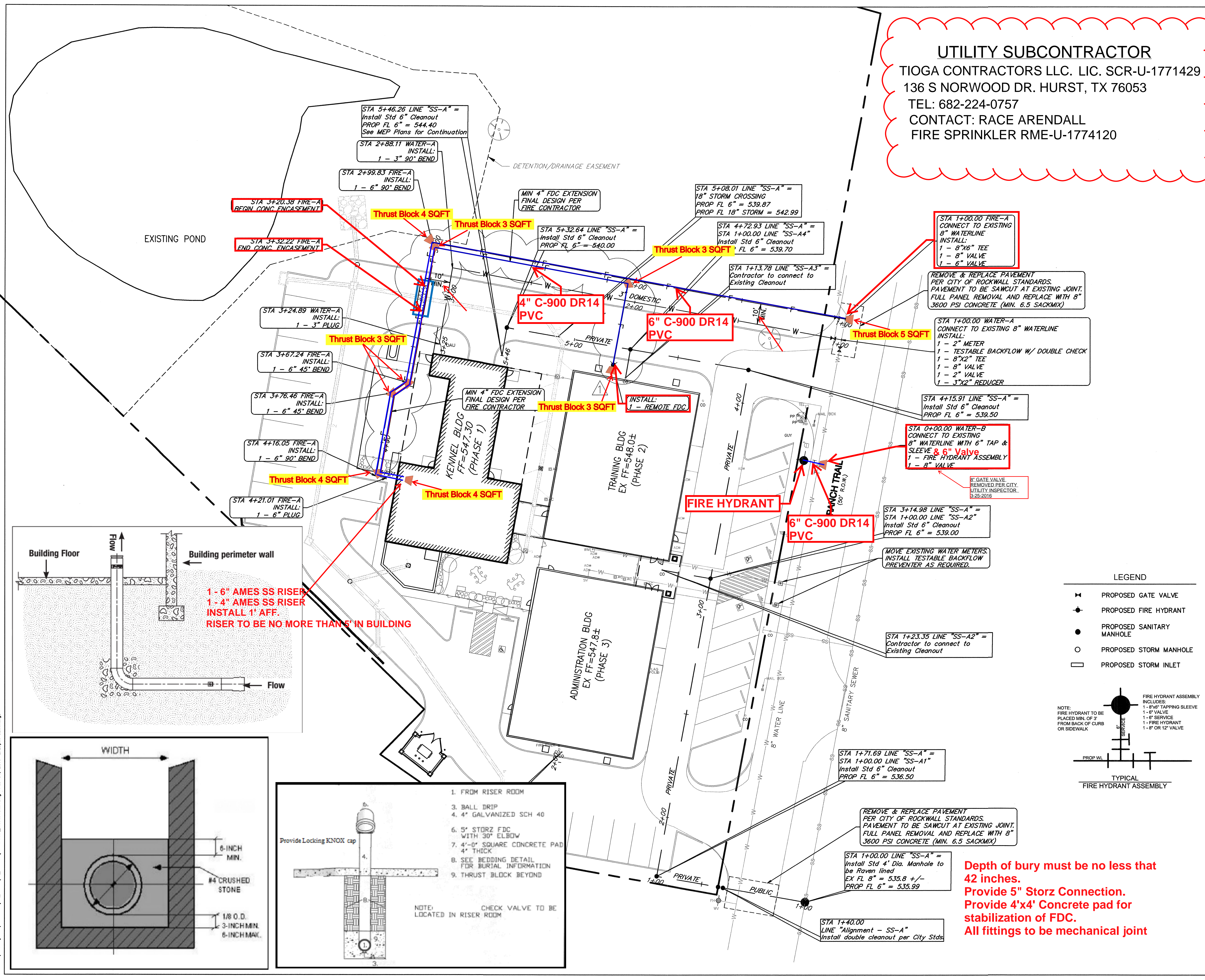


VICINITY MAP
 MAPSCO PG. NO. 30C GRID 'R'

