

1. EXCEPT WHERE MODIFIED BY THE FOLLOWING PROVISIONS, ALL EARTHWORK OPERATION AND COMPACTION REQUIREMENTS SHALL BE IN CONFORMANCE WITH THE MATERIAL, INSTALLATION AND TESTING REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S (IDOT) "STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION" ADOPTED OCTOBER 1, 1988 INCLUDING ALL APPLICABLE CURRENT SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS.

2. EARTHWORK SHALL INCLUDE SITE CLEARING (TREE AND BRUSH REMOVAL), STRIPPING AND STOCKPILING TOPSOIL, EARTH EXCAVATION, CONSTRUCTION OF EMBANKMENTS, PLACEMENT OF PAVEMENT AND STRUCTURAL FILLS, REMOVAL AND DISPOSAL OF SURPLUS AND UNSUITABLE MATERIALS, TOPSOIL REPLACEMENT AND FINAL SHAPING AND TRIMMING TO THE LINES AND GRADES INDICATED ON THE PLANS.

3. BRUSH AND TREES (INCLUDING STUMPS AND ROOTS) SHALL BE REMOVED WHERE NECESSARY FOR THE CONSTRUCTION OF PAVEMENTS, UNDERGROUND UTILITIES, CULVERTS, DITCHES, DETENTION BASIN AREAS, AND BUILDINGS. NO TREE SHALL BE REMOVED UNLESS IT IS SPECIFICALLY MARKED OR AUTHORIZED FOR REMOVAL BY THE ENGINEER. REMOVAL AND DISPOSAL OF BRUSH AND TREES LESS THAN 6" IN DIAMETER SHALL BE INCIDENTAL TO THE EARTHWORK CONTRACT. BRUSH AND TREES SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGAL MANNER.

4. TOPSOIL SHALL BE STRIPPED FROM PAVEMENT AREAS, BUILDING AREAS, OPEN SPACE CUT AREAS AND CLAY FILL AREAS. SUFFICIENT TOPSOIL SHALL BE STOCKPILED AT LOCATIONS DESIGNATED BY THE ENGINEER FOR FUTURE USE AS TOPSOIL REPLACEMENT WITHIN DISTURBED OPEN SPACE AREAS AND BUILDING LANDSCAPE AREAS. REMAINING TOPSOIL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF.

(A) UNDER PAVEMENTS SHALL BE REMOVED TO A DEPTH WHERE THE MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF THE SOILS ENCOUNTERED IS 1.0 TONS PER SQUARE FEET, AS DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER.

(B) REMOVAL OF UNSUITABLE MATERIAL AND PLACEMENT OF FILL MATERIAL UNDER AND ADJACENT TO PROPOSED BUILDING STRUCTURES SHALL BE AS SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.

(C) SUCH UNSUITABLE MATERIAL MAY BE SPREAD WITHIN ADJACENT OPEN SPACE AREAS WHERE FILL IS REQUIRED. IF BORROW PITS ARE REQUIRED TO OBTAIN SUFFICIENT CLAY FILL, UNSUITABLE MATERIAL MAY BE USED TO BRING THE BORROW AREAS TO DESIGN GRADE. DISPOSAL OF SUCH MATERIAL SHALL BE LIMITED TO AREAS AUTHORIZED BY THE ENGINEER. IF SUFFICIENT ACCEPTABLE PLACEMENT AREAS ARE NOT AVAILABLE, REMAINING UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF.

6. EARTH (CLAY) EXCAVATION SHALL BE PLACED AS COMPACTED FILL UNDER PROPOSED AND FUTURE PAVEMENTS AND BUILDINGS, WHERE REQUIRED. ADDITIONAL EARTH EXCAVATION SHALL BE USED TO FILL ADJACENT OPEN SPACE AREAS TO DESIGN GRADES (LESS 6" TOPSOIL). ANY REMAINING EARTH EXCAVATION SHALL BE REMOVED FROM THE SITE AND DISPOSED OF.

