

GENERAL:

1. WORK INCLUDED:

- A. THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPERINTENDENCE, QUALITY CONTROL, MATERIALS, PLANT, POWER, LIGHT, HEAT, FUEL, WATER, TOOLS, APPLIANCES, EQUIPMENT, SUPPLIES, AND OTHER MEANS OF CONSTRUCTION NECESSARY AND PROPER FOR PERFORMING AND COMPLETING THE WORK. CONTRACTOR SHALL PERFORM AND COMPLETE THE WORK IN THE MANNER BEST CALCULATED TO PROMOTE SCHEDULED CONSTRUCTION CONSISTENT WITH SAFETY OF LIFE AND PROPERTY AND TO THE SATISFACTION OF THE OWNER, AND IN STRICT ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL CLEAN UP THE WORK, MAINTAIN IT DURING CONSTRUCTION, AND PAY ALL COSTS INCIDENTAL THERETO. CONTRACTOR SHALL REPAIR OR RESTORE ALL STRUCTURES AND PROPERTY THAT MAY BE DAMAGED OR DISTURBED DURING PERFORMANCE OF THE WORK.
- B. THE COST OF INCIDENTAL WORK DESCRIBED IN THESE GENERAL REQUIREMENTS, FOR WHICH THERE ARE NO SPECIFIC CONTRACT ITEMS, SHALL BE CONSIDERED AS PART OF THE GENERAL COST OF DOING THE WORK AND SHALL BE INCLUDED IN THE PRICES FOR THE VARIOUS CONTRACT ITEMS. NO ADDITIONAL PAYMENT WILL BE MADE THEREFORE.
- C. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SUCH MODERN PLANT, TOOLS, AND EQUIPMENT AS MAY BE NECESSARY IN THE OPINION OF THE ENGINEER, TO PERFORM IN A SATISFACTORY AND ACCEPTABLE MANNER ALL THE WORK REQUIRED BY THE CONTRACT. ONLY EQUIPMENT OF ESTABLISHED REPUTATION AND PROVEN EFFICIENCY SHALL BE USED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE ADEQUACY OF WORKMANSHIP, MATERIALS AND EQUIPMENT, PRIOR APPROVAL OF THE ENGINEER NOTWITHSTANDING.

2. MOBILIZATION:

- A. PERFORM PREPARATORY WORK AND OPERATIONS IN MOBILIZING FOR BEGINNINGS WORK ON THE PROJECT, INCLUDING, BUT NOT LIMITED TO: THOSE OPERATIONS NECESSARY FOR THE MOVEMENT OF PERSONNEL, EQUIPMENT, SUPPLIES, AND INCIDENTALS TO THE PROJECT SITE AND FOR THE ESTABLISHMENT OF TEMPORARY OFFICES, BUILDINGS, SAFETY EQUIPMENT AND FIRST AID SUPPLIES, AND OTHER FACILITIES, INCLUDE THE COSTS OF BONDS AND ANY REQUIRED INSURANCE AND ANY OTHER PRE-CONSTRUCTION EXPENSE NECESSARY FOR THE START OF THE WORK, EXCLUDING THE COST OF CONSTRUCTION MATERIALS.

3. MAINTENANCE OF TRAFFIC:

- A. PREPARE AND SUBMIT A MAINTENANCE OF TRAFFIC PLAN FOR REVIEW. A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF FLORIDA OR A PERSON THAT HAS SATISFACTORILY COMPLETED THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION "FLORIDA ADVANCED WORK ZONE TRAFFIC CONTROL COURSE" SHALL PREPARE THE PLAN.
- B. CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN TRAFFIC CONTROL THROUGH THE WORK AREA FOR THE DURATION OF CONSTRUCTION. PROVIDE TRAFFIC CONTROL DEVICES THAT ARE ON THE FLORIDA DEPARTMENT OF TRANSPORTATION'S "QUALIFIED PRODUCT LIST".

4. PROGRESS SCHEDULE:

- A. PREPARE A CONSTRUCTION PROGRESS SCHEDULE COVERING ALL THE WORK INVOLVED IN THE CONTRACT. THIS INCLUDES SUBMITTAL AND APPROVAL OF SHOP DRAWINGS ON CRITICAL ITEMS, FABRICATION AND DELIVERY OF IDENTIFIABLE MATERIALS AND EQUIPMENT, SPECIFIC ITEMS OR WORK IN THE SCOPE, INTERFACES REQUIRED WITH OTHER CONTRACTS THAT MAY BE PART OF AN OVERALL PROJECT, AND SPECIFIC DEPENDENCIES UPON ACTS OR ACTIVITIES OF PARTIES NOT UNDER THE CONTROL OF CONTRACTOR.
- B. THE BAR GRAPH METHOD OR CRITICAL PATH METHOD ARE ACCEPTABLE FOR SCHEDULING CONSTRUCTION ACTIVITY.
5. SHOP DRAWINGS, PRODUCT DATA AND SAMPLES:
- A. SUBMIT COPIES OF ALL REQUIRED SHOP DRAWINGS, PRODUCT DATA AND SAMPLES FOR ENGINEER'S REVIEW.
- B. SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND TRANSMITTAL LETTERS PERTAINING THERETO SHALL BE IDENTIFIED WITH THE TITLE OF THE PROJECT, SUBMISSION DATE, AND THE CONTRACTOR'S ACKNOWLEDGEMENT THAT HE HAS REVIEWED THEM AND FOUND THEM ACCEPTABLE.
- C. NOTIFY ENGINEER IN WRITING, AT THE TIME OF SUBMITTAL, OF ANY DEVIATIONS IN THE SUBMITTALS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- D. THE REVIEW AND APPROVAL OF SHOP DRAWINGS, SAMPLES OR PRODUCT DATA BY THE ENGINEER SHALL NOT RELIEVE THE CONTRACTOR FROM HIS/HER RESPONSIBILITY WITH REGARD TO THE FULFILLMENT OF THE TERMS OF THE CONTRACT DOCUMENTS. ALL RISKS OF ERROR AND OMISSION ARE ASSUMED BY THE CONTRACTOR AND THE ENGINEER WILL HAVE NO RESPONSIBILITY THEREFORE.

