

GENERAL GRADING & DRAINAGE NOTES

PARKING LOT GRADING NOTES

1. EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGES BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. EXISTING TOPOGRAPHIC INFORMATION SHOWN IS BASED ON IN-FIELD SURVEY PREPARED BY WIER & ASSOCIATES, INC. ON APRIL 18, 2008. (EXCLUDES BELOW GRADE PUBLIC UTILITY LOCATIONS PROVIDED BY UTILITY COMPANY AS DESCRIBED ABOVE.)
2. NEW FINISHED CONTOURS SHOWN ARE TOP OF PAVING IN AREAS TO RECEIVE PAVEMENT AND TOP OF TOPSOIL IN AREAS TO BE SEEDED.
3. AREAS OUTSIDE OF THE PARKING LOT PERIMETERS SHOWN TO BE SEEDED SHALL RECEIVE MINIMUM FOUR (4) INCHES OF TOPSOIL (OR TO DEPTH INDICATED ON LANDSCAPE ARCHITECT PLANS). THIS TOPSOIL TO BE PLACED AND LEVELED BY THE GRADING CONTRACTOR. THIS MATERIAL MAY BE STOCKPILED DURING STRIPPING OPERATIONS.
4. ROUGH GRADING ELEVATIONS SHALL BE AS FOLLOWS:
 - FOUR INCHES BELOW FINISHED CONTOURS IN SEEDED AREAS.
 - SIX INCHES BELOW FINISHED CONTOURS IN PAVED AREAS, UNLESS OTHERWISE NOTED.
5. DIMENSIONS ON BUILDINGS ARE FOR GRADING PURPOSES ONLY AND ARE NOT TO BE USED TO LAYOUT FOOTINGS.
6. GRADING CONTRACTOR SHALL NOTIFY AND COOPERATE WITH ALL UTILITY COMPANIES OR FIRMS HAVING FACILITIES ON OR ADJACENT TO THE SITE BEFORE DISTURBING, ALTERING, REMOVING, RELOCATING, ADJUSTING, OR CONNECTING TO SAID FACILITIES. CONTRACTOR SHALL PAY ALL COSTS IN CONNECTION WITH THE ALTERATION OF OR RELOCATION OF THE FACILITIES. CONTRACTOR SHALL RAISE OR LOWER TOPS OF EXISTING MANHOLES AS REQUIRED TO MATCH FINISHED GRADES IN CONFORMANCE WITH CITY STANDARDS.
7. GRADING CONTRACTOR SHALL COOPERATE AND WORK WITH ALL OTHER CONTRACTORS PERFORMING WORK ON THIS PROJECT TO INSURE PROPER AND TIMELY COMPLETION OF THIS PROJECT.
8. THE GRADING CONTRACTOR SHALL USE WHATEVER MEASURES ARE REQUIRED TO PREVENT SILT AND CONSTRUCTION DEBRIS FROM FLOWING ONTO ADJACENT PROPERTIES. THIS CAN BE ACCOMPLISHED BY SMALL TEMPORARY SEDIMENT PONDS, SILT FENCES OF STEEL WIRE AND BURLAP OR BARRIERS OF CEDAR TREES. CONTRACTOR SHALL COMPLY WITH ALL LOCAL EROSION, CONSERVATION AND SILTATION ORDINANCES. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION CONTROL STRUCTURES UPON COMPLETION OF PERMANENT DRAINAGE FACILITIES AND THE ESTABLISHMENT OF A STAND OF GRASS SUFFICIENT TO PREVENT EROSION.
9. FOR THE WORK ON THE STATE OR CITY RIGHT-OF-WAY, THE GRADING CONTRACTOR SHALL:
 - A. NOT STORE MATERIAL, EXCESS DIRT OR EQUIPMENT ON THE SHOULDERS OF PAVEMENT, IN CASE OF MULTI-LANE HIGHWAYS, IN THE MEDIAN STRIPS. THE PAVEMENT SHALL BE KEPT FREE FROM ANY MUD OR EXCAVATION WASTE FROM TRUCKS OR OTHER EQUIPMENT. ON COMPLETION OF THE WORK, ALL EXCESS MATERIAL SHALL BE REMOVED FROM THE RIGHT-OF-WAY.
 - B. SHALL PROVIDE ALL NECESSARY AND ADEQUATE SAFETY PRECAUTIONS SUCH AS SIGNS, FLAGS, LIGHTS, BARRICADES AND FLAGMEN AS REQUIRED BY THE LOCAL AUTHORITIES AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE GRADING CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HOLD HARMLESS THE TEXAS DEPARTMENT OF TRANSPORTATION, THE CITY, AND THE OWNER FROM ANY CLAIMS FOR DAMAGE DONE TO EXISTING PRIVATE PROPERTY, PUBLIC UTILITIES OR TO THE TRAVELING PUBLIC.

