GENERAL NOTES

1. PRIOR TO COMMENCEMENT OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, AND CONDITIONS AFFECTING THEIR WORK WITH THE ACTUAL CONDITIONS AT THE JOB SITE. IN ADDITION, THE CONTRACTOR MUST VERIFY THE LINE AND GRADES. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONSTRUCTION PLANS, STANDARD SPECIFICATIONS AND/OR SPECIAL DETAILS. THE CONTRACTOR SHALL SECURE WRITTEN INSTRUCTION FROM THE ENGINEER PRIOR TO PROCEEDING WITH ANY PART OF THE WORK AFFECTED BY OMISSION OR DISCREPANCIES. FAILING TO SECURE SUCH INSTRUCTION. THE CONTRACTOR WILL BE CONSIDERED TO HAVE PROCEEDED AT HIS OWN RISK AND EXPENSE. IN THE EVENT OF ANY DOUBT OR QUESTION ARISING WITH RESPECT TO THE TRUE MEANING OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE DECISION OF THE ENGINEER SHALL BE FINAL AND CONCLUSIVE.

2. THE STANDARD SPECIFICATIONS, CONSTRUCTION PLANS, AND SUBSEQUENT DETAILS ARE ALL TO BE CONSIDERED AS PART OF THE CONTRACT. INCIDENTAL ITEMS OR ACCESSORIES NECESSARY TO COMPLETE THIS WORK MAY NOT BE SPECIFICALLY NOTED BUT ARE TO BE CONSIDERED PART OF THE CONTRACT. ALL CONSTRUCTION SHALL CONFORM TO THE VILLAGE OF DOWNERS GROVE STANDARDS AND SPECIFICATIONS.

3. THE CONTRACTORS FOR ALL CONTRACTS SHALL NOTIFY J.U.L.I.E., THE SANITARY DISTRICT, AND ANY APPLICABLE ENGINEERING OR BUILDING DEPARTMENTS TWO (2) WORKING DAYS MINIMUM PRIOR TO START OF WORK. AS REQUIRED, THE UTILITY COMPANIES WILL ESTABLISH ON THE GROUND, THE LOCATION OF UNDERGROUND PIPES, CONDUITS OR CABLES ADJOINING OR CROSSING PROPOSED CONSTRUCTION.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY THAT UNDERGROUND CONSTRUCTION SHALL COMPLY WITH "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", ADOPTED MAY 1996 OR LATEST REVISION.

5. ALL EXCAVATION WORK SHALL COMPLY WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION "SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.", ADOPTED JANUARY 1, 2007 OR LATEST REVISION.

6. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, THE VILLAGE \ CITY AND THEIR AGENTS FROM ALL LIABILITY INVOLVED IN THE CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK ON THIS PROJECT.

7. WHEN A CONFLICT BETWEEN PLANS AND SPECIFICATIONS OR NOTES OCCURS, THE ENGINEER SHALL DECIDE WHICH GOVERNS. GENERALLY, THE MORE RESTRICTIVE, MORE SPECIFIC OR STRICTER PROVISION SHALL GOVERN.

8. THE CONTRACTOR IS RESPONSIBLE FOR RETURNING ALL AREAS AFFECTED BY EQUIPMENT OR LABORERS TO EXISTING CONDITIONS. CONTRACTOR IS ALSO RESPONSIBLE FOR PROTECTING ALL NEW WORK UNTIL COMPLETION OF THIS CONTRACT.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY ROAD OR MATERIAL THAT IS FROM THE PROJECT. THE CONTRACTOR SHALL CLEAN THE STREETS ON A DAILY BASIS. THIS WILL BE DONE AT THE CLOSE OF EACH DAY OF WORK OR MORE FREQUENTLY AS MAY BE REQUIRED DUE TO FIELD CONDITIONS.

10. THE CONTRACTOR IS RESPONSIBLE FOR THE TRAFFIC CONTROL AND PROTECTION OF ALL WORK CONDUCTED WITHIN PUBLIC RIGHT-OF-WAYS. TRAFFIC CONTROL AND PROTECTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE ARTICLES OF SECTION 100 AND 700 OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007, AND THE LATEST EDITION OF THE "ILLINOIS MANUAL, ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".

11. WHENEVER, DURING CONSTRUCTION OPERATIONS, ANY LOOSE MATERIAL IS DEPOSITED IN THE FLOW LINE OF GUTTERS, DRAINAGE STRUCTURES, DITCHES, ETC. SUCH THAT THE NATURAL FLOW LINE OF WATER IS OBSTRUCTED, THE LOOSE MATERIAL WILL BE REMOVED AT THE CLOSE OF EACH WORKING DAY. AT THE CONCLUSION OF CONSTRUCTION OPERATIONS, ALL DRAINAGE STRUCTURES AND FLOW LINES SHALL BE FREE FROM DIRT AND DEBRIS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS, TRAFFIC CONTROL DEVICES, AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL SAFETY REQUIREMENTS PROVIDED BY THE VILLAGE/CITY AND/OR OSHA SHALL BE ADHERED TO BY THE CONTRACTOR DURING CONSTRUCTION OPERATIONS.

13. DURING CONSTRUCTION OPERATIONS THE CONTRACTOR SHALL INSURE POSITIVE SITE DRAINAGE AT THE CONCLUSION OF EACH DAY. SITE DRAINAGE MAY BE ACHIEVED BY DITCHING, PUMPING, OR ANY OTHER METHOD ACCEPTABLE TO THE ENGINEER. THE CONTRACTOR'S FAILURE TO PROVIDE THE ABOVE WILL PRECLUDE ANY POSSIBLE ADDED COMPENSATION REQUESTED DUE TO DELAYS OR UNSUITABLE MATERIALS CREATED AS A RESULT THEREOF.

14. ALL CONSTRUCTION WILL BE INSPECTED BY THE VILLAGE \ CITY ENGINEER OR HIS REPRESENTATIVE. SPECIFICALLY ALL TRENCHES AND SEWERS SHALL BE LEFT OPEN BUT SAFELY BARRICADED UNTIL INSPECTED AND APPROVED BY THE VILLAGE/CITY ENGINEER. PAVEMENT SUBBASE, BASE, AND SURFACE MUST EACH BE INSPECTED BY THE ENGINEER PRIOR TO THE NEXT PHASE OF WORK. PROOF ROLLING AND NUCLEAR DENSITY TESTING WILL BE UTILIZED.

15. THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR HIS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BY OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

16. THE CONTRACTOR IS TO VERIFY ALL FIELD CONDITIONS, PROPOSED IMPROVEMENTS, AND ELEVATIONS PRIOR TO THE START OF WORK AND, IF THERE ARE ANY DISCREPANCIES, IS TO NOTIFY THE DESIGN ENGINEER AT ONCE. NO WORK SHALL BE DONE UNTIL THE DISCREPANCIES ARE RESOLVED.

17. ALL SHRUBS, TOPSOIL, OR EXCAVATION MATERIAL AND ANY OTHER UNSUITABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF AT AN OFF-SITE LOCATION. AREAS WHICH ARE TO BE FILLED SHALL BE COMPACTED TO A MAXIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED AASHTO COMPACTION TEST, T-180-74, (ASTM-D-1557) IN PAVED AREAS. THE OWNER'S SOILS ENGINEER SHALL EVALUATE AND APPROVE THE EXCAVATION, FILL PLACEMENT, AND COMPACTION PRIOR TO PAVEMENT CONSTRUCTION. THE CONTRACTOR SHALL GIVE THE GOVERNING AUTHORITIES HAVING JURISDICTION OVER THE WORK FORTY-EIGHT (48) HOURS NOTICE BEFORE WORK COMMENCES.

18. ANY WATER AND WASTEWATER UTILITIES AFFECTED BY CONSTRUCTION, INCLUDING GRADES, MUST BE BROUGHT TO CURRENT VILLAGE OR CITY STANDARDS AT THE CONTRACTOR'S EXPENSE.

19. EXISTING UTILITIES, TREES, STREETS, AND PRIVATE PROPERTY SHALL BE PROTECTED DURING CONSTRUCTION BY THE CONTRACTOR. ANY DAMAGES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

20. THE CONTRACTOR SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AT AREAS DESIGNATED ON THE SITE PLAN. ADDITIONAL MEASURES SHALL BE PROVIDED AS DEEMED NECESSARY BY THE VILLAGE, CITY OR THE DESIGN ENGINEER AT CONTRACTOR'S EXPENSE.

21. ALL HANDICAP PROVISIONS SHALL BE IN ACCORDANCE WITH THE "AMERICAN DISABILITIES ACT" (ADA) DATED NOVEMBER 29, 1990 OR LATEST REVISION.