6. BORING LOGS, OTHER REPORTS AND DRAWINGS UTILIZED BY ENGINEER:

- A. BORING LOGS, OTHER REPORTS AND DRAWINGS UTILIZED BY ENGINEER, IF ENCLOSED, ARE PROVIDED FOR CONTRACTOR'S INFORMATION AND ARE NOT A PART OF THE CONTRACT DOCUMENTS. THERE IS NO TECHNICAL DATA IN THE BORING LOGS, OTHER REPORTS OR DRAWINGS THAT SHOULD BE RELIED ON BY THE CONTRACTOR.

7. CONSTRUCTION STAKING:

- A. THE BASELINES AND BENCHMARKS FOR PRIMARY CONTROL, NECESSARY TO ESTABLISH LINES AND GRADES NEEDED FOR CONSTRUCTION ARE SHOWN ON THE DRAWINGS. THESE BASELINES AND BENCHMARKS SHALL BE USED AS THE ORIGIN OF ALL SURVEYS, LAYOUTS AND MEASUREMENTS TO ESTABLISH CONSTRUCTION LINES AND GRADES. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT THE LOSS OR DAMAGE OF PRIMARY CONTROL POINTS, ANY STAKES AND/OR CONTROL POINTS LOST OR DAMAGED BY CONSTRUCTION ACTIVITY WILL BE RE-ESTABLISHED BY CONTRACTOR AT NO ADDITIONAL EXPENSE TO OWNER.
- B. CONSTRUCTION STAKING SHALL BE PERFORMED BY A PROFESSIONAL SURVEYOR AND MAPPER LICENSED IN THE STATE OF FLORIDA.

8. PROTECTION/ADJUSTMENT OF UTILITIES:

- A. UTILITY INSTALLATIONS AND STRUCTURES SHALL BE UNDERSTOOD TO INCLUDE ALL POLES, TRACKS, PIPES, WIRES, CONDUITS, HOUSE SERVICE CONNECTIONS, VAULTS, MANHOLES AND ALL OTHER APPURTENANCES AND FACILITIES PERTAINING THERETO, WHETHER OWNED OR CONTROLLED BY THE OWNER, OTHER GOVERNMENTAL BODIES OR PRIVATELY OWNED BY INDIVIDUALS, FIRMS OR CORPORATIONS, USED TO SERVE THE PUBLIC WITH TRANSPORTATION, TRAFFIC CONTROL, GAS, ELECTRICITY, TELEPHONE, SEWERAGE, DRAINAGE, WATER OR OTHER PUBLIC OR PRIVATE PROPERTY WHICH MAY BE AFFECTED BY THE WORK.
- B. CONTRACTOR SHALL PROTECT ALL UTILITY INSTALLATIONS AND STRUCTURES FROM DAMAGE DURING WORK. ACCESS ACROSS ANY BURIED PUBLIC UTILITY INSTALLATION OR STRUCTURE SHALL BE MADE ONLY IN SUCH LOCATIONS AND BY MEANS APPROVED BY THE UTILITY OWNER. THE CONTRACTOR SHALL SO ARRANGE OPERATIONS AS TO AVOID ANY DAMAGE TO THESE FACILITIES. ALL REQUIRED PROTECTIVE DEVICES AND CONSTRUCTION SHALL BE PROVIDED BY THE CONTRACTOR. ALL EXISTING PUBLIC UTILITIES DAMAGED BY THE CONTRACTOR WHICH ARE SHOWN ON THE DRAWINGS OR HAVE BEEN LOCATED IN THE FIELD BY THE UTILITY OWNER SHALL BE REPAIRED BY THE CONTRACTOR.
- C. PUBLIC UTILITY INSTALLATIONS OR STRUCTURES OWNED OR CONTROLLED BY THE OWNER OR OTHER GOVERNMENTAL BODY, WHICH ARE SHOWN ON THE DRAWINGS TO BE REMOVED, RELOCATED, REPLACED OR REBUILT BY THE CONTRACTOR SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS CONTRACT ITEMS. NO SEPARATE PAYMENTS SHALL BE MADE THEREFORE.
- D. WHERE PUBLIC UTILITY INSTALLATIONS OR STRUCTURES OWNED OR CONTROLLED BY THE OWNER OR OTHER GOVERNMENTAL BODY ARE ENCOUNTERED DURING THE COURSE OF THE WORK, AND ARE NOT INDICATED ON THE DRAWINGS OR IN THE SPECIFICATIONS, AND WHEN IN THE OPINION OF THE ENGINEER, REMOVAL, RELOCATION, REPLACEMENT OR REBUILDING IS NECESSARY TO COMPLETE THE WORK UNDER THIS CONTRACT, SUCH WORK SHALL BE ACCOMPLISHED BY THE UTILITY HAVING JURISDICTION, OR SUCH WORK MAY BE ORDERED, IN WRITING BY THE ENGINEER, FOR THE CONTRACTOR TO ACCOMPLISH. IF SUCH WORK IS ACCOMPLISHED BY THE UTILITY HAVING JURISDICTION IT WILL BE CARRIED OUT EXPEDITIOUSLY AND THE CONTRACTOR SHALL GIVE FULL COOPERATION TO PERMIT THE UTILITY TO COMPLETE THE REMOVAL, RELOCATION, REPLACEMENT OR REBUILDING AS REQUIRED. IF SUCH WORK IS ACCOMPLISHED BY THE CONTRACTOR, IT WILL BE IN ACCORDANCE WITH THE GENERAL AND SUPPLEMENTARY CONDITIONS.