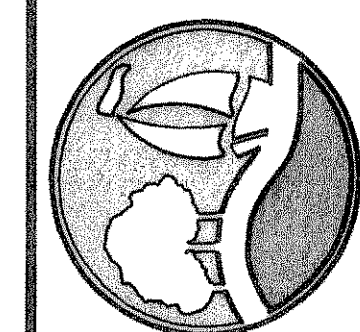
- B. SHALL PROVIDE ALL NECESSARY AND ADEQUATE SAFETY PRECAUTIONS SUCH AS SIGNS, FLAGS, LIGHTS, BARRICADES AND FLAGMEN AS REQUIRED BY THE LOCAL AUTHORITIES AND IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE GRADING CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND HOLD HARMLESS THE TEXAS DEPARTMENT OF TRANSPORTATION, THE CITY, AND THE OWNER FROM ANY CLAIMS FOR DAMAGE DONE TO EXISTING PRIVATE PROPERTY, PUBLIC UTILITIES OR TO THE TRAVELING PUBLIC.
- C. SHALL COMPLETE THE WORK TO THE SATISFACTION OF THE CITY PUBLIC WORKS DEPARTMENT AND OBTAIN A LETTER FROM THE DEPARTMENT STATING THAT THE WORK UNDER PUBLIC JURISDICTION IS ACCEPTABLE.
- D. POST NECESSARY BONDS AS REQUIRED BY THE CITY AND/OR STATE.
10. GRADING CONTRACTOR SHALL TAKE ALL AVAILABLE PRECAUTIONS TO CONTROL DUST. CONTRACTOR SHALL CONTROL DUST BY SPRINKLING, BY APPLYING CALCIUM CHLORIDE OR BY OTHER METHODS AS DIRECTED BY ENGINEER AND/OR OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO OWNER.
11. REFER TO PAVING DETAILS FOR TYPE OF PAVING AND BASE TO BE USED.
12. GRADING CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY EXISTING STRUCTURES, FENCES, DEBRIS OR TREES REMAINING ON SITE, UNLESS NOTED OTHERWISE ON PLANS AND SHALL COORDINATE WITH GENERAL CONTRACTOR.
13. GRADING CONTRACTOR TO COMPLY WITH ALL STATE AND LOCAL SEDIMENT CONTROL AND AIR POLLUTION ORDINANCES OR RULES.
14. A QUALIFIED SOILS LABORATORY SHALL DETERMINE THE SUITABILITY OF THE EXISTING SUBGRADE AND EXISTING ON-SITE MATERIAL PRIOR TO BEGINNING ANY FILLING OPERATION.
15. UNSUITABLE EXCAVATED MATERIALS AND ALL WASTE RESULTING FROM CLEARING AND GRUBBING SHALL BE DISPOSED OF OFF-SITE BY GRADING CONTRACTOR.
16. ALL EXCAVATING IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED.
17. ALL AREAS NOT COVERED BY BUILDING, PAVING OR PLANNED LANDSCAPING, SHALL BE GRASSED ON THIS LOT INCLUDING ADJACENT PARKWAYS.
18. BEFORE ANY MACHINE WORK IS DONE, CONTRACTOR SHALL STAKE OUT AND MARK THE ITEMS ESTABLISHED BY THE SITE PLAN. CONTROL POINTS SHALL BE PRESERVED AT ALL TIMES DURING THE COURSE OF THE PROJECT. LACK OF PROPER WORKING POINTS AND GRADE STAKES MAY REQUIRE CESSATION OF OPERATIONS UNTIL SUCH POINTS AND GRADES HAVE BEEN PLACED TO THE OWNER'S SATISFACTION. NO EXTENSION OF TIME WILL BE GRANTED FOR THE ABOVE.
19. TEMPORARY EROSION CONTROL DEVICES TO BE INSTALLED PRIOR TO BEGINNING OF GRADING. CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION CONTROL DEVICES AND SHALL REMOVE SILT FROM BERM DITCHES, SILT DAMS AND SILT FENCES AS NEEDED.
20. ALL DISTURBED AREAS, NOT SPECIFICALLY DESIGNATED AS SOD AREAS ON THE LANDSCAPE PLAN, SHALL BE HYDROMULCH SEEDED UNLESS OTHERWISE NOTED.
21. THE CONTRACTOR SHALL PREVENT SOIL STABILIZATION TREATMENT FROM LEAVING THE SITE BY WAY OF STORMWATER RUNOFF WHICH MAY DAMAGE DOWNSTREAM WATER COURSES, LAKES OR PONDS. ANY DAMAGE TO WILDLIFE OR FISH KILLS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.
22. MAINTAIN AS MUCH EXISTING VEGETATION AS POSSIBLE AS WELL AS RE-ESTABLISHING THE GROUND COVER AS EARLY AS POSSIBLE. GRASS BUFFER STRIPS SHALL BE LEFT AROUND THE PERIMETER TO AID IN FILTERING SEDIMENTATION. A DENSITY OF TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO PREVENT EROSION SHALL BE ESTABLISHED ON ALL BERMS, SWALES AND SLOPES.
23. ALL SITE GRADING AND EARTHWORK CONSTRUCTION SHALL COMPLY TO THE GEOTECHNICAL REPORT RECOMMENDATIONS.