22. THE CONTRACTOR IS RESPONSIBLE FOR EXAMINATION OF THE ENGINEERING PLANS AND SPECIFICATIONS AND THE EXISTING SITE CONDITIONS PRIOR TO SUBMITTING A BID, AND NOTIFYING THE ENGINEER AT ONCE OF ANY DISCREPANCIES.

23. THE CONTRACTOR IS RESPONSIBLE FOR THE OBTAINING OF ANY NECESSARY PERMITS NOT PREVIOUSLY APPLIED FOR BY THE OWNER AND POSTING OF THE NECESSARY BONDS.

24. THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATION OF THE START OF CONSTRUCTION TO ALL JURISDICTIONAL AGENCIES, UTILITY COMPANIES, AND THE ENGINEER, AT LEAST TWO (2) WORKING DAYS PRIOR TO SAID START. ALL EXISTING UTILITIES MUST BE STAKED PRIOR TO CONSTRUCTION. VILLAGE OR CITY ENGINEERING DIVISION SHALL BE NOTIFIED 48 HRS. IN ADVANCE.

25. THE CONTRACTOR IS RESPONSIBLE FOR CALLING ATTENTION TO THE OWNER OF ANY ERRORS OR DISCREPANCIES WHICH MAY BE SUSPECTED IN LINES AND GRADES WHICH ARE ESTABLISHED BY THE OWNER. THE CONTRACTOR SHALL NOT PROCEED WITH THE WORK UNTIL THE LINES AND GRADES, WHICH ARE BELIEVED TO BE IN ERROR, HAVE BEEN VERIFIED OR CORRECTED BY THE OWNER. ADDITIONAL STAKING THAT MAY BE REQUIRED DUE TO THE CONTRACTOR NEGLIGENCE, SHALL BE PAID FOR BY THE CONTRACTOR.

26. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND HEALTHFUL WORKING CONDITION THROUGHOUT THE PROSECUTION OF THE CONSTRUCTION WORK. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: THE REMOVAL OF DEBRIS, THE PROTECTING OF CONSTRUCTION BARRICADES, AND THE KEEPING OF PUBLIC STREET PAVEMENTS CLEAN OF CONSTRUCTION DIRT AND DEBRIS, SECURING OPEN EXCAVATIONS, AND FOLLOWING ALL SAFETY MEASURES REQUIRED BY THE GOVERNING AUTHORITIES.

27. THE CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION TO THE ORIGINAL CONDITION OR BETTER OF ANY OFF SITE AREAS THAT ARE DAMAGED BY THE CONTRACTOR DURING CONSTRUCTION.

28. THE CONTRACTOR IS RESPONSIBLE FOR THE TESTING OF MATERIALS, IF REQUIRED BY THE OWNER AND/OR THE JURISDICTIONAL AGENCIES.

29. THE CONTRACTOR IS RESPONSIBLE FOR THE GUARANTEE OF ALL MATERIALS AND WORKMANSHIP FOR A PERIOD OF TWO (2) YEARS UPON FINAL ACCEPTANCE BY THE OWNER AND THE JURISDICTIONAL AGENCIES.

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31. ALL LANDSCAPE, SOD AND SEEDING AREAS SHALL RECEIVE A MINIMUM OF 4 INCHES OF TOPSOIL TO ACHIEVE THE FINAL GRADES SHOWN ON THE FINAL ENGINEERING PLANS.

32. UNSUITABLE MATERIAL SHALL BE CONSIDERED AS MATERIAL WHICH IS NOT SUITABLE FOR THE SUPPORT OF PAVEMENT, BUILDING, AND OR LOAD BEARING STRUCTURES AS DETERMINED BY THE SOILS ENGINEER. THE DECISION TO REMOVE SAID MATERIAL, AND TO WHAT EXTENT, SHALL BE MADE BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

33. THE QUANTITIES AS SHOWN IN THE ENGINEER'S "QUANTITY ESTIMATE" ARE THOSE ESTIMATED BY THE ENGINEER AND ARE PROVIDED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR, BY CHOOSING TO UTILIZE THESE QUANTITIES IN THE PREPARATION OF HIS "LUMP SUM" BID, ALSO ACCEPTS THEIR ACCURACY. THE CONTRACTOR IS THEREFORE ENCOURAGED TO MAKE HIS OWN INDEPENDENT EARTHWORK CALCULATION, AND TO VISIT THE SITE PRIOR TO THE PREPARATION OF HIS BID.

34. CONDUIT TO BE PROVIDED UNDER PAVEMENT FOR ALL SERVICE UTILITIES SUCH AS, BUT NOT LIMITED TO GAS, ELECTRIC, TELEPHONE, AND CABLE AS DEEMED NECESSARY BY THE OWNER. ALL CONDUIT SHALL MEET UTILITY COMPANY SPECIFICATIONS. CONDUIT SHOWN HEREON IS APPROXIMATE IN SIZE AND LOCATION. ALL SPECIFICATIONS SHALL BE CONFIRMED WITH THE UTILITY COMPANY PRIOR TO INSTALLATION, TELEPHONE, AND CABLE AS DEEMED NECESSARY BY THE OWNER. ALL CONDUIT SHALL MEET UTILITY COMPANY SPECIFICATIONS. CONDUIT SHOWN HEREON IS APPROXIMATE IN SIZE AND LOCATION. ALL SPECIFICATIONS SHALL BE CONFIRMED WITH THE UTILITY COMPANY PRIOR TO INSTALLATION.

EARTHWORK IMPROVEMENTS

TOPSOIL EXCAVATION INCLUDES:
1. EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS WITHIN THOSE AREAS THAT WILL REQUIRE EARTH EXCAVATION OR COMPACTED EARTH FILL MATERIAL, IN ORDER TO ACHIEVE THE PLAN SUB GRADE ELEVATIONS.

2. PLACEMENT OF THE EXCAVATED MATERIAL IN OWNER DESIGNATED AREAS FOR FUTURE USE WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL.

3. COMPACTION OF THE EXCAVATED MATERIAL WHERE PLACED IN AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL, SHALL BE MODERATE.

4. EXCESS MATERIALS IF NOT UTILIZED AS FILL OR IF NOT STOCKPILED FOR FUTURE LANDSCAPING, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF BY THE CONTRACTOR.

EARTH EXCAVATION INCLUDES:
1. EXCAVATION OF EARTH AND OTHER MATERIALS ARE SUITABLE FOR USE AS STRUCTURAL FILL. THE EXCAVATION SHALL BE TO WITHIN THE TOLERANCE OF 0.3 FEET (+/-) OF THE PLAN SUBGRADE ELEVATIONS. THE (+/-) TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIAL SHALL "BALANCE" AS PART OF THE FINE GRADING OPERATION.

2. PLACEMENT OF THE EARTH AND OTHER SUITABLE MATERIALS SHALL BE WITHIN THOSE AREAS REQUIRING STRUCTURAL FILL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS TO WITHIN A TOLERANCE OF 0.3 FEET (+/-). THE MATERIAL SHALL BE PLACED (8) INCHES IN THICKNESS, AND THE WATER CONTENT SHALL BE ADJUSTED IN ORDER TO ACHIEVE THE REQUIRED COMPACTION. EARTH MATERIAL MAY BE PLACED WITHIN THOSE PORTIONS OF THE BUILDING SITE NOT REQUIRING STRUCTURAL FILL, TO WITHIN SIX (6) INCHES OF THE PLAN FINISHED GRADE ELEVATION. IN AREAS REQUIRING STRUCTURAL FILL, HOWEVER, THE EARTH MATERIAL SHALL NOT BE PLACED OVER TOPSOIL OR OTHER UNSUITABLE MATERIALS UNLESS SPECIFICALLY DIRECTED BY A SOILS ENGINEER WITH THE CONCURRENCE OF THE OWNER.

3. COMPACTION OF THE EARTH AND OTHER SUITABLE MATERIALS, SHALL BE TO AT LEAST 95% OF THE STANDARD PROCTOR DRY DENSITY, ASTM 698 WITHIN PROPOSED PAVEMENT AND BUILDING AREAS. MODERATE COMPACTION IS REQUIRED ELSEWHERE.

4. EXCESS MATERIAL IF NOT UTILIZED AS FILL, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF BY THE CONTRACTORS.

GENERAL, THE EARTHWORK CONTRACTOR SHALL:
1. MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION, AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.

2. SPREAD AND COMPACT UNIFORMLY TO THE DEGREE SPECIFIED ALL EXCESS TRENCH SPOIL AFTER COMPLETION OF THE UNDERGROUND IMPROVEMENTS.

3. SCARIFY AND COMPACT TO THE DEGREE SPECIFIED THE UPPER TWELVE (12) INCHES OF THE SUITABLE SUBGRADE MATERIAL, IN ALL AREAS THAT MAY BE SOFT DUE TO EXCESS MOISTURE CONTENT. THIS APPLIES TO CUT AREAS AS WELL AS FILL AREAS.

