FOR IDENTIFICATION OF CONTRACTUAL AGREEMENTS, THIS SET OF DRAWINGS IS DATED 10/19/2007. ANY REVISIONS THEREAFTER WILL BE NOTED AND DATED ON THE AFFECTED DRAWING(S).

- THE CONTRACTOR SHALL OBTAIN FROM THE OWNER COPIES OF ALL AVAILABLE REGULATORY AGENCY PERMITS AND LOCAL AGENCY PERMITS. THE CONTRACTOR SHALL ABIDE BY ALL TEXAS COMMISSION ON ENVIRONMENTAL QUALITY REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL ON STORMWATER DISCHARGE FROM CONSTRUCTION SITES UNDER THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY PROGRAM. THE CONTRACTOR IS RESPONSIBLE FOR PREPARING AND SUBMITTING TEXAS COMMISSION ON ENVIRONMENTAL QUALITY "NOTICE OF INTENT" (N.O.I.) AND "NOTICE OF TERMINATION" (N.O.T.) NOTICES TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY. THE CONTRACTOR SHALL KEEP ONSITE A COPY OF THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND PERMITS ISSUED TOGETHER WITH THE INSPECTION REPORTS AND CURRENT PLANS, INCLUDING ANY MODIFICATIONS
- 2. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION SHALL BE PROVIDED TO THE CONTRACTOR BY THE OWNER OR OWNER'S SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY
- 3. THE CONTRACTOR SHALL SUBMIT (6) COPIES OF SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING THE MATERIALS REQUIRED FOR CONSTRUCTION. PRIOR TO SUBMISSION, THE CONTRACTOR SHALL THOROUGHLY CHECK SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES FOR COMPLETENESS AND FOR COMPLIANCE WITH THE CONSTRUCTION PLANS AND SHALL VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND SHALL COORDINATE THE SHOP DRAWINGS WITH THE REQUIREMENTS FOR OTHER RELATED WORK. THE CONTRACTOR'S RESPONSIBILITY FOR ERRORS AND OMISSIONS IN SUBMITTALS IS NOT RELIEVED BY THE ENGINEER'S REVIEW OF SUBMITTALS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER, IN WRITING AT THE TIME OF SUBMISSION, OF DEVIATIONS IN SUBMITTALS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 4. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE UTILITY LOCATOR AT 1-800-DIG-TESS AND TO NOTIFY THE VARIOUS UTILITIES, AND TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION OF THESE LITHLITIES WITH THE OWNER OF THE LITHLITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ANY UTILITIES, WHETHER SHOWN ON THESE PLANS OR NOT, THAT INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE CLOSELY COORDINATED WITH THE ENGINEER AND THE RESPECTIVE UTILITY COMPANY FOR RELOCATION OR PROPER INSTRUCTION.
- . PROTECT BENCHMARKS, PROPERTY CORNERS, AND OTHER SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. IF MARKER NEEDS TO BE REMOVED IT SHALL BE REFERENCED BY A LICENSED LAND SURVEYOR AND REPLACED, AS NECESSARY, BY SAME.
- 6. IN ADDITION TO QUALITY CONTROL TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REQUIRED TESTING OR APPROVALS FOR ANY WORK (OR ANY PART THEREOF) IF LAWS OR REGULATIONS OF ANY PUBLIC BODY HAVING JURISDICTION SPECIFICALLY REQUIRE TESTING, INSPECTIONS OR APPROVAL. THE CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION THEREWITH AND SHALL FURNISH THE OWNER AND ENGINEER THE REQUIRED CERTIFICATES OF INSPECTION, TESTING OR APPROVAL.
- . TESTING RESULTS SHALL BE PROVIDED TO THE OWNER/OPERATOR AND THE ENGINEER. ALL TEST RESULTS SHALL BE PROVIDED (PASSING AND FAILING) ON A REGULAR AND IMMEDIATE BASIS.
- 3. AS-BUILTS SHALL BE PROVIDED BY THE CONTRACTOR TO THE ENGINEER THREE WEEKS PRIOR TO FINAL INSPECTION. ALL AS-BUILT DATA SHALL BE PROVIDED BY A TEXAS LICENSED SURVEYOR, SIGNED, SEALED AND DATED BY THE RESPONSIBLE PARTY.
- THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN PRIOR TO CONSTRUCTION. THE M.O.T. PLAN SHALL SHOW ALL PROPOSED TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS, AND BARRICADES, AND SHALL DETAIL ALL PROPOSED CONSTRUCTION SEQUENCING. THE M.O.T. PLAN SHALL BE APPROVED BY THE ENGINEER, OWNER, AND ROADWAY JURISDICTIONAL AGENCY PRIOR TO CONSTRUCTION. ALL PROPOSED ROADWAY AND DRIVEWAY LANE CLOSURES SHALL BE
- 2. ALL CONSTRUCTION SIGNING AND MARKINGS SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH THE CITY OF ROCKWALL REQUIREMENTS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). THE PLACEMENT OF THE SIGNING AND MARKINGS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER PRIOR TO
- 3. INSPECT TRAFFIC CONTROL DEVICES ON A DAILY BASIS TO ENSURE PLACEMENT OF BARRICADES AND FUNCTION OF LIGHTS IS MAINTAINED THROUGHOUT CONSTRUCTION.

RESTRICTED TO THE HOURS BETWEEN 9:00 A.M. AND 4:00 P.M. UNLESS OTHERWISE AUTHORIZED IN THE APPROVED M.O.T.

- 4. CONTACT PROPERTY OWNERS AFFECTED BY CONSTRUCTION. COORDINATE TEMPORARY DRIVEWAY CLOSURES AND SEQUENCING. MAINTAIN ACCESS FOR ALL PROPERTY OWNERS DURING CONSTRUCTION.
- WET UNSTABILIZED AREAS AS NECESSARY TO CONTROL DUST
- ADJUST TRAFFIC CONTROL DEVICES AS REQUIRED UNDER EMERGENCY CONDITIONS.
- . THE CONTRACTOR IS EXPECTED TO COORDINATE ITS ACTIVITIES WITH OTHER CONTRACTORS WHO MAY BE WORKING IN THE IMMEDIATE VICINITY.
- 3. WHEN WORK OCCURS WITHIN 15-FT OF ACTIVE ROAD TRAVEL LANES BUT NO CLOSER THAN 2-FT FROM THE EDGE OF PAVEMENT, SIGNAGE AND WARNING DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH TXDOT RULES AND REGULATIONS.
- 9. TYPE I OR TYPE II BARRICADES AT 20-FT CENTERS SHALL BE PLACED AND MAINTAINED ALONG THE EDGE OF THE ROAD WHEREVER DROP-OFFS OR OTHER HAZARDS EXIST AND TO BLOCK ENTRANCE INTO COMPLETED OR PARTIALLY COMPLETED PAVEMENTS UNTIL SUCH PAVEMENTS ARE OPEN TO PUBLIC USE.