1. THIS GRADING PLAN DOES NOT INCLUDE CONSTRUCTION OF THE FOUNDATION FOR THE BUILDING PAD AND THE AREAS ADJACENT TO THE BUILDING. THE OWNER SHALL SELECT THE FOUNDATION DESIGN OPTION WHICH WILL ESTABLISH THE CONSTRUCTION TECHNIQUE TO BE USED FOR THE FOUNDATION PAD AND AREAS OF THE BUILDING. REFER TO THE PROJECT GEOTECHNICAL REPORT FOR FOUNDATION CONSTRUCTION RECOMMENDATIONS.
2. CONSTRUCTION OF SITE GRADING AND EMBANKMENT SHALL MEET OR EXCEED THE RECOMMENDATION PROVIDED IN THE PROJECT GEOTECHNICAL REPORT.
3. AREAS A MINIMUM FIVE FEET HORIZONTALLY OF THE PARKING PAVEMENT AND EMBANKMENT SLOPES ADJACENT TO PARKING AREA SHALL BE CONSTRUCTED AS PER THE PROJECT GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. THE BELOW SPECIFICATIONS ARE MINIMUM REQUIREMENTS AND SHALL BE SUPERSEDED BY THE PROJECT GEOTECHNICAL RECOMMENDATIONS IF IN CONFLICT. THE SPECIFICATIONS ARE AS FOLLOWS:
 - A. THE AREA SHALL BE STRIPPED OF VEGETATION A MINIMUM SIX INCHES OR DEEPER AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER TO STABLE SUBGRADE AND PROOFROLLED. PROOFROLLING CONSISTS OF ROLLING THE ENTIRE SUBGRADE WITH A HEAVILY-LOADED TANDEM AXLE DUMP TRUCK OR OTHER APPROVED EQUIPMENT CAPABLE OF APPLYING SIMILAR WHEEL LOADS. ANY SOFT, WET OR WEAK FILL OR NATURAL SOILS WHICH DO NOT COMPACT BY PROOFROLLING SHALL BE REMOVED AND RECOMPACTED AS OUTLINED HEREIN. THE PROOFROLLING OPERATION MUST BE PERFORMED UNDER THE OBSERVATION OF A QUALIFIED GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE AND DENSITY CONTROL TESTED.
 - B. ON-SITE SOILS WITH PLASTICITY INDEX ANTICIPATED TO BE GREATER THAN 15, WHICH INCLUDES ANY DARK COLORED SURFACE CLAY SOILS, CAN BE ALSO USED AS GRADE RAISE FILL OUTSIDE THE PROPOSED BUILDING AREA. THESE CLAY SOILS SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 95 PERCENT OF STANDARD PROCTOR DENSITY. THE COMPACTED MOISTURE CONTENT OF THE CLAYS DURING PLACEMENT SHALL BE BETWEEN OPTIMUM AND FIVE (5) PERCENTAGE POINTS ABOVE OPTIMUM.