4. PROVIDE WATER TO ADD TO DRY MATERIAL IN ORDER TO ADJUST THE MOISTURE CONTENT FOR THE PURPOSE OF ACHIEVING THE SPECIFIED COMPACTION.

5. BE RESPONSIBLE FOR IMPLEMENTATION OF THE "STORMWATER POLLUTION PREVENTION PLAN" AS ASSIGNED TO THE EARTHWORK CONTRACTOR ON THE ENGINEERING PLAN.

6. GRADE PUBLIC UTILITY EASEMENTS TO MEET THE REQUIREMENTS OF THE LOCAL PUBLIC UTILITY COMPANIES.

7. ALL FILL MATERIAL IMPORTED ON-SITE MUST MEET THE FOLLOWING REQUIREMENTS:
1.) FILL MUST BE IMPORTED FROM ONE LOCATION.
2.) CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE FOLLOWING DOCUMENTATION FOR EACH LOAD OF CLEAN CONSTRUCTION OR DEMOLITION DEBRIS (CCDD) OR UNCONTAMINATED SOIL RECEIVED:
a) HAULER NAME, SITE OF ORIGIN, ADDRESS, OWNER OR OPERATOR OF THE SITE OF ORIGIN;
b) WEIGHT IN TONS OR VOLUME IN CUBIC YARDS:; AND
c) DATE RECEIVED.
3.) CONTRACTOR IS RESPONSIBLE TO OBTAIN FOR ALL SOIL:
a) CERTIFICATION FROM THE OWNER OR OPERATOR OF THE SITE OF ORIGIN THAT THE SITE HAS NEVER BEEN USED FOR COMMERCIAL OR INDUSTRIAL PURPOSES AND IS PRESUMED TO BE UNCONTAMINATED SOIL: OR
b) CERTIFICATION FROM A LICENSED PROFESSIONAL ENGINEER THAT THE SOIL IS UNCONTAMINATED.
4.) CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT THE CCDD OR UNCONTAMINATED SOIL WAS NOT REMOVED FROM A SITE AS PART OF A CLEAN-UP OR REMOVAL.
5.) CONTRACTOR IS RESPONSIBLE TO VISUALLY INSPECT AND SCREEN EACH LOAD OF SOIL WITH A DEVICE SUCH AS A PHOTO IONIZATION DETECTOR, FLAME IONIZATION DETECTOR OR ANOTHER DEVICE APPROVED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, BUREAU OF LAND, THAT DETECTS VOLATILE ORGANIC COMPOUNDS (ALREADY REQUIRED OF PERMITTED CCDD FILL OPERATIONS);
6.) CONTRACTOR IS RESPONSIBLE TO DOCUMENT ALL CHEMICAL ANALYSIS ACTIVITIES ASSOCIATED WITH TESTING OF THE CCDD OR UNCONTAMINATED SOIL, WHICH MUST INCLUDE, BUT IS NOT LIMITED TO:
a) COPY OF THE LAB ANALYSIS;
b) LABORATORY ACCREDITATION STATUS; AND
LABORATORY AUTHORIZED AGENT CERTIFICATION.

8. EARTHWORK CONTRACTOR IS RESPONSIBLE FOR CERTIFYING THAT ANY SOIL EXPORTED OFFSITE IS CLEAN CONSTRUCTION OR DEMOLITION DEBRIS (CCDD), IF THE SOIL TO BE EXPORTED IS NOT CCDD, CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF THE CONTAMINATED SOIL.

TESTING AND FINAL ACCEPTANCE
1. THE CONTRACTOR SHALL PROVIDE AS A MINIMUM, A FULLY LOADED SIX-WHEEL TRUCK FOR PROOF ROLLING THE PAVEMENT SUBGRADE PRIOR TO THE PLACEMENT OF THE CURB AND GUTTER AND THE BASE MATERIAL.

2. SPECIFIC COMPACTION TESTING MAY BE REQUIRED BY THE OWNER IN SELECTED FILL AREAS. THE CONTRACTOR SHALL BEAR THE COST OF ANY COMPACTION TESTING WHICH DOES NOT MEET SPECIFICATION AS WELL AS THE RESPONSIBILITY AND COST FOR THE NECESSARY CORRECTION(S).

3. APPROVAL OF THE PAVEMENT SUBGRADE BY THE OWNER SHALL BE REQUIRED PRIOR TO THE PLACEMENT OF THE PAVEMENT MATERIALS.

METHOD OF MEASUREMENT
1. AS-BUILT MEASUREMENTS OF EARTHWORK FOR THE PURPOSE OF PAYMENT SHALL NOT APPLY. THE QUANTITIES SHOWN IN THE ENGINEER'S "QUANTITY ESTIMATE" SHALL BE UTILIZED UNLESS SAID QUANTITIES ARE ADJUSTED BY MUTUAL CONSENT BY THE OWNER AND CONTRACTOR PRIOR TO THE SIGNING AND ACCEPTANCE OF THE CONTRACT.

2. THE QUANTITIES AS SHOWN IN THE ENGINEER'S "QUANTITY ESTIMATE" ARE THOSE ESTIMATED BY THE ENGINEER AND ARE PROVIDED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR, BY CHOOSING TO UTILIZE THESE QUANTITIES IN THE PREPARATION OF HIS "LUMP SUM" BID, ALSO ACCEPTS THEIR ACCURACY. THE CONTRACTOR IS THEREFORE ENCOURAGED TO MAKE HIS OWN INDEPENDENT EARTHWORK CALCULATION, AND TO VISIT THE SITE PRIOR TO THE PREPARATION OF HIS BID.

3. PRIOR TO THE REMOVAL OF UNSUITABLE MATERIAL, THE CONTRACTOR SHALL NOTIFY THE OWNER FOR AUTHORIZATION TO REMOVE SAID MATERIAL. UPON AUTHORIZATION AND REMOVAL, THE UNSUITABLE MATERIAL SHALL BE FIELD MEASURED BY THE ENGINEER IN PLACE.

EROSION CONTROL

EROSION CONTROL MEASURES SHALL CONFORM TO "THE STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN NORTHEASTERN ILLINOIS" LATEST EDITION, AND FURTHER MEASURES AS DEEMED NECESSARY. TEMPORARY VEGETATION OR, WHEN APPROPRIATE, MULCHING OR OTHER NONVIABLE COVER SHALL BE USED TO PROTECT AREAS EXPOSED DURING DEVELOPMENT PERMANENT SEEDING AREAS SHALL RECEIVE 16 LBS/ACRE CREEPING RED FESCUE AND 68 LBS/ACRE KENTUCKY BLUEGRASS. STRAW BALES SHALL BE SPREAD AT RATE OF TWO BALES/ACRE IN ALL PERMANENT SEEDING AREAS. FERTILIZER SHOULD BE APPLIED PRIOR TO SEEDING AT THE FOLLOWING RATES:

NITROGEN 130 LBS/ACRE
PHOSPHORUS 130 LBS/ACRE
POTASSIUM 130 LBS/ACRE

DOWNERS GROVE SANITARY DISTRICT

1. MATERIAL SHALL BE:

A) POLYVINYL CHLORIDE PIPE (PVC) WITH A SDR 26, WHICH SHALL MEET OR EXCEED THE PERFORMANCE REQUIREMENTS OF ASTM D2241, 160 PSI PRESSURE PIPE PUSH-ON BELL AND SPIGOT TYPE WITH RUBBER RING SEAL GASKET ASTM D3139, FOR CONSTRUCTION AND INSTALLATION.
B) DUCTILE IRON SEWER PIPE (DIP), WHERE INDICATED ON THE PLANS, WHICH SHALL MEET OR EXCEED THE PERFORMANCE REQUIREMENTS OF ANSI A21.51, CLASS 52 W/ H2 SEWER SAFE (CEMENT LINED AND FUSED CALCIUM ALUMINATE MORTAR). FOR FURTHER INFORMATION REGARDING SPECIFICATIONS, PLEASE CONTACT MR. STEVE KELLY OF GRIFFIN PIPE PRODUCTS COMPANY AT (847) 253-9921.

2. JOINTS SHALL BE:

A) FOR PVC; FLEXIBLE ELASTOMERIC SEALS PER ASTM D 3139.
B) FOR DIP; PUSH-ON (BELL-TITE) PER AWWA C111 AND C600.

3. BEDDING SHALL BE AS DETAILED ON THE ENGINEERING PLANS. (ASTM D-2321)

4. MINIMUM COVER REQUIREMENTS SHALL BE 5' FOR PUBLIC SEWER MAINS, 4' MINIMUM FOR BUILDING SANITARY SERVICES.

5. SLOPE FOR A 6 INCH DIAMETER PIPE SHALL BE A MINIMUM 1.00%, FOR A 8 INCH DIAMETER PIPE SHALL BE A MINIMUM OF 0.43% , FOR A 10 INCH DIAMETER PIPE SHALL BE A MINIMUM OF 0.30%.