EROSION AND SEDIMENT CONTROLS

- . THE ENTITY THAT WILL OWN, OPERATE AND MAINTAIN THE STORM SYSTEM SHOWN ON THESE PLANS IS ST. IVES REALTY. THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL THE REQUIREMENTS OF THAT ENTITY.
- . EROSION AND SILTATION CONTROL MEASURES ARE TO BE PROVIDED AND INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION. SEDIMENT CONTROL CONSISTS OF SILT FENCING, HAY BALES, AND FLOATING TURBIDITY BARRIERS PER TXDOT STANDARDS. EROSION CONTROL CONSISTS OF SEEDING AND MULCHING, SODDING, WETTING SURFACES, PLACEMENT OF COARSE AGGREGATE AND TEMPORARY PAVING
- 3. INSPECT EVERY TWO WEEKS OR WITHIN 24 HRS. OF ANY STORM EVENT GREATER THAN 0.5 INCHES OF RAIN WITHIN A 24 HR. PERIOD DURING CONSTRUCTION. REMOVE ANY SEDIMENT BUILD-UP. REPAIR AND REINSTALL ANY DAMAGED OR MISSING SEDIMENT CONTROL MEASURES. INSTALL ADDITIONAL MEASURES IF INSPECTION REVEALS ADDITIONAL SEDIMENTATION CONTROL IS
- 4. ESTABLISH EROSION CONTROL MEASURES WITHIN 48 HOURS OF THE COMPLETION OF ANY CLEARING, TRENCHING, AND GRADING
- . AREAS TO BE PAVED SHALL BE TREATED WITH A BITUMINOUS PRIME COAT AND SANDED TO MINIMIZE EROSION, WHERE PAVING IS SCHEDULED TO OCCUR MORE THAN 48 HOURS AFTER ACCEPTANCE OF BASE COURSE. AREAS TO RECEIVE CONCRETE PAVING SHALL BE EITHER PROTECTED WITH A LAYER OF TXDOT COARSE AGGREGATE MATERIAL OR SHALL BE PAVED WITHIN 48 HOURS OF ACCEPTANCE OF THE SUBGRADE.

SITE PREPARATION

OTHERWISE OBSTRUCT THE WORK.

- LUNIESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER. THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THE PROPERTY, RIGHT-OF-WAY, AND EASEMENTS AS INDICATED ON THE DRAWINGS. AT NO TIME SHALL THE CONTRACTOR DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR ON AN IMMEDIATE BASIS. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
- 2. STAKE OUT THE CONSTRUCTION, ESTABLISH LINES AND LEVELS, TEMPORARY BENCHMARKS, BATTER BOARDS, CENTERLINES AND REFERENCE POINTS FOR THE WORK, AND VERIFY ALL DIMENSIONS RELATING TO INTERCONNECTION WITH EXISTING FEATURES. REPORT ANY INCONSISTENCIES IN THE PROPOSED GRADES, LINES AND LEVELS, DIMENSIONS AND LOCATIONS TO THE ENGINEER BEFORE COMMENCING WORK
- 3. PROTECT ALL TREES AND SHRUBS LOCATED OUTSIDE THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, PARTICULARLY THOSE TREES AND SHRUBS LOCATED ADJACENT TO WORK AREAS.
- 4. WITHIN THE RIGHT-OF-WAY, EASEMENTS, AND OWNER SECURED PROPERTY, THE INTENT IS TO REMOVE ALL EXISTING LANDSCAPING AND REPLACE PER THE NEW PLAN UNLESS OTHERWISE NOTED ON THE PLANS.
- 5. THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER AND CITY WHEN ALL WORK IS LAID OUT (SURVEY STAKED), SO THAT A DETERMINATION MAY BE MADE OF SPECIFIC TREES TO BE REMOVED. NO TREES SHOWN ON THE CONSTRUCTION PLANS AS BEING SAVED SHALL BE REMOVED WITHOUT PERMISSION FROM THE OWNER AND ENGINEER AND CITY.
- . TREES TO REMAIN IN THE NON CONSTRUCTION AREA SHALL BE BOXED, FENCED OR OTHERWISE PROTECTED IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. DO NOT PERMIT HEAVY EQUIPMENT OR STOCKPILES WITHIN BRANCH SPREAD.
- . AREAS TO RECEIVE CLEARING AND GRUBBING SHALL INCLUDE ALL AREAS TO BE OCCUPIED BY THE PROPOSED IMPROVEMENTS, AREAS FOR FILL AND SITE GRADING, AND BORROW SITES. REMOVE TREES OUTSIDE OF THESE AREAS ONLY AS INDICATED ON THE
- DRAWINGS OR AS APPROVED IN WRITING BY THE ENGINEER 8. CLEARING SHALL CONSIST OF REMOVING TREES AND BRUSH AND DISPOSAL OF OTHER MATERIALS THAT ENCROACH UPON OR
- 9. EXERCISE EXTREME CARE DURING THE CLEARING AND GRUBBING OPERATIONS. DO NOT DAMAGE EXISTING STRUCTURES, PIPES OR
- REMOVE TO A DEPTH OF NOT LESS THAN 18" BELOW THE ORIGINAL SURFACE LEVEL OF THE GROUND.

10. GRUBBING SHALL CONSIST OF REMOVING AND DISPOSING OF STUMPS, ROOTS LARGER THAN 2" IN DIAMETER, AND MATTED ROOTS.

- 11. ALL COMBUSTIBLE DEBRIS AND REFUSE FROM SITE PREPARATION OPERATIONS SHALL BE REMOVED TO LEGAL OFF-SITE DISPOSAL
- 12. ALL NON-COMBUSTIBLE DEBRIS (NOT INCLUDING ACCEPTABLE FILL MATERIAL. FENCES. OR OTHER STRUCTURES). RESULTING FROM SITE PREPARATION OPERATIONS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED TO LEGAL OFF-SITE
- 13. ALL FILL TO BE COMPACTED TO A MIN. 95% STD. DENSITY. ALL FILL TO BE COMPACTED USING A SHEEP'S FOOT ROLLER. GEOTECHNICAL REQUIREMENTS FOR EXCAVATION, BACKFILL AND COMPACTION
- . REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY (BUREAU VERITAS NORTH AMERICA INC, REPORT No. DEO7-023 & 11050 ABLES LANE DALLAS, TEXAS). DATED (FEBRUARY 27, 2007)
- . THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS. ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
- . ROUGH EXCAVATE AND GRADE ANY PROPOSED STORMWATER PONDS AT THE START OF SITE GRADING ACTIVITIES. DIRECT SITE RUNOFF TO THE PONDS TO MINIMIZE RUNOFF TO OFFSITE AREAS.