- E. CONTRACTOR SHALL GIVE WRITTEN NOTICE TO OWNER AND GOVERNMENTAL UTILITY DEPARTMENTS AND OTHER OWNERS OF PUBLIC UTILITIES OF THE LOCATION OF THE PROPOSED CONSTRUCTION OPERATIONS, AT LEAST SEVENTY-TWO (72) HOURS IN ADVANCE OF BREAKING GROUND IN ANY AREA OR ON ANY UNIT OF THE WORK.
- F. THE MAINTENANCE, REPAIR, REMOVAL, RELOCATION OR REBUILDING OF PUBLIC UTILITY INSTALLATIONS AND STRUCTURES, WHEN ACCOMPLISHED BY THE CONTRACTOR AS HEREIN PROVIDED, SHALL BE DONE BY METHODS APPROVED BY THE UTILITY OWNER.

9. FIELD OBSERVATIONS AND TESTING:

- A. FIELD OBSERVATIONS WILL BE PERFORMED BY ENGINEER AND ALL FIELD TESTING OF MATERIALS WILL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. THE COST OF PASSING TESTS WILL BE PAID BY OWNER. FAILING TESTS SHALL BE PAID BY THE CONTRACTOR.
- B. FOR TESTS SPECIFIED TO BE MADE BY THE CONTRACTOR (FOR EQUIPMENT/MATERIAL PRIOR TO DELIVERY TO THE PROJECT SITE), THE TESTING PERSONNEL SHALL MAKE THE NECESSARY INSPECTIONS AND TESTS AND THE REPORTS THEREOF SHALL BE IN SUCH FORM AS WILL FACILITATE CHECKING TO DETERMINE COMPLIANCE WITH THE CONTRACT DOCUMENTS. SIX (6) COPIES OF THE REPORTS SHALL BE SUBMITTED AND AUTHORIZATIVE CERTIFICATION THEREOF MUST BE FURNISHED TO THE ENGINEER AS A PREREQUISITE FOR THE ACCEPTANCE OF ANY MATERIAL OR EQUIPMENT.
- C. IF, IN THE MAKING OF ANY TEST OF ANY MATERIAL, IT IS ASCERTAINED BY THE ENGINEER THAT THE MATERIAL DOES NOT COMPLY WITH THE CONTRACT, THE CONTRACTOR WILL BE NOTIFIED THEREOF AND WILL BE DIRECTED TO REFRAIN FROM DELIVERING SAID MATERIAL, OR TO REMOVE IT PROMPTLY FROM THE SITE OR FROM THE WORK AND REPLACE IT WITH ACCEPTABLE MATERIAL, WITHOUT ADDITIONAL COST TO THE OWNER.
- D. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE PROPER OPERATION OF MATERIAL DURING TESTS AND CONSTRUCTION PERIODS AND SHALL NEITHER HAVE NOR MAKE ANY CLAIM FOR DAMAGES THAT MAY OCCUR TO MATERIAL PRIOR TO THE TIME WHEN THE OWNER FORMALLY TAKES OVER THE OPERATION THEREOF.
- E. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING FIELD TESTING.

10. SALVAGE MATERIAL:

- A. ALL SALVAGEABLE MATERIAL AND EQUIPMENT REMOVED FROM THE EXISTING CONSTRUCTION FOR WHICH SPECIFIC USE, RELOCATION OR OTHER DISPOSAL IS NOT SPECIFICALLY NOTED ON THE DRAWINGS OR OTHERWISE SPECIFIED, SHALL REMAIN THE PROPERTY OF THE OWNER AND SHALL BE TURNED OVER TO HIM. ALL MATERIAL AND EQUIPMENT NOT IN SALVAGEABLE CONDITION AS DETERMINED BY THE ENGINEER, SHALL BE DISPOSED OF BY THE CONTRACTOR IN A LEGAL MANNER AT THE CONTRACTOR'S EXPENSE. THE ACTUAL STORAGE SITE FOR SALVAGEABLE MATERIAL WILL BE DESIGNATED BY THE OWNER.

11. CLEANING:

- A. DURING CONSTRUCTION OF THE WORK, THE CONTRACTOR SHALL, AT ALL TIMES, KEEP THE SITE OF THE WORK AND ADJACENT PREMISES AS FREE FROM MATERIAL, DEBRIS AND RUBBISH AS IS PRACTICABLE AND SHALL REMOVE THE SAME FROM ANY PORTION OF THE SITE IF, IN THE OPINION OF THE ENGINEER, SUCH MATERIAL, DEBRIS, OR RUBBISH CONSTITUTES A NUISANCE OR IS OBJECTIONABLE.
- B. AT THE CONCLUSION OF THE WORK, ALL TOOLS, TEMPORARY STRUCTURES AND MATERIALS BELONGING TO THE CONTRACTOR SHALL BE PROMPTLY TAKEN AWAY AND CONTRACTOR SHALL REMOVE AND PROMPTLY DISPOSE OF ALL RUBBISH OR ANY OTHER FOREIGN MATERIALS. THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL MATERIAL INSTALLED AND SHALL DELIVER SUCH MATERIALS UNDAMAGED IN A CLEAN AND NEW CONDITION.