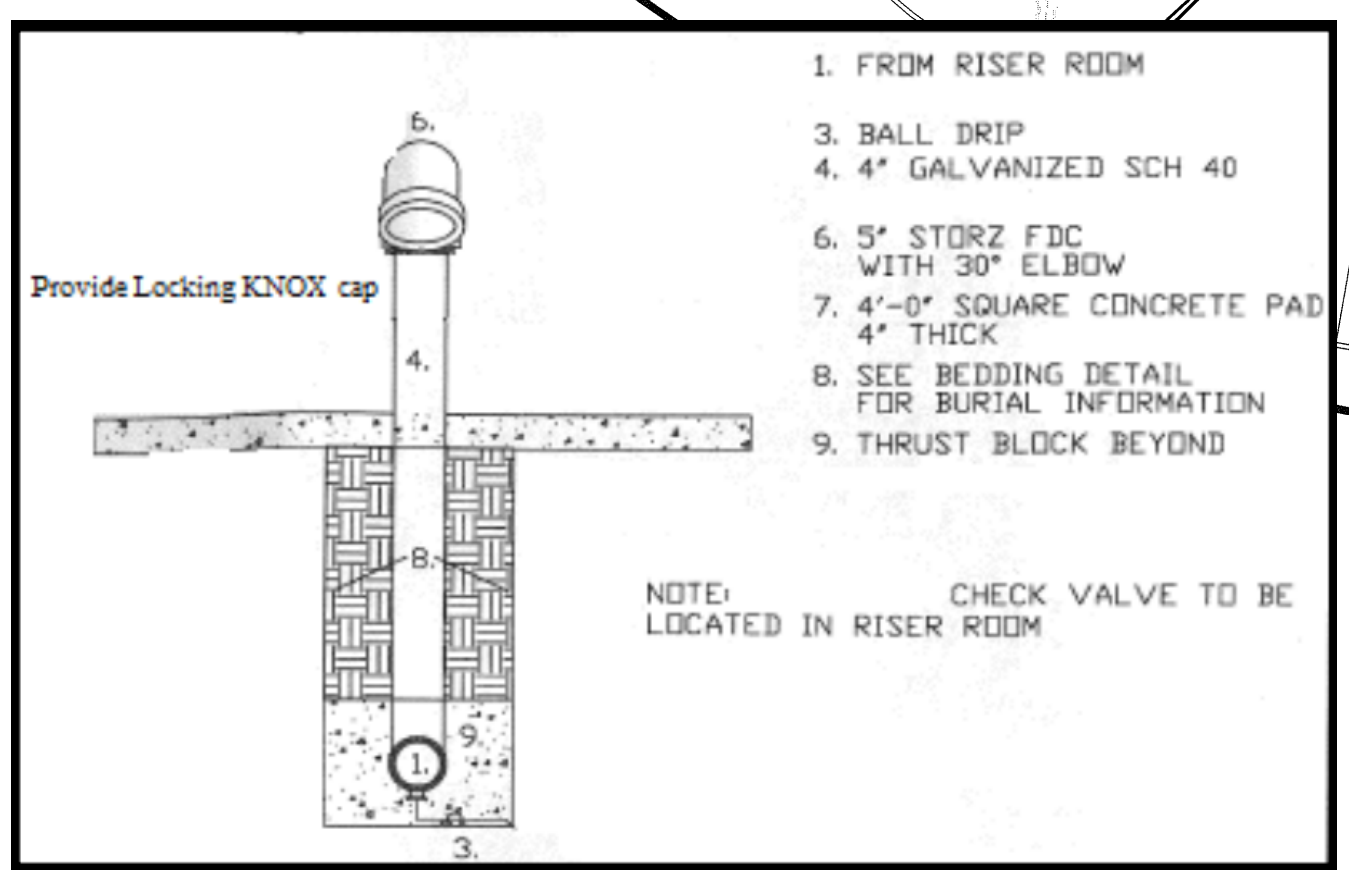
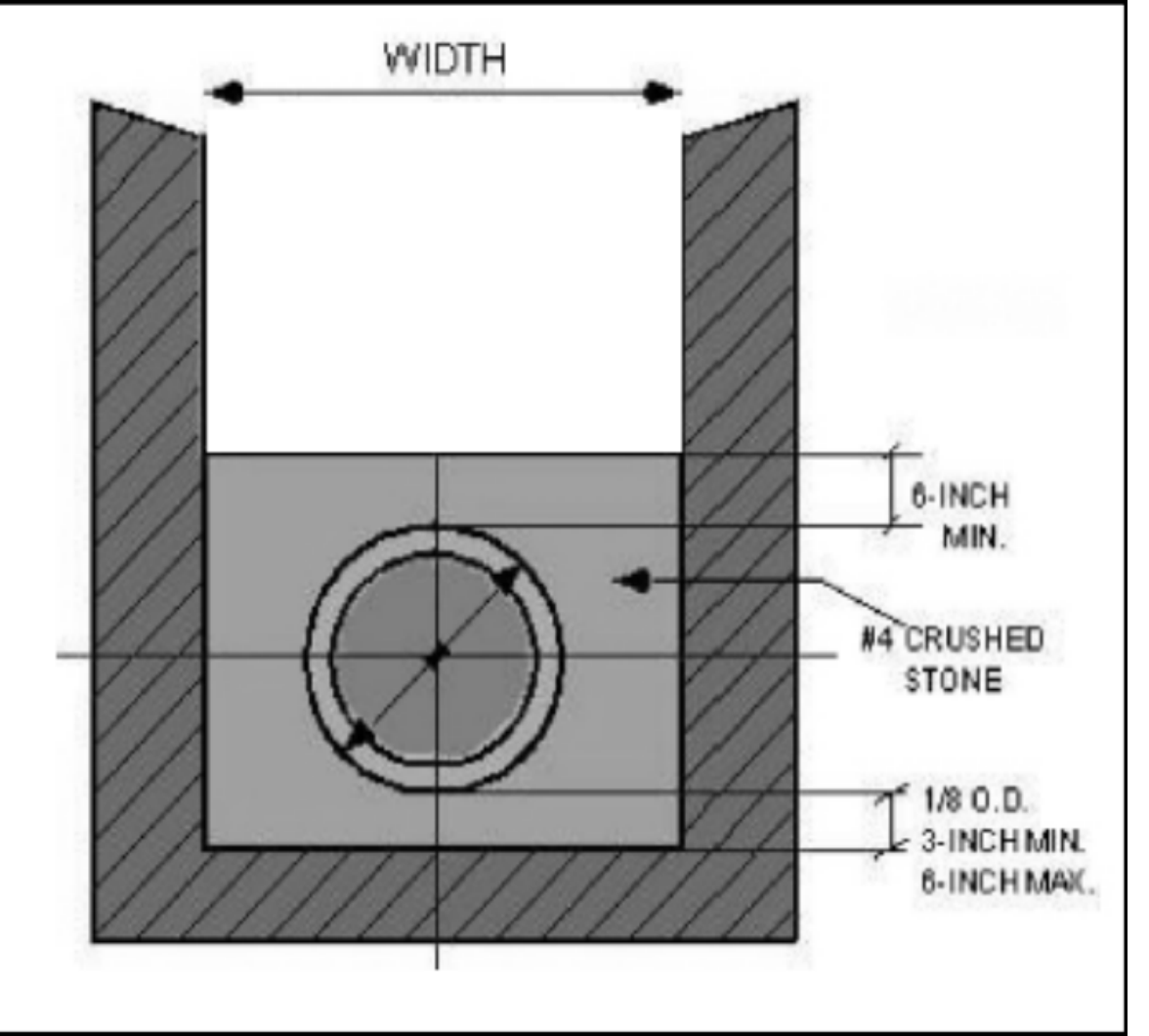
NOTE: ALL PRIVATE WATER & SEWER TO BE INSPECTED BY BUILDING & FIRE DEPARTMENT.

NOTE: FINAL DESIGN OF FDC EXTENSION FROM BUILDING TO REMOTE FDC WILL BE THE RESPONSIBILITY OF THE FIRE CONTRACTOR.

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.



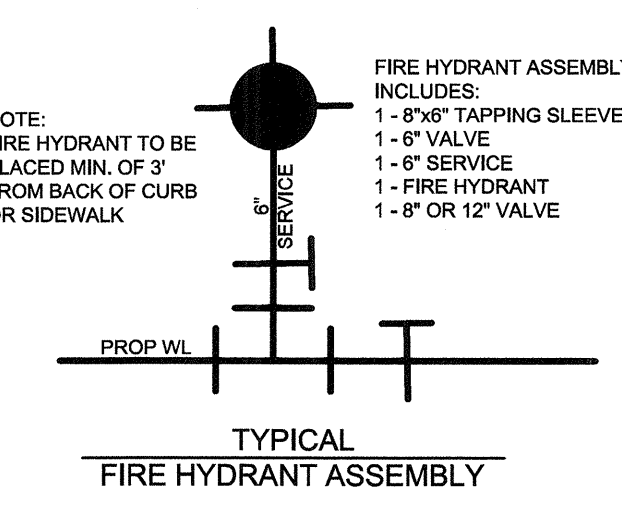
1 - 6" AMES SS RISER
 1 - 4" AMES SS RISER
 INSTALL 1' AFF.
 RISER TO BE NO MORE THAN 5' IN BUILDING



1. FROM RISER ROOM
3. BALL DRIP
4. 4" GALVANIZED SCH 40
6. 5" STORZ FDC WITH 30" ELBOW
7. 4'-0" SQUARE CONCRETE PAD 4" THICK
8. SEE BEDDING DETAIL FOR BURIAL INFORMATION
9. THRUST BLOCK BEYOND

NOTE: CHECK VALVE TO BE LOCATED IN RISER ROOM

- LEGEND**
- ◀ PROPOSED GATE VALVE
 - PROPOSED FIRE HYDRANT
 - PROPOSED SANITARY MANHOLE
 - PROPOSED STORM MANHOLE
 - PROPOSED STORM INLET



NOTE: FIRE HYDRANT TO BE PLACED MIN. OF 3' FROM BACK OF CURB OR SIDEWALK

REVISIONS			
REV NO.	DATE	DESCRIPTION	BY
1	2-2-16	ADDED FDC EXTENSION	BWC

BENCHMARKS & CONTROL POINTS

BM # 1: City of Rockwall Benchmark No. "Reset #1". An aluminum disc set at the Southwest corner of Summer Lee and FM 740, 1.5' west of the first driveway curb line.
 Elevation: 567.704

BM # 2: City of Rockwall Benchmark No. R014. An aluminum disc set at the Northeast corner of Henry M. Chandler Dr. and Commodore Plaza about 1.5' from back of curb and 3' South East of a light pole.
 Elevation: 561.017

Scale: 1" = 20'

Brown & Gay Engineers, Inc.
 F-1046

WATER & WASTEWATER PLAN
PATRIOT PAWS
254 RANCH TRAIL

CITY OF ROCKWALL, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER
BWC	KAT	FEB 2016		14

Depth of bury must be no less that 42 inches.
Provide 5" Storz Connection.
Provide 4'x4' Concrete pad for stabilization of FDC.
All fittings to be mechanical joint

BROWN & GAY ENGINEERS, INC. W:\01_Projects\2745-00\03_0400\01_Sheets\WP-Water_Wastewater.dwg Feb. 04, 2016 - 2:25pm summingh

PLAN
N.T.S.