6. WYES SHALL BE PROVIDED ON THE NEW SANITARY SEWERS FOR PROPOSED BUILDING SERVICES. ALL CONNECTIONS TO EXISTING SANITARY SEWERS SHALL BE MADE BY MACHINE TAP. THE CONNECTION SHALL BE MADE WITH A GENECO SEALTITE SEWER SADDLE (MODEL S).

7. "FLEX SEAL" NON-SHEAR COUPLINGS (WITH STAINLESS STEEL SHEAR RING) SHALL BE USED WHEN JOINING PIPES OF DISSIMILAR MATERIALS OR SIZES.

8. SIZES SHALL BE AS INDICATED ON THE ENGINEERING PLAN.

9. ALL SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE DOWNERS GROVE SANITARY DISTRICT STANDARD SPECIFICATIONS AND WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS AS ADOPTED MAY 1996.

PAVING IMPROVEMENTS
1. FINE GRADING SHALL BE COMPLETED PRIOR TO THE CONSTRUCTION OF THE CURB AND GUTTER AND THE PLACEMENT OF THE BASE MATERIAL, THE STREETS SHALL BE FINE GRADED TO WITHIN 0.1 FEET +/- OF THE FINAL SUBGRADE ELEVATION, TO A POINT TWO (2) FEET BEYOND THE BACK OF THE PROPOSED CURB.

2. CURB AND GUTTER SHALL BE THE TYPE AS DETAILED ON THE ENGINEERING PLANS. THE CURB SHALL BE BACKFILLED AFTER THEIR CONSTRUCTION PRIOR TO THE PLACEMENT OF THE BASE COURSE.

3. PAVEMENT MATERIALS SHALL BE AS DETAILED ON THE ENGINEERING PLANS. THICKNESSES SPECIFIED SHALL BE CONSIDERED TO BE THE MINIMUM COMPACTED THICKNESS.

4. THE PAVING CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:

A. REPAIR ANY BASE COURSE AND BINDER COURSE FAILURES PRIOR TO THE INSTALLATION OF THE FINAL BITUMINOUS CONCRETE SURFACE COURSE.

B. SWEEP CLEAN THE BINDER COURSE PRIOR TO THE INSTALLATION OF THE FINAL BITUMINOUS CONCRETE SURFACE COURSE. EXCESSIVE CLEANING OF THE BINDER COURSE THAT MAY BE REQUIRED, AND IS NOT THE FAULT OF THE PAVING CONTRACTOR, SHALL BE PAID FOR ON A TIME AND MATERIAL BASIS BY PRIOR AGREEMENT WITH THE OWNER.

TESTING AND FINAL ACCEPTANCE

1. PRIOR TO PLACEMENT OF THE BASE COURSE, THE SUBGRADE MUST BE APPROVED BY THE LOCAL JURISDICTIONAL AUTHORITY. (SEE "TESTING AND FINAL ACCEPTANCE FOR EARTHWORK").

2. PRIOR TO PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE, THE CONTRACTOR, IF REQUESTED TO BY THE OWNER, SHALL OBTAIN SPECIMENS OF THE BINDER COURSE WITH A CORE DRILL WHERE DIRECTED BY THE ENGINEER, FOR THE PURPOSE OF THICKNESS VERIFICATION. CORING SHALL BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF ART.406.16 OF THE STANDARD SPECIFICATION ENTITLED "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION". THE COST FOR OBTAINING CORES WHICH ARE LESS THAN THE MINIMUM THICKNESS SPECIFIED SHALL BE BORNE BY THE CONTRACTOR. THE COST FOR OBTAINING CORES WHICH MEET OR EXCEED THE SPECIFICATION SHALL BE BORNE BY THE OWNER.

3. DEFICIENCIES IN THE BITUMINOUS CONCRETE BINDER COURSE SHALL BE ADJUSTED FOR BY INCREASING THE PLAN THICKNESS OF THE SURFACE COURSE WITH NO ADDITIONAL COST TO THE OWNER.

4. FINAL ACCEPTANCE OF THE TOTAL PAVEMENT INSTALLATION SHALL BE SUBJECT TO THE TESTING AND CHECKING REQUIREMENTS CITED ABOVE.

5. WALKS SHALL BE P.C. CONCRETE (3500 PSI) 5' WIDE OR AS SPECIFIED IN THE PLANS AND A THICKNESS NOT LESS THAN 5"; EXPANSION JOINTS AT 50' INTERVALS; W/ CONTRACTION JOINTS EVERY 5'. BEDDING SHALL BE CA-6 3" MINIMUM DEPTH. NO REINFORCING STEEL SHALL BE PLACED WITHIN A PUBLIC SIDEWALK WITHOUT SPECIFIC PERMISSION OF THE VILLAGE INSPECTOR, INCLUDING UTILITY TRENCH CROSSINGS.

METHOD OF MEASUREMENT

1. CURB AND GUTTER, AND BASE COURSE SHALL BE MEASURED IN THE FIELD BY THE CONTRACTOR. THE QUANTITIES SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION.

2. WHEN REQUESTED, DOCUMENTATION FOR THE INSTALLED BASE COURSE, BITUMINOUS CONCRETE BINDER, AND SURFACE COURSE, SHALL BE SUBMITTED TO THE ENGINEER FOR VERIFICATION. DEFICIENCIES IN TOTAL BITUMINOUS CONCRETE PAVEMENT THICKNESS SHALL BE ADJUSTED FOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE JURISDICTIONAL AUTHORITY.

BASIS OF PAYMENT

1. CURB AND GUTTER SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE / LINEAL FOOT.
2. PRIME COAT MATERIAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER GALLON.
3. BASE COURSE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON.
4. BITUMINOUS CONCRETE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON.

SANITARY SEWER SYSTEM
GENERAL

1. ALL DEVELOPMENT, WHETHER PUBLIC OR PRIVATE, SHALL INCLUDE PROVISIONS FOR THE CONSTRUCTION OF SANITARY SEWERS AND APPURTENANCES DESIGNED IN ACCORDANCE WITH THIS SECTION DEVELOPERS SHALL USE EITHER THE PUBLIC SEWER SYSTEM OR AN ALTERNATIVE SEWER SYSTEM, CERTIFIED BY THE AGENCY OR MUNICIPALITY WITH JURISDICTION AUTHORITY, PROVIDED THAT THE DEVELOPMENT IS PROXIMATE TO A TRANSMISSION LINE THAT HAS ADEQUATE CAPACITY TO HANDLE SUCH PROPOSED DEVELOPMENT.

2. THE DOWNERS GROVE SANITARY DISTRICT STANDARDS AND ORDINANCES SHALL GOVERN ALL SANITARY SEWER CONSTRUCTION.

3. ALL SANITARY IMPROVEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE MATERIAL INSTALLATION AND TESTING REQUIREMENTS OF THE "STANDARD SPECIFICATION FOR THE WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," LATEST EDITION, UNLESS OTHERWISE MODIFIED IN THIS SECTION.

PROTECTION OF WATER MAINS

1. WATER MAINS SHALL BE PROTECTED IN ACCORDANCE WITH THE APPLICABLE ILLINOIS POLLUTION CONTROL BOARD REGULATION AND THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, DIVISION OF PUBLIC WATER SUPPLIES, TECHNICAL POLICY STATEMENTS. WHEREVER THE SANITARY SEWER MAIN, BUILDING SERVICE SEWER OR ANY STORM DRAIN CROSSES A WATER MAIN, A MINIMUM EIGHTEEN (18) INCHES VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN THE TOP OF THE LOWER PIPE AND THE BOTTOM OF THE UPPER PIPE.

INSPECTION AND TEST

A. GENERAL

1. THE SEWER CONTRACTOR SHALL SCHEDULE WITH THE DISTRICT A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF CONSTRUCTION.

2. THE SEWER CONTRACTOR SHALL SCHEDULE WITH THE DISTRICT INSPECTIONS OF THE SANITARY SEWER CONSTRUCTION 48 HOURS IN ADVANCE OF THE START OF CONSTRUCTION (630-969-0664).

3. ALL REQUIRED TESTING AND CORRECTION OF ANY DEFECTS OF THE SANITARY SEWER SYSTEM SHALL BE COMPLETED BEFORE CURB AND GUTTER OR OTHER ROADWAY WORK BEGINS.

4. THE CONSTRUCTED SEWERS SHALL PASS ALL DISTRICT REQUIREMENTS FOR AIR, TELEVISING, DEFLECTION, AND MANHOLE VACUUM TESTS.