12. DENSITY TESTING REQUIREMENTS:

- A. PIPE TRENCHES SHALL BE TESTED AT RANDOMLY SELECTED LOCATIONS ALONG THE LENGTH OF EACH PIPE RUN WITHIN EACH 300' INTERVAL (MAXIMUM) AND BETWEEN EACH SET OF TWO STRUCTURES IF A PIPE RUN SEPARATING THE TWO IS LESS THAN 300' IN LENGTH.
- B. ALL PIPE AND STRUCTURE TRENCHES SHALL BE BACKFILLED USING A MAX. OF 12" LIFTS. ALL BACKFILL MATERIAL SHALL BE CLEAN, DRY, STRUCTURAL FILL, WITH NO DELETERIOUS OR ORGANIC MATERIAL PRESENT.
- C. AT LEAST ONE TEST SHALL BE PERFORMED FOR EVERY 12" OF DEPTH, STARTING AT THE SPRINGLINE OF THE PIPE, COVERING THE 12" LAYER BELOW THE SPRINGLINE OF THE PIPE.
- D. TESTS SHALL BE PERFORMED AT EVERY STRUCTURE BEGINNING AT THE BASE OF THE STRUCTURE (COVERING THE 12" BELOW THE BASE OF THE STRUCTURE) WITH ONE TEST FOR EVERY 12" LIFT. TESTS SHALL ALTERNATE FROM CORNER TO CORNER OR FROM SIDE TO SIDE AROUND THE STRUCTURE WITH EACH 12" LIFT.
- E. ALL DENSITY TESTS SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER, LICENSED IN THE STATE OF FLORIDA.
- F. ALL TESTS AND LOCATIONS ARE SUBJECT TO REVIEW BY REPRESENTATIVES OF OUR OFFICE AND ADDITIONAL TESTS MAY BE REQUIRED BASED ON FIELD OBSERVATIONS OF CONSTRUCTION TECHNIQUES OR MATERIALS USED ON SITE.
- G. DENSITY TESTING SHALL BE PROVIDED FOR THE BASE COURSE EVERY 400 FEET OF THE ROADWAY.

DRAINAGE:

1. PIPE SHALL BE PROTECTED DURING STORAGE AND HANDLING AGAINST IMPACT SHOCKS AND FREE FALL. PIPE SHALL BE KEPT CLEAN AT ALL TIMES.
2. LAY PIPE TO SLOPE GRADIENTS NOTED ON THE DRAWINGS WITH A MAXIMUM VARIATION FROM TRUE SLOPE OF 1/8" INCH IN 10 FEET.
3. ALL PIPE SHALL BE CAREFULLY INSTALLED STARTING AT THE LOWEST END, WITH HUBS UPGRADE AND TONGUE END FULLY ENTERED INTO THE HUB.
4. ANY PIPE THAT IS NOT IN TRUE ALIGNMENT OR WHICH SHOWS ANY SETTLEMENT AFTER INSTALLATION SHALL BE TAKEN UP AND RE-INSTALLED AT NO ADDITIONAL COST TO OWNER.
5. PLACE PLUGS IN ENDS OF UNCOMPLETED PIPE AT END OF DAY OR WHENEVER WORK STOPS.
6. PIPE SHALL BE SET FIRMLY, ACCORDING TO THE LINES AND GRADE; AND PREPARATORY TO MAKING JOINTS, ALL SURFACES OF THE PORTION OF THE PIPE TO BE JOINTED SHALL BE THOROUGHLY CLEANED. THE PIPE SHALL BE LAID WITH THE GROOVE UPSTREAM. A SHALLOW EXCAVATION SHALL BE MADE UNDERNEATH THE PIPE AT THE JOINT.
7. INSTALL FILTER FABRIC JACKET AROUND THE FIRST JOINT OF ALL PIPE ENTERING OR LEAVING A DRAINAGE STRUCTURE AND AT ALL CONCRETE PIPE JOINTS. USE A FILTER FABRIC JACKET CONSISTING OF A PIECE OF WOVEN OR NON-WOVEN FILTER FABRIC WHICH PROVIDES AN APPARENT OPENING SIZE OF A NO. 70 TO NO. 100 SIEVE, 24 INCHES IN WIDTH AND A LENGTH SUFFICIENT TO PROVIDE A MINIMUM OVERLAP OF 24 INCHES. SECURE THE FILTER FABRIC JACKET AGAINST THE OUTSIDE OF THE CONCRETE PIPE BY STEEL OR PLASTIC STRAPPING.