- 4. FIELD DENSITY TESTING FREQUENCIES: EARTHWORK ONE TEST PER 2,000 SQUARE FEET PER 6" LIFT WITHIN FILLS BELOW THE (RESTAURANT) BUILDING, ONE TEST PER 5,000 SQUARE FEET PER 6" LIFT WITHIN FILLS IN THE PARKING AREA. ONE TEST PER 150 LINEAR FEET PER 6" LIFT IN AND GRADE BEAM BACKFILL.
- 5. IT IS INTENDED THAT PREVIOUSLY EXCAVATED MATERIALS CONFORMING TO THE FOLLOWING REQUIREMENTS BE UTILIZED
- WHEREVER POSSIBLE. A)ACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-1, A-3, A-2-4, A-2-6; ASTM D2487 CLASSIFICATION GW, GP, GM, SM, SW, SP: UNLESS OTHERWISE DISAPPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS. NO MORE THAN 12% OF ACCEPTABLE MATERIALS SHALL PASS THE NUMBER 200 SIEVE.
- B) UNACCEPTABLE MATERIALS: AASHTO M145 CLASSIFICATION A-2-5, A-2-7, A-4, A-5, A-6, A-7, A-8; ASTM D2487 CLASSIFICATION GC, SC, ML, MH, CL, CH, OL, PT; UNLESS OTHERWISE APPROVED WITHIN THE SOIL AND SUBSURFACE INVESTIGATION REPORTS.
- 6. PROVIDE BARRIERS, WARNING LIGHTS AND OTHER PROTECTIVE DEVICES AT ALL EXCAVATIONS.
- 7. SIDEWALKS, ROADS, STREETS, AND PAVEMENTS SHALL NOT BE BLOCKED OR OBSTRUCTED BY EXCAVATED MATERIALS, EXCEPT AS AUTHORIZED BY THE ENGINEER & THE CITY OF ROCKWALL, IN WHICH CASE ADEQUATE TEMPORARY PROVISIONS MUST BE MADE FOR SATISFACTORY TEMPORARY PASSAGE OF PEDESTRIANS, AND VEHICLES. MINIMIZE INCONVENIENCE TO PUBLIC TRAVEL OR TO TENANTS OCCUPYING ADJOINING PROPERTY.
- 8. FURNISH, INSTALL, AND MAINTAIN, WITHOUT ADDITIONAL COMPENSATION, SHEETING, BRACING, AND SHORING SUPPORT REQUIRED TO KEEP EXCAVATIONS WITHIN THE PROPERTY OR EASEMENTS PROVIDED. TO SUPPORT THE SIDES OF THE EXCAVATION, AND TO PREVENT ANY MOVEMENT WHICH MAY DAMAGE ADJACENT PAVEMENTS OR STRUCTURES, DAMAGE OR DELAY THE WORK, OR ENDANGER LIFE AND HEALTH. VOIDS OUTSIDE THE SUPPORTS SHALL BE IMMEDIATELY FILLED AND COMPACTED.
- 9. ALL SUITABLE MATERIALS REMOVED FROM EXCAVATION AREAS SHALL BE USED FOR THE PROJECT. CONTRACTOR MUST OBTAIN A TEMPORARY FILL PERMIT FROM THE CITY PRIOR TO ONSITE STOCKPILE. EXCESS EXCAVATED SUITABLE MATERIAL SHALL BE STOCKPILED ON SITE AT A LOCATION OF THE OWNER'S CHOOSING, AND SHALL BECOME THE PROPERTY OF THE OWNER, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 10. UNSUITABLE MATERIALS WITHIN THE INFLUENCE AREA OF CONSTRUCTION SHALL BE EXCAVATED, REMOVED FROM THE SITE, AND DISPOSED, UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- 11. EXCEPT AS OTHERWISE INDICATED, EXCAVATE FOR PRESSURE PIPING SO TOP OF PIPING IS MINIMUM THREE FEET BELOW FINISHED
- 12. IF MORE THAN ONE PIPE IS TO BE INSTALLED IN A TRENCH, THE PIPES SHALL BE SPACED A MINIMUM OF ONE FOOT APART FOR PIPES FOUR INCHES AND LARGER. 13. IF PORTIONS OF THE BOTTOM OF TRENCHES OR EXCAVATIONS CONSIST OF MATERIAL UNSTABLE TO SUCH A DEGREE THAT, IN THE

OPINION OF THE ENGINEER. IT CANNOT ADEQUATELY SUPPORT THE PIPE OR STRUCTURE, THE BOTTOM SHALL BE OVER EXCAVATED

- AND STABILIZED WITH APPROVED COARSE GRANULAR STABILIZATION MATERIAL. DEPTH OF STABILIZATION SHALL BE AS DIRECTED BY THE ENGINEER. 14. EXCAVATIONS SHALL BE KEPT DRY, COMPACTED, AND STABLE TO A DEPTH THREE FEET BELOW THE BOTTOM OF THE EXCAVATION
- 15. ALL FILL MATERIAL SHALL BE SUITABLE SOILS OR DIGGABLE FLOWABLE FILL. FILL PLACED WITHIN 1 FOOT OF STRUCTURES OR PIPING SHALL NOT CONTAIN ROCK OR STONE LARGER THAN 2 INCH DIAMETER. IF A SUFFICIENT QUANTITY OF SUITABLE MATERIAL IS NOT AVAILABLE FROM OTHER EXCAVATIONS WITHIN THE SITE, PROVIDE ADDITIONAL SUITABLE MATERIAL.
- 16. SELECT FILL IS DEFINED AS UNIFORMLY BLENDED CLAY SAND WITH A PLASTICITY INDEX OF BETWEEN FOUR AND 15 AND SHALL NOT EXCEED 50% PASSING #200 SIEVE 17. FILL WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, FOUNDATIONS, OR SLABS, SHALL BE PLACED IN LAYERS OF EIGHT
- INCH LOOSE DEPTH. IN ALL OTHER AREAS, PLACE FILL IN LAYERS OF 12 INCH LOOSE DEPTH. 18. VIBRATORY COMPACTION IS NOT ALLOWED WITHIN 100 FEET OF EXISTING STRUCTURES. IN THESE AREAS, COMPACTION SHALL BE ACCOMPLISHED BY STATIC MEANS ONLY.