B. CLEANING
ALL SEWERS AND APPURTENANCES SHALL BE HIGH PRESSURED CLEANED PRIOR TO INSPECTION AND TESTING REQUIRED BY THE SECTION.

C. AIR TEST
1. THE ENTIRE BUILDING SANITARY SERVICE SHALL BE AIR TESTED FROM THE PUBLIC SEWER TO THE BUILDING, INCLUDING THE MACHINE TAP, WYE OR TEE, THE OUTSIDE CLEANOUT(S) AND ALL SERVICE PIPING. IF A NEW WYE OR TEE IS INSTALLED ON AN EXISTING PUBLIC SEWER, THE PIPE CONNECTIONS ON THE PUBLIC SEWER ON BOTH SIDES OF THE WYE OR TEE MUST ALSO BE AIR TESTED, AS DESCRIBED IN ITEM 11.

2. PRIOR TO TESTING, FLUSH AND CLEAN THE SEWERS BY A METHOD ACCEPTABLE TO THE DISTRICT. IF A NEW WYE OR TEE IS INSTALLED ON A EXISTING PUBLIC SEWER, CLEAN THE INSIDE OF ALL EXISTING PIPES TO ALLOW THE TEST PLUGS TO PROPERLY SEAL DURING TESTING.

3. ISOLATE THE BUILDING SANITARY SERVICE FROM THE EXISTING PUBLIC SEWER BY INSTALLING TWO AIRTIGHT PLUGS IN THE PUBLIC SEWER, BY INSTALLING ONE AIRTIGHT PLUG WITH A VOID POSITIONED AT THE CONNECTION BETWEEN THE BUILDING SERVICE CONNECTION AND THE PUBLIC SEWER, OR BY OTHER METHOD ACCEPTABLE TO THE DISTRICT.

4. INSTALL AN AIRTIGHT PLUG ON THE CLEANOUT INSIDE THE BUILDING

5. PROPERLY BRACE THE OUTSIDE CLEANOUT CAP AND COLLAR TO WITHSTAND AIR TESTING.

6. WHENEVER THE SEWER TO BE TESTED IS SUBMERGED UNDER GROUNDWATER, DETERMINE THE GROUNDWATER HYDROSTATIC PRESSURE BY A METHOD APPROVED BY THE DISTRICT.

7. ADD AIR TO THE PLUGGED SEWER SECTIONS UNDER TEST THROUGH THE CLEANOUT OR PUBLIC SEWER PLUG UNTIL INITIAL AIR PRESSURE REACHES 4.0 PSIG GREATER THAN ANY GROUNDWATER HYDROSTATIC PRESSURE.

8. ALLOW AT LEAST TWO MINUTES FOR AIR TEMPERATURE TO STABILIZE, ADDING AIR TO MAINTAIN THE INITIAL TEST PRESSURE.

9. SHUT OFF THE AIR SUPPLY AFTER STABILIZING THE AIR TEMPERATURE AND RECORD THE TIME IN SECONDS USING AN APPROVED STOPWATCH FOR THE INTERNAL SEWER PRESSURE TO DROP FROM 3.5 PSIG TO 2.5 PSIG GREATER THAN ANY GROUNDWATER HYDROSTATIC PRESSURE.

10. THE BUILDING SANITARY SERVICE SHALL PASS IF THE RECORDED TIME FOR THE ALLOWABLE PRESSURE DROP EQUALS OR EXCEEDS 2 MINUTES FOR A 4-INCH AND 6-INCH DIAMETER SERVICE LESS THAN 300 FEET IN TOTAL LENGTH. THE MINIMUM ALLOWABLE TIME FOR LARGER PIPE DIAMETERS OR LONGER PIPE LENGTHS WILL BE DETERMINED BY THE DISTRICT.

11. THE INDIVIDUAL PIPE JOINTS ON EITHER SIDE OF A NEW WYE OR TEE INSTALLED ON AN EXISTING PUBLIC SEWER SHALL ALSO BE AIR TESTED AS FOLLOWS:
A) COMPLY WITH REQUIREMENTS OF ASTM C1103-90.
B) UTILIZE COMMERCIALLY AVAILABLE TEST APPARATUS WITH TWO SEPARATE INFLATABLE SEALING RINGS OR PLUGS, OR ONE PLUG WITH A VOID POSITIONED AT THE CENTER, AT LEAST 2.50 INCHES, BUT NO MORE THAN 2 FEET APART.
C) ACCEPTABLE MAXIMUM AIR LOSS IS 1 PSI IN 5 SECONDS.
D) TEST PRESSURE IS 3.5 PSI HIGHER THAN GROUNDWATER PRESSURE, BUT DO NOT USE A TEST PRESSURE GREATER THAN 6 PSI.
E) PROVIDE TEST APPARATUS THAT ALLOWS REMOTE MONITORING OF TEST BY THE DISTRICT.

12. IF THE AIR TEST FAILS TO MEET THESE REQUIREMENTS, LOCATE AND REPAIR, OR REMOVE AND REPLACE THE FAULTY SECTIONS OF SEWER IN A MANNER APPROVED BY THE DISTRICT, AS NECESSARY TO MEET THE ALLOWABLE LIMITS UPON RETESTING. THE USE OF ACRYLAMID GEL SEALANT IS NOT AN ACCEPTABLE METHOD TO CORRECT LEAKAGE.

13. PROVIDE AND USE EQUIPMENT AND MEASURING DEVICES ACCEPTABLE TO THE DISTRICT.

14. ALL AIR TESTING FOR ACCEPTANCE SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE DISTRICT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 48 HOURS PRIOR TO TESTING.

15. AIR TESTING TECHNIQUES SHALL BE IN ACCORDANCE WITH THE LATEST ASTM STANDARD PRACTICE FOR TESTING SEWER LINES BY LOW-PRESSURE AIR TEST METHOD FOR THE APPROPRIATE PIPE MATERIAL.

16. AIR TESTING MAY NOT BE PERFOMED UNTIL THE SANITARY SERVICE TRENCH HAS BEEN COMPETELY BACKFILLED.

D. SPECIFICATION FOR LOW PRESSURE AIR TESTING

GENERAL
AFTER INSTALLATION, BACKFILLING AND PRIOR TO ACCEPTANCE BY THE DISTRICT, ALL SANITARY SEWERS SHALL BE TESTED FOR LEAKAGE WITH LOW-PRESSURE AIR IN ACCORDANCE WITH THESE SPECIFICATIONS.

THIS WORK INCLUDES THE FURNISHING OF ALL LABOR, TOOLS, AND EQUIPMENT AND WORK AREA SAFETY TO PERFORM A LOW-PRESSURE AIR TEST OF ALL SANITARY SEWERS. THE CONTRACTOR, WITHOUT ADDITIONAL COMPENSATION, SHALL DETERMINE THE SOURCES OF LEAKAGE AND MAKE ALL REPAIRS TO THE SEWERS FAILING TO PASS THIS LOW-PRESSURE AIR TEST. REPAIRS SHALL BE DONE IN ACCORDANCE AS DIRECTED BY THE DISTRICT.

SAFETY
THE AIR TEST MAY BE DANGEROUS IF A LINE IS IMPROPERLY PREPARED. IT IS IMPORTANT THAT THE VARIOUS PLUGS BE INSTALLED AND BRACED IN SUCH A WAY AS TO PREVENT BLOWOUTS. AS A SAFETY PRECAUTION, PRESSURIZING EQUIPMENT SHALL INCLUDE A REGULATOR SET AS 10-PSI GAGE TO AVOID OVER-PRESSURIZING.

TESTING PREREQUISITES
PRIOR TO AIR TESTING, THE FOLLOWING CONDITIONS SHALL BE MET:
1. ALL BACKFILLING OF SANITARY SEWERS AND APPURTENANCES SHALL BE COMPLETED 30 DAYS PRIOR TO TESTING.
2. WHERE EXISTING GROUND SURFACE, AT TIME OF CONSTRUCTION, IS LESS THAN 6 FEET ABOVE THE TOP OF THE SEWER OR THE PROPOSED GROUND SURFACE AFTER CONSTRUCTION, WILL BE LESS THAN 6 FEET ABOVE THE TOP OF THE SEWER, THEN ALL CLEAN-UP AND SURFACE RESTORATION TO FINAL GRADE SHALL BE COMPLETED PRIOR TO AIR TESTING.
3. WHERE SANITARY SEWERS ARE BEING INSTALLED WITH OTHER UNDERGROUND INSTALLATIONS AND UTILITIES THEN ALL CROSSINGS LESS THAN 6 FEET ABOVE THE TOP OF THE SEWER AND ALL INSTALLATIONS LESS THAN 6 FEET ABOVE AND LESS THAN 10 FEET HORIZONTALLY FROM THE SANITARY SEWER SHALL BE COMPLETED PRIOR TO AIR TESTING FOR ACCEPTANCE.