PAVING:

1. DELIVER A REPRESENTATIVE LOAD OF THE ROCK MATERIAL TO THE SITE FOR A TESTING LABORATORY TO SAMPLE. ALLOW SUFFICIENT TIME FOR TEST LABORATORY TO ANALYZE BEFORE COMMENCING PLACEMENT ON THE ROAD. TESTING LABORATORY WILL DETERMINE LAB DENSITY PER AASHTO T180 AND THE LIMEROCK BEARING RATIO.
2. REPRESENTATIVE LOAD OF ROCK IS TO REMAIN IN STOCKPILE FORM THROUGHOUT ROCK DELIVERY SO THAT ENGINEER CAN MONITOR QUALITY OF ROCK MATERIAL BEING DELIVERED.
3. ROCK BASE: MINIMUM LIMEROCK BEARING RATIO OF 100, AT LEAST 97 PERCENT OF THE MATERIAL SHALL PASS A 3-1/2 INCH SIEVE AND THE MATERIAL SHALL BE GRADED UNIFORMLY DOWN TO DUST. ALL CRUSHING OR BREAKING-UP WHICH MAY BE NECESSARY IN ORDER TO MEET SUCH SIZE REQUIREMENT SHALL BE DONE BEFORE THE MATERIAL IS PLACED ON THE ROAD. MATERIAL SHALL NOT CONTAIN CHERTY OR OTHER EXTREMELY HARD PIECES, OR LUMPS, BALLS OR POCKETS OF SAND OR CLAY SIZE MATERIAL IN SUFFICIENT QUANTITY AS TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, OR STRENGTH OF THE ROCK BASE.
4. COMPACT SUBGRADE TO AT LEAST 98 PERCENT OF THE MAXIMUM DENSITY DETERMINED BY ASTM D1557 (AASHTO T180).
5. VERIFY SUBGRADE IS READY TO RECEIVE BASE MATERIAL.
6. SPREAD THE ROCK UNIFORMLY, REMOVE ALL SEGREGATED AREAS OF FINE OR COARSE ROCK AND REPLACE THEM WITH PROPERLY GRADED ROCK.
7. AFTER SPREADING OF THE BASE IS COMPLETED, THE ENTIRE SURFACE SHALL BE SCARIFIED AND SHAPED SO AS TO PRODUCE THE EXACT GRADE AND CROSS SECTION AFTER COMPACTION. FOR DOUBLE COURSE BASE, THIS SCARIFYING SHALL EXTEND TO A DEPTH SUFFICIENT TO PENETRATE SLIGHTLY THE SURFACE OF THE FIRST COURSE.
8. WHEN THE SPECIFIED THICKNESS OF THE ROCK BASE IS GREATER THAN 6 INCHES, CONSTRUCT THE BASE IN MULTIPLE COURSES OF EQUAL THICKNESS. INDIVIDUAL COURSES SHALL NOT BE LESS THAN 3 INCHES.
9. WHEN THE MATERIAL DOES NOT HAVE THE PROPER MOISTURE CONTENT TO INSURE THE REQUIRED DENSITY, WETTING OR DRYING WILL BE REQUIRED. IF THE MATERIAL IS DEFICIENT IN MOISTURE, WATER WILL BE ADDED AND UNIFORMLY MIXED IN BY DISKING THE BASE COURSE TO ITS FULL DEPTH. IF THE MATERIAL CONTAINS AN EXCESS OF MOISTURE, IT SHALL BE ALLOWED TO DRY BEFORE BEING COMPACTED. WETTING OR DRYING OPERATIONS SHALL INVOLVE MANIPULATION OF THE ENTIRE WIDTH AND DEPTH OF THE BASE AS A UNIT. AS SOON AS PROPER CONDITIONS OF MOISTURE ARE ATTAINED, THE MATERIAL SHALL BE COMPACTED TO AN AVERAGE DENSITY NOT LESS THAN NINETY-EIGHT (98) PERCENT OF THE MAXIMUM DENSITY DETERMINED BY AASHTO T-180.
10. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THE SURFACE SHALL BE "HARD-PLANED" WITH A BLADE GRADER IMMEDIATELY PRIOR TO THE APPLICATION OF THE PRIME COAT TO REMOVE THE THIN GLAZE OR CEMENTED SURFACE AND TO ALLOW FREE PENETRATION OF THE PRIME MATERIAL. THE MATERIALS PLANED FROM THE BASE SHALL BE REMOVED FROM THE BASE AREA.
11. IF, AT ANY TIME, THE SUBGRADE MATERIAL BECOMES MIXED WITH THE BASE COURSE MATERIAL, DIG OUT AND REMOVE THE MIXTURE, AND RESHAPE AND COMPACT THE SUBGRADE. THEN REPLACE THE MATERIALS REMOVED WITH CLEAN SUBGRADE MATERIAL AND SHAPE AND COMPACT. PERFORM THIS WORK AT NO ADDITIONAL EXPENSE TO THE OWNER.
12. IN THE PRESENCE OF THE ENGINEER, CHECK THE FINISHED SURFACE OF THE BASE COURSE WITH A TEMPLATE CUT TO THE REQUIRED CROWN AND WITH A 15-FOOT STRAIGHTEDGE LAID PARALLEL TO THE CENTERLINE OF THE ROAD, CORRECT ALL IRREGULARITIES GREATER THAN 1/4 INCH TO THE SATISFACTION OF THE ENGINEER BY SCARIFYING AND REMOVING OR ADDING ROCK AS REQUIRED, AND RECOMPACT THE ENTIRE AREA.
13. IF CRACKS OR CHECKS APPEAR IN THE BASE, EITHER BEFORE OR AFTER PRIMING, WHICH IN THE OPINION OF THE ENGINEER WOULD IMPAIR THE STRUCTURAL EFFICIENCY OF THE BASE COURSE, THE CONTRACTOR SHALL REMOVE SUCH CRACKS OR CHECKS BY RECARIFYING, RESHAPING, ADDING BASE MATERIAL WHERE NECESSARY AND RECOMPACTING.
14. ASPHALT MIX DESIGN FOR EACH ASPHALT TYPE SPECIFIED ON THE DRAWINGS. MIX DESIGN SHALL INCLUDE THE INFORMATION SPECIFIED IN PARAGRAPH 334-3 OF THE FDOT SPECIFICATIONS.