S. NO.	DESCRIPTION	2321 FOR STRUCTURES	2322 FOR UTILITIES	2323 FOR PAVEMENT
Α .	AREAS EXPOSED BY EXCAVATION OR STRIPPING SHALL MEET THE FOLLOWING REQUIREMENTS (A) DEPTH OF SCARIFICATION (B)COMPACTED TO A PERCENTAGE OF MAX DRY DENSITY (MDD) IN ACCORDANCE WITH	6"	6"	6"
	ASTM D 698 I) UNDER PAVEMENT/SLAB II) UNDER ITEM (I) ABOVE	95% 92%-98%	95% 92%-98%	95% 92%-98%
В	FILL MATERIALS IN LIFTS OF LAYERS NOT TO EXCEED:			
	(A) DEPTH (LOOSE) COMPACTED TO A PERCENTAGE OF MAX DRY DENSITY (MDD) IN ACCORDANCE WITH	6"	6"	6"
	ASTM D 698 I) UNDER PAVEMENT/SLAB II) UNDER ITEM (I) ABOVE	95% 92%-98%	95% 92%-98%	95% 92%-98%
С	FREQUENCY OF TEST FOR CUT/FILL AREAS ONE COMPACTION TEST PER LIFT FOR EVERY	2,500 SF	150 LF	10,000 SF
D	FILL MATERIAL EITHER OFF-SITE OR ONSITE SHALL HAVE CBR VALUE EQUAL TO OR GREATER THAN	2	2	2

- VALUE EQUAL TO OR GREATER THAN 2 2 2 19. DENSITY REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT. THE MINIMUM DENSITY REQUIREMENT (ASTM D1557 OR AASHTO T180) SHALL BE A) FILL UNDER AND WITHIN THE INFLUENCE AREA OF ROADWAYS, STRUCTURES, SLABS, FOUNDATIONS = 95%. (STANDARD PROCTOR
- ASTM D-698) B) POND AND ROAD EMBANKMENT FILL = 95%
- C) LANDSCAPE AREAS = 95% D) ALL OTHER AREAS = 95%

WATER AND WASTEWATER GENERAL NOTES

- 1. ALL WATER AND WASTEWATER CONSTRUCTION SHALL CONFORM TO CITY OF ROCKWALL AND NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS' STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (3RD EDITION).
- 2. PLAN SPECIFICATIONS AND APPURTENANCES WILL BE COVERED BY THE CITY OF ROCKWALL STANDARDS OF DESIGN AND CONSTRUCTION MANUAL, SECTION 5 AND SECTION 6 AUGUST, 2003 EDITION.
- 3. A SEPARATE PERMIT MUST BE OBTAINED FOR EACH WASTEWATER LATERAL CONNECTION, CLEANOUT AND WATER METER IN THE DEPARTMENT. FOR INFORMATION CONTACT (972) 771-7746.
- 4. JURISDICTION FOR APPROVAL AND INSPECTION OF THE WATER AND WASTEWATER IMPROVEMENT LIES WITH THE (CITY OF ROCKWALL). THESE PLANS AND ANY SUBSEQUENT REVISIONS TO THEM (INCLUDING FIELD CHANGES) MUST BE APPROVED IN WRITING BY THE CITY OF ROCKWALL IN ADVANCE OF CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL APPROVALS ARE OBTAINED PRIOR TO CONSTRUCTION.
- 5. TRENCH SAFETY PLANS SHALL FOLLOW PROCEDURES OUTLINED IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENT'S STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (CURRENT EDITION), AND THE CITY OF ROCKWALL. CONTRACTOR SHALL ALSO COMPLY WITH MINIMUM STANDARDS FOR TRENCH SAFETY ESTABLISHED BY OSHA.
- 6. UTILITY LOCATIONS SHALL BE VERIFIED AT LEAST 1,000 (FT) IN ADVANCE OF TRENCHING SO THAT CHANGES IN THE GRADE AND/OR ALIGNMENT MAY BE MADE IN CASES OF CONFLICT. THE CONTRACTOR SHALL NOTIFY THE APPROPRIATE UTILITY COMPANIES A MINIMUM OF TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION. SEE THE TABLE OF CONTACTS FOR MORE INFORMATION. 7. THE CONTRACTOR SHALL PROTECT, SHORE AND/OR SUPPORT DURING CONSTRUCTION ALL EXISTING UTILITY LINES TO ENSURE
- THAT THERE ARE NO INTERRUPTIONS IN SERVICE. TEMPORARY RE-ROUTES OF SERVICE MAY BE REQUIRED. (NO ADDITIONAL PAY 8. THE CONTRACTOR SHALL CALL THE CITY OF ROCKWALL FINANCE DEPARTMENT (972) 771-7700 TO OBTAIN WATER METER PERMITS
- AND WASTEWATER LATERAL CONNECTION PERMITS. 9. AFTER THE RELEASE OF THE PLANS FOR CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE CITY OF ROCKWALL CONSTRUCTION INSPECTION SUPERVISOR AT (972) 771-7746 FOR THE ASSIGNMENT OF AN INSPECTOR FOR THE PROJECT THREE WORKING DAYS
- PRIOR TO START OF CONSTRUCTION. 10. THRUST BLOCKING SHALL BE USED ON WATER MAIN CONSTRUCTION IN ADDITION TO MECHANICALLY RESTRAINED JOINTS ON ALL BENDS TEES. FIRE HYDRANTS, ETC. SEE STANDARD DRAWINGS FOR THRUST BLOCK QUANTITIES. ALL THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH, ALL JOINT MUST BE RESTRAINED USING MEGALUG.
- 11. IN ORDER TO CONSTRUCT THE WATER LINES AS SHOWN, IT WILL BE NECESSARY TO ISOLATE EXISTING LINES AND TEMPORARILY REMOVE THEM FROM SERVICE. NO LINE SHALL BE TAKEN OUT OF SERVICE WITHOUT NOTIFICATION OF THE CITY OF ROCKWALL PERSONNEL. ALL WATER VALVES WILL BE OPERATED BY THE CITY OF ROCKWALL PERSONNEL ONLY. CONTACT CITY OF ROCKWALL SERVICE CENTER DEPARTMENT AT (972) 771-7730 FOR DETAILS.
- 12. ALL WATER AND WASTEWATER CROSSINGS SHALL BE ADDRESSED CONSISTENT WITH THE (CITY OF ROCKWALL) CRITERIA.
- 13. BACKFILL SHALL BE BROUGHT TO EXISTING GRADE OR PROPOSED PAVING SUB-GRADE IN ADVANCE OF PAVING, THE BACKFILL AROUND MANHOLES LOCATED IN EXISTING OR NEW PAVEMENT WILL BE FLOWABLE BACKFILL AS PER NCTCOG SPECIFICATIONS, ITEM
- 14. TEST PROCEDURES SHALL BE APPROVED BY THE ENGINEER. ALL TESTS SHALL BE MADE IN THE PRESENCE OF THE ENGINEER AND UTILITY REPRESENTATIVE. NOTIFY THE ENGINEER AND THE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY WORK IS TO BE
- 15. PROVIDE ALL EQUIPMENT FOR TESTING. INCREMENTS ON GAGES USED FOR LOW PRESSURE AIR TESTING SHALL BE OF SCALED TO THE NEAREST 0.1 PSI. GAGES, PUMPS, AND HOSES SHALL BE IN GOOD WORKING WITH NO NOTICEABLE LEAKS.
- 16. ALL SERVICE LINES SHALL BE COMPLETED PRIOR TO TESTING, AND ARE SUBJECT TO THE SAME TESTING AS THE MAIN LINE.
- 17. APPLY HYDROSTATIC TEST PRESSURE OF 180 PSI FOR WATER MAINS FOR FOUR HOURS AND FOR SUCH ADDITIONAL PERIOD NECESSARY FOR THE ENGINEER TO COMPLETE THE INSPECTION OF THE LINE UNDER TEST. DO NOT EXCEED PIPE MANUFACTURER'S SUGGESTED TIME DURATION AT THE TEST. REPEAT UNTIL ALL PARTS OF THE LINE WITHSTAND THE TEST PRESSURE.