SECTION X-X
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

TABLES OF DIMENSIONS AND QUANTITIES															
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)							
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1		
10,12	0.5	1.5	1.5	1.5	1.2	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	
16,18	0.6	1.5	1.5	1.5	1.6	16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.3	
20	0.7	1.5	1.5	1.5	1.8	20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.4	
24	0.9	1.5	1.5	1.5	2.1	24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.5	
30	2.9	1.5	1.9	2.6	3.0	36	4.5	1.5	2.3	3.3	4.2	5.0	1.8	2.6	3.8
42	5.5	2.0	3.0	4.3	4.8	48	5.5	2.0	3.4	5.3	60	6.5	2.5	3.8	5.3
54	6.0	2.3	3.4	4.8	6.0	60	6.5	2.5	3.8	5.3	66	6.8	2.8	4.1	5.7
60	6.5	2.5	3.4	5.3	6.0	72	7.5	3.0	4.5	6.3	78	7.5	3.3	4.9	6.7
72	7.5	3.0	4.5	6.3	7.8	84	8.0	3.5	5.3	7.2	90	8.5	3.8	5.6	7.7
84	8.0	3.5	4.9	6.7	8.4	96	9.0	4.0	6.0	8.2					

HORIZONTAL THRUST BLOCK AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 502.4

DATE: OCT. '04

STANDARD DRAWING NO.: 4010A

PLAN
N.T.S.

SECTION X-X
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

TABLES OF DIMENSIONS AND QUANTITIES															
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)							
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1		
10,12	0.5	1.5	1.5	1.5	1.2	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	
16,18	0.6	1.5	1.5	1.5	1.6	16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.3	
20	0.7	1.5	1.5	1.5	1.8	20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.4	
24	0.9	1.5	1.5	1.5	2.1	24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.5	
30	2.9	1.5	1.9	2.6	3.0	36	4.5	1.5	2.3	3.3	4.2	5.0	1.8	2.6	3.8
42	5.5	2.0	3.0	4.3	4.8	48	5.5	2.0	3.4	5.3	60	6.5	2.5	3.8	5.3
54	6.0	2.3	3.4	4.8	6.0	60	6.5	2.5	3.8	5.3	66	6.8	2.8	4.1	5.7
60	6.5	2.5	3.4	5.3	6.0	72	7.5	3.0	4.5	6.3	78	7.5	3.3	4.9	6.7
72	7.5	3.0	4.5	6.3	7.8	84	8.0	3.5	5.3	7.2	90	8.5	3.8	5.6	7.7
84	8.0	3.5	4.9	6.7	8.4	96	9.0	4.0	6.0	8.2					

HORIZONTAL THRUST BLOCK AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 502.4

DATE: OCT. '04

STANDARD DRAWING NO.: 4010B

PLAN
N.T.S.

SECTION X-X
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

TABLES OF DIMENSIONS AND QUANTITIES															
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)							
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1		
10,12	0.5	1.5	1.5	1.5	1.2	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	
16,18	0.6	1.5	1.5	1.5	1.6	16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.3	
20	0.7	1.5	1.5	1.5	1.8	20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.4	
24	0.9	1.5	1.5	1.5	2.1	24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.5	
30	2.9	1.5	1.9	2.6	3.0	36	4.5	1.5	2.3	3.3	4.2	5.0	1.8	2.6	3.8
42	5.5	2.0	3.0	4.3	4.8	48	5.5	2.0	3.4	5.3	60	6.5	2.5	3.8	5.3
54	6.0	2.3	3.4	4.8	6.0	60	6.5	2.5	3.8	5.3	66	6.8	2.8	4.1	5.7
60	6.5	2.5	3.4	5.3	6.0	72	7.5	3.0	4.5	6.3	78	7.5	3.3	4.9	6.7
72	7.5	3.0	4.5	6.3	7.8	84	8.0	3.5	5.3	7.2	90	8.5	3.8	5.6	7.7
84	8.0	3.5	4.9	6.7	8.4	96	9.0	4.0	6.0	8.2					

HORIZONTAL THRUST BLOCK AT TEES AND PLUGS

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 502.4

DATE: OCT. '04

STANDARD DRAWING NO.: 4020

ELEVATION "B-B"
N.T.S.

SECTION "A-A"
N.T.S.

REFER TO
STD. DWG. No. 4040
FOR GENERAL NOTES.

TABLES OF DIMENSIONS AND QUANTITIES															
I.D. (IN.)	G (FT.)	THRUST (TONS)	EARTH			ROCK			I.D. (IN.)	G (FT.)	THRUST (TONS)				
			A (FT.)	B (FT.)	VOL. (C.Y.)	A (FT.)	B (FT.)	VOL. (C.Y.)							
4,6,8	0.4	1.0	1.0	1.5	0.1	1.0	0.1	4,6,8	0.8	2.0	1.5	1.5	0.1		
10,12	0.5	1.5	1.5	1.5	1.2	10,12	1.1	4.4	2.0	2.5	0.3	1.5	1.5	0.1	
16,18	0.6	1.5	1.5	1.5	1.6	16,18	0.8	5.0	2.0	2.5	0.3	1.5	2.0	0.3	
20	0.7	1.5	1.5	1.5	1.8	20	0.9	6.2	2.0	3.5	0.4	1.5	3.0	0.4	
24	0.9	1.5	1.5	1.5	2.1	24	1.1	8.9	3.0	3.5	0.5	1.5	3.0	0.5	
30	2.9	1.5	1.9	2.6	3.0	36	4.5	1.5	2.3	3.3	4.2	5.0	1.8	2.6	3.8
42	5.5	2.0	3.0	4.3	4.8	48	5.5	2.0	3.4	5.3	60	6.5	2.5	3.8	5.3
54	6.0	2.3	3.4	4.8	6.0	60	6.5	2.5	3.8	5.3	66	6.8	2.8	4.1	5.7
60	6.5	2.5	3.4	5.3	6.0	72	7.5	3.0	4.5	6.3	78	7.5	3.3	4.9	6.7
72	7.5	3.0	4.5	6.3	7.8	84	8.0	3.5	5.3	7.2	90	8.5	3.8	5.6	7.7
84	8.0	3.5	4.9	6.7	8.4	96	9.0	4.0	6.0	8.2					

VERTICAL THRUST BLOCK AT PIPE BEND

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 502.4

DATE: OCT. '04

STANDARD DRAWING NO.: 4030

GENERAL NOTES FOR ALL THRUST BLOCKS:

- CONCRETE FOR BLOCKING SHALL BE CLASS "B".
- ALL CALCULATIONS ARE BASED ON INTERNAL PRESSURE OF 200 PSI FOR DUCTILE IRON, P.V.C., AND 150 PSI FOR CONCRETE PIPE.
- VOLUMES OF THRUST BLOCKS ARE NET VOLUMES OF CONCRETE TO BE FURNISHED. THE CORRESPONDING WEIGHT OF THE CONCRETE (CLASS "B") IS EQUAL TO OR GREATER THAN THE VERTICAL COMPONENT OF THE THRUST ON THE VERTICAL BEND.
- WALL THICKNESS (T) ASSUMED HERE FOR ESTIMATING PURPOSES ONLY.
- POUR CONCRETE FOR BLOCK AGAINST UNDISTURBED EARTH.
- DIMENSIONS MAY BE VARIED AS REQUIRED BY FIELD CONDITIONS WHERE AND AS DIRECTED BY THE ENGINEER. THE VOLUME OF CONCRETE BLOCKING SHALL NOT BE LESS THAN SHOWN HERE.
- THE SOIL BEARING PRESSURES ARE BASED ON 1000 LBS./S.F. IN SOIL AND 2000 LBS./S.F. IN ROCK.
- USE POLYETHYLENE WRAP OR EQUAL BETWEEN CONCRETE AND BEND, TEE, OR PLUG TO PREVENT THE CONCRETE FROM STICKING TO IT.
- CONCRETE SHALL NOT EXTEND BEYOND JOINTS.