TEST PROCEDURE
ALL LOW-PRESSURE AIR TESTING FOR ACCEPTANCE SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE TEST PROCEDURE BY THE DISTRICT OR ITS AUTHORIZED REPRESENTATIVE(S). THE DISTRICT SHALL BE NOTIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO TESTING.

AIR TEST EQUIPMENT, TO BE FURNISHED BY THE CONTRACTOR, SHALL CONSIST OF TEST PLUGS, BRACING, AIR HOSES, AIR SUPPLY EQUIPMENT AND CONTROL EQUIPMENT. THE CONTROL EQUIPMENT SHALL CONTAIN SUITABLE VALVES, PRESSURE REGULATORS AND PRESSURE GAGE(S). THE PRESSURE GAGE USED TO DETERMINE PRESSURE LOSS MUST HAVE A MINIMUM OF 4 1/2" DIAMETER DIAL FACE WITH 0-10 PSI RANGE HAVING MINOR GRADATIONS OF 0.1 PSI AND ACCURACY OF ±0.1 PSI OVER THE FULL RANGE.

A. TESTING SHALL BE DONE BETWEEN TWO (2) CONSECUTIVE MANHOLES.

B. IF REQUIRED, CLEAN THE PIPE TO BE TESTED BY FLUSHING IN A MANNER APPROVED BY THE DISTRICT.

C. PLUG ALL PIPE OUTLETS WITH TEST PLUGS AND BRACE EACH PLUG.

D. ADD AIR SLOWLY UNTIL A CONSTANT PRESSURE IS REACHED OF 4.5 P.S.I.G GREATER THAN THE AVERAGE BACK PRESSURE OF ANY GROUND WATER ABOVE THE INVERT OF THE PIPE. THE AIR PRESSURE MUST BE REGULATED TO PREVENT INSIDE PRESSURE FROM EXCEEDING 5 P.S.I.G GREATER THAN THE AVERAGE BACK PRESSURE OF GROUND WATER.

E. WHEN THE PRESSURE HAS REACHED 4.5 P.S.I.G PLUS CORRECTION FOR GROUND WATER, THROTTLE THE AIR SUPPLY TO MAINTAIN THE AIR PRESSURE ABOVE 4.0 P.S.I.G (PLUS CORRECTION FOR GROUND WATER) FOR AT LEAST 5 MINUTES.

F. AFTER THE STABILIZATION PERIOD, ADJUST THE AIR PRESSURE TO 4.5 P.S.I.G (PLUS CORRECTION FOR GROUND WATER), SHUT-OFF THE AIR SUPPLY, AND ALLOW THE AIR PRESSURE TO DROP TO 4.0 P.S.I.G. IF THIS OCCURS IN LESS THAN 15 MINUTES, THE TIME FOR THE AIR PRESSURE TO DECREASE FROM 4.9 P.S.I.G TO 3.5 P.S.I.G (PLUS CORRECTION FOR GROUND WATER) SHALL BE MEASURED. IF THE AIR PRESSURE DOES NOT DROP TO 4.0 P.S.I.G, WITHIN 15 MINUTES, THE SECTION IS CONSIDERED TO HAVE PASSED THE TEST.

G. IF THE TIME IN SECONDS FOR THE AIR PRESSURE TO DROP 0.5 P.S.I.G IS GREATER THAN THAT SHOWN IN THE FOLLOWING TABLES, THE SECTION IS CONSIDERED TO PASS THE AIR TEST. IF THE TIME IS LESS THAN THAT SHOWN IN THE TABLES, THE SECTION IS CONSIDERED TO HAVE FAILED THE TEST AND MUST BE REPAIRED.

ADJUSTMENTS FOR GROUND WATER
WHEN THE GROUND WATER, AT TIME OF TESTING, IS ABOVE THE SEWER INVERT (AS DETERMINED BY MEASUREMENTS FROM OBSERVATION RISERS) THE TEST PRESSURE SHALL BE INCREASED 0.433 PSI FOR EACH FOOT THE GROUND WATER IS ABOVE THE INVERT.

MANHOLES
MANHOLES SHALL BE OBSERVED DURING WET CONDITIONS AND ALL OBSERVED SOURCES OF INFILTRATION SHALL BE CORRECTED.

E. TELEVISING

1. THE ENTIRE BUILDING SANITARY SERVICE SHALL BE TELEVISED FROM THE PUBLIC SEWER TO THE BUILDING, INCLUDING THE MACHINE TAP, WYE OR TEE, THE OUTSIDE CLEANOUT(S) AND ALL SERVICE PIPING.

2. THE CONSTRUCTED SEWERS MUST BE TELEVISED UNDER SIMULATED FLOW CONDITIONS. DISTRICT PERSONNEL MUST BE PRESENT DURING TELEVISING. NO SAGS GREATER THAN 25% OF THE PIPE DIAMETER WILL BE ACCEPTED. ALL UNACCEPTABLE SAGS MUST BE REPLACED IN A MANNER ACCEPTABLE TO THE DISTRICT.

3. PRIOR TO TELEVISING, FLUSH AND CLEAN THE SEWERS BY A METHOD ACCEPTABLE TO THE DISTRICT. PROVIDE PREPARATORY CLEANING OF THE SEWER TO PERMIT UNOBSTRUCTED PASSAGE OF THE TELEVISION CAMERA AND CLEAN ENOUGH FOR THE CAMERA TO DISCERN STRUCTURAL DEFECTS, MISALIGNMENT, AND POINTS OF INFILTRATION TO THE SATISFACTION OF THE DISTRICT.

4. PROVIDE THE DISTRICT A VHS VIDEO RECORDING OF THE TELEVISING. SET VIDEO RECORDER TO STANDARD PLAY (SP) MODE.

5. BEGIN EACH TAPE WITH THE CURRENT DATE AND THE BEGINNING FOOTAGE COUNT SUPERIMPOSED ON THE VIDEO SIGNAL. PROVIDE CONTINUOUS FOOTAGE COUNTER ON ALL VIDEO RECORDINGS.

6. PROFESSIONALLY LABEL ALL VIDEO TAPES SHOWING THE BUILDING ADDRESS, THE DATE, AND CONTRACTOR'S NAME.

7. MOVE THE CAMERA, AT A SPEED NO GREATER THAN 30 FEET PER MINUTE AND STOPPING AT ALL DEFECTS AND POINTS OF INFILTRATION TO PERMIT PROPER DOCUMENTATION OF THE SEWER CONDITION.

8. ALL TELEVISING FOR ACCEPTANCE SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE DISTRICT. THE CONTRACTOR SHALL NOTIFY THE DISTRICT 48 HOURS PRIOR TO TELEVISING. VIDEO TAPES SHALL BE TURNED IN IMMEDIATELY TO THE DISTRICT INSPECTOR UPON COMPLETION OF TELEVISING.

9. TELEVISING MAY BE PERFORMED AFTER THE SANITARY SERVICE HAS BEEN SUCCESSFULLY AIR TESTED AND ALL OUTSIDE CLEANOUTS HAVE BEEN ADJUSTED TO FINAL GRADE.

F. MANHOLE TESTING

1. EACH MANHOLE SHALL BE TESTED NO SOONER THAN 30 DAYS AFTER COMPLETION OF MANHOLE CONSTRUCTION.

2. ALL LIFT HOLES SHALL BE PLUGGED WITH AN APPROVED NON-SHRINK GROUT.

3. NO GROUT WILL BE PLACED IN THE HORIZONTAL JOINTS BEFORE TESTING.

4. ALL PIPES ENTERING THE MANHOLE SHALL BE PLUGGED, TAKING CARE TO SECURELY BRACE THE PLUGS FROM BEING DRAWN INTO THE MANHOLE.

5. THE TEST HEAD SHALL BE PLACED AT THE INSIDE OF THE TOP OF THE MANHOLE FRAME AND THE SEAL INFLATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

6. A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN AND THE VACUUM PUMP SHUT OFF. WITH THE VALVES CLOSED, THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 INCHES. THE MANHOLE SHALL PASS IF THE TIME IS GREATER THAN 60 SECONDS FOR A 48" DIAMETER MANHOLE, 75 SECONDS FOR 60", AND 90 SECONDS FOR 72".

7. IF THE MANHOLE FAILS THE INITIAL TEST, NECESSARY REPAIRS SHALL BE MADE WITH A NON-SHRINK GROUT. RETESTING SHALL PROCEED UNTIL A SATISFACTORY TEST IS OBTAINED.

8. ALL MANHOLE TESTING FOR ACCEPTANCE SHALL BE DONE UNDER THE DIRECT SUPERVISION OF THE TEST PROCEDURE BY THE DISTRICT OR ITS AUTHORIZED REPRESENTATIVE(S). THE DISTRICT SHALL BE NOTIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO TESTING.