- 18. APPLY LEAKAGE TEST PRESSURE OF 180 PSI FOR WATER MAINS. MAINTAIN PRESSURE AT A MAXIMUM VARIATION OF 5% DURING THE ENTIRE LEAKAGE TEST. THE DURATION OF THE LEAKAGE TEST SHALL BE FOUR HOURS MINIMUM, AND FOR SUCH ADDITIONAL TIME NECESSARY FOR THE ENGINEER TO COMPLETE INSPECTION OF THE SECTION OF LINE UNDER TEST. LEAKAGE MEASUREMENTS SHALL NOT BE STARTED UNTIL A CONSTANT TEST PRESSURE HAS BEEN ESTABLISHED. THE LINE LEAKAGE SHALL BE MEASURED BY MEANS OF A WATER METER INSTALLED ON THE SUPPLY SIDE OF THE PRESSURE PUMP.
- 19. NO LEAKAGE IS ALLOWED IN EXPOSED PIPING, BURIED PIPING WITH FLANGED, THREADED, OR WELDED JOINTS OR BURIED NON-POTABLE PIPING IN CONFLICT WITH POTABLE WATER LINES.
- 20. TESTED SECTIONS OF BURIED PIPING WITH SLIP-TYPE OR MECHANICAL JOINTS SHALL CONFORM TO NCTCOG 3RD EDITION STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
- 21. ALL APPARENT LEAKS DISCOVERED WITHIN ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK BY THE OWNER SHALL
- BE LOCATED AND REPAIRED BY CONTRACTOR, REGARDLESS OF THE TOTAL LINE LEAKAGE RATE.
- 22. THE CONTRACTOR SHALL PROVIDE A POST-CONSTRUCTION FIRE FLOW TEST WITNESSED AND APPROVED BY THE ENGINEER AND THE UTILITY. HYDRANTS SHALL DELIVER A MINIMUM OF 1250 GPM WITH A RESIDUAL PRESSURE OF 20 PSI.
- 23. DISINFECT ALL POTABLE WATER LINES, VALVES, FITTINGS, HYDRANTS.
- 24. ALL DISINFECTION WORK SHALL BE ACCEPTABLE TO THE STATE HEALTH AUTHORITY. IF ANY REQUIREMENTS OF THIS SECTION ARE IN CONFLICT WITH REQUIREMENTS OF THE AUTHORITY FOR DISINFECTION, THOSE OF THE AUTHORITY SHALL GOVERN. THE WATER MAIN DISINFECTION AND BACTERIOLOGICAL SAMPLING AND METHODS OF DISINFECTION FOR ALL WATER CONTAINMENT DEVICES AND PIPING SYSTEMS SHALL CONFORM TO AWWA C651.
- 25. AS-BUILT INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING:
- A) LOCATION OF ALL VALVES, FITTINGS, HYDRANTS AND SERVICES; B) LOCATION OF THE MAINS TIED HORIZONTALLY TO THE BACK OF CURB OR EDGE OF PAVEMENT: C) CERTIFICATION AS TO THE SYSTEM MEETING THE MINIMUM COVER REQUIREMENTS.
- 26. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE SEWER SYSTEM SHOWN ON THESE PLANS IS ST IVES REALTY. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF ST IVES REALTY AND THE CITY OF ROCKWALL.
- 27. PROVIDE LIGHT SOURCE AND MIRRORS FOR LAMPING OF SEWER. ANY SEWER IN WHICH THE DIRECT LIGHT OF A LAMP CANNOT BE VIEWED IN EITHER DIRECTION, FULL CIRCLE, BETWEEN ADJACENT MANHOLES SHALL BE CONSIDERED UNSATISFACTORY, UNLESS THE LINE IS DESIGNED WITH HORIZONTAL DEFLECTIONS, AND SHALL BE REPAIRED BY THE CONTRACTOR WITHOUT ADDITIONAL
- 28, PORTIONS OF GRAVITY SEWERS WHICH EITHER A) CROSS WATER MAINS WITH LESS THAN 24" CLEARANCE, OR B) ARE CLOSER THAN 10-FT HORIZONTAL TO WATER MAINS WHILE THE VERTICAL SEPARATION OF THE WATER AND SEWER LINES IS LESS THAN 24" SHALL BE CONCRETE ENCASED. TESTED SECTIONS OF SEWER WILL NOT BE ACCEPTED IF IT HAS A LEAKAGE RATE IN EXCESS OF THAT RATE DETERMINED BY THE FORMULA SPECIFIED IN AWWA C-600 (DUCTILE IRON PIPE) OR AWWA MANUAL NO. M-23 (PVC PIPE).
- 29. CONDUCT LOW PRESSURE AIR TESTING (4.0 PSI INITIAL PRESSURE) OF INSTALLED SEWER PIPING AND MANHOLES IN ACCORDANCE WITH ASTM F1417. MAXIMUM ALLOWABLE LEAKAGE IS 0.0015 CUBIC FEET PER MINUTE PER SQUARE FOOT INTERNAL SURFACE AREA BEING TESTED. ALLOWABLE AIR PRESSURE DROP DURING THE TEST IS 0.5 PSIG. MINIMUM REQUIRED TEST TIME (DURATION) IS: A) 4" PIPE = 1 MIN, 53 SEC
- B) 6" PIPE = 2 MIN. 50 SEC, OR 0.427 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; C) 8" PIPE = 3 MIN. 47 SEC, OR 0.760 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER; D) 10" PIPE = 4 MIN. 43 SEC. OR 1.187 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER:

E) 12" PIPE = 5 MIN, 40 SEC, OR 1,709 X LENGTH OF PIPE TESTED, WHICHEVER IS GREATER

- 30. CONDUCT LEAKAGE TESTING OF MANHOLES. PLUG INVERTS AND FILL MANHOLE WITH WATER. ALLOWABLE WATER DROPS IN MANHOLE TO BE FIELD DETERMINED BY UTILITY AND ENGINEER. MINIMUM TEST DURATION IS ONE HOUR.
- 31. AS-BUILT INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO DISTANCES OF SEWER LINE LAID FROM MANHOLE TO MANHOLE AND/OR CLEAN-OUT WITH TIES TO LATERALS.
- 32. ALL WATER LINES SHALL BE CLASS 200.
- 33. INSTALL BLUE EMS DISKS ON WATER LINES AT EVERY CHANGE IN DIRECTION, VALVE AND SERVICE.
- 34. INSTALL GREEN EMS DISKS ON SANITARY SEWER LINES AT EVERY CHANGE IN DIRECTION, MANHOLE, CLEANOUT, AND SERVICE.