THRUST BLOCK

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 502.4

DATE: OCT. '04

STANDARD DRAWING NO.: 4040

NOTE:
IN UNPAVED AREAS, INSTALL 2' x 2' x 8" CONCRETE VALVE PAD FLUSH WITH THE TOP OF VALVE BOX. REINFORCE WITH #3 BARS ON 6" CENTERS BOTH WAYS.

GATE VALVE BOX AND EXTENSION STEM
N.T.S.

DRAWING PERTAINS TO ALL GATE VALVE SIZES 4" THRU 12"

GATE VALVE 4" TO 12" BOX & EXTENSION STEM

North Central Texas Council of Governments

STANDARD SPECIFICATION REFERENCE: 502.6

DATE: OCT. '04

STANDARD DRAWING NO.: 4050

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY

BENCHMARKS & CONTROL POINTS

BM #1: City of Rockwall Benchmark No. *Reset #1*. An aluminum disc set at the Southwest corner of Summer Lee and FM 740, 1.5' west of the first driveway curb line.
Elevation: 567.704

BM #2: City of Rockwall Benchmark No. R014. An aluminum disc set at the Northeast corner of Henry M. Chandler Dr. and Commodore Plaza about 1.5' from back of curb and 3' South East of a light pole.
Elevation: 561.017

Scale: 1" = 20'

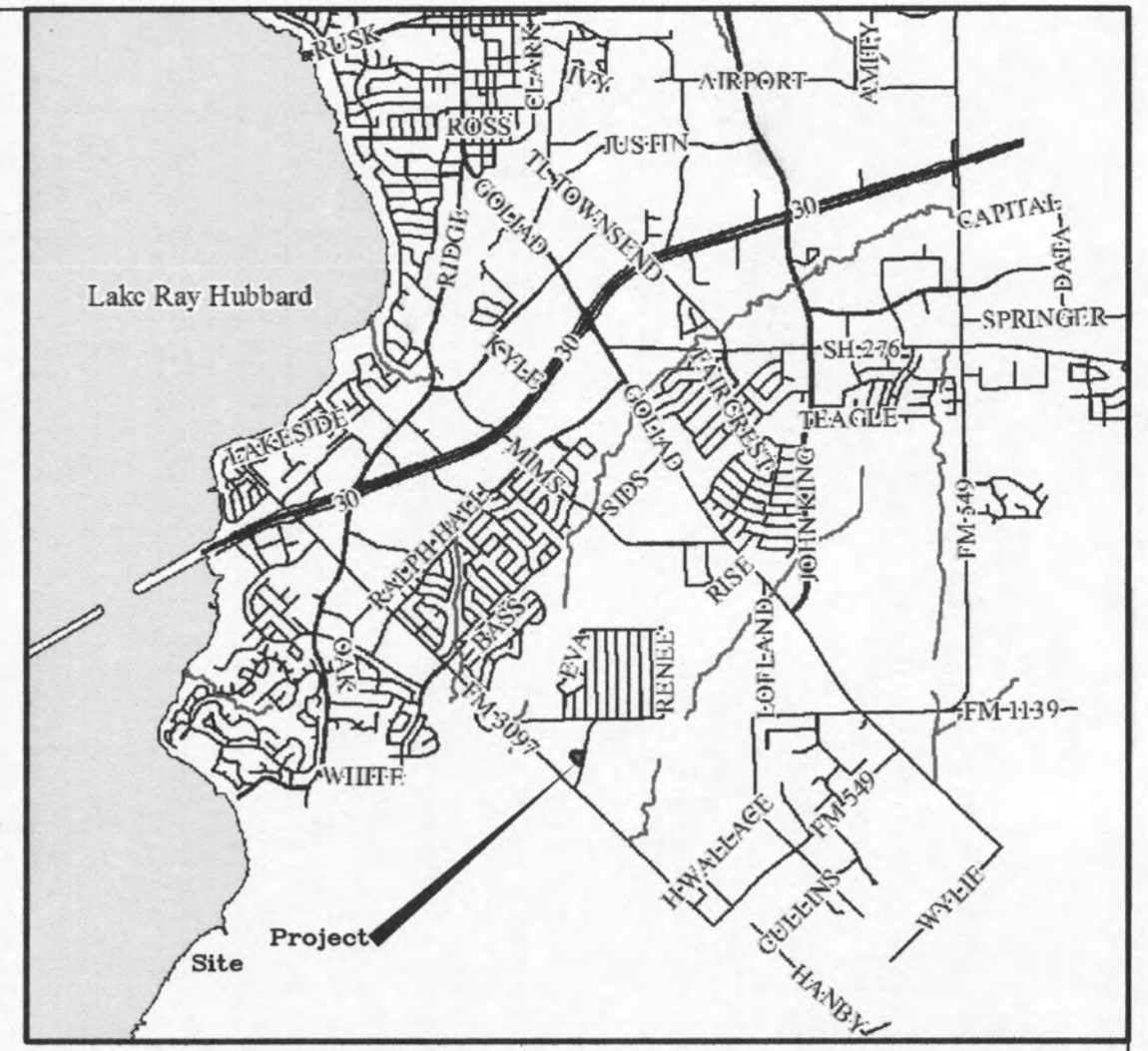
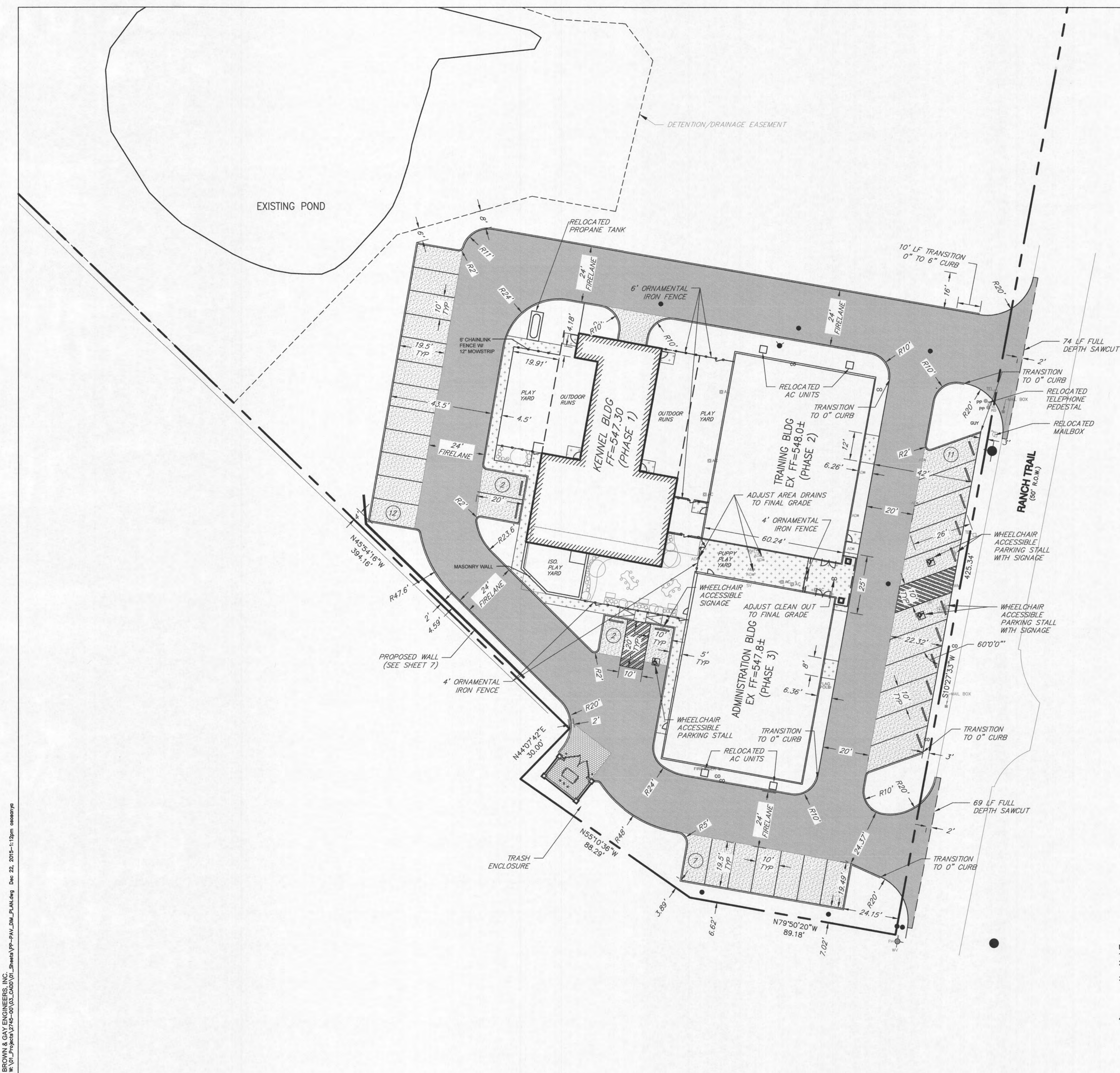
STATE OF TEXAS
BRETT W. CLUMMING
11855
LICENSED PROFESSIONAL ENGINEER