FILL MATERIAL SHALL BE PLACED IN LIFTS WITH A MAXIMUM THICKNESS OF 8" AND COMPACTED AT $\pm 2\%$ OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH THE FOLLOWING:

(A) UNPAVED AREAS: COMPACT TOP 6" OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO 75% RELATIVE DENSITY FOR FREE-DRAINING COHESIONLESS SOILS (ASTM D4253 & D4254), AND 85% MAXIMUM DENSITY FOR COHESIVE SOIL MATERIAL AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D698).

(B) PAVEMENT AREAS: COMPACT TOP 12" OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO 80% RELATIVE DENSITY FOR FREE-DRAINING COHESIONLESS SOILS (ASTM D4253 & D4254) AND 95% MAXIMUM DENSITY FOR COHESIVE SOILS AS DETERMINED BY THE STANDARD PROCTOR METHOD (ASTM D698).

(C) BUILDING AREAS: COMPACT TOP 12" OF SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO 85% RELATIVE DENSITY FOR FREE-DRAINING COHESIONLESS SOILS (ASTM D4253 & D4254) AND 95% MAXIMUM DENSITY FOR COHESIVE SOILS AS DETERMINED BY THE MODIFIED PROCTOR METHOD (ASTM D1557).

(A) WHERE THE SUBGRADE OR LAYER OF SOIL MATERIAL MUST BE MOISTURE CONDITIONED BEFORE COMPACTION, UNIFORMLY APPLY WATER TO THE SURFACE OF SUBGRADE, OR LAYER OF SOIL MATERIAL, IN A MANNER WHICH PREVENTS FREE WATER FROM APPEARING ON THE SURFACE DURING OR SUBSEQUENT TO COMPACTION OPERATIONS.

(B) REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, SOIL MATERIAL THAT IS TOO WET TO PERMIT COMPACTION TO SPECIFIED DENSITY.

9. MINIMUM TOPSOIL REPLACEMENT DEPTH SHALL BE 6". SUCH TOPSOIL SHALL BE PLACED WITHIN PAVEMENT PARKWAYS AND ISLANDS, LANDSCAPE AREAS AND ALL CUT AND CLAY FILL LOCATIONS WITHIN OPEN SPACE AREAS TO BRING THESE AREAS TO FINAL GRADE. ALL AREAS RECEIVING TOPSOIL FILL SHALL BE GRADED AND SHAPED TO SPECIFIED ELEVATIONS AND CONTOURS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINDING LOCATIONS AND OBTAINING APPROVALS FOR THE NECESSARY OFF-SITE DISPOSAL OF BRUSH, TREES AND EXCAVATED MATERIALS.

11. BITUMINOUS CONCRETE AND GRANULAR BASE MATERIALS REMOVED FROM EXISTING PAVEMENT AREAS MAY BE USED AS STRUCTURAL FILL UNDER PAVEMENTS AND BUILDINGS, SUBJECT TO GRADATION, PLACEMENT AND COMPACTION CONTROL BY THE PROJECT GEOTECHNICAL ENGINEER.

12. REMOVAL AND DISPOSAL OF EXISTING PIPES OR OTHER OBSTRUCTIONS (EXCEPT BUILDING STRUCTURES) WHICH INTERFERE WITH PROPOSED CONSTRUCTION AND WHICH ARE NOT INCLUDED AS A SEPARATE PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

1. ALL STREET, PARKING AREA, DRIVEWAY, PATHWAY AND SIDEWALK PAVEMENTS (INCLUDING CURBS AND SHOULDERS) SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MATERIAL AND INSTALLATION REQUIREMENTS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S (IDOT) "STANDARD SPECIFICATIONS FOR ROAD

AND BRIDGE CONSTRUCTION", ADOPTED OCTOBER 1, 1988,
INCLUDING ALL APPLICABLE CURRENT SUPPLEMENTAL
SPECIFICATIONS AND SPECIAL PROVISIONS; EXCEPT WHERE SAID
REQUIREMENTS ARE MODIFIED BY THE FOLLOWING PROVISIONS.