G. DEFECTS
ANY PIPING WITH DIPS, CRACKS, IMPROPERLY SEALED JOINTS, OR VARIATIONS FROM THE APPROVED GRADES AND ALIGNMENT SHALL REPAIRED BY REMOVING AND REPLACING THE INVOLVED SECTIONS OF PIPE. THE REPAIRED SECTION OF PIPE SHALL THEN BE RE-TESTED. THE VILLAGE ENGINEER MAY ALSO REQUEST OTHER TYPES OF TESTING ON THE SANITARY SEWER INSTALLATION AS A CONDITION OF INITIAL ACCEPTANCE.

H. RECORD DRAWINGS
1. PRIOR TO FINAL ACCEPTANCE OF WORK "RECORD" DRAWINGS SHALL BE SUBMITTED TO THE VILLAGE.

2. ONE MYLAR REPRODUCIBLE AND TWO BLUELINE COPIES SHALL BE SUBMITTED.

STORM SEWER AND STORM WATER DETENTION

GENERAL

1. ALL DEVELOPMENT, WHETHER PUBLIC OR PRIVATE, SHALL INCLUDE PROVISIONS FOR THE CONSTRUCTION OF STORM SEWERS AND APPURTENANCES DESIGNED IN ACCORDANCE WITH THIS SECTION. DEVELOPERS SHALL USE EITHER THE PUBLIC SEWER SYSTEM OR AN ALTERNATIVE SEWER SYSTEM, CERTIFIED BY AN AGENCY OR MUNICIPALITY WITH JURISDICTIONAL AUTHORITY, PROVIDED THAT THE DEVELOPMENT IS PROXIMATE TO A TRANSMISSION LINE THAT HAS ADEQUATE CAPACITY TO HANDLE SUCH PROPOSED DEVELOPMENT.

2. THE DETENTION, RETENTION OR DEPRESSIONAL STORAGE AREAS THAT ARE TO BE USED AS PART OF THE DRAINAGE SYSTEM FOR A PROPERTY SHALL BE CONSTRUCTED AS THE FIRST ELEMENT OF THE INITIAL EARTHWORK PROGRAM. ANY ERODED SEDIMENT CAPTURED IN THESE FACILITIES SHALL BE REMOVED BY THE APPLICANT BEFORE PROJECT COMPLETION IN ORDER TO MAINTAIN THE DESIGN VOLUME OF THE FACILITIES.

3. STORM SEWER SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 600 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION," AND "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," LATEST EDITION.

SEWER PIPE CLASS
1. SEWER PIPE CLASS SHALL BE DETERMINED BASED UPON THE SPECIFICATION OF SECTION 550 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION." LATEST EDITION.

MATERIAL SPECIFICATION
ALL STORM SEWER SYSTEM ELEMENTS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

1. SEWER PIPE:
SUMP PUMP SERVICE CONNECTION AND STORM SEWER EXTENSION (4" AND 6") - PVC SEWER PIPE ASTM D2751, SDR35, OR ASTM3034, SDR35, FLEXIBLE PLASTIC DRAIN PIPE. USE PVC SEWER PIPE SDR26 FOR SUMP PUMP IN THE RIGHT-OF-WAY.
CONCRETE SEWER PIPE (10" DIAMETER AND SMALLER), MINIMUM CLASS 3, ASTM C14.
REINFORCED CONCRETE PIPE (12" DIAMETER AND LARGER), CIRCULAR REINFORCEMENT, MINIMUM CLASS 3, WALL B, ASTM C76.
REINFORCED CONCRETE ARCH CULVERT PIPE-MINIMUM CLASS HE-III OR VE-II, ASTM C507.
PVC UNDERDRAIN PIPE (4", 6", AND 8") - ASTM D2729, SDR35.

2. SEWER PIPE JOINTS:
PVC PIPE-ASTM D3212, PUSH-ON TYPE, EXCEPT UNDERDRAIN PIPE WHICH SHALL HAVE SOLVENT WELDED JOINTS.
REINFORCED CONCRETE PIPE-ASTM C443. ("O" RING). USE "SELF-LOCKING" PRE-FORMED RUBBER GASKET JOINTS.
REINFORCED ARCH OR ELLIPTICAL PIPE-ASTM C877FECT

3. CASING PIPES FOR AUGURED SLEEVES:
STEEL PIPE-ASTM A120, 3/8" MINIMUM THICKNESS

4. MANHOLES AND CATCH BASINS:
PRECAST REINFORCED CONCRETE - ASTM C478 AND ASTM C443
SIZE: FOR SEWER LESS THAN OR EQUAL TO 18" DIAMETER OR LESS, MANHOLE SHALL HAVE A 48" INSIDE DIAMETER.
FOR SEWER 21" TO 36" DIAMETER, MANHOLE SHALL HAVE A 60" INSIDE DIAMETER
FOR SEWER GREATER THAN 36" DIAMETER, MANHOLE SHALL HAVE AN OFFSET RISER PIPE OF 48" INSIDE DIAMETER.
ADJUSTMENT: NO MORE THAN TWO (2) PRECAST CONCRETE ADJUSTING RINGS WITH SIX (6) INCH MAXIMUM HEIGHT ADJUSTMENT SHALL BE ALLOWED.
PIPE AND FRAME SEALS: ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH PORTLAND CEMENT MORTAR, O-RING GASKETS OR MASTIC MATERIAL.
BOTTOM SECTIONS: ALL BOTTOM SECTIONS SHALL BE MONOLITHICALLY PRECAST INCLUDING BASES AND INVERT FLOWLINES.
MANHOLE STEPS - EAST JORDAN IRON WORKS, INC. #8518. STEPS SHALL BE INSTALLED IN ALL STRUCTURES (STORM / SANITARY / WATER) AT 16 INCH CENTERS, WHERE THE DEPTH BETWEEN THE RIM AND THE BOTTOM OF THE STRUCTURE EXCEEDS FOUR FEET IN HEIGHT.

5. INLETS:
PRECAST REINFORCES CONCRETE - ASTM C478 AND ASTM C443
SIZE: INLETS SHALL HAVE 24" INSIDE DIAMETER AND A MAXIMUM DEPTH OF FOUR (4) FEET
ADJUSTMENT: NO MORE THAN TWO (2) PRECAST CONCRETE ADJUSTING RINGS WITH SIX (6) INCH MAXIMUM HEIGHT ADJUSTMENT SHALL BE ALLOWED
ONLY ONE (1) PIPE CONNECTION IS ALLOWED AND IT SHALL BE PRECAST WITH PORTLAND CEMENT MORTAR, O-RING GASKETS OR MASTIC MATERIAL.
BOTTOM SECTIONS: ALL BOTTOM SECTIONS SHALL BE MONOLITHICALLY PRECAST INCLUDING BASES AND INVERT FLOWLINES.

6. CASTINGS - UNLESS OTHERWISE NOTED ON THE PLANS, THE FOLLOWING SHALL BE USED:
MANHOLE FRAME AND COVER - IDOT TYPE 1A HEAVY DUTY. CLOSED GRATE TO BE FURNISHED WITH STAMPED "STORM" IN THE MIDDLE AND A MINIMUM OF ONE PICK HOLE.
LANDSCAPE AREA CATCH BASIN - IDOT TYPE 8 BEEHIVE GRATE.
LANDSCAPE AREA INLET - IDOT TYPE 8 - BEEHIVE GRATE.
SIX (6) INCH CURB INLET AND CATCH BASIN - EAST JORDAN IRON WORKS, INC. # 7520 AND TYPE M-VANE GRATE.
THREE (3) INCH CURB INLET AND CATCH BASIN - EAST JORDAN IRON WORKS, INC. # 7520 AND TYPE M-VANE GRATE.

7. CRUSHED GRANULAR BEDDING:
CRUSHED GRAVEL OR CRUSHED STONE COURSE AGGREGATE - ASTM C33, SIZE NO. 67

8. HEADWALLS AND PRECAST END SECTIONS:
ALL PIPES SHALL TERMINATE AT REINFORCED CONCRETE HEADWALLS OR PRECAST END SECTIONS.

TELEVISING
1. TELEVISED INSPECTION OF ALL STORM SEWER IS REQUIRED, AT THE DEVELOPER'S COST, PRIOR TO FINAL ACCEPTANCE.

2. FOLLOW TELEVISING GUIDELINES, WHERE APPLICABLE, PER THE STANDARDS DEFINED IN THE SANITARY SEWER SYSTEM SECTION OF THESE GENERAL NOTES.