9-2-15
Brown & Gay Engineers, Inc.
F-1046

DETAILS - SHEET 01
PATRIOT PAWS
RANCH TRAIL
CITY OF ROCKWALL, TEXAS

DESIGN	DRAWN	DATE	FILE	NUMBER
BWC	KAT	SEPT 2015		13

BROWN & GAY ENGINEERS, INC.
1601 Project 2745-10303_Cadd/01_Sheets/VP-BETALS.dwg Sep 22, 2015 - 1:00pm Taylor



VICINITY MAP
MAPSCO PG. NO. 30C GRID 'R'



ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

LEGEND

- SANITARY SEWER MANHOLE
- STORM INLET
- ✕ WATER GATE VALVE
- BUILDING OVERHANG
- 4"-3600 P.S.I. CONCRETE PAVEMENT REINFORCED WITH #3 BARS @ 24" O.C.E.W. (SIDEWALK) (MIN. 6.5 SACK)
- 5"-3600 P.S.I. CONCRETE PAVEMENT REINFORCED WITH #3 BARS @ 24" O.C.E.W. (PARKING AREAS) (MIN. 6.5 SACK)
- 6"-3600 P.S.I. CONCRETE PAVEMENT REINFORCED WITH #3 BARS @ 18" O.C.E.W. (FIRE LANE) (MIN. 6.5 SACK)
- 7"-3600 P.S.I. CONCRETE PAVEMENT REINFORCED WITH #3 BARS @ 18" O.C.E.W. (DUMPSTER PAD ENCLOSURE/LOADING AREA). (MIN. 6.5 SACK)

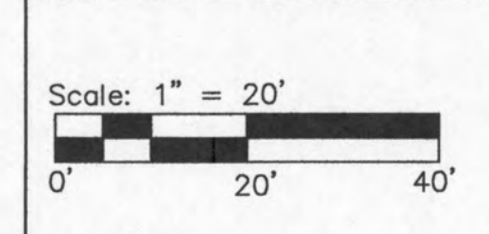
- NOTES:
- ALL DIMENSIONS ARE TO FRONT OF CURB WHERE APPLICABLE
 - REFER TO ARCHITECTURAL PLANS FOR ALL FOUNDATION AND BUILDING DIMENSIONS.
 - GRADES IN ACCESSIBILITY ROUTING INCLUDING CROSSING DRIVEWAYS, SHALL CONFORM TO ADA STANDARDS, NOT TO EXCEED 5.0% ALONG TRAVEL PATH WITH NO MORE THAN 2.0% CROSS FALL. ACCESSIBLE PARKING STALLS SHALL HAVE A MAXIMUM CROSS FALL OF LESS THAN 2.0% IN EVERY DIRECTION. ALL SUBGRADE TO BE 6" LIME STABILIZED (27 LBS/S.Y.) COMPACTED TO 95% STANDARD PROCTOR DENSITY AND TO 2 PERCENTAGE POINTS ABOVE OPTIMUM MOISTURE CONTENT. REFER TO FINAL GEOTECHNICAL RECOMMENDATION AND CITY OF ROCKWALL STANDARD DETAILS & SPECIFICATIONS PRIOR TO CONSTRUCTION. NO SAND ALLOWED UNDER PAVING.

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY

BENCHMARKS & CONTROL POINTS

BM # 1: City of Rockwall Benchmark No. "Reset #1". An aluminum disc set at the Southwest corner of Summer Lee and FM 740, 1.5' west of the first driveway curb line.
Elevation: 567.704

BM # 2: City of Rockwall Benchmark No. R014. An aluminum disc set at the Northeast corner of Henry M. Chandler Dr. and Commodore Plaza about 1.5' from back of curb and 3' South East of a light pole.
Elevation: 561.017



PAVING/DIMENSIONAL PLAN					
PATRIOT PAWS					
RANCH TRAIL					
CITY OF ROCKWALL, TEXAS					
DESIGN	DRAWN	DATE	FILE	NUMBER	
BWC	KAT	DEC 2015			6