UTIL

ITY CONTACT TABLE		
UTILITY	OWNER	TELEPHONE
GENERAL WATER AND WASTEWATER	CITY OF ROCKWALL	(972)771-7730
WATER METER PERMITS	CITY OF ROCKWALL	(972)771-7700
WASTEWATER LATERAL CONNECTION PERMIT	CITY OF ROCKWALL	(972)771-7700
BUILDING INSPECTIONS DEPARTMENT	CITY OF ROCKWALL	(972)771-7709
PUBLIC WORKS DEPARTMENT	CITY OF ROCKWALL	(972)771-7746
FIRE DEPARTMENT	CITY OF ROCKWALL	(972)771-7770
FIBER OPTIC	SBC	(903)457-2092
ELECTRIC	TXU ENERGY	(972)551-6712
NATURAL GAS	ATMOS ENERGY	(972)485-6277
CABLE TELEVISION		

PRECAST STRUCTURES AND APPURTENANCES-MIN. 4200 PSI

- 1. ALL MANHOLES SHALL BE PRECAST CONSTRUCTION. THE MINIMUM SIZE DIAMETER OF MANHOLES SHALL BE 48" FOR SEWER LINES 21" IN DIAMETER OR LESs. INTEGRALLY CAST STEPS WITHIN PRECAST STRUCTURES ARE NOT ALLOWED.
- 2. BASES SHALL BE ONE-PIECE PRECAST BASE SECTIONS CONSISTING OF INTEGRALLY CAST SLAB, BOTTOM RING SECTION AND CONCRETE FLOW CHANNELS. BASE SECTIONS SHALL HAVE INTEGRAL INVERTS WITH GASKETS TO MATCH THE PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL INVERT ANGLES. PROVIDE OUTLET STUBS WITH JOINTS TO MATCH THE PIPE
- 3. RISERS SHALL BE PRECAST REINFORCED CONCRETE PER ASTM C478, MANUFACTURED USING SULFATE RESISTANT CEMENT (ASTM C150, TYPE II). RISERS SHALL BE 48-INCH DIAMETER UNLESS OTHERWISE INDICATED AND SHALL HAVE A MINIMUM WALL THICKNESS OF FIVE
- 4. GASKETS FOR SEATING PRECAST SECTIONS SHALL BE COLD ADHESIVE PREFORMED PLASTIC GASKETS CONFORMING TO TXDOT
- SPECIFICATION 942-2, UNLESS OTHERWISE INDICATED. 5. UNLESS OTHERWISE INDICATED, CONE TOP SECTIONS SHALL BE PRECAST, ECCENTRIC TYPE WITH 24-INCH DIAMETER TOP OPENING CONFORMING TO ASTM C478. PROVIDE 8-INCH MINIMUM THICKNESS FLAT SLAB TOPS WITH ECCENTRIC 24-INCH DIAMETER OPENING, UNLESS
- 6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE A FLEXIBLE WATERTIGHT SEAL OF THE PIPE TO THE MANHOLE. NO ADHESIVES OR LUBRICANTS SHALL BE EMPLOYED IN THE INSTALLATION OF THE CONNECTOR INTO THE MANHOLE. THE RUBBER CONNECTOR SHALL COMPLY WITH ASTM C443 AND ASTM C923. ALL STAINLESS STEEL ELEMENTS OF THE CONNECTOR SHALL BE TOTALLY NON-MAGNETIC SERIES 316 STAINLESS, EXCLUDING THE WORM SCREW FOR TIGHTENING THE STEEL BAND AROUND THE PIPE WHICH SHALL BE TORQUED BY A BREAKAWAY TORQUE WRENCH AVAILABLE FROM THE PRECAST MANHOLE SUPPLIER, AND SET FOR 60-70 INCH/LBS. THE CONNECTOR SHALL BE INSTALLED IN THE MANHOLE WALL BY ACTIVATING THE EXPANDING MECHANISM IN STRICT ACCORDANCE WITH THE
- RECOMMENDATION OF THE CONNECTOR MANUFACTURER. FRAMES AND COVERS SHALL BE GREY IRON PER ASTM A48, CLASS 30B AND SHALL BE US FOUNDRY TYPE 227AS, TRAFFIC BEARING (AASHTO H-20 LOADING), UNLESS OTHERWISE NOTED IN THE DRAWINGS. CASTINGS SHALL BE SMOOTH, CLEAN, FREE FROM BLISTERS, BLOWHOLES,
- 8. ALL MANHOLE FRAMES AND COVERS SHALL BE U.S. FOUNDRY NO. 170F (OR EQUAL), WITH RAISED LETTERING "STORM", "SEWER", OR AS DETAILED ON THE DRAWINGS.
- 9. PROVIDE CAST IRON FRAMES AND RETICULINE GRATES IN ACCORDANCE WITH DETAILS ON THE DRAWINGS. ALL FRAMES AND INLET GRATES SHALL BE PRODUCTS OF U.S. FOUNDRY & MANUFACTURING CORPORATION, OR APPROVED EQUAL.
- 10.ALL INLET GRATES SHALL BE SECURED BY CHAIN AND EYEBOLT TO THE TOP OF THE STRUCTURE. 11.MANHOLE COATINGS AND FINISHES SHALL BE
- A) SANITARY SEWER MANHOLE INTERIOR BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS B) INTERIOR OF MANHOLES WHICH RECEIVE FORCE MAIN DISCHARGE - INTEGRALLY ATTACHED INTERIOR LINER, FULL HEIGHT, FIBERGLASS LINER. LINER THICKNESS TO BE IN ACCORDANCE WITH THE DRAWINGS.
- C) EXTERIOR BITUMINOUS EPOXY COATING, MINIMUM DRY FILM THICKNESS = 16 MILS.
- 12. AS-BUILT INFORMATION SHALL INCLUDE ALL RIM, TOP AND INVERT ELEVATIONS FOR ALL PRECAST STRUCTURES.
- 1. THE ENTITY THAT WILL OPERATE AND MAINTAIN THE PRIVATE STORM SEWER SYSTEM SHOWN ON THESE PLANS IS ST. IVES REALTY. THE PUBLIC STORM SEWER SYSTEM SHALL BE MAINTAINED BY THE CITY OF CITY OF ROCKWALL. THE CONTRACTOR SHALL MEET ALL THE REQUIREMENTS OF THESE ENTITIES.
- 2. ALL STORM SEWER PIPE SHALL BE CLASS III REINFORCED CONCRETE PIPE (RCP) UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ROUND CONCRETE PIPE SHALL COMPLY WITH ASTM C76. ELLIPTICAL CONCRETE PIPE SHALL COMPLY WITH ASTM C507. PIPE JOINTS AND O-RING GASKETS SHALL COMPLY WITH ASTM C443.
- 3. RCP PIPE SHALL NOT BE SHIPPED FROM MANUFACTURER UNTIL THE COMPRESSIVE STRENGTH OF THE PIPE HAS REACHED 4000 PSI AND A MINIMUM OF FIVE DAYS HAVE PASSED SINCE THE MANUFACTURING OR REPAIR OF THE PIPE HAS BEEN COMPLETED.
- 4. ALL PIPE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC SHALL BE IN ACCORDANCE WITH CITY OF ROCKWALL STANDARDS OF DESIGN AND CONSTRUCTION, AND INSTALLED IN ACCORDANCE WITH CITY OF CITY OF ROCKWALL SPECIFICATIONS.
- 5. INSTALL POLYETHYLENE PIPE IN ACCORDANCE WITH ASTM D2321. BACKFILL AND COMPACT EVENLY ON EACH SIDE TO PREVENT DISPLACEMENT. BACKFILL AND COMPACTION SHALL CONFORM TO CITY OF ROCKWALL STANDARDS OF DESIGN AND CONSTRUCTION, AND CITY OF ROCKWALL CONSTRUCTION SPECIFICATIONS.
- 6. ALL STORM PIPES SHALL BE SUBJECTED TO LEAKAGE TESTING. WHEN THE GROUND WATER LEVEL IS ABOVE THE TOP OF THE PIPE, AN INFILTRATION TEST SHALL BE PERFORMED BY SEALING OFF A LENGTH OF PIPE AND MEASURING THE DEPTH OF FLOW OVER A MEASURING WEIR, OR BY PUMPING THE INFILTRATED WATER INTO CONTAINERS FOR MEASUREMENT, TESTS SHALL BE CONDUCTED FOR A MINIMUM OF FOUR HOURS, INFILTRATION LEAKAGE SHALL NOT EXCEED 150 GALLONS PER 24 HOURS, PER INCH DIAMETER, PER MILE OF PIPE. WHEN THE GROUND WATER LEVEL IS BELOW THE TOP OF THE PIPE, THE PIPE SHALL BE TESTED FOR LEAKAGE BY EXFILTRATION. EXFILTRATION LEAKAGE TEST SHALL CONSIST OF ISOLATING THE PARTICULAR SECTION. FILLING WITH WATER TO A POINT FOUR FEET ABOVE THE TOP OF THE PIPE AT THE UPPER MANHOLE OR INLET, AND ALLOWING IT TO STAND NOT LESS THAN FOUR HOURS. THE SECTION SHALL THEN BE REFILLED WITH WATER UP TO THE ORIGINAL LEVEL AND AFTER TWO HOURS THE DROP IN WATER SURFACE SHALL BE MEASURED. THE COMPUTED LEAKAGE SHALL NOT EXCEED 150 GALLONS PER INCH DIAMETER, PER 24 HOURS, PER MILE of PIPE.
- 7. ALL END TREATMENTS SHALL BE PRECAST AND TXDOT APPROVED.
- 8. AS-BUILT INFORMATION SHALL INCLUDE, BUT NOT BE LIMITED TO PIPELINE AND CLEANOUT INVERTS. IN ADDITION TO AS-BUILTS MYLARS, THE STORM SEWER OUTFALLS SHALL BE TIED DOWN WITH X, Y, Z, COORDINATE ON A COORDINATE SHEET WITH OUTFALL LOCATION FURNISHED TO THE CITY.
- 9. ALL STORM INLETS AND MANHOLES SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKWALL DESIGN CRITERIA AND NCTCOG 3RD. EDITION.