 - C. COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN SIX TO EIGHT-INCH THICK LOOSE LIFTS AND COMPACTING EACH LIFT TO AT LEAST THE SPECIFIED MINIMUM DRY DENSITY USING A SHEEP-FOOT ROLLER. IT IS IMPERATIVE THAT THE FILL PARTICLE SIZE BE LESS THAN SIX INCHES IN DIAMETER. IF LARGER CLODS ARE ENCOUNTERED DURING GRADING, THESE CLODS MUST BE BROKEN DOWN PRIOR TO FINAL PLACEMENT IN THE FILL. THIS MAY REQUIRE PLACEMENT OF THE MATERIAL, AN INITIAL COMPACTIVE EFFORT TO BREAK THE CLODS DOWN, SCARIFYING, WETTING AND RECOMPACTING.
 - D. IN ORDER FOR THE FILL MATERIALS TO PERFORM AS INTENDED, THE FILL MATERIAL MUST BE PLACED IN A MANNER WHICH PRODUCES A GOOD UNIFORM FILL COMPACTED WITHIN THE DENSITY AND MOISTURE RANGES OUTLINED IN THE PRECEDING PARAGRAPHS. FIELD DENSITY TESTS SHALL BE PERFORMED ON FILL SOILS TO CONFIRM THIS PERFORMANCE AS CONSTRUCTION PROGRESSES. FOR THE PROPOSED PARKING AND DRIVEWAY AREAS, TESTING AT A FREQUENCY OF NO LESS THAN ONE (1) TEST PER LIFT PER EACH 5,000 SQUARE FEET SHALL BE PROVIDED FOR FILL AND PROOFROLLING.
4. THESE SPECIFICATIONS DO NOT INCLUDE GRADING AND PREPARATION OF THE BUILDING FOUNDATION AREA. THE CONTRACTOR SHALL CONFIRM FOUNDATION CONSTRUCTION COMPACTION, MOISTURE CONTROL, SELECT FILLS AND/OR TREATMENT WITH THE OWNER, THE PROJECT GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER.

NOTE:
 1.) ALL REFERENCES TO 'CITY' SHALL MEAN 'CITY OF ROCKWALL'.
 2.) ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ROCKWALL AND NORTH TEXAS COUNCIL OF GOVERNMENT STANDARD SPECIFICATIONS.

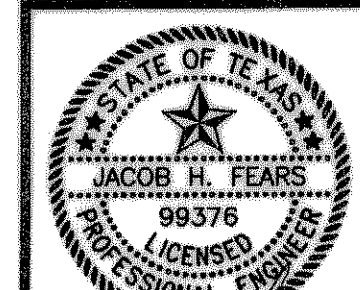
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GRADING GENERAL NOTES



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