GENERAL NOTES

- THESE NOTES APPLY TO ALL SHEETS IN THIS PLAN SET.
- CONTRACTOR IS RESPONSIBLE FOR, AND MUST OBTAIN PRIOR TO CONSTRUCTION, ALL NECESSARY CONSTRUCTION PERMITS REQUIRED BY THE LOCAL MUNICIPALITY. CONTRACTOR MUST HAVE A COPY OF THE LOCAL MUNICIPALITY'S STANDARD CONSTRUCTION DETAILS ON SITE.
- EXISTING UTILITY LOCATIONS SHOWN ARE TAKEN FROM AVAILABLE RECORDS PROVIDED BY THE UTILITY OWNER AND FIELD LOCATIONS OF SURFACE APPURTENANCES. LOCATIONS SHOWN ARE GENERALLY SCHEMATIC IN NATURE AND MAY NOT ACCURATELY REFLECT THE SIZE AND LOCATION OF EACH PARTICULAR UTILITY. SOME UTILITY LINES MAY NOT BE SHOWN. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ACTUAL FIELD LOCATION AND PROTECTION OF EXISTING FACILITIES WHETHER SHOWN OR NOT. CONTRACTOR SHALL ALSO ASSUME RESPONSIBILITY FOR REPAIRS TO EXISTING FACILITIES, WHETHER SHOWN OR NOT, DAMAGED BY CONTRACTOR'S ACTIVITIES. DIFFERENCES IN HORIZONTAL OR VERTICAL LOCATION OF EXISTING UTILITIES SHALL NOT BE A BASIS FOR ADDITIONAL EXPENSE.
- ANY CONTRACTOR / SUBCONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATIONS. SAID EXISTING IMPROVEMENTS SHALL INCLUDE BUT NOT BE LIMITED TO BERMS, DITCHES, FENCES, AND PLANTS. ANY REMOVAL OR DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPLACED OR REPAIRED BY THE CONTRACTOR AT HIS EXPENSE AND SHALL BE APPROVED BY THE CITY OF ROCKWALL.
- THE CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL USE SILT FENCES (OR OTHER METHODS APPROVED BY THE ENGINEER AND CITY) AS REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, OR LOCAL EROSION CONSERVATION, AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS OR OTHER GROWTH TO PREVENT EROSION. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING PERMITS AND APPROVALS BEFORE CONSTRUCTION BEGINS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN NEAT AND ACCURATE CONSTRUCTION RECORD PLANS. A COPY OF THESE RECORD PLANS ARE TO BE SUBMITTED TO THE ENGINEER UPON COMPLETION OF CONSTRUCTION.
- CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS SHOWN ON THE PLANS AND ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION.
- SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE CONSTRUCTION.
- CONTRACTOR TO DISPOSE OF ALL EXCESS EXCAVATION MATERIALS AS DIRECTED BY THE OWNER AND NOT WITHIN CITY LIMITS.
- THE CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING WATER, OR BY OTHER MEANS APPROVED BY THE CITY AND ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
- ALL EXCAVATING IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF SITE BY THE CONTRACTOR AT HIS EXPENSE.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY ENGINEERING AND SURVEYING FOR LINE AND GRADE CONTROL POINTS RELATED TO EARTHWORK.
- THE CONTRACTOR SHALL SALVAGE AND PROTECT ALL EXISTING POWER POLES, SIGNS, MANHOLES, TELEPHONE RISERS, WATER VALVES, ETC. DURING ALL CONSTRUCTION PHASES.
- BACKFILL SHALL BE FREE FLOWING, FREE OF ROCKS AND LARGE CLODS. BACKFILL SHALL BE PLACED IN 6 TO 9 INCH LIFTS AT OR ABOVE OPTIMUM MOISTURE AND MECHANICALLY COMPACTED TO 95 PERCENT STANDARD PROCTOR FOR ALL UTILITIES.
- ALL PROPOSED GRADING WHERE ANY BUILDINGS MAY POTENTIALLY BE CONSTRUCTED SHALL BE AT OR ABOVE OPTIMUM MOISTURE AND MECHANICALLY COMPACTED TO 95 PERCENT STANDARD PROCTOR. ALL OTHER GRADING SHALL BE AT OR ABOVE OPTIMUM MOISTURE AND MECHANICALLY COMPACTED TO 95 PERCENT STANDARD PROCTOR. CONTRACTOR WILL HAVE TO COORDINATE WITH THE UTILITY COMPANIES FOR ANY REQUIRED UTILITY ADJUSTMENTS AND / OR RELOCATIONS. ALL FILL TO BE COMPACTED USING A SHEEPSFOOT ROLLER.
- EROSION CONTROL DEVICES AS SHOWN ON THE GRADING AND EROSION CONTROL PLANS FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBING ACTIVITIES ON THE PROJECT.
- ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY OF ROCKWALL.
- IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL BE REQUIRED TO BE REVISED AND / OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON-SITE.
- IF OFF-SITE BORROW OR SPOILS SITES ARE USED IN CONJUNCTION WITH THIS PROJECT, THIS INFORMATION SHALL BE DISCLOSED AND SHOWN ON THE EROSION CONTROL PLAN. OFFSITE BORROW AND SPOILS AREAS ARE CONSIDERED PART OF THE PROJECT SITE AND THEREFORE SHALL COMPLY WITH THE CITY OF ROCKWALL EROSION CONTROL REQUIREMENTS. THESE AREAS SHALL BE STABILIZED WITH PERMANENT GROUND COVER PRIOR TO FINAL APPROVAL OF THE PROJECT.
- THE CONTRACTOR SHALL ABIDE BY ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS GOVERNING EXCAVATION. THE CONTRACTOR SHALL PROVIDE DETAILED PLANS AND SPECIFICATIONS FOR TRENCH SAFETY SYSTEMS THAT COMPLY WITH APPLICABLE LAWS GOVERNING EXCAVATION. THESE PLANS SHALL BE SEALED BY AN ENGINEER EXPERIENCED IN THE DESIGN OF TRENCH SAFETY SYSTEMS AND LICENSED BY THE STATE OF TEXAS. SUBMIT PLAN TO THE OWNER PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL ASPECTS OF WORK RELATED TO EXCAVATION.
- THE CONTRACTOR SHALL COORDINATE OPERATION OF ALL EXISTING VALVES WITH THE CITY OF ROCKWALL. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE TRENCH SAFETY DURING ALL PHASES OF CONSTRUCTION.
- THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS SHOWN INCLUDING THE HORIZONTAL AND VERTICAL LOCATION OF GRATE INLETS AND ALL UTILITIES CROSSING THE STORM SEWER.
- THE SITE UTILITY CONTRACTOR SHALL PROVIDE ALL MATERIALS AND APPURTENANCES NECESSARY FOR COMPLETE INSTALLATION OF THE STORM SEWER. THE CITY OF ROCKWALL SHALL INSPECT ALL PUBLIC IMPROVEMENTS.
- THE CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES. AS AN ALTERNATE, THE OWNER RESERVES THE RIGHT TO PAY THE INSPECTION FEES DIRECTLY TO THE CITY. CONSTRUCTION STAKING TO BE PROVIDED BY THE CONTRACTOR, UNLESS OTHERWISE AGREED TO BY THE OWNER.
- THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGN OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR IS ITS EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM THAT MAY NOW OR HEREAFTER BE INCORPORATED IN THESE PLANS.
- SEEDING SHALL BE BROADCAST SEEDING IN ACCORDANCE WITH NCTCOG SPECIFICATIONS ITEM 3.10 "SEEDING".
- FERTILIZER SHALL BE IN ACCORDANCE WITH NCTCOG SPECIFICATIONS ITEM 3.11 "FERTILIZER".
- WATER, SEWER, & DUCT BANK WILL HAVE DETECTOR TAPE INSTALLED BETWEEN EMBEDMENT AND NATIVE BACKFILL.
- THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE, AND MATERIAL OF ALL UTILITIES AFFECTED BY CONSTRUCTION PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL AFFECTED UTILITIES 48 HOURS PRIOR TO CONSTRUCTION. DIG TESS 1-800-344-8377. FOR WATER AND SANITARY SEWER CALL CITY OF ROCKWALL SERVICE CENTER 972-771-7730.
- CONTRACTOR SHALL LOCATE AND ADJUST EXISTING UTILITY MANHOLE LIDS, CLEANOUTS, WATER VALVES AND OTHER SURFACE APPURTENANCES AS REQUIRED FOR NEW CONSTRUCTION. CONTRACTOR SHALL COORDINATE UTILITY ADJUSTMENTS WITH OTHER DISCIPLINES AND THE APPROPRIATE UTILITY AGENCIES AND PROVIDE FOR ALL FEES FOR PERMITS, CONNECTIONS, INSPECTIONS, ETC. THESE ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION CONTRACT.
- THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY MONUMENTATION AND PRIMARY CONTROL. ANY SUCH POINTS WHICH THE CONTRACTOR BELIEVES WILL BE DESTROYED SHALL HAVE OFFSET POINTS ESTABLISHED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY MONUMENTATION DESTROYED BY THE CONTRACTOR SHALL BE REESTABLISHED AT HIS EXPENSE.
- BARRICADING AND TRAFFIC CONTROL DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM TO THE LATEST EDITION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", PART VI IN PARTICULAR. TRAFFIC FLOW AND ACCESS SHALL BE MAINTAINED DURING ALL PHASES OF THE CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC SAFETY MEASURES FOR WORK ON PROJECT.
- ONSITE PLANIMETRIC AND TOPOGRAPHIC MAPPING TAKEN FROM DATA PROVIDED BY GIA CONSULTANTS CONFIRMED BY BROWN AND GAY ENGINEERS IN JULY 2014.
- ANY DAMAGES THAT MAY OCCUR TO REAL PROPERTY OR EXISTING IMPROVEMENTS SHALL BE RESTORED BY THE CONTRACTOR TO AT LEAST THE SAME CONDITION THAT THE REAL PROPERTY OR EXISTING IMPROVEMENTS WERE IN PRIOR TO THE DAMAGES. THIS RESTORATION SHALL BE SUBJECT TO THE OWNER'S APPROVAL; HOWEVER, THIS RESTORATION SHALL NOT BE A BASIS FOR ADDITIONAL COMPENSATION TO THE CONTRACTOR. RESTORATION SHALL INCLUDE, BUT NOT BE LIMITED TO, REGRASSING, REVEGETATION, REPLACING FENCES, REPLACING TREES, ETC.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO:
 - PREVENT ANY DAMAGE TO PRIVATE PROPERTY AND PROPERTY OWNER'S POLES, FENCES, SHRUBS, ETC.
 - PROVIDE ACCESS TO ALL DRIVES DURING CONSTRUCTION.
 - PROTECT ALL UNDERGROUND UTILITIES TO REMAIN IN SERVICE.
 - NOTIFY ALL UTILITY COMPANIES AND VERIFY LOCATION OF ALL UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL MAINTAIN UTILITY SERVICES AT ALL TIMES DURING CONSTRUCTION.
- THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SIDEWALKS ADJACENT TO THE PROJECT FREE OF MUD AND DEBRIS FROM THE CONSTRUCTION.
- THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIAL FROM THE PROJECT AREA UNLESS INSTRUCTED DIFFERENTLY BY OWNER OR ENGINEER. THIS WORK SHALL BE SUBSIDIARY TO THE CONTRACT AND IS NOT A SEPARATE PAY ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, INSPECTION, AND TESTING AS REQUIRED BY THE OWNER AND/OR THE LOCAL MUNICIPALITY.
- ALL WORK IN THE CITY RIGHT-OF-WAY, PROPERTY AND EASEMENTS SHALL BE CONSIDERED PUBLIC. ALL OTHER WORK SHALL BE CONSIDERED PRIVATE.
- ALL EXISTING UTILITIES SHALL BE ADJUSTED TO APPROVED GRADE.