15. PRIMER: PROVIDE CUTBACK ASPHALT, RC-70 OR RC-250 COMPLYING WITH FDOT SPECIFICATION 916-3.
16. ASPHALT CONCRETE: ASPHALTIC CONCRETE SURFACE COURSE SHALL BE COMPOSED OF A MIXTURE OF AGGREGATE, MINERAL FILLER, IF NEEDED, AND ASPHALT CEMENT. THE CONSTITUENTS OF THE MIXTURE SHALL BE COMBINED IN SUCH PROPORTIONS AS TO PRODUCE A MIXTURE HAVING A STABILITY WITHIN THE LIMITS IN THE FDOT "STANDARD SPECIFICATIONS". THE JOB MIX FORMULA, SIZE AND PERCENT OF AGGREGATES SHALL BE AS SPECIFIED IN THE FDOT "STANDARD SPECIFICATIONS". THE THICKNESS OF THE SURFACE COURSE SHALL BE AS SHOWN ON THE DETAILED DRAWINGS.
17. SPREAD THE ASPHALT MIXTURE ONLY WHEN THE SURFACE UPON WHICH IT IS TO BE LAID HAS BEEN PREVIOUSLY PREPARED, IS INTACT, FIRM, AND PROPERLY CURED, AND IS DRY.
18. VERIFY GRADIENTS AND ELEVATIONS OF BASE ARE CORRECT.
19. DO NOT BEGIN PAVING INSTALLATION WITHOUT ENGINEER ACCEPTANCE OF THE SUBSTRATE.
20. SPREAD THE ASPHALT MIXTURE ONLY WHEN THE AIR TEMPERATURE IN THE SHADE AND AWAY FROM THE ARTIFICIAL HEAT IS AT LEAST 40°F FOR LAYERS GREATER THAN 1-INCH IN THICKNESS AND AT LEAST 45°F FOR LAYERS 1-INCH OR LESS IN THICKNESS.
21. CLEAN THE SURFACE OF THE BASE OR PAVEMENT TO BE COVERED OF ALL LOOSE AND DELETERIOUS MATERIAL BY THE USE OF POWER BROOMS OR BLOWERS, SUPPLEMENTED BY HAND BROOMING WHERE NECESSARY.
22. WHERE AN ASPHALT MIX IS TO BE PLACED ON AN EXISTING PAVEMENT OR OLD BASE WHICH IS IRREGULAR, FILL ALL DEPRESSIONS IN THE EXISTING SURFACE MORE THAN 1 INCH DEEP BY SPOT PATCHING WITH A LEVELING COURSE MIXTURE, AND THEN COMPACT THEM THOROUGHLY. FILL CRACKS LARGER THAN 1/4 INCH IN WIDTH WITH A SLURRY MIXTURE OF SAND AND EMULSION.
23. PRIMER:
- A. APPLY PRIMER OVER SUBSTRATE AT A UNIFORM RATE OF NOT LESS THAN 0.15 GALLONS/SQUARE YARD FOR SHELLROCK BASES AND NOT LESS THAN 0.10 GALLONS/SQUARE YARD FOR LIMEROCK BASES.
- B. APPLY TO CONTACT SURFACES OF CURBS, GUTTERS, AND OTHER CEMENT SURFACES.
- C. USE CLEAN SAND TO BLOT EXCESS PRIMER.
24. MAINTAIN THE TEMPERATURE OF THE MIX AT THE TIME OF SPREADING WITHIN ±25°F OF THE ESTABLISHED MIX TEMPERATURE. ENGINEER WILL TAKE MIX TEMPERATURES AT AN AVERAGE FREQUENCY OF ONE PER FIVE TRUCKS. IF THE TEMPERATURE FAILS TO FALL WITHIN THE SPECIFIED TOLERANCE RANGE, TAKE CORRECTIVE ACTION.
25. IMMEDIATELY CEASE TRANSPORTATION OF ASPHALT MIXTURES FROM THE PLANT WHEN RAIN BEGINS AT THE ROADWAY. DO NOT PLACE ASPHALT MIXTURES WHILE RAIN IS FALLING, OR WHEN THERE IS WATER ON THE SURFACE TO BE COVERED.
26. BEFORE STARTING ANY ROLLING, CHECK THE SURFACE; CORRECT ANY IRREGULARITIES; REMOVE ALL DRIPPINGS, FAT SANDY ACCUMULATIONS FROM THE SCREED, AND FAT SPOTS FROM ANY SOURCE AND REPLACE THEM WITH SATISFACTORY MATERIAL. WHEN CORRECTING A DEPRESSION WHILE THE MIXTURE IS HOT, SCARIFY THE SURFACE AND ADD FRESH MIXTURE.
27. COMPACT MIXTURE IN ACCORDANCE WITH PARAGRAPH 330-10 OF THE FDOT SPECIFICATIONS.
28. OBTAIN A SMOOTH SURFACE ON ALL PAVEMENT COURSES PLACED AND THEN STRAIGHTEDGE ALL INTERMEDIATE AND FINAL COURSES WITH A 15-FOOT ROLLING STRAIGHTEDGE. FURNISH A 15-FOOT STRAIGHTEDGE AND MAKE IT AVAILABLE AT THE JOB SITE AT ALL TIMES DURING THE PAVING OPERATION FOR CHECKING JOINTS AND SURFACE IRREGULARITIES.
29. PRODUCE A FINISHED SURFACE OF UNIFORM TEXTURE AND COMPACTION WITH NO PULLED, TORN, OR LOOSENED PORTIONS AND FREE OF SEGREGATION, AND STREAKS, SAND SPOTS, OR RIPPLES.
30. UPON COMPLETION OF FINAL SURFACE COURSE ENGINEER WILL TEST FINISHED SURFACE WITH A 15-FOOT ROLLING STRAIGHTEDGE. CORRECT ALL DEFICIENCIES IN EXCESS OF 3/16-INCH IN ACCORDANCE WITH PARAGRAPH 330-12 OF THE FDOT SPECIFICATIONS.
31. ENGINEER MAY DETERMINE PAVEMENT THICKNESS FROM THE DEPTH OF CORE BORINGS. THE MAXIMUM ALLOWABLE DEFICIENCY IN THICKNESS FOR PAVEMENT OF A SPECIFIED THICKNESS OF 2 1/2 INCHES OR MORE IS 1/4 INCH. FOR PAVEMENT OF A SPECIFIED THICKNESS OF LESS THAN 2 1/2 INCHES IS 1/4 INCH.
32. IMMEDIATELY AFTER PLACEMENT, PROTECT PAVEMENT FROM MECHANICAL INJURY FOR AS LONG AS REQUIRED UNTIL ACCEPTED BY ENGINEER.