WATERMAIN

GENERAL
1. ALL DEVELOPMENT SHALL INCLUDE PROVISIONS FOR THE CONSTRUCTION OF WATER DISTRIBUTION FACILITIES COMPLETE WITH VALVES, FIRE HYDRANTS, AND OTHER APPURTENANCES DESIGNED IN ACCORDANCE WITH THIS SECTION. AS A MINIMUM, THE WATER DISTRIBUTION SYSTEM SHALL PROVIDE A SERVICE CONNECTION(S) AT THE APPROXIMATE MID-POINT OF THE PROPERTY LINE OF EACH INDIVIDUAL LOT OR PARCEL WITHIN THE DEVELOPMENT. WHERE MORE THAN ONE BUILDING IS LOCATED OR PLANNED ON ONE LOT OR PARCEL PER PROPERTY, OR WHEN WATER MAIN CONSTRUCTION IS REQUIRED ON THE PROPERTY FOR FIRE PROTECTION, THE PROPOSED CONSTRUCTION SHALL ALSO INCLUDE ALL WATER MAIN CONSTRUCTION AND APPURTENANCES WITHIN THE LOT OR PARCEL EXCEPT SERVICES LINES.

2. SPECIFICATION REFERENCES MADE HEREIN FOR MANUFACTURED MATERIALS SUCH AS PIPE, HYDRANTS, VALVES AND FITTINGS REFER TO DESIGNATION THE AMERICAN WATER WORKS ASSOCIATION (AWWA) OR OF THE AMERICAN NATIONAL STANDARD INSTITUTE (ANSI). WATER DISTRIBUTION SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS," LATEST EDITION, UNLESS OTHERWISE MODIFIED IN THIS SECTION.

MATERIAL SPECIFICATION AND DETAILS
(ALL WATER DISTRIBUTION SYSTEM ELEMENTS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:)

1. DUCTILE IRON PIPE, POLYVINYL CHLORIDE PIPE
PIPE CLASS THICKNESS - ANSI A21.50 (AWWA C150), MINIMUM THICKNESS, CLASS 52, AWWA C900
PIPE - ANSI A21-51 (AWWA C152), AWWA C900
PIPE LINING - ANSI A21.4 (AWWA C104)
FITTINGS - ANSI 21.10 (AWWA C110) ALL FITTINGS MUST HAVE RETAINING GLANDS
JOINTS - MECHANICAL AND PUSH-ON, ANSI A21.11 (AWWA C111), CERTA LOK OR APPROVED EQUAL.
POLYVINYL WRAPPING OF ALL WATERMAINS IS REQUIRED.

2. FIRE HYDRANTS
WATEROUS PACER MODEL WB-67 WITH A 5-1/4" VALVE OPENING, TWO (2) 2-1/2" HOSE NOZZLES, AND ONE (1) 4-1/2" PUMPER NOZZLE, AND SHALL BE EQUIPPED WITH NATIONAL STANDARD THREADS AND OPERATING NUTS.
ALL CONNECTING PIPE BOTTOM FLANGES SHALL BE MECHANICAL JOINTS.
ALL HYDRANTS SHALL BE PAINTED RUST SEAT #31-151 OSHA YELLOW, POLYURETHANE HIGH GLOSS ENAMEL.
ALL HYDRANTS MUST HAVE CONCRETE THRUST BLOCKS PER DETAILS.

3. HYDRANT VALVE BOX
VALVE SHALL MATCH SAME MANUFACTURER AS HYDRANT AND SHALL CONNECT TO THE FIRE HYDRANT WITH A FLANGE CONNECTION.
LID EMBOSSED "WATER"

4. CORPORATION STOPS
FORD FB600 WITH LAD 4-44 SWIVEL.

5. SERVICE PIPE
COPPER TUBE, 2 INCH SMALLER, ASTM B88, TYPE K (1" MINIMUM)
DUCTILE IRON, LARGER THAN 2-INCH, CONFORM TO SECTION C(1) ABOVE.

6. CURB STOP
COPPER SERVICE, FORD B44-444 DUCTILE IRON SERVICE, CONFORM TO SECTIONS C(2)(A) AND C(2)(C) ABOVE.

7. CURB BOX
COPPER SERVICE, TYLER 95-E
DUCTILE IRON SERVICE, 4-INCH AND SMALLER, CONFORM TO SECTION C(4) ABOVE.
DUCTILE IRON SERVICE, 6-INCH AND LARGER, CONFORM TO SECTION C(12) BELOW.

8. CONCRETE THRUST RESTRAINTS
HORIZONTAL REACTION - THRUST AT ALL TEES, PLUGGED ENDS, HYDRANTS, AND BENDS BETWEEN 11 ¼ DEGREES AND 90 DEGREES SHALL CONFORM TO EXHIBIT NO WM10 SPECIFICATION.
VERTICAL REACTION - THE ENGINEER SHALL SUBMIT INDIVIDUAL DESIGNS FOR EACH LOCATION AND COMPLY WITH AWWA C600, SECTION 3.8.
MATERIAL - PRECAST OR POURED CLASS SI CONCRETE.
WHERE UNDISTURBED EARTH IS NOT AVAILABLE OR NOT LIKELY TO BE AVAILABLE TO BACK UP PRESSURE TYPE CONCRETE THRUST BLOCKS, THE ENGINEER SHALL SPECIFY TIE ROD WITH OR WITHOUT ANCHOR TYPE CONCERT THRUST BLOCKS AND SUBMIT DESIGN DATA FOR SUCH SPECIFICATION. CARE SHALL BE TAKEN WHEN POURING CONCRETE SO THAT THE MIX WILL NOT INTERFERE WITH ACCESS TO JOINTS OR WITH HYDRANT DRAINAGE.
WEDGE TYPE THRUST RESTRAINTS SHALL BE USED AT ALL HYDRANTS, PLUGS, CAPS, TEES, ELBOWS, AND FITTINGS. FORMED CONCRETE THRUST RESTRAINTS SHALL BE ALLOWED TO BE USED ONLY WITH THE APPROVAL OF THE DEPARTMENT OF PUBLIC WORKS WATER DIVISION. THE USE OF WOOD BLOCKING, CONCRETE BLOCKS, STAKES OR CLAMPS WILL NOT BE ALLOWED. FORMED CONCRETE THRUST RESTRAINTS MAY BE REQUIRED IN ADDITION TO THE WEDGE ACTION RETAINER GLANDS AT FITTINGS UPON THE DIRECTION OF THE DEPARTMENT OF PUBLIC WORKS WATER DIVISION.

9. CASING PIPES
STEEL PIPE - ASTM A120, 0.375" MINIMUM THICKNESS.

10. VALVES TWELVE (12) INCHES AND SMALLER-EPOXY COATED RESILIENT WEDGE VALVES WITH NON-RISING STEM GATE VALVES, COUNTER-CLOCKWISE TO OPEN, AWWA #C-509, WATEROUS MUELLER OR EQUAL.

11. VALVE VAULTS
PRECAST REINFORCED CONCRETE - ASTM C478 AND ASTM C443.
SIZE: FOR 6", 8", AND 10" DIAMETER VALVES, VALVE VAULTS SHALL HAVE A 48" INSIDE DIAMETER;; FOR PRESSURE CONNECTIONS AND VALVES 12" AND LARGER IN DIAMETER, VALVE VAULTS SHALL HAVE A 72" INCH DIAMETER.
ADJUSTMENTS: NO MORE THAN TWO (2) PRECAST CONCRETE ADJUSTING RINGS WITH SIX (6) INCH MAXIMUM HEIGHT ADJUSTMENT SHALL BE ALLOWED.

12. CASTING
MANHOLE FRAME AND COVER - NEENAH R-1077, TY A EMBOSSED WATER AND VILLAGE OF DOWNERS GROVE.
MANHOLE STEPS, EAST JORDAN IRON WORKS, INC. #8518.406.

13. CRUSHED GRANULAR BEDDING
CRUSHED GRAVEL OR CRUSHED STONE COURSE AGGREGATE -A ASTM C33, SIZE NO. 67.

14. CARRIER PIPE
NEW WELDED STEEL PIPE WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI AND SHALL MEET THE MINIMUM REQUIREMENTS OF ASTM-139 GRADE B. THE MINIMUM WALL THICKNESS SHALL BE 0.25".

⚠1 REVISED PER VILLAGE REVIEW
1. UPDATED NOTES.

NELSON MEADOW - PHASE I

WEST SIDE OF CARPENTER STREET
DOWNERS GROVE, ILLINOIS

GENERAL NOTES	DRAWN BY: CNW	CHECKED BY: TRH
	SCALE: N.T.S.	DATE: 08-31-10
	JOB NUMBER: 04-239	SHEET: 2 OF 11

Consulting Civil Engineering
Land Planning & Surveying
1050 State Route 126
Plainfield, Illinois 60544
voice 815-254-0505
fax 815-436-5158

C.M. Lavoie & Associates, Inc.

#	DATE	DESCRIPTION
1	01-11-11	PER VILLAGE REVIEW
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4		
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6		
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