WATER NOTES:

- CONTRACTOR SHALL OBTAIN A COPIE(S) OF THE CITY OF ROCKWALL ENGINEERING STANDARDS OF DESIGN AND CONSTRUCTION PRIOR TO CONSTRUCTION AND NCTCOG 3rd EDITION.
- ALL WATER LINES, FITTINGS, AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKWALL ENGINEERING STANDARDS OF DESIGN AND CONSTRUCTION. ALL WATER SERVICE CONNECTIONS TO BE FORD COMPRESSION FITTINGS. ALL BENDS TO HAVE RETAINER FITTINGS (MEGA-LUG). USE DOMESTIC DUCTILE IRON FITTINGS ONLY.
- ALL FIRE HYDRANTS SHALL HAVE ONE (1) HYDRA-STORZ CONNECTION AND TWO (2) 2.5" HOSE NOZZLES, SHALL HAVE A MINIMUM MAIN BARREL VALVE OPENING OF 5.25", AND SHALL BE PLACED ON MAINS OF NOT LESS THAN 6" IN DIAMETER. ALL FIRE HYDRANTS ARE TO BE PAINTED PER ARTICLE IV, SECTION 2.H.5 OF THE CITY OF ROCKWALL ENGINEERING STANDARDS AND AGREED TO BY THE CITY.
- UTILITY CONTRACTOR SHALL PLACE APPROPRIATE LOCATION MARKS ON THE CURBS PER THE CITY OF ROCKWALL ENGINEERING STANDARDS.
- ALL WATER MAINS SHALL BE PVC AWWA-C900, DR14, CLASS 200 UNLESS NOTED OTHERWISE.
- TOP OF WATER MAIN SHALL BE A MINIMUM OF 48" BELOW THE TOP OF CURB OR 48" BELOW FINISHED GRADE. METALLIC DETECTOR TAPE WILL BE USED. VALVES TO BE EXTENDED TO WITHIN 1' OF GROUND IF MORE THAN 48".
- FIRE HYDRANTS SHALL BE LOCATED 3' BEHIND THE BACK OF CURB (MIN).
- CONTRACTOR SHALL CLEAN THE WATER MAIN BY INSERTION OF "POLY PIGS" AT DESIGNATED LOCATIONS. COST FOR "POLY PIG" CLEANING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL DOMESTIC WATER SERVICES SHALL BE 2" CLASS 200 POLYETHYLENE.
- CORPORATION STOPS SHALL BE FULL OPEN PRIOR TO BACKFILL.
- CURB STOPS SHALL BE TESTED FOR FULL FLOW WHEN THE SYSTEM IS PRESSURE TESTED.
- METER BOXES SHALL BE FURNISHED BY THE CONTRACTOR AND LOCATED 3' BEHIND THE CURB OR AT RIGHT-OF-WAY.
- WATER MAINS TO BE LOCATED PER THE PLANS.
- METER BOXES SHALL BE ADJUSTED TO FINISH GRADE AFTER PAVING CONTRACTOR COMPLETES THE BACKFILL OF CURB.
- EXTEND SAMPLING POINT 2' ABOVE EXISTING GRADE AND END WITH A 1" CURB STOP. SAMPLING POINTS WILL BE DETERMINED BY THE CONSTRUCTION INSPECTOR.
- PIPE SHALL BE TESTED AT 180 PSI FOR FOUR (4) HOURS.
- CHLORINATE WATER LINES AT 500 PPM FOR FORTY-EIGHT (MIN. 24) HOURS. CHLORINATION IS ACCEPTABLE DURING THE PRESSURE TEST.
- FLUSHING AND CHLORINATION SHALL BE COORDINATED WITH THE CONSTRUCTION INSPECTOR.
- ALL TAPS ON EXISTING MAINS SHALL BE WET TAPS. NO SIZE-ON-SIZE TAPS ALLOWED.
- EXISTING VALVES SHALL BE OPERATED BY CITY PERSONNEL ONLY. ONCE THE NEW WATER LINE IS ACTIVATED AND PASSES BACTERIOLOGICAL TESTING, THE VALVES MAY BE OPERATED BY CITY PERSONNEL ONLY.
- INSTALL BLUE EMS DISK ON THE WATER LINE EVERY 250', CHANGE IN DIRECTION, VALVE, AND SERVICE.