PAVING, SIDEWALKS, AND CURBING

- 1. THE ENTITY THAT WILL OWN OPERATE AND MAINTAIN THE ONSITE ROADWAYS SHOWN ON THESE PLANS IS ST. IVES REALTY. THE CONTRACTOR SHALL BE EXPECTED TO MEET ALL OF THE REQUIREMENTS OF THAT ENTITY
- 2. GRADING SHOWN ON THESE PLANS ARE PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. THE CONTRACTOR SHALL BE EXPECTED TO GRADE THE ENTIRE SITE TO PROVIDE POSITIVE DRAINAGE IN ALL AREAS THROUGHOUT THE SITE. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT FLEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
- 3. ALL PAVING SURFACES IN INTERSECTIONS AND ADJACENT SECTIONS SHALL BE GRADED TO DRAIN POSITIVELY AND TO PROVIDE A SMOOTHLY TRANSITIONED DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE, AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. THE STANDARD CROWN MAY HAVE TO BE CHANGED IN ORDER TO DRAIN POSITIVELY IN THE AREA OF INTERSECTIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH THE ABOVE AND THE ENGINEER SHALL BE CONSULTED SO THAT HE MAY MAKE ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS OR GIVE SUPPLEMENTARY INSTRUCTIONS TO ACCOMPLISH THE INTENT OF THE PLANS.
- 4. UNIFORMLY SMOOTH GRADE THE SITE. DEPRESSIONS FROM SETTLEMENT SHALL BE FILLED AND COMPACTED. TOPS OF EMBANKMENTS AND BREAKS IN GRADE SHALL BE ROUNDED. FINISHED SURFACES SHALL BE REASONABLY SMOOTH, COMPACTED, FREE FROM IRREGULAR SURFACE CHANGES AND COMPARABLE TO THE SMOOTHNESS OBTAINED BY BLADE-GRADER OPERATIONS.
- FOR TEN FEET. FINISHED SURFACES ADJACENT TO PAVED AREAS AND WITHIN TEN FEET OF STRUCTURES SHALL BE WITHIN ONE INCH OF THE PROPOSED GRADE. ALL OTHER AREAS SHALL BE WITHIN THREE INCHES OF THE PROPOSED GRADE. 6. NEWLY GRADED AREAS SHALL BE PROTECTED FROM TRAFFIC AND EROSION. ALL