EARTHWORK:

1. CONTRACTOR SHALL OBTAIN A "DEWATERING GENERAL WATER USE PERMIT" FROM THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT PRIOR TO COMMENCING DEWATERING UNLESS THE WORK QUALIFIES FOR A "NO-NOTICE" AUTHORIZATION AS DESCRIBED IN RULE 40E-20.302(3) OF THE FLORIDA ADMINISTRATIVE CODE.
2. CONTRACTOR SHALL LOCATE EXISTING UNDERGROUND UTILITIES IN THE AREA OF THE WORK AS CONSTRUCTION PROCEEDS. IF UTILITIES ARE TO REMAIN IN PLACE, PROVIDE ADEQUATE MEANS OF PROTECTION.
3. SHOULD UNCHARTED OR INCORRECTLY CHARTED PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, NOTIFY THE ENGINEER IMMEDIATELY. COOPERATE WITH RESPONSIBLE UTILITY COMPANIES IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION.
4. DO NOT INTERRUPT EXISTING UTILITIES SERVING FACILITIES OCCUPIED AND USED BY OWNER OR OTHERS, EXCEPT WHEN PERMITTED IN WRITING BY THE RESPECTIVE UTILITY OWNER.
5. CONTRACTOR SHALL SUSTAIN IN THEIR PLACES AND PROTECT FROM DIRECT OR INDIRECT INJURY ALL PIPES, POLES, UTILITIES, WALLS, BUILDINGS, AND OTHER STRUCTURES OR PROPERTY IN THE VICINITY OF WORK, WHETHER ABOVE OR BELOW THE GROUND, OR THAT MAY APPEAR IN THE TRENCH. CONTRACTOR SHALL TAKE ALL RISKS ATTENDANT TO THE PRESENCE OR PROXIMITY OF PIPES, POLES, WALLS, BUILDINGS, AND OTHER STRUCTURES AND PROPERTY, OF EVERY KIND AND DESCRIPTION, IN OR OVER HIS TRENCHES. EXCAVATIONS OR IN THE VICINITY OF HIS WORK WHETHER ABOVE OR BELOW THE GROUND AND SHALL BE RESPONSIBLE FOR ALL DAMAGE AND ASSUME ALL EXPENSE FOR DIRECT OR INDIRECT INJURY, CAUSED BY HIS WORK, TO ANY OF THEM, OR TO ANY PERSON OR PROPERTY BY REASON OF INJURY TO THEM, WHETHER SUCH STRUCTURES ARE OR ARE NOT SHOWN ON THE DRAWINGS.
6. PROTECT STRUCTURES, UTILITIES, SIDEWALKS, PAVEMENTS, BENCHMARKS, AND OTHER FACILITIES FROM DAMAGE CAUSED BY SETTLEMENT, LATERAL MOVEMENT, UNDERMINING, WASHOUT, AND OTHER HAZARDS CREATED BY EXCAVATING OPERATIONS.
7. PROVIDE EROSION CONTROL MEASURES TO PREVENT EROSION OR DISPLACEMENT OF SOILS AND DISCHARGE OF SOIL BEARING WATER RUNOFF OR AIRBORNE DUST TO ADJACENT PROPERTIES AND WALKWAYS.
8. WHEN EXCAVATIONS EXCEED 5 FEET IN DEPTH, CONTRACTOR SHALL MEET THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S EXCAVATION SAFETY STANDARDS 29 C.F.R.S. 1926.650, SUBPART P.
9. MATERIAL BELOW SUBGRADE DEEMED UNSUITABLE SHALL BE REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
10. EXCAVATION IN THE VICINITY OF ADJACENT FACILITIES SHALL BE PERFORMED BY MEANS THAT WILL NOT DAMAGE THE FACILITIES. ANY DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED TO THE SATISFACTION OF THE FACILITY'S OWNER AT NO ADDITIONAL COST TO OWNER.
11. TRENCH BOTTOM SHALL BE SHAPED TO CONFORM TO PIPE BELLS OR OTHER SHAPE IRREGULARITIES OF SPECIAL APPURTENANCES.
12. WHERE A TRENCH CROSSES EXISTING PAVED AREAS OR ROADWAYS WHICH HAVE NOT BEEN SCHEDULED TO BE REPAVED ON THE DRAWINGS, THE PAVED AREA SHALL BE SAW CUT, RIPPING OF PAVEMENT FOR TRENCHES WITH EXCAVATION EQUIPMENT WILL NOT BE ALLOWED.
13. SATISFACTORY EXCAVATED MATERIALS SHALL BE STOCKPILED UNTIL REQUIRED FOR BACKFILL. STOCKPILES SHALL BE PLACED, GRADED AND SHAPED FOR PROPER DRAINAGE.
14. SOIL MATERIALS SHALL BE LOCATED AND RETAINED AWAY FROM EDGES OF EXCAVATIONS.