SANITARY SEWER NOTES:

- CONTRACTOR SHALL PURCHASE A COPY OF THE CITY OF ROCKWALL ENGINEERING STANDARDS OF DESIGN AND CONSTRUCTION.
- ALL SANITARY SEWER LINES, FITTINGS, AND APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKWALL ENGINEERING STANDARDS, LATEST EDITION AND NCTCOG 3rd EDITION.
- THE SANITARY SEWER SERVICE LINE SHALL BE EXTENDED A MINIMUM OF 2 FEET PAST THE PROPERTY LINE.
- SERVICE LINES SHALL BE 4" PVC AND SHALL BE PLUGGED AND PRESSURE TESTED WITH THE MAIN LINE.
- SERVICE LINES ARE TO BE LOCATED AT THE DOWNHILL SIDE OF THE LOT.
- THE TOP OF SEWER PIPE SHALL BE A MINIMUM OF 48" BELOW FINISHED GRADE.
- THE CONTRACTOR IS REQUIRED TO PULL A MANDREL THROUGH SEWER PIPE.
- A TV INSPECTION OF THE SANITARY SEWER LINES IS REQUIRED.
- THE SEWER PIPE WILL BE PRESSURE TESTED IN ACCORDANCE WITH TNRC LOW PRESSURE AIR TEST (SECTION 317.2 (a)(4)(B)). REFER TO MANHOLE DETAIL FOR ADDITIONAL TESTING REQUIREMENTS.
- ENGINEERED CASING IS REQUIRED WHEN CROSSING STREETS LARGER THAN COLLECTORS.
- NO SERVICES ALLOWED ON CLEANOUT STACK.
- ELIMINATE DISCHARGE INTO THE EXISTING SEWER SYSTEM BY PLUGGING LINE AT CONNECTION. THE CONTRACTOR WILL BE BILLED FOR THE DISCHARGE DURING CONSTRUCTION.
- UTILITY CONTRACTOR SHALL PLACE APPROPRIATE LOCATION MARKS ON THE CURBS PER THE CITY OF ROCKWALL ENGINEERING STANDARDS OF DESIGN AND CONSTRUCTION.
- PIPE MATERIAL FOR WASTE WATER LINES SHALL CONFORM TO THE NOTES SHOWN ON THIS DRAWING AND TO THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS. SANITARY SEWER LINE SHALL BE SDR-35 PVC IF DEPTH OF LINE IS 10' OR LESS AND SDR-26 IF DEPTH OF LINE IS GREATER THAN 10'. EMBED SEWER PIPE IN ACCORDANCE WITH LOCAL MUNICIPALITY DESIGN STANDARDS.
- WATER AND WASTEWATER LINES SHALL BE LOCATED A MINIMUM OF 9' APART (CLEAR DISTANCE). WHEN SEPARATION CANNOT BE MAINTAINED, SANITARY SEWER SHALL EITHER BE ENCASED IN CONCRETE OR UPGRADED TO PRESSURE PIPE (MIN. SDR 26).
- INSTALL GREEN EMS DISK ON THE SEWER LINE EVERY 250', MANHOLE, CLEANOUT, AND SERVICE.

STORM DRAIN NOTES:

- ALL CULVERT HEADWALLS AND INLETS TO HAVE STONE CLADDING.
 - NO PRECAST CURB INLETS.
 - ALL MATERIALS AND WORKMANSHIP FOR STORM DRAIN CONSTRUCTION SHALL CONFORM TO THE NCTCOG STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 3rd EDITION, AND THE LOCAL MUNICIPALITY REQUIREMENTS.
 - CONTRACTOR SHALL MAINTAIN DRAINAGE AT ALL TIMES DURING CONSTRUCTION. PONDING OF WATER WILL NOT BE ALLOWED.
 - STORM PIPE SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) 18" AND ABOVE IN DIAMETER AND SDR-35 POLYVINYL CHLORIDE (PVC)(PRIVATE ONLY) PIPE OR HIGH DENSITY POLYETHYLENE (HDPE)(PRIVATE ONLY) BELOW 18" IN DIAMETER.
- GRADING NOTES:**
- THE CONTRACTOR SHALL ADMINISTER SPRINKLERS FOR DUST CONTROL, EARTHWORK OR BASE CONSTRUCTION AS REQUIRED OR AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH THE LOCAL MUNICIPALITY STANDARDS.
 - FILL MATERIAL SHALL BE COMPACTED BETWEEN 95 AND 98 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST, ASTM D 698. IN CONJUNCTION WITH THE COMPACTING OPERATION, FILL MATERIAL SHALL BE BROUGHT TO A MOISTURE CONTENT RANGING FROM +2 PERCENT POINTS ABOVE OPTIMUM TO +6 PERCENTAGE POINTS ABOVE OPTIMUM +2 TO +6. COMPACTED USING A SHEEPSFOOT ROLLER.
 - ALL DETENTION SYSTEMS TO BE INSTALLED AND FULLY FUNCTIONING PRIOR TO ANY PAVING/CONCRETE BEING INSTALLED. SIDES AND BOTTOM OF THE DETENTION TO HAVE ANCHORED SEEDED CURLEX OR SOD INSTALLED PRIOR TO ANY PAVING/CONCRETE BEING INSTALLED. SILT FENCE TO BE INSTALLED AT THE TOP OF THE BANK AFTER POND INSTALLATION.
 - 75% - 80% OF ALL DISTURBED AREAS TO HAVE 1" MINIMUM STAND OF GRASS PRIOR TO CITY ACCEPTANCE AND/OR CO.

PAVING NOTES:

- CONTRACTOR'S WORK SHALL INCLUDE PAVEMENT REMOVAL AND DISPOSAL REQUIRED FOR NEW WALK, DRIVE, CURB, GUTTER AND OTHER PAVING FEATURES. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION, INSPECTION AND TESTING REQUIRED BY THE OWNER AND/OR THE LOCAL MUNICIPALITY.
- PAVING SECTIONS SHALL BE SAWCUT IN 15' X 15' SQUARES.
- PAVEMENT REMOVAL AND REPAIR SHALL CONFORM TO THE LOCAL MUNICIPALITY REQUIREMENTS. CONTRACTOR SHALL MAKE AN EFFORT TO PROJECT CONCRETE AND/OR ASPHALT EDGES.
- CONCRETE PAVING JOINTS SHALL BE CONSTRUCTED AS RECOMMENDED IN THE GEOTECHNICAL REPORT/NOTED BELOW.
- SITE PAVING AND PAVEMENT SUBGRADE SHALL BE PREPARED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT NO. W141078 PREPARED BY ALPHA TESTING AND DATED JULY 18, 2014.

ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.

REVISIONS			
REV. NO.	DATE	DESCRIPTION	BY

BENCHMARKS & CONTROL POINTS

BM # 1: City of Rockwall Benchmark No. "Reset #1". An aluminum disc set at the Southwest corner of Summer Lee and FM 740, 1.5' west of the first driveway curb line.

Elevation: 567.704

BM # 2: City of Rockwall Benchmark No. R014. An aluminum disc set at the Northeast corner of Henry M. Chandler Dr. and Commodore Plaza about 1.5' from back of curb and 3' South East of a light pole.

Elevation: 561.017



Brown & Gay Engineers, Inc. F-1046

GENERAL NOTES
PATRIOT PAWS
RANCH TRAIL

CITY OF ROCKWALL, TEXAS					
DESIGN	DRAWN	DATE	FILE	NUMBER	
BWC	KAT	DEC 2015			4