2. PRIOR TO PLACEMENT OF PAVEMENT MATERIAL, ALL SUBGRADE AREAS SHALL BE PROOFROLLED TO DETECT POSSIBLE UNSUITABLE OR UNSTABLE SOIL CONDITIONS. (PROOFROLLING SHALL BE WITNESSED BY THE PROJECT GEOTECHNICAL ENGINEER.) SHOULD UNSUITABLE OR UNSTABLE MATERIAL BE ENCOUNTERED WITHIN PAVEMENT AREAS, IT SHALL BE REMOVED TO A DEPTH WHERE THE UNCONFINED COMPRESSIVE STRENGTH OF THE SOIL IS A MINIMUM OF 1.0 TONS PER SQUARE FOOT OR AS DIRECTED BY THE PROJECT GEOTECHNICAL ENGINEER. SUCH MATERIALS SHALL BE REPLACED WITH SUITABLE FILL MATERIAL (GRANULAR OR CLAY) COMPACTED IN PLACE.

3. WHERE INDICATED ON THE PROJECT PLANS, GEOTEXTILE REINFORCEMENT FABRIC (MIRAFI 500X OR APPROVED EQUAL) SHALL BE PLACED ON THE SUBGRADE PRIOR TO INSTALLATION OF THE PAVEMENT MATERIAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

4. VARIOUS PAVEMENT TYPES, MATERIALS AND THICKNESSES TO BE PROVIDED SHALL BE AS INDICATED ON THE PROJECT PLANS.

5. AGGREGATE BASE COURSES SHALL BE AGGREGATE, TYPE B (100% CRUSHED) AND SHALL BE COMPACTED TO 95% OF STANDARD LABORATORY DENSITY, PCC PAVEMENT SUB-BASE SHALL BE GRANULAR MATERIAL, TYPE B AND SHALL BE COMPACTED TO 95% OF STANDARD LABORATORY DENSITY. STANDARD LABORATORY DENSITY SHALL BE MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH ASTM D 698.

6. SURFACE AND BINDER COURSES SHALL BE BITUMINOUS CONCRETE, CLASS 1. COMPACTION SHALL BE IN ACCORDANCE WITH ARTICLE 406.15B OF THE STANDARD SPECIFICATIONS. SPECIFICALLY THE BINDER AND SURFACE COURSES SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 93% OF THE MAXIMUM THEORETICAL DENSITY AS DETERMINED BY AASHTO T209.

7. BITUMINOUS PAVEMENT MATERIALS SHALL MEET OR EXCEED THE FOLLOWING STRENGTH REQUIREMENTS:

BITUMINOUS CONCRETE, CLASS I	1700 M.S.
BITUMINOUS AGGREGATE MIXTURE (BAM)	1700 M.S.
AGGREGATE, TYPE B (100% CRUSHED)	80 IBR
GRANULAR MATERIAL, TYPE B	30 IBR

8. BINDER COURSE MATERIAL MAY CONTAIN RECYCLED BITUMINOUS MATERIAL SALVAGED FROM COLD MILLING OR CRUSHING OF EXISTING HOT-MIX BITUMINOUS MIXTURES. SUCH NEW BINDER COURSES SHALL BE IN CONFORMANCE WITH ALL APPLICABLE IDOT REQUIREMENTS INCLUDING IDOT SPECIAL PROVISIONS #7A AND 7B (HOT-MIX RECYCLING).

9. BITUMINOUS PRIME COATS SHALL BE APPLIED AT THE FOLLOWING RATES:

ON BITUMINOUS BINDER OR BASE - 0.05 GALLONS/S.Y.
ON AGGREGATE BASE - 0.25 GALLONS/S.Y.

10. PORTLAND CEMENT CONCRETE (PCC) FOR CURBING, SIDEWALKS AND VEHICLE PAVEMENTS SHALL CONFORM TO IDOT REQUIREMENTS (3500 PSI, 5 TO 8% AIR-ENTRAINMENT) AND SHALL BE PROPERLY CURED IN-PLACE. SLUMP SHALL BE NOT LESS THAN 2 INCHES OR MORE THAN 5 INCHES.