15. EXCESS AND/OR UNSATISFACTORY MATERIALS SHALL BE DISPOSED OF OFFSITE.
16. GENERAL: PROVIDE BORROW SOIL MATERIALS WHEN SUFFICIENT SATISFACTORY SOIL MATERIALS ARE NOT AVAILABLE FROM EXCAVATIONS.
17. SATISFACTORY SOILS: ASTM D2487 SOIL CLASSIFICATION GROUPS GW, GP, GM, SW, SP, AND SM, OR A COMBINATION OF THESE GROUPS, FREE OF ROCK OR GRAVEL LARGER THAN 3 INCHES IN ANY DIMENSION, DEBRIS, WASTE, VEGETATION, AND OTHER DELETERIOUS MATTER.
18. UNSATISFACTORY SOILS: ASTM D2487 SOIL CLASSIFICATION GROUPS GC, SC, ML, MH, CL, CH, OL, OH AND PT, OR A COMBINATION OF THESE GROUPS.
19. UNSATISFACTORY SOILS ALSO INCLUDE SATISFACTORY SOILS NOT MAINTAINED WITHIN 2 PERCENT OF OPTIMUM MOISTURE CONTENT AT TIME OF COMPACTION.
20. BACKFILL AND FILL: SATISFACTORY SOIL MATERIALS.
21. BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED TWELVE INCHES IN DEPTH AS MEASURED BEFORE COMPACTION. EACH LAYER SHALL BE COMPACTED TO AT LEAST THE MINIMUM PERCENTAGE OF A MODIFIED PROCTOR (ASTM D1557) SPECIFIED IN THE COMPACTION SCHEDULED IN PARAGRAPH 3.03.
22. AREAS ADJACENT TO STRUCTURES AND OTHER CONFINED AREAS INACCESSIBLE TO A VIBRATORY ROLLER SHALL BE COMPACTED WITH A MANUALLY OPERATED VIBRATORY COMPACTOR.
23. IT IS THE INTENTION THAT THE FILL MATERIALS WITH RESPECT TO MOISTURE BE USED IN THE CONDITION THEY ARE EXCAVATED INsofar as THIS IS PRACTICABLE. MATERIAL WHICH IS TOO WET SHALL BE SPREAD ON THE FILL AREA AND PERMITTED TO DRY, ASSISTED BY HARROWING IF NECESSARY, UNTIL THE MOISTURE CONTENT IS REDUCED TO ALLOWABLE LIMITS.
24. IF ADDED MOISTURE IS REQUIRED, WATER SHALL BE APPLIED BY SPRINKLER TANKS OR OTHER SPRINKLER SYSTEMS WHICH WILL INSURE UNIFORM DISTRIBUTION OF THE WATER OVER THE AREA TO BE TREATED AND GIVE COMPLETE AND ACCURATE CONTROL OF THE AMOUNT OF WATER TO BE USED. IF TOO MUCH WATER IS ADDED THE AREA SHALL BE PERMITTED TO DRY BEFORE COMPACTION IS CONTINUED.
25. SUPPLY ALL HOSE, PIPING, VALVES, SPRINKLERS, PUMPS, SPRINKLER TANKS, HAULING EQUIPMENT, AND ALL OTHER MATERIALS AND EQUIPMENT NECESSARY TO PLACE THE WATER ON THE FILL.
26. UNSUITABLE AND SURPLUS EXCAVATED MATERIALS BECOME THE PROPERTY OF THE CONTRACTOR AND ARE TO BE REMOVED AND DISPOSED OF OFF SITE.
27. SUITABLE EXCAVATED MATERIAL MAY BE USED FOR FILL OR BACKFILL IF IT MEETS THESE SPECIFICATIONS.
28. ALLOW TESTING LABORATORY TO INSPECT AND TEST SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTHWORK ONLY AFTER TEST RESULTS FROM PREVIOUSLY COMPLETED WORK COMPLIES WITH REQUIREMENTS.
29. TESTING AGENCY WILL TEST COMPACTION OF SOILS IN PLACE ACCORDING TO ASTM D2922.
30. WHEN TESTING AGENCY REPORTS THAT SUBGRADES, FILLS OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL TO DEPTH REQUIRED, RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
31. PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION. KEEP FREE OF TRASH AND DEBRIS.
32. REPAIR AND RE-ESTABLISH GRADES TO SPECIFIED TOLERANCES WHERE COMPLETED OR PARTIALLY COMPLETED SURFACES BECOME ERODED, RUTTED, SETTLED, OR WHERE THEY LOSE COMPACTION DUE TO SUBSEQUENT CONSTRUCTION OPERATIONS OR WEATHER CONDITIONS.

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