SETTLEMENT OR WASHING AWAY THAT MAY OCCUR FROM ANY CAUSE PRIOR TO SEEDING

OR ACCEPTANCE SHALL BE REPAIRED AND GRADES RE-ESTABLISHED TO THE REQUIRED

5. SLOPE GRADES TO DRAIN AWAY FROM STRUCTURES AT A MINIMUM OF 1/4" INCH PER FOOT

- ELEVATIONS AND SLOPES AT NO ADDITIONAL COST TO THE OWNER. 7. ALL AREAS WITHIN THE RIGHT-OF-WAY SHALL BE FINISH GRADED WITH A SMOOTH TRANSITION INTO EXISTING GROUND. ALL SWALES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING. ALL DISTURBED AREAS SHALL BE SODDED AFTER FINAL GRADING IN ACCORDANCE WITH THE CONSTRUCTION PLANS PRIOR TO FINAL INSPECTION, ALL SODDING SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL FINAL ACCEPTANCE BY THE
- 8. MATERIALS AND CONSTRUCTION METHODS FOR THE ROADWAY AND PAVING CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF CITY OF ROCKWALL TRANSPORTATION STANDARD SPECIFICATIONS.
- 9. ROADWAY PAVING, BASE, AND SUBGRADE THICKNESSES SHALL BE IN ACCORDANCE WITH DETAILS & DESIGN SPECIFICATIONS ON THESE DRAWINGS.
- 10. THE CONTRACTOR SHALL PROVIDE OWNER AND ENGINEER PAVEMENT AS-BUILTS. AS-BUILTS SHALL CONTAIN AT A MINIMUM, BUT NOT BE LIMITED TO PAVEMENT WIDTHS, PAVEMENT CROSS SLOPES AFTER FINAL GRADING, ELEVATIONS, AND DRAINAGE DIRECTIONS WITH HIGH POINTS DELINEATED. PAVEMENT CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS SHALL BE MEASURED EVERY 200 FT PLUS AT ALL CHANGES IN SLOPE, INLET LOCATIONS, AND AT ALL DRIVEWAY AND STREET INTERSECTIONS. FOR PARKING LOTS, RECORD CENTERLINE AND EDGE OF PAVEMENT ELEVATIONS ALONG ALL DRIVE AISLES AND ISLANDS.

SIGNS AND PAVEMENT MARKINGS

- 1. ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE TXDOT ROADWAY AND TRAFFIC DESIGN STANDARDS. GENERALLY, ALL MARKINGS SHALL CONFORM TO THE FOLLOWING: 6" EDGE LINES, 6" LANE LINES, 6" SINGLE CENTERLINES, AND 4" DOUBLE LINE PATTERNS, UNLESS OTHERWISE NOTED ON THE PLANS.
- 2. ALL PAVEMENT MARKINGS WITHIN R/W & ENTRANCE DRIVE SHALL BE THERMOPLASTIC WITH RAISED PAVEMENT MARKERS (TYPE 911 - 4" X 4"). RAISED PAVEMENT MARKERS ARE TO BE INSTALLED IN ACCORDANCE WITH THESE PLANS AND TXDOT STANDARDS.
- 3. PARKING STALL PAVEMENT MARKINGS SHALL BE PAINTED. PAINT SHALL MEET THE REQUIREMENTS OF TXDOT SPECIFICATIONS, NON-REFLECTIVE TRAFFIC PAINT.
- 4. ALL ROADWAY TRAFFIC SIGNS SHALL BE MANUFACTURED USING HIGH INTENSITY RETROREFLECTIVE MATERIALS. THE BACK OF ALL FINISHED PANELS SHALL BE STENCILED WITH THE DATE OF FABRICATION, THE FABRICATOR'S INITIALS, AND THE NAME OF THE SHEETING IN THREE-INCH LETTERS.
- 5. INTERNAL SITE TRAFFIC SIGNS ARE NOT REQUIRED TO BE RETROREFLECTIVE EXCEPT FOR
- 6. THE CONTRACTOR SHALL VERIFY THE REQUIRED LENGTH OF THE SIGN COLUMN SUPPORTS IN THE FIELD PRIOR TO FABRICATION.
- 7. ALL PAVEMENT MARKINGS REQUIRE LAYOUT APPROVAL IN THE FIELD BY THE ENGINEER PRIOR TO INSTALLATION.
- 8. PRIOR TO FINAL PAVEMENT MARKING INSTALLATION, A TWO WEEK CURE TIME OF THE ASPHALT IS REQUIRED.

- 1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR NORTH CENTRAL TEXAS, 3RD EDITION, AND THE
- CITY OF ROCKWALL DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION ADDENDUM. 2. USE OF FLY ASH OR ANY CHEMICAL ADMIXTURE IN CONCRETE WILL REQUIRE PRIOR APPROVAL FROM THE DIRECTOR OF CITY OF ROCKWALL PUBLIC WORKS AND WILL BE SUBJECT TO SPECIAL MONITORING AND INSPECTION OF WORK AS PROVIDED IN THE CITY OF ROCKWALL ADDENDUM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS

CONSTRUCTION IN NORTH CENTRAL TEXAS. FLY ASH SHALL NOT BE USED IN HAND FINISH

- 3. DURING THE CONSTRUCTION OF THESE IMPROVEMENTS, ANY INTERPRETATION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR NORTH CENTRAL TEXAS, AND ANY MATTER, WHICH REQUIRES THE APPROVAL OF THE OWNER, MUST BE APPROVED BY THE DIRECTOR OF CITY OF ROCKWALL PUBLIC WORKS OR HIS DESIGNEE BEFORE ANY CONSTRUCTION INVOLVING THAT DECISION COMMENCES. ASSUMPTIONS ABOUT WHAT THESE DECISIONS MIGHT BE WHICH ARE MADE DURING THE BIDDING PHASE
- WILL HAVE NO BEARING ON THE DECISION. 4. TO VERIFY LOCATIONS OF EXISTING WATER AND WASTEWATER MAINS IN THE AREA, CONTACT SERVICE CENTER IN PUBLIC WORKS DEPARTMENT AT (972) 771-7730 AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION.
- 5. STREETS, ALLEYS, SIDEWALKS, DRIVEWAYS, AND STORM DRAINAGE FACILITIES IN THE PUBLIC RIGHT OF WAY SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CITY OF ROCKWALL, STANDARD CONSTRUCTION DETAILS.
- 6. ALL CONCRETE FOR PAVEMENT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI-6.5 SACK MIN. IF MACHINE FINISH AND 4500 PSI-7.0 SACK MIN. IF HAND FINISH. CONCRETE PAVEMENT THICKNESS SHALL BE 6 INCHES FOR THE PARKING LOT AND ACCESS DRIVE PAVEMENT SECTIONS, AND 7 INCHES FOR THE DUMPSTER PAD AND AND AREA IN FRONT OF THE DUMPSTER.
- 7. STORM DRAINAGE FACILITIES IN DRAINAGE, CHANNEL, AND DETENTION AREA EASEMENTS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE CITY OF ROCKWALL CRITERIA AND NCTCOG 3RD, EDITION.

RECORD DRAWING

TO THE BEST OF OUR KNOWLEDGE CPH

ENGINEERS, INC., HEREBY STATES THAT

AS-BUILT CONDITIONS OF THE SUBJECT

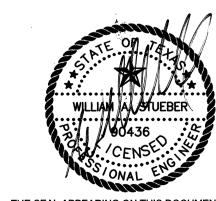
BY THE PROJECT LAND SURVEYOR.

THIS PLAN IS A REPRESENTATION OF THE

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Architects

Planners

Landscape Architects

Invironmental Scientis

Construction Management Design/Build

CORNERS

CCKWALL **E**

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