11. PCC VEHICLE PAVEMENTS AND PCC SIDEWALKS ADJACENT TO DRIVEWAYS OR PARKING AREAS SHALL RECEIVE A LINSEED OIL PROTECTIVE COAT APPLICATION (2 COATS) PER IDOT SPECIFICATIONS.

12. PAVEMENT MARKINGS ON DRIVEWAYS AND PARKING LOTS SHALL BE OF A PAINT SUITABLE FOR SUCH USE AND MEETING IDOT SPECIFICATIONS. ALL PARKING SPACES SHALL BE DEFINED WITH 4" LINES. STOP LINES SHALL BE 16" WIDE.

13. PAVEMENT LANE AND AUXILIARY MARKINGS ON PUBLIC ROADWAYS SHALL BE REFLECTORIZED THERMOPLASTIC MATERIAL IN CONFORMANCE WITH IDOT MATERIAL AND INSTALLATION SPECIFICATIONS. REQUIRED MARKINGS SHALL BE AS INDICATED ON THE ROADWAY PLANS.

A. GENERAL REQUIREMENTS:

1. ALL SEWER AND WATERMAIN IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MATERIAL, INSTALLATION AND TESTING REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS" 4TH EDITION (MAY, 1986); EXCEPT WHERE SAID REQUIREMENTS ARE MODIFIED BY THE FOLLOWING PROVISIONS.

2. ALL SEWERS SHALL BE PLACED ON A GRANULAR CRADLE (BEDDING) WHICH SHALL BE NOT LESS THAN 4" IN THICKNESS UNDER THE PIPE AND CONSIST OF GRADED CRUSHED STONE 1/4" TO 3/4" IN SIZE. SUCH CRADLE MATERIAL SHALL EXTEND TO THE HORIZONTAL MIDPOINT OF THE PIPE, UNLESS OTHERWISE NOTED.

FLEXIBLE PLASTIC PIPE SHALL BE BEDDED AND BACKFILLED IN ACCORDANCE WITH ASTM D-2321. CLASS I EMBEDMENT (ANGULAR GRADED STONE) SHALL BE USED AND SHALL EXTEND FROM 4" UNDER THE PIPE TO 6" ABOVE THE TOP OF PIPE.

THE COST OF PROVIDING AND PLACING GRANULAR CRADLE AND EMBEDMENT MATERIAL SHALL BE INCLUDED AS PART OF THE UNIT PRICE FOR SEWER CONSTRUCTION OF THE SIZE AND TYPE SPECIFIED.


3. WHEN UNSUITABLE SOIL CONDITIONS ARE ENCOUNTERED UNDER SEWERS WHICH REQUIRE THE REMOVAL OF UNSUITABLE MATERIALS BELOW THE DEPTH OF THE STANDARD BEDDING, THE CONTRACTOR SHALL REPLACE THE MATERIAL REMOVED WITH GRANULAR MATERIAL OF THE GRADATION APPROVED BY THE ENGINEER.

PAYMENT FOR UNSUITABLE SOIL REMOVAL SHALL BE MADE AT THE CONTRACT UNIT PRICE PER CUBIC YARD OF SOIL REMOVED AND REPLACED WITH GRANULAR MATERIAL. THE CONTRACT UNIT PRICE SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE UNSUITABLE MATERIAL AND SUPPLYING AND PLACING THE GRANULAR FILL.

4. WHEREVER THE REQUIRED 18" VERTICAL SEPARATION CANNOT BE MAINTAINED BETWEEN A SEWER AND A WATER MAIN, AND

**NETTLE CREEK GOLF COURSE
STOCKDALE RD. & SARATOGA RD.
ERIENNA TOWNSHIP, ILLINOIS**

GENERAL NOTES

SCALE:	APPROVED BY	DRAWN BY
DATE: 7/9/90		
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